CADBURY CASTLE SOMERSET

The later prehistoric and early historic archaeology

John C Barrett, P W M Freeman and Ann Woodward

ENGLISH HERITAGE

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Summary

The seven hectare hillfort of Cadbury Castle was excavated between 1966-70 and 1973 by Leslie Alcock on behalf of the Camelot Research Committee. The site is an impressive multivallate hillfort built on a free-standing and steeply scarped limestone hill in the south-west of England. This report is concerned with the occupation of the hill during the first millennium BC and in the early centuries of the first millennium AD. Earlier occupation dating to the Neolithic was also encountered during the excavations, and the site is well known for its important post-Roman settlement and defences.

The interior of the hill rises to a prominent domed plateau around which, by the end of the first millennium BC, four circuits of stone and earthwork banks had been erected. Three entrances allowed access to the interior: the north-eastern and south-western entrances remained in use throughout the hillfort's history, but the third entrance on the eastern side of the hill was blocked at some stage.

The excavations were concerned with the investigation of three aspects of the site; the sequence of enclosing earthworks with particular emphasis being directed towards the complex building sequence of the inner bank, the history of the south-western gateway, and the interior occupation on the plateau and an area on the northern slope of the hill.

Two basic intellectual and methodological problems are addressed by this report. One concerns establishing a chronological framework by which the separate structural sequences of earthwork building, gateway development, and interior occupation (along with their associated artefact and animal bone assemblages) can be brought together into a single sequence to describe the site's history. The second concerns establishing a way of integrating the separate studies of a large and diverse amount of material, including artefacts, building materials, industrial debris, and animal bones, around the history of one or more common themes.

The hill appears to have been occupied throughout the period covered by this report although the intensity and focus of the occupation clearly varied. To describe that occupation in terms of a single sequence is therefore a simplification of the complex and varied histories of building and other activities which are represented by the archaeology. None the less such a period sequence provides a useful guide through those histories. A three-fold period sequence has been devised which conforms directly with the sequence of Ceramic Assemblages for the site. The latter is mainly based upon the analysis of the stratified assemblages recovered from the inner bank and from the hillfort interior. The dates assigned to these periods depend upon comparisons between the Cadbury metal and ceramic assemblages and finds from other sites as well as a small number of radiocarbon dates from Cadbury Castle itself. Early Cadbury runs from *c* 1000–300 BC and incorporates Ceramic Assemblages 4, 5, and 6, Middle Cadbury spans *c* 300–AD 40/50 and incorporates Ceramic Assemblages 7 and 8, while Late Cadbury, from *c* AD 40/50–400, covers Ceramic Assemblages 9 and 10.

The chronological framework and ceramic sequence allows us to trace the structural history of the hillfort. Alongside this, however, there remains a wealth of information represented by the artefacts and other debris which were deposited during the occupation of the hill. A single broad theme concerning the occupation of the hill in terms of the human body has been developed in this report as a way of integrating the study of this diverse material. Thus the architecture of the hill, including the perimeter earthworks, gateways and interior buildings and other facilities, can be regarded as ordering the spaces and paths of movement available to the occupant, while the remaining material debris is firstly discussed in terms of clothing, decorating, and feeding the body before we consider the way those bodies operated on the world around them through productive activities, violence, and exchange. Finally the activities of production and consumption are considered in terms of the material resources used and the resulting patterns of deposition.

As currently understood, the occupation of the hill in Early Cadbury commences with a cluster of buildings established on a flat and relatively protected area of the plateau, associated with which were a small number of pits and a spread of occupation debris including finds of late Bronze Age metalwork. This settlement nucleus developed throughout the period with the establishment of a few circular structures and four- and six-post rectangular buildings around the line of an east–west road which probably ran into a hollow-way leading up from the north-eastern entrance. A series of deposits seemingly deriving from metalworking but incorporating additional debris began to form immediately north of this road and towards the centre of the excavated area. This area of 'industrial' activity, which was intermittently surfaced with cobbles, continued in use throughout Early and Middle Cadbury. The perimeter of the hill in the Early period is initially demarcated by a series of field lynchets, banks, and fence lines before the first timber revetted stone bank was constructed. Evidence of any early gate structures associated with the Early phases of enclosure have been lost through the subsequent erosion and building activity in the area of the south-western gate.

Middle Cadbury represents the main period of occupation within the hillfort. In the areas excavated, round houses were built and re-built across the eastern plateau and alongside the developing hollow-way on the northern slope of the hill. They undoubtedly existed more widely within the interior and it seems likely that such buildings were also erected in quarry scoops

which had served the building and refurbishing of the earthen bank of the inner rampart. It is in this period that most rock-cut storage pits were dug and infilled. Some of these may have been directly associated with particular residential buildings, others were dug onto the more exposed and seemingly unoccupied parts of the western plateau. Throughout the period the debris and cobbling associated with industrial activity on the plateau continued to develop and there is some evidence that parts of this area were fenced off from the settlement and storage activities taking place around it. The outer lines of the ramparts were built during Middle Cadbury and a complex sequence of gate structures and associated guard chambers developed in the south-western entrance. These gate structures required, among other things, revetting the rampart terminals on either side of a roadway which was eroding as the result of its use.

It seems possible that the intensity of occupation had already begun to decline before the beginning of the first-century AD and the beginning of Late Cadbury. The changing character of the site is hinted at by the lack of buildings and few pits which belong to the Late period and the burial of a number of calf and cattle carcasses (later Middle Cadbury) in the area of the plateau which had previously been associated with industrial activity. Use of the site did continue into the later period with refurbishment of the inner rampart and gateway but late in the first century AD a period of destruction occurred in the gateway, associated with which is a spread of fragmentary and partly burnt human remains, weaponry, and dress fittings. All the indications are of Roman military activity against the hillfortis occupants. After this destruction a roadway was laid through the gate: four phases of refurbishment of the gate passage took place and a group of Roman timber barracks were built in the interior of the site. Final destruction of the gate by fire occurred probably in the second century. One structure belonging to the mid to late first century is what is taken to be a small timber shrine built on the plateau, and there are indications that a Roman masonry structure, possibly a temple, was erected on the hill. There is, however, no indication of later Roman activity and thus continuity into the period of the hill's early medieval re-occupation.

Résumé

Le fort de Cadbury couvrant sept hectares, édifié sur une colline, a été fouillé entre 1966-70 et 1973 par Leslie Alcock pour le comité de recherche Camelot (Camelot Research Committee). Le site est un fort impressionnant à plusieurs remparts, bâti sur une butte de calcaire isolée et très escarpée dans le sud-ouest de l'Angleterre. Ce rapport concerne l'occupation de la colline durant le premier millénaire av. J.C. et les premiers siècles du premier millénaire ap. J.C. Une occupation plus précose datant du Néolithique fut aussi enregistrée durant les fouilles, et le site est aussi connu pour ses défenses et gisements importants après l'époque romaine.

L'intérieur de la colline est formé d'un plateau important et bombé autour duquel, dès la fin du premier millénaire av. J.C., quatre cercles de pierre et talus de terre avaient été dressés. Trois entrées permettaient l'accès à l'intérieur, les entrées nord-est et sud-ouest furent utilisées pendant toute l'occupation du fort, la troisième entrée sur le côté est de la colline fut blouchée à un certain moment.

Trois aspects du site furent examinés durant les fouilles: la séquence de terrassements d'enceinte, tout particulièrement la séquence complexe de construction du talus intérieur; l'histoire de la porte sud-ouest; et l'occupation intérieure du plateau et d'une zone sur le versant nord de la colline.

Deux problèmes fondamentaux d'ordre intellectuel et méthodologique sont adressés dans ce rapport. L'un concerne l'établissement d'un cadre chronologique par lequel les différentes séquences de construction de bâtiments en terre, l'aménagement des portes, et l'occupation intérieure (dont son mobilier et ses groupements d'os d'animaux) peuvent être réunis pour former une unique séquence décrivant l'histoire du site. L'autre concerne l'établissement d'un système servant à intégrer les diverses études d'une grande quantité de matériaux différents, incluant objets, matériaux de construction, déchets industriels et os d'animaux, autour de l'histoire d'un ou plusieurs thèmes communs.

Bien que l'intensité et la concentration d'occupation aient clairement varié, la colline semble avoir été occupée à travers toute l'époque traitée dans ce rapport. Décrire cette occupation en une unique séquence est donc simplifier un passé rendu varié et complexe par ces phases de construction et autres activités représentées dans l'archéologie. Toutefois une telle séquence fournit un guide utile à travers ces époques. Une séquence triphasée a été conçue, conformant directement à la séquence des groupements de céramiques du site. Celle-ci est essentiellement basée sur l'analyse des groupements stratifiés récupérés du talus intérieur et de l'intérieur du fort. Les dates attribuées à ces phases dépendent de la comparaison entre les métaux trouvés à Cadbury et les groupements de céramiques, les objets trouvés sur d'autres sites ainsi qu'un petit nombre de datations du fort de Cadbury lui-même faites par le carbone. L'époque Primitive de Cadbury va d'environ 1000 à 300 av. J.C. comprenant les groupements de céramiques 4, 5 et 6; puis il y a l'époque Moyenne

entre environ 300 av. J.C. et 40-50 ap J.C., incorporant les groupements 7 et 8, et enfin l'époque Tardive entre environ 40-50 et 400 ap J.C., que couvrent les groupements de céramiques 9 et 10.

Le cadre chronologique et la séquence céramique nous permettent de retracer l'histoire de l'édification du fort. Cependant en paralèlle, il existe une richesse d'information grâce aux objets et autres débris qui furent déposés durant l'occupation de la colline. L'occupation de la colline en fonction du corps humain représente un seul grand thème, qui a été développé dans ce rapport de telle manière à intégrer l'étude de ces multiples matériaux. Ainsi l'architecture de la colline, incluant les terrassements du périmètre, des portes, des bâtiments intérieurs et d'autres installations, peut être considérée comme ce qui dicta les espaces et chemins de passage disponibles à l'occupant, tandis que les restes de débris matériaux sont d'abord discutés sur le plan de l'habillement, l'ornement et l'alimentation du corps avant même de considérer la manière dont ces corps fonctionaient dans le monde autour d'eux à travers des activités productives, la violence et l'échange. Enfin les activités de production et de consommation sont examinées en fonction des ressources matérielles employées et de la formation de dépôts qui en a résulté.

Selon nos connaissances actuelles, l'occupation Primitive de la colline de Cadbury commence avec un agglomérat de bâtiments établi sur une zone plate du plateau plate et relativement protégée. Associés avec cet agglomérat, étaient un petit nombre de fosses et une étendue de débris d'occupation parmi lesquels étaient des objets provenant du travail du metal datant de l'Âge du Bronze Tardif. Ce noyau d'occupation se développa durant toute cette période avec l'établissement de quelques structures circulaires et de bâtiments rectangulaires à quatre-et six poteaux autour d'un axe routier est-ouest qui lui-même courait probablement vers un chemin creux menant de l'entrée nord-est. Une série de dépôts qui sembleraient provenir du travail du metal mais comprenant des débris supplémentaires commencèrent à se former directement au nord de cette route et vers le centre de la zone fouillée. Cette zone d'activité dite industrielle, qui fut revêtie par intermittence de galets, continua à fonctioner à travers toute l'époque Primitive et Moyenne de Cadbury. Le périmètre de la colline à l'époque Primitive est initialement délimité par une série de champs lynchets, talus et palissades avant que le premier talus de pierre recouvert de bois d'oeuvre ne soit construit. Toutes traces des premières portes associées avec les premières phases de construction de l'enceinte ont été perdues par l'érosion subséquente et les chantiers de construction dans la zone de la porte sud-ouest.

L'époque Moyenne de Cadbury représente la période d'occupation principale du fort. Dans les zones fouillées, des maisons rondes furent bâties et rebâties sur toute la surface du plateau est et le long du chemin creux qui s'aménagea sur le flanc nord de la colline. Ces maisons étaient indubitablement plus nombreuses à l'intérieur du fort et vraisemblablement de tels bâtiments furent aussi construits dans les trous de carrière ayant fourni en matériaux la construction et la réparation du talus de terre du rempart intérieur. C'est durant cette période que la majorité des silos souterrains taillés dans la roche furent creusés et remplis. Certains ont peut-être été directement associés avec des habitations particulières, tandis que d'autres furent creusés dans les zones plus exposées et il semblerait inoccupées du plateau ouest. Durant toute cette période les débris et sols aménagés, associés avec une activité industrielle sur le plateau, continua à se développer et quelques indices ont montrés que des parties de cette zone furent séparées du reste du gisement par des clôtures autour desquelles du stockage eut lieu. Les lignes extérieures des remparts furent bâties entre environ 300 av J.C. et 40-50 ap. J.C. et autour de l'entrée sud-ouest se développa une séquence complexe de constructions et salles des gardes, associés à la porte. Il fut nécessaire entre autre de réparer ces édifices placés en bout de rempart, de part et d'autre de la voie qui s'érodait avec le temps et la circulation.

Il semblerait que l'intensité d'occupation avait déjà commencé à diminuer avant le début du premier siècle ap. J.C. et le début de l'époque Tardive de Cadbury. Le caractère changeant du site nous est évoqué par quelques activités: la mise en terre de plusieurs carcasses de bétail et de veau dans la zone du plateau qui auparavant avait été associée à l'activité industrielle pendant la période ultérieure de l'époque Moyenne de Cadbury, le manque de bâtiments et quelques fosses qui appartiennent à l'époque Tardive. L'utilisation du site continua jusque pendant l'époque ultérieure avec les réparations du rempart intérieur et de la porte mais plus tard pendant le premier siècle ap. J.C. une période de destruction survint dans la porte avec laquelle sont associés des restes humains fragmentaires et partiellement brûlés, des armes et des accessoires vestimentaires. Tout semble montrer des actions militaires romaines contre les occupants du fort. Après cette destruction une route fut aménagée à travers la porte, quatre phases de réparations de ce passage eurent lieu, et un groupe de casernes romaines en bois fut bâti à l'intérieur du site. La destruction finale de la porte par le feu survint probablement pendant le deuxième siècle ap. J.C.. Une structure datant de la moitié fin du premier siècle semblerait être un petit sanctuaire de bois bâti sur le plateau, et il semblerait aussi qu'une construction romaine en maçonnerie, possiblement un temple, ait été dressée sur la colline. Il n'y a cependant aucune indication d'activité romaine ultérieurement et ainsi de continuité jusqu'à la période de ré-occupation médiévale de la colline.

Traduction: Agnès Shepherd

Zusammenfassung

Die sieben Hektar große Höhenburg Cadbury Castle wurde 1966–70 und 1973 im Auftrag des Camelot Forschungskomitees von Leslie Alcock ausgegraben. Bei der Anlage handelt es sich um eine eindrucksvolle mehrwallige Höhenburg, die auf einem freistehenden, steil abfallenden Berg aus Kalkstein im Südwesten Englands errichtet wurde. Dieser Bericht befaßt sich mit der Besiedlung des Berges während des ersten Jahrtausends v. Chr. und in den ersten Jahrhunderten des ersten nachchristlichen Jahrtausends. Die Ausgrabungen stießen außerdem auf frühere Besiedlungsspuren aus dem Neolithikum. Der Fundplatz ist ferner weithin bekannt für seine wichtige nachrömische Siedlung samt Verteidigungsanlagen.

Der Berg erhebt sich zu einem auffällig gewölbten Plateau, um das herum am Ende des ersten Jahrtausends v. Chr. vier Ringe aus Stein- und Erdwällen errichtet worden waren. Drei Eingänge erlaubten Zugang zum Inneren, wobei der nordöstliche und der südwestliche Eingang während der gesamten Geschichte der Höhenburg in Gebrauch blieben, während der dritte Eingang an der östlichen Seite des Berges zu einem bestimmten Zeitpunkt versperrt wurde.

Bei den Ausgrabungen ging es um die Untersuchung von drei Aspekten der Anlage: der Abfolge der Erdwälle, die die Anlage umfassten, unter besonderer Berücksichtigung der komplexen Bauabfolge des inneren Walls, der Geschichte des südwestlichen Tordurchgangs sowie der Innenbesiedlung auf dem Plateau und in einem Gebiet am nördlichen Berghang.

Zwei grundlegende intellektuelle und methodologische Probleme werden in diesem Bericht angesprochen. Eines betrifft das Herstellen eines chronologisches Rahmens, der es erlaubt, die einzelnen Bauabfolgen von Erdwällen, Torentwicklung und Innenbesiedlung (zusammen mit den jeweils zugehörigen Artefakt- und Tierknocheninventaren) in eine einzige, die Geschichte der Anlage beschreibende Abfolge zusammenzufassen. Das andere Problem besteht im Finden einer Methode, die es erlaubt, die einzelnen Untersuchungen einer großen und verschiedenartigen Materialmenge aus Artefakten, Baumaterialien, Fertigungsabfällen und Tierknochen in die Geschichte eines oder mehrerer gemeinsamer Themen zu integrieren.

Der Berg war offenbar während der gesamten Periode, mit der sich dieser Bericht befaßt, besiedelt—obwohl Intensität und Zentrum der Besiedlung offensichtlich variierten. Das Beschreiben der Besiedlung als eine einzige Abfolge ist deshalb eine Simplifizierung der komplexen und verschiedenartigen Bauentwicklungen und anderer Aktivitäten, die sich archäologisch nachweisen lassen. Trotzdem stellt eine solche Periodenabfolge einen nützlichen Leitfaden durch diese Entwicklungen dar. Eine Dreiperiodenabfolge wurde konzipiert, die der Abfolge der Keramikinventare aus der Anlage unmittelbar entspricht. Diese basiert hauptsächlich auf der Analyse stratifizierter Inventare aus dem Innenwall und dem Inneren der Höhenburg. Die diesen Perioden zugeschriebenen Datierungen beruhen auf Vergleichen zwischen Metall- und Keramikinventaren aus Cadbury und Funden von anderen Fundplätzen sowie auf einer kleinen Anzahl von Radiokarbondaten von Cadbury Castle selbst. Frühes Cadbury verläuft von ca. 1000–300 v. Chr. und umfaßt die Keramikinventare 4, 5 und 6; mittleres Cadbury erstreckt sich von ca. 300 v. Chr.–40/50 n. Chr. und umfaßt die Keramikinventare 7 und 8; spätes Cadbury reicht von ca. 40/50–400 n. Chr. und beinhaltet die Keramikinventare 9 und 10.

Der chronologische Rahmen und die Keramikabfolge erlauben uns, die Baugeschichte der Höhenburg nachzuzeichnen. Daneben gibt es freilich noch eine Fülle weiterer Informationen in der Form von Artefakten und anderen Überresten, die während der Besiedlung des Berges in die Erde gelangten. Die Diskussion eines einzelnen breitgefaßten Themas in diesem Bericht, nämlich der Besiedlung des Berges unter Bezug auf den menschlichen Körper, dient dazu, die Untersuchungen des verschiedenartigen Materials zu integrieren. Die Architektur auf dem Berg, einschließlich der umgrenzenden Erdwälle, der Toranlagen sowie der Gebäude und anderer Einrichtungen im Inneren, können dementsprechend als Mittel betrachtet werden, die die dem Besucher zur Verfügung stehenden Räume und Wege in eine Ordnung bringen. Die übrigen materiellen Reste werden zuerst unter Bezug auf das Bekleiden, Schmücken und Ernähren des Körpers diskutiert, bevor wir darauf eingehen, wie sich diese Körper durch produktive Aktivitäten, Gewalt und Tausch auf die Welt um sie herum auswirkten. Schließlich werden Aktivitäten im Zusammenhang von Produktion und Verbrauch auf die verwendeten materiellen Ressourcen und die resultierenden Ablagerungsmuster hin betrachtet.

Nach gegenwärtigem Kenntnisstand beginnt die Besiedlung des Berges im frühen Cadbury mit einer Gruppe von Gebäuden, die auf einer flachen und relativ geschützten Fläche des Plateaus errichtet wurden und zu denen eine kleine Zahl von Gruben sowie eine Ausdehnung von Siedlungsabfällen gehörten, aus denen spätbronzezeitliche Metallfunde stammen. Der Siedlungskern wurde im Verlauf der Periode weiterentwickelt durch den Bau einiger runder Strukturen sowie vier- und sechspfostiger, rechteckiger Gebäude entlang der Ausrichtung einer Ost-West-Straße, die wahrscheinlich in einen Hohlweg mündete, der vom nordöstlichen Eingang hinaufführte. Eine Reihe von Ablagerungen, die offenbar von der Metallbearbeitung herrühren, aber zusätzliche Reste enthielten, begann sich unmittelbar nördlich dieser Straße und auf das Zentrum der Grabungsfläche hin zu bilden. Dieses Gebiet 'industrieller' Aktivität, dessen Oberfläche (mit Unterbrechungen) mit Feldsteinen gepflastert war,

blieb über das frühe und mittlere Cadbury hinweg in Gebrauch. Der Umkreis des Berges war in der frühen Periode zunächst durch eine Reihe von Feldbegrenzungen, Wällen und Zäunen markiert—bis der erste holzverkleidete Steinwall gebaut wurde. Hinweise auf etwaige frühe Toranlagen, die zu den frühen Phasen der Umfassung gehören, sind durch spätere Erosion und Bauaktivitäten im Gebiet der südwestlichen Tordurchfahrt verloren gegangen.

Das mittlere Cadbury stellt die Hauptperiode der Besiedlung innerhalb der Höhenburg dar. Innerhalb der Grabungsflächen wurden über das östliche Plateau hinweg und entlang des sich formenden Hohlweges am nördlichen Berghang Rundhäuser gebaut und immer wieder neu gebaut. Ohne Zweifel gab es sie häufiger im Inneren und es scheint wahrscheinlich, daß solche Häuser auch in den Löchern errichtet wurden, aus denen beim Bauen und Erneuern des Erdwalls der inneren Wallanlage Erde gewonnen wurde. In dieser Periode wurden die meisten in den Felsen gehauenen Vorratsgruben eingetieft und zugefüllt. Während einige von ihnen mit bestimmten Wohngebäuden verbunden gewesen sein mögen, wurden andere auf den freier liegenden und offenbar unbesiedelten Teilen des westlichen Plateaus gegraben. Während der gesamten Periode akkumulierten sich weiterhin Überreste und Feldsteinpflasterungen, die mit Fertigungsaktivitäten auf dem Plateau in Verbindung standen. Ferner gibt es Hinweise darauf, daß Teile dieses Gebietes von der Siedlung und Vorratshaltungsaktivitäten, die um sie herum stattfanden, abgezäunt waren. Die äußeren Linien der Wallanlagen wurden während des mittleren Cadbury gebaut, und im südwestlichen Eingangsbereich entwickelte sich eine komplexe Abfolge von Torbauten und zugehörigen Wachhäuschen. Diese Torbauten erforderten unter anderem das Verkleiden der Wallenden auf beiden Seiten der Fahrbahn, die durch Gebrauch erodierte.

Es scheint möglich, daß die Besiedlungsintensität schon vor dem Anfang des ersten Jahrhunderts n. Chr. und dem Beginn des späten Cadbury zurückzugehen begann. Der sich ändernde Charakter der Anlage wird angedeutet durch die Bestattung einer Anzahl von Kalb- und Rinderkadavern auf genau derjenigen Fläche des Plateaus, die zuvor, im späten mittleren Cadbury, für Fertigungsaktivitäten genutzt wurde, sowie durch das Fehlen von Gebäuden und die nur wenigen Gruben, die zur späten Periode gehören. Die Anlage wurde in der späten Periode jedoch weiterhin genutzt, und die innere Wallanlage und Tordurchfahrt wurden erneuert. Doch aus dem späten ersten Jahrhundert n. Chr. findet sich in der Tordurchfahrt eine Zerstörungsphase, zu der eine Ausdehnung fragmentierter und teilweise verbrannter menschlicher Überreste, Waffen und Kleidungsteile gehört. Alles spricht für eine römische Militäraktion gegen die Bewohner der Höhenburg. Nach dieser Zerstörung wurde eine Fahrbahn durch das Tor gelegt, die Tordurchfahrt in vier Phasen erneuert und eine Gruppe römischer Holzbaracken im Inneren der Anlage errichtet. Zur endültigen Zerstörung der Tordurchfahrt kam es durch ein Feuer, wahrscheinlich im zweiten Jahrhundert n. Chr. Ein Gebäude, das in das mittlere bis späte erste Jahrhundert gehört, wird für einen kleinen Holzschrein gehalten, der auf dem Plateau gebaut wurde. Daneben gibt es Anzeichen dafür, daß eine römische Mauerstruktur, vielleicht ein Tempel, auf dem Berg errichtet wurde. Es gibt jedoch keine Hinweise auf spätere römische Aktivität und somit auf eine Kontinuität bis in die Periode der frühmittelalterlichen Wiederbesiedlung des Berges.

Übersetzung: Cornelius Holtorf

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1 Defining the problem

The intellectual framework

Writing Cadbury

by John C Barrett

Books are meant to be read and what is gained from that reading depends upon two things; the way the text has been written, and the expectations which the reader may have about that text, what it should say, and how it might be read. This section explains some of the thinking behind the writing of this book, because that thinking assumes a certain range of approaches from you, the reader.

The tradition of excavation reportage is that publication represents a written record of discovery. The report therefore describes the material remains and their stratigraphic relationships as these were observed and recorded in excavation and post-excavation analysis. The historical significance of these findings may then be considered. There is normally a clear distinction between reportage as the factual description of material on the one hand, and interpretation which suggests what the material might mean historically on the other. Excavation reports also appear to be written for consultation, as a quarry for information, rather than as a narrative account to be read from beginning to end.

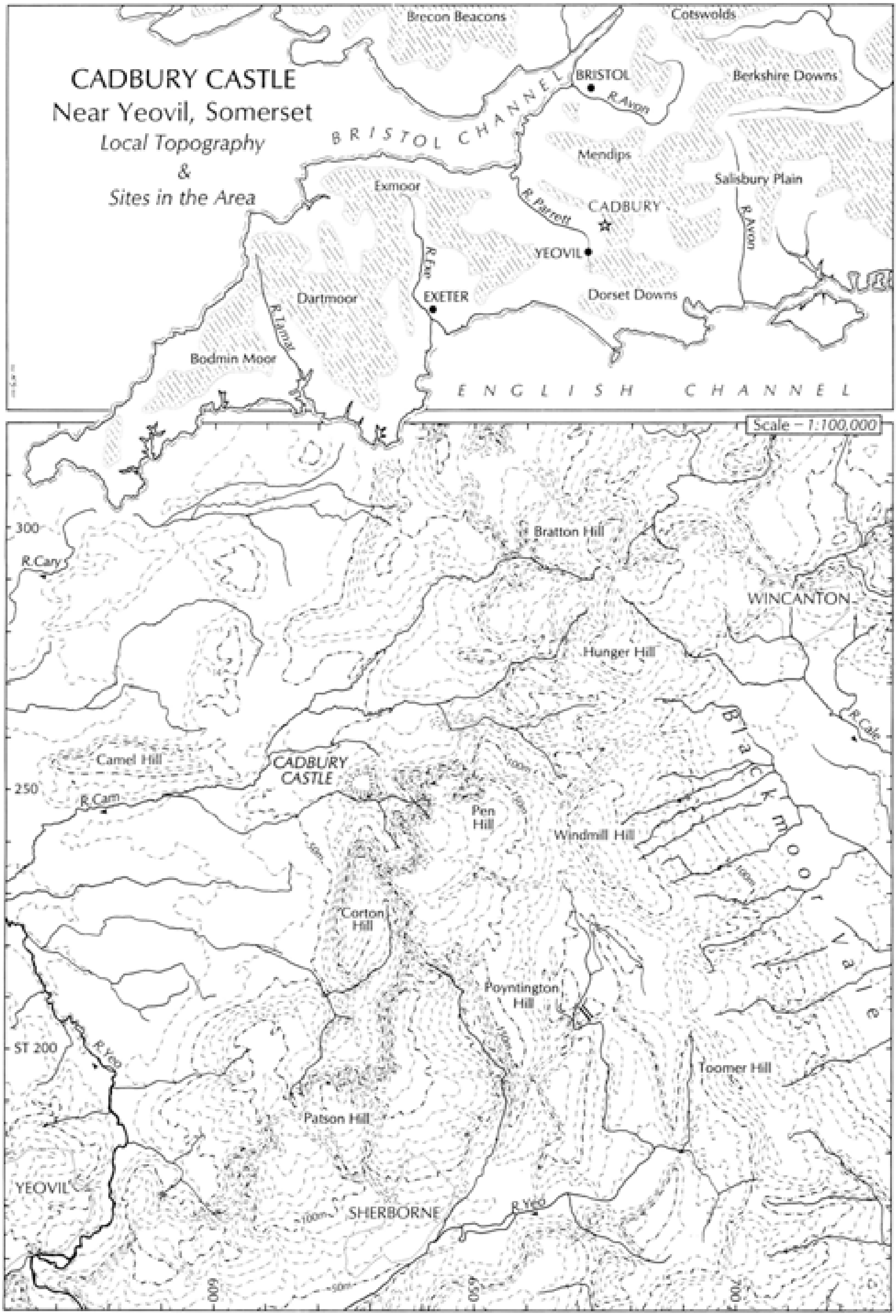
This report attempts to shift the balance towards interpretation and towards narrative. This does not mean that the description of material has been abandoned, but neither has it been accepted as valuable in its own right. Instead description has been taken to serve a larger purpose – understanding the later prehistoric occupation of Cadbury Castle.

There are two important ways in which this approach determines the format of this book and makes it rather different from other excavation reports. First, the book is written as a narrative account. It embodies a developing argument about the way the hill was physically transformed and occupied throughout the first millennium BC and the early centuries of the first millennium AD. There are two strands which build this narrative. Firstly we establish the research aims of the project and the analytical procedures adopted to interpret the material. Secondly we describe the changing physical conditions which were available to those who occupied the hill in the first millennium BC and early in the first millennium AD, the consequences of that changing occupation in terms of the pattern of activities undertaken, and the ways the occupants may have understood, and thus have claimed some control over, their own lives.

The chapter sequence of the narrative is structured in the following way. The research priorities of the excavation and post-excavation programmes, within the wider and changing context of Iron Age studies, are considered in Chapter 1, as are the physical form of the hill and the way the archaeology of the hill was approached between 1966 and 1973. To explore those research priorities through a given body of material demands that certain analytical procedures be put in place and in Chapter 2 two such procedures are discussed. The first involves establishing a chronological framework through which the complex and diverse archaeological remains encountered on different parts of the hill may be ordered. Such an ordering is an obvious simplification of the reality of processes which operated at a different pace and frequency from each other. The chronological sequence is therefore established according to principles which we choose. These are described in the second chapter and differ in certain important aspects from the approach taken in earlier interim reports on Cadbury Castle. The second difference in the way this report is structured concerns the approach taken towards the publication of the artefacts. The aim has always been to undertake an integrated study of this material and the form of that integration is established in Chapter 2.

The next ten chapters concern an account of the occupation of Cadbury Castle over a millennium, commencing from the eighth century BC. Chapter 3 describes the way the hill was enclosed by a series of banks and the way the inner bank in particular was refurbished on a number of occasions. Chapter 4 covers the complex remains uncovered in the excavated south-western gate, while Chapter 5 describes the evolution of the architecture of the hillfort interior. In many ways these three areas represent very different kinds of archaeology. The inner bank is made up of a massive accumulation of soil, stone, and artefacts, while the dominant image of the gateway is one of long-term erosion. The archaeological deposits in the interior are mainly represented by rock-cut features although some important surface stratigraphy survives. These differences are more than simply a matter of form; they chart differences in the way people lived on and used the hill. The earthworks were built in periods of intense activity which focused on certain parts of the hilltop perimeter; refurbishment of the gate similarly involved large-scale building work. A large amount of the archaeological stratigraphy which makes up these structures was therefore laid down in these distinct Episodes of activity between which passed periods of stability and erosion. The interior may have seen more routine and small-scale patterns of rebuilding, with the steady accumulation of debris associated with the day to day activity of occupying the hill.

The earthworks, gateways and buildings were the physical conditions once occupied by people, but so were the artefacts which were recovered by the excavators. We seek to recover this history of occupation and the point is explored in Chapters 6, 7, and 8 by grouping the material in relation to the human body, the way it was clothed, fed, and the ways it may have acted,


CADBURY CASTLE
Near Yeovil, Somerset
Local Topography
&
Sites in the Area
Brecon Beacons
Cotswolds
BRISTOL
R.Avon
Berkshire Downs
BRISTOL CHANNEL
Mendips
Salisbury Plain
Exmoor
R.Parrett
CADBURY
R.Avon
YEOVIL
R.Exe
Dartmoor
EXETER
Dorset Downs
R.Tamar
Bodmin Moor
ENGLISH CHANNEL
Scale – 1:100,000
300
Bratton Hill
R.Cary
WINCANTON
Hunger Hill
R.Cale
Blackmoor Vale
Camel Hill
CADBURY CASTLE
100m
250
R.Cam
Pen Hill
Windmill Hill
50m
100m
Corton Hill
Poyntington Hill
ST 200
R.Yeo
Toomer Hill
Patson Hill
YEOVIL
100m
SHERBORNE
R.Yeo
50m
600
650
700

before turning, in Chapters 9, 10 and 11, to consider the routine control of resources and the spatial regularities by which those bodies – those people – organised their activities within the hillfort. There is therefore no single report on the artefacts organised by material in this publication. Instead major groups of artefacts are discussed in the stratigraphic contexts in which they occurred, and artefacts are then grouped and discussed according to the history of the human presence.

Throughout the text a certain amount of supporting information is required to sustain the detail of the argument or to furnish greater detail in the description of the material. These working data are gathered in Chapter 13 and cross-reference is made to this chapter where necessary. This final chapter represents a pathway into the archive of records and artefacts now held by the Somerset County Museums Service.

Ultimately this book is about the way people made one dramatic hill their own place in the first millennium BC and early first millennium AD. This involved the remaking of the hill by the building of enclosing banks and gates and the construction of roads, buildings, and other facilities within the interior, and the occupation and use of those facilities. Chapter 12 reviews this process of the making and ultimate destruction of an Iron Age community in terms of our new understanding of the period.

This book represents the latest, but by no means the last, research programme to build upon the excavations at Cadbury Castle, Somerset. It covers the archaeology of the later prehistoric and Romano-British periods on that hill. The excavations took place between 1966 and 1973, and the post-excavation programme began in 1991. Both research programmes are of their time. A companion volume (Alcock 1995) deals with the archaeology of Early Medieval Cadbury; at times both volumes touch upon the same material but from slightly different perspectives. Alongside these two publications there exists an extensive archive of excavated material, site records, and specialist studies which have contributed to these publications. The latter are given bibliographic citation in this report. Future researchers will work between these different sources of information as well as drawing upon the physical remains of the hill itself.

The research programme 1965–94

by John C Barrett

The multivallate hillfort of Cadbury Castle sits on a free-standing and steeply scarped hill at the eastern border of the county of Somerset (ST 62 25) (Fig 1). The steepness of the hill contributes substantially to the impressiveness of the earthworks, although the visual effect from the surrounding landscape is masked by today's tree cover (Fig 2). The inner bank encloses a domed hilltop 7.5ha in area which rises to a plateau elevated some 76m above the surrounding countryside.

Fig 1 Location map and local topography

Fig 2 View of Cadbury from the north-east

The dissected limestone hills of Somerset, to which Cadbury belongs, abut the chalk uplands of Wessex to the east. To the south lie the hills of Dorset and south Somerset while the land to the north opens into the Somerset basin and the lowlands of the Levels.

In terms of size (by way of comparison the interior areas of Danebury, Hampshire and Maiden Castle, Dorset are just over 5 and 17ha respectively), multivallation, and the length of its Iron Age occupation, Cadbury Castle belongs among the developed hillforts of the southern British Iron Age (Cunliffe 1984, 24). It lies on the western margins of the main distribution of such hillforts which extends from Wessex northwards into the Welsh Marches (Fig 3). The considerably more massive but little understood site at Ham Hill lies 10.7km to the south-west.

Cadbury Castle has long attracted antiquarian interest (see below), although before 1966 the recovery of artefacts was restricted to surface collection with only very limited excavation. Indeed, the only documented example of the latter is the work of St George Gray in 1913 (Gray 1913). In 1965 the Camelot Research Committee was formed, representing the convergence of widespread interests upon: the mythical association of Cadbury Castle with Camelot; the potentially historical association of the site with Arthur; and the recognition of imported Mediterranean pottery dating to the fifth and sixth centuries AD among the existing collections of material (Radford and Stevens Cox 1954–5). Leslie Alcock was appointed as field director and a reconnaissance excavation in the summer of 1966 was followed by excavations every summer thereafter until 1970. A short final season's work took place in April 1973. The earlier finds and historical references made it clear that any excavation on the site would encounter the evidence for a long history of occupation and this proved to be the case with occupation extending, intermittently, from the early Neolithic to the Saxon periods. Despite the Research Committee's obvious concern with the

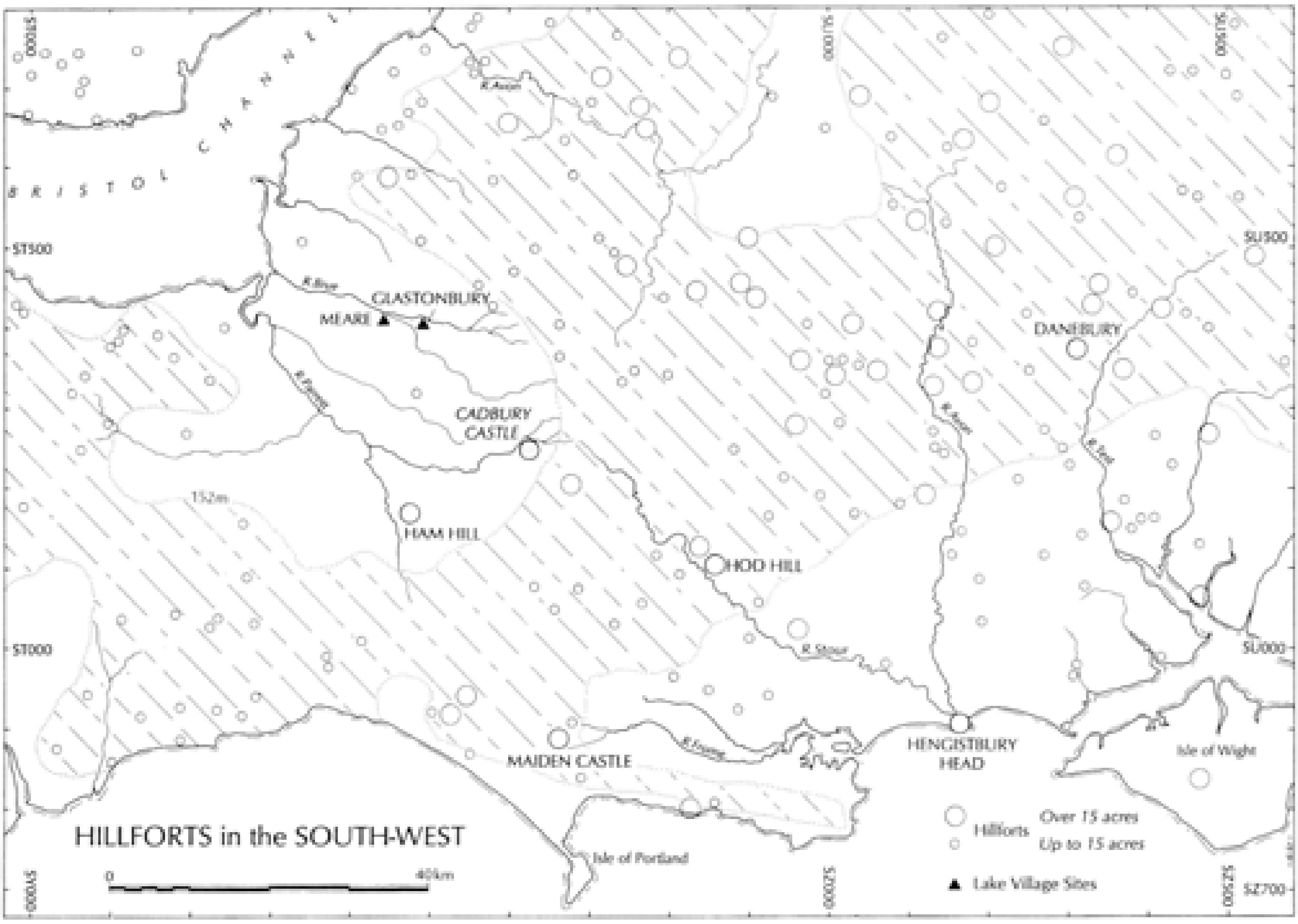


Fig 3 Map showing hillforts in the south-west

fifth and sixth centuries AD, the research programme remained committed to a holistic approach, dealing 'fairly and impartially with all phases of the site' (Alcock 1982, 357).

The form of the hillfort, the evolving excavation strategy, and the quality of the data are all issues which will be considered below. We must begin with the issue of research strategies and identify those which have guided an archaeological programme lasting a little under thirty years. Initially no specific research design was published; the 1966–73 excavations were simply explained as having the broad aim of establishing the archaeological context for the various loose historical and archaeological associations which Cadbury Castle had accumulated since the sixteenth century. The clearest indications of research priorities are given in an early paper which allowed the excavator to think aloud after the first season's work (Alcock 1967a) and in the two final interim statements (Alcock 1972a; 1980).

The concern of this publication is with the later prehistoric and Roman period occupation of the hill. There is only a cursory reference to earlier prehistoric periods where they lend perspective to the long-term use of the hilltop (Chapter 3). This was the base upon which the early medieval fortifications were built and it represented the guarantee that, whatever else happened in the search for Arthur 'excavation here could not utterly fail' (Wheeler in Alcock 1972a, 7). However, although research into the fortification and occupation of early medieval Cadbury has always maintained a regional perspective on the political and military role of the site (cf Alcock 1971; 1995), the study of Iron Age Cadbury has had a more site-specific focus. From the beginning, analysis of the later prehistoric settlement was concerned with on-site formation processes, including the structural sequence and artefact associations. Alcock expressed this as forming a 'site structure model' which was 'the framework of workable hypotheses which explain, in terms of human building (and other) activity, the features observed and recorded on site'. Such a model was necessarily 'site specific' (Alcock 1980, 658–9).

The excavation programme was therefore not accompanied by the kind of landscape survey we would now associate with the work at Danebury (Palmer 1984) and Maiden Castle (P Woodward 1991, 9–36), nor indeed by any detailed regional consideration of the Iron Age in south-western Britain. Current research by Birmingham Archaeology Field Unit will undoubtedly redress the balance for Cadbury. To understand the reasons behind this more restricted approach, and the way the approach has been developed in this report, it is necessary to consider the place and the period of the excavations in the context of Iron Age studies in Britain in the 1960s and 1970s.

By the early 1960s two competing cultural models existed for the British Iron Age. One had been worked up over 30 years by Christopher Hawkes and it established a regional framework for England across which the sequential flows of cultural replacements and influences could be mapped. These tides of cultural development were driven by continental forces of migration and invasion (Hawkes 1959). Adopting this scheme (and attempts were made to extend it to Scotland and Wales; Piggott 1966 and Alcock 1972b) meant that excavators would seek to refine the particular regional cultural sequence to which their sites belonged by means of the stratigraphic analysis of culturally significant artefacts, and they would explain the structural developments occurring on those sites (including periods of defensive refurbishment) as the consequences of cultural migrations. As Sharples has recently emphasised, it was such an approach which lay behind Wheeler's campaign of excavation at Maiden Castle, Dorset (Sharples 1991a, 1–2). The second model emerged as a critique of the first when Hodson demonstrated that certain key cultural associations could not be sustained and did not support the interpretations placed upon them, namely as indicating horizons of cultural transformation (Hodson 1960; 1962). As a result Hodson was able to propose that the British Iron Age was dominated by indigenous cultural development to which the contribution of continental cultures was limited (Hodson 1964).

This debate was taking place at a time when the 'invasion hypothesis', as a means of explaining change generally in British prehistory, had come under attack (Clark 1966). That hypothesis depended partly upon the quite subjective recognition of 'cultural influences' on such things as pottery, but it also depended upon data drawn from what were very often poorly recorded excavations. Alcock quickly recognised that the Cadbury Castle excavations could contribute methodologically and substantively to the question of cultural development. In contemplating the range of Iron Age pottery from the site he wrote of the failure of the 'present confusion of classificatory systems' to deal with such an assemblage and of his hope that analysis could take place through a scheme for Cadbury 'firmly based on stratification and independent of hypothetical models' (Alcock 1967a, 50). The 'site-structure model' for Cadbury, with the analysis of stratigraphy and the recognition of the residual nature of many of the artefacts, would, it was hoped, lead to an 'intrinsic typology', defined as 'the typological study of the Cadbury material without reference to other sites' (Alcock 1980, 682). This emphasis, as a first step in analysis, on a site-specific sequence of material differs from the approach later adopted at Danebury, where the nine ceramic phases used to describe the sequence of material from that site include phases which 'were allowed for, to contain external evidence, but were not demanded by the Danebury material itself' (Cunliffe 1984, 233). That pottery was used as the single artefact type to build the Cadbury sequence (see Chapters 2 and 13) reflected both on the enormous quantities of the material which had been recovered and on the central role pottery had always played in cultural analysis.

Along with the establishment of a potentially indigenous cultural sequence for the British Iron Age came a move away from cultural narratives which 'never seemed to explain anything, other than in terms of migrations...and supposed influences' (Renfrew and Bahn 1991, 34). The move relocated the explanation for changes witnessed in the material record among indigenous processes, in particular among forces of economic change. This shift in thinking affected the analysis of both settlement sites and artefacts. Settlements, including hillforts, were examined for the role they might have played in a particular evolving system of regional economic organisation. The first attempts to understand southern British hillforts as the product of indigenous processes therefore looked towards the different roles they may have played in the agricultural economy (Bradley 1971a and b), and the role of the hillfort as a 'redistribution centre' for a regional economy has been one of the initial models used to understand the development of Danebury (Cunliffe 1984). Similarly, artefact studies have emphasised a concern with the organisation of production and distribution in place of stylistic comparisons. A classic example of this was Peacock's work on the geological sources for the clays and fillers used in the production of Iron Age pottery from south-western Britain (Peacock 1968; 1969). Collis suggests this work demonstrated that 'the distribution of a certain style of pottery was not an indicator of a group of invaders (Hawkes), or of a society which had common cultural origins (Hodson), it was an economic pattern of production and exchange', although he goes on to qualify the point, noting that in pre-capitalist societies 'goods do not necessarily follow logical economic patterns, but flow along social channels, such as kinship or political networks' (Collis 1994, 127–28).

The analysis of Iron Age Cadbury Castle, up to and including the publication of Alcock's 1980 paper, tended to operate within the terms of reference of the traditional cultural paradigm. Certainly issues other than a simple cultural sequence for the site were addressed. The extensive excavations of the interior were a deliberate attempt to reveal the extent and organisation of building activity within a hillfort interior, rather than concentrating effort upon the rampart sequence. And the recognition of such on-site activities as metalworking was seen to have a particular significance (Spratling 1970). But the shift from 'cultural' to 'processual' archaeology was not really a feature of the thinking in either the excavation programme or in the first phase of post-excavation work. One resulting issue has been the lack of concern shown for evidence relating to the local agricultural economy; the extensive sampling for charred floral remains was only instigated on Iron Age sites through the work of Martin Jones in the late 1970s (eg Jones 1978). Moreover, work on the huge animal bone assemblage from Cadbury Castle – a data set which the Danebury project has demonstrated has considerable implications for our understanding of southern hillforts – was consistently under-resourced.

If the study of the Iron Age aspects of the site has a character peculiar to the time of the excavations, then the approach taken to the Roman period has been different again. Roman occupation on the hill has long been recognised through the persistent recovery of coins and by reports of masonry and tile brought up by the plough. Roman artefacts and structures were also identified during the excavations, and a Romano-British settlement was investigated at the foot of the hill in South Cadbury village between 1965 and 1967 by John Laidlaw (1966; 1967). The Roman period activity was assigned to two quite specific periods and to two quite distinct processes. The first belonged to a period of mid- to late-first-century military activity which was associated with destruction deposits in the south-west gateway, with the 'barrack' buildings in the interior, and with the recovery of an important group of military metalwork (as well as coins and pottery). Alcock saw this activity as heralding the end of the Iron Age and representing some kind of 'policing' and clearance of the hilltop (Alcock 1972a, 159, 170). The precise historical context for this seemed unclear and to post-date the mid-40s campaign of Vespasian. The second period of activity was dated to the fourth century AD and was believed to be connected with the construction of a late pagan temple on the hill, although the physical remains of such a structure remained tantalisingly slight (Alcock 1972a, 173). Apart from the intrinsic interest of this activity, it was important to establish whether or not this 'religious revival was a prelude to the artistic, cultural and political revival of the 5th and 6th centuries' (Alcock 1967a, 51). By the beginning of the Cadbury programme Alcock was convinced that such continuity was unlikely while also recognising that fifth-century activity would be almost 'impossible to prove archaeologically' (Alcock 1967a, 52). The idea of a break between late Roman activity and the refurbishment of the hillfort in the early medieval period has, however, remained and it informs the logic behind the split between this volume and its companion (Alcock 1995).

In 1991 the post-excavation programme for Cadbury Castle began again in earnest. Some parts of the work were already in existence, others had to be initiated, and all inherited data which had been structured by a particular set of earlier excavation priorities. In some senses, therefore, the recent programme has been the re-excavation of an excavation archive. The broad aim of this programme has been to produce a publicly available account of the results of the excavation which would encourage future research where such research could, in turn, draw upon an adequately organised and curated archive. This objective will only have been achieved if this publication is seen to do more than simply catalogue the residues of the earlier excavation programme; the post-excavation project has had to pick up the earlier priorities and rework these within a more recently formulated research programme.

As outlined above, explanations of the role and development of Iron Age hillforts have tended to consider the possible social and economic roles of this class of monument in the organisation of certain kinds of regional system. A slightly different approach, and one which will be followed here, would be to see the hillfort as one location in a complex of overlapping landscapes which were inhabited by a number of different communities. These are social landscapes; they are the landscapes through which people moved and upon which they worked. Each landscape describes the routine activities of people on a daily or a seasonal basis by which a particular community came to be identified. The hillfort, like the settlement or any other location, can be considered as one place where a number of these landscapes (or communities) converged and thus the place where yet another community, defined by those who inhabited these places at certain times of the year, came into being.

From this perspective it becomes a priority to understand the range and the organisation of activities which took place from time to time on this hilltop. The post-excavation programme was formulated with the idea of investigating the developing architectural organisation of the hilltop within which these various activities took place. Such activities were undertaken by people, the obvious point often lost in the detailed analysis of deposits and artefacts. Here we attempt to treat the architecture of the hill as the setting which was occupied in any one period by people who used and worked upon a wide range of material resources. This emphasis is maintained by relating our discussion of the artefacts directly to the human body – the way it was clothed, fed, and the tools that it used – before considering the residues of those activities in terms of the spatial distribution of archaeological deposits across the hill. It was hoped that this perspective would maintain Alcock's original emphasis upon a 'site-structure model' while developing our understanding about what may have taken place on this hilltop some two thousand years ago.

Antiquarian and archaeological research 1542–1965

by P W M Freeman

There are a number of antiquarian and more recent accounts of Cadbury Castle which informed the original research programme. The earliest extant account is that of John Leland in 1542 (Smith 1907). Additional accounts, but ones which do not appreciably improve on his description, include those by: Camden (1586); Selden (1612, 54); Stow (1615, 55); Speed (1627, 23); Thomas Gerard of Trent (1633, 189–91); Musgrave (1719, i, 172, which included a detailed description of the site coupled with his own measurements and a drawing of it which shows, complete with smoking chimney, a house on the hilltop); Collinson (1791, 71–3); and Gough (1806, i, 92). However, it is Stukeley's description of 1724 which stands out in these early accounts. His drawing of Cadbury shows a tower or spire of a chapel protruding through the trees on the eastern slopes of the hill (Stukeley 1776, centuria I, pl 43 reproduced in Alcock 1972a, 11, pl 2). It has to be said, however, that most of these reports were largely unselective in what they described. From them, we might note that the hilltop had already been extensively ploughed (Leland), that many Roman copper, silver, and gold coins had been recovered from in and around the hill (Leland), and that along with round pebbles,

> immense quantities of Roman coin, chiefly of Antonius and Faustina: various other Roman relic – camp-utensils and remains of military equipage, urns, paterae, fibulae, pavements of hypocausts, bolts and hand-grindstones had also been picked up. (Stukeley 1776)

With respect to more critical discussions of the site, the starting point for our purposes should be Dymond (1882), who also included a plan of the site he had made in 1873. Until then the only readily available plan of the site was that made by Crocker in 1834 and published by Phelps (1836, 118–19, pl viii). The *Journal of the British Archaeological Association* (1868, 187–8) records that Grover exhibited plans and sections of Cadbury surveyed under his own direction and on which he invited comment. Why he had prepared these plans and what happened to them is not recorded. Along with a detailed report of the visible remains, Dymond's account paraphrased earlier descriptions of the site. He also devoted special comment to Warre's (1818) description of it. While Dymond preferred to dismiss the earlier claims that pavements, hypocausts, door jambs, and vaults had been found at Cadbury, he noted that when the Somerset Archaeological Society visited the site in 1857 fragments of Romano-British pottery and slingstones were found and that similar material (and Roman coins) was being exhibited there in 1870. The point in repeating these earlier accounts is to emphasise firstly that it was recognised even in the late medieval period that the site had already been heavily ploughed and secondly that clearly Roman material was recovered from the hilltop and that it could in part be zoned.

Dymond's description remained the most substantial and influential description of the site for some time. It owed much to Kains-Jackson's (1880, 32–3) description and to Collinson's account (1791). In 1890 Bennett, former rector of South Cadbury, repeated and reviewed the evidence for the Camelot-Arthur connection which Leland had apparently been the first to make (Bennett 1890). This highly idiosyncratic but readable and valuable account is important for a number of reasons. Not only is there a description of the remains and the observation that Cadbury had to be an important site because of its relationship to neighbouring sites and to known ancient roadways, but there was also a realisation of the fact that the site had to have a pre-Roman antiquity. His account also preserves a number of contemporary and older stories about the site. Working from the basis that there had to be some elements of reality behind these tales, Bennett also related the results of his own diggings on the hill. These were apparently on a house platform inside the site as well as a cross-section across part of the ramparts. From the latter he was able to conclude that:

> ...it seems that there must have been a considerable interval between the beginning and the completion of the rampart, and that a rude race who began it had to give way to another in a higher state of civilisation, and this it would seem, from the differences in the remains at different levels, may have happened more than once. (Bennett 1890, 10)

He also confirmed Leland's observation that 'Roman coins...are very numerous still ...and they are still found...most commonly at the eastern end of the hill'. While he believed the Roman evidence to be that of an army summer camp(s) he argued that the visible remains had to originate from the fifth century AD. Most enigmatically of all, Bennett also reported that:

> ...One other relic of these days [viz post-Roman, Arthurian Cadbury] has been found lately. In a field called Westwoods at the foot of the western end of Camelot, and close beside King Arthur's Lane, there are some trenches filled full with skeletons of men and boys: no females. The bodies have been filled in pell mell, with none of the respect and care men bestow upon those who have died beside them in battle. Here it seems we have the graves of the last of the Britons of Camelot. It may have been they were slain upon their ramparts and their bodies dragged down here to a dishonoured grave. It may be they were cut off when the city was lost and they were flying away by the side opposite to that upon which the attack had fallen. (1890, 18)

Like all good mystery stories, this one leaves one wanting to know more. Although we can discount the Arthurian, and indeed the post-Roman, date on the grounds that subsequent excavations have not revealed a violent end to post-Roman Cadbury, how Bennett could say there were definitely no females leaves one wondering what the basis was for this assertion. Bearing in mind what was subsequently found at the same south-western gate at Cadbury, it is attractive to link Bennett's report with events at mid-first-century AD Cadbury (see Chapter 4). However, this is speculation. The graves could as easily have been medieval plague pits as anything else.

Although the site was described by Allcroft (1908, 95–9) and Burrow (1924, 75–6), the next major statement came with Bothamley's contribution to the *Victoria County History* of Somerset (Bothamley 1911; cf Boyd-Dawkins 1906 203–4), which although reliant on Bennett's account also described in some detail the physical scale of the site.

The first systematic excavation took place between 17–24 June 1913 under the direction of St George Gray (1913). This report is valuable for a number of reasons. Working from Bennett's evidence of antiquarian accounts and local mythology, St George Gray published some of the material that he had donated to Taunton Museum (now Somerset County Museum). In addition he reviewed the evidence for occupation in the area of the hillfort. St George Gray opened up five trenches: three in the vicinity of the south-west gate, one across the inner defences close to the same gate, and one on the highest part of the interior. These trenches proved what St George Gray called 'Late Celtic' as well as Roman occupation (along with indications of Neolithic use) of the hilltop. He was also struck by the absence of any Bronze Age material. Of the trench across the defences he concluded:

> ...it is important to be able to record the fact that nothing of earlier date than the late Celtic period was found on the bottom. Roman occupation of the camp has also been proved by the presence of Roman pottery, including terra sigillata. But the most surprising constructional feature revealed in this digging is the walling and paving at the top of the south-western entrance. (1913, 24)

After St George Gray the pace of investigation at Cadbury Castle slackened. In 1928 Barrow (1928) described the earlier work at the site, as did Dobson in 1931 (Dobson 1931, 233). Interest in the site, however, did not die but was revitalised in the years after the Second World War. The evolution of what became the research programme for the site has been extensively recounted by Alcock (1972a). The story goes back to the period 1954–62. In 1955 Radford and Stevens Cox published the finds from Cadbury up to that year (Radford and Stevens Cox 1954–5). For future work at the site, the crucial element in this was Ralegh Radford's recognition of sherds of pottery of a type which he had identified from Tintagel in the 1930s and had demonstrated must be of Mediterranean origin, of the fifth to sixth centuries AD. The next development came with 1962 when Mary Harfield published the results of her own twice-weekly visits to the site between 1954 and 1959 (Harfield 1962). In this she drew attention to the discovery of Neolithic-type flints and pottery as well as to the existence of two contemporary 'working floors' on the north-facing slope at Cadbury. Bronze Age, Iron Age, Roman, and 'Dark Age' artefacts were noted as well the existence of a multi-period rubbish heap on the south face. She also mentioned the presence of masonry, perhaps more modern than ancient, in and around the supposed east gate. In addition, Harfield was instrumental in bringing about the first ever archaeological aerial photographs of the site, although the Royal Air Force had photographed the site as early as 1928. In 1955, while the site was covered by a crop of oats, Harfield noticed marks in it; she persuaded the commanding officer of a nearby Royal Naval Air Station to have a number of photographs taken. She published two of these, one showing what she believed to be an Iron Age bank and ditch along with storage pits and the other with earlier Iron Age defences. Alcock subsequently republished these photographs (1972a, pls 4, 5).

The hill and its earthworks

The hill: geology

by H S Torrens with P J Ashmore and H C Prudden

Cadbury Castle was created on one of a series of outliers to the west of the main Middle Jurassic (Inferior Oolite) escarpment running north-south through Somerset and Dorset (Fig 4a). Some of these outliers, like Brent Knoll and Glastonbury Tor, are far removed from the main escarpment to which they were once joined; others, like South Petherton, Cadbury and Creech Hill, lie nearer the present main outcrop of the rocks of which they are formed. Each of these last is capped by a limestone of a different age.

The origin of the Cadbury outlier has been ascribed to subterranean drainage and erosion alone, but the fundamental cause is tectonic. Bristow (1855) seems to have been the first to record the major fault downthrowing north and running east-west along the southern foot of the hill. This connects westward with the Camel Hill Fault, similarly aligned but downthrowing in the opposite direction (Mottram 1961, 198–9). This latter fault, with the Sparkford Fault on the north side, also isolates the Blue Lias outlier of Camel Hill. Beyond Downhead the fault becomes untraceable in the Lower Lias clays, but is perhaps connected with the major thrust faulting running along the north margin of the Polden Hills to the west.

The Cadbury fault connects eastwards with the Mere Fault, described in detail by Mottram (1961). The effect of this important fault system, most felt at the edge of the Inferior Oolite escarpment, was to isolate an Inferior Oolite outcrop in the region of Cadbury Castle and Compton Pauncefoot which was unprotected on its faulted southern side. Normal processes of drainage and erosion then quickly isolated parts of this outcrop as outliers, the most isolated to the west being Cadbury Castle, with the other outlier of Littleton Hill to the east.

Cadbury Castle owes its shape, steepness, and height to its geological structure and the tectonic processes which initially fashioned it. Both the Inferior

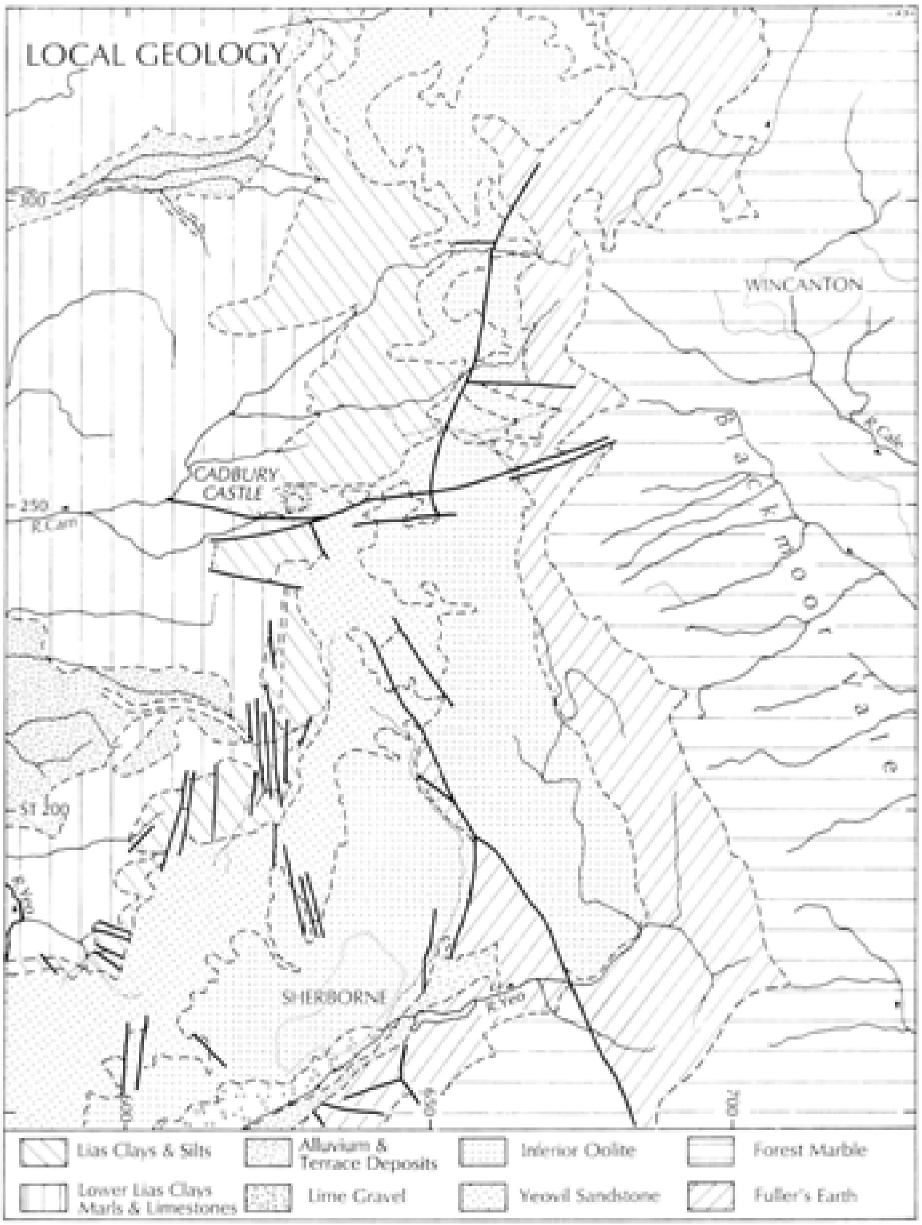


Fig 4a Local geology map

Oolite limestone and the top beds of the Yeovil Sands acted as a strong cap which then resisted erosion, unlike the clays to the west in the Vale of Sparkford. This capping is repeated to the east in Littleton Hill and to the south along Corton Hill.

In a broad sense Cadbury is part of the Yeovil Sand escarpment which extends from Yeovil, although it is not easy to state precisely which processes of erosion have helped separate Cadbury Castle from the main escarpment. However, it is interesting to note that there are several springs near the base of the escarpment to the south of Littleton Hill. The presence of ground water suggests the possibility of increased soil creep in wetter areas, together with removal of material by streams, especially during periods of heavy rainfall. But there are reasons to suppose that both stream activity and mass movements of rock waste were much more important during the colder phases of the Pleistocene Ice Age. Although there is no evidence that the ice sheets ever came as far south as south Somerset there is ample evidence for the presence of permafrost induced by the colder climate. The separation of Cadbury Castle from the escarpment can probably be best explained as a result of accelerated hillslope recession during such periods of periglacial erosion. The location of springs suggests the places where erosion may have been most rapid.

The cap rock to the Cadbury outlier is Inferior Oolite. However, the thickness and exact sequence of rocks in the immediate neighbourhood are still not known because there are no permanent exposures. The basal Lower Lias and Rhaetic Rocks are well known from the nearby Sparkford inlier (Kellaway and Wilson 1941, 138) but the complete sequence of horizons present in the remainder of the Lower Lias is unknown. There is a comparable lack of information for the local Middle and basal Upper Lias strata. Charles Moore, who examined these rocks in great

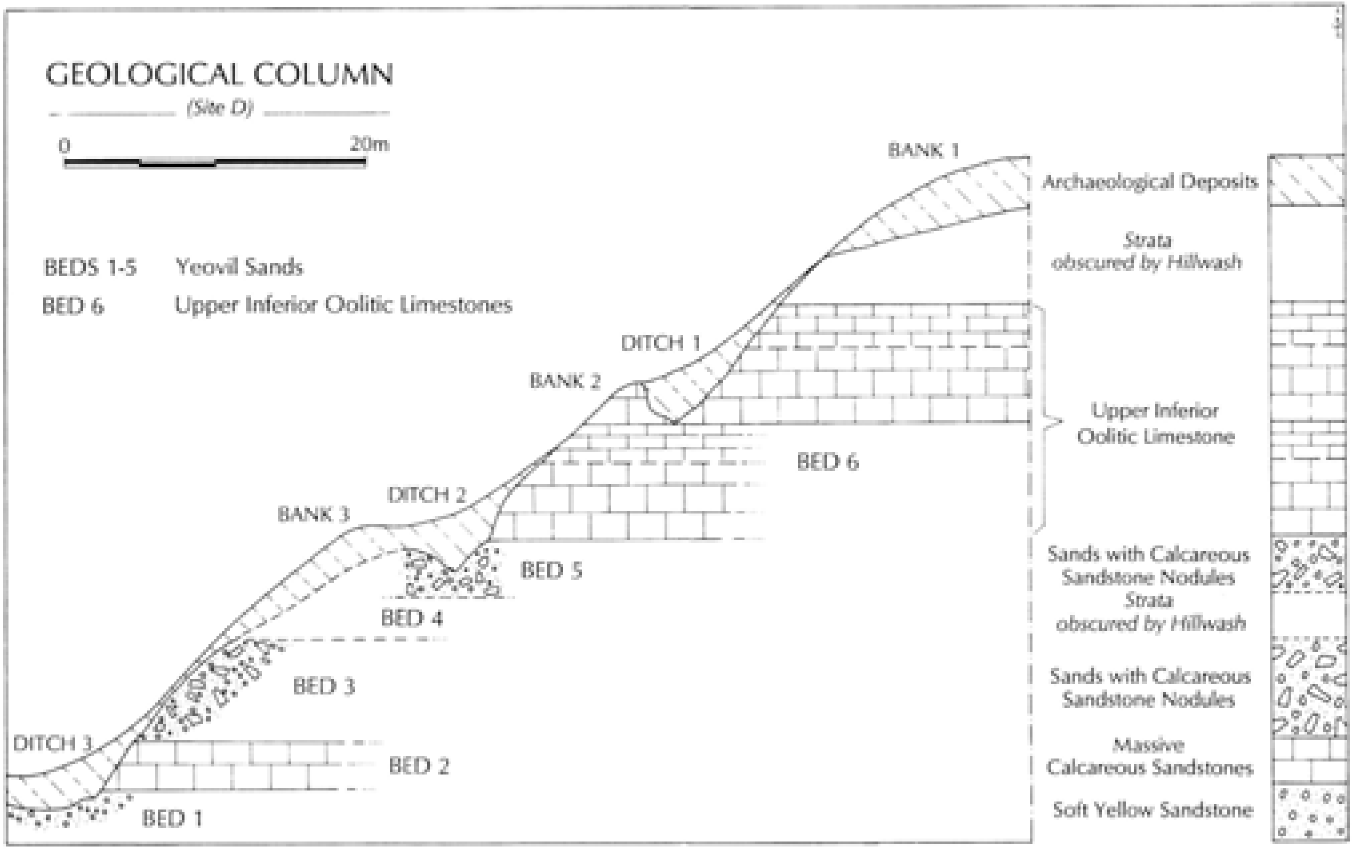


Fig 4b Geological Column

detail throughout Somerset, noted that these beds had been extensively quarried before about 1865 at Sandford Orcas and Rimpton (1867, 126, 140), about 3km south of Cadbury. These localities may well have been the source of the loose imported blocks of Upper Lias limestones seen in the centre of the inner bank (Bank 1) on the eastern side (Alcock 1972a, 25). There do not seem to have been sections visible in more recent times in these strata nearer Cadbury, for Moore (1867, 145) expressly notes 'no sections of the Middle and Upper Lias are to be found between Sandford Orcas and the neighbourhood of Bath', although Richardson (1906 and 1909) did later describe sections in the Shepton Mallet area.

The solid geology exposed during the excavations or visible under normal conditions included parts of the Yeovil Sands, the arenaceous deposit at the top of the Upper Lias, and parts of the overlying calcareous cap rock, the Inferior Oolite. The most complete sequence seen during the excavation was exposed in the main part of sections through the ramparts on the southern side of the hill, where a fairly complete sequence through the upper part of the Yeovil Sands into the basal Inferior Oolite was exposed. The archaeological section, which ran from the inner to outer banks (see p51) was in most places cut down to *in situ* bedrock over a horizontal distance of some 60m and a total depth of some 30m.

This sequence is summarised as follows (Fig 4b). At its base was a soft yellow sandstone. The inner edge of Ditch 3 was here formed by a bed of massive calcareous sandstone which was succeeded by soft yellow sands with nodules of more calcareous indurated material. None of the samples taken proved fossiliferous. Above these soft sands the solid geology was masked by slumped material, until the area of the second hillfort ditch, the bottom and outer side of which were dug down to soft sand containing large blocks of calcareous sandstone similar to the calcareous sandstone further down the sequence.

Above this, with its base forming the inner side of Ditch 2, was a sequence of limestones. This may be subdivided according to its apparent fissility, but it must be noted that the more massive strata occurred on the sides of the ditches where frost shattering will have had less time to be effective, and although it is clear from lower down the section that the builders of the fort deliberately sited their ditches immediately below harder layers of rock, the divisions may not reflect variations in original composition.

The strata here all had a dip estimated at about 12° to the north-west, which is similar to the angle at which limestone outcrops at the base of the inner bank (Bank 1) some 100m to the east.

The earthworks

by Hazel Riley and Christopher J Dunn

Cadbury Castle is located on the north-western edge of the dissected limestone hills between Sherborne and Wincanton, the geology of which is discussed above. On clear days it is possible to see the Bristol Channel, the Glamorgan hills, and the Somerset Basin.

The hill is sub-rectangular in shape with a domed top and rises steeply to some 150m above OD at its summit. To the north lie the Somerset Levels, Glastonbury Tor, and the Mendips, to the west Ilchester and Ham Hill, and to the south and east are the steep escarpments of Pen Hill, Corton Hill, and Parrock Hill. The villages of Sutton Montis and South Cadbury lie close to the foot of the hill, to the south-west and north-east respectively, and the shrunken settlement of Whitcomb (Condick *et al*, 1976) lies approximately 1km to the south. The adjacent hills to the east and south are marked by numerous strip lynchets and traces of other field systems, indicating extensive medieval and post-medieval cultivation.

The site and its immediate environs were surveyed by the Royal Commission on the Historical Monuments of England (RCHME, Exeter Office; Dunn and Fletcher 1993). It was planned at a scale of 1:1000 during the winter and spring of 1993 [illegible]. At the time of the survey, the interior and southern defences of the hillfort were under pasture, while the northern, western, and eastern defences had a cover of woodland and, in places, dense scrub. A Wild TC 1600 electronic theodolite with integral Electromagnetic Distance Meter was used to establish a traverse framework from Ordnance Survey coordinates. Modern detail, the main archaeological features, and a network of temporary control points were recorded with this instrument. Additional archaeological detail was supplied by taped offsets. The contours used to show the topography of the interior were obtained from the detailed imperial measurement contour survey undertaken by Musson in 1966 as a preliminary to the first season of excavation. This survey was converted to metric and interpolated to produce contours at 2m intervals.

The ramparts

The number of ramparts and ditches varies around the defensive circuit. However, there are generally four banks and three ditches, although in places terraces occur instead of ditches. Alcock's site notation was to number the banks and ditches from the inner circuit outwards. The outer ramparts on the east have been destroyed by cultivation. Alcock excavated several sections across the top of the inner bank (Bank 1) and one across the whole of the southern ramparts; most of these are still visible as slight earthworks.

The northern and western ramparts, which extend from the north-eastern to the south-western entrances, are between 100 and 120m wide with a height difference of about 40m from the bottom of the outer bank to the top of the inner bank [illegible] x–x1). The outer bank is breached in two places on the northern side of the hill. The eastern breach (Fig 5, a), caused by a track, is associated with what appears to be an area of pre-hillfort landslip. The ditch incorporates a substantial hollow caused by this landslip and the outer bank swings slightly to the north to follow its edge. The other breach, at Queen Anne's Wishing Well, may also be associated with an ancient landslip but has been damaged by erosion in the immediate vicinity of the well. Dymond (1882, plan facing 110) depicts a pond in this area. The stone wellhead with shell moulding is probably of early eighteenth-century date (NMR ST 62 NW 2). At the north-eastern end of the hill, a slight hollow in the outer bank (Fig 5, b) may be the site of the building shown on a plan of 1834 (Phelps 1836, pl 7). Just beyond this point, the outer bank ends rather abruptly. If it formerly continued eastwards, then any traces of it have been obscured by a hedge bank and by strip lynchets in the adjoining fields. In the easternmost field, a steep scarp, probably largely natural, may originally have been used to strengthen the approach to the northern entrance; its top has been utilised as a cultivation terrace and, later, by a track.

Most of the eastern ramparts have been obliterated by medieval or later cultivation, and what now survives are the two uppermost banks and the intermediate ditch. Towards the south, the outer face of the inner bank is being severely damaged by badger activity. Traces of a third bank are probably represented by a short length of earthwork (Fig 5, c). Excluding this last bank, the defences now have an overall width of between 40 and 50m, with a rise in height of approximately 17m from the base of the lower rampart to the top of the inner bank (Fig 6, y–y1). Below these, the ground falls away in a series of strip lynchets which have destroyed the outer ramparts. These lynchets are now poorly defined, although the fact that they were considered worthy of depiction by Dymond (1882, plan facing 110) suggests that their condition has deteriorated in the last hundred years. Near King Arthur's Well, they are crossed by a later bank, the southern boundary of a garden plot associated with a former cottage (Fig 5, d). This cottage is depicted on an early nineteenth-century map (Somerset County Record Office, SCRO, *c* 1800) and according to Mrs Montgomery, owner of the site, was occupied until the first part of the twentieth century; its site is marked by a low platform. Above it, to the south-west, a prominent hollow on top of the rampart may be the site of another building. A cottage shown by Stukeley (1776, pl 43) below the inner rampart could be either of these buildings.

The southern and south-eastern ramparts, which extend from the south-western to the eastern entrances, are between 85 and 100m wide and rise some 50m from the bottom of the outer bank to the top of the inner bank (Fig 6, z–z1). They are generally well defined and, in places, the bedrock forming the sides of the ditches is visible. The top of the inner bank has a very uneven surface, probably the result of animal burrowing and collapse. Much of the outer ditch and bank has been damaged by badgers. A pre-hillfort land-form may have dictated the marked change in direction of the second bank (Fig 5, e). Cultivation, of medieval or post-medieval date, has in several instances truncated the foot of the outer bank. It has also converted the ditch below the inner bank, between the south-western entrance and Alcock's rampart section across the southern ramparts (Site D), to a terrace.

The whole of the inner bank top was modified by the construction of the *burh* defences of Cadanbyrig (Cadanburh) in 1009 or 1010. Field evidence for this may be represented by a break of slope on the outer face of the inner bank, which is particularly clear on the southern side. Also relevant are a number of exposures of walling on the outer face, revealed by erosion; in all some fourteen exposures were recorded during the survey. The composition of the walling and their relative heights in the bank suggest some (Fig 5, f, g, and h) may be part of the *burh* wall, whereas those on the southern rampart are more likely to be part of the post-Ethelredan work, which Alcock identified most clearly around the south-western entrance. A further exposure (Fig 5, j) could be part of the fifth- or sixth-century defences.

The entrances

There are three gaps in the enclosed circuit, at the south-western and north-eastern corners, and on the eastern side. All three have the appearance of being of considerable antiquity. Only the south-western entrance has been the subject of recorded excavations (Gray 1913; Alcock 1972a and 1980).

The south-western entrance has a deep, curving entrance passage, which funnels traffic up through the southern end of the massive western ramparts. It ends rather awkwardly just below the entrance gap through the inner bank. The disturbed nature of the ground here reflects the extensive excavations undertaken by Alcock, with slight earthworks representing the back-filled trenches. The ramparts to the south of the entrance passage lie on a spur which has been disturbed by later quarrying; however, five banks still survive. These climb above the entrance passage, with the uppermost terminating rather abruptly on the south-east in front, and to one side, of the gap through the inner bank. This terminal could reflect the presence of an earlier route to the gap from the south-west, or it may simply be the result of later modification caused by the cultivation of the inner ditch on the eastern side of the entrance (see above). The western end of the entrance passage is crossed by low scarps; it is unclear if they are earlier or later than the passageway. They could be part of the possible Celtic field system on the western side of the hill (see below) or the result of medieval and later cultivation. They may, however, simply reflect the form of the underlying bedrock.

The north-eastern entrance forms part of Castle Lane, the present-day approach to the hillfort, which gives access to the hill from Castle Farm and the village of South Cadbury. It has been an important route to the hilltop and is deeply hollowed where it crosses the inner ramparts. This entrance is sited just south of the north-eastern corner of the hillfort, which forms a spur flanking the northern side of the entrance passage. The ramparts become more substantial here, with an extra length of bank (Fig 5, k). The structure and morphology of this side of the entrance are therefore very similar to that of the southern side of the south-western entrance. Given the scale of these northern earthworks, it is surprising that the passage itself is so straight. It may be significant that the two surviving rampart terminals on the south are at an angle to the passage, suggesting that the latter may have been realigned.

The eastern entrance consists of a passageway, curving slightly at its eastern end, which makes its way up through the defences and ends as a deep hollow below the inner bank. Immediately to the west, a steep scarp leads up into the interior of the hillfort through a broad gap in the inner bank; the terminal flanking its southern side is particularly well defined. This steep scarp effectively blocks the entrance and appears to be a later addition. It may well have been augmented by ploughwash from the cultivation of the interior. There are well defined bank and ditch terminals on the southern side of the entrance passage, while much of the northern side has been reduced by cultivation and is overlain by a ruinous wall of post-medieval origin.

This entrance was first noted and described in detail by Warre (1856–7, 58), who considered it to be an original feature of the hillfort; this view is supported by the field evidence. Later writers, however, dismissed it as a modern gap (Dymond 1882, 112; Bothamley 1911, 484), while Radford and Stevens Cox (1954–5, 106) suggested that it might be post-Roman in origin. It is uncertain when and why this entrance fell out of use, although it may be significant that, unlike the other entrances, it does not now appear to be related to any major medieval settlement. The south-western and north-eastern entrances give access to Sutton Montis and South Cadbury respectively, both settlements recorded in the Domesday Survey (Thorn and Thorn 1980, 19:26; 36:7). At South Cadbury, to the south-east of the church, the remains of at least one Roman building have been excavated (Laidlaw 1966; 1967).

The interior

The earthworks enclose an area of *c* 7.5ha. The most prominent feature is the natural scarp which occupies the south-western part of the interior; it has been heavily quarried. On the upper edge of this scarp a low bank survives, together with the intermittent traces of a shallow ditch. Excavation has shown that these features relate to the early medieval use of the hilltop (Alcock 1972a, 202–3). On the west, between the natural scarp and the inner bank of the hillfort, are three probable quarry scoops. A further quarry, close to south-eastern corner of the hillfort, survives as an open work. The use of the hilltop as a source of stone dates from at least the sixteenth century (Bates 1887, 79).

Small circular depressions, visible near the centre of the hilltop, mark the sites of backfilled pits excavated during the 1966–70 campaign; traces of the excavation trenches are still discernible. Large, shallow depressions, visible behind both the north-eastern and eastern entrances, are probably the result of wear and erosion.

They help to demonstrate the antiquity of these entrances and can be compared with similar features recorded by the RCHME at Maiden Castle, Dorset (Sharples 1991a, fig 29). A slight scarp, caused by ploughing, is visible in places near the rear of the inner rampart.

Medieval and post-medieval land use of the hillfort and its environs

The medieval and post-medieval land use history of Cadbury Castle and its environs has had a profound influence on the present-day form of the monument and its setting. The process of open field agriculture, practised at a time when quality arable land was clearly at a premium in the area, has both influenced the current layout of the surrounding fields, and destroyed or modified parts of the hillfort itself.

A well preserved series of strip lynchets forms a striking feature outside the hillfort on the southern side of the hill. In the early nineteenth century these continued around to the south-east (SCRO *c* 1800), where remnants, largely plough-flattened, are still visible. Further strip lynchets also survive outside the hillfort on the north and east, despite modern cultivation. On the west, beyond the hillfort defences, earthworks of rectilinear form may be the remains of Celtic fields which have been modified by later strip cultivation.

The strip lynchets formed part of the extensive open field system of South Cadbury parish. This system probably originated in the early medieval period and was, albeit in a modified form, still in use at the beginning of the nineteenth century (Hardwick 1978; SCRO *c* 1800). Indeed, cultivation of some of the strip lynchets on the southern side of the hill continued intermittently until the early twentieth century. Bennett (1890, 11) noted that they had been ploughed in his lifetime and a retired farmworker can remember them under cultivation (Mr Kerton pers comm).

An undated estate map (SCRO *c* 1800) and the Tithe Award and Map (SCRO 1839) are the best sources of information regarding later land use in the area. The estate map gives the names of five possible open fields in South Cadbury parish: West Field, Chappel Field, East Field, Castle Field, and Littleton Field. Of these, Castle Field is adjacent to the hillfort and contained the strip lynchets on the southern side of the hill. On the eastern side of the hill, strip fields ran lengthwise up and down the gentler slopes below the substantial strip lynchet near the eastern entrance. Large orchards lay on either side of Castle Lane, while the north-western side of the lane, just below the hillfort defences, was flanked by two garden plots. The fields below the northern defences were enclosed by the beginning of the nineteenth century; several retain the form of earlier strip fields and were depicted by Stukeley (1776, pl 43).

A plantation was established on the northern, eastern, and western defences of the hillfort during the early nineteenth century. The Tithe Map (SCRO 1839) shows that the interior and southern ramparts formed a single parcel of land under pasture, which was separated from the plantation by a stone wall. This wall ran northwards from the eastern entrance and along the back of the inner rampart to leave the interior via the south-western entrance. The lower courses of this wall survive in many places. The outer perimeter of the hillfort is enclosed by a second stone wall, largely built on a negative lynchet. Documentary evidence suggests that this wall originated between 1629 and 1647 (Batten 1870, 22; Bennett 1974).

The interior of the hillfort has been cultivated over a long period of time, hence the paucity of extant earthworks. Some of the features excavated by Alcock were interpreted as medieval or later field boundaries, perhaps indicating the presence of strip fields. Leland, who visited the site in 1540–2, noted that the top of the hill was often ploughed and produced good corn, although at the time of his visit it was pasture for sheep (Bates 1887, 79). Camden (1586, 153), Stukeley (1776, 150), and Bennett (1890, 2) also mention cultivation inside the hillfort, and narrow ridge and furrow is visible on an early aerial photograph (RAF 1928). Barley, flax, and potatoes were grown during the Second World War, and the interior was reseeded in 1952, when storms caused a great deal of erosion (Mrs Montgomery pers comm).

Discussion and conclusions

This earthwork survey is the first to have considered the hillfort in the context of its immediate surroundings. This has led to a number of new observations. First, there is evidence that pre-hillfort land-forms may, in places, have influenced the course of the ramparts. Second, the morphology of all of the entrances has been examined in detail. This has revealed similarities between the south-western and north-eastern entrances, and demonstrated possible changes to the position of their entrance passages. The authenticity of the eastern entrance has been confirmed, and a possible reason given for its abandonment. Finally, the full extent and the effects of medieval and later land use on the hill can now be evaluated. Of particular interest is the evidence for cultivation and minor settlement within parts of the area occupied by the defences of the hillfort, and the modification of possible Celtic fields on the western slopes of the hill.

The excavation

The excavation strategy

by P W M Freeman

The full extent of the excavations is given in Figure 7 and the sequence of Site development in Figure 8. In 1966 the pre-excavation strategy comprised two elements. Firstly, there was to be the production of a contour plan of the interior in an attempt to determine suitable areas for building terraces as well as a plan across the earthworks in advance of exploring them.

Secondly, three trenches were opened to establish the nature of the stratification. Site A was begun against the inside of the rampart on the north side of the hill. Site B was placed on the north-facing slope of the interior over a distinctive cropmark evident on one of the 1955 air photographs while Site C was set over another promising complex of marks on the hilltop.

In April 1967 a geophysical survey (see below) had been completed for 25% of the interior. This enabled new excavation trenches to be placed in areas of potential archaeological interest. Thus a complex of trenches (referred to as the Plateau Sites), Sites E, F, and G, were opened along the plateau north-east of the 1966 Site C, and Site H just north-north-west of Site C. In addition, other trenches over the ramparts were started at Sites D, I, and J, as well as an extension to Site A over other stretches of the inner bank.

For 1968, the strategy was to pursue the results of the 1967 season. While the geophysical survey of the interior continued, Sites B and C, opened in 1966, were now enlarged. Two other new trenches on the hilltop plateau were also examined. Site L was an area south-west of the 1967 Sites E, F, G complex, and Site M was cut across the steep scarp at the south-west of the plateau. Three trenches at Site K were opened up in the south-west entrance to the hillfort. This choice was determined by the fact that it was thought to be the less heavily used of the two main gates on to the hilltop and so less likely to have been altered in the past. In addition, this was the area of St George Gray's excavations, the results of which, it was hoped, would act as a guide into the deposits.

The 1969 season was described as the logical continuation of the 1968 work. The geophysical work concentrated on the northern part of the plateau. The rampart cuts, Sites A, I, and J, were to be completed to bedrock in order to compare them with the results from Site D. Site B was further extended as was Site L. Site N was opened up as an extension on the southern side of Sites E, F, and G. Work at Site K continued with the addition of an extension to it over the ramparts.

In 1970, the penultimate season, the plan was to complete the exploration of structures discovered in previous years rather than to open up new areas. The geophysical survey was finished. Site B was completed with the addition of a western extension, Site W (hereafter referred to as BW). Site P covered the area between Sites L and N. Sites S and T extended Sites L and N, while the Site K complex was completed. By the end of this season approximately 6% (or some 4400sq m, as calculated by Musson) of the interior had been excavated (Alcock 1972a, 204). Virtually all of the interior had also been examined by the geophysical survey (see below).

Finally, in 1973, the opportunity presented itself for the re-examination of part of the ramparts. A trench which had been cut mechanically immediately to the east of the south-west gate had remained open. Prior to backfilling Alcock had the chance to clean back by hand and examine a section of the ramparts (Site KX, Alcock 1980, not published in full here). This would, theoretically at least, permit a more detailed and concentrated exploration of the various superimposed banks as well as the more accurate recovery of finds and the taking of samples for radiocarbon dating purposes.

Geophysical surveys

by Paul G Johnson

Four geophysical survey devices are recorded as having been used between 1966 and 1970 (Alcock 1968a, 47; 1995, 9). Only one of these, the proton magnetometer, was of proven capability in archaeological fieldwork (Waters and Francis 1958; Aitken *et al* 1958). The other three were the Pulsed Induction Magnetic Locator (Colani 1966; Colani and Aitken 1966), the Fluxgate Gradiometer (Alldred 1964), and the Howell Soil Conductivity meter (also known as the soil anomaly detector and 'banjo'; Howell 1966). Two instruments (a proton magnetometer and the Pulsed Induction Magnetic Locator) were used by a team from the Research Laboratory for Archaeology at the University of Oxford for an evaluation exercise undertaken in the spring of 1967, stimulated by a small feasibility survey performed with the Soil Conductivity Meter at the close of the 1966 excavation season. The results from the proton magnetometer and the Soil Conductivity Meter received partial publication.

The first results of the geophysical survey formed a basis for developing the excavation strategy in 1967, with the location of the excavation trenches (Alcock 1968a, 47; 1968b). In the following seasons, however, the excavation programme created its own momentum. Clearly the detail of the rock-cut features which was provided by excavation far outstripped the information which had been provided by geophysical survey, and attempts to interpret buried structures on the basis of geophysical survey alone had proved unfounded (Alcock 1972a, 51–62, 70–3). Although the Soil Conductivity Meter survey was continued in subsequent seasons, it was noted that the device's ability to detect anomalies in anything other than the shallowest of topsoil conditions was suspect (Alcock 1969, 30; 1970, 47). The shortcomings of electromagnetic prospecting devices similar to Howell's Soil Conductivity Meter had already been commented upon (Scollar 1962, 152). Later work demonstrated that the Soil Conductivity Meter was not in fact a soil conductivity meter, but an instrument which responded predominantly to the magnetic susceptibility of the medium under examination, and that it was unlikely to respond to any feature of archaeological potential if it was buried in more than 0.5m of overburden (Tite and Mullins 1969).

Alcock was acutely aware of the failings of the Soil Conductivity Meter. His hopes for acquiring an improved device were frustrated in 1968 and as a result the survey progressed with the existing machine, which was eventually modified in an attempt to enhance its responses in deeper deposits. The results obtained by the Soil Conductivity Meter were never fully analysed. The relationship between these original data and those obtained by the more recent survey has been investigated. The problems associated with the stability of the instrument, data imbalance, and survey methodology remain considerable and consequently no attempt has been made to present these data here.

Between 1992 and 1993, the interior of the hillfort was resurveyed using an electrical resistivity meter and a fluxgate gradiometer. The site was surveyed with both instruments at a uniform sampling density of 1.0m. Survey grids were fixed in relation to the RCHME survey of the hill (see above) and offset from one another by 10m to facilitate a check on inconsistencies within each data set, and the traverse directions were perpendicular to one another.

The resulting field data have been processed initially using a conventional dot density software package and then reworked through the data interface and assembly programme Datasurv (Huggett 1992). Within each data set all inter- and intra-grid variation has been corrected manually. Graphical representation of the resistivity data (Figs 73–4) is a product of Surface (Spiler and Fletcher 1990), a surface modelling package which allows viewing and illumination of the surface model from any chosen position above it. The graphics presented here are vertical views of the surface model illuminated at different angles. The gradiometer data graphic is the product of Geoplot 2. The size of the data sets has determined that these graphics are presented as composites.

Obviously geophysical data cannot be interpreted in the same way as the results of excavation; if they could we would not dig. But excavation does not replace or render other data redundant. The results of the latest survey are therefore presented in Chapter 5, where they enhance our understanding of the interior by giving a broader perspective of the distribution of buried features.

The excavation record

Introduction

by John C Barrett

Any post-excavation programme concerned with understanding on-site activities through the analysis of archaeological residues (that is, moving beyond a catalogue of stratigraphy and finds) must begin by doing two things. Firstly, it must establish the broad processes of deposition and erosion which have operated on the hilltop over the last two millennia and which have provided the differentially surviving pattern of archaeological deposits sampled in excavation. These deposits provide the stratigraphic contexts which contain information about past human activity. Secondly, it must consider the assumptions and techniques which were used to record those deposits and through which they now have to be viewed via the available archive. It will then be necessary to interpret the record of these deposits and the materials they contain in terms of human activity.

A relatively simple model for the differential survival of deposits on the hill can be our starting point before we undertake a more detailed consideration of the excavation record (cf Cunliffe 1984, 47–9). This model divides the areas of the hill between the ramparts including the tail deposits which formed immediately behind them, the gate passages, and the interior.

The surviving monumental feature of the site is the ramparts. The inner line comprises a complex sequence of upcast banks, some constructed as earth and stone dumps, some stone-built and some timber-revetted. Apart from the importation of stone and timber, much of the building material was derived from the rock-cut ditches and, we must assume, from quarry pits behind the inner bank (Bank 1). Repeated refurbishment of Bank 1 has created a deeply stratified sequence of material which includes a fair proportion of residual artefacts. It was upon this that the original ceramic sequence for the site was based (Alcock 1980). Once in place, Bank 1 also acted to retain downslope soil movement and in this largely uninvestigated area of the site we must assume that there survive deeply stratified deposits relating to such an accumulation, as well as to building and quarrying activities. The importance of this zone for building activity and the survival of protected archaeological deposits is exemplified by the Danebury excavations and, to a lesser extent, by those at Maiden Castle (cf Cunliffe 1984, 54–81, 146–73; Cunliffe and Poole 1991, 38ff; Sharples 1991a, 67–88).

The ramparts are breached in three places by gates which, although different in form, are all characterised by the formation of hollow-ways. The excavation of the south-western entrance revealed a complex sequence of activity. Iron Age use of the entrance passage had cut a deep hollow-way on either side of which lay the rampart terminals, successive guard chambers and gate structures. This process of erosion ends with an infill deposit associated with a phase of destruction which in turn is overlaid by a sequence of road surfaces dating from the Roman through to the early medieval periods. Immediately inside this gate, upslope and between the gate and the scarp of the plateau, lies a broad basin enclosed by the inner ramparts which probably contains a deep and complex sequence of archaeological deposits. It remains uninvestigated.

The hilltop plateau will have suffered plough erosion, the east-west spine of the hilltop presumably bearing the greatest loss of deposits, with soil accumulating on some parts of the slope. Over much of the plateau excavation did reveal plough erosion with only a thin soil cover on the bedrock and archaeological deposits surviving in rock-cut features, such as pits, quarries, and eroded hollow-ways. However, the localised survival of surface deposits over some parts of the interior was also encountered during excavation.

The excavated areas

by P W M Freeman

The rampart excavations: The development of the thinking behind those strategies employed in digging the various rampart sections has been fully discussed elsewhere by Alcock (1972a, 32–103; 1980, 659–62). The results of this work are covered in Chapter 3. Suffice it to note that the sections were cut almost entirely through Bank 1 either by hand or by machine (Fig 7). Site A was begun by hand and deepened by machine, a process which had to be halted by the observation of preserved timber low in the rampart deposits. Site J was machine-cut, although the actual position of the trench was shifted between 1967 and 1969. Site I was also machine-cut at first, although here the discovery of a human burial halted the process. All these sections clarified the upper and later phases of enclosure but, being either too narrow or not completed, are of less help in our understanding of the earlier phases of Bank 1. Site D began as a machine-cut trench before a hand-dug trench was opened next to it. The hand-dug trench was some 10m wide over Bank 1, although this was split with a running medial baulk, and the trench extended the section across the outer ramparts. The width of the inner section of the trench was designed to ensure that any vertical timbers belonging with early timber revetted phases of the rampart would be picked up. It resulted in providing a clear understanding of the complex sequence of banks, including those built in drystone, and it demonstrated the inadequacy of machine-cut trenches to reveal the

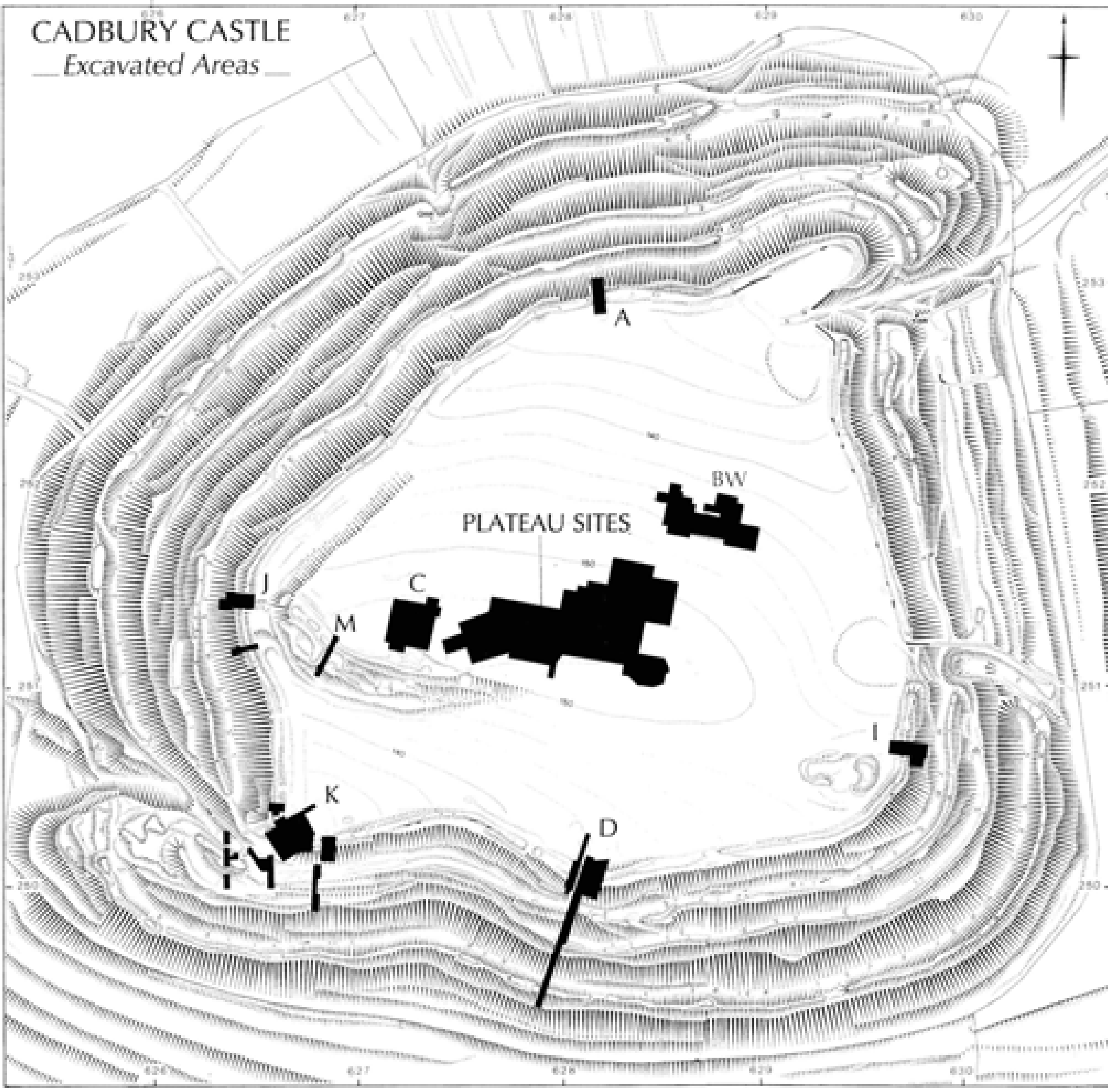


Fig 7 Plan of excavated areas superimposed on RCHME survey (see Fig 8 for Plateau site letters)

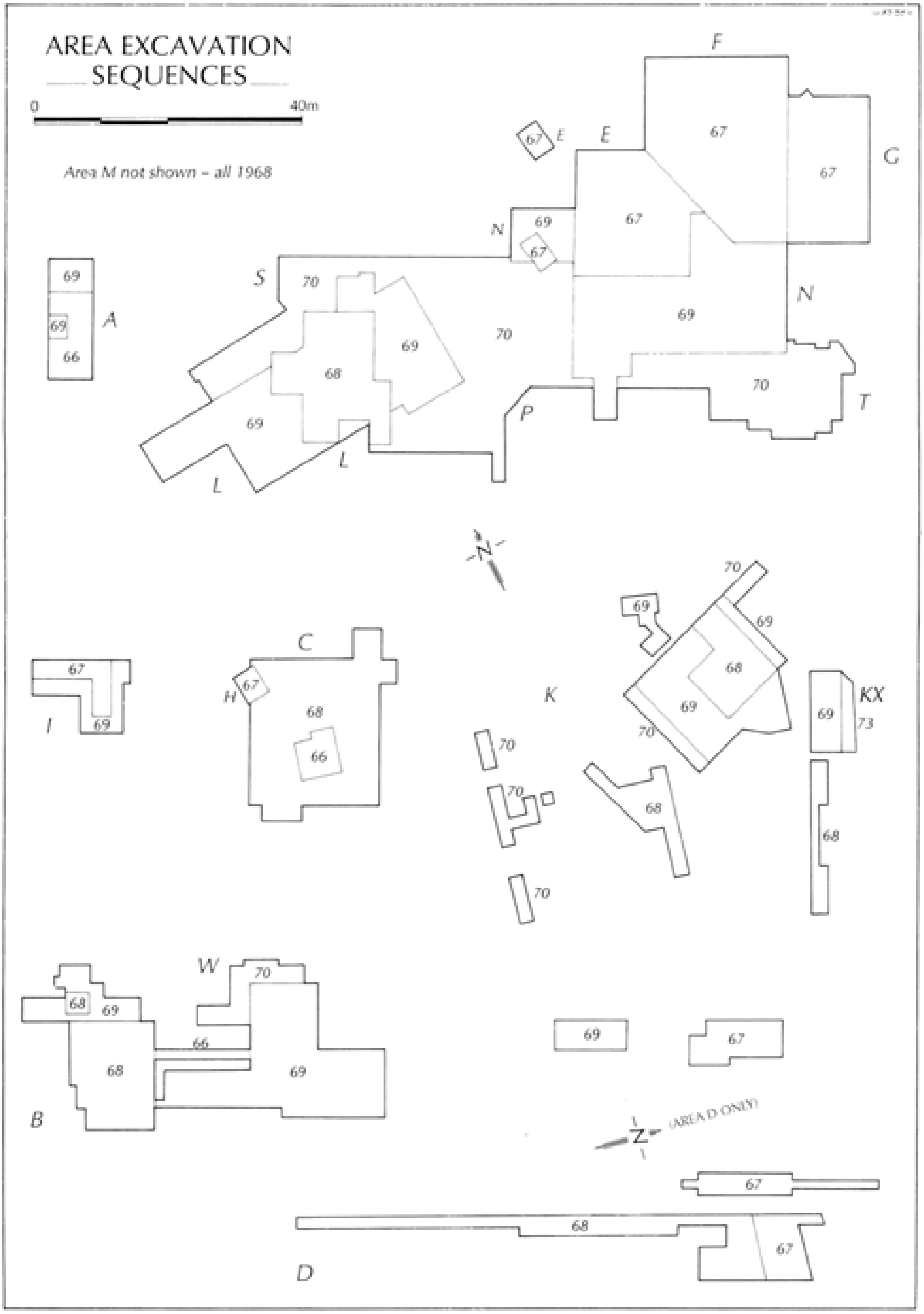


Fig 8 Plan of Site excavation sequence (final digits indicate years of excavation)

full complexity of the buried stratigraphy. One further trench immediately to the east of the south-west gate was machine-cut through Bank 1 in an effort to check the sequence here prior to the excavation of the gate itself. This Site, KX, was left open at the end of the excavation and was extended by hand in 1973 before backfilling. It was only when the machined section was cleaned and then cut back by hand that the benefit of this kind of combined strategy came to be fully appreciated (Alcock 1980).

As might be expected, the excavations revealed that the front of the inner earthwork had suffered considerable erosion, resulting in the loss of much of the front sections of a number of the early ramparts. The residues of the earlier deposits, along with the later ramparts, were then interpreted according to two assumptions; that all soil accumulations and structures beneath Bank 1 related to built ramparts of one phase or another, and that rampart building and refurbishment will have operated uniformly around the entire perimeter of the site. Both assumptions might be questioned. If erosion had affected the front of Bank 1, then a deep soil accumulation occurred at the back. Structural remains were certainly recognised in this area on Sites A and D although they were never fully understood. Alcock bemoaned the difficulties of dealing with intense '....human activity, principally represented by black pits cutting into black soil, [which] had left both structures and layers chaotically disturbed....' (Alcock 1972a, 68). The complex of deposits at the back of rampart cuttings in Sites A and D has not been considered in this post-excavation programme.

The south-west gate excavation: As mentioned above, the south-west gate was chosen for excavation because it appeared the least eroded. St George Gray (1913) had located a stone-built entrance passage here. It was hoped that further excavation would confirm that this was the Ethelredan gate relating to the latest recognisable phase of enclosure and that the, albeit slight, results of the 1913 excavations would act as a guide into what were likely to be complex archaeological deposits. The gateway was excavated with a large trench in the central gate passage and eight smaller trenches placed over outer ramparts and ditches in the vicinity of that passage (all are referred to as Site K). The additional machine-dug trench through Bank 1 of the ramparts (Site KX) has already been noted.

In the event the results of 1913 proved of little help in excavating what proved to be the most complex Iron Age and later structures encountered on the site. The reasons for the complexity are largely to do with the way the passage began as an erosional channel which had deepened with use and ended its life by an accumulation or infill of deposits. Consequently the excavators began by removing layers of roadway which could be linked with certain gate structures and later phases of the rampart, a complex but reassuringly familiar procedure of unravelling a vertical stratigraphic record back through time. In the gate passage that vertical sequence ended with the so-called 'massacre deposits', an accumulation of debris, human remains, and metalwork which indicated a phase of destruction, even if the exact derivation of the material remained unclear. Beneath this there was no further built sequence of roadways, and it was realised that all this material lay in an erosional channel or hollow-way. Thus the Iron Age use of the gate had involved the erosion of the passage and the cutting down of later guard chambers and gates into earlier deposits to result in a general lowering of the entrance through time.

The interpretive challenge offered by this structure was recognised during the excavation, although coming to terms with that challenge through the recording of the deposits was another matter. Archaeology is, after all, not terribly good at dealing with the histories of erosional surfaces. The problem of interpretation has been compounded by the further expectation that the Iron Age gate history should conform with the sequence of ramparts.

The interior: In the post-excavation phase of work, the initial description and analysis of all but the Sites B and W (hereafter referred to as BW) was completed by 1974 by Christopher Musson. His report is organised by structure type (circular structures, rectilinears, hearths, gullies, substantial pits and animal burials etc) for each Site. The structures were numbered sequentially by Site and brief descriptions given.

Although much of the interior was devoid of surface stratification, virtually all such archaeological deposits having been disturbed down to the surface bedrock by medieval and later ploughing, there were important exceptions. Towards the east of the excavated area on the central plateau, notably in Sites E, N, P, and T, areas of cobbling incorporating the residues of industrial and other activities remained intact or only partly damaged, as did parts of the eastern side of Site BW which lay on the north-facing slope of the interior. The preservation of these areas can be attributed either to the fact that they were towards the southern end of the slope running upwards to the north or, as in the case of BW, because there were set into them large depressions, such as roadways, whose depth saved them from the plough. For the most part, however, excavation involved the mechanical or hand-stripping of topsoil down to the natural rock (a depth of no more than 0.25m in most cases) and the subsequent excavation of pits and other rock-cut features, furnaces, hearths, trenches, gullies, and stakeholes. It was these, in particular the pits, which therefore represented the main catchment for artefact deposits within the interior of the site. At the time of excavation, relatively few plans of buildings could be identified. Exceptions were: the rectangular structure in Site C; the early medieval hall in Site L; two post-built rectangular structures in Site P; a series of rectilinear structures in Site BW; the possible shrine in Site N; and six roundhouses marked by gullies of varying depths in Sites BW, G, L, N, P, S, and T. The identification of stake-walled roundhouses, surviving in two terraces on Site BW, and stake-wall lines protected by the cobbled surfaces elsewhere in the interior, remind us of an archaeologically ephemeral architecture which will not be recognisable on plough-eroded surfaces (Guilbert 1975, 214 ff). Many hundreds of postholes were left unexplained. A further attempt was subsequently made to recover additional plans by the analysis of depths, fillings, and contexts of such features. With regard to dating, very few postholes contained datable material of any period, and the few building plans which emerge are dated more by inference than by associated artefacts.

Musson's attempt to isolate building plans from the interior (with the exception of Site BW) entailed extracting from the 1:50 site plans only those features which might be interpreted as postholes. These were then coded according to their depth below the present rock surface; in general it was assumed that most postholes would also have been dug through *c* 0.25m of topsoil above the rock. Separate drawings were then made for postholes under 0.3m in depth, postholes over 0.3m in depth, and all postholes irrespective of depth. These drawings were then searched for possible building plans, beginning with pairs of postholes continuing with small square and rectangular structures and ending with large circular ones. Where incomplete patterns were identified, comparison was made with the overall site drawings, to see whether the missing postholes might have been obscured or cut away by later pits or gullies. The posthole patterns were also examined in relation to continuous features like gullies and wall trenches, but no significant relationships were identified. The attribution of finds to phases of the development of the site was at this stage obviously tentative. An attempt was also made to recover additional building plans by analysis of depth, filling, and contents of postholes. Finally, the individual postholes forming likely patterns were checked against one another for type of filling and potential dating material. In general, these checks were inconclusive.

As far as the dating of features is concerned, the method was to re-examine the finds from each one and to allocate it to a phase in relation to the established stratified groups from the rampart and gate sites. A large number of features could be given only a general phase range; this applied especially to those producing material attributable to the later phases of the Iron Age. It must also be remembered that the material contained in rock-cut features established only a *terminus post quem* for their origins, although in some cases the absence of material which was later than the bulk of the finds group from a relatively prolific feature can also provide an inferential *terminus ante quem*. In a very few cases, levels or features can be assigned a *terminus ante quem* by virtue of being sealed or cut by later datable features or because they were beneath the cobbling found on the eastern part of the plateau. In spite of this approach, however, depressingly few of the postholes contained datable material, whether of the Iron Age or of other periods, and the few building plans which emerge must therefore be dated more by inference than by direct archaeological evidence.

Musson's archive report includes working notes which show that he had identified, with varying degrees of confidence, more structures than those which are described in his text. His report has formed the basis of our analysis of the interior. The original Musson trench codes and numbers have been retained, with the addition of those structures we have identified. Finally, the Site BW has been included in our discussion, using preliminary notes prepared by the area supervisor of the later years, Graeme Guilbert.

2 The analytical framework

Introduction

by John C Barrett

To write a history of over a thousand years of human occupation of Cadbury Castle requires the establishment of certain analytical procedures which will allow us to interpret the excavated evidence. One quite general requirement is to be able to order the material chronologically. As we have already indicated, deep stratigraphic sequences occur on some parts of the site, in particular the sequence of deposits which go to make up Bank 1 and which are discussed in detail in Chapter 3. However, we need to be able to integrate such sequences with the wide range of rock-cut features in the interior and thus establish a period sequence for the overall development of the architecture of the hill. Such integration has been achieved by establishing a sequence of ceramic assemblages for Cadbury Castle, enabling this ubiquitous material to be used as a chronological marker for the deposits within which it occurs.

Our second, general requirement is to formulate an integrated approach towards the analysis of artefacts. Our priority has to be to gain some understanding of what it meant to live among and to use this material, rather than simply describe what that material was. This chapter addresses both these questions and establishes the analytical framework for the chronological sequence of the site and the analysis of the artefacts.

Depositional processes

by Ann Woodward

The archaeology of a site is the sum of the deposits that have survived within it. Not everything that was laid down will have survived, and not everything which has survived will be recovered or noticed in excavation. It is the pattern and variety of surviving deposits as observed that will determine in part the character of the archaeological narrative and conclusions that can be deduced. At Cadbury Castle, the outstanding importance of the variety of deposits represented was highlighted by the excavator, who built his programme of investigation around their very existence. This process has been discussed fully by Alcock (1972a; 1980) and a lengthy reiteration of the strategy need not be offered. The essential points are that Alcock appreciated the potential for the information gleaned from deep cuttings within the defences to inform the archaeology of the interior, and for the overall pattern of development perceived within the interior to enhance interpretations of the excavated gate and rampart sections. This potential, however, exceeded all expectations, for within the interior, two large areas of deep and contrasting stratification were encountered, the rampart and gate cuttings investigated some of the most complex and well preserved Iron Age deposits ever excavated in Britain, and the variable extent of occupation through time on the plateau meant that the problems of residuality experienced during the excavation of some other hillforts were greatly reduced. In brief, the variety and nature of deposits investigated at Cadbury Castle have provided a data set of unrivalled value to Iron Age studies.

Archaeological deposits are a mixture of natural elements and cultural components. The matrix of a context usually comprises a variable mixture of soil and stone, but in most cases moved by human agency and sometimes transformed as a result of human activities such as burning. The movement of stone and soil will have been aimed primarily at constructing elements of structures, be they walls, fences, buildings, ditches, banks, pits or ponds, which mainly serve to segregate space in the inside/outside sense, or the floors, yard surfaces, paths, and roadways upon which human activities were enacted. Within the matrix there may be an assemblage of artefacts and ecofacts comprising natural, but humanly modified, materials such as animal bones, grain, antler or stone, and materials transformed from their natural state, usually by fire: daub, pottery, metalwork, and glass. The nature of any deposit can be deduced firstly by a careful analysis of the soil and stones present, their size grades, degree of wear or alteration, and relative disposition, and secondly by consideration of the artefacts present, their raw material, mode of manufacture, function, degree of wear and/or transformation, fragmentation, and their relative disposition within horizontal and vertical space.

The concept of 'primary' and 'secondary' modes of deposition, whereby floor and yard surfaces are deemed 'primary' with the potential survival of 'activity patterns' while all eroded deposits, middens, ditch and pit fillings, and the like are relegated to a 'secondary' mode of lesser research potential is not useful in Iron Age studies. For instance, if many pits and ditches are to be interpreted in terms of the long-term locations for deliberate deposits, involving a mixture of matrices, artefacts, and ecofacts derived from everyday life or manufactured expressly for the purpose (Hill 1995), a simplistic primary/secondary classification can hardly be applied. Just as every artefact possesses its own cultural biography, so the components of every archaeological context also have a life history. For instance, a cache of quarried or gathered stones might be used initially to build the wall of a house, and later be reused to patch a segment of decaying rampart. In time it falls into a ditch, only to be dug out again and used once more to build a house. Later still it becomes incorporated in the walls of an oven, and is cracked by the effect of heat; this leads to its reuse as cobbling. Following a time of wear, it becomes incorporated within a heap of midden material, part of which is finally deposited in the base of a pit. The most informative archaeological sites will be those where the greatest variety of potential depositional contexts are represented. Cadbury Castle is such a site, and the vast array of depositional types can be illustrated by the following selective list: lynchets, ramparts constructed of stone, soil and timber, ditches, gullies, fences, circular structures of post, gully, and stakehole construction, 2-, 4-, and 6-post structures, rectangular gully structures, pits, hearths, ovens, middens, yards, paths, and tracks, hollow-ways, animal burials, and deposits of human remains. Few hillforts have offered such a totality of surviving types of depositional trap and two particular deposits, the stratified sequence of surfaces and midden materials of the east plateau, and the gate deposits containing substantial proportions of disarticulated human remains, are of exceptional importance.

The sheer variety of the contextual categories represented can be illustrated by a consideration of variations in mean sherd weight across the site. Most contexts contain pottery and the size of fragments is often indicative of their functional status. The analysis of mean sherd weights for the pit assemblages on the plateau showed that the values were distributed unimodally. Although smaller and larger fragments (indeed, whole vessels) were present, most sherds fell within a weight range of 7g to 9g. If these values are taken as the normal range for well broken pottery not subjected to long-term erosion or comminution by human or animal traffic, then three ranges of deposit type may be adduced: those containing pottery of normal mean sherd weight, those where pottery survives in larger fragments, and finally, those where the pottery sherds are generally smaller. The smaller the sherds, the further down a humanly controlled life history will the matrix and components of a particular context have travelled. Thus, the types of contexts which contain the lowest mean sherd weights include lynchet banks (eg 4g, 3g, 3.4g), old ground surfaces below banks (eg 3.7g), a layer of soil build-up within a disused structure (5.3g, east guard chamber), cobbled tracks (4g), deliberately 'clean' sealing layers (eg 6g, immediately above human remains in the south-west entrance passage), and silting layers of mainly natural origin (6.7g). Context types which contain sherds of normal mean sherd weight are the pit fillings, the posthole fillings, and some floor levels in structures (7.4g, 8.4g, 7.8g, 8.7g). Within the area of stratification on the plateau, the layer below the first cobbling and one of the intermediate layers were also characterised by such values (8g, 8g, 7g). However, the actual layers of cobbling in this zone, and the thick 'rubbish layer' above them, contained pottery of mean sherd weights well above the norm (17g, 11g, 19g). Other high values were obtained for postholes where sherds had been used as packing (eg 13g), certain hearths (34.3g, 14g), and floors within structures (11.6g, 9.4g). The rampart contexts contained sherds of varying size depending on whether the matrix was composed mainly of stone or soil, and their position within the overall sequence, but the gateway deposits containing the concentration of human remains produced pottery of normal mean sherd weight.

To summarise, we need to study contexts in terms of their position within the life-histories of their natural and artefactual components. Mean sherd weight calculations may assist in the elucidation of such a categorisation of contexts and for Cadbury it is demonstrated that an unusually wide range of context categories were investigated. This indicates a high potential for analysis leading to interpretation, but even when multiple context types are present it is necessary to understand and to discuss the degree of reworking of deposits and the whole topic of the potential residuality of components, both natural and man-made. The only component which displays much variety through time, and is commonly represented in most contexts, is pottery, and it is this material which is used most often in exercises designed to investigate levels of residuality.

On many Iron Age sites the problem of residuality impedes certain lines of research and this applies particularly in some areas where many sites have been excavated, such as Hampshire, because the fabric contrasts between the subdivisions of the Iron Age are not very distinct. Also, on many Iron Age sites, features of all phases are present over the whole area excavated, so that all features are likely to contain unknowable proportions of residual material. This of course has severe implications for the interpretation of other finds categories such as animal bone or metalworking residues, which display no or few intrinsic datable characteristics of their own. Observations such as these apply equally to small totally excavated enclosures such as Old Down Farm and Winnall Down and the major hillfort campaigns mounted at Danebury or Balksbury.

At Cadbury Castle the situation is quite different. Firstly, the interior was not fully occupied in all periods, so there are zones of structures and features which can be dated securely to particular phases of the Iron Age, and the associated contexts contain very 'pure' assemblages of contemporaneous artefacts and ecofacts. Secondly, the fabrics of the late Bronze Age and early Iron Age, as well as the forms, are highly distinctive. This means that residual material, even in the form of small undiagnostic sherds, can readily be picked out. Indeed, so clear-cut are the data that it is possible to calculate the proportional presence of residual material within various contrasting categories of context. The pits of middle to late Iron Age date which lie away from the limited area of early Iron Age activity contain up to 3% residual items, while those cut through the early Iron Age occupation zone produce between 4% and 21% of late Bronze Age/early Iron Age pieces. For middle–late Iron Age structures on the plateau which produced more than 20 sherds from all their structural components, the residual levels lie between 15% and 20%, with one exception where the figure was 7%. Within the rampart sequences at the south-western gate, the degrees of residuality are rather lower than expected. Most figures for the rampart matrix contexts lie between 17% and 26%, and naturally the residual component increases upwards through the sections. Residuality within the east guard chamber was lower than this (at 13%), but in the first west guard chamber was considerably higher (50%). By contrast, the residuality figures for the levels containing the human remains are some of the lowest found on the site as a whole (average 4%). In the area of stratified deposits of the eastern plateau a sample of *c* 6400 sherds from one zone was analysed. The layers of cobbling contained residual items at the *c* 25% level, while the intermediate and 'rubbish' deposits of midden-like material produced ceramic assemblages with 50% and 51% residual items. However, these residual items could readily be separated.

The purpose of this discussion has been to demonstrate that the Cadbury Castle data set displays a variety of context types which is extremely considerable and probably unique: it is unlikely that such a wealth of potential information will be obtained from another Iron Age site in the foreseeable future. Furthermore, the contexts include groups where residuality is significantly low, and in other cases, such as the highly structured stratified deposits on the eastern plateau, the degree of residuality can be quantified and taken into account during detailed analyses. Taken together, these observations imply that the overall potential of the data set is very great indeed. The aim of the current report is to define and classify the wealth of data available, and to demonstrate their analytical potential by selective example.

The site chronology

by John C Barrett

A sequence of stratigraphic units captures some information about the changing composition of the material assemblages which were in use through time, as well as indicating the range of residual debris which was accumulating on the site up to that particular moment.

Faced with these complexities – of sequential episodes of deposition operating at different rates on different parts of the site, and the differential strands of development of material assemblages – the tendency is always to attempt a rationalisation. This normally involves drawing the description of both structural and artefactual sequences together into a single, period sequence for the history of the site. Such an approach is also followed here; we must be clear as to its limitations.

Alcock originally wrote the history of Cadbury Castle as a sequence of cultural development where each cultural phase was defined by a distinctive artefact assemblage (Cadbury 1–12). The 'site-structure model' (see p5) was intended to establish the basis for such a sequence in terms of the stratigraphic evidence internal to Cadbury Castle itself (Alcock termed this an 'intrinsic typology': 1980, 682). The characteristic artefact assemblages were largely defined in terms of pottery, the ubiquity of that material and its quite specific characteristics of form and fabric confirming its importance as a cultural and chronological indicator (cf Collis 1977). Alcock identified the ramparts, with their deep stratigraphy, and the fill of the rock-cut storage pits in the interior of the hillfort, with their large artefact assemblages, as providing the stratigraphic information necessary to establish the Cadbury cultural sequence. In the event, the storage pit fills were found not to cover the full chronological range of the hillfort's Iron Age occupation, and consequently analysis hinged upon the rampart stratigraphy. It is necessary to emphasise, however, that the sequence of ceramic development occurring at Cadbury Castle should be regarded as neither punctuated by clear-cut periodic changes, nor as a sequence in which change, when it occurred, need have conformed chronologically with moments of rampart refurbishment. None the less, Alcock's use of the rampart stratigraphy alone did tend to result in equating rampart phases with ceramic phases.

The history of Cadbury Castle cannot be thought of as a sequence of single-period sites placed one on top of the other. Rather, occupation will have developed organically over very long periods of time, carrying with it different strands of development in artefact styles. Cutting across this will be moments of hiatus, such as breaks in occupation, and major stratigraphic events, such as rampart or gate refurbishment. A site phasing is nothing more than an attempt to simplify this complexity and to consider the history of site formation in broad and manageable terms.

The period sequence for Cadbury Castle which is presented below is built on the basis of the ceramic sequence. In Chapter 13 Ann Woodward presents the variables of form, fabric, and decoration which are used here to describe variations in the ceramic assemblage through time. This enabled the Ceramic Assemblage sequence to be established by tracing the variables through a number of different lines of stratigraphic association, from the ramparts, gate, and interior, to provide the general model of a sequence of ceramic assemblages for the site itself. The details of the stratigraphy for the ramparts and gate are provided in Chapters 3 and 4. Following the original nomenclature of Alcock 1980, these Ceramic Assemblages are numbered 4–10, running from the late Bronze Age to the Romano-British period.

With these Ceramic Assemblages in place, it is then possible to attempt, again in the very broadest of terms, to correlate the short runs of stratigraphic events which are recorded for the interior of the hillfort with one another, and thus to construct an overall model of site periods. This model describes the structural history of the entire site in terms of Early, Middle, and Late Cadbury.

An absolute chronology for this sequence is based upon metal associations (although much of the material is redeposited), the radiocarbon dates (see Chapter 13 and Fig 175), and comparisons with the dated ceramics from other sites.

Assigning individual structural features to one or more of these periods, or to subdivisions within them, very often depends upon identifying a date of deposition for the pottery within their fills. This task is not straightforward; residual material has been redeposited in almost all stratigraphic contexts (cf Lock 1991, 278–84). This problem would seem to imply that the date of any unsealed, rock-cut feature can only be given as a *terminus post quem* defined by the date of the latest artefact which that feature contains. Ann Woodward has confronted this issue for a large number of the main structural features and pit fills recorded from the interior, and on the basis of each ceramic context group and, where available, stratigraphic relationships, she has estimated a date of deposition for each fill. A few selected stratified assemblages from the interior are presented below to exemplify some of the Ceramic Assemblages.

The analysis which follows is therefore based on the variables by which the ceramic assemblage can be described and which can be consulted in Chapter 13. We then proceed to an evaluation of the stratigraphy and associations, thus establishing first a Ceramic Assemblage sequence and then a period sequence for Cadbury. These are general approximations of the sequence of the material and structures represented by the site; they are constructed by cross-referencing between the different stratigraphic sequences.

The site sequence

by P W M Freeman

What is presented here is a new scheme for the Cadbury sequence, one which largely dispenses with the system established by Alcock. Over the years of the excavations and into the 1970s, Alcock devised a number of terms, periods, and phases to date activity at Cadbury Castle. These became increasingly sophisticated, not to say complicated. In essence three systems for explaining the history of occupation and defence of Cadbury have been used. In the mid-1960s the classification began as the simple divisions 'Neolithic, Late Bronze Age, Pre-Roman Iron Age and Roman', defined by pottery types and diagnostic metalwork (Alcock 1967b, 72). By 1968, seemingly influenced by German conventions, the periodisation was expressed in terms of 'Younger, Middle and Upper aspects of the Neolithic and Bronze Ages', and as 'Initial, Early, Middle, Later and Ultimate phases of the Pre-Roman Iron Age' (Alcock 1969, 33). Few, if any, absolute dates were offered at this stage. As a result of subsequent excavation, this system had been refined by 1972, and it was now related principally to

1966–1969	*1972a*	*1980*
Early Neolithic (*c* 4000 BC)	Early to Middle Neolithic	Cadbury 1,
Late Neolithic (*c* 3000 BC)	Late Neolithic	Cadbury 2,
Early Bronze Age (*c* 2000 BC)	Earlier Bronze Age	Cadbury 3,
Younger Bronze Age (900–800 BC)	Late Bronze Age	Cadbury 4, ? some continuation into pre-rampart turf
Initial Pre Roman Iron Age (*c* 650 BC)	Initial Iron Age	Cadbury 5, pre-rampart soil and undefended settlement
Early Pre Roman Iron Age (*c* 550 BC)	Early Iron Age	Cadbury 6, defended Iron Age settlement of 'Rampart' A, refuse on tail and material incorporated into 'Rampart' B
Middle Pre Roman Iron Age (*c* 350 BC)	Middle Iron Age	Cadbury 7, defended settlement of 'Rampart' B
Late Pre Roman Iron Age (c 250 BC 'Rampart' C)	Late Iron Age	Cadbury 8, infill quarry scoop behind 'Rampart' C and later structural phases
Ultimate Pre Roman (c100BC–AD100)	Ultimate Iron Age (c 100 BC outer banks)	Cadbury 9A, pre-'Rampart' Iron Age and core of 'Rampart' D1
		Cadbury 9B, material on tail of 'Rampart' D1 and core of 'Rampart' D2
		Cadbury 9C, material from final re-furbishing of 'Rampart' D
Roman		Cadbury 10A

the phases evident in the construction and use of the ramparts. To this approximate dates were added (Alcock 1972a, 114–170, 210–11). In its final manifestation, Alcock re-drew the phasing of the site in 1980 into a sequence of what he called 'Cultural Phases', derived, in the main, from the pottery and construction phases from the Sites D, K, and KX (Alcock 1980). The origins and validation of this approach had been achieved by his excavations at Castell Collen (Alcock 1964); '...the logical relationship of ramparts and pottery [had] ...been examined in a discussion of the intermittent occupation of Roman forts. At Cadbury...the problem is not one of using supposedly dated pottery to establish the chronology of a rampart, but rather of using successive rampart structures to determine the historical sequence of cultures' (Alcock 1980, 684). In this approach, diagnostic and distinctive types of pottery, supplemented where possible by other finds, defined each of the phases. The various cultural characteristics and types were then applied to the interior trenches.

This sequence has since been widely used, both by Alcock (1982; 1987; 1995) and others (eg Cunliffe 1982). The three systems, along with their correlations, and utilising Alcock's terminology for the sequence of structures in Bank 1, are as on page 23. Owing much to the late 1960s–early 1970s infatuation with cultural archaeology, the development of the Cadbury cultural scheme was carefully explained by Alcock, along with the logic behind it (Alcock 1980). However, it should be noted that its evolution may also have been conditioned by the difficulties that had or were becoming evident in establishing a sequence for the interior structures. The only substantial interior deposits were the deep pits there, but it was recognised that these were not as wide-ranging in date as hoped. The full extent of these problems will become evident presently, but it can be said that, at the time, the excavators were faced with profound obstacles in their ability to isolate structures, let alone date them. Alcock's cultural sequence was an attempt, evidently a successful one, to help elucidate both ground plans and phasing of the site interior. The strongest advantage of this system was that it was built on material and stratigraphic evidence internal to the site (what Alcock called an 'intrinsic typology') and with minimal reference to material from other sites ('extrinsic typologies').

In this report, and as a consequence of the re-examination of much of the material, the numerical ceramic sequence devised by Alcock is retained, with the caveat that the phases should be redated in absolute terms. In addition, this report has also devised a simple five-fold periodisation across the entire site. These generalising periods are expressed as Neolithic and early Bronze Age Cadbury (a period not covered by this report), the core periods of Early Cadbury, Middle Cadbury, and Late Cadbury which might be equated chronologically with the Iron Age and Romano-British periods, and lastly early medieval Cadbury (Alcock 1995). As in the earlier schemes, these periods have been identified almost exclusively through the associated ceramics, and the issues raised are discussed below.

The stratigraphic sequence of late Bronze Age, Iron Age and early Roman ceramics

by Ann Woodward

The late Bronze Age and Iron Age ceramic assemblage is very large indeed. The total weight is 1340.323kg and, next to the pottery from 20 seasons of excavation at Danebury, it is one of the largest assemblages ever recovered by excavation in Britain. Moreover, the Cadbury assemblage displays a remarkable variety, including variations both through a lengthy time sequence and in type of context. Starting in the late Bronze Age there is an interesting and exciting range of contrasting fabrics and many distinctive forms. In the late Iron Age there is an outstanding collection of Glastonbury wares associated with other cultural components such as saucepan pots. Finally, there is a substantial assemblage of Durotrigian and early Roman wares. The full range of forms is associated with exotica and often with datable metalwork such as brooches and military items. The main bulk of the pottery derives from the pits in the interior, but the assemblages of pottery from the ramparts, with their considerable time depth, are also very substantial. Compared with many other sites, the ceramic sequence is remarkably complete. The present project has, for reasons mainly of restricted timing, concentrated only on selected aspects of the assemblage. These have included the chronological sequences of forms, fabrics, and decorative schemes, as evidenced in the most complex rampart and gate deposits, the dating of all structures excavated within the interior, and various functional aspects of the extensive middle to late Iron Age assemblages recovered from the pits. However, a detailed archive for all the pottery (except that from behind Bank 1 in Site D) has also been completed, and this will facilitate many further research programmes that might be initiated in the future.

The detailed presentation of the pottery from Bank 1 at the south-western entrance (Site KX) and a preliminary exposition of the rampart and culture sequences for Cadbury Castle were composed by Leslie Alcock in 1973 and 1974, and published six years later (Alcock 1980). They form a classic text which has survived as an outstanding contribution to Iron Age pottery studies; indeed, it has seldom been matched, let alone surpassed, by any subsequent publications in this country. The aims of the more recent programme of analysis have been to further the proposals presented in the 1980 study, to test, by simple quantitative means, the validity of the sequence there proposed, and to follow up some of the problems that had been posed but by no means solved.

Happily, it may be concluded that the present analysis has confirmed and verified the sequence of pottery phases defined by Alcock, and the numerical system, 4–10, has been retained throughout this monograph, although the numerals have been prefixed with the specific descriptive term 'Ceramic Assemblage' as opposed to Alcock's all-embracing prefix 'Cadbury'. The construction of such an objective system was one of the main aims of the excavation project, namely 'to develop a scheme for Cadbury firmly based on stratification and independent of hypothetical models' (Alcock 1967a, 50). This approach has been adhered to most firmly in the present work, and we reiterate that 'the scheme established at Cadbury is a scheme for Cadbury. It may have considerable reference to sites in adjacent areas of Somerset, Wiltshire, and Dorset, and lesser reference to the Iron Age of Southern Britain as a whole; but this relevance must be established by evidence and argument' (Alcock 1980, 685).

Although the numerical pottery sequence has been verified and retained, it has not been so easy to adopt the correlations between rampart sequence and culture sequence that were also proposed by Alcock. Problems arise owing to the very great complexity of the internal development of Bank 1, which has only been appreciated as a result of the detailed unpicking of the stratification in the south-west entrance, Site K (see Chapter 4, The south-western gate sequence). Although the important theoretical discussion of the use of dating materials from the cores of banks, the surfaces sealed beneath them, and layers and structures behind them (cf Alcock 1980, 682–6) remains profoundly pertinent, the equations of (in Alcock's terminology) Rampart A with the occupation of Cadbury 6, Rampart B with Cadbury 7, Rampart C with Cadbury 8, and Rampart D with Cadbury 9 can no longer be upheld. Furthermore, it is felt that such a rigid system is rather misleading, in that it breaks up the sequence of rampart development into discrete and distinct phases, with implied discontinuities, whether chronological gaps or sudden cultural changes, between them. Following the analysis of Site K it appears that the site sequence was a much more unified one, displaying gradual change, modifications, and developments through time, with no major realignments except that between Ceramic Assemblage 8 and Ceramic Assemblage 9/10. The bank is now ascribed a single structure number, with periods of use, decay, and refurbishment occurring through a sequence of 14 Episodes (see Chapter 4, Episodes I–XIV).

The main thrust of the present programme of analysis was intended to be a detailed quantitative study of the stratified pottery from the south-west gate (Site K). This was achieved, but the results quickly showed that the evidence from Site K was deficient for the earlier pottery phases. It was decided therefore to attempt further studies of the quantitative composition of assemblages from a selected sequence of well stratified contexts in the rampart cutting of Site D (see Chapter 3, Pottery from Site D: south rampart cutting), and a study of pottery from the best stratified deposits within the interior, at Site N (see below and Fig 12). The results of the study of changing representation of ceramic forms and fabric types are presented in summary form below. The illustrations of selected items from Sites D and K are presented in Chapters 3 and 4 respectively (Figs 27–30; 55–6). These items have been selected to amplify the sequence published by Alcock in 1980, and to fill out a presentation of forms from the early phases, which are illustrated in the form series (see Chapter 13, Figs 144–66) only by fragmentary material from the interior. A new summary of the ceramic phases is provided below. This will list the main content of each phase in terms of the form and fabric series (see Chapter 13). It will also include discussion of some of the problems addressed in the original exposition of the system by Leslie Alcock. The main problems that have been considered are as follows:

1 Is there a firm chronological division between Alcock's Cadbury 5 and Cadbury 6, for which Alcock notes some overlap (Alcock 1980, 693)?
2 Does the assemblage of Alcock's Cadbury 7 really exist as a major chronological phase (op cit, 697)?
3 Is there any basis for a subdivision, as tentatively proposed by Alcock, of his Cadbury 8 (op cit, 697)?
4 Can the subdivision, and dating, of Alcock's Cadbury 9 (op cit, 698–9), be upheld when the disposition of Roman material is fully analysed ?

A quantitative analysis of pottery from Sites D, K, and N

by Ann Woodward and Lynne Bevan

A full record of all the pottery, by sherd count and weight, was accomplished for the whole of Site K and selected contexts from Site D. These analyses employed the detailed fabric codes listed in Chapter 13. All the non-pit pottery from N was scanned and recorded by sherd count, but it was not weighed. The fabric codes used for Site N were from the simplified series listed in Chapter 13.

The chart (Fig 9) shows the variations in ceramic form through time. Each histogram represents the percentage occurrences of form types within a set of contexts which belong to one of the Bank Episodes defined in Chapter 4 (The south-western gate sequence). The earlier Episodes are best represented in Site D (left of Fig 9), and the later Episodes in Site K (right of Fig 9). In the histograms, the ceramic form codes are arranged in rough chronological order from left to right. The incidence of more residual early material in Site D than Site K is readily apparent. This is due of course to the better representation of the earlier Bank Episodes in Site D. The occurrence of significant 'first appearances' of specific form types and significant concentrations in particular Episodes have been shaded. The detailed importance of these will be alluded to below in the period summary for the site. At this stage,

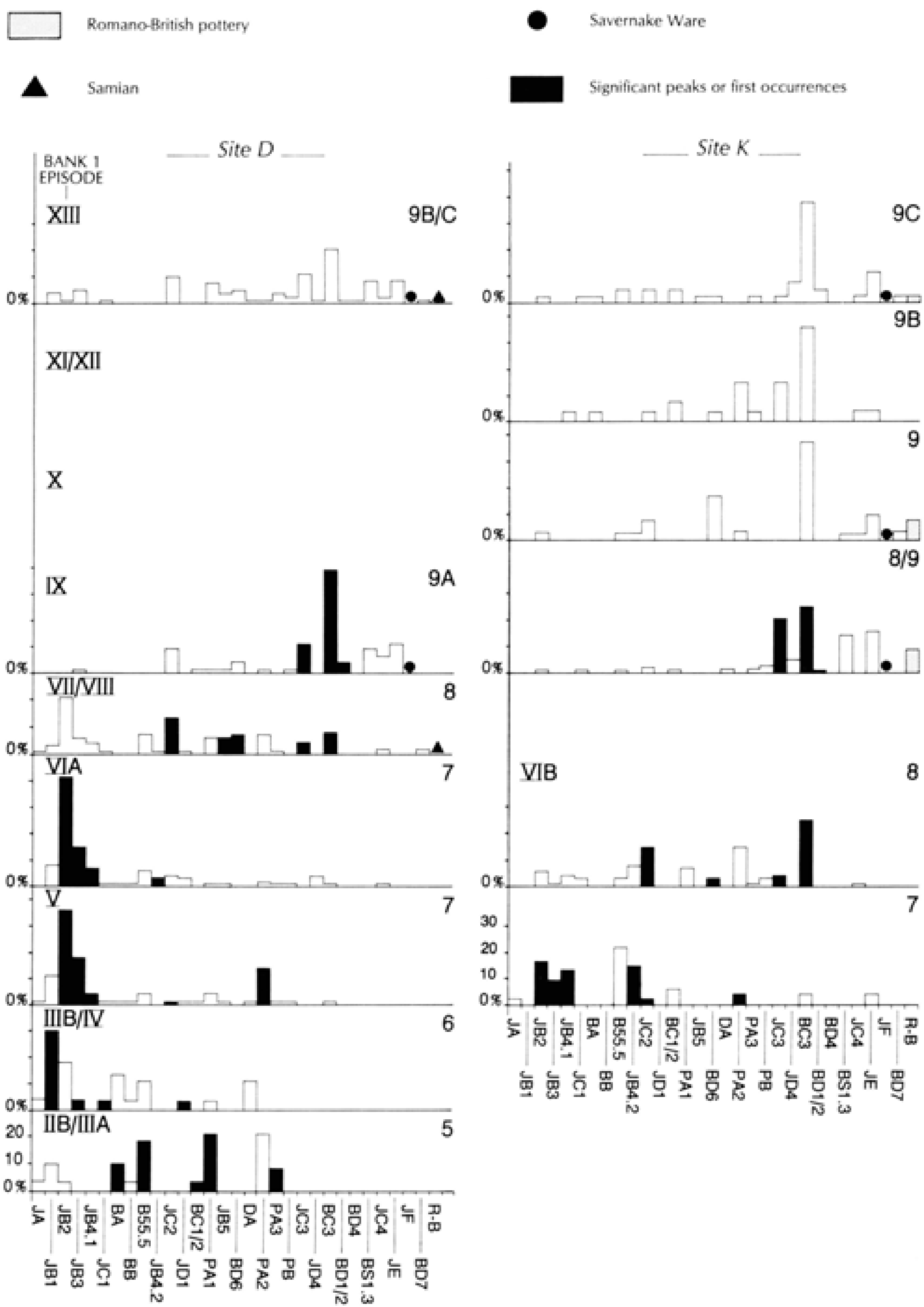


Fig 9 Chart showing the variation of ceramic forms through time for Bank 1 Sites D and K

Table 1: Ceramic forms in stratified deposits, Site N

context group	*JB1*	*JB2*	*JB3*	*JB4.1*	*JC1*	*BA*	*BS5.5*	*JC2*	*JD1*	*BC1-2*	*PA1*	*BD6*
shrine	2			1							1	3
rubbish layer	22	23	6	1	16	6	16	17			45	2
higher cobbles	1		1		3				1		2	5
greeny layer	30	13	2	5	9	4	26		1	2	44	4
sealed by greeny			1		4	2					9	
lower cobbles	3		1		1		1		2		3	
sealed by cobbles	3				1		2				5	
context group	*DA*	*PA2*	*PA3*	*PB*	*JC3*	*JD4*	*BC3*	*BD1-2*	*BS1-3*	*JC4*	*JE*	*ceramic assemblage*
shrine					2		26	1	6	1	13	9/10
rubbish layer		10	2		3	2	5			1		8
higer cobbles	2	1					3			1		8
greeny layer		10	2	1	3	1	5					7/8
sealed by greeny												7
lower cobbles		2										5/6
sealed by cobbles		3	2				1					4/5

attention is particularly drawn to the fact that the newly defined Bank Episodes (II to XIII) are associated with a sequence of distinct Ceramic Assemblages (noted in the right-hand side of each chart), and that these assemblages match well those previously defined as Cadbury 5 to Cadbury 9. The equations are indicated on the chart. The occurrence of Romano-British pottery, samian, and Savernake Ware should also be noted. These ceramics, all of which are commonly held to be of post-conquest date, occur in the assemblages from Episode VII/VIII onwards.

A summary of the forms occurring in the stratified sequence from the interior Site N is given in Table 1. These data have not been presented in graphical form because the totals per context grouping are so variable. However, as in the rampart sequences, a clear progression of distinct assemblages could be recognised, and using rough correlations of their characteristics with particular assemblages within the rampart sequences, it has been possible to ascribe Ceramic Assemblage numbers to the stratified sequence in Site N (see the lower right-hand column, Table 1).

The occurrence of fabric types through time is summarised in Figure 10 where data for the same context groups representing the Bank 1 Episodes in Figure 9 are presented. In this case the data integrate the evidence from Sites D and K to provide a single chronological overview. Details will be noted in the phase summary below but some general trends may be noted immediately. Firstly, it is apparent that the overall patterns in changing fabric use noted by Alcock (1980) were substantially correct. The full fabric descriptions to which the following summary refers are provided in Chapter 13. Calcite inclusions (fabric a) are confined largely to Ceramic Assemblage 4, and calcite and shell 'mixtures' (fabrics b/k and f/i/l/m) are characteristic of Ceramic Assemblage 5. Ceramic Assemblages 6 and 7 are dominated by shelly wares (fabric c), and Ceramic Assemblage 8 sees the first significant occurrences of fine sandy wares (fabric s) and a revival of oolitic

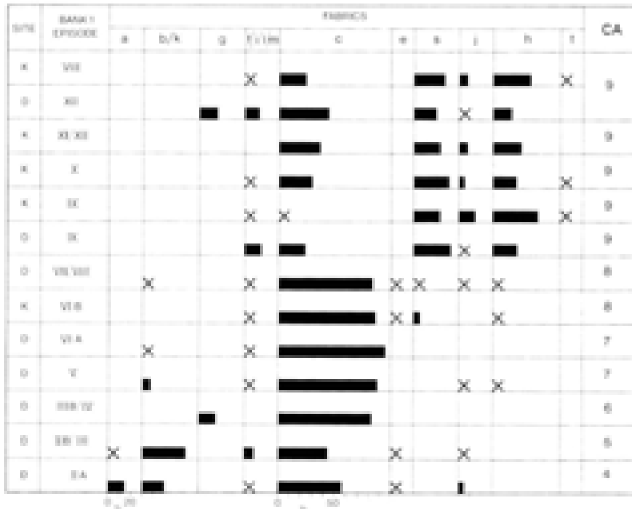


Fig 10 Chart showing the variation in ceramic fabrics through time for Sites D and K

tempering (fabric e). A second conclusion to be drawn from the chart is that the change from the mainly shell-tempered assemblages of Ceramic Assemblage 8 (Episodes VII and VIII) to those of Ceramic Assemblage 9 (Episode IX onwards) is not only dramatic and obvious, but appears to represent a major dislocation of pottery use on the site. The question of the dating, and cultural context, of this dislocation will be considered below. Equivalent data concerning the occurrence of fabric types in the interior (Site N) are given in Figure 11. For Site N, the simpler fabric coding system (see Chapter 13) was employed and the main complication in comparing these data with those from the rampart sequences is that fabric Q (quartz) includes coarse quartz tempering of Ceramic Assemblage 6 type along with Poole Harbour fabrics. Setting aside this problem, the general patterning of change through time reflects that established for the rampart sequences, although, inevitably in an area of shallow stratification, the incidence of residuality from layers with Ceramic Assemblages 4 to 6 is greater.

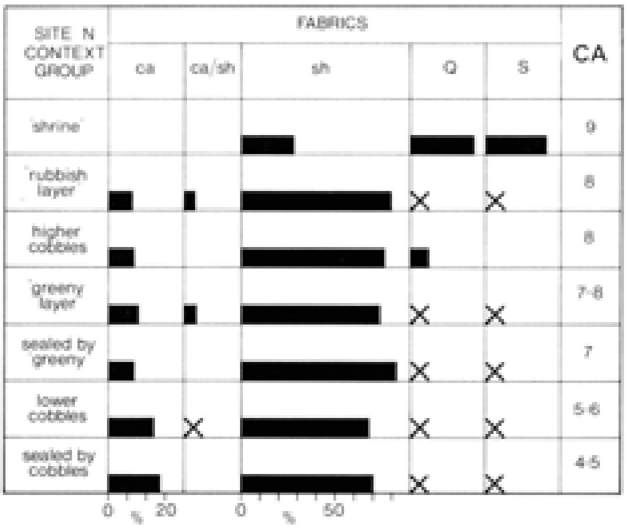


Fig 11 Ceramic fabrics in the stratified deposits of the interior Site N (X — <5%)

Cadbury 4 to Cadbury 10 revisited

by Ann Woodward

This section presents a revised summary of the Ceramic Assemblages represented at Cadbury Castle. It attempts to crystallise the results of the quantitative studies presented above, and throughout the following paragraphs, reference should be made to the histograms (Figs 9–11) and Table 1 illustrating the previous sections. Modern practice does not allow for the full publication of the pottery assemblages by context. However, it was felt desirable to publish a careful and representative selection of these groups from the interior (other groups from the ramparts and south-west gate are published in the relevant chapters). For each context all rims, bases, and decorated sherds are illustrated, and for each diagnostic sherd details of form code, fabric and any decoration are listed. The fabric codes refer to the simpler classification (see Chapter 13). The site model which breaks the structural history into the Early, Middle, and Late Cadbury Periods is mentioned above and summarised below (see The revised phasing scheme).

Ceramic Assemblage 4: The main forms occurring in this phase are large bipartite rusticated jars (JA), small bowls of simple profile (BC1 and BC2), ovoid jars with hooked rim (PA1), and ovoid jars with an internal rim bevel (PA3). Bases with a rough, but marked, external expansion (BS5.5) are also characteristic. The fabric distribution includes distinct quantities of calcite or 'calcite mixture' inclusions although most of the pottery is shell-tempered. The use of fine sand in the fabrics is another significant element. The main associations of Ceramic Assemblage 4 are with a lynchet bank and soil beneath Bank 1 (Site D, Episode II), and with a small circular structure and other features on Sites F and N (Figs 77–8).

Ceramic Assemblage 5: The form PA1 and PA3 ovoid jars continue, as does the incidence of the expanded (BS5.5) base. Newly occurring form types are carinated bowls with or without flaring rim (BA), ovoid jars with a flattened rim (PA2), tripartite shoulder jars (JB1), and a few jar types with upstanding flattened or slightly necked rims (JB2 and JB3). The fabric types are mainly mixtures (b/k and f/i/l/m) which incorporate varying proportions of calcite, shell, flint, quartz, and limestone. The main stratigraphic associations are with an early bank, either a field lynchet or an enclosure in the Bank 1 sequence (Site D, Episode III), the lower cobbles on Site N, and circular and rectangular structures on Sites E, F, N, and T (Figs 77–9).

Ceramic Assemblage 6: The jar forms JB1, JB2, and JB3 continue, but in this phase JB1 is markedly dominant. Ovoid jars of type P1 and P2 continue, and the BA bowls are joined by a few examples displaying cordons (BB). Other new types are the round-shouldered storage jars with flattened rims (JC1) and globular jars with gently out-curved rims (JD1). The array of fabrics is quite different from Ceramic Assemblage 5, with a dominance of shell inclusions along with a significant presence of shell and mica mixtures (fabric g). No calcite or shell 'mixture' fabrics are now present. Ceramic Assemblage 6 is associated with the construction and use of the first stone and timber bank (Site D, Episode IV), and, in the interior, with a large series of circular and rectangular structures. These occur in the areas formerly occupied and also extend into Sites L, P, and S (Fig 79).

Two interior contexts have been selected for presentation here. The first context, E3B,C (Fig 12), forms one spatial division of the surface deposit known as the greeny layer identified in Sites E and N (see p166). This layer contained material ranging from Ceramic Assemblages 5 to 7 and overlay a cobbled surface containing pottery of Ceramic Assemblages 5 and 6.

	Form	*Fabric*	*Decoration*
1	BA2.1	sh	IG2; IG4; IG3
2	BA1.1	sh	IGE
3	BA	S	IG1
4	JB1.1	sh	FP1
5	JB1.1	plate sh; S	P2
6	JB1.3	plate sh	FP3
7	JB1.3	sh	FP3
8	JB1.3	plate sh	FP3
9	JB1.1	ca	FP1
10	BA1.	mica S; sh	-
11	BA2?	sh	-
12	BA2.2	mica S	-
13	BA2.2	mica S	-
14	JB1	sh	-
15	JB1	sh	-
16	PA3	ca	-
17	PA3	sh;ca	-
18	PA2?	sh	-
19	PA2	mica S	-
20	PA1	ca	-

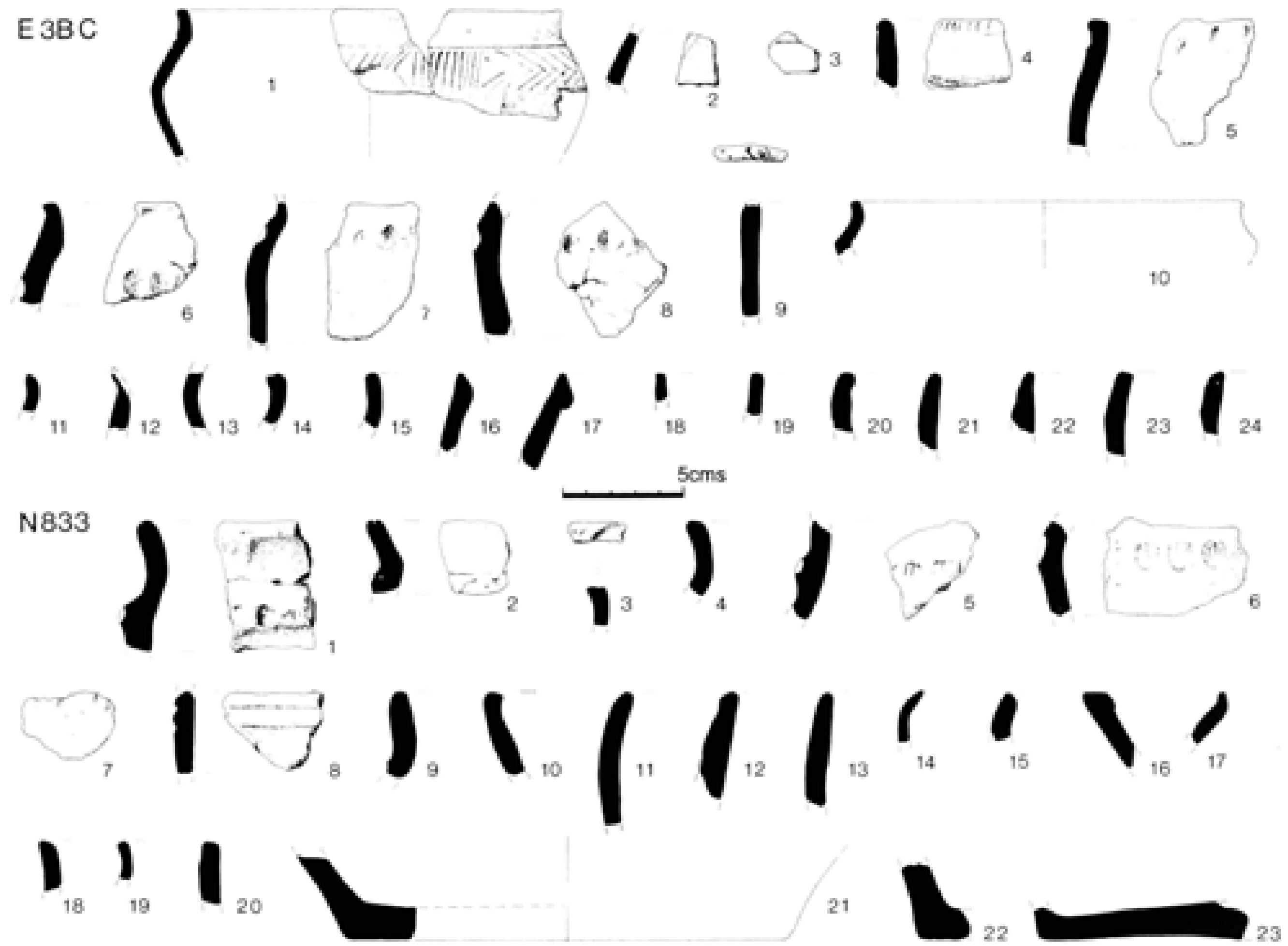


Fig 12 Two ceramic assemblages from the interior: E3BC, N833. Scale 1:3

21	PA1	ca	-
22	PA1	sh; ca	-
23	PA2	ca	-
24	PA1	sh	-

The second context is an Early Cadbury pit in Site N (N833, Fig 12): the vessels date from Ceramic Assemblages 5 and 6. Four layers, A to D, were distinguished during excavation. Total sherds: 168.

	Form	*Fabric*	*Layer*	*Decoration*
1	JB1.3	sh	A	FP3
2	JB1.3	sh	A	FP1, FP3
3	JB1.1	sh	A	FP1
4	JB1	sh	A	-
5	JB1.4	sh	A	FP3
6	JB1.3	sh	A	FP3
7	JB1.3	sh	-	FP3
8	BB?	sh; ca	A	IG2 (haematite)
9	JB1	ca	-	-
10	BA?	ca	B	-
11	PA2	ca; sh	B	-
12	PA1	sh; ca	B	-
13	PA1	sh; ca	B	-
14	PA1	sh; ca	B	-
15	PA1	sh	B	-
16	DA1	sh; ca	A	-
17	BA?	S	A	-
18	?	sh	A	-
19	JD1	sh	A	-
20	PA2	ca	-	-
21	BS5.1	sh; ca	B	-
22	BS5.1	sh; ca	-	-
23	BS5.1	sh	A	-

One of the specific aims of this study has been to investigate the reality of a division between Ceramic Assemblages 5 and 6. The quantitative analysis has confirmed a clear contrast between the two successive assemblages, both in terms of forms and fabric types represented. The division has been confirmed also by the firm attribution of the building of the first major rampart to Ceramic Assemblage 6, and a contemporaneous expansion of settlement within the interior.

Ceramic Assemblage 7: Jar forms JB1 and JC1 continue. JB2 and JB3 show marked peaks of occurrence, and the jar assemblage is now amplified by the addition of more slack-profiled large jars (JB4.1) and the distinctive smaller jars with slack profile and an out-curved rim (JB4.2). Flat-rimmed ovoid jars (PA2) now outnumber those with simple rims (PA1), and a new form of jar with thickened and rolled rims appears (JC2: 'proto-bead-rim' jars). The fabrics are almost entirely dominated by shell tempering. Stratigraphic associations for Ceramic Assemblage 7 include continued use of the stone and timber rampart (Sites D and K, Episode V), and structures erected immediately behind it: extensive structures and pits within the interior and the greeny layer complex in Site N.

The preliminary analysis of the ceramic system for Cadbury, as presented by Alcock (1980), was not able to prove the existence of Ceramic Assemblage 7 as a distinct chronological phase. However, the studies of ceramics from the rampart sequences presented here have shown that there is a clear horizon characterised by 'shell only' fabrics and a distinctive range of forms. This assemblage has a substantial presence in Site D, as well as within structures behind the first stone and timber rampart in Site K. A further test has been applied to the pit assemblages which might pre-date the main Ceramic Assemblage 8 series of pit fillings. The number of pits containing pure Ceramic Assemblage 7 is 17. However, in addition to this, there are a further 36 pits which contain plain wares only. The forms represented are common to Ceramic Assemblages 7 and 8, so these pits could also belong to Ceramic Assemblage 7, or to an early stage in Ceramic Assemblage 8 before the introduction of the decorated forms. This analysis has included only pits containing more than ten sherds. Although the plain ware pit assemblages are mainly small in size (less than 100 sherds), a significant number are larger (up to 256 sherds), so the absence of decorated Ceramic Assemblage 8 sherds is unlikely to be due to a factor of small assemblage size. It may be concluded that Ceramic Assemblage 7 undoubtedly exists as a definite, albeit possibly short-lived, chronological phase within the sequence of site activities.

Ceramic Assemblage 8: Ovoid jar forms PA1 and PA2 continue in bulk and there is a peak in the occurrence of straight-sided jar form JB5. The proto-bead-rim jars (JC2) are also very common. The main innovations are the bead-rimmed forms: a jar, JC3 and the first bead-rimmed bowls of form BC3.3, which at this stage are tempered with shell or oolitic inclusions. Decorated wares are significant, including saucepan pots (PB) and Glastonbury ware jars of form BD6. As in Ceramic Assemblage 7, the fabric repertoire is dominated by shell tempering, but now there is a significant presence of oolitic-tempered wares and a presence of fine and coarse sandy wares at 2% and 1% respectively. Ceramic Assemblage 8 is a long-lived phase in stratigraphic terms, embracing as it does a major rear extension of the stone and timber rampart and the initiation of the multiplex wall which was inserted into its back (Sites D and K, Episodes VI to VIII). Within the interior, most of the occupation evidence belongs to the Ceramic Assemblage 8 phase: many circular houses, most of the pits, and the so-called rubbish layer in Site N.

Alcock, appreciating the potential extended time-span of Ceramic Assemblage 8, felt that 'When the pit groups have been fully studied, there may be a basis, in recurrent pit-group associations, for suggesting subdivisions of Cadbury 8' (Alcock 1980, 697). This process has proved very difficult in practice. The ceramic assemblages from the pits are remarkably uniform, especially in terms of their coarse ware content. Most are overwhelmingly dominated by plain ovoid and barrel-shaped jars (PA1, PA2) and by proto-bead rim jars (JC2), with a smattering of bead-rim jars and bowls (JC3; BC3.3). More detailed consideration of the functional and other aspects of these assemblages will be found in later chapters (see p00), but for the purposes of the immediate chronological argument it is necessary to concentrate on the decorated wares, namely the Glastonbury jars (BD6) and the saucepan pots (PB). Firstly, it was felt that a study of the incidence of Glastonbury ware within the rampart sequences at Sites D and K might be informative. Analysis of the fabrics of the stratified BD6 sherds by David Williams (see Chapter 9, Typical descriptions: Glastonbury Ware), showed the presence of two main groups: sandstone and fossil shell. When the stratification of these sherds was considered it became abundantly clear that although the shelly fabrics were in use throughout the later rampart sequence, the sandstone-tempered sherds were only found in relatively late stratigraphic positions, ie those relating to the first foundation of the multiplex wall. Furthermore, the sandstone-tempered sherds were decorated with motifs which were altogether different from those present on the shelly jars. The sandy wares bore mainly curvilinear elements and motifs, including complex patterns executed with a compass, while the shelly jars were dominated by geometric designs, especially zones or triangles filled with hatching or cross-hatching. This chronological distinction can be applied to the pit assemblages, where pits containing sandstone-tempered jars of form BD6 may be regarded as occupying a late stage in the chronological sequence. Saucepan pots did not occur in any numbers in the rampart sequences, but were present in 34 pits within the main excavated area of the interior (excluding Site BW). They are usually tempered with shell, or occasionally with quartz. In nearly every case, pits which produced sherds of saucepan pot also produced sherds of Glastonbury jars, and in 13 cases the Glastonbury jars present were in sandstone-tempered as well as shelly fabrics. It can be concluded then that saucepan pots were in circulation during both chronological phases of Glastonbury jar occurrence. In the rampart sequences, most of the Ceramic Assemblage 8 bead-rim bowls (form BC3.3) were in shelly or oolitic-tempered fabrics, but a few were in fine sandy fabrics. A scan of the ceramic archive for the pit assemblages shows that only a handful of the Ceramic Assemblage 8 pits (seven in the interior, excluding Site BW) contained sand-tempered bead-rim bowls. In addition, these were not noticeably associated with the late sandstone-tempered Glastonbury jars, so they cannot be defined as a further 'late Ceramic Assemblage 8' feature.

Five pit groups from the interior have been selected to illustrate Ceramic Assemblage 8.

Pit group C702 (Fig 13, nos 1–4, 14–18, 24–6, and 31 are non-ceramic finds): two layers, A and B, were defined during excavation. This is typical of Ceramic Assemblage 8, with one intrusive sherd of Butt Beaker, (BD8: no 32), which is Late Cadbury. Total sherds: 249.

	Form	*Fabric*	*Layer*	*Decoration*
5	PB1	sh	A	IG4; IGC
6	BD6	sh	-	IG2; IGA; GR2
7	BD6	S	-	IGC
8	P	sh	A	-
9	PA1	sh	-	-
10	PA	sh	-	-
11	PA2	sh	A	-
12	PA1	sh	-	-
13	PA1	sh	-	-
19	JC2	sh	A	-
20	PA1	sh	-	-
21	JC3	sh	A	-
23	JD4	sh	-	-
27	JC2	sh	A	-
28	JC2	sh	A	-
29	JC2	sh	A	-
30	PA3	sh	A	-
32	BD8	S	-	-
33-9	BS5.1	sh	-	-

Pit group L160 (Fig 14, nos 13 and 20 are non-ceramic finds): No individual layers were distinguished. This assemblage has a high proportion of decorated fine wares. Total sherds: 132.

	Form	*Fabric*	*Decoration*
1	JD4	sh	IG6
2	BD6	sh	IG2; ICE
3	BD6	sh	IGE
4	BD6	sh	IC4
5	PB	Q	IG1
6	BC3?	sh	-
7	JC3	sh	-
8	PA1	sh	-
9	JC3	sh	-
10	JC2	sh	-
11	PA2	ool	-
12	JC2	sh	-
14	JC2	sh	-
15	JC2	sh	-
16	JD4	sh	-
17	JC2?	sh	-
18	PA1	sh	-
19	PA1	sh	-
21–4	?	sh	-
25	JB5	sh	-
26–7	BS5.4	S	-
28–31	BS5.4	sh	-

Pit group L452 (Fig 15, nos 1–4 and 13 are non-ceramic): Two layers, A and B, were distinguished. This assemblage has a high incidence of large coarse ware sherds and two possibly intrusive later pieces, nos 22 and 23. Total sherds: 100.

	Form	*Fabric*	*Layer*	*Decoration*
5	BD6	sh	A	IG1; IGF
6	BD6	sh	B	IG1; IGF
7–8	BD6	sh	-	IG6
9	BD6?	sh	-	IG1; IG4
10	?	sh	A	IG9
11	?	sh	-	IG1; IG4; GR2
12	PA1	sh	-	-
14	PA1	sh	-	-
15	PA1	Q	-	-
16	PA3	sh	-	-
17	PA1	sh	-	-
18	JC2	sh	A	-
19–20	PA1	sh	-	-
21	PA3	sh	-	-
22	JD4	sh	-	-
23	BC3.3	S	-	-
24	BC3	ool	-	-
25	JC2	sh	-	-
26, 28	JC2	sh	-	-
27	JC1?	sh	-	-
29	BC3	sh	B	-
30	PA1	sh	-	-
31,32	BS5.1	sh	-	-

Pit group P402 (Figs 16–18, nos 1–2 (crucible fragments), 38, 43–4, 46–7, 55–6, 69–72 are non-ceramic finds): This is a typical larger Ceramic Assemblage 8 pit with a predominance of coarse wares. There are a few residual sherds from Early Cadbury, and one intrusive Late Cadbury sherd (no 4) occurred in layer A. Five layers, A to E, were distinguished. Total sherds: 267.

	Form	*Fabric*	*Layer*	*Decoration*
3	BD6?	Q	C	IG9; IC2
4	JE	S	A	IG6
5	BD6?	sh	C	IG8
6	BD6	sh	A	GR2; ICC
7	BD6	Q	A	IGA
8	PB	sh	A, B	IG1; IC4
9	PA1	sh	C	-
10	PA1	sh	A, B	-
11	PA1	sh	A, C	-
12	C2	sh	B, C	-
13	PA1	sh	A	-
14	PA3	sh	A, B	-

Fig 13 Ceramic assemblage and other finds from interior pit C702. Scale 1:3

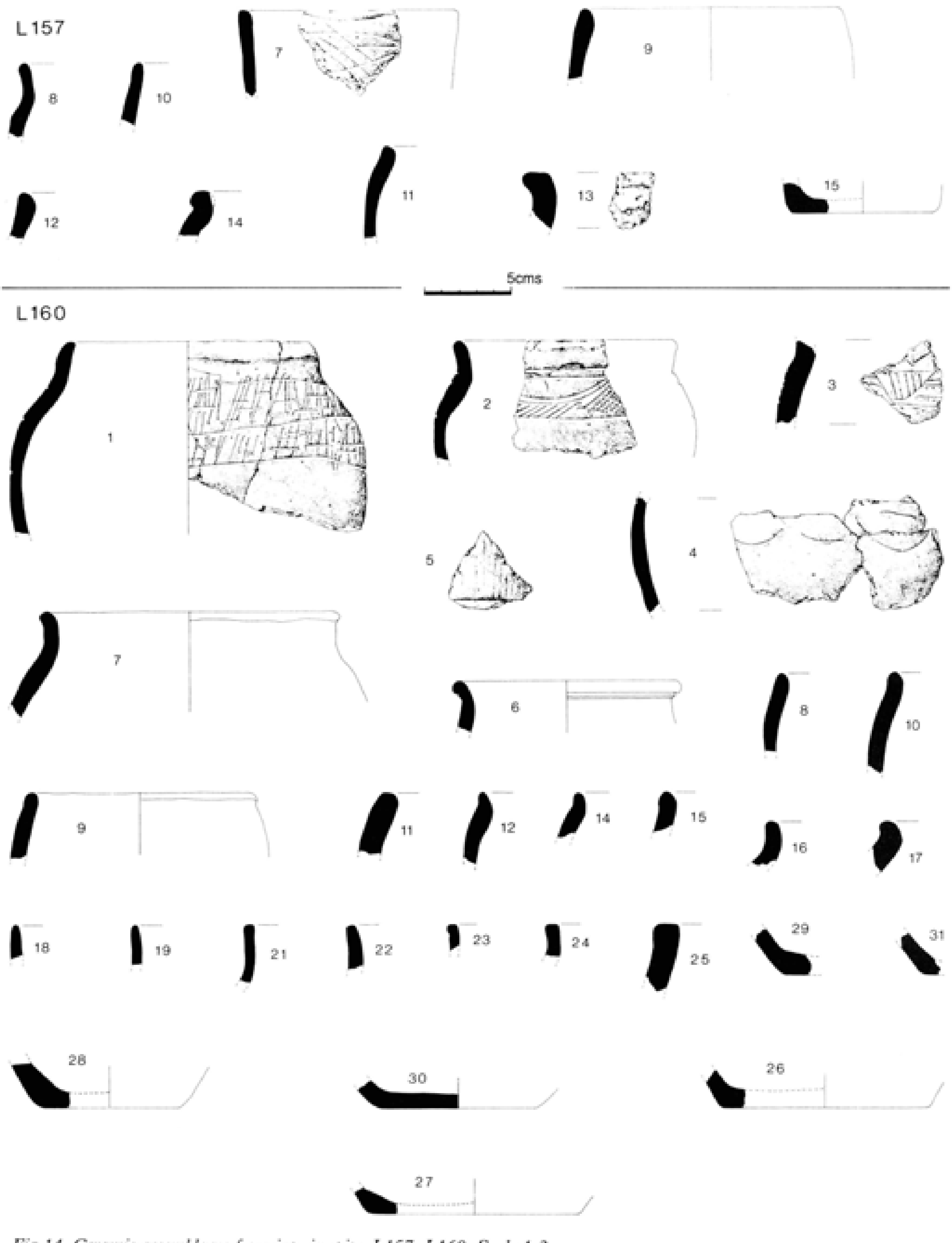


Fig 14 Ceramic assemblages from interior pits: L157, L160. Scale 1:3

Fig 15 Ceramic assemblage and other finds from interior pit L452. Scale 1:3

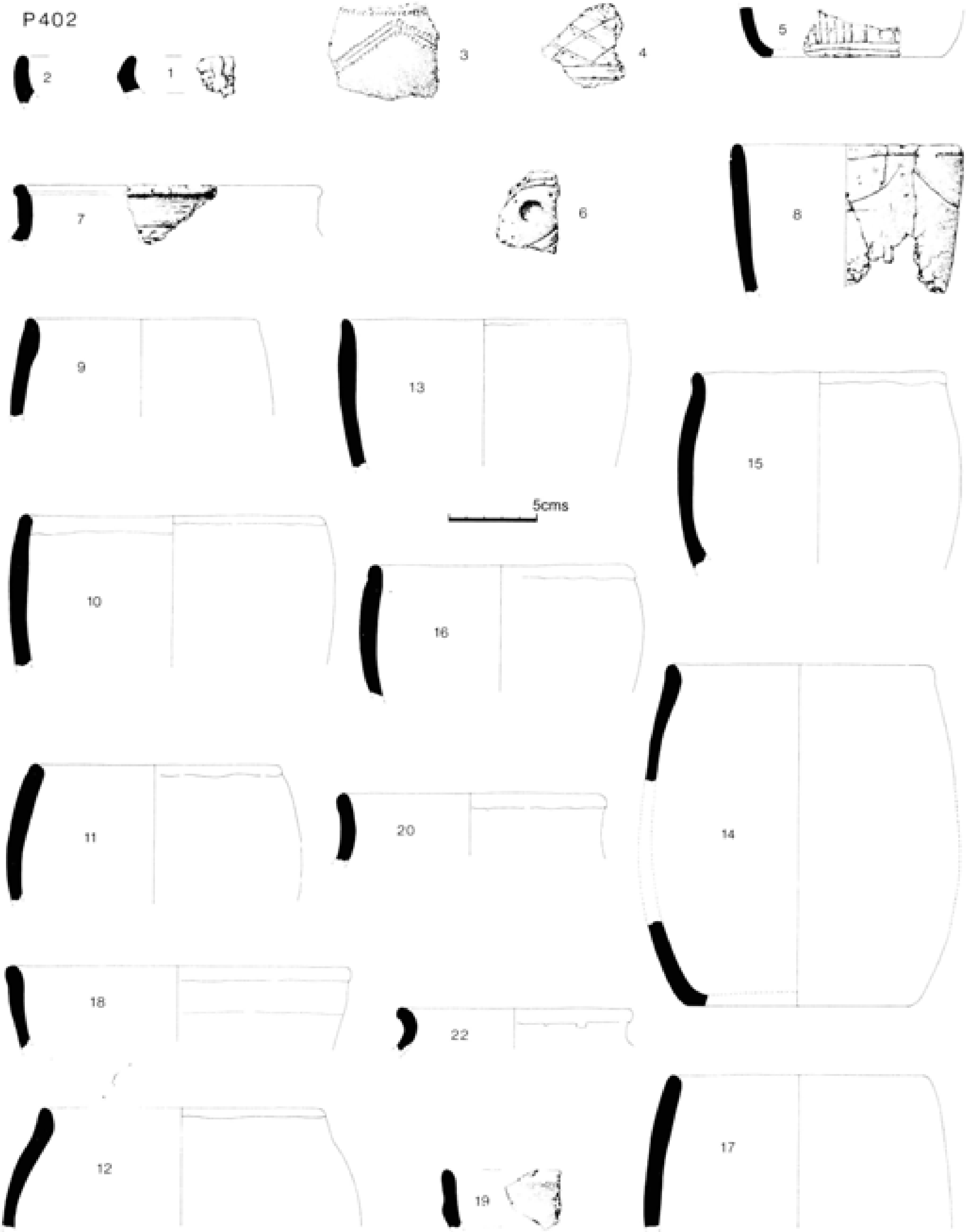


Fig 16 Ceramic assemblage from interior pits P402, 1-20, 22. Scale 1:3

Fig 17 Ceramic assemblage from interior pits P402, 21, 23-42, 45, 48-54, 57-60. Scale 1:3

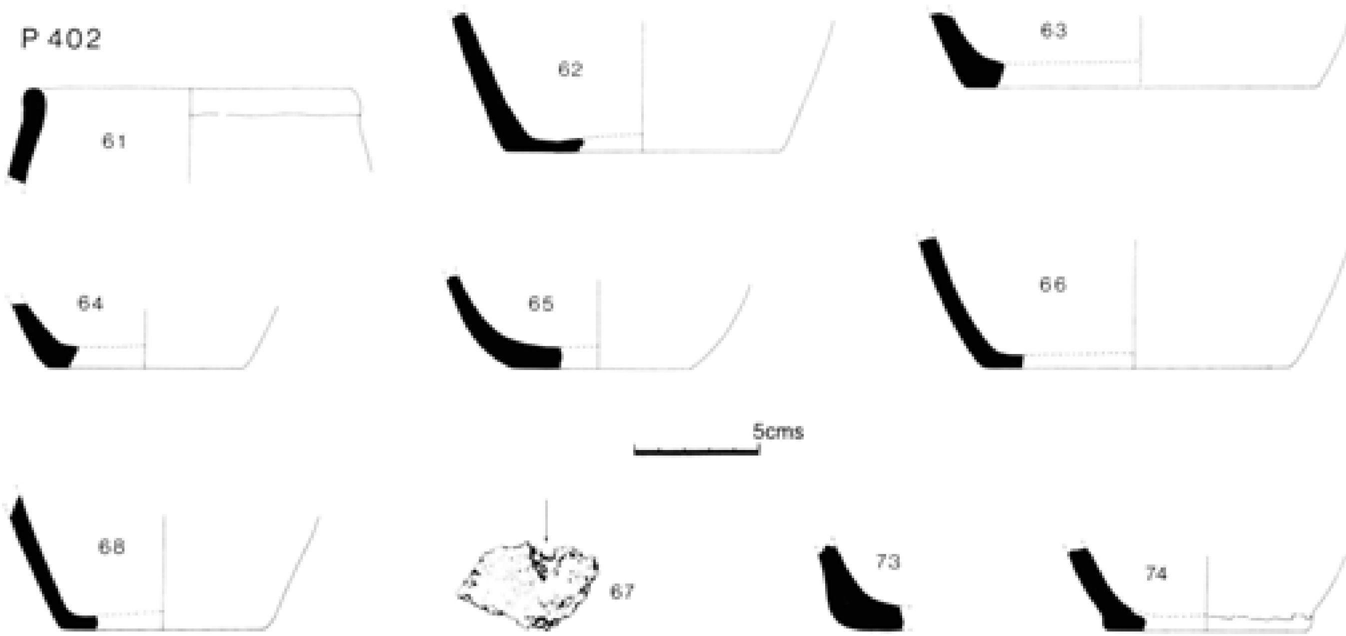


Fig 18 Ceramic assemblage from interior pits P402, 61-8, 73, 74. Scale 1:3

15	JC2	sh	-	-
16	JC2	sh	A	-
17	PA1	sh	A	-
18	JC2	sh	C	-
19	BC2	sh	A	-
20	JC2	sh	C	-
21	PA1	sh	C	-
22	JD4	Q	C	-
23	PA1	sh	A	-
24	PA1	sh	A	-
25	JB2	sh	A	-
26	PA1	sh	A	-
27	JC2	sh	B	-
28	PA1	sh	A	-
29	PA1	sh	A	-
30	JB4.1	sh	A	-
31	?	sh .	A	-
32	PA1	sh	A	-
33	PA2	sh	B	-
34	JC2	sh	C, D	-
35	JC2	sh	A, C	-
36	JC2	rock	B	-
37	PA3	sh	A, B	-
39	BC2	sh	B	-
40	JC2	sh	D	-
41	JC2	sh	B	-
42	PA1	sh	A	-
45	JD4	sh	A	-
48	JC3	sh	C	-
49	BC3	sh	A, C	-
50	JD4	sh	A	-
51	JC3	S	B	-
52	JC2	sh	B	-
53	JC1	sh	A	-
54	JB5	ool	A	-
57	JD4	sh	A	-
58	PA2	sh	C	-
59	JD4	Q	A	-
60	JC3	sh	A	-
61	PA2	sh	A	-
62–3	BS5.1	Q	C	-
64-6, 68	BS5.1	sh	A	-
67	BS (perf)	sh	B	-
73	BS5.3	sh	C	-
74	BS4	sh	C,A	-

Pit group P823 (Fig 19): This is a typical small pit assemblage. Total sherds: 24.

	Form	*Fabric*	*Layer*
1	JC2	ool	A
2	PA2	sh	-

Pit group P824 (Fig 19): Two layers, A and B, were distinguished. This is a medium-sized assemblage. Total sherds: 82.

	Form	*Fabric*	*Layer*	*Decoration*
1	BD6	S	A	IGD; IC3/IG3; ICF
2	BD6	sh	-	IGE
3	PB	sh	A	IC4
4	PA2	sh	A	-
5	PA1	sh	A	-
6	PA1	sh	A	-
7	PA1	sh	A	-
8	PA1	sh	B	-
9	PA3	sh	B	-
10	JB5	sh	A	-
11	PA1	sh	A	-
12	PA1	ool	B	-

Fig 19 Ceramic assemblage from interior pits P823, 1-2, P824, 1-23. Scale 1:3

13	JC2	sh	A	-
14	JC2	sh	A	-
15	JC2	sh	B	-
16	PA1	sh	A	-
17	JD4	sh	A	-
18	JC4	sh	A	-
19	JD4	sh	A	-
20	BS5.3	sh	A	-
21–3	BS5.1	sh	B, A, A	-

Ceramic Assemblage 9: The bead-rim bowl form BC3.3, in its sand-tempered and developed form, is overwhelmingly dominant. Bead-rim jars (JC3) and necked jars (JE) are also common, but the large high-shouldered and flat-rimmed jars (JC4) and developed S-profiled jars (JD4) are relatively uncommon. Complex bases with pedestal or foot-ring (BS1–3) are further innovations. The fabrics are mainly sand-tempered, with a roughly equal division between the Poole Harbour (fabric h) and coarse sand (fabric s) varieties. Fine sand is also significantly represented, as are shelly and some other coarse wares. However, these last two types must be mainly residual within the rampart sequences. Stratigraphically, Ceramic Assemblage 9 occurs in Episodes IX to XIII of the Bank 1 sequence (mainly in Site K; see Chapter 4). This commences with

Fig 20 Ceramic assemblage from interior pits W051, 6-15, W058, 2-19. Scale 1:3

the first main use of the multiplex wall and continues to the massacre event and the later phases of stone wall refurbishment and modification. The only definite structure associated with Ceramic Assemblage 9 in the interior is the possible shrine, Structure N5, but a scatter of pits also contains reasonably pure Ceramic Assemblage 9 pottery (see Chapter 5, Late Cadbury).

On the basis of a phasing of Bank D (Alcock's multiplex stone wall, 1980, 698–9) Alcock outlined a preliminary subdivision of Cadbury 9 into three chronological phases: Cadbury 9A, 9B, and 9C. The first (Cadbury 9A) was signalled by the occurrence of sandy developed bead-rim bowls alongside fine ware cordoned bowls of the 'Hengistbury B derivative' type (BD1 and BD2). Cadbury 9B was defined by the introduction of tazza forms (BD7) and the occurrence of bead-rim bowls of the 'war cemetery' type (BC3.2), and Cadbury 9C encompassed the introduction of massive heavy-rimmed storage vessels of the Savernake Ware type (JF), the dominance of straight-necked jars with burnish-decorated zones (JE4.2), and the first occurrence of true Romano-British products such as those from the Corfe Mullen kiln. The detailed quantified study of form representation through the rampart sequences in Sites K and D has not provided evidence to confirm this simple threefold division. Cordoned bowls, Savernake Ware, true Romano-British products, and the JE4.2 jars all occur throughout the Ceramic Assemblage 9 sequence, through Episodes IX to XIII. 'War cemetery' bowls occur in Episodes IX and XII, and the tazza forms occur as early as the Episode VIII/IX transition. In addition, the distinctive Ceramic Assemblage 9 group from the bedding trench of the possible shrine N5 contains large quantities of Savernake Ware alongside terra nigra and terra rubra exotica. This evidence does not prove that there was no chronological development of form composition of assemblages during Ceramic Assemblage 9; it merely fails to demonstrate it in a simple fashion. The cordoned bowls, by comparison with other sites in Dorset, would most probably have reached the site well before the other specific ceramic types discussed above, and a hint that this was the case is available within the pit assemblages from the interior. In these, there is a consistent occurrence of cordoned bowl fragments (BD1 or 2) within the pits of Ceramic Assemblage 8, while the incidence of JE4.2 jars and 'war cemetery' bowls is altogether rare in the same pits.

Discussion of the chronology of Ceramic Assemblage 9, in relation to the radiocarbon dates and other sites, will follow in Chapter 4, but it can be noted here that we may well be dealing with a very complex sequence of episodes spanning a relatively short period of time. Ceramic Assemblage 9 appears to be contained entirely within the first century AD. In the first half of that century the multiplex wall came into full use; then followed the massacre event, a phase of abandonment and site cleansing, and then the construction of a new gateway, itself of several phases, all within the later first century. Needless to say, much of Ceramic Assemblage 9 is associated with Romano-British pottery of well known post-conquest types, and the ceramic phase can therefore be seen to overlap substantially with Alcock's Cadbury 10A.

A small number of contexts in the interior date from Late Cadbury and one pit and one layer group are illustrated here.

Pit group W058 (Fig 20, 1–2 are non-ceramic finds): This is a good example, containing several diagnostic pieces of Ceramic Assemblage 9 mixed in with residual material, mainly of Ceramic Assemblage 8. Five layers (A to E) were distinguished. Total sherds: 64.

	Form	*Fabric*	*Layer*	*Decoration*
3	BD6	S	-	IG2; IC2; IGF
4	JE4	S	A	IC3
5	BD2	sh	-	-
6	BD2	S	-	-
7	Lid	sh	-	-
8	PA1	sh	-	-
9	JC3	sh	A	-
10	PA1	sh	A	-
11	JC2	sh	A	-
12	PA1	sh	-	-
13	JC2	Q	C	-
14	PA1	sh	-	-
15	JC3	S	A	-
16	JC4	S	-	-
17	BS5.1	sh	C	-
18	BS5.4	S	A	-
19	BS5.3	sh	C	-

Context W035 (Fig 21): This contains one of the best series of developed Durotrigian wares of Late Cadbury. The context was located above the roundhouse Structure BW6 in Site BW and sealed below a Roman 'field' oven. In this case only the more complete vessels have been illustrated. The uncommon form BD7 (no. 8) is not a true tazza but a form of carinated bowl more characteristic of Dobunnic territory (cf Salmonsbury, Gloucestershire: Dunning 1976, 386, fig 16, 1–2). Total sherds: 222.

	Form	*Fabric*	*Decoration*
1	BC3.3	L	-
2	BC3.3	sh	-
3	BC3.2	Q	-
4	BC3.3	S	-
5	JD4	sh	IGH
6	BC3.3	S	-
7	BC3.3	S	IG9/10
8	BD7	S	-
9	BC3.3	S	-
10	JC2	sh	-
11	JC3.3	Q	-
12	indeterminate bowl	S	-

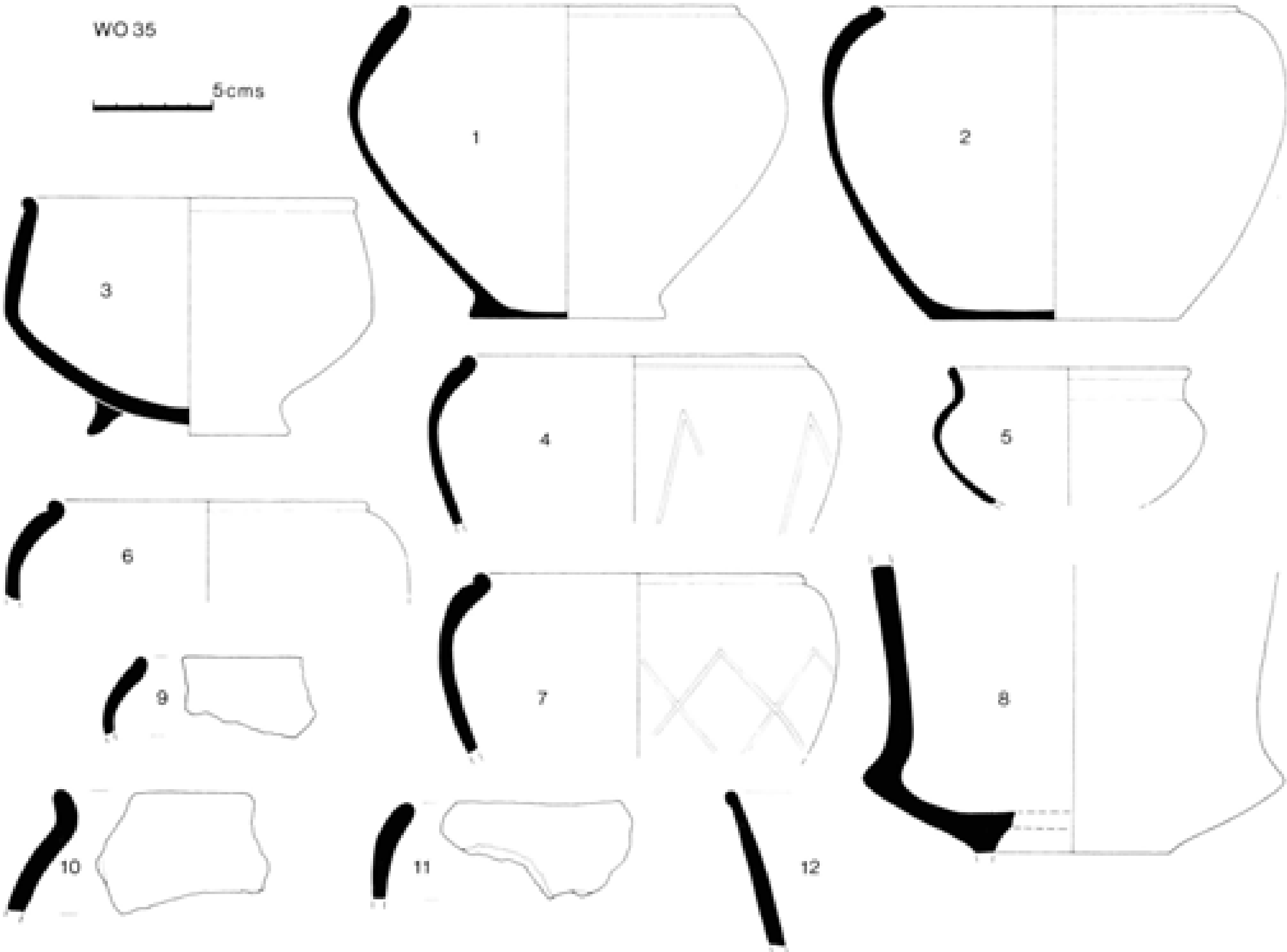


Fig 21 Ceramic assemblage from interior pit W035, 1-12. Scale 1:3

Ceramic Assemblage 10: Although the assemblage of Roman pottery encountered in excavated contexts is small relative to the amounts of Iron Age pottery recovered, it includes a wide variety of readily identifiable types which often can be dated with fair precision. There is a distinctive group of wares which can be dated to the mid-first century AD, including samian, amphorae, Lyon ware, Gallo-Belgic imports, Pompeian Red ware, and products of the kilns at Savernake and Corfe Mullen. A few of these pieces could have reached Cadbury immediately prior to the Roman conquest but the overall composition of these closed assemblages indicates deposition between *c* AD 43 and AD 70. They derive mainly from the vicinity of the military timber buildings and oven on the north-facing slope of the interior, from the massacre and later levels at the south-west gate, and from the foundation trench of the porched shrine (building N5). Although there is a possibililty that the Savernake ware jars were being circulated prior to the Roman invasion, their consistent association with samian and Corfe Mullen ware does indicate that they were a post-conquest innovation here.

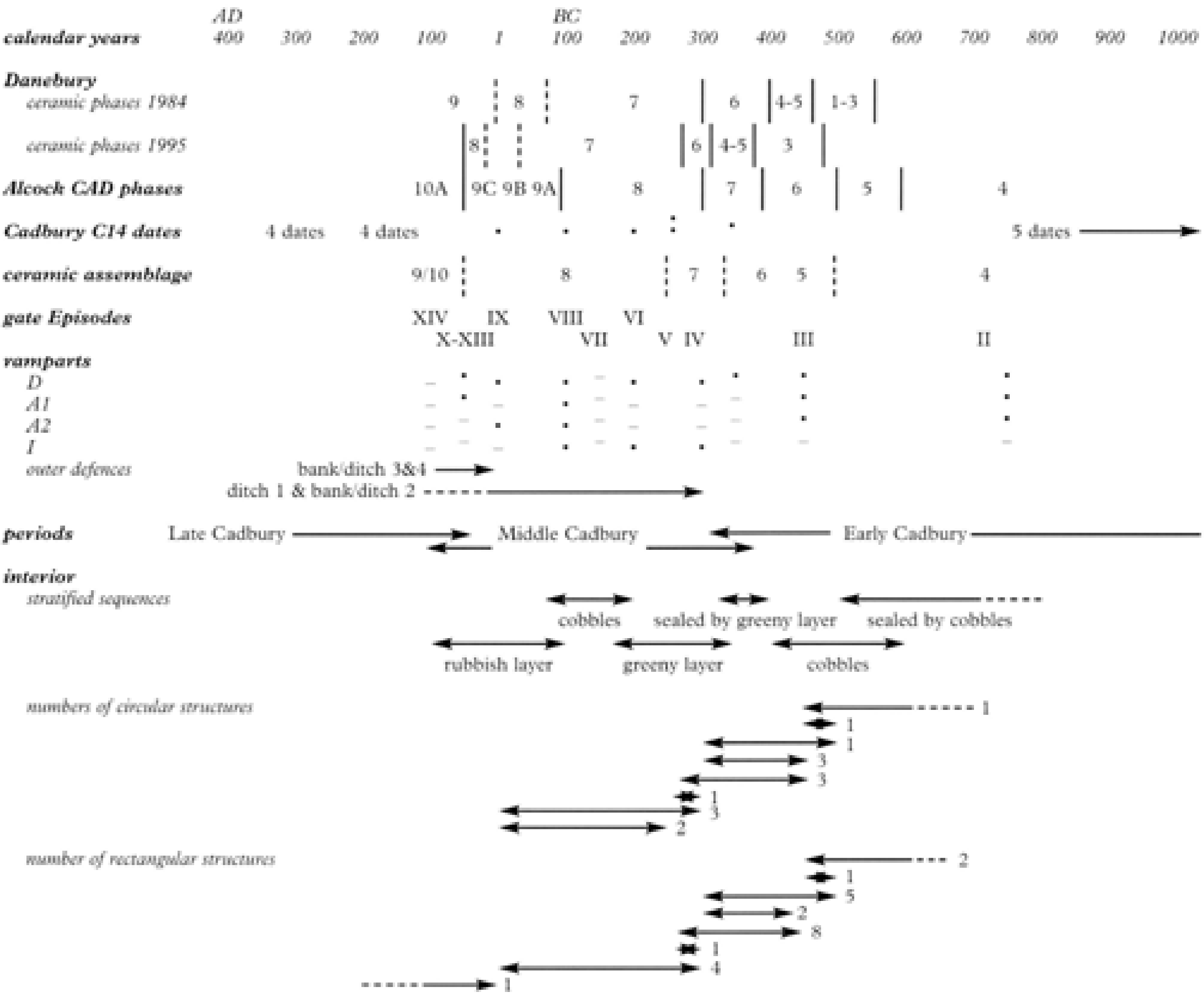
The remainder of the Roman period is not well represented by ceramics from excavated contexts, but what little there is suggests that activity continued from the late first century through to the end of the fourth century AD. The material includes samian sherds dating up to the early third century, Black Burnished ware types of the second, third, and fourth centuries, as well as late third- and fourth-century types from the Oxfordshire and New Forest production centres. Inspection of the extant surface material housed in local museum collections has revealed a preponderance of later Roman pottery types, salutary confirmation of the fact that the bulk of the Roman finds, along with much structural evidence, has been removed from the hilltop both by the plough and by antiquarian collectors.

The revised phasing scheme

by Ann Woodward

The history of occupation at Cadbury Castle can be described in terms of a relative sequence which has been built up using stratigraphic evidence and the changing pottery traditions represented – the Ceramic Assemblages. The 22 radiocarbon determinations available (see Chapter 13) are largely concentrated at either end of the late Bronze Age to Roman sequence.

Table 2 Summary chronological table



Their detailed interpretation will be discussed in Chapter 4, but the radiocarbon dates from Cadbury cannot be employed to calibrate the sequence of Ceramic Assemblages. For this we need firstly to turn to associated objects which can be ascribed absolute dates, whether intrinsically or in relation to sites elsewhere, and secondly to refer to the only ceramic sequence in southern Britain that has been dated adequately by the radiocarbon method, namely Danebury.

Datable items from the Cadbury Castle excavations are few and varied in type. We have only 13 Iron Age coins and the Roman coin list gives a pitiful total of 14. Only 29 fragments of samian ware were found, and the total amount of stratified Roman pottery is small. Certain categories of metalwork are datable. Examples include late Bronze Age tools and weapons, which mainly belong to the Ewart Park tradition of the tenth to ninth centuries BC (Needham forthcoming), or the spiral copper alloy finger rings which may be compared with those from Maiden Castle. The largest group of material with dating potential is the assemblage of late Iron Age and early Romano-British brooches. However, even these cannot supply the precision of dating required to explore certain historical hypotheses. Bishop also comments that the Roman military equipment is of 'very limited utility as a dating tool' (see p242).

In the chronological table (Table 2), the dated sequence of ceramic phases at Danebury, as presented in 1984, and as revised in 1995, is displayed alongwith Alcock's 1972 ceramic sequence for Cadbury. Against these a best-fit arrangement of our sequence of Ceramic Assemblages has been set. The left-hand side of the table shows the evidence for dating the sequences of activity examined in the three main areas of the hillfort: the south-western gate (Site K), the rampart cuttings, and the interior. In each of these areas the dating has been adduced using different criteria, and the degree of resolution consequently varies widely. The gate sequence has been analysed in terms of a series of Episodes, 14 in number and labelled by upper-case Roman numerals. These have been dated by reference to the available sequence of radiocarbon dates, the Ceramic Assemblages represented, and by the datable metalwork and early Roman pottery. The Episodes are not evenly distributed through time, and many intervening events, activities, and phases of deposition are undoubtedly unrepresented within the surviving stratification. However, this sequence provides us with the most detailed picture of developments through time. The Episodes represented in the gateway are echoed in part among the sequences investigated in the other rampart cuttings; phases of construction and dereliction can be tied in roughly to the gate sequence on both structural and ceramic grounds. The evidence from the outer defences is more difficult to incorporate. One reading of the evidence, as shown on the chart, might suggest that the two uppermost ditches and banks related to the hillfort founded during the time of Ceramic Assemblage 7, and modified through the currency of Assemblage 8, while the third and fourth bands of fortification belong to the period of the final strengthening of Bank 1, during the first century AD.

The process of dating structures and activities within the interior is less straightforward. In the absence of long stratigraphic sequences of deposits, dating depends on the sherd assemblages contained in the fillings of pits, gullies, and postholes, and incorporated within the layers of cobbles and rubbish layers. The stratified set of layers on the eastern plateau contained many thousands of sherds, and although there was a significant and varying degree of residuality (see above, Depositional processes), the main context groups could be ascribed to chronological periods with some certainty. Obviously, the fillings of the pits could not be dated in terms of the date of the latest sherd contained within each pit. A method of pit dating was devised which took into account any evidence of stratigraphy afforded by intercutting features, and adduced a most probable date of deposition based on the overall size of the sherd assemblage, the number of diagnostic items present, the date range of pottery represented, and mean sherd weights. All pits were dated by the same specialist during a continuous period of analysis in 1993. In many ways this method resembles that used during the re-analysis of the pit data from Danebury (Cunliffe 1995, 7–9), although it was developed independently. The dating of structures in the interior proved extremely difficult, dependent as it was upon very small assemblages of pottery contained within individual postholes or gullies. The average number of sherds from the circular structures was 35 for those which appeared to be of one build, and 128 for the multiperiod examples. This excludes the most substantial circular gully (G1), which contained more than a thousand sherds. For the rectangular structures, the average number of sherds per structure was 24. Bearing in mind the poor quality of these data, and the size and condition of the sherds studied, it was nevertheless possible to ascribe broad dates of construction and use to most structures in the interior. The incidence of these use ranges is summarised in the lower sector of the chart (Table 2).

It has been established that the degrees of resolution of absolute dating vary across the site in relation to the types of deposit encountered. The most detailed picture derives from the south-western gate, but most of the finds came from deposits on the plateau, where the dating sequence was far less clear-cut. Faced with this dilemma, and the desire to develop a unified approach to the analysis of the many finds categories represented in the excavated deposits, a simple threefold system of periodisation, into Early Cadbury, Middle Cadbury, and Late Cadbury, was devised. Early Cadbury includes the late Bronze Age and early Iron Age phases, characterised by Ceramic Assemblages 4, 5, and 6, and Middle Cadbury covers much that elsewhere might be termed middle and late Iron Age in date. The main Ceramic Assemblages found in Middle Cadbury deposits are 7 and 8. The division between Early and Middle Cadbury reflects a major change in the overall flavour of the ceramic repertoire (reflected, interestingly, by the major ceramic changes taking place in ceramic phases 4 to 6 at Danebury: Cunliffe 1995, 18), and also a fundamental change in the human exploitation of the hilltop, the first construction of the defences. The Late Cadbury period, associated with Ceramic Assemblages 9 and 10, is perhaps the most novel feature of the new scheme, encompassing as it does a series of phases which elsewhere would be ascribed to the final or ultimate Iron Age on the one hand, and to the Romano-British period on the other. We have chosen to group these together in order to link more closely the entire time period within which the impact of Romanisation was felt. Romanised objects were probably circulating well before the time of invasion, and the occupation of south Somerset throughout the Romano-British period continues to display many native characteristics. The degree to which the cultural transformation of the hilltop changed, or did not change, both between Middle and Late Cadbury and within the Late Cadbury period is a theme of particular relevance to the current study. Indeed, it is just such general trends that we wish to investigate. It is the elucidation of broad changes through long timespans that will inform us best concerning the key developments that affected human life on the hill, and the use of the proposed threefold periodisation not only will serve to provide data for such an analysis, but will avoid the many pitfalls of a spurious chronological accuracy.

The early medieval sequence

by Leslie Alcock

Stratigraphic evidence for the early medieval sequence comes from the excavation of the defences and the south-west gate. This sequence is published fully elsewhere (Alcock 1995) and is described here in outline and in terms of two site assemblages:

Fifth to sixth centuries

The timber and rubble rampart of this period overlay a dereliction layer on top of the ruined Iron Age inner bank (Bank 1). This may suggest a period of farming in the interior. At the entrance the main gate posts were cut down into the late Iron Age and Roman build-up in the hollow-way. The body of the rampart incorporated some late Roman pottery and coins; but more relevant was the stratified occurrence of two sherds of imported amphorae datable (on evidence from the Mediterranean) to broadly AD 475–550. Numerous sherds of these, deposited in the interior along with imported tableware and glass, demonstrated that this had been a high-status occupation, which had ended by about AD 600. Moreover, a concentration of imported pottery and glass make it possible to assign a probable drinking- and feasting-hall to this period.

Late Saxon

The late Saxon mortared stone wall and its accompanying bank overlay the rubble of the fifth- to sixth-century rampart, in places separated by a humus layer indicating a period of abandonment. At the entrance, the construction of the masonry gate had destroyed the right-hand side of the fifth- to sixth-century timber gate. While the stratigraphy was thus clear, the chronology was inferential. Numismatic evidence for minting at Cadbury (Old English Cadanburh) showed that a mint had been active there *c* AD 1010–20; ie for the last issues of Ethelred II and the first of Cnut. The character of the wall and bank was consonant with that from known Late Saxon *burgh* defences, notably at Wareham. Moreover, there was a quantity of distinctive pottery, some stratified in the defences, but principally from rubbish pits in the interior, for which a tenth- to eleventh-century date seems appropriate. There was no direct evidence for dating structures in the interior.

Material culture: the artefact categories

by John C Barrett

Introduction

Archaeological approaches to the study of artefacts have changed considerably over recent years. Some of these changes had begun to take effect at the time of the excavations at Cadbury Castle in the late 1960s. Although the debate between Hawkes and Hodson (see p5) hinged upon establishing different cultural narratives to explain the formal changes in Iron Age artefact assemblages, it was pursued in traditional terms and did not fundamentally question the equation between artefact style and cultural norm. It was this debate that Alcock addressed in his analysis of the Iron Age pottery sequence from Cadbury. However, the variability which can be recognised in any artefact assemblage might be read in a number of ways. In 1962 Binford had urged archaeologists to recognise that artefacts did more than simply represent ideas about social (ie cultural) identities; they also functioned, perhaps more fundamentally, to enable social systems to adapt to particular environmental conditions (Binford 1962). In this light, artefacts could be thought of as having been used in one or more of the various 'systemic' contexts by which human society was organised. Binford argued that it was these roles, where the artefact acted as a tool for certain social or economic tasks, which gave that artefact its historical significance. It was for the archaeologists to ascribe the possible roles to the artefact.

This, in essence, was the position developed by 'new' or 'processual archaeology'. Clarke's model for the Glastonbury Lake Village, for example, sought to equate the observed regularities in the distribution of artefacts and structures across that site with the organisational regularities which had once operated both within the settlement and between the settlement and its wider environment (Clarke 1972). Recent attempts to explain the development of hillforts have also been written in terms of identifying their functional roles in the organisation of Iron Age society. Thus Danebury has been represented as an emergent centre for the redistribution of resources within a particular territorial system. Its development through time is no longer taken as indicating cultural change, population movements, and invasions. From such a perspective artefacts are no longer simply indicators of cultural affiliation (reference to La Tène metalwork is now used to indicate a chronological rather than a cultural label); instead they are discussed in terms of their social or economic function.

Obviously from this perspective artefacts must be regarded as having operated in more than one systemic context. A spindle whorl, for example, is more than the material indication of a stage in textile production; it may once have been drawn into the way work was organised by divisions of age and of gender, it had to be made from stone or clay and may have been an item of exchange between its producer and user, and its archaeological recovery might depend both upon the way domestic debris was deposited and the techniques of excavation. The historical importance of this humble object is perhaps partly determined by this ambiguity, an ability of the artefact to slip between these contexts. If this is the case then it is not enough, having abandoned a fixed meaning for the artefact in terms of cultural characteristics, to substitute another fixed meaning by reference to a single function.

Archaeology has, of late, been faced with a fairly simple choice concerning the way the material remains of the past are to be interpreted. One option has been to close down ambiguity, regarding any uncertainties in the interpretation of the material as limiting either what can be known about the past or limiting the extent to which the objective value of our observations can be sustained. Binford's attempts to build a 'middle range theory', aimed at providing an unambiguous meaning for observational data, is the classic example of an attempt to maintain the value of objectivity. The alternative has been to recognise that interpretation necessarily involves uncertainty and, furthermore, that conflicts over meaning and value are experiences central to human social practices. It is these conflicts over meaning which express the differences between human beings, exposing them as historically, culturally, and socially constituted, and as such it is these conflicts which become a force of historical change.

Stark though this choice might appear, it has had little impact upon the traditional modes of archaeological reportage which cover fieldwork and excavation. It is as if the description of stratigraphy, finds, and environmental residues remained unaffected by a debate which appears concerned with more esoteric matters. We would doubt the validity of this point of view, and we introduce our doubts here by way of introducing our treatment of the artefacts from Cadbury Castle.

The organisation of artefact reports

Conventionally, artefacts are discussed after the stratigraphic sequences of the site have been described (for the stratigraphy supposedly provides the context for understanding the artefact). The artefacts are then discussed according to categories of raw material (pottery, bronze, glass etc) and of form. A great deal of this conventional approach does remain in use in this report. At the same time, however, we have attempted to move beyond it for the following reasons. The significance of the artefact is context-dependent, but there are many contexts into which an artefact can be placed. Artefacts can usefully be regarded as having had a biography; a life-cycle in which the artefact moved from production through use to discard. This biography involves a move from one context to another through which the significance of that artefact changes. These moves in context, between production, use, and discard, and the contexts of exchange which each involves, are not discernible if we limit our discussion of the artefact to a description of its ideal form. A shield binding in the process of manufacture, in use on a shield, deposited as part of the votive deposition of that shield, or deposited as scrap ready for recasting are all different things and should be treated as such. These differences are lost when we treat this scrap of metal as simply indicating the existence of a shield.

If this point is accepted then it would seem to have serious consequences for artefact studies. Traditionally, such studies tend to go only as far as reconstructing the original form of the artefact, as demonstrated by the way pottery sherds are drawn to reconstruct the vessel profile and to discuss that form, its date, and comparanda. These approaches seek to fix the meaning of the artefact in its original form, rather than recognising that the meaning of the artefact will have shifted between the contexts of human activity in which that artefact was created, used, and abandoned. A more subtle approach would be to recognise that the meanings of things are open and that no description will ever be able to tell us everything. Instead we might be more selective, tracing particular human practices through the artefact residues which are available for study.

Contextualising the Cadbury Castle artefacts

The studies of the material culture recovered from Cadbury Castle are presented in a way which attempts to expose this multiplicity of meanings. We will consider some of the material associated with aspects of the enclosure of the hill and with its defence, in dramatic deposits of metalwork associated with the destruction of the south-west gate. In Chapters 6–8 we will consider the range of artefacts which are represented by the debris recovered from the hill. These are the artefacts as they existed at one stage in their biographies, the moment between production and discard. As we have noted, this is the traditional focus for artefact studies. It is a focus which places Cadbury Castle in the wider context of an Iron Age material culture universe. This is one context for our understanding of the material; as a site assemblage which was used during the occupation of the hillfort. But the material has also to be ordered for the report, and we might question how this is to be done: by raw material; by artefact category; by functional group? After excavation the finds were divided between the various specialists mainly according to raw material (stone, clay, iron etc) and their reports, catalogued by artefact category, are available in the site archive.

What is published in Chapters 6–8 is a discussion of the range and significance of the material culture. The artefacts are primarily grouped by artefact category rather than by raw material. These categories are then further ordered with reference to the human body. Our aim is to evoke the material experiences of the human body, that is the experiences of the people who inhabited the hill and whose bodies were enclosed, shielded, and guided by the buildings and pathways which are described in the chapters which follow. To do this we treat the body in two ways; the way in which it is acted upon to clothe, decorate (Chapter 6) and feed it (Chapter 7), and secondly the way the body operates as an agent upon the world around it, by work, violence, and exchange with others (Chapter 8). This is simply another way of creating a context in which to think about the material. The categories are open, no object acts in only one category, but that is the point we wish to make.

Chapters 9, 10, and 11 discuss the selection of raw materials used in the production of many of these artefacts and a range of processes in which they were used and which led to their final deposition on site.

3 Enclosing the hill

Introduction

by John C Barrett

The hill of Cadbury Castle provided the context for a wide range of human activities throughout the Iron Age. Those activities will each have had a specific character; they will have varied from time to time, and each will have involved different members of the community. The significance of Cadbury Castle as a place in the Iron Age landscape will have been known in the very simplest of terms, by reference to the people who went there, when they went there, and by what occurred there. This quite specific context, defined in such terms as a time and place where certain people might live, meet, and exchange, where animals might be slaughtered, artefacts made, and sacrifices undertaken, was enhanced not only by the prominence of the hill but also by its enclosure. The earthworks restricted access (as they continue to do) and further isolated the hilltop from the surrounding countryside.

This substantial chapter is concerned with the history of enclosure and with the results of the excavation of four of the five sections through the inner bank (Bank 1: Sites A, Fig 22; D, Figs 23–6; I, Fig 31,and J, Fig 32) and sections though the outer earthworks (Sites D, Fig 34 and K, Fig 37). Site KX was cut through the inner bank to test the structural sequence in the area adjacent to the south-west gate and it will be discussed in Chapter 4 in relation to the history of that gate (the reason for this will be outlined below).

The text which follows is a slightly edited version of the report on the ramparts which was prepared by Leslie Alcock with the assistance of Michael Bishop. The section drawings have been prepared for publication subsequently. The sections (Figs 24–5) for Site D represent a complex amalgamation of a number of field drawings. Although this volume is concerned only with the later prehistoric and Roman occupation, the full chronological sequence represented by the rampart sections is discussed here to preserve the interpretive logic of Alcock's analysis. Nonetheless the description of the early medieval deposits (Banks E and F) must be read in conjunction with Alcock's publication of early medieval Cadbury Castle, which also contains the upper portions of two of the section drawings of Site D not included here (Alcock 1995, Illus 2.3. Note Alcock's Section B–B′ is our section C–C′).

What follows is an account of one of the deepest structural sequences recorded for the British Iron Age. The rampart stratigraphy was recognised as having the potential to establish a stratified, cultural sequence of artefacts for the site, and this was subsequently published by Alcock (1980). It is important to understand the underlying assumptions which have informed Alcock's analysis of this stratigraphy. The ramparts are distinguished as Banks 1–4, numbered from the inner bank outwards. The inner bank (Bank 1) is made up of a number of ancient earthworks which are distinguished sequentially as Banks A–F. We have already noted the fundamental expectation of a coherent sequence of bank building and refurbishment around the entire perimeter of the hill (we express elsewhere our reasons for doubting this, see pp18 and 151) and that this structural sequence should, at least broadly, conform with a similar sequence of gate refurbishment. Consequently, the variable stratigraphic record from the four sections discussed here was resolved into a single sequence: pre-bank activity; Banks A to D, of Iron Age date; and Banks E to F, of medieval date. Within this sequence Banks C and D have been subdivided into two or more phases. The complex stratigraphy is thus interpreted as a narrative sequence of six banks. On the other hand, the discussion of the south-west gateway in the following chapter considers the structural evidence in terms of a more complex sequence of Episodes; the dislocation between the two narratives is deliberate. We hope that the reader will be led to a position which will involve a critical review of the evidence for enclosure and defence of the hill. The bank sequence exposed in Site KX has then been considered in the light of our reading of the history of the gateway, and correlations between the gateway sequence at K and those described here for Sites A to D are also offered.

One additional point must be made. Roman activity on the hill was regarded by Alcock as having 'ended' the Iron Age, and was not seen as being associated with a phase of enclosure; the Roman garrison supposedly occupied the standing or partly ruined ramparts belonging to the late Iron Age (Bank D). If this interpretation were to be correct (and again we have reasons for doubting it, see below, Banks E1 and E2) we appear to have a phase in the cultural occupation of the hill which is unassociated with a particular building phase of earthwork enclosure. It will not, therefore, be represented by a stratified assemblage of material from the banks, but rather by residual debris caught up in later bank deposits. To write the history of the occupation of the hill solely in terms of this stratified sequence is to overlook a very specific physical transformation of the evidence.

The Inner Bank (Bank 1)

after Leslie Alcock and M J Bishop

Site A

Stratification and structures

Site A was begun in 1966 as a 4.5m square sited on the level zone behind Bank 1 on the northern side of the hill (Figs 7 and 22). The intention was to examine the character and depth of the stratified deposits in the lee of the bank, as part of the reconnaissance programme of that year. It was predicted, correctly, that the level zone was the result of the build-up of ploughsoil and hillwash against the rear of the bank, and it was hoped that this accumulation would have covered and preserved buildings of various dates, including those of the fifth to sixth and eleventh centuries AD. In the event, no determinate structures were discovered to a depth of 1.2m (layers A001, 002, 004, 005, 005A, and A009), nor was there a usable sequence of finds. Later analysis showed that A009 contained examples of the whole repertory of Iron Age pottery. The highest structural feature, A010, was an oven attributable to Late Cadbury (Ceramic Assemblage 9/10); that is, not later than the first century AD. Below it an Iron Age sequence was explored, in a trench about 1.6m wide, for a further 1.5m. Towards this depth, sandy silts with pan surfaces (A023, 022, 032, 033, 034, and especially A035) appeared to be phases of natural hillwash, but the surface of A034 produced the greater part of a vessel which belongs to Ceramic Assemblage 6 or 7. Just below this, it was necessary to bring the reconnaissance excavation to an end, with no certainty that virgin soil had been reached.

Meanwhile in the same year, at the suggestion of Sir Mortimer Wheeler, the objectives of the reconnaissance season were widened by extending the trench with a cutting about 0.85m wide across Bank 1. The intention was to test the surface indications of a late refortification of the site; the result was to demonstrate the existence of the late Saxon *burh* wall and bank. In 1967, this rampart cutting was extended mechanically down to the top of layer A121, and this produced nebulous evidence about the later pre-Saxon phases of the bank. In 1969 it was decided to cut a trench mechanically to a width of about 4.5m and down to the bedrock, as part of the general programme of rampart cuttings for that year. Having removed the backfill of 1966–7, and begun the exploration of earlier phases, the excavations encountered the important pit group A100 (not on section). Thereafter the trench was excavated by hand down to layer A125, and the eastern half was carried down to natural hillwash, A128, which underlay Neolithic pottery. This hand excavation produced several interesting pottery groups with reasonably secure stratification, but the trench was too narrow to yield much information about structures.

The sequence revealed in 1966–9 in Site A falls into three parts: pre-bank deposits; Iron Age banks and associated structures; and post-Iron Age banks. These are described below, starting with the earliest.

The pre-bank deposits

Nowhere in Site A was solid rock encountered, but the examination of drainage ditches outside the defences revealed that a damp, buff to yellow silt forms the natural soil on the northern slopes of the hill. This is represented by A128, a yellow sandy silt, clean of charcoal and human debris. This was overlain by a brown sandy silt, A127A, whose darkness suggested the formation of humus. Subsequent analysis of soil samples confirmed the likelihood that A127A was indeed a humic soil. Unfortunately, the soil yielded only two spalls of flint and an indeterminate potsherd, but immediately above it, at the base of A127, was a large part of a Grooved Ware bowl (Alcock 1980, fig 5,127.1), while other Neolithic sherds and about 130 Neolithic flints, both waste and worked, were scattered throughout A127. The solitary stakehole, A186, hinted at structures. It was obviously impractical to search for more stakeholes under three metres of build-up, but nonetheless, it was clear that there had been an important late Neolithic occupation on the surface of A127A, continuing into the lower part of A127.

Layer A127 itself was a light brown sandy silt, not dissimilar from A128, and perhaps like it a natural hillwash. Indeed, soil analysis suggests that A127 had been formed of a mixture of A128 with A127A by accumulated rainwash. If this interpretation is correct, the deposition of A127 probably marks a hiatus in the occupation of the hilltop, and this would certainly coincide with a well marked gap in the sequence of finds between the late Neolithic and late Bronze Age (ie before Early Cadbury). The accumulation of clean, virtually sterile hillwash ended abruptly with the formation of A126A, below A126, a layer marked by charcoal, burnt stones, and other evidence of burning. Above a thin spread of concentrated burning, charcoal flecks continued up to a highly distinctive layer, A126. This was a sticky clay, chocolate brown in colour, which may be paralleled by the layer immediately beneath the earliest bank elsewhere on the site (eg I030, D646 and D658). Here too it underlay the earliest Bank, A125. The probable explanation of these layers is that the charcoal of A126A represents the clearance of scrub, and perhaps even some woodland, from the hilltop in order to bring it under cultivation. Above this, but still within A126A was soil loosened by the plough, and washed downhill, while A126 represents the formation of a humus under pasture rather than arable conditions. Subsequently, this humus was fossilised by the building of Bank A and related structures on its surface.

A date for the beginning of cultivation is provided by a quantity of sherds from a single Ceramic Assemblage 4 vessel from the ploughsoil (Alcock 1980, fig 5 A126A.1). This would be in accordance with other evidence for the resumption of human activity, and especially farming on the hilltop, in Early Cadbury. The date of the fossil humus or old ground surface A126 is given by a group of Ceramic Assemblage 5 and 6 (Alcock 1980, fig 5 A126.2, 3, 5) from its surface, and would be consistent with other evidence for the date of the overlying Bank A.

The Iron Age banks and associated structures

A brief summary is given here prior to the exposition of the detailed sequence. Upon the old ground surface A126 lay A125, a sandy yellow soil, deeper towards the exterior, tailing off towards the interior, where it merged into a concreted layer of yellow sand and gravel, with some burning. This material could have been derived from digging a ditch through layers like A127 and A128 down into yellow sandstone. There is no doubt that the bulk of A125 is the tail of a bank whose front has been destroyed by erosion, by the burrowing of badgers, and perhaps also by the digging of ledges for later revetments. No further comment can be made on the structure of this bank. The concreted yellow sand and gravel to the rear may be the floor of a house built immediately in its lee. Postholes were indeed recorded here, but no coherent pattern emerged. The fact that A125 lies immediately on a fossil soil implies that it should be identified as Bank A. The only determinate find was a small bowl which is not closely datable, but which seems likely to belong to Ceramic Assemblage 6 or 7 (Alcock 1980, fig 5, A125.1). On the tail of Bank A is a layer of humus, A125A, which suggests that the Bank stood for long enough to become a grassy bank. The subsequent history of the defences is not easy to discern in Site A. No revetments are preserved below A102, the late Saxon mortared wall. In earlier phases, the stony layers A111, and A119 with A120 appear to be discrete banks, while A201 may be the rear of what became known elsewhere as Stony Bank, perhaps with A202 as an associated posthole. Since A111 is not earlier than the mid-first century AD on the evidence of a sherd of colour-coated rough-cast beaker, we have direct evidence for no more than three Iron Age banks, successively A125, A201 with A202, and A119 with A120. This is certainly fewer than were found elsewhere at Cadbury, for instance Site D.

Moreover, between the formation of humus A125A on the back of A125 and the building of the Stony Bank (A201), up to a metre of soil rich in human debris accumulated on the tail and up towards the crest of Bank A (layers A124, 123, and A122). The numerous pits which had been cut into these layers demonstrate considerable human activity (see below). It is necessary to postulate at least one intervening bank, to defend this human occupation and to dam up hillwash so that layers A124, 123, and A122 could accumulate. This bank must have been erected on top of Bank A and towards its front. All trace of it has been lost by erosion on the steep hillside.

To judge from the pottery (Ceramic Assemblages 7 and 8; op cit, fig 5, A122.1, 3) in layers A124, 123, and A122, and in pits cut into them, the lost bank or banks and bank A201 span the phases in Middle Cadbury and are likely to be contemporary. The stone layer A119 almost certainly overlay a pit, A100 (not on section), with Durotrigan pottery (Ceramic Assemblage 9). This bank, A119, and A120 should therefore be the late Iron Age defence and could be identified as Bank D recognised on Sites D and K/KX.

The detailed evidence for these statements may now be deployed (Fig 22), with the warning that not all the features which produced determinate finds are present on the drawn section. Layer A124 was a grey hillwash with a few charcoal flecks. Finds were sparse, but it did yield some featureless potsherds characteristic of Early Cadbury and also a flint scraper which is probably Iron Age rather than a stray from the Neolithic levels. It was cut by several pits and postholes, among which A189 (not on section) contained a small shouldered jar which should belong to Ceramic Assemblage 6 or 7. A124 was barely separated from A123 by a thin spread of gritty brownish soil, A123A, which may represent a halt in the deposition of hillwash. In colour, however, A123 was clearly distinguishable from A124 because it belongs to a series of greenish silts. (These colours seem to reflect differences in the degree of waterlogging after deposition, rather than any significant change in the character or source of the original deposit.)

Among the pits and postholes cut into A123, two contained significant pottery assemblages, namely A177 and A178 (not on section). Both had some material appropriate to Ceramic Assemblage 6, but mainly Ceramic Assemblage 7 (Alcock 1980, fig 5, A178.1–4). In addition to the pits and other holes actually dug into A123, incoherent runnels or gullies and shallow bowls or scoops were found in its surface. All these were filled and the surface of the layer was completely overlaid by a spread of burnt grain, layer A122A. The grain was principally wheat. One may speculate that this comes from the burning down of a granary in the vicinity, but there is no evidence to show whether this was the result of accident or deliberate firing. The layer above the burnt grain, A122, is another greenish silt like A123, and must represent the continuance of the same kind of hillwash and deposition. As stratified pottery demonstrates, A122 is also to be attributed to Early Cadbury. Appropriately, the pits which cut it (A153, 165, and A167, not on section) and which probably reflect occupation and activity in the rear of the bank A201 contain later pottery of Ceramic Assemblage 8.

At this point it becomes possible to indicate correlations between the stratification of the inner part of Site A, dug in 1966, and the bank section properly excavated in 1969. It should be said at the outset that below layers A121–028–A018A no layer can be traced from end to end of the cuttings. Vertically below the recent wall (A104) there is a discontinuity, and various deep and narrow slots which were dug in an attempt to trace layers throughout in fact merely confused the picture. The evidence of these slots, such as it was, was recorded, but it has been deliberately omitted from the published sections. Despite this, it can be said that layer A012 is a greenish silt, closely comparable in appearance to A122 and A123, and reasonably attributed to the same deposition. The pottery from it implies that the deposition of A012 may cover a long period (Ceramic Assemblages 7 and 8). Below A012, the series of sands interspersed with grey,

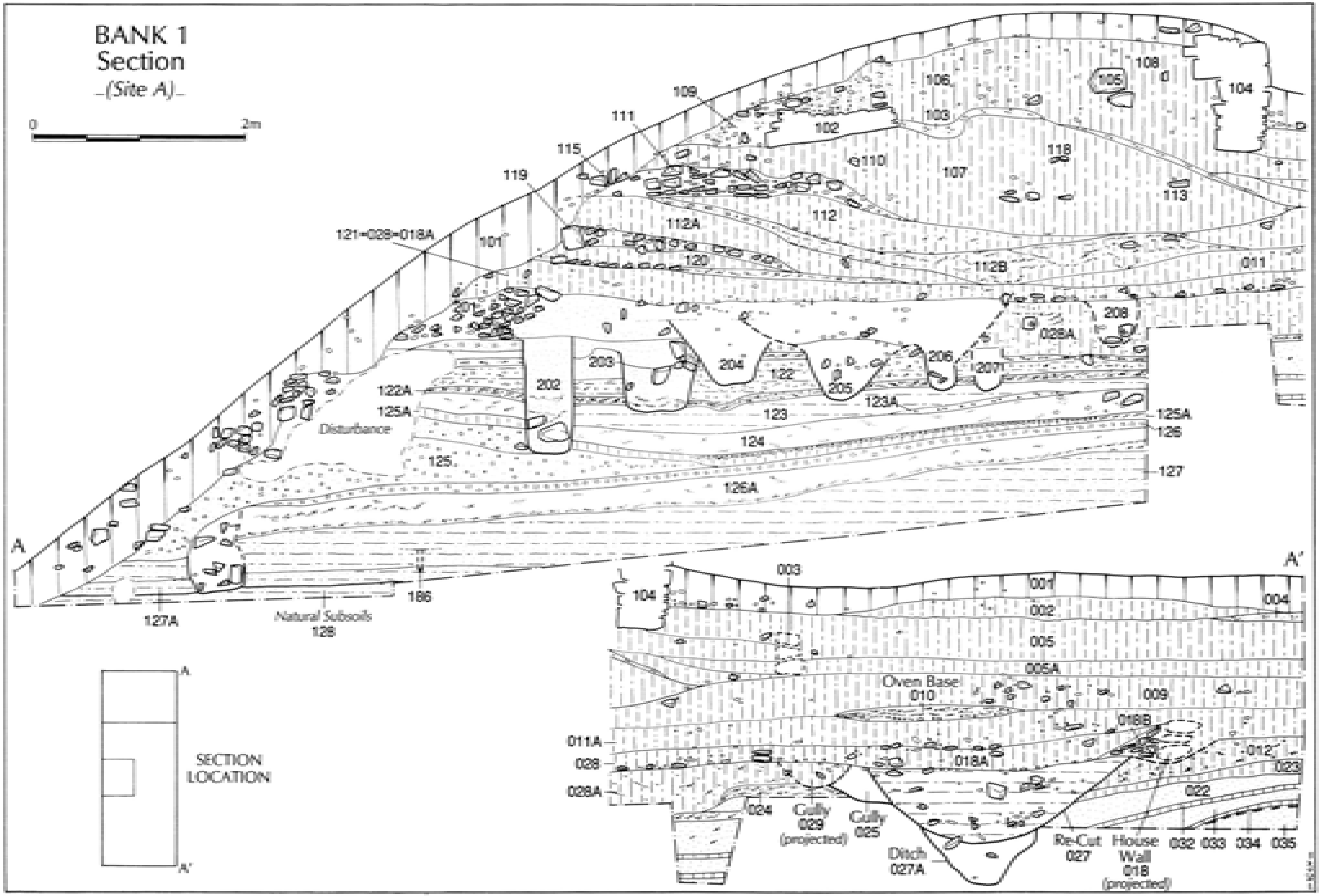


Fig 22 Site A Bank 1 section

possibly leached, layers should take us back into Early Cadbury.

Cut into the surface of A012 were several gullies, pits, and postholes, among which the most important was the curving gully A027A, with recuts A027B and A027 and with a causeway at least 1m wide on the west. The arc is both too short and too irregular to allow us to determine the diameter of the circle. It is tempting to see here a wall trench for a roundhouse, comparable with those from the interior. In fact the section does not support this inference: it provides no evidence that posts ever stood in the trench, and it suggests rather that A027A is a shallow recut drainage ditch. But the argument should not be pressed too far, because the section line is oblique to the ditch and consequently difficult to interpret.

After the ditch A027 had completely silted up, a rough dry-stone revetment (A018), three or four courses high, was built up to the south of it. Not enough of this was uncovered to establish its function, but it seems unlikely to have been a house wall. The collapse from it (A018B) was covered by a loamy fill (A018A) which contained a very mixed collection of pottery, mostly of Ceramic Assemblage 8, but including at least three characteristic Durotrigian pieces as well as a socketed iron arrowhead. It seems likely that the layer was accumulating during Late Cadbury. Stratigraphically it may be correlated with A028, and that in turn with A121. The finds from these levels are tantalisingly few and unhelpful. It is probable, however, that pit A100 was cut from the level of A121, though this cannot be proved because the upper part of the pit was lost in the mechanical excavation. The pottery from A100 may be attributed Ceramic Assemblage 9.

Overlying A018A, but separated from it on section by A011A was an oven base (A010). This consisted of a roughly oval area of yellow sandstone gravel, about 1.6m wide by more than 2m long. The surface of this was burnt red, and lying upon it was a layer up to 0.1m thick containing charcoal, lumps of burnt daub, and a considerable quantity of pot. It seems likely that the daub represents the collapse of the domed roof of the oven. Some of the pottery showed signs of having been burnt after it had been broken. For instance, joining sherds of a footring were respectively black as originally fired and red as a result of recooking in an oxidising atmosphere. It is not easy to explain how the pottery came to be included in the oven debris.

The objects from A010 provide an excellent type series of early Late Cadbury material. The outstanding piece is a bronze fiddle brooch ornamented with punched zigzags and wavy lines (and dated as mid-first century AD). The pottery includes 'war cemetery' bowls, a range of necked jars, and large coarse storage jars, all of Ceramic Assemblage 9 (Alcock 1980, figs 18 and 19). Romano-British coarse wares and samian are absent. Nor is there any Roman military equipment. There is, however, one small sherd of Corfe Mullen ware.

The oven appears to correlate stratigraphically with a dense layer of charcoal, A112B. The pottery from this is attributable to Ceramic Assemblage 9, but the evidence of burning seems appropriate to the Roman military event recognised in the south-western gateway (but for a review of the evidence for this event see Chapter 4). The spread of charcoal rises to the north over a layer of dark soil (A112A) which must represent the rear of Bank D in its final phase.

The post-Iron Age banks

Overlying the charcoal layer A112B is a depth of black, almost stone-free soil (A112). This may be compared with the deep humus which lies on the back of Bank D on Site D (see p60: D506A). Accepting that A112B is burning from the events of the mid-first century AD, then the black soil must have accumulated during the Roman period, perhaps as a result of the ploughing of the hillfort's interior. Above this is a layer of very carefully laid stones (A111), which certainly marks another bank structure. Apart from small residual sherds of Ceramic Assemblage 9, this bank also yielded a fragment from a rough-cast beaker, datable to AD 40–70, and we have already seen that A111 overlies layers deposited in the first century AD. In fact, these laid stones are most reasonably identified as the base for Bank E, built in the late fifth–early sixth centuries (Alcock 1995). The overlying black soil, A110, may be an earthen bank associated with Bank E, strengthened or delimited towards the rear by the rough lacing of kerbs A113 and A118. In addition to derived material, A110 contained a very small sherd which appears to come from a post-Roman Class B amphora.

The next structural event was the erection of a mortared masonry wall (A102), with broad footings, an outer face of well laid lias limestone slabs, a rougher inner face, and a core of rubble and mortar. This is Bank F. Immediately to its rear was a mortar mixing pit, and from this there was a spread of mortar (A103) towards the rear. The mortar had been preserved by the erection upon it of an earthen bank (A106) within which the very rough wall A105 marked an internal strengthening. There is no dating evidence for this wall-and-bank defence, but there is no reason to doubt that it was the fortification of the Ethelredan *burh*.

Two later events can be discerned. Separated from the mortar spread A103 by a depth of 0.20 to 0.25m was a wall (A003), dry-built of large or even massive blocks of local limestone (not on section). In its character and stratification, this may be identified with a wall of massive yellow blocks at the south-west gate. If this identification is correct, A003 is certainly post-Ethelredan. Finally, wall A104, still visible in places today around the perimeter of the hilltop, appears to mark a recent event in the agricultural history of the hill.

Site D

Introduction

The excavation of Bank 1 on Site D (Fig 7) was carried out over two seasons, 1967 and 1968. In the first year the intention was to examine the rampart sequence, and a trench 15m long by 10m wide was opened up across the bank. This trench was extended in 1968 by 1m on the west side and 2m on the east to give a final width of 13m. These extensions were taken down only to the base of the Dark Age rampart (Bank E2), as they were intended primarily to relieve the weight on the sides of the trench. The mechanical excavation of 1967, 2m to the west of the main excavation, had shown that a total depth of 4.5m was to be expected. In 1967 the Saxon defence (Bank F) had been examined in detail and also 4m of the Dark Age bank (E2), on the east side of the site. The lateral extensions of 1968 allowed a second extended examination of this structure, particularly on the east where indications of timber lacing were evident.

A further extension of 2m was cut on the north side of the site in the second year. A total length of 17m was thus reached. This extension was to give room for a second objective, examination of structures in the rear of the ramparts. This was prompted by the belief that the defences provided shelter for domestic buildings and that there should therefore be extensive traces of occupation. In the event, few traces of buildings were recognised.

In 1967 the Saxon town wall and the Dark Age defence had been completely dismantled only in the 4m on the east side of the Site (Fig 8). This division was formalised in 1968 by a medial baulk, 0.5m wide, 5m from the east side of the excavation (Fig 23). As a baulk of this width could not stand to any great height, it was drawn and removed at intervals. It was not laid out until the 'Dark Age rampart' had been removed over the west of the site, and therefore no full section was obtained at this point. The 1967 section has not been projected onto that of 1968 as the line of the lower section had been cut back, and the upper portions of sections B–B′ and C–C′ on Figures 24 and 25 have therefore not been included here (Alcock 1995, Illus 2.3).

Since the purpose of the excavation in 1968 was two-fold, in that year the north and south parts of Site D were separately managed and recorded. With the medial baulk, this divided the site into quarters and each quarter was given individual blocks of numbers to allocate to contexts. Thus contexts in the south-west quarter were labelled from 501 to 600 and in the south-east from 601 to 700. In the north-west and north-east quadrants, numbers ran from 701 to 800 and 801 to 900 respectively. In 1967, with no formal division in the site, numbers ran from 001 to 100 over the entire area. This numbering has been retained here. This may appear to be awkward but it is not confusing once the divisions outlined above are understood. It has not been thought necessary to renumber the results of the two seasons' work because this would inevitably run the risk of imposing interpretations upon the evidence and excessive tampering with the original field records. However, one adjustment has been made. Where features observed in 1967 were seen again in 1968 and allocated new context numbers, the later numbering has been preferred. This conforms with the larger number of features observed in 1968.

Several problems which affected both the techniques of excavation and the interpretation of the results were encountered on this Site. One of the greatest of these was the topography of this part of the hill. The original ground surface sloped from north to south, to a break in the slope from which the side of the hill falls away sharply. The earliest banks were constructed on the edge of this break in slope. Only upon excavation did it become clear that the Site also lay on the side of a hollow in the hillside. To either side of the Site the ground rises gently, although accumulated hillwash and successive bank building have made it appear level. The excavation was on the east side of this hollow and hence the original ground surface also sloped from east to west. In fact, the highest point was in the north-east corner where the bedrock was only 1.28m below the modern surface. In addition, the excavation was placed on the most advanced point of the curve of the southern side of the hill.

These three factors, individually or in combination, affected the construction of every bank. It was the north-south slope which had the most obvious effect upon bank construction. Because the earliest banks were constructed upon the edge of the break in slope, the effective edge of the hill became the southern edge of the top of each bank. Whether the bank was standing or whether it was decayed, this humanly made edge of the hill was higher and slightly to the north of its original, natural position. The builders of later banks were then faced with a choice. Either they could place the front face of their structures downhill and use the remains of the earlier defences as a core to their own, or they could place the face upon the man-made edge and build their new banks over the tops and backs of the previous structures. In general, the second choice was taken. With time the banks not only grew higher but moved backwards, up the hill. The front of the last defence, the Saxon town wall (Bank F), was thus 4.5m north of the front of the first Iron Age bank, Bank A (cf Figs 23 and 26).

From the middle of the Iron Age onwards, there was a steep slope down into Ditch 1 in front of each bank. This slope comprised the remains of previous banks and was undoubtedly an extra asset to the defensive position. The effect, however, was devastating for the archaeology. Nearly every bank face has been open to erosion and rescarping since it fell into disuse. Of all the defences described below, the front survived of only the last and the second.

The east-west slope added the complication that the level of the bank might differ from one structure to another. Earlier structures were dug away to unequal relative depths from one side of the site to the other. In some cases the foundations of a structure might be dug into its predecessor on one side of the site yet be built up on the other. This levelling did not remain constant. In one place a bank might be dug in more deeply on the west side than in the east, while in another phase the situation might be vice versa.

The need to accommodate the apex of the bend in the line of the bank at this point has meant that the line of one bank was not necessarily the same as that of either its predecessor or its successor. This bend did not remain in the same place from one phase to another: it might be in the west side of the site in one period, in the east in another or even just beyond the limits of the

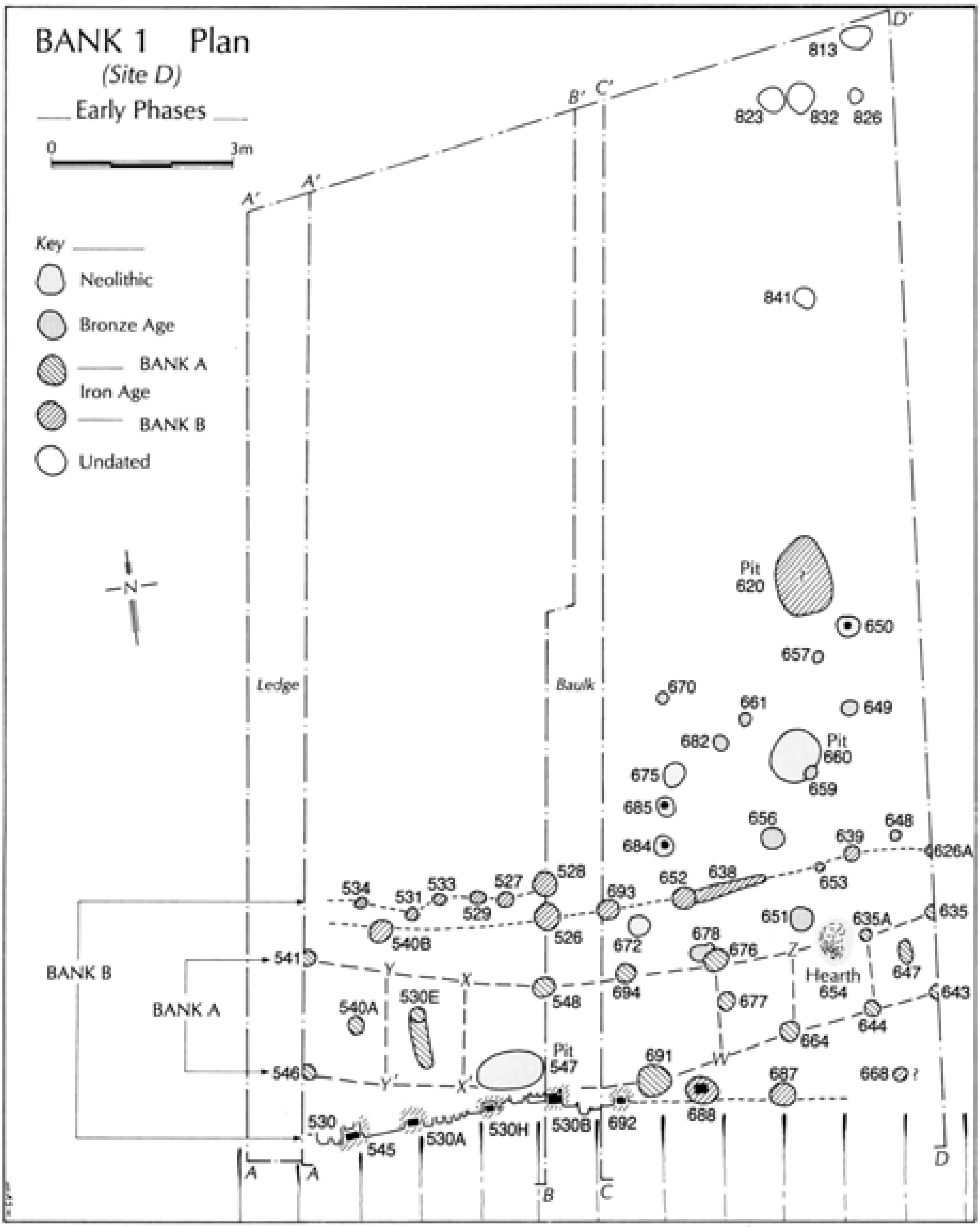


Fig 23 Site D plan of the early phases

excavation in yet another. Furthermore, the acuteness of the bend varied from one bank to another. Thus the front of a particular bank might appear further forward in one section than another. It might be better preserved in one section than another for the same reason.

The remaining problems refer more directly to techniques of excavation. As will be appreciated, an excavation of 221sq m in area with a depth in some places of 4m or more presents very great problems, both in recording and understanding the stratigraphical and spatial complexities encountered. The subdivision of the Site in 1968 went part of the way to meeting these problems, but it must be admitted that they were never fully overcome. More specifically, both ancient and modern intrusions had destroyed much in the northern half of the Site and had bitten deeply into the south face of Bank 1. Secondly, there had been extensive destruction by rabbits, who found, in the soft earth of the bank, the ideal situation for burrows. A third difficulty lay in the qualities of the earth. The occupation layers and deposits behind the banks and the bodies of Banks C1 and F (Fig 26) were of black organic earth. In the lower levels, where it was overlaid by later banks and was thus less humified and more moist, this earth took on a greenish hue. At no time could distinct colour changes be observed. Features dug into this earth were filled with identical material and there was acute difficulty in being able to see these in either plan or section. Often the only indication of a posthole was an arrangement of packing stones. It was similarly difficult to detect surfaces. These were indicated occasionally by patches of burning or hearths, or they might be suggested by a greater stone content or some slight change in texture. But such remains were fragmentary and confusing. The only surface which was clearly seen over the whole trench was the turf line near the bottom of the excavation.

The structural sequence

In the exploration of the ramparts the sections are of great importance for understanding the sequence and relationships of structures. There are two plans: one shows the Neolithic features and Banks A and B (Fig 23), the other shows the later bank sequence (Figs 26). Two full sections are presented here (Figs 24 and 25), the west and east faces of the trench (sections A–A′ and D–D′). Incomplete sections are also presented (sections B–B′ and C–C′) of the lower east and west faces of the medial baulk.

Since plans and sections are inextricably bound together in providing the evidence for the bank structures, no layer to layer descriptions of the sections are given here. The following account will draw the evidence from sections and plans together, and it is hoped that the interpretation of the sections will be evident from this. The structural sequence will now be described in the order of deposition.

The natural subsoil and bedrock: Only in the south-east quarter of Site D was the excavation taken down into the natural layers. The subsoil and bedrock were also exposed in the north face of Ditch 1. It is clear from the evidence of these two areas that the surface geology of the hillslope is complex and it is doubtful whether sufficient information was obtained during the excavations for a complete understanding of it.

Beneath the anthropogenic deposits in the southern half of Site D was a red clay with limestone fragments in it (D646 in C–C′ [illegible] D658 in D–D′ [illegible]. This was 0.35m thick in the face of Ditch 1 (D–D′). Precisely how far north this layer extended was not determined, as it was only examined in the south-west quarter, but it did not cover the whole of the Site. In the north, Iron Age deposits rested directly upon limestone rubble.

This rubble underlay the red clay in the south, and here it was thicker and cleaner than in the north where black earth had penetrated between the stones. The rubble gave way to compact limestone, which is bedrock. This dipped sharply from north to south and also, less sharply, from east to west. Its highest point was in the north-east corner of the site, where it was found only 1.28m below the present surface. The limestone rubble is clearly the eroded surface of the bedrock, but the exact nature of the red clay is not clear. It may also be a product of the erosion and breakdown of the bedrock but its depth at the southern end suggests that this is not the case. The red clay is known from other parts of the hill, but it is not a constant occurrence and nowhere has it been found to the depth encountered here. A possible explanation is that it is a secondary geological deposit which once covered the whole hill. Since then it has been largely eroded away except where protected or where local irregularities in the limestone had resulted in a deposition of unusual depth. It may be assumed that it originally covered the whole of Site D but that it has been totally destroyed by nature and agriculture in the northern part.

The Neolithic occupation: This was principally seen in the south-east quarter of the excavation, although some features were seen on the southern edge of the western quarter. In sections C–C′ (Fig 24) and D–D′ (Fig 25) a deposit of black earth (D683, 645, and D 655) may be seen lying in a shallow depression in the red clay. This depression was in fact a slight shelf which ran diagonally across the southern end of the excavated area. There is no way of determining whether it was natural or artificial. Site D was situated on its western edge and if it was artificial more extensive remains may exist to the east. The deposit of black earth lay on the level floor of this shelf. It was thickest (0.12m) where it was cut away by the foundations of Bank B. Finds from it included pottery of early Neolithic types, animal bones, charcoal, and flint flakes, some of which were tools, but the majority waste. The deposit is therefore identified as Neolithic occupation debris (and might be correlated with A127 and 127A on Site A). In and below the earth and to the north of the shelf were a number of features including a hearth, pits, and postholes (Fig 23).

Pre-enclosure activity: In sections C–C′ (Fig 24) and D–D′ (Fig 25), a layer of red-brown clayey earth, mixed with limestone fragments (D636) can be seen overlying the Neolithic occupation deposit and the natural subsoil. Within this layer was a low bank of limestone rubble (D636A) 0.25m thick by 1.65m wide which lay directly upon the Neolithic deposit. It was difficult to see the bank in excavation, its chief distinction being that it contained less earth and had larger stones than the layers behind it. No finds came from the bank. The layer D636 covered the remaining exposed area of the Neolithic deposit and extended for some 2m to the north, where it petered out on the sloping bedrock. Finds from D636 included flint flakes and sherds belonging to Ceramic Assemblage 4 (Fig 27).

The bank D636A was too low to have been defensive. Its relationship with D636 suggests that it was a field boundary. D636 built up behind the bank, and was 0.35m in depth at its thickest point. This implies some considerable soil movement, which was not due to natural agencies; the stone content was too profuse for the layer to be the result of hillwash. All this is consistent with agriculture. The interpretation offered, therefore, is that the bank D636A was a field boundary and that layer D636 was a ploughsoil forming a positive lynchet.

The lynchet was sealed by a fossil turf (D536 in A–A′ and B–B′; D631 in C–C′ and D–D′, Figs 24–5). This was seen in all the main sections and was examined over the whole width of the Site. It was dark brown in colour and had the consistency of plasticine. From its southernmost point, the back edge of the foundations of the face of Bank B, it extended northwards for some 8.5m on the east side and 10.4m on the west. Underneath the Iron Age banks it was preserved to a depth of 0.12m. The last 2 or 3 metres in the north became less deep and less well preserved, with the colour changing to a greenish grey and the texture becoming more friable, until it petered out entirely. Its northward preservation may be accounted for by the depth of the deposit overlying it. After the construction of Bank A, the area behind that defence remained exposed, but after Bank B had been built it was becoming covered by occupation deposits. Thereafter the succession of banks, gradually moving northwards, built up a depth of protective covering. It is notable how the condition of the turf, as excavated, deteriorated to the north, as the bedrock rose and the overlying deposits became shallower.

This turf probably formed in Early Cadbury. It was the surface upon which Bank A was constructed and despite considerable compression it was preserved to some depth. Its establishment, therefore, must clearly predate the construction of Bank A. We may note that this argument also supports the dating of D636 and D636A to the Bronze Age. Both D536 and D631 produced sherds of Ceramic Assemblage 5 (Fig 27).

Ten postholes (Fig 23: D648, 649, 651, 656, 657, 659, 661, 670, 678, and D682) were first observed in the layer below (D636). However, it has subsequently been recognised that the nature of their fillings makes it clear that the majority were cut through the turf. The only two doubtful ones are D657 and D682. These postholes, in common with those which were observed cutting the turf, were not necessarily dug at the same time, but are a palimpsest of activity at differing dates. Reference to Figure 23 will show that they make no coherent pattern. It will be noted, however, that some of them lie within the confines of Bank A.

Bank A: The evidence for the framework of Bank A is fragmentary, but enough existed for its general character to be quite clear. Postholes D546, D541, and D691, D694 (projected on Fig 24) appear in sections A–A′ and C–C′ as front and rear parts of a framework. This suggests a timber frame of 'box' type. On section B–B′ another rear posthole (D548) was observed, but its front pair had been destroyed in the construction of Bank B. D548 was 1.35m from D694. Assuming a similar spacing for the other rear posts, there is room for two more postholes, inferred at points X and Y, between D548 and D541. These would be spaced 1.3m from each other and the observed postholes. This arrangement is feasible with a 'box-type rampart', since while there may be variation in the structural patterns, a tolerable symmetry in the individual units is to be expected. Having observed the distance between D548 and D694, it is possible to fit in two more points (X′ and Y′) at a similar spacing between D548 and D541. Thus D541, D546 and D694, D691 on Figure 23 were 1.85m apart. The front posthole of D548 will have been in the position occupied by posthole D530B of Bank B, which is similarly spaced. It is therefore reasonable to suggest two front pairs with X and Y and 1.85m from them, X′ and Y′.

On the east side of the Site, another rear posthole (D635 on D–D′ Fig 25) is to be seen. Three postholes are recorded in the vicinity which, with D635, appear to make up a 'box'. These are D635A, which was noted in excavation as a probable rear post and is on the correct line, and D643 and D644, which appear to be the front pairs for D635 and D635A. D643 was 1.3m from D635 and D644 was 1.2m from D635A. D635 and D635A were 1.2m apart.

Between D635A and D694 only one posthole was observed which could have held a rear post (D676). This was 1.5m from D694 and is in the correct position. Taking 1.3m to be the average spacing as worked out on the west side, another posthole, unobserved, can be suggested at point Z. This point was 1.3m from D676 and 1.25m from D635A. The front pair for a posthole at point Z is D664, which is on line and 1.4m from

D644. D664 and Z are 1.35m apart. To complete the pattern, a front posthole may be assumed to have been at point W to pair with D676. Point W is 1.2m from D691 and D664 and 1.6m from D676.

There is an alternative to the scheme just outlined. It is possible that the timber framework consisted of three rows of posts, not two. The evidence for this is postholes D540A, 530E, 677, and 647. Of these, D530E is the most important. This was observed to have a horizontal postsocket running southwards from it and the excavators were convinced that this horizontal post was connected with Bank A. D530E was the sole trace of any horizontal, transverse timbering such as might be expected in a 'box-type rampart'. This posthole lies to the south of the rear of the framework described above, however, and if it is truly connected with Bank A, it suggests an arrangement with three rows of posts. D647, 677 and 540A are positioned similarly to D530E, between the front and rear rows of postholes. D530E and D647 have an approximately central position within their 'boxes', but D540A and D677 are well off-centre. If these postholes do not indicate a central row in the framework, they must be assigned to the incoherent remains of pre-bank activity mentioned above.

It might be expected that horizontal ties, linking the rows of uprights, were part of the framework. Except for D530E no trace of horizontal bracing was found. In section A–A´ (Fig 24) a layer of brown clay (D524A) may be seen in the body of Bank A. It is tempting to interpret this as the postpipe of a horizontal timber, but it is more likely that it was only a patch of turf. Despite this, it is possible that such timbers did exist, but that no trace survived. In this context it should be remembered that these were only slight indications of the uprights rising through the earthen bank. For the model of Bank A with only two rows of uprights, transverse tie beams are, therefore, inferred.

If, however, the alternative model of three rows of posts is accepted, then the horizontal postsocket running southwards from D530E indicates tie beams between the front and middle row of posts, at least. From the positions of the postholes in the middle row it is unlikely that these were attached to the front uprights. It is more likely that they will have been fixed in the timbering between the front posts.

This alternative scheme would suggest a raised rampart walk between 0.8 and 1.1m wide, supported on the southern two rows of posts. The rear row might have then been tied in to help support the front row. The front face of the framework was boarded up to retain the core of the bank. In sections A–A´ and C–C´ (Fig 24) it will be noted that there is a marked ledge in the north face of postholes D546 and D691. This suggests that the front face of Bank A may have been planked horizontally behind the upright posts, and that the bottom of this planking was set into the ground. No trace of a rear revetment was found.

The timber framework of this bank can thus be described as having been of 'box' construction, perhaps with an intermediate row of posts. The 'boxes' were of irregular dimensions from one side of the Site to the other. The spacings of rear posts, some of which were upright, while others sloped, were between 1.5 and 1.2m, with an average of 1.31m. The width of the frame ranged from 1.85m on the east to 1.2m on the west (cf Alcock 1972a, fig 18). This reduction in width need occasion no undue comment, for stretches of timber-framed ramparts exposed on the excavations elsewhere have shown some irregularities. Here, the bank curved across Site D, with the centre of the bend being at the centre of the width of the excavation, so a small amount of irregularity may have been accentuated by the need to introduce a bend and by the contours of the ground.

The timbers contained in the observed postholes must have been substantial, but no postpipes and little packing remained to give any indication of actual sizes. The front postholes ranged from 0.25 to 0.5m in diameter with depths of 0.6 to 1m, while the rear postholes were between 0.27 and 0.35m in diameter and 0.4 and 0.6m deep. The four postholes on the possible middle row had diameters of about 0.25m. The ledge in the north faces of D546 and D691 suggests planking between 0.1 and 0.2m thick.

The core of the bank, infilling the framework (D524; A–A´, B–B´, and D–D´), was red-brown clayey earth with limestone rubble. This was probably derived from a ditch along the edge of the break in slope in front of the bank. No trace of this ditch survived. The absence of any clean limestone rubble in the core suggests that the ditch cannot have been deep, but only penetrated into the red-brown clay of the natural subsoil. This type of bank requires a berm. Some slight remains of this can been seen in front of D546 in A–A´. Elsewhere it had been totally destroyed in the construction of Bank B.

Behind the bank core and the rear posts was a 'tail' of material identical to that of the core, D525 on A–A´ and C–C´. This 'tail' was probably a deliberate embankment. The only pottery associated with Bank A came from D525 and is assignable to Ceramic Assemblage 6 (Fig 27).

In all the main sections, a turf line (D525A) can be seen on top of the 'tail'. Since the top of Bank A was totally destroyed there is no way of knowing whether this once covered the whole structure or was confined to the rear embankment. At the least, D525A indicates the possibility that Bank A stood for some time.

Bank B: Bank B was better preserved on the west side of Site D than on the east, where the foundation trench of Bank C2 had destroyed much of it. The evidence was more coherent than that for Bank A although Bank B was no more regular than its predecessor.

The first stage in its construction was the digging away of the top and front of Bank A. This was deepest in the west. A ledge was dug across the front of the earlier structure and deep postholes sunk. Into the postholes squared timbers were inserted to take a breastwork. A dry-stone wall of blue lias limestone was built between the uprights. Seven postholes were found rising through the wall. These were D545, 530A, 530H, 530B, 692, 688, and 687 (Fig 23). D530B and D692 may be seen in sections B–B′ and C–C′ (Figs 24–5). Another posthole (D668), of which only the bottom was found, appears to be in line with the others, but it cannot be shown to belong definitely with these. In all the postholes, except D687 and D668, postpipes were found, indicating squared timbers between 0.3 by 0.19m and 0.19 by 0.17m in size. The posts were set between 1.05 and 1.3m apart.

The ledge from which the postholes were sunk was badly preserved on the east side of the Site, where only short lengths were traced. On the west side it had survived well. The facing wall of blue lias (D530) was also best preserved in the west. On the east side a few stones survived beside posthole D692 and no more. It is noteworthy, from Figure 23, how far forward the eastern front postholes of Bank B are in relation to the modern face of the bank. There can be no doubt that the east side of the facing wall was destroyed by collapse and later building.

At its highest point the dry-stone wall survived to ten courses, 0.4m high, and no more than 0.25m thick. Blue lias does not occur locally, and it would have been imported in quantity if the whole hill had been encircled by Bank B. Some dressing of the stone may have taken place on site, and it is probable that the scraps of blue lias, so common in Iron Age contexts here, derive from this period of building. This wall was no more than a facing skin to the rubble body of the bank behind it (D522 on A–A′ and B–B′) and had little structural strength. Even the remaining lower courses leaned outwards from the pressure of the material behind. It may be doubted whether it stood for long, although Bank B may have remained in use for some time.

The body of the bank was of limestone rubble. This was large in size and may have been derived from a ditch in front of the bank. The ditch was probably a recutting of the one which accompanied Bank A. The quantity of fresh limestone indicates a large-scale deepening. The rubble filled the ledge behind the facing wall and covered the body of Bank A. The facing wall and the rubble bank were probably erected together, level by level. The surface of the bank was laid with large blocks to give a paved walkway.

The limestone bank was also irregular in its width. On the west of the site it was some 3.4m thick, narrowing to 3.05m in the centre. On the east side it expanded to some 3.6m.

In sections A–A′ and C–C′ the rubble has a vertical face on the north. On the latter section this coincides with a large posthole (D693). A timber revetment is thus suggested. On section D–D′, another posthole (D626A) can be seen. This is smaller than D693 but its position is similar. Between D693 and D626A two other postholes, D652 and D639, of a size comparable to D693, fit in to make a line (Fig 23). A gully, D638, runs east from D652 towards D693; this suggests planking between the uprights in the postholes. Such an interpretation would agree well with the vertical face to the rubble observed on the sections.

Posthole D526 on B–B′ is another rear post to Bank B. Its characteristics are similar to D626A. The north face of the rubble is not well preserved, but the edge of the compact rubble lines up on plan with the faces seen in sections A–A′ and C–C′. Further west only one posthole (D540B) lines up with the rear revetment posts just discussed. It was not seen in the bank material which covered it and this, with the loose rubble in the top of D526, suggests that the original rear face of the bank may have collapsed to cover D540B and D526.

This suggestion of a collapse appears to be confirmed by another row of posts just to the north of D526 and D540B. On B–B′ a posthole (D528) is visible just behind D526. From D528 an irregular line of postpipes (D527, 529, 533, 531, and 534) was observed running along the rear of the stone bank (Fig 23). These appear to be the uprights of a rear revetment. They are not exactly aligned, and, with their northerly position, this may reflect the fact that they belong to a secondary revetment designed to contain a collapse of the north face of the bank. No evidence for collapse was seen in the east side of the Site. The primary rear revetment posts were rather irregularly spaced, being between 2.55 and 0.65m apart. It is noteworthy that the three closest postholes (D526, 693, and 652) were positioned where the east bank was narrowest. This is also the point at which the rear revetment changed alignment, swinging northwards in the eastern half of the excavation. The front face was slightly concave in plan. In addition, the course of Bank B differed from that of Bank A; the plan suggests that it curved just east of Site D, not in the centre as did the earlier line.

Bank B must have remained in use for some considerable period. The probability of repairs to a collapsed rear revetment has been discussed, and to this may be added two possible turf lines or surfaces which are to be seen behind the bank on A–A′ (D523A and D523B). Further, over the whole Site some 0.5m of soil and debris accumulated in the rear of the bank (D521 on A–A′ and B–B′; D629 on C–C′ and D–D′).

Few finds of any significance came from D522, the body of Bank B (Ceramic Assemblage 6; Fig 28). Pottery of Ceramic Assemblage 7 was found in the layers behind the bank (D521 and D629; Fig 28).

Bank C1: Above Bank B a complex stratigraphy was observed in the sections. Two banks emerge from this complex: C1, a bank of earth with a palisade, and C2, a stone wall with a pavement behind it. These two structures are labelled C1 and C2 because they were not appreciated as being distinct at the time of excavation and have only been distinguished in post-excavation analysis. By that time the notation of the bank sequence had been established and partly published. To avoid any inconsistency between interim and final reports, it was therefore decided to subdivide the central Iron Age phase wherein the multiplication of structure had occurred. By way of recompense, however, this terminology does have the advantage of expressing the stratigraphic links and complexities of these two banks.

Bank C1 was not identified in excavation. The evidence for it lies solely in the analysis of the sections, of which A–A′ is the key (Fig 24). Here, overlying the body of Bank B (D522) is a soil (D519) with a scatter of gravel (D516A) upon it. This gravel may be the same as D519A/B. Above these is a mass of limestone rubble postulated as a collapsed wall (D516), with a large vertical slab as its northern edge. Behind this is soil (D520), into which is dug a palisade trench (D518B) which cuts D519A and 519B. To the north of D518B is a large pit (D521A) which is cut from a higher level and is sealed by a layer of paving (D513E). This would give a sequence as follows: D519, 516A, 519A and B, and 520 (perhaps also the top of D521) all overlie Bank B. A palisade trench (D518B) was cut into D520, 519A, and 519B. Subsequently when other layers D518 and D513 have overlaid D520, a pit (D521A) was dug and when filled this was sealed by D513E. The presumed wall D516 postdates D519, 516A, 519A and B, and 518B. The interpretation to be drawn from this is that D520 was an earthen bank because its angle and depth are not explicable by natural causes. D519, 516A, D519A and B may have been the surface upon which the bank was heaped or they may have been part of the bank. The palisade trench D518B was set into the bank. These two constitute Bank C1. The wall D516 and the remainder of the other features are relevant to Bank C2.

If section C–C′ is compared with A–A′, the wall of Bank C2, D628B, can be seen resting directly upon Bank B. Behind D628B is a depth of soil, D624 and D628, which is too deep to have been caused naturally. Into this soil is cut a palisade trench D628A. D624, 628, and 628A are all sealed by a layer of stone, D622. Thus again the evidence can be interpreted to show an earthen bank and a palisade, with later features overlying and cut in.

The evidence of sections B–B′ and D–D′ is unsatisfactory in this respect. In the black soil which constituted the bank at this point it was extremely difficult to distinguish layers and it was only in A–A′ and C–C′ that these could be seen. Also it was only in these two that the palisade trench cut into black earth and filled with black earth was distinguished.

The model of a third Iron Age defence consisting of an earthen bank, jacketing the remains of the preceding banks, with a palisade set along the inner edge of its crest, does appear to fit the observed facts. The bank may be assumed to have had a glacis face. No trace of quarry ditches to provide material for the bank were found behind it save for D824A and B in D–D′. This scoop was again only seen in section, but it is cut from approximately the right height, given its northward position, and its filling is cut by pit D838 which contained pottery of Ceramic Assemblage 9. If it is indeed to be interpreted as a quarry scoop, Bank C1 is the only defence to provide a context for it.

The pottery from D520, 628, and 624 (Ceramic Assemblage 7, see below, Fig 29) also confirms there being an artificial bank, as it is clearly residual. This is presumably a Middle Cadbury bank, ie contemporary with Ceramic Assemblage 8.

Bank C2: Bank C2 destroyed the front of Bank C1. Its major feature was a wall, D516/628B, which was inserted into the southern face of the earlier bank. The cutting to take this wall penetrated into the bank alone on the west side of the Site, but on the east it was dug deeply, all but destroying Bank B (compare sections A–A′, C–C′ and D–D′ Figs 24–5). In this foundation trench a wall with a limestone rubble core was constructed. The south face of this wall was almost completely destroyed except for a few large blocks lying directly on top of the ruins of the front face of Bank B. These blocks were probably the bottom course in a stepped or battered face.

The north face, in the back of the foundation trench, survived well on the west side of the excavation. It was dry-built of irregularly shaped and sized blocks. On the west, the width of the wall at its base, from the large blocks on the south to the base of the north face, was about 2.5m. On the east side it was badly preserved. Nothing remained of the front face and only a few blocks of the rear. As found, the wall did not rise to any height and it will be argued below that it was never substantially freestanding.

To the north of the wall a number of fragmentary features were observed. Their interpretation is very difficult and what is offered in the following paragraphs is a version which seems to give some coherence; other explanations, however, may be equally valid. The least contentious summary of these features is that they represent continuous activity behind the wall of Bank C2 over some considerable period.

The first of the features to note is a row of limestone stones standing on edge in the western half of the Site. These stones did not appear on the sections but are recorded on Figure 26. They stood between 0.4 and 0.65m north of the rear face of the wall D516. No rubble was present between the stones and the wall. It should be noted that the upright stone at the back of D516 on A–A′ does not belong in this series, it being merely one of the blocks of the north face of the wall. The row of upright stones was not observed on the east side of the Site, but it is probable that the slab behind D628B on C–C′ belongs to it.

Behind the stones were several layers of paving (D510A and D512D). The layers were separated by only a few centimetres of soil and had hearths (D512A–B–C, D513A and C) interleaved with them.

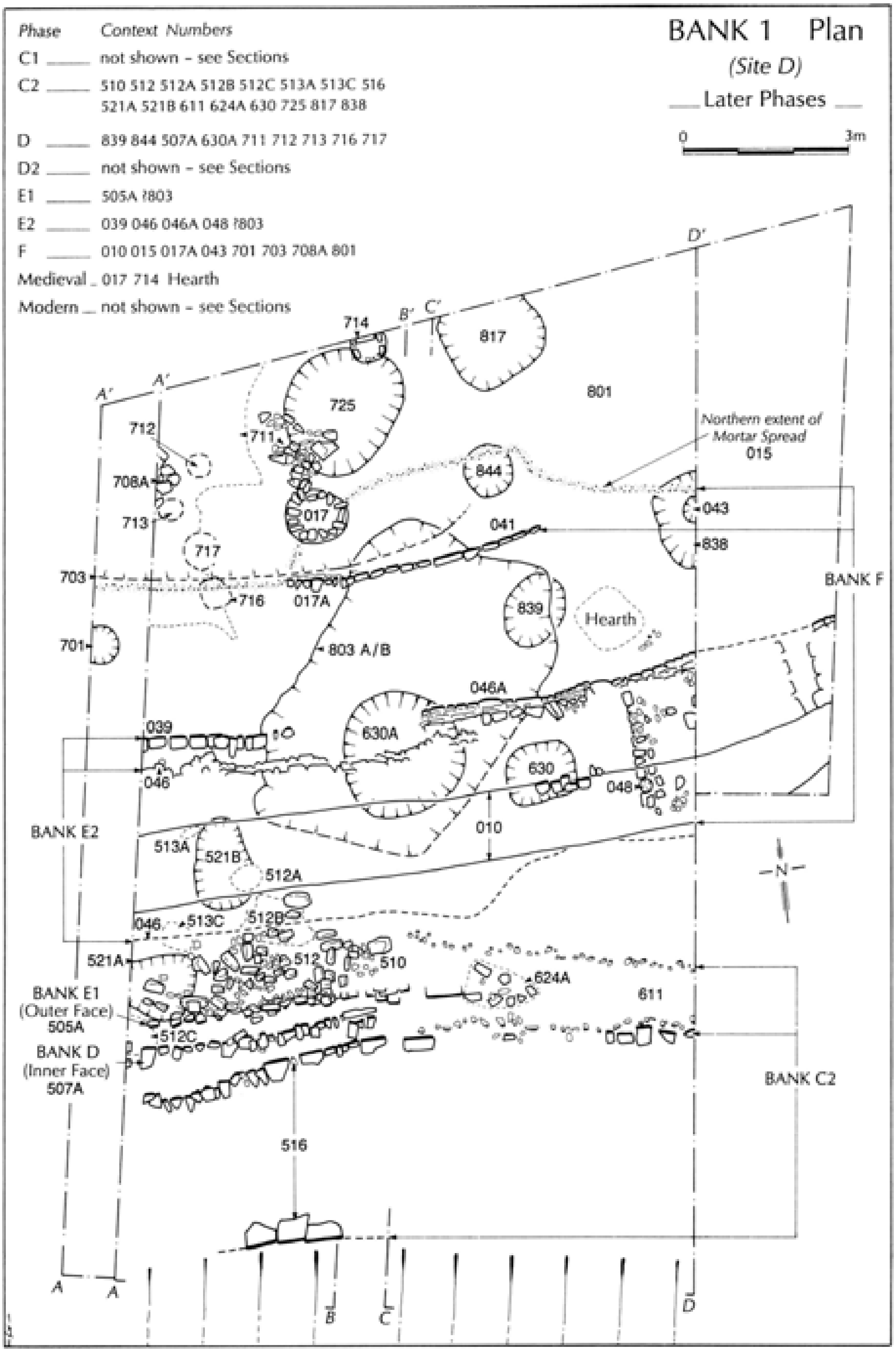


Fig 26 Site D plan of the later phases

This paving was patchy and the layering was confused. Hence only two layers can be said to have certainly existed, but it is probable that there were more. Indeed it may be fallacious to consider the layers as total resurfacings rather than a series of partial, *ad hoc*, patches. It is significant that the southern limit of the paving was the row of upright slabs.

The paving continued through into the east half of the excavation. On C–C′ a mass of rubble (D622) can be seen behind the wall of Bank C2 (D628B). This mass did not run out far to the east of the section and it does not appear on B–B′. It was a purely local phenomenon. The paving lay on top of this rubble and was present in patches further east (D624, Fig 24). D622 may be explained in a number of ways, as a levelling-up deposit, or the infilling of a soft patch to provide a basis for the paving. Perhaps it was a secondary modification to Bank C1, a capping of stones placed on the bank after the palisade had been removed. In this latter scenario, it might be equated with the stone at the top of D520 in A–A′ and B–B′. Also on the west the pit D521A, mentioned above, was partially covered by patches of paving, some of which was laid on a base of rubble shot into the pit mouth (section A–A′).

Above the paving were layers containing hearths, patches of paving, and perhaps a roughly cobbled surface. These layers were thin on the extreme west side (D510 and D512 on A–A′) but were deeper on the east (D617 and D611 on C–C′). The uppermost layer on the east side (D611) contained much stone, which is suggestive of a cobbled surface. It should be noted that this layer overlaid the area in which the row of upright stones might have been expected.

The upright slabs behind the wall and the soil between the slabs and the wall have the appearance of a palisade trench with packing in its north side. Nothing of this trench was visible in section, but since the earth filling was identical to the material into which it would have been dug, this poses no difficulty to the interpretation. A possible objection, however, is that the rubble mass (D622) appears to butt up against the wall without any sign of a trench between. D622, though, was a local phenomenon only and there are a number of reasons why a trench might not have been observed. If the rubble predated the palisade, the material dug out of it might have been used in backfilling. If it was deposited after the palisade had been put up, it might have collapsed into the trench when the palisade was withdrawn or decayed. Thus, although D622 presents no evidence for the existence of a palisade trench, it does not disprove its existence.

The hypothesis of a palisade behind the wall is strengthened by the fact that the southern limit of the paving was the upright stones. This observation admits of two interpretations, either that the paving was pre-existing and was cut by the insertion of the palisade, or that the palisade was earlier and limited the area of paving. The number of layers of paving and their stratigraphic position argue against these being earlier than the palisade, but the second interpretation explains the observation more coherently. The paving with its several layers, patches, and interleaved hearths indicates a long period of occupation on the back of the bank.

Pit D521A contained only a billhook wrapped in straw (see below, Redefining the perimeter). This and its position in the back of the bank suggests that the deposit may have had a ritual significance. Its uppermost filling was a deposit of rubble which provided a base for the paving which partially covered it. This demonstrates that it was dug before the last layer of paving, at least, was put down. Since it was so close to the wall and palisade of Bank C2 it may be thought unlikely that it was dug at the same time as these were inserted, because further disturbance would surely have made the ground unstable. The possibility of D521A being a foundation deposit for C2 may therefore be discarded. Since its stratigraphic position shows that it was dug from a higher level than the possible top of the bank of Bank C1, however, it may be placed in the C2 phase, as part of the activity witnessed by the paving layers and hearths.

Bank C2 may therefore be summarised as a stone wall, stepped or battered at the front, with a palisade just behind. Such a palisade would make it unnecessary for the wall to have stood to any height above the bank behind it. No evidence for much decay or destruction was found and the wall of Bank D was founded almost directly on top of C2 (A–A′). Thus, the lack of height to the wall of Bank C2 may be deduced from both direct observation and probability.

It is likely that at a late stage the palisade of this defence was removed or decayed. It has already been noted that the uppermost of the layers behind the wall had the appearance of rough cobbling, D611, and although an intrusion D571 on section C–C′ mars the evidence in section, on Figure 26 this layer can be seen to run up to the few remaining blocks of the back of the wall on the east side of the Site. D611 thus overlaid the position of the palisade, which indicates that this latter had disappeared. On this evidence, it may be possible to suggest a phase between Banks C2 and D when there was occupation but no defence. D611 is stratigraphically equivalent to D510 in section A–A′. Context D510 produced a Late Cadbury assemblage including Neronian samian.

A long period of occupation on the back of the bank is attested by the superimposed patches of paving, hearths and cobbling and pit, D521A, with its probable ritual significance. The main bank layers D622 and D516 produced material of Ceramic Assemblage 7–8 (see below, Figs 30 and 29 respectively). Pottery from D518 which cut the pit D521A was broadly contemporary (Ceramic Assemblage 7; see below, Fig 29).

Bank D: This bank consisted of a stone wall backed by a low bank of limestone rubble. The wall did not survive in the east side of the excavation. Here, because of its advanced position in Bank 1 and because of later intrusions, only the rubble bank survived, D610 (C–C′ and D–D′ Figs 24–5). In the extreme east, in D–D′, even this was reduced to a mere stump. The wall was best seen on the west, D507A (section A–A′) where its back (north) side was relatively well preserved. This did not appear well on the sections, the two blocks at the southern end of D507 in A–A′ being the clearest remains, but it can be seen in plan (Fig 26). All that remained, in fact, was no more than 'the back of the front', a rear wall face of irregular limestone blocks and some rubble core. No trace of a front (south) face survived. The remnants of this wall were 1.4m wide at their base.

The rubble bank, D507/610, was 0.4m thick behind the wall and some 3.3m wide. It presumably served as a rear-of-bank walkway and its depth provides one clue to the height of the wall. The only other evidence is that there was a large quantity of massive stone in the ditch below Bank 1, suggesting that the wall had been thrown down. This, with the facility and preparedness to undertake large stone building, as evidenced by the final passage walling in the south-west gate, suggests that the wall of Bank D may have been very substantial. The original form of that wall, however, whether it was stepped or battered like its predecessor or not, can only be a matter of speculation.

Although the wall was founded almost directly upon that of Bank C2, it is shown to be a discrete entity by a thin layer of soil (D510) which lay between D507A and D516 and D507 and the layers of paving. It should be noted that D510 contained Neronian samian (see above). It did not follow the same course as the wall of C2 and its north face was some 0.4m north of its predecessor. This is in approximately the same position as the packing stones of the palisade of C2, which might suggest some element of continuity were it not for the intervening layer D510 just mentioned, and the layer of rough cobbling D611 which apparently seals the palisade trench on the east side. The alignment of the wall further makes it clear that this correspondence of position is solely on the west side of the excavation and completely fortuitous.

These sparse remains, therefore, were the remnants of a defence which was probably of some substance, consisting of a wall and walkway overlying the eroded Bank C2. Pottery from D507 (see below, Fig 30) and D610 produced material from Ceramic Assemblages 9 and 10 including Savernake ware. This would suggest a date for Bank D within the first century AD.

Bank D refurbishment: In sections A–A′ and C–C′ (Fig 24) two layers, D506B/608B and D506A/608A can be seen overlying Bank D. D506B/608B was a black soil, 0.45m deep. D506A/608A was similar but also contained small limestone flecks, and was shallower. These two layers evidently produced 16 brooches of types dating to the mid-first century AD (although only 5 of these are now available) and sherds of Corfe Mullen and Savernake pottery, also appropriate to the mid-first century AD.

When first excavated both these layers were attributed to agriculture, but it must be noted that the lower one is thick and rises onto the top of Bank D. It is more prob able that this deposit was constructional. The brooches found in the layer are comparable to those which accompanied the human bones in the 'massacre deposit' of the south-west gate, Site K. It is therefore possible to suggest a connection between Sites D and K in this phase and to postulate that D506B/608B was a refurbishing of the defences in the first century AD. If this interpretation is followed, then this layer becomes Bank D2.

The upper layer D506A/608A has a level surface, which does not suggest any defensive structure. The well disseminated small stones are consistent with a ploughsoil. This layer could thus continue to be interpreted as the result of soil movement, due to agriculture, filling the angle in the back of Bank 1 as it then stood.

Banks E1 and E2: Bank E1 was constructed on top of the two layers discussed above. This structure survived as no more than a 'tail' of limestone rubble (D505, D038 on sections A–A′ and D–D′ Figs 24–5) behind the fragmentary remains of a revetment of placed blocks (D505A on A–A′ and Fig 26).

It would be easy to attribute these to the foundations of Bank E2 but for two stratigraphical details which clearly demonstrate their individuality. The first of these details is a thick layer of charcoal and burning which covers D038 and intervenes between it and Bank E2 in D–D′. The second is a large intrusion, D803, 803A, 803B, which is to be seen in section C–C′ dug into the back of the banks in the centre of the Site. It was cut from a higher level than E1 and therefore postdates it. The lower layers of its filling appeared to be due to silting, while the upper layers may have been deliberate filling thrown in to level up for Bank E2, which was built directly on top. Roman pottery came from the filling. Thus the likelihood of the pottery in the large intrusion being residual is great.

The date of Bank E1 can only be assessed on stratigraphic grounds. Bank E1 is stratified between D506A and D608A and Bank E2. On the historical model for Cadbury, its date must therefore lie in the Roman or early post-Roman periods.

Bank E2: Bank E2 was a timber-framed defence with a core of earth and stone. The first stage in its construction was to burn off the vegetation on top of Bank E1. This left the charcoal deposit on top of D038 which has been mentioned above. The large intrusion was probably filled in. No burning was found over it and the base of E2 rests directly upon its filling.

The evidence of timber framing was found only in the eastern half of the Site, where the bank was best preserved and the only section to show this evidence was D–D′ (Fig 25). The evidence consists of spaces between faces of stone blocks containing black earth. These had once held vertical and horizontal timbers of between 0.15 and 0.2m square. The horizontal timbers had run both transversely and longitudinally in the core of the bank.

In the west, the bank core (D046) was made up of layers of earth and rubble (A–A′ and C–C′ Fig 24), while the quantity of rubble was greater in the east (D–D′ Fig 25). This difference in the core, with the evidence for timberwork in the denser rubble only, might suggest some special structure, such as a watch-tower. However, this is unlikely in view of the evidence for timber lacing from Sites I and K, and it must be assumed that a local concentration of earth in the bank core has meant that the timber slots did not survive on the west of Site D.

The rubble core contained blocks of faced stone, sawn tufa, and box-tiles robbed from some building of Roman date. Nothing survived on Site D of the front of this defence. The rear face was not vertical but a battered revetment of roughly piled blocks. This was designed rather to provide a stable slope than to retain anything. Just east of the centre of the Site was a patch of secondary rear revetment 3.1m long, D046A (Fig 26). This repair may have been necessitated by the slipping of the original face, caused by the settling of the filling of the large intrusion which underlay the bank at this point.

Apart from this repair, nothing was found to indicate how long Bank E2 remained in use. The long period which elapsed before Bank F was built is marked by turf which grew over E2 (D504A on A–A′).

One last complication to this structure remains. On the west side of the Site, a scoop or platform (D032) was dug into the tail of Bank E2. Along the south side of this a wall of blue lias limestone blocks was constructed (D039 on A–A′). This wall ran for 2.2m from the west face of the excavation, and stood three courses, 0.2m, high (Fig 26). It was intrusive into the rear of Bank E2, built after the surface of the bank was stabilised, for the scoop (D032) cut the turf (D504A). The purpose of this wall is not clear, and all that may be said about its date is that it was built after the construction of Bank E2 and before that of Bank F.

Bank F: The defence of the Saxon *burh*, Bank F, was a very substantial structure. It consisted of a mortared stone wall backed by a high and wide bank of earth.

The first stage in construction was to prepare the ground on top of Bank E2 for the wall D010. In the east, this involved removing the turf and earth so that the wall rested directly upon the rubble of the preceding bank (D–D′ Fig 25). The soil dug out was dumped to the north, over the rear slope of the bank (D020). In the west, it was necessary to build up a level platform to take the wall. The structure with the blue lias wall (D039 on A–A′ Fig 24) was levelled over and soil placed in successive steps against the north slope of Bank E2 (D026, 021, and D020 on A–A′).

Small pits for the mixing of mortar were then dug behind the bank area (D701, D043). The wall (D010) was then built. As found, it was 1m wide at its base and survived to a maximum height of nine courses, 0.8m, on the north side. Its southern face was poorly preserved.

Behind the wall a thin layer of mortar extended over the ground surface. This mortar streak (D015) was visible in A–A′ and D–D′ and is a constant feature of the Saxon defence around the entire hill. It may be that it represents the actual construction of the wall D010, with mortar carried from the mixing pits being spilt on the ground. However, this presupposes an incredible sloppiness on the part of the builders around the whole circuit. A more satisfactory explanation may be that it was deliberately laid to prepare and consolidate the ground surface before the bank (D009), was built (see below). On A–A′ a bifurcation of the mortar streak D015 and D012 may be seen just behind D010. This may imply that the wall was built up in successive stages, with sufficient time between them for soil to be deposited upon D015 which was then sealed by D012. This would not have been a significant time lapse, merely intermediate between two stages in the construction programme.

When the wall was completed, a large earthen bank, D009, was thrown up behind it. The bank was 4.2m wide. The material for it was obtained from a wide quarry scoop in the north of Site D. Only the southern edge of this scoop (D703, D801) lay within the excavation. It was about 0.5m deep. The scoop was cut through the mortar around the mixing pit D701 and cut the pit D043.

The north face of the bank was retained by a stone wall. This was only found in the centre of the Site, stretching for 3.5m. From the quantities of stone in the filling of the quarry scoop it would appear to have originally extended across the whole site. Two phases were apparent in this walling. The base resting directly upon the mortar streak was of mortared blocks, D041 (not on section). This was the original rear revetment to Bank F. D041 was at most three courses (0.25m) high, and it is probable that it was never completed. Alternatively it may have been damaged in the slighting of the defences which seems to have taken place in the reign of Cnut.

On top of these mortared remains was a dry-stone wall which stood to a height of about 1m, D017A (not on section). This was battered towards the south and was not thick. It appears to have been built into the back of the bank as a retaining skin. The character of the walling and its position on top of the mortared walling suggest that it should be connected with the post-Ethelredan rebuild at the south-west gate.

The field wall: The last wall to be built in Bank 1 was a field wall, D004, which was inserted into its north face. This wall was dry built and was positioned just to the south of D017A. It had not survived well, but its foundation trench can be seen in section A–A′.

Occupation behind Bank 1: As explained above, one of the reasons for excavating Site D in 1968 was to explore the evidence of occupation behind the banks. It was expected that there would be a considerable amount of such evidence because of the apparent depth of material at the back of Bank 1. However, as described in the introduction, such evidence was extremely difficult to locate, not least because of the technical difficulty of distinguishing features dug into and filled with the same black earth.

In the event, no stone structures were found. All that could be identified was a few patches of surfaces, distinguishable because of their texture or appearance, and some pits and postholes, largely recognised only when they cut into bedrock. Most of the pits were dug from a considerably higher level than that at which they were first observed, and consequently only the fragmentary remains of occupation behind the banks can be described.

Behind Bank A was a number of postholes, cut through the turf. Some of these were not observed cutting the turf, but were seen only at a lower level. These have already been discussed above. Of the remainder, no pattern is discernible and the level from which they were cut cannot be assessed with any great accuracy. The only features which can be definitely said to represent occupation behind Bank B are the patch of clay (D619) seen in section D–D′ (Fig 25), and the stakeholes cut through it.

Nothing, save perhaps the confused layering in a possible quarry scoop (D024A and B), can be attributed to the phase of the Bank C1. Pits D521A (section A–A′ Fig 24) and D521B clearly predate the paving behind Bank C2, but it cannot be shown that they are contemporary with C1. Indeed it has already been argued that D521A was a ritual pit dating to the C2 phase. D521B was also lacking in finds, and so too was the pit D630, which was recognised at approximately the same stratigraphic level. It is probable that these also represent activity in the C2 phase.

Later Middle Cadbury pottery first appears amongst the paving behind Bank C2 (above). This suggests that a number of pits, D725, 817, 834, 844, 838, and 839 (Fig 26), which all produced similar pottery, are contemporary with part of the C2 phase.

Pit D630A (section C–C′) was very badly damaged by the large post-Iron Age pit (D803) in the centre of the Site. Stratigraphically it is not clear whether it was dug through, or from just below, Bank D (D610): the section will bear either interpretation. The pit produced a hoard of ironwork including an axe, saw, and part of a currency bar. Some of these objects appear to have been wrapped in straw. With them were a toggle in bone, a shale platter, and clay slingshot bullets. All were mixed in with burnt material which had been hot enough to fuse some of the bullets to the saw. All this indicates a ritual deposit (see below, Redefining the perimeter). A few sherds of pottery were also found, but in the context of a pit, and there is every possibility of their being intrusive.

At first sight the features D712, 713, 716, and 717 (Fig 26) are more tangible. This may be illusory, however. They were called postholes because they appeared as regular shapes in the edge of the stony layer tailing off from Bank D (top of D711 on A–A′). The material which filled them was black earth, indistinguishable from that beneath the stones. It may be, therefore, that they were no more than 'bald' patches in a very patchy stone level. If they were postholes they would be Late Cadbury, but they should be regarded only as possible features. The large intrusion in the middle of the Site D803A and B on C–C′ (and Fig 26), the lias wall (D039), and the Saxon quarry scoop have already been discussed (above).

Pottery from Site D: south rampart cutting
by Ann Woodward

Note: The pottery from Site D was not analysed in full by Leslie Alcock and Michael Bishop, but a selection of well stratified groups have now been studied. These are illustrated below.

The illustrated pottery derives from selected contexts which formed a key stratified sequence through the Bank 1 deposits. The stratification is described above. The groups illustrated do not include all feature sherds from the context concerned, because they were too numerous. Neither do they include the key diagnostic sherds previously published by Alcock (1980, fig 14), although references and codes for the latter are cited at the end of the listings below, for the sake of completeness. The form and fabric codes used are defined in Chapter 13.

Figure 27
D636, Bank 1 Ceramic Assemblage 4

	Form	Fabric
1	PA3	u
2	PA2	c
3	Neolithic?	c
4	BA2.2	b
5	PA2 expanded rim	b
6	PA2	c

D536, Bank 1 Ceramic Assemblage 5

	Form	Fabric
1	BA2.2	b
2	PA2	c
3	BB	c

Plus Alcock 1980, fig 14, D536.1: PA3, quartz
D631, Bank 1 Ceramic Assemblage 5

	Form	Fabric
1	PA2	b
2	PA1	c
3	BA2	c

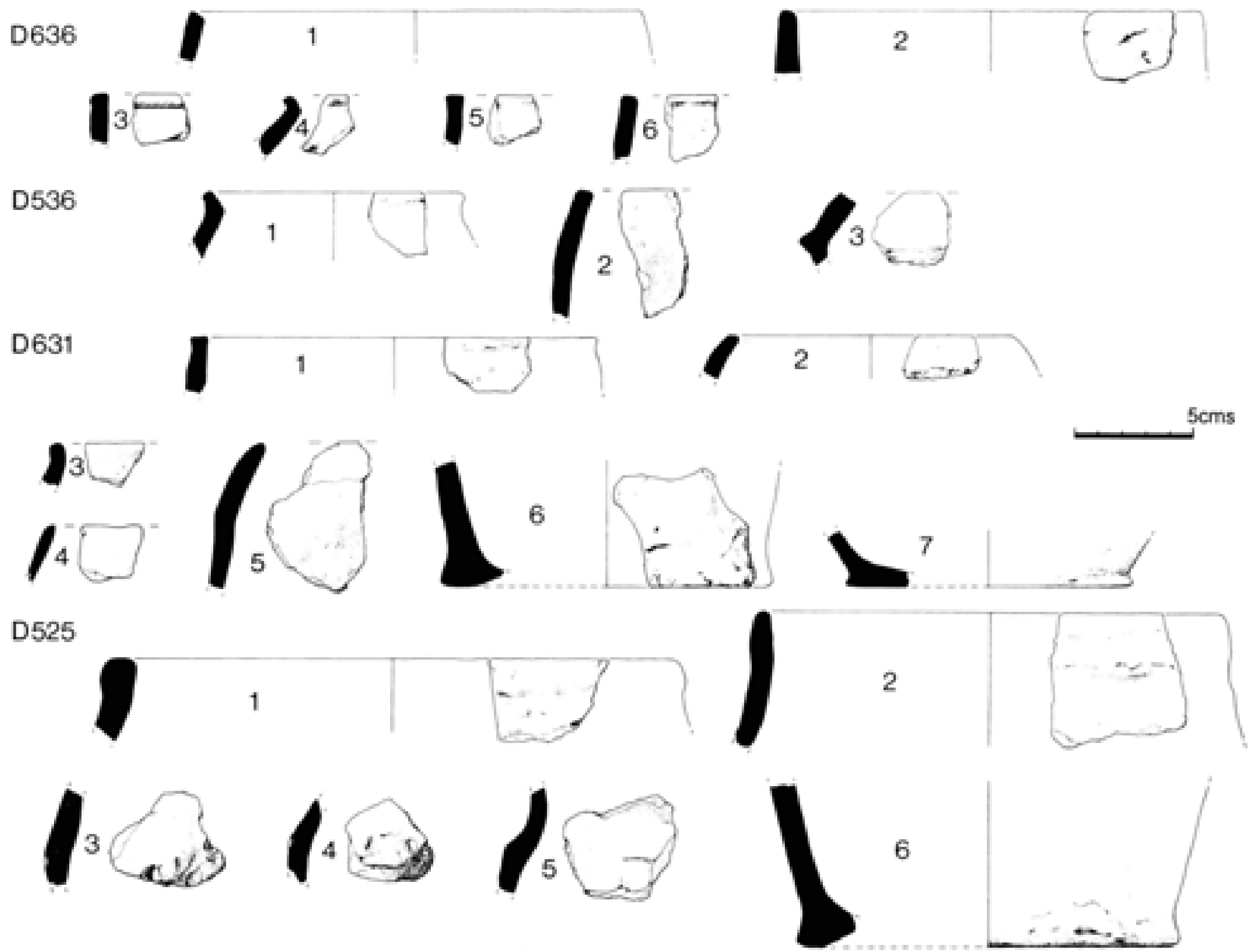


Fig 27 Ceramic assemblages from Site D: D636, 536, 631, and 525. Scale 1:3

4	BA	c
5	PA1	b
6	BS5.5	c
7	BS5.5	c

Plus Alcock 1980, fig 14, D631.1: PA3, shell/calcite; 2: BC1, micaceous sand; 3: PA2, quartz; 4: JA.3, shell; 5: JB1.4, shell; 6: JB1.1, calcite/shell; 7: JB1, shell; 8: JB1, shell; 9: JB1, shell

D525, Bank 1 Ceramic Assemblage 6

	Form	Fabric
1	JC1	g
2	JB2	c
3	JB1.3	g
4	JB1.3 (FP3)	g
5	JB1	c
6	BS5.5	c

Plus Alcock 1980, fig 14, D525.1: BA1.1, fine sand Ceramic Assemblage 5 (residual); 2: JB1.3, shell; 3: JA, shell; 4: JB1.5, shell; 5: miniature bowl, shell; 6: BB, shell with haematite slip

Figure 28
D522, Bank 1 Ceramic Assemblage 6

	Form	Fabric
1	JB2	c
2	Lug	c

Plus Alcock 1980, fig 14, D522.1: JB2, shell; 2: BA2.1, shell

D521, Bank 1 Ceramic Assemblage 7

	Form	Fabric
1	JB2	c
2	JB1.3	g
3	JB2	c
4	JB3	c
5	JB3	c
6	JB2	c
7	JB2	c
8	PA1	c
9	JB2	c
10	JB3	c
11	JD1	c
12	DA1 (FP1)	c
13	JB1.5	c

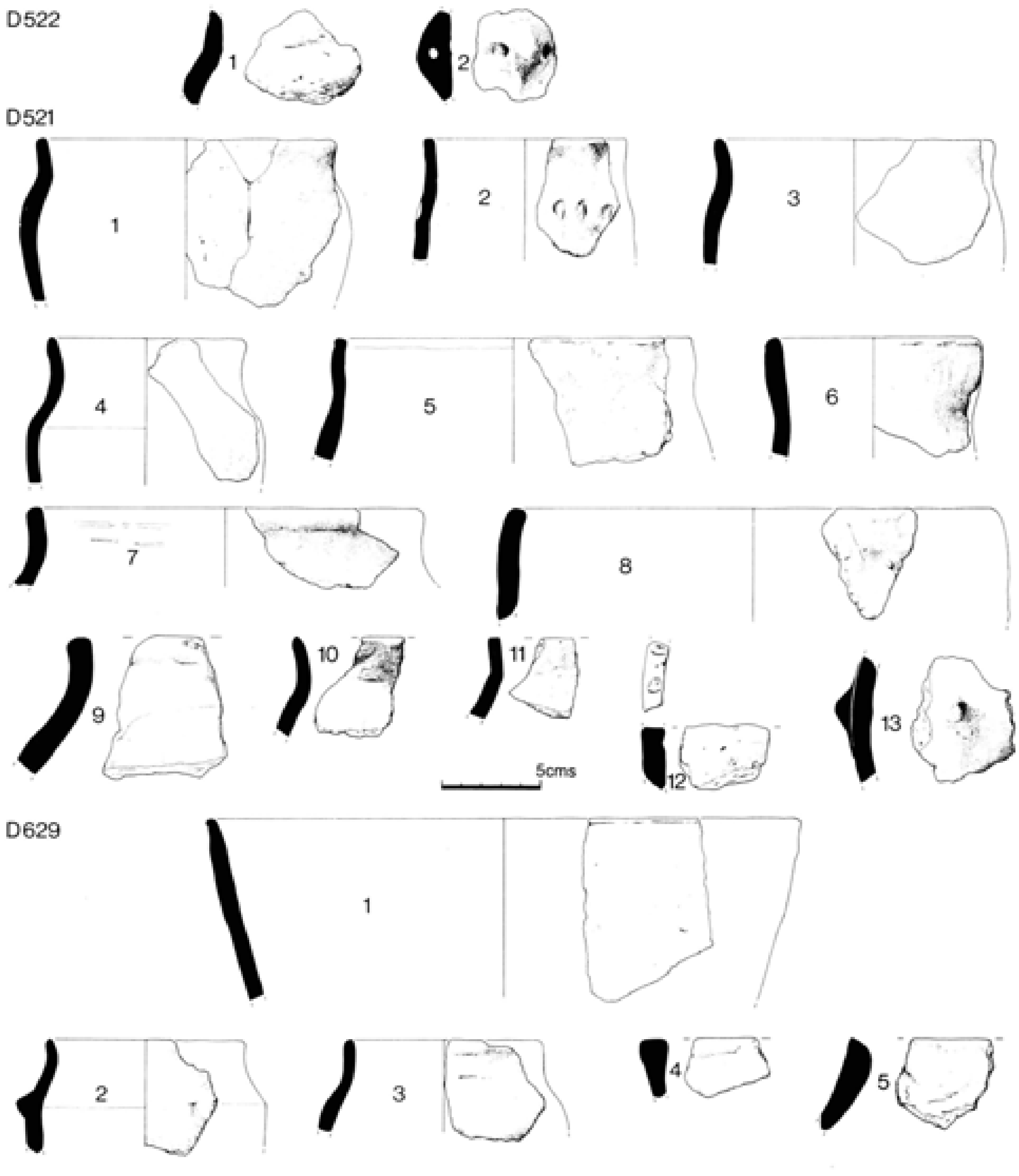


Fig 28 Ceramic assemblages from Site D: D522, 521, and 629. Scale 1:3

D629, Bank 1 Ceramic Assemblage 7

	Form	Fabric
1	PB?	c
2	B1.5	c
3	JB3	c
4	DA1	c
5	JA	c

Figure 29
D520, Bank 1 Ceramic Assemblage 7

	Form	Fabric
1	BA2	l, haematite coating

D628, Bank 1 Ceramic Assemblage 7

	Form	Fabric
1	JB1.3	c
2	JB1.3	c

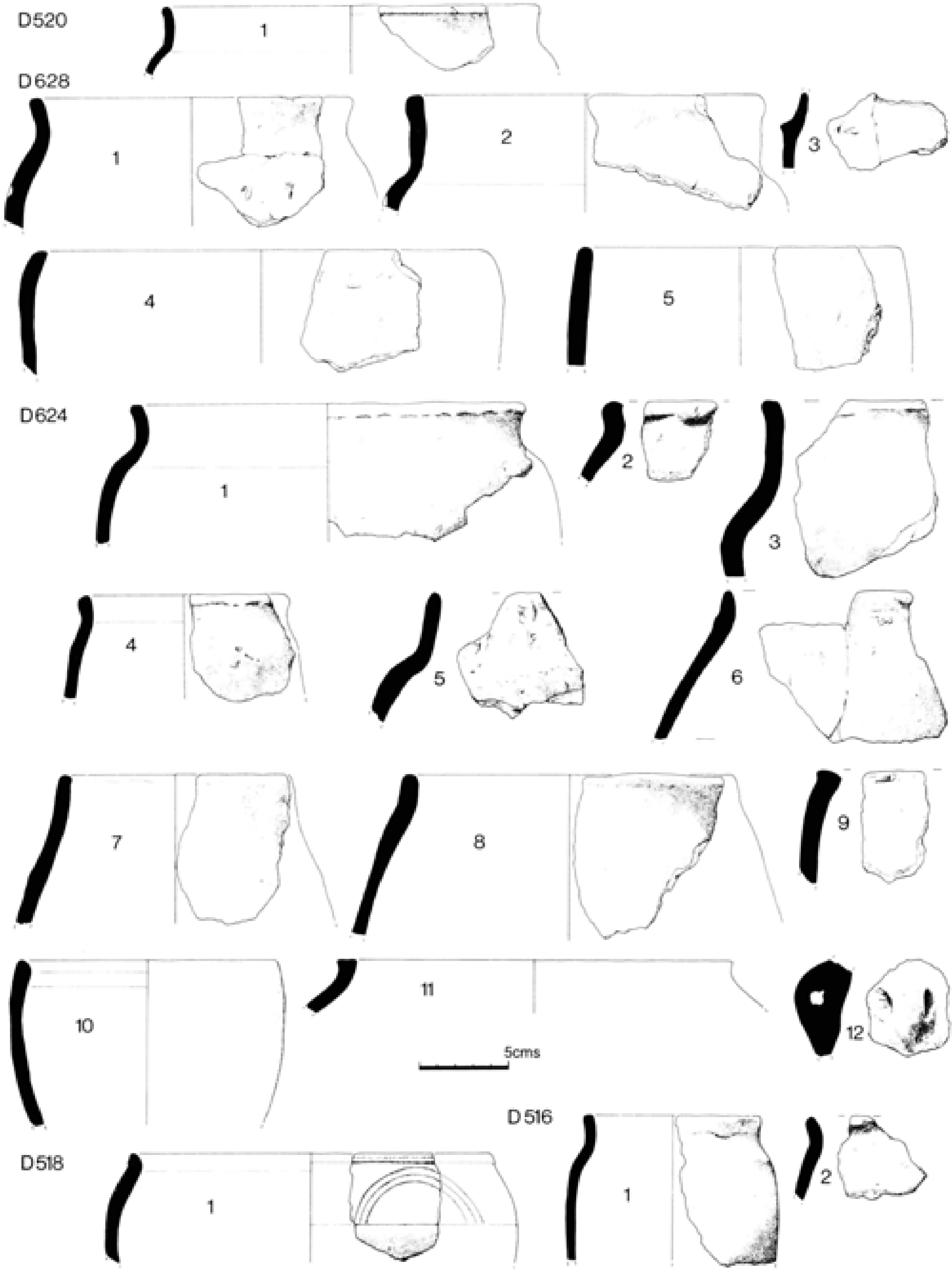


Fig 29 Ceramic asemblages from Site D: D520, 628, 624, 518, and 516. Scale 1:3

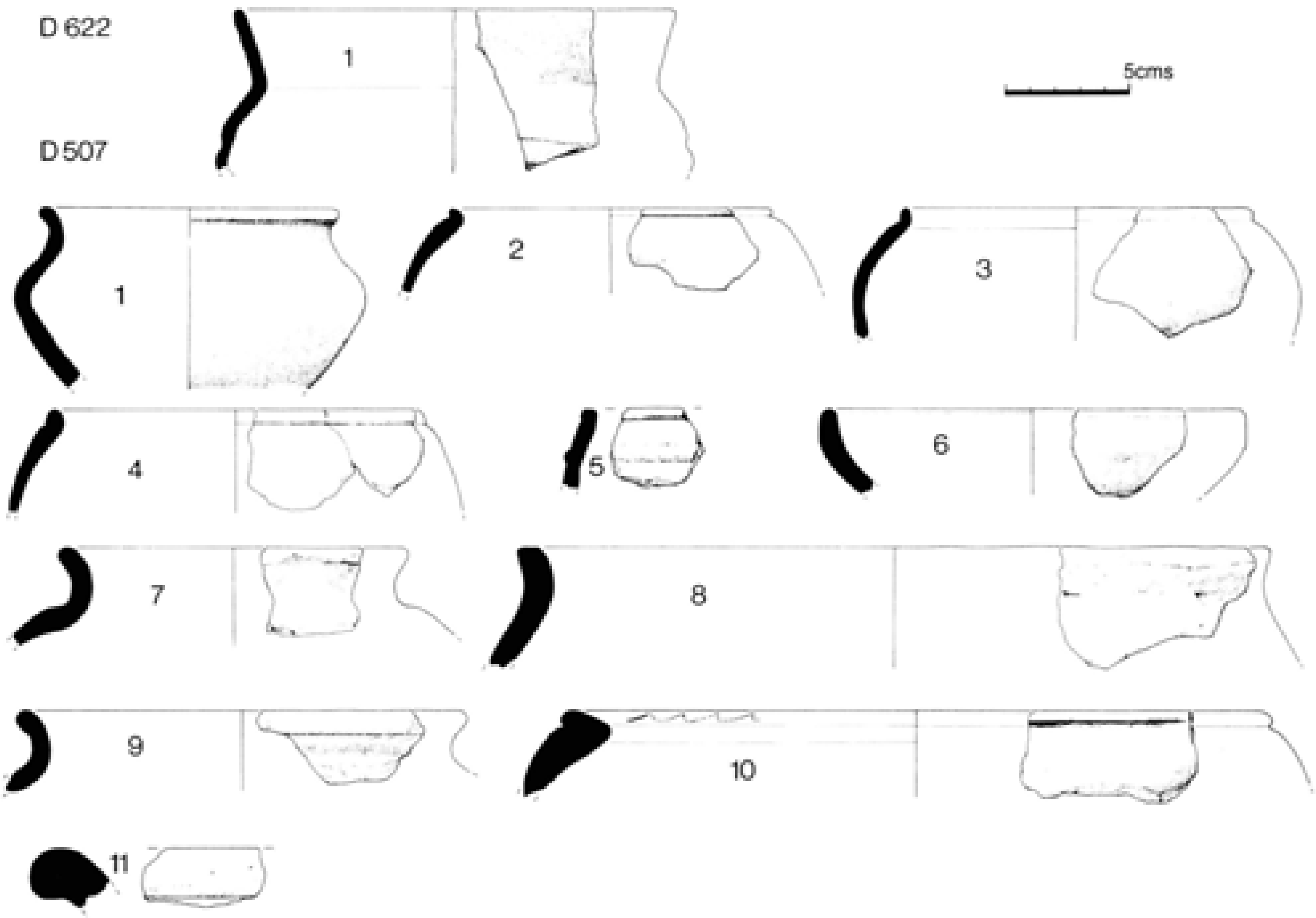


Fig 30 Ceramic assemblages from Site D: D622, 507

D628, Bank 1 Ceramic Assemblage 7 (continued)

3	JB1.5	c
4	PA1	c
5	PA2	c

D624, Bank 1 Ceramic Assemblage 7

	Form	Fabric
1	JB2	c
2	JC2	c
3	JB2	c
4	JB2	c
5	JB3	c
6	JB4.1	c
7	JB4.1	c
8	JB4.1	c
9	JB5	c
10	PA1	c
11	JC1	l
12	Lug	c

D518, Bank 1 Ceramic Assemblage 7

	Form	Fabric
1	BD5	h (intrusive)

D516, Bank 1 Ceramic Assemblage 7/8

	Form	Fabric
1	JB2	b
2	JD1	c

Figure 30
D622, Bank 1 Ceramic Assemblage 8

	Form	Fabric
1	BD6	c, grooves and oxidised coating

D507, Bank 1 Ceramic Assemblage 9

	Form	Fabric
1	BD1/2 variant	h
2	BC3.3	s
3	BC3.3	s
4	BC3.3	h
5	BD 5	v
6	BC 3	s
7	JE4.2	s
8	JC3	c
9	BD6, plain	s
10	JC4	h
11	JF	i

Site I

Stratification and structures

The excavation of Site I in 1967 and 1969 was far from satisfactory, but since it yielded important evidence for the character of Bank E, as well as an interesting burial, an attempt must be made to summarise the information from it. In 1967 a trench 2m wide was laid out in order to examine the post-Roman defences and in particular to see whether the so-called Stony Bank (Bank E) which had just been discovered in Site D was present elsewhere around the perimeter. Immediately below the Ethelredan mortared wall a rubble bank was indeed discovered (I121–122, Fig 31 section B–B′). A rim sherd from a very late bead-rim bowl (form BC3.3) showed that the bank could not predate Late Cadbury. Its general characteristics and stratigraphic position suggested that it could reasonably be identified with the Stony Bank. It was especially interesting because two or three courses of revetment were still in place. This revetment therefore ran for some 7m to the south. This fulfilled the limited aims of the 1967 cutting, which was then closed down.

In 1969 the trench was reopened mechanically, with the intention of taking the north section of the 1967 cutting down to bedrock, in a trench of convenient width for the working of the excavator. The section A–A′ which resulted (Fig 31) is a testimony to some of the disadvantages of mechanical trenching. Below the revetment of Bank E is an uninterpretable complex of banks, pits, and habitation levels. The difficulty in understanding the structural sequence arises partly from the collapse and erosion of banks built on a steep slope, and partly from disturbance by burrowing rabbits and badgers, but this difficulty was compounded by the near impossibility of detecting evidence for dry-stone features in the side of an archaeological cutting after they have been removed mechanically. The excavators had been prepared to sacrifice such features in plan in order to obtain the sequence in section, but in the event they lost both. Section A–A′ was drawn without a proper comprehension and it is presented here without further comment.

Further problems were encountered within the trench itself, where the machine excavation was stopped on the point of chopping into a human burial. Thereafter the major effort was concentrated on clearing the burial by hand and attempting to establish its relationship with the banks. The presence of the skeleton made it impossible for the excavation to work to the full width that had been intended. As compensation it was possible to clear by hand and to record fully part of the internal structure of Bank E which would otherwise have been sacrificed in the excavation. What follows is an attempt to establish a structural sequence from the fragmentary evidence.

Like Site J in 1969, Site I was placed where Bank 1 crosses the axial ridge of the hill (Fig 7). Consequently the banks were placed at the head of a particularly steep slope. Moreover, in contrast to the northern and southern parts of the perimeter, there was no internal build-up of ploughsoil and hillwash; rather the reverse, for as section B–B′ (Fig 31) shows, the bedrock at the rear of the bank, I118, is appreciably lower where it has not been protected by the cobbling (I123) and by the body of the bank itself.

The longest comprehensible sequence is provided by section C–C′ (Fig 31). This shows the Yeovil Sandstone bedrock (I030) overlain in the front part of the trench by a dark clay I029, which is comparable to the buried soil beneath Bank 1 in other sections (A126 Fig 22, D646 and D658 Fig 25 section D–D′). Upon this lies the compact relaid sandstone I028, which looks like the freshly quarried material dumped to form a bank. In appearance it clearly resembles Bank A in Sites A and D. The soft brown soil, I027, could be the weathered top of Bank A; the posthole I018 could have held a rear post, and the light brown gravelly clay I017 could then be interpreted as the tail of that bank. The finds from I017 belong to Early Cadbury including sherds of Ceramic Assemblage 6 and this again would be appropriate for Bank A.

Against this structural identification are strands of evidence, consistent in all the defensive sections, for a progressive rearward shift of Bank 1 throughout its long history. This makes it difficult to believe that even the tail of the earliest bank could lie so far to the rear. For what it is worth, there is no hint of Bank A in a comparable position on section A–A′. It therefore seems more likely that I028, 027, and I017 represent the rear slope of some subsequent bank phases, probably Bank B, more probably Bank C. Posthole I012 might have held a rear support for a late phase of Bank C, which may otherwise be represented by the compact dark grey soil, I026.

Behind the posthole is a series of ash layers or hearths, I016 and I014, separated by a greenish-brown soil, I015. The upper hearth I014 on section D–D′ which was cut by the posthole I012 yielded characteristic Ceramic Assemblage 7 material. Above this again is a brown soil with lumps of sandstone, I013, with a sporadic capping of stones, I013A. This is probably a bank tail, and its position and character are appropriate to Bank D. The posthole I020 might have held a rear support for this bank, but this hypothesis is difficult to reconcile with the way in which the stones of I013A run across the top. The bronze spiral finger ring could date I020 to Later Middle Cadbury, and the bulk of the pottery from I013–013A may be attributed to Ceramic Assemblage 8. Both I013A and I020 were cut by I019, the grave pit for a human burial. The skeleton was that of a young adult male, who had been buried in a very tightly flexed or foetal position, with the head slightly down. The grave pit had been dug as small as possible and the body must have been a very tight fit. There were no grave goods, but the grave filling contained a dozen featureless sherds, which had either come originally from the layers into which the pit was dug or had filtered down from the layers sealing the

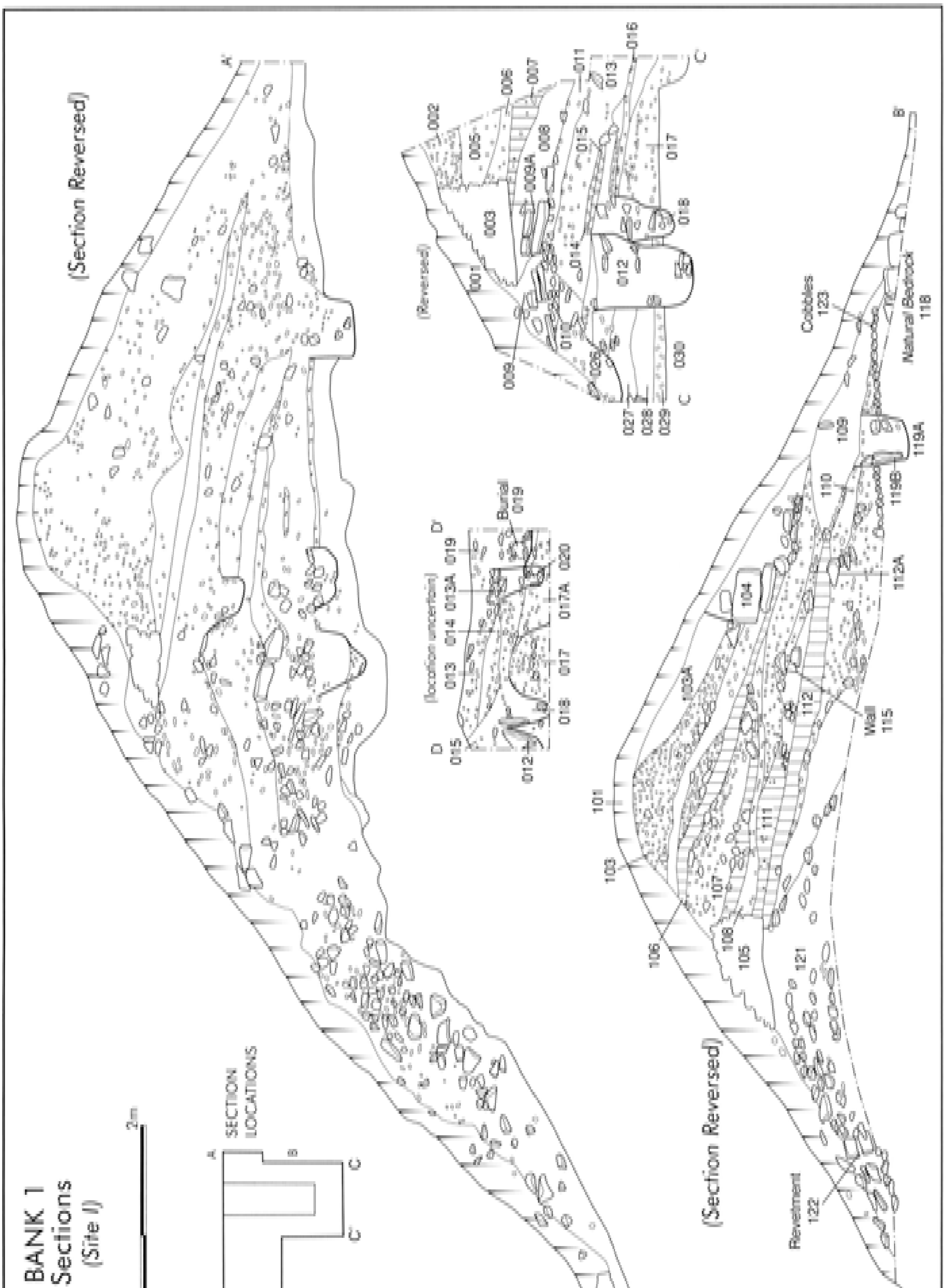


Fig 31 Site I sections A-A', B-B', C-C', D-D'

grave as the body decayed. No sand-tempered wares or characteristic Ceramic Assemblage 9 forms were present, although these do occur in the overlying layer I011.

The attempt to date the grave I019 from the evidence of a few scraps of pottery was necessitated by the obscurity of the stratification immediately above it. It seems likely, however, that the soft powdery grey soil I011, which contained some sand-tempered pottery, is occupation in the rear of the latest Iron Age defence, Bank D. The jumbled rubble, I010, (section C–C´) contained broadly similar pottery and may be contemporary, but there are grounds for believing that the pottery is in fact residual and that I010 is part of Bank E, assignable to the fifth to sixth centuries AD. Certainly there is no detectable break in the stratification between I010 and I009, and the latter is undoubtedly part of Bank E. The reasons for this categorical statement are twofold. Firstly, I009 exhibits both transverse and longitudinal beam slots, comparable with those observed in Bank E in Site D (see above). Secondly, I009 contains many worked blocks, both sawn and hammer-dressed, comparable with those of Bank E at the south-west gate, where various arguments converge in favour of a date late in the fifth century AD. The bank structures I010 plus I009 of section C–C´ are the equivalent of I121 and I122 in Section B–B´. Here again the pottery is entirely residual. Revetment I122 is the length of walling uncovered in 1967. It consists of a mixture of dressed and natural blocks, of very mixed sizes, badly laid with a pronounced forward tilt. In places it was standing three or even four courses high, and it is this which makes it possible to discern vertical gaps which once housed timber uprights. The shifting and partial collapse of stones make it difficult to be positive in all cases. No postpits were detected below the bottom course of the revetment (in contrast to those found below Bank B in Site D). It is probable that the uprights were not earthfast, but were part of a timber framework which rested on the ground. The transverse slot in I009 lines up with Slot 2 in the revetment, and posthole I031 (not on section) may have held an upright at the rear of the frame. Roughly parallel to the revetment I122 and at right-angles to the transverse slot I009 is a row of big blocks, I009A, which seem to mark the emplacement for a longitudinal timber.

The back of Bank E was covered by a fairly deep humus, I112 on section B–B´ and I008 in section C–C´. This contained only residual pottery, and, as with the other rampart trenches, there is no ceramic evidence to date this or the subsequent bank phases. The humus was overlain by a stiff brown loam I007, and I111, which had two lines of stone, I115, as a slight lacing course. These layers are in turn overlaid by the Ethelredan mortared wall, I003 and I105, with its mortar spreads, I006 and I108. Above the mortar, the Ethelredan bank consists of a mixture of soil and broken-down Yeovil Sandstone, with occasional lenses of humus like I106: all this is material scooped up from the interior in the rear of the bank. Cut into the back of the bank is a dry-stone wall of large, carefully laid blocks, I104. It is not clear whether this is to be equated with the wall of massive yellow blocks at the south-west gate, and the wall A003 of Site A, or whether it is the recent field wall, A104 on Site A, K003 and K104 at the south-west gate.

Site J

Introduction

The excavation of Site J began in 1967 (Figs 7, 8, and 32, section B–B´) as part of the programme for confirming the existence of the later Banks E and F, all round the perimeter. In that year, a 2.0m cut was laid out at a convenient point on the northern perimeter, and was excavated down to a humus layer (J115 on B–B´) which contained a mixture of material of Ceramic Assemblages 9 and 10. The humus lay upon an apparent bank (J116) on which was a clutch of slingstones. It seemed reasonable in the light of both the pottery and the slingstones to interpret J116 as the final Iron Age bank, and since the limited objective had been attained the trench was then closed. Further work was done in 1969, during the campaign of sectioning the Bank 1 mechanically. Instead of reopening the 1967 cut, it was decided to locate a new cut further north, more or less on the central ridge of the hill (Fig 32, plan and section A–A´). The hope here was that one would obtain information about structures to the rear of the bank at a point where there was no overburden of hillwash. A trench just under 5.5m was excavated mechanically down to bedrock, rock-cut features were excavated by hand, and the sections were cleaned down and recorded. The two seasons' work are best considered separately.

Site J South

Further study of the pottery from J115 makes it clear that the hypothesis proposed in 1967 is correct. The bulk of this pottery consists of large, unabraded sherds with many joins, all characteristic of Ceramic Assemblage 9. Along with these are abraded scraps from earlier phases of the Iron Age together with a few pieces which are late Roman. The humus layer J115 then accumulated at the end of the Iron Age, and during the succeeding centuries, on the back of a bank. It was in turn overlain by the mixed stones and dark soil J114 and J111 (section B–B´). These comprised a distinct bank, with one course of a massive external revetment still remaining: J112 (section B–B´). In addition to late Roman pottery J114 also yielded a coin of Honorius (AD 393–402). The bank cannot therefore be earlier than *c* AD 400. Its identification as Bank E is not in doubt.

Regrettably, however, we know nothing further of its structure. Only the basal course of the revetment remained. No internal structures were observed. A number of iron nails were found, which might suggest that the bank had incorporated a nailed timber framework, but the make-up of the bank also included lias roofing tiles, from some demolished Roman building, and it is possible that the nails came in with these (see below, Nails stratified in Banks E and F on Site J). Finally, on the back of Bank E a humus accumulated, J110, which contained many small and clearly residual sherds of Ceramic Assemblages 8, 9 and 10. The next structural event was the construction of the mortared stone wall of the Ethelredan *burh*, J104. In Site J this had largely been robbed out. From its rear ran a tenuous mortar streak (J105), but the mortar did not lie upon the humus of Bank E: it was separated from it by 0.4m of reddish gravel (J109) and dirty earth (J107), which presumably comprise the first phase of Ethelredan building, Bank F1. When this had reached a certain height, its front was trimmed back to receive the mortared wall, mortar was slopped over the surface of J107, and only after this was the main *burh* bank, J103, erected. This consisted principally of massive, medium, and small blocks of soft yellow sandstone, interspersed with earthy yellow sand from the crumbling of this same rock. Towards the rear some attempt had been made to pile these blocks together so as to give stability to the body of Bank F2. It should be emphasised here that no pottery or other artefacts of late Saxon date occurred in layers J109, 107, 105, or 103.

The final event here was the insertion in the back of the existing bank of the rough field wall, J102. Three crudely piled courses of massive blocks were found (section B–B´).

Site J North

The earlier features discovered in the trench cut in 1969 were a number of Iron Age pits, dug into the solid rock (Fig 32). In terms of the structural history of Bank 1 the most important was J176 (Fig 32 plan and section A–A´). It contained a mixture of pottery, but the latest pieces take us quite certainly to the end of the Iron Age. If we make the simple assumption that J176 was dug behind the bank rather than into its tail, it follows that even the latest Iron Age bank was to the west, or downhill from the pit. Pit J150 (Fig 32) supports this conclusion, but more shakily, because it is in an area much disturbed by the digging of badger sets and other non-human activity. For what it is worth, J150 suggests that in Middle to Late Cadbury, the bank was outside the area investigated in 1969.

The phenomenon of missing banks has already been noted above in the case of Banks B and, partly, C on Site A. There the former presence of these banks was inferred from the hillwash which had built up behind them, and it was concluded that they had been destroyed partly by the digging of foundations for later banks, partly by erosion and a steep hillside. In 1969, however, there was no similar evidence that hillwash was dammed up by the Iron Age banks, and no real evidence for the existence of such banks at all. This prompts the question whether the trace of the inner banks had been carried round the northern end of the summit ridge, or whether the defences here had relied on the natural steepness of the ground, perhaps improved by scarping. This seems a most unlikely hypothesis, however, and certainly the outer banks were not discontinued in this area. A consideration of the trace of the defences in relation to the form of the hill itself suggests another solution. From the south-west gate, the bank visible on the ground today climbs fairly steeply to the point at which it crosses the summit ridge, climbing a vertical distance of over 10m. As one will see shortly, this is the line taken by the post-Iron Age banks, E and F. But if Banks A–D had kept even slightly closer to a contour level, they would have passed to the west of the 1969 excavation, and it is possible that only the tail of the latest of these would have been present in the trench dug in 1967. This explanation is not wholly convincing, but short of following Bank D continuously from the point where it was last seen in 1967, no greater certainty is possible.

Of the layers which overlie pit J176, the lowest consist of a dense pack of flattish stones, J012, with a slight humus capping J010B. These, then, are the tail of a bank, on which turf has formed. There are cross-joins in the pottery from the two layers, so this can be considered as a group. It is in fact, somewhat mixed, but the latest identifiable pieces are of the third–fourth century AD: a colour-coated mortarium, and one or more cooking pots with the later style of trellis ornament. In other words, J012 and its humus capping J010B may be compared in terms of the associated finds with the bank and humus found in 1967: bank make-up J114, J111, and the humus J110. We may therefore identify J012 as the very tail of Bank E, which has otherwise totally disappeared. Indeed, in the north face of the trench it was not recognisable at all. As in 1967, so in 1969, the mortar spread which makes such a distinctive feature of the Ethelredan building-work was separated from the humus capping of Bank E by a considerable depth of material, in this case the clay and gravel layers J008, 009, and 010 (section A–A´ Fig 32). These overlay the irregular pit J126, whose contents included an iron knife which seems more likely to belong to the fifth to seventh century AD than to the Iron Age or the late Saxon *burh*. The pit and an associated slot, J121, presumably represent activity in the rear of Bank E, but nothing further can be said of that activity. Turning back to the overlying layers, these represent the first phase of Ethelredan activity, Bank F1. All trace has been lost of the Ethelredan mortared wall, and the position of the mortar mixing pit J007 (section A–A´ Fig 32) makes it clear that the wall lay beyond the modern ground surface. This in itself is a witness to the degree of erosion on this part of the perimeter, and goes some way to explain the disappearance of earlier banks.

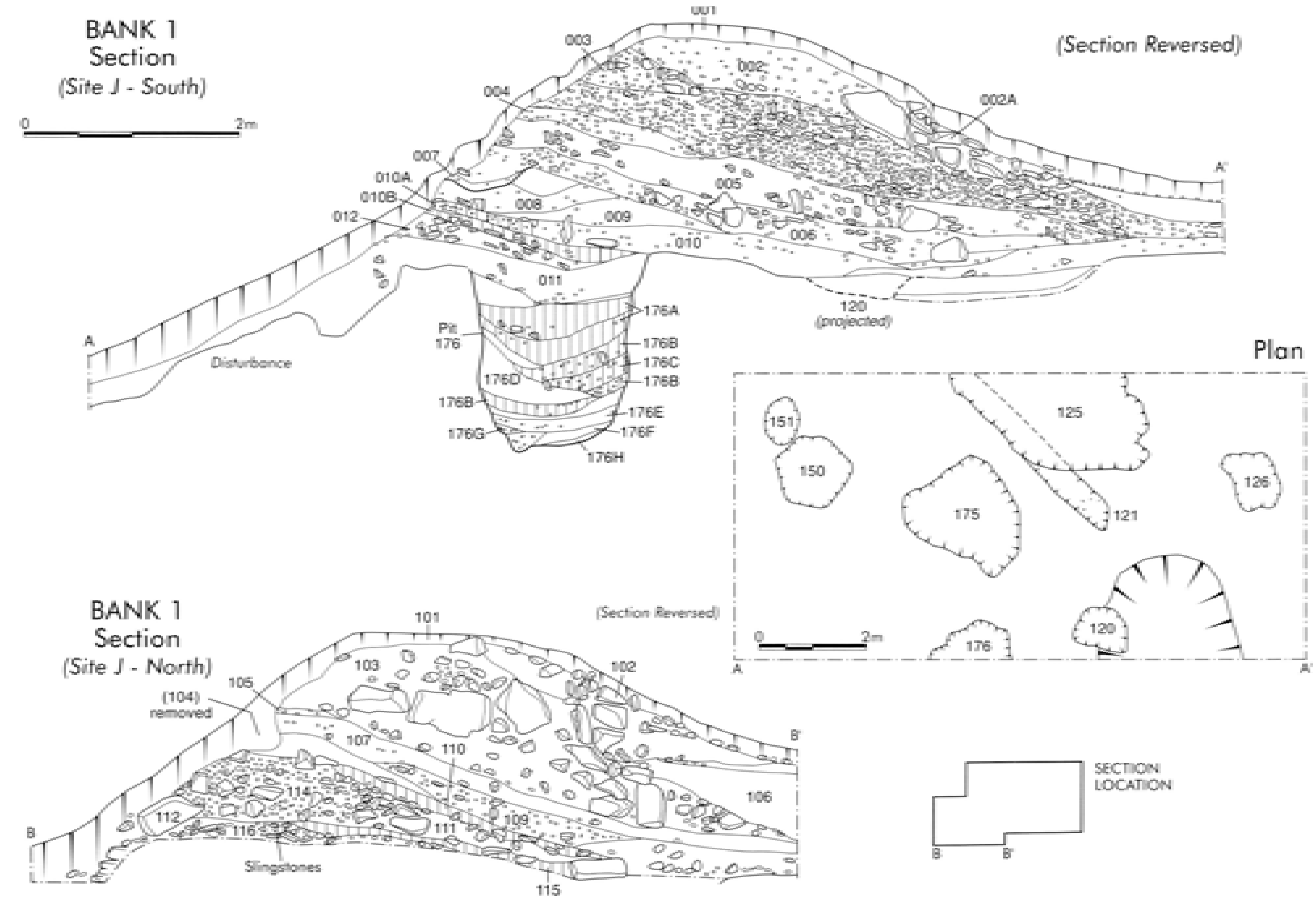


Fig 32 Site J sections A-A´, B-B´, C-C´, D-D´

Nails stratified in Banks E and F on Site J: Layers J008, 012, 107, and 114 (Fig 32) produced a total of ten iron nails; none were found elsewhere on Site J. The nails occur in Bank E (J012, 111, and J114) and in the pre-mortar phase of Bank F (J008 and 107). They pose three problems:

Are they a constructional feature of Bank E, in which timberwork played a large part?

If not, how do they come to be found in these layers?

What is their chronological significance?

The idea that the nails served to hold together the timber framework of Bank E, attractive though it is, cannot be accepted. Where the best traces of timberwork were preserved (Sites D and I) no nails were recorded at relevant levels. Conversely, on Site J (North and South), there were no observable traces of timber. This is not to say that timberwork had not been used here, only that all evidence for it was lost. If the nails are not related functionally to Bank E why do they occur there? The most probable explanation is that they came along with Roman refuse, which is found in all these layers which produced nails. In addition to pottery there are occasionally perforated roofing tiles of lias limestone from pits J121 and J125 (Fig 32 plan) and from layer J115 (Fig 32, section B–B´). These tiles come from the demolition of some Romano-British building, and a similar source is probable for the nails.

This in turn answers the question about their chronological significance. The layers which contain them accumulated during (J012, 111, and J114) or after (J008 and 107) the demolition of some Roman building. They are therefore Roman, most probably late Roman (third to fourth centuries AD) or post-Roman. This, of course, is consistent with the other evidence for the date of Bank E. It should be added that most of the nails are of well known Roman types.

The outer earthworks

after Leslie Alcock and M J Bishop

Introduction

The overall strategy of the excavation programme was to concentrate on exploring the interior of the fort, at the expense of work on the defences. The length and complexity of the structural history of Bank 1, and the need to examine one entrance very thoroughly, led to some modification of this strategy, but it was possible to maintain it in the case of outer earthworks. The minimum of excavation consistent with obtaining an outline of this structural history was carried out: a single trench across all the ditches and banks on Site D, and a shorter one across Ditch 1 – Bank 2 – Ditch 2 on the eastern edge of Site K (Figs 7 and 8). It will nonetheless appear that even this minimum yielded more information than has commonly been gained from the earthworks of multiple-rampart forts. It might be thought more logical to discuss Ditch 1 in conjunction with Bank 1 rather than with the outer banks and ditches, but there are several reasons against this. Firstly, the length of the grass slope of the ditch is such that there is no direct stratigraphic connection between the bank above and the ditch fills below. Secondly, none of the structural complexity of Bank 1 is reflected in the ditch, for as it appears today it represents only a single phase in the history of the defences. Thirdly, the actual process of fortifying the slopes of the hill seems largely to have been carried out by throwing spoil downwards rather than upwards, so that each ditch is more intimately connected with the bank below rather than the one above it.

In the following account, Site D is described first, in descending order from Ditch 1 to Bank 2 and so down to Bank 4. Site K301 (in the area of the south-west gate) is then described in the same way.

Site D

Introduction

Ditch 1 and the outer banks and ditches were explored in 1967 in a trench about 65m long measured down the slope (Figs 7, 8, 33, and 34). The location of the trench was determined by the need to find a line stretching across all four banks which was unencumbered by trees. The line chosen proved to have limitations, in that Bank 2 was found to be missing. The width of the trench varied from 1.5 to 3.0m in response to the depth and character of the fills uncovered. Thus it was wider across the loose deep fills of Ditches 1 and 2, and also over Banks 2 and 3, in order to search for possible palisades. The work of excavation was physically arduous because of the overall steepness of the slope.

The interpretation of the stratification and associated finds is complicated on Site D by two factors. Firstly, because of their varied range, the defences traversed several geological zones: limestone rubble, solid oolitic limestone, variable limestone, and soft yellow sandstone (see Chapter 1, The hill: geology). In the case of both the variable limestone and the yellow sandstone under Banks 3 and 4 respectively, it was not easy to define the undisturbed natural, and the interpretation of the sections is to that extent questionable. Moreover, these strata differed in their hardness and therefore in their resistance to the sculpturing of geological forces. Consequently, even before it was drastically modified by human activity, the slope of the hill may have been undulating, or even terraced, rather than regular. It is therefore impossible to project the original slope of the bedrock from those points where it can be established so as to estimate the ground profile before ditch cutting began, or to calculate the quantity of rock removed by quarrying.

Fig 33 View of Site D section looking upslope

Secondly, the practice of cleaning out ditches and of throwing material downhill when any ditch was recut means that any find is likely to have travelled downhill from the position in which it was originally deposited. For instance, the pottery from the primary silt of an early phase of Ditch 1 might be thrown onto the counterscarp, Bank 2, in cleaning out the ditch. With the collapse and weathering of Bank 2, such pottery might move downhill until, with the cutting of Ditch 2, it became incorporated in the make up of Bank 3. By the continuance of such processes, it might eventually end up beneath Bank 4 or in the make-up. With such cautions in mind, the evidence may now be described.

Ditch 1

Ditch 1 appears on Site D as a cut into solid Jurassic limestone with a scarp slope about 8m long and a counterscarp slope of 2.7m (Fig 34). Towards the bottom of the ditch both slopes become relatively shallow, but the upper part of the counterscarp is at 80°, while the average angle of the scarp is about 50°. It is just possible that the change of angle of the counterscarp is evidence for a recutting of the ditch profile, but there is no other evidence to support this idea.

The lowest fill of the ditch D106 is a dark brown silt with some small stones, which presumably formed quite rapidly after the ditch had been cut to its present profile. If D106 had been forming over a long period, it would be reasonable to expect it to contain some larger stones which would have been eroded from the slopes by frost action. Only five small and weathered body sherds (one of them in a coarse sandy fabric) came from D106.

The fill D106 is overlain by a considerable depth of rubble, D105 and D104. The size of the stones in these fills ranges widely, but it is particularly noticeable that many are 0.3–0.5m long. There is a little soil among them, especially towards the top (D104), but on the whole, where the stones do not lie flat against one another, there are air-spaces between them. Out of 44 sherds, the 3 most determinate belong to Ceramic Assemblage 9, while 3 sherds from large coarse storage jars could be as late as Ceramic Assemblage 10. This pottery and the character of the rubble itself prompt the interpretation that these massive blocks had originally formed the front revetment of the ultimate phase of Bank 1 (Bank D), and they were initially interpreted as having been deliberately thrown down into the ditch at the end of that phase.

The higher levels of the section, D103, 102, and 101 (Fig 34), contain stones which are normally considerably smaller than the massive rubble of D105 and D104. Some of these may have come from the core or tail of Bank D (or indeed of any earlier bank exposed by the throwing down of the front revetment of that bank). The very small angular stones with reddish silt between them, D102, are more likely to derive from weathering of the reddish limestone rubble which lies on top of the solid limestone and beneath the old ground surface under Bank 1. The only significant find was a rim of a fine Corfe Mullen jar in a hard cream fabric. Little account can be given of the preceding development of Ditch 1. The earliest phase of Bank 1, Bank A, was composed predominantly of reddish-brown clay and small limestone rubble. This material was no doubt derived from the layers of limestone rubble and reddish clay which overlie the solid Jurassic limestone in the geological sequence. This implies that the ditch from which it was quarried was at the very top of the natural slope, separated from the front revetment of Bank A by a sloping berm. It is indeed probable that the topmost two metres of the present scarp slope represent fairly closely the inner face of the earliest ditch.

The presence of large blocks and slabs of Jurassic limestone in the body of Bank B demonstrates that the ditch from which they were quarried lay farther down the scarp, where solid limestone immediately underlies the turf. There is no reason to doubt that this ditch was a rather shallower version of Ditch 1 as we see it today, but all traces of it and of any intermediate phases of ditch-cutting were obliterated in the ultimate phase by the very large-scale quarrying which was needed to provide a massive outer revetment for Bank D.

Bank 2

As a result of collapse and erosion, Bank 2 (Fig 34) was virtually absent from Site D, and it is represented in the section line merely by a handful of medium to large stones, resting on what is evidently a levelled platform in the solid rock. The filling of Ditch 1, however, gives a hint of the character of Bank 2. Whereas most of the stones in the ditch seem to have fallen down the scarp slope, one layer clearly derives from the counterscarp. This is D103A, a jumble of large to medium stones closely comparable to those still apparently in position on the line of Bank 2. This would imply that in its first stage Bank 2 had the form either of a dry-stone wall, or of a bank with a revetment on its inner face. This wall or revetment was thrown down into Ditch 1 after the revetment of Bank 1 had been slighted, but not necessarily any long time later. We have here, then, sought evidence for one phase only of Bank 2. It is impossible not to think that there must have been earlier phases, in which, for instance, Bank 2 was a mere counterscarp bank produced by cleaning out Ditch 1. If this is so, then some of the evidence may yet be available in Ditch 2.

Ditch 2

In its first form, Ditch 2 (Fig 34) had a scarp slope about 12m long at an average angle of 45°, but with short risers up to 50°. The upper part was cut into hard slabby limestone, which gave a sharply stepped profile. By contrast, the lowest 3m of the scarp, and the whole of the counterscarp, were quarried from a softer, more variable rock, resulting in a smoother profile. The counterscarp slope is 3.5m long at an angle of 35°.

Ditch 2 yielded a relatively large quantity of diagnostic pottery spanning the greater part of the Iron Age. The stratification too was more complicated than in Ditch 1. But before this evidence is outlined, it is necessary to examine the probability that Ditch 2 as we now see it represents a secondary ditch rather than an original one. The evidence for this hypothesis comes from beneath Bank 3, where on the evidence of the 1967 trench no solid rock was found for a distance of 9 or 10m. Beneath the northern edge of Bank 3, the variable limestone dropped off sharply and towards the northern lip of Ditch 3 yellow sandstone was found beneath washed-down bank material, but below the body of the bank was a mined layer of dark reddish-brown stony soil, D310 (Fig 34). At the time of excavation this was assumed to be a hillwash or scree, filling a natural scoop or shallow depression in the solid rock. Although there was no well defined fossil soil on top of it, none the less the distinction between D310 and the overlying bank make-up, D309 was clearly marked (Fig 34). Since the 1967 season, however, a deeper knowledge of the geological structure of the hill has suggested that the original explanation given for D310 is incorrect. It now appears that between the yellow sandstone and the variable limestone is a fairly thick stratum of limestone rubble. Part at least of D310 represents the weathered outcrop of this stratum, but this is not the whole story. The sharper drop in the variable limestone under the northern edge of Bank 3 is unlikely to be natural, and altogether more likely to make the scarp slope of a rock-cut ditch in front, the first phase of Ditch 2. The loose rubble, some of it very massive (D311B), which lies upon this slope marks an early stage in the deliberate infilling of this ditch, while the dark stony earth D311A is a later stage. If this is so, then part of D310 overlays the ditch. Because the excavation was not pressed far enough there is no evidence to show where the outer lip of this early Ditch 2 was located.

Two cautions must be given here. First, this hypothesis was first formulated five years after the excavation of Site D, so it has not been tested in the field. Second, if D311A and D311B are the fill of a ditch, it is remarkable that there is only the slightest suggestion of subsidence in the overlying D310 where it is pressed down by dark material D309. On the other hand, Site K301 provides irrefutable evidence of two major phases in Ditch 2, the earlier being backfilled when the second was cut (see below, Outer earthworks at the south-west gate: Site K, Ditch 2).

Neither in Site D nor in Site K is there any direct evidence for the date of this first phase of Ditch 2. The most likely explanation of the structural sequence is that the original ditch had been cut into unstable rock, the limestone rubble and variable limestone. When this was realised, it was recut rather higher up the slope, and the material now quarried was used partly to refill the original ditch, partly to create Bank 3. If this is so, then there is no real gap in time between the first and second phases of Ditch 2. We now turn to the latter.

The typologically earliest material from Ditch 2 comes not from the primary fill, D206, but from D204, a reddish sandy silt which lies on the scarp slope of the ditch. This yielded a cabled rim, which should belong to the assemblages of Early Cadbury (form JB1, see Chapter 13); other indeterminate sherds are not incompatible. This material probably derives, by way of the original counterscarp bank (Bank 2), from an early clearing out of Ditch 1. Ultimately it came to rest in the filling of the recut Ditch 2. The mollusca from D204 are overwhelmingly open country species (see below, The environment of the outer earthworks: the land mollusca from Site D, Ditch 2); and if the explanation given for the source of D204 and its pottery is correct, they may reflect the character of the hilltop at the very start of the sequence of bank building.

Subsequently, Ditch 2 was cleaned out or recut yet again, leaving a residue of earlier silting, D204 (Fig 34), against an easement in the scarp slope. The silt D206 was then deposited in the new ditch bottom. The pottery from it belongs to Ceramic Assemblages 8 and 9. The very weathered state of some of the sherds argues, however, that the true date of the deposit is perhaps later in the currency of these assemblages (ie early to mid-first century AD). This would be consistent with the fact that it marks the first cutting of Ditch 2, before it became largely choked with fallen rubble and soil.

These subsequent deposits consist of interleaved tips containing stones of all sizes (D205), and gritty soil with rare stones, D202 (Fig 34). The stones must come from a collapsed bank or wall, while the soil comes partly from bank core, partly from the weathering of the bedrock. The lie of the tips makes it clear that much, if not all of the stone has come down the scarp slope: in other words, it represents the collapse of Bank 2. The pottery from D202 falls into two quite distinct typological groups (though no stratigraphic distinction was observed). The larger, and earlier, group, which belongs to Ceramic Assemblage 8, must mark an early structural period in the second phase. The later group, of Ceramic Assemblage 9, marks the final refurbishing of the bank. At a higher level still, the more diffuse rubble D201 contains, in addition to earlier material, further Late Cadbury sherds.

Bank 3

We have already seen that the present Bank 3 (Fig 34) probably overlies an original Ditch 2 on Site D as it certainly does on Site K. This necessarily implies that the original Bank 3 was further down the slope, but all trace of it has been lost. As we see it today, Bank 3 is a dump of rubble, especially heavy at the base (D309), and stony soil. At about 1.2m above its base a distinctive stone-free soil, D306 (Fig 34), appeared to mark a fossil soil. If this is so then the overlying stony soils, D304 and D301A, reflect a secondary heightening of the bank. This may have been revetted on the uphill side by a stone wall, represented in the section by a mass of stones, D301B, which rests on a ledge cut into the old soil, D306. A weakness of this interpretation is that the stones were not observed to run coherently across the trench. Some of the stones in layers D205 and D201 of Ditch 2 could, however, be attributed to the collapse of a wall from the scarp of Bank 3.

About a score of sherds were stratified in Bank 3. None is particularly diagnostic; but with one exception from D300 they are in the shell-tempered fabrics characteristic of Ceramic Assemblages 6 to 7. It is probable that the majority derive from certain structural activity in connection with Bank 2 or Ditch 2. They have no real relevance to the date of Bank 3.

Ditch 3

The outermost ditch, Ditch 3 (Fig 34), was quarried into the relatively soft yellow sandstone of the Yeovil beds. The scarp slope was rather over 12m long at an average angle of 45°. The lowest quarter of the slope was markedly sharper than the average at 52°. Unlike the other ditches, the bottom was more or less flat for about 3.5m. The counterscarp had a fairly even slope of 35° for 3.5m, the upper part of this cut into a yellow silty clay rather than into sandstone. The sharpening of the lower scarp slope may imply that the ditch had been recut and disappeared from this point. This would be consistent with the evidence for two phases in Bank 4.

On the bottom of Ditch 3 was a layer of yellow sandy silt, D322, with rare stones in it, presumably derived from the weathering of a scarp slope. This also yielded the only find from the ditch, an undiagnostic sherd. Above this was a similar yellow silt, D321, which contained stones of very varied size. In fact, D321 comprises material which has weathered naturally from both scarp and counterscarp slopes, and the rubble which has fallen or has been thrown down from Banks 3 and 4. Without doubt subdivisions exist in it, but none were observed in the course of excavation, nor are any attempted here. It is none the less worth emphasising that some of the densest of rubble in D321 lies so close to the counterscarp that it must derive from a revetment or wall on Bank 4.

Bank 4

Bank 4 (Fig 34), like Bank 3, presents problems of geological interpretations. Throughout most of the trench which sectioned it, solid bedrock was not reached. Instead the undisturbed natural appeared to be represented by the sandy clay with small stones, yellowish at the base, D408, but reddish above, D403. Above this again a rather browner layer D407 was interpreted as the fossil soil beneath the bank. From D407 came a shell-tempered sherd.

The body of the bank consisted of yellow clay, D409, 405, and 402, interleaved with tips of stone, D406. A black layer, D404, was interpreted as a fossil soil dividing two phases of bank building. Although it was not continuous across the trench, it reached a thickness of 0.75m in the west face. From D404 and the underlying D405 came sand-tempered sherds of Ceramic Assemblage 9 which place the first building of Bank 4 in Late Cadbury. Nothing further can be said about the structure of the bank except that, as we have seen, the disposition of fallen stones in layer D321 of Ditch 3 leads us to infer an internal revetment or even a wall standing on the crest.

The environment of the outer earthworks: the land mollusca from Site D

by Amanda Rouse

Introduction

Samples for landsnail analysis were taken by J G Evans in 1967, from the southern banks and ditches explored on Site D. Analysis was initially carried out by J G Evans and H Jones, using the method described in Evans (1972); all identifications and counts were checked, and revised where necessary, by the author in 1993.

Results

The results are presented in Figures 35 and 36, and Tables 3 and 4. The histograms are plotted in percentage form only, as sample weights varied. Hence, each species, excluding the burrowing *Cecilioides acicula*, is expressed in terms of relative abundance of the total sample assemblage.

Ditch 1: Two spot samples were analysed, from D106, the lowest fill of the ditch, a dark brown silt with small stones, thought to have formed rapidly, and from D102, a scree-like fill of mainly small, angular stones, with reddish silt between them, containing pottery probably of early Roman date. The results are presented in Figure 35 and Table 3.

D106: The most abundant single species is *Lauria cylindracea* (more than 20%). This snail is distributed widely in Somerset (Swanton 1912) and can be found in a variety of habitats from woodland to grassland, but is often characteristically rupestral (Kerney and Cameron 1979), and may have been living on the rock-cut slopes of the ditch. The remainder of the assemblage is dominated by broadly shade-loving species, especially those characteristic of limestone rubble (Evans and Jones 1973). Those species that require leaf mould, such as *Carychium tridentatum*, are present but few. The fauna appears to reflect, in most part, the shaded, humid, and rubbly micro-environment of the ditch. However, open-country species, especially *Vallonia excentrica*, *V costata*, and *Helicella itala*, comprise 16%, and may indicate a wider open environment.

D102: Shells are very abundant. The assemblage is dominated by *Discus rotundatus*, *Vitrea contracta*, and *Oxychilus cellarius* (together making up over 65%), and is characteristic of a rock-rubble or scree context. These species can live without vegetable matter, feeding on animal debris, and find the humid interstices of bare limestone rubble a favourable habitat, even when in a wider open environment (Evans and Jones 1973). Open country species maintain a notable presence.

Ditch 2: A vertical column of six samples was taken from 0.9 to 2.1m below the modern surface. Contexts D204, a reddish sandy silt on the scarp slope of the ditch, D202, a gritty soil with rare stones, and D201, diffuse rubble, were thus sampled. The results are presented in Figure 36 and Table 3.

D204: Two samples (1.9–2.1m and 1.7–1.9m) provided assemblages dominated by open-country species (81% and 73%), particularly *Vallonia excentrica*, *V costata*, and *Helicella itala*. *Vallonia excentrica* is considered to be a stenotopic grassland species (Evans 1991). It is thought likely that D204 derives from an early cleaning out of Ditch 1, and its molluscan assemblage may reflect the site environment at the beginning of the sequence of bank building. The shade-loving elements, including rock-rubble species, comprise only 10% and 23%. Given that the micro-habitat of the ditch would have been more suitable for shade-loving species, the larger open-country components clearly indicate an open site environment.

D202: Three samples (1.5–1.7m, 1.3–1.5m, and 1.15–1.3m) yielded assemblages broadly similar to those from context D204, the main species being characteristic of open country. *Discus rotundatus* and *Oxychilus cellarius* are also present in notable quantities in the lower samples from this context, consistent with the theory that it derives, at least in part, from the collapse of Bank 2 or a wall. The uppermost sample (1.15–1.3m) is particularly dominated by open country species, especially *Vallonia excentrica*.

D201: One sample (0.9–1.1m) was taken from this context. Its assemblage is in marked contrast to those from the earlier contexts below, though very similar to that from D102 in Ditch 1. Rock-rubble species comprise 72% of the molluscan fauna, reflecting the micro-environment of the context (diffuse rubble) itself. There are six shells of *Helix aspersa*, thought to have been introduced to Britain in the first century AD.

Bank 3 and Bank 4: A vertical sequence of seven samples, and one spot sample, were taken from Bank 3, through contexts D203, bank material, and the underlying D310 and D311A, dark stony soils. D310 and D311A were originally thought to be hillwash, filling a natural hollow, but are now interpreted as fills of an earlier ditch. A single sample was taken from Bank 4, from D407, a fossil soil beneath the bank. The results are presented in Table 4.

Shells are sparse in all of these samples. Most species are broadly shade-loving and the open country component is small or absent. However, given that the faunas may reflect the micro-environment of the contexts themselves and that counts are very low, it is not proposed that they need indicate a generally shaded site environment.

The buried soil sample (D407) contained a single *Acicula fusca* shell, a species which requires a damp ground layer and is often considered to be a woodland species in the true sense (eg Evans 1972). It is uncommon on sites of a Neolithic or later date. However, the assemblage as a whole seems to be ecologically and perhaps taphonomically mixed. In addition, the total count is low (only 36 shells for a sample weight of 2.0kg). Unfortunately, therefore, very little can be made of this, perhaps the earliest assemblage from the site.

Discussion

Land mollusca from the lowermost fill of Ditch 2 (context D204) indicate an open, grassland site environment during Early Cadbury, at the beginning of rampart construction. The lowest fill of Ditch 1 (D106) contained high proportions of species that can thrive on broken or bare faces of limestone and are

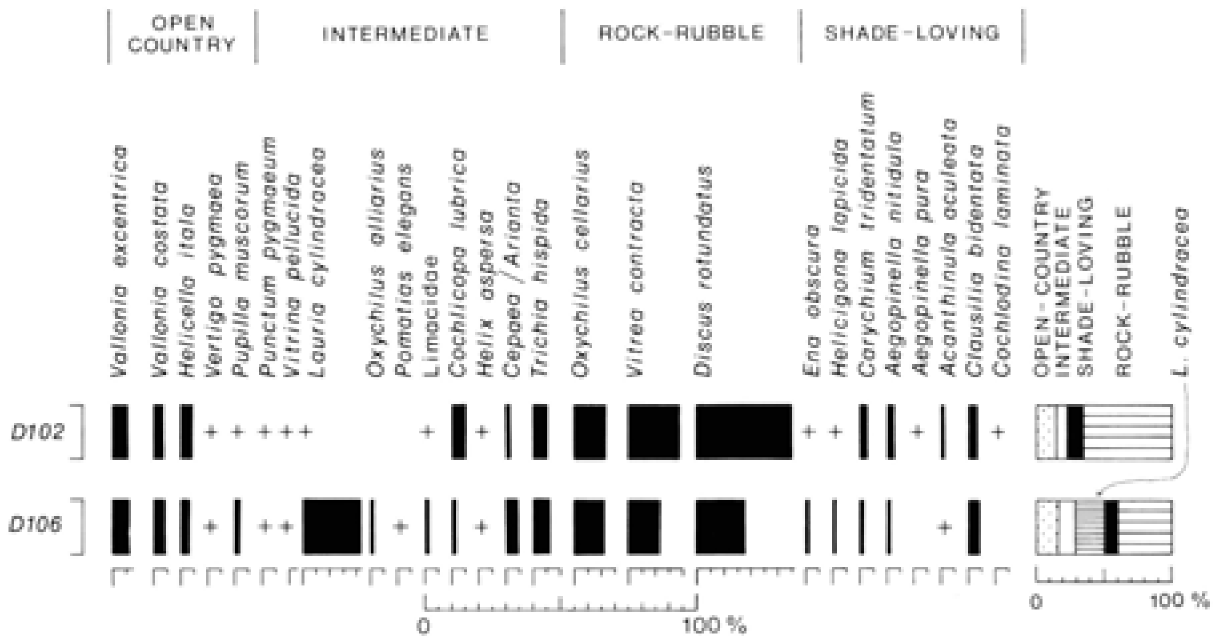


Fig 35 Mollusca represented in Ditch 1 silts

Table 3: Mollusca from Ditches 1 and 2, Site D

	ditch 1		*ditch 2*					
depth below modern surface (m)			*1.9-2.1*	*1.7-1.9*	*1.5-1.7*	*1.3-1.5*	*1.15-1.3*	*0.9-1.1*
context	*D106*	*D102*	*D204*	*D204*	*D202*	*D202*	*D202*	*D201*
sample weight (kg)	2.2	1.5	1.2	1.3	0.7	1.2	1.0	0.7
Pomatius elegans	2	-	-	+	-	-	-	-
Carychium tridentatum	11	57	-	-	-	-	-	49
Cochlicopa lubrica	1	4	-	-	-	1	-	11
Cochlicopa sp.	2	3	-	-	1	-	-	11
Vertigo pygmaea	8	10	5	6	-	5	1	7
Pupilla muscorum	17	10	8	35	10	19	18	4
Lauria cylindracea	208	2	-	5	1	1	1	-
Vallonia costata	40	78	79	145	63	85	47	11
Vallonia excentrica	58	118	58	155	60	85	158	52
Acanthinula aculeata	3	17	-	-	-	-	-	8
Ena obscura	11	17	5	9	5	6	4	2
Punctum pygnaeum	4	6	8	20	5	-	2	-
Discus rotundatus	171	735	8	84	55	30	9	330
Vitrina pellucida	1	4	3	-	-	1	-	2
Vitrea contracta	80	308	3	17	7	10	1	186
Vitrea sp.	31	85	1	5	3	-	1	52
Nesovitrea hammonis	-	-	-	-	-	-	-	1
Aegopinella pura	-	8	-	-	-	-	-	6
Aegopinella nitidula	11	54	-	-	-	-	-	38
Oxychilus cellarius	109	241	7	29	20	9	1	167
Oxychilus alliarius	10	-	-	2	-	-	-	-
Limacidae	13	5	-	1	1	2	4	4
Ceciliodides acicula	4	142	-	-	-	3	-	26
Cochlodina laminata	-	2	-	-	-	-	-	2
Clausilia bidentata	37	64	-	-	-	-	-	14
Helicella itala	29	89	47	131	38	57	29	14
Trichia hispida	58	106	6	11	14	25	10	41
Helicigona lapicida	8	15	1	1	-	-	1	4
Cepaea nemoralis	17	13	-	-	-	3	-	4
Cepaea hortensis	-	5	-	-	-	-	-	-
Cepeae/Arianta	24	15	5	7	11	5	9	7
Helix aspersa	+	15	-	-	-	-	-	6
total count, excluding *C. acicula*	964	2086	244	663	294	344	296	1033

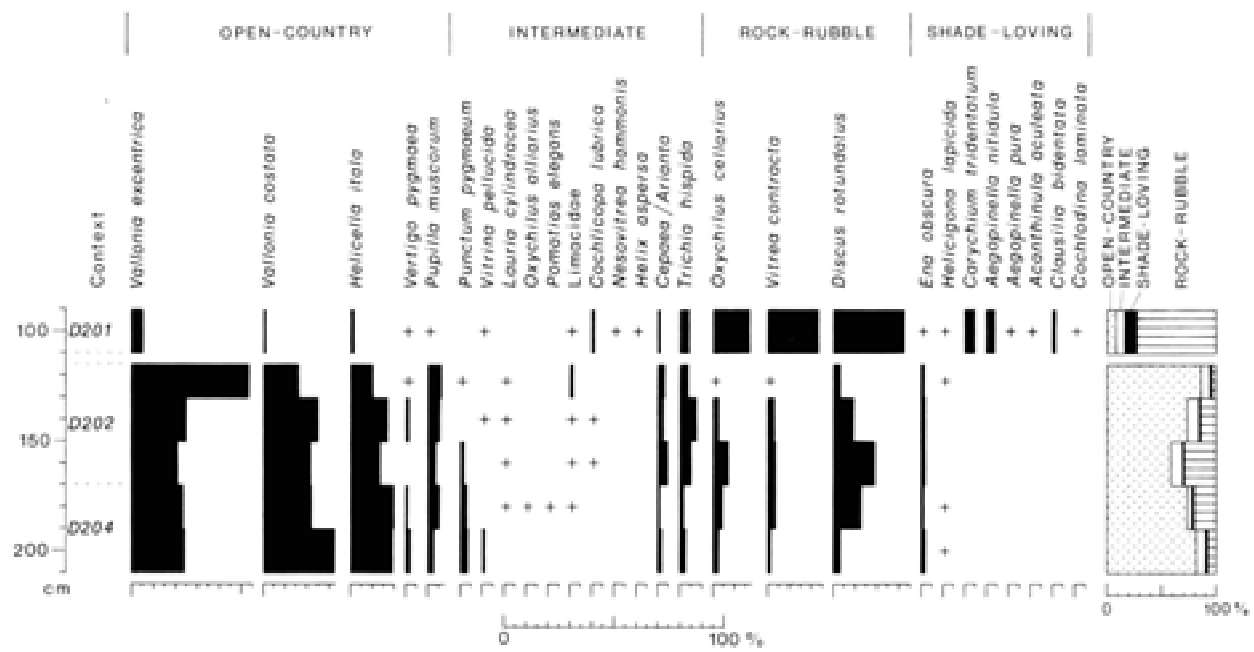


Fig 36 Mollusca represented in Ditch 2 silts

Table 4: Mollusca from Bank 3 and Bank 4, Site D

					Bank 3				Bank 4
depth below top of context D203 (m)		*1.0+*	*0.9-1*	*0.8-0.9*	*0.7-0.8*	*0.6-0.7*	*0.15-0.3*	*0.0-0.15*	
context	*D311A*	*D311A*	*D311A*	*D311A*	*D310*	*D310*	*D203*	*D203*	*D407*
sample weight (kg)	0.3	1.1	1.0	0.8	1.0	0.7	1.3	0.9	2.0
Pomatias elegans	3	1	-	+	1	1	2	1	2
Acicula fusca	-	-	-	-	-	-	-	-	1
Carychium tridentatum	1	2	4	3	4	-	14	6	4
Cochlicopa sp.	-	-	-	-	-	-	2	-	-
Vertigo pygmaea	-	-	-	-	-	-	1	-	-
Pupilla muscorum	-	-	-	-	-	-	2	-	-
Vallonia excentrica	2	1	1	-	-	-	-	1	3
Acanthinula aculeata	2	-	-	-	-	-	1	2	-
Punctum pygmaeum	-	1	-	-	-	-	1	-	-
Discus rotundatus	6	3	2	7	+	-	24	9	6
Vitrina pellucida	-	1	-	-	1	-	-	-	-
Vitrea contracta	2	4	10	17	6	-	17	10	1
Vitrea sp.	1	1	4	5	3	-	8	1	3
Nesovitrea hammonis	-	-	-	-	-	-	-	1	
Aegopinella pura	-	-	-	-	-	-	-	1	-
Aegopinella nitidula	4	1	1	-	-	1	2	2	-
Oxychilus cellarius	6	3	11	7	2	-	7	11	5
Oxychilus alliarius	-	-	-	-	-	-	-	2	-
Limacidae	1	-	2	2	1	-	3	2	-
Ceciliodides acicula	-	1	-	-	-	-	-	3	1
Clausilia bidentata	1	2	-	4	+	2	1	1	5
Helicella itala	4	-	-	-	2	-	4	-	3
Trichia hispida	-	-	-	1	-	-	5	-	1
Helicigona lapicida	2	-	-	-	-	-	-	-	-
Cepeae/Arianta	-	-	-	-	-	-	2	1	2
total count, excluding *C. acicula*	35	20	35	46	20	4	96	50	36

likely to reflect the micro-habitat of the ditch. However, the significant proportion of open-country species from this context supports the interpretation of a wider open environment.

Context D202, a gritty soil allowed to form in Ditch 2, falls in the transition of Middle to Late Cadbury, and also provided mollusca that indicate an open environment.

Some of the contexts that were sampled (such as D201 in Ditch 2, D102 in Ditch 1) consisted, in large part, of limestone rubble or scree. Their molluscan faunas are essentially shade-loving, but the dominant species are characteristic of bare rock rubble rather than woodland, scrub or long vegetation. Thus they probably reflect the somewhat specialised micro-habitats provided, rather than the wider environment of the site. Context D102 is probably the latest that was sampled, perhaps mid-first century AD in date. Its landsnail assemblage still indicates a generally open grassland environment. Open country species are abundant, despite making up only 15% – proportionally overshadowed by the rock-rubble group.

All sampled contexts that yielded sizeable molluscan assemblages suggest an open environment throughout the Iron Age, at least at the southern part of the site. There are three open country species that recur in numerical importance: *Helicella itala*, *Vallonia costata*, and especially *V excentrica*. Together they suggest stable grassland conditions (Evans 1991). There is no indication of a broken surface or cultivation. Some assemblages contain predominant shade-loving components, but these comprise a distinct group of species known to be associated with a particular lithopedostratigraphic context. Their requirements are met by shade that is context specific, provided by limestone scree and rubble, and they do not suggest a shaded site environment.

Outer earthworks at the south-west gate: Site K

Introduction

Ditch 1 was first explored in 1913 by St George Gray in a cutting 7m long by 3m wide, sited a little east of the south-west entrance. He reported that its width at the bottom was 1.5m; that the scarp slope was 'a fairly smooth converse slope of solid rock' (angle about 46°); and that the counterscarp was 'less regular, but steeper'. He did not draw the stratification, but he did draw the profile of the ditch, and he describes the fills in terms which make it possible for us to reconstruct the layers schematically. He also recorded the positions of some of the principal finds.

On the bottom of the ditch St George Gray found a fine silt, which contained, along with indeterminate pottery, a disc (1913/16) comparable in fabric with vessels from the Lake Villages (form BD6, see Chapter 13), and attributable therefore to Middle Cadbury. Nearby was the greater part of the cranium of a human adult (1913/17). This is likely to be an outlier from the 'massacre level' (see Chapter 4) at the south-west gate. Above the natural silt was a deposit of massive stones up to 0.6m in length, which St George Gray considered was the result of the ditch being 'entirely neglected and allowed to fill up from natural causes'. Apart from a piece of charcoal and a sherd of coarse, decayed pottery, 'period indeterminable', there were no finds from this massive stonefall.

From a depth of 2m upwards, stones decreased both in size and in number, and the fill was chiefly a yellowish-coloured earth. It was clear from the investigation in 1968 that St George Gray had been very undiscriminating here. The finds included two calcined fragments of human skull, 1913/13 and 1913/27, which certainly derive from the 'massacre level', in which burnt skull fragments were common. The almost complete skeleton of a child, (1913/6) on the other hand, is doubtless a regular burial: in default of other evidence, a late Roman date is not unlikely. The only determinate metal object was an iron nail, 1913/11, which may be compared with those from Site J. The pottery described and illustrated by St George Gray appears to belong to span the entire Iron Age. The latest pieces are 1913/7, a fragment of a countersunk handle (form JC3:CSL), and an unillustrated sherd, 1913/12, which is classed as 'Romano-British (?)', and which is likely to belong to the first century AD.

It cannot be said that St George Gray's cuttings established much about the history of the defences, especially since he regarded the Durotrigian pottery as being Romano-British. He had, however, recovered some 60 potsherds, as well as other relics, from a cutting only 3m wide. Moreover, his trench was still open, with the spoil from it lying to the east. It was therefore decided, as part of the work at the south-west gate in 1968, to reopen his cutting and extend it to the west. It was hoped that this would permit a better understanding of the stratification which he had recorded imperfectly, as well as further dating evidence. As a result, trench K301 (this is the designation of a small trench, not a context), 2m wide, was dug across Ditch 1, and an extension 1m wide was then carried for a distance of 15m over Bank 2 and Ditch 2 (Figs 7 and 37).

Ditch 1

As in Site D, the final phase of Ditch 1 at this point was cut into solid Jurassic limestone. In K it was rather deeper and wider than D, and the angle of the counterscarp was shallower, but these are minor differences, caused no doubt by irregularities in the bedrock. The primary silt, K319, was overlain by a massive tumble of limestone blocks and slabs with air spaces between them, K317 (Fig 37). Despite St George Gray's view that this was a natural accumulation, there can be no real doubt that it marks the collapse or slighting of

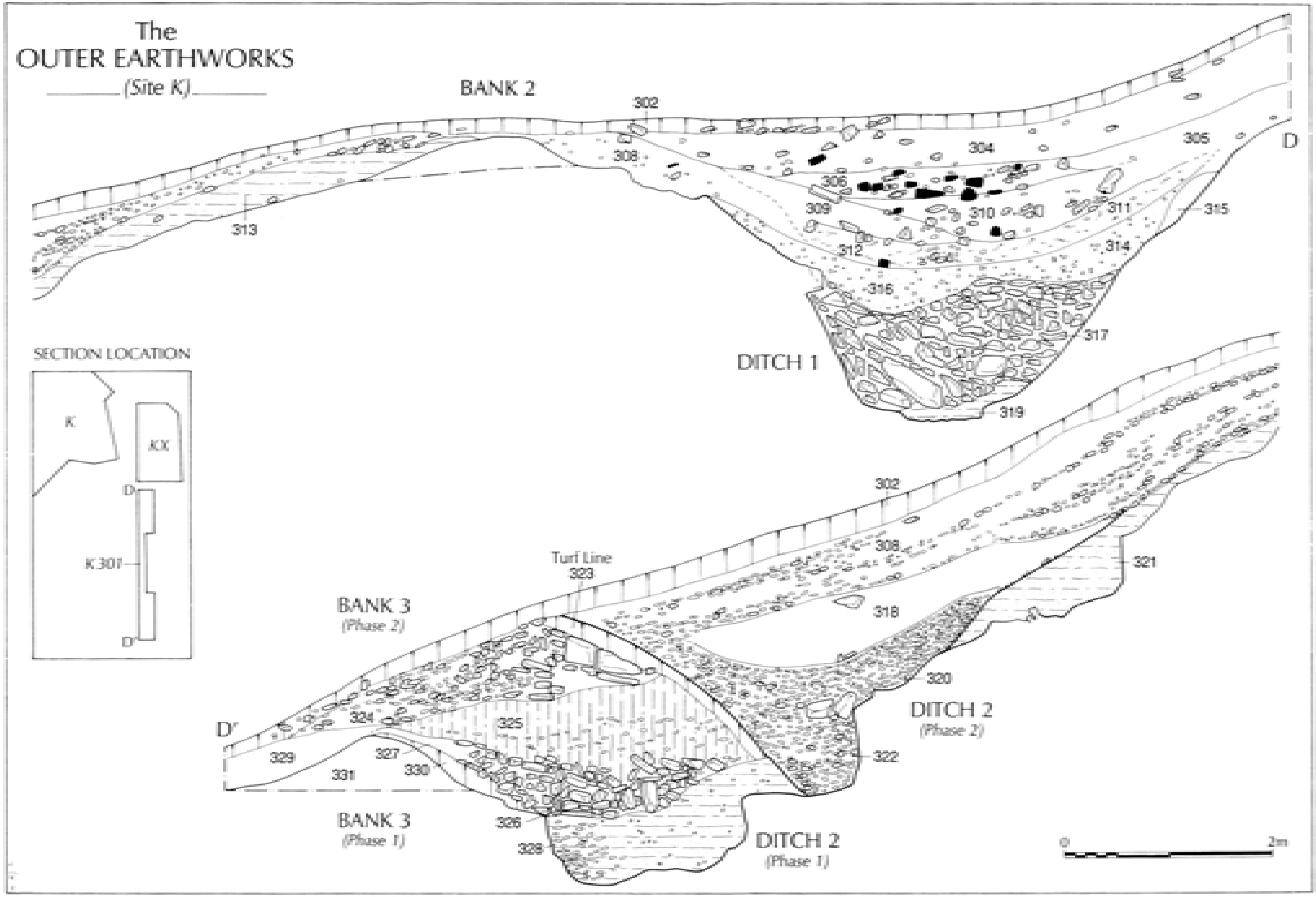


Fig 37 Outer earthworks Site K

Bank D in the first century AD. It was in turn overlain by reddish brown gravelly soil with varying qualities of stone, K314 and K316. These may derive partly from the bank or core of Bank D, partly from the weathering of the ditch sides.

Above these are lenses of darker, gritty soil, containing varied amounts of charcoal, K311 and K312. From K311 came a rim fragment from a large coarse storage jar of Ceramic Assemblage 9 and also a rim sherd from a bead-rim bowl which could be contemporary. In 1913 a fragment of burnt human skull, 1913/13, came from an equivalent level. It seems, therefore, that K311 and K312 represent either peripheral scatter from the 'massacre and burning' levels at the gate which are discussed in the next chapter, or the subsequent disposal of charcoal, burnt bones, and so on from those levels. The second explanation is the more likely, since here the charcoal overlies the thrown-down stonework of Bank D.

The higher levels of Ditch 1 mark a long period of collapse and weathering from the scarp and counterscarp slopes. The only feature of any interest is the layer of rubble K306. About half the stones in this are not the Jurassic limestone of the hill, but blocks and slabs of Lias limestone. Given their high level in the ditch, these are more likely to come from the building or destruction of the Ethelredan *burh* wall.

Bank 2

In trench K301, as in Site D, there were no substantial remains of Bank 2. Its original position is indicated, however, by K313 (Fig 37), a silty, sandy soil, reddish in colour, and almost full of stones. This seems likely to be a natural soil formed in the limestone, and preserved from quarrying or weathering by being buried under Bank 2. The overlying stones, K308A, mark the last traces of the bank itself. The slightly larger size of the stones in the northern part of K308A may indicate the foundations of a wall or revetment, but there are no clear signs of a revetment having collapsed from Bank 2 into Ditch 1. On the other hand, the bulk of the fill of the later phase of Ditch 2 must have come from Bank 2, and allows us to infer that its make-up was chiefly of soil and small rubble, with only a few larger blocks. The same material yielded two sherds of Ceramic Assemblage 8, which allows us to infer that the first refurbishing of Bank 2 took place during Middle Cadbury.

Ditch 2

The complicated history of Ditch 2 could be fully demonstrated in Site K301, in contrast with Site D where it could only be inferred. The bedrock of the original counterscarp, K331, is described in the site records as 'natural but loose'. which probably implies that this was a coarse rather unstable limestone rubble. This was overlain by K329 (Fig 37), a brown stone-free soil, which was probably a natural soil, comparable with K313. Ditch 2 was originally dug through this and into the limestone rubble in the form of a wide irregular scoop. The stones thus quarried were piled up as a wall or bank at the head of the counterscarp.

This arrangement stood for some time while K328 (Fig 37) was deposited, a mixture of reddish-brown gravel and silt, formed by natural weathering processes. On the gentler part of the counterscarp, turf appears to have formed, for K330 is a fine reddish brown layer interpreted as buried turf. After 0.6–0.8m of silt had accumulated, Bank 3 was thrown back into Ditch 2, spilling beyond the centre of the ditch to find its angle of rest. The bottom layer, K326, comprised medium to large blocks of Jurassic limestone and Yeovil sandstone, with air spaces between them. Above this K325 was a mixture of loam, gravel, and small rubble, while K324 had an admixture of larger stones again. Beyond the tail of K326 and K325, the original silt of Ditch 2, K328, was dug out to a width of about 0.8m, to give the second phase of the ditch a narrow, steep-sided bottom (subsequently filled with K322, Fig 37). It is not certain whether the scarp slope was modified at this time, or whether the slope revealed by excavation represents the original profile. The fact that the markedly stepped profile of the scarp matches the stepping of the counterscarp of the original Ditch 2 is in favour of this latter interpretation. If this is so, then the sandy silt K321 probably accumulated at the same time as K328, and was truncated in the same way by the digging of the second phase ditch. The absence of any fine silt in the bottom of the recut ditch implies that it had been cleaned out again shortly before the small angular rubble K322 and K320 was thrown into it from Bank 2 or Bank 3. These deposits contained a few sherds, obviously residual, of Ceramic Assemblages 6, 7, and 8. The further processes of infilling, represented by K318 and K308B, probably occurred more slowly.

Bank 3

The medium to large rubble, with air spaces between the stones, K326 (Fig 37), clearly implies that Bank 3 originally had a built wall or revetment standing at the lip of Ditch 2. This was backed by the more mixed soil and stones represented by K325 and much of K324. In the second phase, the slope of the bank was continuous with the counterscarp of Ditch 2. The large stones, K324, suggest nonetheless that the slope had originally been crowned with a wall, as in the earlier phase. But this wall cannot have survived long. The large blocks are overlain by a gritty brown soil, K323, which runs unbroken down the slope. This appears to be a turf or soil which formed on the bank after the wall had been demolished to its lowest courses, but before the deposition of K322 and K320. Presumably a major part of the body of Bank 3 has been lost down the slope. There is no dating evidence for either phase of Bank 3.

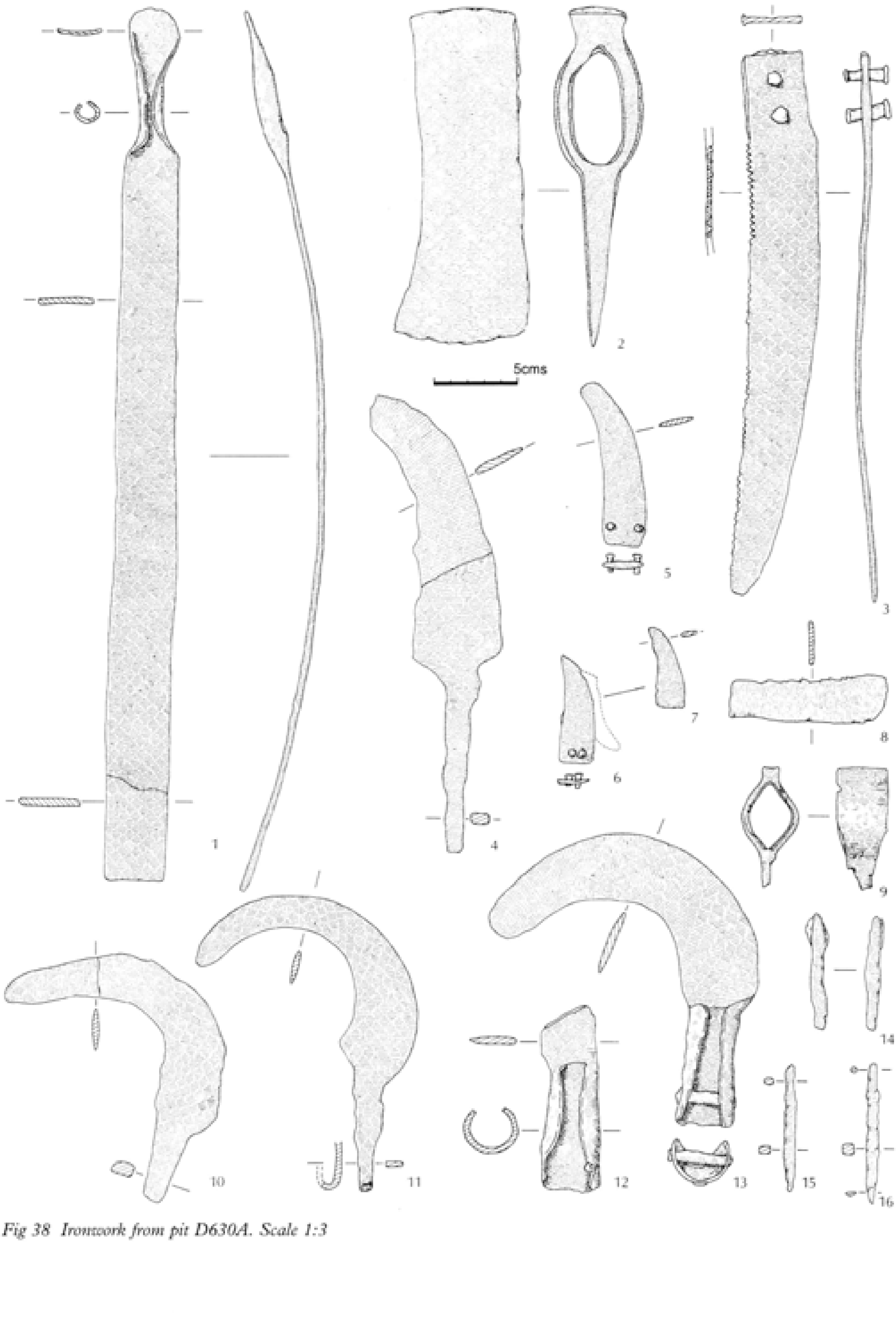


Fig 38 Ironwork from pit D630A. Scale 1:3

Redefining the perimeter

by John C Barrett

The building of ramparts around the hill effectively remade the hill in a cultural form. The hill took on a new appearance and access to and from the hilltop was restricted. The distinction between the hillfort's interior and the surrounding landscape was thus partly created by the building of the earthworks and it is perhaps unsurprising that the importance of the perimeter was also marked by votive deposits made up of artefacts and human burials.

There are two Iron Age burials from the perimeter of the site; the grave of a 20–22 year old (Young 1994), whose discovery on Site I is reported above (see above), and the grave of a neo-natal infant from the inside the south-west gate from the same deposit as a hoard of slingshot (see Chapter 4, Episode VI, Structure K9).

The artefact deposits comprise the hoard of iron-work and other material found in a pit (D630A) at the back of the earthworks on Site D (see above, Site D, Occupation behind Bank 1) and the additional deposit of the reaping/billhook in D521A. The Site D hoard also contained a currency bar and Richard Hingley has drawn attention to the way a number of currency bars appear to have been deliberately buried on the boundaries of enclosed settlements in south-west England (Hingley 1990, 106). He links such deposits with the rituals of boundary definition.

The iron hoard from D630A is illustrated (Fig 38) and catalogued below (after Macdonald 1994). The iron-work archive number is given at the end of each entry. Additional finds from the pit, some of which can no longer be located, are listed at the end of the catalogue. The circumstances of discovery of the hoard are described above.

Figure 38

1 Currency bar, upper two-thirds, sword-shaped, length (minimum) 516mm (242)
2 Axe, complete shaft-hole axe, edge welded on, length 199mm (1177)
3 Saw, complete, set teeth, length 324mm (1180)
4 Knife, large (97)
5 Knife, small with broad riveted tang, length 97mm (98)
6 Knife, small with broad riveted tang, length 64mm (99)
7 Knife, tip of blade, length 48mm (100)
8 Saw, fragment of blade, length 94mm (1181)
9 Adze, socket probably from an adze, length 73mm (1175)
10 Reaping hook, tanged, length 147mm (33)
11 Reaping hook, tanged, length 178mm (34)
12 Reaping hook, socket and blade fragment, length 110mm (32)
13 Reaping hook, socketed, length 172mm (31)
14 Awl, very corroded, length 68mm (193)
15 Awl, very corroded, length 74mm (194)
16 Awl, very corroded, length 82mm (195)

Additional objects associated with this ironwork are recorded as follows: two bone toggles, a bone weaving comb, an antler hammer, a bone pin, a shale platter, a wooden object, a wooden bowl fragment, and a carved stone object (see Chapter 13, Fig 113.7). An unrecorded number of clay sling bullets also came from this feature.

4 Defending the hill

The south-western gate sequence

by Ann Woodward and Heather James

Introduction

Excavation in the south-western gate began in 1968 with the opening of Site K (Figs 7 and 39). The earthworks of this entrance have already been described (see Chapter 1, Outer earthworks at the south-west gate: Site K). Following the careful dissection of the Ethelredan gate during the excavation seasons of 1968 and 1969, the 1970 campaign commenced with the exploration of the Dark Age wall terminals and the evidence for a timber gate tower (see p102). However, at this point 'the interest and excitement of the 1970 season at the gate was far from ended' (Alcock 1972a, 105). Painstaking excavation and analysis of a vast bulk of stratified deposits led to the total examination of some of the most important and complex Iron Age stratification ever encountered in Britain. The task was not a simple one. As Alcock observed:

> A very remarkable feature was that there was no made road through the Iron Age entrance. The living rock itself formed the road surface, and this was heavily rutted by cart-wheels. Moreover, during the centuries of Iron Age usage, the rock had been worn down by the passage of feet, hooves and wheels, until a hollow-way over six feet deep had been formed. To cope with the progressive deepening of this passage-way successive guard chambers had been cut down into the rock beside the entrance. Normally speaking, of course, later structures lie on top of earlier ones, but here, the stratification was completely topsy-turvy; the floor of the earliest guard-chamber was about the level of the eaves of the last one. (Alcock 1972a, 107)

Indeed, the data were so complex that no detailed post-excavation analysis was attempted. Following the completion of Alcock's accounts of the stratification and the analysis of key pottery groups relating to rampart cuttings Sites A, I, and J, he went on to tackle the evidence for rampart sequences within the cutting at the south-west entrance. He prepared reports which described and analysed the stratification displayed in the mechanically cut section through Bank 1 (which was later cut back as Site KX in 1973), and the main west and east sections of the Site K trench (, sections A–A' and B–B'). The main ceramic groups

Fig 39 General view from the north-east of the south-west gate under excavation

were also described, and one of the series is presented below (Figs 55–6). However, the records relating to the gate passage, rampart terminals, guard chambers and other prehistoric structures within the central area of the cutting had never been considered in detail. Nor had the pottery been catalogued by Sylvia Stevenson and Leslie Alcock. Thus one of the main tasks of the present programme of post-excavation work was to prepare a report on the evidence from the south-west gate, working from first principles, but utilising Alcock's account of the rampart stratification to the west and east as a guiding light to initiate a gradual understanding of the more complex data available for the gate passage area itself. His original accounts of the west and east face sections are held in the site archive (Alcock nd).

A 'total record' analysis of all the pottery from Site K was undertaken by Lynne Bevan and Ann Woodward as part of the general ceramic project (see below and p25), and the stratigraphic records were analysed by Heather James. By careful correlation of the site plans, section drawings, context records, and photographs, she was able to group the myriad layers, deposits, and features into coherent blocks of stratification and to begin a phased analysis of the site. At this stage, the many postholes and pits were not ascribed to structures, and without the availability of ceramic and other finds reports, a final chronological phasing could not be attempted. Following completion of the ceramic analysis, Ann Woodward undertook to continue the stratigraphic study: many individual structures were defined and described, a new system of phasing devised, and a phased matrix of the stratigraphic blocks was finalised. This work depended heavily on the archival accounts prepared by Heather James, and also involved extensive reference to the original context records and site drawings. More difficult areas of the analysis were argued through with the substantial assistance of John Barrett and Philip Freeman. The account presented here has been prepared by Ann Woodward but it includes many points of detail extracted from the archive text composed by Heather James.

Site K was located at the south-western entrance through the innermost bank of the ramparts (Fig 7). By the time its Iron Age deposits were investigated, four other trenches through Bank 1 had been excavated and a system of rampart classification devised. This involved Banks A, B, C, and D which, with subdivisions of C and D, gave a sequence of six successive and individual Iron Age earthworks. The sequences have been discussed fully by Alcock (1972a; 1980) and in Chapter 3. When detailed analysis of the Site K records began it soon became apparent that the sequence of constructional events at the entrance was much more complex, and that the events at the entrance could not be easily ascribed to the existing system of rampart classification. The account for Site K therefore proceeds by defining a system of 14 constructional episodes denoted by upper case Roman numerals, Episodes I to XIV. It has been argued in Chapter 2 that the Cadbury 1 to Cadbury 9 system of site phasing devised by Alcock (1980) should be confined to describing a sequence of Ceramic Assemblages for the site, such that the stratigraphic rampart sequences can be defined independently, and then dated by reference to their contained finds. Within Site K it was apparent that the eastern terminal of Bank 1 showed evidence for a single construction, variously composed of differing proportions of soil and stone, which had been gradually developed, widened, heightened, and shifted northwards, over a very long period of time. In our analysis of this cutting it did not seem helpful to subdivide the bank structure into the four main successive and discrete Banks A to D; we have preferred to treat the bank as a single structural entity, Structure K7, albeit with ten chronological phases of development, K7A–J.

The chronological series of Episodes will be described in this section. The stratigraphic relationships are illustrated within three key section drawings, one through each bank terminal and one across the gate passage (Fig 40). The spatial development of the ramparts, entrance, guard chambers, and associated structures are shown in a series of eight phase plans (Figs 41–3, 46–7, 49). These have been compiled using data from the three major definition plans drawn on site, a series of overlays and small plans or sketches included in the context records. A plan showing all the features that cut into bedrock is included in Figure 72, which also shows Site K in relation to the bedrock features excavated in Site KX (taken from Alcock 1980, fig 3). Following the description of the Episodes of activity discerned in Site K will be found a brief section which attempts to relate these phases to the evidence previously published from Site KX, and with the other rampart sequences already presented in Chapter 3.

The sequence of Ceramic Assemblages has been discussed in Chapter 2 and reference to these assemblages will be made throughout this text.

Owing to their internal complexity and the overwhelming abundance of finds within them, the so-called massacre deposits in the gate passage will be considered separately below. In interim accounts it has always been assumed that the 'massacre' represented by these deposits marked a decisive end to the Iron Age and Romano-British sequence of events in Site K. However, detailed analysis has shown that there were signs of two major events of destruction by fire, one in the later part of the first century AD and an earlier one to which the famous massacre deposits belongs. Thus, it will be argued, the massacre event may be restored to the period around the Roman conquest. This massacre occurs as Episode IX in the Site K sequence, with the second and final phase of destruction falling in Episode XIV. The key elements of the stratification of the conquest massacre deposits will be dealt with at the appropriate point in this chapter, followed by an extended contextual discussion and full consideration of the dating evidence provided by the various categories of finds. The term massacre deposit has been maintained in describing this material and should not be read to prejudice our understanding of the formation processes involved.

Episode I: Neolithic terrace or lynchet

Structure K7A: At the very base of the stratified deposits, but east of the gate passage only, lay a thick layer of reddish-brown soil and gravel. This lay directly upon the bedrock of the hill and it sealed in part a series of postholes which appeared to represent the remaining vestiges of parts of two rectangular structures. This deep deposit is visible in section B–B' (Fig 40) as K867, 0.3 to 0.6m thick, overlying a layer of fine brown silt K867A. These deposits contained three indeterminate shell-tempered sherds and animal bones. They were sealed by layers belonging to Episode II and cut by postholes belonging to Structures K7B and K7C. The thickness and nature of K867 suggests that it is the remains of an artificial earthwork, either a bank, in which case a field boundary bank may be indicated, or the result of terracing meant to facilitate the foundation of the timber structures next to be described.

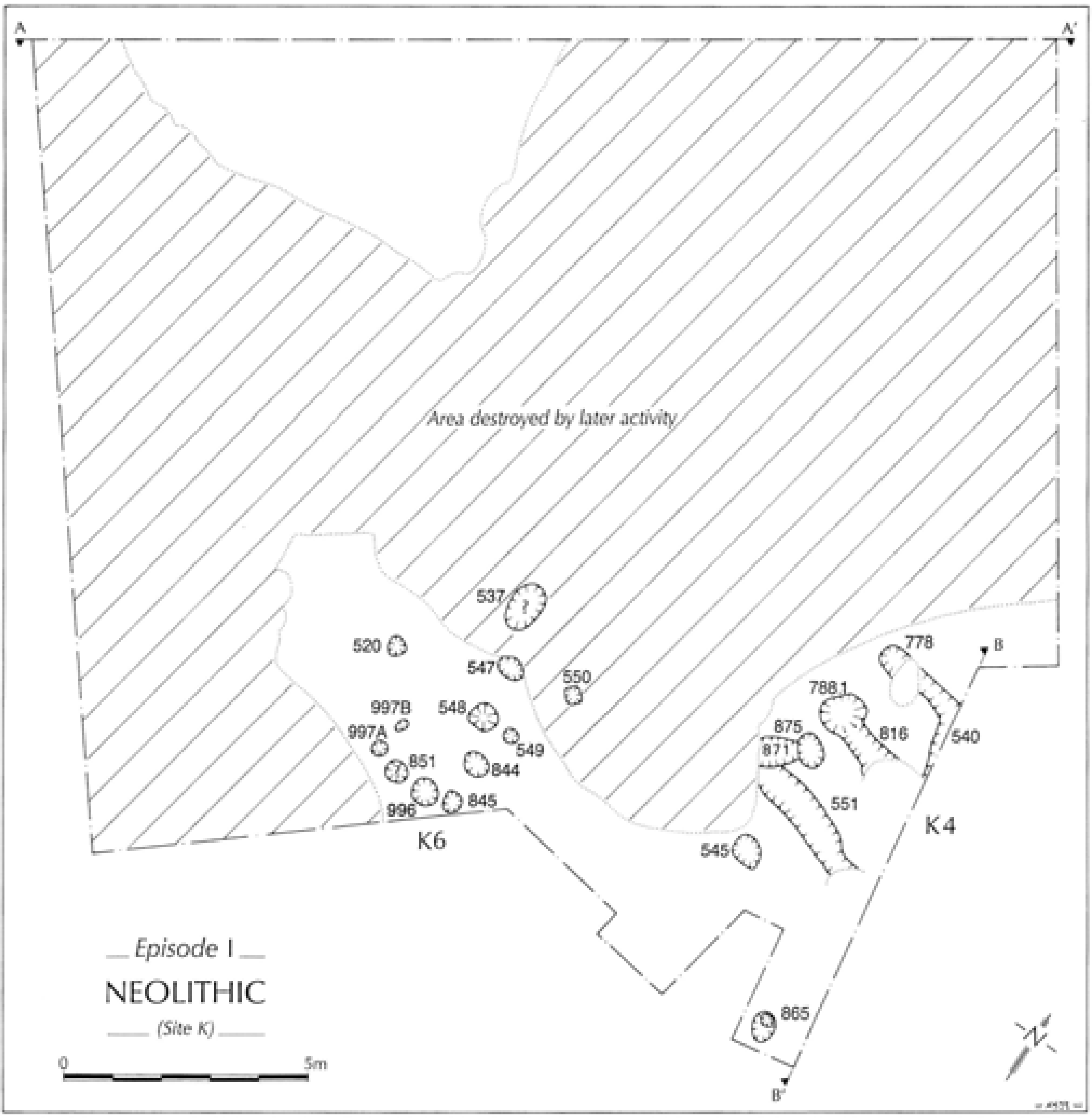


Fig 41 South-west gate Episode I: Neolithic

Structure K4: Towards the eastern margin of the cutting there were three potential gullies or slots; their depths were not recorded but they possessed integral post-settings, at least at their western ends (Fig 41). Two of the gullies (K540 and K551) and three postholes (K788.1, 875, and K545) were sealed by layer K740 of Episode VI and so was the gully K540 which is visible on section B–B' (Fig 40). Posthole K871 was cut by the first guard chamber foundation of Episode VI. In section, gully K540 was on average 0.45m deep, while posthole K788.1 reached a surviving depth of 0.5m. To the south, an isolated posthole, K865, was sealed beneath the bank deposit of Structure 7A. There were no finds from any of these features. The complex of gullies and postholes seems to represent the foundation for a rectangular timber structure 4m in width and of unknown length.

Structure K6: Further west, a second series of postholes was sealed by the layers of the Structure K7A bank (Fig 41). They may have been connected with the internal support and revetting of the bank, or may be the remains of the foundations for a timber structure that pre-dated the earthwork. Postholes K547, 548, 844, and K845 (depths 0.35 to 0.65m) form a straight row, while smaller postholes lie to the west. Feature K550, sealed by floor levels of the guard chamber (Episode VII), may also have belonged to this

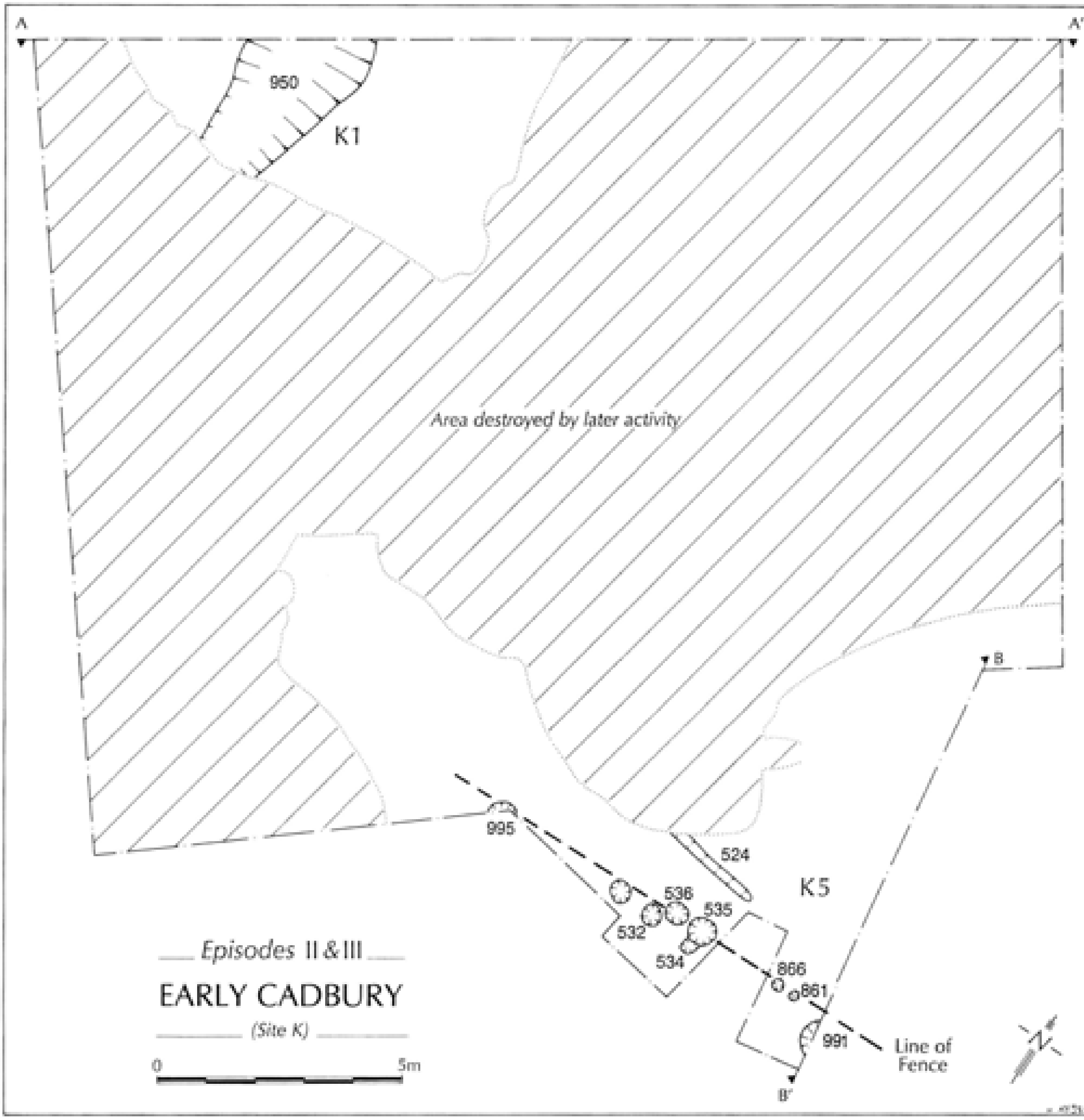


Fig 42 South-west gate Episode II/III: Early Cadbury

structure, but K537, sealed by the same levels, is more likely to have held an inner gate post of Episode VI. In all probability the structure extends beyond the cutting, and may have been destroyed to the west by the down-cutting of the Iron Age gate passage. The only find from all these postholes was a single sherd of quartz-tempered pottery from K537 (which may belong better in Episode VI, as suggested above).

The stratigraphic position of these structures below deposits of known Bronze Age date, together with the almost total lack of finds, suggests that they may well date from the Neolithic period.

Episode II: Bronze Age fence and lynchet bank

The height of the earthwork Structure K7A established in Episode I was enhanced by the development of further soil layers, Structure K7B, and a linear series of postholes was sealed beneath.

Structure K7B: Comprised a thin bank of ploughsoil (K530) 0.15m deep below K859B (not visible on section). The soil was red and sandy, with no charcoal or gravel, but contained red deer antler. It is interpreted as a ploughsoil. There were two indeterminate sherds and the antler yielded a radiocarbon date of 1310–1000 cal BC (I5973, uncalibrated dates are given in Chapter 13). Towards the eastern side of the gate passage only, this layer was sealed by a thin old ground surface, K859B (Fig 40, section B–B'). This was a brown soil with charcoal flecks, which was cut by features belonging to Episode IV. It was only 0.05 to 0.06m deep and produced three shell-tempered sherds. To the west of the gate passage a similar, or the same, bank may be represented by layer K928 (Fig 40, section A–A'), which is cut by the ditched Structure K1 of Episode III (K950). This layer contained charcoal, flint flakes, and pottery, but several diagnostic sherds are of Ceramic Assemblages 5 or 6 and would therefore be intrusive. This particular area of the site was very disturbed and lay close to the modern surface.

Structure K5: Below the bank of ploughsoil (Structure K7B) was a series of postholes (Fig 42, K535, 536, 532, 534, 866, 861, 991, and K995), behind which lay part of a linear slot (Fig 42, K524). On average the postholes were 0.50m deep and their fillings often included stone packing. This line of posts was interpreted by Alcock as the supports for the revetment posts for Bank A. A more expansive interpretation would suggest that the posts contained may have formed a fence line for a field, against which a positive lynchet of ploughsoil built up, or an enclosure for settlement structures or livestock. If the latter, such an enclosure may well have developed within the corner of a field, and the field layout may have repeated the alignment of a previous field or terrace which had already been in use, from time to time, over more than a thousand years.

The radiocarbon date and general lack of finds from these deposits would suggest that part of this phase of activity dated to the later Bronze Age, but the line of posts may have been established in the middle Bronze Age.

Episode III: late Bronze Age soil bank

Structure K7C: Overlying the old ground surface K859B was a further layer of rubbly soil, K859A, surmounted by 0.20 to 0.25m of soil K859 (Fig 40, section B–B'). The profile of these layers was slightly mounded and suggests a further phase of bank, Structure K7C. The soil K859 contained ash and charcoal and a few sherds including a shoulder sherd from a jar of Ceramic Assemblages 5 or 6 (Fig 56). The presence of ash and charcoal may indicate the deposition of domestic refuse from a nearby structure, or a phase of destruction of the fence and bank. As in Episode II, the exact function of the bank cannot be determined.

Structure K1: To the west of the gate passage, no bank deposits of this phase survived, but a substantial ditch (K950) had been cut through the disturbed layer (K928) of Episode II (Fig 40, section A–A' and Fig 42). This round-bottomed ditch was 1m deep, with gently curving sides. The reddish brown soil filling K618A was sealed by an old ground surface, K618. It was cut into bedrock and cut by posthole K618B (section A–A'). There were no visible recuts in section and no sign of any associated bank. The filling contained bone, flint, and antler, and a radiocarbon date of 1260–920 cal BC (I5971, uncalibrated dates are given in Chapter 13) was obtained for animal bone. The old ground surface sealing the filling contained sherds in fabrics characteristic of Ceramic Assemblages 5 and 6. The ditch was 2.6 to 1.4m wide and may have lain roughly perpendicular to the line of posts, Structure K5, underlying the Episode II bank east of the gate passage. Whether the ditch had followed a straight or curved line could not be ascertained, owing to truncation by the Iron Age gate passage, so an agricultural or domestic role for the ditch cannot be debated. The radiocarbon date suggests a late Bronze Age date for this Episode and this is confirmed by the occurrence of immediately post-Bronze Age pottery in the old ground surfaces sealing both the ditch filling and the bank make-up of Structure K7C.

Episode IV: first stone bank

For the first time, the bank of Structure K7 is now made up of posts and a core structure which can be linked functionally together as representing a built bank. This undoubtedly was designed with enclosure, if not defence in mind. The new structure, denoted Structure K7D, is equivalent to Alcock's Bank B (see p55).

Structure 7D: East of the gate passage a substantial bank core, revetted by a stone wall at the rear and associated postholes, was seen over a distance of 8m (Fig 43). The area was not fully planned during excavation so evidence has been pieced together from small plans and the section drawings. The back revetment wall was constructed of worn and decayed yellow Yeovil sandstone (K891) and was aligned roughly east-west. It survived to a maximum height of 0.65m, having nine courses of flattish blocks 0.3 to 0.4m wide. The core comprised smaller rocks and soil surviving to a height of 0.4m (Fig 40, section B–B'). The south side had eroded away down from the slope and no front revetment survived. Beneath the bank wall face was a series of postholes: K445, 446, 990, 992, 993, and K994 (Fig 43). One, K992, corresponded to a niche in the wall face and one, K990, is visible in section B–B' (Fig 40). They were from 0.35 to 1m in depth (average 0.61m) and cut soil K859 of Episode III. Other possible candidates for this post alignment, but with no stratigraphic relationships recorded, are K519, the linear slot adjoining it, and K999. Slightly in front of this line, at its western limit, lay a larger posthole K848. West of the gate passage a row of five postholes (K482E, 679, 692, unnumbered, and K930) cut into bedrock may have held supports for the back of a similar rampart on this side. The large stones visible at the south end of section A–A' (K451, Fig 40) may be the last vestiges of a stone bank and revetment. These five postholes were on average 0.50m in depth and the

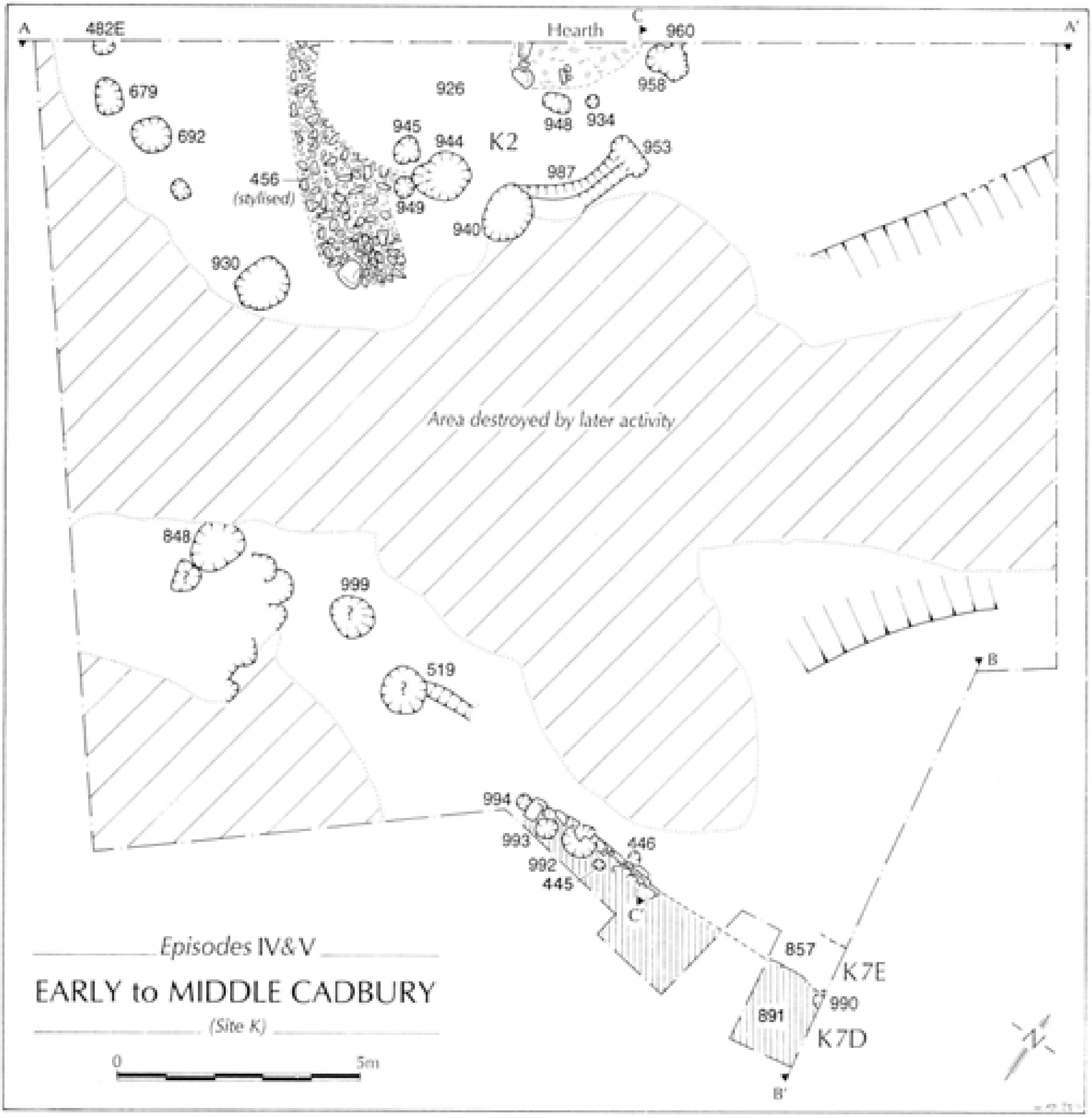


Fig 43 South-west gate Episode IV/V: Early to Middle Cadbury

only find was a Ceramic Assemblage 7 rim sherd from K930. The few sherds from the stony core east of the passageway were mainly of Early Cadbury fabrics and again included sherds of Ceramic Assemblage 7 (Fig 56). Although the front timbers and revetment did not survive anywhere in Site K, they did in Site D (see Chapter 3, Site D, Bank B; cf Alcock 1972a, 129–30, and F fig 19).

It is postulated that if K930 had held a gate post on the western side, then a possible gate post on the east may have been supported in posthole K848, which was 0.3m deep and contained one sherd of Ceramic Assemblages 5 or 6. The series of scarps to the east of K848 may represent half-eroded postholes of this phase and could have held an end revetment for the stone bank. At this stage the exit roadway may have veered south (rather than taking the west alignment adopted later in the Iron Age) and this suggested alignment may further be verified by the widely spaced scarps inside the gate (see Fig 44), although these are too wide apart to denote the sides of a road which passed between the posts in K930 and K848. It is possible that K999 (depth 0.5m) was an earlier gate post location. Alternatively, the gates may have been held by posts in K930 and K999, with K848 holding a mid-line post set 2.5m downslope. Ceramic evidence suggests that the bank Structure K7D was constructed during Middle Cadbury in the currency of Ceramic Assemblage 7 pottery.

Fig 44 View of posthole Structure K2 from north-east

Episode V: modification of the stone bank

Structure K7E: Following an episode of intense burning, the rear of the rampart was extended northwards to form Structure K7E. The evidence for burning comes only from the east corner of the site where dense charcoal lay 0.08m thick directly over bedrock, next to the base of bank Structure K7D (K863 section B–B' Fig 40). It contained three shell-tempered sherds. Above the charcoal was a deposit of rough blocky rubble and soil, K857, piled against the back wall of bank K7D to a height of 0.4m and comprising Structure K7E. The layer extended at most to 0.8m north of the wall and contained a diagnostic sherd of Ceramic Assemblage 8. This extension to the bank may have been formed using material from a collapse of the upper stages of the back revetment wall of 7D, following a phase of destruction and slighting associated with the burning described above. On top of the rough rubble extension lay make-up layers, apparently formed by basket-loads of different coloured gravels, below a dark soil containing charcoal, burnt grain, and stones. This was from 0.12 to 0.3m thick, but did not extend as far as section B–B'. These layers may represent further extension to the bank or, possibly, a walkway along its back face. The few sherds in these layers included nothing later than Ceramic Assemblage 7.

Structure K2: Behind the rear line of the presumed bank on the west side of the entrance passage there was evidence for a circular structure *c* 6m in diameter. Foundations on the south-west side were formed by an arc of stone rubble and boulders K456 (Fig 40, section A–A' and Fig 43) and K456A/B/C, which partly lay over the filling of the Episode III ditch, Structure K1. The maximum depth of the rubble was 0.6m and it may partly have functioned as a terraced support for the downslope portion of the circular structure. The pottery from this rubble was mainly of Ceramic Assemblages 5, 6 or 7, but *c* 13% of it was intrusive Ceramic Assemblage 9 material. This is not surprising as the deposit lay very near to the modern surface and there were voids surviving amongst the boulders contained within it. To the north-east, the structure was defined by the remains of two curving gullies (K987 with two phases and K960) and six postholes. Posthole K482E and gully K960 are visible in section A–A' (Fig 40; K960 appears on Fig 44). The gully contained the traces of burnt timber planking. A doorway to the east was defined by double and triple postholes (K958 and 953. The edge of K953 was too shallow to record on section C–C' Fig 40). All the postholes contained dark soil and charcoal, and the door postholes also contained packing stones. The other postholes, K940, 944, 945, and 949, of average depth 0.68m, effectively joined the timber slot to the terminal of the rubble foundation K456. Finds from the postholes included sherds of Ceramic Assemblages 5 and 6.

The floor of Structure K2 comprised two distinct layers denoting different phases of occupation. The lower K927 (Fig 40, sections A–A' and C–C') was of silty clay and charcoal and contained an antler comb, a bone gouge, and a whetstone. There were two interior postholes, K934 and K948, of depths 0.25 and 0.20m (Fig 43). Above this was a floor level of yellow-brown soil with charcoal, ash and baked clay, K926, to a depth of 0.25m (Fig 40, sections A–A' and C–C'). Within the level surface was a hearth (K926A) of laid lias slabs, covered in red clay (Fig 40, section A–A' and Fig 43). The floor level K926 contained a substantial quantity of Ceramic Assemblage 7 pottery (previously published in Alcock 1980, fig 15).

Structure K2 was destroyed by an intense fire here and it may be that this phase of destruction can be equated with the phase of Episode V burning, mentioned above, which preceded the first northward extension of the stone bank on the eastern side of the gate passage.

Episode VI: rear bank extension and first east guard chamber

Structure K7F: To the east of the gate passage, the back of the stone bank was further extended and refaced with a crude face of stonework, K749. This is not visible in section B–B', but, a little further west, it survived to a height of 1.4m and comprised 12 courses of slabs and smaller stones (Fig 45). The northern extremity of this extension is shown on Figure 46. The stones contained four sherds, one definitely belonging to Ceramic Assemblage 8. This well built and carefully designed extension was probably contemporary with the initial construction of the east guard chamber, Structure K15A.

Structure K15A: An oval scoop was excavated through the field bank or terrace deposits of Episode I and the Structure 7E rubble bank, in part into the

Fig 45 View of Structure K7F

bedrock, to form a level-floored guard chamber. This ancient excavation also cut the slot K524 (Episode II) and a posthole K871 of Episode I. The chamber measured 6 by 4.3m, with fairly straight-sided rock walls, sloping slightly outwards. Its entrance on to the gate passage was defined by two major postpits, K830 and K544, the latter 0.4m deep (into bedrock). Just west of K544, an isolated postpit K537, 0.65m deep with a well defined postpipe, may have been one of a new pair of gate posts in this phase. However, it produced only one quartz sherd and may have belonged to an earlier Episode.

West of the passageway, no evidence for any rock-cut guard chamber at this stage has survived, but there was a multiple gate posthole K976/933, 0.3–0.4m deep with lias packing stones. K933 contained two sherds in Ceramic Assemblage 5 or 6 fabrics. The Episode IV gate posts K930 and K848 may well have been still used and employed now to define a realigned passageway passing further to the south-west. It is possible that the new inner gate posts, held in features K976/933 and K537, stood before the construction of the first eastern guard chamber.

It was the upcast from the construction of the guard chamber that was used, presumably, to build the new wall face for Structure K7F. Certainly, more of this natural material was spread around behind the bank and the back of the new chamber as layer K740 (Fig 40, section B–B'). This was a layer of orange gravelly soil with small rocks. It was 0.2m deep and included some re-laid bedrock. This deposit sealed the postholes of Structure K4 (Episode I) and was cut by the postholes of Episode VIII which were associated with bank K7G.

Structure K3: Possibly at the same time that the east guard chamber (Structure K15A) was constructed, the circular structure (K2) behind the stone bank west of the gate passage was remodelled and enlarged. The surviving elements of this structure were an arc of postholes and a series of floor levels. Further postholes (Fig 46) formed just over 50% of the plan of a circular structure *c* 7m in diameter. These postholes (K962, 879A, 878, 982, 983, 471, 973, 684, 954, 683, 678, 691/3, 689, and 618B; the last in Fig 40 section A–A' and Fig 44) were small, measuring up to 0.4m in diameter and were of average depth 0.31m. There may have been an entrance gap to the south-east, in the vicinity of the new gate post, but this area has been cut away by the later rock-cut western guard chamber. The postholes contained 19 indeterminate sherds.

Structure K9: Within the area defined by the Structure K3 postholes there was a deep series of floor or occupation levels (Fig 46). It is possible that the Structure K3 postring belonged with the later phases of these floors. The earliest (K926 and K927) certainly belonged to Structure K2 and have been described in the account of Episode V. The layers must represent a long and continual build-up of occupation layers and it is likely that traces of further circular wall-lines have been lost during the continual rebuilding that has taken place in this location. Ceramic dating is not helpful because pottery from the later layers here was mixed with finds from the Episode VII layers to the north during excavation. The sequence of deposits is illustrated in section A–A' (Fig 40). Above the Structure K2 floors of Episode V there was first a greenish-brown clay soil with patches of heavy burning, K696, and then a layer of worn cobbles with animal bones (K686/690). This was sealed by small rubble in a yellow sandy matrix (K687), which lay below a yellow silty soil with stones and charcoal, K664. This deposit contained a hoard of stone slingshot and the remains of a human infant (K668). Finally, these deposits were sealed by soil (K628) and a layer of worn stones (K622), the latter probably the floor for Structure K3. On it lay brown soil with pebbles and much charcoal, K478. The total depth of the Episode VI floor deposits was 1.1m. To the north they were cut away by the edge of the scarp that had been hollowed out prior to the construction of Structure K11 in Episode VII.

If the infant burial and slingshot hoard are interpreted as foundation deposits (see p83) then they may have been contemporary with the construction of the new gate, the K7F extension of the bank east of the passageway, and the construction of the east guard chamber.

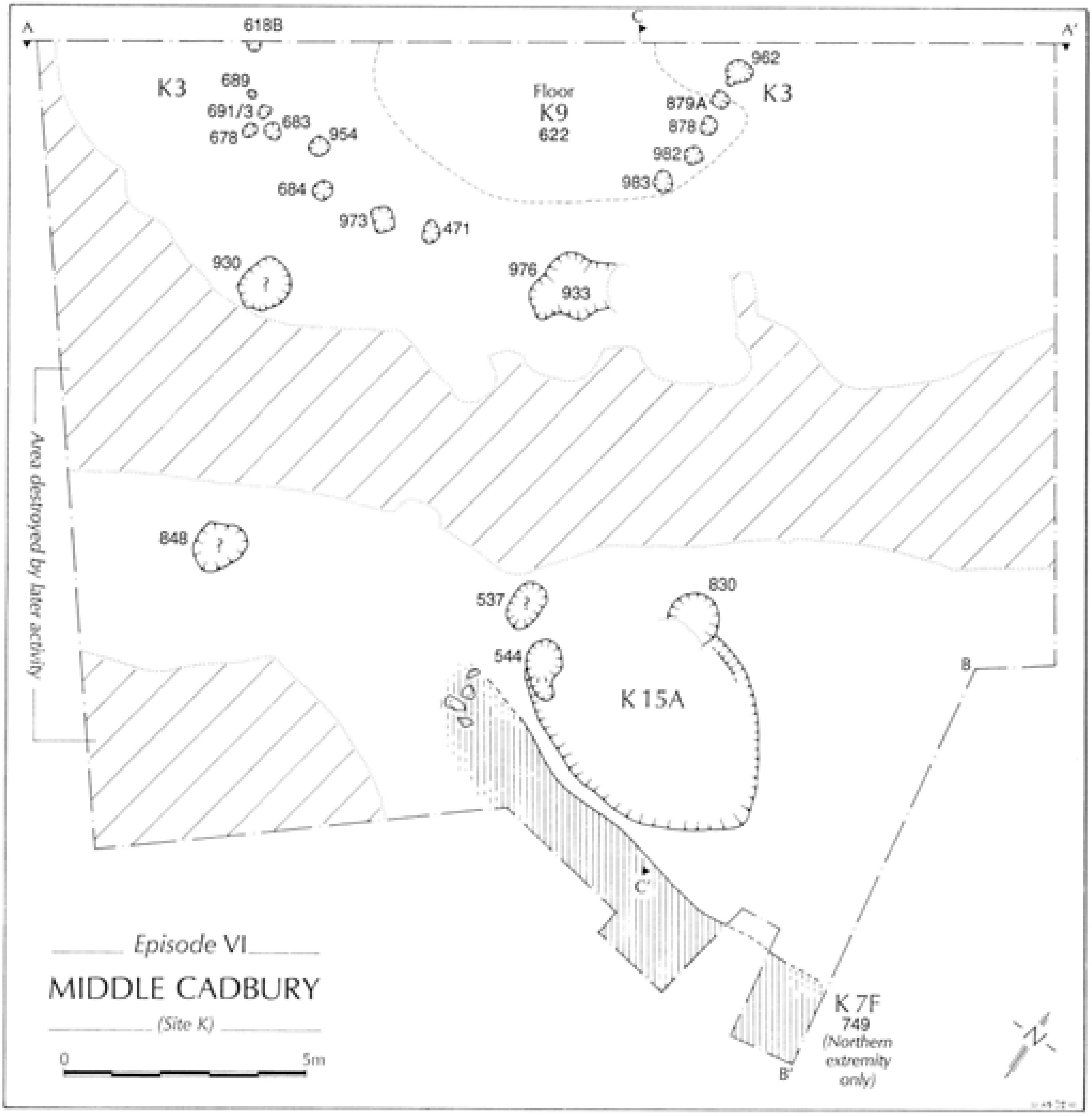


Fig 46 South-west gate Episode VI: Middle Cadbury

This would place the cobbles and clay surfaces (K686/690 and K696) chronologically earlier (in the later part of Episode V). The stone floor K622, above the ritual deposits, would then be the floor of Structure K3, contemporary with the first east guard chamber, Structure K15A.

The limited ceramic evidence from deposits of this Episode suggests that the constructional phases were occurring after the first appearance of the Ceramic Assemblage 8 forms.

Episode VII: remodelling of the east guard chamber and construction of a west guard chamber

Structure K15B: The eastern guard chamber was remodelled and made slightly smaller by the construction of dry-stone walling. This walling K883 (Figs 47 and 40, section C–C') survived up to 0.9m along a length of 5m and incorporated two large upright flat stones on its southern side. The walling occupied the eastern part of the scarp only and reached as far as the two new entrance postholes K799 (1m deep; Fig 40 section C–C') and K542 (0.5m deep). The posthole K546 may have held a central roof support. A total of 17 sherds from the constructional stonework belonged to Ceramic Assemblage 7, with one intrusive Roman sherd.

There were floor deposits to a depth of 0.15 to 0.25m, but no drawn record of these is available. The earliest deposit included a cache of slingshot, a spread of pottery, and a rock hearth. This was sealed by further layers of silt, soil, a cobbled floor, rubble, and a dark brown soil with charcoal which continued outside the entrance. There were also a second hearth, of thin lias slabs, and a central oven, but their detailed contexts are not known. Part of the floor deposits is shown (unnumbered) on section C–C' (Fig 40). From these floor levels there was a total of 1268 sherds, mainly of Ceramic Assemblage 8. At some stage in this sequence, part of the walling K883 seems to have collapsed, because it was replaced by a section of more fragmentary stonework K881 in the vicinity of pit K871 (not shown on plan Fig 47).

Structure K20: The rebuilding of the east guard chamber may have been required due to the gradual erosion of the gate passage, and for the same reason it became necessary to provide a new pair of gate post emplacements, slightly further downslope. The new main gates, Structure K20, were held in postholes K988 and K894, the former 0.6m deep. These postholes contained substantial packing stones, and the posts were both heavily burnt in Episode IX. There was also a centre post, K879B. The fillings of K988 and K894 were sealed by the stone walling of the Episode XI gate passage.

Structure K14A: At about the same time, a completely new rock-cut chamber was constructed on the west side. The profile of this oval chamber is shown on section C–C' (Fig 40 and plan Fig 47), although it is much obscured by the evidence of two later phases of remodelling (in Episodes VIII and X). Part of the rock-cut outline is visible in Figure 44. No original floor levels or dating material have survived from this Episode. The entrance posts were held in holes K932 and K919 (0.35 and 0.95m deep respectively) and K695, 0.45m deep (Fig 40, section C–C'), may have held a central post. There were six indeterminate sherds from these postholes.

Behind the west chamber, the occupation layers of Episode VI were cut away to form a deep scoop within which evidence for the deposition of domestic debris was found, both below and within a circular timber structure, K11 (Fig 40, section A–A'). In the base of the scoop were layers of dark ashy material with red ash, lumps of charcoal, and burnt bone, K498 and K459 (section A–A'), 0.05 to 0.3 m deep. This lay over some cobbles and traces of a curving bank of stones (unnumbered). There were 30 sherds of Ceramic Assemblage 8, an iron object, and a layer of burnt grain (K665 Fig 40, section A–A'). The stone bank may be the remains of the first structure built in the scoop. The ash layers were cut by postholes of Structure K11, described below, and by the gullies of Structure K13, belonging to Episode VIII (section A–A').

Structure K11: Cutting the ash and debris layers were a series of postholes forming an arc, possibly part of a circular structure, *c* 5m in diameter (Figs 47 and 44). The postholes K981, 977, 985, 961, 964, and K970 were of average depth 0.23m and all were characterised by distinctive orange gravelly fills. There were five indeterminate sherds. Within the arc lay an oval hollow K969, only 0.26m deep, and a hearth K672 (Fig 40, section AA' and Fig 47). The hearth was confined within the upper fillings of a pit, K959, next to a posthole, K972. The oval hollow was also filled with orange fill and the features of this structure produced sherds of Ceramic Assemblages 6 to 8. The hearth, comprising six burnt lias slabs, was enclosed by a kerb of blocks (K673 in section A–A') and surrounded by thick ash and charcoal deposits. The pit within which the hearth was contained may originally have functioned as a posthole earlier in Episode VII. From the base it contained layers of black soil with lias slabs, yellow gravel, and charcoal. The phase of hearth and burning was sealed by yellow bedrock fragments K660.

Episode VIII: rear extension of east bank and remodelling of west guard chamber

Following continued erosion to the passageway and to the edges of Ditch 1, the stone bank once again became unstable. In order to provide space for a further backward extension and remodelling of the stone bank, it was necessary to infill the rock-cut east chamber and to extend the bank foundation across it. At the same time, the west chamber was retained but extensively redesigned. The infilling of the east chamber is represented by layers K781 and K741 on section C–C' (Fig 40). K781 was 0.1m of brown soil with occasional stones sealed by a 0.25m layer of reddish brown grit. Above this was a layer of close-packed rubble, K741, up to 0.4m thick. There were 34 sherds of Ceramic Assemblage 8 and a piece of copper alloy binding.

Structure K7G: Lying on the redeposited bedrock layer K740, of Episode VI, a neatly constructed foundation for a new stone bank, K570, was inserted. It was founded into the upper part of the rubble filling the former east guard chamber, and was remodelled at least twice, in Episodes X and XI (K791 in Figs 49 and 52). Thus only the very lowest course of stonework visible in section C–C' (Fig 40) survives from Episode VIII. The stone bank was built with a lobe-shaped terminal extension (Fig 49), probably designed to provide extra strength, and the whole bank was reinforced behind a further bank, presumably of soil, supported by timbers held in a grid of postholes (Structure K8).

Structure K8: A total of ten postholes, including K541, 750, 751, 753, 767, 769, 778, and K788, were square-cut and averaged 0.51m in depth. Some contained packing stones, and there were 39 sherds of Ceramic Assemblage 8 from their fillings. The postholes cut layer K740 (Episode VI) and were sealed by the burnt layer K834 of Episode IX. Three of the

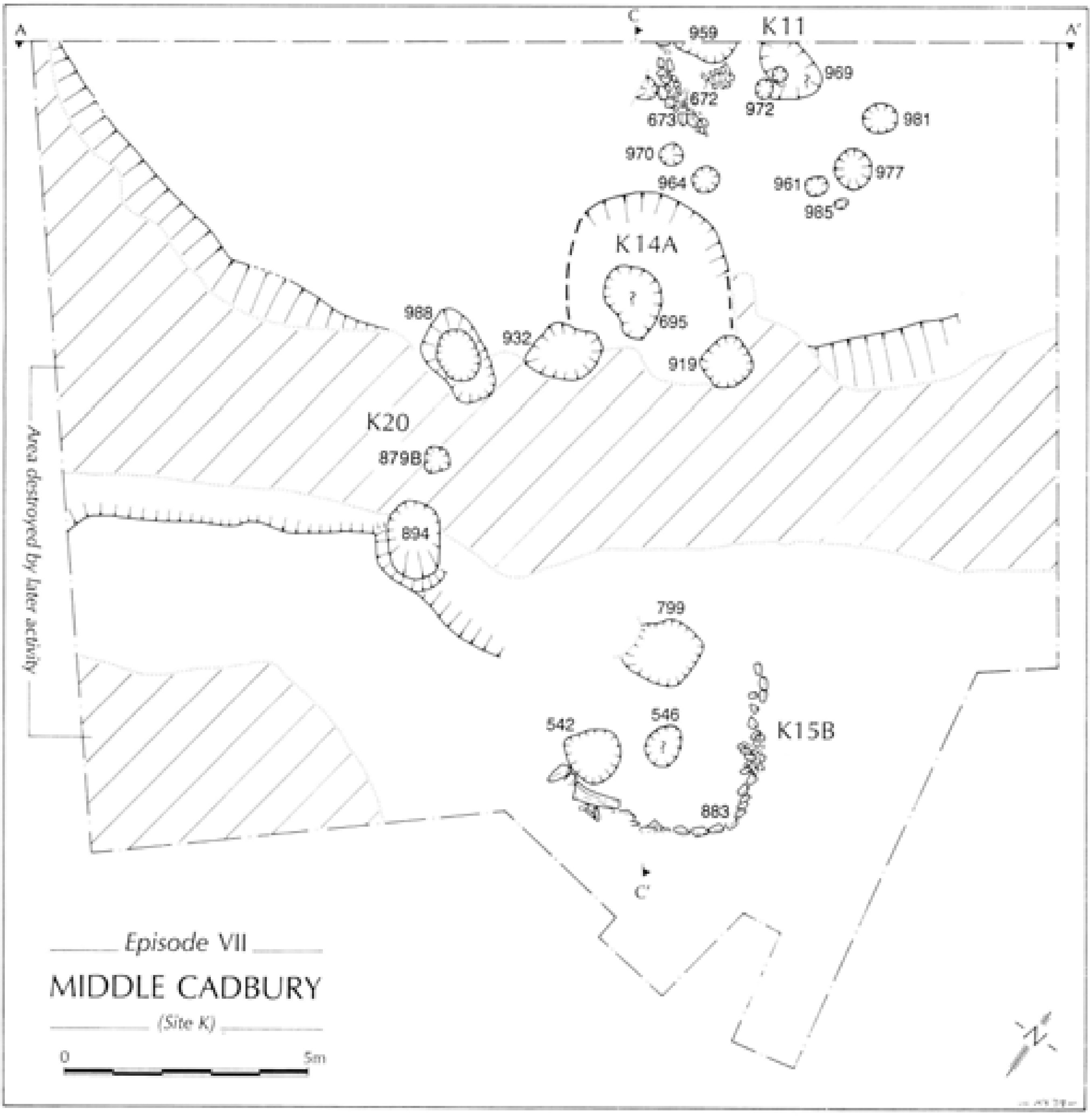


Fig 47 South-west gate Episode VII: Middle Cadbury

Fig 48 View of Structures K16 and K17 in relation to stone wall revetment (Episode XI), showing some postholes of previous Episode and east side of gate passage

postholes, K767, 751 and K750, are visible on section B–B' (Fig 40). The layer of burning alluded to above, and the fact that the lower stones of the bank were burnt, suggest that the whole bank was destroyed by a fire of great intensity.

Structure K14B: The west guard chamber was remodelled and reduced in size. On the north side a slot 0.2 to 0.25m wide and cut up to 0.16m deep survived for a length of 3m (Fig 49 and Fig 40, section C–C': no numbers). This slot may originally have continued on the north side and would have held a continuous timber wall. The entrance onto the passage was defined by two postholes, K560 and K697, the latter later replaced by K698 (Fig 40, section C–C'). The floor was probably the cut bedrock and the top of the infill of posthole K695 (Episode VII). No floor levels survived below the massacre deposit of Episode IX. The gap between the postulated timber wall and the rock-cut face of the scoop may have been filled with soil, but following the destruction of Episode IX all this was removed for a remodelling in dry-stone construction (Episode X). The inner gate seems to have been supported now in posthole K697 (0.6m deep), which also defined the southern portal of the entrance to the guard chamber and a newly cut massive posthole on the east side. This hole, K838, was 1.2m deep and contained very large packing stones and four distinct layers of infill. The outer gate, held in postholes K988 and K894, survived from Episode VII (Fig 49). The pair of post settings K930 and K848, first established in Episode IV, may also have been still in use, but they may well now have been too high up in relation to the ever-deepening profile of the gate passage roadway.

For the first time in this account it is possible to describe some layers that survived within the gate passage. All previous surfaces and objects dropped had been eroded down the slope by the continuous process of wear on the bedrock surface. A layer of cobbles (K594) up to 0.1m deep survived across the 3.2m width of the passageway. They were sealed by silt (K653 Fig 40, section C–C'). Towards the southern margin of the trench there were two V-shaped ruts, 2.2m apart and 0.1m deep. There were a few finds, but these were intrusive from the massacre deposits immediately above. In the area of the main gate, Structure K20 (Episode VII), a second layer of cobbles, K651, lay above the silt K653. In the centre of the roadway lay a large rectangular block of stone, K939 (Fig 49).

Structure K12: No evidence for any remodelling of a bank behind the west guard chamber survived, but the likelihood of its existence is indicated by the fact that a new timber structure located in the scoop was built much further back (ie further north) than Structure K11 of the previous Episode (Fig 49, cf Fig 46).

An arc of postholes may have belonged either to a very large circular structure or to a roughly rectangular layout (Fig 44). Ten postholes (including K967, 980, 920, 921, 462, 467, 434, 435, and K436), on average 0.19m in depth, were filled with brown or grey-brown soil and produced four indeterminate sherds.

Structure K13: Two parallel, and possibly successive, gullies probably belonged to a rectilinear structure whose plan mainly lay outside the area of excavation (Fig 44). Gully K457 was 0.6m wide and *c* 0.8m deep (Fig 40, section A–A'). K437 was shallow (0.35m deep) but contained some vertical pitched limestone slabs. There is no stratigraphic evidence to separate the gullies of Structure K13 from the postholes of Structure K12. They could therefore belong to a single structure. However, as this would produce an unlikely plan, the evidence has been presented here as representing small portions of two separate buildings. The gullies of Structure K13 contained 52 sherds of Ceramic Assemblage 8.

Episode IX: burning and massacre

This section provides a stratigraphic account of the massacre levels in the gate structures and passageway. The appellation massacre has been applied since these deposits were first discovered. It is retained here

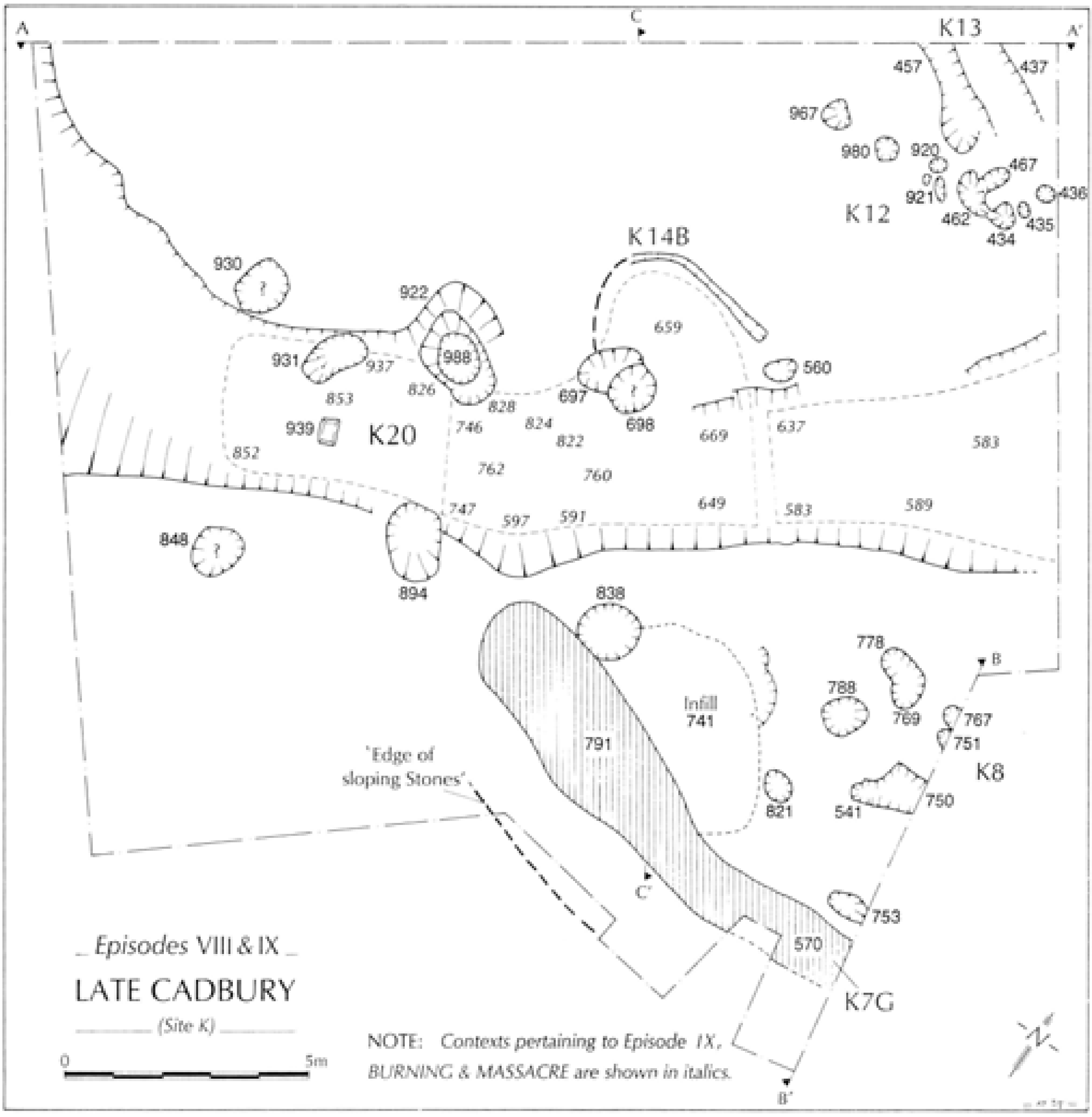


Fig 49 South-west gate Episode VIII/IX: Middle to Late Cadbury

without prejudice to the interpretation of their possible significance. There will be little reference to the substantial assemblage of associated finds: these are discussed at length below (see p116ff). The Episode is characterised by evidence for extremely intensive burning. Such evidence was found in relation to the main bank, K7G, the main gates and gate posts, the gate passage and the west guard chamber.

Structure K7G: The lower stones, all that survived, were heavily burnt, and lying against their rough rear face was a deposit of charcoal and twigs up to 0.3m thick, K834 (Fig 40, section B–B'; plan Fig 49). Above this lay dark brown soil (K584) which contained considerable amounts of charcoal. In all there were 67 sherds, mainly Ceramic Assemblage 8, but with Assemblage 9 well represented in K584 (see Fig 56). K584 also contained an iron reaping hook and a copper alloy rivet. These burnt deposits were cut by the postholes of Episode X associated with the rebuilt stone bank, Structure K7H. The burnt material seems to have included structural timbers and light roofing material, presumably from the timber-laced soil bank backing stone bank K7G and the roofing of the gate passage, the west chamber or other structures that might have existed inside the Iron Age gate.

Structure K20: The posts of the main gate had been destroyed by intense heat and in some cases the posts themselves had burnt slowly *in situ*, leaving cylindrical voids down the centres of the posthole fillings. The main posts were held in holes K988 and K894 (Episode VII). K988 had a void post pipe and charred fragments of timber. It was sealed by the western stone passage wall of Episode XI. K894 also contained traces of a partly burnt post in a pipe with a void centre, and partly overlying the top of its fill were a buffer stone and iron furniture associated with the Iron Age gate (Fig 50). The posthole filling was partly sealed by the eastern passage wall of stone (Episode XI). A third posthole, K931, which lay just west of the stone slab K939, also had a cylindrical void with charcoal adhering to its sides. This hole had been sealed later by a flat stone (Fig 49).

The gate passage: Lying above the second layer of cobbles of Episode VIII were was a series of thick deposits containing large numbers of metal objects, potsherds, and human remains. The deposits can be divided into three groups: outside the gate; inside the gate and opposite the west chamber; and thirdly, north of the guard chamber. Their location is indicated in Figure 49. In the area immediately outside the gate there were layers of almost pure charcoal (K852, 853, 826, and K937), and others, such as K850 and K856 (not planned), contained much burnt material. These denoted an area of very high-temperature burning. There were also deposits of carbonised grain and extensive human remains. The gate furniture next to the posthole K894 lay within these deposits, and the whole was sealed by the red gravel K829 of Episode X (not shown on the published section).

Fig 50 View of ironwork latch-lifter hoard Massacre Context Group II

Just inside the gate and alongside the west chamber there were extensive deposits of rather different character. Layers K649, 822, 824, 828, 591, 669, 762/597, and 746/747 (see Fig 49) were grey-black sandy silts, 0.15 to 0.35m thick. They contained charcoal flecks and human bones. K747 gave a radiocarbon date of cal AD 120–250 (GU651; see Chapter 13,). Section C–C' (Fig 40, layer K649) shows these layers running at a lower level than the stone-built passage walls of Episode X and their associated road surfaces (K518 and 648). Moreover, another similar layer K587 (not on the published section) was sealed by the eastern wall K588. The layers K822, 824, and 828 (not on section), on the west, were more stony and reddish in colour, but none of these deposits seem to be the result of *in situ* burning. They appear to be a deposit of fine silt which built up around the human and metal remains. To the south, the deposit banked up against the remains of the burnt gate described above. This set of black deposits was sealed by a patchy cobbled road surface contemporary with developments of Episode X.

Further inside the gate, extending northwards from the inner margin of the guard chamber, there were deposits similar to those just inside the gate, but on average only 0.2m deep. Contexts K580, 583 (just below 580), 589, and K637 were brown or yellow brown soils with charcoal and much human bone (Fig 49). These layers lay directly below the post-Roman road surface, all 'Roman' road surfaces having been eroded away here towards the top of the slope.

Structure K14B: Within the west guard chamber, up to the line of the timber gully, there were deposits of charcoal, ash, and burnt grain 0.05 to 0.15m deep (K659 Fig 40, section C–C'). Large fragments of carbonised wood (Fig 51) were clearly the remains of beams, squared timbers with evidence of jointing and wattle; there were also many metal items and some human remains. Six radiocarbon samples were taken for this deposit (see Chapter 13) and a more detailed discussion is given below (see p106ff). The burnt deposit appears to comprise the burnt remains of the guard chamber walling and roof. It is sealed by a layer of burnt and unburnt rubble (K657) which was laid deliberately.

Fig 51 South-west gate view of burnt timber in Context Group IV

Episode X: rebuild of the multiplex wall

After a period of abandonment, the 'massacre deposits' were deliberately sealed with rubble and the stone bank and west guard chamber reconstructed (Fig 52).

The gate passage: The sealing of the burnt deposits in the west chamber referred to above was matched in the main passageway. These covering layers survived in the area outside the main gateway and also just inside. They do not occur on section C–C'. The main layers were K614, which consisted of boulders, blue and green white clay, red gravel, and sandy soil, and K829, a red gravel with some large stones, patches of blue clay, and yellow sandstone. The thickness of these deposits was very variable. Outside the threshold, above K829, there were further thin layers of grey and red coloured stones and the entire deposit reached to the southern margin of the trench, where it was 0.4m deep. The infilling material appears to have been derived from the ruined stone banks, the clay having been introduced from a redefinition and deepening of the main ditch. This activity no doubt was associated with the rebuilding of the bank K7H.

Structure K7H: The second build of K570 covered in plan a similar area to the first phase and was, in effect, a straightforward rebuild following the damage suffered at the time of the earlier destruction (Fig 52). In section B–B' (Fig 40) the rebuild is seen as seven to eight courses of slabs with a maximum surviving height of 0.9m. It was constructed of massive flat stones and overlay layer K834 of Episode IX. The wall was poorly constructed and, like its predecessor, required support behind from a bank soil. This was supported by timbers in another grid system of postholes. The distinct layers of material in the soil bank were interdigitated with the stone courses of K570 and both were apparently built up at the same time, as part of a single constructional process. K570 in section B–B' is equivalent to K791 in section C–C' (Fig 40). K791 survived to 20 courses and reached a height of at least 2.10m (Fig 48). In section this new back revetment to the stone bank was seen to have a back face which tapered inwards to the core of the bank. There were two indeterminate sherds in the matrix of the wall.

Structure K16: Behind the wall, a rectangular layout of postholes roughly reflected the pattern of holes dug to support the lacing of the Episode VIII bank, Structure K7G. Postholes K592, 596, 744, 745, 777, 779, and 782 were, on average, 0.42m deep, with brown soil or blue clay fillings (Fig 52). They contained 26 sherds, mainly Ceramic Assemblage 8, but with some Ceramic Assemblage 9 fabrics. Feature K596 (Fig 40, section B–B'), a possible hearth, may have been associated with the reconstruction activity. The postholes cut the burnt layer K584 of Episode IX (Fig 49). The soil bank comprised a series of well defined layers of material, illustrated in section B–B' (Fig 40). From the base there was a layer of orange gravelly soil with some rocks (K569), then a deeper fine soil layer with fragments of blue clay (K565). Above this was orange gravel, K566, and then a blue clay deposit, K555. Sealing all this was a capping of orange gravelly soil with stones, K567. The whole deposit reached 0.9m in depth and extended 4.4m back from the rear wall. It contained 249 sherds, including many diagnostic pieces of Ceramic Assemblage 9 (see below, Fig 55), an iron brooch, and an iron ferrule, both in K577. The bank was revetted on the west side by walling K780 (Fig 48), and the Episode VIII gate posthole K838 may have been recut.

To the west of the gate passage no traces of any stone bank material of this phase have survived, but there are vestiges of the tail of a soil bank similar to that preserved to the east. In sections A–A' and C–C' (Fig 40) the layers of orange gravel K601, grey clay K477, and orange clay K469 can be equated with layers K566 and K555, east of the gate passage (section B–B'), while K473 is a small clay lens. These layers lie directly below the make-up of the post-Roman Bank E (K460) and are laid above a substantial deposit of material which served to fill in and level up the scoop behind the earlier rampart. These levelling layers were up to 0.6m in depth and include K642B, a burnt layer, a layer of lighter soil, K478B, which was probably redeposited ploughsoil, and K499, a greyish brown soil with charcoal, ash, and burnt lias (Fig 40, section A–A'). The burnt layers here may in fact be related to the massacre of Episode IX.

The roadway: At some stage after the deliberate sealing of the massacre deposits and reconstruction of the ramparts, there was a build-up of fine silt filling a dip between the rubble infill and the sloping massacre deposits of Episode IX. This was a grey green silt soil with gravel lenses, up to 0.4m deep in places; it was sealed by a layer of stones which formed a patchy road surface K648. This road surface, K518/648 on section C–C' (Fig 40), was 0.1m thick, comprising rough and patchy cobbles, very worn and mainly red in colour. This roadway extended, albeit in patches, to the northern margin of the trench, where it lay directly on the relict massacre deposits of Episode IX.

Structure K14C: The west guard chamber was reconstructed with dry-stone walling inside the original oval rock-cut scoop (Fig 47). Walls K639 and K638 survived against the western scarp and the southern edge respectively (Fig 52). K639 survived to *c* 11 courses. It was crudely built and the front faces of the stones were burnt red. In section C–C' (Fig 40) it is 1.3m high and slopes back from the base. To the north-west it was destroyed. Between the wall and the bedrock scarp was a brown silty soil, K963, which contained 35 sherds of Ceramic Assemblages 8 and 9. Wall K638, of ten courses and 0.7m high, was abutted by K639. The possible floor level K667 visible in section C–C' is misleading, because it is described in the records as 'a curve of lias blocks'. The postholes K698 and K560 were probably re-cut as new portal supports.

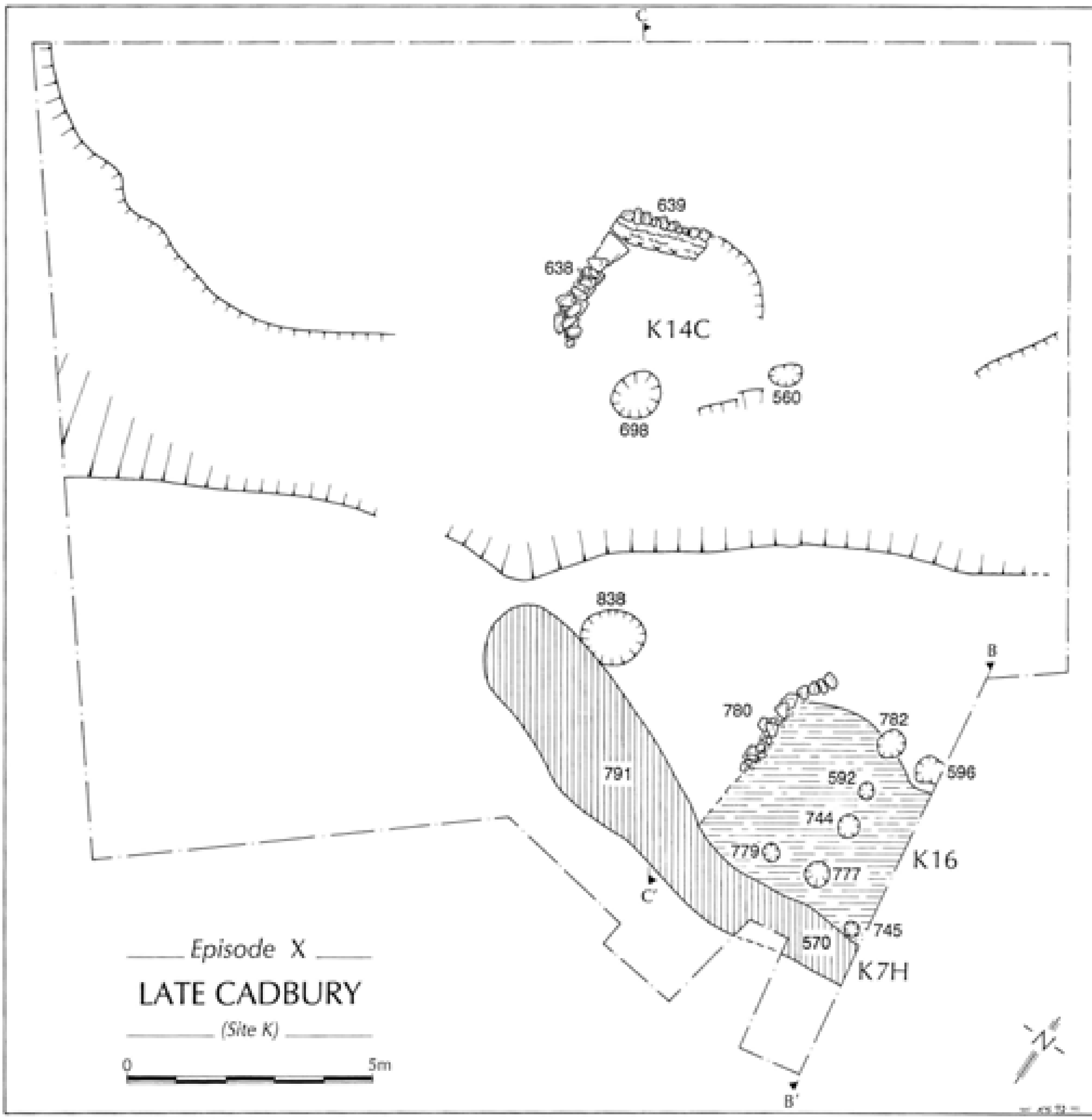


Fig 52 South-west gate Episode X: Late Cadbury

Episode XI: second massive rebuild of multiplex wall

The stone bank wall was heightened and revetted more strongly. The structure was now so high and so unstable that it also became necessary to revet the sides of the gate passage with dry-stone walls. On the west, these were tied in to the walling of the existing dry-stone guard chamber (Fig 53).

Structure K7I: A rough core of rubble, K572, 1.2m deep in section B–B' (Fig 40), marked the heightening of the stone wall east of the passageway. This may have been accomplished using debris from the collapse of a once higher back revetment and associated stone core. There were 12 sherds in Ceramic Assemblage 9 fabrics from this layer.

Structure K17: The main back wall was at the same time extended slightly further west, closer to the passage. The soil bank from Episode X was probably retained but it was now revetted by a new supplementary wall, K590 and 840, at right-angles to the back revetment wall. This lay on the same line as Structure K16, of Episode X, but at a higher level. It survived as two courses of slabs, 0.2m high, and contained no finds.

A photograph (Fig 48) shows Structures K17 and K16 in relation to the back face of the stone wall revetment.

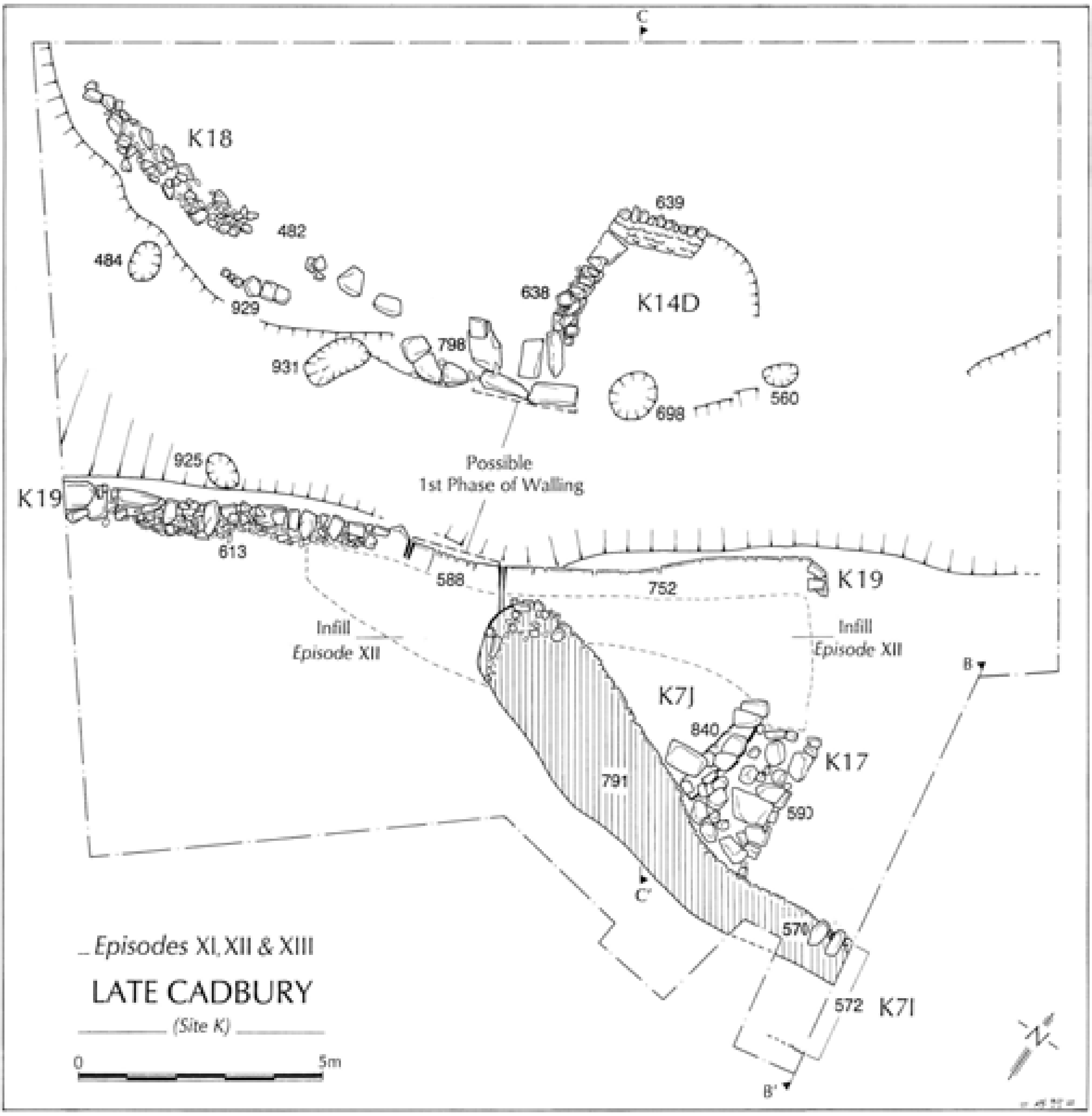


Fig 53 South-west gate Episodes XI/XII/XIII: Late Cadbury

The soil bank has been removed so that some of the postholes of Episode X are visible, half excavated away but cutting the burnt 'massacre' destruction level (Episode IX) below the rebuilt multiplex wall. However, the new walls evidently did not hold the bank terminal safely for long. The roadway was far below and the dry-stone walling became even more unstable. The only solution was to line the passage with stone walling and to infill the space between this and the former terminal of the wall (in Episode XII).

Structure K19: On the east side of the gate passage dry-stone walling survived to four courses (maximum) over a length of 16 metres (Figs 53, 48, and 54). Three distinct sections could be detected. To the north was K752, well built from large stones with a curved terminal (see Fig 53). It was 0.9m high in section C–C' (Fig 40). The central portion (K588) was higher but only 2m in length. It joined K752 at a straight joint and lay over the massacre layer K591. At its southern end the wall line stepped out slightly and continued as wall K613, whose stones were cracked and badly decayed. It continued to the southern extremity of the cutting, where only one course survived. Thus it formed a boundary to the terminal of the main ditch and continued to join Bank 2 (see Chapter 3). K613 was extremely well constructed, obviously by skilled stonemasons. The relative chronology of the three surviving builds could not be deduced. The centre section K588 may have been rebuilt following a collapse, but more probably the centre masonry was an original revetment, in line with the terminal of the multiplex wall, and this was subsequently extended to the south and north. Finds within the stonework of the walling included 22 sherds, some of Ceramic Assemblage 9, a strip-bow brooch, and a penannular brooch.

Structure K18: On the west side of the passageway, the dry-stone guard chamber, Structure K14D, remained in use. The south wall was modified and tied into a new stretch of dry-stone walling, K798 (Fig 53). This was built from smaller stones than the eastern wall and survived as far south as posthole K931. Beyond that posthole, to the south-west, was a line of stones (K929) which may have been a remnant of the same wall, and a further alignment of stones on a slight terrace in the bedrock (K482, Fig 53). Again, there seems to have been more than one build. The centre section may have been constructed first, to match K588, with subsequent extensions to the south. Within the walling were found a penannular brooch and a Roman signet ring (Fig 71; 27). The patchy cobbled road surface K518/648 was still in use.

Episode XII: extension and consolidation of multiplex wall

The extensions of the gate passage walling southward may have belonged to this new phase of activity, when the whole area behind the walling, at least on the east side, was infilled with stone rubble (Fig 53). These rubble

Fig 54 View along south-west gate passage from the west showing walling of K19 to the right

deposits are well shown on section C–C' (Fig 40) as K576 and K514. K576 was close-packed stones in light brown soil and was capped by K514, small stones with calcium carbonate adhering to them. In all, the deposit was 0.7 to 0.9m deep. Another such rubble layer was K523, which produced a British wire brooch and a fragment of human skull. There were 75 sherds in all, mainly of Ceramic Assemblage 9 and including pieces of a 'war cemetery'-type bowl. The patched road surface K518/648 presumably continued to be patched even further.

Episode XIII: final heightening of wall

Structure K7J: At the very end of its useful life the multiplex stone wall was provided with a final heightening layer of soil and gravel. In section B–B' (Fig 40) this appears as layer K501. This lay over the soil bank layers of Episode X and stone rubble core of Episode XI and under the stone core of post-Roman Bank E (K582). A similar refurbishment of gravel covered the Structure K17 retaining wall and the fill deposits of Episode XII. Finds from this layer included Ceramic Assemblage 9 pottery, Savernake Ware (Fig 55, see below), an iron spearhead, and a copper alloy brooch . To the west of the gate passageway, layer K403 (Fig 40, section A–A') may have been the tail of a similar capping laid over the former bank terminal. This lay over the levelling-up deposit K478B of Episode X, and below the turfline (K402) sealed beneath the make-up of the post-Roman bank, K409, and contained two brooches.

Episode XIV: final fire and destruction

Within the roadway there was now evidence for a second and final phase of major destruction by fire. The stonework of the passageway and the interior surfaces of the walls of the western guard chamber showed signs of intense burning. Above the frequently patched cobbled road surface K518/648 various silts and soils of various colours were associated with pottery of developed Romano-British form. These layers denote a short period of abandonment prior to the massive destruction of the stonework of the gateway and wall terminals. In the area of the main gate itself there was a deposit of red tumbled stones filling the roadway to the level of the top surviving courses of the side walls (Structures K18 and K19). On section C–C' (Fig 40) this layer is K558, 0.45m deep, and shows signs of burning throughout. Finds included an iron spearhead, four brooches, and 200 sherds of Ceramic Assemblage 9.

To the north of the threshold, further layers of stones lay above and around the eroded top levels of the massacre deposits of Episode IX. Finds in this area comprised Romano-British pottery and metal items, including a second or third century brooch.

All these layers of rubble were eventually sealed by a new cobbled road surface, equivalent to K423 in section C–C' (Fig 40). This was the road cut by the timber slots of the post-Roman timber gate complex. Its post-Roman date is confirmed by the recovery of a Germanic copper alloy ring or pendant (Alcock 1995, 25–6 and catalogue no Br1) beneath the road.

Pottery from Site K: contexts adjacent to main east section

by Leslie Alcock and Ann Woodward

The illustrated pottery comprises selected items from contexts which could be seen in the main east section (see Fig 40 section B–B'). The selection of key diagnostic items was originally made by Leslie Alcock and the drawings are by Sylvia Stevenson. Form and fabric codes, and attributions of contexts to Bank 1 Episodes, have been added. In this case, the context groups are described in stratigraphic order, but starting at the top of the succession, which was the system preferred by Alcock. In addition to providing a more detailed view of the ceramic types present in the layers representing the later episodes of the Bank 1 development, this series of illustrations also includes a few key items which are not illustrated elsewhere in this monograph. These include the terra nigra dish and a good example of the tazza form, BD7. The fabric codes are from the simpler system outlined in Chapter 13. Also other non-ceramic key items have been included.

Figure 55

K014, hill or ploughwash above tail of post-Roman Bank E

1 post-Roman Bi amphora
2 terra nigra platter, probably Claudian (see Chapter 7, Imported wares), residual

Not illustrated: Late Saxon cooking pot and much residual Iron Age material.

K582, core of post-Roman Bank E

1 Bi amphora

K501, Bank 1 Episode XIII Ceramic Assemblage 9/10
1–2 spearhead see below (Fig 63; 66) and copper alloy brooch

	Form	*Fabric*
3	JF	S
4	Lug (? JC3)	S
5	BC3.3	S
6	BC3.3	S
7	JE4.2	S
8	JE4.2	S
9	?BD6	S

(This group was previously published in Alcock 1980, fig 17.)

K570, Bank 1 Episodes VIII to XI Ceramic Assemblage 8/9

	Form	*Fabric*
1	BC3.3	S
2	PA	Q
3	JC2	sh

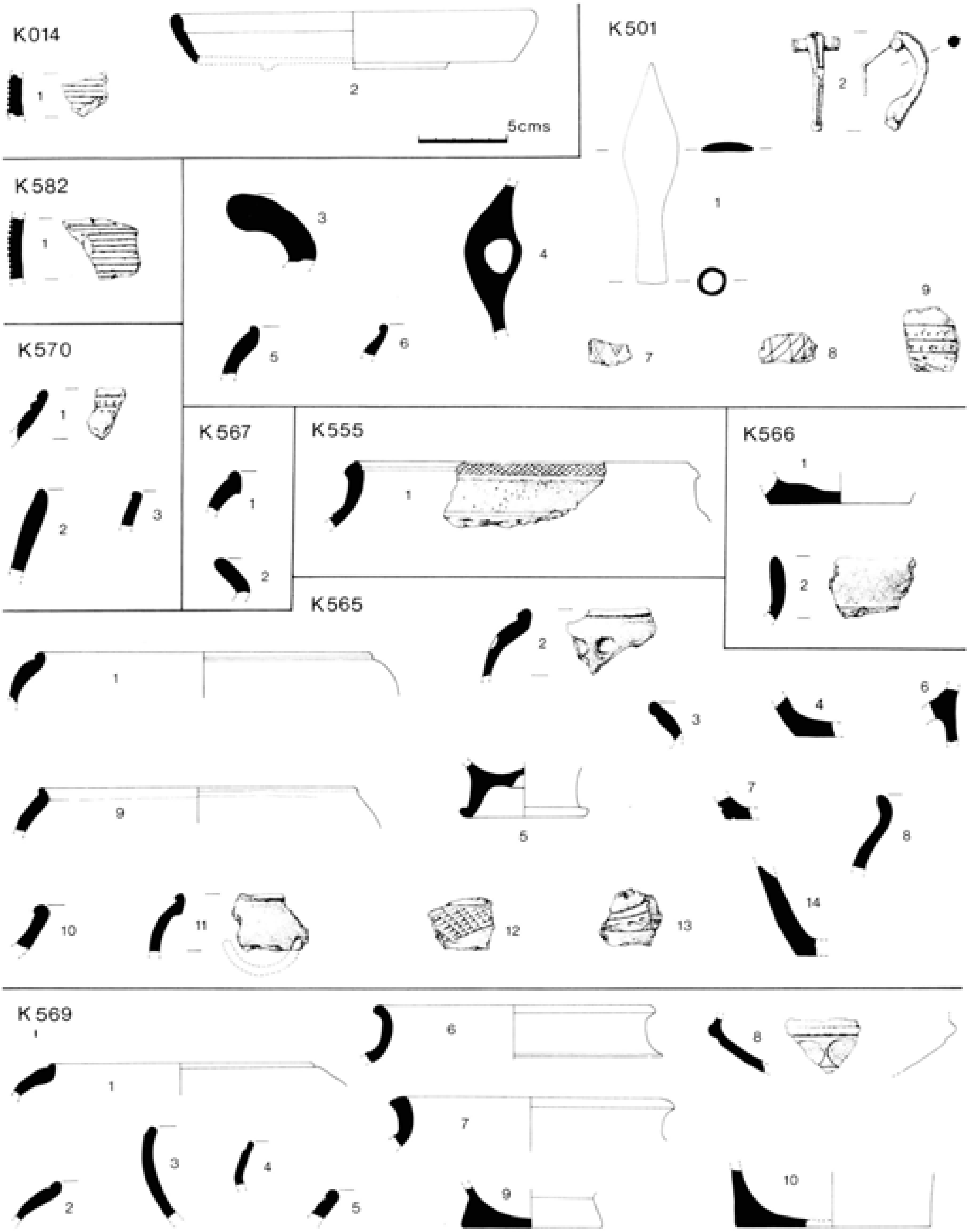


Fig 55 Ceramic assemblages and other finds from the south-west gate: K014, 501, 582, 570, 567, 555, 566, 565, and 569. Scale 1:3

K567, Bank 1 Episode XII Ceramic Assemblage 9

	Form	*Fabric*
1	BC3.3	s
2	JD4.4	sh

K555, Bank 1 Episode X Ceramic Assemblage 9

	Form	*Fabric*	*Decoration*
1	BD6	s	IGD

K566, Bank 1 Episode X Ceramic Assemblage 9

	Form	*Fabric*
1	BS5.1	s
2	JD4	sh

K565, Bank 1 Episode X Ceramic Assemblage 9

	Form	*Fabric*	*Decoration*
1	BC3.3	S	-
2	JC3	S	GR2
3	JD4.4	S	-
4	BS5.1	S	-
5	BS1	S	-
6	handle stump	S	-
7	BS (?BD6)	S	-
8	BD4	sh	-
9	JC2	sh	-
10	JC2	sh	-
11	BC3.3	sh	IC4
12	BD6	sh	IGF
13	BD6	sh	ICE
14	BS 5.1	sh	-

Nos 8 to 14 are residual from Ceramic Assemblage 8

K569, Bank 1 Episode X Ceramic Assemblage 9

	Form	*Fabric*	*Decoration*
1	JC3	S	-
2	JC3	S	-
3	BC3.3	S	-
4	BC3.2	S	-
5	BC3.3	S	-
6	BD2	S	-
7	BD6?	S	-
8	BD7 (tazza)	S	ICB (burnished) against unburnished background
9	BS4	S	-
10	BS5.3	S	-

(This group was previously published in Alcock 1980, fig 17.)

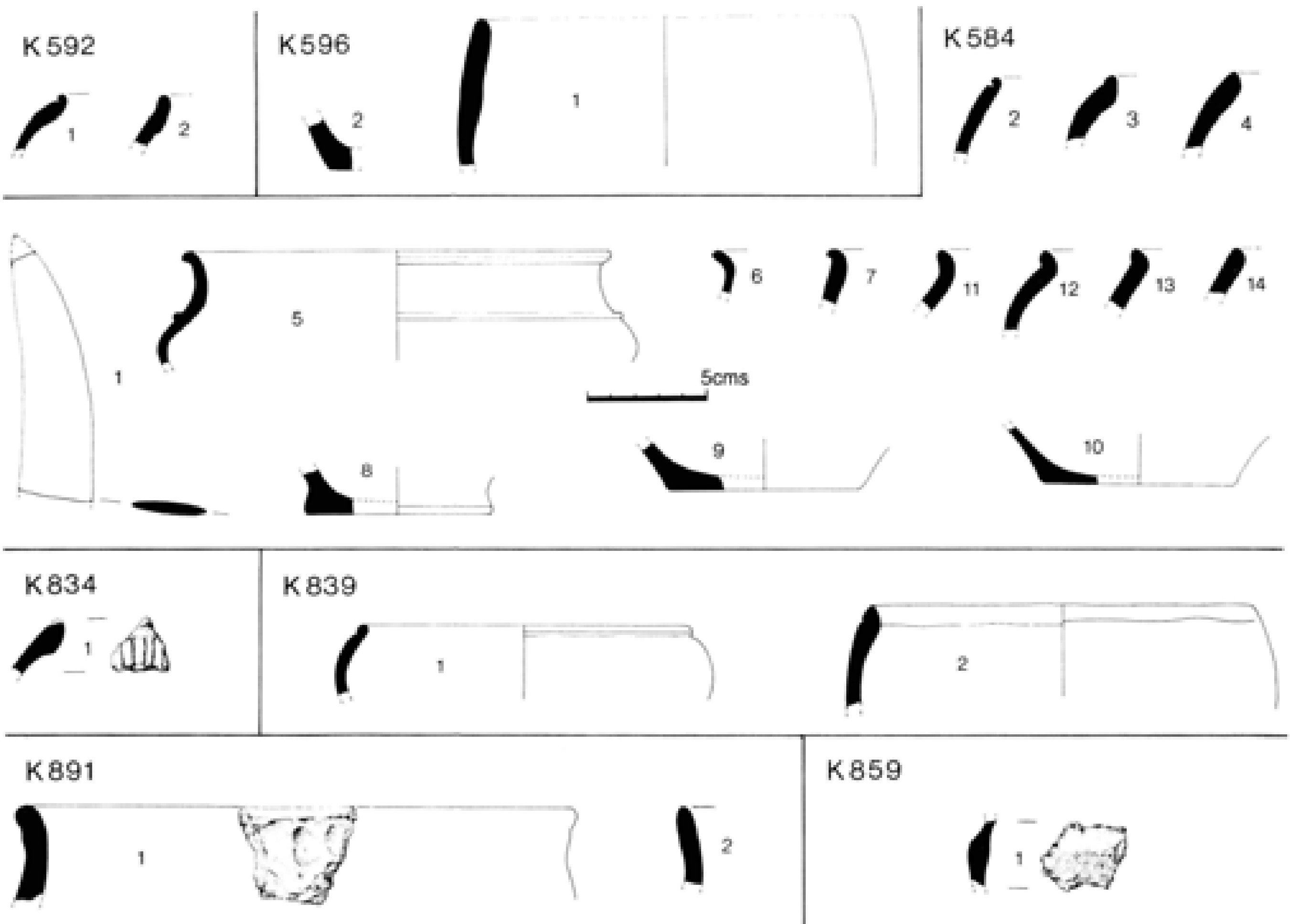


Fig 56 Ceramic assemblages from the south-west gate: K592, 596, 584, 834, 839, 891, and 859. Scale 1:3

Figure 56

K592, Bank 1 Episode X Ceramic Assemblage 9

	Form	*Fabric*
1	BC3.3	S
2	BC3.3	sh

K596, Bank 1 Episode X Ceramic Assemblage 9

	Form	*Fabric*
1	PA1	sh
2	BS5.1	S

K584, Bank 1 Episode IX Ceramic Assemblage 9

1 iron reaping hook (see Chapter 7, Iron agricultural implements)

	Form	*Fabric*
2	BC3.2	S
3	BC3.3	S
4	BC3.3	S
5	BD2	S
6	BD2?	S
7	JD4	S
8	BS4	S
9	BS5.4	S
10	BS5.4	S
11	JC2	sh
12	JC2	sh
13	JC2	sh
14	PA3	sh

K834, Bank 1 Episode IX Ceramic Assemblage 9

	Form	*Fabric*
1	BC3.3	S

K839 (not planned), Bank 1 Episode VIII Ceramic Assemblage 8

	Form	*Fabric*
1	BC3.3	S
2	BC3.3	S

K891, Bank 1 Episode IV Ceramic Assemblage 7

	Form	*Fabric*	*Decoration*
1	B3	sh	FP2
2	JB4	ool	

K859, Bank 1 Episode III Ceramic Assemblage 5/6

	Form	*Fabric*
1	JB1	sh

The massacre levels: a contextual analysis

by Ann Woodward

Introduction

There is no doubt that the massacre deposits found within the south-west gateway at Cadbury Castle are the most memorable, if also the most macabre, legacy of the excavation campaign. The remains captivated the numerous visitors to the site, and some members of the archaeological team were so overcome by the horror of their implications that they were unable to work in this location (Alcock 1972a, 105). The general complexion of the deposits is best described in the words of the excavator:

> Scattered along the 20 metre length of passage which was explored were parts of at least 28 human bodies of both sexes, ranging in age from 4 to about 35 years, and including many children. These human remains were curiously disjointed: there was a complete left limb, a trunk with the right forearm but no other limbs, and so on. Associated with the human remains were about one hundred and fifty bronze brooches, both bow and penannular; iron weapons, both native and Roman, including swords, lances, javelins, arrowheads and shield bosses; and a repoussé bronze plaque with a Romano-Celtic human or divine head.
>
> This evidence is consistent with a battle or massacre, after which the bodies of the slain were left unburied to be pulled apart by wild animals and birds of prey. (Alcock 1971, 4)

Initial interpretations of these deposits were based on observations made in the field, a preliminary assessment of the samian, a scan of the brooches, and a run of radiocarbon dates. Detailed analysis of the stratification, the pottery, the items of copper alloy and iron (including the brooches and weapons), and of the human remains, has only taken place in preparation for this monograph. Needless to say, the emerging picture is infinitely more complex than that envisaged immediately after the excavation. The present account attempts to bring together the pertinent results from all the new spheres of analysis, and to weld them into a reasoned account of the events that took place. From the outset it was decided to approach the material from first principles, and not from the standpoint of the few available historical milestones known from the classical sources. To facilitate such an approach a series of detailed questions were formulated; this included questions which the archaeological data could hardly hope to clarify, but it was felt important that the list of questions should be framed as widely as possible.

There were five primary questions. Were the deposits deliberate or accidental? How many attacks, if any, were represented in the data? At what date were the episodes of violence perpetrated? Who was attacking whom? Who were the victors, and what was the nature of the outcome of the conflict? In order to initiate an approach to these problems it is necessary to tackle the problems of deposition. We need to consider whether the deposits are all similar, whether any or all are *in situ*, what human activities or natural events they represent, and whether they were all contemporary. In the case of each group of finds it is necessary to establish which, if any, were *in situ*, the completeness of the various objects, the size of fragments and degree of wear, the dating evidence that they provide, and their relative abundance according to context type. As one element of the destruction of the gateway was intense heat it is also important to consider the incidence of burning among the deposits, the artefacts, and the bones. For the pottery assemblages it proved significant to study the variation in average sherd sizes and the incidence of diagnostic sherds, and to compare the content of the assemblages with groups studied from the interior of the hillfort. The incidence of burnt items among the metal objects was particularly noted, and also the occurrence of pieces which appeared to have been broken deliberately or folded. The iron door furniture seemed to occur in two main groups, so it was important to consider their relative dating. Finally, for all the artefact groups it was necessary to establish their attribution to native, Romano-British or Roman military styles or traditions wherever possible.

The human remains posed a rather different set of questions. It is was important to consider whether all the bone deposits were similar and, if not, how they differed. The distribution of the numbers of individuals represented, and the variable occurrence of different parts of the body, needed analysis. Also the signs of burning needed to be assessed, and their correlation, if any, to particular parts of the body. Finally, it was necessary to consider the incidence of the different age and sex groups, and the evidence for wounds and violent death.

All discussion of the various finds groups is based on data from the reports and catalogues prepared by Bishop (military items), Foster (copper alloy), Leach (Roman pottery), Olivier (brooches), Macdonald and Saunders (ironwork), and Woodward (Iron Age pottery).

Chronology

Following preliminary study of the brooches, and the samian found in the gateway, the bank section Site D, and the interior, Alcock found it necessary to revise his initial dating of the massacre deposit from the conquest period to the later-first-century AD:

> The massacre itself was at first dated to *c* AD 45 in the belief that, like the events of that date at Maiden Castle and Hod Hill in Dorset, it marked the initial Roman advance across southern Britain under the general Vespasian. Fuller consideration of the archaeological material, and of the historical context, notably by Manning (1976, 37–9), has demonstrated that a more likely explanation for the massacre lies in the Roman suppression of some western extension of the Boudican revolt in AD 61 (Campbell *et al* 1979, 31).

The main massacre deposits belong to Episode IX, as defined in the stratigraphic account for Site K presented in the previous section (see above, p96). They were related to a major burning of a timber gate, but not to the burning of the stone-lined gate passage which occurred in a much later Episode (XIV). In other words, the archaeological evidence contained the results of two major destruction episodes, with the famous 'massacre' layers belonging to the earlier of the two events. Following this earlier event there was a period of dereliction, and then an act of deliberate sealing of the bone deposits by a layer of rubble. This act preceded the major reconstruction of the gateway in stone (Episode X), and three further phases of modification, consolidation, and extension to the multiplex rampart (Episodes XI to XIII). These later phases of rampart reconstruction are dated by pottery and other artefacts to the later part of the first century AD. The post-conquest samian from the bank and the interior thus would relate to the currency of the later-first-century defences.

The realisation that at least two major episodes of destruction took place at the south-west gate has also allowed some clarification of the contexts for the intractable series of radiocarbon dates (Campbell *et al* 1979; see Chapter 13). Most previous discussion has revolved around the problems posed by the dates derived from charcoal and burnt grain samples associated with the massacre event. All but one (from K747) of the ten dating samples derive from burnt deposits in the western guard chamber (K659). Only two (now given as 40cal BC–90cal AD (GU646) and 10 cal BC–120 cal AD (GU649)) were felt to be consistent with the supposed historical date of AD 61. The rest now give dates spanning the first to the sixth centuries. Following the establishment of a more complex sequence of activity episodes at the gateway and, indeed, a sequence of construction which continues well after the major massacre episode, an alternative point of view may be advanced. The western guard chamber was apparently re-used during phases of refurbishment and extension of the multiplex wall and the gate passage which took place not only after the massacre episode but following a subsequent phase of abandonment and intentional sealing or cleansing (Episodes X to XIII). It is quite likely that further episodes of destruction and burning may have taken place during, or at the end of, this late building sequence. The sequence may well have extended into the early second century AD, and charcoal relating to a late destruction phase may have become incorporated in the guard chamber deposits. This then might provide an archaeological explanation for the predominance of charcoal and grain samples which gave rise to radiocarbon dates spanning the first to sixth centuries AD. It is therefore likely that charcoal from K659 represents material deriving from more than one event of destruction.

A radiocarbon date from the Episode IX destruction layer in Site KX can now be seen to be highly acceptable, and the apparently late dates for the massacre deposits in Site K may relate to a subsequent phase of destruction (see below p150).

Matrix of the deposits

The massacre deposits of Episode IX comprise four main groups of contexts: those just outside the threshold of the burnt gate, those inside the gate, those higher up the gate passage, and finally, those occupying the western guard chamber (see Fig 57). The relationships and interrelationships of these Context Groups were described above (see p97). Above these, in the middle and lower sectors of the passageway, was a group of rubble deposits sealing the bone layers, and there was a similar layer of stones over the burnt deposit in the guard chamber. These five context groups (equivalent to stratigraphic Blocks 43, 55, 51, 45, and 48 in the Site K archive) will be numbered as follows in the present account:

Context Group

I	outside threshold	K826, 849, 850, 852, 853, 854, 856, 937, 939
II	middle passageway	K587, 591, 597, 648 (some material residual in Episode X roadway), 649, 669, 746, 747, 760, 762, 822, 824, 825, 828, 846, 862
III	upper passageway	K538, 556, 559, 580 (580A, 580B), 583, 589, 599, 612, 630, 637,646, 650, 652
IV	west guard chamber	K647, 657, 659, 681
V	sealing rubble: lower and middle passageway	K558, 595, 598, 600, 602, 610, 614, 658, 756, 757, 758, 763, 764, 797, 829, 925

The Group I deposits were mainly of charcoal and up to 0.05m thick. Context K856, for instance, was ashy material representing severe burning, while context K850 was a rich silty soil with much charcoal. These layers were the result of severe and high-temperature

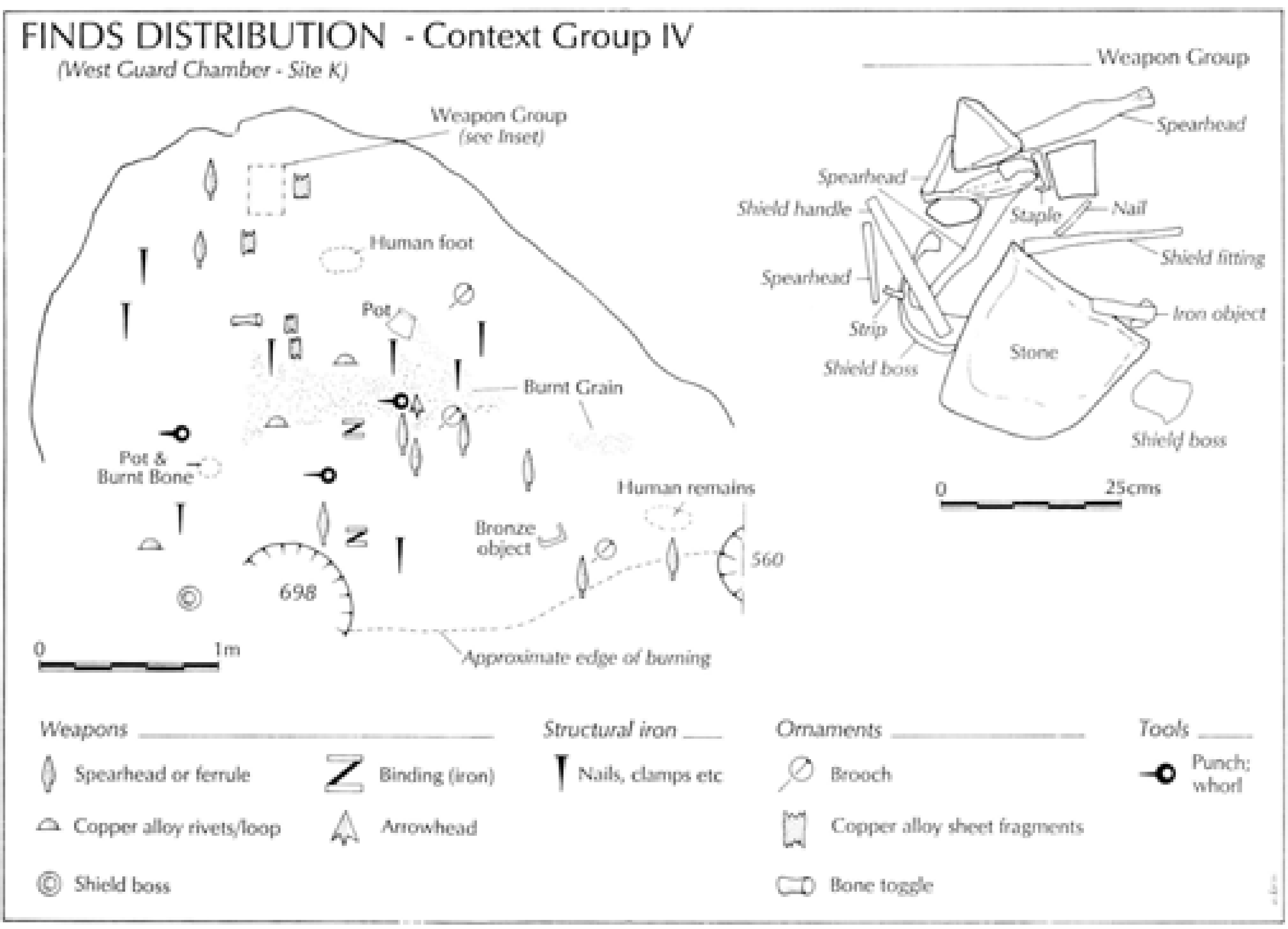


Fig 57 Distribution of finds in the west guard chamber, Context Group IV

destruction of the wooden gate structure. Some of the charcoal retained visible graining and a stone doorstop remained *in situ*. The burnt deposits in the guard chamber (Group IV) were thicker, at 0.05m to 0.15m, and consisted of almost pure charcoal, ash, and burnt grain. A series of nine radiocarbon dates was obtained from samples at this level (see Chapter 13). Large fragments of wooden jointed beams and wattle were recorded *in situ*, as was a discrete grouping of weapons (Fig 57). The layers in the middle passageway (Group II) were characterised by a very large number of human bones and artefacts. However, the matrix was quite different from those encountered in Context Groups I and IV. The contexts were described mainly as grey brown sandy soils with flecks of charcoal. Some contained more charcoal (K597), or displayed a more reddish (K824) or yellow brown tinge (K669), but on the whole they were all fine soils and seemed to represent a deposit of material, 0.15m to 0.35m thick, that had gradually built up around the mass of human remains and metal objects. This build-up appeared to have been a natural process resulting from the wash of soil down the passage from the hilltop above, albeit containing some traces of the conflagration that had occurred at the adjacent gate.

Upslope from these Group II deposits were the rather similar contexts belonging to Group III. However, because these were more disturbed by later deposits, they were more mixed. Although consisting mainly of dark brown or yellow brown soil with charcoal flecks, on average 0.2m in depth, they also contained disturbed cobble stones derived both from the roadway below, and from the early Roman and post-Roman road levels which lay directly above at this point in the passageway. Finally the sealing rubble layers of Group V overlay the main massacre deposits of Group I and part of Group II, and also extended to the southern limit of the cutting. The rubble comprised large boulders, brown sandy earth, lias, red gravel, and patches of blue-black and greenish white clay. Towards the threshold the rubble contained some human remains, but at the time of its deposition the debris within the main massacre deposits must have been largely obscured by silts. The Group V layers, which belong to the beginning of Episode X, were associated with the massive reconstruction of the multiplex rampart and ditch in the second half of the first century AD, and appear to have been designed primarily to raise the level of the lower portion of the gate passage. The sealing rubble in the western guard chamber similarly may have been laid as a floor foundation relating to the rebuilt chamber (Structure K14C) of Episode X. Thus the massacre deposits were deliberately sealed over.

This evidence appears to indicate that only the deposits of Group I and Group IV were direct results of the destruction by fire. They contained *in situ* burnt woodwork and largely comprised pure charcoal and ash. By contrast, the layers above the threshold within the gate passageway appear to have been gradual secondary deposits of silt and hillwash, which had formed around the debris of bones and artefacts lying on the road surface. A longitudinal section drawing of the central zone of the passageway (Section K43, not published) shows that the Group I burnt deposits outside the doorstop formed a slight mound. It was against this mound that the remarkable assemblage of bones and artefacts, and subsequently the silty soils, of the Group II deposits had built up. Without the presence of the hump of burnt debris at the threshold, the deposits, and most of their contents, would presumably have washed further down the hill slope.

The pottery

Romano-British pottery was present in all the massacre Context Groups (see Table 5). This indicates that the massacre cannot have taken place before the immediate pre-conquest period. The fabrics represented are grey wares, BBI, and Savernake and Corfe Mullen wares. All these could have been reaching Cadbury Castle around AD 45, so their presence does not interfere with the theory of a conquest date for the massacre.

The amounts of Iron Age pottery found in the five Context Groups are also shown in Table 5. The largest average sherd weights were found in the two Groups which have been argued to be *in situ* deposits (I and IV). There were no diagnostic sherds from Group IV; the significance of this is not apparent. The secondary passage deposits, II and III, contained more sherds but they were smaller on average. The occurrence of sherds of known form is summarised in Table 6. There is very little material of the early Iron Age or from Ceramic Assemblage 8. The pottery is mainly of Ceramic Assemblage 9 style with forms JC3 and BC3 (bead-rimmed jars and bowls, see Chapter 13) well represented, and significant

Table 5: The occurrence of selected finds categories in the five context groups from the south-west gate

context group	*armour*	*weapons*	*ornaments*	*brooches*	*gate furniture*	*structural iron*	*IA sherds*	*RB sherds*	*average sherd weight (g)*
I	1	2	1	7	3	8	39	3	9
II	4	24?	7	53	12	1	1403	11	7.5
III	2	11	1	28	-	2	800	16	5.3
IV	6+	17	1	7	3	13	463	6	9.2
V	1	5	6	7	-	9	162	5+	8
totals	14+	59	16	102	18	33	2867	41	-

Table 6: The occurrence of major ceramic forms in the massacre deposits and the porched shrine

context groups	*JA/BA JB 1-3*	*JC1*	*JC2*	*BD6*	*PB*	*JC3*	*JD4*	*BC3*	*BD1/2*	*JC4*	*JE*	*tazza/butt beaker*
I	-	-	-	-	-	1	-	1	-	-	4	-
II	-	1	2	-	2	19	5	22	1	-	12	-
III	-	-	5	-	-	15	2	19	3	3	-	3
IV	[nil]	-	-	-	-	-	-	-	-	-	-	-
V	1	-	1	-	-	-	-	5	-	1	2	-
totals	2	1	8	-	2	35	7	47	4	4	18	3
shrine N5	2	-	-	3	-	2	-	26	1	1	13	-

incidence of forms JC4, JD4 and JE. It can be argued that all the pottery, at least in context Groups II and III, was washed down from the hilltop with the silt. In this case it is important to compare the assemblage with those recorded within the interior in order to seek a chronological match. A good match can in fact be made with the assemblage from the trench of the porched shrine Structure N5 (see p27), which is also summarised in Table 6. The only appreciable difference is that there were some examples of Glastonbury Ware bowls (BD6) from the shrine. This correlation suggests that this building was in use after the massacre, and before the major reconstruction of the defences at Site K. A post-conquest dating for the shrine has always been suggested (eg Alcock 1972a, 163); now it can be more securely linked with events of dereliction and subsequent rebuilding at the south-west gate.

Table 7A: Human remains from the massacre levels: minimum numbers of individuals by the context group, age and sex

context group	*male >19 yrs*	*female >19 yrs*	*<1 yrs*	*unknown sex 1-10 yrs*	*11-19 yrs*	*>19 yrs*
I	-	-	-	2	6	9
II	1	-	-	7	7	20
III	1	1	-	2	4	8
IV	-	-	-	-	1	3
massacre totals	2	1	-	11	18	40
V	2	1	1	5	5	6
totals	4	2	1	16	23	46

The human bodies

by Ann Woodward and J D Hill

The human remains were catalogued initially by the late R Concannon in the 1970s, and subsequently were studied by Archie Young, the dental evidence being analysed by Dorothy Lunt. A summary report was then prepared from the catalogues by Stephen Forbes. There is considerable scope for further analysis, particularly with regard to an accurate assessment of the numbers of fragments and bones per context, the attribution of body parts, and variation in fragment size, colour, and degree of burning. The results of the initial analysis allow some preliminary conclusions to be drawn, and various hypotheses concerning the derivation of the bones may be advanced. Unfortunately this task is hampered to some extent by the fact that articulated body portions and adjacent groups of bones were not bagged separately, that none of the positions of *in situ* bone groups or scatters were planned in the field, and that very few were photographed.

Close study of the skeletal and dental evidence indicates that the minimum number of individuals represented in the pure massacre deposits (Context Groups I, II, and IV) is 22. The distribution of minimum individuals, assessed on all anatomical criteria and by age and sex, among the various Context Groups is shown in Table 7. The figures given in the age group columns are summations from the calculations undertaken for the individual contexts in each Context Group, and the estimations of totals are calculated from the total

Table 7B: Human remains from the massacre levels: the percentage occurrence of body parts by context group

context group	*number of bones*	*minimum number individuals*	*skull/ jaw*	*limbs*	*extremities*	*girdles*	*ribs/ vertebrae*
I	283	9	16	11	20	10	43
II	576	10	17	20	40	7	16
III	121	-	52	27	12	1	8
IV	72	3	5	19	64	3	8
V	664	-	18	14	34	6	28
total assemblage			19	16	33	6	26

Context Group assemblages. These last totals are lower than one might have expected, because a single individual body may have been represented in more than one context. Children aged 1–10 years were remarkably well represented (17%) and adults outnumbered young adults by a factor of more than two. Very few individuals could be sexed, just four males and two females.

All parts of the body – head, trunk, limbs, and extremities – were found in most contexts. From the available catalogue it has been possible to calculate rough counts of different bones per context and thus, by grouping these into body parts, to give some indication of variation in the deposition of different body parts through the five context groups. A summary of this evidence in percentage form is given in Table 7B. From this it is apparent that representation of certain body parts is greater in some contexts than in others. For instance, the greatest percentage of material is found in the middle passageway (Context Group II) and the sealing deposit (Context Group V), while the least is seen in the upper passageway (Context Group III) and the guard chamber (Context Group IV). A chi-squared test was applied to the raw data, indicating that statistically the distribution is highly significant. Essentially, the deposition of material was not uniform, with certain areas being the main recipients for the skeletal material, followed by a distribution into the more peripheral areas.

There was much evidence of burning, and in some cases bones had been calcined. The latter were usually long bones and occurred primarily in the *in situ* burnt deposits (Groups I and IV), with one example from Group III. Most contexts contained some burnt bones and some which were unburnt. Furthermore, some body parts appear to have been burnt, or not burnt, more than others. In the case of hand and feet bones it was noticed that these categories were very often unburnt, although sometimes the associated ankle bones were burnt. This suggested that the extremities had somehow been excluded from the fire that had affected the other body parts. Unburnt hand and feet bones were found in all Context Groups. In contrast, the fragments of skull were almost always burnt and, most interestingly, many of the fragments showed traces of intense burning on their exterior and interior surfaces. These fragments also were noted as having deposits of burnt soil or concretions adhering to them. These burnt skull fragments came mainly from the passageway (Context Groups I and II). Very few articulated body portions were found. They included a torso plus right forearm in the *in situ* Context Group I (K856), a left leg in the upper passageway (Context Group III, K650; Fig 58), and a foot in the western guard chamber (Context Group IV, K647).

That some of the bones had been exposed to the air, and moved around, is suggested by the presence of gnawing marks, sometimes attributable to rodents, on bones in at least four contexts. All these were located

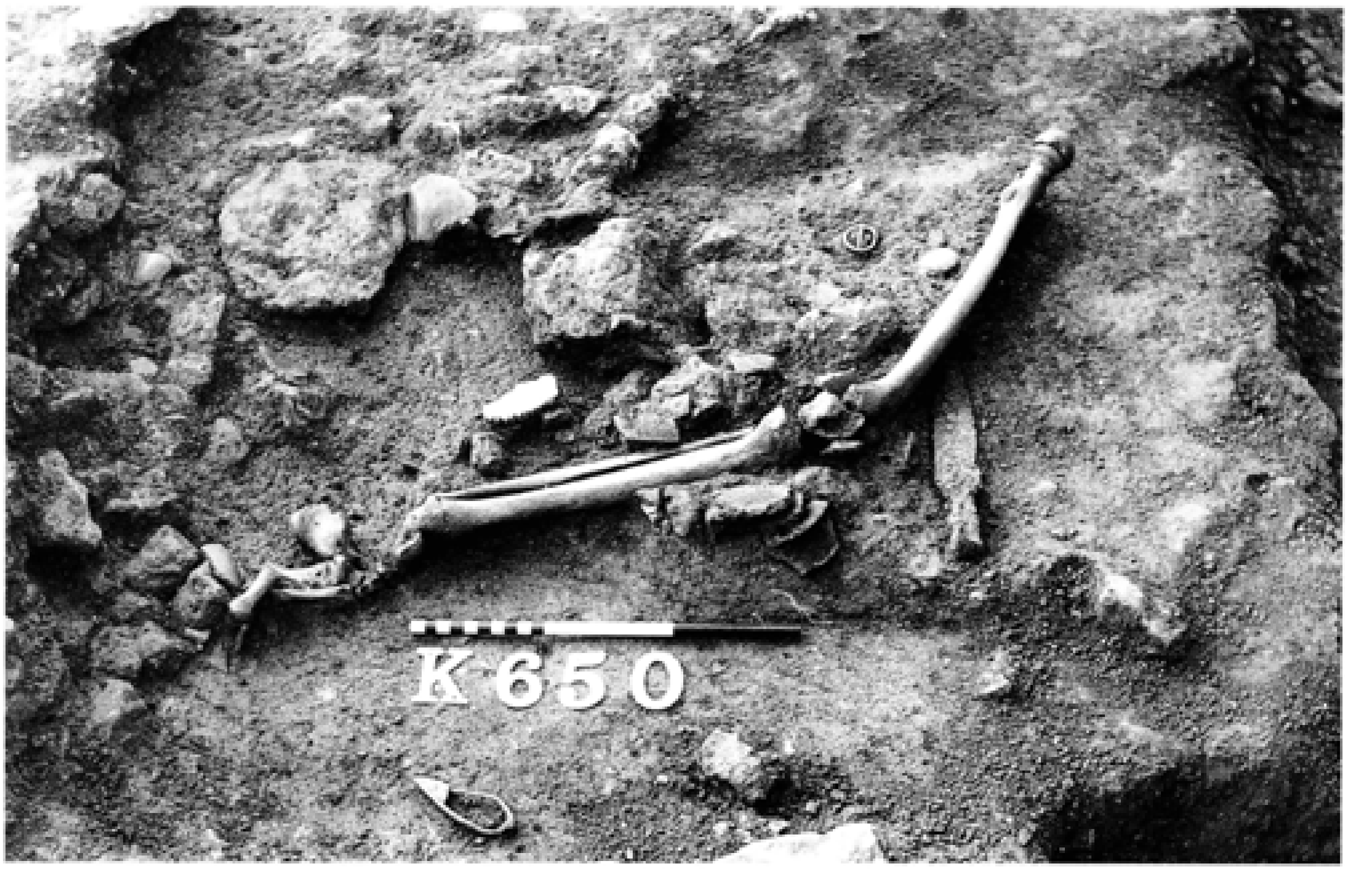


Fig 58 View of human skeletal material and artefacts K650, Context Group III

in the middle or upper passageway. In six cases green staining on finger or foot bones indicated that jewellery was still worn at the time of death, and in two cases copper alloy finger rings survived on the bones (Fig 70, 7 and 9). There were nine instances of injuries which may have been the result of violent trauma and, sometimes, the cause of death. These were mainly injuries to the upper leg, but included one slashed skull fragment.

The anatomical data, taken as a whole, do not seem susceptible to a single simple explanation, and it seems more likely that the bones derive from two or more separate patterns of deposition. The presence of the torso, and of other bones belonging to the same body, in the Group I contexts at the threshold together with the high incidence of torso bones (ribs and vertebrae) suggests that some individuals at least may have fallen in battle and remained *in situ*, subsequently to be pulled apart by animals. Also, we have noted that it was the *in situ* deposits of Group I that contained most of the calcined bones, affected as they must have been by the conflagration at the gate and within the guard chamber. However, problems with this interpretation remain; although it could be argued that the bodies would have been exposed to the elements, this does not explain why a single torso or leg remained intact, while the rest of these bodies were absent. If these deposits were open to the elements, and then covered by hillwash, one cannot explain the good preservation and articulation of the feet and hands in Context Group II, the torso and right arm in Context Group I, or the left leg in Group III, for basic taphonomic principles would suggest that such extremities are the most susceptible to disarticulation and destruction through animal gnawing. It might be argued that these deposits represent the intentional deposition of parts of human bodies. Such deposits are indeed well known from Iron Age sites such as Danebury, Winklebury, and Gussage All Saints (see Wait 1985 for a summary of such data).

Most of the bones from the middle and higher passageway had been burnt at lower temperatures, and the feet and hands were significantly unburnt. In addition, the bones of hands and feet were particularly well represented in the middle passageway and guard chamber. This suggests a systematic technique of treatment of a group of corpses. This treatment may have involved the partial cremation of a group of bodies on one or more pyres. The hands and feet extended beyond the reach of the hotter flames or fell into the lower cooler parts of the pyre. Also, body fat burns extremely fiercely; bones covered with abundant fat will tend to be exposed to greater heat than those, such as hands or foot bones, which are not (S Mays pers comm). Such pyres were presumably located on the hilltop at a point not too far within the south-western entrance: an area which has never been subjected to excavation. The remaining portions of bodies, and single bones, could then have been moved by animals, or naturally crept down the derelict passageway of the gate. The presence of finger-ring stains, and of some actual spiral copper alloy rings still present on some finger bones, might indicate that the victims in this case were members of the native population.

The selective treatment of parts of the corpse might account for the condition of the skull fragments, mainly from the middle and upper passageway, which had been burnt inside and out. Remembering also that skulls and skull fragments were particularly common in the upper passageway (see Table 7B), it is possible to surmise that some of them were treated differently in some way. One possibility is that some or all of the victims were beheaded, and the severed heads of the vanquished displayed at some conspicuous point in the vicinity of the devastated gate. At some time later they could have been taken down and burnt to destruction, their fragments subsequently filtering down the passageway to rest amongst the remains of the postulated victims of the pyre, and the *in situ* casualties of battle and destruction at the gate.

The armour and weapons

Context Group I: *LORICA segmentata* (K856), 2 iron spearheads (K852, K856)
Context Group II: *LORICA segmentata* buckle (K669), iron shield boss (K669), domed rivet head (K648), rivet (K591), chape (K649), complete knife scabbard (K597), 12 iron spearheads (K591, 597, 649, 747, K760), 1 conical ferrule (K760), 1 cylindrical socket (K746), 8 iron catapult bolts (K591, 597, 648, 649, K760)
Context Group III: domed plate rivet (K580B), riveted strip (K583), 5 iron spearheads (K580, 580B, 637, K646), 6 iron catapult bolts (K580, K583)
Context Group IV: 2 iron shield bosses (K681), 2 iron shield hand grips (K681), many riveted plates (K659), wire clip (K659), 13 iron spearheads (K647, K659, K681), 3 iron catapult bolts (K647, K659), iron spiral ferrule (K659)
Context Group V: rivet (K614), spearhead (K614), catapult bolt (K829), 2 iron conical ferrules (K610, K614), iron ferrule of uncertain form (K614)

This substantial array of elaborate weaponry and military accoutrements consists mainly of large and heavy items. They are likely to have been deposited in distinct groups. Even the fragments of segmental body armour are quite large, and certainly similar in size to those from Site BW in the interior of the hillfort. The large group of items from the west chamber (Context Group IV) was undoubtedly *in situ*, but very few military items were found in the other *in situ* deposits of Context Group I. The other large group derives from the middle passageway (Context Group II): these may be an amalgam of all the weapons from the entire passage which collected downhill against the threshold deposits during the silting process.

Although the iron weapons are too corroded to assess degree of wear, other aspects of their state of presentation are of some interest. All the bolt heads and catapult bolts were complete; however, almost half of the spearheads had been damaged in use or deliberately broken, and six had been folded and bent. Spearheads which had been treated in this way were found equally in the *in situ* deposits of the west chamber (Context Group IV) and in the middle passageway Context Group II layers.

Items of both Roman and native style are well represented. The segmental armour and catapult bolts are presumed to be Roman; the scabbard and chape are native. While the shield fittings, spearheads and arrowheads are normally classified as Roman, it is possible that the native population would have had access to similar styles of weapon at this period. The entire assemblage is witness to a severe episode of fighting at or near to the gate, during which casualties were suffered on both sides. The apparently ritual folding and breaking of many of the spearheads may be linked to post-battle rites connected with humiliation, failure or death. This treatment suggests that the objects were deliberately deposited in the west chamber and passage, and were not the result of casual loss in battle.

The ornaments

The ornaments listed by Context Group below exclude the brooches which are covered in the next section. The ornaments are copper alloy unless stated otherwise.
Context Group I: bracelet (K852)
Context Group II: 3 Type 1 finger rings (K597, K828), 2 iron jointed neck ring elements (K597, K747), horse plaque (K591), decorated sheets (K591, K822)
Context Group III: Type 1 finger ring (K580)
Context Group IV: face plaque (K659)
Context Group V: 2 Type 1 finger rings (K829), 1 Type 5 finger ring (K829), iron neck ring element (K614), horse plaque (K610), decorated sheet (K614)
As several finger rings were found around actual finger bones, there can be little doubt that the ornaments were associated with the bodies that fell at the gateway, or that were disposed of on the postulated cremation pyre. The bracelet and rings, along with the iron neck rings, are all of late Iron Age type, and therefore native in style. The finely decorated sheet plaques, also of late Iron Age design, may have decorated a shield (see p147, 29), in which case they should better be considered with the armour and weapons.

The brooches

Context Group I, total 7: Aucissa derivative, simple hinged, Penannular Fowler D (K852); Strip Bow (K850), Penannular Fowler D3 (K853); Penannular Fowler D2, Unclassified Penannular (K856)
Context Group II, total 53: Colchester, 4 Aucissa derivatives, 3 Strip Bows, 3 Dolphin Hinged, Misc Bow Brooch, Penannular Fowler D2, Penannular Fowler D4, Unclassified Penannular (K591); Simple Wire British, Colchester, Aucissa, Aucissa derivative, Hod Hill, Fiddle Brooch, Unusual Colchester derivative, Camerton, Dolphin sprung, Misc Bow Hinged, Unclassified Pin Fragment, Penannular, Penannular Fowler D, Penannular Fowler D2, Unclassified Penannular (K597); Fiddle Brooch, Strip Bow Brooch (K648); Simple Wire British, 2 Colchester, Fiddle Brooch, Penannular Fowler D4 (K649); Penannular Fowler D1, Unclassified pin fragment (K747); Fiddle Brooch, 2 Strip Bow Brooches, Penannular Fowler D2 (K760); Colchester (K762); Aucissa Derivative (K822); Aucissa Brooch (K824); Simple Hinged Brooch (K825); Fiddle Brooch, Strip Bow Brooch, Colchester Derivative B, Penannular Fowler A (K828)
Context Group III, total 28: Simple Wire British, 3 Aucissa Derivatives, Rosette Derivative, Strip Bow Brooch, Dolphin Sprung, Misc Bow Brooch Hinged Pin (K580); Dolphin Hinged (K580A); 2 Simple Wire British, Colchester, 2 Aucissa Variants, Aucissa Derivative, Fiddle Brooch, Strip Bow Brooch, Colchester Derivative Hybrid, Camerton, Unclassified Pin Fragment, Penannular Fowler D1, Penannular Fowler D3 (K580B); Penannular Fowler D3 (K583), Colchester, Unusual Colchester Derivative (K612); Simple Hinged Brooch, Keyhole Brooch (K637); Hod Hill (K646)
Context Group IV, total 7: Aucissa Derivative, Strip Bow Brooch (K647); Simple Wire British, 2 Strip Bow Brooches, Misc Bow Brooch, Penannular Fowler D5 (K659)
Context Group V, total 7: Dolphin Hinged, Penannular Fowler A3, 2 Penannular Fowler D, Unclassified Penannular (K614); Polden Hill (K658); Aucissa derivative (K829)

From the outset, the excavators were of the opinion that the brooch assemblage was not directly associated with the deposit of massacred bodies, and yet many discussions of the dating of the massacre have hinged on the chronology of these brooches. It is obvious that strands of varying degrees of association need to be unravelled, but first it is useful to reiterate the stated hypothesis of 1972:

> It seems likely that traders' booths and stalls stood just inside the town gate, to catch the attention of rustics and their wives as they brought their goods to market. This, at least, is the most reasonable explanation for the scores of bronze brooches which were scattered down the length of the entrance – that they had come from a trinket-stall, which had been overthrown in the course of the final struggle at the gate. (Alcock 1972a, 163)

Following preliminary discussions between the author and Adrian Olivier concerning possible interpretations of the brooch assemblage, he undertook a study of the wear and condition of brooches amongst the various contexts, with particular attention to any signs of burning. These analyses were purely subjective and depended on observations by eye; it would certainly be

Table 8: Brooches from the massacre deposits: occurrence condition and cultural attribution

context group	*context*	*number of brooches*	*condition*				*cultural attribution*			
			fresh	*worn*	*too corroded*	*burnt*	*military Roman*	*?military Roman*	*native*	*un-identified*
I	852/853	4	1	-	3	-	-	1	3	-
	856	2	1	-	1	-	-	-	1	1
	850	2	2	-	-	-	-	1	1	-
	747	4	-	-	4	-	-	-	2	2
II	591	16	12	2	1+?1	3	-	4	10	2
	597	16	7	2	6+?1	1	3	2	8	3
	648	4	-	-	3+?1	-	1	-	3	-
	649	5	3	2	-	-	1	-	4	-
	669	1	1	-	-	-	-	-	1	-
	746	1	-	-	1	-	-	-	-	1
	760	6	5	1	-	2	1	-	4	1
	762	1	-	1	-	-	-	-	1	-
	822	3	-	1	2	1	-	1	-	2
	824	2	1	-	?1	-	-	1	1	-
	828	4	1	1	?2	1	1	-	2	1
III	583	1	1	-	-	1	-	-	1	-
	589	1	-	-	?1	-	-	-	1	-
	630	1	-	1	-	-	-	-	1	-
	580/580.2	24	19	4	?1	5	3	4	14	3
IV	647/659	7	4	2	-	5	-	1	5	1
V	614	5	-	2	3	-	-	-	4	1
	829	3	1	-	2	-	-	1	-	2
	646	1	1	-	-	-	1	-	-	-
	658	1	1	-	-	-	-	-	1	-
summary										
I		12	4	-	8	-	-	2	7	3
II		59	30	10	19	8	7	8	34	10
III		27	20	5	2	6	3	4	17	3
IV		7	4	2	1	5	-	1	5	1
V		10	3	2	5	-	1	1	5	3
totals		115	61	19	35	19	11	16	68	20
			53%	17%	30%	17%	10%	14%	60%	16%

useful for the preliminary results to be checked and extended by chemical or other scientific means at some future date. However, the first results display some interesting patterns and the summary figures are presented in Table 8.

If the minimum number of bodies represented in the massacre deposits is 22, and the standard costume of an adult might have included two brooches (A Olivier pers comm), then it seems highly unlikely that the total of 115 brooches derived from the massacred bodies represented in the excavated deposits. Furthermore, only 17% of the brooch total appeared to have been burnt. The highest incidence of burnt brooches occurred in the west chamber (Context Group IV), where five out of the seven (71%) were burnt. It seems likely that these brooches may have been associated directly with the *in situ* massacre deposits in that location. But interestingly, none of the 12 brooches from the other *in situ* deposits at the gate threshold (Context Group I) showed signs of burning. In the middle and upper passageway the brooches displayed much lower instances of burning than in the west chamber: 14% in the Context Group II and 22% in Group III. There was no simple correlation between degree of burning and brooch type, or relative chronology of the types. It seems possible that the main assemblage in the passageway derived from more than one source of activity and that both these activities differed from the pattern of deposition that had led to the inclusion of brooches in the *in situ* destruction layers. This hypothesis is confirmed by the dating of the various groups of brooches. The groups from the middle to upper gateway Context Groups and the covering rubble (Context Groups II, III and V) contained assemblages which were dated by Olivier slightly later than those recovered from the *in situ* deposits of Context Groups I and IV. All the groups, however, belong to the middle decades of the first century AD (see Olivier, below). It may be that the burnt examples in the passageway came, like the fragmented human remains, from cremation pyres situated on the hilltop, whereas the unburnt brooches may have derived from a different primary source. However, there was no obvious splitting of the different brooch types, or their relative chronologies, among the groups of burnt and unburnt brooches. The unburnt group seemed to include more brooches of slightly earlier date, but some of these may have been residual items.

Of those brooches whose surface condition could be assessed, it was found that a high proportion (76%, against 24% worn examples), were in fresh or mint condition. In general, the native forms were more worn than the Roman. Only 10% of the brooch total could be assigned to types of possible Roman military attribution (Aucissa, Aucissa variant, Hod Hill, and related derivatives). None of these were found in the *in situ* massacre layers of Context Groups I and IV. They were fairly common in the middle and upper passageway deposits, where they displayed a higher than average degree of burning. If the military type brooches had been worn by Roman soldiers, and this assertion can be questioned on several counts (see Olivier, p199), this might imply that the bodies of some Roman soldiers were burnt on the cremation pyres inside the gate.

The majority of the brooches, 72% of the identifiable types, were of native type and manufacture. Indeed, the general aspect of the entire assemblage is native, and Olivier has argued that, with the exception of the military pieces and a few later types, most of the brooches may have belonged to the native inhabitants of the hillfort. Thus we return to Alcock's original hypothesis. If a few brooches can be assigned to the *in situ* massacre deposits in the west chamber, and some burnt examples are argued to derive from the victims of the pyres, then most of the assemblage is still to be accounted for. Olivier has made the fascinating observation that 'some of the groups and sub-groups (particularly of Aucissa derivative and strip bow) are very consistent, employing many decorative techniques in common, and could conceivably belong to the stock-in-trade of a brooch dealer' (A Olivier pers comm). These groups of brooches, however, include burnt and unburnt examples. Either some of the victims of the massacre were wearing brooches supplied by such a dealer, or some of the brooches in this 'commercial' group were spilled into destruction layers which were still hot. The hypothesis of a trinket stall situated inside the gate still holds some attraction, and can be compared with those suggested at the Romano-Celtic shrine site of Woodeaton in Oxfordshire; another site which produced more than 100 brooches (Kirk 1949). Alternatively, a 'stock-in-trade' group of brooches might have been gathered together in a bag and lost, like the keys and latch-lifters, as a 'hoard of flight'. In such a case, the brooches could have been dispersed at the time of loss, or subsequently by natural means when the human remains, ornaments, silt, and pottery were working their way down the slope. In this respect it is interesting to note that a high proportion of the brooches derived from the middle passageway levels (Context Group II), which had banked up against the hump formed by the *in situ* debris from the destruction of the wooden gate.

The gate furniture and structural ironwork

Context Group I: 3 bolts (K850, 852, 856), 7 nails (K856), rod (K856)
Context Group II: spike/collar (K597), double-spiked loop (K591), 3 L-shaped lift-keys (K597), 7 L-shaped latchlifters (K597), 1 nail (K669)
Context Group III: 2 nails (K580)
Context Group IV: L-shaped lift-key (K659), 10 nails (K647, 659, K681), 2 clamps (K647) 1 loop/staple (K659), 2 double-spiked loops (K659, K681)
Context Group V: 9 nails (K614)

It is immediately apparent from the above listings that structural ironwork was found most commonly in the *in situ* deposits of Context Groups I and IV; the items presumably derived from the gate itself and the wooden superstructure of the west guard chamber. The iron door spike and collar were *in situ* and provided support for the eastern door of the gateway destroyed by fire. The group of keys and latch-lifters, also visible in Figure 50, was found immediately inside the gate. There was a total of seven latch-lifters and three keys, with a further key found in the western chamber. Most items were complete, or almost complete (C Saunders pers comm). It seems unlikely that all these latch-lifters and keys belonged to the south-west gate, and Saunders would prefer to view them as a hoard. In this case we may be dealing with a 'hoard of flight' – a trusted individual having gathered together the locks and keys of all the major structures located within the hillfort at the time of the attack, but having failed to remove them to a point of safety on lower ground. Alternatively, they may represent a deliberate deposit alongside the groups of weaponry and ornaments.

Finds distributions

During excavation, some of the small finds from sectors of some of the major contexts were recorded two-dimensionally. For the passageway, no complete distributions can be reconstructed, but analysis of the plots available in the archive has shown that the distribution of objects was fairly even, with no particular clusters, and no incidence of higher densities towards the sides of the passageway, or any other general characteristics of that nature. The only tight grouping of objects was the gate furniture discussed above. However, in the case of the western guard chamber, an almost complete distribution of small finds can be pieced together (Fig 57), and various clusters of material can be identified. The heap of weapons and armour and the spread of spearheads to the east of it were the most obvious. By contrast, items of structural iron and the ornaments are more evenly distributed.

Synthesis

by Ann Woodward and J D Hill

Detailed studies of the different categories of material found within the massacre levels at the south-west gate have suggested that the processes of deposition were multiple, variable, and complex. At least seven contrasting modes of deposition have been proposed:

1 Debris from the *in situ* destruction of the gate. These deposits comprise mainly charcoal and ash and incorporated burnt wooden superstructure relating to the gate and the guard chamber, iron gate furniture, a few human bodies, weapons, armour, some ornaments, and a few of the brooches.

2 Fragmented remains of victims from a pyre or pyres situated north of the cutting, pulled down the gate passage by gravity, water, and animals. These remains included the majority of the human remains, most of the ornaments, and some of the brooches.

3 The results of the secondary disposal of a group of skulls (or severed heads), possibly previously displayed in the vicinity of the entrance. This finds group comprised the burnt skull fragments.

4 Lost hoards. Two groups of objects can be interpreted as 'hoards of flight', one dropped in a single location (the keys and latchlifters) and the other dispersed along the gate passage (the 'stock-in-trade' brooches).

5 Deliberate structured deposition of human body parts, ornaments, and weapons, the last often in a ritually broken or folded state.

6 Silting around the remains within the gate passage. This process of deposition involved the incorporation of the pottery, and a few of the brooches, especially those of slightly later first century AD date.

7 Deliberate covering of the remaining visible debris in the passageway, and levelling-up for the roadway associated with the reconstructed stone gate passage. These deposits contained redeposited finds from the layers below, occurring in low proportions.

Two major episodes of destruction were identified in the stratification, but most of the finds were associated with the first. They appear to have been associated with a major battle. Certainly the *in situ* deposits contained weapons and armour of both native and Roman military type. Presumably both sides suffered casualties. Historical tradition would imply that any bodies left to decay where they fell would have been the natives, and that any Roman soldiers killed would have been the subject of carefully orchestrated funeral rites, associated with the appropriate honours. The pyre or pyres postulated to have been constructed within the entrance might have fulfilled such a function. Some of the brooches associated with the remains of the pyre victims might suggest that they were Romans, but ornaments (bracelet and finger rings) of native type were also present. Some of the few bodies left in the destruction deposits may have been soldiers – the owners of the near-complete sets of military equipment contained within the burnt deposits of the western guard chamber (Fig 57).

Thus the deposits derived from battle, but they may also have been reworked, not simply by natural but also by human agency. It is the consequences of this reworking which have been recovered archaeologically. Many of the artefacts are unlikely to have been casually discarded. Deliberate deposits associated with boundaries are now well attested, not least at Cadbury (see p83), and such deposits are commonly found near entrances. The choice of the south-west entrance at Cadbury may be connected with the ideological conflation of west with back/dark/death (Parker Pearson forthcoming). The artefact categories deposited are also likely to have been selected. The majority of Iron Age weapons in Britain derive from votive deposits such as graves, watery places, and shrines. The bending, folding, and 'killing' of weapons is a characteristic of such deposits and is a characteristic of the 'massacre' levels. The presence of Roman armour and catapult heads in supposedly native ritual deposits may simply reflect the incorporation of the exotic into indigenous practices, as evidenced in Roman Gallia Belgica, where Roman military equipment has been found in post-conquest native votive deposits.

Like weapons, brooches are also found in deposits associated with ritual. Brooches were deposited in the Iron Age ditch terminals at the Uley shrine (Woodward and Leach 1993) and south of the eastern entrance of the shrine at Hayling Island (King and Soffe 1994).

It is possible that although the main deposits could date from the time of the battle, other deposits were laid down over a longer period of time, with some of the rubble layers in the passageway representing successive deliberate deposits. Such an explanation could solve some of the chronological difficulties presented by the brooch assemblage. These deposits were certainly respected during the rebuilding of the entrance some years later. Rather than simply clearing out the deposits they were paved over, implying that they had become a form of foundation deposit for the new gateway.

Context, chronology, and history

by Ann Woodward

As we have seen, Alcock was anxious to relate the periods of activity recognised in the south-western gateway to the known historical events recorded in the classical texts. These include the campaign of Vespasian in the south-west from AD 43/44 and the Boudican revolt of AD 60/61, discussed by Manning (1976), but the internal disruptions of AD 47, recorded by Tacitus (*Annals* 12.31), may also be of relevance, for these uprisings are now thought to have occurred east of the Trent and Severn, and probably in the south (A Barrett 1979). In addition, there may have been many other conflicts not recorded in the surviving historical texts. The very fact that so many hillforts in the south-west were occupied by the Roman army attests to a continuing period of native unrest in these regions (Todd 1987, 191–2).

In an attempt to establish a relationship between the first century AD episodes in the gateway and those detected within the interior a summary of the available dating evidence may be offered. A general description of the Late Cadbury plateau structures, shrine, barracks, and oven, will be provided in the next chapter; here we are concerned solely with their dating. The massacre had previously been dated by the brooches. It is now concluded that many of these were not directly associated with the human remains and, furthermore, most types can only be dated within a mid-first-century bracket. Similarly, items of Roman military equipment cannot be dated to individual decades within the first-century, although most are presumed to date from the time of the conquest or later. The finest dating is given by the pottery, with Savernake Ware and other initial Roman types occurring in the silt in and among the human remains. Following the possible rearrangement, abandonment, and sealing of the massacre deposits, the rebuildings of the stone ramparts (Episodes X to XIII) are dated by Roman pottery, various brooches of the first and second centuries and a Roman signet ring. The dating of the final conflagration of Episode XIV is given by further Roman pottery and metal items, including a second-century brooch. Finally, the radiocarbon dates, which may indicate more than one phase of burning, centred on the second- or early-third-centuries AD.

Turning to the interior, the construction of the porched shrine, structure N5, is dated by pottery which includes two pieces of terra rubra which could be pre-conquest imports and 51 sherds of conquest period Savernake and Shepton Mallet wares. The date of its decay, or more probably destruction, cannot be determined. The activity associated with the barracks in Site BW is dated to *c* AD 41–68 by six sherds of samian and to *c* AD 40–70 by 22 fragments of amphorae and a mid-first century lamp. The currency of the associated military equipment could have spanned the period AD 43–148. However, the placement of an oven, also dated to the same time bracket, above the demolished foundations of one of the barrack buildings suggests that they were relatively short-lived.

It is evident that the dating evidence obtained from Cadbury Castle cannot be employed to determine exact dates, whether they be AD 43/44, 47, or 60/61, for any of the early Roman structures. The dating evidence from other sites is equally ambiguous. There are hints that the catapult bolts found in the house at Hod Hill could be the result of using the hillfort as a post-conquest practice ground (Maxfield 1989, 25), while the 'war cemetery' graves at Maiden Castle may represent the victims of warfare staged elsewhere (Sharples 1991b, 125). In any case, the sequence of events at the eastern entrance of Maiden Castle is probably far more complex than Wheeler envisaged. These, and other south-western sites which have produced military evidence, all require fresh contextual analysis before any comparisons can be attempted.

However, given the new stratigraphic sequence proposed for the gateway, it would be possible to follow the attempts by Alcock to offer an extensive series of alternative scenarios attached to historic dates. Any number of possibilities giving a massacre in either AD 43/44, 47 or 60/61 are plausible, but the dating evidence does not allow the reconstruction of a firm historical narrative. Similar problems also arise in Gaul (Hamilton 1995). However, the final point to be emphasised is that the actual date, or even the exact sequence of events, is not central to any full understanding of the human processes that were taking place. The questions to be answered are how and why, not when.

We have covered many issues in our detailed contextual studies of the deposits in the gateway. These relate to how the gate was attacked, how the occupants of the hillfort attempted their defence, how the bodies of both factions might have been treated immediately after the assault, how and why the deposited remains may have been reworked or displayed, why the deposits were sealed with such care, and how the aggrandised entrance passage was constructed over these remains. Such questions as these surely are the principal subject matter of archaeological enquiry. We are glimpsing the actions of people undertaken in the face of disaster, mourning, and glorification in the aftermath of internecine conflict. The exact moment within the first century AD when this stage of stress may have occurred is not only unknowable; it is largely irrelevant.

This account has attempted to present one reasoned analysis of events that may have led to the deposition of the various categories of material recovered during excavations at the south-west gate. As further research could be undertaken for most finds categories, this presentation is by no means a definitive one; it is intended to raise questions as much as to answer them. Finally, it must be emphasised that the reconstruction of events discussed above relates only to the south-west gate. The other gates of the hillfort, and the rest of the defences, may contain data which might derive from yet further episodes of attack or destruction which were not experienced at the south-west gateway, or, indeed, data which might refute the hypotheses put forward in the study presented here.

The material residues from the gate

The material which makes up the so-called massacre deposit is published below. It is published fully in an attempt to emphasise the character of the assemblage. The specificity of the assemblage must be recognised; it is not intermixed with a wider range of debris which might normally be associated with domestic activity. The pottery sherds from these contexts are small and eroded, indicating that the material probably washed in with the soil matrix. The very small numbers of additional stone, glass, and worked bone artefacts are listed at the end of these catalogues. It should be noted that no clay or stone slingshot was recorded as directly associated with the deposit. A fuller discussion of the material culture from the hillfort will be found in Chapters 6–9.

Each catalogue of material is organised in a slightly different manner, although a consistent level of information is maintained throughout. The way the material has been organised is explained at the beginning of each catalogue entry.

The human skeletal material

by Stephen Forbes

A preliminary identification of the human skeletal material was made by Dr A Young while that of the dentition was conducted by Dr D Lunt. However no comprehensive analysis of the bone assemblages from each context was ever undertaken and therefore cannot be presented here. The following comprises a context-by-context review of the material based upon the catalogues produced by Drs Young and Lunt. The term massacre is used here, as elsewhere due to its historical appellation, but should not be understood to prejudge the nature of the deposit's formation.

The contexts have been subsumed under five Context Groups (I–V) (see p107), and these are used as sub-headings within the body of the text, under which a more detailed description is then presented. The minimum number of individuals present in each context is given. These are assigned to four separate categories: infant (<1 year), child (1 to 10 years), juvenile (11 to 19 years), and adult (>19 years). These categories are fairly arbitrary and are intended as merely a general indication of age. Normal practice in estimating minimum numbers is followed based upon the incidence of certain skeletal elements within the individual contexts. The minimum number given should only be used as a guide, as this does not represent the total population present, due to the very real possibility of skeletal element mixing between contexts. The presence of disarticulated and scattered remains makes ageing and sexing a more difficult task.

The skeletal material was aged on the degree of epiphyseal fusion, degree of cranial suture closure, and for the younger age categories, general morphology. For the dentition, a more accurate assessment of age was available from the degree of dental development, less so in regard to dental attrition. Only if age can be assigned with any accuracy is it mentioned in the text; otherwise, it is subsumed into one of the four classifications given. In a few instances a tentative assessment of sex was made and this has been included where appropriate. This was in the main based upon the sexual characteristics evident from the extant mandibles, although in one instance a bone's gracility is used to provide an indication of sex, a more arbitrary and doubtful method. A general summary of the bones present is given, which in the main were fragmentary, along with any evident burning seen upon on the material. Any skeletal modifications are also noted.

Context Group I: outside threshold

The minimum number of individuals represented in context K849 is three, one juvenile and two adults. The juvenile material comprises both clavicles, left ilium, left scapula, and a right calcaneum. Age is put at approximately 10–12 years. For the adult individuals, the material consists of long bones, with four ulnae and three radii, and a distal piece of right humerus. In addition, 13 vertebrae are present from the cervical, thoracic, and lumbar regions of the spine, and duplication of certain vertebrae is noted. This, along with the presence of two left calcanei, indicates that at least two adults are represented. The age of these individuals is placed in the early twenties. No burning is evident on any of the bones. However, it is noted that a piece of mud/clay had become fused to the humeral shaft, possibly as a result of the bone's proximity to a heat source.

A number of individuals are represented in context K850. Minimum numbers indicate one young child, three juveniles, and three adults. Little remains of the child apart from a few cranial fragments and a thoracic vertebra consisting only of the neural arch and pedicles. The juvenile material consists in the main of cranial and vertebral pieces. Only two of the long bones are represented, with four metatarsals from the right foot, a proximal foot phalanx, and an intermediate hand phalanx. Both a maxillae and a mandible are present, albeit in a fragmentary state. A few teeth are extant; some of the permanent dentition has erupted, and the first molars manifest some wear. A number of vertebrae of adult origin are present, especially from the cervical region, with three atlas (c1) vertebrae represented. Additional adult material comprises a right scapula, ribs, innominate, various fragments of long bone, and tarsal and metatarsals from the feet. Of the hands only one metacarpal and three phalanges are present. No adult cranial fragments were found. Burning is seen, although this varied between bones. Cranial material from the juvenile is badly burnt with, in one instance, fusion of a number of pieces. Also noted is the fusion of an adult fragmented cervical vertebra (c2) to its inferior neighbour in the region of the posterior arch. Ribs are in the main clear from burning, although four pieces evidenced burning on all surfaces. The same variability in burning is seen with the adult hand phalanges, with two badly burnt and the third undamaged, possibly the result of being from different hands or even different individuals.

Various fragments of human bone are found in context K852, which indicate a minimum number of individuals of one juvenile and one adult. The juvenile material comprises consists of segments of unfused sternum, the proximal head of a femur, and some pieces of rib. Adult material analysed comprises a right clavicle, three lumbar vertebrae, a left fifth metatarsal, two left metacarpals, and four hand phalanges, proximal and intermediate. In addition, pieces of calvarium, sphenoid, and long bone are also present, although it is unclear as to which of the two individuals these pieces belong, being probably a product of both. Burning is evident on some of the material, especially the calvarium and long bones, where both external and internal surfaces are affected. The right clavicle and one of the hand phalanges had a clay/mud concretion fused to the bone. Whether this was due to the bones' proximity to heat is unknown, although no burning is evident on any of the cortical surfaces.

The context K853 contains little material apart from several pieces of fairly thin cranium, and a number of pieces of long bone. A minimum of one individual is represented, and it is assumed this is of adult origin. Burning is evident, as all the cranial fragments, save one, are heavily burnt on both the ectocranial and endocranial surfaces and at the margins. Fusion of some of the long bones with the soil has also occurred.

A minimum of one adult individual is present in context K854, which comprises three pieces of skull. These consist of a piece of right maxilla, although no teeth are left *in situ*, a piece of calvarium, and possibly a piece of zygoma. All three of these pieces are heavily burnt.

In context K856, a minimum number of three individuals are represented, a child, a juvenile, and an adult. Of the child, only a few pieces of cranium are extant. More of the juvenile remains, in the form of a scapula, pieces of innominate, distal epiphysis of a humerus, a proximal piece of femur and three metacarpals. Most of the material in the context is of adult origin. Many vertebrae are present from the cervical, thoracic, and lumbar regions of the spine, with long bones present only from the upper body apart from one piece of femur. Other material comprised various fragments of the manubrium, sternum, left clavicle, left scapula, left ilium, left patella, and a large number of ribs. Metacarpals and metatarsals (shafts only) are present in small numbers, along with hand phalanges from the proximal, intermediate, and distal regions. It is perhaps worthy of note that where side could be assigned, most of the material present, for the juvenile as well as the adult, came from the left side of the body. Burning is evident, as fusion has occurred in the case of some of the fragments from the child's cranium, and also in the case of some adult bone fragments.

Context Group II: middle passageway

For context K591 the minimum number of individuals identified is seven: two children, two juveniles, and three adults. One of these adults is over 30 years of age, based on the degree of cranial suture closure, and is possibly male. The child material comprises pieces of innominate, vertebrae, a scapula, a piece of femoral neck and a calcaneum. The juvenile material is not much more extensive, with a left scapula, two tibiae from different individuals, a distal piece of left humerus, a calcaneum, and 11 metacarpals. The adult material has all the long bones represented to varying degrees. Additional adult material comprises vertebrae from the all areas of the spine, a pair of scapulae, cranial fragments, tarsal bones, phalanges from both hands and feet, and a number of metacarpals and metatarsals from a minimum of three individuals. Evidence for burning comes from the adult material alone, with tarsal bones and cranial fragments demonstrating this to variable degrees. It is noted that on the left scapula a groove is evident in the cortical surface. This has been interpreted as a cut mark, although no more detail has been given. In addition, animal gnawing on one of the bones is evident.

The minimum number of individuals in context K597 is five, two children, one juvenile, and two adults. Of the children, a few long bones are present, as are pieces of innominate and sacrum, three metatarsals, a metacarpal, and scapulae. The juvenile consists of pieces of cranium, humerus, fibula, some vertebral arches, phalanges from the hands and feet, and a right second metacarpal. Adult material largely comprises fragments from the upper long bones, apart from a single piece of femur. Other adult material consists of cranial fragments, vertebral pieces of which two axis (c2) vertebrae are evident, some tarsal bones, and metatarsals, with the right metatarsal compliment complete. In addition, one metacarpal is present along with rib fragments and some proximal foot phalanges. Burning is seen on the cranial pieces, with both ectocranial and endocranial surfaces affected, and on the adult tarsal bones, and one of the proximal foot phalanges is heavily affected. Little burning is evident on the child or juvenile material, although one of the child radii displayed slight signs. The full compliment of adult right metatarsals recovered may well be attributable to their interment while still anatomically related, that is, with the soft tissue still adhering. One of the long bone shafts from the child material evidenced some marks. It is suggested by the investigator that this may be due to gnaw marks from a small rodent. Marks found on some femur fragments may, the investigator believes, be the result of a possible violent blow.

In context K649 the minimum number of individuals is put at three, consisting of one child, one juvenile, and one adult. The child material comprises two teeth, a first and second molar from the right maxilla. These are aged to approximately six to seven years, and may well be from the same individual. A third tooth found in this context is identified as a right mandibular second molar from an individual of approximately 13 to 14 years. One extra tooth is present, an animal deciduous molar, probably pig, aged around a year. The adult material comprises cranial pieces, long bone elements, a right clavicle, rib fragments, two vertebrae (c1 and c2), tarsals, metatarsals, and a hand phalanx with green staining. Burning is seen but tends to be variable in nature. Cranial pieces demonstrate several degrees of burning: on both ectocranial and endocranial surfaces, on the ectocranial surface only, and no burning whatsoever. The right clavicle evidences grooves in the cortical surface, but it is unclear whether they were the result of a small rodent or of excessive post-excavational cleaning.

The material from context K669 represents a minimum of one individual of adult origin. This consists mainly of cranial fragments, apart from one piece that may be part of a scapula. Most of the pieces showed signs of burning on ectocranial and endocranial surfaces and at the margins. Two pieces are unburnt, although one has an adherent 'cement-like' attachment which may be the result of the bone's close proximity to a source of heat.

In context K746 a minimum of two adult individuals are represented. Pieces of cranial vault are present, as are two left ulnae and one left radius, which together comprise the upper long bone compliment. Of the lower limbs, only a piece of mid-shaft of the left tibia is extant. The left hand is well represented by all the metacarpals, along with five of the left carpal bones and two phalanges. Bones of the right foot consist of the first four metatarsals and a few tarsal bones, with a base from a first metatarsal, probably from the left foot. Also evident in the context are a few pieces of rib and a part of a thoracic vertebra. The left half of a mandible is present with the three posterior molars *in situ*, along with an additional three loose teeth. Burning is evident on a number of the bones, but this is variable. All the cranial fragments are burnt on both ectocranial and endocranial surfaces, as well as on the margins. Ribs have also been subjected to burning as have the metatarsals, the latter consisting of the proximal heads only, which are fused together at the base by a kind of 'cement'. Conversely, the vertebra and left hand showed no evidence for burning whatsoever. It is suggested by the large number of bones from the left hand that this portion of the anatomy entered the burial record as one piece, that is, fleshed to some degree.

Little human material is present in context K747, representing a minimum of one adult individual. What is present consists mainly of a few fragments of long bone. These are burnt externally and, on one, partially on the internal surface. In addition, a right intermediate cuneiform is present, again evidencing burning. It is suggested that this tarsal bone may be from one of the individuals represented in K746.

A considerable amount of material is present in context K760. The minimum number of individuals is put at eight, represented by two children, one juvenile, and five adults. The child material comprises cranial fragments, plus a number of long bones mainly from the upper body, along with ribs, vertebrae, and metacarpals. In addition, pieces of mandible are present, with dentition, from two separate individuals. Little juvenile material is represented apart from cranial fragments, a right fourth metatarsal, four right metacarpals, and phalanges from the proximate and intermediate region of the hands. The larger part of the material is of adult origin. This consists of two pieces of right mandible from separate individuals, one comprising *in situ* dentition from the first premolar to the third molar. All of the long bones are represented to varying degrees, with a number of vertebrae and cranial fragments present. Many bones from the hands and feet are seen; in fact, there are five right fourth metatarsals, providing the basis for the adult minimum number. The hand bones all come from the right side of the body, with one full set represented, along with a number of right carpal bones. Evidence for burning is seen on the adult cranial fragments on all surfaces and at the margins, and long bones are also burnt both on the exterior surface and on the interior. Two pieces of child crania display possible evidence for burning on the endocranial surface only. Also on a large intact piece of juvenile cranium, consisting of the left parietal and most of the occipital, there are three grooves or cuts on the exterior surface, which did not penetrate the outer table. No suggestion concerning their origin was made. On an adult proximal hand phalanx a bronze ring was found (Fig 70.7).

There is little material in context K762. Of this a minimum of two individuals are represented, one juvenile and one adult. The juvenile material comprises the proximal epiphysis of a left humerus only. The adult material consists of a right fifth metatarsal and a piece of possible cranium. Burning is evident only on the piece of possible cranium.

A minimum of one adult individual is present in context K822. The two pieces extant are of calvarium, which are heavily burnt on the ectocranial surface, less so on the endocranial.

Context K824 consists of a number of pieces of calvarium and of a proximal piece of humerus. The minimum number is put at one adult. Burning is evident at the distal end of the humeral fragment.

A single piece of proximal right radius is present in context K825, producing a minimum number of one adult. The bone evidences traces of slight burning.

In context K846 a minimum of two individuals are represented, one juvenile and one adult. The juvenile material consists of two teeth, an incisor and a molar, which show little wear, a few pieces of innominate and five metatarsal shafts with their epiphyses missing. Material from the adult comprises various cranial fragments, ribs, pieces of long bone from the femur, tibia, and radius, and a number of vertebral fragments from the thoracic and lumbar regions of the spine. Evidence for burning is present on pieces of juvenile ilium, and from the adult cranial fragments, long bones, ribs, and some of the vertebrae. Some of the ribs display an adherent mud/clay substance which has fused to the bone's surface.

The material in context K862 is solely of adult origin, although a small piece of thin shaft may be from a child, but this is uncertain. Minimum number can only be put at one adult on this basis. The material comprises a piece of calvarium, partial left radius and a long bone fragment, two ribs, one vertebra from the thoracic region, and a metacarpal, possibly a first right. The metacarpal has been heavily burnt as has a piece of radial shaft.

Context Group III: upper passageway

In context K556 eight pieces of unidentified long bone are present. A minimum of one adult is represented. It appears half of these pieces have been subject to burning, the other half have not.

The material from context K558 represents a minimum of one individual of adult origin. There are two pieces from the cranium and one from a long bone shaft, possibly radius. The cranial pieces are burnt, although the shaft fragment is not, but it does show some sort of external encrustation, for which the investigator has suggested lime.

The minimum number of individuals represented in context K580 is five, comprising one child, one juvenile, and three adults. Little remains of the child apart from some cranial fragments, including a piece of left sphenoid. A child's tooth is present, a maxillary left first molar, approximate age six to eight years. Of the juvenile the extant material consists of a third metacarpal, without its epiphyses, and four metatarsals. In addition, a small fragment of the right maxilla is present, comprising the second and third molars. The third molar is in the process of eruption, suggesting an approximate age of eighteen. The largest contingent of material is of adult origin relating mainly to the cranium. From this it is evident that one is almost certainly male, and aged over 30, based on the degree of cranial suture closure. Another suggests an age of approximately 20–25, based on the degree of dental attrition, derived from a fragment of the left maxilla carrying seven erupted permanent teeth (2–8). Also evident within this piece of dentition are two caries on the approximal surfaces of the first and second molars. Other adult skeletal material present consisted of fragments from all the major long bones apart from the humerus, pieces of rib, possibly a piece of ilium, a thoracic vertebra, a second right metacarpal, and the proximal phalanx of the first metacarpal. Evidence for burning appeared on the adult material, particularly the cranial and long bone fragments. The cranial fragments display variable burning from none at all to only the ectocranial surface, and on a number to both exterior and interior surfaces. A couple of instances of material becoming fused to the endocranial surfaces were noted, with carbonised grains included within the accretions. The jaw fragments also display evidence for burning on all but one piece. On one piece of bone, identified as possibly from an ilium, there are what appear to be tooth marks on both sides of the bone at its margin.

Only adult material is represented in context K583. This would appear to be from a minimum of one individual, comprising pieces of thick calvarium, a piece of patella, and pieces of long bone and ribs. In addition, a small fragment of left mandible is present with the second and third molars *in situ*. The degree of molar attrition suggests an age in the region of 25–35. Evidence for burning comes from both cranial and long bone fragments. Adherent concretions on the bones are also apparent.

Only pieces of adult cranium are represented in context K589 from a minimum of one individual. The majority show no evidence of burning, while two pieces demonstrate burning on both ectocranial and endocranial surfaces. Upon reassembly of certain pieces of cranium the investigator noted damage in the lambda region of the skull and another at the margin of the left parietal. It is suggested by the investigator that these may have been caused by blows to the skull.

In context K612 only a few pieces of human material are represented. These appear to be from a juvenile and represent a minimum of one individual. This comprises two pieces of calvarium, a proximal third of humerus with epiphysis unfused, and two pieces of fibula. Burning is evident only on pieces of the calvarium, on both ectocranial and endocranial surfaces.

Little is represented in context K630 apart from six fragments of adult calvarium, producing a minimum of one individual present. Two of these evidence no burning whatsoever; three display burning only on the ectocranial surface; and one is burnt on both the exterior and interior.

The minimum number of individuals represented in context K637 is two, consisting of one child and one adult. Little of the child remains apart from a piece of rib. The adult material comprises pieces of calvarium, long bone fragments, and a piece of rib. No burning is evident on the rib from the child, yet on the adult material there are traces on the cranial and long bone fragments, on both external and internal surfaces. The investigator found 'cement-like' adhesions on both cranial surfaces, and also appearing on the internal long bone surfaces.

From context K646 a minimum of one adult individual is represented. The material consists of three pieces of cranium, a piece of distal left humerus, and a piece of rib. Of these only the cranial fragments show any burning, and this is apparent on both ectocranial and endocranial surfaces.

In context K650 a minimum of two juveniles are represented. The first is an individual aged around 18 years. Both a left femur and a left tibia have been recovered along with the unfused epiphyses. The greater trochanter epiphysis on the femur has only recently fused to the head of the shaft. Tarsal bones and a piece of fibula are also present. Sex is tentatively expressed as female (Fig 58). The second juvenile individual is derived on the basis of the recovery of the proximal epiphysis of a tibia. Age is put around 10–11 years. No burning appears to be in evidence on any of the bones.

Context Group IV: west guard chamber

In context K647, the human material comprises of cranial fragments, pieces of long bones and ribs, and a proximal phalanx from the hand. The minimum number of individuals represented is one adult. Burning is seen on all bones to varying degrees, with the cranial material attesting to burning on both endocranial and ectocranial surfaces.

The second of the contexts in this group, K659, contains primarily human material, along with a few animal bones. From the analysis it appears that minimum number of individuals represented is three, one juvenile and two adults. Material from the juvenile consists of a piece of distal humerus, a scapula, a possible fragment of a navicular, and a metatarsal and phalanx, both of which, along with the humerus, lacked epiphyses. The adult material comprises fragments of cranium, pieces of humeri, radii, and ulnae from the upper body long bone compliment, and fragments of femora and tibia, from the lower compliment. In addition, a piece of possible clavicle, and some rib fragments are present. The feet are well represented by both tarsal bones, metatarsals, and various proximal and intermediate phalanges, along with a sesamoid bone. The fact that so many of these bones are present seems to indicate that they went into the ground as one piece, that is with soft tissue still present in order to maintain anatomical relationships, and thus aid recovery (Fig 57). Burning is evident on the tarsal bones with 'cement' adhesions present, although this is found to vary among different bones. Burning is not restricted to the tarsal bones, but is found on the majority of the other bones present, again with cement-like concretions adhering to the bones. Cranial fragments are also affected on both endocranial and ectocranial surfaces. The juvenile material also displayed burning on many fragments, apart from the left scapula. Marks found on some femur fragments may, the investigator believes, be the result of a possible violent blow.

Context Group V: sealing rubble

In context K610 a minimum of one adult individual is represented. The three pieces of calvarium present are fairly thick. Only on two of these pieces is there any evidence for burning. Of the largest of these pieces, a groove is evident whose edges suggest some sort of cut. The investigator has suggested that this may have been the result of a pre-mortem blow.

The context K614 contains a substantial amount of material. The minimum number of individuals represented is put at 12: one infant, three children, three juveniles, and five adults. Infant bones are noted but no description of the bones present is available. A piece of mandible, aged to approximately one year old, may well belong to this individual. No teeth are present. The child material comprises cranial fragments, pieces of innominate, vertebrae, pieces of long bone, ribs, and tarsal bones. Some dentition is also present, producing approximate ages for three individuals of three, four, and six. The juvenile material comprises many cranial fragments, especially from the temporal and occipital regions. Also in evidence are fragments from all the various long bones, various vertebrae from at least three individuals, mainly from the cervical region, ribs, clavicle, metacarpals, and metatarsals. Dentition is present from three separate individuals. Of the two where ages can be ascertained these are aged to approximately 13 years. The adult material is extensive, with many cranial pieces present, and all the major long bones are represented. The investigator suggests at least one male and one female are present. Additional adult material consists of ribs, scapulae, and vertebrae. The hands and feet are well represented in this context, from metacarpals and hand phalanges, to tarsals, metatarsals, and foot phalanges. The adult dentition present is from two individuals in the age range of 20–25, both possibly male. Slight calculus is evident on the teeth. Burning is evident on many bones to varying degrees. Principally cranial and long bones are affected, but also ribs, tarsals and pieces of mandible. One of the proximal hand phalanges demonstrates green staining, possibly due to a metal ring. Certain marks found on some femur fragments may, the investigator believes, be the result of a possibly violent blow.

In context K829 the minimum number of individuals represented is put at seven: two children, two juveniles, and three adults. The child material consists of a few pieces of innominate including two left ischia, a left scapula, clavicles, and a few pieces of long bone. Material from the juveniles consists of cranial fragments, clavicles, right innominate, scapulae, ribs, elements from the major long bones, tarsals, and phalanges from the hands and feet. The dentition examined suggests two individuals of approximately 12 and 15 years of age, with the latter displaying slight deposits of calculus. Adult material from the context consists of cranial fragments, scapulae, clavicles, pieces from all the long bones, and ribs. There are a good number of vertebrae from which it was concluded that at least three adult individuals are present. In addition, phalanges, tarsals, and metatarsals are present. An almost complete mandible with 14 erupted permanent teeth suggests an age of 25–35, possibly male. Calculus is evident on the teeth, but is not extensive. There is evidence for burning. This is mainly confined to the adult material where some cranial fragments, long bone pieces, ribs, and tarsals are involved to varying degrees, but also includes a piece of juvenile fibula. A number of the bones display green staining. This is evident from a distal fragment of a child's left radius, an adult left second metatarsal, and two hand phalanges. An intermediate hand phalanx was found with a ring (Fig 70.9).

The military copper alloy items

by Michael Bishop

These are illustrated on Figures 121 and 122 in Chapter 13.

Context Group I: outside threshold

Fig 121.26 *Lorica segmentata* fitting K856. Free-moving element from a hinged strap fitting formed from double thickness sheet. The object does not appear to have been cut out after doubling over. The upper face is rectangular with cut-off corners. The (presumably) original rivets with small, domed heads are *in situ*. Length 24mm, width 16.5mm, thickness 4.5mm, deduced strap thickness 1mm, sheet metal thickness 0.4mm.

Context Group II: middle passageway

Fig 122.27 *Lorica segmentata* buckle fitting K669. Double thickness sheet, as usual, but there are no visible remains of the normal hinge. This suggests either that the hinge did not exist, in which case this may be an internal leather fastening buckle riveted directly to a Corbridge Type A cuirass (although these are normally made from iron), or that the hinge was removed prior to deposition, either deliberately or accidentally (and the possibility must exist that it was deliberately converted into an internal leathering buckle). On the underside, the end of the sheet has quite clearly been intentionally cut with a slightly concave edge. The copper alloy spindle is the original, with burred-over ends, the loop is present, and the tongue is still articulated on the spindle. The buckle loop seems to have been formed by working a near-rectangular-sectioned bar in order to roll the central portion, giving it an oval section for much of the loop. The rectangular ends are pierced to take the spindle. The rivet, which is heterodox in appearance, may not be original. There are faint traces of incised lines running parallel to the long sides. Length 27mm, width 18mm, body width 13mm, body length 15mm, maximum thickness 4.5mm, sheet metal thickness 0.5mm.

From above the Roman layers

Fig 122.29 Buckle loop K489. From a *lorica segmentata* buckle fitting, probably a hinged buckle fitting (but see no 27). The loop itself has been formed from the rolling of a rectangular-sectioned bar which is pierced at either end to receive the buckle spindle. The line of the join that has resulted from the working is visible on the outer face of the loop. Length 15mm, width 17.5mm, thickness 2.5mm.

Fig 122.33 Embossed 'rosette' washer K855. 33 petals and beaded border. The object has been trimmed around its periphery, pierced centrally, and dented by a near-central blow, so seems to have seen service. Damage on the underside around the central aperture may suggest that the washer had been prised off and over its rivet. Diameter 32mm, height 5.5mm, rosette diameter 28mm, sheet metal thickness 0.3mm.

The ironwork (excluding brooches)

by Philip Macdonald

The late Iron Age and Roman military equipment, which represents the bulk of the gate assemblage, forms an important body of material comparable with those from Bredon Hill, Hod Hill, and Maiden Castle. The material is discussed with reference to the stratigraphic Context Groups I–V as defined by Woodward (above). In addition, later erosional deposits, overlying the primary massacre stratigraphy and presumably derived from deposits upslope in the unexcavated portion of the gate passage include finds of outstanding significance (see p131). The assemblage consists of 37 spearheads, 21 catapult bolt heads, 3 shield bosses, and 2 shield hand grips. In addition, six conical ferrules (Fig 60.30 and cat no 269 (not illustrated) from Context Group II; cat no 1107 (not illustrated) and Fig 63.65 from Context Group V, and Fig 63.74 and 63.75 from Various Contexts) are likely to have come from spears. Table 9 illustrates the distribution of both the weapons and the other iron objects across the five contextual groups.

The assemblage includes a wide range of spearhead forms, (Manning Types I to IV, Manning 1985, 162–8), closed sockets being more common than open flanged examples. Two of the more exceptional pieces (Fig 62.41 from Context Group IV, and Fig 61.35 from Context Group III) have small triangular blades and extended socketed shafts; very similar in form to an example from Danebury (Cunliffe and Poole 1991, fig 7.18) dated to a late ceramic phase (cp7) which pre-dates the end of intensive occupation of Danebury and is claimed to date to about 100 BC. The catapult bolt heads can be divided into two classes based on the form of their heads. Four (Fig 59.15–17 from Context Group II and Fig 63.70 from Various Contexts) have square-sectioned tapering pyramidal points, while the remainder, where the blade form is identifiable, have cruder flat blades. It is not possible to say whether the spearheads are Roman or native, as some auxiliary soldiers in the Roman army would presumably have used similar forms to the inhabitants of Cadbury. The bolt heads are usually assumed to be for use with *ballistae*, suggesting a probable Roman origin.

Six of the spearheads and one bolt head (Fig 61.39) show evidence of having been deliberately damaged by being folded and bent, damage which is not likely to have been caused by use. Other spearheads and bolt heads are also damaged, but it is uncertain whether this deformation was the result of use or a deliberate act. The majority of the damaged weapons are from Context Group IV (Figs 62.44–5, 62.49–50), while single examples occur in Context Groups II, III, and V (Figs 59.9, 61.39, 63.62 respectively). The significance of this is difficult to evaluate. The deliberate destruction of iron weaponry is without precedent at similar sites such as Bredon Hill (Hencken 1938), although ritualistic destruction of ironwork does occur in a votive context, for example in the Waltham Abbey hoard (Manning 1985, 184).

In addition to the offensive weaponry there are five military artefacts which are associated with a defensive function, three shield bosses and two shield hand grips. All three bosses (Figs 59.19, 62.54–5) are of the same basic hemispherical form used on flat shields, or shields with a flat central section, such as the Roman auxiliary shield. This simple type of boss has a wide

Table 9: Ironwork from the massacre deposits

context group / *find type*	*I*	*II*	*III*	*IV*	*V*	*various contexts: miscellaneous deposits*	*total*
reaping hook	-	-	1	-	-	-	1
spearhead	2	12	4	13	1	5	37
bolt head	-	8	6	3	1	3	21
shield boss	1	-	2	-	-	3	
shield handgrip	-	-	2	-	-		2
neck-ring	-	2	-	-	1	2	5
buckle	-	1	-	-	-	-	1
loop/staple	-	-	-	1	-	-	1
nail	7	1	2	10	9	-	29
bolt	3	-	-	-	-	-	3
double-spiked loop	-	1	-	2	-	-	3
collar	-	1	-	-	-	-	1
spike	-	1	-	-	-	-	1
clamp	-	-	-	2	-	-	2
latch-lifter	-	7	-	-	-	-	7
l-shaped lift-key	-	3	-	1	-	-	4
ferrule	-	1	-	1	3	1	6
miscellaneous strip	-	-	1	5	-	-	6
miscellaneous rod	1	-	-	-	1	-	2
miscellaneous plate	-	-	1	6	-	-	7
miscellaneous bar	1	-	-	4	-	-	5
miscellaneous indeterminate	3	3	-	8	-	-	14
total	17	42	15	60	16	11	161

distribution on the Continent, although in Britain there are few from closely datable late Iron Age and Roman contexts, which makes these examples of great significance. It is not possible to ascertain whether the bosses were used by the site's inhabitants or by Roman auxiliary soldiers. One example (Fig 59.19), although containing four equally spaced rivet-holes, a feature suggestive of probable Roman origin (Buckland 1978, 264), cannot be proven to be Roman in the absence of any inscriptions or decoration on the boss, and the other two fragments are too incomplete to be diagnostic.

The principal objects of note in the remainder of the assemblage are the jointed neck-rings and the keys. There are five jointed neck-ring, or torc, elements from Cadbury, all from the gate, which are interpreted as being derived from three individual two-piece composite neck-rings. The first jointed neck-ring consists of parts from Context Group II (Fig 59.18) and from Various Contexts (Fig 63.72), the second of parts from Context Group V (Fig 63.64), and from Various Contexts (Fig 63.73), and the third, of which only one part survives, from Context Group II (Fig 59.20). Decoration was present on only one of the five pieces (No 656) and consisted of a simple brass inlay cross design (C Saunders pers comm) which is the earliest known British example of brass being used as ornamental inlay (Alcock 1972a, 170). Due to technical difficulties in the smelting of zinc, brass (a copper zinc alloy) is not considered to have been produced in the British Isles earlier than a decade before the conquest (Fell 1990, 30). This provides a *terminus post quem* for the application of the brass inlay, and presumably manufacture of the decorated neck-ring. These neck-rings are difficult to parallel in a British context and there are no direct parallels. There is a handful of examples of twisted iron torcs with looped ends, from Spettisbury Rings (Hawkes 1940), Camerton (Jackson 1990, 63–4), and Danebury (Cunliffe 1984, 371), but there are no direct parallels for the examples from Cadbury.

The latch-lifters and L-shaped lift-keys from Context Group II (Fig 60) form an associated group which were deposited together adjacent to the late Iron Age gate (Alcock 1972a, pl 36). It is not likely that these keys would have been used to unlock and open the gate and Professor Manning has suggested (pers comm) that they may be a ritualistic deposit invoking a symbolism of security. The most interesting of the keys is the L-shaped lift-key (Fig 63.59) whose form suggests is a cross between a lift-key and a latch-lifter.

A catalogue of the ironwork follows in which the illustration number from Figures 59–63 is given at the head of each entry; an asterisk indicates that the object is not illustrated. The archive catalogue number is given at the end of each entry.

Context Group I: outside threshold

1 Spearhead K852. Roughly triangular blade, with a missing point, rounded shoulders and a long open socket. Length (min) 161mm (1117).

* Spearhead K856. Triangular blade fragment. Length (min) 88mm (1120).

Nails (classification based on Manning 1985, 134–5)

	Cat No	*Context*	*Type*	*Dimensions*
*	914	K856	?	?
*	916	K856	?	?
*	909	K856	1A or 1B	Length (min) 84mm

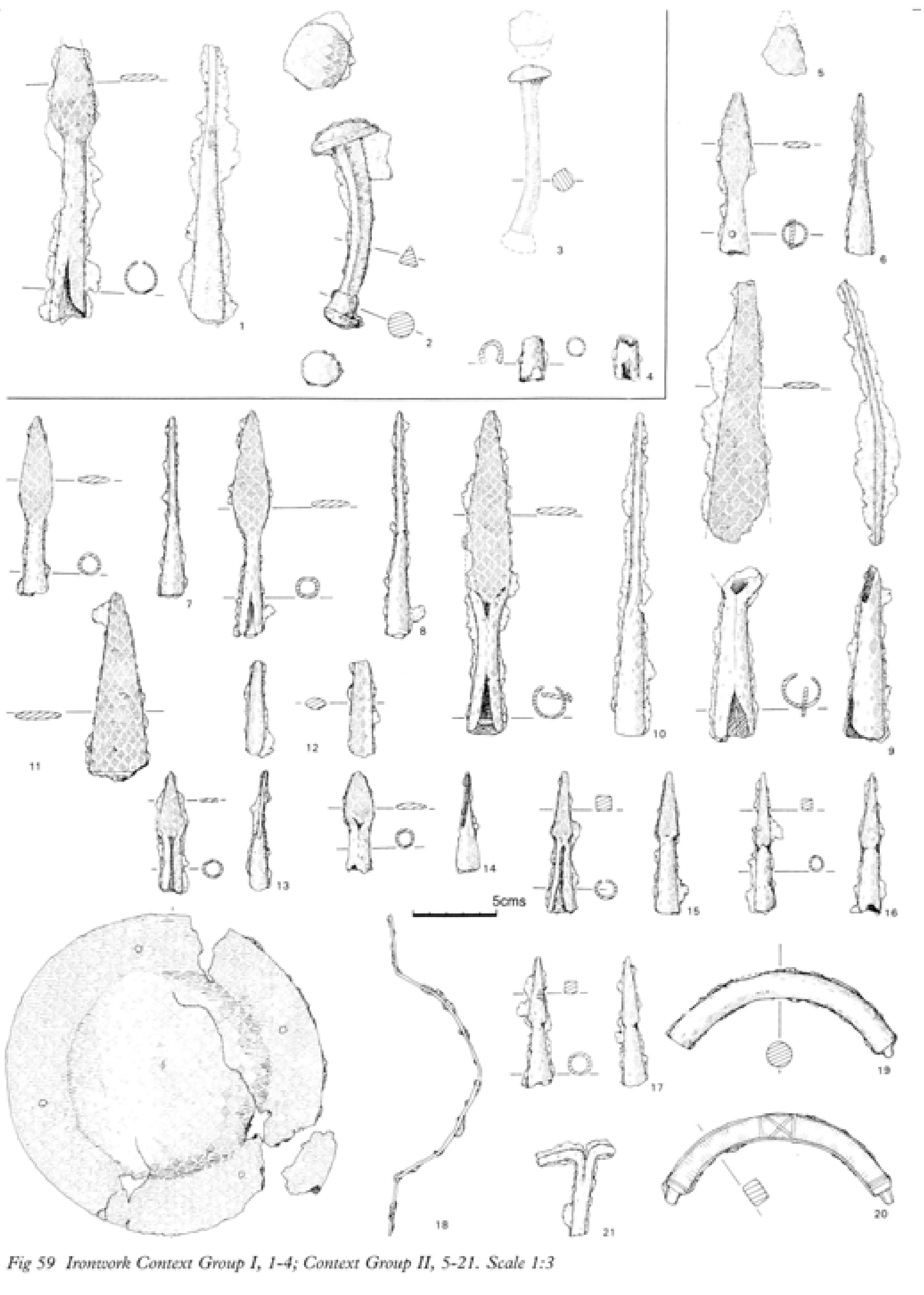


Fig 59 Ironwork Context Group I, 1-4; Context Group II, 5-21. Scale 1:3

* 909 K856 ? Length (min) 37mm
* 910 K856 1A or 1B Length (min) 82mm
* 911 K856 ? Length (min) 51mm
* 912 K856 ? Length (min) 69mm
* Bolt? K856. Not available for study (896).
2 Bolt K850. Circular (diameter *c* 37mm) domed head with a triangular-sectioned tapering shaft, which at its end runs into a circular-sectioned socket capped with a slightly domed head (diameter *c* 21mm). Length (min) 122mm (680).
3 Bolt K852. Damaged circular (diameter *c* 25mm) domed head toping a sub-circular sectioned shaft which narrows to a point midway along its length before widening to a broken-off end. Length (min) 99mm (681).
* Bar? K856. Not available for study (527).
* Rod K856. Sub-square-sectioned rod, broken at one end and upturned into a tip at the other. Possibly the end of a latch-lifter. Length (min) 108mm (239).
* Indeterminate K852. Not available for study (278).
* Indeterminate K852. Not available for study (2).
4 Socket fragment K856. Fragment of a closed socket (diameter *c*11mm), probably either from a spearhead or a ferrule. Length (min) 28mm (1168).

Context Group II: middle passageway (incorporating K597 latch-lifter hoard)

* Spearhead? K597. Not available for study (1130).
5 Spearhead? K591. Triangular fragment, possibly from a spear blade. Length (min) 31mm (1126).
6 Spearhead K591. Narrow leaf-shaped blade, broken at the tip, with rounded shoulders. A nail remains through the closed socket. Length (min) 96mm (1127).
7 Spearhead K597. Leaf-shaped blade with rounded shoulders and a closed socket. Length 106mm (1129).
8 Spearhead K597. Leaf-shaped blade with rounded shoulders and an open socket. Length 133mm (1131).
9 Spearhead K597. Two fragments. Narrow tapering blade broken at the tip and above the shoulders, and a flanged socket containing a nail. The blade has been deliberately bent and broken. Length (min) estimated 275mm (1132).
10 Spearhead K597. Narrow leaf-shaped blade broken at the tip, and a flanged socket containing a nail. Length (min) 191mm (1136).
* Spearhead? K747. Flanged socket with an intact nail. Length (min) 41mm (1114).
* Spearhead? K747. Tapering blade fragment. Length (min) 32mm (1114).
* Spearhead K747. Leaf-shaped blade with a damaged tip, rounded shoulders, and a partially welded closed socket. Length (min) 152mm (115).
11 Spearhead? K760. Part of a wide blade with a missing tip. Length (min) 112mm (116).
12 Spearhead? K649. Possibly part of a tapering spearhead blade, oval in cross-section. Length (min) 57mm (1169).
* Bolt head? K597. Not available for study (1085).
13 Bolt head K648. Flat triangular blade and flanged socket with a nail hole. Length 74mm (1089).
* Bolt head? K649. Small flat triangular blade and flanged socket. Length (min) 40mm (1090).
* Bolt head K649. Narrow flat triangular blade with rounded shoulders and a flanged socket with a nail hole. Length 69mm (1091).
14 Bolt head K760. Small flat leaf-shaped blade and flanged socket. Length 61mm (1075).
15 Bolt head K591. Square sectioned head damaged at the tip and an open conical socket. Length (min) 85mm (1096).
16 Bolt head K597. Square sectioned head and a closed conical socket. Length 84mm (1097).
17 Bolt head K597. Square sectioned head and a closed conical socket. Length 80mm (1098).
18 Shield boss K669. Flat circular boss incorporating a regular domed *umbo* and a damaged slightly downturned flange. The *umbo* is not perfectly hemispherical but slightly pointed. The flange is pierced by four roughly equally spaced nail holes (diameters 3–4mm). The slightly rising flange is paralleled by the Camelon boss (Breeze *et al* 1976, 85, fig.3). External diameter *c* 188mm Thickness *c* 2mm Flange width *c* 34mm (1102).
19 Jointed neck-ring element K597. Small part of a two-piece circular neck ring, circular in cross-section, forming one-third of a circle, which finishes in a tenon and an indeterminate socket at either end. Figure 63.72 (Various Contexts) is probably the other part of this neck-ring. External diameter 160mm, thickness 15mm.(659).
20 Jointed neck-ring element K747. Small part of a decorated circular two-piece neck-ring, rectangular in cross-section, forming one-third of a circle, which finishes in tenons at both ends. The decoration, which is all on one face of the neck ring, involves two bands by one socket and at least one band at the other socket. Midway between the two sockets are two bands 16–19mm apart which enclose a diagonal cross design. The main section of this neck-ring was not recovered. External diameter 150mm, thickness 14mm (656).
* Nail K669. Length (min) 53mm (969).
21 Double-spiked loop K591. Two partially conjoined parallel iron bars whose arms turn out in opposite directions. Length (min) 56mm (975).
22 Collar K597. Unsplayed hoop. This was found *in situ* in the gate deposits and bound the late Iron Age gate's upright stile and prevented it from splitting. The collar is associated with Figure 60.23 (Alcock 1972a, pls 36, 37). External diameter 105mm, thickness 50mm (899).
23 Spike K597. Circular slightly domed head and the upper part of a circular-sectioned tapering stem. This spike which was driven into the upright stile of the late Iron Age gate presumably functioned as a pivot. The spike is associated with the collar (Fig 60.22, Alcock 1972a, pls 36, 37). Length (min) 179mm (970).

NB The set of seven keys, listed below, from Context Group II make up the latch-lifter hoard (Alcock 1972a, pl 36).

24 Latch-lifter? K597. Stem, in two fragments, with an upturned tip and a welded loop handle. Length (min) 176mm (226).

25 Latch-lifter K597. Stem bent through two right-angles along its length, with an upturned tip and a welded loop handle. Length 155mm (228).

26 Latch-lifter K597. Stem bent at an angle of 110° along its length. With a missing tip and a welded loop handle. Length (min) 120mm (229).

27 Latch-lifter K597. Slightly curved stem which is bent twice along its length at right angles and folded back to form a handle. The tip is missing. Length (min) 263mm (230).

* Latch-lifter? K597. Not available for study (232).

28 Latch-lifter K597. Small welded loop handle attached to a stem which is bent through two right-angles along its length. The tip is missing. Length (min) 196mm (233).

29 Latch-lifter K597. Stem, in two fragments, which is bent at right-angles twice along its length with a broken welded looped handle and an upturned tip. Length (min) 462mm (234).

* L-shaped Lift-key K597. Stem with a rolled bow and a three tooth bit. Two teeth are probably missing. Length 114mm (222).

* L-shaped Lift-key K597. Broken stem with at least a one tooth bit. Length (min) 91mm (223).

* L-shaped Lift-key? K597. Large L-shaped fragment of a tapering rod with a damaged tooth. Length (min) 89mm (231).

30 Conical Ferrule K760. Closed at its narrowest end. Length 79mm (1106).

* Indeterminate? K597. Not available for study (25).

* Ferrule K746. Slightly tapering cylindrical socket, roughly circular in cross-section, and closed at its narrower end (diameter 31–6mm.). The socket still retained wood. Length 70mm (269).

* Unknown / Binding? K597. Rectangular-sectioned bar which is bent round on itself approximately just under one sixth of the way along its length from both ends. One end may be broken. Length 68mm. (533).

* Unknown? K597. Not available for study (549).

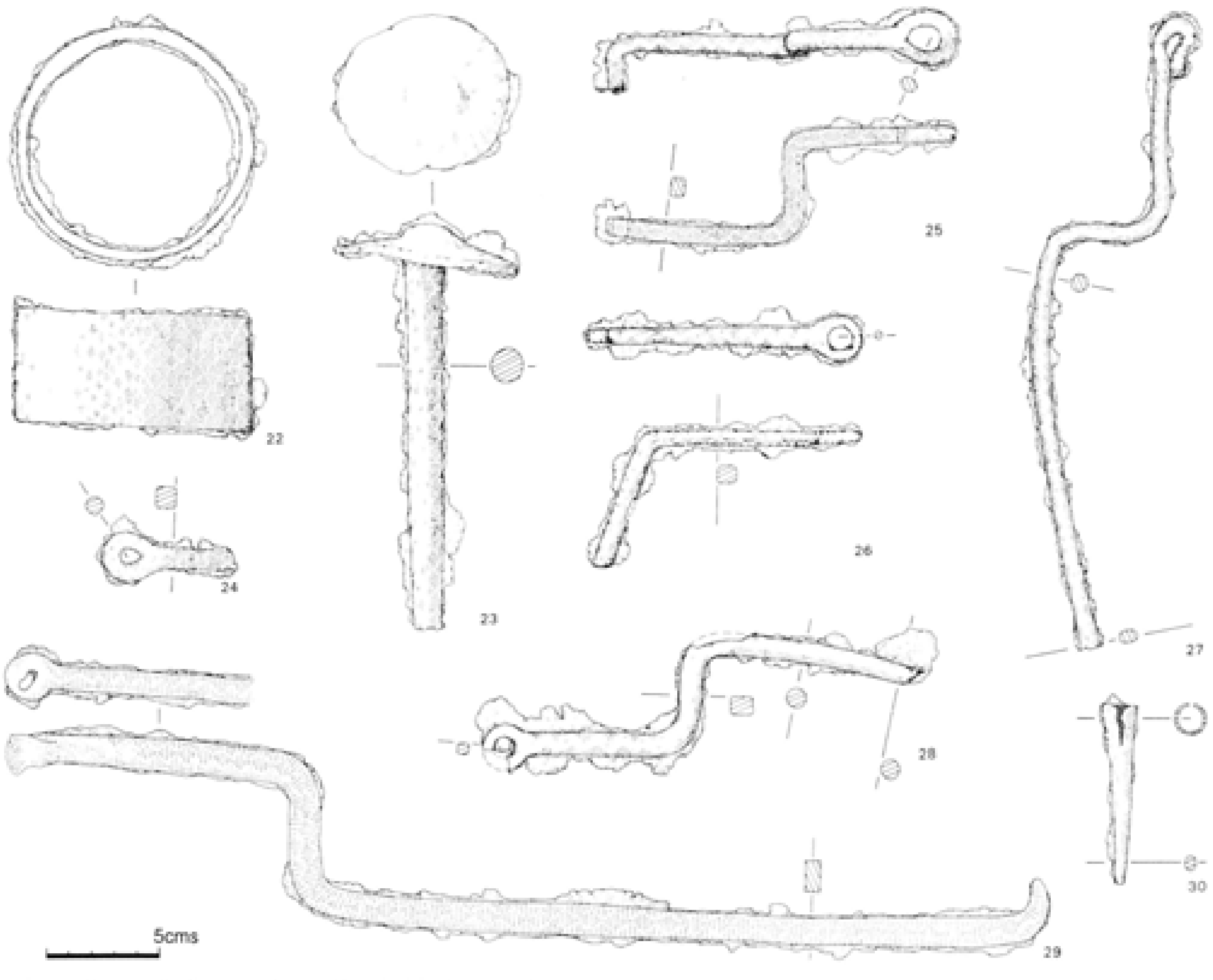


Fig 60 Ironwork Context Group II, 22-30. Scale 1:3

Context Group III: upper passageway

31 Reaping hook K580B. Fragment of a hooked blade. Length (min) 48mm (50).
32 Spearhead K580. Triangular blade with missing tip, sloping shoulders, and an open socket. Length (min) 171mm (1123).
33 Spearhead K580. Narrow triangular blade with missing tip, sloping shoulders, and a flanged socket. Length (min) 216mm (1124).
34 Spearhead K580B. Narrow leaf-shaped blade with sloping shoulders and a flanged socket. Length (min) 252mm (1125).
35 Spearhead K646. Narrow, triangular asymmetrical blade with an extended square-sectioned shaft which widens to an open, circular-sectioned, socket. Similar in form to Figure 62.41 from Context Group IV. For a close parallel in terms of shaft/socket length cf Danebury (Cunliffe and Poole 1991, 2.283 fig 7.18). Length 289mm (1140).
36 Spearhead? K637. Flat tapering blade fragment. Length (min) 53mm (1139).
* Bolt head? K580. Not available for study (1078).
* Bolt head? K583. Not available for study (1079).
37 Bolt head K583. Flat triangular blade and flanged socket. Length 65mm (1080).
38 Bolt head K583. Flat triangular blade and flanged socket. Length 82mm (1081).
39 Bolt head K583. Flange-socketed bolt head with a flat blade which has been deliberately bent over. The undamaged point suggests the damage was not caused by impact. Length (min) 37mm (1082).
40 Bolt head K583. Flat triangular blade, with either a missing or blunted tip, and a flanged socket. Length (min) 52mm (1083).
* Nail K580. Length (min) 24mm (566).
* Nail K580. Length (min) 17mm (567).
* Riveted strip/Binding ? K583. Roughly rectangular shaped tapering strip, bent round on itself at the narrowest end and pierced by two folded-over nails, one at the widest end and one half way along the strip. Length (min) 119mm (585).
* Plate K580B. Roughly rectangular fragment, raised slightly at either side and in the middle, with two corresponding troughs running *c* 10mm adjacent to these sides. There is a tiny (1.5mm) perforation at the base of each trough *c*7.5mm from the edge. Dimensions (min) 43 x 60 x 1mm (575).

Context Group IV: west guard chamber

* Spearhead? K659. Not available for study (1144).
* Spearhead? K681. Not available for study (1113).
41 Spearhead K647. Small triangular blade with either a rounded or missing tip and an extended shaft which terminates in an open circular-sectioned socket.

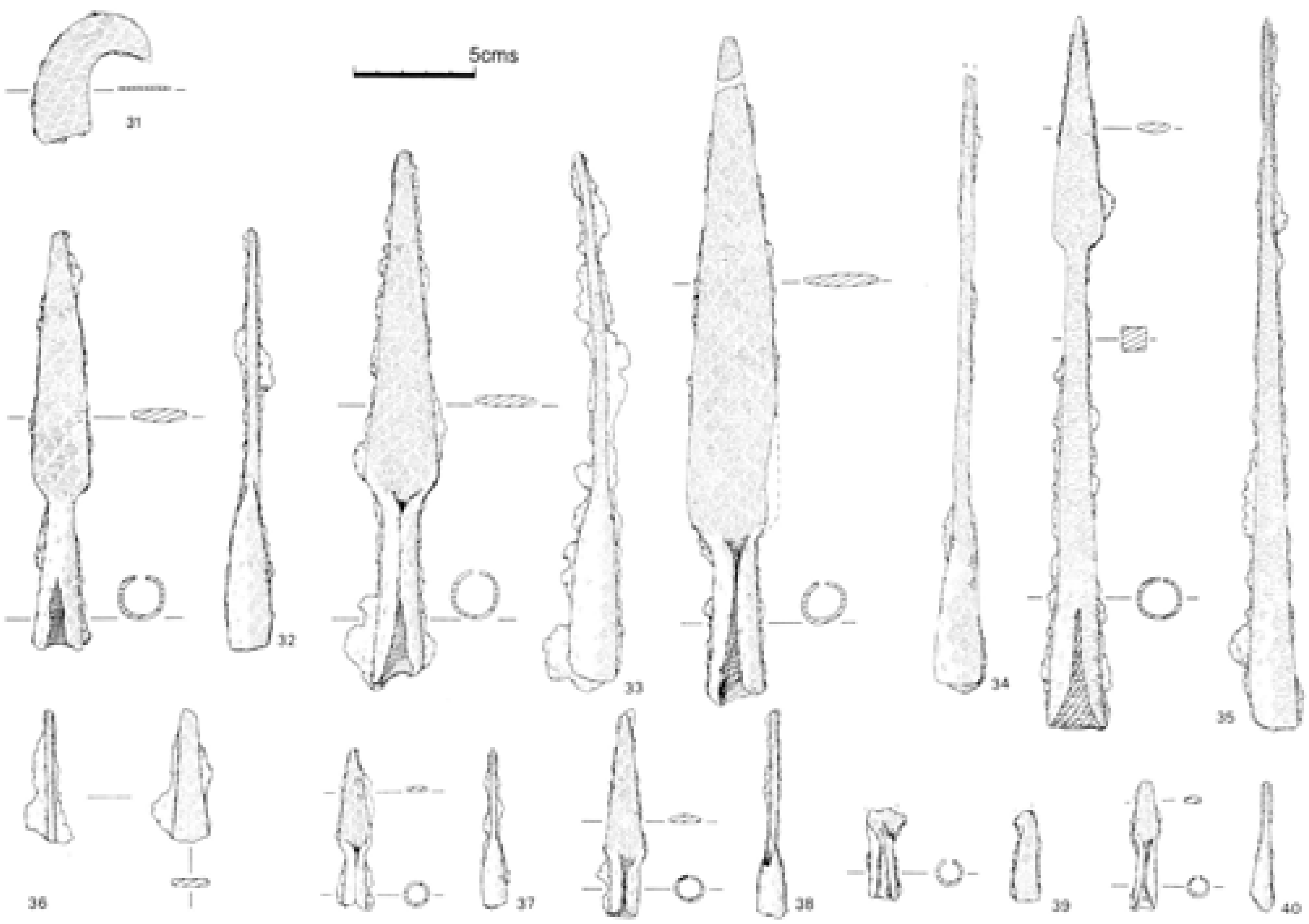


Fig 61 Ironwork Context Group III, 31-40. Scale 1:3

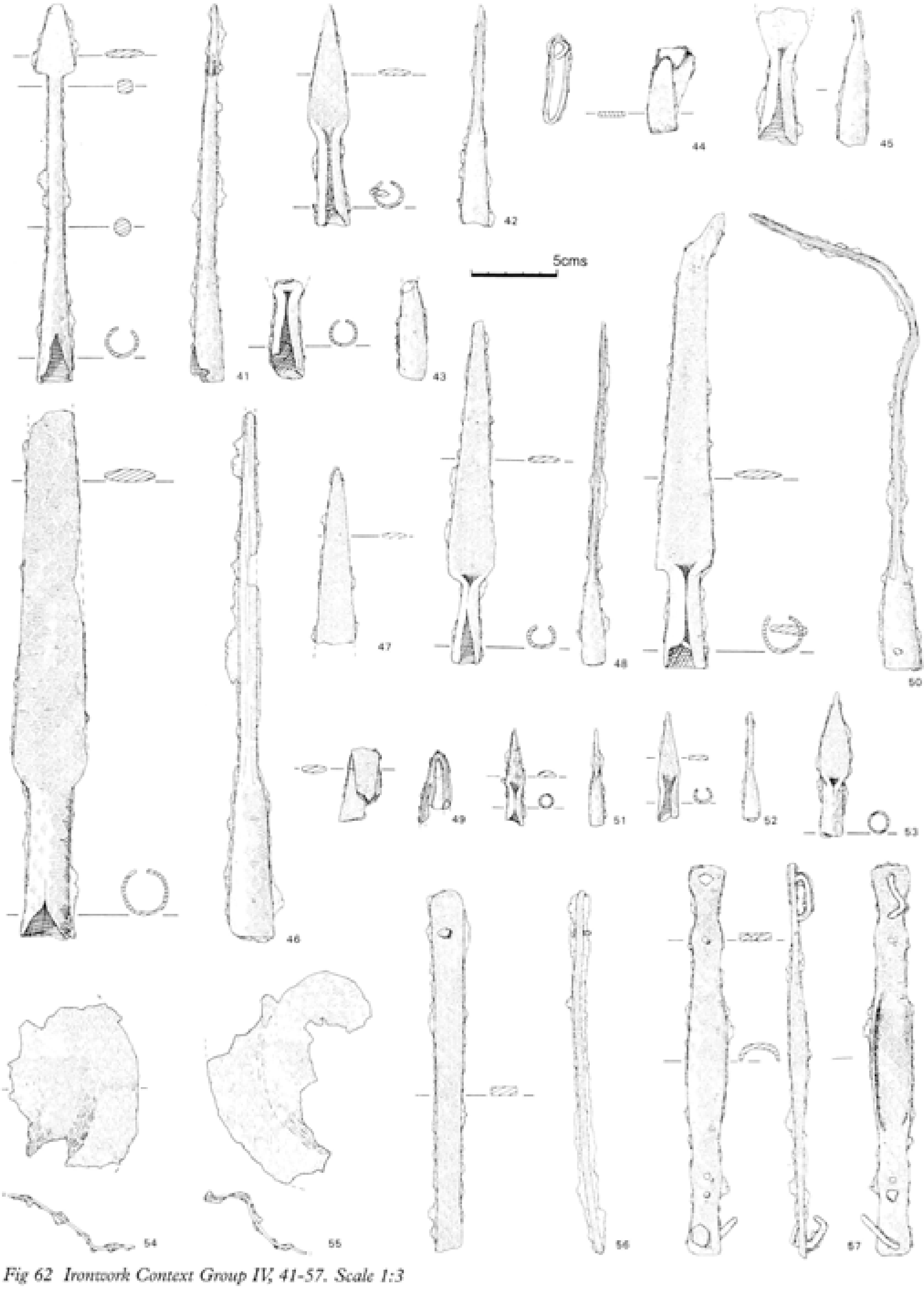


Fig 62 Ironwork Context Group IV, 41-57. Scale 1:3

Similar in form to Figure 61.35 from Context Group III. For a close parallel in terms of shaft/socket length see Cunliffe and Poole (1991, 2.283 fig 7.18). Length (min) 220mm (1141).

42 Spearhead K659. Triangular blade and flanged socket which retains an intact nail. Length 130mm (1143).

43 Spearhead? K659. Flanged socket. Length (min) 59mm (1145).

44 Spearhead? K659. Narrow triangular blade deliberately broken and folded. Length (min) 51mm (1146).

45 Spearhead K659. Flanged socket and lower part of a blade. Possibly deliberately bent and broken. Length (min) 81mm (1147).

46 Spearhead K659. Relatively narrow tapering blade, missing tip, short steep shoulders, and an open socket. Length (min) 308mm (1148).

47 Spearhead? K659. Triangular blade fragment. Length (min) 104mm (1149).

48 Spearhead K659. Long narrow triangular blade missing tip and flanged socket. Length (min) 199mm (1150).

49 Spearhead? K681. Narrow triangular blade fragment, deliberately broken and folded. Length (min) 45mm (1111).

* Spearhead? K681. Not available for study (1110).

50 Spearhead K681. Long narrow triangular blade missing tip. Flanged socket contains an intact nail. The blade has been deliberately bent in several places. Length (min) 314mm (1112).

51 Bolt head K647. Flat triangular blade and flanged socket. Length 58mm (1088).

52 Bolt head K659. Flat triangular blade and flanged socket. Length (min) 64mm (1092).

53 Bolt head? K659. Leaf-shaped blade and closed socket. Length 85mm (1093).

54 Shield boss K681. Flat circular fragment incorporating an apparently hemispherical *umbo* and a flat flange. External diameter *c*150mm, thickness *c*1.5mm, flange width *c*23mm (1103).

55 Shield boss K681. Flat circular fragment incorporating a distorted and damaged *umbo* and a flat flange. External diameter *c*164mm, thickness *c* 1.5mm, flange width *c* 24mm (1101).

56 Shield hand grip? K681. Slightly curved rectangular-sectioned bar, which narrows slightly towards its broken end in the middle. One end is missing while the other is rounded and pierced by an intact rivet. Length (min) 209mm (1104).

57 Shield hand grip? K681. Shaped bar with a U-sectioned middle and with double waisted ends. The thickened middle is C-shaped in cross-section and provided the grip. The rectangular-sectioned, double waisted, ends are pierced by two and three fixing rivet holes respectively. The outer holes at each end are set between the outer waist and the end of the bar and contain large bent-over rivets. A single rivet hole is situated between the inner and outer waists at each end of the bar and at one end a third hole, containing a small rivet, is set between the empty hole and the outer large rivet. Length 228mm (1105).

Nails (Classification after Manning 1985, 134–5)

	Cat No	*Context*	*Type*	*Dimensions*
*	961	K659	1B	Length (min) 20mm
*	963	K659	?	Length (min) 22mm
*	964	K659	1B	Length (min) 49mm
*	965	K659	?	Length (min) 57mm
*	967	K681	?	Length (min) 70mm
*	901	K681	?	Length (min) 42mm
*	959	K647	?	Length (min) 59mm
*	966	K659	?	Length (min) 37mm
*	966	K659	?	Length (min) 33mm
*	1007	K659	?	Length 145mm

* Clamp? K647. Rectangular sectioned bar which is bent at each end to about 90°. Length 40mm (898).

* Clamp? K647. Rectangular sectioned bar bent at one end to about 90° and folded completely over at the other end. Length 36mm (898).

* Loop?/Staple? K659. Two incomplete entwined loops, formed by bent bars. Probably part of a double spiked loop and attached fitting. Length (min) 47mm (976).

* Double-spiked loop K681. Two partially conjoined parallel iron bars whose broken arms turn out in opposite directions at one end. Length (min) 55mm (972).

58 Double spiked loop and ring. K659. Rectangular-sectioned bar bent to form a loop with broken parallel arms and linked to a ring made from a circular-sectioned (diameter 11.5mm) bar. Parallels: Manning (1985, 130: R34–36 pl 61). Spike length (min) 86mm. Ring external diameter 67mm, internal diameter 44mm (977).

59 L-shaped Lift-key? K659. Broken rectangular-sectioned stem with two right-angle bends within it. One end may be part of a damaged two-tooth bit. The form of this piece suggest it is a cross between a lift-key and a latch-lifter. Length (min) 126mm (224).

* Strip? K659. Not available for study (598).

* Folded strip K647. Narrow strip broken at both ends, and folded in an elongated spiralling loop. Length (min) 47mm (594).

* Riveted strip K659. Rectangular strip, folded at right-angles approximately half-way along its length with a rivet at either end. Width 11mm (596).

* Riveted strip K659. Rectangular strip, broken at one end and rounded at the other. The rounded end is pierced by a rivet. Length (min) 51mm (597).

* Riveted strip K681. Roughly rectangular shaped fragment, broken at both ends, slightly twisted and curved along its length, and pierced by a rivet at one end and a circular hole at the other. Length (min) 54mm (576).

* Plate K659. Roughly rectangular plate with rounded corners, and a single rivet adjacent to one of the corners. Length 50mm (559).

* Plate K659. Broken roughly rectangular shaped plate fragment, bent at an approximately 60° angle 20mm from one end. Possibly associated with next item. Length (min) 44mm (560).

- * Plate K659. Roughly rectangular plate with two rivets adjacent to two opposite corners. Possibly associated with plate listed above. Dimensions (min) 51 x (min) 82 x 2mm (560).
- * Plate K659. Two conjoined fragments of curved plate, fixed together by a rivet and pierced by a separate flanged circular hole (diameter 6mm). Dimensions (min) 46 x (min) 28 x 1mm (561).
- * Plate K659. Broken fragment. Possibly associated with next item. Dimensions (min) 31 x (min) 19 x 3.5mm (562).
- * Plate K659. Broken fragment. Possibly associated with above. Dimensions (min) 24 x (min)16 x 2mm (562).

60 Spiral ferrule K659. Two and a half twists of a flattened D-shaped sectioned bar. Length 44mm, diameter 40mm (536).

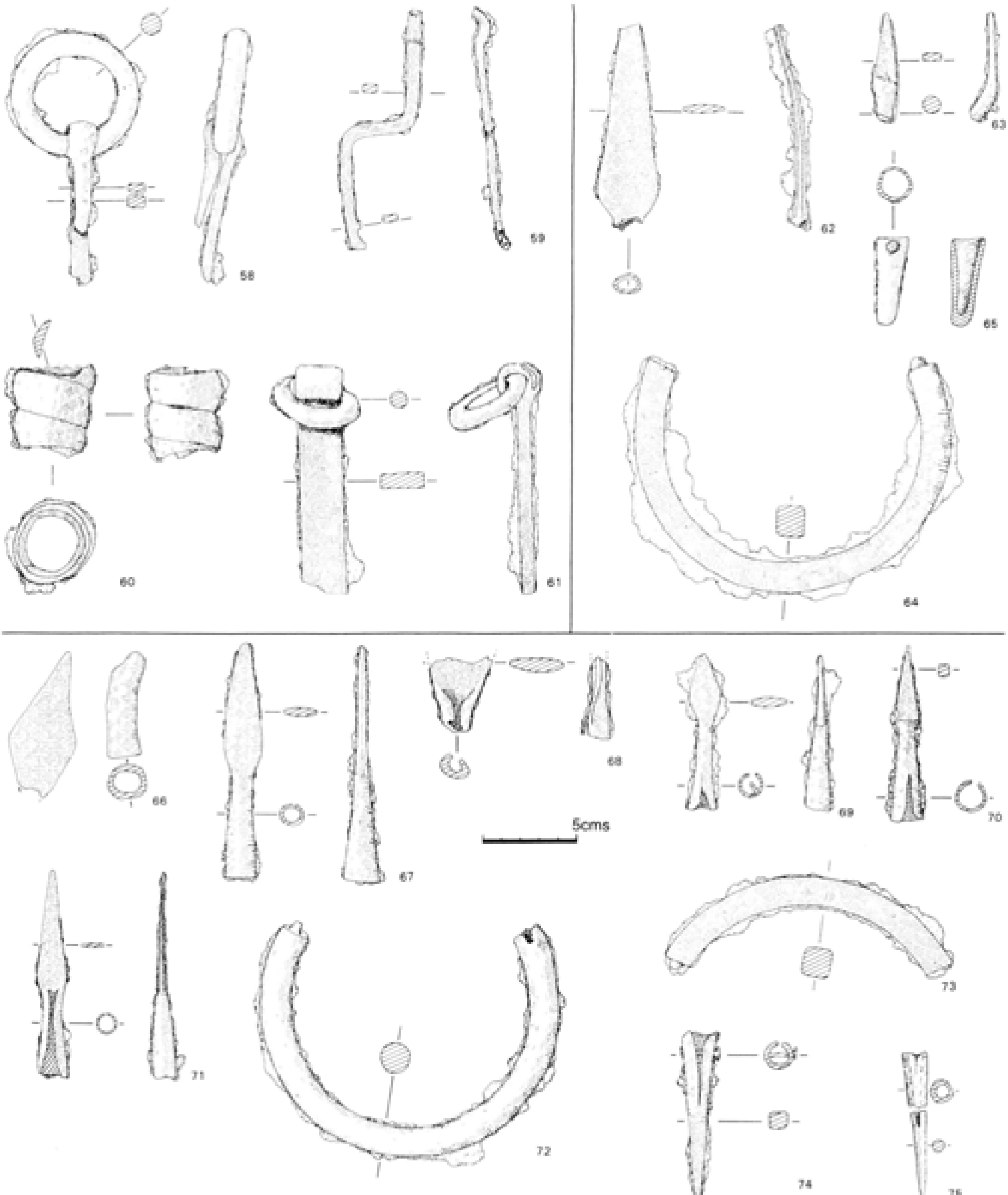


Fig 63 Ironwork Context Group IV, 58-61; Context Group V, 62-5; Various Contexts, 66-75. Scale 1:3

* Bar K647. Irregularly shaped rectangular-sectioned rod, broken at both ends, one of which is bent. Length (min) 43mm (531).
* Bar K659. Trapezoidal shaped fragment of a rectangular-sectioned sharply tapering bar. Length (min) 33mm (532).
* Bar K659. Fragment broken at both ends, turned through a 90° angle. Circular in cross-section at one end and square at the other. Length (min) 28mm (995).
* Bar K659. Folded over at one end and broken at least at the other. Length (min) 36mm (894).
* Indeterminate fragments K659. Not available for study (541).
* Indeterminate K681. Not available for study (23).
* Indeterminate fragments K681. Not available for study (23).
* Unknown/Binding? K659. Rectangular-sectioned bar which is bent round on itself approximately a quarter of the way along its length from both ends to form a closed loop. The two ends are shaped to fit together. This object is paralleled at Danebury (Cunliffe and Poole 1991, fig 7.24, 2.340) Length 35mm (534).
* Unknown K659. Tapering sheet rippled along its length and broken at both ends. Possibly part of the same object as next item. Length (min) 37mm (524).
* Unknown K659. Twisted fragment of a rectangular-sectioned rod, broken at one end. Possibly part of the same object as above. Length (min) 20mm (524).

61 Unknown/Loop headed bar and ring K681. Rectangular-sectioned bar, broken at one end and turned over at the other to form a closed loop. A complete ring, made from a circular-sectioned (diameter *c* 10mm) rod, is threaded through the loop. Bar length (min) 121mm, loop external diameter 48mm, internal diameter 27mm (551).

* Unknown/Tang? K659. Rectangular-sectioned bar tapering to a rounded point and broken at the other end. Length (min) 22mm (1009).

Context Group V: sealing rubble (overlying Context Groups I and II)

62 Spearhead K614. Triangular blade broken at the tip and socket. The blade has possibly been deliberately bent. Length (min) 109mm (1138).

63 Bolt head? K829. Slight diamond-shaped blade with a rectangular cross-section towards the tip and a circular cross-section towards the hafted end. Length (min) 58mm (1152).

64 Jointed neck-ring element K614. Large part of a circular two-piece neck-ring, square in cross-section, forming two-thirds of a circle, which finishes in a tenon and socket at either end. Figure 63.73 (Various Contexts) is probably the other part of this neck-ring. External diameter 170mm, thickness 16mm (660).

Nails (classification after Manning 1985, 134–5)

	Cat No	*Context*	*Type*	*Dimensions*
*	948	K614	?	?
*	949	K614	?	?
*	994	K614	?	?
*	955	K614	?	?
*	947	K614	1A or 1B	Length (min) 79mm
*	950	K614	?	Length (min) 79mm
*	952	K614	1A or 1B	Length (min) 90mm
*	953	K614	?	Length (min) 66mm
*	568	K614	?	Length (min) 13mm

* Rod? K614. Not available for study (574).
* Conical ferrule K614. Not available for study. Substantial remains of a pointed wooden haft (C Saunders pers comm) (1107).
* Ferrule? K614. Not available for study (535).

65 Conical ferrule? K610. Socket with a rounded end with an intact nail. Length 47mm (1017).

Various Contexts: miscellaneous deposits (incorporating remainder of the weapon assemblage and other finds of outstanding significance)

* Spearhead? K855. Not available for study (118).

66 Spearhead K501. Asymmetrical blade with angular shoulders and a closed socket. Length estimated (min) 135mm (1121). Episode XIII.

67 Spearhead K651. Leaf-shaped blade with either a rounded or missing point and a closed socket. Length 125mm (1142). Episode VIII.

68 Spearhead? K855. Part of a flanged socket and blade. Length (min) 44mm (1119).

69 Bolt head K644. Flat, leaf-shaped blade with sloping shoulders and open socket with an intact nail. Length 83mm (1087).

70 Bolt head K759. Square-sectioned head with a damaged tip and open conical socket. Length (min) 92mm (1094). Episode VIII.

71 Bolt head? K510. Narrow flat triangular blade and flanged socket. The form of the object is typical of the Type IIB catapult bolt heads (Manning 1985, 176) although it is exceptionally large for this identification. Length 111mm (1122).

72 Jointed neck-ring element K594. Large part of a two-piece circular neck-ring, circular in cross-section, forming two-thirds of a circle, which finishes in a tenon and socket at either end. Figure 59.19 (Context Group II) is probably the other part of this neck-ring. External diameter 155mm, thickness 16mm (675). Episode VIII (early cobbles).

73 Jointed neck-ring element K594. Small part of a two-piece circular neck-ring, square in cross-section, forming one third of a circle, which finishes in a tenon and socket at either end. Figure 63.64 (Context Group V) is probably the other part of this neck-ring. External diameter 170mm, thickness 15mm (658). Episode VIII (early cobbles).

74 Conical Ferrule K644. Relatively long with an intact nail towards the mouth. Length 85mm (1108).
75 Conical Ferrule K577. Closed at its narrower end. Length 77mm (270). Episode X (soil behind stone wall).

The brooches

by Adrian Olivier

This is a catalogue of brooches from the south-west gate. All brooches from those contexts which are assigned to Context Groups I to V (ie the massacre deposits) are listed here and many are illustrated (Figs 64–9). The illustration number is given at the head of each entry; an asterisk indicates that the object is not illustrated. The finds are presented in the catalogue sequence. Table 8 provides a summary of the forms which occurred in each of the Context Groups. The catalogue (Olivier 1994) has been arranged in traditional form, following the generally accepted conventions of brooch morphology (see also p197). Each entry gives the stratigraphic context and Context Group (as detailed above p107) and is followed by a description of the individual brooch and the catalogue number. Some significant examples of brooches which are *not* from the Context Groups have also been illustrated here. Other brooches from the area of the gate but not from the massacre Context Groups are not listed here, but are described in the archive report (Olivier 1994).

Simple one-piece British brooches (Camulodunum Type VII)

Simple Wire British brooches

1 K 580B (Context Group III) Copper alloy. The bow is formed of flattened wire and has a low symmetrically curved profile, with a gently curved obtuse angle at the head. A shallow central groove running down the centre of the bow contains diagonal braided ornament. The short, rectangular catch-plate turns out very slightly from the base of the bow (019).
2 K 649 (Context Group II) Copper alloy. The central groove contains a single line of incised zigzag ornament. The spring has been broken and repaired in antiquity by the addition of a hinged pin. The bow and pin are now broken (020).
* K 597 (Context Group II) Copper alloy. Very corroded. The bow has a low, asymmetrically curved profile. The pin is missing (022).
* K 659 (Context Group IV) Copper alloy. The lower bow, foot-, and catch-plate are missing (023).
* K 580 (Context Group III) Copper alloy. The catch-plate is rectangular. The spring and pin are missing (026).

Flat triangular bow form

3 K 580B (Context Group III) Copper alloy. The narrow triangular bow has a low, asymmetrically curved profile, with an integral, rectangular catch-plate. The head of the brooch turns in towards the foot (027).

Simple Gaulish and Colchester brooches (Camulodunum Type III)

Simple Gaulish brooches

Simple Gaulish brooches can be divided into two main groups: those characterised by a broad, flat ribbon bow, and those with a generally long, wire or rod bow, tapering to a point at the foot. Only *c* 50 examples of the ribbon bow form are recorded in Britain and the morphological range of the group is very diverse, including examples with long, broad parallel-sided or slightly tapering bows, or short, very wide bows. Individual features (presence of side-wings and bow decoration, form of hook and catch-plate) may be chronologically sensitive but cannot yet be used as a basis for classification with confidence.

4 K 554 (No Context Group) Copper alloy. The long, slightly distorted bow has a very flat D-shaped cross-section, and tapers slightly towards the foot. The spring has six coils with an external chord held in place by a broad ribbon hook; the end of the hook is now missing and its original length cannot be estimated. The bow is ornamented by a shallow central groove containing impressed decoration in the form of narrow transverse ridges. The catch-plate is decorated by a single quite large trapezoidal opening; no traces of original bridgework survive. Two small circular perforations in the forward part of the catch-plate suggest that it may have been broken in antiquity and repaired by the addition of a small plate attached by rivets (030).

Colchester brooches

* K 580B (Context Group III) Copper alloy. The long rod bow (now broken) has an oval cross-section and tapers to a point at the foot. The catch-plate is broken, but originally had three rectangular perforations. The spring and pin are missing (031).
5 K 612 (Context Group III) Copper alloy. The long bow has a D-shaped cross-section tapering to a point at the foot. The upper surface of the bow has a central shallow groove containing raised 'braided' ornament. The spring has eight coils and has been broken and repaired in antiquity by the addition of a hinged pin, which is now missing. The catch-plate has three simple rectangular perforations (032).
6 K 597 (Context Group II) Copper alloy. The rod bow has a faceted cross-section; the upper surface is ornamented by a shallow longitudinal groove containing raised zigzag decoration. The long side-wings

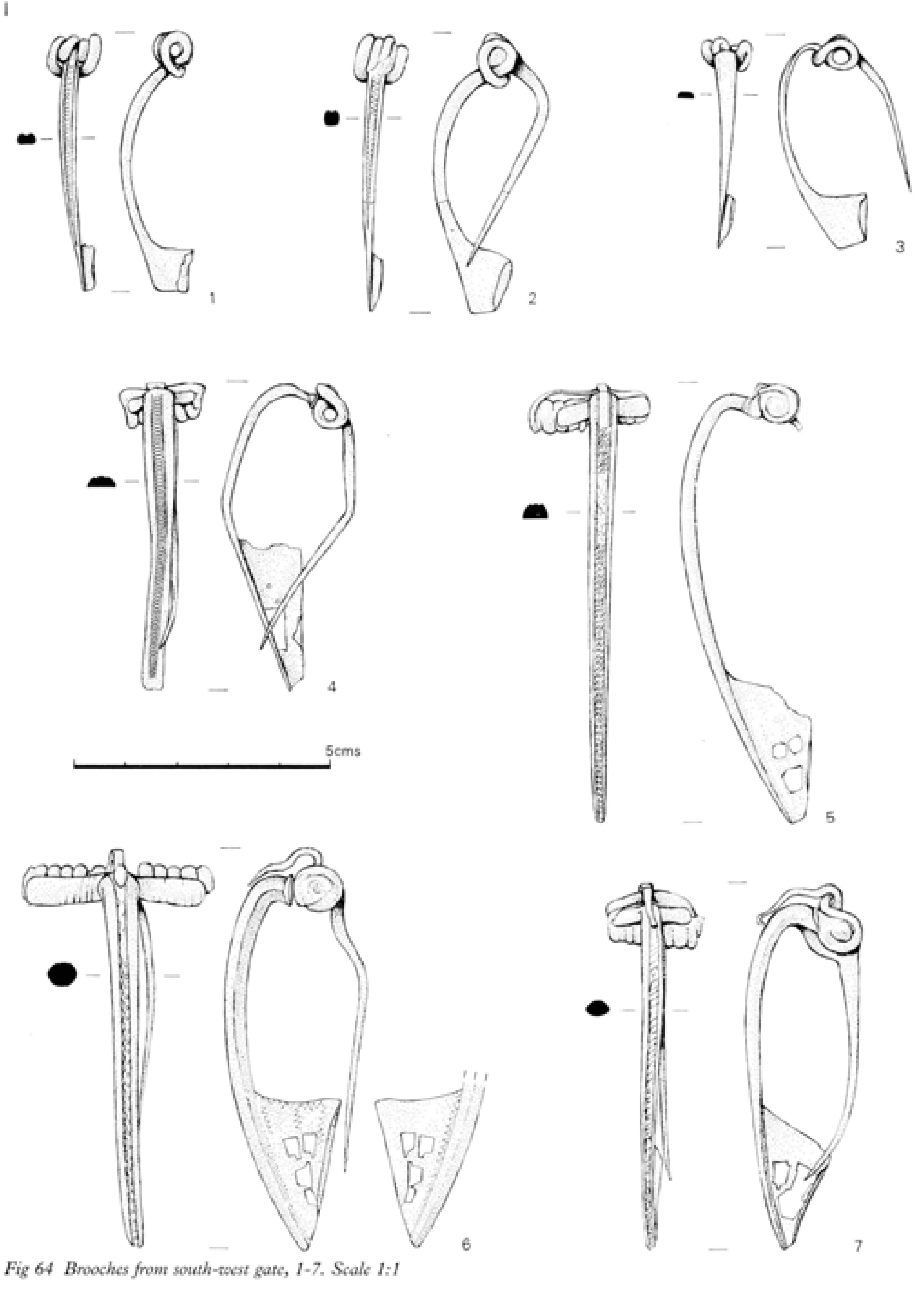


Fig 64 Brooches from south-west gate, 1-7. Scale 1:1

are decorated by transverse grooves. The bilateral spring has ten coils, and has been broken and repaired in antiquity by the addition of an iron axial bar. The external chord is held in place by a long hook that reaches up over the head of the brooch. The catch-plate has four separate rectilinear perforations separated by narrow stepped bridgework; the forward panel of the catch-plate is also decorated by three short parallel lines of rocked scorper-graver work (033).

7 K 649 (Context Group II) Copper alloy. The upper surface of the bow has relief 'braided' ornament set in a shallow longitudinal groove. The bilateral spring originally had six coils, but has been broken and repaired in antiquity by the addition of a hinged pin threaded on an iron axial bar. The external chord is retained by a long hook that reaches up over the head of the brooch. The catch-plate had three small rectilinear perforations in a triangular arrangement (now broken); the forward edge of the rear perforation has a small rectangular indentation resulting in a slight step to the bridgework separating the perforations (034).

* K 762 (Context Group II) Copper alloy. The bow is plain. The catch-plate originally had three simple rectangular perforations in a triangular arrangement; the catch-plate has been broken and repaired in antiquity by the addition of a small riveted plate to retain the pin. The spring has also been broken and repaired by the addition of a hinged pin threaded on an iron axial bar (035).

8 K 591 (Context Group II) Copper alloy. The upper surface of the bow is ornamented by a shallow, longitudinal groove containing relief 'braided' decoration. The catch-plate has three circular perforations in a triangular arrangement. The pin is broken (036).

* K 649 (Context Group II) Copper alloy. The shallow longitudinal groove running down the bow contains fine, relief zigzag ornament. The catch-plate has two circular perforations. The spring has been broken and repaired in antiquity by the addition of a hinged pin threaded on an iron axial bar. The pin is now missing (038).

Aucissa and Aucissa-related brooches (Camulodunum Type XVII)

Aucissa brooches

9 K 597 (Context Group II) Brass. The head is rolled forward under, and then back over the axial bar of the pin. The bow has a raised central spine with faint traces of knurled ornament, flanked by cavetto mouldings. The pin is missing (042).

Aucissa variants

10 K 580B (Context Group III) Copper alloy. Unlike the Aucissa brooch, the catch-plate is integral with the asymmetrical profile of the bow. The wide upper bow is fluted, and separated from the lower bow by transverse mouldings. The head is rolled forward over, and then back under the axial bar of the pin. The pin is missing (044).

* K 580B (Context Group III) Copper alloy. The catch-plate and foot are integral with the more gently curved symmetrical profile of the bow. The central channel contains a line of relief wavy zigzag ornament emphasised by opposed and alternate impressed circles (not very carefully positioned). The lateral grooves and the head are decorated by fine rocked scorper-graver work. The head is rolled over and then back under the axial bar of the pin. Possibly burnt. Now broken; the pin is missing (046).

Aucissa derivatives

11 K 580 (Context Group III) Copper alloy. A carefully crafted brooch typologically closer to the parent group. The bow has a central groove containing raised moulded zigzag ornament, and shallow marginal grooves retain faint traces of fine rocked scorper-graver work. The edge of the bow is defined by a narrow ridge. The head forms a broad plate. The foot is separated from the bow by an impressed saltire flanked on each side by a single well defined transverse groove and terminates in a raised circular foot-knob that is also ornamented by a transverse groove. Possibly burnt (047).

* K 647 (Context Group IV) Brass. A lighter brooch with a narrow ribbon bow, and a T-shaped expansion at the head, but also characterised by moulded raised zigzag ornament in a central groove, and a raised foot-knob. The pin is missing (048).

* K 591 (Context Group II) Copper alloy. Similar, although the head forms a slightly broader plate. The foot is still separated from the bow by a saltire flanked on each side by a narrow transverse groove, but terminates in a small flat almost circular plate, also decorated by a transverse groove. The pin is broken (049).

12 K 580 (Context Group III) Copper alloy. The central of three grooves on the bow is ornamented by short lateral notches. The bow is separated from the foot by two short angled grooves flanked on each side by a single transverse groove (a devolved saltire ?) (051).

13 K 850 (Context Group III) Copper alloy. The bow is ornamented by a series of well executed longitudinal grooves and impressed, possibly rouletted, decoration, as well rocked scorper-graver work. The small foot-plate is almost rectangular in shape and is decorated by two transverse grooves. The pin is missing (052).

14 K 822 (Context Group II) Copper alloy. The bow is ornamented by three longitudinal grooves which retain faint traces of transverse decoration. The base of the bow has two small opposed and slightly off-set notches. The sub-circular foot-plate is quite wide and ornamented by two transverse grooves. The head and pin are missing. Burnt ? (053).

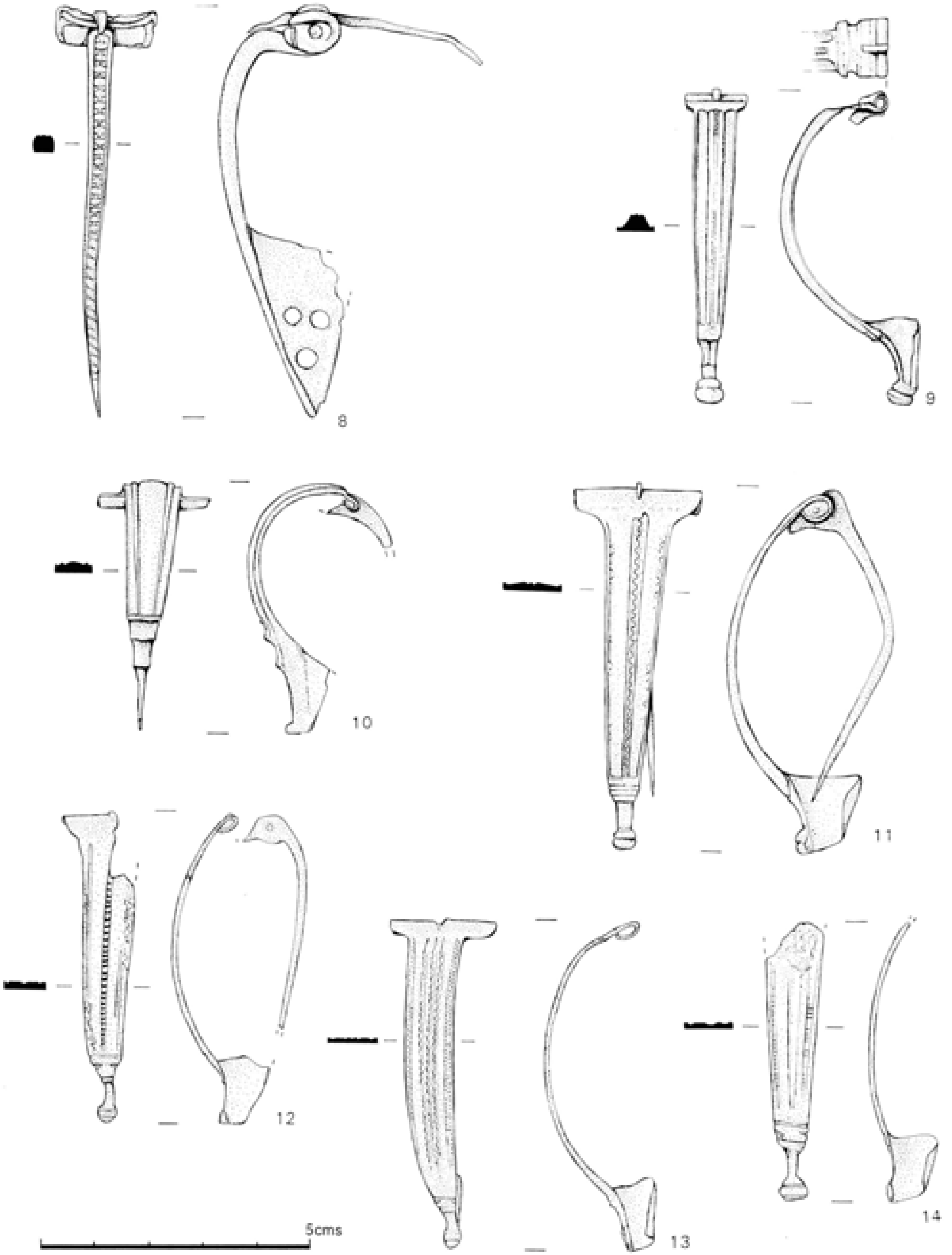


Fig 65 Brooches from south-west gate, 8-14. Scale 1:1

15 K 829 (Context Group V) Copper alloy. The bow expands to form a wide plate at the head. The two marginal grooves decorating the bow contain transverse ornament; the central groove is plain. The base of the bow is ornamented by three transverse grooves, but no notches (054).

* K 591 (Context Group II) Brass. The pin is missing (055).

* K 580 (Context Group III) Copper alloy. Broken. The pin is missing (056).

16 K 852 (Context Group I) Copper alloy. There is no separate foot-plate, but the ribbon foot expands slightly towards the base. Broken (058).

* K 580B (Context Group III) Copper alloy. The expanded plate at the head is relatively narrow. The bow is decorated by fine marginal grooves and a central groove containing a finely executed raised wavy spine formed by two rows of opposed and offset small impressed circles. The pin is broken (060).

* K 591 (Context Group II) Copper alloy. Each edge of the bow is ornamented by a pair of narrow grooves. Broken (061).

17 K 591 (Context Group II) Copper alloy. A small example. The outer two grooves running down the bow have transverse ornament, but the central groove is apparently plain (062).

18 K 824 (Context Group II) Copper alloy. The head-plate is decorated by a pair of impressed concentric 'eye' rings. The central groove contains transverse decoration, flanked on each side by a plain shallow groove. The foot is almost triangular in shape. The pin is missing (063).

* K 597 (Context Group II) Copper alloy. The head and pin are missing and the foot is broken (065).

* K 597 (Context Group II) Copper alloy. The head is decorated by three impressed 'eyes'. The central groove contains fine, carefully executed zigzag moulding, and the two lateral grooves are plain. The foot and pin are missing (067).

Hod Hill and related hinged brooches

Hod Hill brooches

19 K 646 (Context Group III) Copper alloy. The head is rolled under and then back up over the axial bar of the pin (demonstrating a probable continental origin). The trapeziform bow has longitudinal flutes, and the central ridge retains faint traces of knurled ornament. A small lateral knob projects from the top of each side of the bow, and each knob is also fluted. The base of the bow is separated from the foot by transverse flutes, the outer pair of which contain two rows of small impressed circles. The pin is missing (068).

20 K 597 (Context Group II) Copper alloy. The narrow bow is formed by a series of transverse mouldings above and below a small rectangular panel having three pronounced longitudinal ridges. Long lateral knobs, also fluted, project from the centre of this panel (070).

Hod Hill variants

A number of variants on the Hod Hill form are characterised by the presence of a rectangular or circular plate on the bow.

21 K 203 (No Context Group) Copper alloy. The sides of the upper bow are notched. The central circular plate is decorated by raised concentric rings. The foot is fan-shaped and ornamented by marginal grooves which retain very faint traces of rocked scorper-graver work; the central groove has a line of relief zigzag ornament formed by opposed and slightly offset impressed circles. Tinned. The pin is missing (071).

Fiddle brooches

22 K 760 (Context Group II) Copper alloy. The base of the bow is curved to form a near semi-circle. The surface of the bow is decorated by a number of crude (presumably) incised grooves; the grooves contain rocked scorper-graver work, and their upper edges are notched. The brooch is 'tinned'. The head and pin are missing (072).

* K 649 (Context Group II) Copper alloy. Fragmentary, but otherwise very similar (073).

* K 828 (Context Group II) Copper alloy. The bow is ornamented by carefully executed grooves and ridges and lines of rocked scorper-graver work. Broken. The pin is missing (075).

* K 648 (Context Group II) Copper alloy. Fragmentary and badly corroded. The bow retains faint traces of grooved ornament with rocked scorper-graver work (077).

* K 580B (Context Group III) Copper alloy. The cross panel is apparently plain. Broken. The pin is missing (079).

* K 597 (Context Group II) Copper alloy. The cross panel is rhomboid. Broken (081).

Rosette derivatives

23 K 580 (Context Group III) Copper alloy. The catch-plate has a small circular perforation. The rosette and rivet are missing (082).

Keyhole brooches

24 K 637 (Context Group III) Copper alloy. The circular bow plate has an appliqué cone with knurled outer rim attached by means of a central rivet. Small projecting lugs (one on each side of the plate and one at the head) are now broken. The fan-shaped foot has a narrow marginal groove on each side and a broad central groove which retains very faint traces of rocked scorper-graver work (083).

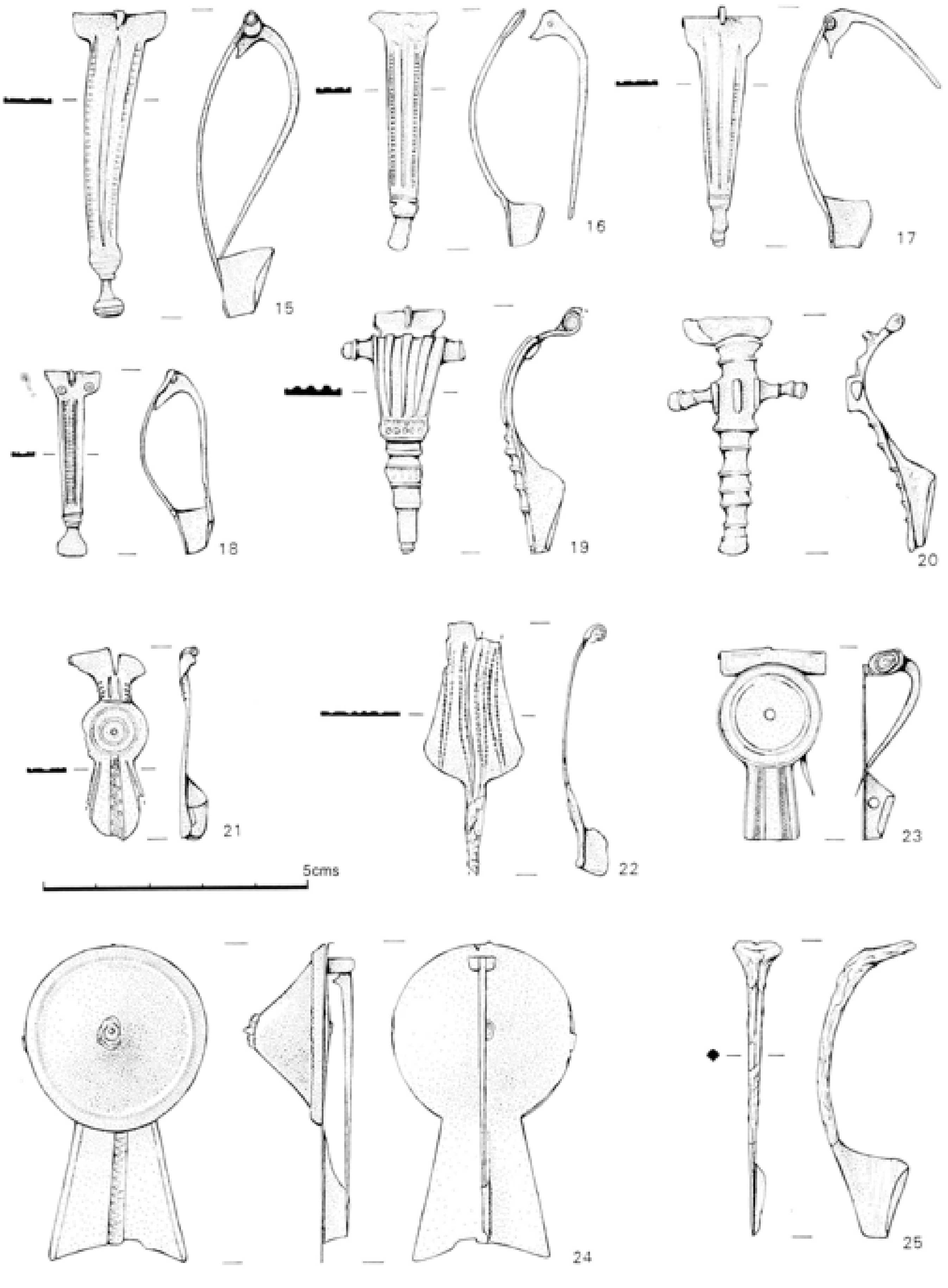


Fig 66 Brooches from south-west gate, 15-25. Scale 1:1Scale 1:1

Strip bow and related brooches

Simple hinged brooches

25 K 852 (Context Group I) Copper alloy. The bow has a rhomboid cross-section. The head is rolled over and then back under the axial bar of the pin. Broken (084).

26 K 577 (No Context Group) Iron. The pin is missing (086).

* K 824 (Context Group II) Iron. The pin is missing (087).

27 K 825 (Context Group II) Copper alloy. The raised central ridge retains faint traces of indistinct relief ornament. The cast bow has a hollow underside. Distorted. The pin is missing (093).

* K 747 (Context Group II) Iron. The narrow triangular bow is apparently plain. Fragmentary. The pin is missing (097).

* K 637 (Context Group III) Iron. The flat triangular bow is relatively broad at the head. Broken (098).

Strip bow brooches

* K 591 (Context Group II) Copper alloy. The bow is fluted. The head is broken and the foot is missing. The foot is missing from all five examples, but in each case a sufficiently large portion of the bow survives to indicate that it originally tapered towards the foot (103).

28 K 760 (Context Group II) Copper alloy. The ribbon-like bow tapers slightly towards the foot. Each edge of the bow is emphasised by a single marginal groove (104)

29 K 659 (Context Group IV) Copper alloy. Almost identical (105).

* K 580 (Context Group III) Copper alloy. Very similar. The head also has incised decoration. Broken. The pin is missing (107).

* K 760 (Context Group II) Copper alloy. Very similar. The head is broken and no trace of incised decoration survives. Broken (108).

* K 580B (Context Group III) Copper alloy. The head is obscured by corrosion products. Broken. The pin is missing (109).

* K 591 (Context Group II) Copper alloy. Very similar. The head retains faint traces of incised decoration. Broken. The pin is missing (110).

30 K 850 (Context Group I) Copper alloy. A larger brooch, but otherwise having all the features of the preceding group (111).

31 K 647 (Context Group IV) Copper alloy. The head does not expand, but is simply rolled over, and then back under the axial bar of the pin. The two inner grooves are separated by a relatively broad ridge, and retain traces of incised ornament. Burnt ? The pin is missing (114).

* K 591 (Context Group II) Copper alloy. Similar, although the central groove is plain. The foot and the pin are missing (116).

* K 659 (Context Group IV) Copper alloy. The bow retains very faint traces of three ornamental grooves but is too badly corroded to ascertain any further detail. Burnt ? Broken. The foot and pin are missing (120).

32 K 828 D409 (Context Group II) Copper alloy. The bow is broader at the foot than at the head, and is decorated by a single pair of marginal grooves that retain very faint traces of incised rocked scorper-graver work. The pin is missing (122).

* K 648 (Context Group II) Copper alloy. The lower bow and foot only. In addition to the pair of marginal grooves, a central groove is decorated by a line of relief zigzag ornament (123).

33 K 586 (No Context Group) Copper alloy. This brooch has a simple head, rolled forward over, then back under the axial bar of the pin. The bow widens at the foot, and is ornamented by a single pair of marginal grooves and three grooves running down the centre of the bow. With the exception of the central groove, all the others are decorated by rocked scorper-graver work. The pin is missing (125).

Colchester derivative and related forms

Hybrid forms

34 K 580B (Context Group III) Copper alloy. The main body is identical in most respects to that of a Colchester brooch. The bow has a central longitudinal channel containing relief ornament in the form of small upstanding rectangles. The catch-plate originally had three rectilinear perforations separated by stepped bridgework, but has been broken and repaired in antiquity by the addition of a plain riveted plate. The head expands into a plate to form a simple housing for the pin, rolled forward over and then back under the iron axial bar of the pin. The plate is ornamented by simple linear incisions (127).

Unusual Colchester derivative forms

35 K 597 (Context Group II) Copper alloy. The cast bow has a rhomboid cross-section, flattened on the underside of the head. The head of the bow is ornamented by a 'V' of small impressed circles, meeting just above the midpoint of the bow, and continuing down its length to the foot as a narrow knurled ridge. Each side of the bow is also decorated by a small margin of knurled 'beading'. The sidewings have transverse grooves. The long freestanding hook holds the chord of the mock spring in place and reaches up to the head of the brooch terminating in a small circular plate, with a central circular depression. One side wing terminates in a down-turned circular lug, perforated to hold the axial bar of the pin; the other side-wing is broken. The catch-plate has two large perforations separated by narrow stepped bridgework (128).

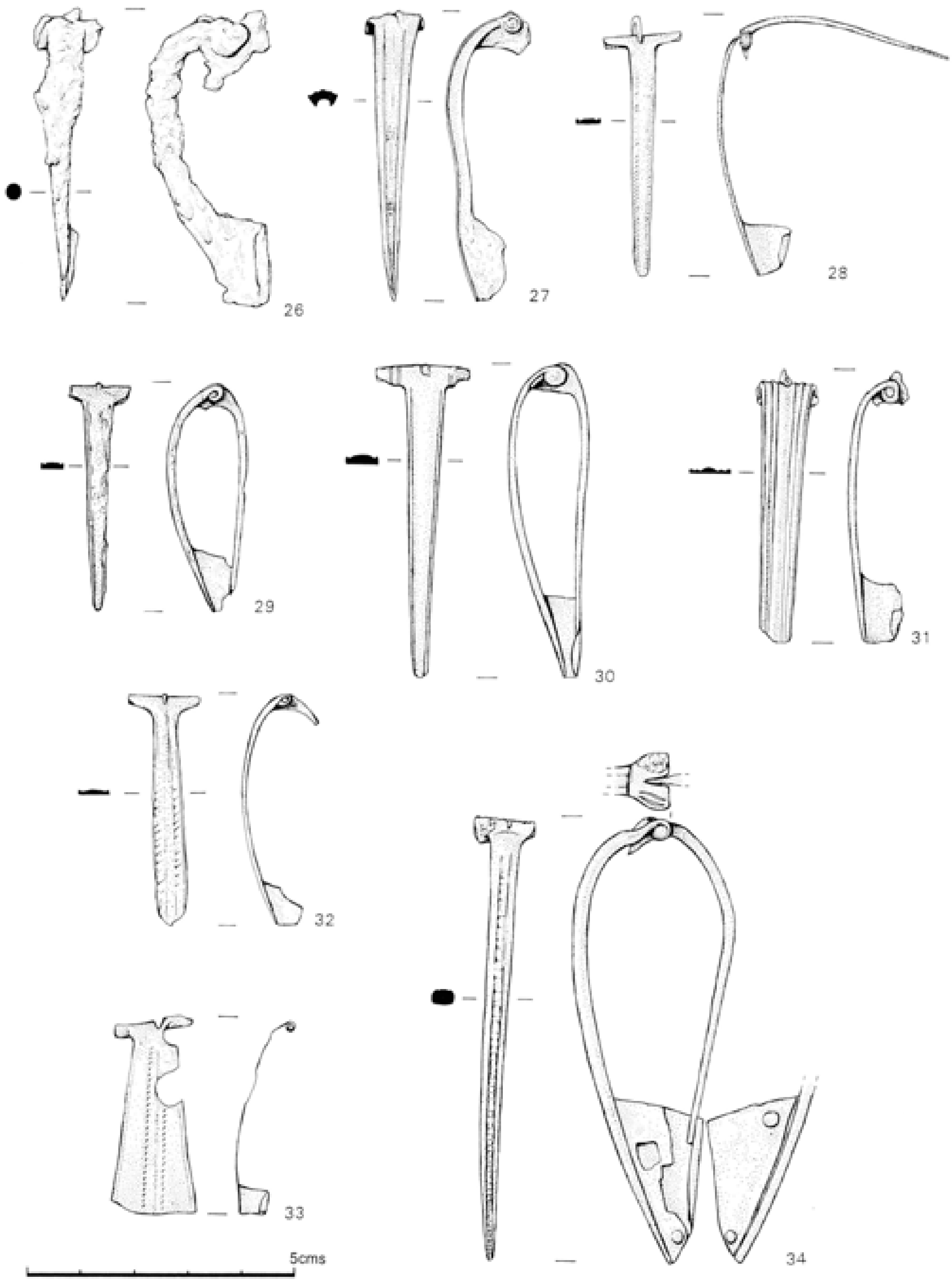


Fig 67 Brooches from south-west gate, 26–34. Scale 1:1

36 K 612 (Context Group III) Copper alloy. A small example of the same form as no 35 above. The upper surface of the cast bow is decorated by longitudinal grooves, but the brooch is otherwise plain. The catch-plate is solid (130).

Camerton brooches B

37 K 580B (Context Group III) Copper alloy. The flat triangular bow has a hollow underside and the upper surface is ornamented by a broad central ridge flanked on each side by an additional narrow ridge; these ridges retain very faint traces of knurling on the lower bow. The mock spring, applied hook, and pin are all missing, but the rivet that would originally have attached the hook to the bow survives. Burnt ? (131).

38 K 586 (No Context Group) Copper alloy. Very similar. In addition each side of the bow has a single narrow marginal groove. The rivet has incised crosshatched ornament. The mock spring, applied hook, and pin are all missing (132).

* K 597 (Context Group II) Copper alloy. The surviving portion of the bow is badly corroded but retains faint traces of at least two narrow longitudinal ridges. The applied hook survives, and has an hourglass shape with a small central circular expansion following the outline of the rivet. The pin and foot are missing (133).

Colchester derivatives BB

39 K 828 (Context Group II) Copper alloy. The chord and axial bar of the separate spring are threaded through a double lug cast in one with the bow (effectively forming a mock hook). The bow does not have the cavetto moulding typical of the Colchester derivative B form, but the upper surface is ornamented by three narrow longitudinal grooves. The catch-plate has two curvilinear perforations separated by narrow bridgework. The spring is broken and the pin is missing (134).

Dolphin brooches – sprung forms

40 K 597 (Context Group II) Copper alloy. The spine of the bow is decorated by a fine double ridge running down to the foot, which is continuous with forward projection of the hook. The side-wings are semi-cylindrical; the terminals are ornamented by moulded transverse decoration, and the centre (below the head) is emphasised by an oval raised platform, with a beaded edge. The spring and pin are broken and the catch-plate is missing (135).

41 K 580 (Context Group III) Copper alloy. The spine of the bow is decorated by a line of relief zigzag ornament formed by opposed and slightly offset small impressed circles; the flanking ridges retain traces of incised decoration, and each side of the bow is also emphasised by a slight, but well defined ridge. The bow retains traces of imperfect casting. The catch-plate is missing (136).

Dolphin brooches – hinged forms

42 K 591 (Context Group II) Copper alloy. The bow is plain, except for a short knurled ridge at the head, representing a vestigial hook. The tubular side-wings retain traces of transverse ornament at their terminals. The catch-plate is unperforated (139).

* K 614 D457 (Context Group V) Copper alloy. The decorative ridge is knurled and runs down the entire length of the bow (142).

43 K 580A (Context Group III) Copper alloy. The prominent head is plain, with no vestigial hook ornament. The flat upper surface of the bow is fluted, with two rows of impressed knurled ornament. The axial bar of the pin is iron, with knob terminals. The pin is missing (144).

* K 591 (Context Group II) Copper alloy. Similar, although the upper surface of the bow is ornamented by a single central ridge. The pin is broken (146).
* K 591 (Context Group II) Iron. Very badly corroded; possibly a hinged Dolphin brooch (148).

Polden Hill brooches

44 K 658 (Context Group V) Copper alloy. A short rearward-facing hook projects from the head of the brooch. The upper surface of the bow is decorated by a double row of relief knurled ornament set within a central channel. The catch-plate has an unusual triskele perforation. The spring and pin are missing (149).

Miscellaneous bow brooch fragments

Unclassified

* K 659 (Context Group IV) Iron. The bow has a round/oval cross-section. The head and pin are missing (151).
* K 591 (Context Group II) Copper alloy. The flat, triangular shaped bow is ornamented by a central groove with impressed decoration. The catch-plate is unperforated. The head and pin are missing (153).

Hinged pins

* K 580 (Context Group III) Copper alloy. A fragment of the head and the hinged pin of a Strip bow or related form (167).
* K 597 (Context Group II) Copper alloy. Hinged pin only (174).

Pin fragments (unclassified)

* K 747 (Context Group II) Copper alloy. Shank of pin only (188).

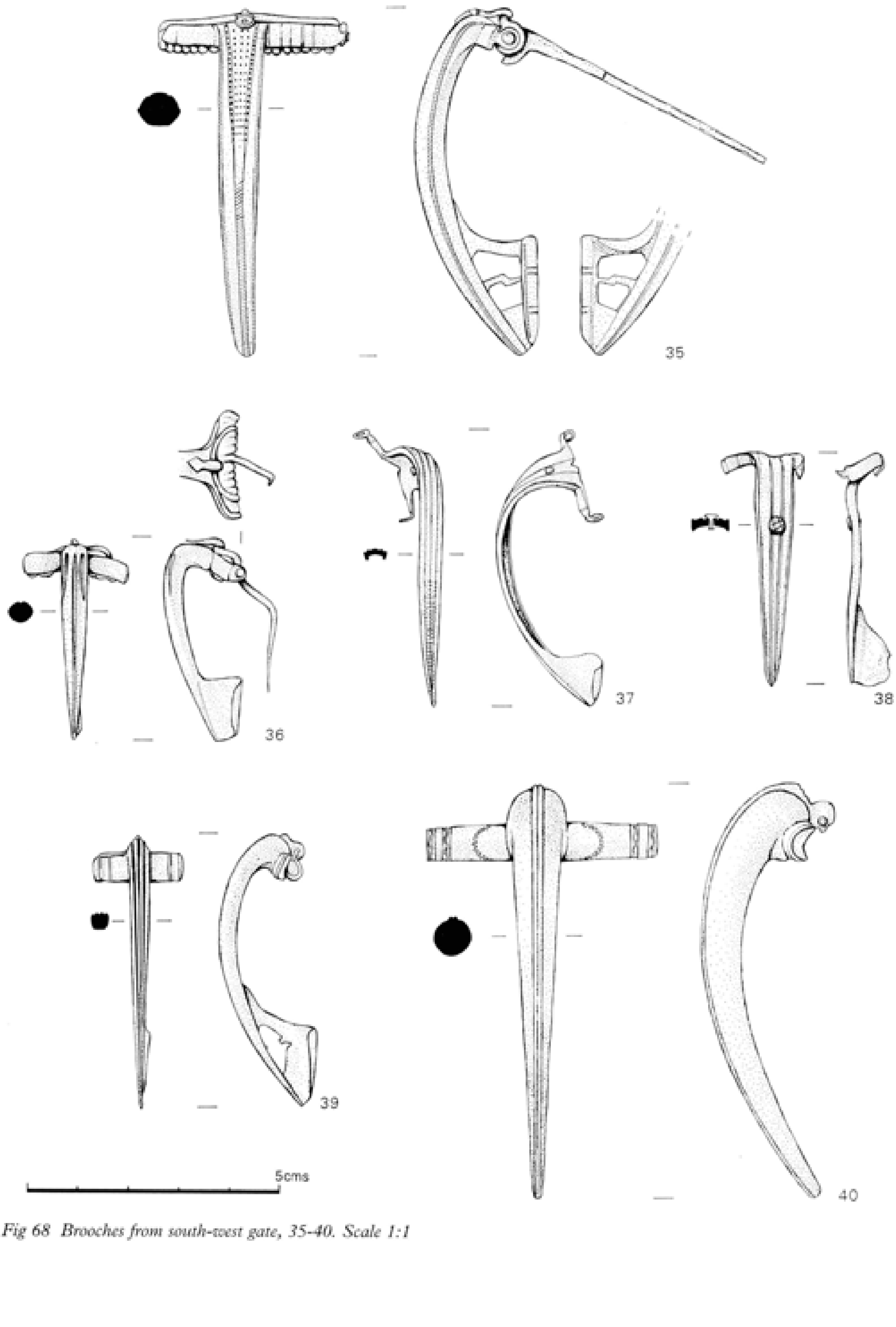


Fig 68 Brooches from south-west gate, 35-40. Scale 1:1

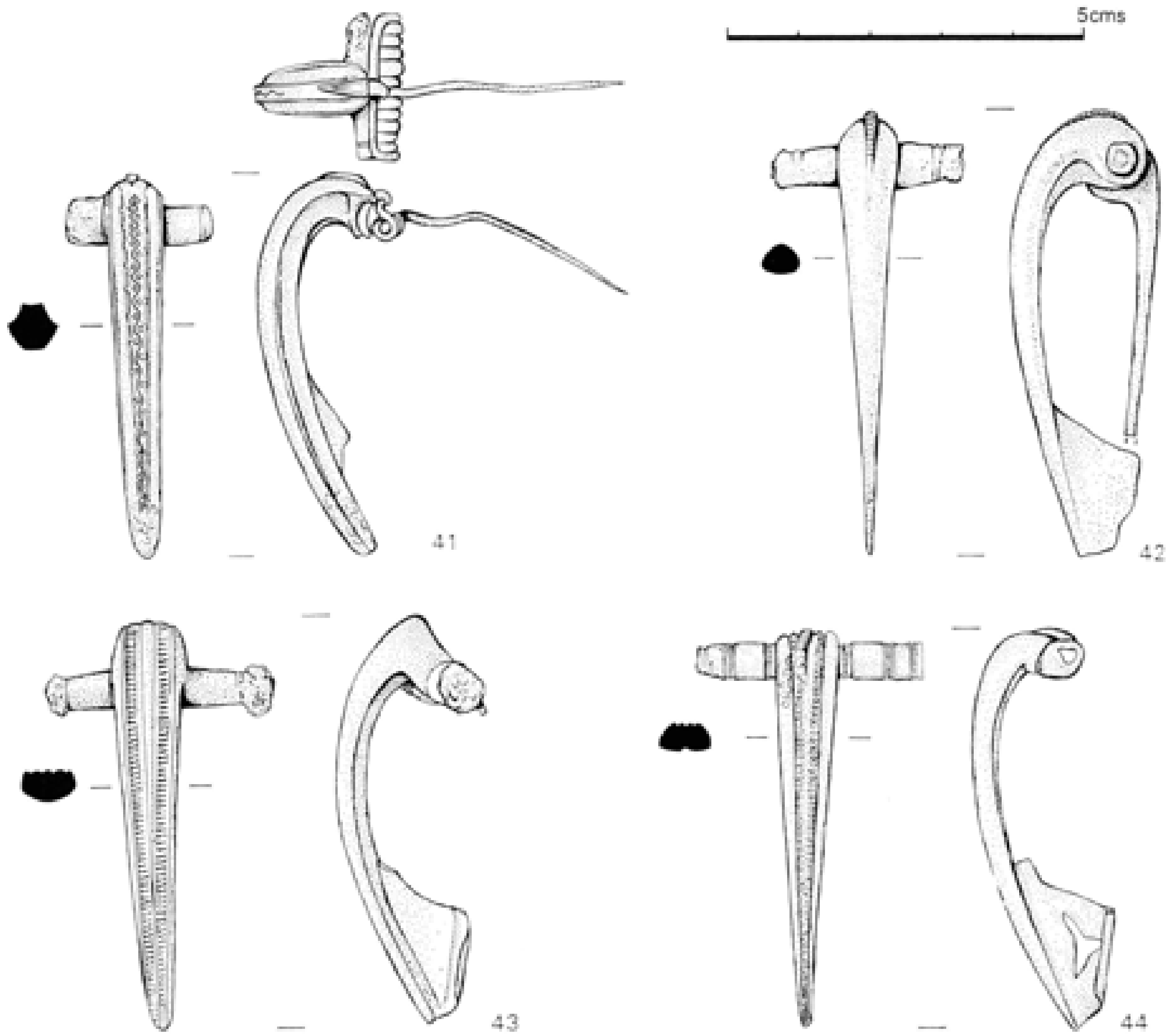


Fig 69 Brooches from south-west gate, 41-4. Scale 1:1

- * K 580B (Context Group III) Copper alloy. Shank of pin only, narrows slightly at the head. Possibly from a spring (189).
- * K 597 (Context Group II) Copper alloy. Shank of pin only. Broken (191).

Penannular brooches

Fowler Type A

- * K 828 (Context Group II) Iron. Fragmentary (206).

Fowler Type A3

- * K 614 (Context Group V) Copper alloy. The surviving terminal is in the form of a knob with double mouldings separated by a narrow groove. Part of the ring and one terminal are missing. The pin is broken (210).
- * K 597 (Context Group II) Copper alloy. The surviving portion of the pin retains a slightly humped profile (214).

Fowler Type D

- * K 614 (Context Group V) Copper alloy. The surviving terminal is bent back on itself over the ring. The pin is missing (215).
- * K 614 (Context Group V) Copper alloy. The pin is broken but originally was slightly humped (217).
- * K 852 (Context Group I) Copper alloy . Half the ring and fragment of one terminal only (218).
- * K 597 (Context Group II) Iron. Broken and very fragmentary (219).

Fowler Type D1

- * K 580B (Context Group III) Copper alloy. The bent back terminals are decorated by incised transverse lines. The pin is slightly humped (220).
- * K 747 (Context Group II) Copper alloy. The terminals are knicked by transverse lines, but are too corroded to ascertain whether they a simple bent back or cast. The pin is missing (221).

Fowler Type D2

- * K 597 (Context Group II) Copper alloy. The terminals have transverse notches and are pinched into an hourglass shape, but are too corroded to ascertain whether they are bent back or cast. The pin is missing (222).
- * K856 (Context Group I) Copper alloy. Similar. One terminal and the pin are missing (223).
- * K 760 (Context Group II) Copper alloy. The ring is distorted and the (iron) pin is missing (224).
- * K 591 (Context Group II) Copper alloy. The surviving terminal is bent back. Half the ring and the pin are missing (225).

Fowler Type D3

- * K 580B (Context Group III) Copper alloy. The bent back terminals are decorated with an incised saltire between a pair of transverse incised lines (226).
- * K 853 (Context Group I) Copper alloy. There are no transverse lines, but the end of each terminal is decorated by longitudinal notches. The pin is broken, but has a humped profile (228).
- * K 583 (Context Group III) Copper alloy. The bent back terminals are carefully decorated by transverse and longitudinal incised lines. In addition the body of each terminal is notched close to the end to give a pinched shape (229).

Fowler Type D4

- * K 649 (Context Group II) Copper alloy. The terminals are corroded and it is difficult to distinguish whether this is an example of a Fowler Type D2 or Fowler Type D4 brooch. The terminals are bent back and clenched in the centre resulting in an hourglass shape, and the end of the terminal tilts upwards a little, giving a slight zoomorphic effect. The pin is missing (230).
- * K 591 (Context Group II) Copper alloy. The surviving terminal is very small, but conforms to Fowler Type D4, although it is cast rather than bent back (231).

Fowler Type D5

- * K 659 (Context Group IV) Copper alloy. The terminals are cast but retain the fold-back line. Burnt ? (235).

Unclassified penannular brooches

- * K 856 (Context Group I) Copper alloy. Similar, but the ring is plain. The terminals and pin are missing (239).
- * K 597 (Context Group II) Copper alloy. The ring is of round wire. The terminals and the pin are missing (241).
- * K 614 (Context Group V) Copper alloy. Fragment of ring only (242).
- * K 591 (Context Group II) Copper alloy. Pin only (244).

Copper alloy objects (excluding brooches)

by Jennifer Foster

The illustrated objects have catalogue numbers referring to Figures 70–1. All unillustrated objects are prefixed by an asterisk. The massacre deposit Context Groups are included after the context number and the specialist catalogue number is in brackets at the end of each entry.

1 K649 (Context Group II). Semi-circular scabbard chape of U-shaped section. Piggott Group II. Forged, not cast. Decorated with a lip motif at the front of the chape. A strut at the back was originally riveted on both sides, but the rivet on one side is lost and the strut broken. The whole chape is slightly distorted. Length 28mm, diameter of rivet hole 1.5mm, width 41mm (020).

2 K597 (Context Group II). Complete knife scabbard, very late Iron Age in date. Wrought copper alloy sheet. The front plate has rounded corners and is clasped by the back plate, protruding slightly above the level of the back plate. One side is damaged. The scabbard tapers asymmetrically, probably to accommodate a knife with straight back and curved blade: a very small knife (length of blade 85mm). The loop handle was made from a piece of sheet with rectangular ends and the corners cut off. It is attached by two very rough rivets (no attempt at disguising them has been made) and decorated with three lines of incised dots. The scabbard was made as follows: first the handle was riveted to the back-plate, then the sides of the back plate were folded over the front plate. The plates were held together by the addition (perhaps by casting on) of a solid ball terminal. Finally, the decoration was added: a zigzag line was incised along both sides of the front and back plates. Length 93mm, length of handle 24mm, diameter of knob 10mm (022).

The knob terminal is a very late Iron Age feature, appearing, for example, on the sword chape from Stanwick (Wheeler 1954, pl XXVI, a and c), and probably indicates a date *c* AD 50.

Roman dagger scabbards of conquest date also have circular terminals, but these tend to be flat circles rather than knobs (eg Bishop and Coulston 1993, 77). This scabbard has a typical La Tène III attachment handle, as opposed to the Roman scabbards which have side rings, so it appears to be a native item.

3 K580 (Context Group III). Ring, undecorated and distorted to an oval due to wear, diameter 18–19mm (047).

4 K828 (Context Group II). Ring, circular-section wire with squared terminals decorated with an incised line (048).

5 K829 (Context Group V). Ring, circular-section with squared terminals decorated with a collar (050).

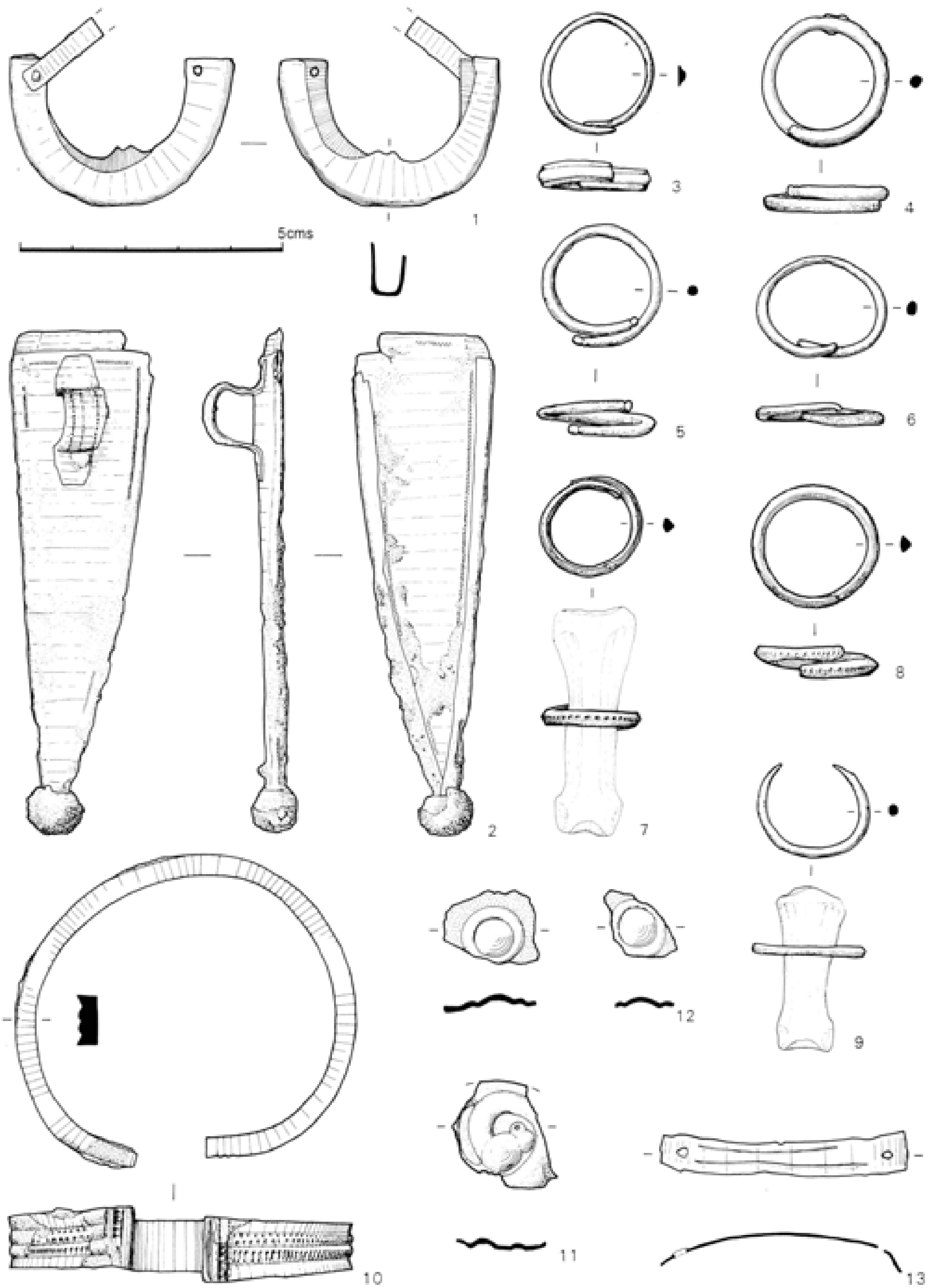


Fig 70 Copper alloy from south-west gate. Scale 1:1

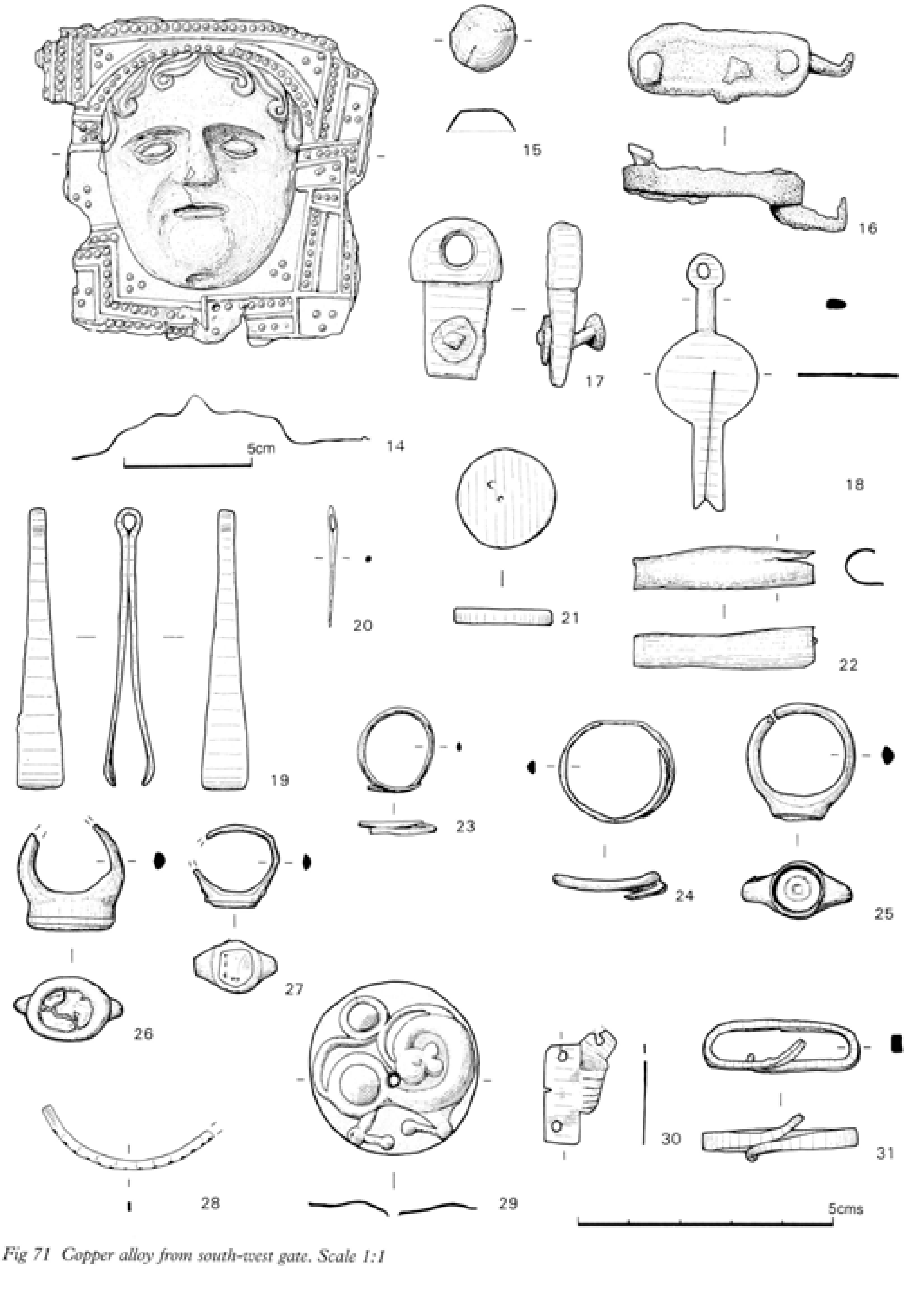


Fig 71 Copper alloy from south-west gate. Scale 1:1

6 K829 (Context Group V). Ring beaten from a piece of circular section wire which has cracked, was used and worn like this, distorted (051).

7 K760 (Context Group II). Plain ring of triangular section, squared terminal with loop decoration, internal diameter 14.5mm, external diameter 18.5mm. Found on an adult finger bone.

8 K828 (Context Group II). Plain ring of triangular section, squared terminal with loop decoration, internal diameter 19mm, external diameter 23mm (052).

9 K829 (Context Group V). Ring, diameter 17mm. Found on an adult finger bone (061).

10 K852 (Context Group I). Heavy penannular brass bracelet, rectangular section, cast with squared, slightly expanded terminals. Decoration consists of deeply ridged borders along the edges of the bracelet with two raised central ridges each with a line of incisions arranged in a herringbone fashion. The terminal has two incised lines at right-angles to the main decoration with a row of stamped dots between. The decoration in the top row is well worn, in contrast to that of the lower row, so perhaps the bracelet was habitually worn the same way up. Diameter 66mm, width 8.5mm. Very similar to a late Iron Age bracelet from a male grave at King Harry Lane (Stead and Rigby 1989, 102, no 1), though in view of the analysis perhaps this example should be considered early Roman (see p273) (072).

11 K591 (Context Group II). Fragment of a horse plaque, showing the head of a horse and with a central rivet hole. It has the same dimensions as and is similar to Figure 71.29 (see below). It must have been made in the same master former (084).

12 K591 (Context Group II). Fragments of sheet decorated with repoussé ring and dot ornament (085)

13 K822 (Context Group II). Sheet scrap, rivet holes in each end (2.5mm). Two parallel incised lines along length. Slightly bent, broken at one end, length 47mm (097).

14 K 659 (Context Group IV). A face plaque of sheet bronze decorated with a face and probably executed in repoussé, although the reverse cannot be seen because it is covered with wax. In good condition, except for a few cracks, and the surface is burnished with some scratches which may relate to cleaning. There are no original edges; all the edges are broken, not cut. Length 120mm, width 130mm, length of face 90mm, width of face 70mm.

A very fat face, the head only with no neck or ears shown, with a large rounded chin and a fat double chin below. The profile is flat. The eyes are lentoid in shape, fairly deeply set beneath large undercut brows with no eyebrows. The pupils are unmarked, the eyeballs protrude and have a double outline. The nose is a simple triangle, nostrils very slightly indicated; originally it stuck out slightly, but is now flattened, as the mask was found face down. The mouth is thin-set, with only the upper lip protruding; the profile of the mouth is very similar to faces on the Gundestrup cauldron (Klindt Jensen 1979, fig 17). The fringe of the hair is parted in the middle and divided into four locks ending in stylised curls, very Celtic in design, lobes ending in commas. The rest of the hair is shown as a loop at the sides. The expression of the face is strange, half a jovial smile, half frowning, and it is difficult to decide whether it is intended to be male or female. Many Romano-Celtic and Celtic faces are clean-shaven, so the absence of a beard is not indicative and female figures are not necessarily shown with long hair (eg Ross 1967, pl 68b).

The surround is executed with repoussé lines and dots. The line of the top of the head is followed by an arch and at first sight this is supported by pillars on either side. At intervals there are three dots set together in a triangle, but the design is in fact totally asymmetrical. For example, under the chin the double rows of dots and lines are offset. On the right-hand side as it is viewed the design meets the head, while on the left-hand side there is a large gap filled with the three dots. It is not possible to reconstruct the design because of its asymmetry.

This is a typical Romano-Celtic face, not as naturalistic as Roman faces (eg Pitts 1979, pl 30), but more expressive than a classic Celtic face (eg from Roqueperteuse: Megaw and Megaw 1989, fig 271). It has some Celtic features such as the curls, the outline of the eye, the flat profile, and the triangular nose. The surrounding design in dots and lines is typical of late Iron Age and early Roman repoussé work (eg from the Lexden Tumulus: Foster 1986,75 and fig 26). Many representations of faces at this period are either three-dimensional heads (eg Ross 1967, pl 34b) in bronze or sculptures in stone, but there is a series of metal plaques of this kind (Woodward 1992, 56). A tin face mask was found at Bath in a culvert (Cunliffe 1969, 66 and pl XI). Ross (1967, 98) interprets this as a mask to be fixed onto a wooden head or figure, probably votive, as it was found in the baths. Another, perhaps closer parallel was found at the Nettleton shrine (Wedlake 1982, frontispiece, 143–5), again interpreted as a votive plaque as it was found on the floor of the shrine. It is slightly smaller than that from Cadbury Castle (107mm), but is surrounded by an arch supported by two pillars. This plaque was dedicated to Apollo and was mounted onto an iron sheet before being offered at the temple. Both the Nettleton and Bath plaques have no eyes and probably had enamel eyes which have been lost.

Some of these face plaques have therefore been found in votive situations. The mask from Cadbury Castle is of this same general type, but it is not complete and could therefore have been a fragment from a larger panel, perhaps a decorative mount for a piece of furniture. There are no rivet holes in the section surviving, although one would expect a line of rivets along the top of the panel, perhaps 30mm apart. There is no sign that the panel was pulled off as it would than have broken at the rivet holes.

15 K648 (Context Group II). Rivet with domed head and no obvious means of attachment, diameter of head 12mm (080A).

16 K760 (Context Group II). Rectangular plaque with rounded corners. On one side a rivet protrudes for 3mm, goes through the plaque and has been beaten flat on the underside. At the other end another rivet is bent into a hook. Very corroded. The entire surface is covered with grass impressions in the corrosion products, including wheat glume fragments (K Burrow pers comm). Length of plaque 35mm, length including rivet 43mm (080B).

17 K742 (Miscellaneous, ie mainly from above Roman layers). Cast bucket suspension loop. Probably of late Iron Age date. It would originally have been one of a pair of bucket mounts to support a swing bucket handle. Simple rectangular mount with a semicircular loop at the top, which would have protruded above the top of the bucket, pierced by a circular hole 5mm in diameter to contain the hook of the handle. The mount was fixed to the bucket by a rivet 13mm long, now slightly bent. The thickness of the wood was probably 4mm. A round washer 8mm in diameter protected the front of the mount. Length 31mm, diameter of hole 5mm.

Most Iron Age bucket mounts are more elaborate than this; there are two fairly simple fitments with decorative side-wings on a bucket from Alkham, Kent (unpublished, in the British Museum). Other buckets such as those from Baldock and Aylesford, have heads or faces (Stead 1971) but the function is the same in each; to support the ends of a swing handle. All of these bucket mounts have rivets with washers (001).

18 Unstratified. Nail cleaner (one of two). Wrought from an oval section bar (still remaining at the neck), a suspension hole at the top worn to an oval. Circular shoulder and forked terminal, the points of which are worn asymmetrically. Length 48mm, width of circle 19mm (006).

19 Unstratified. Pair of tweezers. Made from a single sheet of rectangular section rod, undecorated, bent in half to form loop. Inturned flared terminals. Possibly formed a pair with the nail cleaner (Fig 71.18). Typical Roman type. Length 48mm (007).

20 K510 (Miscellaneous). Complete fine sewing needle. The hole (eye) was cut after needle was made. Length 23mm, width of hole 0.8mm (010).

21 K005 (Miscellaneous). Circular cast balance weight. Crudely finished around circumference, presumably to correct the weight, and filled on one surface. Several small holes on surface are casting flaws. Diameter 18mm, weight 7.5302gms (116.209 grains) (013).

22 K227 (Miscellaneous). Wrought clamp either from shield binding or possibly from a bucket. Now very distorted. Slight incised line at either end. Length 35mm (025).

23 K025 (Miscellaneous). Finger or toe ring, made from a rolled sheet tube, not properly closed at one end, but was used and worn despite this. This ring was possibly made on site; it is an unusual technique also employed in the making of needles from the site (p186). Distorted (039).

24 K707 (Miscellaneous). Ring of circular section with tapering terminals (040).

25 K612 (Context Group III). Hand-wrought brass signet ring, broken across the band, perhaps at the original join. Circular setting for a yellow glass setting, slightly roughened at the back, with a few chips around the edge. Bubbles and flow lines from the manufacture can be seen in the glass under the microscope. The yellow glass appears to have been poured into a mould; it has a slight dimple with a raised ring around it on the upper surface. Alternatively, it could have been stamped when the glass was still hot. Traces of the cement used to hold the glass in place are still visible within the ring setting. Diameter 8mm, diameter of setting 8.5mm (050).

26 Unstratified. Hand-wrought brass signet ring, broken across the band. Large oval setting still retaining flat glass inlay, now iridescent. Made from poured glass. Diameter 15mm, length of setting 11mm. (051).

27 K798 (Miscellaneous). Small signet ring broken at the side of the band. A circular setting with an incised line, retaining a flat circular glass inlay (now iridescent), again made from poured glass. Distorted. Diameter 12–15mm, inlay 7mm (052).

28 K402 Small bracelet with an outer diameter 37mm. This is too small for an adult wrist but would fit a young child's wrist, but it may be distorted (058).

29 K610 (Context Group V). Horse plaque. A disc cut from sheet bronze. It is designed to decorate a flat surface, probably a shield, attached by a rivet (now missing) through a hole (2mm in diameter) punched through the centre. Beautifully made and preserved, except for a slight crack. This is very similar to Figure 70.11 and may have been made in the same master former. Diameter 32mm (064).

30 K432 (Miscellaneous) H-shaped sheet fragment with 2mm rivet holes in the arms of the H. Decorated with five incised lines along the central bar of the H. Broken, bent and cut, obviously scrap. Width of arms 18mm (071).

31 K698 (Miscellaneous). Three pieces of wire bent into an oblong, two of rectangular cross-section and one of circular section. Possibly scrap, also possibly clips (080C).

Worked stone, bone, and glass

by F E S Roe, W Britnell, J Price, and S Cottam

All unillustrated objects are prefixed by an asterisk. Specialist catalogue numbers appear at the end of the entry

Worked stone

K659 (Context Group IV. Blue lias spindle whorl disc, straight-sided, smooth finish, central straight perforation (diameter 11mm), weight 25g (Fig 92.6, p356) (034).
*K580 (Context Group III). Lower fragment rotary quern. Pen Pits stone.
K597 (Context Group II). Shale armlet with rib and groove decoration (Fig 97.6) (025).

Worked bone

*K591 (Context Group II). Small pointed blade, sheep/goat tibia. Length 155mm (097).
*K659 (Context Group IV). Two burnt fragments of a bone toggle (228).
*K597 (Context Group II). Decorated bone tube possibly from a sheep/goat metapodial. Decorated with finely cut lines and the medullary canal has been cleared to form a longitudinal perforation. Possibly a Roman military item. Length 70mm (307).
K850 (Context Group I). Decorated bone tube, almost identical with the above item (Fig 127.5) (309).

Glass

K659 (Context Group IV). Body fragment of mid-blue cast bowl. Deep convex side, one narrow vertical rib, trace of second. Inner surface ground. Two horizontal wheel-cut lines within band of abrasion on lower body. Surfaces scratched, rib edge worn. Heavy iridescence. First-century Roman tableware. Dimensions 60 x 26mm, thickness 2–6mm (Fig 109.1)(001).

Roman pottery

by Peter Leach

The Roman pottery from the south-west gate and the adjacent rampart sections represents the second major assemblage available for analysis (after that from the northern slope of the interior). Examination of the assemblages associated with this phase and initially thought to be approximately contemporary with the Roman military activity documented in the interior, reveals an immediate contrast between the two areas. At the south-west entrance, structures and deposits associated with the massacre evidence and its aftermath are almost devoid of Roman style pottery. Only a handful of sherds are of Savernake fabric and the remainder of Dorset Black Burnished fabric. The lack of relevant samian suggests that first-century AD deposits in the gate were in fact mainly earlier than those on the northern slopes of the hilltop, and this evidence is in accord with the stratigraphic evidence discussed above.

Thus virtually the entire assemblage of Roman and Romano-British pottery from the gate is either residual or is contemporary with those deposits which accumulated between about AD 100 and 400 at Cadbury Castle. Sherds of samian, colour-coated and a small range of coarse wares of second-, third-, and fourth-century manufacture can indeed be identified here, although many of these are also residual in even later, post-Roman contexts. Among the residual pottery a small group of mid-first-century material is present, including a sherd of terra nigra and further Savernake ware, but no samian. Much of this is noticeably smaller and more abraded than the contemporary material from the hilltop, and all the evidence suggests that there was no *in situ* early Roman military occupation in this locality.

Correlations between the structural sequences in the gate and the Bank 1 sections

by Ann Woodward

Sites K (the gate) and KX (rampart section)

In the light of the new sequence of events proposed for Site K, it is important to review the interpretation of the stratification of Site KX. This Site began as a machine-dug section through the inner bank to the east of the gate and was cut back as a hand-dug section in 1973. It provided the best dated sequence of pottery recovered during the excavation campaign, and both the finds and the stratification were fully published and discussed by Alcock (1980). The location of Site KX in relation to the main Site K is shown in Figure 72. The plan and section were published by Alcock (1980, fig 3). The present reassessment involved reference to the original site records and site drawings, and a careful reconsideration of the important series of ten radiocarbon dates (see below and Chapter 13). This has led to an interpretation of the stratification which departs radically from the previously published account, at least from the middle Iron Age phases onwards.

The following account briefly discusses the major contexts from Site KX in the framework of Site Episodes I to XIII, defined above for Site K. The radiocarbon dates, which were listed in Alcock 1980, tables 1 and 2, are cited at two standard deviations and have been recalibrated using the maximum intercept method of Stuiver and Reimer (1986) and using data published by Stuiver and Pearson (1986), Pearson and Stuiver (1986), and Pearson *et al* (1986), and are quoted in the form recommended by Mook (1986; see also p370).

Episodes I to VIII

Episode I: Neolithic terrace or lynchet: KX018 contained Neolithic sherds and flint flakes. The undated postholes on the edge of the rear scoop may have dated

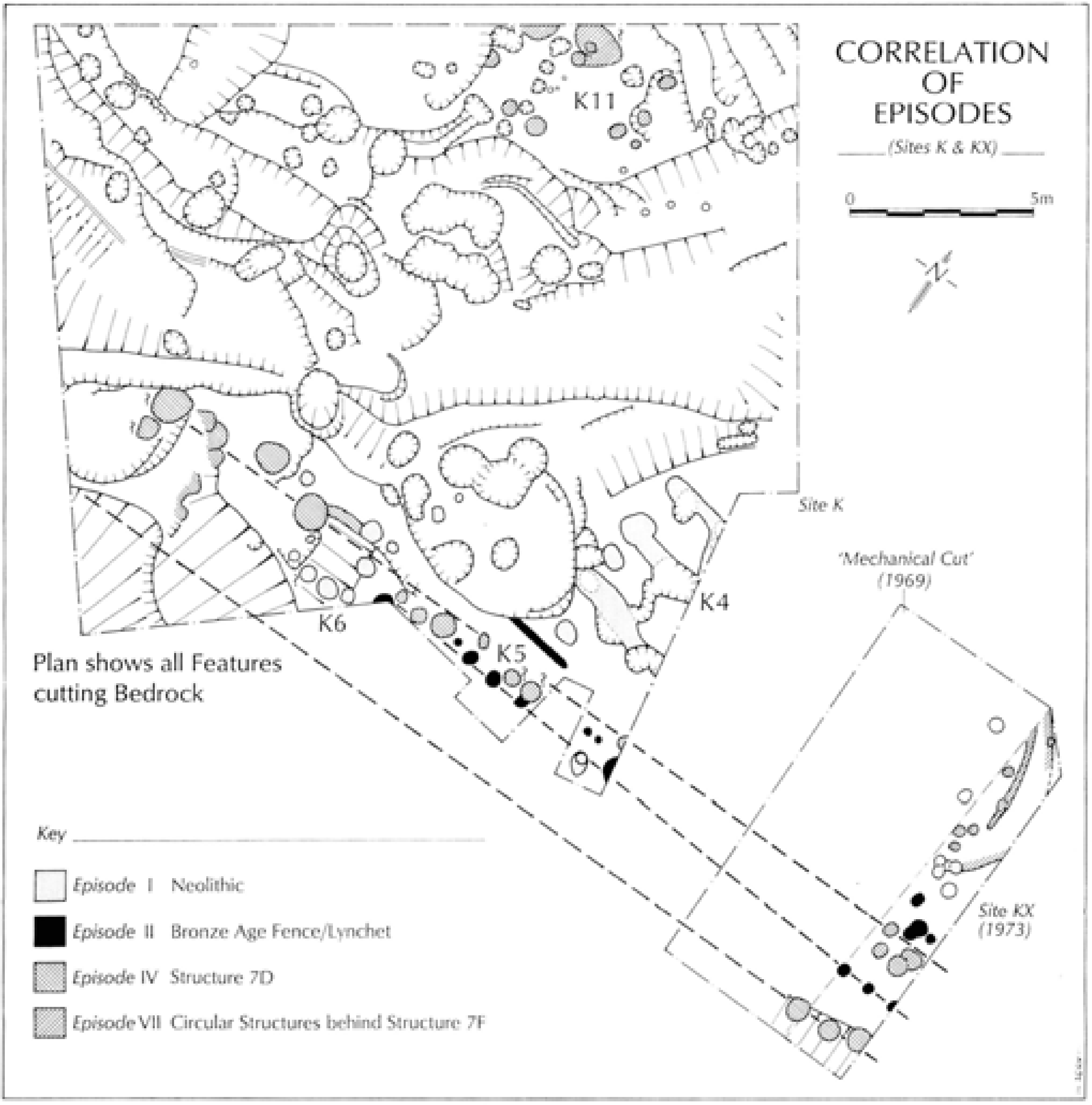


Fig 72 Correlation of Episodes between Sites K and KX

to this early phase and, if so, may have belonged to a structure or structures similar to those defined in Site K.

Episode II: Bronze Age fence and lynchet bank: KX016 and KX017 were a row of three postholes (see Fig 72 context no. missing: no context nos on Fig 72) following the line of fence postholes in Site K. Further postholes to the north may have functioned in the same way as slot K524. Three radiocarbon dates from Site KX with a range from the fifteenth to ninth centuries cal BC (1450–810 cal BC (SRR451); 1440–1020 cal BC (SRR442); 1310–800 cal BC (SRR443) correlate with the two dates from similar levels in Site K (1410–910 cal BC (I5973); 1380–840 cal BC (I5971). The associated pottery is of Ceramic Assemblage 4, and there is good correlation between these dates and those for similar assemblages elsewhere in Somerset and southern England (Woodward 1990, 140). However, charcoal from posthole KX034 gave an Early to Middle Cadbury date (520 cal BC–10 cal AD (SRR 448). Either this lynchet lasted longer than was deduced from the analysis of Site K, or, more likely, KX034 actually held a post belonging to the soil bank of Episode III. This posthole contained pottery of Ceramic Assemblage 5/6 only.

Episode III: Late Bronze Age soil bank (Alcock's Rampart A, Alcock 1980, 668–9): KX015 was interpreted by Alcock as 'Rampart A' (1980, 666);

it contained no pottery. There was Ceramic Assemblage 5/6 pottery from equivalent layers in Site K. Although the site records are ambiguous, the published section suggests that at least one of three postholes, mentioned above under Episode II, was cut, or recut, at this stage. The line of posts was probably maintained through Episodes II and III.

Episode IV: first stone bank (Alcock's Rampart B, Alcock 1980, 668–9): This Bank B comprised KX042 and two parallel rows of postholes. The back timber revetment is of at least two phases and correlates with the similar rows of postholes excavated in Site K (see Fig 72). The supporting holes for a timber revetment just survived in Site KX; in Site K it had been destroyed by the successive widening and deepening of the first defensive ditch. Ceramic Assemblage 7 pottery was associated with contexts of this episode in Site K. The radiocarbon dates from one of the posts, KX039A, of 200 cal BC–60 cal AD (SRR 450) appeared slightly late to Alcock (1980, table 2), but it is now known from Site K that the first stone bank lasted, with various modifications, through Episodes V to VIII, concurrent with the main floruit of the Ceramic Assemblage 8. The later phases of this stone bank in Site K would be equivalent to Alcock's Rampart C (Alcock 1980, 669–70), but these phases are not represented fully in the KX section.

Episode V: modification of the stone bank: KX037 contained only residual pottery of Ceramic Assemblages 1/2, 4, and 5/6 with some early prehistoric material. In Site K, equivalent deposits produced diagnostic sherds of Ceramic Assemblage 7. This corresponds to Alcock's first phase of Rampart C (Alcock 1980, 669) in Site K.

Episodes VI–VIII: rear extensions to stone bank and three phases of guard chamber construction. These episodes (associated with Ceramic Assemblage 8) are not represented in Site KX.

Episode VIII: structures in quarry scoop: Gully KX040 and, possibly, rubble KX036 belong here associated with Ceramic Assemblage 8 pottery. The structure or structures represented by these rock-cut features in the base of the scoop in Site KX can be best correlated with the circular structure K12 of Episode VIII in Site K (Fig 49).

Episodes IX to XIII

As far as this point, the published account of Site KX and the newly proposed sequence for Site K are roughly in accord. Sealing the rampart stratification at this point in trench KX there was a layer of burnt material, KX038, which stretched from the rear face of the rampart right through to the rubble KX036 on the edge of the rear quarry scoop (Alcock 1980, fig 3). Because it was felt that this destruction layer was associated with the burning of the post in hole KX039A (of our Episode IV), this context was interpreted as relating to the destruction of Bank B in the middle Iron Age (Alcock's Rampart B in Alcock 1980, 669). However, KX038 produced a radiocarbon date of 100 cal BC–190 cal AD (SRR 449). The stonework immediately above the destruction layer was interpreted as the very truncated remains of Bank C (Alcock Rampart C K035, K032) below three phases of Alcock's 'Rampart D' (Alcock 1980, 670–72). From Site K it is now known that the multiplex wall (Alcock's 'Rampart D') was first constructed prior to the massacre and then was remodelled at least four times, all in the later first century AD. If the destruction layer in Site KX is taken to be the burning level contemporary with the massacre, which would put the stratification in total accord with the radiocarbon dates, then the three phases of stone bank above it could correlate with three or four building phases evidenced in Site K. The sequence for Site KX would continue thus:

Episode IX: burning and massacre: KX038 produced one shell-tempered sherd and a radiocarbon date of 100 cal BC–190 cal AD (SRR 449). This episode is dated to the conquest period in Site K.

Episode X: rebuild of multiplex wall (Alcock's Rampart C; reinterpreted here as Bank D): KX035 and KX032 plus filling/levelling of scoop, KX031. The bank material KX032 contained mainly Ceramic Assemblage 8 sherds plus one sandy, bead-rim bowl more characteristic of Ceramic Assemblage 9. The scoop fill contained only Ceramic Assemblage 8 material, but so did the equivalent layers in Site K. The stratigraphic position of ashy layer KX029 is not securely recorded but probably belongs to this episode. It produced a radiocarbon date of 400–170 cal BC (SRR 445), which is consistent with the dating of Ceramic Assemblage 8 contained in the bank and the scoop filling. Alcock interpreted this as a layer predating the first building stage of the multiplex stone rampart and regarded the radiocarbon date now given as 400–170 cal BC (SRR 445) as too early. It is still statistically inconsistent with regard to its stratigraphic relationships with the dates from KX039A (Episode IV above) and KX038 (Episode IX above).

Episode XI: second massive rebuild of multiplex wall (Alcock's Rampart D1): KX026, KX028 with rear bank soil KX024 belong here. Ceramic Assemblage 9 pottery occurred throughout, including 'war cemetery' bowls.

Episode XII: extension and consolidation of multiplex wall (Alcock's Rampart D2): KX025 and KX022 produced Ceramic Assemblage 9 ceramics, including Savernake ware. A radiocarbon date of 430–640 cal AD (SRR 444) for KX022 suggests the intrusion of some charcoal from the post-Roman layers which lie directly above.

Episode XIII: final heightening of wall: This episode is not attested in Site KX, but KX023, a layer of weathered material, may belong chronologically to this phase.

Correlations between the gate sequence (Site K) and sections through Bank 1 (Sites A, D, I, and J)

by Ann Woodward

The accounts of the stratification of the ramparts excavated in Sites A, D, I, and J were prepared by Alcock in the 1970s, a short time after the completion of excavations, and they are presented in their original form, apart from minor editing, in Chapter 3. The interpretations offered there are discussed in terms of Alcock's system of Bank 1, (his 'Ramparts A to D'), a system which had been published fully in the account of Site KX (Alcock 1980). In the light of the more complex, and contrasting, system devised for Site K, it is useful to reconsider these other sequences in terms of the detailed episodes defined for the south-west gate.

Table 10: Correlation between Alcock ramparts, ceramic assemblages and episodes

Alcock rampart	*Ceramic Assemblage*	*Site K Episode*	*Site K bank structure number*
	10	XIV	final destruction
D2/3	9/10	X - XIII	7H, I, J
	9	IX	burning & massacre
D1	8	VIII	7G
C2	8	VI - VII	7F
C1	7	V	7E
B	7	IV	7D
A	5/6	III	7C
(Bronze Age)	4	II	7B
(Neolithic)	1	I	7A

The stratification at Site I was admittedly confused and little understood. For section C–C' (Fig 32), Alcock suggested possible correlations with his 'Rampart A to D' system, and no further useful information may be added. On Site J, the Iron Age banks appear to have been located outside the area excavated in 1969, although J116 in the 1967 section BB' may have been the top of the Iron Age bank (Fig 32). Correlations for the sequences in Sites A and D are more complex, but as an introduction, the basic correlation between the Alcock Rampart system, the Ceramic Assemblages (see Chapter 2), and the Site K episodes are is presented in Table 10.

Site A

Although the early phases of the sequence may be correlated quite easily, the location of any destruction deposits and traces of the multiplex wall cannot. In the Site A section drawing (Fig 22), a destruction deposit could be represented either by an unnumbered lens of charcoal between layers A121 and A120, or by the oven deposit A010 and its associated charcoal layer A112B (see Chapter 3). The sequence of bank layers above the charcoal lens might then represent a rebuilding of the wall following destruction. However, it may be that the multiple wall was never rebuilt on the north side of the hill, following the massacre event of Site K Episode IX.

Site D

Equations between the main contexts shown in the Site D sections C–C' and A–A' and the Site K Episodes are given in Table 11. As in the case of Site A, it can be shown that the correlations up to Site K Episode VIII are fairly straightforward. The main

Table 11: Correlation between Site D and K sequences

Alcock rampart	*Site K Episode*	*Site K description*	*main Site D contexts section C-C'*	*section A - A'*	*Ceramic Assemblage*
	XIV	final fire and destruction	608A	506A	(ploughsoil)
	XII	extension and heightening			
	XIII	of multiplex wall			
D 2/3	XI	second massive rebuild of mulitplex wall	608B, (603), (609)		9/10
	X	rebuild of multiplex wall	(608A)	507	9/10
	IX	burning and massacre	501 (soil)	510 (soil)	9/10
D 1	VIII	rear extension	610, 611	510A (paving)	
	VII	remodelled guard	617, 611, (620)	512C, (513B), 513C,	
		chambers; structures behind	(619), (618)	512, (512A), 518, 513, (513A)	8
C 2	VI	first rear bank extension	628B, 622	516	7/8
C 1	V	modification of stone bank	628, 624, 628A	520, 518, 521, 516A	7
			629	523(A)	7
B	IV	first stone bank	522	522	6
			525	525	6
A	III	early Iron Age soil bank	524	524	5
	IIB	Bronze Age fence/	631	536	5
	IIA	lynchet bank	636	539/540	4
	I	Neolithic terrace/lynchet	645, 683	-	-

Context numbers in parenthesis are not shown on the section drawings problem is the identification of any deposits which might be contemporary with the massacre. In none of the drawn sections is there a clear spread of charcoal which might be cited as a candidate for direct comparison with the destruction layer proposed in Site KX (KX038). However, close comparison of the westernmost section (A–A') at Site D with KX (and they are not far removed in space) would suggest that the multiplex wall layers D507 (=D610) and D506B (=D608B) equate with KX035/032, 026/028, and KX025/022. Moreover, the fact that D507 and D506B contained Romano-British pottery (including Savernake, Neronian samian and Corfe Mullen wares), and brooches of conquest or later type, would confirm such a hypothesis. Looking immediately below the stone bank D507/610 one finds a fairly thick layer, D510, which is variously described as deep, sterile soil or paving. Presumably the 'paving' element (sometimes referred to in the records as D510A) relates to the topmost features of the D512 complex just below, while the deep soil may well represent a build-up of material following the 'massacre'. Layer D510 contained samian of Neronian date. No actual burnt massacre deposits survived in the area of Site D; indeed none may ever have been present. Although destruction at the south-west gate involved intense burning, the destruction of the fort elsewhere around the perimeter may have involved slighting of the defences only. On the other hand, there are traces of charcoal deposits in the drawing of section A–A' (Fig 24) – D512C and the southern part of D711 – which directly underlie the soil deposit of D510.

5 Occupying the hill

Approaching the hilltop

by John C Barrett

The steep sides of Cadbury Castle dominate any approach and isolate the hilltop from the surrounding countryside. Even before the first defensive perimeter was erected, paths up the hillside were likely to have been mapped as the well worn tracks of human and animal movement. Enclosure will have ensured that the lines of approach became more formalised.

Only one gateway has been excavated, revealing, as we have seen, a long and complex history of modifications (Chapter 4). The earthwork survey suggests that the path approaching the break through the inner bank at this gate may have been realigned late in its history. The earthworks of the other two unexcavated gates also indicate modifications late in their history. Nonetheless there is no evidence to suggest that any of these gates were not operating when the site was first enclosed. We might assume that each gate respected a traditional route onto the hilltop. The three gates obviously afforded the only access to the enclosed site, two on the eastern side of the hill and one in the south-west corner. Each gate is slightly different in design and in the perspective of the interior which it presents to the visitor.

The north-east entrance is encountered as a deep straight passage between the massive and, on the north, inturned earthworks of the ramparts. Once through the inner bank the wide expanse of the interior opens up, rising steadily towards the broad horizon of the hilltop. Short stretches of the inner bank are visible to the right and left as they climb the slope of the hill before disappearing over the horizon. The eastern gate is out of sight at this point. Geophysical survey (see Chapter 1) indicates that a number of hollow-ways fan up the hill from this entrance; one of these is also visible on the aerial photographs and was encountered in excavation.

The eastern entrance is approached along a slightly curving passage which terminates at a deep scarp below the inner bank. The date of this scarp, and thus the blocking of the entrance, is unknown. Immediately inside the entrance rather less of the interior is visible than from the north-east entrance. The horizon is closer, curving round to the south and sloping away on the north. Geophysical evidence again implies that a number of hollow-ways radiated into the interior from this entrance (A). There are faint traces of a road running behind the east rampart which may have connected the east and north-east gates. This may be an early feature; it is not aligned on the north-east gate in its present form and it is the one hollow-way which appears to be cut by pits. Moreover, it either cuts or underlies the northern-most of the two hollow-ways running out from the eastern gate.

It is probable that the south-west entrance was realigned at some point in its history. The current approach follows a long curving passage which proceeds southwards by clinging to the line of the ramparts before turning eastwards to climb and terminate outside the passage through the inner bank. This passage is then followed by turning to the north-east. Throughout its length the passage is overlooked by ramparts which block any direct view to the interior. Once inside, the visitor stands at the foot of an arena which is backed by a deep scarp some eighty metres distant. This scarp, which leaves only a narrow corridor between it and the western rampart, tends to channel further progress eastwards. By taking such a path (and it is possible that this route is matched by a hollow-way shown by geophysical survey Figs 73 and it is possible to move upslope and onto the hilltop.

Each entrance gave, indeed continues to give, access from a different part of the immediate hinterland to a different part of the hilltop. The areas of the hill range from the broad expanse of the interior visible from within the north-east entrance to the more restricted and enclosed area entered from the south-west. The hilltop plateau forms the horizon visible from each entrance and presumably the area upon which a number of the interior routes may have converged. However, even today, with the site entirely open, it is impossible to gain a commanding view of the entire interior from any one place on the plateau. Instead, the view over much of the area is of an immediate horizon which effectively perches the visitor high above the surrounding landscape. The buildings, fences, and roadways which once clothed the hill will have extended this feel of a regionalised interior in which pathways threaded through and between bounded and enclosed spaces. An understanding of the overall organisation of the settlement could only have been pieced together out of the sequence of movements an inhabitant may have made over the hill. It is this image of regionalised or localised spaces and activities which we must keep before us when considering the result of the excavations which took place on the hilltop.

The excavated areas

by John C Barrett, Jane M Downes, P W M Freeman, and C R Musson

The excavators opened a large area on the hilltop plateau and extended their investigations downslope towards the north-east entrance (Figs 7 and 75). All these trenches were excavated between 1966 and 1970 and each trench was given a site-specific lettered designation within which each context was identified by a site-specific three-figure number. The trenches lay almost entirely along the east-west plateau: Site C was placed towards the highest point to the west, above the scarp which overlooks the south-west gate; Sites L, S, P, and N extended eastwards over a slight terrace which lies within a few metres of the steepening southerly slope marking the edge of the plateau ([redacted] Site T was situated at the extreme south-east corner of that plateau; Sites E, F, and G were at the north-eastern end of the summit, covering a more or less flat area with only gentle slopes to the north and east; and Site BW (originally two separate sites) was further to the north again, on the sloping ground which drops towards the north-east entrance (Fig 8). In very general terms we may distinguish between the western (Sites C, S, L, and P), eastern (Sites N and T), and northern parts of the plateau (Sites E, F, and G) and the northern slope of the interior (Site BW).

The occupation of the hill will be discussed in this chapter in terms of the architectural organisation of paths, buildings, working, and storage areas. These were the spaces which people occupied, where they lived, worked, and moved between areas. The point is obvious but is all too often lost in archaeologies which describe the facilities around which life was lived rather than the lives themselves. Analysis of the architecture has depended upon two programmes of work. First the identifications of structures was undertaken on all the interior trenches (with the exception of Sites B and W) by C R Musson (see p18) with a detailed reconsideration of this analysis and the original archive by J M Downes and P W M Freeman. This analysis involved scanning the site plan for patterns of postholes, stakeholes, and linear features, checking the coherency of these patterns in terms of the dimensions and fills of each element, and establishing the stratigraphic relationships recorded in the field notes. Stratigraphic details of the main structures with additional drawings will be found in Chapter 13.

The point has already been made but requires stressing; a great deal of the excavated area had suffered plough erosion, but a few surfaces had escaped this damage. Some of these on the east of the plateau were well preserved and the floors of some structures which were terraced into the northern hillslope had also escaped the plough. These surfaces of laid floors and yards sealed and preserved a number of superficial structures, such as ovens and furnaces, and debris, including the evidence for metalworking. The excavators clearly did not anticipate this level of survival (any more than the 'massacre' deposits were anticipated in the south-west gate passage), and a programme of recording which had become attuned to the excavation of rock-cut features could not adapt well to the challenge posed by these deposits. Their importance for the understanding of activity on the hilltop and the problems caused by the muddled record will haunt the text which follows.

The relative survival of structural features across the excavated area therefore varies markedly. Stakeholes occur where sealed by cobbling or the silts accumulated in a house terrace, but elsewhere the bedrock has been eroded leaving only the more substantial post pits. The variable distribution of smaller rock-cut features is clearly displayed in Figures 75 and 84.

The second programme of analysis has been concerned with establishing a sequence for the structural history of the interior and for the hillfort in general. The basis for such a sequence, expressed in terms of Ceramic Assemblages, is presented in Chapter 2. Ann Woodward's analysis of the pottery from various features and surviving surface deposits has established a series of preferred 'dates of deposition' for these assemblages, expressed in terms of one or of more of the Ceramic Assemblages. Obviously the entire area of the interior had been heavily utilised, resulting in the steady redeposition of residual sherds in later features. Some later sherds have also been worked into the top of earlier deposits. The problems which can arise when residual material dominates an assemblage, resulting in the date of deposition being assigned too early, have been identified in the analysis of the Danebury stratigraphy (Lock in Cunliffe and Poole 1991, 278–84). However, Ann Woodward has already noted that the degree of residuality occurring in many of the interior deposits at Cadbury does not appear to be as great as that encountered in Danebury (see p21). In an attempt to accommodate such uncertainties, and without simply adopting the open-ended dating of a *terminus post quem* for individual deposits, a long probable date span has been given to many structures. Such structures will therefore appear on more than one of the period plans. The largely subjective nature of this analysis is not to be doubted; at best we are only presenting the history of the occupation in its broadest outline.

The structural sequence presented here therefore depends heavily upon the analysis of the stratified Ceramic Assemblages, although some additional, stratigraphic information is available on certain parts of the site. The history of the interior is discussed in terms of the three periods of Early, Middle, and Late Cadbury which have been discussed in Chapter 2. Early Cadbury extends from the tenth to the fourth century BC and equates with Ceramic Assemblages 4, 5, and 6; Middle Cadbury covers the fourth to first century BC and equates with Ceramic Assemblages 7 and 8; and Late Cadbury dates between the first and fourth centuries AD and equates with Ceramic Assemblages 9 and 10.

The text which follows should be read against Figures 75, 77–80.

Early Cadbury

Early Cadbury spans the periods traditionally known as the late Bronze Age and the early Iron Age. It is during this period that Cadbury Castle changed from an open settlement to an early hillfort. Because of the importance of the period, and in an attempt to test the reliability of the available data, some effort has been made to establish a chronological subdivision between a phase associated with the deposition of Ceramic Assemblages 4 and 5 (Early Cadbury phase I) and a phase associated with the deposition of Ceramic Assemblage 6 (Early Cadbury phase II). The cumulative plan of those features associated with all Early Cadbury assemblages (ie Ceramic Assemblages 4, 5, and 6) is given in Figure 77 while the more detailed subdivision of the period is given in Figures 78–79.

The beginning of Early Cadbury is represented by a small cluster of buildings on the flat and least exposed eastern edge of the plateau. In addition there are a few pits in this area with one outlier to the west. It is probable that activity associated with the earliest phase of occupation extended beyond the area of the buildings. A notable scatter of late Bronze Age metalwork was also recovered. A proportion of this comes from later features or topsoil; other finds were buried by or contemporary with the lower cobbles (below). The overall distribution of the lower cobbles is given in Figure 77. Even allowing for redeposition it is likely that this mirrors, if somewhat fuzzily, the original spread of this material. Similarly, later pits which produced substantial quantities of residual Ceramic Assemblages 4 and 5 have also been plotted on Figure 78. Again the assumption is that this residual material mirrors the extent of surface spreads and middens whence it derived. If this argument is accepted, then it is clear that contemporary surface debris extended in an arc to the north and west of the excavated buildings.

Two rectangular post-built structures, F3 and F5 (Figs 77 and 173), belong to the beginning of the sequence (Early Cadbury I). The structural remains of F3, a six-post building, are slight and display evidence of rebuilding. They lie within the area enclosed by two arcs of a shallow gully. The latter may represent a roundhouse or be contemporary with F3. The record is too confused to allow any conclusion to be drawn and the stratigraphic relationship between these gullies and structure G1 is unrecorded. Only three postholes survived of the building F5, but the projected fourth post for a building 1.75sq m square would have been cut away by a later pit.

A small group of pits and postholes, the fills of which produced pottery of Ceramic Assemblage 4, had been dug to the west of the buildings F3 and F5. The pits (N968/F345, N802J, N905, and E701) were in an area which had been heavily disturbed and we lack a detailed record. However, E701 (Fig 83) contained the base and side of a late Bronze Age vessel which stood on an ashy deposit and beneath a large circular piece of grey clay. The pit was about 1.0m in diameter and 0.46m deep; its sides were fire-reddened and it lay within an area of late Bronze Age activity which included a possible kiln E700 (Fig 83) and a small spread of late Bronze Age metalwork.

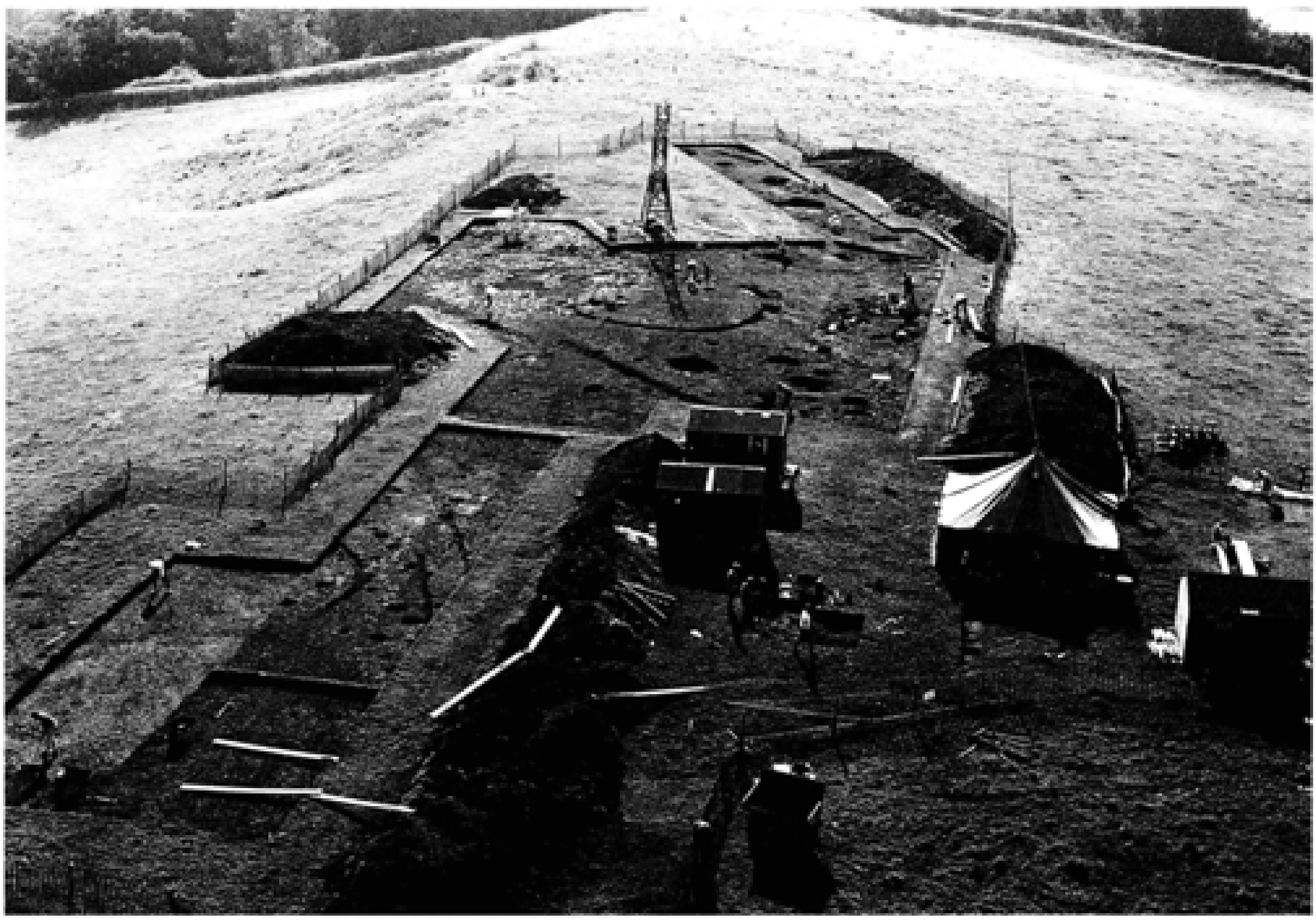


Fig 76 View of excavations on the plateau sites from the east in 1969

A complex group of stakeholes and gullies was recorded to the south of the rectangular buildings. They survived by virtue of their burial beneath a well laid cobbled surface. In places this also sealed a brown soil (N803, 853, 903, and N953). One gully (N042) was the segment of an arc of 7.0m radius, the second gully (N734) described a semicircle with a very much smaller radius, at most 0.75m. The area also contained a number of stakeholes forming straight lines and arcs, one with a radius of some 5.0m. Some of the stake lines lie radially to the arcs and these, along with the larger gully, may all represent renewed fence lines with subdivisions within the enclosed areas. If we extrapolate the lines of arc then the areas enclosed, either totally or partially, by such fences may have been in the order of between 79 and 154sq m.

The area of cobbling which preserved these ephemeral structures lay in a slight hollow no more than a few centimetres deep (Fig 77). Along its southern margins the cobbles and the exposed bedrock were worn. Ploughing has obscured the true limits of this deposit, although patches of cobbling indicated that it extended westwards, and it is in its westerly extent that the cobbling overlay the brown soil mentioned above. The hollowing into which the cobbling was set was more notable towards the centre of the strip, and in this area the cobbling was finer and more worn. The pottery sherds recovered among the cobbles belong to Ceramic Assemblages 5 to 6. The only notable object sealed by this deposit was an iron ring-headed pin (Fig 134.2).

All these observations are consistent with the development of a path or road running west-south-west to east-north-east immediately to the south of the fenced enclosures and over the cobbled surface. The bedrock was not worn beneath the cobbling and the cobbling extended beyond the eroded line of the road. It is reasonable to assume that the developing route-way was orientated towards the eastern entrance of the hillfort, although its exact course is unclear. Its westward line was not located in the area of the excavation; it may either have skirted the extreme southern edge of the plateau, perhaps terminating at the high point above the scarp, or it may have turned southwards to drop downslope towards the south-western hollow-way.

The cobbling seems to have extended beyond the road on either side and it is unlikely that it was laid as a single programme. Additional patches are noted elsewhere on the eastern side of the plateau, and where the information is recorded the cobbling comprises small fragments of oolitic limestone, some water-worn pebbles and burnt stone (although not, apparently burnt *in situ*).

The laying of the cobbling effectively marks the opening of the second phase of Early Cadbury which is equated with the deposition of Ceramic Assemblage 6. It is now that we find the construction of more substantial rectangular buildings and the first large round houses being built on the hilltop (Fig 77). It is also in this period that the cobbled surfaces were extended and the roadway was established and maintained. Although we will return to the point, it should be remembered that the first clear evidence for a rampart around the hill is also associated with the deposition of Ceramic Assemblage 6 pottery. This, then, is the beginning of the early hillfort.

At the eastern end of the excavated plateau and immediately to the south of what we take to be the east-west road line stood an important group of buildings. The building sequence begins with two concentric lines of gully identified as Structure T7 (Fig 172). They may represent two phases of a small circular building with a floor area of, at most, between 20 and 28sq m. The pottery associated with the gullies is assigned to Ceramic Assemblages 5 and 6, although a direct stratigraphic relationship between them and the cobbled surface could not be established. This building was replaced by a number of substantial rectangular buildings (T1–T5, Fig 174). Buildings T1–T4 seem to have shared an alignment with the roadway which bounded them to the north (Fig 77).

Three of the buildings may have been contemporary (T2, 3, and T4). All were of similar dimensions and all were supported by six posts probably rising some 2m above the ground surface. There is evidence for the rebuilding of T2 and T4. T3 may also have been rebuilt although the evidence is less clear. Slightly larger and of different shape, T1 was a single phase six-post building. It occupied part of the same floor area as T2 and abutted the line of T3; it was therefore not contemporary with these buildings. Charcoal from the corner posts of T1 was assumed to represent the remains of burnt posts. Charred grain was also recovered from the four corner posts; in one case this is recorded as having come from the post-packing, and it is therefore not a direct indicator of the function of the building. The remaining building T5 is different again; it is a six-post trapezoidal building, the long axis of which lay at an angle to the other buildings. Its floor area coincided with the gullies of T7. Cobbling extended across three of the postpits of T5.

The construction of substantial rectangular buildings immediately alongside roads is a feature well attested at Danebury (Cunliffe 1984, 92–5; Cunliffe and Poole 1991, 114–16), where the case for many these buildings acting as storehouses has been made. The argument is reasonable and does not call upon the recovery of burnt grain from some of the postholes for support. Chalk spreads and silting extended into the areas demarcated by some of the rectangular buildings at Danebury, implying that the posts carried a raised floor beneath which such deposits could accumulate (Cunliffe and Poole 1991, 115). The extension of cobbling over the postpits of one building at Cadbury may have a similar implication.

To the north and north-west of the cobbled surfaces and the road, scattered across the plateau, stood a number of four- and six-post buildings. The long

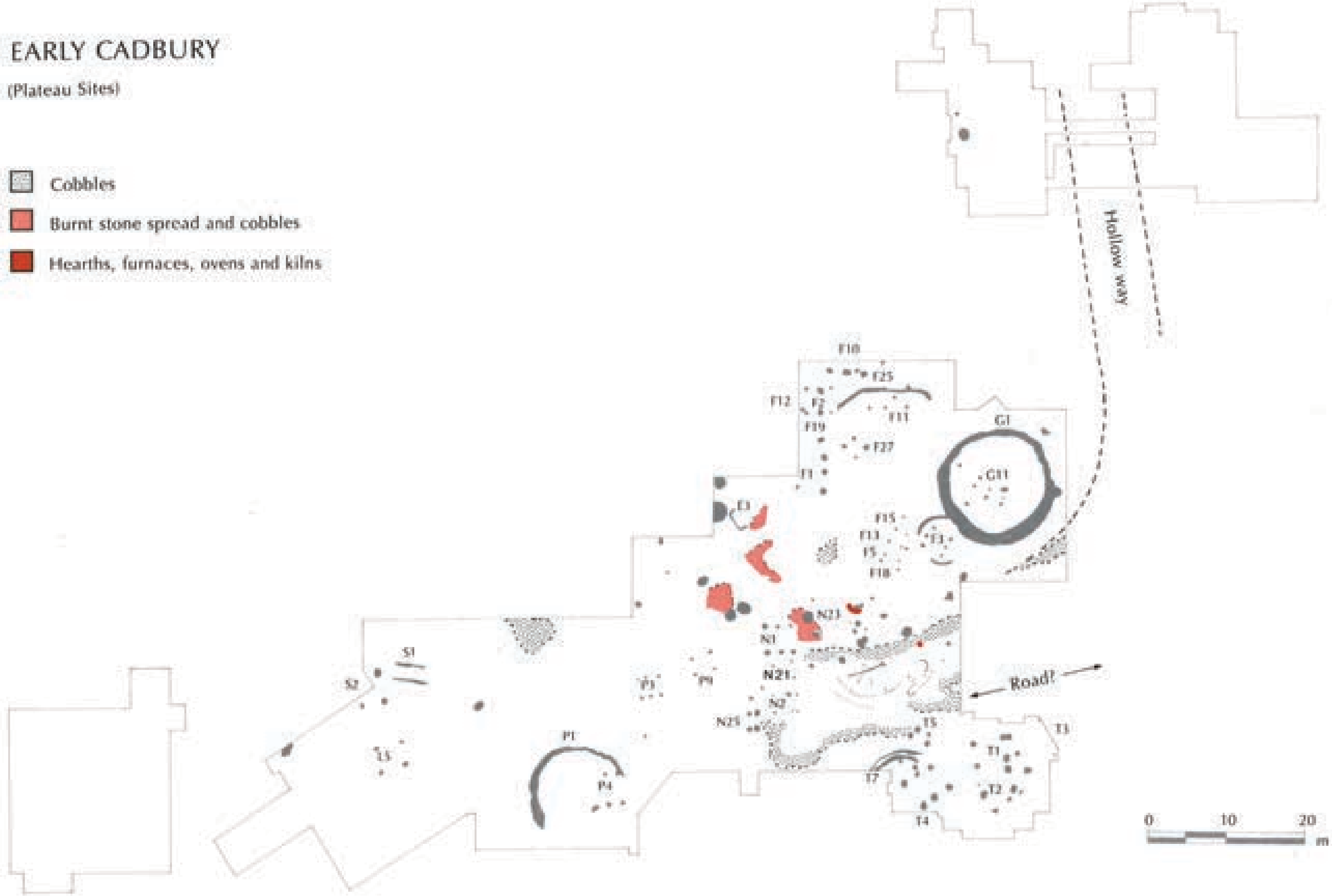


Fig 77 Early Cadbury structures

axes of all these buildings tend to be orientated east-west. Pottery associations extend from Ceramic Assemblages 4 and 5 to Ceramic Assemblage 6. These buildings (N1, N2, P3, P4, P9, F1, F2, L5 (Fig 173), and S2 (Fig 174)) appear less massive and do not cluster in the same way as those already discussed. Comparison can again be made with Danebury where the smaller rectangular post-built structures display a more scattered distribution across the interior of the hillfort (Cunliffe 1984, 92).

One of the Cadbury examples demands more detailed consideration. This particular structure (L5, Fig 173) has been interpreted as the porch of a large circular building of early medieval date (Alcock 1995, L3). The alternative, however, is to accept L5 as a free-standing and much earlier building. The pottery from the postholes can be assigned to Ceramic Assemblage 6. The postholes are more massive than those of the proposed circular building, upon which L5 is aligned somewhat uncomfortably (Alcock 1995), and L5 is similar in dimensions to S2 (Fig 174).

Two additional rectangular buildings (S1 (Fig 174), and E3 (Fig 173)), represented by foundation trenches rather than by individual postholes, are equally problematic. The former comprises two parallel lengths of gully, each cut by three postholes and defining a floor area of some 8sq m. The pottery from these features can be assigned to Ceramic Assemblages 5 and 6, although a single sherd of early medieval Bi amphora was also recovered. The area of the building has been heavily eroded and the sherd might be intrusive. Alternatively, this building could be contemporary with the nearby early medieval timber hall (Structure L1). A full discussion of the early medieval structures is given in the companion volume (Alcock 1995). The second building (E3) is defined on three sides by a continuous bedding trench, giving a floor surface which was at least 2.5m wide. The building lies within the area of the cruciform structure E1 with which it shares a common axis. The pottery from E3 belongs to Ceramic Assemblages 5 and 6; E1 certainly post-dates the late Iron Age. Our problems associated with the interpretation of the cruciform structure are discussed below (p178). Alcock links E1 and E3 together as the outer wall trench and inner furnishing of an early medieval church (Alcock 1995, 1). Alcock's interpretation is certainly economical, but if we take E3 on its own we can find reasonable comparisons among the Iron Age rectangular buildings at Danebury, in particular the open-ended building Danebury RS4 (Cunliffe 1984, 86).

It is probable that at least two large roundhouses (P1, Fig 171, and G1, Fig 169) are contemporary with the grid of six-post buildings on the south-east of the plateau (Fig 77). The ceramic dating is not, however, as unambiguous as that for the six-post buildings and we must allow them a broader date range, possibly extending into Middle Cadbury. The more westerly of the two (P1) is defined by a shallow gully enclosing a potential floor area of 99sq m. No floor deposits or definite wall line survived, nor did a hearth, although a shallow scoop (P906) containing burnt debris may be contemporary with the building. A doorway was not clearly identified either, although it may have faced south-east. The second house (G1) was also defined by a gully which had been cut against the hillslope and had been recut at least once. No wall line or floor deposits were recorded; the floor area of this building was in the region of 104sq m. It is possible that the entrance of this house shifted from north-east to east in the recutting of the ditch and the reconstruction of the house. The cumulative effect of this lengthy structural history was to produce a continuous, multi-period ring-ditch which was then itself cut by a number of later features.

The establishment of an east-west road and its role in determining the location of the rectangular buildings T1–T5 has already been discussed. At least one other road, running upslope from the north-east entrance towards the plateau, was probably established during Early Cadbury. This route is recorded on both geophysical survey and aerial photographs as a hollow-way (Fig 73, B). It was sectioned in the trenches which lay downslope from the main plateau excavations (Site BW) and its line appears to have swung up onto the plateau, just entering the north-east edge of the plateau trenches (Figs 75 and 77). If this line is projected, then a junction between the two routes might be expected to have lain immediately on or just beyond the eastern edge of the main area of excavations.

Where fully sectioned the hollow-way is represented by a broad channel eroded into the bedrock, running north-north-east to south-south-west and containing irregular surfaces of cobbling separated by silts. These deposits will be more fully discussed in connection with Middle Cadbury (below p160). The problems which attend the dating of such an erosional surface, covered by silts containing largely residual material, are considerable. Our understanding of the hollow-way is further complicated by the existence of what appear to be early medieval quarry scoops cut along its western edge which were not fully understood at the time of excavation. The dating of the hollow-way is based upon the (albeit tenuous) stratigraphic links established between the silts it contained and the infilling of a Middle Cadbury house platform (BW6, Fig 167) which lay immediately to the east. The roundhouse was probably built when the hollow-way was in use, and deposits which sealed this house platform also infill the hollow-way. It seems reasonable to accept that the hollow-way was established by the end of Early Cadbury and, indeed, that it must have already witnessed heavy use by that time. There is also some slight evidence that buildings were placed around the line of hollow-way on this north-facing slope during this period. The evidence is limited to a small number of gullies (W103/113 and B757) which were cut by the terraces of

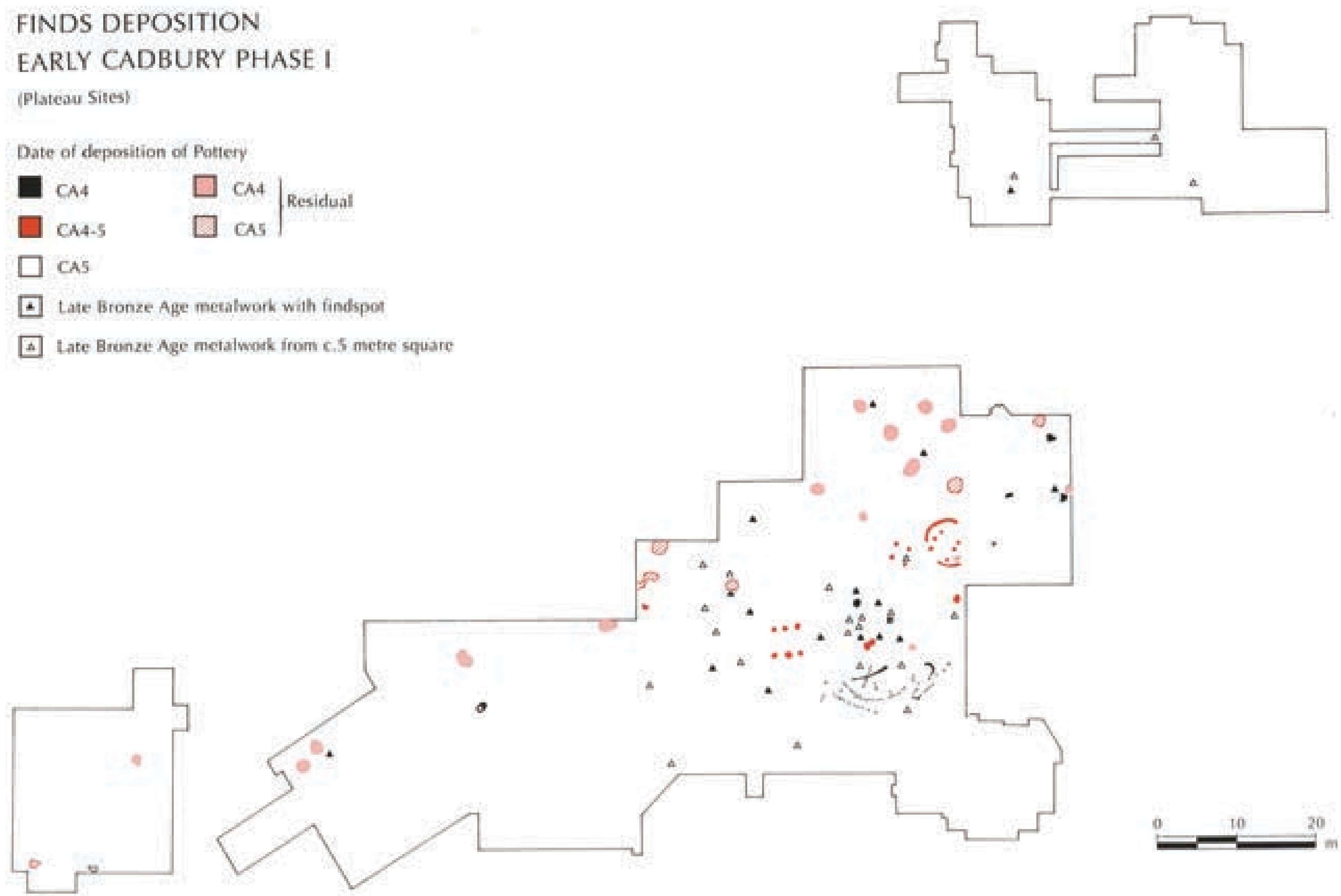


Fig 78 Early Cadbury I finds deposition

Middle Cadbury roundhouses and one possible four-post building (BW9), one post of which may have been removed by a Middle Cadbury pit.

We have attempted to trace the excavated evidence for the development of Early Cadbury from a small nucleated group of buildings and what may have been fenced yards which were sited on the eastern edge of the plateau, to a more extensive settlement which lay at the junction of at least two roads through the early hillfort. Alongside the relatively secure structural evidence described above occurs the inevitable background noise of postholes and gullies which, although probably contemporary with this period of occupation, cannot be assigned so easily to specific building plans. A number of more doubtful structures can obviously be identified and although some of the structural elements are plotted on Figure 77, the structures themselves are not discussed in the main text.

We have already observed that to describe the history of a complex site in terms of a single sequence of periods introduces breaks into what should be perceived as a more organic development for the settlement (see p22). It also imposes a spurious order upon the multiple continuous and discontinuous sequences which went to make up that development. A stratigraphic sequence of building events, such as the rampart sequence, can certainly be described simply in terms of that stratigraphy, and the gate sequence at Cadbury has also been analysed as a series of stratigraphic Episodes (see Chapter 4). The rebuilding of a house could be similarly described. But life on the hill was probably lived out as a greater continuity than is allowed by a traumatic catalogue of building sequences. Roadways and floor surfaces, for example, will have been crossed and occupied, daily, seasonally, perhaps for generations, but the archaeology of such activity is witnessed, if at all, by erosion and the superficial spread of debris. It is the latter which is the stuff of continuity. Rebuilding and renewal were acts of optimism, believing that the world would continue and that its order was sustainable; rebuilding was simply worth the effort. In other words, sequences of building were viable because they occurred in the context of more mundane and routine activities. The erosion of the hollow-way or the continuous use of the yard surfaces may evoke more faithfully the life ways of the occupants of the hill than the periodic rebuilding of a house, and it is precisely the former which we have the greatest difficulty in assigning to a particular period of occupation.

This problem, the product of our desire to resolve continuity into a sequential order of structural deposits, is particularly acute when dealing with the surviving surface deposits on the eastern side of the plateau. Their survival, as we have stressed, is largely the result of their escaping the plough, but it seems likely that this area did take on a quite specific character for most of the history of the occupation of the hill. The plan of all rock-cut features is obviously a palimpsest resulting from at least a thousand years' intensive occupation (Fig 75), but it does display one clear pattern. The roundhouses which span Early and Middle Cadbury, and the storage pits which date mainly to Middle Cadbury, lie to the west and north of the area where the surface deposits were most clearly encountered. The lower cobbled surface, which we have assigned to Early Cadbury, is overlain by later deposits which will be described below. We might expect to find the record of structures and deposits either cutting or placed on the lower cobbling which derive from activities which took place on that surface, and such records do seem to occur. These deposits must express a continuity of activity which carries us between Early and Middle Cadbury. Their record is confused, but they seem to include the sequence of two hearths N843 and N807 and a possible kiln E700 (Fig 83), the stone and clay structure of which probably stood on the cobbled surface and overlay an earlier hearth E704. Other traces of burnt material are recorded, including burnt stones to the south of E700 which overlay several postholes, one of which (E706) produced a pair of late Bronze Age tweezers from among the post-packing (Fig 92.1). To the north-west, a series of intercutting pits, including one lined with clay and stone (E982, Fig 83) and with a covering of burnt stone, may be an indication of the further extent of some kind of industrial activity on to the north of the plateau. However, the character of most of these areas of burning remains ambiguous to such an extent that it is often difficult to know if the burning had taken place *in situ*.

Middle Cadbury

Middle Cadbury represents four centuries of intensive occupation and is equated with the deposition of Ceramic Assemblages 7 and 8 (Fig 80). Although it will be discussed here in its totality some attempt must be made to trace the development of the period. The roots of this relatively arbitrary slice of time lie in Early Cadbury but the period also results in the physical transformation of the hill. As we have already argued, continuity can be expressed in terms of the continuity of route-ways and in the use of areas given over to particular activities. Two roads, the north-south hollow-way and the east-west road, were identified in the excavated areas as having been established during Early Cadbury; it would seem that by the very end of Middle Cadbury or by the opening years of Late Cadbury both had either shifted in alignment or actually fallen out of use.

The reading of the evidence offered here in connection with the hollow-way is that the route was maintained intermittently and with periodic resurfacing throughout this period (Fig 81). Cobbling (W083) had been laid on the eroded bedrock within the hollow-way and above this a silt had formed (W091). Above this again were more silts mixed with lumps of bedrock (W087) which may represent a further attempt to resurface the road, and which in

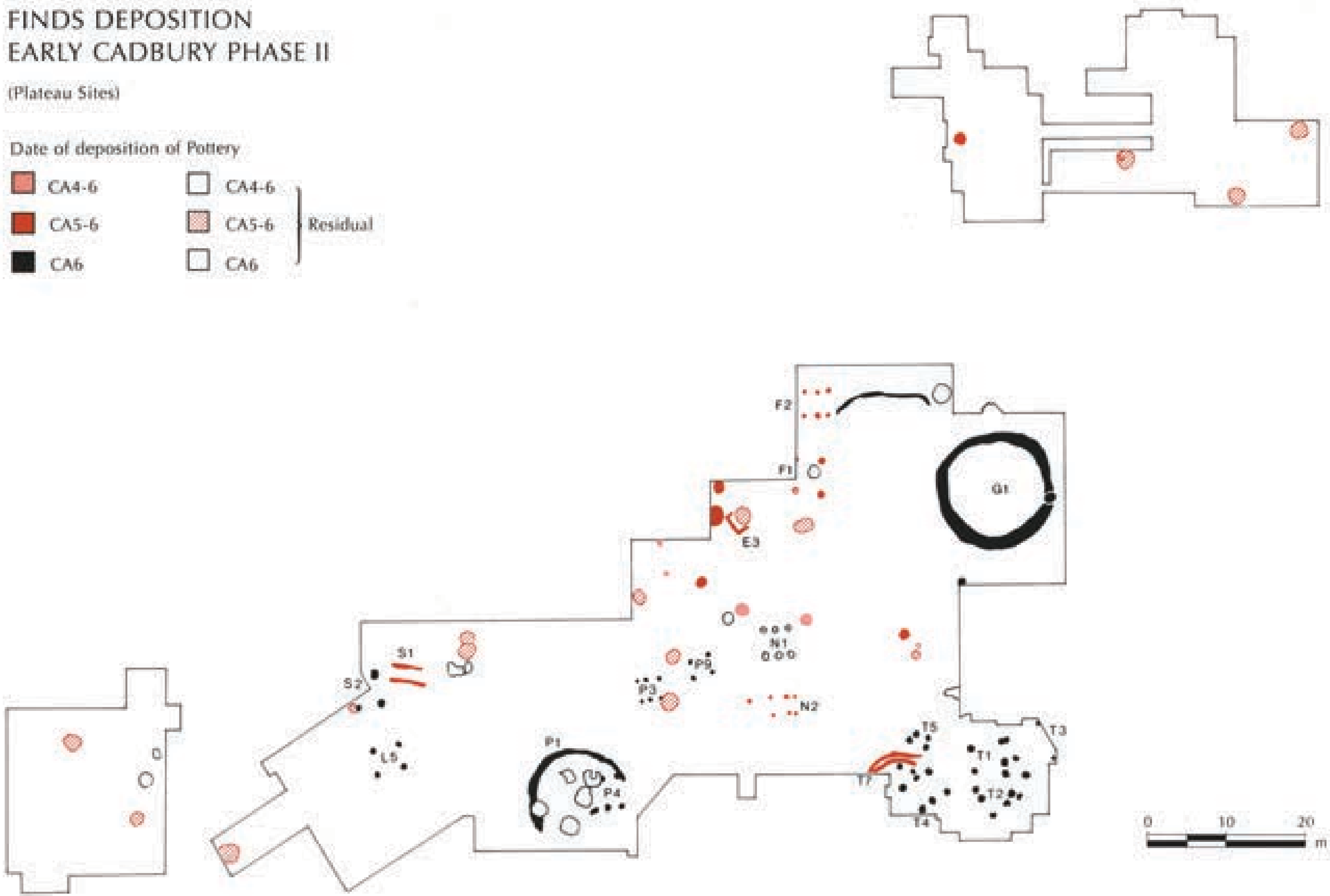


Fig 79 Early Cadbury II finds deposition

turn were overlain by more silts (W075) followed by a final road surface (W038). Small numbers of eroded pottery sherds were recovered from the lowest road surface and from the silt layers W091 and W075. Although small, all these assemblages would appear to belong to Middle Cadbury. Silts overlay the final road surface, the formation of which appears to have been contemporary with the infilling of the abandoned Middle Cadbury roundhouse BW6 (below p169). The relevant layers (W027, 028, W041, and B647) produced pottery of Late Cadbury Ceramic Assemblage 9 and similar material was found in pits which cut through these silts. The use of this road in Middle Cadbury was therefore such that silting clearly did occur, at least at certain periods. This must have some implications for our understanding of the density of occupation on the hill; it clearly fluctuated, if not actually being punctuated by periods of abandonment. Where one corner of this same road was observed on the plateau it no longer occupied anything other than a slight hollow. One layer of cobbling is recorded (G046), which overlay a soil (G047). The road was flanked by two gullies (G001 and 005) which may have been fences.

During Middle Cadbury, roundhouses and storage pits were established on the northern slope on either side of the hollow-way, representing a significant expansion of the areas settled on the hilltop. Being situated on the slope the houses were necessarily built on rock-cut terraces which had subsequently silted on abandonment. Preservation was therefore good and on excavation these buildings were all recognised as stake-walled roundhouses. The best preserved of these houses (BW6, Figs 80–82, and 167) stood on the east side of the hollow-way, but with the threshold of the entrance facing north-east and thus away from the road. The floor area of the house occupied some 95sq m and the lines of stakeholes which defined the wall imply that the house had been rebuilt on a number of occasions. Internally a hearth (W106, Fig 166) and cooking pit which produced charred twigs in its base (B720, Fig 167) can be identified. Other features which occupied the floor area include the burial of a child (B736, Fig 167) and a number of pits, some of which clearly cut the wall line and thus post-date the building. Most of these pits produced pottery of Ceramic Assemblage 8 from their fill, a few with Ceramic Assemblage 9, and while a few may be contemporary with the use of the building most seem to have colonised an abandoned building platform. Thus we might allow BW6 to be abandoned before the end of the Middle Cadbury period.

A second roundhouse on the eastern side of the hollow-way was also identified in excavation (BW5; Figs 80 and 166), although it was only represented by a fragmentary arc of stakeholes which had been set into a slight terrace. On the opposite side of the hollow-way a third roundhouse (BW1, Figs 80 and 167) is represented by a slightly more complex structure. An arc of stakeholes was set partly into a gully, concentric with an inner arc of postholes. The floor again occupied about 95sq m, but no entrance was identified and the platform was cut by a quarry scoop (BW3, Fig 167) which is probably of post-Roman date. No firm dating evidence exists for either BW1 or BW5. One other standing building situated on this northern slope of the hill should be noted. The four-post building BW9 has already been mentioned in connection with Early Cadbury, although its dating is uncertain and the building could have stood during Middle Cadbury.

If we now follow the line of the hollow-way up onto the plateau we pass roundhouse G1 to the west (Fig 80). This building has been discussed in connection with the earlier period, but again the pottery could also allow the building to be assigned to Middle Cadbury. It is with the next roundhouse to the south (T6, Fig 172) that we encounter one clear dislocation with the earlier use of the plateau, for this building overlay the area previously occupied the rectangular six-post buildings. The pottery associated with T6 belongs to Ceramic Assemblage 7. The gully, which had been recut at least once, enclosed an area of at most 133sq m. and the entrance of the building faced east. There was no indication of internal roof supports and, as with the case of G1, no evidence that the gully held wall posts rather than having acted as a drainage gully. It is therefore worth noting that the floor area of BW6 would fit comfortably within the areas enclosed by T6 and G1, and to emphasise that stake walls were only recognised in those areas protected from the plough.

For the earlier part of the Middle Cadbury sequence the east-west road was also maintained. The evidence for this is that the southern limit of a midden soil which had accumulated over the earlier cobbles conformed with the northern line of the road. We will return to this important midden deposit in a moment. The road presumably ran to the south of a circular building P1 and the (not contemporary) six-post building P4. The pottery associations would allow both buildings to run from the end of Early to the beginning of Middle Cadbury and we have no more detailed information upon which to establish a relative chronology (both buildings have been discussed above p 158). However, P1 was replaced by P2 (Fig 171), the latter being associated with pottery of Ceramic Assemblage 8. Perhaps the roundhouse P1 was replaced on a different footing and reoriented to face north-west. The shift to the north may have been towards a slightly less exposed part of the plateau. The gully of P2 had been recut at least once and on the north-east and eastern arms of the circuit packing to support a wall set within the gully is recorded. The floor occupied 79sq m; no internal roof supports can be identified, and no hearth is recorded. Although the entrance of this later house appears clearly identified, a complicating factor is the two radial gullies, each linked with substantial post-holes which had been recut and which projected from the north-eastern side of the wall trench. Perhaps these gullies represent a subsidiary entrance to the building.

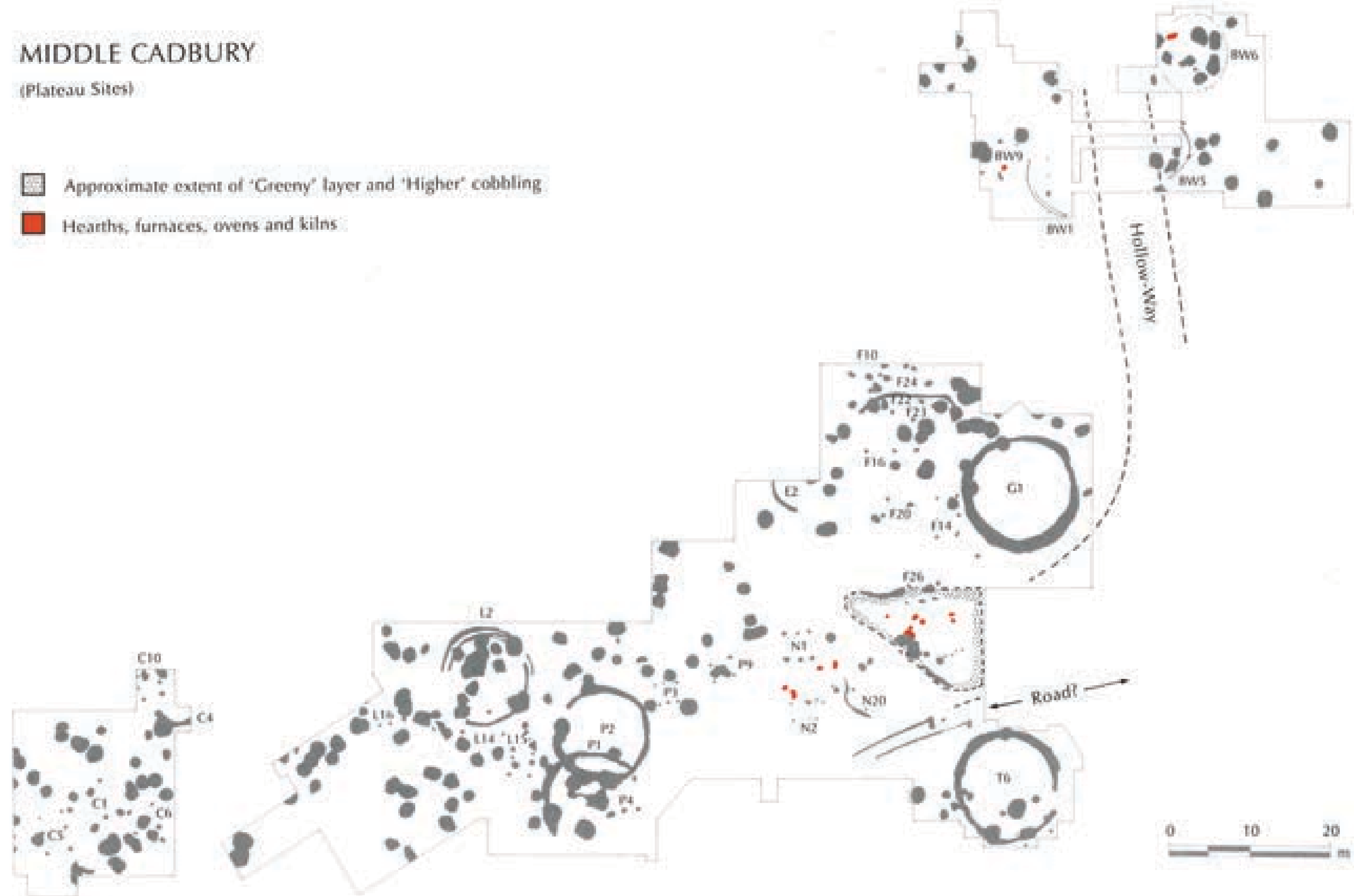


Fig 80 Middle Cadbury structures

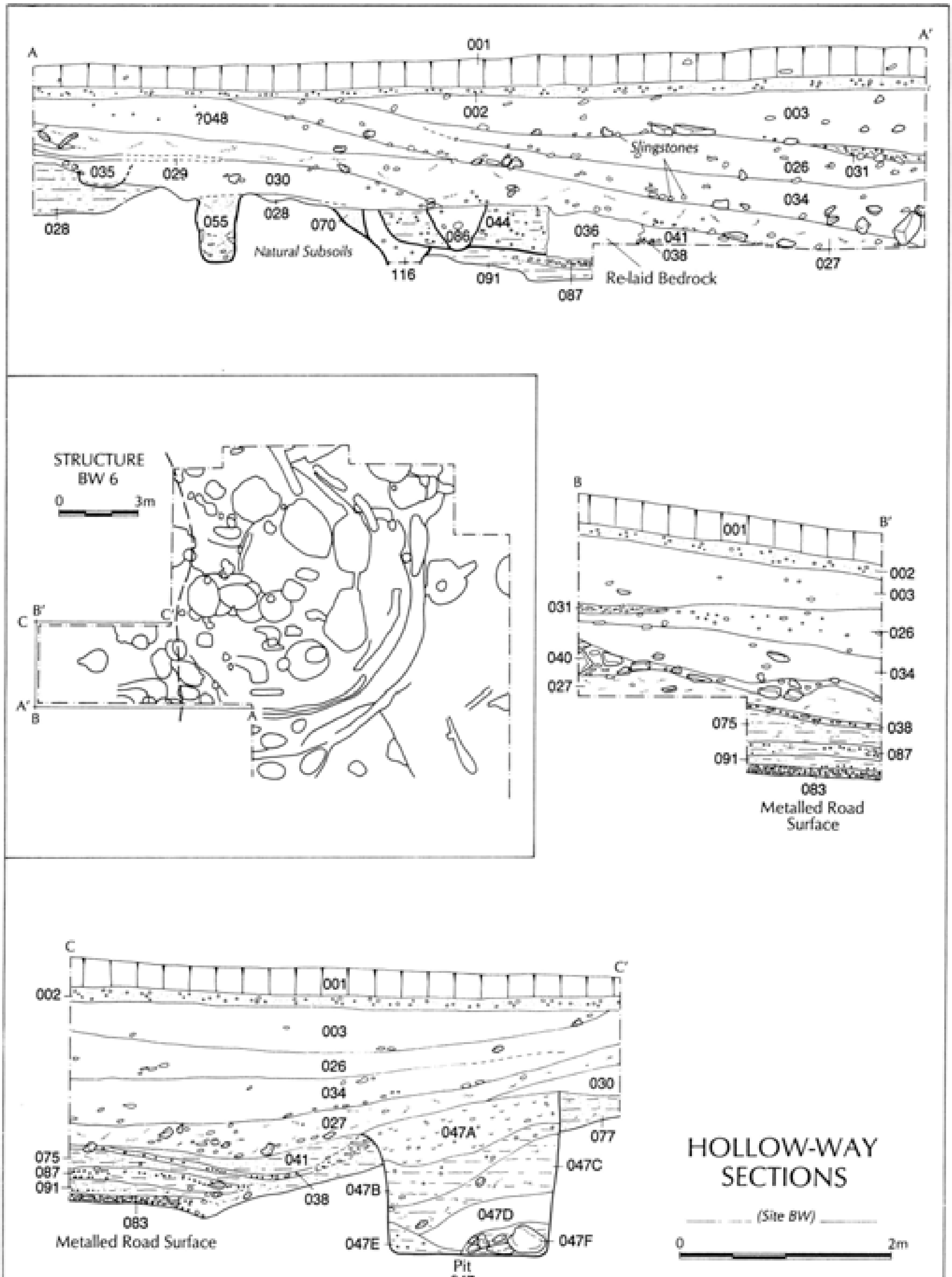


Fig 81 Hollow-way sections: plan 1:200, sections 1:50

A number of pits were dug immediately to the south of house P2 and into the floor area of the abandoned, earlier house. The fills of these pits, which are probably contemporary with P2, contained substantial residual quantities of pottery belonging to Ceramic Assemblage 7, presumably indicative of earlier midden debris associated with the end of the earlier house. Pit digging clearly continued after the later house had itself been abandoned; pits P608 and P609, for example, cut the entrance terminal of that house.

The short lifespan of house T6, compared with the possibly lengthy use of G1, along with the replacement of house P1 by P2, might hint at a trend to situate houses away from the immediate break in slope on the southern edge of the plateau. This may be borne out by the building of L2 (Fig 170) on the northern edge of the excavated area. The pottery associated with this structure can be assigned to the later part of the Middle Cadbury sequence (ie belonging to Ceramic Assemblage 8), and the house is represented by a number of lines of narrow gully. Postholes were observed in several places along these gullies, indicating that they represent wall footings. These had been recut twice. The floor area of the building would have covered some 95sq m. Neither a hearth nor internal roof supports was recognised, and the cluster of post-holes on the north-east quadrant is the only indication of an entrance surviving on this plough-eroded surface.

The fragmentary remains of two further round-houses deserve comment; C4 (Fig 168) to the west and E2 (Fig 168) on the northerly part of the plateau. The former was marked by a short length of curving gully which seems to indicate quite a small building, and although the floor area cannot be calculated, large slabs of stone recovered from the bottom of this gully may have derived from a paved floor. The building could have been quite late in the Middle Cadbury sequence, for although the gully contained pottery assigned to Ceramic Assemblages 7 and 8 it also cut pits the fills of which produced Ceramic Assemblage 8. The second building (E2) is also represented by a short length of curving gully in which stakeholes were observed once the fill of the gully had been removed by excavation. A hearth (E901, Fig 168) lay within the area contained by this gully.

Middle Cadbury clearly saw an expansion of the settlement; houses were built alongside the hollow-way on the northern slopes of the hill and the building pattern also extended to the most westerly extent of the plateau which has been excavated. The probable roundhouse (C4) has already been described and a number of rectangular post-built structures found in this area may date to this period, although the evidence is slight. These six-post buildings (C1, C5, and C6, Fig 173) appear as substantial structures, C5 and C6 being similar in overall scale. One posthole of C6 is cut by a pit (C265) containing pottery of Ceramic Assemblage 8 and a posthole of C5 cut a pit which contained a similar assemblage.

Some of the other rectangular buildings (with the exception of T1–5) which have been assigned to Early Cadbury and discussed above could also belong to the beginning of the Middle Cadbury period, and they are therefore represented on Figure 80.

If the extent of roundhouse building is one indicator of the expansion of settlement during this period then the pattern of storage pit digging is another. Alcock records the investigation of 375 rock-cut pits of all periods (Alcock 1980, 683). Of these 362 pits can be identified as having been fully excavated and not substantially truncated by later features and these form the basis of an analysis presented below (see p203). The pottery from the fills of a smaller number, 272 pits, has been analysed to provide an indication of the date at which these pits were being infilled. Most of the rock-cut pits produced pottery which could be assigned to Ceramic Assemblage 8. Admittedly this assemblage does cover a long period, probably in excess of two centuries, but none the less the evidence indicates that pit storage only became a routine feature during the latter part of Middle Cadbury. Early Cadbury assemblages were recovered from 23 pits, Middle Cadbury from 208 pits (of which 189 are Ceramic Assemblage 8), and 41 pits produced pottery of the Late Cadbury Ceramic Assemblage 9.

We have already noted that the pits are not distributed evenly across the area excavated; clusters occur towards the western, central, and northern parts of the plateau and in the south-eastern corner of the trench, but the eastern side is relatively clear of large pits as is a small area in the west. The former area is matched by the surviving surface deposits, to which we shall return below; there is little evidence to explain the latter.

The pits can be categorised according to profile where that profile has not been heavily affected by erosion. At Cadbury most are cylindrical, with a much smaller proportion being overhanging or beehive forms. The last were entirely a feature of Middle and Late Cadbury. We will return to consider the nature of the fills in some of these pits when we consider food preparation on the hill (Chapter 7). There is no evidence that any of the pits were ever clay-lined or capped. Daub was present in only a few pits and one incidence of carbonised grain is recorded from the base of the Middle Cadbury pit P402. Although the observations which have been made with regard to the use and disuse of the pits at Danebury (Cunliffe and Poole 1991, 161–2) are not possible for Cadbury data, we will assume that the primary function of the pits was for storage. The impression gained from the distribution of these pits is that they occurred in close proximity to contemporary house structures.

The general spread of settlement activity in Middle Cadbury is presumably reflected in the results of the resistivity and gradiometer surveys (Figs 73 and 74). These are dominated most dramatically by anomalies indicating rock-cut pits on the gradiometer survey (Fig 73).

They are not distributed evenly across the interior. There are indications of arcs and lines of pits, and there are fewer pits appearing behind the northern rampart, although the latter may reflect the masking of soil overburden. Roundhouses are less easy to detect in these surveys.

We must now return to the complex surface stratigraphy which was found above the cobbled surfaces on the eastern side of the plateau. These deposits occurred between roundhouses G1 to the north and T6 to the south, and to the north of the east-west roadway which had been established in Early Cadbury. Fragmentary and patchy in their extent, they seem to indicate the accumulation of middens, a process which was interspersed with the laying of a second, upper layer of cobbles during the Middle Cadbury period. It is possible to present this sequence in a relatively straightforward manner with a chronology based upon the stratified pottery assemblages. The laying of the lower cobbles occurred, as we have seen (see above), during the later part of Early Cadbury. Above these a sequence began with features generally referred to as 'sealed by greeny layer' followed unsurprisingly by the 'greeny layer', both of which produced pottery belonging to Ceramic Assemblage 7. The higher cobbling overlay the greeny layer and was in turn overlain by the so-called rubbish layer. The extent of both the greeny layer and higher cobbling did not conform with the full extent of the rubbish layer. The greeny layer was restricted to the north-east of the rubbish layer, as was the higher cobbling. The limits of the earlier deposits were therefore not a product of the erosion which had truncated the rubbish layer. Both the upper cobbling and the rubbish layer produced pottery belonging to Ceramic Assemblage 8. The sequence above the lower cobbling thus belongs to Middle Cadbury with the higher cobbling marking the transition from Ceramic Assemblage 7 to 8.

Such a sequence is likely to be an over-simplification and a much more 'organic' development should be allowed, where the relatively continuous use of the area resulted in the accumulation of debris intermittently across these surfaces with at least one attempt to resurface the area with a layer of cobbles during Middle Cadbury. The records are confused and we will not pretend to be offering anything other than an outline assessment of these important deposits. Our aim will be to establish their general character, identify the principal characteristics of the artefact assemblage, and to offer an interpretation of the activities which led to their formation.

We have already noted that activity on the lower cobbled surface, recognisable as a group of hearths and one possible furnace, occurred during Early Cadbury. That activity presumably generated debris which began to accumulate over the cobbles as well as spreading across any abandoned structures. It is under these conditions, which clearly continued to operate into Middle Cadbury, that the greeny layer originated. It is extremely difficult to offer any independent dating for the hearths themselves, and soil deposits which produced both Early and Middle Cadbury ceramic assemblages seem to be sealed by the greeny layer. The complexity of this long-lived process may be expressed through the example of a complex hearth sequence. Hearths N843 and N807 appear to be relatively early in the sequence. They underlay the greeny layer although their relative dates can only be guessed; N807 overlay a small number of features and its relationship with the lower cobbling was unclear, and N843 was the more disturbed and may have been the earlier of the two structures. These two hearths may then have been replaced by a complex set of inter-cutting hearths or ovens immediately to the south-west which include N826–827, and N828 (Fig 83). They are all similar in form and size; each is built of clay and stone lining set into a shallow pit, appears more securely associated with pottery of Ceramic Assemblage 7, and is overlain by the greeny layer. There is also stratigraphic evidence for a sequence, as N828 cut N827. The neighbouring hearth, a domed surface of clay N825, is ambiguously situated in the sequence, recorded as being both over and under the greeny layer, and it is also recorded as overlying the N826/7/8 complex (Fig 83). The area of these features is presented in plan in Figure 84. Those readers with a good visual memory may, when perusing this plan, find themselves recalling the plans of the overlying hearths found at the Glastonbury Lake Village (Bullied and Gray 1911).

A number of gullies also underlay the greeny layer and were thus broadly contemporary with the hearth/oven sequence outlined above. These gullies include N754, which cut across the line of stakeholes and gullies of Early Cadbury to the south-west of the cluster of hearths described above, and N954/E724 to the north of the hearth/oven complex. These gullies may represent fence lines, which begin with N006 preserving the south-west line of the fences predating the lower cobbles. Three post-pipes were recorded in gully N954/E724 and the gully appears to have been recut once. It formed the northern edge of a clay floor (N955, not recorded on plan) which is noted as underlying the greeny layer. The pattern of continuity was also maintained by the spread of the greeny layer which, on its southern edge, respected the line of the east-west roadway.

The greeny layer overlay the lower cobbles and most of the features described above. The pottery from it is dominated by Ceramic Assemblage 7, although as we have argued it is likely that this layer also incorporated debris which had begun to accumulate during Early Cadbury. The layer is recorded as a 'greeny, greasy soil, stoney and with patches of orange [soil]'; its thickness was recorded in only one area as between 20–60mm. The rate and detailed mechanisms of its formation are unknown.

Activity over the surface of the greeny layer was most clearly represented by an upper layer of cobbles along with those features which either sat on or had been cut through that surface. Pottery from the upper cobbles can be assigned to Ceramic Assemblage 8 and the structures contemporary with this higher cobbling are again mainly groups of hearths, ovens or furnaces. These structures are distributed fairly extensively across the eastern end of the site and three examples will be discussed here.

East of the position occupied by the earlier hearth/oven complex N826/7/8 lay a furnace N874 (Fig 83). The stratigraphy was disturbed in this area, and the most reasonable interpretation is that N874 was contemporary with the upper cobbles. The furnace was set in a large fire pit which was filled with clay. Upright stones were set into the pit and lined with clay; both clay and stones were reddened with fire. It appears that the furnace had been refloored and it was filled with burnt stone upon abandonment.

About 20m to the west lay another furnace N451 (Fig 83). The stratigraphic position of this structure is even more ambiguous, but economy of argument places N451 as contemporary with the upper cobbles. In this case another large pit had been dug and lined with clay. The floor was also lined with stones, and upright slabs lined with clay defined the edge of the structure. A further furnace was then built over and around this structure and then rebuilt on at least two occasions (N464, 465, and N466, Fig 84). A rubbish pit N463A was associated with the earliest of these furnaces. Additional features, P061 lying 14m to the west (Fig 83) and N079 and N099 (Fig 83) immediately to the east of this complex, were all broadly contemporary and all represented either furnaces or ovens, emphasising the dense and extensive spread of these activities.

The most northerly extent of similar activity was found in those same areas where burnt stone spreads were recorded for Early Cadbury. Once again the structures are recorded as intercutting pits and scoops, producing a complex of features E980, 982 (Fig 83), and E983. Stratigraphically this complex overlay an Early Cadbury pit E988, occupied the same area as building E3 (here assigned to Early Cadbury), and is cut by the later cruciform structure E1, but there is no other close dating evidence. The structural evidence hints at clay and stone-lined features which were infilled with burnt stone, charcoal, and soil upon abandonment.

As this activity extended across, and beyond, the surviving area of the later cobbles, so more debris accumulated over the cobbled surface and the abandoned structures. This upper midden is referred to in the site records as the rubbish layer. Generally this layer was only a few centimetres thick, although it is recorded in one place as up to 0.2m thick. Its main extent can only be reconstructed with any certainty from those areas which were dug and recorded in 5m squares. The deposit is described as a grey ashy loam containing large numbers of artefacts and animal

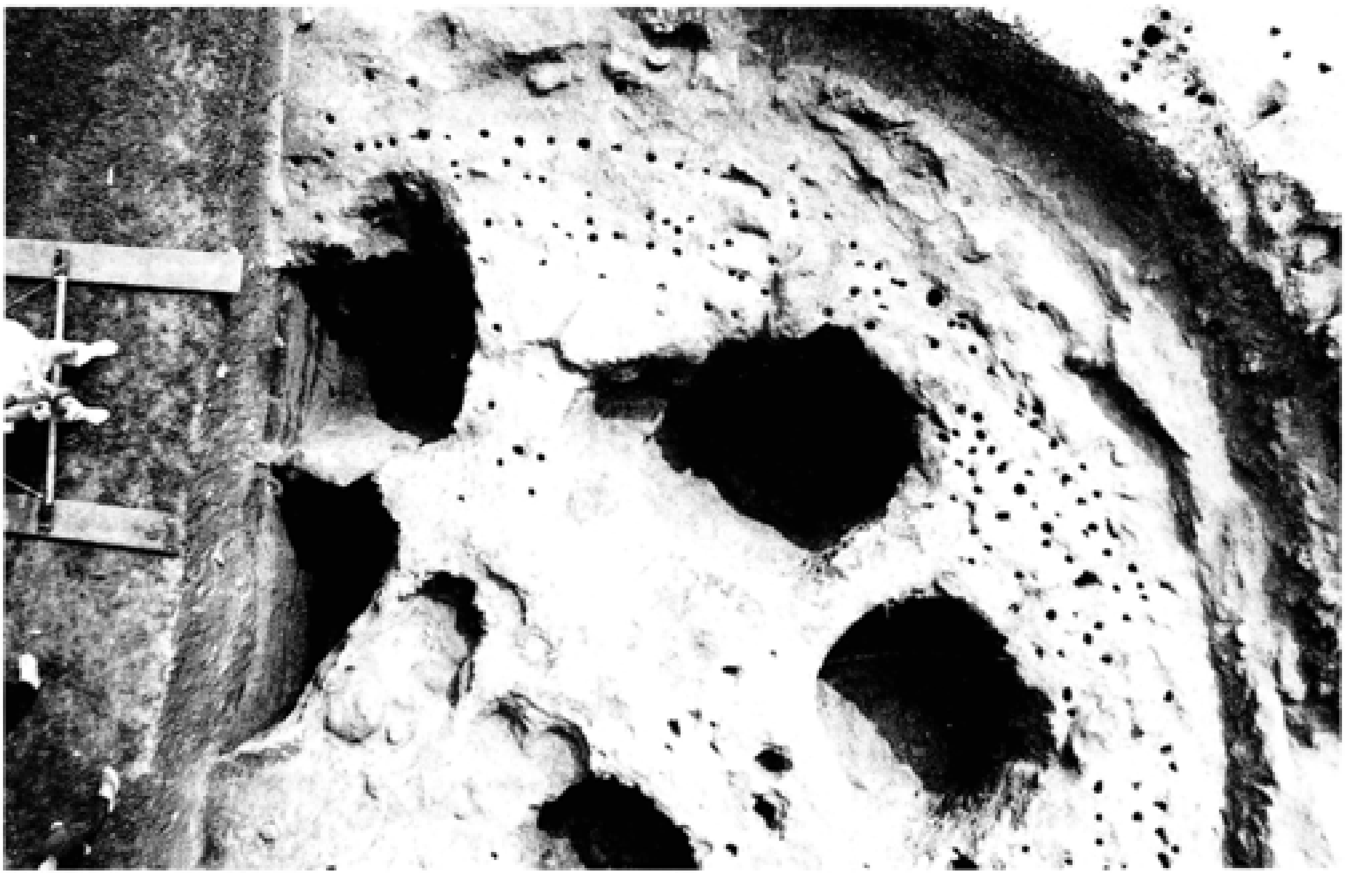


Fig 82 Hollow-way sections and Roundhouse BW6

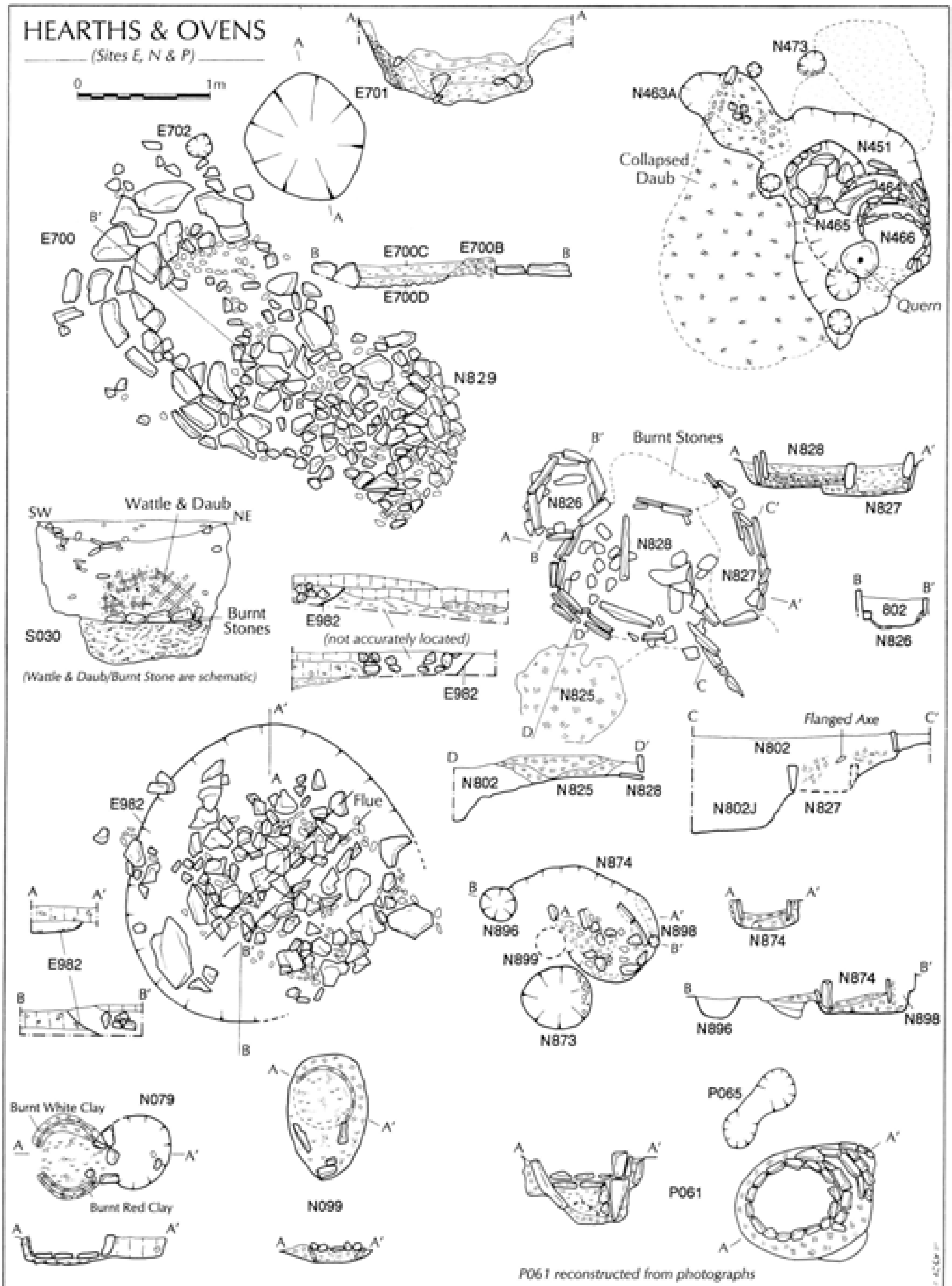


Fig 83 Hearths and ovens

bones but with relatively little stone. Many of the hearth, oven or furnace structures became visible while the rubbish layer was being excavated, but few are demonstrably dug into this deposit. For example, N808 was an arc of burnt stone which has been interpreted as a hearth. It was recognised in the rubbish layer but the base of the structure was planned as part of the greeny layer. We do not know if the upper levels of this hearth merely protruded through the overlying deposits or whether the structure had been set in a pit which had been cut through the rubbish layer. Three possible furnaces N079–099, and N451 (Fig 83) were revealed as the rubbish layer was excavated, and they could therefore be contemporary with the accumulation of this deposit. Given such doubts, however, and given the plough erosion which affected the upper surface of the rubbish layer, it is still possible to argue that the construction of hearths, ovens, and furnaces had declined significantly by the time this deposit had accumulated. The decline in activity is further supported by the mean sherd weight analysis of pottery from the rubbish layer (see p310). The sherds from this layer are generally large, indicating less disturbance and trampling.

The evidence for the changing status of the east-west road is more ambiguous. The line of this road was never very precisely recorded, but by Late Cadbury a sequence of two palisades may have been built along it. The northern line comprised a trench (T105, N029, and N603) which died away to the west and terminated in a series of intercutting postholes and pits (N606, N606.1, and N606.2) at its eastern end. If this represented one side of an entrance then it is difficult to identify the other, unless it was marked by pits N654 and N655 (Fig 84). This northern trench is recorded as cutting the rubbish layer, although the field plans are less clear on this relationship (Musson 1994, 29; Downes 1994, 15). The southern line of palisade diverges slightly from the northern; it also dies away in the west and terminates in the east at intercutting pits or postholes (N662 and N670). These palisades, which are unlikely to have been contemporary, may have flanked one side of the road or have been built on top of it. They seem to have represented a barrier between an approach up the slope from the south and the area of midden deposits and floors to the north. One palisade presumably replaced the other and in so doing shifted the line of the north-south entrance way, either to the east or to the west.

Late Cadbury

The next four centuries witnessed a marked decline in activity on the hill, culminating in the possible abandonment of the site prior to its reoccupation in the fifth century AD (Alcock 1995). The detail of the early part of this sequence is important in light of recent speculation concerning the decline in use of hillforts during the late Iron Age in southern Britain (Cunliffe 1994). We will return to the more general issues raised by the period in Chapter 12. Our aim here is to describe the detailed changes, as far as they are understood, in connection with Cadbury Castle itself.

Although Late Cadbury covers another block of four centuries, all those features plotted with a degree of certainty in Figure 85 only date to the first century AD. Thus, while a direct comparison between the distribution of features dated to Middle and Late Cadbury (Figs 80 and 85) will give an impression of the magnitude of the changes which occurred between the two periods, such a comparison is between a pattern of occupation lasting four centuries and that lasting one century. Our task will be to trace the themes of continuity which run from Middle Cadbury and to map their dislocation during this period. It is hoped that this will provide an understanding of the quality of the changes which occurred in Late Cadbury. We will conclude our discussion, however, with a more speculative look into the second century and beyond.

No roundhouses can be traced in Late Cadbury, effectively removing all evidence for domestic structures in this period. However, a small group of storage pits did produce pottery which can be assigned to the early first century AD (Ceramic Assemblage 9). If this evidence does accurately reflect the date of the use and abandonment of these pits, then the fact that such pits were being dug and that pottery debris was accumulating (including an assemblage of unweathered sherds from the silts overlying the house BW6) indicates continued domestic activity on the hill. The organisation of that activity, at least as represented by the storage pits, continued to respect some of the earlier spatial parameters of the site. However the intensity of that activity had clearly slackened, as is indicated by the silting of the hollow-way and the abandonment, or shift in alignment, of the east-west road.

That the north-south route was no longer in use is implicit in the record of silts which covered it and the adjacent roundhouse platform. The formation of these seems to have started by the end of Middle Cadbury and they have been discussed above. By the late first century AD the hollow-way was not accounted for in the laying-out of the timber buildings which will be discussed below.

By the end of Middle Cadbury a sequence of two palisades had been built along the line of the east-west road on the plateau and along the southern margin of the rubbish layer (see above). Like the northern of these palisades, a number of the features which cut into the rubbish layer are not dated by ceramic association, neither were they sealed by overlying stratigraphy. Such features are therefore assigned to Late Cadbury by virtue of the fact that they post-date the rubbish layer. If the palisades imply a modification of route ways on the plateau then it is also necessary to draw attention to one remarkable pattern of continuity. This is provided by three curving gullies N052/030, 036, and N032. Each was recorded as visible in the top

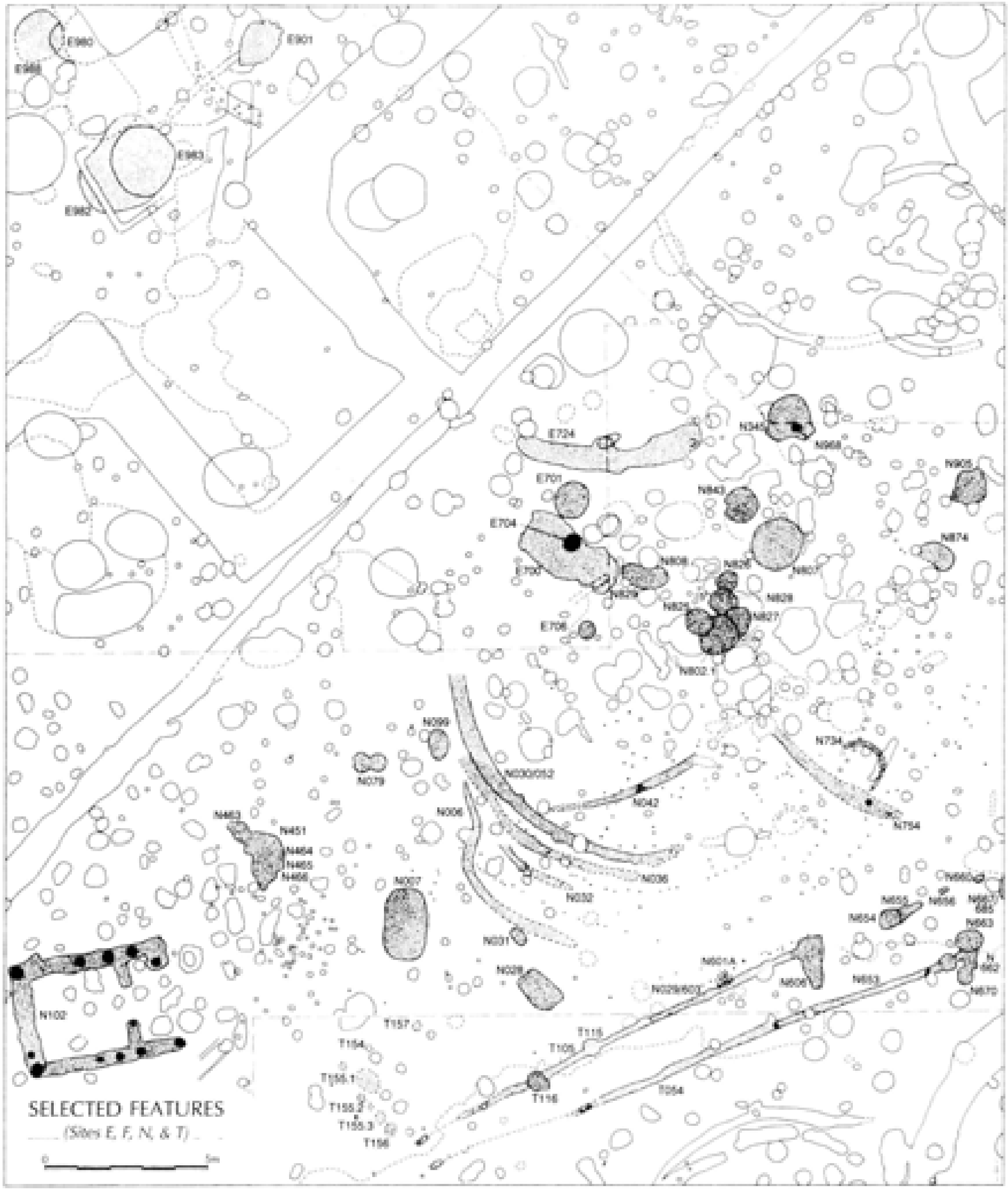


Fig 84 Detailed plan of the eastern area of the plateau: selected features

of rubbish layer, the more substantial N052/030 being recognisable as a 'greenish sandy streak' across the surface of that layer. Upon excavation N052/030 was found to cut down to and penetrate the bedrock and there is (admittedly ambiguous) evidence that it held a wall of close-set planks. These gullies seem to represent the renewal of an enclosure wall, cutting the rubbish layer but respecting a line previously marked by gullies and stakeholes which extended chronologically back to Early Cadbury (Fig 77).

The importance of the eastern-central area occupied by the rubbish layer clearly continued into Late Cadbury; it was fenced off and enclosures were maintained within it. Up to this point we have discussed the features associated with this and the underlying deposits as representing hearths, ovens, and furnaces. However, it also seems clear that the burial of a number of animal carcasses occurred alongside and perhaps post-dated those activities associated with the formation of the rubbish layer.

The animal burials are very substantial deposits (Fig 86). The disturbed nature of much of the upper levels of the rubbish layer makes the stratigraphic record difficult to read with any certainty, and consequently it is best to allow that the pattern of animal burial extended through the end of Middle Cadbury and into Late Cadbury, rather than attempt to force all such deposits into a single chronological horizon. The burials do seem

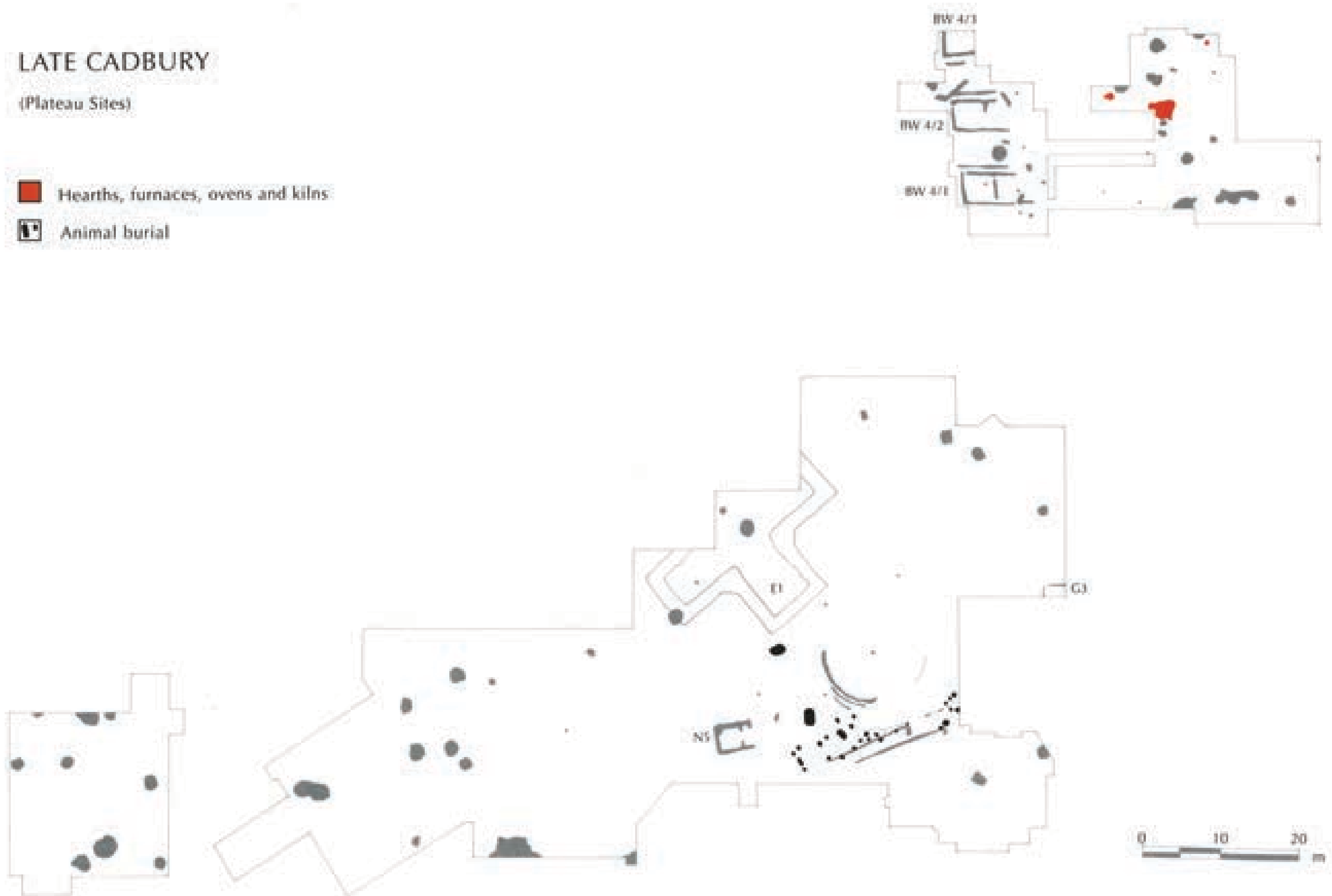


Fig 85 Late Cadbury structures

to have been partly contemporary with the final stages of the rubbish layer's accumulation and to have partly post-dated its formation. Examples can be found of burials with a number of different stratigraphic relationships. Some appear to have lain on the upper cobbled surface (such as the double calf burial N002.2); others were in pits which cut the cobbles but are not recorded as having cut the rubbish layer (such as two large pits N007 and N028 which contained the articulated bones of mature cattle); and other examples still were in pits which appear to cut both the rubbish layer and the cobbles (such as pit N685 which contained articulated calf bones and a fragment of pig skeleton). In addition numerous animal bones were scattered throughout the rubbish layer. The latter remains may have derived from animal burials which were either not recognised as such during excavation, or had been disturbed during, or subsequent to, the formation of the rubbish layer.

The relationship of the animal burials to the two successive lines of palisade is important. The southern limit of the distribution of the burials conforms almost exactly with the palisade lines. At the same time there are some stratigraphic relationships; pit N601.1 cut the eastern terminal of the northern palisade and contained the remains of a new-born calf while N663, a bowl-shaped pit containing the remains of two new-born calves, cut the eastern terminal of the southern palisade.

The animal bone which was recorded as scattered within the rubbish deposit seems to have been concentrated towards the eastern end of the excavated area. A marked concentration of animal bone occurs in the very area which contained the highest concentration of metalwork and a major complex of furnaces and hearths. The distribution of the identified burials is given in Figure 85. The bones of two calves have been dated by radiocarbon. One burial came from the lower level of a pit (N633B) which cut the cobbles and also, probably, the rubbish layer; the date is 390cal BC–cal AD 60 (GU5437). The second burial came from a shallow pit (N031) which was observed cutting the cobbles, we must assume that the cut through the rubbish layer was not observed. These bones gave a date of 360 cal BC–cal AD 20 (GU5438).

Alcock (1972a) noted that the distribution of animal burials lay to the south of a concentration of metalwork finds. Subsequent analysis has confirmed this general pattern. The finds of metal, which are mainly iron and fragmentary, are concentrated in the rubbish layer and, with the exception of a small dagger N051C (Fig 135.53), they cannot be assigned to specific, grouped deposits.

Given this obvious concentration of deliberate animal burials over a clearly demarcated area of the hilltop, it is natural enough that we might expect to find a focus for such activity. One such focus is indeed represented

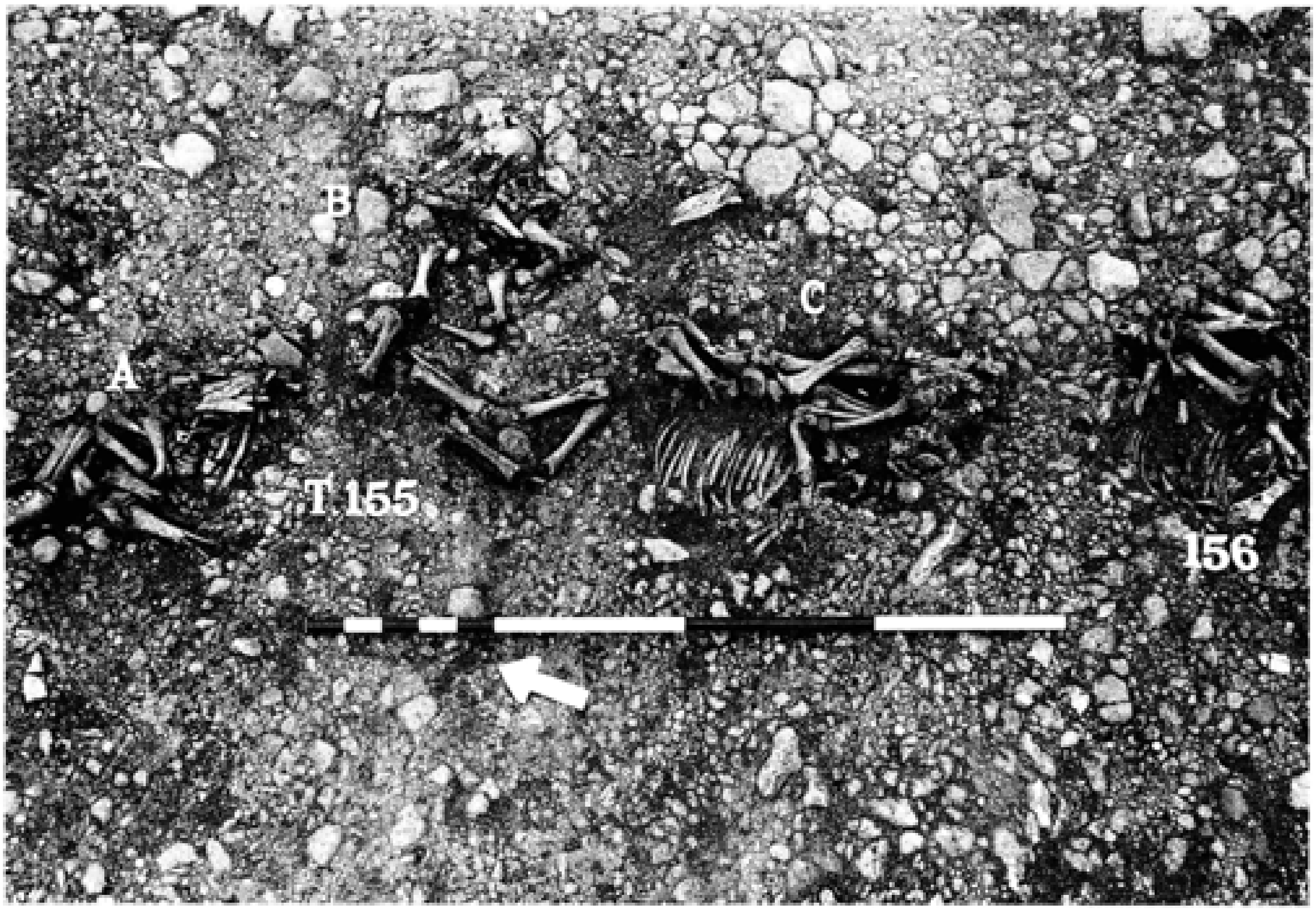


Fig 86 Animal burials and surface deposits on the eastern plateau

by the rectangular building N5 originally identified as a shrine (Downes 1997) (Figs 84, 85, 87 and 173). The rubbish layer did not survive this far to the west and the building cannot therefore be related to it directly, but nonetheless ceramic evidence would place the building in the middle decades of the first century AD and therefore, perhaps, later than the animal burials. It **could** also be later than the massacre deposit in the south-western gate passage. The building comprises a small cell with a floor area of 6.5sq m, oriented to face east with an open porch or portico just over 3sq m in floor area fronting a 1m wide doorway.

The building thus faced east, across the area containing animal burial deposits. Its orientation could have been upon a path which ran to the north of the earlier palisade lines and thus towards the southerly extension of the hollow-way which was encountered in the north-east of the excavated area. It should be stressed that no such path was recorded by the excavators. However, the east-west axis of N5 broadly demarcated the line between the main concentration of metal finds to the north and the animal burials to the south.

The timber building N5 was represented by a continuous bedding trench (N102); postpipes were not visible until the fill had been substantially excavated and then they were only observed irregularly around the wall line. The upper fill of the bedding trench appeared mixed, but the pottery included large and unabraded sherds which may have been incorporated among the packing material. The assemblage includes material belonging to Ceramic Assemblages 9 and 10, the latter represented by Savernake ware, one sherd of Shepton Mallet ware, and two pieces of *terra rubra*. Originally identified as a small porched shrine (cf Cunliffe 1984, fig 4.35), this building seems to have been erected after the initial massacre deposits in the south-west gate (see pp 108–9).

Given the stratigraphic relationship by which some of the animal burials post-date the palisade, along with the two radiocarbon dates and the late dating of N5, all the material clearly represents a long period of activity which may have extended over two centuries.

The other mid-first century buildings may be slightly later again and are of very different character. These represent a group of rectangular timber buildings which had been constructed on the north-facing slope of the hill (Fig 88). They are grouped as building BW4 (the individual components are numbered 1, 2, and 3). The corner of a more southerly example might be identified as G3, although the dimensions of the gullies of this building differ from those of BW4/1. The gullies were flat-bottomed, with no evidence of terracing into the hillslope, and a number of postholes and stakeholes were scattered along the line of the gullies without forming a regular pattern.

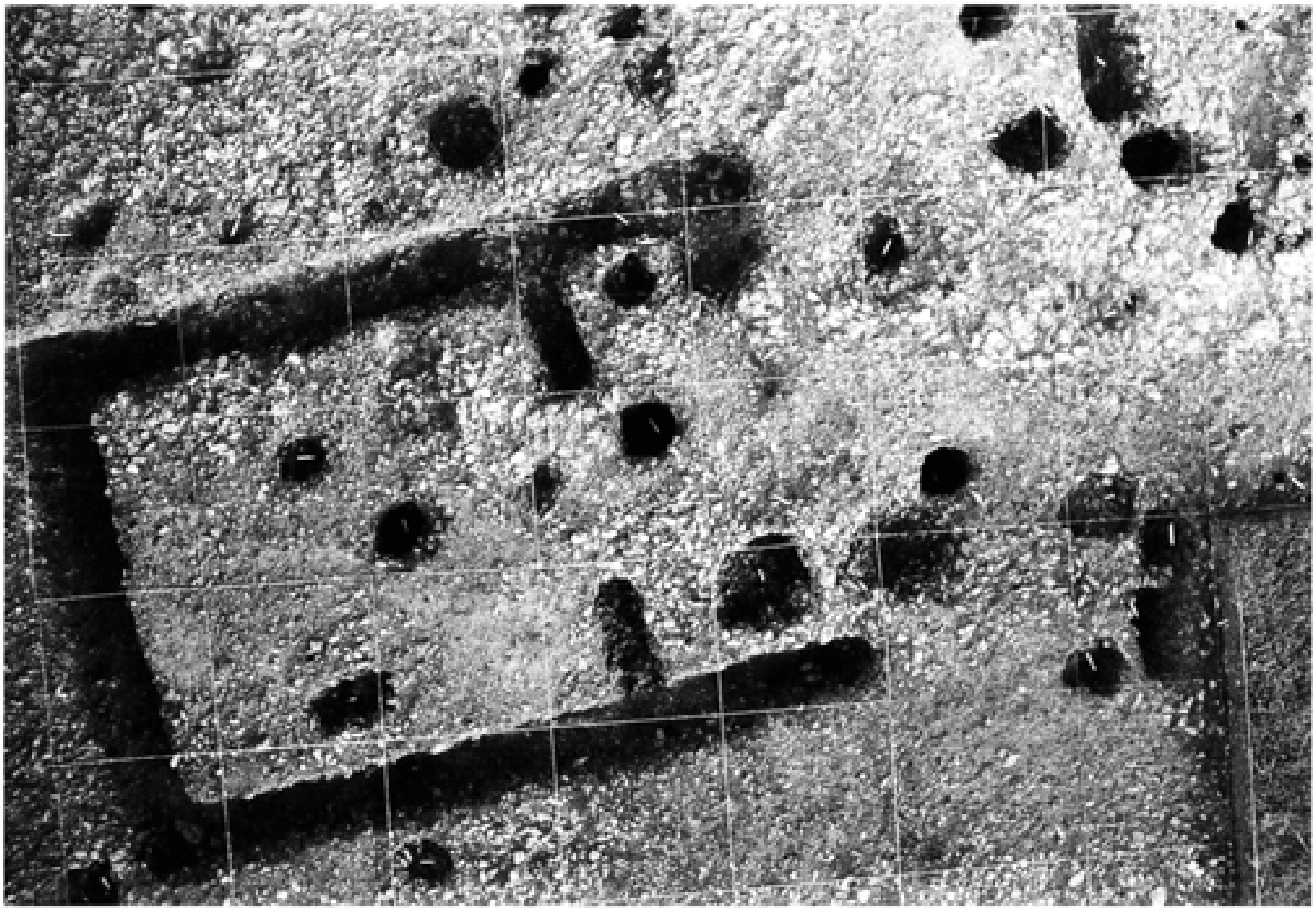


Fig 87 Vertical view of Structure N5

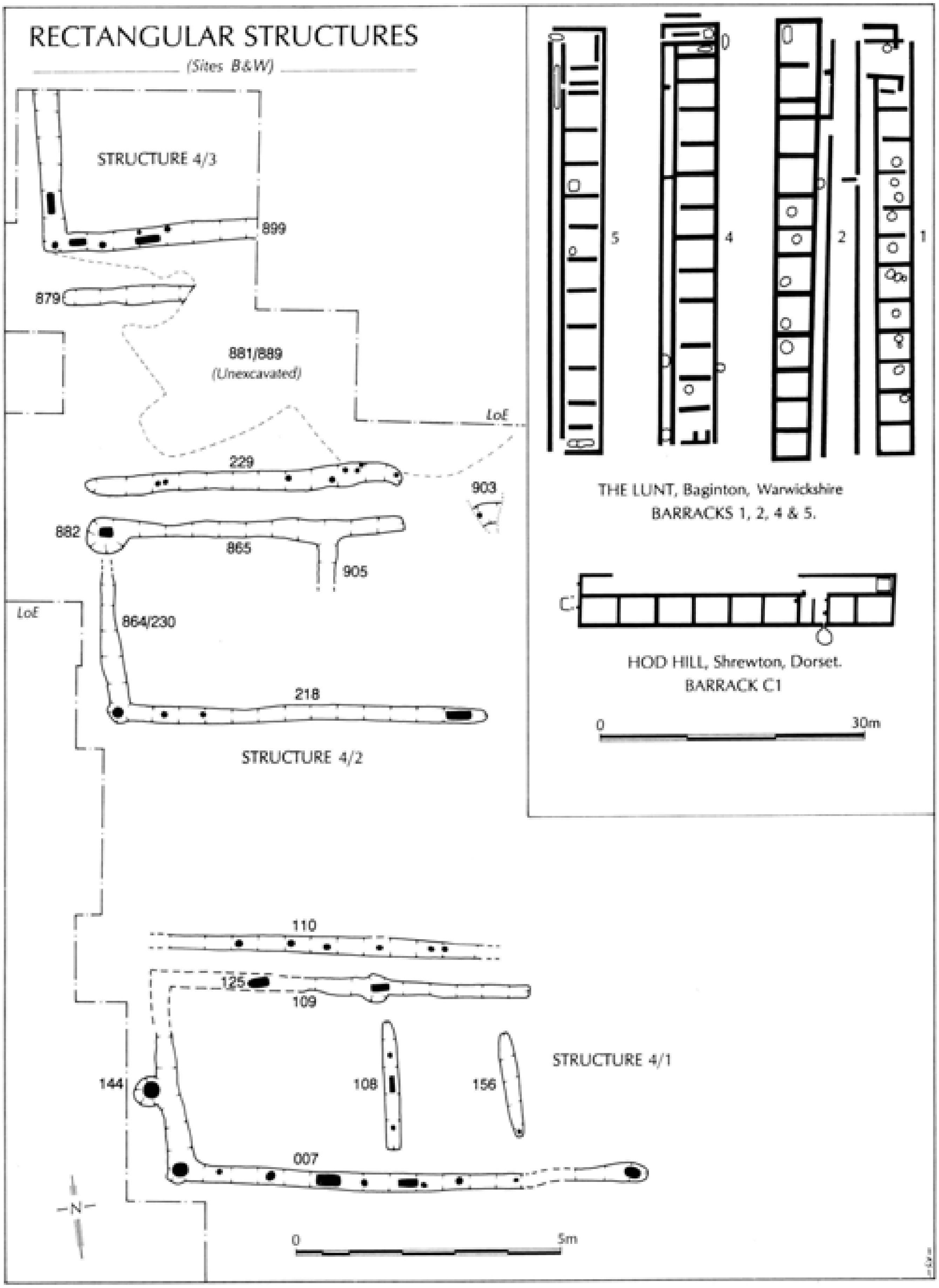


Fig 88 Rectangular structures

The northern group comprises three buildings, each some 3.3m wide, and all with verandas. Two of these verandas faced one another, while the third, somewhat oddly, faced onto the back of the second building. Two of the buildings (BW4/1 and BW4/2) had internal partition walls. These buildings have been identified as Roman barracks, and if this is correct then one curious aspect of their layout is that they were only one cell deep and not the more common two cells, with an *arma* for storing equipment and a *papilio* to the rear for sleeping accommodation. That said, however, one-cell structures were found in the early forts at Hod Hill (Richmond 1968) and Baginton (Maxfield 1986, 64). At the former the barracks were some 40m long and at the latter some 50m long (Fig 88). On average barracks would have been about 10m wide; the one-cell Cadbury examples are only half this width, and at best only 8–9m of their length survives. If we project the full length of the blocks then they would have extended over the line of the hollow-way and the fill of the roundhouse platforms. Some slight evidence for this more extensive building pattern is given by a gully (B627) which was overlain by a soil (B625) and then the base of a Roman oven (B626). This gully, on the east side of the hollow-way, was aligned upon B218, one of the gullies of building BW4/2 on the west. A hoard of ironwork was found in this eastern area, in what would have been the back of the barrack block, a phenomenon not unknown in Roman military structures. To a certain extent the failure to trace the possible full easterly extent of these buildings could be put down to the difficulty in recognising the gullies where they cut the upper silts of the hollow-way and the roundhouse platforms, but it also seems likely that later Roman or post-Roman quarrying had cut a series of terraces against the west side of the hollow-way, thus truncating the remains of the barracks (Fig 89).

The rectangular buildings clearly cut the roundhouse BW1 and presumably overlay the fill of BW6 which produced pottery of Ceramic Assemblage 9. The gullies themselves produced Iron Age pottery along with one burnt and abraded sherd of Flavian/Trajanic samian (from B884) and a Saxon sherd (from B218); the latter was presumably intrusive.

Activity associated with these barracks may also have included the building of an oven in Site A in the back of Bank D. On the basis of a brooch and ceramics recovered from it, this oven was dated to *c* AD 40–70. Given this evidence from Site A, the possible continuation of the barracks into Site G, and the use of either the north-east gateway or the eastern entrance, we could postulate a Roman military installation occupying the north-east quadrant of the hill, covering some 40,000sq m. As to the identity of such a garrison, it would appear on the basis of its equipment to have comprised a mixed legionary and auxiliary cavalry detachment. There should therefore be more barracks awaiting exploration,

Fig 89 View of rectangular structures in Site BW from the east end of the late Roman quarry scoops

including stables. The area occupied by the fort would on analogy with other examples elsewhere be sufficient for a garrison of at least 500 men.

Activity post-dating the assumed dismantling of these buildings is represented by an oven which would have overlain the eastern end of building BW4/2 and the earlier roundhouse BW6. What appears to have been the latest fill of the roundhouse terrace (W030) produced pottery of Ceramic Assemblage 9 and part of a mid-first-century AD brooch. This was overlain by the clay base of the oven (B626) which was fronted by a low stone wall. The structure was associated with large amounts of charcoal, burnt daub, and burnt bedrock, and appears to have been at least partly sealed by the collapsed remains of the upper part of the oven. The area around the oven produced first-century AD ceramics (including amphorae sherds) and much damaged Roman military equipment (see p242) and ironwork (archive). The military equipment could be dated anywhere between AD 43–138. Around the oven was a small group of pits (eg B638 and B642) which may have been contemporary with it.

We have already noted that, after a short hiatus, the oven seems to have overlain the demolished remains of one of the presumed barrack blocks, implying a relatively short life for the use of these buildings. However, the oven itself apparently attests to continuing military activity on the hill through the middle decades of the first century AD.

Deposits sealing the oven produced a number of stone slabs, and allusion has also been made to quarrying on the hilltop. Some of the scarps recorded to the west, and possibly also to the east, of the hollow-way appear to be the vestiges of such activity; they truncated the barrack block gullies as well as the earlier house platforms of BW5 and BW6 and probably BW1. Such quarrying would also help to explain the deposition of Roman pottery well down within some of the deposits which overlay the area of the hollow-way. The date of this activity cannot be fixed with any precision, but it must lie between the end of the early military activity in the first century AD and the digging of pit B345, which produced late Saxon pottery, through a level surface in one of the quarry hollows.

Quarrying is also attested on the southern edge of the plateau. Two wide, shallow scoops (P963 and P959A and B) appear to have been cut to derive good tabular limestone. A single sherd of first-century AD pottery was recovered from low in the filling of P959A and a pit containing a body sherd of Class B amphora cut the northern edge of P959B. Three other irregular hollows had also been cut above the scarp of the hilltop (L638, 639, and L643), although they produced no closely datable finds apart from a range of Iron Age pottery sherds.

What are we to make of this evidence? The question allows us to end our discussion of the architectural history of the hilltop with some happy speculation. We must begin by noting that the post-Roman bank, most fully investigated on Site D (Bank E: Alcock 1995, 14-23), comprised substantial quantities of Roman building debris, including a single fragment of window glass. This was from a cylinder-blown pane of late third- to fourth-century type (Harden 1961a, 39–63). The core was locally derived rock, 'but in Cutting [ie Site] D there were also fragments of roofing tiles of both pot and stone, and dressed blocks of tufa, while in Cuttings [Sites] I and K hammer-dressed, and even sawn, blocks had been incorporated in the structure' (Alcock 1995, 18). Site J also produced roofing slates and iron nails, and all 'are likely to have derived from a demolished Roman building, but there is nothing to show whether this had been built on the hilltop, or at its foot, where there had been a small Romano-British settlement. The tufa would be appropriate to a bath building, and that itself might have been part of a Roman temple complex which, it has been conjectured, lay within the decayed Iron Age defences. The existence of this temple remains at present wholly speculative' (Alcock 1995, 18).

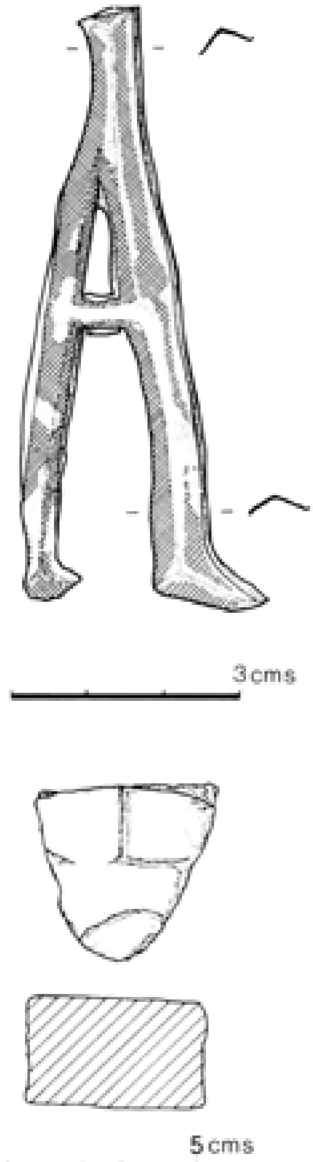


Fig 90 Gilt letter 'A'. Inscription.

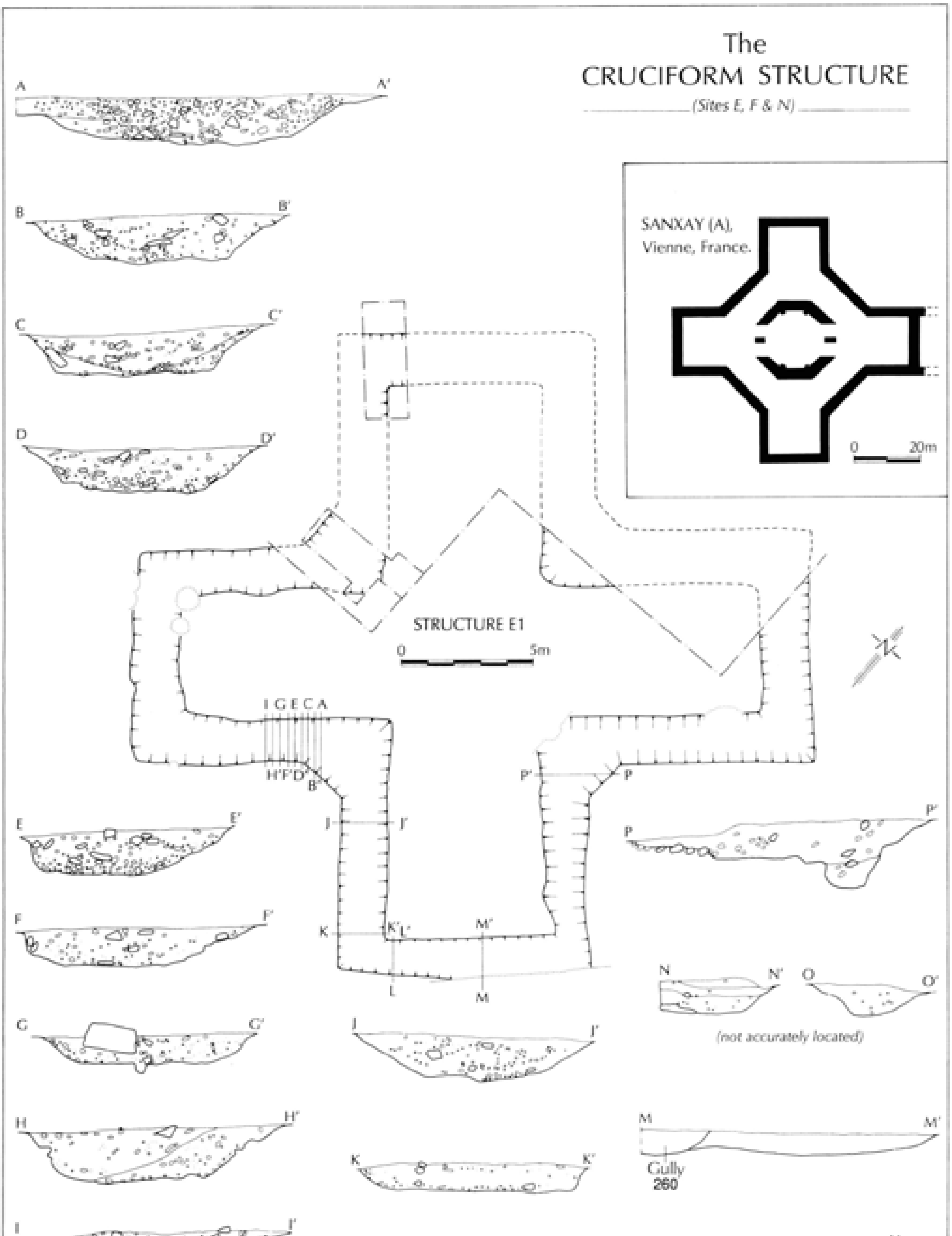


Fig 91 Plan and sections of cruciform Structure E1: plan 1:200, sections 1:40

However, the excavations have only produced seven fragments of clay Roman tile which are most likely to have been brought to the site in the course of manuring. The largest concentration of stone roofing tile was recovered from pits J115, 121, and J125 on the western ramparts of the plateau. As has been noted much tile was found in the rampart trenches in the same areas as Roman masonry but it appears that the excavators did not retain it. What does survive, however, is a significant body of structural material housed along with the extant surface collections of pottery which are curated in local museums. There are occasional stone and clay roof tile fragments, and stone tesserae with mortar adhering, some of which can be located to the north-west of the hillfort interior.

There are two other small pieces of evidence which we may now bring into play. Antiquarian accounts record considerable quantities of 'Roman' material from the interior and towards the eastern side of the hilltop (see p7), although such quantities are not a feature of the recent excavations and the Roman designation is open to question. Secondly, the recent excavations have produced evidence for an inscription, namely a small piece of polished marble bearing traces of three chiselled letters in two rows. Only the letter E can be read, with perhaps a C and the serif of another letter, possibly an L (Fig 90). This had been buried along with a fragment of roof tile in a small pit on the western side of the plateau (L621). In addition there is a letter A (Fig 90), cut from sheet copper and then gilded, which came from the northern slope of the hill (Fig 90). Late Roman temple sites have produced letters in a similar style (Lydney, Wheeler and Wheeler 1932; Woodeaton, Henig 1984, 147) which are presumed to be ritual offerings. However, a secular context at Packenham, Suffolk, has produced the letter P (Judith Plouviez pers comm). The Cadbury letter is unusual in having no visible means of attachment. It has been well worn, broken, and bent, which may imply that it has been deposited as scrap (Wright 1967, 203, no 2 pl XVI.7)

This somewhat nebulous evidence leads us in search of a masonry building, perhaps a temple, which was demolished for building material in the post-Roman period, a search which brings us to Structure E1. The detail of the discovery and excavation of this building has been given by Alcock (1995, 50–53) and a plan and section drawings are presented here in Figures 84 and 91. The structure is represented by a cruciform foundation trench, with four arms 8–9m long and some 8m wide with an overall dimension across the arms of about 25m. Each arm was linked by a diagonal splay across the re-entrant angle (Fig 91). The trench appears to cut a number of Iron Age pits. Examination of the pottery from the trench shows that *c* 75% of the sherds belong in Ceramic Assemblages 5/6, *c* 24% in Ceramic Assemblage 8, with little material belonging to Ceramic Assemblage 9. There are less than 20 sherds of Ceramic Assemblage 10, which are worn and range from first to fourth century AD in date. A single sherd of post-Roman Class Bi amphora is recorded from the south-west corner of the trench. Alcock concludes that 'it is only on the basis of an interpretation in terms of function and historical context that a date can be suggested for this major structural feature' (Alcock 1995, 53). The interpretation then offered is that it represents the unfinished foundation trench for a Saxon church, established in the context of Cadbury Castle's short-lived status as a *burh*. That no masonry building ever stood in the trench is implied by 'the complete absence of masons' chippings and mortar dust'(Alcock 1995, 53).

Here we simply offer an alternative reading, that the trench was for a masonry building which was robbed out and backfilled in the fifth or sixth century AD. The date for such a building would therefore fall within the Roman period. A broadly comparable building measuring 36 x 36m can be found in the octagonal temple with cross-shaped ambulatory at Sanxay, near Vienne in Gaul. This shrine, possibly dedicated to Apollo, flourished in the mid-second century AD, possibly with an Iron Age antecedent (Horne and King 1980, Fig. 17.21,1).

It seems that many of the late Roman finds from the hilltop, which survive in deposits sealed by chance in some of the rampart cuttings (especially Site J), have been removed by centuries of ploughing and anti-quarian activity. What is remarkable is that Roman objects survived on the plateau long enough to be discovered by excavation during the Alcock campaign. In addition to the letter A and the fragment of marble inscription described above, there are fragments of Roman glass vessels, brooches, bracelets, a few Roman coins, and glass beads. Furthermore, if items of the first century AD are excluded on the grounds that they will have been associated with the military occupation phase, it can be demonstrated that most of these items were found on the eastern end of the plateau area in the vicinity of our postulated temple building (E1). If this zone is defined as including Sites E, F, N, P, and S, then it can be established that more than half of the glass beads, two-thirds of the brooches and pieces of vessel glass, and all of the bracelet fragments derive from this zone. The absence of Roman tools and other domestic items is noticeable, and this assemblage of small personal trinkets and glass is very reminiscent of the items found on other Roman temple sites within the region, the nearest of which is Lamyatt Beacon (Leech 1986).

One final caution must be offered. In his discussion of the Roman coins from the hill John Casey finds no support for the presence of a late Roman temple (see p252). Late Cadbury therefore ends either with the abandonment of the site after military occupation in the first century AD, or with the establishment of a temple complex on the hill, perhaps in the second century AD, the later history of which cannot be ascertained. There is no evidence of a continuity of occupation into the fifth century AD.

6 Clothing and decorating the body

Introduction

by John C Barrett

This is the first of three chapters, each of which will consider the artefacts recovered from Cadbury Castle in contexts defined by reference to the human body. Catalogues to accompany the artefact illustrations will be found in Chapter 13 (see p356ff). We begin here with the clothing and decoration of the body before considering the feeding of the body (Chapter 7) and the body acting as agent (Chapter 8). The reasons for the approach taken have already been given in Chapter 2. We reiterate that to assign any group of artefacts to one or other of these broad contexts is relatively arbitrary and that this better reflects the way the significance of an artefact is context-dependent than the more traditional approach which treats artefact categories as if they embodied some absolute value.

No organic items of clothing have survived and our understanding of the ways the body may have been adorned depends upon the items used in working textiles and leather, as well as the additional items of ornamentation, which have been recovered from the site. The objects associated with textile production are discussed before those concerning leatherworking. Objects of adornment are then described. The most notable example of our changing perception in the classification of these objects here is that of the bun-shaped and triangular clay objects which are traditionally identified as loom weights. Following on from her work on the Danebury material Cynthia Poole has, in this report, reclassified these objects as oven bricks and they are discussed as such in the next chapter (see p213). We begin this survey of the material with tweezers and razors, in other words with the modification of the body itself.

Tweezers and razors

by Brendan O'Connor

Four tweezers possibly of late Bronze Age or early Iron Age date came from the site (Fig 92.1). Three are of similar size, the fourth more slender. Two came from Early Cadbury contexts in the interior, one from a Middle Cadbury pit, and one from Middle Cadbury deposits in the ramparts. An additional, presumably later, pair of tweezers came from the gate deposits (Fig 71.19).

Copper alloy tweezers are not closely datable, but they are characteristic of late Bronze Age and early Iron Age settlement sites (Needham 1980, 20, 25–6; O'Connor 1980, 221–3). Hillfort finds include a pair in unsealed late Bronze Age deposits behind the rampart at The Breiddin, Montgomeryshire (Musson 1991, 33, 135, fig 56, 144), and another among the bronzes from Ivinghoe Beacon, Buckinghamshire (Britton 1968, 208–9, figs 11, 16, 19).

Two single-edged copper alloy razors, one nearly complete (Fig 92.2), the other a blade fragment, were recovered from Cadbury. The former comes from a Middle Cadbury pit (S210), the latter from topsoil in the interior. Jockenhövel attributes the more complete example to his Feldkirch type (1980, 174, no 661, Taf 34) of Hallstatt C date (ibid 195–7). A contemporary date would be confirmed in Britain if the Feldkirch example from Danebury is accepted as from a closed group (Cunliffe 1984, 337, 340, fig 7.2, 1:11). Apart from Danebury there is another hillfort find from Ham Hill, Somerset (Jockenhövel 1980, 174, no 665; Pearce 1983, 532, no 750e, pl 89). Both razors from Cadbury probably belong to the Llyn Fawr phase (eighth to seventh century BC) and their composition confirms a Llyn Fawr date (see p272)

Spinning

Fired clay spindle whorls

by Cynthia Poole

The division between clay spindle whorls and beads was drawn arbitrarily at 5g; it is possible some of the smaller spindle whorls were in fact beads, and at the top end of the scale some may have served as discoidal weights for other purposes.

There was a total of 30 clay spindle whorls (none illustrated), of which 19 were complete, and one tile and three pottery discs. All were well made with smooth surfaces, often extremely well finished, almost polished. The spindle whorls had been baked or fired.

The whorls ranged from 22–52mm in diameter and 14–30mm in height. Their weights varied from 10–56g, but a few incomplete examples were estimated to have weights up to 62g.

Six different forms were represented, though some objects are indeterminate in form. These were (sub)spherical, hemispherical, discoidal, cylindrical, biconical, and truncated cones. No dumb-bell form occurred amongst the clay spindle whorls, though this form is known from other Iron Age sites. The cylindrical and discoidal forms are also known among chalk, shale, and other stone spindle whorls, while the hemispherical type is common for bone spindle whorls.

Decoration occurred on ten of the spindle whorls and fell into three basic categories: fingernail impressions, incised dots, and incised or impressed lines. Fingernail impressions occurred on five whorls, generally vertical, forming a line around the maximum circumference. On one it was combined with dot decoration.

The incised dot decoration occurred on two whorls and on both was combined with one of the other forms of decoration. The dots superficially look rather

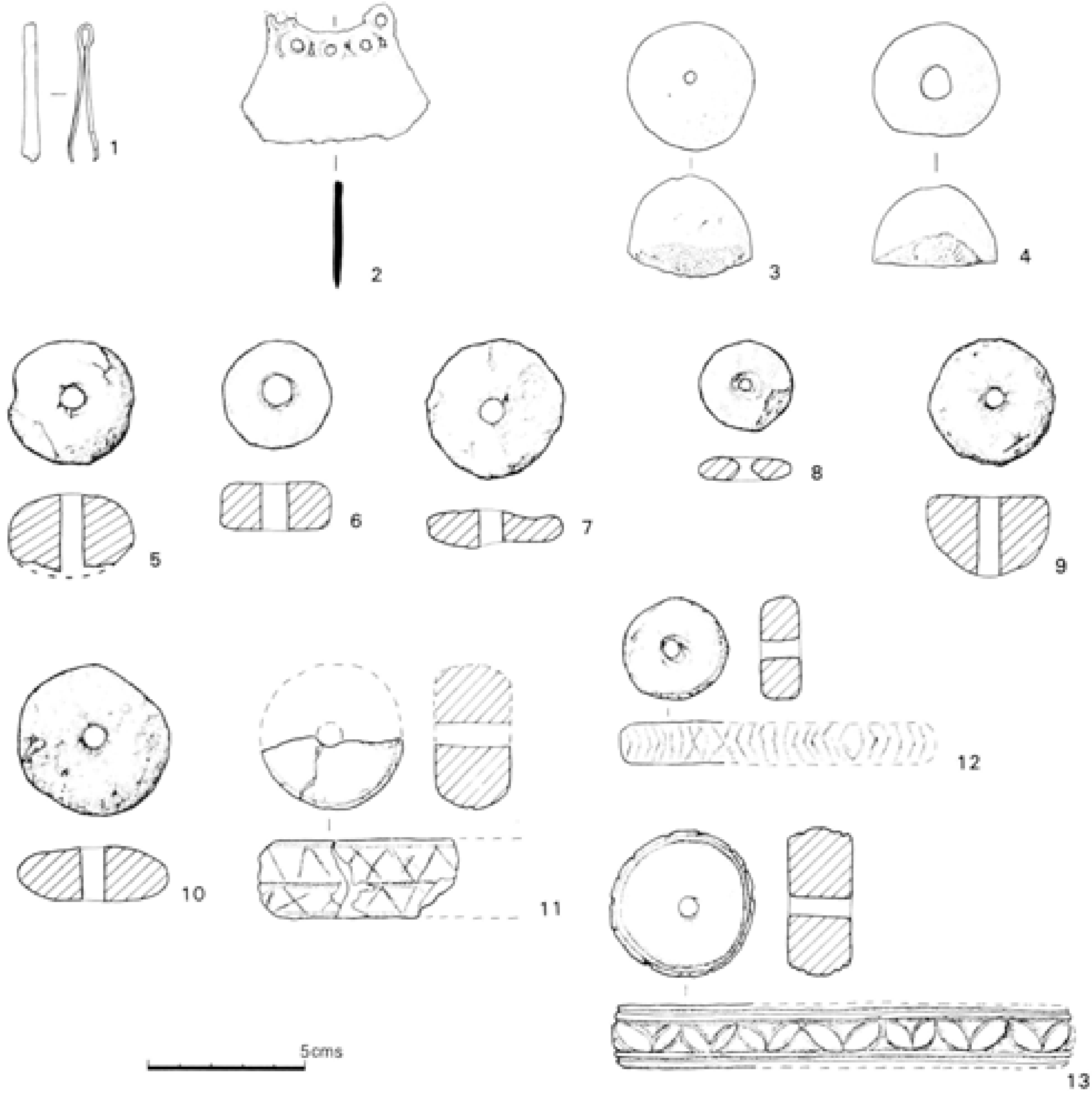


Fig 92 Tweezers, razors, bone and stone spindle whorls. Scale 1:2

random in arrangement, but more detailed examination suggests possible lines spiralling out from the perforation, or diagonal lines, perhaps representing the movement of the spinning or to form a pattern best appreciated while spinning. Comparable dot and line decoration occurred on a bead at Danebury (Cunliffe and Poole 1991, 371–2, fig 7.42, 7.85).

The same effect is found with the incised lines which often radiate out from the perforation, sometimes with a single line marking the central circumference. On one biconical spindle whorl the incised line decoration was very clearly confined to one side suggesting a definite top and base, something hinted at by other whorls which are slightly asymmetric in profile. On this whorl the lines do not form a symmetrical pattern but look more like letters; unfortunately the surface is damaged and the pattern incomplete.

Incised linear patterns occur on chalk spindle whorls and discoidal weights from other Iron Age sites, including Danebury and Maiden Castle. The incised dot and line decoration could have been made with a fine point, possibly of bone or metal. Some of the impressed lines might have been made with the edge of a bone tool.

In addition to these moulded clay spindle whorls there were three discs chipped from pottery and one from tile. Clearly the intention was to form a circular disc, but more often they ended up polygonal. Perforations in the centre are generally drilled from both sides resulting in an hour-glass shape. On one, the perforation was drilled only to a depth of 3mm before being abandoned.

These discs fall in the same diameter range (31–45mm) as the other spindle whorls, but apart from the unfinished disc, their weights (6, 8, and 75g) are at either extreme. Their height is much less, 8–10mm, being governed by the thickness of the pot.

Bone spindle whorls

by W J Britnell

Three items (two of which are illustrated, Fig 92.3, 4) are made from the proximal epiphyses of bovine femurs which have been detached from the shaft of the long bone and perforated. Two are from Middle or Late Cadbury contexts and one is undated. All three were possibly spindle whorls, although the perforation through one example appears to be too small. Similar examples, some of which are decorated, are known from a number of Iron Age and later sites in the region (Britnell 1977, 65; Sellwood in Cunliffe 1984, 395, 3.211–13; Coles 1987,160, W44; Laws in Sharples 1991a, fig189.5).

Stone spindle whorls

by Peter S Bellamy

Thirty-six spindle whorls were manufactured from stone. These range from extremely rough examples, little more than perforated pieces of unworked stone, to finely finished and decorated examples. They have been classified using the same morphological categories as the fired clay examples. The majority are discoidal with either curved or straight sides (Fig 92.6, 10), and there are also isolated examples of hemispherical and cylindrical types (Fig 92.5, 9). The shape of the spindle whorls appears to be partly determined by the raw material used, for example, the preponderance of disc types made from Lias reflects the nature of this rock type which fractures into thin flat pieces.

The majority of the spindle whorls had been worked into a regular shape with finished surfaces exhibiting very few toolmarks. The perforations are generally centrally placed, though several are slightly off-centre. They are either drilled straight through or are countersunk. The majority have straight-drilled holes, but nine have slightly countersunk 'hourglass' perforations drilled from both sides, and one has a conical perforation countersunk on one side only. Five of the stone spindle whorls had visible toolmarks. These were shallow rounded grooves, striations on one or both faces of the whorl (Fig 92.5) or grooves around the perforation (Fig 92.7). One decorated whorl (Fig 92.13) had traces of chisel or knife marks around the decoration. Of the two Kimmeridge Shale spindle whorls (not illustrated) recovered, one was knife-cut and the other lathe-turned.

The size of the stone spindle whorls ranges between 26–80mm in diameter, but 90% are between 26–50mm across. The perforations measure between 2–15mm in diameter but the majority are 7–9mm across. The weights of these artefacts do not cluster tightly but are spread between 7–72g (with a single much heavier example at 125g). This weight range is similar to that of the fired clay spindle whorls.

Not all the spindle whorls were necessarily used on a spindle or for spinning. The smaller examples (Fig 92.8) may have been used as beads, and those with smaller diameter perforations may have been suspended as small weights. Some of the larger whorls may have been used as flywheels on drills or other mechanical devices.

There are three decorated examples among the stone spindle whorl assemblage. (A fourth with incised dots has already been published (Alcock 1980, 674, fig 9 KX024.2) and is not included in this report.) Two have incised decoration around the sides: one has a chevron design (Fig 92.12), and the other a double zigzag design (Fig 92.11). A running chevron design also occurs on some examples from Meare (Coles 1987, figs 3.66–7). The third decorated example is much more finely finished, and is highly decorated with a double leaf motif in relief within a double rib frame (Fig 92.13). It was found in a pit (F311) dated to the Middle Cadbury period. Such highly decorated spindle whorls are uncommon. Only one other example with a similar high standard of decoration (but with a different motif) has been recovered from an Iron Age context, at Camerton, Somerset (Horne 1937, fig 7).

There are no discernible chronological differences between the spindle whorl types. Most of the datable spindle whorls come from the Middle Cadbury period and all types are represented. Only disc types were recovered from Late Cadbury contexts but the total number is so small that the absence of other types may be fortuitous. Equally, no spindle whorls have been recorded from the Early Cadbury period. This is probably a reflection of the small number of contexts ascribed to this period rather than a genuine indication that this class of artefact was absent from the hillfort at this time.

The range of spindle whorls from Cadbury Castle is similar to that found on other Iron Age sites in southern England. The size of the assemblage is comparable to that from the hillforts of Maiden Castle and Danebury but seems to be considerably smaller than those from the settlements of Meare and Glastonbury.

Weaving

Combs

by W J Britnell

Parts of 42 combs of early Iron Age type were found (Fig 93); 33 (79%) are made from red deer antler and 9 (21%) from bone, probably from the shafts of horse and cattle tibias and metapodials. They represent the commonest type of bone and antler artefact from the site and are also one of the commonest types of implement made from bone and antler surviving on

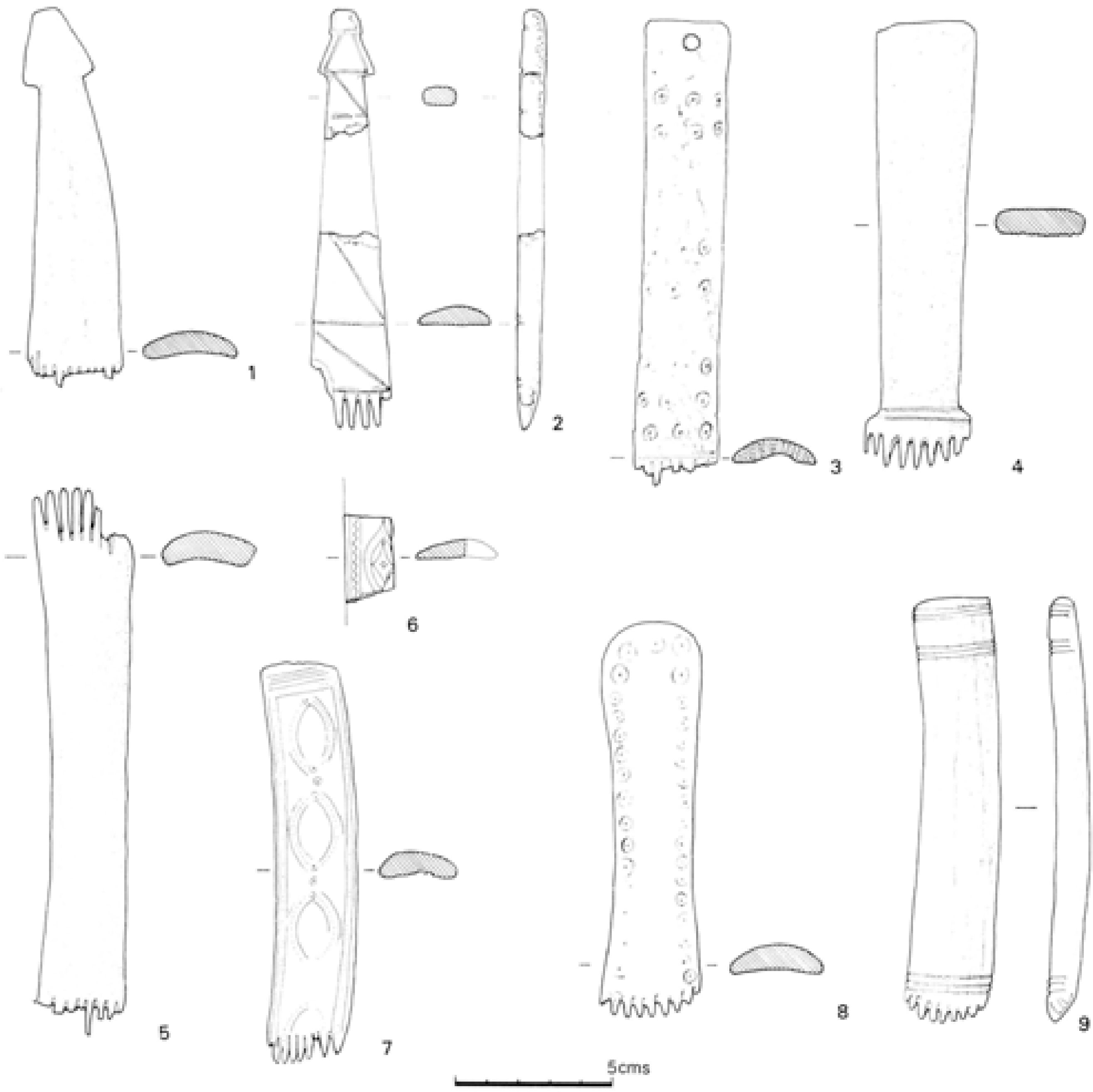


Fig 93 Combs. Scale 1:2

Iron Age sites in Britain. Most of the antler combs are made from the beams of red deer antlers although some of the smaller examples may have been made from larger brow-tines.

A high proportion of the combs are fragmentary, and the identification of some fragments is uncertain. Fifteen examples are sufficiently complete to be certain of the original form and decoration. The number and dimensions of the teeth are closely comparable with other data from southern Britain (cf Sellwood in Cunliffe 1984, 377). Complete combs vary in length from 113–75mm (average 144mm). The range in maximum width across the teeth of the more complete combs is 26–40mm (average 32mm). The number of teeth ranges from 7–16 (average 9) and tooth thicknesses range from 2.5–5.4mm (average 3.6mm).

At least 18 examples are decorated and seven have holes for suspension (eg Fig 93.3). Some examples with only simple transverse lines at the base of the teeth (eg Fig 93.4) have been excluded from the total of decorated examples since it appears that these were principally marking-out lines for cutting the teeth. In two instances the teeth clearly cut through the decoration (Fig 93.7, 8), suggesting either that the teeth have been recut or that the decoration was undertaken first (cf Bulleid and Gray 1911, 271; Gray and Cotton 1966, 65). The form of the butt can be determined in 21 cases, of which 15 are simply squared, three are simply rounded, two have angular enlargements at the butt, one has a semicircular enlargement, and one is double-ended (Fig 93.5). Only about 13 combs are from dated contexts, 10 of Middle

Cadbury date and three of Late Cadbury date, and there is consequently insufficient information to determine whether there was any change in form or decoration through time. The combs and comb fragments are widely distributed across the site as single finds: 11 examples are from the ramparts, 24 from the plateau sites, two from the northern slopes of the interior, and five from the south-west gate. Possible concentrations are represented by 15 examples from the southern side of the plateau and 10 examples from the rampart Site D.

Characteristic wear patterns on the teeth of a number of examples are precisely matched elsewhere (eg Sellwood in Cunliffe 1984, 375–8; Coles 1987, 105). In some instances the surface decoration appears to be worn in a manner suggesting that they were held with the butt end in the palm of the right hand and with the forefinger placed on the upper surface extended towards the teeth.

The function of these implements has been considered in some detail elsewhere (eg Hodder and Hedges 1977; Sellwood in Cunliffe 1984, 371–8; Coles 1987, 105–6), where it has been generally considered that they were associated with wool processing or textile production.

Small pointed blades

by W J Britnell

A total of 69 complete or fragmentary implements in the form of small pointed bone blades were found (Fig 94.1–9), of a type occurring widely on Iron Age sites in the region (Britnell 1977, 72–4, 77–9 fig 10) and elsewhere in Britain, and commonly referred to as gouges. Since most examples conform to a consistent and distinctive pattern, it seems reasonable to assume that the great majority represent a specialised form of implement used for a specific purpose, rather than representing a general-purpose tool with a wide variety of possible functions. A detailed consideration of the form of the implement is important in an attempt to define the function of this common and ubiquitous type.

In terms of manufacture and raw material the implements can be divided into five groups as follows: sheep/goat tibias with the butt formed of distal end of bone (41 examples, eg Fig 94.1–4); sheep/goat tibias with the butt formed of proximal end of bone (11, eg Fig 94.8, 9); sheep/goat metatarsals with the butt formed from proximal end of bone (12); sheep/goat metatarsal with butt formed from distal end of bone (1); sheep/goat metacarpal with the butt formed from the distal end of the bone (1); sheep/goat radii (2, eg Fig 94.6); and roe deer metatarsal with the butt formed from proximal end of bone (1, Fig 94.2). Three further items possibly represent similar objects in the process of manufacture. The form of the blades, the use of raw materials, details of hafting, and patterns of wear on the tips of the blades suggest that a majority of the implements had a single specific function, though it is probable on the basis of wear patterns that some had other distinct functions. Grouping all these implements together may therefore be to some extent misleading, but represents an expedient compromise which attempts to reduce the number of items that would otherwise need to be assigned to numerous miscellaneous categories. It also enables a comparison to be made with other schemes of classification which have suggested that some types defined on a typological basis have some chronological significance (cf Wheeler 1943, 303–4). Classification purely on the basis of either typology or wear patterns is equally unsatisfactory since only 18 (27%) implements would be sufficiently complete to be able to determine both form and function, only about 35 (52%) are sufficiently complete to determine the original form of the butt, and the tips of the blades of only about 37 (55%) are sufficiently complete to determine the wear pattern (cf alternative approaches summarised by Sellwood in Cunliffe 1984, 385).

The lengths of complete or nearly complete examples were measured (Britnell 1994). There is generally some overlap in the length range of the implements made from different bone types, the different average lengths being mostly due to the original raw material. Where it is possible to determine the original form of the butt, 34 (87%) have a longitudinal socket, 25 (64%) have both a socket and lateral perforations, and 5 (13%) appear to have been unhafted.

A majority of examples of all bone types are made from mature bones, with fused distal or proximal epiphyses, although a number of immature bones are present (eg Fig 94.4). Examples made from sheep/goat tibiae with the butt formed from the sub-rectangular distal epiphysis of the bone show the highest degree of consistency in manufacture. These have been made by an oblique cut through the proximal end of the bone, almost invariably on the anterior surface, forming a blade or point from the naturally flattened posterior surface with an upper concave surface on one face formed from the inner surface of the hollow medullary cavity. Examples made from sheep/goat tibias with the butt formed from the triangular-sectioned proximal epiphysis show a slightly greater variation in manufacture. These have been made by cutting away the distal end of the bone on various different surfaces; seven have been made by cutting the anterior surface, two have been cut on the lateral surface, one on the angle between the posterior and lateral surfaces, and one is cut on the angle between the anterior and lateral surfaces. Being formed from the more rounded shaft at the distal end of the bone, it would be more difficult to produce flattened blades, which probably explains why a proportion of points of this type, though generally similar in appearance to the previous type, appear to be stubbier. The examples made from sheep/goat metapodials have all, with two exceptions, been made with the butt formed from the sub-circular proximal epiphysis. Where it is possible to tell, three of these have been made by cutting away the posterior surface, four by cutting away the anterior surface, and one by cutting away the medial or lateral surface of the bone. Two points, one made from a sheep/goat metatarsal and one from a sheep/goat metacarpal, are both somewhat irregular. The two points made from sheep/ goat radii and the single point made from a roe deer metatarsal are likewise irregular and are the only examples of the use of these bone types from Cadbury Castle, the latter being the only identified utilised deer bone (excluding antler). Although the implements made from each bone type have a gouge-like appearance this results from the inherent nature of the raw material and does not appear to have a functional significance.

A reasonably high proportion of the implements appear to have been hafted, normally by cutting through the thin layer of compact bone tissue at the articular surface and trimming away the cancellous tissue (within the epiphysis) back to the compact tissue of the sides of the bone to create a socket. In some instances the sockets have lateral perforations. Only rarely was the epiphysis entirely removed, the enlargement at the epiphysis normally being retained even though the sides have been heavily trimmed in several instances. The size and shape of the sockets largely mirror the external form of the epiphyses of the bone type used, the sockets being normally sub-rectangular (average 8 by 13mm across internally) in the case of implements made from sheep/goat tibias with the butt formed from the distal end, triangular (*c* 12 by 14mm across) where the proximal ends of sheep/goat tibias form the butts, and sub-circular (*c* 9mm across) in the case of blades made from sheep/goat metatarsals. In the case of two examples made from sheep/goat tibias with the butt formed from the distal end of the bone the longitudinal perforations are very narrow, being only 3 by 8.5mm and 3.5 by 10mm across. Lateral perforations are between 2.5–6.5mm in diameter (average 4mm). Some of the

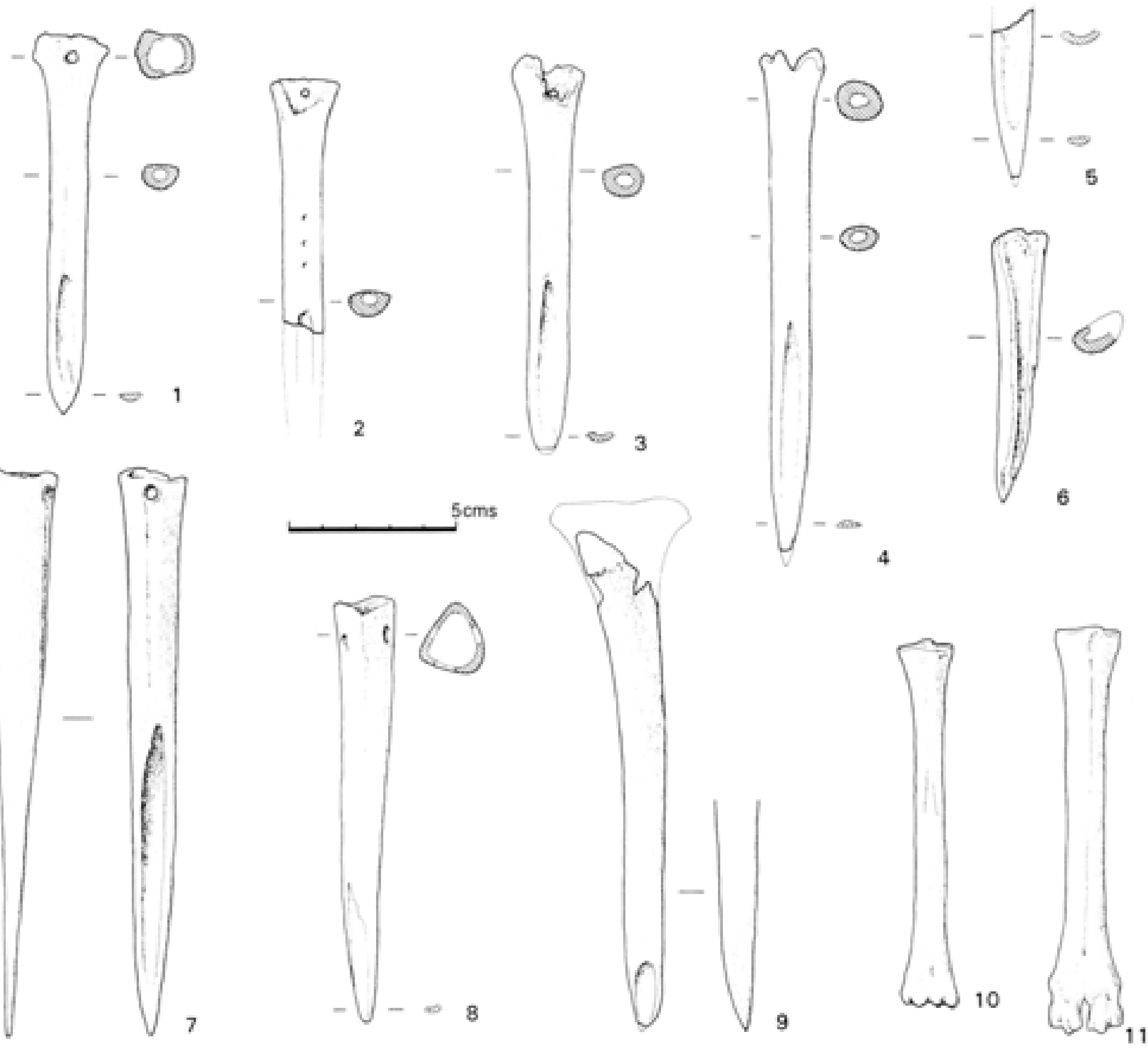


Fig 94 Small pointed bone blades, grooved and polished sheep/goat metapodials. Scale 1:2

holes are countersunk but they are mostly cylindrical and appear to have been cut with a drill. In the case of points made from sheep/goat metatarsals and those made from sheep/goat tibias with the butt formed from the distal end of the bone there is normally a pair perforations which pierce the anterior and posterior surfaces, between 2.5–10mm (average 6mm) from the top of the butt, and which are normally in alignment. One example made from a tibia has an additional perforation only 1mm from the top of the butt, which possibly represents a mistake. In only one instance are the perforations out of alignment, and these are of unusually small diameter. Of the examples made from sheep/goat tibias with the butt formed from the triangular cross-sectioned proximal epiphysis the perforations are inevitably out of alignment: one example has three small transverse perforations, one in each of the medial, lateral, and posterior surfaces, and another has two perforations, one in each of the medial and lateral surfaces. The single example made from a roe deer metatarsal is unusual in having a perforation in only one surface of the bone. None of the lateral perforations show any distinct traces of wear, suggesting that they were peg-holes rather than intended for suspension.

Only one example is decorated (Fig 94.2), a feature noted on other sites in the region, and normally, though not invariably, as in the case of this example, confined to the flatter, anterior surface of the bone (cf All Cannings Cross, Cunnington 1923, pl. 12.13). The shafts of the majority of the implements are otherwise unworked, or only superficially trimmed, but in one example the shaft has been squared (cf examples from a number of Wiltshire sites, eg All Cannings Cross, Cunnington 1923, pl 8.11; Lidbury, Cunnington and Cunnington 1917–19, pl X.6). Two of the Cadbury Castle examples appear to have been broken in antiquity and subsequently reused, with evidence of wear on the broken surfaces.

The function of this distinctive implement type has been the subject of much speculation and a wide variety of uses has been suggested, including use as prickers, borers, and spoons (Cunnington 1923, 85), lance- or spearheads (Roes 1963, 34), weaving shuttles (Balch 1914, 113; Wheeler 1943, 304), thread-pickers (Gray 1910, 59), pin-beaters (Crowfoot 1945; Wild 1970, 66), and in hide dressing (Sellwood in Cunliffe 1984, 387) and eating implements (Coles 1987, 53).

Evidence of the way in which the implements were used is provided by the original form of the hafting and by patterns of wear. The sockets of similar implements appear to have contained pieces of wood (Gray and Cotton 1966, 309, 312, B130; Bulleid and Gray 1917, 420, fig.149.B151) or iron or bone (Balch 1914, pl XXIIIB.17, 19, 21–3; Balch 1913, pl XXVI, fig.2 d and e), suggesting handles. Other examples (Cunnington 1923, 86–7) have been found with the remains of iron 'rivets'. The articular surfaces of fresh bone are quite robust, and it seems unlikely that the surviving wood fragments had been used to hollow out the shaft (*pace* Sellwood in Cunliffe 1984, 387). The presence of two otherwise similar objects from Cadbury Castle which were not provided with sockets, together with the fact that the implements would not be capable of sustaining much lateral stress without fracturing, suggests that the implements were hand-held and often provided with short handles, possibly of wood, normally secured by a single transverse rivet, an interpretation first proposed by Bulleid.

Although the points of these implements show a wide variation in shape the extreme tip is often purposely flattened. This is notable on one example, where even though the shaft has been heavily trimmed, it has significantly not been done with the intention of making the point any sharper. This characteristic has been noted elsewhere, as in the case of examples from Meare (Gray and Cotton 1966, 312–3, especially nos B35, 74 and 146), All Cannings Cross (Cunnington 1923, 85), and Danebury (Sellwood in Cunliffe 1984, 385). It is probable that a definitive functional interpretation must await a detailed study of the microscopic traces of wear, but a preliminary microscopic examination of the examples from Cadbury Castle suggests that only between 10–20mm of the tip show any distinct traces of wear, and this appears to have been produced by gentle rubbing. Parallel, longitudinal striations produced on the surfaces of the blades by knife-cuts during manufacture have often been worn away on both the faces and the edges at the point. In some instances slight transverse furrows are visible which appear to have been produced by wear. Though not all the points show this degree of wear, this no doubt depends upon the extent to which the individual implements were used before they were lost or discarded. There is generally an absence of longitudinal scratches or grooves and this would preclude their use as gouges or awls involving abrasive materials. It seems likely that they were mostly hand-held and possibly moved in a plane perpendicular to the shaft between relatively soft materials, and in a manner which would concentrate the wear on both faces of the blade near the point. Crowfoot's (1945) suggestion that some at least were used as pin-beaters for beating in the weft between the warp threads on an upright loom seems plausible, and has gained some acceptance (Sellwood in Cunliffe 1984, 387; Coles 1987, 53). The use of pin-beaters with a point of a similar size and form in recent times is recorded in Iceland and the Faeroes, probably for the manufacture of fairly tightly woven fabrics made on the warp-weighted loom (Hoffmann 1964, 320–1), similar examples being known from late Saxon contexts (eg Cunliffe 1976, fig 140.65). Several examples, including two made from sheep/goat metatarsals, appear to show patterns of wear which are uncharacteristic of that group and would seem to have been used much more roughly. The existence of 13 similar though unexplained socketed points found with an early Iron Age warrior burial at Grimthorpe, Yorkshire (Stead 1968, 171–2, fig 16), also appears to militate against a single functional interpretation.

Small hafted pointed blades of the type described above are widespread on Iron Age sites in the region (Britnell 1977, 77–8, fig 10) and elsewhere in Britain; the type cannot be clearly identified in contexts before the early Iron Age, and only rarely (if ever) within the Roman period (Wild 1970a, 66 and Table J). A majority (19) of the more securely dated examples from Cadbury Castle of the type made from sheep/goat tibias with the butt formed from the distal end of the bone are probably all from Middle Cadbury contexts, with a single example from an early Late Cadbury context. Although there are relatively few examples of the type with the butt formed from the proximal end of the bone, of the eight examples from datable contexts, three appear to be Middle Cadbury contexts, and five Late Cadbury. The evidence from Cadbury Castle may therefore bear out evidence from Maiden Castle (Wheeler 1943, 303–4; Laws 1991, 236) and elsewhere for an early preference for the type made from sheep/goat tibias with the butt formed from the distal end of the bone and a later preference for those made from sheep/goat tibias with the butt formed from proximal end. The reason for this change-over is unexplained, but might conceivably be due to a change in butchery practice and the consequent form of the raw material rather than conscious preference for a part-icular bone type. Of the group as a whole, including those made from other bone types, about 32 appear to come from Middle Cadbury contexts, nine from Late Cadbury, contexts, and one small fragment from a post-Roman context.

The in-site distribution of examples shows that 12 (18%) are from the rampart sites, 7 (10%) are from the south-west gate, 44 (66%) are from the main plateau sites, three (4%) are from the northern slopes of the interior, and that two (2%) are unlocated. Of the plateau finds there is a possible concentration along the southern margins of the excavated area. The implements are otherwise generally well scattered, and all the examples appear to have been found singly.

Grooved and polished sheep/goat metapodials

by W J Britnell

Eight objects belong to a distinct functional class of artefact recorded at a number of Iron Age sites in the region (Britnell 1977, 91, fig 11) and elsewhere in Britain. Four are made from sheep/goat metacarpals (eg Fig 94.11) and three from metatarsals (eg Fig 94.10), of which at least one is an immature bone with an unfused distal epiphysis and one is indeterminate. They show distinctive evidence of wear but characteristically are otherwise unworked. Since the type has been made from a very restricted range of bone types it is often possible to identify examples from very small fragments, or indeed examples where the degree of wear is very slight and might otherwise be easily missed. In all instances the wear has undoubtedly resulted from the same processes, but differs in degree from slight traces of artificial polishing to more deeply worn grooves when carried to extremes (cf Sellwood in Cunliffe 1984, fig.7.38; Coles 1987, fig.3.61, R16). Most of the Cadbury Castle examples are only slightly worn. The wear pattern has been generally described as having been caused by the friction of threads (eg Gray and Cotton 1966, 319, note 91), and associated with weaving or some similar activity (Clay 1924, 481; 1925, 79; Wheeler 1943, 306). A suggestion that they were used as bucket handles would seem to be unlikely (Clay 1924, 481). Seven of the Cadbury Castle examples are from Middle Cadbury contexts, all from the plateau sites. Two examples came from the same pit (P953). Four examples appear to have been found in close association with each other at Maiden Castle in two contexts (Britnell 1977, 91), and examples were also found in twos and threes at Swallowcliffe Down (Clay 1925, 78–9). It therefore seems possible that recurrent patterns of activity are indicated in the same area or that several examples were used together. Recurrent patterns of wear, possibly mirrored in the 'pair' from Cadbury Castle, are normally confined to a general zone *c* 80mm across on the all surfaces of the bone and concentrated in bands 10–20mm across and up to *c* 70mm apart on opposite sides. A wide variety of possible uses can be suggested (cf Coles 1987, 145–7), which might be tested by practical experiment. Although the implements would appear to have little practical application on a warp-weighted loom, the pattern of wear might suggest that they were used for the manufacture of narrow braids on some form of simple hand loom.

Sewing

Iron and copper alloy needles

by C Saunders and Jennifer Foster

Iron needles are not common finds but this may be the result of their relatively small size and the effects of corrosion. Four such needles are known from Cadbury Castle (eg Fig 135.68), but none can be closely dated. Like the more common bone examples and those of copper alloy, iron needles can be divided into two broad types: those with a rounded or ring head and an eye which is more or less circular, of which Cadbury produced a single example, and those with a pointed or lozenge-shaped head and an eye which is not always circular, of which three examples are known.

Five copper alloy needles (Figs 71.20 and 98.1–4) of varying sizes (length 42 and 23mm) were made from sections of rolled copper alloy sheet tube. On all four the join can be seen and it can be suggested that such needles were made on the site.

Bone needles

by W J Britnell

Eighteen finely worked and perforated bone points (eg Fig 95.1–5) were almost certainly all used for sewing. In most instances the source material is uncertain, although they have probably all been made from bone: two have probably been made from small long bones such as sheep/ goat tibias and metapodials. Nine smaller fragments possibly also belonged to similar needles, and one is much cruder than the other needles with extant eyes. The examples are all most likely to be of Iron Age date on typological grounds. Seven of the more complete examples are from Middle Cadbury contexts. All of the examples appear to belong to a type most common on sites of the British Iron Age, with a more or less pointed head close to the eye, which may be either circular or lenticular; this type has been recognised on numerous sites in the region (Britnell 1977, 60–2). The in-site distribution of the more certain and possible examples is as follows: the ramparts *c* 12%; the south-west gate 12%; the plateau sites 73%; and the north-facing slope of the interior 4%. Of the examples from the plateau sites ten are from pits, four are from postholes or postpipes, there are single examples from a wall-trench, a hearth, and a gully, and two are from topsoil. Two examples come from the same pit in the interior.

Leatherworking

Awls (copper alloy)

by Brendan O'Connor

Five complete single-pointed awls and two tangs (not illustrated), also from single-pointed awls, all possibly of late Bronze Age date, are known from the site. Single-pointed bronze awls are numerous on middle and late Bronze Age settlement sites, but persist into the early Iron Age (Needham 1986, 141–2). Most of the Cadbury examples come from redeposited material in the interior. These tools could have been used for a number of crafts and, in some cases, working on copper alloy cannot be excluded (see p272).

Awls (bone)

by W J Britnell

These are represented by a group of 21 simple bone points made from sheep/goat metapodials, normally with sharp and rounded points, with the butt formed from the distal end of the bone; three are from sheep/goat metacarpals (eg Fig 95.6), 16 from metatarsals (eg Fig 95.7 and 95.10), and two are either metacarpals or metatarsals. Four examples at least have been made from immature bones, the distal epiphyses having become detached during or after manufacture (eg Fig 95.8), and in one instance the distal epiphysis has been deliberately removed and the shaft possibly used as a socket.

In most instances where the evidence survives the objects have reasonably slender and sharp points which are rounded in cross-section as though intended for piercing, though in two cases the points are stubbier and blunter. In at least four cases there are longitudinal scratches on the points which may be the result of wear. None of the points shows the polishing and flattening characteristic of the small pointed blades noted above (eg Fig 94.1–9).

Eight of the points are from dated contexts, two from Early Cadbury, five from Middle Cadbury and one from a Late Cadbury context. Several of the

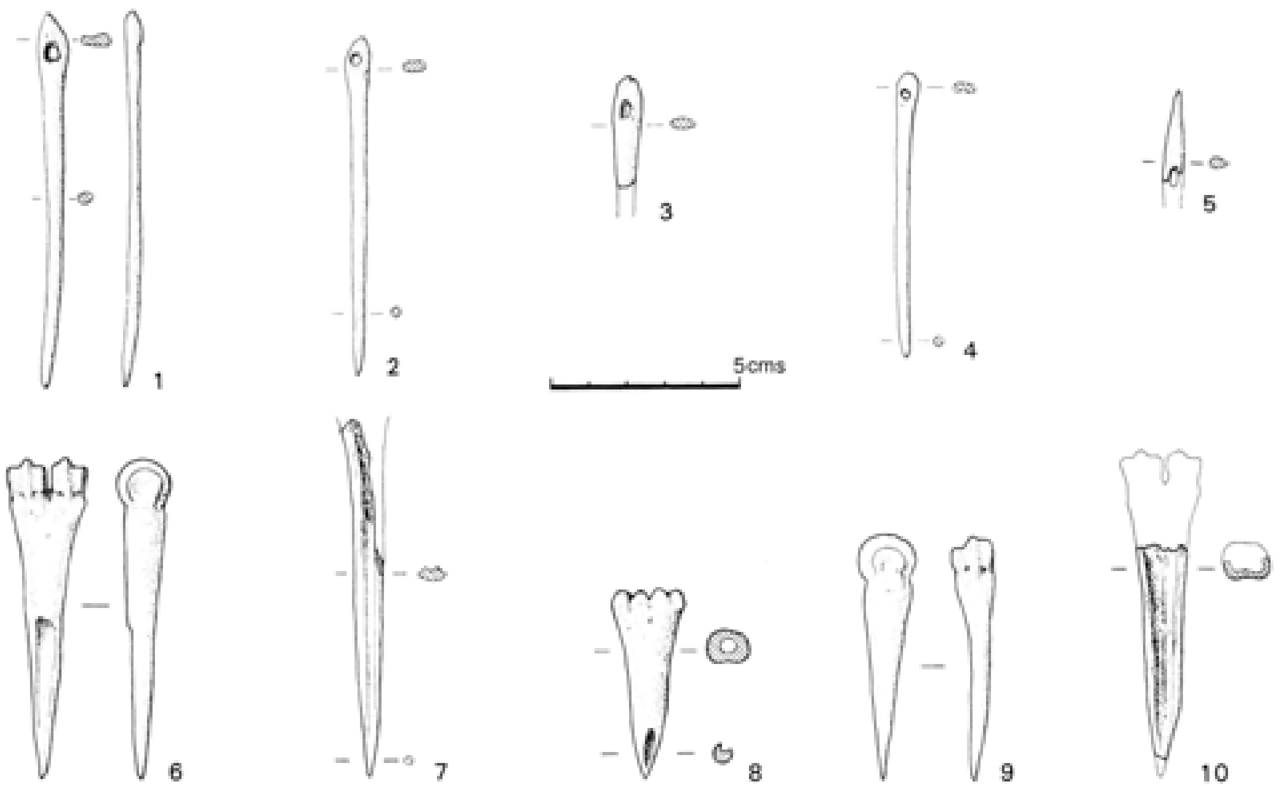


Fig 95 Bone needles and awls. Scale 1:2

examples show distinctive manufacturing techniques which are uncharacteristic of the Iron Age material from Cadbury Castle, and it is possible that some are of Neolithic or Bronze Age date. Three examples (Fig 95.7–9) have been made from either the lateral or medial surfaces of the bone, and have clearly been produced by a groove-and-splinter technique with the use of a burin or other sharp point, the natural longitudinal furrows on the anterior and posterior surfaces having been deepened, leading to the removal of one side of the bone. Three further examples (not illustrated) have been produced by a similar technique, but the anterior or posterior surfaces have been removed by grooves made in the medial and lateral surfaces. Similar techniques of manufacture are evident on material from Neolithic (cf Smith 1965, 128–9) and Bronze Age sites (cf *Inventaria Archaeologica* GB 55, nos 129–39) elsewhere in Britain, and a similar dating seems likely for at least some of the examples from Cadbury Castle. Apart from these examples, which can be perhaps distinguished on technological grounds, the remaining examples can be paralleled on a number of early Iron Age sites in the region (Britnell 1977, 80–1), but they are by no means common, and some might be of an earlier date.

The in-site distribution of examples at Cadbury shows that all examples of this type are from the plateau sites, with concentrations towards the eastern side of the plateau. It is notable that four examples (including Fig 95.8) were found in the same context (F345), suggesting a recurrent pattern of activity or possibly that a number of points were used in conjunction.

Iron leatherworking tools

by C Saunders

The most common iron leatherworking tool to survive from the Iron Age is the awl. This was used to pierce holes in leather before sewing and would certainly have been a necessary tool if sewing with a bone needle, although its use makes the task easier even if metal needles are being used. In more recent times specialised forms of leatherworking knives were used and although such specialisation was certainly current in Roman times no such British Iron Age knife has been identified so far. Many knives of this period have concave edges and could have been used to cut leather as well as other materials. Iron tools used in the production of leather during the tanning process seem unknown.

The commonest form of awl is a rod pointed at both ends with a maximum thickness at a point one third/halfway down the length of the tool. The top part above this point tends towards a quadrangular cross-section and forms the tang by which a bone or wooden handle was attached. Seventeen possible awls are known from Cadbury Castle, three from the rampart hoard (D630A see Fig 38).

Punches were used to work and decorate leather (just as they were used in metalworking). Leather-working punches were commonly handled, like awls, although it is not always possible to distinguish one from the other when they are corroded. Punches often have a rounded point at the cutting end. No certain punches can be assumed to a definite Iron Age date but four tools known from Cadbury Castle are either awls or punches, and all come from the interior (eg Fig 134.39).

Iron Age knives display a wide variety of sizes and frequently have curving or triangular blades which may be single- or double-edged. They must have served a wide variety of functions, from the equivalent of the modern pocket knife to more specialised functions such as butchery or leatherworking. The 13 Cadbury examples are rather fragmentary (eg Figs 134.3, 134.42–3, 135.57). Four knives are from the rampart hoard (Fig 38.4–7).

Body decoration

Clay beads

by Cynthia Poole

Only three objects (not illustrated) could certainly be designated as clay beads, though a number of the smaller spindle whorls may in fact have been beads. The beads weighed from 2 to 4g, measured 13 to 16mm in diameter and 11 to 16mm in height. They were all spherical or sub-spherical in form. None had any form of decoration. Similar beads occur in small quantities on other Iron Age sites, including Danebury (Cunliffe 1994, 399, fig 7.44, 7.12–13), Maiden Castle (Sharples 1991, 211, fig 169.5) and Gussage All Saints (Wainwright 1979, 101–3, figs 77.4013, 78.4035).

Glass beads

by Jennifer Price and Sally Cottam

Fourteen glass beads were found. Eleven or twelve are types in circulation in the pre-Roman Iron Age, and most also occur in early Roman contexts, while two or three are likely to belong to the later Roman occupation of the site. The discussion follows Guido's classification of prehistoric and Roman glass beads (Guido 1978).

Seven of the beads were decorated. Two (Fig 96.5–6) are dark blue globular beads with opaque yellow and opaque white marvered spirals (Guido Class 6). The distribution of this class of beads is predominantly southern British, although examples are also known from further north, as at Rudston Villa, east Yorkshire (Charlesworth 1980, 125, fig 84 no 11) and Old Winteringham, north Lincolnshire (Charlesworth 1976, 244 fig 132 no 1). Most have been found on sites of the first century BC and first century AD, but some survive into the second century AD and later. Many examples are known from hillforts, including an early first century BC bead from Maiden Castle, Dorset, and others have been noted at Torberry, Sussex, and Hunsbury, Northamptonshire (Guido 1978, 112–5), and at Danebury, Hampshire (Henderson 1984, 396–7, 6.8).

The dark blue annular bead with opaque white oblique radial and circumferential trails (Fig 96.7) is another pre-Roman type, which may have a continental origin. The earliest examples date to the second century BC, and few survive into the Roman period (Guido Class 7a). Guido listed six examples from south-west Britain, including Meare and Glastonbury, Somerset, and the legionary fortress at Caerleon (Guido 1978, 117–9).

A heat-distorted annular blue/green bead with a green and yellow twisted cord forming a wave or horizontal band around the circumference was found (Guido Class 9). Annular beads with twisted cables in various colours were produced in the first century BC and are also quite frequently found on Roman period sites. The use of dark green glass for the cable suggests that this bead may belong to the first century AD, as the colour is rare before this time. The context for this find in a Roman oven deposit dated to the mid-first century AD provides supporting evidence for this date. A close parallel for this example was found in a Roman burial at Strood, Kent (Guido 1978, 183). Other examples of annular beads with twisted cables in south-western Britain are known from Exeter (Charlesworth 1979a, 230–1, no 49 fig 71), Bagendon (Harden 1961a, 201 nos 5–6, fig 42), Frocester Court Villa, Gloucestershire (unpublished), Usk (Guido 1978, 185; Price 1995, 105 nos 1–2, fig 31), and Hengistbury Head (Henderson 1987, 160 no 123 fig 116).

The colourless globular bead with three opaque yellow spirals (Fig 96.8) (Guido Class 10), came from a pit with decorated Glastonbury ware (Guido 1978, 188). Similar beads have been found at other late Iron Age sites, particularly in south-western Britain. A concentration of these beads at Meare in Somerset together with semi-formed beads, melted drops, and evidence for bead moulds suggests that they were produced there (Henderson 1980; Henderson 1991, 123–5). Other examples are known from Maiden Castle, Dorset, and Pen Dinas and Moel Trigarn in west Wales (Guido 1978, 187, 189). A few also occur in Roman contexts, as at South Shields fort, Tyne and Wear (Allason-Jones and Miket 1984, 280, 4.52).

The last two decorated beads are more unusual. One is a nearly complete small annular bead which has an opaque blue outer layer over an opaque yellow core, decorated with an angular opaque white wave (Fig 96.9). Many varieties of wave-decorated beads were produced from the fourth century BC until the sixth century AD or later (Guido Group 5). Although no exact parallel for the Cadbury Castle example is apparent, it can be broadly compared with Group 5B, E, and F beads, several of which have been found in south-western England (Guido 1978, 134, 138), and the use of opaque yellow glass as a core has been noted on other pre-Roman Iron Age beads.

The second is a small dark blue, dark purple, and opaque white fragment (Fig 96.10), probably from an annular bead, which was found in the mixed 'rubbish' layer in association with a Durotrigian coin. This may have been constructed from a fragment of a cast polychrome mosaic vessel, perhaps a pillar moulded bowl, and if so it is likely to have been produced in the first century AD. The reuse of cast polychrome mosaic vessel fragments to make beads has also been noted at Frocester Court, Gloucestershire, and the Neronian legionary fortress at Usk, Gwent (Price 1995, 106, 108 nos 5–6, fig 31), and a few bangles and counters or gaming pieces were made in this way.

There are seven undecorated beads (Fig 96.11–17), of which two are annular (both dark blue), two are globular (dark blue and yellow-brown), two are ovoid (one opaque red and one dark green), and one is segmented (dark green). Dark blue annular and globular beads are very long-lived types, originating in the Iron Age and frequently found on sites of the Roman period (Guido Group 6iv, Group 7iv). The distribution of both types appears to be concentrated in south-western Britain (Guido 1978, fig 22) and includes examples from Glastonbury and Ham Hill (Guido 1978, 154, 156, 158, 170), Usk (Price 1995, 106, 108 nos 7–11, fig 31), and Caerleon (Brewer 1986, 147–9, nos 8, 21, 47–51, fig 48). Yellow/brown globular beads (Guido Group 7vi) are less common, but also appear to have been in use during the later Iron Age and Roman period.

The remaining three beads are probably post-conquest types. One is a rather irregularly shaped opaque red ovoid bead which is broadly comparable with similarly coloured biconical beads (Guido 1978, 98, fig 37.14); opaque red beads are known from Romano-British sites at Strood, Kent, and Nettleton, Wiltshire (Guido 1978, 222). An example from Bagendon, Gloucestershire (Harden 1961a, 201 no 4 fig 42), is, like the Cadbury Castle bead, more ovoid than biconical and has dark brown streaks, which may point towards a first-century date for the Cadbury Castle bead.

A small dark green ovoid bead may be a single segment from a bead similar to the longer segmented bead (Fig 96.16). As already mentioned in connection with the annular bead with cable decoration above, the earliest use of dark green glass for objects in Britain occurs in the first century AD. A few wound segmented beads are known in late first- to second-century contexts, but they become more common in the later third and fourth centuries. They were produced in a range of translucent and opaque colours; dark green examples from south-western Britain include beads from Hengistbury Head (Henderson 1987, 160 no 125 fig 116) and Colliton Park, Dorchester, Dorset, and Brislington villa, Somerset, Ham Hill and Worlebury, Somerset (Guido 1978, 201–3), and Usk, Gwent (Price 1995, 107, 109 no 30 fig 31).

One other Romano-British bead which merits discussion is a heavily weathered fragment of a pale blue faience melon bead. This is a long-lived bead type.

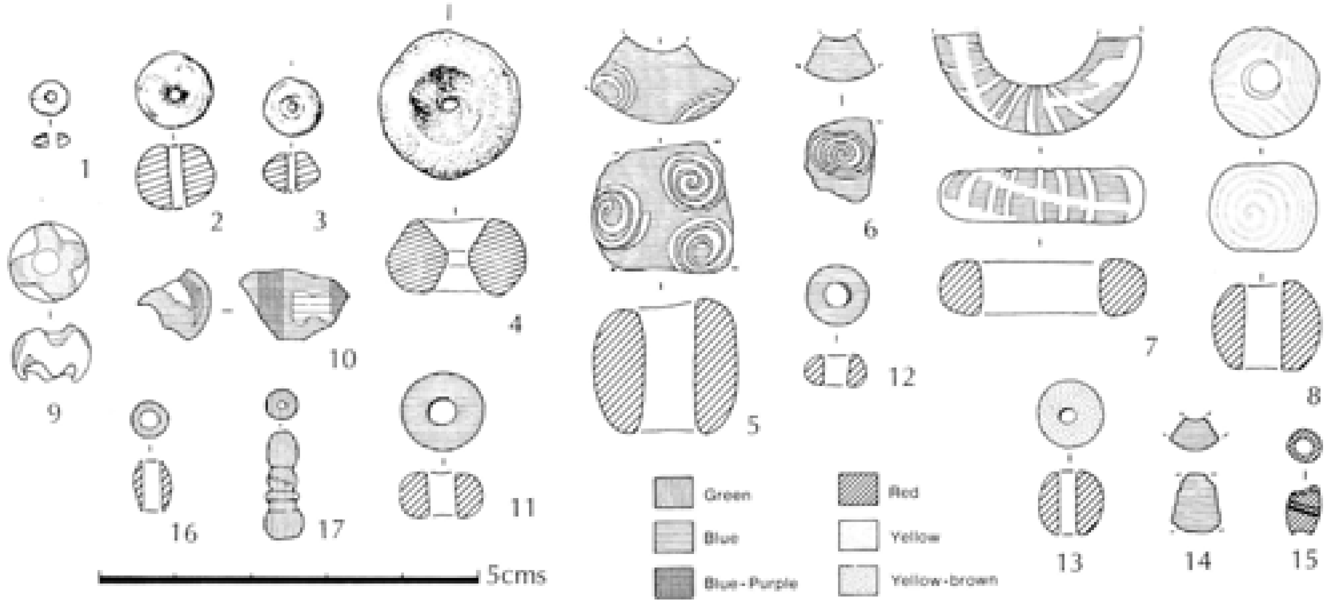


Fig 96 Amber, shale and glass beads. Scale 1:2

It is present in Britain in Claudio-Neronian contexts, and is frequently found on first and second century sites, especially those connected with military activity. Numerous examples are known from Usk (Price 1995, 107, 111–2 nos 35–41u, fig 31), Caerleon (Brewer 1986, 151 nos 1–24, fig 49), and elsewhere. Similar beads also occur in some late Roman and early post-Roman Roamn contexts.

Amber, shale, and stone beads

by Peter S Bellamy with Fiona Roe

Four amber beads were recovered: one broken and one very fragmentary annular bead, one flat disc bead with rounded edges (Fig 96.1), and one spherical bead (Fig 96.2). The beads were classified using the system in Beck and Shennan (1991). The annular and disc-type beads have been found in small numbers on other Iron Age sites (eg Glastonbury, Meare, Ham Hill, and Danebury). The single spherical bead, on the other hand, is not a type normally found on Iron Age sites. None have been recovered from secure Iron Age contexts in Britain, the majority having been found on early or late Bronze Age sites (Beck and Shennan 1991). The date of this example is uncertain.

Two shale beads, one incomplete, were found in the interior of the hillfort. Both are of a similar type, namely biconical with flattened ends (eg Fig 96.3). Shale beads are found in small quantities on Iron Age sites in Wessex, but are most commonly disc-shaped. No precise parallel for these beads has been found and they reflect the shape of the shale spindle whorls. It is possible that they may be, in fact, small spindle whorls. Both beads were hand-made. Only one was from a datable context belonging to the Early Cadbury period.

Two of the smallest spindle whorls may alternatively be beads. One made of shale is biconical with flattened ends (Fig 96.4), the other is disc-shaped (Fig 92.8). Neither came from a datable context. In addition, four small fossil ammonites, *c* 20mm in diameter with a small central perforation, were recovered from the excavations. All came from the interior of the hillfort. It is not clear whether the central perforations were a natural feature. In any case, it is possible that these fossils were collected for use as beads or amulets. They may have been acquired from the 'Ammonite Marble' in the Lower Lias at Marston Magna (Woodward 1906, 19), 3 km south-west of the site.

Kimmeridge Shale armlets

by Peter S Bellamy

This report follows Calkin (1955) in calling these objects armlets, with no implication concerning where they were worn on the arm. It is possible that the larger diameter examples were worn at the ankle.

A total of 29 fragments, representing at least 28 armlets, was recovered. Both knife-cut and lathe-turned examples were present, the majority (69%) being hand-tooled. Most of the armlets had an oval or circular cross-section (Fig 97.1–2 and 8), and eight were 'D-shaped', that is with a flat inner, and curved outer, face (Fig 97.9). The dimensions of the armlets fall within the general range found on other Iron Age sites. The internal diameters range between 45–100mm with the majority being between 50–70mm.

Six of the armlets were decorated. Two basic types of design are represented, circumference rib and groove (Fig 97.3–4 and 6), and spiral decoration (Fig 97.5). The former is the more common form of decoration on armlets, both at Cadbury Castle and on other sites. These are usually from late Iron Age and Roman contexts, for example from Maiden Castle (Wheeler 1943, figs 109.9, 11, 111.20), Glastonbury (Bulleid and Gray 1917, figs 50–2), and Silchester (Lawson 1976, fig 5.40–2). Three armlets from Cadbury had identical decoration comprising two ribs defining a lowered flat central band (Fig 97.4, 6). All three examples were lathe-turned and came from Late Cadbury contexts. Similarly decorated armlets were found at Silchester (Lawson 1976, fig 5.40b). One other lathe-turned rib and groove decorated fragment (Fig 97.3) was recovered from an undated context in the northern part of the interior. One knife-cut armlet decorated with a single rib was found in an undated part of the interior.

Two spiral decorated armlets (Fig 97.5, 7) were recovered, neither from dated contexts. The closest parallels to these were from Meare (Coles 1987, fig 3.57 k24, k26, k27). Other spiral decorated armlets have been found elsewhere in late Iron Age and Roman contexts, for example, at Maiden Castle (Wheeler 1943, fig 111.17) and Silchester (Lawson 1976, fig 6.45). The Cadbury Castle examples are probably of a similar date.

In addition to the completed armlets, there are three armlet rough-out fragments (eg Fig 97.7, 10) similar to those found at Meare (Coles 1987, fig 3.56 k1, k5), suggesting that some finishing of armlets took place on site. There is also some indication of reuse or repair on some fragments. For example, two pieces

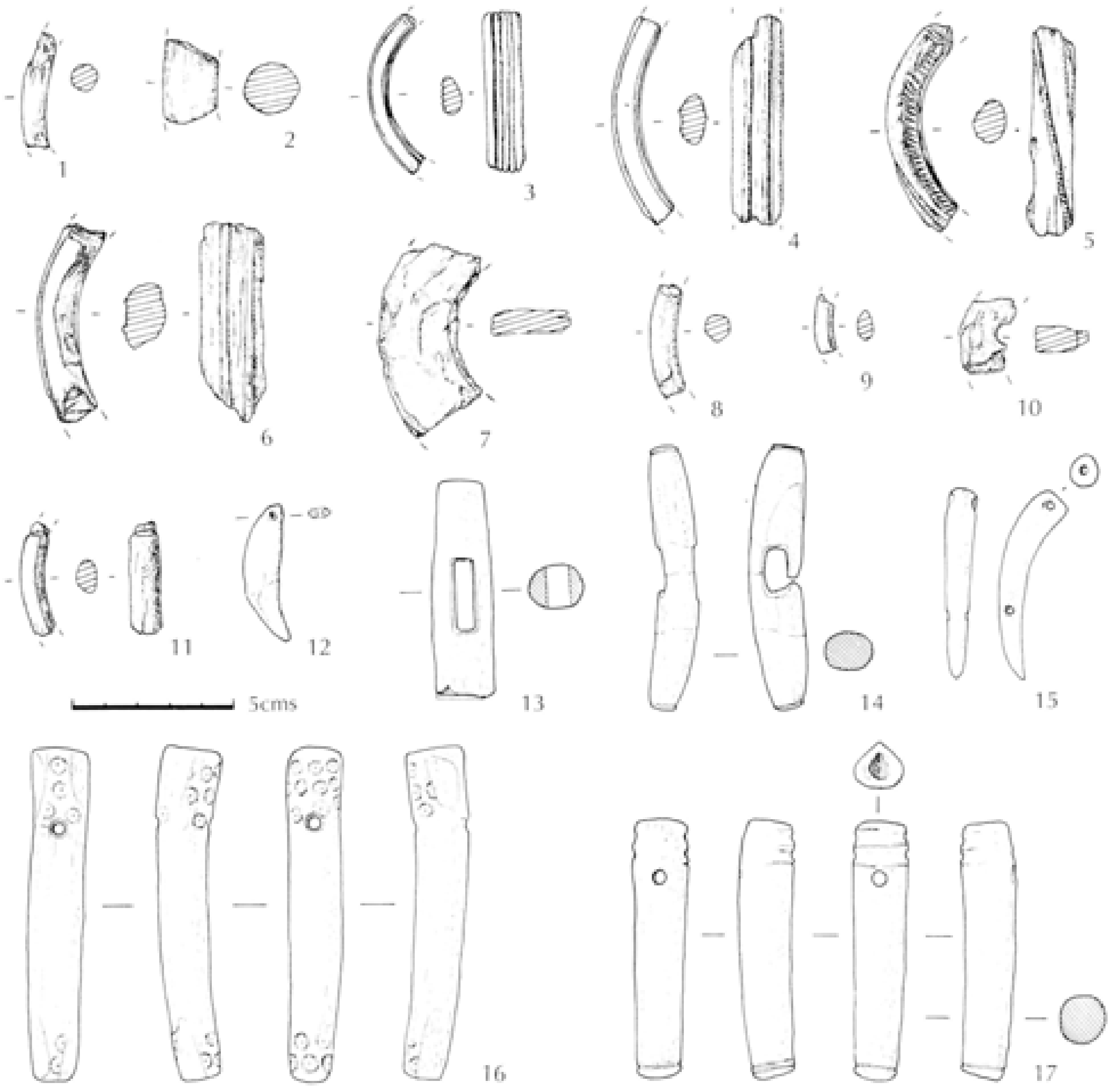


Fig 97 Armlets, tooth pendant and antler toggles. Scale 1:2

which were likely to be from the same armlet had the ends trimmed (Fig 97.1, 11), either as a means of repair or perhaps to take a fitting for suspension, possibly to convert the armlet into a pendant reminiscent of those found at Meare (Bulleid and Gray 1953, pl LIII). One other armlet had a sawn or cut end (Fig 97.2) representing either deliberate breakage or trimming prior to repair or reuse as a pendant.

Chronologically, the majority of datable armlets come from the Middle Cadbury period, with none recovered from Early Cadbury and only a few from Late Cadbury contexts. It is interesting to note that all the datable decorated armlets come from the Late Cadbury period. The number of pieces involved is too small to be certain whether this represents a real change in the assemblage composition, but it conforms to a general trend which can be recognised on other sites in southern England.

Numerically, the Cadbury Castle assemblage is similar in size to that from Glastonbury, but larger than the Danebury and much smaller than the Meare and Maiden Castle assemblages.

Copper alloy bracelets

by Jennifer Foster

Seven copper alloy bracelets or bracelet fragments came from the excavations (eg Fig 98.4–6). These include a La Tène I –II bracelet with D-shaped section and angled ribbing around the circumference, one terminal ending in three knobs (Fig 98.5), the other possibly a tenon for a mortise and tenon fastening. This example came from the interior of the hillfort. A La Tène I bracelet from Arras (Stead 1979, 76) has similar ribbing and a mortise and tenon joint. Ribbed bracelets are not common (ibid, 77). Most knobbed Iron Age bracelets have large bosses rather than knobs (ibid, 76); these are smaller and more delicate than the usual rather brash examples.

A second penannular brass bracelet has already been illustrated from the massacre deposits (see Fig 70.10). The other examples are fragmentary and were found widely distributed across the site.

Gold bracelet

by Brendan O'Connor

A fragment of gold bracelet (not illustrated) from topsoil on the eastern part of the plateau appears to represent half a bracelet attributable to Class C in the most recent classification of late Bronze Age gold bracelets (Needham 1990a, 149; Hook and Needham 1990, 19). Comparison with Urnfield bracelets with flat everted terminals would suggest a Ewart Park (ie tenth to ninth centuries BC) date (O'Connor 1980, 208–11). Recent finds have amplified the distribution of gold bracelets in the south-west (Taylor 1980, 128, map 6; Needham 1990a, 149, fig 107). The majority of finds from southern Britain occur in hoards and near the coast.

Iron decorative items

by C Saunders

A small number of iron items of human dress comprise brooches (below), pins, including three ring-headed (eg Fig 134.2) and one swan's-neck pin, a spiral finger ring (Fig 135.55), and part of a knobbed bracelet (Fig 134.38), as well as the iron neck ring(s) (Figs 59.19–20, 63.64, 63.72–3) recovered from the massacre deposits.

Copper alloy pins

by Brendan O'Connor and Jennifer Foster

An early pin from Cadbury (not illustrated) has an irregular disc-shaped head and decorated shaft. The decoration of ornamented zones separated by ribs can be matched on pins from Gwithian, Cornwall (Rowlands 1976a), attributed to the Penard phase (Burgess 1976). One of these pins shares the cross-hatched motif (ibid, fig 4.8b), which occurs on another Cornish pin, found near the river Fowey (Herity 1969, 16–17, pl XIV). The Fowey pin has a swollen and looped shaft and an amber inset in its head; its form relates it to the Picardy pins of the Taunton phase (O'Connor 1980, 76–7). Comparisons for the decoration on the Cadbury pin can be found also on continental pins of the earliest phases of the Urnfield period (ibid, 121, list 85). The decorated Cadbury pin may thus be no later than the Penard phase (ie thirteenth to twelfth centuries BC).

In addition there are five pins (not illustrated), each originally with a straight shaft but with differently designed heads, which may be late Bronze Age although only two were stratified in Early Cadbury contexts. While pins are relatively common on late Bronze Age settlement sites in Britain, distinctive types are less usual. There is no systematic study of these pins. In addition, three other pins were originally identified as swan's-neck pins and dated to Hallstatt D, ie sixth century BC (Alcock 1968b, 11; 1972a, 122). Such precise dating for these pins with recurved necks seems open to doubt (O'Connor 1980, 257–8), especially in view of the presence of a plain pin with recurved head (although its original form may be uncertain) in the Ewart Park hoard from Lulworth, Dorset (Drew 1935, 450, pl LXIX, 2), and another example from the Bronze Age settlement on Burderop Down, Wiltshire (Gingell 1992, 106, fig 78.4). Three of these pins were analysed (see p272). One example, a long pin with asymmetrical head, is likely to be of Wilburton date; the others, with disc/nail heads, have Ewart Park composition.

Two Iron Age copper alloy ring-headed pins were recovered, one represented by the fragment of a ring-headed pin (Fig 98.13). A second ring-headed pin probably carried coral inlay (Fig 98.8, see p262). A very similar composite object is represented by a cast ring (diameter 34mm) with a broad groove, presumably for

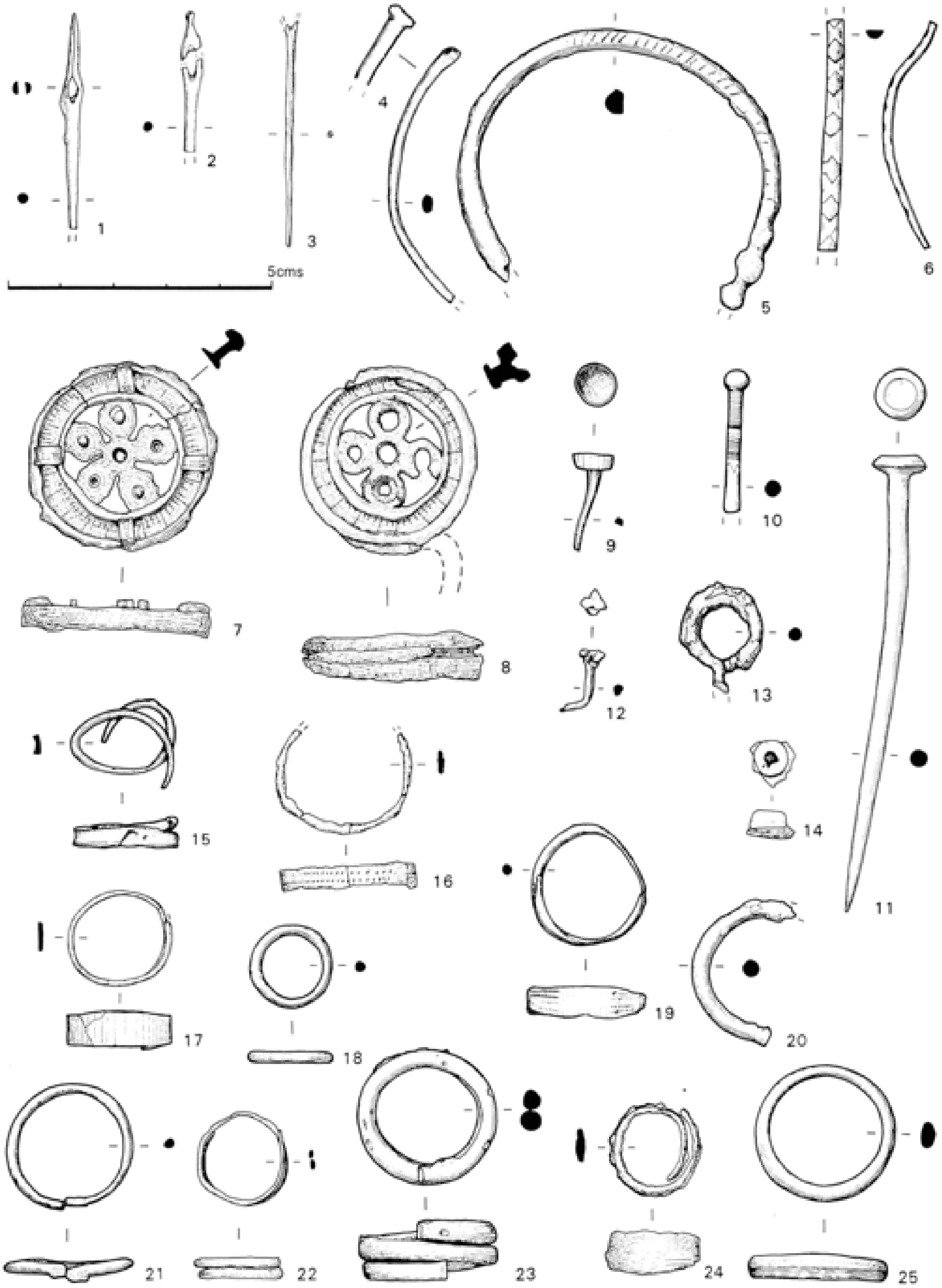


Fig 98 Needles, bracelets, pins and rings (copper alloy). Scale 1:1

inlay, which is blocked at four cardinal points by semicircular pieces of iron (Fig 98.7). Within the ring are five circles around a central circle, each decorated by studs held in place by iron pins. This roundel and the ring-headed pin came from the area of the surviving surface deposits on the hilltop plateau. Objects of similar design came from Danes Graves (Stead 1979, 71) and they probably date to *C* 300–250 BC.

Two coral studs from similar objects are also illustrated here (Fig 98.12, 14), and three Iron Age hair or clothes pins (Fig 98.9, 10, 11). The first stud originally held a glass inlay, only part of which survives.

Copper alloy rings

by Jennifer Foster

The number of finger or toe rings (29 examples, Fig 98.15–25) is similar to the number from Glastonbury (35; Bulleid and Gray 1911, pl XLI), although the types are slightly different: there is only one of the spiral rings that are common at Glastonbury and Meare.

Of the rings, the greater number are plain loops of rectangular or circular section wire with overlapping terminals, 14 of which are tapered, 11 are squared, while two have bulbous terminals. Bulleid suggested (1911, 209) that the rounded terminals were to prevent the rings catching on clothing. Most have 1.25 turns, unlike those from Glastonbury where spiral rings (2.25 turns) were more common (ibid, 209–17). Only one from Cadbury is of this type (Fig 98.23).

There is a range of sizes, from a ring with an internal diameter of 10.5mm to three of 20mm. Many are distorted to an oval, probably due to wear; the mean diameter has been used in these cases, as the likely original finger size. Most were fairly fine, thickness 2–3mm, though a few were as thick as 5mm. Some may be toe rings; the two rings from the Yorkshire inhumation burials that were worn (as opposed to being used as pendants, or loose in the grave) were both found on toes (Stead 1991, 92), and three rings were found on toes in the Maiden Castle war cemetery (Wheeler 1943, 278). These have overlapping terminals; the one from Rudston with squared terminals, the other from Garton Slack being tapered. Two of the Cadbury Castle rings were found associated with bones, but these were finger rather than toe bones (Fig 70.7, 9; see p146). This is not an unusual occurrence in cemeteries, but in the Cadbury context of disarticulated pieces of skeletons raises interesting questions. It indicates that the hands were buried fairly quickly: a ring is unlikely to have remained on a disarticulated hand scattered by scavenging animals. Likewise, it would probably become detached if the body rotted unburied on the surface. Both these finger bones were stained green by contact with the copper in the metal. Three other finger bones also had green staining, though the rings were not found *in situ*.

None of these rings is easy to date, except for the three signet rings, which are Roman (Fig 71.25, 26, 27). Overlapping terminal and spiral rings are found throughout the Iron Age, but all of the types are also found in Roman contexts (eg Ilchester; Leach 1982, fig 119). Apart from the signet rings, these are all simple types, roughly made with wire. Several have flaws which must have been apparent to the wearer. The Roman signet rings have all broken around the band, but none had lost its stone before being lost.

Composite rings

by Brendan O'Connor and Jennifer Foster

A late Bronze Age gilded ring (not illustrated) comes from the eastern plateau. This is an example of so-called 'ring-money', penannular rings of base core covered with gold sheet or foil (O'Connor 1980, 215). These appear to be a version of the solid gold rings perhaps more common in Ireland, but the only recent study does not distinguish them systematically (Taylor 1980, 64–5, 133–4, pl 33, e–i). The Cadbury ring matches the dimensions quoted by Taylor. Solid gold rings appear to be more common than gilded rings in southern Britain and the Cadbury example can be added to a small group in Wessex (O'Connor 1980, lists 211–2, map 71). Continental finds, more numerous lately, mainly from the area between the Seine and the Meuse (Dehon 1991, 118–20, 124, figs 8, 9, 6), are predominantly from burials and provide dating evidence contemporary with the Ewart Park and Lyn Fawr phases dating from the tenth to seventh centuries BC.

A different form of composite ring is the hollow ring of hammered sheet metal, made from two matching halves (Fig 99.11). It has a black core of an organic substance. This is one of a distinctive type of 200 rings found in widespread La Tène I contexts (500–250 BC; Raftery 1988). Type 1 has three rivets holding the two halves together; Type 2 (of which this is an example) has no rivets and it is unclear how the two halves were held together. Most of these rings come from Central Europe north of the Alps, from eastern France through Germany and Austria. Only two other finds context are known from the British Isles: a group of three Type 1 rings from Lisnacrogher, County Antrim (Raftery 1988, 31 and pl IV) and a Type 1 ring from a grave at Kirkburn, Yorkshire (Stead 1991, 93). These British examples are almost certainly imports. Our example comes from a Middle Cadbury context on the eastern plateau, a date consistent with the third-century date for the Kirkburn burial and the general range in continental Europe. Type 1 tend to be earlier than Type 2; none are earlier than La Tène, most date to La Tène B2/C1, and only four date to the beginning of La Tène C. All but six of these rings come from graves. Many are associated with swords, although as Raftery shows their delicacy and lack of damage makes their use as scabbard rings unlikely

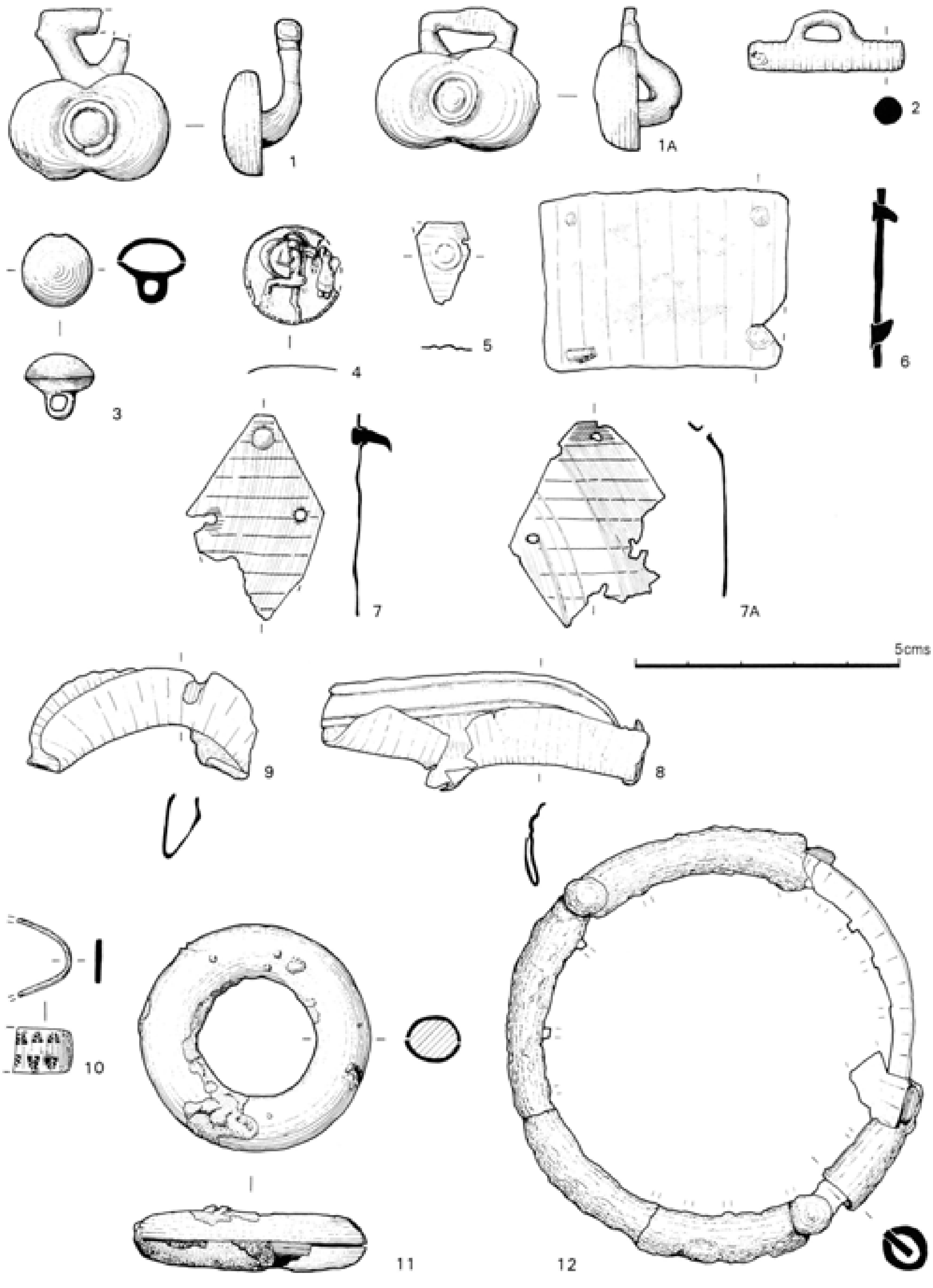


Fig 99 Buttons, decorated and undecorated copper alloy sheet, miscellaneous rings. Scale 1:1

(Raftery 1988, 12). The Kirkburn example was found beside the woman's head, along with an amber bead, a copper alloy double stud, and a jet ring; all may have been threaded onto a necklace (Stead 1991, fig 69). Others have been found in the pelvic area of female skeletons with other perforated objects.

Copper alloy buttons and dress fasteners

by Jennifer Foster

Five copper alloy buttons (eg Fig 99.1–3) include a pair of cast bronze button and loop fasteners or toggles (Fig 99.1–1A), each with two lobes joined in the centre by a raised boss surrounded by a raised circle, flat on the reverse with triangular circular-section loops. These are sometimes identified as harness equipment but are as likely to be dress toggles. Although not found together, they do come from the same area of the interior and are obviously a pair; they are not identical, as would be expected with items cast by the lost wax method (Foster 1980). They belong to Wild's Class 1 (1970), and date to the late Iron Age.

Copper alloy sheet

by Jennifer Foster

The material included here (Fig 99.4–10) may have functioned as decorative sheet on a number of items, not only clothing but wooden containers and furniture. A number of pieces of decorated copper alloy sheet occur on the site. Among these are three plaques, two with horse decoration and one with a human head, from the gateway (Fig 7.14; see p146), and a bronze disc with the figure of a soldier in relief stamped onto the surface of the metal (Fig 99.4). The latter comes from the northern slopes of the interior in a pre-Flavian context. The figure stands on his left leg with right knee raised. He wears a crested helmet and is holding a half-moon-shaped object in one hand, possibly an archer's bow, and a long object in the other, possibly the quiver.

The complete and fragmentary 'horse plaques' have been described in connection with the gate deposits (see Figs 70.11, 12, 71.29). The complete example (Fig 71.29) carries a typical La Tène curvilinear design. Horses are an occasionally recurring theme in British La Tène art (Megaw and Megaw 1989, 224 ; Ross 1967, 321) and there are many different types of representation, from abstract to representational. They are particularly abundant on the reverse of British Celtic coins (van Arsdell 1989a). None is a direct parallel for this figure although a similar disc from Westhall (British Museum 1925, 146, fig 168) is about the same size. Leslie Alcock (pers comm) has pointed to similarities with early medieval repoussé work from Scandinavia; however, when the various elements of the Cadbury Castle design are analysed, they emphasise the similarity with the art of the later British Iron Age and the context indicates a date at the very end of the Iron Age. For example, the knee knobs are found on Celtic coins (Megaw and Megaw 1989, 180), and particularly on Dobunnic coins (van Arsdell 1989, 130). The horses on Dobunnic coins also face right, as does the Cadbury horse. Another feature is the curled round head and sinuous, almost snake-like, neck. Both the Westhall animal and the repoussé horses on the Aylesford bucket (Brailsford 1975, 89) have bent round necks, although they are rather less well executed than the horse plaque from Cadbury. Another example of curled round necks is provided by the engraved horses on the second-century BC scabbard from La Tène (Megaw and Megaw 1989, 133). This design is similar to the dragon pairs on scabbards (ibid, 127) which, like the Aylesford horses, have huge dividing lips. Horses do, of course, have very mobile and protruding lips; the Cadbury Castle plaque has abstracted this feature into two circular bosses. Bosses represent the rear end, again similar to the Aylesford horses, and the tail. This is a unique feature; most Celtic horses have a semi-representational tail and on Dobunnic coins the horse tails have three strands ending in knobs. The boss does, however, balance the forequarters of the animal, so that the entire surface of the plaque is filled. This is a feature of Celtic design; the background on coins, for example, often being filled with small objects (van Arsdell 1989, 36).

This design is beautiful, all the features following one from the other, taking the eye around the circle of the plaque and back again. Van Arsdell, in his description of horses on Celtic coins (1989, 45), draws attention to the expression of movement, and the sense of the eye being carried round the design, 'enhancing the impression of vivid motion'. Even the legs, often an angular irregularity on Celtic portrayal of horses (see, for example, the extremely awkward display of legs on the Aylesford bucket; Brailsford 1975, 89), are economically arranged here so as not to destroy the symmetry of the picture. There are no parallels in repoussé for this bent-up arrangement, although the late Iron Age bull figurine from the Lexden Tumulus has similar bent forward back legs (Foster 1986, 59). Limbs are frequently under-represented in Celtic art, reduced to thin sticks or a disembodied floating series of knobs.

The use of these plaques is difficult to determine. Most probably, perhaps, they decorated a shield, eg the circles on the shield from Deal (Parfitt 1995).

The human face plaque has already been described in connection with the finds from the gate (see p146 and Fig 71.14). This is a typical Romano-Celtic face, not as naturalistic as Roman faces (eg Pitts 1979, pl.30), but more expressive than a classic Celtic face (eg from Roqueperteuse (Megaw and Megaw 1989, fig 271)). It has some Celtic features such as the curls, the outline of the eye, the flat profile, and the triangular nose. The surrounding design in dots and lines is typical of late Iron Age and early Roman repoussé work (eg from the

Lexden Tumulus: Foster 1986, 75, fig 26). Many representations of faces at this period are either three-dimensional heads (eg Ross 1967, pl 34b) in bronze or sculptures in stone, but there is a series of metal plaques of this kind (Woodward 1992, 56). A tin face mask was found at Bath in a culvert (Cunliffe 1969, 66, pl XI). Ross (1967, 98) interprets this as a mask to be fixed onto a wooden head or figure, probably votive, as it was found in the baths. Another, perhaps closer parallel was found at the Nettleton shrine (Wedlake 1982, frontispiece, 143–5), again interpreted as a votive plaque because it was found on the floor of the shrine. It was slightly smaller than that from Cadbury (107mm), but is surrounded by an arch supported by two pillars. This plaque was dedicated to Apollo and was mounted on to an iron sheet before being offered at the temple. The figures in both the Nettleton and Bath plaques have no eyes and probably had enamel eyes which have been lost.

Some of these face plaques have therefore been found in votive situations. The mask from Cadbury is of this same general type, but is not complete and could therefore have been a fragment from a larger panel, perhaps a decorative mount for a piece of furniture. There are no rivet holes in the section surviving, although one would expect a line of rivets along the top of the panel, perhaps 30mm apart. There is no sign that the panel was pulled off as it would then have broken at the rivet holes.

Possible mirror

by Jennifer Foster

This object (Fig 99.12) came from the same context on the eastern plateau as the cast roundel (Fig 98.7). It is a tubular ring of wrought sheet copper alloy, with a join on the inner face. This originally gripped a flat circular sheet of bronze, pierced in an openwork pattern. The sheet has broken off almost flush with the ring, making it impossible to reconstruct the decoration, although most of the struts are very narrow and about 10mm apart. The edge of the circular plate hidden within the ring is incised or scored on both faces and the edge was also beaten. The plate was attached to the ring by rivets with large flat circular heads; two were associated but are now detached. The plate is in a hard bronze, like that of mirrors, and it was found with numerous pieces of bronze sheeting. It may have been a mirror with cut-out decoration around the edge.

Brooches

by A Olivier

A total of 245 brooches or brooch fragments were recorded. Of these 160 (although 5 are uncertain) come from the gate, 98 of which are directly associated with massacre deposits (see p132ff and Figs 64–9). For descriptive convenience reference is made, where appropriate, to Hawkes and Hull's Camulodunum classification (1947), although it has also been possible to incorporate the results of more recent work undertaken in this country.

The brooches (Fig 100.1–13, 101.14–20) form a remarkably consistent group, generally reflecting a strong chronological and regional coherence, resulting in an assemblage that with few exceptions typifies brooches current in the south-west during the middle years of the first century AD. Only a relatively small number of the brooches recorded are likely to date to the years before the first century AD, and these include one certain La Tène I form (Fig 100.1), three fragments that could belong to La Tène I or La Tène II forms (eg Fig 100.2), four La Tène II involuted brooches, and two developed La Tène II brooches (Fig 100.3, 4). All these are presumably derived from Middle Cadbury occupation during the third and second centuries BC, although individual examples may survive at least to the first century BC. Morphologically, most of these examples may be regarded as 'British', and none are out of place in a general south-western context, although the forms have a wider (if scattered) distribution over much of the Midlands and further afield (including the Arras culture of the north-east). A most unusual and rare form of iron brooch with a looped mock hinge mechanism may be related to this earlier group; the only two close parallels for this piece (from Cold Kitchen Hill and All Cannings Cross) suggest that regardless of its date, manufacture of this singular form is relatively local.

There are few examples at Cadbury Castle of typical late Iron Age La Tène III form brooches. One Knotenfibeln (Fig 100.5) may have close continental affinities, but is sufficiently distinctive and unusual at least to suggest the possibility of (relatively) late (and perhaps) indigenous manufacture. Although a first-century BC date for this piece should not necessarily be discounted, examples of the general form are recorded elsewhere from contexts during and even beyond the middle of the first century AD. A related La Tène III form brooch (Fig 100.6) similarly may date from the first century BC to at least the middle of the first century AD. The two examples of La Tène III wire brooches (Fig 100.7) (both stratified in Middle Cadbury contexts) demonstrate, however, that such forms are current, albeit in small numbers, certainly during the first century BC, and possibly as early as the middle of the second century BC. The 14 Simple one-piece British brooches (eg Figs 100.8, 9), together with the single Simple Gaulish brooch, and the nine Colchester brooches, all represent forms often defined as La Tène III (eg Fig 100.10), but which can also continue in production and use during the post-conquest period, and sometimes well into the second half of the first century AD. Certainly, some have clear affinities with earlier La Tène II forms, and are likely to represent British and probably local manufacture at least as early as the first half of the first century AD;

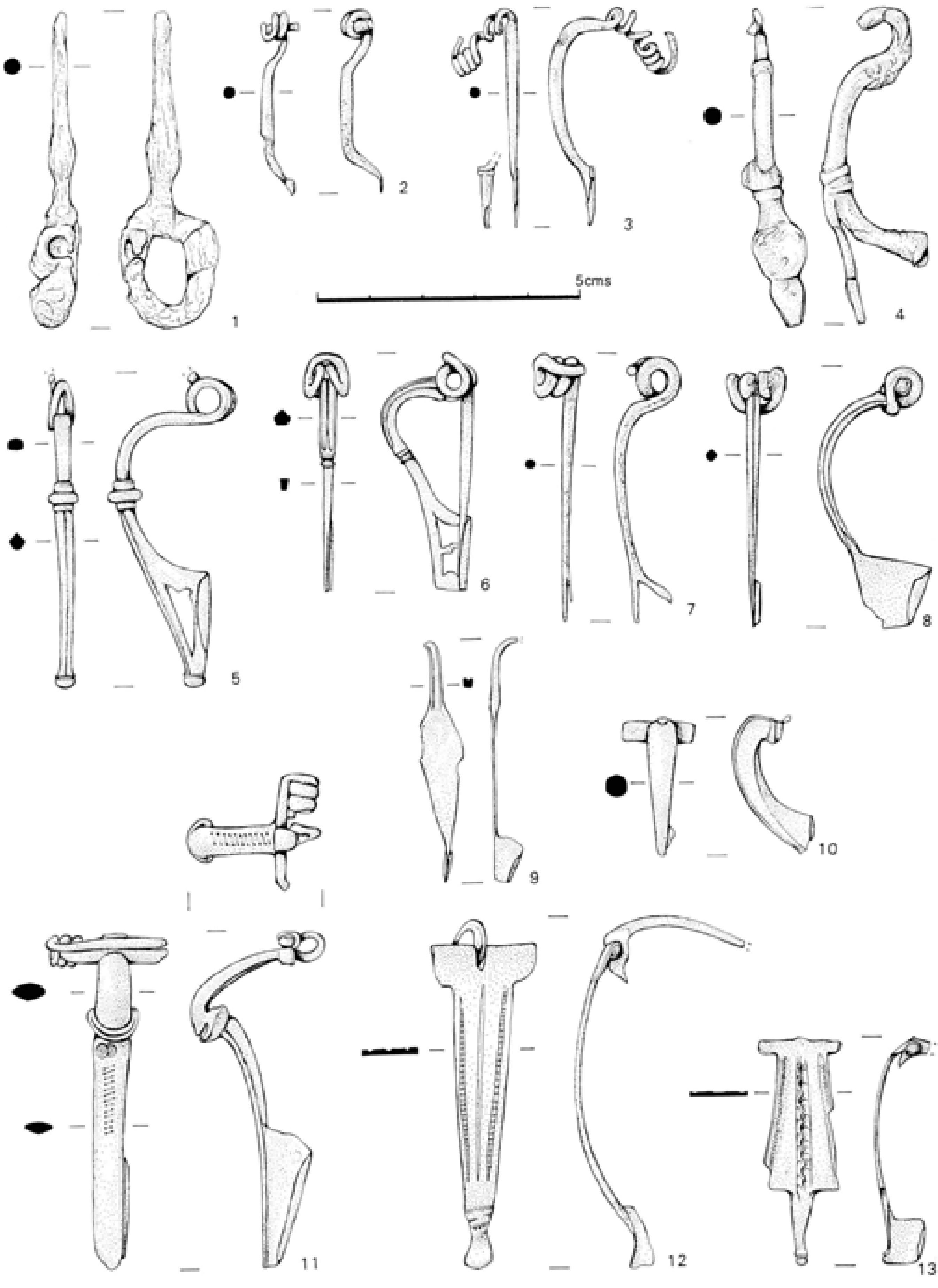


Fig 100 Brooches. Scale 1:1

others (eg Fig 100.8) belong to groups most common during the middle years of the first century AD, but are still probably of local manufacture. The single Simple Gaulish brooch has a similar date range, but is one of the few La Tène brooches at Cadbury Castle of continental form (if not manufacture), and the British Colchester brooches also span the same chronological period.

Typologically, these late Iron Age brooches represent a general continuum of manufacture and use from perhaps as early as the late second century BC to the middle years of the first century AD. Chronologically, however, most of these forms occur most frequently during the middle decades of the first century AD and into the early post-conquest period, and none need have an origin at Cadbury any earlier that the first half of the first century AD. Consequently, any dislocation in the occupation of the hillfort between Middle and Late Cadbury could well be reflected by the brooch record, and certainly intensive occupation of a high-status site during the first century BC and the early decades of the first century AD (even outside the south-east) should perhaps be expected to be associated with a higher proportion of brooches with stronger continental affinities than those present at Cadbury Castle, rather than the (presumably) later and derivative forms that are more common there.

The difficulties inherent in such over-generalisations, however, are emphasised by the presence of two Knickfibeln (eg Fig 100.11), clearly related to the Simple Gaulish brooch, and on the Continent dated to at least the first half of the first century AD. Such brooches are likely to have been introduced to Britain at the time of the conquest, by Roman soldiers originally stationed in the Rhineland, but the possibility that individual examples may have been imported from the continent during the first half of the first century AD prior to the conquest cannot be discounted. To a very great extent it is extremely difficult to judge whether such brooches are likely to have been worn by indigenous inhabitants of Cadbury Castle during the first half of the first century AD, or whether they may have been introduced to the site by Roman soldiers during the immediate post-conquest period. In either case, the actual brooches could have been derived from one and the same stratigraphic event (eg the massacre or infill deposits). The same problems arise from the consideration of other forms usually regarded as imports introduced at or immediately after the conquest by Roman soldiers (eg Aucissa and Aucissa variants and Hod Hill and Hod Hill variants). Even in post-conquest contexts, none of these latter forms is exclusively associated with Roman military activity (although this is often the case), and such brooches could have been worn by the occupants of the hillfort. It is certainly also possible that individual examples could have been introduced to Cadbury during the pre-Roman period by other mechanisms.

The assemblage of brooches is particularly characterised by the relatively large numbers of Aucissa derivatives (eg Fig 100.12), Hod Hill derivatives, including Fiddle brooches (Figs 100.13, 101.14, 15) and Strip bow and related brooches (Fig 101.16–18, 20). All these groups, which are particularly common in and typical of the south-west, are clearly derived from continental prototypes, and presumably represent a regional brooch tradition of local manufacture during the middle years of the first century AD (traditionally dated to the immediate post-conquest period). How much later this secondary development occurred after the introduction of the continental progenitors cannot be defined with precision, and depends of course on the date of introduction of the continental forms (by whatever mechanism). If Aucissa and Hod Hill brooches are present in the region before the conquest, then their derivative forms may also appear early, although the traditional dating for all these groups places them in the immediate post-conquest period during the middle first century AD. The simple British hinged Strip bow brooches (Fig 101.16, 17), often of iron, are presumably a direct development of the Simple one-piece British wire brooches, perhaps reflecting the influence of the new hinged mechanism prevalent during the mid-first century AD on an indigenous brooch form. The other forms may also be local adaptions of more 'exotic' brooches. Certainly all these groups betray evidence of local manufacture (particularly of decorative techniques), but this may not necessarily imply local production for a local indigenous market; indeed, many of these relatively crude derivatives of forms popular with the Roman army may perhaps have been produced locally to supply a military rather than a native market. The presence of such brooches at Cadbury Castle cannot therefore be associated exclusively with any particular group of wearers, be they inhabitants of the hillfort or assumed interlopers. The presence of all these groups together in the massacre and infill deposits does emphasise that they are all broadly contemporary, and further illustrates the dangers of overdependence on often confusing typological sequences. Certainly most of the examples belonging to these groups at Cadbury are from post-conquest contexts, and if the entire series of such brooches here is ascribed a conquest and post-conquest date, then sufficient time must elapse before their deposition for the development and manufacture (for whatever market) of the local derivative forms.

A number of Colchester derivative and related forms, including sprung and hinged Dolphin brooches (Fig 101.19) and a Polden Hill (Fig 69.44) brooch, also belong to specific groups common in the south-west during the middle first century AD, and represent the essential continuity of brooch manufacture throughout the first century AD. Almost all the brooches belonging to these groups are typologically early in their respective series, and again emphasise the contemporaneity of all these forms during a relatively short period. The marked absence of any forms typical of the late first and second centuries AD suggests that occupation of this part of Cadbury during this phase at least may not have extended into the last quarter of the first century AD. It is interesting to note that Laidlaw's excavations in South Cadbury village (see archive) have produced three examples of later forms more typical of the late first and second centuries AD (D Mackreth pers comm).

Although many of the brooches recorded at Cadbury Castle are typically south-western in form, and are therefore presumably of relatively local manufacture, there is no evidence to suggest actual on-site production. The presence of certain groups and forms hints at specific regional and quite local markets, and some may have been manufactured either on-site, or in its near vicinity. In the absence of firm evidence of production, however, too little is known of the specific processes of production and distribution to identify the product of individual workshops or artisans with confidence.

The contemporaneity of most of the groups of brooches at Cadbury Castle is confirmed by the incidence of the stratified examples. Unfortunately, this general chronological overlap during the middle years of the first century AD hinders (admittedly) superficial attempts at spatial analysis across the site. All the excavated areas have produced a relatively wide range of forms (including typologically earlier and later examples), and the on-site distribution of brooches therefore appears to be essentially consistent with the stratigraphic data, reflecting a broadly similar pattern of loss by form over all the excavated areas. These problems are exacerbated by the difficulty of confidently differentiating the chronological occurrence of a wide range of late Iron Age and early Roman forms all current during the middle years of the first century AD.

The northern slope of the interior is considered to be characterised by more intensive Roman occupation,

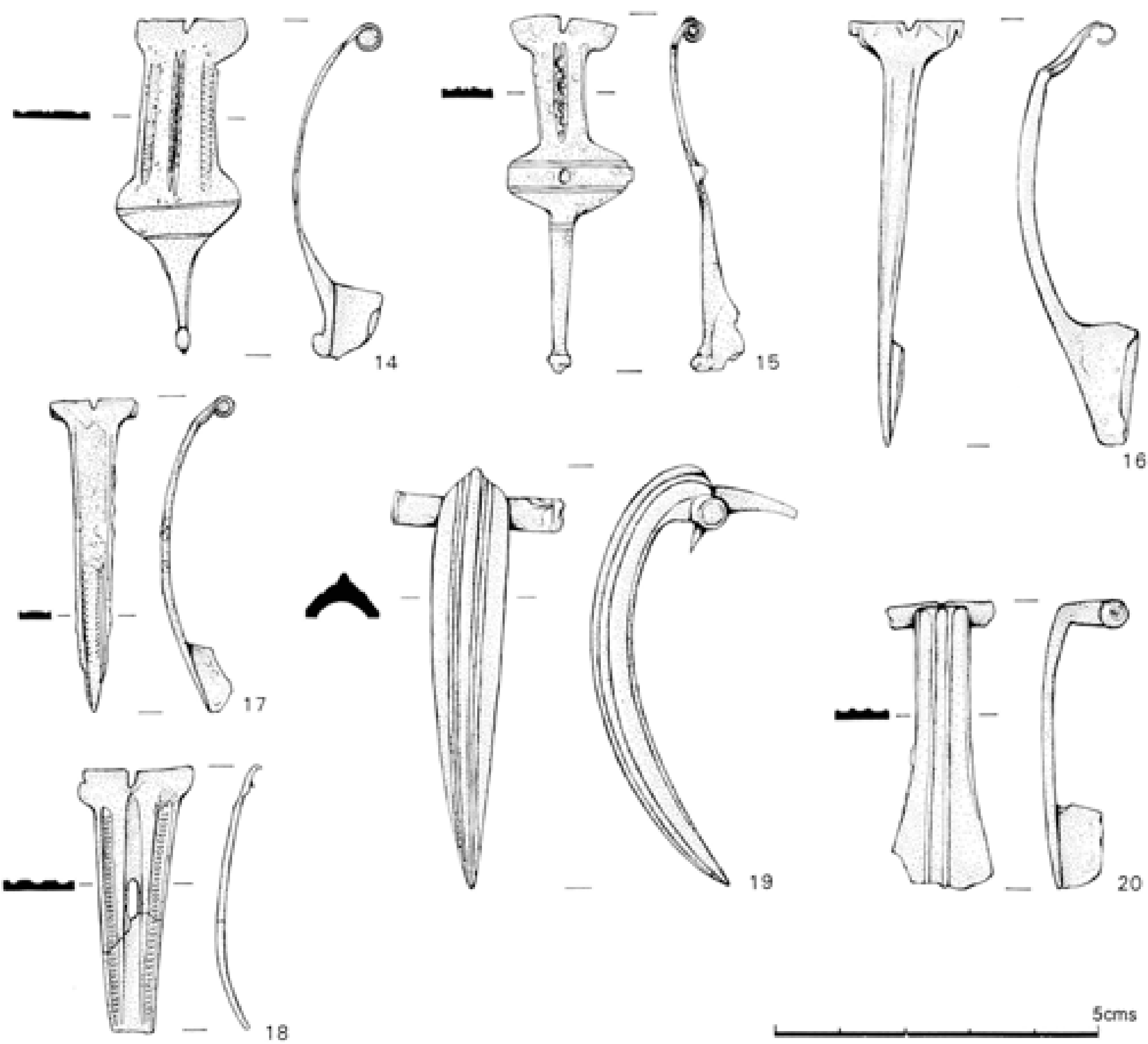


Fig 101 Brooches. Scale 1:1

continuing to the second and third centuries AD, and although this area has produced one example of the relatively typologically late Dolphin brooch, it has also produced hinged 'Roman' forms current during the middle first century AD (Aucissa and Strip bow brooches), and broadly contemporary one-piece brooches (Colchester and Simple British forms), as well as a La Tène III form brooch. In fact there is little to differentiate chronologically the sample of brooches from this area from the other excavated areas; in addition, there is little to suggest (from the evidence of the brooches) that occupation at this part of the site continued into the second century AD.

The main excavated areas of the interior plateau have only produced 25 brooches (including seven unidentifiable fragments). This group does include a hinged Dolphin and a Strip bow brooch, but it is interesting to note that the remaining bow brooches comprise a Simple one-piece British wire brooch, the possibly early Cold Kitchen Hill form brooch, and most of the La Tène I and La Tène II brooches, clearly indicating that regardless of later activity, earlier Iron Age occupation of Cadbury Castle must have been located in this area (mainly on the southern and eastern edges of the excavated area).

With the exception of the south-west gate, only Sites A and D of the sections through the defences have produced brooches (the majority at Site D), comprising a mix of forms including earlier La Tène II and La Tène III brooches, but mainly brooches common during the middle years of the first century AD before and after the conquest. A very large proportion of the brooches from Cadbury Castle were recovered from the gate (see p132ff), and these also include the same range of middle first century AD forms, but no earlier La Tène I or La Tène II brooches. Examples include brooches of La Tène III form (but not necessarily date), Simple Gaulish, Colchester, Simple British one-piece brooches, mid-first-century AD imports (Aucissa, Hod Hill), and presumably locally produced variants and derivative forms (Strip bow, Aucissa, Fiddle, Dolphin, Colchester derivative, Camerton, and Polden Hill). The full chronological range of this group probably covers most of the first century AD, although all the examples here could have been deposited during the middle decades of that century.

The subset of brooches from the massacre and the infill deposits at the gate reflect the same general chronological picture, and all could have been manufactured, marketed, worn, and deposited during the middle decades of the first century AD. The great majority of these brooches can be conventionally described as 'Roman', although this does not preclude the appearance of pre-conquest imports (particularly Aucissa and Hod Hill brooches), or the early development of certain hinged forms (Simple British two-piece brooches); a relatively small number are of one-piece sprung La Tène III form (Colchester, Simple one-piece British brooches), although conversely a post-conquest date for these examples cannot be discounted. There are no major or apparently significant differences between the brooches from the massacre or the infill deposits, and it must be assumed that although these represent clearly differentiated stratigraphic events, the dating evidence of the brooches is not itself sufficiently refined to distinguish them chronologically, and that they are therefore either broadly contemporary, or that the content of the infill deposits is in large part derived from the massacre levels. It is equally difficult to distinguish any possible cultural groupings among these brooches. Some (Aucissas and Hod Hills) are often (but not exclusively) associated with military activity, and in a general sense were certainly popular with the legions at the time of the conquest. Others (Colchesters, Simple British one- and two-piece brooches) are popular British forms probably worn by the inhabitants of the hillfort during the mid-first century AD, and the various derivative forms of the Colchester brooch (Colchester derivative, Camerton, Dolphin, Polden Hill) represent a clear continuation of the same tradition, often produced locally, but betraying a 'Roman' technical influence, and also presumably worn (after the conquest) by the inhabitants of Cadbury. The large group of Aucissa and Hod Hill variants and derivatives (including Fiddle brooches) is less easy to categorise in this fashion. Typologically these brooches are all derived from the earlier (imported) military forms; they are most popular in the south-west, and many betray evidence of presumably local production and style (particularly decorative motif). It is not clear, however, whether they may have been produced locally for a military market to replace continental forms no longer easily available, or whether they may represent a local market for brooches based on forms introduced to the region by the Roman army, but adopted by the inhabitants of the region. In either case, although the appearance of relatively large numbers of such brooches in these deposits at Cadbury Castle cannot be precisely identified chronologically, it is suggested that sufficient time must have elapsed after the appearance of the probably military prototypes in the region for these derivative forms to have been produced prior to their deposition (this need not, of course, necessarily be a particularly long period).

Tentative and very subjective assessment of wear indicates that these latter derivative forms appear quite fresh, particularly in contrast to the British brooches, although the actual significance of this is unclear, and certainly this contrast does not necessarily indicate a cultural difference between the groups (eg 'British' and 'Roman'). Some of the brooches from the gate deposits appear burnt and may have been derived from a cremation pyre inside the gate; the presence of apparently unburnt brooches in the same deposits, however, suggests a complex depositional history representing a variety of different processes. Some bodies may have been stripped of clothing and accoutrements prior to cremation, and the unburnt brooches could perhaps have been derived from a deliberate accumulation of such material that was subsequently dispersed. Why particular bodies may have been treated differently in such a fashion is unclear; similarly, it is difficult to understand why material that may have been carefully removed from bodies before cremation should then almost immediately be subject to presumably casual dispersal and deposition rather than some other use or reuse. Neither the instigators of nor the participants in such activity (Roman soldiers or native inhabitants) can be identified, and it is clear that the evidence of the brooches alone is unfortunately of little help in understanding the function and underlying significance of any such acts which may have preceded their actual deposition.

Worked bone and antler ornaments

by W J Britnell

Bone ornaments include four perforated tooth pendants (eg Fig 97.12) of a type common on prehistoric and later sites in the region (Britnell 1977, 97–8) and elsewhere, of which three are the canine teeth of a large breed of dog and one is the incisor of a dog or wolf. Three examples are from the interior and one is a surface find. The only datable example is from a Late Cadbury context.

The second category of material is toggles or dress fasteners (these may include harness fittings) (Fig 97.13–17). There are 11 examples. One (not illustrated) dates to Middle Cadbury; and is made of bone and similar to examples from Glastonbury (Bulleid and Gray 1917, 406 B209, B258, B385); Meare (Gray and Cotton 1966, 341, B22, B59, B153), and All Cannings Cross (Cunnington 1923, pl 6.34).

Five fragmentary toggles (eg Fig 97.13–14) made from red deer antler tines belong to types known from a number of Iron Age sites in the region (Britnell 1977, 102–3, fig 14; Coles 1987, fig 3.26) and in Romano-British contexts (cf Cunliffe 1964, fig 24.15). All have smoothed surfaces with elongated perforations towards the centre through the shorter axis of the tine. Two have decorative lines encircling the ends, which have been partly worn away. One example comes from the south-west gate and the remainder are from the plateau sites. Two examples are from Middle Cadbury contexts (including Fig 97.14) and one is from a Late Cadbury context.

Four other possible dress-fasteners, one made from a roe deer tine (Fig 97.15) and three from red deer antler tines (eg Fig 97.16–17), belong to distinct types known from Iron Age sites in the region, particularly in Somerset (Britnell 1977, 105, fig 14) and elsewhere in Britain. They are often decorated at both ends, decoration has typically become worn away on the convex face at either end, and there is usually at least one single transverse cylindrical perforation drilled through the wider end, normally through the longer axis of the tine, and occasionally a second perforation near the middle or towards the narrower end. Similar objects were found in very large numbers at Glastonbury and Meare, and although they are described as 'cheekpieces for horses' bridles' it was concluded from the wide range of simple forms that a variety of different functions were represented (Bulleid and Gray 1917, 440). Other less plausible suggestions have included use as the hand-holds for chariots (Fox 1946, 77, note 2), linchpins (Stead 1965, 34–5), and as 'charms against the Evil Eye' (Gray and Cotton 1966, 331). The association with horse bridles has been widely accepted, it having been suggested that this primitive form of cheekpiece, contemporary with more sophisticated La Tène bits in bronze or iron, was possibly reserved for cart-horses (Clark 1952, 225, 307). More recently, Roes has also tried to explain this apparent anachronism by suggesting that 'horn and bone remained as a substitute for metal in poor self-supporting communities' (Roes 1960, 70), but this is clearly not borne out at Glastonbury and Meare, where very few of the bone and antler artefacts can be regarded as being merely copies of metal forms. They are dissimilar to a small group of antler cheekpieces from Britain which are of later Bronze Age date (Britnell 1976) and could not have been used in a similar way. One source of information suggests an alternative interpretation for at least some of these objects. Two examples, very similar to examples from Cadbury (Fig 97.16–17), were found in the 'Charioteer's Barrow' at Arras, Yorkshire, a burial which also contained metal bits of La Tène style. Both the perforated tines were found lying on the inhumation, which suggested to the excavator that they had been suspended from a belt worn by the corpse (Stillingfleet 1848, 26–32). The most reasonable explanation is that some of these objects were a form of clothes fastener, sometimes used in pairs (cf Gardner and Savory 1964, 168). One of the Cadbury examples is from the ramparts, two are from the plateau sites, and one is unstratified. The three dated examples (including Fig 97.16–17) are from Middle Cadbury contexts.

Finally, a fragmentary barrel-shaped toggle (not illustrated) is similar to types known from Iron Age contexts, for example at Danebury (Sellwood 1984, 378–80), where a characteristic wear pattern tends to support their interpretation as fasteners.

7 Feeding the body

Introduction

The excavations did not involve any routine sampling for burnt plant residues, the type of work which, since the mid-1970s, has so revolutionised our understanding of Iron Age arable economies in southern Britain. What we do have are some of the artefacts with which the land was worked, the grain processed, and food served. Grain storage pits are discussed below and a discussion of the animal bone residues at Cadbury Castle will be found in Chapter 10 (see p278).

Iron agricultural implements

by C Saunders

The basic requirements of arable agriculture are the same for all periods and have been listed by Bowen (1951, 5):

a) the ground must be broken up
b) the seed bed prepared
c) animals kept away from growing crops
d) the harvest taken
e) crops prepared for storage or use
f) crops stored.

Iron tools would have been used in all these processes and can be conveniently divided into two groups. Firstly, those for breaking up and preparing the ground and general digging work, and secondly, cutting tools for harvesting and other purposes.

The only tool which certainly falls within the first group is part of a ploughshare (not illustrated). In the Iron Age, iron was used to tip wooden shares and known examples can be divided into several types by their length and other characteristics. Typologically there was a tendency to lengthen the share; shorter examples could simply have tipped the foreshare of such an ard or perhaps even the end of the main share or the sole of a crook ard. The ploughshare tip from Cadbury Castle is incomplete, it lacks the usually, flanged socket by which such shares are attached, although it seems generally to resemble the rather spike-shaped shares known from Spetisbury, Hod Hill, and Woodcuts, Dorset (Manning 1964; Rees 1979).

Various forms of billhook were used in the later Iron Age. Only one example (see p59: pit D521A) was found, which is very close in form to its modern counterpart. It is double-edged but some others are single. The type is well represented in Somerset with other examples coming from Glastonbury (Bulleid and Gray 1917, fig 138, pl LX.19, 117, 141, 144, 149, 175, 176), Meare (Bulleid and Gray 1948, pl L), Wookey Hole (Balch 1914, pls VIII.10, XVIII.22), Ham Hill (Taunton Museum), and Camerton. One of the Glastonbury examples still retained its handle, which was of ash (Bulleid and Gray 1917, pl LX.148). Such a tool could have had a variety of uses in woodland and hedgerow management as well as in the production of wicker hurdles, thatching spars, and the like.

During the Iron Age angular reaping hooks and balanced sickles were used, the latter being very rare among the surviving material. The blades of reaping hooks vary from those which are very angular to those of crescentic shape but still unbalanced form. Wooden handles were attached by means of sockets, narrow tangs, broad riveted tangs, and by flanged socket and turned-up tang. They come in a wide variety of sizes from very small examples, often called leaf knives or pruning hooks, to larger examples used for cutting cereals, and various classifications can be suggested (as for example Rees 1979). Nine definite and an additional four possible examples come from probable Iron Age contexts at Cadbury. Four of these are from the hoard of ironwork found at the back of the inner rampart (D630A see p83, Fig 38.10–13).

The pits

by Gino Bellavia, Jane M Downes, and Iain Ferris

Analysis was undertaken on a sample of 362 pits from the interior of the hillfort. Those pits which were not fully within the areas excavated, pits which were severely truncated by other features, and pits for which the site records were incomplete were omitted. A further selection of pits from the western end of the plateau was examined in greater detail (see below). Although the Cadbury data were not ideal, either in terms of sampling or consistency, it has nevertheless been possible to isolate certain trends (rather than state unequivocal facts about pit digging and usage).

The pits were classified according to their shape in section as follows: cylindrical (39.5%); overhanging or beehive (4.14%); sub-rectangular (3.04%); irregular (3.87%); and unclassifiable, mainly due to erosion and weathering and to lacunae in on-site recording (49.45%). A small selection of pits is illustrated in section in order to provide an impression of the more common types (Fig 102).

The highest concentration of cylindrical pits was on the east of the plateau where they represent 67.14% of pit types. Although there is not secure dating evidence for all pit fills, some chronological trends can be observed. In Early Cadbury no overhanging pits appear to have been dug and there are fewer examples of the cylindrical type. The relative frequencies of all pit types in Middle and Late Cadbury remain constant, with cylindrical pits predominating.

Dimensional and volumetric analysis confirmed the observation that pits on the east of the plateau are significantly different from those elsewhere, not only in form but in size, with the majority of small volume pits being in this area. Across the west of the interior there was an overall tendency towards certain quite well

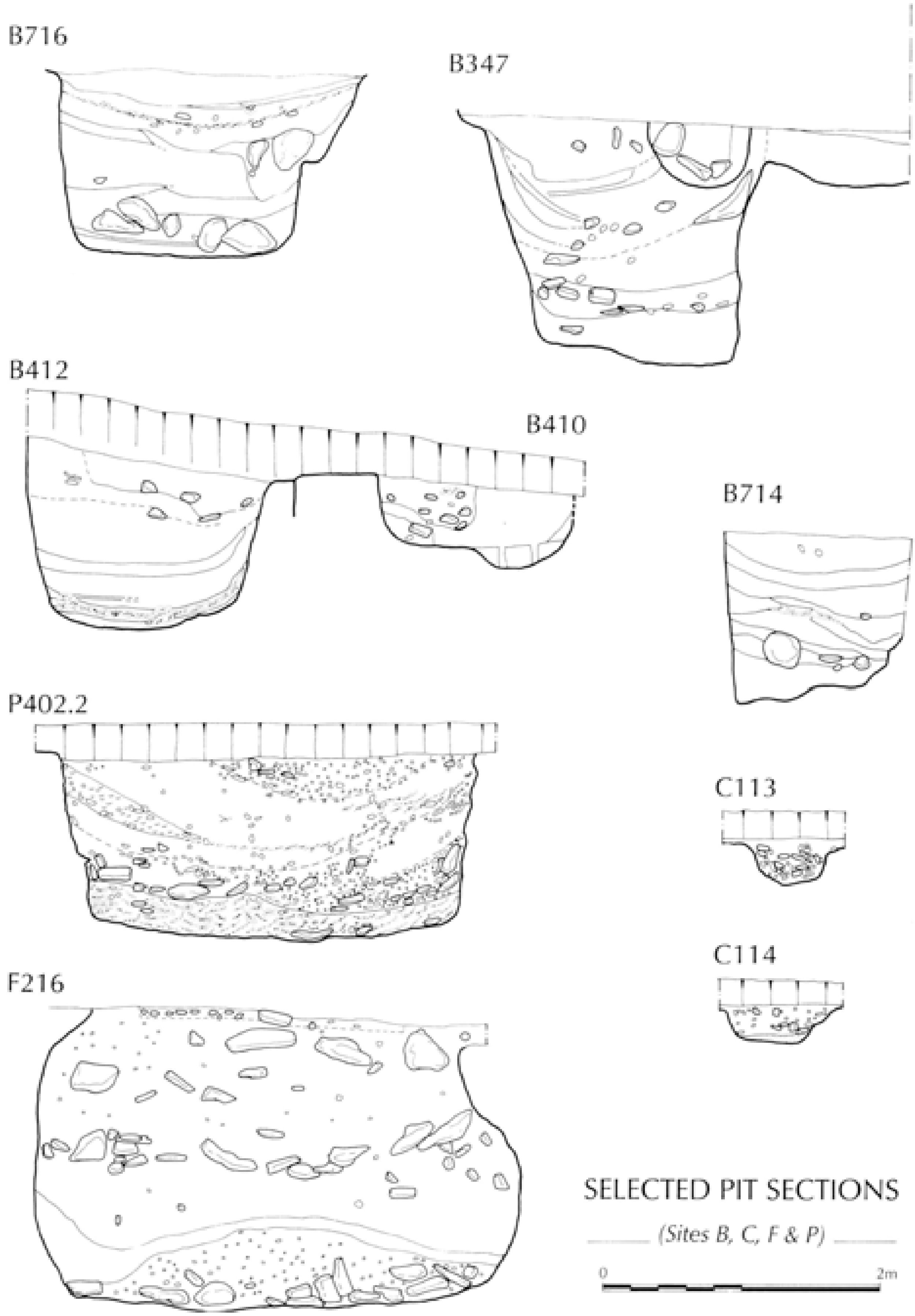


Fig 102 Representative selection of pit sections from the interior

defined proportions for pits, which when plotted in the form of ratio of maximum dimensions/depth versus volume fall largely within the range of ratios 1:5. This might suggest no significant chronological break in practice, though there is a minor trend towards larger pits being late.

The range of backfill types was considerable and an attempt was made to classify the types of layers present in individual pits, despite some inevitable disparity in the site records. The majority of pits (65%) appear to have been backfilled with a single deposit, while the rest varied between 2 and 14 layers of backfill, with the majority containing between 3 (9%) and 5 layers (7%). Early Cadbury pits tended to contain single layers while the greatest variation in infilling practice is apparent in Middle Cadbury.

Comparisons with similar studies on other sites, in particular Danebury (Whittle in Cunliffe 1984; Cunliffe and Poole 1991), Maiden Castle (Rawlings in Sharples 1991), Gussage All Saints (Wainwright 1979), and Winnall Down (Fasham 1985), are hampered by a considerable variation in the collection, analysis, and presentation of the data between sites and in the descriptive terms adopted. However, an overview and attempted bias rectification of the available evidence has been undertaken by J D Hill (1993; nd) who kindly allowed his conclusions to be drawn upon ahead of publication.

For a simple comparison of pits with those from other sites it has been assumed that 'straight profile' or 'barrel' pits at other sites are equivalent to cylindrical pits at Cadbury. This analysis considers the relative frequency of pits regardless of the absolute numbers (ie at Danebury (Cunliffe and Poole 1991, 153) 2399 pits were recorded of which 1707 were excavated). At Cadbury there are proportionally far fewer overhanging (beehive) pits in relation to cylindrical (barrel/straight) ones than at Danebury, Gussage, and Maiden Castle (Rawlings in Sharples 1991, fig 91). However, other sites such as Old Down Farm and Little Woodbury showed a similar pattern to that noted at Cadbury Castle.

The only directly comparable classificatory scheme to Cadbury is that employed at Winnall Down and a comparison of the change in pit type over time produces contrasting results. At Winnall Down the number of cylindrical pits is small in the site's early phase and declines slightly more in the middle Iron Age. At Cadbury there is a high percentage of cylindrical pits which does not vary significantly over time, with a much smaller number of overhanging pits declining significantly over time. In addition to the problems concerning inter-site comparison and the quality of the data already alluded to, it should be noted that the cylindrical classification scheme at Cadbury could be too generalised and include many eroded overhanging pits. Erosion at Danebury was considered to have affected up to 60% of the pits (Cunliffe and Poole 1991, 159).

There is no recorded evidence that any of the Cadbury pits were ever clay-lined or capped. Daub was present in only a few pits. There was only one instance of carbonised grain being recovered. This was a layer 0.15m thick at the base of pit P402.2 (Fig 102) on the western side of the plateau.

Certain artefacts are consistently found grouped together, and pits received the same types of artefacts throughout the time they were being filled-in some cases presumably over quite a long timespan. Few fragments of human bone were found and the sample is too small for any discussion of spatial patterning. However, the westernmost end of the plateau (Site C) certainly seems to have had the highest incidence of pits containing animal skulls. In an attempt to assess the quality of the data from the pits at Cadbury, the 41 pits in this area were selected for more detailed analysis. What follows should be viewed as an interim statement and the springboard for further analysis.

The basal layers of the pits were usually of silt or small stone rubble with silt, presumably collapse from the sides of the pits. Instances of the basal layer itself comprising burnt material are infrequent, although there are many occurrences of charcoal-rich layers being the second deposit within a pit, evidence which may point towards the practice of burning rubbish in pits, as suggested for other sites (Rawlings 1991, 93). In pits C457, 653, 656, and C702 the basal layer was burnt; in the case of C457 and C702, which are next to each other, the burning is definitely *in situ* as the sides of the pits were substantially fire-reddened. The bottom of pit C457 was covered, in part, by a thin lens of charcoal, which was covered, in turn, by a thicker layer of burnt sand. The sides of the pit were fired from the burnt sand upwards, and it is likely that this pit continued to be used for firing material or was consistently used to dump material from fires, as the majority of the rest of the fill was an ashy, charcoal-rich matrix. The lens of charcoal on the bottom contained burnt bone and an iron knife. In pit C702 it would appear that there were at least two episodes of the contents of the pit having been fired. An infant humerus came from this feature.

In 25% of the pits from this part of the interior, the second layer was a band of charcoal or burnt material (C054.4, 106, 204, 402, 409, 511, 559, 660, and C711), although it is frequently not clear whether the burning was *in situ*. The exception was C660, which had an initial layer of clay and a lens of silt, containing bones, upon which lay a thick band of charcoal, and what appears in one section to have been a lining of burnt stone; the sides were heavily burnt from this layer upwards. A broken pot was embedded just above the charcoal, and the greater part of two other pots. The layer above the charcoal comprised charcoal rich earth containing large amounts of clay, both fired and unfired, some pieces of which had wattle impressions. The upper third of this pit appears to have silted up naturally.

Fills of the pits vary greatly. Rapid, deliberate infill is easier to detect when a layer comprises a dump of fairly sterile rubble, or discrete dumps and tips of ashy/industrial debris. Green clay often features as a discrete lens, and a greenish silt has been interpreted as a 'cess-like' matrix.

Layers described as brown stony loam or silt, often fairly rich in finds, occur commonly as upper fills of pits. As has been noted elsewhere (eg Maiden Castle, Rawlings 1991, 93), it is difficult to know how such layers formed, and whether they too represent a perhaps slower, deliberate infill of silts and occupation debris.

The majority of the pits from the western end of the plateau were filled with combinations of rubble, clay, burnt material, and silt/loam. Only five pits contained homogeneous fills. Of these C057 and C209 contained only rubble. Pits C206, 604, and C661 were filled with stony brown loam throughout. Some differentiation in the fill might be perceived in C206 and C604 which had larger stones and more charcoal flecks lower down.

In pit C106 an ox skull lay on the initial layer of silt and rubble, and was then covered with burnt material. Pit C054.4 contained a thick band of charcoal and green clay approximately 0.25m from the bottom of the pit. Large slabs of stone were set into this layer, and two ox skulls were placed on these stones in the north part of the pit. The two ox skulls from pit C202 were from different layers; the first skull to be deposited was contained within a gravel layer above sticky silt, and the second skull lay above a yellow brown stony soil. The remainder of this pit was filled with an ashy dump. Pit C102 contained a horse skull lying upside down in a rubble dump that overlay a naturally infilled deposit of rubble and silt.

Pit C766 contained a dog skull and several other skulls, but their specific context is not known. There was also a prenatal human mandible from the topmost stony loam fill, and two pieces of adult calvarium, from the charcoal layer below. It should be noted that other finds of human skull from the pits are also recorded as being contained within an ashy/charcoal matrix, and that animal skulls usually occur in the lower fills of pits, in primary deposits.

Whole pots were found in pits C054.2/3, 403, 409, and C660. In pit C403 a basal layer of rubble was covered by a 0.50m thick layer of sandy stony material containing lenses of charcoal and an almost complete vessel. A further complete pot was found above this layer, surrounded by ashy material within a thick layer of black loam with much bone. The bottom of pit C409 was covered by a layer of rubble, followed by a 0.40m thick layer of dark loam. This layer was succeeded first by a lens of charcoal, and then by a sand lens, which contained a complete pottery vessel. In this instance the pot was broken and mouth facing downwards. The depositional contexts of the complete vessels from pits C403 and C409 were similar to that of the pot from C660 (see above), in that they were associated with sand and/or charcoal, and *in situ* burning. The complete vessel from C054.2/3 was contained within a dark, soft, greenish soil that filled most of the pit.

Despite the limited sampling of pits from only one area of the site, some depositional trends are observable, particularly with regard to associations between different classes of artefacts (cf Hill 1995a, 64) (see also p302ff).

Querns

by Peter S Bellamy

A total of 254 pieces of quern were recovered, forming a minimum of 117 quernstones. These comprise both saddle querns (49 pieces) and rotary querns (97 pieces), with 108 pieces which cannot be satisfactorily identified as either rotary or saddle querns.

Saddle querns

The saddle querns were split into upper and lower stone on the basis of the shape of the grinding surface. Stones which are worn concave both longitudinally and latitudinally are considered to be lower stones, and stones which are convex latitudinally are considered to be upper stones, as the action of drawing the stone backwards and forwards is more likely to cause this type of wear. The upper stones are sometimes worn concave latitudinally. The small number of large fragments surviving means that it is difficult to assess the overall sizes of the upper and lower stones, though these appear to be roughly about the same size. It is possible that some of the stone artefacts classified as grinders were used with the saddle querns as small upper stones.

The number of whole or reconstructable saddle querns is small (nine in all), which means that the general shape and size of the querns cannot be determined with any degree of certainty. It is clear, however, that there is very little difference in either shape or size between the upper and lower stones: the upper stones are between 315–77mm in length, 67–205mm wide, and 23–96mm thick, and the lower stones are 140–415mm long, 128–210mm wide, and 26–142mm thick. They are roughly rectangular in shape, with either squared, rounded or more pointed ends, and with a rectangular or hemispherical cross-section (Fig 103.1). The shape seems partly dependent on the rock type used, with the Old Red Sandstone examples naturally splitting into rectangular shapes. There are very few traces of tool marks or other evidence of shaping. The grinding surfaces occasionally bear traces of pecking or roughening.

Mortar: One possible saddle quern has almost square, strongly dished, worn surfaces which suggest that it may have been used as a mortar rather than as a quern. It is a roughly rectangular broken block of quartzite with two opposed worn surfaces (Fig 104.1). The worn surfaces are very smooth. This artefact would probably have been used in conjunction with a grinder or polisher.

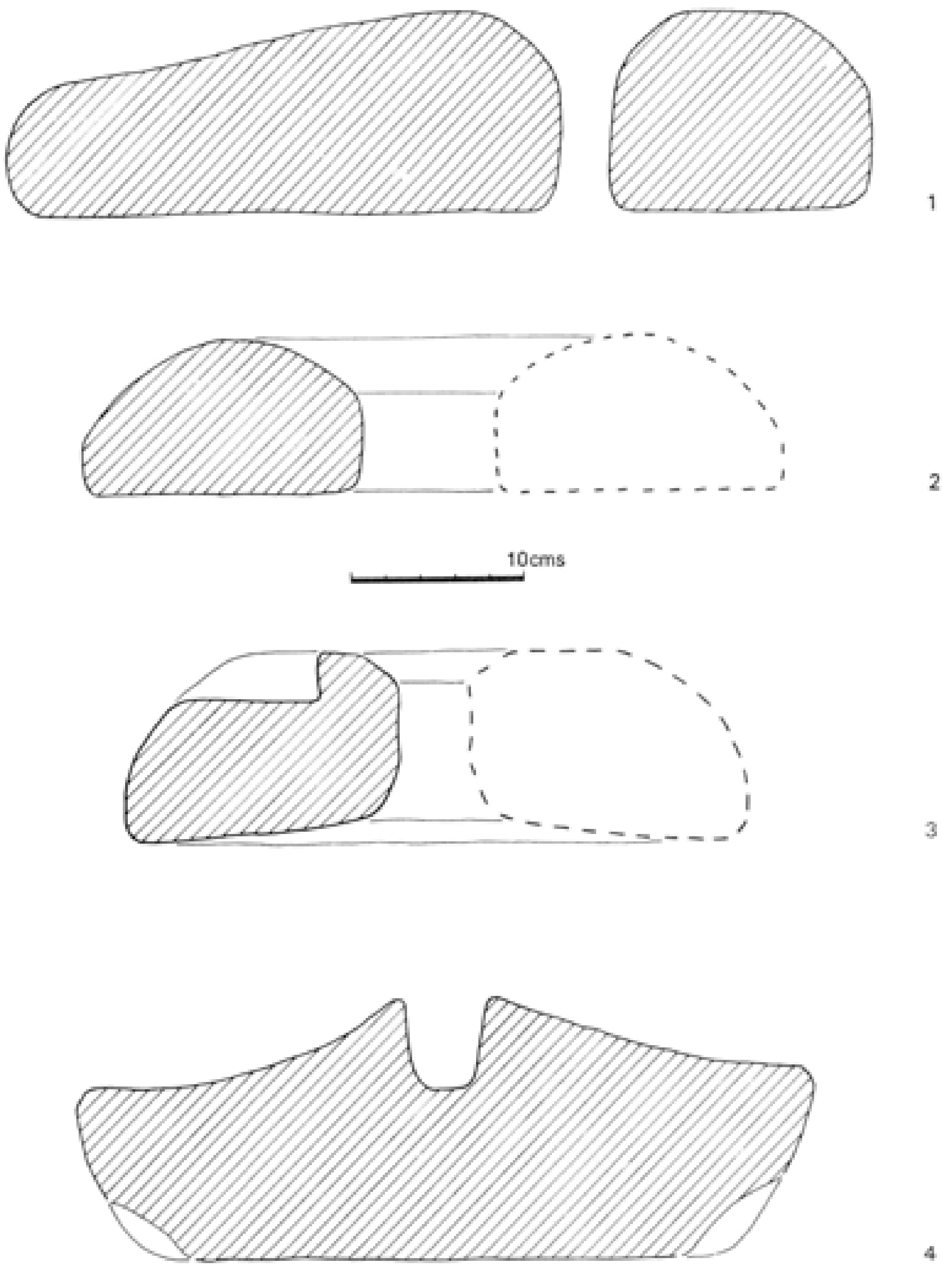


Fig 103 Quern stones. Scale 1:4

Rotary querns

Upper Stones: The major attributes of the rotary quern classification system are the shape of the top of the stone and the shape of the hopper, that is the shape of the upper stones. Further classification could be made on the basis of the shape of the grinding surface, type of handle slot, etc.

The two main shapes of top stone are:

Type 1, domed with no significant change in shape between the sides and top

Type 2, flat-topped with a sharp angle between sides and top.

Three different shapes of hopper occur on the Cadbury Castle querns:

a) convex-sided

b) straight-sided

c) dished

The other significant influence in the appearance of the querns is the shape of the grinding surfaces, which are either concave (described as 'segment of sphere' by Curwen (1937)) or straight ('conical'). The reason for the different shapes is unclear. Although it may be functional, both types of grinding surface exhibit similar traces of wear, concentrated towards the outer edge of the stone. Both types also appear to work in the same

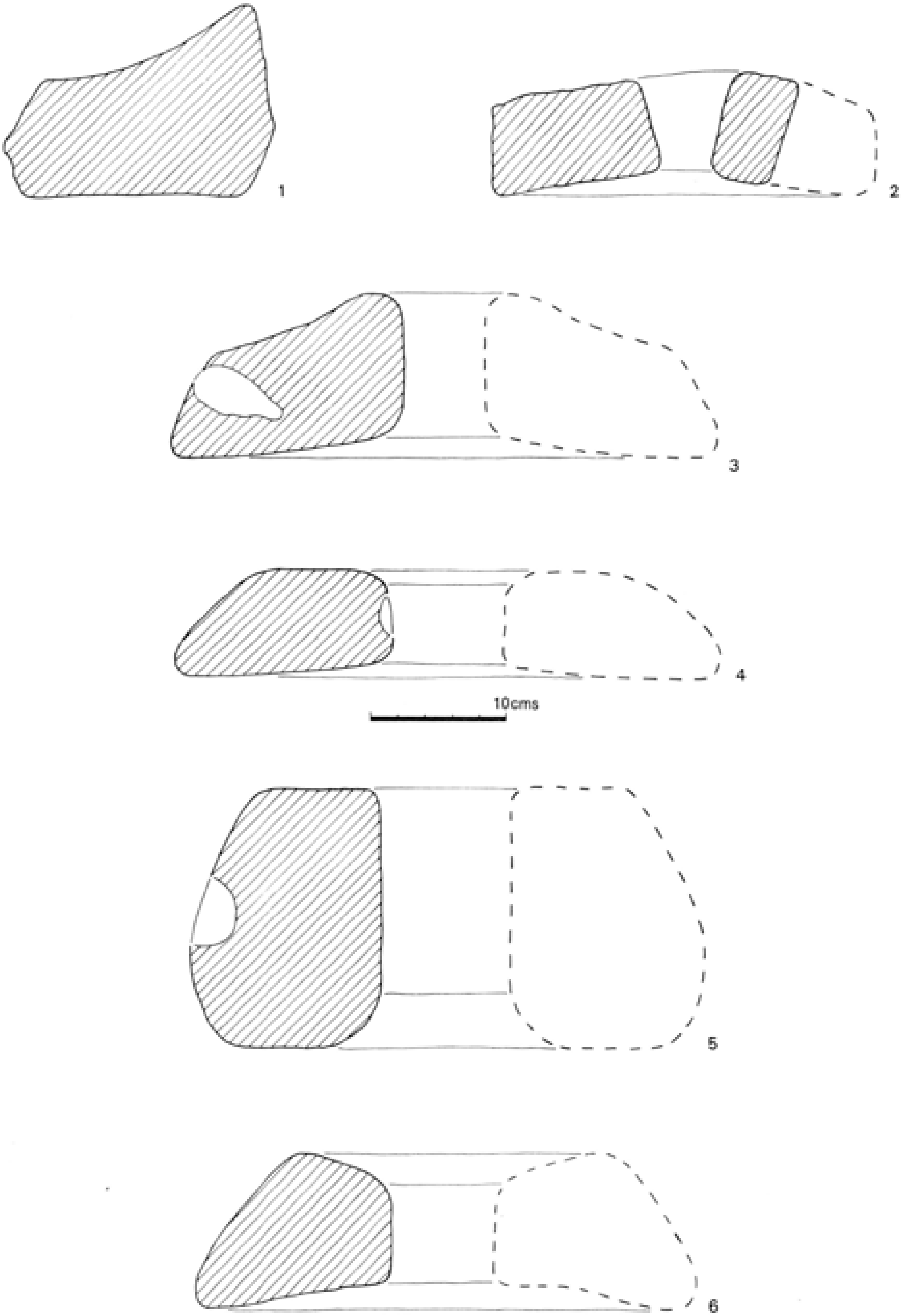


Fig 104 Quern stones. Scale 1:4

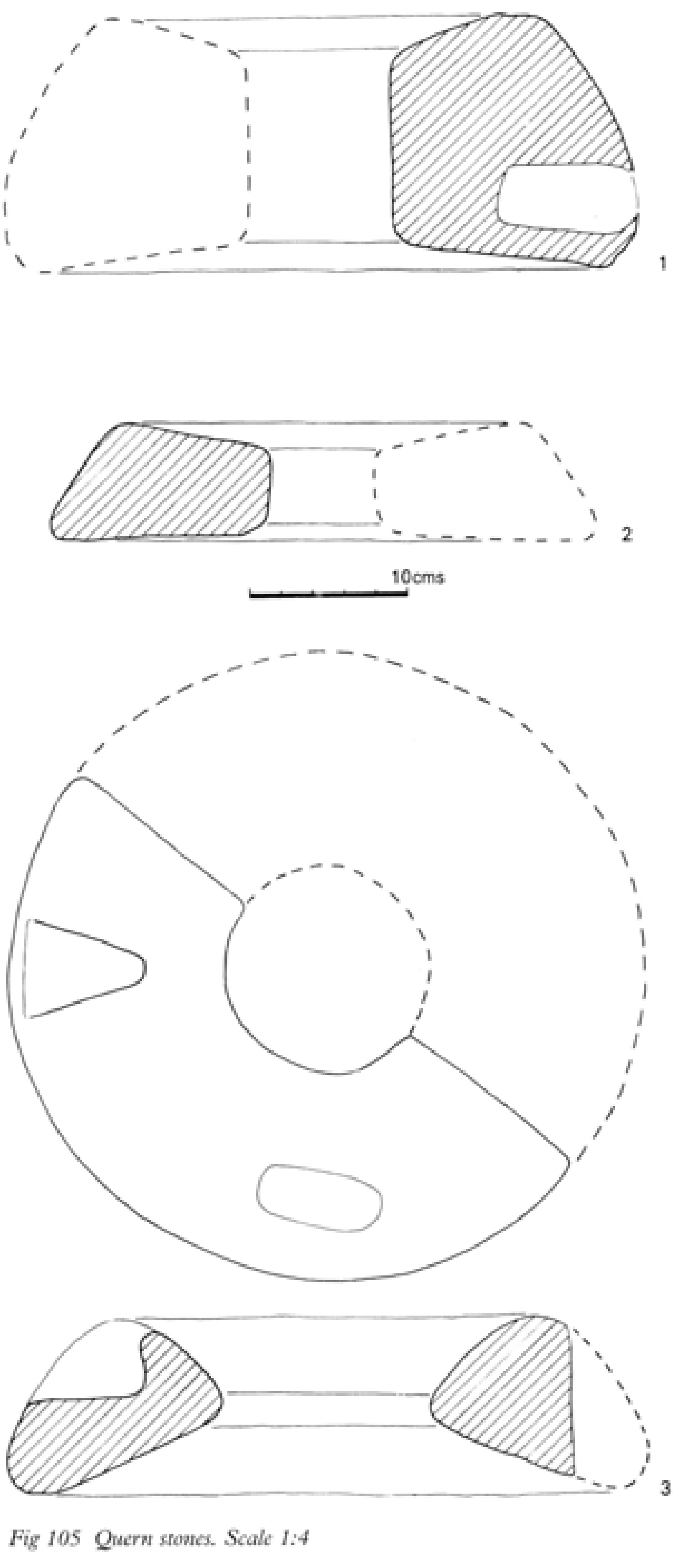


Fig 105 Quern stones. Scale 1:4

fashion, and in general one particular shape of top stone and hopper is associated with one particular shape of grinding surface (though this does not hold true in every case). This would lead one to suppose that stylistic influences rather than functional considerations are a more likely explanation for the differences.

The major division in the Cadbury querns has been made between the domed and flat-topped examples (Type 1 and Type 2 respectively). These broadly conform to Curwen's Wessex type and Sussex types. They have been further subdivided by the shape of hopper. The most numerous type (1a) has a domed top and a convex-sided hopper (Fig 103.2). These usually have concave grinding surfaces. Four of these querns can perhaps be regarded as a separate type (Curwen's Hunsbury type), as they are noticeably thicker and, where it can be determined, have straight grinding surfaces (Fig 104.5). Type 1b querns have domed tops and a straight-sided hopper (Fig 104.6). Again a sub-group of very thick stones (Fig 105.1) can be identified. The thinner type has a concave grinding surface, and both concave and straight grinding surfaces occur on the thicker querns of this type. The third type (1c) has a domed top and no discernible hopper (Fig 104.4). Three different sub-types of flat-topped quern have also been recognised. Type 2a has a flat top, straight-sided hopper, and straight grinding surfaces (Fig 103.3). Type 2b has a dished hopper and there is one occurrence each of straight-sided and concave grinding surfaces (Fig 105.2). Finally, Type 2c has no discernible hopper and the majority of examples have straight grinding surfaces (Fig 104.2).

Many of the querns were well finished with peck-marks visible on the sides and top, especially the flat-topped examples. The majority of the grinding surfaces have been deliberately pecked and pitted to roughen them. The central perforation (or feeder pipe) appears to have been drilled from both sides in almost all cases, as evidenced by its hourglass section on most querns. The precise shape of the perforation cannot be reconstructed for many of the querns, as very little of the circumference remains. Where this can be determined, the perforation is oval. Only one example has slots on either side of the perforation to let the grain pass through (Fig 104.3), and one other example has evidence of drilling at the edge of the perforation, possibly an abandoned attempt to make a slot (Fig 104.4).

Traces of handle attachments were found on 19 querns. Two different types were present, a socket pierced into the side (13 examples), and a slot let into the top surface of the stone (six examples). The sockets were usually oval or circular in shape, often tapering into the stone. The socket was usually angled downwards into the stone, in two instances actually piercing the grinding surface. One quern had a horizontal handle slot. The handle slots on top of the stones are almost all fragmentary, as the quern tends to split along the resultant line of weakness. All have a rectangular cross-section and, where their shape can be reconstructed, they are trapezoidal in plan. In general, the Type 1 querns had handle sockets and Type 2 had handle slots. Three querns of Type 1 had handle slots rather than the more usual socket; one was an irregular, fairly roughly finished example, another was a thin stone, and the last was a fairly unusual quern of Type 1a (Fig 105.3) which was well-finished with a large central perforation and a trapezoidal handle slot. It also had an oval boss on the top surface, a feature not encountered on any other quern and of unknown function.

The study of the Cadbury Castle assemblage suggests that, in general, size is not an important factor. There does not seem to be a strong correlation between overall diameter and quern type, though the thicker examples of both Types 1a and 1b are among the largest examples present in the assemblage. The overall diameters of the upper stones range between *c* 270–464mm with the majority falling between 360–400mm. They measure between 61–204mm in thickness. The central perforations measure between *c* 35–135mm across.

Lower Stones: The rotary quern lower stones are all broadly similar in type (Fig 103.4). They consist of a roughly trimmed flat base and steep, slightly everting sides with a central blind spindle hole. The grinding surfaces are either convex or straight, mirroring the concave or straight grinding surfaces of the upper stones. Several appear to have concave grinding surfaces, but this is a result of the wear around the spindle hole and at the edge of the stone, rather than being the original shape of the surface. The grinding surfaces, in most instances, appear to have been deliberately roughened by pitting the surface. All the grinding surfaces are worn, with concentric striations and smoothly polished areas, especially towards the edge of the stone. Sometimes the stones appear to have undergone considerable wear, leaving a raised central boss around the spindle hole unworn. The angle of the grinding surface, where this could be determined, was between 10°–19°.

The spindle holes are all circular or near circular, 31–50mm in diameter and between 43–67mm deep with a squared or rounded bottom. The wear traces at the bottom of one spindle hole are suggestive of a replacement spindle (stone lost).

The diameters of the lower stones range between 320–415mm with the majority falling between 360–70mm. This falls within the range of diameters of the upper stones, though the majority of uppers are larger than the lowers. The wear traces at the edges of both the upper and lower stones, however, indicate that the two stones of a rotary quern were of the same size.

Chronology

The saddle querns were recovered from contexts of all later prehistoric periods. Although none can confidently be dated to early prehistoric features, it is possible that some of the saddle querns were, in fact, Neolithic or Bronze Age in date. Three saddle quern fragments were recovered from Early Cadbury

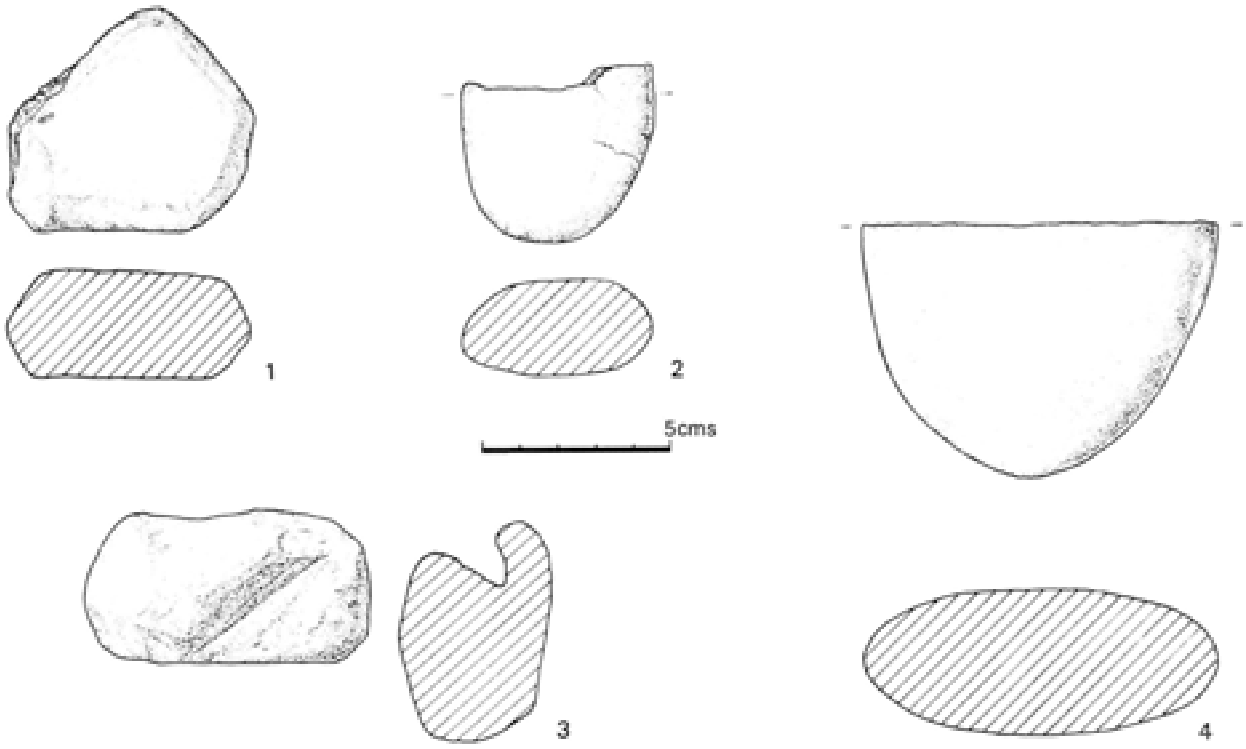


Fig 106 Grinding and polishing stones. Scale 1:2

contexts. No rotary querns were found in this period, indicating that the saddle querns were being used on site before the intro-duction of the rotary types. The 14 saddle quern fragments and 16 rotary fragments from Middle Cadbury contexts suggest that both types of quern were in use contemporaneously during this period. The rotary quern fragments do not seem to occur before the later part of this period (ie associated with pottery of Ceramic Assemblage 8), but the saddle querns are found throughout. This suggests that the rotary querns were introduced to Cadbury Castle later than at Danebury where the evidence shows that they were in use by the mid-fifth century BC (Laws *et al* 1991); and much later than suggested at Gussage All Saints where rotary querns were found in early Iron Age contexts (Buckley 1979). Nine saddle querns were also found in Late Cadbury, but these were all from contexts where they were likely to be residual or reused; so it is not certain whether saddle querns continued to be used into Late Cadbury.

The greatest concentration of rotary querns was in Late Cadbury. However, many of these querns were probably in residual contexts and thus may not give an accurate reflection of the date range of the querns. Nevertheless, a closer look at the different types of rotary upper stones indicates that there is some chronological distinction, despite the small numbers involved. In general, the Type 1 querns appear to belong to Middle Cadbury and the Type 2 querns to Late Cadbury. The majority of the Type 1a and 1b querns came from Middle Cadbury contexts and it is only Type 1c which was found exclusively in Late Cadbury contexts, but the number of datable Type 1c querns is so small that no firm conclusions can be drawn from this. No Type 2 quern was recovered from a Middle Cadbury context. The lower rotary stones occur in both the Middle and Late Cadbury periods but are concentrated in Late Cadbury. Therefore, it seems that the domed rotary querns are earlier than the flat-topped types.

The querns from Cadbury Castle conform to the major quern types found on many Iron Age sites (Curwen 1937, 1941; Brown 1984; Laws *et al* 1991; Buckley 1979). The proportion of saddle querns to rotary querns in the assemblage (1:3), falls between Danebury (1:1.9) and Gussage All Saints (1:4.7), but is much less than at Meare (1:0.7), where the majority of quern fragments were from saddle querns.

Grinding stones

by Peter S Bellamy

Ten pebbles with evidence of pecking or grinding on one or more faces were recovered from the excavations. On most examples use has created distinct worn, and flattened facets (Fig 106.1), four examples having more than one worn facet. Three others had wear traces all around the circumference. These pebbles were generally ovoid in shape, measuring 45–100mm across. They are likely to have been used for a variety of grinding and polishing tasks, some probably in conjunction with saddle querns or mortars. They are generally distributed over the central area of the site, concentrated mainly in the eastern part of the interior, with isolated examples from the gate and northern slope of the interior. The few found in datable contexts are all from Middle Cadbury features.

Hearths and ovens

Introduction

by John C Barrett

A number of features associated with fire, either hearths, ovens or furnaces, are recorded from the interior of the hillfort (see Fig 83). Hearths are identified, where they have survived ploughing, as areas of burning on a surface, some having a clay or stone base (Downes 1994, 19). Of the more complex structures it has proved difficult, at least on the level of analysis undertaken for this report, to distinguish between ovens and furnaces. Possible furnaces are discussed elsewhere (see p296ff); of the remaining material, two structures may be identified as ovens. Both are Late Cadbury: one from behind the rampart in Site A (see p50), the other from the northern slopes of the interior in Site BW (see p175). The records of the latter are confused but indicate a structure, which may have been rebuilt at least once. It originally stood on a stone base which was edged with kerb stones and had been scooped into earlier deposits. Rebuilding of the oven appears to have involved the laying of at least one clay floor for the new structure. Aside from such *in situ* structures as these, ovens are represented by redeposited structural material, including daub, oven covers, plates, and oven bricks. One rather ambiguous example comes from the western end of the plateau and comprised substantial proportions of burnt structural daub (80kg) and an oven plate thrown into a pit (S030) 1.05m deep with charcoal and burnt stone at the bottom.

Structural materials

by Cynthia Poole

It is believed that virtually all the structural daub from Cadbury Castle derives from ovens. A small quantity of pieces could come from hearths, but these are notoriously difficult to identify when not *in situ*. The oven daub is divided into the different parts of the oven for general description. Evidence for the daub being from buildings is entirely lacking.

Wall daub: This was by far the commonest form identified. There were 98 samples, weighing 97kg. It occurred in all the basic daub fabrics (see p261): over two-thirds were made in fabric F (55 samples weighing 67kg), followed by fabrics D (25kg), C (2kg), B (1.6kg), and E (396g).

Wall daub was characterised by impressions of interwoven wattles on one side of the fragments. The wattles run in two directions, composed of upright sails with horizontal rods interwoven around them. In some cases, the vertical sail impression survives with rod impressions curving to either side. More often it is only the rods which are present, but their different angles indicate their interwoven nature. The sails have a greater average diameter than the rods, generally measuring between 15–35mm, though most are between 20–30mm. The rods are proportionately smaller, needing greater flexibility, and range in size from 4–20mm, with the majority having a diameter of 13mm. Rods are nearly always roundwood, whereas sails may take the form of roundwood or split poles. The sails are also found in pairs, probably the result of overlapping the ends of two sails to provide extra length. Wattle measurements for all groups of wall daub are listed in the archive. There were nine groups of wall daub, which exhibited 50 or more wattle impressions. Eight of these came from pits.

The surface on the opposite side to the wattles is normally smooth, probably the inside surface of the oven, judging from joining pieces of wall daub and oven plate. The quality of the finish of this surface can be very variable (from very even to rough with marked surface irregularities), even within the same sample. In some cases depressions from fingertips were visible and sometimes shallow parallel ridges from finger smoothing.

One or two fragments occurred with a greyish white surface finish. Comparable finishes were noted at Suddern Farm, Hants, and it would appear to be a characteristic of late Iron Age or first century AD material. The samples from Cadbury are not datable.

The wall daub can vary in thickness from a skim of only a few millimetres over the wattles up to 45–50mm between and around the wattles. There were a small number of pieces with evidence of smoothing on the wattle side, ie the outside of the oven.

Wall daub probably derives from the upper part of ovens or furnaces. No primary evidence of this is available at Cadbury Castle, as no *in situ* oven daub appears to have been retained, though two small samples of wall daub were found in oven or furnace fill. However, the excavation of a well-preserved oven at Danebury (Cunliffe and Poole 1991, 140–50) showed the collapsed superstructure was typical wall daub. In addition, samples of daub occur of oven plate curving up continuously into wall daub from both Danebury and Cadbury. There is no evidence at Cadbury Castle to suggest it might derive from any other type of structure.

The lower oven walls or wall base are very poorly represented. This is partly because *in situ* ovens were not sampled, and it is possible the material in secondary contexts was not collected as it is rather amorphous. Only 12 samples were identified, though many of the small amorphous unidentified fragments could derive from oven bases The total of oven base material weighed 19,497g. The best example of this material occurred in the oven in pit S030. It was distinguished by the thickness of the daub, between 80 and 130mm, with occasional wattle impressions measuring 9–60mm in diameter. Some pieces have a curved edge with semicircular cross-section which probably came from the stoke-hole arch. The curvature of various samples of possible stoke-hole suggest diameters of *c*80, 140 and 220mm. Another characteristic that can sometimes identify oven base is the impression of large stones. At Danebury, flints were commonly built into the oven bases (Cunliffe and Poole 1991, 145), and at Cadbury Castle stones appear to have lined the initial cut for the oven.

Oven plates: Oven plates were sparsely represented by only 13 samples, weighing a total of 15,921g, of which nearly 90% came from the pit S030. They take the form of a flat plate between 12 and 60mm thick, randomly pierced by circular or oval perforations, usually cylindrical, but occasionally funnel-shaped in profile. These measure 15–70mm in diameter and tend to be placed 30–60mm apart.

The upper surface is flat and smooth, though irregularities may occur. The underside is generally characterised by straw, wattle or plank impressions; the latter two being the norm at Cadbury. Straw impressions do not occur alone, being present in small quantities and compressed between the daub and the wooden supports.

It would appear the plates were constructed on wide parallel planks on which rested criss-crossed but not interwoven wattles. The wattles range in diameter from 5–32mm and the planks range from 15–110mm wide, although most were 30–70mm wide and 15–30mm thick and made from split small trunks or poles.

Cadbury oven plates were either portable objects or built into an oven structure. The main example is from the oven in pit S030. The oven plates could either have supported food to be baked or have held the fire, acting as a grate, with whatever was to be heated supported on the oven cover.

The rather small quantity of oven plate from Cadbury is unlikely to have been biased by on-site retrieval, as it has distinctive features that encourage its retention, nor is there any reason why oven plates would survive less well. It may therefore indicate that fewer oven plates were in use here than other Iron Age sites such as Maiden Castle (Wheeler 1943, 321; Poole in Sharples 1991a, 209) and Danebury (Poole 1984, 118; Cunliffe and Poole 1991, 146–9). The possibility is that triangular oven bricks served a similar function, as will be discussed below.

Oven covers: Oven covers are scarcely represented, there being six possible examples weighing 1kg. All are assigned to Middle Cadbury. None of the samples is identified with any degree of certainty. In one the presence of a small perforation 24mm in diameter in a daub plate 15–20mm thick suggested a similarity to Type 2 oven plates (covers) as described from Danebury (*ibid*, 148, fig 4.95,30); however, oven plates from Maiden Castle (Wheeler 1943, 321) exhibited these smaller dimensions of perforation. The second group exhibited no diagnostic features but took the form of a curved, convex plate 10–30mm thick.

It is possible the ovens at Cadbury Castle had a continuous dome formed of wall daub, though no openings or flues have been positively identified. Alternatively the ovens may have been left open at the top.

Oven bricks: Oven bricks can take several forms, of which the most common is triangular and may include some more pyramidal in shape. In addition there are cylindrical, sub-rectangular, and rectangular examples which may be considered variants of one basic form. Bun-shaped objects are also likely to be some form of oven brick. The triangular type is usually interpreted as loomweights. However, following the writer's work at Danebury these have been redesignated as oven furniture. Zaida Castro Curel (1985) had suggested similar types of objects from Spain were also unlikely to be loomweights and had noticed they commonly occurred in the vicinity of ovens or hearths on Iberian sites. The premises for a reassessment are as follows. Not all triangular objects have perforations. Of those with perforations there is no evidence of wear marks such as occur on chalk weights. None of these objects have been found in primary positions indicative of weaving activity and those rare examples found in primary situations are under or within the collapsed superstructure of an oven. Moreover, although they frequently occur in groups, often of similar sizes, these are rarely large enough to suggest enough weights for a loom. The majority are found discarded in storage pits, commonly in association with oven daub, as at Danebury (Cunliffe and Poole 1991, 372–82), and in these instances the fabrics are identical, implying that they were part of the same batch. It was this particular aspect, first noticed at Danebury (Cunliffe and Poole 1991, 372–82), which suggested that these objects were some sort of oven furniture. Finally, the uneven firing is similar to that found on oven daub, depending on its position in the structure.

The sub-rectangular/cylindrical form is represented by six examples, though two could be interpreted as bricks or weights. The two more complete examples measure *c* 160mm in height, and widths vary from 65 by 80mm up to *c* 110mm. One has a distinctly square section but rounded at one end, whereas the others are oval in section along both axes.

The triangular oven bricks conform to the normal characteristics of these objects. There were 78 bricks represented, varying from small fragments up to almost complete objects, and about eight additional samples that may be fragments, but lacked any sort of diagnostic feature. They measure between 110mm and 220mm along each side, though often one side is slightly shorter by 5–10mm than the other two. The height (from apex to the shorter side) is 105–118mm and the width 55–120mm.

These oven bricks normally have a number of perforations across their corners, varying from one to four in number, though a few bricks have none. Only one brick of pyramidal form had no perforations. The fragmentary nature of most of the bricks makes it impossible to say with certainty the numbers with one, two or three perforations.

Where the full length of the perforation has been preserved, it commonly increased in size to the outer edge and was often oval or more rarely figure-of-eight-shaped. The general shape, size, and occasional striations on the perforations indicate they were made while the clay was unbaked. There are a few clear examples that show the perforations were made by piercing from both sides.

The surfaces are generally well finished, though some are rough as a result of organic impressions. The rougher finishes are not comparable to that on other forms of oven daub; by comparison the bricks are well finished and carefully made.

There are few complete examples from Cadbury, but of the better preserved, weights range from 1.1–1.7kg plus a rare large example of 2kg. Some idea of the overall size of the smaller fragments can be gained from their width, which is most commonly 60–80mm. A small number are much thicker, from 85–120mm. Of datable material, the larger bricks would appear to come from Late Cadbury contexts. The total weight of the 86 triangular oven bricks was 38,209g, making this the second commonest form of oven daub from the site.

There are nine groups of two bricks, two or perhaps three groups of four bricks, and one group of six or seven. Nearly all are associations of incomplete objects which often appear to have been discarded in association with oven daub. There are two examples from Late Cadbury contexts (J176, T359) which support their identification with oven daub. One takes the form of the corner of a triangular brick, with a perforation 13mm in diameter across it in the usual way, except that the object has a rough surface on the triangular face, which bisects the perforation, and *c* 100mm from the apex is a large circular perforation *c* 50–60mm in diameter through the face (ie at right-angles to the other), typical of an oven plate. This incomplete fragment would appear to be a combination of oven plate and brick, suggesting that the two served similar functions.

The second important fragment could be interpreted as merely a corner of oven brick with a perforation 16mm in diameter across it in the normal way, except that over the surface are several oval or circular depressions, clearly the same as the fingertip decoration observed on oven covers from Danebury (Cunliffe and Poole 1991, 149–50) and elsewhere. In addition to the triangular fragment there are nine substantial fragments, 60–75mm thick, with the fingertip decoration over the surface which is typical of oven covers. It could be suggested that there are two different objects present here, a triangular brick and oven cover, but since they are both clearly made in identical fabric, poorly baked, and with identical decoration a very close association is suggested.

Containers

Prehistoric ceramic vessels

by Ann Woodward

Basic aspects of ceramic morphology and development through time have been considered in detail in Chapter 2 (see p24ff). This section will present a summary of the overall occurrence of pottery types among the pit assemblages from the interior, augmented by selected groups from the gate and Bank 1. These figures will then be compared with data from a number of other Iron Age sites. Finally, chronological trends in vessel size and function will be investigated.

Table 12, upper, summarises the percentage occurrences of the most commonly utilised forms in selected assem-blages across the site. The main groups of material derive from pits in the interior, but for the Early and Late Cadbury assemblages the data from the interior has been amplified by including the most represent-ative groups from Bank 1 (Site D) and gate (Site K) cuttings. The percentages do not add up to 100% because they are percentages of all diagnostic sherds, including all rims, base angles, and decorated sherds, not all of which could be assigned to a ceramic type. Descriptions of the pottery codes listed in the table may be found in Chapter 13. The Early Cadbury assemblage is dominated by the large coarse jar forms JB1–3, and flat-rimmed barrel-shaped jars (PA2) are almost as common as those with simple or incurved rim (PA1). Potential exotics (BA) occur at an average 4% level. In Middle Cadbury, the barrel-shaped jars (PA1–3) are by far the commonest form and those with simple rim (PA1) are most abundant. The next commonest forms are proto-bead rim jars (JC2) and the Glastonbury bowls (BD6). By Late Cadbury, bead-rim bowls (BC3) are dominant, followed by necked burnished jars with lattice decoration (JE). The high incidence of barrel-shaped jars (PA) in the pits with Cadbury Assemblage 9 is due to the substantial incidence of residual material in these contexts. It is interesting to note that the incidence of 'fine ware' bowls (BC3) and the more mundane cooking pots (JE) within the general Late Cadbury rampart contexts and the bedding trench of the small rectangular structure N5 (see p173) is very similar. This could be taken as evidence against a ritual interpretation for the structure, but when it is taken into account that there is very meagre evidence for any occupation within the fort associated with Ceramic Assemblage 9, then it could be argued that the entire Late Cadbury pottery assemblage derived from primary ritual contexts. This question must remain open.

The average occurrences of the major ceramic forms represented in the three phases at Cadbury Castle are shown in Table 12, lower. In this table an attempt has also been made to present some comparative data from other Iron Age sites in south and west England. There are very few sites where quantitative data of suitable format has been published. The figures for Danebury, Maiden Castle, and Hengistbury Head have been taken from Brown (1991, 186; Table 64). These percentages have been calculated in a different way from those at Cadbury Castle, so trends, not absolute comparisons, are to be sought. However, the ceramic codes are in the main part exactly comparable, as the Cadbury system has been based on the classifications devised for the assemblages from Danebury

Table 12: The occurrence of major ceramic forms: by period (percentage of total diagnostic sherds)

	JB1	*JB2*	*JB3*	*BA*	*JD1*	*PA1*	*PA2*	*PA3*	*JB4*	*JC2*	*BC3*	*BD6*	*PB*	*JC3*	*JC4*	*JD4*	*BD1/2*	*JE*	*BS1-3*	*total diagnostic sherds*
Early Cadbury																				
CA 5/6 pits	10	6	3	2	2	10	6	3	-	-	-	-	-	-	-	-	-	-	-	227
CA 5/6 Site D	14	27	12	6	1	7	14	2	-	-	-	-	-	-	-	-	-	-	-	214
Middle Cadbury																				
Pure CA 7 pits	3	4	-	-	-	16	6	1	5	7	1	-	-	-	-	-	-	-	-	159
CA 8 pits Site C	-	-	-	-	-	23	6	2	-	9	2	7	1	3	2	-	<1	-	-	810
CA 8 pits Site L	-	-	-	-	-	20	4	1	-	12	3	6	1	3	-	-	<1	-	-	542
CA 8 pits Site S	-	-	-	-	-	19	4	2	-	4	2	9	1	2	<1	-	-	-	-	341
CA 8 pits Site P	-	-	-	-	-	21	6	2	-	12	2	8	2	2	<1	1	<1	-	-	732
CA 8 pits Site E	-	-	-	-	-	16	16	6	-	6	5	3	1	3	2	-	-	-	-	173
CA 8 pits Site N	-	-	-	-	-	20	5	5	-	8	9	3	-	3	-	-	-	-	-	106
CA 8 pits Site T	-	-	-	-	-	9	4	5	-	5	1	8	4	-	-	-	-	-	-	216
CA 8 pits Site F	-	-	-	-	-	18	7	2	-	11	4	7	1	1	<1	-	-	-	-	634
CA 8 pits Site G	-	-	-	-	-	30	5	4	-	5	6	10	1	1	1	2	-	-	-	125
																				3679
average (CA8)	-	-	-	-	-	19	6	3	-	8	4	7	1	2	1	<1	<1	-	-	
Late Cadbury							PA													
Site D (IX & XIII)	-	-	-	-	-		9		-	-	26	5	2	12	4	-	2	9	9	194
Site K (IX - XIII)	-	-	-	-	-		5		-	-	34	6	1	12	2	4	2	13	7	196
CA 9 pits	-	-	-	-	-		18		-	-	6	10	-	3	2	-	3	3	2	530
N5 'shrine'	-	-	-	-	-		1		-	-	26	3	-	2	1	-	1	13	6	100

CA = ceramic assemblage

The occurrence of major ceramic forms: intersite comparison (all figures are percentages)

	JB1	*JB2*	*JB3*	*BA*	*JD1*	*PA1*	*PA2*	*PA3*	*JB4*	*JC2*	*BC3*	*BD6*	*PB*	*JC3*	*JC4*	*JD4*	*BD1/2*	*JE*	*JF*
Cadbury Castle																			
Early	12	16	8	4	2	9	10	3	-	-	-	-	-	-	-	-	-	-	-
Middle	-	-	-	-	-	19	6	3	5	8	4	7	1	2	1	<1	<1	-	-
Late	-	-	-	-	-		8		-	-	23	7	1	7	2	1	2	10	5
Danebury	9	5	<1	5	<1	6	5	<1	4	10	-	<1	41	2	-	-	-	-	-
Maiden Castle	<1	-	-	1	-	<1	<1	<1	2	7	30	2	2	26	7	5	<1	2	-
Hengistbury Head	<1	3	<1	2	-	-	<1	-	<1	2	22	<1	5	7	2	21	9	17	-
Tollard Royal	-	-	-	-	-	-	-	-	-	-	(36)	-	-	(36)	4	-	4	19	1
Gussage All Saints																			
Phase 1		52		40	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-
Phase 2	-	-	-	-	3	5	-	-	-	62	-	2	17	-	-	-	-	-	-
Phase 3	-	-	-	-	-	-	-	-	-	-	18	-	-	3	20	15	12	27	5

and Hengistbury Head. At Tollard Royal (Wainwright 1968, Table I, 122), the bead-rim jars and bowls were not separated during analysis for this site and it is not possible to assess accurately the proportions of the two forms from the illustrated examples. Therefore the figure for bead-rim jars and bowls (Wainwright types I, II, IV, IV and VII) has been split equally between forms BC3 and JC3. To emphasise this estimation these particular figures have been placed in parenthesis. It is only for the site of Gussage All Saints that the data can be presented according to a three-phase sequence, as at Cadbury. The figures in Table 12 have been deduced by collating two tables in Wainwright (1979, 58, 66, Tables IX and XI respectively), following a conversion of the Gussage form series into the Cadbury system of codes. It had been hoped to compare the Cadbury data also with the only other Somerset Iron Age assemblage for which systematic quantitative data is available, Meare East (Rouillard 1987). Unfortunately, however, it proved impossible to convert the Meare East coding system to the Cadbury classification because the published tabulations record figures by type only, and each type at Meare East includes a wide variety of forms, which, according to the Danebury/Cadbury system, could span several periods of the Iron Age.

The three phases of Gussage are roughly equivalent to Early, Middle, and Late Cadbury in terms of chronology. The Danebury assemblage relates entirely to Early and Middle Cadbury, while the groups from Maiden Castle, Hengistbury Head, and Tollard Royal relate to Late Cadbury, in that they all include substantial Durotrigian elements. Some general observations may be put forward. In the Early period at Cadbury, the plain jar forms JB2–3 outnumbered the shouldered and finger-tip rusticated JB1 varieties while at Danebury the reverse appears to have been the case. The occurrence of fine small bowl forms is surprisingly high at Cadbury, but it must be noted that a further 5% of BB form bowls from Danebury have not been tabulated here. However, the most significant point seems to be the exceedingly high proportion of bowls (relative to jar forms JB1–3) recovered from the enclosure at Gussage All Saints. For the Middle period, we may note particularly the very high incidence at Cadbury of barrel-shaped jar forms PA1–3. At Danebury, the highest most commonly occurring form by far is the saucepan pot (PB). Their relative occurrence at Danebury is far higher than at Gussage where, in Phase 2, proto-bead rim jars (JC2) were the most commonly occurring form. In the Late period, a common aspect of the assemblages from Cadbury, Maiden Castle, Hengistbury Head, and Gussage Phase 3 appears to be the preponderance of bead-rim bowls (BC3). In all cases except Maiden Castle necked jars of form JE were also significant. Other specific occurrences to note are the higher incidence of bead-rim jars (JC3) at Maiden Castle, and of JD4 forms at Hengistbury Head and Gussage Phase 3. In Gussage phase 3 there is a particularly high percentage of large storage jars of form JC4 and a relatively high incidence of cordoned jars (BD1/2). Indeed, the occurrence of BD1/2 jars at Gussage in phase 3 relative to bead-rim bowls and jars is higher than at Hengistbury Head itself, although it must be remembered that many of the Gussage examples are in the local Poole Harbour fabrics (Wainwright 1979, 64), and are not therefore to be considered as true exotics.

When considering the possible implications of such comparative data it must be emphasised that the detailed chronological differences within the time-spans of the various assemblages involved have not yet been fully elucidated. The fact that sherd frequencies reflect patterns of vessel breakage and replacement, and not usage, must also be borne in mind. Thus cooking and serving vessels are likely to have been broken most often and may be over-represented in the figures, while large static storage containers and rarely used, carefully conserved ritual or display vessels will be under-represented. However, assuming that these last factors will have operated on all sites, then the observed differences between assemblages discussed above remain valid.

In order to investigate the topic of probable vessel function, close attention has been paid to the recording of rim and base diameters and, in the case of surviving ceramic profiles, the estimation of vessel volumes. Since the project design did not allow for the detailed re-analysis of the pit assemblages it has not been possible to record the presence and location of any residues of food or liquids or the occurrence of sooting. An analysis of all the measurable rim diameters for the major ceramic forms present at the south-west gate, selected contexts from the rampart and the interior pits is summarised in Figure 107. The data for the Early and Late Cadbury phases mainly derive from the gate and Bank 1, while those for Middle Cadbury relate to the interior pit assemblages. The histograms seem to indicate quite clearly the occurrence of vessel forms of small, medium, and large size in each phase assemblage, in a similar way to diagrams recently prepared for various groups of Bronze Age pottery (eg Woodward in Bell 1990, 141).

The total percentage of complete vessels or reconstructable profiles from the site as a whole was extremely low, which is a general reflection of the degree of ceramic fragmentation represented. From the corpus of complete profiles 38 examples, including items belonging to all the major ceramic forms found on the site, were selected for detailed analysis. (These are the examples included in the published form series in Chapter 13.) Vessel volumes were estimated and then compared with the rim radius and height parameters. Vessel volume is obviously as important as shape, if not more so, in the consideration of function. It is surprising to note therefore the low incidence of such studies in the British literature. Following the pioneering attempts by Barrett in relation to later Bronze Age forms (Barrett 1980), the method has been used for Neolithic assemblages (Thomas 1991, 94–5, fig 5.8), but the technique does not seem to have been applied in the case of any Iron Age assemblages. For the Cadbury Castle sample, vessel volume was estimated by calculating the volume of each conic frustra of equal cross-sectional area. In seven cases this was checked by a more accurate, but lengthier, calculation which involved summing the volumes of a series of equivalent cylinders of 10mm height set across the drawn cross-section of the vessel. The latter results were within 10% of the volume values estimated from the equal frustra.

A plot of the variation in height amongst the 38 vessels indicated that a three-fold division into low, intermediate, and tall size groups was valid. These groups are defined by vessel heights of 40–130mm, 140–190mm, and 200mm or more. A graph of vessel volume against rim radius was prepared, the points being differentiated according to the low, intermediate, and tall height groupings. This graph showed that there was direct linear relationship between volume

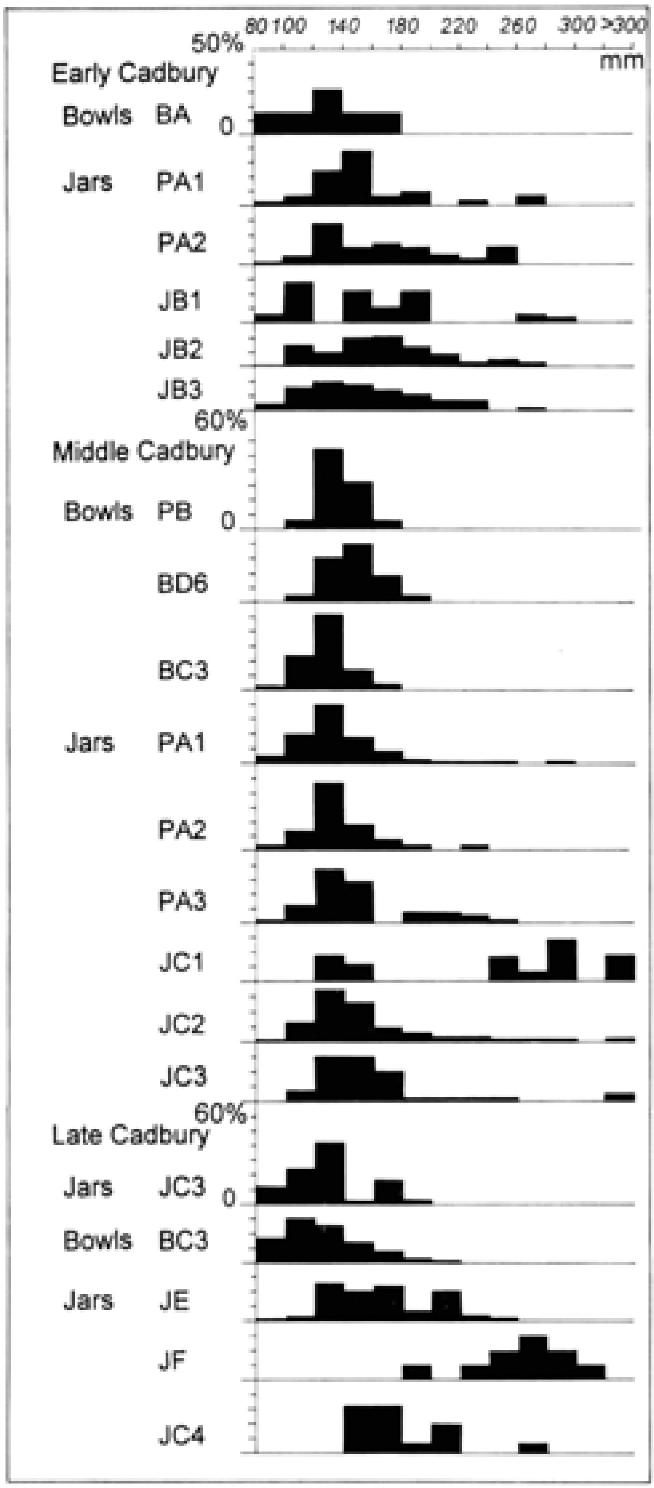


Fig 107 Occurrence of ceramic rim diameter by form and period

and rim radius. Further, it could be argued that the relationship was slightly different for pots belonging to each of the three height groupings. The relationships that could be deduced from the graphs were:

low vessels (40–130mm height)
volume (in litres) = 0.25 radius (cm)
intermediate vessels (140–190mm height)
volume (in litres) = 0.35 radius (cm)
tall vessels (200mm+ height)
volume (in litres) = 0.81 radius (cm) - 1.7

It was also evident that an average result could also be plotted legitimately for all the points on the graph. This line can be defined thus:

volume (in litres) = radius (cm) - 4.41

Vessels which did not conform at all well to the average line were single examples of large forms JD3, JC1, and JE4, with particularly large volumes in relation to rim radius, and two examples of BC3 bowls which possess low volumes in relation to their rim radii. It is suggested that these formulae might prove useful in the estimation and comparison of vessel volumes in assemblages from other Iron Age sites.

Having established that there is a direct relationship between vessel volume and rim radius, albeit one which varies somewhat according to vessel height, the employment of data concerning rim diameter ranges for the different vessel types, as presented in Figure 107, for the estimation of possible function can be undertaken with some confidence. Referring to Figure 107, it can be seen that in the Early Cadbury period a single category of fairly tightly defined small bowl forms (BA) contrasts with many types of medium to large sized jars. Height studies show that these include vessels of medium height (PA1–2) and taller items of forms JB1–3. In Middle Cadbury there was a wider range of bowl forms, with tightly defined rim diameter ranges but mainly larger than the Early Cadbury bowls. The barrel-shaped jars (PA1–3) are more closely defined in size than in Early Cadbury and have a far smaller range in rim diameter than the taller jar forms JC1–3. The latter jar forms in fact fall into three rim diameter range groups: one with peaks at a lower level than the peaks for Early Cadbury jar forms JB1–3, one at a medium level equivalent to the largest JB1–3 Early Cadbury jars, and a third at the very high 300mm plus level. In Late Cadbury, the bowl forms are more standardised (BC3 only) but the rim diameter range is greater. Jars, on the other hand, are more restricted than in Middle Cadbury (compare the two histograms for form JC3). The flat-rimmed jars of form JC4 display a very tight rim diameter cluster and even the thick-walled coarse jars with rolled rims (JF) only reach the 300mm level. The functional implications of these data cannot be realised without full consideration of the incidence of decoration. This will be found in Chapter 11.

Summary: The assemblage of late Bronze Age and Iron Age pottery from Cadbury Castle is one of the largest, and best stratified, ever recovered by excavation in Britain. Following completion of the descriptive ceramic archive, study has concentrated on the analysis of 28,041 sherds from the interior pits, 5020 from the stratified surface deposits in the interior, and 9057 and 16,543 sherds respectively from the bank sequences of the rampart and gate. A form series compatible with those devised for some other major sites, and systems of fabric and decorative motif coding specific to Cadbury Castle can be found in Chapter 13. Consideration of the ceramic sequences in one rampart cutting and the gate has led to a basic confirmation of the ceramic

Table 13: The Iron Age pottery assemblage

	1	2	3	4	5	6	7	8	9	10	11	12
	ceramic forms							*range of ceramics in use*	*within-type standardisation*		*specialisation of production*	*pottery brought in from >10km distance*
	decorated			*plain*								
	open, restricted	*neutral*	*closed*	*open*	*open, restricted*	*neutral*	*closed*	*(number of major types)*	*jars*	*bowls*	*(number of resources exploited)*	*>10km distance*
Early Cadbury			JB1;JA (12%)	BA (4%)	JB2-3; JD1 (26%)		PA1-2 (19%)	8	low	(rare) high	6	4% (calcite: 50%)
Middle Cadbury	BD6;JD3 (7%)	PB (<1%)	BD5 (<1%)	DA1 (<1%)		PB;JB5 (<1%)	JC1-2; PA1-3; BC3 (40%)	10	low	high	5	5-10%
Late Cadbury	BD1/2; JE4 (12%)		JC3; BC3 (2%)		JD4; JF (6%)		JC3-4; BC3 (30%)	10	low	low	2	approaching 100%
	(percentages are of all rims/base angles/decorated sherds per period)							*(high means 100mm or less variation in rim)*				

sequence devised by Alcock (1980). However, it has also allowed the refinement, and quantification, of many of the significant trends that are detectable. The new presentation of the evidence has led to some important conclusions: that there is a firm chronological division between Ceramic Assemblages 5 and 6, that the Ceramic Assemblage 7 plain ware assemblage did exist in a distinct but probably short-lived phase and that, apart from the late dating established for the sand-tempered Glastonbury jars, no clear subdivision of Ceramic Assemblage 8 proved possible. The most important chronological implications relate to the Late Cadbury Ceramic Assemblages 9 and 10. Detailed analysis of pottery from the later sequence of contexts in the rampart and gate (Sites D and K) has suggested that Durotrigian pottery of Ceramic Assemblage 9 does not appear except in association with ceramics of Roman type and post-conquest brooches. The conclusion to be drawn is that the Durotrigian pottery industry had no impact at Cadbury Castle until, or soon after, the time of the Roman conquest. It has already been established that Glastonbury wares survived until the conquest on sites in the Somerset Levels, and that all Durotrigian pottery there is associated with Roman material (Miles and Miles 1969, 51), so the demonstration of a similar situation at Cadbury Castle should cause little surprise. The preliminary division of Alcock's Cadbury 9 (our Ceramic Assemblage 9) into three subdivisions cannot be upheld by detailed examination of the contextual aspects of the late pottery, and indeed it would be more valid to consider Ceramic Assemblage 9 and early Ceramic Assemblage 10 together as a single phase: thus the usefulness of Late Cadbury in our terminology is firmly established.

Detailed analysis of the distribution of rim diameter ranges by ceramic form and period has shown meaningful patterning. It has demonstrated that rim diameter relates directly to vessel volume, and three size ranges, which often cut across the form categories, have been detected. These relate roughly to the three inferred functional groups of eating and serving vessels, cooking pots, and large storage jars. At Cadbury Castle the proportion of eating and serving vessels in relation to storage vessels appears to increase through time. Storage vessels decrease in number, but the individual vessels are often greater in size. The definitive characteristics of the three period assemblages are shown in Table 13. Here the functional aspects of the variation in profile (columns 1–7) have been summarised using a classification of open versus closed form, which has been employed usefully in the study of ceramics of other periods and places (eg for Neolithic pottery in Britain: Whittle 1977, 77; Thomas 1991, 89; Cleal 1992).

Among the eating and serving wares at Cadbury Castle, open forms gradually give way, through time, to closed forms in Late Cadbury. The larger cooking and storage vessels display open, restricted or closed profiles in Early Cadbury, but in Middle and Late Cadbury almost all are closed. Open and neutral forms are rare throughout, while the incidence of decoration shows a more complicated pattern. Decoration is most common in Early Cadbury and Late Cadbury, but in those periods it is unspecialised and very uniform. In Middle Cadbury, the range of decoration is far more complex, but it is found on only two specialised pottery form types. The degree of ceramic specialisation in each assemblage (column 8) is demonstrated by the number of major types in use and can be seen to increase through time. The level of within-type standardisation, however (columns 9–10), illustrated by the variation in rim diameter values per form type, falls in the Late

Cadbury period. Analysis of the tempering materials used in the pottery types of varying period (columns 11–12 see p259ff) further shows that specialisation of production increased through time, along with the importation of pottery from non-local sources.

The Late Cadbury 'Roman' ceramics

by Peter Leach with contributions by D Bailey, L Bevan, B Dickinson, K Greene, V Rigby, and D Williams

This report on the Roman imported and 'Romano-British' pottery aims to present the range of material recovered, its chronology and distribution, and to consider its local and regional significance. The quantity of material available for examination is not great – structures and deposits attributable to the period between the mid-first century AD and the end of the fourth century are a very minor component within the archaeological record, although their potential importance for the history of this site is somewhat greater.

The assemblage derives from localities widely distributed across the site, but with an emphasis upon areas where structural elements and deposits of the post-conquest period were recognised. After a lapse of over 20 years since excavations ceased, it has not proved possible to locate all the material recovered. The main omission appears to be the assemblage from Site J. Another significant assemblage was probably recovered from Site D, but most of this site is excluded from the analysis. Elsewhere, while efforts have been made to extract all material from among other pottery groups during processing, the sheer size of the ceramic assemblage overall may have resulted in a further small quantity being overlooked.

The material defined as the subject of this study comprises those wares originating from the Roman world between the first and fourth centuries AD, and the products of 'Romanised' native industries operating within that period. This definition excludes those imported wares of fifth-century and later date, but also excludes 'Durotrigian-style' Black Burnished wares current at Cadbury during the final phase of the Iron Age occupation, which evidently post-dates the Roman conquest of Britain. The problems which can sometimes arise in satisfactorily defining the distinction between that material and later products of this industry are considered further below.

Definition and quantification of the assemblage is achieved by means of a fabric and form series, inclusive of all British-made and imported types, and incorporates the reports of relevant specialists for the latter. Quantification is based only upon sherd and weight counts; estimated vessel equivalents have not been calculated for such a small assemblage. Effectively the proportional representation of pottery types is based upon sherd counts; weight proportions tend to be unacceptably distorted by the exceptional weight and thus over-representation of Fabrics 2 and 9. As part of this analysis, surface collections of pottery held by the Somerset County Museum at Taunton and the Yeovil Museum were examined but not quantified. Examination and definition of the coarse pottery in particular has benefited from the recent analysis of other local groups (published and unpublished), notably at Ilchester (Leach 1982; 1993), Catsgore (Leech 1982), Lamyatt Beacon (Leech 1985), and Shepton Mallet (Evans in prep).

The assemblage of excavated pottery available for examination comprised a total of 420 sherds weighing 14,547g. It can be divided between imported wares and Romano-British types.

Imported wares

Samian Ware (*Brenda Dickinson):* This collection of samian (29 fragments comprising 7% of the total sherd assemblage), though small, comprises material ranging from the Claudio-Neronian period to the late second century, or more probably the first half of the third century. Many of the sherds are small and some have split laterally, but most of their surfaces are in good condition. Pre-Flavian vessel types (Forms 24 and Ritterling 12) and typologically Neronian dishes of Form 15/17 are present, but there is nothing which is certainly Flavian. All the first-century material comes from the South Gaulish factory of La Graufesenque. The single Trajanic vessel is in the fabric of Les Martres-de-Veyre. The rest of the central Gaulish ware appears to be from Lezoux and includes some Antonine forms, but nothing which is necessarily Hadrianic. One of the three East Gaulish vessels comes from Rheinzabern and another probably originated from there. The third and latest piece is in Trier fabric and is almost certainly third-century.

Amphorae *(David Williams)*: Of the 23 sherds which make up this group, 18 come from the globular-shaped Baetican olive oil amphora Dressel 20 (Peacock and Williams 1986, Class 25). This form is very common in Roman Britain and was first imported into the country during the late Iron Age pre-Roman period (Williams and Peacock 1983). The Dressel 20 rim present can probably be dated to the years *c* AD 30–70 (Fig 108.2). There is also a somewhat elongated Dressel 20 spike, indicating an early vessel in this series (Fig 108.1); in addition, there are three sherds which probably represent separate Dressel 2–4 wine amphorae, one from an Italian vessel, one from a Catalan, and possibly one from an eastern Mediterranean form (Peacock and Williams 1986, Class 10). These three Dressel 2–4 sherds are most probably first century AD in date, the main floruit of this type. Taken as a whole then, this small group of amphorae may have been deposited sometime during the first three decades after the Roman conquest and its aftermath.

In addition, sherds of Lyon ware (Fig 108.13), *terra nigra*, *terra rubra*, Pompeian red ware, and part of a lamp were recovered. All are likely to be pre-Flavian, the two terra sherds may be pre-conquest imports.

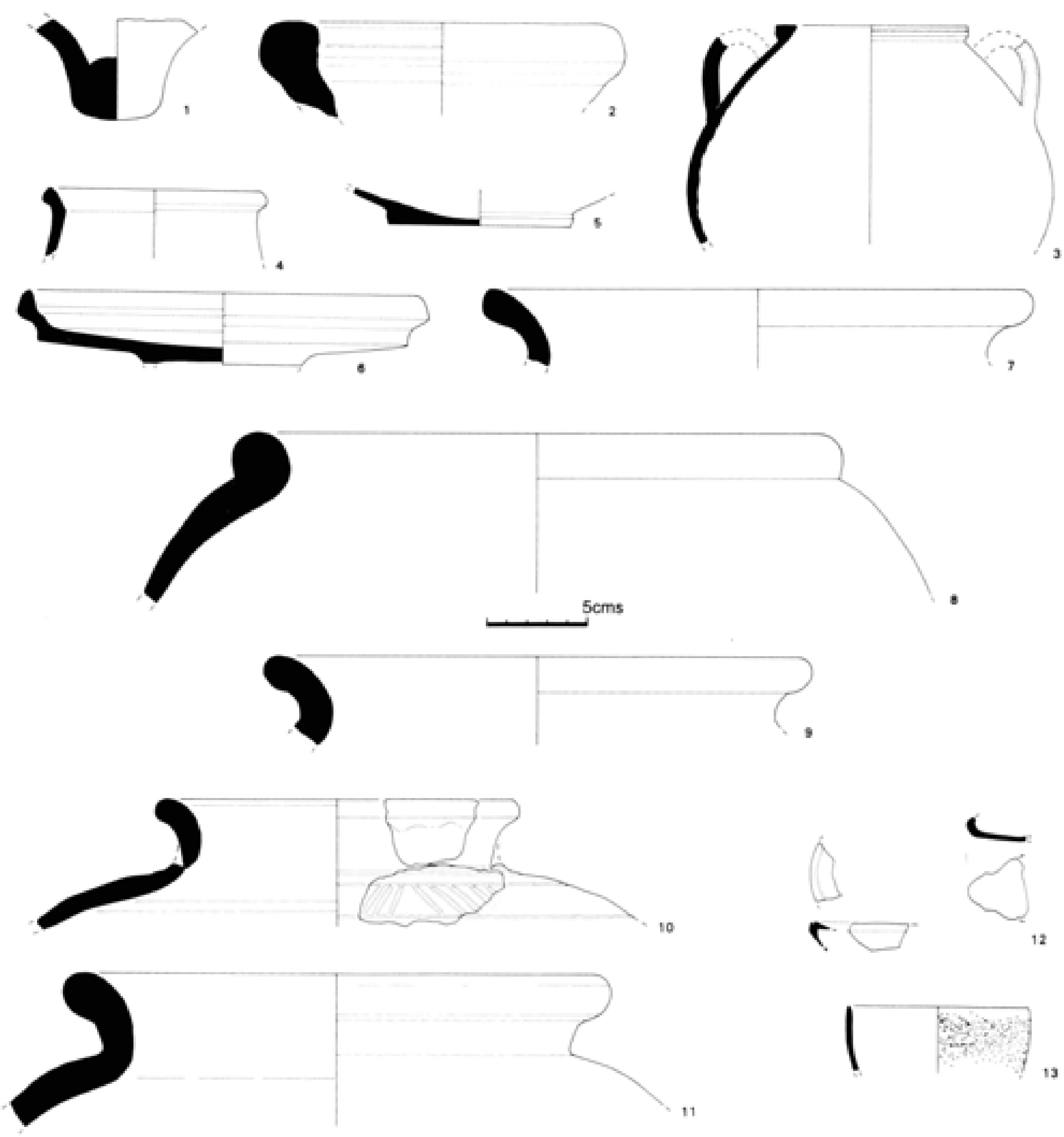


Fig 108 Late Cadbury (Roman) ceramics. Scale 1:3

Romano-British types

Dorset Black Burnished ware (BB.1): Durotrigian-style wares, evidently originating from the Dorset manufacturing sites, form one of the largest assemblages of pre-Roman Iron Age pottery, characterising Ceramic Assemblage 9 and the sequence of events culminating in the Roman military conquest and its aftermath. The manufacture and distribution of BB.1 pottery, which is petrologically indistinguishable from the native Durotrigian wares (Williams 1977), continued from sites around Poole Harbour for the next three centuries or more. Romano-British Black Burnished wares from Dorset (BB.1) are well known throughout Britain and occur in a well defined range of forms which vary over time (Gillam 1970).

At Cadbury Castle less than 50 Romano-British BB ware sherds were recognised (11% of the entire assemblage), primarily upon the basis of rim form or decoration. In these circumstances it should be recognised that the real representation of post-conquest material will be somewhat higher, body sherds and probably a few form sherds having been, in all likelihood, overlooked among the great mass of Durotrigian wares. One other feature of the post-conquest Durotrigian Black Burnished pottery industry was its readiness to copy Roman forms (eg flagons, platters or samian bowl forms). A few of these early types are included within the assemblage reported on here, but once again further examples are almost certainly to be found within the bulk of the Durotrigian assemblage.

The bulk of the Romano-British BB.1 sherds were recovered from the Bank 1 sections (apparently Site J) and the gate. Very little was recognised elsewhere from the interior, including the northern slope of the hill (eg the dish Fig 108.6), although further representatives are scattered among the surface collections in the Taunton and Yeovil museums. Bowl, jar, and dish forms are recognisable within this group, including second-, third-, and fourth-century types. As in the final phases of the pre-Roman Iron Age, Cadbury Castle and the south Somerset region were dominated ceramically by the Dorset Black Burnished pottery industry. At rural sites such as Catsgore or Bradley Hill (Leach 1982; 1982a) this fabric comprised over 70% of the assemblages excavated, while assemblages from excavations at the Roman town of Ilchester average around 60% of Black Burnished ware (Leach 1982; 1993).

Grey wares: Grey wares (coarse, reduced pottery fabrics) are ubiquitous and are found among every assemblage of Romano-British pottery. Of the 40 sherds recognised (9% of the total assemblage) all but two came from the gate, although others were present in the sequence of material from Bank 1. Several sub-types could probably be defined here, ranging from medium fine to coarse sandy wares, but for such a small assemblage, the production sources of which are unknown, further subdivision serves no useful purpose. Pottery of this type was probably manufactured locally in a rural location. No sherds of a fine micaceous grey ware identified in later first-century contexts at Ilchester (Leach 1982, 141–142, Type Gii) and present among the pottery from Laidlaw's excavations in South Cadbury village were recognised among the hillfort assemblage.

Most of the pieces recovered from the gate were small, moderately abraded sherds, but some jars and bowl forms can be recognised and third- and fourth-century types are present. Virtually all the representatives of this fabric came from the Bank 1 sections, although a further scatter was present within the museum surface collections (not quantified).

Savernake Type ware: The largest fabric type represented in the assemblage (over 150 sherds representing almost 37% of the total) is synonymous with a group of coarse storage jars originating from kilns at Savernake Forest in Wiltshire (Fig 108.7–11). This product has been identified as one with close pre-Flavian military connections in southern England, an example of native British pottery manufacture stimulated and distributed by the requirements of the army. Beyond its core supply region in north Wiltshire, Savernake ware is recorded at such sites as Cirencester, Kingscote, and Uley in Gloucestershire, Bath and Sea Mills in Avon, and at Ilchester and Ham Hill in Somerset. The fabric at Cadbury Castle appears to correspond with Fabric 1 at Oare (Swan 1975, 42) and similar coarse storage jar forms can be paralleled from that site (*ibid*, figs 3.30, 40.49–52).

The bulk of this material was recovered from Sites B and N (the latter in association with the possible shrine Structure N5), and a smaller group from the south-western gate. No further sherds were quantified from the other excavated areas. A few others may well have been overlooked among the large assemblages of native coarse jars. One or two sherds were recognised in the museum surface collections and a small group is present among the assemblage from South Cadbury village.

Corfe Mullen ware: A distinctive cream buff or pale pink, medium fine sandy fabric is identifiable as a product of kilns at Corfe Mullen, Dorset (Calkin 1935). This was another attempt by Durotrigian potters to supply the Roman army during the early years of the conquest, in this case with flagons (Fig 108.3–5) and jugs of relatively fine quality. The range of output and period of production (Claudian/Neronian to possibly early Flavian) were both quite limited, but this product occurs widely in the south-west in military contexts from Exeter and in Somerset and Dorset (eg Waddon Hill, Hod Hill or Lake Farm, Wimborne in Dorset and Ham Hill or Ilchester in Somerset (Darling in Dore and Greene 1977).

At Cadbury Castle virtually the entire assemblage of *c* 60 sherds (over 13% of the total assemblage) came from the north-facing slope of the interior. Only a handful was recognised from other excavated areas, including one or two pieces among the assemblage from Laidlaw's site at the bottom of the hill, but none in the museum surface collections.

Shepton Mallet ware: Pottery from kilns at Shepton Mallet, Somerset is normally a buff-orange, relatively fine ware, produced in fabrics and forms which suggest a close association with the Severn Valley pottery industry. The early military connection with Severn Valley wares in its core production area around Gloucester may not extend to the Shepton Mallet kilns. No material of this type is associated with the earliest Roman contexts at Camerton (Wedlake 1958) although similar fabrics appear in Flavian contexts at Ilchester (Leach and Jones forth-coming). At Shepton Mallet the kilns are not closely dated, but were probably in production towards the end of the first century, although perhaps not beyond the early second (Evans forthcoming). Only four small abraded sherds (comprising 1% of the total assemblage), probably attributable to this source, were recognised. Most came from the south-west gate. No vessel forms can be recognised.

Miscellaneous sandy ware: Three additional oxidised sherds (less than 1% of the total assemblage) do not fit neatly into either of the above categories and have been assigned to this miscellaneous sandy fabric type. All three were abraded body sherds and could possibly be assigned as oxidised variants among the coarse ware fabrics as a result of burning.

Oxfordshire wares: Four small abraded sherds (1% of the total assemblage) of the distinctive red slipped, Oxfordshire colour coat fabric (Young 1977, Type C) were recognised. These derived from bowls manufactured in the later third and fourth centuries. At least one other piece, a mortarium, came from the rampart at Site J and a few other pieces may have existed or have been overlooked. None was recognised in the museum surface collections, but a much larger group (30–40) is present among the assemblage excavated by John Laidlaw in South Cadbury village.

New Forest ware: Products of the New Forest pottery industry are equally sparse. Five sherds (1% of the total assemblage) of the well fired, red- or purple-slipped, indented beakers produced in the later third and fourth centuries can be recognised (Fulford 1975. Fabric Type 1a). Twenty or more sherds come from Laidlaw's excavations in the village.

Miscellaneous colour coats: A further 17 sherds (4% of the total assemblage)of colour coat fabrics have been amalgamated into this type classification for convenience. Several types of thin-walled cups or beakers and flagons or jugs are represented. None of these can be assigned to a known source of production, although several suspected kilns were probably operating in the lower Severn Valley/south-west England region during the second and third centuries. Similar miscellaneous colour coats are present in the Ilchester Roman pottery assemblage (Leach 1982) and in smaller quantities on other rural sites in the region. The majority of sherds are recorded from the south-west gate, with a scatter from other sites and one or two within museum surface collections.

Discussion

To assess the significance of the Roman pottery from Cadbury Castle, its date and site occurrence are central to any discussion. In crude terms up to 70% of the assemblage is of first-century AD manufacture, the bulk of it probably dating from the middle decades. This is in accord with the proposed model of a Roman military occupation around AD 60 and relates to evidence for contemporary activity encountered during the excavations. A closer look at site occurrence and distribution is therefore instructive and relevant areas will be considered briefly in turn. The material from the stratified deposits in the interior has, however, already been discussed in relation to the form and date of the possible shrine Structure N5 and the pottery from the south-west gate above (see p173).

Over 40% of the available assemblage was recovered from the northernmost area of the interior (Site BW) on the north-facing slope. Much of the pottery here was recovered from deposits within and overlying the Iron Age hollow-way which was earlier than the rectilinear Roman barrack buildings and oven (B626 see p160–2). None of the Roman fabrics were recovered from the posthole and beam trenches of these buildings and the material above the hollow-way had been subjected to post-Roman disturbances. East of the hollow-way, a second group of material was recovered from the remains of the oven and deposits nearby, in association with fragments of Roman armour and military equipment. The assemblage from the oven comprises five sherds of South Gaulish Neronian samian, two fragments from a lamp (Fig 108.12), the rim of a Pompeian Red ware flanged dish copy, (possibly Corfe Mullen) sherds from two Corfe Mullen flagons (Fig 108.3–4), eight sherds of Dressel 20 amphorae (Fig 108.2), including a rim of pre-Flavian type (AD 30–70) and a sherd of Catalan Dressel 2–4 of similar date, sherds from at least two large storage jars of Savernake ware, and part of a platter in Black Burnished fabric. The bulk of the residual pottery in later contexts is contemporary (some joining sherds) and probably associated with the Roman structural features here, primarily comprising further groups of amphorae, Savernake, and Corfe Mullen wares.

Over 90% of the Roman pottery from this area belongs chronologically to the first-century, the Savernake, Corfe Mullen, and amphorae being dominant. Quantified by weight, the Savernake ware and amphorae are overwhelming by virtue of their bulk size and sherd weight. In terms of vessel representation, though not precisely quantified, no more than 10–15 vessels of all fabrics were probably present. The few other Roman sherds, including several colour coats and further samian and black burnished types, were all residual.

The two areas comprising Site J were essentially sections cut through the inner western bank in 1967 and 1969 (see p69). Regrettably, at the time of preparing this report, the Roman pottery from these trenches was not available for examination, although several pieces had been drawn. From these it is apparent that most, if not all, the pottery in this area was of later Romano-British type. Black Burnished and Grey wares and an Oxfordshire colour coat mortarium can all be recognised and are of later third- and fourth-century manufacture. Only one of the assemblages illustrated (J115) appears to be from a Roman period context, and even here the Black Burnished forms are late types. The remaining groups are certainly residual, deriving from post-Roman bank deposits. No representatives of the earliest Roman phase are present within this small group, although a late first- or early second-century fragment of samian is recorded.

Less than 8% of the total assemblage available for examination derives from other excavated areas. Among this samian is the largest group (being easily recognisable, it was evidently separated out at an early stage from the larger ceramic assemblages with a view to specialists identification). The collection from Bank 1 Site D is particularly noteworthy as the other principal group of Neronian, South Gaulish ware. Without further infor-mation for this area of the site it is impossible to suggest a context for its occurrence here, although deposits or events contemporary with those documented on the northern slopes of the interior must be strongly suspected. A more extensive Roman pottery assemblage was probably recovered here and it is surely significant that among the few other pieces seen as part of this analysis, two were of Corfe Mullen fabric.

Elsewhere the recorded representation of Roman pottery is so small that it may be accountable as no more than 'background noise', such as might arise from agricultural manuring. However, one small group of pottery, the imported finewares, is noteworthy. Excepting the sherd of *terra nigra* noted from the gate, fragments of Lyon Ware (Fig 108.13) and the Pomepian Red lid came from sites on the hilltop just to the south of the northernmost area excavated (Site BW). These sherds come from vessels current during the early- and mid-first-century AD, and from their recovery so close to the presumed barrack buildings we may suspect that these too arrived as a result of the Roman military occupation.

A cursory examination of the surface collections of material held in the Taunton and Yeovil museums reveals the presence of further Roman pottery among the bulk of primarily Iron Age sherds recovered. This material is of limited value in so far as it is poorly located and for the most part heavily abraded. No more than 5% of the surface collected ceramic material is of Roman type, among which are certainly representatives of most type fabrics recognised in the excavation analysis. Where identifiable however, it is noticeable that most of the surface material is of later Roman date, a far greater proportion than that recorded in excavation.

Overall, the Roman pottery analysed for this report is strongly biased towards a first century AD representation. This is reflected in the structural record as excavated. Little more light can be shed by this assemblage upon the hypothesis that a later Roman occupation was centred upon a Romano-Celtic temple. In the absence of relevant excavated contexts, the principal evidence for this derives from structural material and portable finds incorporated into later defensive circuits of the hillfort. The only group of pottery available for examination from such a locality was from the south-west entrance. Very small quantities of later Roman pottery were recognised here, although it may be significant that a proportionally larger assemblage seems to have been present behind Bank 1 at Site J. Excepting the areas on the hilltop, from which very little later Roman pottery is recorded, Site J is perhaps closest to the highest point on the hill. In further support of this hypothesis are occasional stone and clay roof and flue tile fragments, and stone tesserae with mortar adhering, within the museum surface collections, some of which can be located to the north-west of the hillfort interior.

Glass vessels

by Jennifer Price and Sally Cottam

One hundred and twenty-one glass fragments were found. Forty-seven fragments of post-medieval and modern glass are not discussed. The remaining 74 fragments indicate glass deposition in the late first millennium BC and the first two-thirds of the first millennium AD. Within this group 14 beads are discussed in Chapter 6, and 29 fragments from a minimum of 14 vessels belonging to the early post-Roman occupation have been published elsewhere (Price and Cottam in Alcock 1995).

The Roman vessel glass was found in several areas of the site, and there was no noticeable concentration of finds. Some fragments came from contemporary deposits but the majority were found in unstratified or residual contexts. The fragments were generally very small, which often made precise identification difficult, and some were quite worn, from use either during the life of the vessels or after breakage. A few fragments have been distorted by heat. These were widely distributed in different areas of the site and do not appear to provide evidence for glassworking.

The surviving vessel glass fragments suggest periods of glass use from the first to the fourth centuries AD. The preponderance of tablewares is noteworthy. Most of the recognisable vessels are cups, beakers, bowls, and jugs, and only two fragments from prismatic containers are present.

The most coherent group of tablewares (12 fragments representing 10 or 11 vessels) belongs to the Claudian or early Neronian period. These vessels were probably produced in Italy or the Rhone valley; they are comparable with many contemporary groups in the western provinces. A second group (ten fragments from ten vessels) is not closely dated and appears to represent sporadic episodes of glass deposition in the late second, third and fourth centuries. These vessels may have been produced in the Rhineland, northern France or Britain; they are comparable with contemporary material in the north-west provinces. The dearth of blue/green container fragments strongly suggests that little glass was reaching Cadbury Castle between about AD 70 until the late second century.

Although the quantity of Claudian/Neronian glass is very small, the composition of the assemblage is broadly comparable with finds at other hilltop defended sites in southern Britain which were garrisoned by Roman troops in the mid-first century, such as Hod Hill (Harden 1968) and Waddon Hill, Dorset (Harden 1979), and Brandon Camp, Herefordshire (Price 1987). Good quality polychrome and brightly coloured cast and blown tablewares are characteristic of this period, and become uncommon from the early Flavian period onwards.

At least two and possibly four vessels were cast or sagged. The two certain examples are both mid/dark blue pillar moulded bowls (Fig 109.1–2). The others, a dark blue and opaque white vessel and a yellow brown vessel, may also be pillar moulded bowls but exact identification is not possible as they are represented by partly melted lumps. The blown vessels include two polychrome jugs (Fig 109.3–4), three or four strongly coloured monochrome vessels, one with vestiges of trailed or painted decoration, and another with unmarvered horizontal trails, and a pale greenish colourless vessel, probably a cup, with horizontal wheel-cut lines.

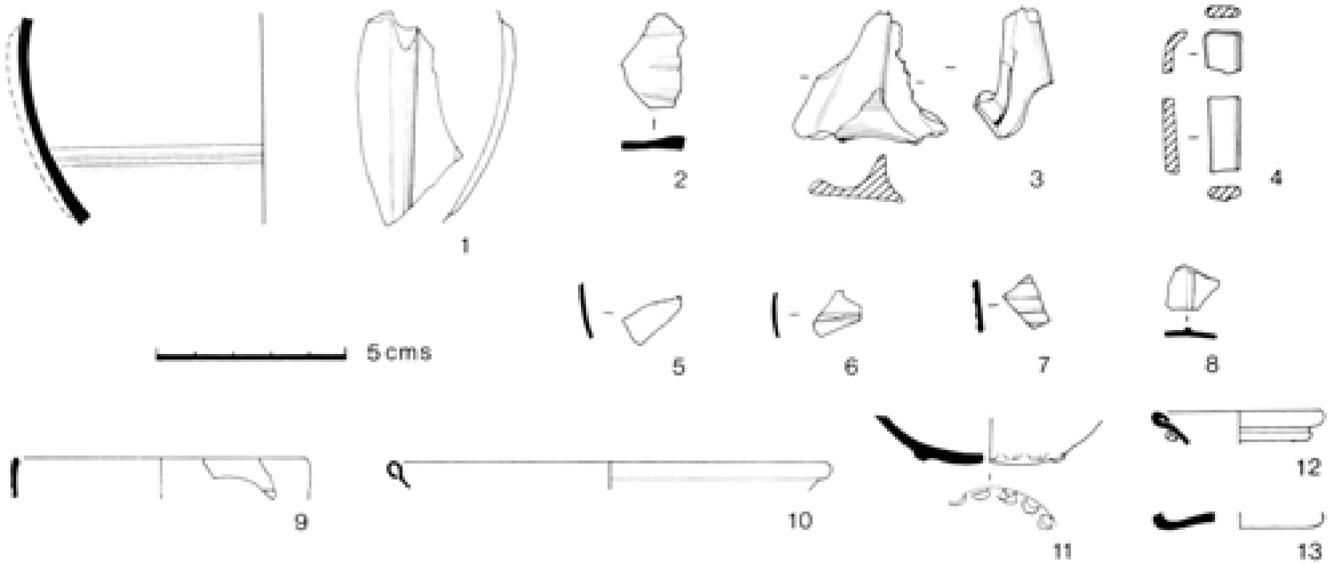


Fig 109 Glass vessels. Scale 1:2

Pillar moulded bowls have vertical rims, narrow plain shoulders, thick-walled convex bodies with prominent vertical ribs, and slightly concave bases. The inside surface is dull with wheel-polishing, and is sometimes decorated with narrow wheel-cut grooves. The outside surface is shiny except on the rim and shoulder which are ground and wheel-polished. The distinctive combination of surfaces makes even the smallest fragments of these bowls easily recognisable. Pillar moulded bowls are found throughout the Roman world in the first century AD. Isings (1957, Form 3) has listed many from dated contexts in the western provinces, and examples from Britain have recently been examined from Colchester (Cool and Price 1995, 15–26) and Usk (Price 1995, 140–49). Most pillar moulded bowls in Britain were made in blue/green glass, and polychrome mosaic and strongly coloured monochrome examples are not very common. Blue pillar moulded bowl fragments have been found at several sites in southern and western Britain associated with mid-first century military activity. These include Exeter (Harden 1952, 93 no 2), Kingsholm, Gloucester (Price and Cool 1985, 45 no 2, fig 47), Usk (Price 1995, 145–7 no 7, fig 42), and Brandon Camp (Price 1987, 74 no 2). The two pillar moulded bowls at Cadbury Castle have rather different profiles. One is from a deep bowl with two close-set horizontal wheel-cut lines on the lower body inside, and the other is from a hemispherical or shallow bowl with a wide base.

One of the polychrome jugs (Fig 109.3) has an opaque white ribbon handle with a central rib and three-pointed 'claw' terminal applied to a translucent mid-blue convex body. The other (Fig 109.4) has at least one narrow angular ribbon handle in translucent dark blue with opaque white streaks on the surface and within the handle. A range of thin-walled jugs with convex bodies and one or two angular rib handles was produced in the western provinces in the Claudian and Neronian periods. Most of these were monochrome, in blue/green or strong colours, though a few had rim, handle, and body decoration in one or more contrasting colours. Isings (1957, Forms 13–15, 52a and c, 54, 56) lists examples from dated finds in Italy, southern France, Switzerland, and the Rhineland, and others are known in Spain and elsewhere.

Most of these jug forms have only occasionally been recorded in Britain. A blue thin-walled globular jug is known at Colchester (Thorpe 1935, 25, pl IIIa), and a blue/green one was found at Usk (Price 1995, 178–9, 182 no 114, fig 47), but otherwise only small fragments have survived. The use of contrasting colour for the handle is a very unusual feature in Britain, apart from a fragment with a dark blue body and an opaque white handle from Lake Farm, Wimborne, Dorset (unpublished).

A jug form which has been recognised quite frequently on Claudian/Neronian sites in Britain is the two-handled jug or amphorisk. The distribution has recently been discussed in connection with finds from Colchester (Cool and Price 1995, 148–9) and Usk (Price 1995, 179, 182 no 115, fig 47). Most of these vessels have handles with a rounded central rib and edge ribs, but a dark blue one found at Exeter (Charlesworth 1979, 228 no 30, fig 71) has narrow angular ribbon handles very similar to the Cadbury Castle fragments. It is thus possible that the handle fragments might come from an amphorisk, but as nothing is known about the body this identification is very tentative.

Three small fragments from dark blue vessels survive. One is completely undiagnostic, and the other two (Fig 109.5–6) might come from the same convex vessel, despite being found at some distance from each other. The vessel form cannot be identified, but the outer surface on both fragments has shallow horizontal grooves which may have contained marvered trails in contrasting colour or painted decoration, now weathered out. The convex yellow-brown fragment (Fig 109.7) has retained its narrow unmarvered self-coloured trails which were probably wound spirally round the body.

Strongly coloured vessels with trails in contrasting colours are not common in Britain, apart from a few small fragments with white trails in Claudian/ Neronian contexts at Colchester (Charlesworth 1985 MF3:F3 nos 16–20, fig 80; Cool and Price 1995, 60–1 no 275, fig 4.1), Bagendon (Harden 1961a, 199 nos 1, 3–4 pl LV), and Chichester (Charlesworth 1981, 293 nos 4–5, 8–9, fig 15.1). Alternatively, it is remotely possible that the shallow horizontal grooves record the former presence of painted lines. Brightly coloured cups with painted decoration have occasionally been noted in Claudian/Neronian contexts in southern Britain, and in some instances the paint has weathered away, leaving roughened patches. Strongly coloured vessels with self-coloured trails occur in early and late Roman contexts, but this yellow/brown fragment is too small and undiagnostic for the vessel form to be identified.

The last Claudian/Neronian fragment is from a good quality greenish colourless vessel with horizontal wheel-cut lines. Although positive identification of this form is not possible from the surviving piece, it is likely to be a cup. Polychrome, strongly coloured, blue/green and nearly colourless hemispherical and cylindrical cups (often known as Hofheim cups) have been found on early- and middle-first-century AD sites in most parts of the Roman world. These have cracked-off and ground rims, wheel-cut or abraded lines on the bodies, and concave bases. Isings (1957, Form 12) has listed dated finds in the western provinces. Many examples are known on Claudian/Neronian sites in Britain, but they disappear rapidly soon after AD 70. Their distribution in Britain has recently been discussed in connection with finds at Colchester (Cool and Price 1995, 64) and Usk (Price 1995, 159–62).

The remaining Roman tablewares appear to represent occaisional deposition of glass over approximately two centuries. They do not constitute a closely dated group. One small piece comes from a straight-sided yellow/brown vessel decorated with narrow vertical ribs (Fig 109.8). This is similar in some respects to the piece included in the Claudian/ Neronian group described above. Yellow/brown glass is most common in the first and early second centuries, but the poor quality of the glass suggests that this is from a late Roman vessel, perhaps a fourth-century beaker.

Colourless tablewares appeared in Britain in the Neronian period, and became more common from the early Flavian period onwards, as polychrome and brightly coloured monochrome tablewares began to disappear. Colourless glass remained in use for tablewares until the end of the Roman period, although its quality varied during this time, deteriorating noticeably in the fourth century. Six fragments at Cadbury came from colourless cups, bowls, and a flask, or bottle. The fire-rounded rim fragment (Fig 109.9) comes from a cup or bowl with straight sides, which appears to have been decorated on the upper body with a trail which is now missing. The glass of the surviving piece is quite thin and rather poor in quality, but it is generally comparable with the cylindrical cups with fire-rounded rims and double base-rings which dominate assemblages of drinking vessels in the north-west provinces in the late second and first half of the third centuries AD (Isings 1957, Form 85). Some examples have horizontal self-coloured trails on the upper body, and a few have trails in a contrasting colour. These cups were very common indeed in Britain, often occurring in large numbers at settlement sites. Their distribution has recently been discussed in connection with finds from Colchester, where at least 46 examples were noted (Cool and Price 1995, 82–5).

There is also one heavily weathered fragment from a shallow bowl with a tubular rim (Fig 109.10). Bowls with this form of rim were produced at several periods, but the use of thin bubbly colourless glass suggests a third- or fourth-century date for this vessel. The fragment is comparable with a colourless bowl belonging to the mid-third century or later at Pentre Farm, Flint (Price 1989, 82 no 18 fig 29), and others from Barton Court Farm, Abingdon (Price 1986, 4 no 7), and Dorchester on Thames, Oxon (Charlesworth 1984b, 152 no 9 fig 38).

The lower body and base of a convex vessel, probably a cup or beaker, has a ring of pulled-out points around the edge of the base (Fig 109.11). Colourless and greenish colourless vessels with pulled-out decoration on the body are found in late-second- and third-century contexts in the north-west provinces. In Britain, four colourless cups came from mid-third-century burials at Brougham, Cumbria (Cool 1990, 170–1, fig 1 nos 2–5) and other British examples have been noted in connection with finds from Colchester (Cool and Price 1995, 86–7). By contrast, vessels with pulled-out points in a ring round the base edge are much less common, though beakers with this kind of base have occasionally been noted in the Rhineland and elsewhere. The high quality of the glass of the Cadbury fragment is noteworthy.

The rim fragment (Fig 109.12) from a colourless flask, jug or bottle has a rolled-in edge, a funnel mouth, and a thick unmarvered horizontal trail below the rim. Several vessel forms produced in the north-west provinces in the mid to late third and fourth centuries AD have this type of rim. Isings (1957, Forms 120a–b, 126, and 127) lists many finds from dated contexts. The colour and quality of the glass is comparable with a one-handled bottle from Colchester found in a mid-second-century to mid-third-century context (Cool and Price 1995, 201 no 2245, fig 11.15) and with a two-handled bottle from Shakenoak (Harden 1968, 76 no 8, fig 26 no 6).

The five pale greenish body fragments, one with a horizontal abraded line, and the pale greenish concave base fragments (Fig 109.13) come from fourth-century beakers, cups or bowls. The piece with the abraded decoration is likely to be from a conical beaker with a cracked-off rim and small concave base, but the precise form of the other vessels is less certain. Several of the most common tableware vessels with cracked-off rims in production in the north-west provinces in this period have simple concave bases, including hemispherical cups, conical beakers, and indented conical bowls. Isings (1957, Forms 96,106, 197,117) has listed many dated examples. All three forms are frequently found in Britain, in burials, as at Lankhills cemetery, Winchester (Harden 1979) and on settlement sites, as at Colchester (Cool and Price 1995, 88–92, 104–5) and elsewhere.

The last (and smallest) group of Roman vessel glass from Cadbury is the bottles. The two blue/green body and base fragments come from one or two mould-blown prismatic vessels with raised basal designs. These are most likely to be square bottles, as this was the commonest of the blue/green vessel forms produced in high quantities for the transport and storage of liquid and semi-liquid foodstuffs in the first and second centuries AD (Isings 1957, Form 50).

In Britain, a few square bottles occur on mid-first-century sites, and the form became very common after AD 70, continuing in production until late in the second century. These bottles were distributed very widely. They are present in great numbers in virtually every late-first- to second-century assemblage of vessel glass in Britain, and frequently account for more than 50% of the glass fragments of the period. Their virtual absence from this site is therefore a strong indication that the products transported in these containers were not reaching Cadbury, which ties in well with the complete absence of glass tablewares between *c* AD50-175.

Kimmeridge shale containers

by Peter S Bellamy

A very small number of Kimmeridge shale container fragments were recovered. These can be divided into two basic types, bowls and platters.

Bowls: Only a single small rim sherd of a bowl was recovered (Fig 110.1). This appears to be from a lathe-turned, upright-sided vessel with a double bevelled rim and an external bead 16mm below it. The sherd is warped, making it impossible to determine the original diameter of the vessel.

It was recovered from a pit in the northern area of the interior, which is not closely dated, but the vessel is probably of late Iron Age or possibly Roman date, given that it was lathe-turned. Only a small number of shale vessels have been recovered from Iron Age sites and no precise parallels for this bowl can be found. It falls within a concentration of Iron Age shale vessels noted in north Dorset and Somerset (Cunliffe 1982, fig 15).

Platters: Some large flat or slightly curved fragments of shale, 15–17mm thick, were recovered. These may be the remains of platters, though the pieces were all very fragmentary and in a poor state of preservation, so their precise size and shape cannot be reconstructed, nor can the precise number be determined. Only one piece retains part of the edge, which is bevelled and has a small lip. This edge is slightly curved, indicating that this platter may have been originally circular or oval in shape. None of the fragments is decorated but the faces, where they survive, are smooth and flat. Two fragments bear traces of irregular criss-cross striations on one face.

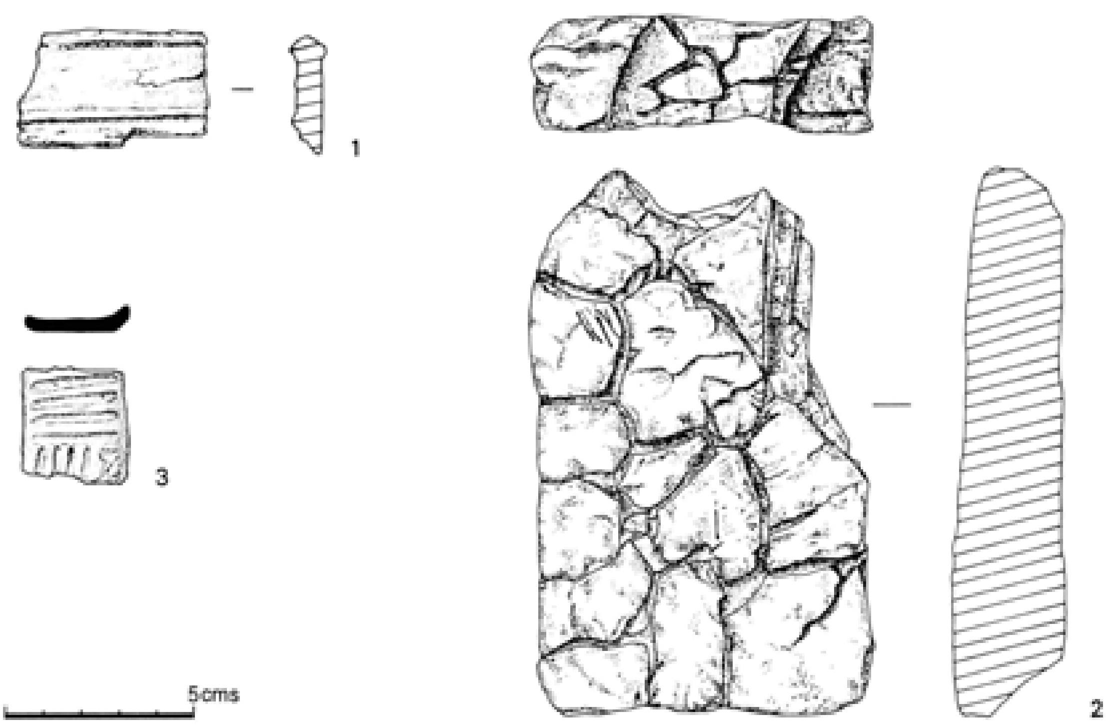


Fig 110 Kimmeridge shale object and copper alloy container fragments. Scale 1:1

They were all recovered from three contexts in the interior, only one of which can be dated to Late Cadbury. Objects of this type are not common in Iron Age contexts; the most complete parallel comes from a late Iron Age context at Maiden Castle (Laws 1991, fig 186.9), though this is not so well finished. Another possible circular platter and several flat fragments with striations were also recovered from Maiden Castle, the latter pieces being interpreted as cutting boards (Wheeler 1943, 314–8, figs 108.4, 109.15). A platter is recorded, but now lost, from the pit containing the iron hoard buried at the back of the rampart (D630A, see p83).

In addition to these there are two broken objects which cannot readily be identified, one with a hollow moulding along the one surviving edge and traces of an irregular perforation (Fig 110.2).

Metal containers and container fittings: iron

by C Saunders

Iron fittings and wooden buckets

Bucket handles (Fig 134.15): Two types were in use in pre-Roman Britain. Type 1 has attachment loops bent over at right-angles to the plane of the handle. Type 2 has loops set in the same plane as the curve of the handle. The vessels from which these handles came had mouth diameters ranging from 130 to 255mm and fragments of both types are present at Cadbury Castle.

Iron tankard mount: A small tankard mount of long waisted lozenge form with pierced circular expansion at each end is known from Cadbury. Spratling has pointed out that this is remarkably similar to the copper alloy mount on the Trawsfynydd tankard (Fox 1958, pl64). Although most tankard fittings are of copper alloy, at least three iron handles are known from central southern Britain.

Cauldrons

Several types of sheet metal cauldron were used during the Iron Age but all the iron pieces from Cadbury Castle seem to come from the Letchworth/Battersea type, named after two finds which demonstrate the complete form. This type of cauldron consists of an iron rim attached to a deep iron 'collar' which forms the upper part of the cauldron body, the main part of which was of copper alloy with copper alloy rivets joining the two. A complete rim and collar, complete with two ring handles, come from Letchworth, Hertfordshire (Moss-Eccardt 1965). These ring handles were fixed to the collar immediately below the rim by means of a staple, in this case decorated with a triple 'moulding', which passes through the collar and is welded into a lozenge shaped plate or washer, which is itself welded to the collar and serves to secure the staple and strengthen the collar at the point of attachment. Complete cauldrons of this type are known from middle late La Tène contexts on the continent (Eggars 1951, Type 5; Vouga 1923, pl XXVII.2, 3, from La Tène, and Jacobi 1974, from Manching and elsewhere).

The cauldron fragments from Cadbury Castle consist of four fragments of cauldron rim, at least six fragments of collar, six ring handles with attached staples, and in two cases parts of collar and one in-complete staple.

Cauldron rims (Figs 134.9, 135.49): Two sizes are present among three fragments; one with an internal diameter at the rim of *c*360mm and one of *c*500mm (the complete Letchworth rim is 508mm in diameter), showing that the four fragments come from a minimum of two vessels. In all of the fragments the collar survives within the rim, which is hollow and bent round the top of the collar. One fragment still has a small part of the collar projecting below the rim. Three fragments of rims of this type were found during Wheeler's excavations at Maiden Castle (unpublished, Dorchester Museum); two of these came from the area which produced, from 'the early Belgic level,....a large quantity of fragments of iron and bronze and incomplete leg-bones of a pony', (Wheeler 1943, 274, pl XXIXB). With this material was a 'horn-cap' and five, possibly six ring handles, with simple attachment staples like those discussed below, although these were not identified as such by the excavator.

Cauldron collars (Figs 134.1, 134.10, 135.50–2): Of the six fragments only one gives a diameter. The diameter of *c*360mm compares with one of the rim sizes above. Three fragments come from the bottom of the collar and still have the copper alloy rivets by means of which the lower part of the cauldron body was attached. No fragment now shows the complete depth of the collar.

Cauldron handles (Fig 134.11–14): Of the six iron handles only two seem to form a pair; and therefore at least five cauldrons are represented. One example still retains a portion of a collar, to which it is attached by means of a staple and lozenge-shaped washer, exactly as at Letchworth. The only difference is that this and all the other Cadbury Castle handles have plain attachment staples and are not decorated with the triple moulding found at Letchworth and elsewhere. There is a triple-moulded staple from Cadbury but this is not now attached to a handle.

Cauldron staple (not illustrated): The single triple-moulded staple for attaching a cauldron handle is incomplete with the back missing. Staples with triple mouldings were not only used on cauldrons of the Letchworth/Battersea type, they also occur on a cauldron with two piece copper alloy body found in a La Tène III burial at Letchworth (Stead 1986, 55, figs 21, 23).

Metal containers and container fittings: copper alloy

by Brendan O'Connor and Jennifer Foster

A rivet, ring handle, and base-plate fragment (Fig 111, see p272) all derive from section sheet bronze vessels of the late Bronze Age. The rivet is identifiable as a cauldron rivet by its concave head which conforms with the large, flat, internal heads of rivets from cauldrons of Class A (Gerloff 1986, 86). The earliest

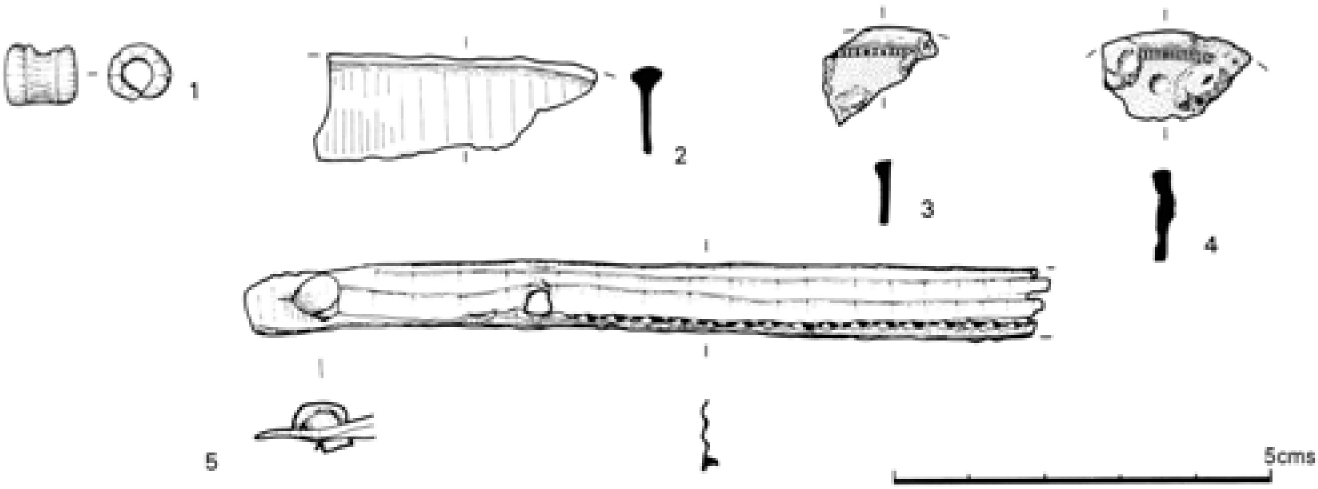


Fig 111 Copper alloy container fragments. Scale 1:1

insular cauldrons are now dated to the Penard phase (thirteenth to twelfth centuries BC) but fragments occur in later Wilburton and Ewart Park hoards; there are two possible examples from south-west England (Gerloff 1986, 102, fig 12). The ring handle measures 60mm in diameter and is presumably from either a bucket or a cauldron. The cast base-plate was originally attached below the outer circumference of the base of a sheet bronze bucket. This fragment clearly belongs to the wheel type of base-plate defined by Needham (1986, 376–7). The best comparison appears to be with the base-plates in the Hatfield Broad Oak hoard, Essex (Davies 1979, 151, fig 8.1, 2–3) which have concentric and radial grooves across the whole underside. The recent find from Little Houghton, Northamptonshire (Needham 1986, fig 2) has grooves only on the outer circumference, while the plates in the Bagmoor hoard, Lincolnshire (Smith 1957, GB23.1) have only concentric grooves. There is no sign on the Cadbury fragment of a spoke such as occurs on base-plates from Northern Britain and Ulster (Needham 1986, 376, n32). Associated finds of base-plates indicate a Ewart Park date (tenth- to eighth-centuries BC; *ibid*, 377) though earlier currency cannot be excluded. The up-to-date distribution provided by Briggs (1987, 183–7, fig 2) shows Cadbury as an isolated find in western England and the only one from a hillfort.

Five Iron Age copper alloy fittings or fragments were recovered. One is a cast bucket suspension loop, probably of late Iron Age date (Fig 71.17). It would originally have been one of a pair of bucket mounts to support a swing bucket handle. It is a simple rectangular mount with a semi-circular loop at the top, which would have protruded above the top of the bucket.

Additional finds include a typical La Tène moulding to decorate the centre of a bucket handle (Fig 111.1), the fragment of a flat-topped copper alloy rim from a straight-sided vessel (Fig 111.2), and two non-joining fragments from a curved copper alloy plate simply decorated with a double line of punched dots 2.5mm from the rim (Fig 111.3, 4). A straight bronze strip with two rivet holes (Fig 111.5) possibly also comes from a wooden or metal vessel.

8 The body as agent

Control and production of resources

Introduction

We have already acknowledged the arbitrary nature of some of our distinctions; food clearly requires control, acts of production, and exchange, but we have distinguished here between the technologies used in food preparation to feed the body (Chapter 7) and the technologies described below by which the body works upon the world in other ways. This theme will be covered again in Chapter 10 with specific reference to the exploitation of animals (see p278) and metal production (see p291).

The briquetage

by Cynthia Poole

The quantity of material available for study consisted of 29 samples varying between 1 and 4 sherds each and weighing a total of 615g. The sample is very small and it is likely that most of the briquetage is still mixed with the pottery, as the present research programme did not allow all the pottery to be examined directly.

Four fabrics could be identified:

(i) a fine clay matrix tempered with a high density of coarse chaff, as evidenced by the impressions (8 samples, 192g)

(ii) a fine silty fabric; no added temper (13 samples, 117g)

(iii) clay with sand temper (5 samples, 148g)

(iv) clay with rounded coarse sand and grit, rather platy, probably limestone or quartzite (3 samples, 158g).

Three forms could be identified. First, cylinders measuring between 80 and 260mm in diameter, though 110–150mm was most common. The walls were between 8 and 18mm thick (nine samples, 169g). Secondly, a bowl-shaped vessel with a flat base. The base measured 100mm in diameter and the walls were 10–18mm thick and flared out at an angle of about 130% (one sample, 150g). Finally, a trough-shaped container with walls measuring in excess of 60mm long by 40mm wide (three samples, 115g). In addition to these, 16 samples weighing 182g could not be assigned to any form.

In terms of weight, both the fabrics and forms show little significant difference. The forms present are the most typical of the containers used for transporting salt in the Iron Age and are similar to those found at Danebury (Cunliffe and Poole 1991, 404–7), Maiden Castle (Poole in Sharples 1991a, 206–7), and Hengistbury Head (Poole in Cunliffe 1987, 178–80). Of the fabrics, only (iv) is unlike those identified from these sites.

The salt could have been imported either from the Dorset coast centres or from the Somerset Levels coastal region, Cadbury Castle being roughly equidistant from both. Without more detailed analysis of the fabrics and greater information on the production sites in Somerset, it is not possible to say whether one or both sources were used. Less than half of the contexts containing briquetage could be dated, but briquetage was present in all periods with the largest assemblage from Middle Cadbury.

Late Bronze Age tools

by Brendan O'Connor

Among the Early Cadbury material were a number of late Bronze Age tools, including two socketed gouges (for compositional analysis see p272) and two double-edged socketed knives (Fig 112.2–3). There is also possible socketed hammer (Fig 112.1), but this is not a characteristic form and it may be the butt of a tubular spearhead ferrule.

Socketed gouges occur from Wilburton to Llyn Fawr phases (twelfth to seventh centuries BC) of the late Bronze Age, though most datable examples belong

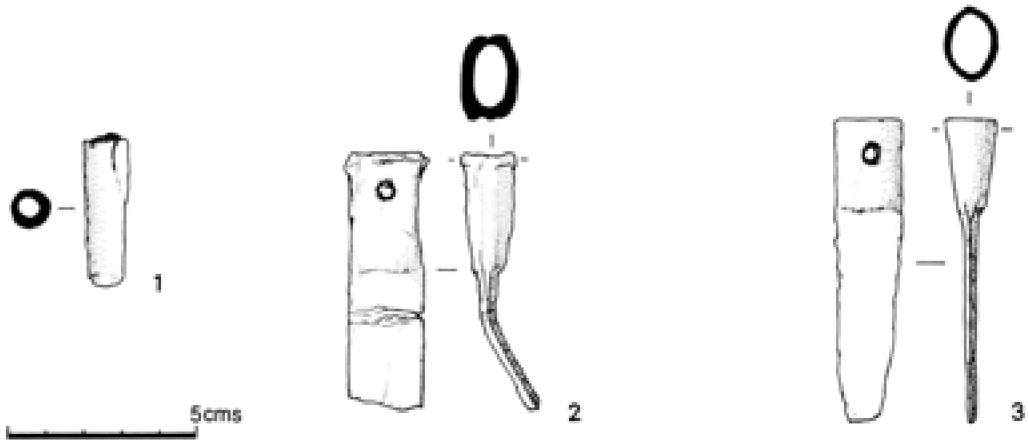


Fig 112 Copper alloy socketed hammer and knives. Scale 1:2

to the tenth- to eighth-century Ewart Park phase (Needham 1990b, 49). Composition of the Cadbury gouges indicates a Ewart Park date. South-western finds (Pearce 1983, 338, 374; Northover 1988, 79, fig 40) include examples from Mount Batten and Kent's Cavern, Devon; Ham Hill, Somerset, and Hod Hill, Dorset.

Both the socketed knives belong to the most numerous Thorndon type, with straight socket base, and both appear to have the commonest blade section with flat midrib (Hodges 1956, 38; Burgess 1982, 38). These knives are characteristic of the Ewart Park phase (O'Connor 1980, 178). The distribution of socketed knives in the south-west (Pearce 1983, 338, 375; Northover 1988, 80, fig 40) includes settlement finds from Mount Batten and Kent's Cavern, Devon.

Iron woodworking tools

by C Saunders

Adzes

One adze socket was removed from the iron hoard behind the inner rampart (D630A see p83 Fig 38.9), a second from Late Cadbury deposits around the Roman oven (B626) in the interior of the site (see p175). The adze is used for trimming and shaping timber and adze marks were observed in the sides of at least one pit at Cadbury. It is now a common standardised tool but in the past it was widely used with specialised forms used by different crafts, but there is no sign of such specialisation among the Iron Age material, although there is in Roman times. Surviving examples have cutting edges which range in width from *c* 35 to 65mm. The commonest form of Iron Age adze has a pronounced butt or head at the back of the socket, a characteristic which distinguishes them from examples of other periods. These two examples are comparable.

Axe

A single complete shaft-hole axe came from the same rampart hoard as the adze socket (see p83, Fig 38.2). For some periods it is possible to classify axes according to function and the axes surviving from the Iron Age do vary in size and therefore presumably function, although the sample is too small to determine significant groupings. Two main types of axe were used in the Iron Age, the socketed axe, derived originally from the Bronze Age socketed form, and the shaft-hole axe of modern form (Manning and Saunders 1972); of these the socketed form is the commonest. The axe from hoard D630A was made by wrapping a strip of metal of the required size around a mandrel to form the eye (or shaft hole) and this strip hinged at the butt (or poll) so that the blade consists of two pieces of metal welded together with another piece of iron welded to the face of one side to form the cutting edge. Very similar axes are known elsewhere from the southern British Iron Age. The cutting edge of the Cadbury axe is 800mm wide and it is large enough to have served as an effective felling axe.

Saws

One complete saw and a blade fragment came from the rampart hoard D630A (Fig 38.3), and in addition seven blade fragments are also recorded. All the saws which survive from the Iron Age appear to be hand saws although frame saws were commonly used in Roman Britain. At Glastonbury, the excavators recorded that 'A few examples of saws were among the discoveries but these were small and obviously unsuited for heavy work....The paucity of saws is not surprising when we consider that little evidence of their use could be deduced from the examination of the vast collection of timber entering into the construction of the village. The number of pieces of saw marked wood noted during the digging did not exceed a score, and none of these were of greater diameter than 6ins' (*c* 150mm). This Glastonbury evidence fits well with the length of complete saw blades, which range from 188 to 320mm.

This saw is typical of the normal Iron Age saw. Saws of this type had handles of wood, as on the fine example from Glastonbury (Bulleid and Gray 1917, pl IX, 153) which has an ash handle of curved form ending in a terminal knob, or of antler, as at Bredon Hill (Hencken 1938, fig 9.1), the natural curve of the material making it an appropriate selection. In common with other early saws the teeth slope towards the handle so that the blade cut on the pull, in contrast to modern saws which cut on the push or down stroke. The wrought iron used for Iron Age blades would tend to buckle if the action was on the push, but when pulled the action keeps the blade tensioned as it works. To prevent the blade binding in the cut or kerf the teeth are set, exactly as in modern practice, turned outwards alternately; this has the effect of making the edge the widest part of the blade. Most Iron Age saws were treated in this manner. In form such saws resemble modern pruning saws (see eg Rees 1979), but it is unwise to push such an analogy too far as these are very specialised tools, whereas saw marks suggest that Iron Age saws were also used for cutting bone, horn, and antler as well as wood.

Where it can be determined, the number of teeth/cm is in accord with other Iron Age saws in suggesting that two groups of saw are involved. The first group have 2.0 to 3.3 teeth/cm and the second 4.0 to 5.0 teeth/cm. This corresponds fairly closely to the modern division between cross cut saws, used for cutting across the grain, and panel or tenon saws, used for cutting tenons and other fine work. Some saws in the first group, including the complete Cadbury example, do have coarse enough teeth to have served as rip saws, used for cutting down the grain.

One final example of a possible saw from a Middle Cadbury context has a narrow unriveted tang. There is something similar to this from Glastonbury (Bulleid and Gray 1917, pl LXI, I11), although with finer teeth. If these are saws then it is difficult to see how they functioned without the handle loosening on the pull stroke, for neither has the end of the tang turned over to prevent this.

Iron metalworking tools

by C Saunders

Metalworking tools are very uncommon site finds, the best examples coming from hoards or other deliberate deposits. Although there are a few examples, in some cases the identification is probable rather than positive.

The finds include a cold chisel from the surface deposits in the interior (Fig 134.8). Cold chisels are used by blacksmiths and other metalworkers for cutting cold metal and also by masons for cutting stone. They are short and thick but long enough to hold in a clenched hand (at least 120/130mm), the Cadbury example being just long enough to fulfil this function.

Three probable cold sets were also recovered, all from the interior and one from a Middle Cadbury context. Sets are used for cutting both hot and cold iron; they are handled and struck with a sledge hammer, unlike chisels used for lighter work which are hand-held and struck with a hand hammer. In modern practice hot sets have a finer, more slender edge than cold sets, but with corroded material the original form of the edge is often hard to determine. Wedges, used for splitting timber, the method of forming planks in the British Iron Age, closely resemble some sets and in practice it is often difficult to distinguish one form from the other.

Punches (eg Fig 135.69) are used on both hot and cold metal and also in leatherworking. It is perhaps possible that some of the seven small tools assigned to this category from Cadbury could have been used on leather.

A single complete stake (Fig 135.70) was recovered from topsoil over the surviving surface deposits in the interior. In use this tool was set into a block or bench by means of the 'tang'. Its form is similar to a modern hatchet stake used for bending sheet metal by hammering it over the edge of the tool.

Antler handles

by W J Britnell

Five simple handles made from red deer antler are probably for iron knives or choppers, of which three are from Middle Cadbury contexts and two from Late Cadbury contexts. Two (not illustrated) were intended for simple tanged implements, one also having a ferrule, and three (including Fig 113.1–2) for tanged and riveted implements, one of which retains an iron rivet. Four further possible red deer antler handles may have been intended for simple tanged implements, of which two are from dated contexts, one of Middle Cadbury date and one of Late Cadbury date.

Forked handles

There are three similar 'handles' with sawn slots, one of red deer antler and two of roe deer antler (Fig 113.3). Close parallels are known from a number of Iron Age sites, particularly in Somerset (Britnell 1977, 115–6, fig 16; Coles 1987, 88). The consistent form, invariably without accompanying rivet holes and normally made from roe deer antlers, suggests a specialised function. None of the surviving examples appears to have been found with any surviving evidence of what was held by the sawn slots, but it seems probable that this was intended to hold a blade secured by binding around the beam, possibly represented by the decoration on an example from Meare East (Coles 1978, fig 3.27, H110). In the case of some examples parts of the pedicle around the base of the antler have been retained at the end of the slot, which form a raised flange which may have helped to secure binding around the beam (eg Bulleid and Gray 1917, pl LXVI, H79, H168, H209; Gray and Cotton 1967, pl LVIII, H69; Eagles and Evison 1970, 33 fig 11f).

Whetstones and sharpeners

by Peter S Bellamy

The 140 whetstones from Cadbury Castle (eg Fig 113.4–10) have been classified according to the shape of their wear surfaces, that is, whether they have a flat or convex shape across the width or have a grooved working surface. Several have traces of pitting on one end, suggesting that they were also used for other purposes such as hammerstones or grinding stones, but these have not been considered separately. This system has been adopted because it reflects potentially greater differences in this type of implement than the more commonly used criterion of overall shape, especially since the majority of whetstones utilised naturally shaped pieces of stone, mainly beach pebbles, rather than being deliberately shaped.

Most had flat working surfaces with the wear pattern ranging from slightly smoothed areas, either flat or gently undulating, to surfaces which had worn concave longitudinally. These whetstones with flat working surfaces can be subdivided into two types on the basis of their shape: bar-shaped with roughly rectangular cross-sections (Fig 113.6, 10), and flat pieces of stone, often with a roughly sub-rectangular shape and a rectangular cross-section (Fig 113.8). The bar-shaped whetstones exhibit traces of use on one or both faces and less frequently on the sides and/or ends, while the flat whetstones have fewer well worn concave surfaces and only one has a worn facet on one edge. It is probable that these whetstones were used for sharpening knives and similar implements where a flat grinding surface is desirable.

The whetstones with convex surfaces are all are oval beach pebbles with a flattish oval cross-section with no trace of any flat worn facets (Fig 106.1). Most have traces of wear on both faces. These may have been used for sharpening larger implements such as sickles and billhooks.

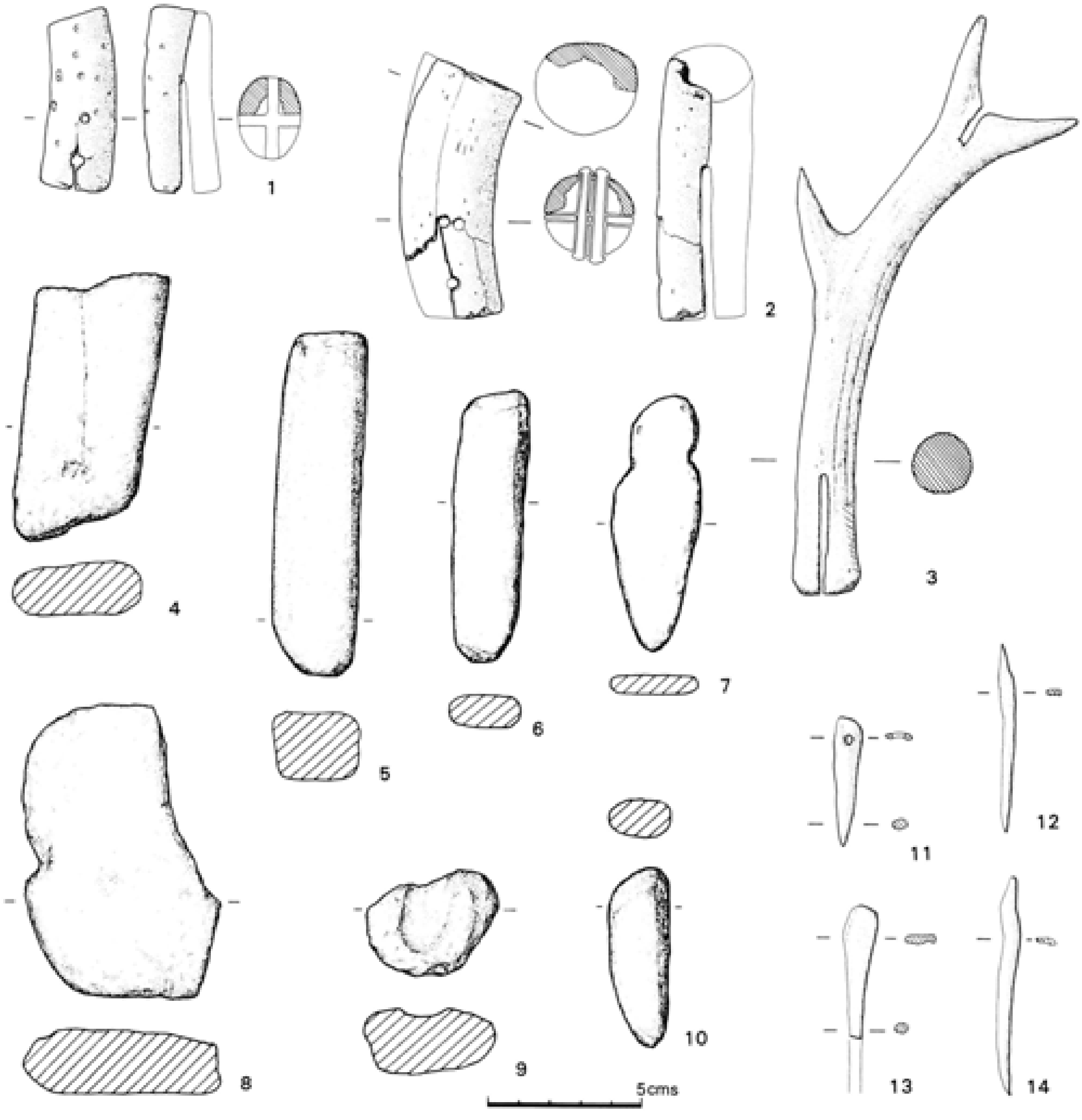


Fig 113 Antler handles, whetstones and sharpeners, bone pins and pegs. Scale 1:2

The whetstones with grooves or notches are referred to as sharpeners, as the wear traces indicate possible use for sharpening pointed implements such as awls and needles. They consist of both flat and bar-shaped pieces of stone. The size, number, and position of the grooves varies on each artefact. The majority have small V-shaped grooves on one side or end and less frequently on one face (Fig 106.3). The most remarkable sharpener is a small pebble with a large smoothed U-shaped groove on one face and three similar grooves on one edge (Fig 113.9). Three of the sharpeners have several striations or scratches on one face as well as a groove. Five other whetstones also have similar scratches. It is unclear whether this is use-wear from the sharpening of a pointed object or is accidental damage.

The majority of the whetstones from Cadbury Castle utilised naturally shaped pieces of stone, mainly beach pebbles. Many were broken though it is not clear whether this happened prior to use, was the result of deliberate shaping, or happened during use. Most have no traces of wear on the broken edge, but 19 were evidently used after breakage. In addition to those fashioned on water-worn stones, there is a small number made from other rock sources or which are deliberately shaped. Three whetstones were worked into shape, one rectangular, one a small square-sectioned rod, and one into a pointed shape, with opposed notches at the other end (from the iron hoard in D630A Fig 113.7). One other whetstone was made from a broken quern fragment. Two whetstones were perforated with a small hole drilled from both sides near one edge; the overall size and shape of these two pieces cannot be reconstructed.

The sizes of the complete whetstones range between 31–158mm in length, with no apparent preferred size within this range. The weights are equally wide-ranging (between 3–670g) with the majority weighing under 150g. It is possible that some of the smaller whetstones were portable personal implements, but there does not appear to be a definite grouping of different sizes, so specific portable whetstones cannot be identified with certainty.

Whetstones were present in all the later prehistoric periods. There does not appear to be any morphological change in the whetstones over time. Whetstones of a similar type have been found on many Iron Age sites in southern England. The number of whetstones recovered from Cadbury is of the same order of magnitude as the very similar assemblages from Danebury (Brown 1984; Laws *et al* 1991) and Maiden Castle (Laws 1991). The number of whetstones of similar type from both Glastonbury and Meare (Bulleid and Gray 1917; Gray 1966; Coles 1987) far exceeds the size of the Cadbury Castle assemblage. Smaller quantities have been found on a range of other Iron Age sites such as Hengistbury Head (Laws 1987), Gussage All Saints (Wainwright 1979), Old Down Farm (Davies 1981), etc, indicating that they were a common item in the Iron Age toolkit.

Stone polishers

by Peter S Bellamy

A group of ten very similar stone artefacts were recognised and have been designated polishers. These artefacts are flattish oval pebbles of pale grey quartzite which have traces of polish, often a high gloss, on both faces (Fig 106.4). The edges of the pebbles are not worn. None of them survives complete. The wear traces on these artefacts indicate that they were used for rubbing or polishing, though without further experimental research it is not certain what materials they were being used on. A similar artefact was recovered from Tollard Royal, where the suggested use was as a pot-burnisher (Wainwright 1968, fig 24.199).

In addition there are three other artefacts which may belong to this group, two quartzite pebbles and one metamorphic pebble. These have some polish on the faces, but also some evidence of pecking or crushing on the ends, suggesting that they may have been used for other purposes besides polishing or burnishing, perhaps for grinding or as a small hammerstone.

Four of the polishers come from contexts dated to the mid-first century AD and all the others come from undated contexts, which suggests that they may date to the latter half of the Late Cadbury period. Six of the polishers were recovered from the northern slope of the interior, which contains the greatest concentration of features of this late date.

Hammerstones

by Peter S Bellamy

There are 14 stones with evidence of crushing on one part of their surface, which have been classified as hammerstones. These were mainly flint nodules or pebbles, with one Upper Greensand chert pebble and one Old Red Sandstone pebble also utilised. The majority of these artefacts are ovoid or irregular in shape with wear restricted to one or both ends, though four had signs of wear over most of their surface. They weighed between 180–820g.

The majority of hammerstones came from the eastern half of the central area of the site but no particular concentrations or significant distributions could be recognised. A small number were recovered from all the later prehistoric periods, but it is uncertain whether these implements represent part of the Iron Age assemblage or are residual artefacts from the earlier prehistoric activity on site.

Pins and pegs

by W J Britnell

These comprise a miscellaneous group of 12 simple bone or antler points (Fig 113.11–14). None is of a distinctive type and a variety of functions is probably represented, including possibly use as awls, pins, and small pegs. Many of the objects preserve some of the natural surfaces of the bones from which they were made, particularly the medullary cavity, suggesting that they are mostly made from sheep/goat metapodials or tibias, although two similar 'pegs' are probably been made from antler. Two items appear to have been made from bone which has been roasted and the brittler nature of the material probably explains their irregular shape. Comparable objects are known from later prehistoric sites in the region, and the majority are likely to be of Iron Age date on typological grounds. Five examples are from datable contexts, four of Middle Cadbury date and one of Late Cadbury date. Ten examples come from the plateau sites, one is from the northern slope of the interior, one is from the ramparts, and one is from the south-west gate.

Harness equipment

by Jennifer Foster and C Saunders

Copper alloy harness equipment comprises a strap union and seven probable harness rings (Fig 114.1–2). The cast undecorated strap union (Fig 114.4), with solid domed double bosses originally had two curved strap loops, one of which is now broken. The width of

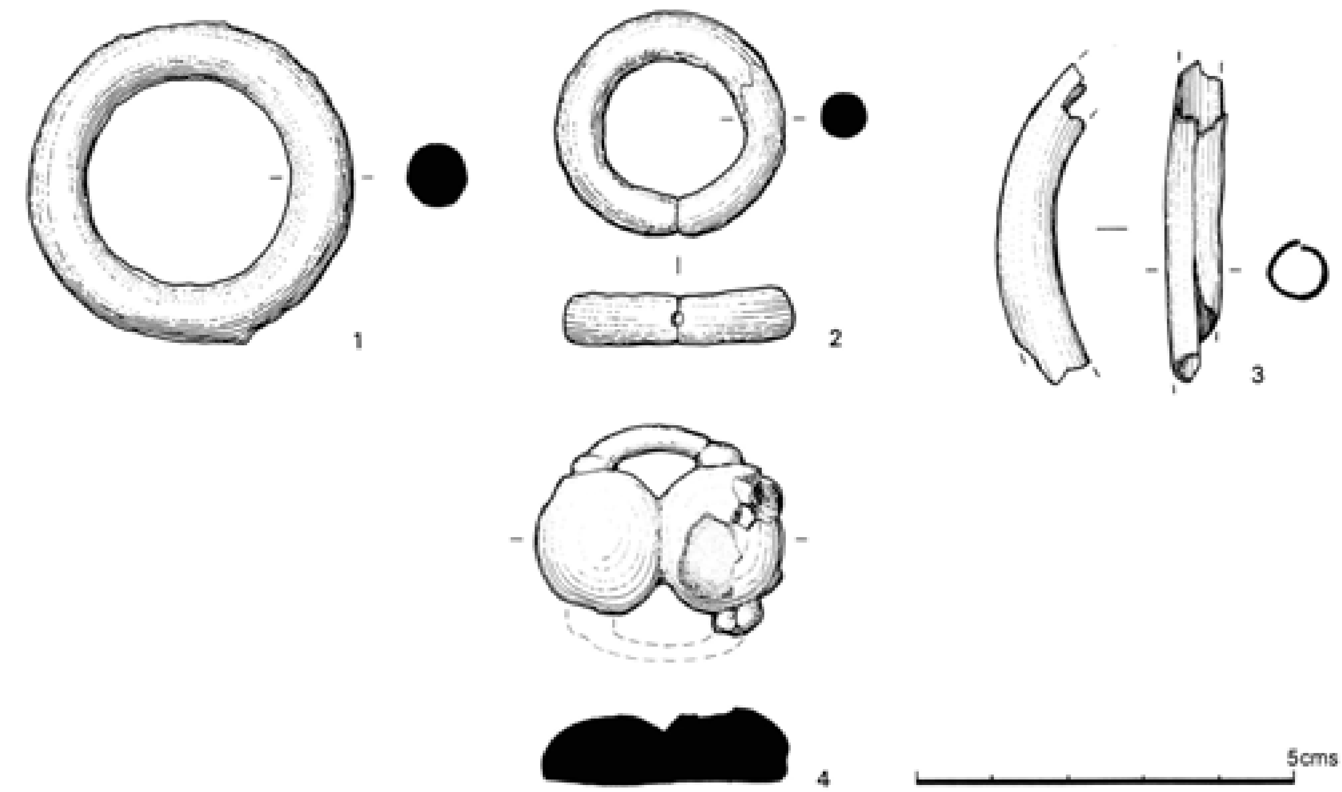


Fig 114 Harness equipment. Scale 1:1

the strap through the loops was no more than 10mm. This is one of Spratling's Group I side-looped strap unions (Spratling 1972, 107), a varied group of late Iron Age strap unions. Most have pillar-like side loops and a figure-of-eight design, but an example similar to that from Cadbury came from Bury Hill in Hampshire (Hawkes 1940) and another, though with flat discs rather than domed bosses, from Camerton (Jackson 1990b, 34). It is now clear that strap unions were used for the harness of ponies. Moulds for strap unions were found at Gussage All Saints with moulds for casting other items of harness equipment (Foster 1980, 19) and Stead has shown (1991, fig 42) the position of strap unions relative to terrets as deposited in Yorkshire cart burials; they were evidently attached to the ends of the yoke to adjust the girth.

Plain copper alloy rings, too large to be finger rings, could have been for a variety of purposes, such as harness, for example for the joining of straps without the use of a buckle, or chain, as the links in a chain, used with S-shaped or waisted chain links, or scabbard mounts, where two rings were used to fasten the scabbard to the belt in order to keep it rigid (see Rapin 1991, 324–5). Seven rings from Cadbury could have been used for such purposes. One was probably cast. Two were made from copper alloy wire bent into a circle and the ends abutted; there was a kink in the circumference where they were bent over.

The few bridle bit finds are scattered across the site. Two definite parts from iron bits of three-link form and one probable part were found. This three-link (or double-joined snaffle) bit is the most common Iron Age form, which can be divided into several classes (Palk 1984). The two side links from Cadbury belong to Palk's Category C and would originally have fitted onto rein rings of iron coated in copper alloy. The baluster shape of these links was at one time seen as a developed western form typologically derived from an earlier and more streamlined form (Fox 1946, 30), although the reverse sequence has also been suggested (Stead 1965, 42). The finding of an unused side link of this type along with evidence for the manufacture of Category A and E bits in a pit filled with metalworking debris at Gussage All Saints, Dorset, suggests that they may have been all contemporary.

The single-jointed snaffle of iron was the standard continental bit form, and became the normal British bit after the Roman conquest. Two such bits are represented at Cadbury. At the end of the British Iron Age a type of bronze two-link bit was in use but iron two-link bits seem almost unknown. An iron bit found in a hoard with currency bars at Madmarston Camp, Oxfordshire, may have been of this form (Fowler 1960) and there is a definite example among the large collection of Iron Age ironwork from Hunsbury, Northamptonshire (Northampton Museum). However, there is at least one certain Roman type with the Hunsbury material (a looped spatulate headed linch pin) and this example could be later in date. The same applies to examples from Hod Hill, Dorset (Brailsford 1962, K28, pl XIII and K29, pl XIII).

In addition to the iron bits, there is a fragment of Iron Age bridle bit rein ring wrought from sheet bronze with the join on the inner side (Fig 114.3). Under the microscope it can be seen that the surface is deeply scored with longitudinal scratches and some very short transverse scratches, presumably where the ring turned in the side link. This ring is distorted and broken in antiquity and may possibly be scrap.

Iron Age bridle bit rein rings vary considerably in size (the range at Llyn Cerrig Bach, for example, is from 93mm to 69mm outer diameter: Fox 1946, nos 49, 86, 52 and 129). This ring is slightly on the small size. Some rein rings were of solid bronze, others were sheet over iron cores (eg from Hengistbury Head: Palk 1987, 151). Palk identifies three bits from Llyn Cerrig Bach as having hollow bronze rein rings, similar therefore to this ring from Cadbury. Spratling on the other hand (1972, 448) describes these as originally having an iron core that has differentially decayed. This, however, seems unlikely in view of the fact that entire bits with bronze casing survive from Llyn Cerrig Bach. This example has no sign of an iron core, although if it was to be used for recycling, it is possible that a core was removed.

The only other evidence for bridle bit manufacture at Cadbury was a mould for casting a side link of the same form as the iron bits (see p298).

Amongst the horse furniture we may also include here the find of a fragment of an iron nave band. This is of typical D-shaped section with the remains of wood preserved in the corrosion. Two major types of nave band, used to bind the hub of a wooden wheel, were in use in the Iron Age. The most widespread has a diameter which centres around 125mm and a D-shaped cross-section. The other is made of wider metal and has a flat rectangular cross-section. Examples of the first type are not only found in the burials of East Yorkshire (Stead 1979), where they may be cased in copper alloy, but at sites much closer to Cadbury such as Barbury Castle (McGregor and Simpson 1963, fig 2,2), Spetisbury (British Museum), and Meare (Bulleid and Gray 1953).

Iron keys and structural fittings

by C Saunders

A range of miscellaneous iron objects include keys and structural fittings have already been discussed in relation to the ironwork finds from the south-western gate (see p126). The only form of key certainly used in the British Iron Age was the 'latch-lifter' of almost sickle shaped form which opened a simple wooden bolt. This form which continued in use in the Roman period alongside more developed locks and keys. There are two slide keys from the King Harry Lane Cemetery, St Albans, (of a type which occurs on the Cadbury gate) which might date to before the Roman conquest (Stead and Rigby 1989, 107, 370, fig 166, burial 375) as the type is known from the continental Iron Age (Jacobi 1974, 156–61).

Violence

by Brendan O'Connor, Jennifer Foster, and C Saunders

Bronze spearheads

The earliest weaponry from the later prehistoric sequence is represented by four spearheads. The angular midrib and slender profile of two fragments suggest they belong to side-looped spearheads of Rowlands' Group 2 (1976b, 52). Associated finds appear to be confined to the Taunton phase (fifteenth to mid-thirteenth centuries BC), though earlier and later currency cannot be excluded (O'Connor 1991, 236). Cadbury appears to be on the western fringe of a Wessex distribution (ibid, 234; Pearce 1983, 333; Rowlands 1976b, map 15). Several examples are known from middle Bronze Age settlements (ibid, 277–8; Needham 1991, table 33, fig 90) and there are complete hillfort finds from Hambledon Hill and Hod Hill, Dorset (Rowlands 1976b, 364, nos 1241–2, pl 38).

The third spearhead is complete, although wear and damage hinder attribution of this example to any of the specific types or variants recognised within the general class of pegged spearheads (Ehrenberg 1977, 13–15). Though relatively small, it lacks the exaggerated conical profile of the 'short stumpy' type, where the diameter of the mouth can reach one-third of the length (Colqhoun 1979, 106). A tenth- to eighth-century (Ewart Park) date is most likely, though an earlier Wilburton date from the twelfth century BC cannot be excluded. In the south-west, there is a spearhead comparable with this Cadbury example in a burial on Ham Hill, Somerset (Pearce 1983, 532, no 748b, pls 89, 153) and another possible hillfort find from Worlebury Hill, Somerset (ibid, 538, no 776c, pl 93). Elsewhere, there is the blade of a pegged spearhead from Danebury, Hampshire (Cunliffe 1984, 337, fig 7.2, 1.8) and a complete example of the 'short stumpy' type from Beeston Castle, Cheshire (Needham 1993, 44, 50, fig 33, 12).

The final example is represented by part of a blade wing with straight edge parallel to the midrib of which a fragment survives (Fig 115). The distinctive angular profile of the base of the blade of this fragment identifies it as from a barbed spearhead of Type II in the classification of Burgess, Coombs, and Davies (1972, 219–22) of Ewart Park date (ibid, 226; see p272). Most single finds come from in or near the Thames, though the distribution of hoard finds is more widespread (ibid, 222, 244–5, fig 1b). Other Somerset finds are from Godney (ibid, fig 32) and the Stogursey hoard (McNeil 1973, 48–9, fig 7, 76–80). The Cadbury fragment may be regarded as scrap, like those in Stogursey and other hoards where spearheads do not predominate (Burgess, Coombs, and Davies 1972, 228–33). It is an unusual find in a settlement context, though there is a rivet of a barbed spearhead from Thwing, Yorkshire (Manby 1980, 322).

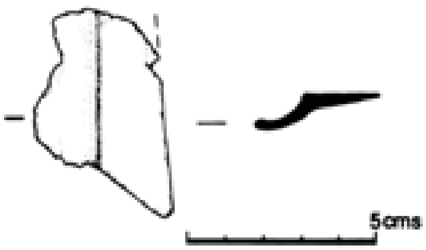


Fig 115 Barbed spearhead. Scale 1:2

Practically all Iron Age weapons come either from the 'rubbish layers' in the interior or from contexts associated with or derived from these or from the massacre deposits in the gate, and there can be no doubt that this is the nature of this deposit which led to their survival (see p122ff). As discussed elsewhere, much of this material is incomplete and fragmentary.

Swords or daggers

It is not always possible to tell if part of an iron blade comes from a sword or a dagger, as the width at the hilt of a dagger may be equal to that of a sword. Of the pieces known from the site there is only one certain sword, a rather indeterminate example ploughed up from the hilltop which formed part of the Bean collection. However, it is likely that the three additional fragments identified as sword/dagger blades (Fig 134.6, 17–18) most probably come from swords. Although all these are fragments of hilts/top of blade, it must be emphasised that no other fragments of obvious sword or dagger blades were recovered. It is not possible to tell with such fragmentary pieces of hilt and blade if they came from La Tène I or II swords (Piggott 1950, Group I and II), but note the La Tène I chapes discussed below. The three examples came from the area of the surviving surface deposits in the hillfort interior.

Daggers

There seem to be four main classes of Iron Age daggers in Britain:

1 those of Late Hallstatt type known from finds from the River Thames (Jope 1961)
2 those of early La Tène type, practically all of which also come from that river (Jope 1961)
3 daggers with anthropoid hilts (Clarke and Hawkes 1955)
4 daggers of similar form to the swords of Piggott's (1950) Group II.

It is to this fourth group that the four iron dagger hilt and blade fragments from Cadbury belong. Two of these are from the area of interior surface deposits (Fig 135.53, and 62). They are characterised by blades of long triangular form with lozenge-shaped or rounded lozenge-shaped cross-sections, sloping, sometimes slightly concave shoulders and a narrow tang. The surviving hilt guards are all of curved (ogee) form and may be of iron or bronze. They may be called the Ham Hill/Hunsbury type after a well preserved example from the former site, still with an iron hilt guard, and an example from the latter which is still set in an iron scabbard with a chape of Piggott's Group II, La Tène II-derived form. Interestingly this chape is of a size directly comparable to those used on sword scabbards. This type is well represented in the Somerset area, with examples from Glastonbury, Meare, Kingsdown Camp, and Camerton. A possible example of this type from Bigbury, Kent, suggests that they were in use as late as the first century AD.

Hilt fittings

The iron hilt of a sword would have been covered by hilt fittings, such as carved bone or ivory hand grips (Bishop and Coulston 1993, 71). None of these survive from Cadbury, but two late Iron Age or early Roman bronze mounts were found (Fig 116.1–2). Both have parallels at Hod Hill, so are likely to date *c* 50 BC. Spratling considered them to be fittings from native sword hilts based on Roman designs, like those from Cotterdale, Embleton, Hod Hill, Thorpe, and Worton (Spratling 1972, 159).

One, from the area of rampart Site A, is an incomplete cast bronze four-armed mount, the curved arms of which clasped the oval top of a pommel. In the centre is a rounded rectangular perforation (5 by 4mm) for the end of the iron hilt tang (Fig 116.1). Very corroded and cracked, it is a less elaborate version of the cruciform mount from Hod Hill (Brailsford 1962, pl IIa), there dated to the first century AD. A cruciform mount of a slightly different kind was found at Llyn Cerrig Bach (Fox 1946, pl XV, 12). At Cotterdale (Piggott 1950, fig 9.2D) the pommel had a cruciform mount upside down on the end of the hilt, and a cruciform hilt mount to enclose an organic hilt decoration, Piggott's Group IVb.

The other example came from the northern slope of the interior in the area of the Roman oven (B626) and is an oval cast bronze hilt mount with rectangular perforation (8.5 by 13mm) and low raised border on both faces, used as a washer to divide the hand grips (Fig 116.2). Plain bronze hilt rings were found on swords from Hod Hill (Brailsford 1962) and Maiden Castle (Wheeler 1943, fig 90.2,3, pl XXXXA.2,3).

Scabbards

Sixteen iron scabbard fragments are known from Cadbury Castle as well as a number of additional, less certain examples. If all the fragments from the area of the interior surface deposits (see p298–301, Figs 134.30–7, 135.63–4) identified as certainly or possibly coming from scabbards are considered then there is hardly enough metal to make even a single scabbard, although it is clear from the fragments that several are represented. Iron scabbards were made up of a front plate and back plate, the edges of one turned over to clasp the other.

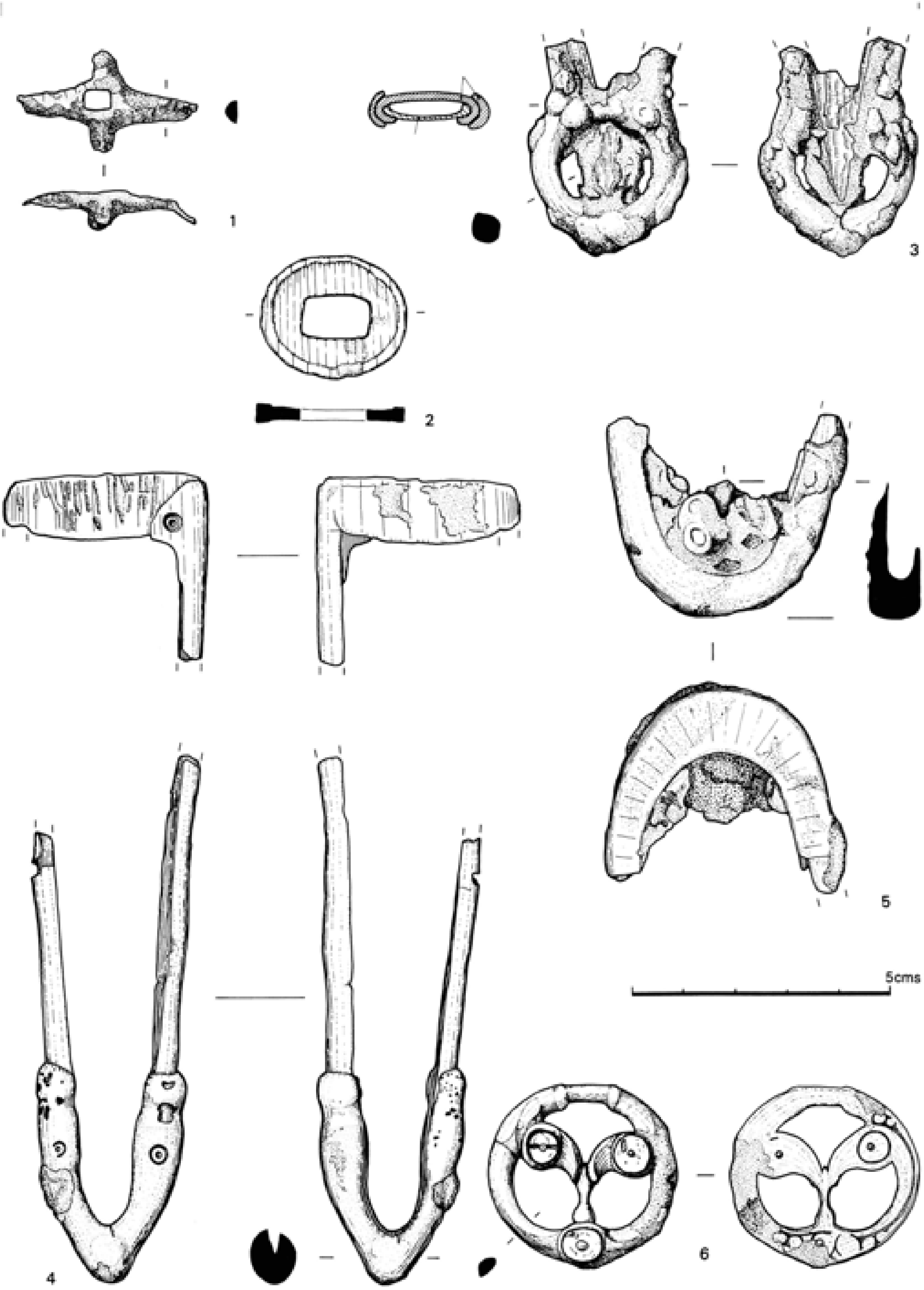


Fig 116 Copper alloy hilt fittings, chapes and strap fitting Scale 1:1

Examples where the edges are turned over are described as front plates and those with plain edges as back plates, although in practice there was no such distinction (de Navarro 1972, 22). The tip of the scabbard was bound and strengthened by a metal chape. No sign of decoration has been observed on any of the fragments, although one group came from an example with a marked median ridge. Despite the attention which has been paid to the elaborately decorated British bronze scabbards, most British Group II scabbards (the commonest type) seem to have been of iron. However, on the evidence of the chapes discussed below these fragments are more likely to have come from Group I La Tène I scabbards. Others will have been of leather or wood, although these would also have been strengthened with a metal chape. One complete knife scabbard in wrought copper alloy sheet comes from the area of the south-west gate passage (see p111). It was found among the Late Cadbury massacre deposits. In addition a circular ball terminal for a knife scabbard also came from the plateau.

Chapes

All of the ten iron chape fragments (Figs 134.20–8, 135.65) identified came from examples of La Tène I form. This is remarkable when the rarity of La Tène I swords from Britain is considered. The sword from the River Thames at Standlake, Oxfordshire, has been seen as standing at the head of the British La Tène sword series. This still retains a copper alloy open ring chape of La Tène I form and a copper alloy scabbard mount from a presumably leather scabbard (Fox 1958, pl 22) and these are decorated with engraved and repoussé designs related to Jacobsthal's Waldalgesheim style. Jope (1961, 320) dated it as early as 300 BC although others have expressed doubts about such an early date (Piggott *et al* 1970, no 25.6). Two La Tène I swords came from an old bed of the River Nene at Orton Meadows, Cambridgeshire (Stead 1984). One still retained a complete iron scabbard with an open chape, the top of which was bridged at both front and back, an early feature. The front plate was decorated down both sides in a manner recalling that on Late Hallstatt dagger sheaths from England and France. The sword blade was decorated with a 'ladder' pattern. 'This piece is as early as any La Tène sword and scabbard in Britain. It suggests that British armourers produced the long sword no later than their continental colleagues' (Stead 1984). The La Tène II chape differed from the open La Tène I ring chape in being heart-shaped and closed (with no gap between the chape and scabbard at its tip), although closed forms do also occur in La Tène I. One of the Cadbury Castle chapes seems originally to have been very ring-shaped but others, although still 'open', are tending towards a more heart shape. The chape is made up of several components, namely the chape itself or terminal, attached to which are two arms or bindings (eg Fig 135.54, 66) which clasp the scabbard plates and which are joined or bridged across their tops. No complete iron chape survives, nor are there enough components to form complete chapes. All this material comes from the area of the surviving surface deposits in the interior (see p298ff).

Four copper alloy chapes were recovered, one from the plateau, two from the northern slopes of the interior, and one from the south-west gate. One (from the plateau) is a La Tène I openwork scabbard chape end of Piggott Group I (Piggott 1950). It has an annular openwork chape end, circular in section (thickness 5mm) with a ridge on the upper surface (Fig 116.3). These are two projecting knobs on either side of the chape end where it meets the U-shaped binding which clasped the edge of the chape. This is a feature also found on the West Buckland chape (Stead 1984, 48). It is difficult to detect, because of corrosion, whether the chape end was a complete circle, or whether there was a gap between the knobs, but other parallels suggest there was a gap, on the Kirkburn sword, for example (Stead 1991). However, La Tène I chapes are rare in Britain (Stead 1984, 47), so that it is difficult to generalise from one example to another. Like the La Tène I chape ends on the Kirkburn sword and West Buckland dagger (ibid, 48), the bronze binding covers the front of the chape only; on the underside the iron back plate can be seen. On the continent iron scabbard plates are more usual; the bronze front plate seems to be a British feature (Stead 1979, 63). Although very corroded, it is possible to reconstruct the sequence of manufacture. First the iron back plate was forged, not flat, but with curved-over edges to contain the sword blade, and then the bronze front plate was overlapped. Finally, the annular chape end was cast on, with U-shaped binding covering the join between front and back plates and holding the chape together. Further up the chape the U-shaped edge binding was probably of wrought bronze.

The bronze front of the chape has corroded away, revealing the iron weapon tip within. From the size (the chape end is 29mm across) this was probably a dagger; for example, the La Tène I dagger sheath from West Buckland (Stead 1984, 48) has a similar openwork chape end 32mm across. This is a useful addition to the very small group of La Tène I copper alloy scabbards from Britain (Stead 1984, 47), and probably dates to the third century BC.

The second and third examples are from the northern slopes of the interior. One is a La Tène II scabbard chape, Piggott Group II (Fig 116.4, see p273). The wooden scabbard was edged at its lower end with wrought U-shaped binding, now buckled and broken in several places. There are no rivet holes; the copper alloy binding was cast onto the chape end, also of U-shaped section, and was held in place on the scabbard by that and the half bridge. The bridge, also of wrought bronze, has been joined to the strips of U-shaped binding so carefully that it is not possible to see the join with the naked eye, but it has cracked at the back on one side, and broken on the other. The bridge extends around the back only. It is quite a deep bridge, deeper than the La Tène II chapes from La Tène itself (eg de Navarro, 1972, pl LX, no 52). It is straight across the top and slightly curved below (maximum depth 12mm), like the chape from Spetisbury (Piggott 1950, 8, no 7). The beating marks on the inner surface can be clearly seen. On the front of the chape the bridge originally extended into two stylised bird-head clamps; only one now survives, with a stamped ring and dot ornament forming the eye. Bird-head clamps were found on 18 middle La Tène scabbards from La Tène (de Navarro 1972, 29, 115), though these are more obviously heads, with a circular hole for the eye and a cut-out beak (eg ibid, pl XXIV, 1a and pl LX, no 52). No other La Tène II scabbard from Britain (Piggott 1950; Stead 1984; 1985b) has a bird's head ornament, though those from Meare and Hunsbury have decorative cut-out bridge fronts (Piggott 1950, 8, nos 3 and 1).

The chape was made in two pieces, first binding and bridge, and then the chape end which was rather crudely cast on; certainly on the reverse the join between binding and chape can be clearly seen. In fact the chape end has several casting flaws, through one of which can be seen the scabbard edge binding; this is a common fault in La Tène II chapes (I M Stead pers comm). These flaws were ignored and the chape well used and worn. The chape end is a very simple shape, slightly flared on either side (although less on the left than on the right). It widens slightly where it joins the binding, though there is no definite knob, unlike many British scabbards (eg Piggott 1950, fig 3, no 5, from Woodeaton; and Stead 1979, 60, from Bugthorpe). There is a stamped ring and dot on each side on the front, matching the eye ornament on the chape clamp. The only other decoration is a small incised line, front and back, at the base. Like most La Tène II British chape ends, this is fairly substantial, unlike those from the continent which give a more graceful impression, for example the very fine example from La Tène with bird's head clamps (de Navarro 1972, pl XXI no 48).

The third copper alloy chape is semicircular and of U-shaped section, similar to the example from the gate (see p143) but cast rather than forged, and with no sign of a strut at the back (Fig 116.5). A possible lip motif at the front is obscured by corrosion. It was originally decorated with two raised circular areas with incised circles and is now very worn and corroded. Analysis suggests a late Iron Age date; the level of antimony is very low, as is usual at the end of the Iron Age (see p273). The fourth chape is of Piggott Group II and comes from the south-west gate passage (see p143 Fig 70.1).

Semicircular scabbard chapes date to the late Iron Age (first century BC/AD) and were designed to fit the late Iron Age swords with wide blades and rounded tips: Piggott (1950) cites an example from Gelliniog Wen, Anglesey (see also Déchelette 1927, 620).

Strap fitting

An openwork cast strap fitting (Fig 116.6) with raised decoration (now very worn) was also found (see p273). Inside are two raised circular bosses with comma-shaped tails. Each boss has a domed coral stud held in place with a copper alloy pin. The comma-shaped bosses join a spindle shape at the base of which, where it joins the outer circle, is a third coral stud. The strap would have been no more than 7mm wide. It may be a sword suspension ring (or a harness fitting). Comparing it with other similar items would give a date no later than 250 BC.

Iron spearheads

Iron spearheads were produced in a wide variety of forms from leaf shaped to more elongated, with lozenge cross-sections or with strongly pronounced midribs. An important group of 37 spearheads of Manning Types I to IV (Manning 1985, 162–8) came from the south-west gate passage along with a number of catapult bolt heads (see p122ff). Another 11 examples, either near complete or fragmentary, were found scattered across the interior (see p298, eg Figs 134.7, 19, 135.59) with one probable example from the deposits behind the inner rampart at Site D. A badly corroded conical iron ferrule and a bronze ferrule came from the interior, the latter from the area of the Roman oven (see p175).

Shields

The Iron Age shield was primarily of wood, although rare leather examples are known, while thin sheet bronze shields such as the Battersea Shield (Stead 1985b) were probably for display rather than practical use. They are rarely found intact, but are represented at Cadbury Castle by a variety of fittings: bosses, edge binding, edge clamps, and also possibly nails and domed washers. Continental shields were flat with a raised midrib, designed to cover the horizontal hand grip at the back. Later the midrib was reinforced with a metal boss (Rapin 1991, 321). To prevent the plates of the boss becoming dislodged, the ends were extended to cover the wooden midrib. Spine mounts of this type can be seen on several British shields (Spratling 1972, 173–80), such as the bosses from Llyn Cerrig Bach (Fox 1946, 9) and Moel Hiraddug (Savory 1976, 31), which have elaborate decorative delta-shaped side plates.

Four copper alloy shield boss mounts (Fig 117.1–4), all incomplete but in various stages of fragmentation, were recovered from the interior and in the area of the surviving surface deposits (see p166). One example (Fig 117.1) was a mount decorated with repoussé motifs, of a simple oval shape capping the wooden boss, extending into pear-shaped terminals which covered the midrib of the shield. It does not appear to have

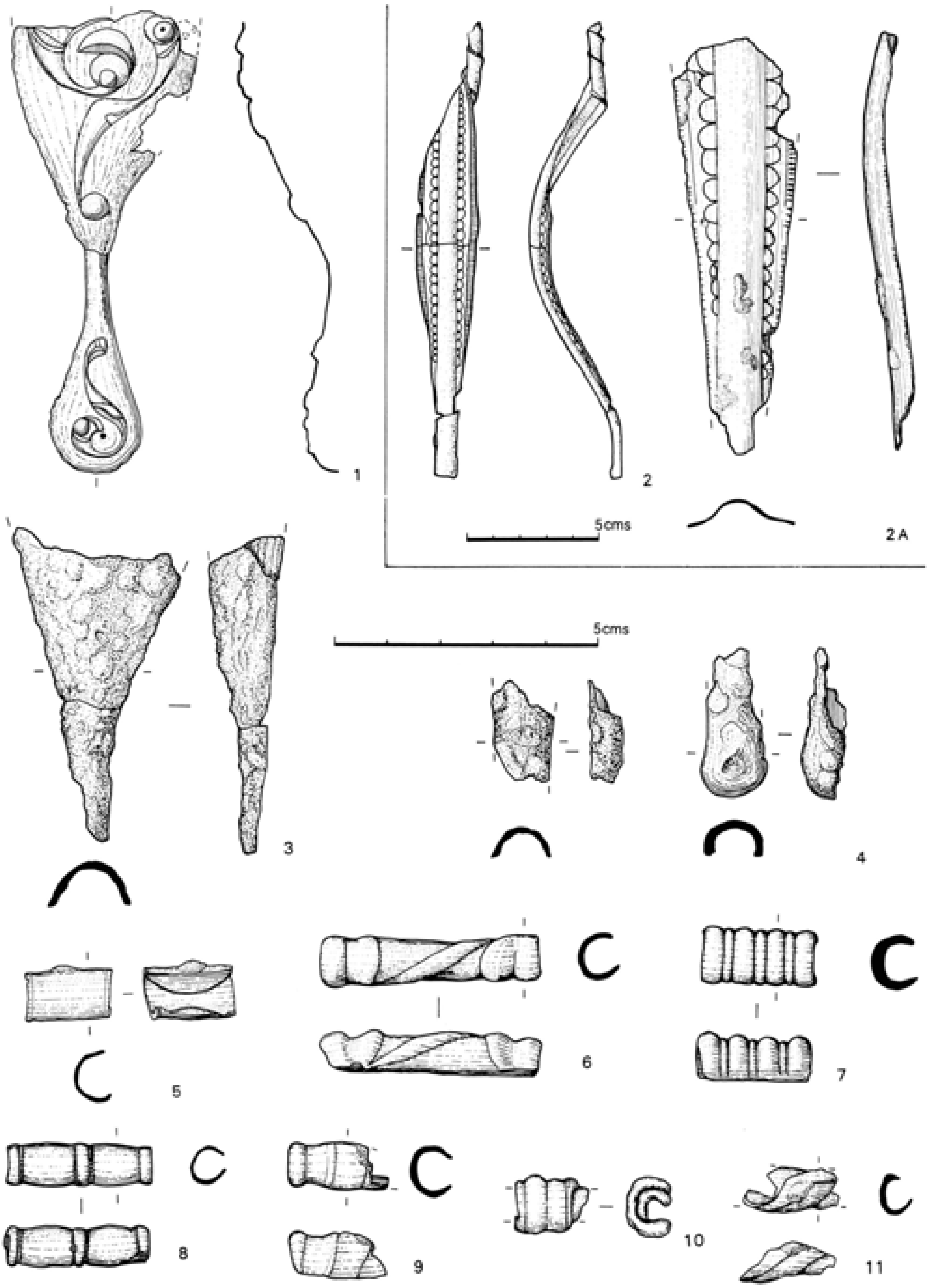


Fig 117 Shield mounts and clamps. Scale 1:1 (no 2 scale 1:2)

covered the whole of the boss (Spratling 1972, 179). A fragment from Meare (Spratling 1972, no 309) and another from Cadbury Castle (Fig 117.3) are also examples of pear-shaped terminals of this type. A recently excavated shield boss from Deal (Parfitt, 1995; and Stead 1991a) has a similarly shaped boss, but without the pear-shaped terminal. Interestingly, this boss was made in halves, the top half of which has been lost. We have too little of the Cadbury mounts to know whether these, too, were made in two halves. All these shield bosses are gently arched in profile; the arched shape of the Llyn Cerrig Bach boss can be seen particularly well (Fox 1946, pl IV).

Three flat circular iron shield bosses were recovered from the south-west gate passage and guard chamber (see p125 and 129). Such bosses were used in flat shields or shields with a flat central section. In addition, two iron hand grips also came from the gate (see p129), and a third example is represented from the material in the stratified deposits of the interior (Fig 134.29).

The wooden or leather edges of Iron Age shields were bound with long strips of U-shaped copper alloy binding (see below), which were held in place by short binding clamps; at Cadbury Castle these were apparently clipped on and held in place by tension, not by rivets, nor do they seem to have been attached by solder (eg Fig 117.5–11). There are 11 of these clamps from Cadbury, of various designs and sizes. The warrior burial at Deal (Parfitt 1991; Parfitt 1995 and Stead 1991a) contained the remains of a shield bound in this way with U-shaped binding and seven shield clips, again of varying design. Perhaps some were replacements. Three of the Deal clips (probably the originals as they matched the plaques decorating the shield) had circular plates decorated with repoussé. Another had a long flat extension onto the surface of the shield, while the remaining two were plain like those from Cadbury Castle. The strain on the shield edge must have meant that shield clamps were often lost; evidently it did not matter that the new clamps were in a different style. The clamps from Cadbury could therefore have come from the same shield, or from 11 different ones, but perhaps the latter possibility is more likely, as they were widely scattered across the site. Most of the Cadbury clamps are rectangular (15–18mm), like those on the Deal shield. One is square, like those on the Battersea shield (Stead 1985, 20). The Battersea clamps were, however, attached by pins. It should be noted that very similar binding and clips are found on Iron Age buckets (eg the unpublished bucket from Alkham, Kent, in the British Museum).

U-shaped binding is difficult to date (Fig 118), as it was used from the Bronze Age into the Roman period, and it is also notoriously difficult to say from which object the binding came (see p.273). However, it has been possible to divide the Cadbury Castle binding into four types, and tentatively suggest a function for them:

a) Roman shield binding (see Fig 120.1), characterised by side loops
b) narrow, deep V-shaped binding of a very distinctive shape, used for edging Roman helmets (see p243)
c) and d) two different sizes of U-shaped binding which are probably Iron Age in date

There were 41 fragments in categories c) and d) of which 21 fragments were medium-sized (inner measurement 4–6mm). These are probably the remains of binding removed from the edge of Iron Age shields. None had rivet holes and they would have been attached by means of shield clamps (see above). Some pieces are bent and broken and all probably represent scrap for recycling. Binding is also found on some Iron Age mirrors (Spratling 1972, chapter 18), and miscellaneous items such as a lid from Kirkburn (Stead 1971, 57), a cup from Beeston Castle (Foster 1993), and various buckets (Stead 1991), but none of the pieces from Cadbury has a small enough curve to be the rim binding

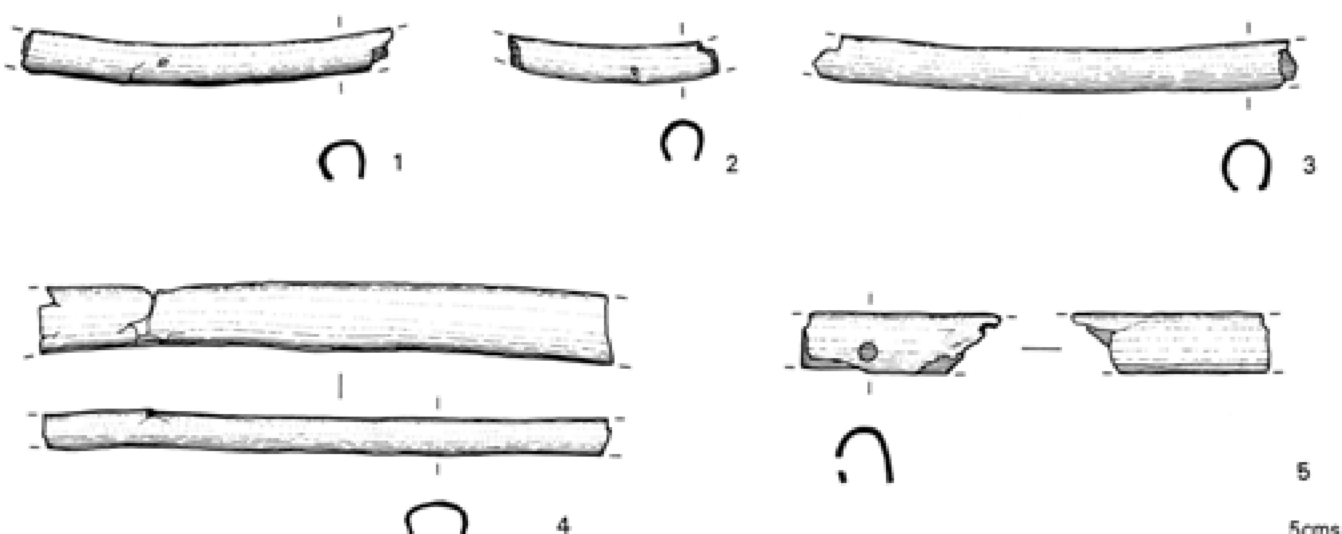


Fig 118 Shield bindings. Scale 1:1

of a circular object. Moreover, the curved pieces all have a backward curve. This suggests that at least some of this binding comes from a shield shaped like that from Deal (Parfitt 1991; Stead forthcoming) which has two straight or slightly convex long sides with cast knobs at the four corners, and incurving upper and lower ends. This discovery has shown that Piggott's so-called Group VI scabbard chapes (Piggott 1950, 22) are in fact the corners of shields.

Of the six examples of the larger size (inner measurement 7–8mm), four could be from the same object, probably also a shield. They are all straight pieces, of open U-shaped section, sides slightly curving; the inner measurement of 7mm compares well with the binding on the Battersea shield (7.5mm). There are no rivet holes and no terminals. Two examples are slightly different; they have a deeper U-shaped section and a rivet hole in the side; however, Spratling considered this type to be shield binding (1972), and the Battersea shield binding has rivets.

Antler pointed ferrules

by W J Britnell

Two objects (Fig 119) are made from the tines of red deer antlers, of which one (Fig 119.2) is from a Late Cadbury context, similar to examples from Iron Age sites in Somerset and Dorset (Britnell 1977, 106) and possibly related to similar objects made of iron (cf Bulleid and Gray 1953, 235 and fig 65, I119).

The Roman military equipment

by M C Bishop

Introduction

The study of Roman military equipment has the potential to provide a range of information about a site. At the highest level, it offers clues to the nature of the garrison, for even though some aspects of this identification may be disputed, there is nevertheless sufficient comparative material available to enable recognition of, for example, items of cavalry harness or legionary (as opposed to auxiliary) equipment; it cannot, so far as it is possible to tell at the moment, isolate the presence of auxiliary infantry (not even in the case of specialist troops such as archers, since archery was widely practised in the Roman army: Coulston 1985, 283–4).

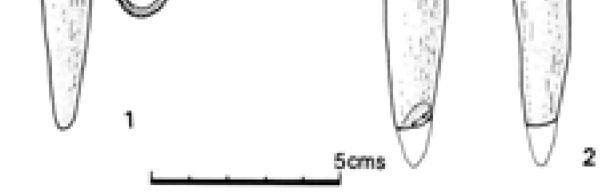


Fig 119 Antler ferrules. Scale 1:2

In more mundane terms, equipment serves to confirm the presence of the Roman army at a site (but it does not provide any help in determining whether such a stay was for one day or one year). It has a very limited utility as a dating tool (certain key items can be identified as pre-Flavian, or post-Julio-Claudian), although some military artefacts, in the Roman period as in other eras, were astonishingly long-lived. Finally, and it is arguably at its most interesting here, it can reveal details about the nature of the everyday life of artefacts and the people who made and used them. Thus its contribution to the archaeology of a site is greater in terms of trivial details than it is useful in delineating great issues.

Discussion

Material that is readily identifiable as Roman military equipment was scattered across the hillfort, but by far the greatest concentration came from the areas of the barrack buildings and field oven on the northern slopes of the interior (see p175). It can be statistically demonstrated (Bishop 1986) that in standard Roman forts most military equipment tends to come from areas of barrack accommodation, so this might confirm the identification of these buildings as Roman military barracks.

The Cadbury military equipment is a standard first-century assemblage (Figs 120–23) that would not look out of place among the finds from any Roman military base in Britain or continental Europe. It contains nothing that could not belong anywhere between the period of the invasion of Britain (AD 43) to the accession of Antoninus Pius (AD 138), the few diagnostic pre-Flavian indicators (such as bird-headed pendants, embossed figural belt-plates or Coolus-type helmet fittings) being notable by their absence from the collection, with one possible exception. Fittings like one strap terminal (Fig 123.50) are more commonly found in pre-Flavian contexts, but by no means exclusively so. The paucity of belt fittings (pre-Flavian or otherwise), is unhelpful, rather than significant.

In terms of the composition of the assemblage, there is a large amount of *lorica segmentata* fittings (Figs 121.23–6, 122.27–32), but that is not unusual, since this particular type of armour was especially prone to damage. Indeed, many of the items show signs of having been repaired at least once before deposition, a phenomenon that was noted on all of the cuirasses in the Corbridge Hoard (Allason-Jones and Bishop 1988). *Lorica segmentata* was, almost certainly, an exclusively infantry form of armour and may have been used mainly by legionary troops, although this point has been the subject of some debate (Maxfield 1986; Coulston 1988b; Bishop and Coulston 1993). A belt dagger frog (Fig 123.45) from Cadbury is probably an infantryman's (it was unusual, but not unknown, for cavalrymen to own daggers: Harrauer and Seider 1977). Catapult bolts (see p122) may more definitely be associated with legionary troops (Baatz 1966;

Campbell 1986), while light javelin heads would be found amongst light infantry (usually auxiliary, but possibly some legionary, cf Speidel 1990, 15–18) and cavalry (Hyland 1993, 142–51).

Helmet fragments form a major component of the collection (Figs 120.2–13, 121.14–22), most notably copper alloy piping used to trim the edges of the cheek-pieces and neckguards. Much of this has been damaged

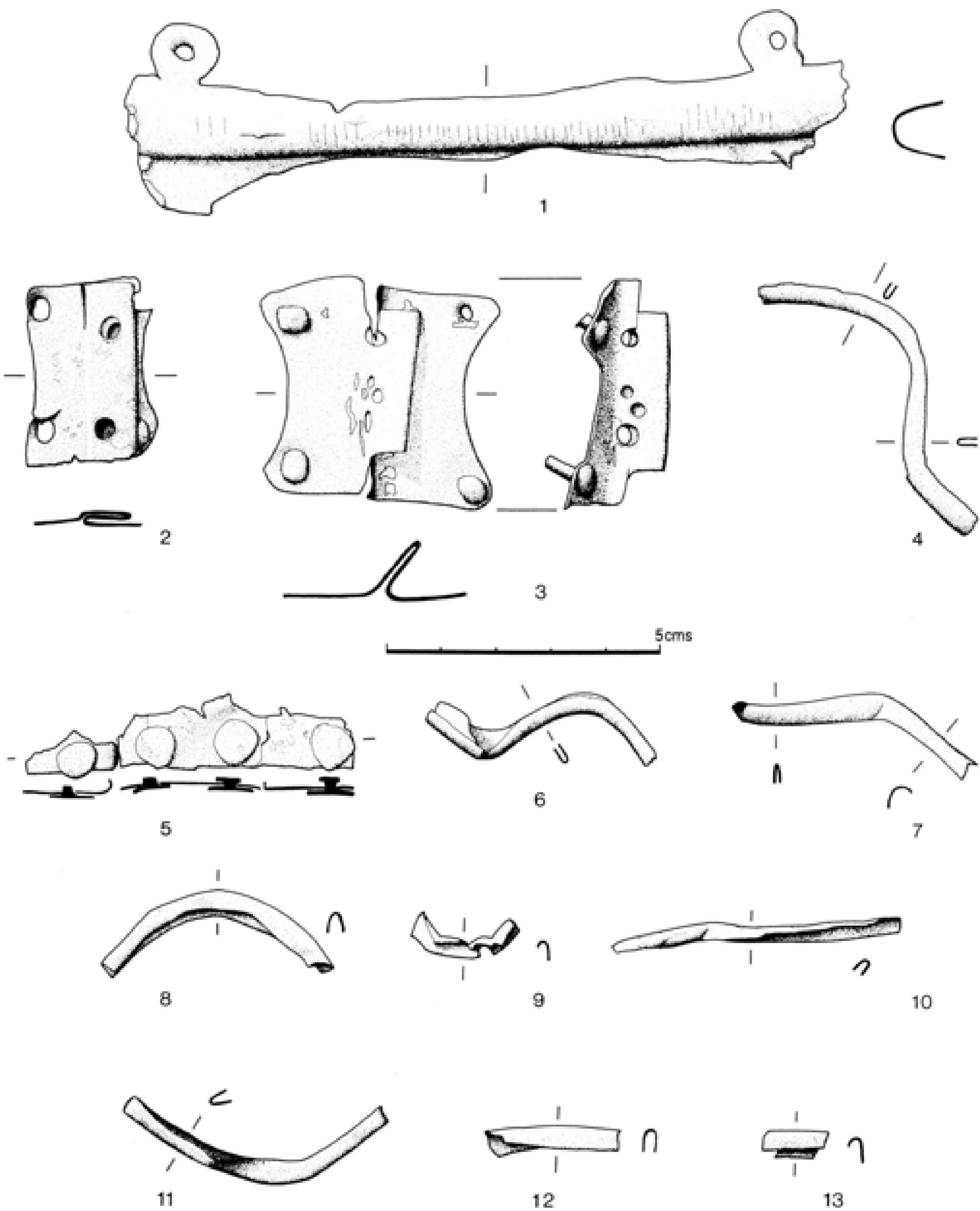


Fig 120 Roman military bronzes, 1-13. Scale 1:1

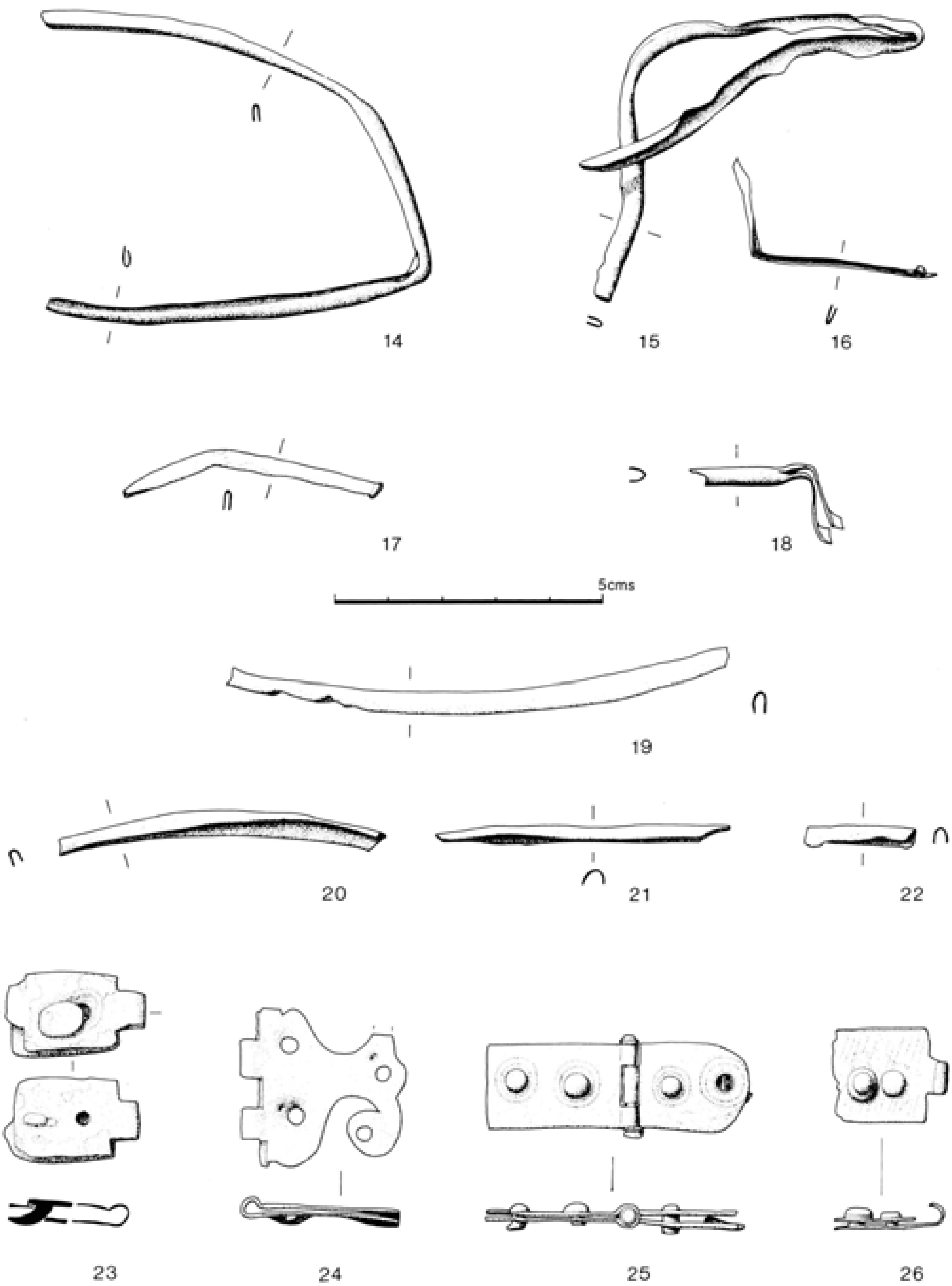


Fig 121 Roman military bronzes, 14-26. Scale 1:1

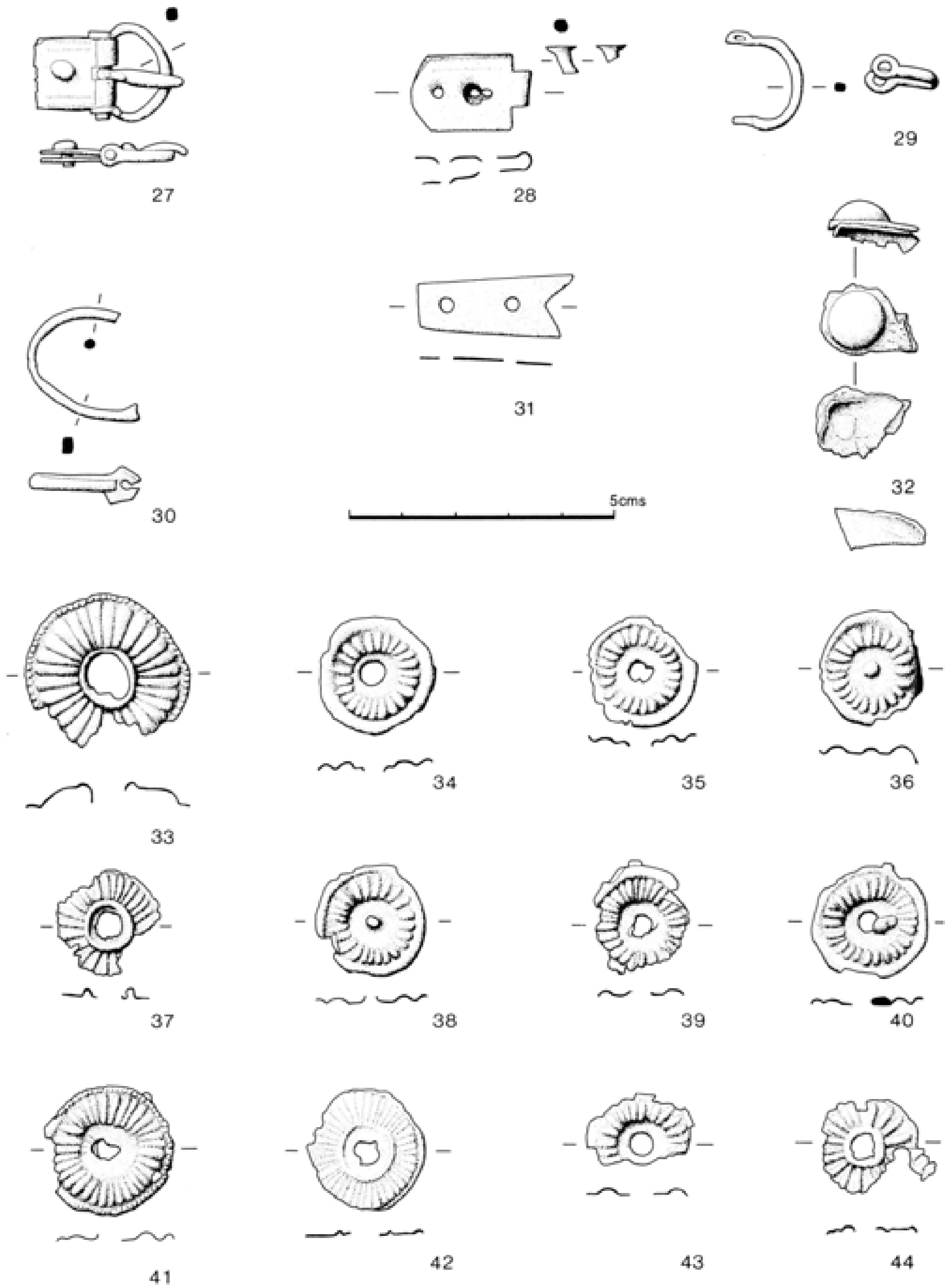


Fig 122 Roman military bronzes, 27-44. Scale 1:1

prior to loss and it must raise the question whether, unlike *lorica segmentata* (which seems to have been prone to falling apart regardless of the prevailing military conditions), this attrition may have been due to battle damage. First-century Roman armour put most emphasis on defending against downward blows to the head and shoulders, helmets evolving to deflect such blows outwards and away from the wearer. As such, headgear would be the most prone to suffering combat damage and the lengths of piping could be symptomatic of the need for field repairs after action.

Fittings from horse harness, of which there are eight examples (Fig 123.46–53), almost certainly testify to the presence of cavalry, although arguments against this based upon the presence of horses in infantry units should be noted, if not heeded (Bishop 1987).

The material is quite eloquent on the repair and manufacturing capabilities of the Roman army of the period and in this respect it falls in line with all other first-century sites. 'Rosette' washers (Fig 122.33–44) would seem to have been manufactured at the site (the one unfinished example could conceivably have been

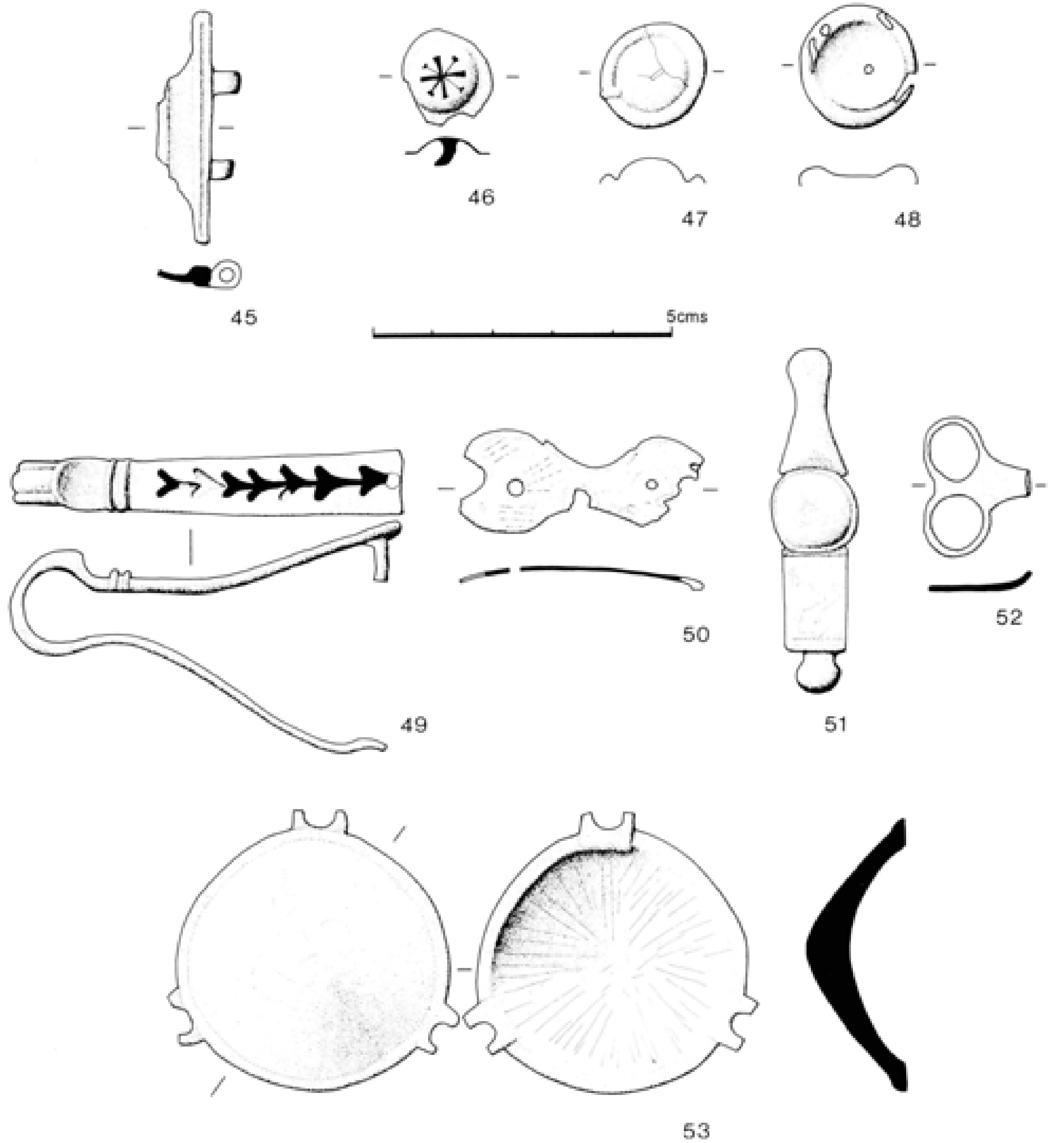


Fig 123 Roman military bronzes, 45-53. Scale 1:1

brought from elsewhere, but this seems unlikely) and the presence of seven washers from the same stamp is most interesting.

With regard to the archaeology of the site, some features produced significant amounts of military equipment, notably around the Roman oven (B626) on the northern slope of the interior (see p175). The mixed nature of the finds (infantry and cavalry) would serve to confirm the contemporaneity of the two troop types and suggest a mixed garrison.

Slingshot

Clay slingshot

by Cynthia Poole

A total of 113 slingshots, weighing in total 2046g, were recovered from the site. Of these, 108 came from a single context in the interior and would appear to be a special deposit within pit fill (S066D). This group were all very similar in form and finish and were all made in the same green unbaked clay. All were very fragile with the surface layer tending to form a skin which flaked off.

All the slingshots have the same basic shape, being ovoid in form and pointed to a lesser or greater extent at the ends, though generally tending to be slightly rounded. The surfaces were generally well smoothed.

The weight of the complete shot ranged from 18 to 26g, with the majority at 20g. In length, the slingshots measured between 34mm and 46mm when complete, with the majority at 40mm. In roughly half the examples, two width measurements were taken rather than just a single diameter measurement to take account of the more oval section. This effect may have been post-depositional as a result of the weight of soil overburden on the unbaked clay slingshots hoard. The diameter or maximum width measured between 18 and 30mm with the peak at 27mm and the lesser width 19–26mm with the peak at 23mm.

The slingshots are similar to those found on other Iron Age sites. Their sizes are closest to those found at Glastonbury (Bulleid and Gray 1917, 562–7), All Cannings Cross (Cunnington 1923, 67), and a single example from Hengistbury Head (Cunliffe 1987, 165, 111.118, 168), but similar though slightly larger examples occur on other hillforts (Danebury, Maiden Castle, Yarnbury). The clay slingshots are considerably lighter than stone pebbles commonly found in hillforts and thought to be slingstones, which may weigh up to 150g (as at Danebury). The stone pebbles may have been used as military missiles, while the clay slingshots may have been used for hunting small game.

Stone slingshot

by Peter S Bellamy

The slingstones are generally water-worn, oval flint pebbles, ranging in size from 33–72mm in length, 17–45mm in width, and between 19–172g in weight, with a typical size of about 50 by 20–30mm and an average weight of 40.9g. This is comparable to the slingstones found at Maiden Castle (Laws 1991a, 232) but is slightly larger and heavier than the clay slingshots.

A total of 2036 slingstones, weighing 83,470g, were retained from the excavations, as well as 152 broken and 228 burnt slingstones,weighing 2203g and 1566g respectively. In addition, a further 477 slingstones are mentioned in the written site archive. There are also 26 slingstones from Site KX adjacent to the south-west gate, which has already been published (Alcock 1980), and a hoard of 302 slingstones which cannot be attributed to site or feature, and are not included in this report. It is clear that this is not the total number of slingstones discovered on site, as mention is made in the excavation records of 'slingstones' and 'many slingstones' which do not appear in the retained collection.

The number of slingstones recovered is very small compared with the collections from Maiden Castle and Danebury. However, the chronological distribution is similar on all three hillforts. At Cadbury Castle slingstones occur throughout the Iron Age but the vast majority occur in features dated to the later Middle Cadbury period, which mirrors the large increase in slingstones in cp7 at Danebury (Brown 1984, 425) and the concentration of hoards at Maiden Castle in phase 6G (Sharples 1991a, 244).

Exchange

Stone, clay, and copper alloy weighing equipment

by Peter S Bellamy, Cynthia Poole, and Jennifer Foster

The stone artefact assemblage contained a group of 19 objects of similar shape and size, namely cubic with rounded edges and corners (Fig 124.1–3), measuring 40–65mm across. These objects were made from flint, lias or sandstone and had been pecked into shape, although some had only very rudimentary shaping. The flint examples in particular resembled hammerstones, but the form of the objects seems more likely to be the result of deliberate shaping rather than wear. The function of these artefacts is not certain, but given their fairly uniform size and shape it is possible that they were intended to be weights. The weights of these artefacts are spread fairly evenly between 130–280g. No trace of any means of suspension was found. These artefacts were found in small numbers in all later prehistoric periods, but mainly from Middle Cadbury period contexts, especially from the eastern plateau.

There are five different objects which might be described as clay weights, representing three different forms: circular, ovoid, and oblong or cylindrical. A group of three were all very similar circular discs, with elliptical cross-sections. They measured 66mm, 73mm, and 75mm in diameter and 34mm, 28mm, and 30mm in thickness respectively. They were all virtually complete

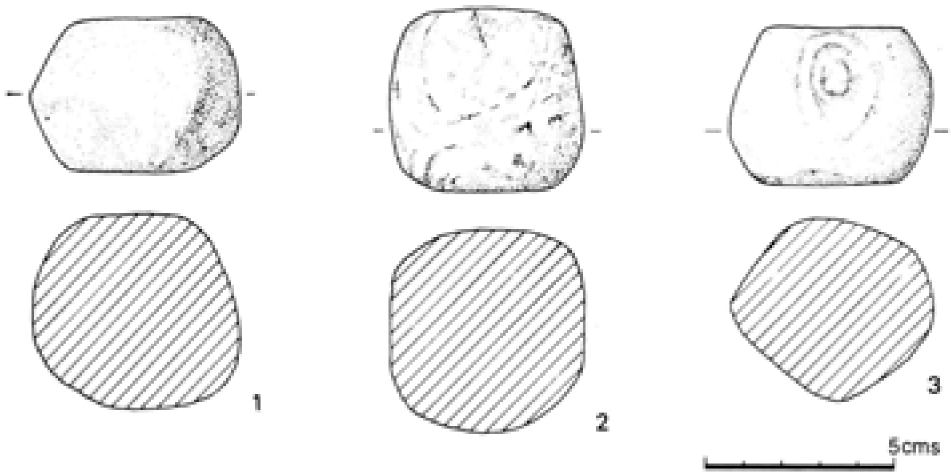


Fig 124 Stone weighing equipment. Scale 1:2

and weighed 130g, 140g, and 145g. They were all pierced by a central perforation which measured 13–15mm at the surface narrowing to 7–13mm in the centre. On all three, one surface was very well smoothed, while the other side seemed more battered, possibly resulting from the use of the objects. On one there was a second partial perforation punched half-way through the thickness from the smooth side. There is no sign of wear to suggest these weights were used suspended, but they were probably utilised in a similar manner to spindle whorls.

A roughly ovoid shaped weight from the interior measured 80mm long and 52mm in diameter. It had a perforation running through its long axis, which has a slight figure-of-eight shape and measured 7 by 9mm. The surface is smooth, with some slight irregularities, and slightly less than half has been lost. The remaining piece weighed 130g and the whole object probably weighed *c* 230–50g. There is no sign of wear from suspension, but it could have functioned as some form of weight in the same way as the group above.

The third form was probably oblong or cylindrical in shape, and is represented by a fragment, of which only the top 40mm survived. It measured about 55 by 62mm in width and weighed 110g. It is pierced by a perforation 15mm wide, at the top of which are grooves resulting from wear during suspension.

All examples come from undated contexts, but only the oblong weight may be regarded as typically Iron Age and at that it is early or Bronze Age in form. The others may be Iron Age, but there is little comparative material available from other sites by which to judge them.

Two copper alloy items connected with weighing and measuring may be identified. One is a circular cast balance weight (Fig 71.21), weight 7.5302g (116.209 grains). It is crudely finished around the circumference, presumably to correct the weight, and filed on one surface. The second object is a possible weighing balance with a broken loop, and rectangular section bar; one end is broken and very corroded. The original probable length was 70mm. Many weighing arms have rings at the ends of the arms, but there is one without them from Hod Hill (Brailsford 1962, pl XI, no 166).

Iron Age coinage

by Colin Haselgrove and Melinda Mays

Thirteen Iron Age coins were found during the excavations, making this the largest collection of excavated finds from an Iron Age hillfort in the south-west since the Maiden Castle excavations of 1934–7. They comprise a gold stater inscribed Anted (Mack 386), probably issued by the Dobunni (coin no 1); the bronze core of a plated gold or silver unit, either British A2 (Allen 1960) or Mays (forthcoming) Durotrigan Ab (coin no 2); and 11 South-Western silver units, one Mays Durotrigan E (coin no 3), the rest Mays Durotrigan F (coin nos 4–13). The coins and their contexts are fully described in Haselgrove and Mays (1994); apart from coin no 13, they are illustrated in Gunstone (1977, nos 131–41, 183). All 13 coins were subjected to EDXRF analysis by P W Clogg in their 'as received' condition as part of an on-going programme of analysing Iron Age silver and copper alloy coin types from excavated sites. The analytical results are incorporated in the main text and in Table 14; a copy of the full report is lodged with the site archive. At least one Iron Age coin appears to have been found at Cadbury Castle, during the late nineteenth-century explorations at the site (Bennett 1890), but this cannot now be traced.

With the one (Dobunnic) exception, the Iron Age coins are local types as one would expect from the position of the hillfort well within the core circulation area of the South-Western series (Fig 125). The series is ascribed, surely correctly, to the people known after the Roman conquest as the Durotriges, but it is a moot point whether this people yet formed a coherent political as opposed to cultural entity when they struck their earliest coinage. The boundaries of the coin distribution, as established by analysing the fall-off in the number of findspots with distance (Kimes *et al*, 1982) provides a reasonable indication of their eventual territory.

Despite retaining broadly the same basic type throughout their history, the coins comprising the South-Western series were produced to a variety of different standards of weight and fineness (Allen 1968; Cowell *et al* 1987; Mays forthcoming). The coinage shows clear evidence of progressive debasement and weight loss, which are mirrored by the stylistic quality of the coins. On these grounds, two main phases of coinage can be distinguished, although it cannot be certain to what extent the later (and cruder) overlapped chronologically with the earlier and finer; the relevant distributions are quite distinct. The first phase coins are concentrated in Cranborne Chase as far south as Badbury Rings and Hod Hill, which is also where the majority of known archaeological sites with definite coin finds are located. The later issues have a wider distribution throughout the territory, where,

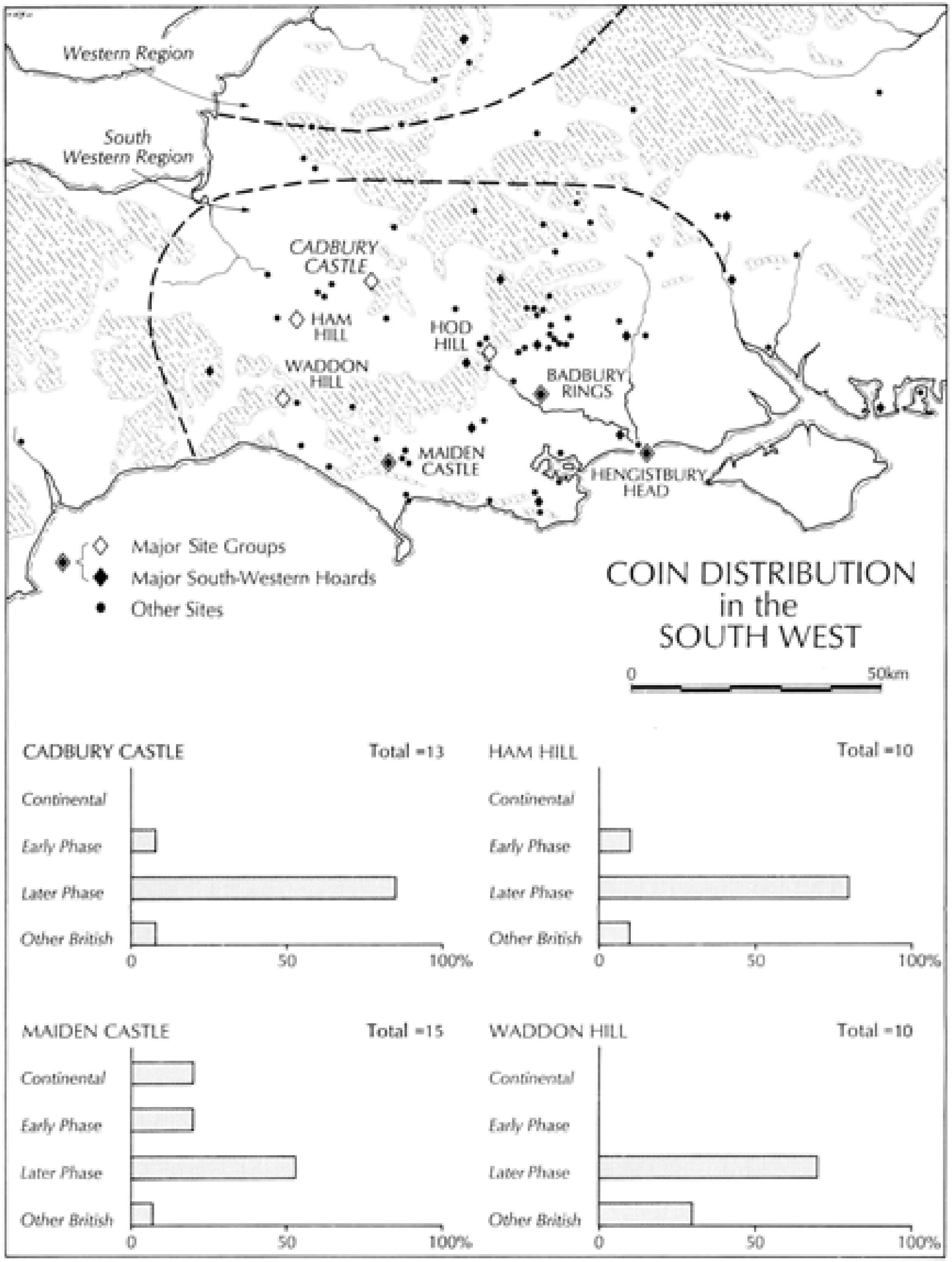


Fig 125 Distribution of archaeological sites and hoards where South-Western coins have been found; the boundaries of the South-Western and Western coin regions are also shown. Below: proportions of Iron Age coins among the excavated assemblages from selected sites in the South-Western region

Table 14: major alloying elements of the Iron Age coins

coin number	*Au*	*Ag*	*Cu*	*Sn*
		% metal		
1	46.18	14.76	39.06	det
2	det	2.71	78.67	18.56
3	0.33	77.22	18.47	2.97
4	0.19	79.63	18.62	3.11
5	det	77.05	22.85	det
6	0.2	73.24	24.49	1.30
7	det	68.82	29.98	1.20
8	0.22	66.35	32.95	1.19
9	0.16	56.43	43.13	0.71
10	det	51.97	46.86	0.81
11	det	42.88	54.31	2.40
12	det	16.95	76.45	6.60
13	det	14.45	85.55	n.d.

apart from the Dorchester-Maiden Castle area, the number of site finds is also noticeably sparser.

The series begins with debased gold staters, weighing *c* 6.0g, and containing up to 14% gold, which rapidly diminishes; their accompanying quarter staters; and a starfish-design coinage of uncertain denomination, which overlaps somewhat in weight with the quarter staters. The staters are derived stylistically from one of the earliest gold coinages of southern England, known as British A2 (Allen 1960). Some kind of relationship may also have existed with another early gold series, British B. Although this has findspots extending well into Dorset and Somerset, the distribution centres on Hampshire and Wiltshire, implying that British B was produced outside the later territory of the Durotriges. Recent metal analyses suggest that British B was metallurgically derived from British A2, and the South-Western base gold issues from British B (Cowell *et al* 1987; Cowell 1992). The accompanying quarter staters are known in gold (as one class of British O), debased gold, and silver.

The first phase staters and quarter staters are dated to the mid-first century BC from their occurrence in the well known Le Catillon, Jersey, hoard. This belongs to the latest Armorican hoard horizon (Gruel 1986) and itself probably dates slightly after the middle of the century (Fitzpatrick and Megaw 1987; Haselgrove 1987). The starfish issue, which is found in a more restricted distribution area, is mainly found associated with the earlier staters and quarter staters, and is probably roughly contemporary with them. One specimen was found in the Rozel hoard, Jersey, which included Roman coins, the latest of which dates to 39 BC. This series has no obvious prototypes. It is possible that the South-Western adherence to a base gold and then silver standard when other peoples were striking reasonably fine gold coins reflects the region's strong cultural links with Brittany and Normandy, where the local stater coinages were similarly debased (eg Gruel 1986; Burnett and Cowell 1988), rather than mere economic imperatives.

The later struck staters usually contain some silver with an admixture of copper and tin, ranging from reasonably fine silver issues (*c* 75–80% Ag) to coins which are essentially of bronze, the picture being further complicated by apparent traces of silver-washing on some coins. Without analysis it is often impossible to tell whether the later phase coins are of 'silver' or of 'bronze', and it seems that this may also have been a dilemma when they were in circulation, judging from the number of test cuts on the coins from Hengistbury (Mays 1987, 141).

The chronology of the individual varieties of the first and second phase staters is not as clear-cut as suggested by van Arsdell (1989a and b). While it is possible to place the very earliest coins around the 50s–40s BC, as mentioned above, there is no evidence whatsoever for the date of the later issues. They may have been struck fairly soon after the finer ones, or they may have been some gap in time: all that we can say for certain is that they have a wider distribution than the finer coins, and that they were in circulation for longer, occurring in Claudian and later contexts. The same chronological difficulties apply to the barbarous cast bronze coins, made from a ternary alloy of copper, tin, and lead, which conclude the South-Western series. These issues are more or less confined to the Hengistbury area, and were almost certainly produced there (Sellwood and Mays 1987). They may overlap the later struck staters, or could be as late as the Roman conquest.

Only one of the South-Western finds from Cadbury Castle belongs to the first phase coinage, a bronze core (coin no 2). This would have been plated either in gold (to resemble British A2) or in debased gold or silver (as Durotrigan Ab); there is hardly any difference stylistically between the two. If it was a contemporary imitation of a British A stater, it is outside their main distribution, though such coins are found in the region (eg in the Corfe Common hoard, where a British A1 stater was associated with 34 South-Western issues; Cowell *et al* 1987).

The remaining South-Western staters are all silver issues of varying degrees of purity, which fall metrologically and stylistically into the second phase of the coinage. The figures given in Table 14 for the major alloying elements are the average of five measurements per face. Allowing for the difficulties of using a surface technique to analyse coins in relatively poor condition, most of the Cadbury coins were evidently struck in reasonably good silver, four employing around 73–80% silver (coin nos 3–6), and another four around 50–70% (coin nos 7–10). One coin with a fineness about 43% (coin no 11) is slightly finer than the 30% standard represented by the hoard found at Castle Rings Camp, Donhead St Mary, Dorset (Cowell *et al* 1987). The two remaining coins have a fineness of only about 15% (coin nos 12–13).

The only Iron Age coin import from outside the region is the gold stater of Anted. This originated in the adjacent coin-using territory to the north (Fig 125), which is generally identified with the Dobunni. However, this begs exactly the same question in relation to the earlier issues as it does with the South-West and the more neutral geographical designation, 'Western', is therefore preferred here. Anted's gold coinage has been studied by Sellwood (1984a), who identified nine subgroups based on die marks on the reverse of the coins. The Cadbury Castle coin appears to belong to her Group vii. The die marks were presumably used to distinguish separate issues (or issuers), but more analyses are needed to establish whether these correlate with particular standards of weight or fineness. Both the weight (5.52g) and the fineness of this coin (46% Au; Table 13, coin no 1) are slightly high for the series (5.4g, 40% Au). Anted's coinage is variously dated to the last decade of the first century BC (van Arsdell 1989a), to the second decade of the first century AD (Haselgrove 1987), and to the fourth decade (Allen 1961), a reminder of the uncertainties which still beset the absolute dating even of the inscribed British coinages.

The Western gold coinage has a noticeably wider distribution than the silver and is often found in outlying areas, whereas the silver is largely restricted to a definite core (Sellwood 1984a; Haselgrove forth-coming). This hints at a functional distinction, with the gold being used more in payments or exchanges between peoples due to its status as bullion. However, the distribution does also give the impression of a creep of Western silver into Durotriges territory (Sellwood 1984a, 413), with silver finds coming from at least three other major South-Western sites: Hengistbury Head, Hod Hill, and Maiden Castle, as well as the Roman fort at Waddon Hill (Haselgrove forthcoming). Also relevant here is the great hoard of Western silver and some gold, found in 1869 at West Down Farm, Nunney, only 23km from Cadbury Castle (Allen 1961, 127). This included seven to eight gold staters of Anted, but also Roman issues down to Claudius of AD 41– raising the question of how much this dispersal is a post-conquest phenomenon, rather than reflecting relations between different Iron Age peoples. Conversely, South-Western issues are particularly common finds on sites outside their main circulation area. Over half such sites have certain or probable Roman military associations (51%), strongly supporting the idea of post-conquest displacement, with the Roman army a significant agent in this process. Offerings on religious sites account for a further 20% of the external findspots, a common phenomenon with Iron Age coinage outside its area of origin.

Genuine gold coins as opposed to plated copies are notoriously rare as settlement finds even in their areas of primary circulation. Most finds come from off-site locations, often in contexts which suggest religious offerings rather than emergency concealments, and many known religious sites also include gold coins among their finds. In view of their high value, it can be asked whether this is not so with some settlement finds as well. The Cadbury coin was found at the south-west entrance, where it could conceivably have been a deliberate deposit. The potentially sacred nature of boundaries is well known and may well be reflected in the frequent finds of Iron Age coins at hillfort entrances or from ramparts (Haselgrove 1987), as well as deposits of other objects such as 'currency bars' (Hingley 1990). Other such findspots in or near Durotriges territory include the east entrance at Danebury, the hoard from the rampart of Castle Rings Camp, and above all Maiden Castle. Eight of the 14 Iron Age coins from the 1934–37 excavations there were found at the eastern entrance (Wheeler 1943), although this might alternatively be connected with the intensive late Iron Age metalworking activity in the entrance area, especially as more recent finds include possible melted-down remains of two Iron Age potin coins (Sharples 1991a). Two more coins were found on the site of the original west entrance, but only four Iron Age coins came from the interior, one below the later Roman temple and three others from the immediately adjacent site. A British LA gold stater was supposedly found at Maiden Castle in 1890, but in uncertain circumstances (Wheeler 1943, 333–4).

The plated Cadbury coin may also have appeared to be of gold, while several of the remainder were struck in reasonably fine silver, raising the question of whether any of these coins could also be offerings. A further indication of the potential value of the South-Western staters is the number of known hoards (Fig 125) – at least 12, several of them substantial. Similar coins are, however, also fairly prolific site finds, which implies a gradual devaluation, probably exacerbated by deterioration in their appearance, with the coinage coming to be used in an increasingly wide range of transactions, from which casual losses occurred. Unfortunately the stratification of the Cadbury Castle finds offers little guidance on these matters, nor indeed on the main period of their use. None of the coins are certainly undisturbed at their primary point of deposition and only one is from a context ascribed to the Late Cadbury occupation (coin no 11), although another two came from undated contexts which may be as early (coin no 10 and the Anted stater). Unlike Maiden Castle, only two other coins were found on the defences, a second coin at the south-west entrance, the other from the south rampart, where it was residual in an early medieval context. The remaining nine coins were all found in the main area of the interior or in the area immediately to the north-east. Only one coin was found in the general area of building N5, the possible late Iron Age shrine, although another was associated with ironwork and other material which may be the remains of a deliberate deposit.

The depositional patterning thus offers little guide to either cultural or chronological aspects of Iron Age coin use at Cadbury. Another way to approach the question of chronology is by comparing the Cadbury Castle coin assemblage with those from other excavated sites in the region. Unfortunately neither of the South-Western sites with the largest coin lists are suitable for the purpose. The vast majority of over 3000 Iron Age coins excavated at Hengistbury Head were evidently deposited in bulk; whatever the context in which this took place, they do not represent site losses in any normal sense (Haselgrove 1987). The modern area excavations between 1979–84 yielded only seven identifiable Iron Age coins, two of which are late cast issues (Sellwood and Mays 1987). Richmond's excavations within the Iron Age hillfort and Roman fort at Hod Hill yielded only one Iron Age coin (Allen 1968) and it is uncertain which of the other coins attributed to the site were definitely found within the ramparts. The need for caution is amply illustrated by Badbury Rings, where the only securely provenanced coins derive from the adjacent Roman extra-mural settlement, and not from the Iron Age hillfort at all.

This leaves us with three sites: Maiden Castle, Ham Hill (the other major Iron Age hillfort in this part of Somerset), and the Roman fort at Waddon Hill. The 1934–7 Maiden Castle excavations produced 14 Iron Age coins, the 1985–6 excavations yielding only one more definite find. Four of these are imports from outside the region. At Ham Hill, where (as at Hod Hill) there was apparently Roman military occupation, the various excavations have produced at least nine South-Western issues and a British potin (Gunstone 1977). Roman military occupation is also a possibility at Maiden Castle (Sharples 1991a). Finally, the 1959–69 Waddon Hill excavations yielded ten Iron Age coins, three of them non-local types (Webster 1979). At least eight other South-Western coins together with a bronze of Claudius were found there in the nineteenth century. Waddon Hill is presumed to be a post-conquest foundation and there is no attested pre-Roman occupation.

The histograms of the coins from the three sites and Cadbury are shown in Figure 125. With such a small group due caution must be exercised, but the results do seem to bear out the points which have already been made. Only Maiden Castle, which is much closer to the core area of South-Western circulation, has yielded a significant proportion of early style coins and it is the only site at which imported Armorican coinage has been found. The neighbouring sites of Cadbury Castle and Ham Hill have virtually identical profiles, with high proportions of later coins, substantiating the idea that circulation in this area was secondary to the earliest developments. There may, therefore, be an underlying rationale to the later Roman subdivision of the Durotriges into two separate civitates, one of them with its putative capital at Ilchester midway between the two hillforts (eg Frere 1987, 191). However, since the later staters were in circulation both before and after the Roman conquest, it is impossible to be more precise about the duration of Iron Age coin use at Cadbury Castle, although the starting date cannot be much before the final third of the first century BC. As befits a Roman foundation, the coin list from Waddon Hill is later still in emphasis and the presence there of Kentish, East Midlands, and Western types (Webster 1979) strengthens the idea of troop movements having contributed to widespread dislocation. Unlike the three other sites, Cadbury Castle has not produced any quarter-staters (whether early or late), but this is not particularly significant, seeing that Ham Hill and Waddon Hill yielded only one specimen apiece.

Summary

Thirteen Iron Age coins were found during the Cadbury Castle excavations, 12 of them issues belonging to the local region. With the exception of the plated coin, the latter are all silver staters belonging to the later phase of South-Western coinage. Due to their relatively elevated precious metal content, the coins should not automatically be regarded as an index of economic activity; at least some of them may have been deliberately deposited ritual offerings rather than losses from commercial transactions, including the gold stater of Anted imported from the Gloucestershire area. Absolute dating is difficult, but coin use at Cadbury and at neighbouring Ham Hill cannot have begun much before the late first century BC, some time after coinage had come into regular use at the equivalent Dorset hillforts such as Maiden Castle and Hod Hill.

The Roman coins

by P J Casey

The occurrence of Roman coins in post-Roman contexts is a consequence of redeposition rather than continuous use and the coins will be treated, for comment, as a representative group of the Roman period. The outstanding characteristic of the early material is that it strongly implies a Claudian presence on the site. The presence of an unworn Claudian *sestertius* and a *dupondius* characterises the presence as military and early in the invasion period. The Claudian army in Britain was ill supplied with base metal coinage. Claudian issues post-dating AD 44 are very scarce and the small change crisis was exacerbated by the withdrawal of issues of Caligula bearing his portrait. His issues in the name of Agrippa, his grandfather, were not affected by the *damnatio memoriae*, but the non-recovery of a hoard of Caligula's coins at Hod Hill does suggest an effective demonetisation (Richmond 1968). The shortfall, in the absence of earlier issues to countermark as was the case in Germany, was to produce copies of the diminishing pool of Claudian coin (Boon 1988). None of these copies, which are numerous and are an indication of late Claudian or Neronian date, is recorded from Cadbury Castle and thus, on numismatic grounds, a Neronian presence is unattested.

The paucity of material does not give grounds for generalised economic statements. All of the coins recorded from the post-Claudian period could have been dropped in casual use of the site in the Roman period rather than in structured activity. The dearth of Constantinian material of the period AD 337–48 which forms the second peak in a normal distribution on Romano-British sites (the first is that of the coins of AD 259–73) argues against the presence of a ritual or temple on the site in the fourth century, whilst the presence of coins of the very end of the fourth century is characteristic of areas in Britain well supplied with currency at this period.

Miscellaneous artefacts

Worked bone

by W J Britnell

Bovine scapulae: Three utilised scapulae (eg Fig 126.1–2), probably all bovine, were recovered. Although none is from a securely dated context, they belong to a type of implement noted at a number of Iron Age sites, as for example at Glastonbury, Meare, Meare East, and All Cannings Cross, including decorated examples (Britnell 1977, 634; Coles 1987, 155–6). Complete artefacts from all sites are distinguished by various characteristics: normally most of the blade of the scapula has been cut or worn down and the edges smoothed, and the spine has often been heavily trimmed. The surfaces of the dorsal fossae are sometimes decorated and the proximal articular surface, the glenoid cavity, has sometimes been perforated as though for suspension. All the faces are normally smoothed as though by wear, especially the hollow thoracic surface. The scapulae from the sites mentioned above are not characterised by rough wear.

Bone rods and bars: A group of 24 objects subdivided into six types made from sheep/goat metapodials of types which have mostly been frequently found on Iron Age sites in the region and elsewhere in Britain. There are parallels with numerous examples from both Glastonbury and Meare but the schemes of classification adopted at those sites (Bulleid and Gray 1917, 421–27; Gray and Cotton 1966, 316–21) have not been followed here since they concern a much wider range of types. Some of the types have perforations and some show distinctive traces of wear, and although the function of most types is obscure, several have been thought to be associated with weaving or the production of thread or yarn.

Sheep/goat metapodials with central perforations: There are three examples (eg Fig 126.3) of a type frequent upon sites of middle and later Iron Age date in the region (Britnell 1977, 85–6 fig 11) and elsewhere in Britain, and examples are also known from Roman contexts (Wild 1970, 34, and Table G). The Cadbury Castle examples, as is almost invariably the case elsewhere, are made from sheep/goat metacarpals. The three examples have a single cylindrical perforation of between 4–5mm in diameter drilled through the anterior and posterior surfaces, sometimes leaving a slight burr on one side. In some instances either or both the proximal or distal ends have been removed from the bone. The preservation of the Cadbury examples varies, but two appear to be little worn and there is no evidence of wear around the perforation. Slight polish is noted on examples from Maiden Castle (Laws 1991a, 236) and fractures across the central perforations of examples from Maiden Castle (Laws 1991a, 236) and Danebury (Sellwood 1984b, 389) might suggest that they were subjected to stress. These simple objects have a wide range of possible functions, and although Pitt Rivers's (1888, 172) suggestion that they may have been used 'for winding string, or perhaps as netting needles or as a bobbin' has been frequently been restated, an association with weaving (cf Henshall 1950, 148; Crowfoot 1945, 157; Wild 1970, 34) is less certain since there are few obvious traces of wear and since an implement of this type is not essential with the warp-weighted loom (Hoffmann 1964, 55, 67, 89). Two datable examples from Cadbury come from Middle or late Middle Cadbury contexts, two from separate contexts in the plateau sites and one from the south-west gateway.

Sheep/goat metapodials with transverse perforations at ends: Three sheep/goat metapodials have transverse, cylindrical perforations 3–6.5mm in diameter drilled through the anterior and posterior surfaces, two (meta- tarsals) having a single perforation at the distal end (Fig 126.4) and one (metacarpal) having a perforation at the distal and proximal ends. Similar examples are known from Iron Age sites in the region (Britnell 1977, 86). The function of these objects is obscure: the latter example is alone in showing some indications of surface polishing, but none of the perforations show any clear indication of wear around the perforations. All the examples came from separate contexts in the plateau sites, one fragmentary example being from a Late Cadbury context.

Sheep/goat metapodials with longitudinal perforations through the proximal end: Eight metatarsals have irregular longitudinal perforations 5–9mm in diameter cut through the proximal articular surface which has damaged the bony septum dividing the medial and lateral sides of the medullary cavity (Fig 126.5–6). In some instances the distal end of the bone is missing but in others the distal epiphysis is complete. Similar examples are known from Iron Age sites in the region (Britnell 1977, 87). There are no clear indications of wear and the function of these objects is obscure, though it is possible that some may have served as handles (cf Coles 1987, 145; Laws 1991a, 236). Five examples are from datable contexts, in all cases belonging to Middle Cadbury. One example is from the ramparts, four examples are from separate contexts in the plateau sites, and three come from separate contexts on the northern slope of the interior.

Sheep/goat metapodials with longitudinal and lateral perforations at proximal end: Five metatarsals are like the previous group but have an additional often irregular lateral perforation at the proximal end, normally through the posterior surface, which joins the longitudinal perforation at a slight angle (eg Fig 126.7). The perforations have necessitated the removal of the cancellous bone tissue

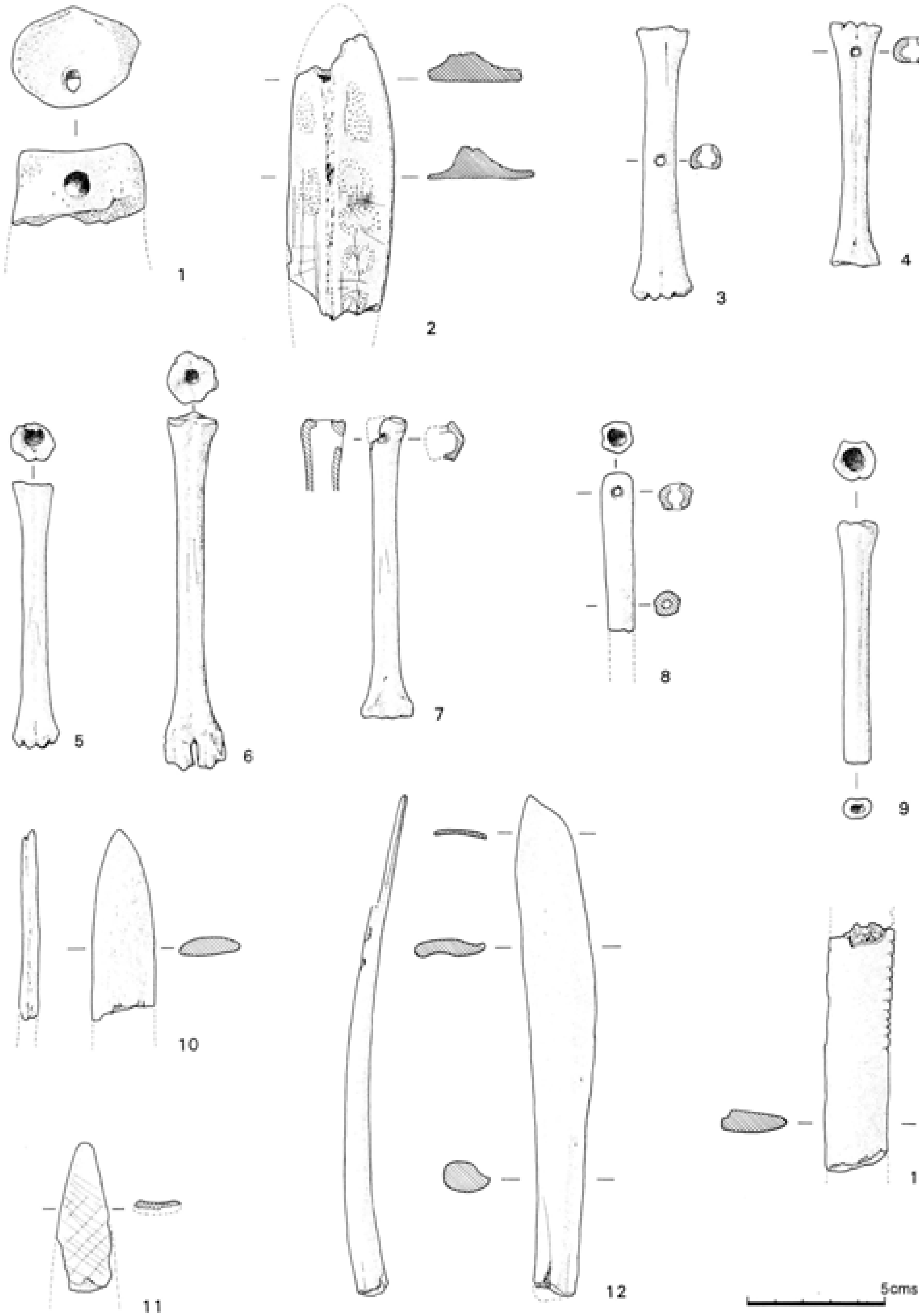


Fig 126 Worked bone. Scale 1:2

and parts of the bony septum at the proximal epiphysis. Similar examples are known from other Iron Age sites in the region (Britnell 1977, 87). In the case of three objects, the distal epiphyses have been partly removed, sometimes roughly, and the rough edges or exposed cancellous tissue has become smoothed or polished. The function of this type is again obscure, although it has been suggested that they were bobbins (Bulleid and Gray 1917, 426–7). Four of the five examples are from datable contexts, belonging to Middle Cadbury, one example coming from the ramparts, three from separate contexts in the plateau sites, and one from the northern slope of the interior.

Miscellaneous perforated sheep/goat metapodials: A single miscellaneous example (Fig 126.8), probably made from a metatarsal, where the proximal articular surface has been removed as though to form a hollow tube, with a lateral perforation between the between the medial and lateral surfaces. From an Early Cadbury context on the plateau.

Sheep/goat metapodials with detached epiphyses: Four similar objects have been made from metatarsals (Fig 126.9), in some cases by the removal of both the distal and proximal ends of the bone, and several examples are carefully finished and smoothed, but have no clear indications of wear suggesting their purpose. The illustrated example is similar to the group of metapodials with longitudinal perforations through the proximal articular surface. Although the objects have the general form of pipes or tubes at least one example would not appear to have been used as such. Two of the objects are from a single Middle Cadbury context on the plateau and two are from a single Middle Cadbury context on the same part of the site. The unusual occurrence of two of objects from each of two different contexts suggests that they had a similar function and were possibly used in multiples. Two similar examples are known from Glastonbury (Bulleid and Gray 1917, 427; B295 and B413).

Rib blades: Five rib blades trimmed and pointed at one end to form a blade (eg Fig 126.10–12), of a type know from other early and middle Iron Age sites in the region, particularly in Wiltshire (Britnell 1977, 93 fig 12), which are occasionally decorated. Four examples show indications of wear around the tips of the blades, suggesting use as spatulae. One example continued to be used after one face of the blade had been broken away, suggesting that the implements were not subjected to considerable stress. One example is from the rampart cuttings and the remainder are from single contexts in the plateau sites. The four examples from the plateau sites are from datable contexts, all belonging to Middle Cadbury. In several instances elsewhere, as for example at All Cannings Cross (Cunnington 1923. pls 7.1,3; 124.10) and Boscombe Down West (Richardson 1951.164 fig 17, 19, 21) between two and six examples have been found within the same context, which possibly suggests a process in which more than one implement was used in conjunction in the same process.

Notched blades: Three fragmentary blades of unknown function with a series of finely cut notches on one edge, but otherwise unworked (Fig 126.13). Similar examples are known from All Cannings Cross (Cunnington 1923, pl 15.6–7, 12). The notches show no clear indications of wear and would be unlikely to be sufficiently robust to withstand much pressure (cf Cunnington 1923, 109). An example from Meare East (Coles 1987, fig 3.7, B122) has a pointed end similar to the category above. The three examples all come from the rampart cuttings, of which two are from dated contexts, one being from an Early Cadbury context and one from a Middle Cadbury context.

Large bone points and blades: Six large points or blades (Fig 127.1–3), five made from horse or cattle metapodials and one from a pig tibia, the latter being the only certain implement from Cadbury Castle made from a pig bone. The implements have clearly been used for different functions, but none of these can be readily identified, although two have chisel-like spatulate ends suggesting use as modelling tools; three have perforations and two have sockets and perforations for hafting. Four examples are from the plateau sites, one is from the ramparts and one from the northern slope of the interior. Three examples are from Middle Cadbury contexts.

Decorated bone tubes: Four decorated bone tubes (eg Fig 127.4–5) and fragments have possibly all been made from sheep/goat metapodials. Two of the items are practically identical and may have been handles; the other two fragments probably belonged to similar objects. The form of lattice decoration, made by fine knife cuts, is characteristic of Roman knife handles (cf Webster in Cunliffe 1975, fig 118, 113). All four objects are from the south-west gate; one fragment in association with second- to third-century AD metalwork and one with mid to late-first-century AD metalwork.

Stone objects

by Peter S Bellamy

Stone discs: Three stone discs, one perforated, were recovered. The perforated example is a large, very fragmentary chalk disc measuring *c* 113mm in diameter and 30mm thick, with a central hole 11–13mm across, drilled from both sides. It is probably too large to have been a spindle whorl. Marks made by a pointed tool *c* 0.5mm wide were visible on one face. Similar perforated discs have been found at Maiden Castle (Sharples 1991a, fig 169.12; Wheeler 1943 pl XXXIII) and Danebury where they were tentatively interpreted as small flywheels or drillweights (Brown 1984, 422). The example from Cadbury Castle was recovered from the late Bronze Age pre-bank turf on Site D.

The other two stone discs both had been chipped into shape. They were of differing sizes; the smaller Lias disc (Fig 127.6) is 48mm in diameter and 9mm thick; the larger Old Red Sandstone disc measures 170 mm in diameter and 17 mm in thickness and has a smoothly worn surface (Fig 127.7). They came from a Late Cadbury context in the rampart and a Middle Cadbury context from the interior respectively. The function of these stone discs is not clear, but it is possible that they were used as weights or as pot lids.

Stone counters: Four stone counters were recovered from the excavations. Two were small flat Lias discs 22mm in diameter and 5mm thick which had been chipped into shape. Both of these came from Middle Cadbury period contexts in the interior. Another was a finely finished hemispherical flint counter, 14mm in diameter and 6mm thick. It came from a Late Cadbury period context in the interior. The other possible counter was a small flattened quartzite pebble with a glossy surface, 18mm in diameter and 12mm thick which was recovered from a Middle Cadbury period context also in the interior. Large quantities of similar types of counters were found at Meare (Gray and Cotton 1966) and Glastonbury (Bulleid and Gray 1917).

Stone balls: There were eight spherical or ovoid stone objects recovered from the excavations, forming a fairly heterogeneous assemblage. The three largest

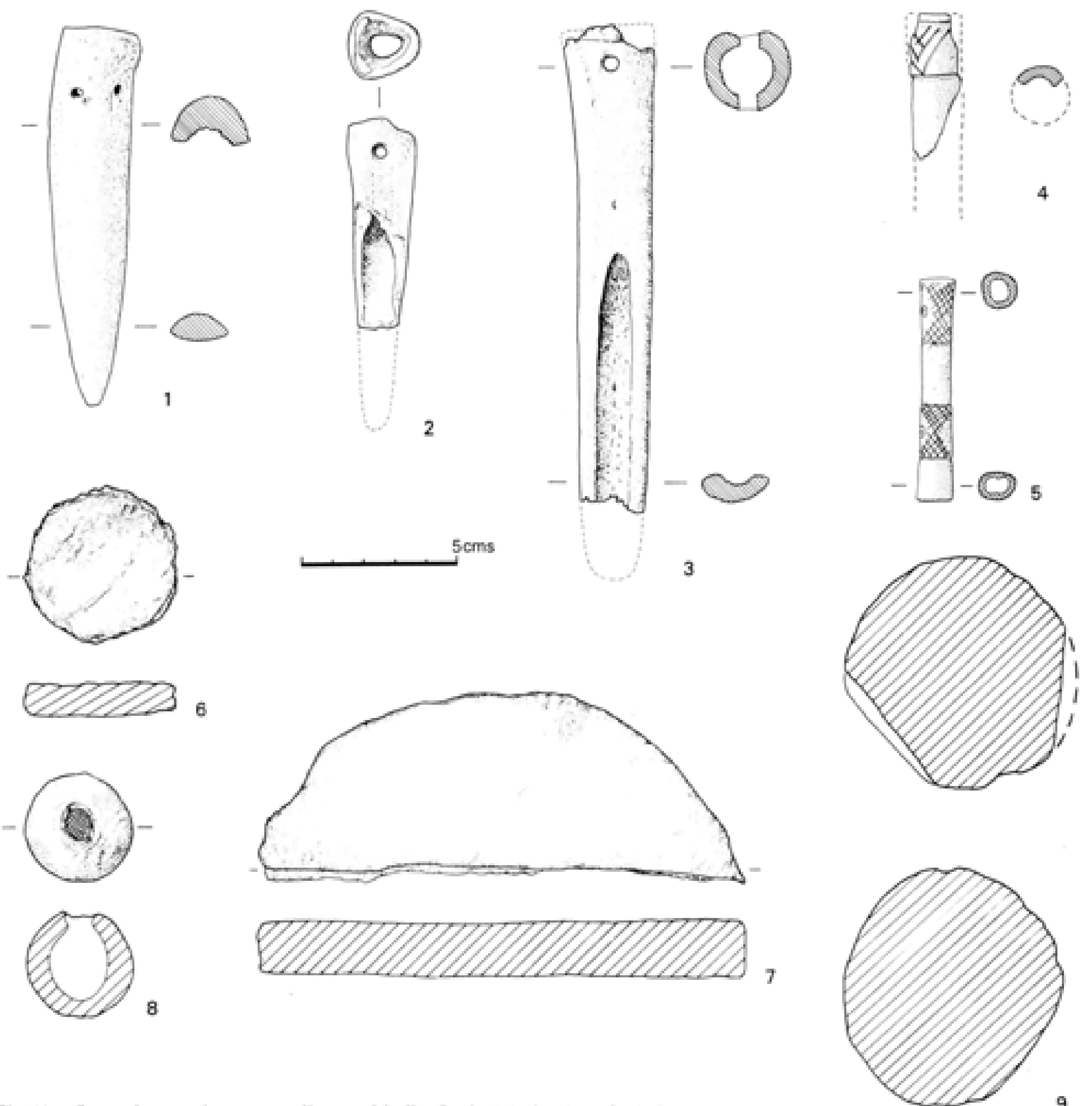


Fig 127 Large bone points, stone discs and balls. Scale 1:2 (no 9 scale 1:4)

balls (eg Fig 127.9) were made from Forest Marble and were very similar in appearance, size and weight (160mm diameter and 4500g) and all three had traces of chisel marks on the surface, indicating that they had been deliberately shaped. In addition, one had a single prominent groove and traces of four others running across its surface. Three medium-sized sandstone balls were fairly rough with no trace of deliberate shaping, and ranged in size between 87–124mm across. One of these medium-sized irregular ovoid balls had traces of a slight longitudinal groove. Two smaller stone balls (eg Fig 127.8) were recovered; one was a small Lias ball, 38mm across, with slightly flattened ends, reminiscent of the small cubed stone weights and the other was very rough.

The function of these balls is not clear. The difference in size and finish may indicate that they were not all used for the same purpose. The existence of grooves on two of the balls may suggest that a cord was tied around them for suspension, perhaps as weights. Alternatively, it has been suggested that they were used in Roman artillery. Three of the balls were from Middle Cadbury contexts and one from a Late Cadbury context.

Clay balls

by Cynthia Poole

These can be subdivided into solid balls and partly perforated balls.

There are three objects characterised as solid balls. One well formed complete example measures 15mm in diameter, weighs 4g. The other two examples are larger and more ovoid in form, measuring 35 and 44mm long and 17 and 37mm wide. They weighed 20g and 58g. The smaller one may have been an unfinished object, possibly a slingshot, and the larger one has a very battered appearance, though originally well smoothed.

There are three partly perforated clay balls, which is a form known from other Iron Age sites, though not in large numbers. The objects take the form of a spherical ball, flattened at the end, which is perforated. They measure between 22 and 32mm in diameter and *c* 20mm high. The perforations are usually 2–7mm in diameter, decreasing towards the end, and can vary between 6 and 17mm deep. The complete examples weigh 10g and 18g. They were baked or fired. There is no clear evidence for the function of these objects, but they probably fitted on the end of some other tool or object.

9 The resources of production

Introduction

by John C Barrett

The prominent hill of Cadbury Castle, enclosed, defended, and occupied throughout the latter half of the first millennium BC and into the first millennium AD, was only one place in the Iron Age and early Roman period landscape. Our perceptions focus upon the archaeological remains on the hill and our discussion has hardly extended beyond the bounds of the ramparts and the south-west gateway. Such perceptions will naturally give this place a pre-eminence and we will always tend to locate Cadbury Castle at the mid-point of a surrounding landscape. Indeed this is precisely the way in which we have represented the geographical context of the site (Fig 1). To a certain extent this perception makes historical sense; the hillforts which encircle the basin of the Somerset levels or are scattered over the Wessex uplands will each have housed activities which drew most heavily upon the immediately local resources of people and materials. But such a view can only be a first approximation to the complex reality by which activities on the hill intervened in people's occupation of the wider landscape.

We began this volume by referring to Cadbury Castle as one location shared between a number of overlapping landscapes (see p6). The intention was to draw attention to the hill as a place through which people passed, a place where different communities formed at different times and whose members would find other allegiances, other places to be, beyond the ramparts at other times. This is an attempt to shift our perspective away from the relatively static image of the hillfort as a central place within a territory and to view it instead as a place to and from which people moved according to different requirements, obligations, and temporal cycles. It was through such movements that the defences and buildings which are described in chapters 3, 4, and 5 were built and occupied, and also by which the artefacts described in chapters 6–8 were either brought to or made on the site, and then discarded there.

The next three chapters explore the ways in which the on-site residues which are recovered archaeologically are the products of the routine activities which took place on the hill. It was around these activities that the occupants of Cadbury experienced their own place within the particular communities to which they belonged; they expressed the security of a known and dependable world and the effectiveness of traditional knowledge and skills in dealing with that world. At first sight the issues with which we are dealing appear straightforward. The material residues provide us with patterns. Certain objects are found on the site while others are not; those that do occur do so in certain places and in association with a restricted range of other objects. Such patterns imply a regularity in the processes which created them, and the archaeological task is to recognise what those processes may have been. Once we have gleaned some understanding of those processes we may begin to explore how they may have been organised to create the complex historical system which was Iron Age Cadbury Castle. However, while patterning and order certainly exist they (rather like beauty) lie in the eye of the beholder. We recognise one set of patterns and not another because of the way we look at the material. The categories which we choose to use to describe and measure those residues are active in creating the patterns which we then seek to explain. In short, we do not simply discover history, we make it.

It is from this perspective that we will consider some of the residues which were recorded in excavation and then studied in the post-excavation programme. It is a perspective which demands that we fully understand the context of our analysis. Context is not simply given to us (as the stratigraphic context of a group of material), it is also ascribed by us in the expectations and practicalities of our own work. Our ideas frame the contemporary context in which the material is given significance, ie by the way we record and divide the material for specialist study, and these ideas are maintained in the ways by which archaeology is currently organised. One sub-text of this report is to explore how a different analytical context may be established. An attempt to reconsider the contexts in which artefact categories may be understood has, for example, already been made in the organisation of Chapters 6–8.

This chapter deals with one of the fundamental categories employed in artefact analysis, the raw material from which those artefacts were made. These are the materials from which the surviving artefacts were fashioned. This does not assume that the objects described in the previous chapters were made on site; many undoubtedly arrived in their finished state, others may have arrived as scrap material intended for re-working. However, what we do see here is the range of raw materials which was available to the particular communities who occupied Cadbury Castle. It is through this that we gain some understanding of the control that the members of that community exercised over their world and the movement of those resources, carried by people, from the wider landscape to Cadbury Castle. However, the vast range of organic materials which were once present on the site no longer feature, and we appear blind to their existence because we can no longer see the objects themselves. The surviving materials, the ways in which they were procured, and the organisation and knowledge employed in their working, define the opening chapters of an artefact's biography. The working and consumption of these materials and the artefacts fashioned from them will then feature in the two chapters which follow.

Pottery production

by David Williams and Ann Woodward

A programme of petrological examination of selected pottery samples was devised, its purposes being to verify the fabric series that had been defined macroscopically, and to investigate the possible sources of the different tempering materials. Four linked reports were prepared by Williams (1994). The summary presented here brings together a selection of the results in order to demonstrate the changing patterns of pottery production that can be perceived for the three main periods of activity at Cadbury Castle. The detailed list of fabric types is given in Chapter 13, and the correlation between fabric types and ceramic forms, and the patterns of changing use of filler types, have been stated and discussed above (see p24ff).

Early Cadbury

Throughout Early and Middle Cadbury, shelly wares are dominant. The exact source of the shelly limestone employed to produce the filling agent is unknown, but could be local to the site. There is no specific evidence for on-site pottery production, but it seems likely that at least some of the shelly wares were made on or within a few kilometres of the hillfort. In Ceramic Assemblage 4 the characteristic filler type is calcite. Ceramic Assemblage 5 is dominated by calcite and shelly mixtures, employing in addition flint, sandstone, oolites and some micaceous sand. In Ceramic Assemblage 6, shell filler becomes very dominant and there is a significant proportion of micaceous sandy fabrics in use.

Typical descriptions

Calcite: Frequent large pieces of calcite in the form of rhombs, set in a ground mass of small quartz grains, with the odd piece of limestone and shell. Origin: probably the Mendips. Nearest source: 20km.

Fossil shell: Frequent plates of fossiliferous shell, often with some calcite, limestone, and a few small quartz grains. Origin: Jurassic (local).

Flint: Many medium-sized angular pieces of flint, together with fairly well sorted grains of quartz, some iron oxide with a little mica. Origin: the Wessex chalklands. Nearest outcrops: 16km.

Oolitic: Packed with medium-sized, concentric oolitic grains. A little bit of limestone and a sparse scatter of quartz grains also present. Origin: Jurassic. (local).

Sandy (i): A very fine fabric with some silt sized quartz grains, shreds of mica, and a sparse scatter of calcite crystals. Origin unknown.

Sandy (ii): Haematite-coated sherd: frequent subangular quartz grains ranging up to 1mm across, with red oxide, sparse flint and limestone, and some flecks of mica. Origin: unknown, but presence of flint suggests a non-local source.

Sand and mica: A fairly fine-textured sandy fabric with frequent well sorted small quartz grains and flecks of mica scattered throughout the clay matrix. Origin: not proven.

It should be noted that no scratch-cordoned bowls have been found at Cadbury, and that no examples of glauconitic sandy wares have been identified either. However, the presence of flint tempering does indicate some contact with the Wessex chalkland.

Middle Cadbury

In Ceramic Assemblage 7 shell is the dominant filler type, but in Ceramic Assemblage 8 there is a revival in the minor usage of oolitic limestone for inclusions, and the different varieties of decorated Glastonbury wares are also represented. The plain wares are dominated by shell tempering; this occurs for most barrel-shaped jars, dishes, proto-bead rim jars, and the first bead-rim bowls. The saucepan pots represented at Cadbury are also dominated by shell-tempered fabrics. This is in stark contrast to Wessex where, for example at Danebury, the predominant fabric types for saucepan pots are flint filler or sand-tempered (Cunliffe 1984, 307). Amongst the decorated Glastonbury wares, four fabric types have been distinguished. Of these shelly fabric is the most common, followed by the sandstone fabric. The other two types, gabbroic and sanidine, appear to occur rarely. The overall relative proportions of these different fabrics could not be determined in detail because the gabbro and sanidine could not be recognised readily in the hand specimen, and because the pit assemblages have not been manually inspected during the current programme of analysis.

Typical descriptions: Glastonbury Ware

Sandstone fabric: Peacock's Group 2. In thin-section frequent subangular grains of quartz can be seen scattered throughout the clay matrix, together with fragments of sandstone, some flecks of mica, quartzite, and a little iron oxide. This closely matches Peacock's Group 2 (Sandstone, Peacock 1969), with a likely origin in the Old Red Sandstone region of the Mendip Hills. Nearest outcrop: 22km.

Shell fabric: Peacock's Group 4. In thin-section frequent pieces of fossiliferous shell and limestone can be seen scattered throughout the clay matrix. The limestone is a shelly limestone or biosparite and it is likely that the fragments of shell are derived from it. This belongs to Peacock's Group 4 (Shell, ibid), where a Jurassic origin was suggested, though the exact source or sources remain unknown.

Sanidine Fabric: Peacock's Group 5. The most prominent, non-plastic inclusions are rounded grains of orthoclase felspar, in particular sanidine. Also present are fragments of volcanic rock, sandstone, shale, quartzite, and flecks of mica. This fabric very closely matches Peacock's Group 5 (Sanidine, ibid), which it was suggested derived from the Permian of south-western England. The area north of Watcombe to Exeter and along the Crediton Valley as far as Colebrook was singled out in particular as being the likely source of the raw materials used for making the pottery. Nearest outcrop: 73km.

Gabbroic fabric: Peacock's Group 1. In thin-section the numerous inclusions comprise mainly felspar and amphibole. The mineralogy is distinct and the source must be the gabbro which outcrops on the Lizard Head in Cornwall. Peacock's Group 1 (Gabbro, ibid). Source: 220km.

Although the shell-tempered Glastonbury wares of Group 4 were not distinguishable from the shelly fabrics of the saucepan pots, or the vast bulk of the Middle Cadbury coarse wares, on petrological grounds, this does not necessarily mean that they were all made in the same centre. All that can be said at this stage is that they all originate somewhere in the Jurassic region.

Late Cadbury

Ceramic Assemblage 9 is almost totally dominated by sandy fabrics filled with varying quantities of fine to coarse quartz sand. This marked a very distinct break from all that had gone before. Shell-tempered wares are now mainly residual, although a few shelly vessels may have been still in use. Initially, it was presumed that most of the sandy wares, characterised by well-known Durotrigian forms, had derived from the known production centres in the Poole Harbour/Wareham area of Dorset, and this was confirmed by some early thin-section analysis. At a later stage in the programme, selected stratigraphic sequences of Ceramic Assemblage 9 material and some other key context groups were studied by the authors in conjunction with Lisa Brown, who is undertaking detailed research on the Poole Harbour pottery industry. She noted that there was a particular predominance of the finer fabric and form elements of the Poole Harbour industry, and that much of the material from Cadbury Castle was oxidised, displaying a markedly pink, buff or white exterior surface. She also noted that there was a tendency for the finer Poole Harbour fabrics to become commoner through time, in the stratified sequences from the Bank 1 (Site D) and south-west gate. It was also confirmed that none of the cordoned bowls of form BD1 and BD2 were French imports, and that none of the very fine copies, characteristic of the Hengistbury Head site, were present at Cadbury Castle. It was decided to examine four groups of material petrologically. These were four groups of vessels which were uncommon within the general repertoire of the Poole Harbour industry: the very distinctive 'white-slipped' bowls referred to above, some fine ware necked bowls, a series of 'Butt Beaker' copies, and carinated cups of non-Poole Harbour form.

Key descriptions

Poole Harbour fabric (fabric h): In the hand-specimen, the pottery generally appears in a hard, very sandy fabric, mostly, but not always, dark grey to very dark grey/black in surface colour, with the burnished areas often acquiring a rich dark sheen. In fresh fracture the sherds exhibit a distinctive-looking core, consisting of frequent light-coloured angular quartz grains set against a black or very dark grey background, which gives the appearance of a 'cod's roe'. In thin-section the range of non-plastic inclusions comprise frequent subangular quartz grains, together with flecks of mica and invariably some pieces of shale, normally set in a fairly clean clay matrix. Occasionally, a little mudstone, flint, quartzite, limestone or shell may also be present. However, the products from this region of Dorset have been more readily identified by heavy mineral separation. They produce a distinctive suite of non-opaque heavy minerals in which tourmaline, together with zircon, dominates the assemblage (Williams 1977). Source: 44km.

White-slipped bowls with bead rim: Hard, sandy fabric with traces of white slip on the outer surface which carries on over to the inner surface just below the rim, very pale brown in colour with a dark grey core. In thin-section: tightly packed ill sorted subangular quartz grains, silt-sized to 0.60mm across, some of them polycrystalline, together with some flecks of mica, iron oxides, and a little flint. A heavy mineral separation produced a few grains of zircon. An example in a rougher sandy fabric showed a similar character in thin-section, but heavy mineral separation produced practically no non-opaque grains.

Necked bowls: Hard, rough sandy fabric, with quartz grains protruding through the surfaces. In thin-section, frequent well sorted subangular quartz grains with some flecks of mica and a little iron ore. Heavy mineral separation produced mostly zircon grains, with accessory rutile and tourmaline.

Carinated cup: Hard, rough, very sandy fabric, similar to the last. Heavy mineral separation: some zircon with a few grains of rutile and tourmaline.

'Butt Beaker' copies: Hard, very smooth sandy fabric, very dark grey surfaces, approaching black, with a lighter grey core. In thin-section: frequent subangular quartz with flecks of mica, some pieces of shale, a little limestone, and the odd piece of flint. Heavy mineral residues: tourmaline-rich assemblages.

Of these groups of more unusual material, only the 'Butt Beaker' copies appear to contain a tourmaline-rich heavy mineral suite which leads one to suspect that they may have been made in the Wareham-Poole Harbour region, although the Cadbury Castle sherds contain slightly more quartz grains than are generally present in Dorset, Romano-British BB1. None of the other sherds match up petrologically to known Durotrigian products. Unfortunately, the range and texture of the inclusions are of a common nature, giving little real indication of likely sources. It is possible that some, or all, may have been made close-by to the Wareham-Poole Harbour region, although alternatively they could have been made much nearer to the find-site. Also the unusual products seem to come from a variety of sources.

Conclusion

The exact proportions of locally made wares and products brought in from afar are difficult to determine because the exact sources of some of the major fabric groups are unknown. If the shell-tempered wares were produced locally, as seems likely, then the main period of change falls at the Ceramic Assemblage 8/9 interface. This change would have involved a dramatic changeover from a system of mainly local pottery production to the extensive use of coarse wares imported from Dorset. However, we have seen that unusual products from other, unknown sources were also involved in this later phase. In Dorset, the Poole Harbour products were in use from the later stages of the early Iron Age, but at Cadbury Castle, and in Somerset as a whole, the industry does not appear to have had any impact until the time of the Roman conquest. Before this, in Middle Cadbury, the pottery repertoire indicates the presence of small numbers of fine wares from sources up to *c* 75km away (plus a few items from the further Cornish source). In Early Cadbury such foreign products were somewhat more common, especially in Ceramic Assemblage 5, but the filler types indicate rather nearer sources, more in the order of 20km. This is with the exception of the calcite inclusions characteristic of Ceramic Assemblage 4 which, if they indicate origins in the Mendips, would suggest a wider-ranging system of ceramic production in the late Bronze Age. However, it may be that a nearer source of calcite remains to be identified.

Daub and burnt clay fabrics
by Cynthia Poole

The fabric used for daub and burnt clay, both structural and small objects, was only examined in hand specimen either directly or with a low powered microscope; no thin-sectioning or other mineralogical analysis was undertaken. Seven fabrics were identified, of which the finer fabrics were the most common.

Fabric A: 7 samples: Late Cadbury. This fabric was applied exclusively to the Roman roofing tile. It was fired to a bright red or orange colour throughout and contained a low density of coarse quartz sand and limestone grit.

Fabric B: 174 samples: Early to Late Cadbury. This was a fine clay, usually baked or fired to a pink, light reddish-yellow or pale brown colour. It contained no or very few inclusions, possibly just a low density of silt or fine sand, which might include both quartz and mica.

Fabric C: 6 samples: Middle Cadbury (Ceramic Assemblage 8). Virtually all the examples come from a single deposit of oven daub in pit S208. The fabric was fired to brown or grey. It contained between 20% and 40% inclusions, which included mostly angular quartz from coarse sand size up to 5mm, plus a little angular limestone 1–5mm and ?fossil shell up to 12mm.

Fabric D: 74 samples: Early to Late Cadbury (Ceramic Assemblages 7, 8, and 9). It fired to various shades of grey, brown, reddish yellow and red. The matrix was generally a fine sandy clay including both quartz and mica and could contain between 5% and 35% of inclusions, 20–25% being commonest. The inclusions consisted of combinations of limestone, including lias, oolithic, and chalk, generally angular except chalk and varying from 1–23mm sandstone, 1–40mm and angular, calcite or quartzite 5–8mm and angular, rounded grog or clay pellets up to 12mm, quartz and mica as coarse sand and grit, and occasional shell. Most of these rock fragments could come from relatively local sources.

Fabric E: 59 samples: Early to Late Cadbury (Ceramic Assemblages 5/6, 7, 8, and 9). This fabric fired to various shades of reddish yellow, brown grey and black. The matrix was a sandy clay with quartz and mica and contained between 5% and 35% inclusions, *c* 15% or less being most common. The inclusions were characterised as coarse sand and grit up to 4mm, though occasional limestone pieces reached 20mm and calcite 9mm. Limestone was most common and sandstone, quartzite, and calcite all occurred quite frequently, while chalk, shell, and grog were rare. The inclusions were more commonly rounded, though angular inclusions also occurred.

Fabric F: 241 samples: Middle Cadbury to post-Roman (Ceramic Assemblages 7, 8, 9, Roman, and post-Roman). This fabric baked or fired to a wide variety of shades of red, reddish yellow, brown, grey, and black. It has a distinct sand content, generally fine to medium, with mica apparently dominating but quartz also present. There were some examples where the mica component was quite coarse and very common. Occasionally small rock fragments of the types commonly found in the coarser fabrics were present.

Fabric H: 2 samples: Middle Cadbury (Ceramic Assemblage 8). This was the only raw clay found at Cadbury Castle. It was green, sometimes with whitish mottles, and sometimes contained quartz sand, It may have been the basis for Fabric F and possibly the other fabrics, except A. The major sample of this consisted of 108 slingshots from pit S066D.

Apart from Fabric A, the remainder were prepared on site. The addition of tempering materials was probably fairly haphazard, as they are gradations between all the fabric types going from the finest through to the coarsest.

Kimmeridge Shale

by Peter Bellamy

A total of 67 artefacts have been identified, by visual examination, as Kimmeridge Shale. Another small fragment was darker in colour and more finely laminated than the rest of the shale and may be jet. This piece has been liberally coated in PVA, making identification difficult.

Kimmeridge Shale occurs as exposures along the south coast of the Isle of Purbeck, Dorset, about 55km south-east of Cadbury Castle. Evidence for large-scale exploitation of this raw material is found in Purbeck from the early Iron Age to the Roman period. The evidence for shale working, in the form of waste core materials plus products in various stages of manufacture, from both handworking and lathe-turning industries (the latter starting in the first century BC), has been found on virtually every Iron Age site in Purbeck (Calkin 1955; Cunliffe and Phillipson 1969; Woodward and Sunter 1987; Cox and Hearne 1991). In addition, it is a common occurrence further afield in Dorset. Waste pieces and rough-outs, as well as finished objects, have been recovered from more distant Iron Age sites also (eg Danebury, All Cannings Cross, Glastonbury) which suggests that Kimmeridge Shale was traded both as finished and unfinished objects.

The shale artefacts from Cadbury comprise mainly finished objects with a small number of rough-outs, waste pieces, and some unworked fragments. The important question is whether the shale came to the site as completed objects or was manufactured on site from imported raw material. It is clear that the number of pieces of manufacturing waste is very small and widely distributed. A close inspection of the unworked pieces reveals that the majority of these do not convincingly represent raw material brought to the site, but are small flat pieces, all of which could easily be broken fragments of larger finished objects. It therefore does not seem likely, on present evidence, that shale was worked in any quantity on site.

Amber

by Peter Bellamy

The four amber objects were not subject to any provenance analysis as three objects had been previously conserved with PVA and the fourth was extremely fragile and fragmentary. However, it has been shown (Beck and Shennan 1991) that the vast majority of prehistoric amber artefacts in Britain are of Baltic amber. It seems likely, therefore, that the amber beads from Cadbury Castle are of Baltic origin.

Amber deposits occur in the eastern Baltic but small amounts of Baltic amber are also found washed up onto the eastern shores of England and Scotland (ibid 16-19). The source of the amber found at Cadbury cannot be determined precisely but it is clear that it was imported to the site. It is not clear whether the amber arrived in the form of raw material or as finished objects, but in view of the small number of artefacts (all finished objects), it seems unlikely that the latter is the case.

Coral

by Jennifer Foster

A small number of copper alloy decorative items have been identified which either contain or appear once to have contained a coral or coral-like inlay (Figs 98.7–8, 116.6). The use of coral in Hallstatt and La Tène Europe has been summarised by Champion (1976 and 1985). The coral used was the pink or red *corallium* imported from the Mediterranean and used in locally-made objects. Some La Tène objects have been positively identified as having coral inlay, but coral is difficult to identify unless a branch is visible or the object is thin-sectioned; it is therefore possible that some British pieces are decorated with another calcareous substitute. Stead has suggested that some of the Danes Graves beads, for example, may be chalk (Stead 1979, 87) and Dr Bates and Dr Perkins (pers comm), who kindly examined the Cadbury inlays, were cautious about definitely identifying them as coral and suggested that they might be tufa, which is banded in the same way and has the same chemical structure. Tufa would have been available fairly close to the hillfort. If much of the British coral is in fact a local substitute, this would have important implications for our understanding of long-distance trade. Mediterranean coral would, of course, have been a very costly substance and it is perhaps sensible to suggest that local substitutes would be sought in much the same way as red glass was also used as a substitute for coral. The use of substitutes might also explain why coral was still in use in Britain in the first century BC (eg at Hengistbury Head: Cunliffe 1987, 152, no 39) and first century AD (in the Polden Hills hoard; rein hooks; Fox 1958, 123, pl 72b; Spratling 1972, nos 183 A and B), 250 years after it went out of fashion on the continent.

Worked stone

by F E S Roe

A total of 943 pieces of worked stone are reported on here. Some undated finds have been included when the stone is of intrinsic interest, as for instance the south-western granite used for a saddle quern.

Twenty-nine different lithic materials were found to have been used for the artefacts at Cadbury Castle. Many are relatively coarse-grained, and macroscopic examination has been the main method for comparing the archaeological finds with samples collected in the field, except in the case of whetstones, seven of which have been thin-sectioned. Somerset is a hitherto unexplored area in terms of worked stone, and fieldwork has been undertaken to investigate possible sources for the materials selected for use at Cadbury Castle. This work has led to the identification of a probable quern quarry in the Old Red Sandstone at Beacon Hill, near Shepton Mallet, a distance of some 21km to the north of the site.

Querns and rubbers

The materials used for querns at Cadbury Castle are varied, by contrast with the whetstones, which are predominantly made from one basic material. A total of 276 quern fragments have been examined, but some of the more complete examples reported on in 1975 by P R Stanley now appear to be missing. All the quern materials had to be imported to the site, as the local Jurassic limestones were unsuitable. Separate materials were used for saddle and rotary querns, according to suitability, and the quest for the best available materials in the area brought about a change to different types of stone once rotary querns became current. There are a number of sources, the nearest of which was the greensand at The Pen Pits about 15km to the north-east. However, most of the quern materials came from further away, mainly from the east side of the Mendips. In particular, Old Red Sandstone from the Mendips was utilised, accounting for 84.3% of the quern and rubber finds, and more than one source for this seems to have been in use.

Micaceous Old Red Sandstone: The greatest number of quern and rubber fragments (134) are made from a micaceous variety of the Old Red Sandstone (see Table 15). This is light reddish or pink/brown, often having a slightly bleached appearance. The flakes of mica cause it to be fissile, so that it breaks readily into slabs, and there are many relatively small fragments. It was used almost exclusively for saddle querns and rubbers (Tables 16 and 17), and there is only one rotary quern fragment made from this particular variety of Old Red Sandstone.

Most of these saddle querns appear to have been little modified from the original blocks of stone, and some are quite thin flat slabs. It is not possible to suggest a specific source for this material, though it must have been obtained from the Mendips, and it may be that surface collection of loose pieces is all that was involved. Another possibility is that stone was obtained from the ditches of Maesbury Castle 23km away, since these were rock cut (Tratman 1959, 177), and slabs would have been readily available. Whatever the source, the same material may have been utilised as temper for pottery. One of the main fabrics from Ceramic Assemblages 5–9 contains quartz sand and also mica, together with other ingredients (see p259). Pieces of micaceous Old Red Sandstone from the site have been thin-sectioned by David Williams, who reports (pers comm) that there seem to be similarities in composition between this and the sandstone in the pottery. This, together with a little non-micaceous Old Red Sandstone, is the only quern material for which there are finds from early contexts (Table 15).

These flat saddle querns are on the whole unlike ones from other sites. Some micaceous Old Red Sandstone was used for saddle querns at both Meare and Glastonbury (Gray and Cotton 1966, 385; Bulleid and Gray 1917, 612) but although it came from the Mendips it was not necessarily from the same source. Other sites where similar stone was utilised cannot be cited at present.

Old Red Sandstone from Beacon Hill: Another variety of Mendip Old Red Sandstone that accounts for 85 quern fragments seems to have a source on Beacon Hill *c* 21km from Cadbury Castle. The main part of the workings here appears to have been on cliffs facing south, though there are also hollows in places

Table 15: Phasing of materials used for querns

	early Cadbury	*early-middle Cadbury*	*middle Cadbury*	*middle-late Cadbury*	*late Cadbury*	*unstratified*	*contexts*	*fragments*
Old Red Sandstone (micaceous)	13	2	38	5	13	48	119	134
Old Red Sandstone (unspecified)	2	-	5	-	1	8	16	19
Granite	-	-	-	-	-	-	1	1
Chert (Harptree Beds)	-	-	1	-	-	-	1	1
Staddon Grit	-	-	-	-	-	1	1	1
Igneous Andesite	-	-	1	-	-	1	2	2
Quartzitic Sandstone Group	-	-	-	-	-	1	1	1
Harptree Beds (silicified sandstone)	-	-	5	-	2	2	12	12
Upper Greensand Pen Pits	-	-	4	1	2	3	10	10
Upper Greensand (unspecified)	-	-	2	-	1	3	6	6
Ham Stone	-	-	1	-	-	-	2	2
Dolomitic Conglomerate	-	-	1	-	-	1	2	2
Old Red Sandstone Beacon Hill	-	-	4	2	25	23	54	85

Fragments of silicified sandstone from four contexts belong to one rotary on the hilltop. The stone utilised is variable, but it is mainly conglomeratic, containing rounded quartz pebbles in a matrix of finer quartz grains (Green and Welch 1965, 13). In colour it varies from purplish/pink to very light buff/pink. It is relatively hard and contains little feldspar, though reddish iron flakes do occur. On the whole there is no mica, but a purple sandstone with some mica is within the range found during fieldwork.

The Beacon Hill Old Red Sandstone was used almost exclusively for rotary querns (Table 16). The only saddle quern is a small but complete one from a probable Middle Cadbury context. Two of the rotary fragments are also Middle Cadbury. The majority of the stratified finds are Middle/Late or especially Late Cadbury. It would seem that by Late Cadbury there had been a switch both from saddle to rotary querns and from micaceous to pebbly Old Red Sandstone.

This particular stone seems again to have been used as temper for pottery, in this case Peacock's Group 2 (Peacock 1969, 46) which occurs in Ceramic Assemblages 8 and 9 (see p259–60).

There seem to be a few querns made of the same conglomeratic Old Red Sandstone from Glastonbury (Roe 1995, 165), and also probably from Meare (Gray and Cotton 1966, 385), but evidence where available suggests that this source may have been used as much if not more during the Roman period (Roe 1995).

Old Red Sandstone (unspecified): A small number of quern fragments (19) are made from feldspathic Mendip Old Red Sandstone, lacking both the mica and the pebbles of the two varieties already described. These are divided between saddle and rotary querns. Some of the saddle quern fragments are Early Cadbury, while a complete saddle quern comes from a Middle Cadbury context. Two rotary fragments are also Middle Cadbury.

Old Red Sandstone was used extensively for querns at both Meare and Glastonbury, but as it was widely available from four separate areas on the Mendips, differing sources may have been used and it is not possible to specify where this Cadbury stone may have been collected.

Granite: Some other materials were used in limited quantities for saddle querns, most notably granite. The single quern fragment is unprovenanced, and it must have been brought in from Devon or Cornwall, some 100–240km away. South-western granite has also been recorded in small quantities from Meare (Gray and Cotton 1966, 385), from Gussage All Saints (Buckley 1979, 94), and from Maiden Castle (Sharples 1991a, fiche).

Chert: Another saddle quern fragment from a Middle Cadbury context is made from chert, which probably derives from the silicified Harptree Beds which occur in the northern part of the Mendips (Donovan and Kellaway 1984, 9).

Igneous Rock: Two fragments, possibly from saddle querns, are made of igneous rock, probably andesite from the east side of the Mendips (Green and Welch 1965, 8). One of these is from a Middle Cadbury context, the other unphased.

Staddon Grit: There is one rubber fragment of whetstone material from the ploughsoil.

Quartzitic Sandstone Group: Another material used, perhaps relatively early, is Carboniferous Sandstone of the Quartzitic Sandstone Group, again with a source in the Mendips (Green and Welch 1965, 52). This has limited outcrops, which may have prevented its wider use. It is a hard sandstone, and was used for a possible mortar. This mortar differs from the saddle querns in having a notably hollow working surface; there is no phasing information.

Harptree Beds: By Late Cadbury Old Red Sandstone from Beacon Hill, as described above, was the main material used for rotary querns. Other materials were also tried, including further varieties of stone from the Mendip area. One such was from the Harptree Beds, not the chert described above, but a distinctive silicified red/brown sandstone containing casts of Jurassic fossils including *Lopha*, *Pecten*, and *Trigonia* (Green and Welch 1965, 105). There are 12 finds of rotary fragments, but 4 of these have been found to join. Rotary querns made of this stone tend towards a greater depth than those made from other materials. The majority of these rotary fragments have been assigned to Middle Cadbury.

Rotary querns made of the same material were found at Glastonbury Lake Village. The suggested source of the stone was in liassic shore deposits near Croscombe (Bulleid and Gray 1917, 612). However, fieldwork around Croscombe produced no good match for the stone, and a more likely source seems to be around the village of Oakhill, close to Beacon Hill and 22km from the site. This is the most southerly extent of the Harptree Beds (Green 1984). There is no present-day exposure of the rock, and pieces lying on the surface may have been collected for use.

Dolomitic Conglomerate: Two rotary quern fragments appear to be made of Dolomitic Conglomerate from Triassic deposits in the Mendip area.

Upper Greensand: Most of the Cadbury quern materials were obtained, as has been seen, in the east or south east Mendip area, but there was also some limited use of Upper Greensand from the Pen Pits near Penselwood on the Wiltshire/Somerset border at a distance of 15km. This is another area of ancient workings, but unlike Beacon Hill, it is characterised by numerous small hollows over a wide area (Pitt Rivers 1884). This greensand consists of quartz grains speckled with relatively large grains of glauconite in a calcareous matrix. There are scattered fossil shells in the stone and also iron concretions. The ten fragments from Cadbury (with two more unstratified) are all probably from rotary querns. The phasing implies use mainly during Middle Cadbury.

This particular greensand was probably used at a good many sites, but still has to be recorded. It occurred at Danebury, but in Somerset has only been verified from a Roman context at Fosse Lane, Shepton Mallet (Roe forthcoming).

There are also six pieces of rotary quern utilising a finer-grained Upper Greensand, greenish-grey in colour and containing a little mica. The provenance of this is unknown at present. Dating ranges from Middle to Late Cadbury, with emphasis on Middle Cadbury. Such greensand must also have been widely used at other sites. The querns at Gussage All Saints, for instance, are mainly greensand (Buckley 1979), but information for other sites is not available at the time of writing.

Ham Stone: A golden coloured, iron-rich, shelly Jurassic limestone from the Upper Lias at Ham Hill was used for querns. Ham Hill is 17km to the south-west of Cadbury Castle. Two rotary querns were made from Ham Stone which has now been bleached by weathering. The stone was also used at Ham Hill and both sites share a Statton Grit source for whetstones. In the past Ham Stone was more noted as a building stone (Torrens 1969, 304).

Grindingstones

There are only ten implements that have been classified as grinding stones and this small number probably reflects a paucity of suitable pebbles that could be utilised in this way. The varied materials used seem to reflect this, being partly pebbles which may have been collected casually, or perhaps from Chesil Beach, such as quartzite (three examples), quartzitic sandstone (one), and miscellaneous sandstone (one), and partly materials which had already been brought to the site for other purposes and were then reused, such as Old Red Sandstone (one example), and Staddon Grit (four examples). Five of the grinding stones are in fact multipurpose implements.

Hammerstones

There are 14 hammerstones, all made from flint except one which is made of chert from the greensand. Both the chalk, as an assumed source for the flint, and the greensand curve in an arc to the east, south-east, south, and south-west of the site, and the chalk is within 22.5km, so although an exact source cannot be suggested, the flint nodules should have been relatively easy to obtain. An alternative source for them could have been the flint pebbles of Chesil Beach.

Some of these hammerstones may be early prehistoric, though the available stratification indicates Iron Age and later contexts. It may be noted that some of the flint weights could originally have been used as hammerstones.

Whetstones

Initial examination of 140 whetstones suggested that the majority of them were made from a stone similar to that used for Iron Age whetstones at both Danebury and Maiden Castle (Roe 1991a and b). This particular material is a reddish/grey or grey/buff sandstone, relatively fine-grained and slightly micaceous, with a source that is thought to be in the Staddon Grit of South Devon.

Seven of the Cadbury whetstones were selected for thin-sectioning, two from Early Cadbury and five from Middle Cadbury. One of the Early Cadbury whetstones was made from Mendip Old Red Sandstone, while the rest proved to be similar both to that used for the implements from Danebury and Maiden Castle and to samples of rock collected in the field in the Plymouth area.

The Staddon Grit is a Lower Devonian sandstone with a type area at Staddon Heights (136km from the site) just to the south of Plymouth (Dineley 1961; Harwood 1976). Beach pebbles suitable for whetstones can be found at the foot of these cliffs and also on the west side of Plymouth Sound. The thin-sections, both from the whetstones and the rock samples, show two main varieties of stone, one more pink/red in colour with a high iron content, the other a buff-grey stone with a moderate iron content. The rock contains about 60% quartz grains (Pound 1983, 466), together with circa 26% tuff, 8% quartzite and chert, 4% indeterminate plagioclase, and scattered small flakes of mica (muscovite). Under the microscope the quartz grains can be seen to be angular in shape, an essential factor for whetting and sharpening.

Identification of Staddon Grit cannot be certain without extensive thin-sectioning, but it seems probable that about 79% of the Cadbury Castle whetstones were made from this stone. A few, perhaps a dozen, seem to be made from other Lower Devonian materials, probably collected from the same general area. Old Red Sandstone was little used.

The available stratigraphy is not particularly helpful for dating the whetstones. A few Early Cadbury whetstones, including the thin-sectioned example, appear to be made from Mendip Old Red Sandstone.

Just three of the whetstones that can be identified as Early Cadbury appear (including one thin-sectioned example) to be made from the Staddon Grit. One of these is perforated for suspension. There is dating information for only 39.3% of the Staddon Grit whetstones. However, a high proportion of these, some 82%, have been attributed to Middle Cadbury, and there are other probable Lower Devonian materials from these phases. Only seven Staddon Grit whetstones have been recorded from Late Cadbury contexts, and some of these may well be residual or redeposited.

Whetstones made from Staddon Grit are only known from four sites at present, though other occurrences can be expected. Sea-borne trade to the south coast has been suggested to explain the finds at the inland sites of Danebury and Maiden Castle, bringing in good, hard stone for use at sites on the chalk, where whetstone materials would have to be imported. There may be a link with the port at Mount Batten, Plymouth (Cunliffe 1986). Staddon Grit does not appear to have been transported as far as the Somerset Levels, and so in this one instance no comparisons can be made with Meare and Glastonbury. The whetstones at Meare were thought to have been made of Mendip Old Red Sandstone (Gray and Cotton 1966, 376). However, they are very probably made from the same material as those found at Glastonbury. The latter were beach pebbles obtained from the Severn shore, but derived ultimately from the Hangman Grit of the Quantocks (Roe 1995, 162).

Polishers

There are 13 polishers, almost all utilised quartzite pebbles which were probably collected from Chesil Beach on the Dorset coast. All except three are made from light coloured quartzite, the exceptions being a multi-purpose implement of purple quartzite which was also used as a hammer stone and grinding stone, and two small pebbles, one of dark quartzite, the other of metamorphic rock. These too could have come from Chesil Beach. In addition, as noted above, around 15% of the whetstones have shiny surfaces, suggesting they have also been used for burnishing or polishing. However, whether Staddon Grit was being used for the same purposes as the quartzite pebbles remains unclear.

Spindle whorls

Little effort was needed to acquire suitable materials for spindle whorls, and use seems often to have been made of whatever was to hand, in particular the local Jurassic rocks such as Inferior Oolite and Lower Lias, available either on the site or from within a few kilometres. Materials already brought to the site for other purposes, such as Old Red Sandstone and Kimmeridge Shale, could have been reused. The only imported materials appear to have been White Lias from about 27km away to the north of the Mendips and Chalk from either about 23km to the east, just east of the Pen Pits, or 21km to the south.

Blue (Lower) Lias comes out as the most favoured material, with 12 examples. These spindle whorls tend to be flat discs with straight sides. White Lias, which appears to have been brought from furthest away, accounts for seven examples, and these are more varied though mainly rounded in shape. The Jurassic limestone spindle whorls, six or seven in number, are usually thicker and may be domed. All are of a shelly Inferior Oolite, of a type which caps Cadbury, excepting one oolitic example, and one made from the Middle/Upper Lias Junction Beds, and probably from Corton Ridge just to the south of the site (Wilson *et al* 1958, 44).

Weights

There are 19 objects of worked stone which appear to have been simple weights without hooks for suspension. They are made from varied materials but are all very similar in size and shape, being roughly spheroidal, though usually with an approximation towards two flattened surfaces.

Three weights are made of Lias, and these are the most crudely shaped. One of them is from an Early Cadbury context. There are five flint weights, roughly battered into shape, and for these there is the possibility that they may originally have been hammer stones before reuse as weights. Three of them are from Middle Cadbury contexts. Old Red Sandstone was utilised for four weights and two are made from quartzite. There is one example of White Lias and four of miscellaneous sandstone, likely to be further examples of Old Red Sandstone.

Counters

There are four small counters made of varied materials. Two are flat discs of Lias and two rather more rounded examples are made respectively of flint and quartzite. The numerous examples of counters from Meare Village West and Glastonbury are described as being made from flattened pebbles (Gray and Cotton 1966, 379). Further counters made from Lias have been recorded from Roman sites, for instance Camerton, where they were made mostly from pottery but with three Lias examples (Wedlake 1958, 248). There are also Lias counters from Ilchester (Leach 1982, 217).

Discs

Stone discs, of different sizes and unknown use, occur regularly though in limited numbers on Iron Age and Roman sites in southern Britain. There are two fairly small Lias discs and both probably belong to Late Cadbury. A larger disc is made of micaceous Old Red Sandstone, as used for the saddle querns on the site, and has a smoothly worn surface. This has been assigned to Middle Cadbury. There is also an Early Cadbury perforated chalk disc, again of unknown use.

Slingstones

A good many slingstones were found at Cadbury Castle, and a sample of 408 was examined. The majority are made of flint or chert, and resemble pebbles from Chesil Beach, with the same crackled surface probably caused by the pounding of the sea. The proportion of flint to other materials is also similar to that found at Chesil Beach. Here 98.5% of the pebbles were flint, with quartzite the second most common material (Carr and Blackley 1968, 133). The Cadbury slingstones in the sample gave a figure of 96.8% flint; there were ten quartzite pebbles and one each of vein quartz and black chert. Four further slingstones may have come from other sources, since three appeared to be Old Red Sandstone and one limestone.

Chesil Beach is about 40–48km south of Cadbury Castle; this distance might explain the smaller quantity of slingstones here compared to Maiden Castle (Sharples 1991, 224).

Stone balls

There are seven large and medium stone balls. Four of the largest stone balls seem in all likelihood to have been Roman ballista balls. Three of these are made of coarse, shelly Jurassic limestone, similar to the Ham Stone but now bleached by weathering. Two of the balls are complete, and the third, a broken half, comes from a Late Cadbury context. The stone was obtained from Ham Hill about 17km to the south-west (Torrens 1969, 169). With the exception of the two rotary querns (see above), this material was little used here.

Another large and three medium stone balls, which were perhaps also ballista balls, are made from the Yeovil Sands, an orange yellow sandstone, available on the site itself from below the Inferior Oolite, and in the immediate neighbourhood, as for instance on nearby Corton Beacon (Wilson *et al* 1958, 61). Like the Ham Stone, this material was little used at Cadbury Castle. It is a relatively soft sandstone and other artefacts made from it have not been recorded.

Constructional stones

Inscription: The one small fragment of inscription is made from light-coloured, fairly coarse-grained marble of unknown provenance, but likely to be non-British.

Hearthstones: There are seven flat pieces of stone showing signs of burning and interpreted as possible hearthstones. Three of these are of Lias and four of local shelly or sandy Jurassic limestone, probably the Junction Beds of the Middle/Upper Lias. Both materials would have been obtainable close to the site. One slab appears to be complete, with a blackened circumference and a flat upper surface, suggesting possible use as a baking sheet or griddle, perhaps for cooking food in the same way that drop scones are made. These hearthstones have associations with Middle to Late Cadbury.

Miscellaneous worked Lias: The majority of pieces of Lias from the site are fragmentary, and can be assumed to relate to the building of the ramparts. Four items show signs of further working, and two of these, a possible disc and a small perforated fragment, come from Middle Cadbury contexts.

Summary

The list of lithic materials (Table 17) indicates how use was made of all available resources, both those to be found within the immediate vicinity or so of the site and those from a wider local area. All the immediately local materials seem to have been at least sampled (Table 17), though Jurassic rocks are not on the whole suitable for basic tasks such as grinding and sharpening. The Inferior Oolite was used only for some of the spindle whorls. Lias was preferred to oolite as a building stone, being used in the ramparts and also for some roofing tiles. The source of the tufa is assumed to be local. None of the fragments now retains traces of working, but these too may have been used for building.

The imported stone divides readily into two groups, brought in either from the north or the south. To the north of the site the Mendips were of importance, mainly for quern materials, and so the greatest quantity of imported stone, certainly by weight, came from this area, from a range of 24–32km away. Most of the Mendip stone, including material used as temper in some of the pottery, was probably collected from within the same limited area to the north-east of Shepton Mallet.

Table 16: Quern and mortar materials

	Saddle	*Rotary*	*Mortar*	*Unclassified*	*Contexts*
Old Red Sandstone (micaceous)	31	1	-	87	119
Old Red Sandstone (unspecified)	4	3	-	9	16
Granite	1	-	-	-	1
Chert (Harptree Beds)	1	-	-	-	1
Staddon Grit	1	-	-	-	1
Igneous Andesite ?	2S?	-	-	-	2
Quartzitic Sandstone Group	-	-	1	-	1
Harptree Beds (silicified sandstone)	-	9*	-	-	12
Upper Greensand Pen Pits	-	8	-	2	10
Upper Greensand (unspecified)	-	6	-	-	6
Ham Stone	-	2	-	-	2
Dolomitic Conglomerate	-	2	-	-	2
Old Red Sandstone Beacon Hill	1	20.5	-	11	54
total					227

Among the stone brought in from elsewhere, the Staddon Grit stands out as an example of long-distance trade. If, however, it was being obtained via Weymouth (and perhaps Maiden Castle or Ham Hill) it would only have needed a journey of between 17 and 42km for the overland transport. There could be links between this imported stone and the trade in materials for non ferrous metalwork coming from the same ultimate area in Devon. Other materials were being obtained from the Weymouth area, most notably pebbles of flint, quartzite, and other types of stone from Chesil Beach. Chalk could have been collected on the same route, and perhaps the unsourced Upper Greensand, while Kimmeridge Shale was available a few kilometres to the east.

The use of lithic materials from two fairly specific areas suggests that quite a conservative element may have been in operation when it came to selecting the types of stone to be used. The Pen Pits greensand does not fall within either of these two areas to the north and south of Cadbury Castle, which may partly explain its limited use. The quarries may simply have lain away from the regular routes in use at the time, and they were possibly also difficult of access through a forested area.

The single piece of granite stands on its own as an import from the south-west, unless this too was brought in via Weymouth along with the Staddon Grit.

The contacts both to the north and south of the site appear to have been established by Early Cadbury, and the links with the Mendip area especially were then continuous up to and including the Roman occupation. Mendip Old Red Sandstone seems to have been in use by Early Cadbury, for whetstones, and there are also saddle quern fragments, made from both micaceous and plain feldspathic Old Red Sandstone. Staddon Grit whetstones have again been recorded in Early Cadbury. Old Red Sandstone saddle querns

Table 17: Worked stone (all types) materials

	Balls ballista	*Balls small*	*Beads*	*Counters*	*Discs*	*Grinding -stones*	*Hammer -stones*	*Hearth -stones*	*inscription*	*miscellan -eous*	*Mortar*
local stone											
Ham Stone	3	-	-	-	-	-	-	-	-	-	-
Yeovil Sands	4	-	-	-	-	-	-	-	-	-	-
Clay	-	2	-	-	-	-	-	-	-	-	-
Ammonite Marble	-	-	4	-	-	-	-	-	-	-	-
(Lower Lias)				-	-	-	-	-	-		-
Lias	-	-	-	2	2	-	-	3	-	4	-
Junction Beds	-	-	-	-	-	-	-	4	-	-	-
Middle/Upper Lias								.			
Inferior Oolite	-	-	-	-	-	-	-	-	-	-	-
Tufa	-	-	-	-	-	-	-	-	-	-	-
Mendip area											
White Lias	-	1	-	-	-	-	-	-	-	-	-
ORS, mic	-	-	-	-	1	-	-	-	-	-	-
ORS	-	-	-	-	-	1	-	-	-	-	-
ORS Beacon Hill	-	-	-	-	-	--	-	-	-	-	-
Chert, Harptree	-	-	-	-	-	-	-	-	-	-	-
Beds											
Quartzitic	-	-	-	-	-	-	-	-	-	-	1
Sandstone Group	-	-	-	-	-	-	-	-	-	-	-
Harptree Beds	-	-	-	-	-	-	-	-	-	-	-
Doleritic	-	-	-	-	-	-	-	-	-	-	-
Conglomerite											
Andesite	-	-	-	-	-	-	-	-	-	-	-
other sources											
Flint	-	-	-	1	-	-	13	-	-	-	-
Quartzite	-	-	-	1	-	1	-	-	-	-	-
Chalk	-	-	-	-	1	-	-	-	-	1	-
Sandstone, misc.	-	-	-	-	-	2	-	-	-	-	-
Grey Sandstone	-	-	-	-	-	1	-	-	-	-	-
Staddon Grit	-	-	-	-	-	-	-	-	-	-	-
Metamorphic	-	-	-	-	-	-	-	-	-	-	-
Granite	-	-	-	-	-	-	-	-	-	-	-
Pen Pits, Upper	-	-	-	-	-	-	-	-	-	-	-
Greensand											
Upper Greensand	-	-	-	-	-	-	-	-	-	-	-
Kimmeridge Shale	-	-	-	-	-	-	-	-	-	-	-
Foreign											
Marble	-	-	-	-	-	-	-	-	1	-	-
total											

Table 17: continued

	multi -purpose	*pebble -hammer*	*polishers*	*quern fragments*	*sling -stones*	*spindle -whorls*	*weights*	*whet -stones*	*building materials*	*total fragments*	
local stone											
Ham Stone	-	-	-	2	-	-	-	-	-	5	
Yeovil Sands	-	-	-	-	-	-	-	-	-	4	
Clay	-	-	-	-	-	-	-	-	-	2	
Ammonite Marble	-	-	-	-	-	-	-	-	-	4	
(Lower Lias)	-	-	-	-	-	-	-	-	-	-	
Lias	-	-	-	-	-	12	3	1?	x	25	+ building
Junction Beds	-	-	-	-	-	1	-	-	-	5	
Middle/Upper Lias										-	
Inferior Oolite	-	-	-	-	-	6	-	-	-	6	
Tufa	-	-	-	-	-	-	-	-	x		+ building
Mendip area											
White Lias	-	-	-	-	-	7	1	-	-	9	
ORS, mic	-	-	-	119	-	4	-	-	-	134	
ORS	-	-	-	15	-	-	-	-	-	26	
ORS Beacon Hill	-	-	-	54	-	-	4	6	-	85	
Chert, Harptree	-	-	-	1	-	-	-	-	-	1	
Beds											
Quartzitic	-	-	-	-	-	-	-	-	-	1	
Sandstone Group	-	-	-	-	-	-	-	-	-	-	
Harptree Beds	-	-	-	12	-	-	-	-	-	12	
Doleritic	-	-	-	2	-	-	-	-	-	2	
Conglomerite											
Andesite	-	-	-	2	-	-	-	-	-	2	
other sources											
Flint	-	-	-	-	x	-	5	-	-	19	+ slingstones
Quartzite	2	-	12	-	x	1?	2	-	-	19	+ slingstones
Chalk	-	-	-	-	-	4	-	-	-	6	
Sandstone, misc.	1	1	-	-	-	-	3	13	-	20	
Grey Sandstone	-	-	-	-	-	-	-	7	-	9	
Staddon Grit	3	-	-	1	-	-	-	113	-	117	
Metamorphic	-	-	1	-	-	-	-	-	-	1	
Granite	-	-	-	1	-	-	-	-	-	1	
Pen Pits, Upper	-	-	-	10	-	-	-	-	-	10	
Greensand											
Upper Greensand	-	-	-	6	-	-	-	-	-	6	
Kimmeridge Shale	-	-	-	-	-	2	-	-	-	2	
Foreign											
Marble	-	-	-	-	-	-	-	-	-	1	
											+ building
											+ slingstones
total										*535*	

continue through to Middle Cadbury with an andesite saddle quern also appearing in Middle Cadbury. There is one rotary quern fragment dated Middle Cadbury made from Upper Greensand and the rotaries were probably first being made during Middle Cadbury. It is during this period that the greatest variety of quern materials were in use. Micaceous Old Red Sandstone was being widely used at this stage for saddle querns, and there is also one of chert. However, at some point there must have been a change over, whether gradual or otherwise, to rotary querns, and then the silicified sandstone of the Harptree Beds seems to have been favoured. Other materials being used in smaller quantities for rotaries by this time were feldspathic Old Red Sandstone, Upper Greensand, including some from the Pen Pits, and Ham Stone. The Beacon Hill conglomerate was little used during the period, but became the dominant quern material later on.

The use of bone, antler, and tooth as raw materials

by WJ Britnell

Bone, antler, and tooth in the Iron Age were predominantly used in a way that took advantage of both the inherent properties of the material as well as its natural shape, which thus required a minimum of working. It is therefore often possible to determine the particular bone and antler types used down to species level. Despite a number of miscellaneous, one-off objects, there is a high degree of correlation between the types of artefact produced and particular bone and antler types. Consequently the process of manufacture can be reconstructed with some accuracy and even small fragments of objects can often be attributed to particular artefact types with some degree of certainty, even though the function of many of the artefact types may be obscure. Only a relatively small proportion of the objects commonly made in bone and antler are to be found in other materials (eg needles, spindle whorls) and although some objects may also have been made in wood or some other substance which does not normally survive, it does therefore not appear that bone and antler were generally regarded as poor substitutes.

Of the *c* 252 bone and antler artefacts (excluding bone and antler waste and horn processes) of probable Iron Age date or certainly from Iron Age contexts, about 80% can be attributed to species and probable bone types. About 75% are made from bone, 23% from antler, and 2% from tooth. Of the bone implements, 64% are sheep/goat, 13% are cattle/horse, roe deer and pig are 0.5% each, and undetermined is 22%. The great majority of the sheep/goat bones are either tibia (43%) or metapodials (55%), with otherwise only radii represented (2%). Cattle and horse bones are predominantly meta podials with occasional use of femurs and scapulae. Pig and roe deer bones are only represented by single examples, respectively a tibia and a metatarsal. Of the antler, 95% is red deer and 5% roe deer. The general pattern of utilisation is similar to that recorded in Iron Age contexts elsewhere (Grant 1984, 531–2).

A high degree of selectivity is evident which will no doubt be the result of the inherent physical properties of the bone and antler types – their strength, shape and size – as well as availability determined by species frequency and butchery and food preparation practices. Prolonged boiling and roasting of bone may affect the usefulness of the material (Coy 1975; Cornwall 1956, 204). Few of the worked items appear to have undergone these processes and most of the items are made from bone types which in any case have a relatively low food value and would be likely to have been discarded relatively soon after slaughter. Few if any of the worked bones show any indication of gnawing by dogs, suggesting that material was collected for this purpose rather than casually disposed rubbish. Antler would have been available either from animals slaughtered during the summer or winter or once they were shed from about February and March in the case of red deer, and between summer and autumn from slaughtered animals or from shed antlers in the period after about October and November in the case of roe deer.

Technological information from bone and antler artefacts

The Iron Age bone and antler provides evidence of a wide range of manufacturing techniques as well as evidence not otherwise generally available of the dimensions and performance of a variety of contemporary iron tools which are likely to have been more commonly used on other materials.

Axes/heavy cutting blades: The presence of sharp axes or heavy cutting blades is demonstrated by indications of working on, for instance, cattle and sheep/goat horn processes which have in some cases been neatly cut away from the frontal bones of the skull.

Knives: Many of the objects show evidence of the use of knives, eg decoration on bone and antler combs and decoration on blades, the fineness of the striations resulting from cutting indicating blades with sharp and regular edges.

Drills: The small peg holes which are found on the small pointed blades (Fig 94) can be reproduced with a sharp knife, but a majority are perfectly aligned on both surfaces of the bone, which suggests that the holes were produced by drilling. These perforations have an average diameter of 4mm, with a range of 2.5–6mm, and are similar in size to those through the centres of sheep/goat metacarpals (eg Fig 126.3). The perforation of one of these still retains a burr upon one face which appears to indicate that this hole was drilled from one surface of the bone. Holes of comparable dimensions have also been drilled through various antler objects; those through comb handles (eg Fig 93.3) and those through antler tines (Fig 113.1, 2) both average about 5mm in diameter. Although there is no direct evidence from Cadbury Castle, it is possible that rectangular slots cut through some of the antler tines (eg Fig 113.1–3) were begun by means of drilled holes. Three different types of early Iron Age artefact from Cadbury Castle (combs, perforated antler tines, and an antler 'hammer') have been decorated with ring-and-dot patterns, which seem likely to have been performed by an implement resembling a centre-point drill bit.

Saws: The antler waste and several finished objects provide evidence of the kinds of saw blades available. Some blades were apparently very thin, being less than 1mm thick, but the saw cuts are generally between 1.5–4mm across. Several incomplete or unused combs from Glastonbury (Bulleid and Gray 1911, 283, p1 XLVI) show that fine saws were sometimes used for cutting the teeth. Comparable evidence is provided by several sawn horn processes which have saw cuts of between 1.5–4mm in width (average about 2.5mm). One of these sawn processes has a doubled cut around its entire circumference which may have been produced by two separate but exactly parallel cuts or possibly by a blade 4mm wide with widely set teeth.

Evidence of horn-working

Evidence of horn-working is almost certainly represented by a distinctive series of 20 cut and sawn horn processes, similar to examples noted on Iron Age sites elsewhere within the region (Britnell 1977, 101 fig 13; Laws 1991a, 238). Of the worked horn processes from Cadbury Castle, 13 are of cattle, 4 are sheep, and 3 are goat. In each instance the processes have been detached from the frontal bones of the skull, probably soon after slaughter, by either sawing or chopping. In a majority of instances the processes have also been sawn or cut around the entire circumference postmortem at the base or a slight distance above.

Normally the outer horny layer, which often extends for an appreciable distance beyond the tip of the underlying bone, can be removed from the horn process after a period of maceration during which the corium dries and partly shrinks. The secondary working exhibited by the processes from Cadbury Castle and a number of early Iron Age sites in Britain is not readily explicable and may be exceptions to more normal practice (cf Grant 1984, 505, 513), but almost certainly provide evidence of horn-working. In two cases the tips of the processes have been removed. Two other examples represent sections sawn from horn processes, a method which it has been suggested (Schmid 1972, 47–8) represents a technique for cutting rings of bone while still supported by the bone. Horn continues to grow during the life of the animal (cf Schmid 1972, 88), and especially in mature animals or those which have received poor nutrition, the horn at the base of the process, near the skull, can become highly corrugated or flakey. Some of the saw cuts immediately above the base of the process may have been made to exclude this poorer material. Saw cuts nearer the tip may have been designed to cut the horn into smaller pieces while it was still supported by the bone. Eleven of the worked horn processes from Cadbury are from dated contexts, eight from Middle Cadbury and possibly three from Late Cadbury contexts. Six examples are from the rampart cuttings, eleven are from the plateau sites, and three are from the northernmost area of the interior. Although there are no concentrations of worked horn processes within the same features to suggest specialisation, it may be significant that the majority of examples from the interior come from the western part of the plateau, and that all but one of the examples from the ramparts come from Site D.

Copper alloy analysis

by P Northover

The collection of copper alloy metalwork, fragments, and scrap from the excavations is remarkable for its quantity, with over 1100 items recorded, and for the lengthy period over which it was deposited, at the very least from the late Bronze Age to the sixth century AD, a stretch of over 1500 years. However, the distribution of the metalwork through that period is uneven, and many pieces cannot be assigned to a specific period on their form alone. To achieve a better understanding of this large body of material an analysis project was established, funded by the Fund for Applied Science in Archaeology. The four principal objectives were to:

1 identify alloys and impurity patterns to assist in defining the chronology of the metalwork
2 to use the same data to outline the nature of the metal economy and its connections at Cadbury Castle at different periods
3 to provide more detail on the nature of metal-working activity at Cadbury Castle in specific periods
4 to determine the mode of construction and/or use of specific objects

The following categories of material were examined: Bronze Age metalwork, specific Iron Age and Roman objects including U-shaped bindings and brooches, and metalworking waste (see Chapter 10). Some objects in the categories examined have been reassigned to the post-Roman period, for which a separate project was undertaken (Alcock 1995).

Samples were either cut with a jeweller's piercing saw, or drilled using a hand-held modelmaker's electric drill with bits ranging from 0.5 to 1mm in diameter. All samples were hot-mounted in copper-filled acrylic resin, except those taken for the study of tin-plating which were mounted in carbon-filled bakelite for improved edge-retention on the sample. Analysis was by electron probe microanalysis with wavelength dispersive spectrometry. Thirteen elements were analysed using pure element and mineral standards. Detection limits were of the order of 100–200ppm for most elements but 300ppm for gold and 0.10% or worse for arsenic. This last is due to the compromises made to avoid the well known interference between the strongest lines in the lead and arsenic spectra, the lead (La) and arsenic (Ka). The relatively strong lead (Ma) line could be used but it was necessary to use the weak arsenic (Kb) line, hence the degradation in performance. A more sensitive routine for arsenic is available but was not cost-effective in relation to the limited resources available for this project. The mean of three analyses for each sample was calculated to give concentrations in percentage weight and the cut samples were additionally used for metallographic examination.

Bronze Age metalwork (Early Cadbury)

For Britain generally, and for south-west England in particular, the sequence of alloys and impurity patterns of Bronze Age metalwork is now well defined (Brown and Blin-Stoyle 1959; Northover 1980, and unpublished data; Pearce 1983). One of the most important changes in the south of England was the development and large-scale exploitation of leaded bronze alloys in the late Bronze Age as traditionally defined in England (Brown and Blin-Stoyle op cit). The use of these alloys became so universal that, with the exception of special categories such as sheet bronze, almost all late Bronze Age bronze objects in southern Britain contain alloy levels of lead. (Earlier examples of alloys with lead do occur at the start of the middle Bronze Age but the impurity patterns and object types associated with this are easily recognisable; none are found in the analysed material from Cadbury Castle.)

From material catalogued as being of Bronze Age date (O'Connor 1994), 24 items of copper alloy and 1 of gold were analysed, the majority being of recognisably late Bronze Age types. Of the 24 copper alloy pieces all but 5 had more than 1% lead. Of the five, three can be excluded from the late Bronze Age on a combination of compositional and typological criteria. Most obvious is the flanged axe (Alcock 1972a, 113, pl 23), which is a typical Arreton period example from the end of the early Bronze Age with a composition matched by a number of contemporary objects, for example two spearheads recently found on the Isle of Wight (Northover unpublished). There is a fragment of a side-looped spearhead, which has a composition most appropriate to the fifteenth to thirteenth centuries BC (Taunton period, MBA II), although it could be earlier (see Northover 1980 for a compositional scheme for the middle Bronze Age). A small blade fragment can probably be dated to the Penard period of the twelfth and thirteenth centuries BC.

Within the late Bronze Age both composition and typology make a contribution to the discussion. As indicated above, leaded bronze alloys were essentially an innovation of the late Bronze Age, in the south more specifically of the Wilburton industry of the twelfth and eleventh centuries BC (LBA1, or LBA 2 using O'Connor's 1980 terminology). Wilburton bronze is characterised by high levels of arsenic (As), antimony (Sb), nickel (Ni), and silver (Ag), generally with antimony greater than arsenic (Northover 1982), and it is convenient to set a threshold of antimony greater than 0.5% for defining typical Wilburton impurity patterns, although this will undoubtedly exclude some genuine Wilburton material. On this basis only one item, a pin, might be regarded as likely to be of Wilburton date. The impurity pattern of most of the rest of the material is very consistent, with 0.08–0.12% nickel, 0.10–0.25% antimony, and 0.10–0.40% arsenic, usually with arsenic greater than antimony. The consistency is a consequence of both the extensive recycling going on at the time, and a degree of consistency in the sources drawn on for the metal. The Cadbury Castle data are consistent with the general pattern for the area in the late Bronze Age and reflect metal imported from continental Europe, exchanged with south Wales, and, probably, metal mined in the south-west. The pattern persisted into the Llyn Fawr period (of the eighth to seventh centuries BC) where we have the two distinctive razors (see p179); metallurgically the two razors are very typical Llyn Fawr period products.

For the purposes of analysis the late Bronze Age objects have been divided by category to determine whether any type has any special characteristics. Firstly, the small tools such as single-point awls (see Chapter 6 p187) which have been advanced in the past as metalworking tools. They, like numerous examples from other sites such as Flag Fen (Coombs 1992) and Thwing (Manby forthcoming) appear to be typical of settlement sites from the Wilburton period well into Ewart Park (twelfth to eighth century BC). They can be very heavily leaded; as a consequence it has been suggested that they could not have been used directly for scribing or engraving metal. The effects of lead on hardenability have perhaps been exaggerated by some writers; certainly those with lower lead contents could have been hardened perfectly adequately for working on annealed bronze, although their wear resistance may not have been very good. However, they could still have been associated with metalworking as they could have been used for mould- and pattern-making. Equally they could have been used by a number of non-metallurgical crafts. Among the larger tools, used for woodworking or other crafts, the two gouges, with respectively low tin and high lead contents, are most probably of Ewart Park date rather than later, as Llyn Fawr period tools tend to have higher tin and lower lead contents than Ewart Park.

Typologically the barbed spearhead fragment (Fig 115 see p235) is earlier rather than later in the Ewart Park period but does not differ greatly from the pegged spearhead fragment which cannot be precisely dated. The fragment is one of only two Bronze Age objects examined metallographically; it had the expected cast structure with no signs of subsequent mechanical working. The other microstructure identified is a cast structure in a pin fragment (see p192); pins were cast close to their final shape in moulds relatively massive when compared to the size of the pin, hence the moderately slow cooling rate recorded. The shafts were then finished by grinding and polishing as much as they were ever forged.

For the rest of the material there is little to remark. The bucket base plate fragment (see p227, Fig 110.3) is one of the very few vessels or vessel fragments from the south-west. The lozenge-section ring is made of a very heavily leaded bronze typical of many cast components on Bronze Age vessels and could be a ring handle from a bucket (Gerloff forthcoming) (see p227). The gold-covered ring (see p194) is of a late Bronze Age type and has an appropriate composition (cf Taylor 1980). The two razors (eg Fig 92.2 see p179) are the only objects that can be specifically assigned to the Llyn Fawr period and their alloy contents (0–2% lead, 10.2–11.3% tin) are typical for the type of object.

Iron Age and Roman period artefacts (Early to Late Cadbury)

As in the Bronze Age, metal can be assigned to the Iron Age and Roman periods on both typological and compositional grounds. A scheme for grouping Iron Age impurity patterns was developed for the analysis of the copper alloy metalwork from Maiden Castle (Northover 1991a) and that is used here.

Iron Age: One of the most characteristic impurity patterns of the Iron Age, especially in south-central and south-western England, is that with iron (Fe), arsenic (As), cobalt (Co), and nickel (Ni) as the main impurities with cobalt greater than nickel; an origin in the south-west of England has been put forward for the type. Fourteen objects assigned to the La Tène Iron Age were analysed, and of these four are classic examples of this composition (Group 1 at Maiden Castle): the hollow two-piece ring (Fig 99.11, see p194), a piece of a chape (Fig 116.4, see p238), an openwork strap fitting (Fig 116.6, see p239), and a bracelet (Fig 98.5 see p192). In general this composition can be found from La Tène I to the mid-first century BC and no later. The strap fitting is particularly interesting as Iron Age bronze is generally unleaded, and this is particularly true of bronze with the impurity pattern of this object. The 14% lead of this object is therefore remarkable. Two items, the cast roundel (Fig 98.7) and the ring-headed pin (with 'roundel', Fig 98.8), have low levels of nickel and cobalt with about the same amount of each. These comprise another common Iron Age type but tends to be earlier rather than later in the La Tène period so it may be worth reviewing the dating of this piece.

Another feature of the analyses as a whole is the generally low level of antimony. There are both geographical and chronological trends in the distribution of metal with an antimony impurity – antimony increases towards the east of England and towards the end of the Iron Age. The only really significant antimony contents are in a chape, paralleling chapes from Danebury, Hampshire (Northover 1991b) and Hunsbury, Northamptonshire (Barnes 1985). So far the proportion of metal with antimony is much lower than at Maiden Castle or Danebury. The remainder of the bronze can be placed in Group 5 of the Maiden Castle scheme, ie arsenic, or arsenic/nickel compositions, the group which also predominates in the analysed copper alloy casting waste at Cadbury Castle (see Chapter 10).

Group 1 and Group 5 co-exist in one chape. There is no reason why Group 5 metal should not be distributed throughout the Iron Age at Cadbury, but, as will be discussed in relation to the waste, it may be concentrated towards the end of the Iron Age in the first century BC and the first years of the first century AD (see p294).

U-shaped bindings: A special category of sheet metal product in the Iron Age and Roman periods is the U-shaped binding, found on the edges of shields and scabbards, on wooden vessels, and on a variety of other objects (see p241). Generally Roman and Iron Age examples can be distinguished on the basis of form, and the 20 examples analysed for this project all came from bindings identified as Iron Age. This identification is confirmed by the analysis, as 14 of the analyses are of the characteristic Group 1 composition, and a fifteenth is close to it. To emphasise this point the analyses are tabulated (Table 18) in descending order of cobalt content. The alloys made up with this Group 1 copper are medium to high tin bronzes, mainly with 10–14% tin. Unusually, one example has 3.78% lead, a rare addition to this metal, but it should be compared with the roundel and ring-headed pin discussed in the previous section.

Of the five non-Group I analyses two are of Group 5, which as we have seen is important at Cadbury Castle. The other three are rather varied and hard to categorise but, unlike most Iron Age bronze at Cadbury, have an antimony impurity. One also has zinc which probably means here that it should be classified with the first-century AD and Roman metalwork.

First-century AD/Roman metalwork: The prime identifier for this period must be the presence of zinc as an alloying element to make brasses and gunmetal. Brass first appears about the beginning of the first century AD in some coins of the Trinovantes, and some imported brooches (Bayley 1990; Northover 1992). The use of brass for brooches increased and some were certainly made in Britain (Stead and Rigby 1986, 122–23). How fast the alloy spread before the arrival of the Roman army in AD 43 is still far from clear. Another complication is that zinc up to 1–2% can easily derive from impurities from copper ores. Such a source was operating on the Welsh borders in the Iron Age but its products seem confined to northern Wales and the Marches. Others were active in Europe and some of their products may have been imported.

Taking brass first we have a piece of sheet (Fig 99.8), a repoussé disc with a figure (Fig 99.4), and a plain U-shaped chape (Fig 70.1). These are probably all Roman. Of the other objects , two bronzes have a zinc impurity, while the gilt 'A' was of copper (Fig 90). Copper as a substrate for plating is not unknown in this period, witness the mid–late first century AD tinned copper discs in the Tal-y-Llyn hoard. The technique of gilding has yet to be determined.

Brooches: Out of 221 brooches and brooch fragments that have been catalogued (Olivier 1994), 96 were analysed fully; a small number of others were examined in relation to a study of tinning of copper alloys.

The general pattern of alloy choice in brooches is now well known (eg Bayley 1985; 1990). However, the number of purely qualitative analyses, and the simplified system of labelling habitually used for the alloy types (copper/bronze/gunmetal/brass in plain and leaded versions) may obscure some significant details about their production and selection. The Cadbury Castle brooches are, to date, the largest series to have been analysed for a full set of impurities as well as alloy content. All but three of the individually identifiable types in the catalogue had at least one member analysed, and most had at least half their members sampled. Fragments (pins, springs, etc) were generally not sampled and the largest class, the strip bow type, was under-represented, partly because of the condition of some of the brooches.

Reviewing the 96 analyses as a whole, 65 (67.7%) were bronze, usually unleaded, 8 (12.5%) were of mixed copper-tin-zinc (Cu-Sn-Zn) compositions, again

Table 18: Analysis of copper alloy metalworking

An.	*No.*	*Type*	*Fe*	*Co*	*Ni*	*Cu*	*Zn*	*As*	*Sb*	*Sn*	*Ag*	*Bi*	*Pb*	Au	S
casting waste etc															
SCY313	P/304	Waste	0.01	0	0.03	87.64	0.00	<0.10	0.04	12.06	0.02	0.04	0.15	0.00	0.02
SCY320	N/275	Waste	0.02	0.01	0.01	87.16	0.00	0.53	0.01	12.16	0.03	0.02	0.05	0.01	0.00
SCY316	N/176	Waste	0.01	0.01	0.04	88.14	0.00	0.52	0.01	10.95	0.02	0.01	0.07	0.00	0.22
SCY303	B/31	Waste	0.01	0.01	0.02	91.68	0.00	<0.10	0.01	7.48	0.12	0.00	0.04	0.00	0.64
SCY312	T/202	Waste	0.01	0.01	0.05	89.11	0.00	0.30	0.03	10.23	0.04	0.04	0.17	0.00	0.02
SCY301	K/710	Waste	0.01	0.01	0.12	88.63	0.00	0.25	0.22	10.54	0.10	0.01	0.12	0.00	0.00
SCY304	N/126/49	Waste	0.00	0.01	0.05	89.38	0.00	0.30	0.02	10.09	0.02	0.03	0.10	0.00	0.01
SCY311	E/928/125	Waste	0.04	0.02	0.02	87.94	0.09	<0.10	0.03	11.8	0.05	0.01	0.01	0.00	0.01
SCY315	T/452/11	Waste	0.07	0.02	0.03	91.00	0.01	0.13	0.01	8.64	0.03	0.02	0.05	0.00	0.00
SCY309	N/652	Waste	0.01	0.02	0.03	90.71	0.00	<0.10	0.01	6.38	0.03	0.01	0.00	0.00	2.73
SCY307	N/652	Waste	0.01	0.02	0.08	87.65	0.00	<0.10	0.03	10.71	0.02	0.01	0.05	0.00	1.40
SCY314	E.2(0)/29	Waste	0.01	0.02	0.05	92.15	0.00	0.37	0.03	7.15	0.01	0.03	0.16	0.00	0.01
SCY302	P/051	Waste	0.11	0.03	0.01	85.01	0.01	0.20	0.01	14.21	0.01	0.02	0.27	0.00	0.12
SCY305	I/12/4	Waste	0.09	0.03	0.02	87.33	0.00	<0.10	0.02	11.89	0.05	0.08	0.48	0.00	0.01
SCY310	E/941	Waste	0.05	0.04	0.02	86.85	0.00	<0.10	0.01	12.94	0.00	0.00	0.06	0.00	0.02
SCY318	G/94A/71	Waste	0.09	0.04	0.08	94.97	0.05	<0.10	0.07	4.57	0.01	0.00	0.11	0.00	0.01
SCY308	N/050	Waste	0.02	0.05	0.01	85.72	0.02	0.12	0.00	13.98	0.01	0.00	0.04	0.00	0.03
SCY317	G/94E/41	Waste	0.14	0.07	0.02	85.21	0.00	0.84	0.01	13.52	0.05	0.05	0.10	0.00	0.00
SCY306	N/052	Waste	0.22	0.09	0.05	92.53	0.03	0.78	0.02	6.15	0.04	0.01	0.07	0.00	0.01
SCY316	N/081B	Waste	0.45	0.15	0.03	89.08	0.00	0.61	0.00	9.54	0.00	0.04	0.09	0.02	0.00
U-Shaped Bindings															
SCY331	N55/051	Binding	0.40	0.31	0.04	86.72	0.01	<0.10	0.02	12.27	0.00	0.03	0.20	0.00	0.01
SCY338	N001/36	Binding	0.11	0.23	0.05	85.4	0.00	0.13	0.01	13.77	0.01	0.02	0.11	0.02	0.13
SCY321	G/21/14	Binding	0.30	0.23	0.05	86.24	0.03	<0.10	0.03	12.74	0.03	0.00	0.02	0.01	0.14
SCY328	N/199/651	Binding	0.15	0.21	0.05	80.63	0.02	0.46	0.03	18.01	0.03	0.02	0.19	0.04	0.17
SCY330	E/3A(1)/6	Binding	0.43	0.20	0.05	85.11	0.02	0.49	0.01	13.17	0.01	0.00	0.30	0.05	0.15
SCY337	F/3D/35	Binding	0.13	0.19	0.04	84.15	0.00	<0.10	0.04	14.85	0.01	0.01	0.35	0.03	0.21
SCY336	D/306/45	Binding	0.14	0.18	0.03	88.59	0.01	<0.20	0.03	10.62	0.05	0.03	0.10	0.00	0.21
SCY332	N/701/802	Binding	0.40	0.15	0.03	84.28	0.01	<0.10	0.05	10.24	0.00	0.00	3.78	0.04	0.74
SCY323	P/453/44	Binding	0.17	0.15	0.03	86.54	0.03	0.25	0.03	11.97	0.04	0.01	0.27	0.00	0.51
SCY334	N/053/389	Binding	0.07	0.13	0.05	83.95	0.03	0.69	0.03	14.72	0.04	0.00	0.20	0.00	0.09
SCY333	N/707/763	Binding	0.20	0.12	0.04	84.52	0.01	1.61	0.01	13.19	0.00	0.08	0.14	0.05	0.04
SCY327	N/001/30	Binding	0.17	0.11	0.03	86.8	0.00	0.64	0.03	11.66	0.02	0.03	0.31	0.04	0.16
SCY335	N/901/162	Binding	0.04	0.08	0.05	87.15	0.03	0.11	0.01	11.93	0.06	0.04	0.03	0.04	0.42
SCY324	D/360A/13	Binding	0.03	0.07	0.05	90.78	0.00	0.20	0.01	8.65	0.03	0.02	0.10	0.02	0.06
SCY340	P/306/21	Binding	0.32	0.04	0.13	85.57	0.08	0.11	0.03	12.93	0.03	0.04	0.25	0.02	0.46
SCY326	B/339/229	Binding	0.03	0.03	0.02	87.41	0.01	0.27	0.00	11.91	0.02	0.06	0.18	0.04	0.02
SCY322	B/306/110	Binding	0.27	0.00	0.08	84.98	0.00	0.20	0.07	14.15	0.10	0.04	0.10	0.00	0.01
SCY329	I/0/2	Binding	0.03	0.00	0.04	91.7	0.41	0.38	0.10	6.17	0.51	0.02	0.64	0.00	0.00
SCY339	K/617/61	Binding	0.20	0.00	0.03	87.93	0.07	<0.10	0.10	11.52	0.01	0.01	0.08	0.03	0.01
SCY325	K/005/14	Binding	0.05	0.00	0.04	86.07	0.01	<0.10	0.15	13.36	0.16	0.02	0.11	0.00	0.02

unleaded, while 19 (19.8%) of the total were brass. The nearest site to Cadbury for which any substantial analysis of brooches has been made is Camerton (Cowell 1990); of 28 brooches there, 13 (46.4%) are bronze, just over half of which were leaded, and 15 (53.6%) were brass, a considerable difference. Equally instructive is the contrast with the brooches from the Iron Age cemetery at King Harry Lane, St Albans (Stead and Rigby 1989), dating approximately AD 1–60 and thus contemporary with a large proportion of the Cadbury Castle brooches. Out of 188 copper alloy examples from that cemetery, 175 brooches were analysed and all but 10 were of brass. The explanation for this disparity is very simple: only certain specific types of brooch were made of brass and these brooches are conspicuous by their absence from Cadbury Castle. For instance, approximately 90% of all one-piece Colchester brooches analysed by Bayley are brass, and King Harry Lane cemetery has 77 of the type. Cadbury Castle has six, and only half of them are brass, a proportion matched at Richborough, Kent. Of other standard brass types, Rosettes and Aucissa brooches have five examples between them at Cadbury Castle and Langton Down is absent altogether; only the Hod Hill variant with lateral knobs has brass examples, while the Fiddle type is either of bronze or a mixed alloy. While the one-piece Colchester brooches were made in England, the other brass types are imported and some have military connotations. Clearly the geographical location and status of Cadbury Castle in the first century AD strongly influences the brooches used there, and their composition. This said, we can now look at some individual types in more detail.

The majority of Nauheim derivative brooches are bronze with a zinc impurity. This is a general and very consistent pattern, much more so than the general occurrence of zinc as an impurity in bronze at this time in the first century AD. The zinc contents range from 0.1 to 2.0%, never enough materially to influence the properties or colour of the bronze. This argues for a certain consistency of workshop practice and, probably, a small number of workshops turning out large numbers of a standard product. Reliance on a copper source with a regular zinc impurity cannot be ruled out either.

Of a dozen standard Colchester and closely related brooches seven are brass, all with high zinc contents between 21% and 27%. Four have trace levels of tin only and as all analysed brass ingots (Northover forthcoming) are tin-free, the direct use of ingot brass in their manufacture is indicated. The remainder are gunmetal or unleaded bronze, the latter having an antimony impurity, in two cases as high as 0.8–0.9%.

Aucissa and Hod Hill brooches tend to be brass but their derivatives may be more varied. Probably the proportion of brass is low here. It is this grouping, together with Rosette/Keyhole brooches where tin-plating is most prevalent. The one standard Aucissa brooch is, as might be expected, brass, as is one of the Camerton standards. Tin contents are exceptionally low (down to 0.01%), again demanding the use of ingot brass. The bronzes mainly have 10–12% tin, always with an antimony impurity and often with zinc. As will be seen below, this pattern recurs constantly at Cadbury Castle, through the other bronze brooch types. The Hod Hill brooches with lateral knobs and the Fiddle type are bronze or gunmetal. Other types, such as Rosette and Knickfibel, divide between bronze and brass; with these brooches tin and zinc only rarely drop to zero. It is these types, notably Fiddle and Rosette, together with the strip bow, which are tinned. Metallography shows that the tinning is applied fairly consistently with only one exception to a high fired and eutectoid surface layer firmly merged with the structure of the bronze. The exception has a lower firing temperature and the plating is gradually being split off by corrosion.

Slightly later brooches, such as T-shaped, Dolphin, and Polden Hill, tend to be leaded bronze on other sites. The Cadbury group of Dolphin brooches is remarkably lead-free; this must be accepted and not regarded as simply an artefact of the analysis technique as it has been confirmed metallographically. There is usually a zinc impurity and an average antimony content above the average for the brooch collection as a whole, suggesting some specialisation of manufacture.

The copper alloy strip bow brooch is the commonest type at Cadbury Castle with 41 examples, 24.4% of identifiable brooches. Thirteen were analysed: there was one example of gunmetal and one of a brass with 25.64% and only 0.06% tin. The rest are bronze, about evenly divided according to whether or not they have a zinc impurity. There are no correlations between the detailed typology of the class and either alloy content or impurity pattern, but this may be because the analysed sample is too small. Their popularity at Cadbury might be the result of local manufacture; however, there are no traces of this at Cadbury, and the antimony content of all the examples and the zinc content of most of them means that there is no match with the analysed waste. The bronze itself is usually a medium tin alloy with 10–13% tin, reflecting the practice with Dolphin and Aucissa derivative types as well.

Penannular brooches overlap with and then succeed other types to become the most important brooch type at Cadbury Castle from the second century BC onwards. Bayley's national distribution (1990, 15) shows that bronze accounts for about 50% of the total, with brass, gunmetal, and other alloys accounting for the other half. Of the 18 analysed, 2 are brasses with traces of tin, and there are 2 of gunmetal. Other than that the same bronze types are visible as were found in other groups at Cadbury, with a regular antimony impurity and zinc either absent, or present up to 1.6%; in other words the same bronzes as seen in other major brooch groups at Cadbury Castle.

The results of the brooch analysis can now be summarised very briefly. The dominant metal used in brooches is bronze. This tends to be very consistent in composition with antimony and zinc impurities throughout all types. Some of the zinc may come from brass or gunmetal scrap and some may come from zinc-rich copper mines. The relative absence of brass is directly connected with the absence of certain types of brooch which may be imported or have military connections. Where they do occur brass is less prevalent than elsewhere. Similarly gunmetal and leaded bronze are largely strangers to the repertory of the brooch maker.

Forty-two of the brooches were examined metallographically as part of the analysis. Differences in structure can be due simply to the properties of the different alloys, with the brasses tending to have a much larger grain size than the bronze. This is to be expected if the bronze and brass have been annealed under the same conditions. The bows of the brass Hod Hill brooches with lateral knobs have particularly large grain sizes at over 100+m. Where the alloys are the same, as with many of the bronzes, differences in manufacture between the types do emerge. For example, the strip bow brooches were mainly sampled from the bow or in the hinge area; the bronze is left in the fully annealed state, while the grain size is very varied. On the other hand, the rather similar Aucissa derivative type has a bow with a smaller and more uniform grain size that has been left partially cold worked, usually with a final cold reduction from shaping the bow and working the hinge area of 10% to 15 or 20%.

Glass analysis

by Julian Henderson

The glass has a range of production dates from the late Iron Age through the Roman period to early medieval period. Chemical analysis of the glass is a way of monitoring the change in raw materials used over time. Since translucent glass through the periods is normally found to be of a soda-lime-silica type it is interesting to compare the impurity patterns which would be introduced with both the major raw materials and the deliberately added materials used as colorants.

Glass of a soda-lime-silica composition is normally considered to have been made from a source of silica (sand in this case), a source of lime (possibly shell fragments in the sand), and an alkali probably of a mineralogical origin, like natron (Brill 1989). The way in which glass is coloured is by adding small quantities of minerals rich in the colorant element such as cobalt and copper. Iron is often introduced into the glass as an impurity producing the usual green colour (the so-called 'natural' green colour), a colour which glass artisans tried to neutralise by adding glass clarifiers such as manganese oxide (Henderson 1985). In addition to these colorants, opacity in ancient glass was brought about by the addition or the development of opacifiers which were in the form of complex crystals. These crystals not only prevent the transmission of light, but also produce their own range of colours such as opaque yellow, white, and turquoise (Turner and Rooksby 1961).

The actual production of glass was carried out in specific furnaces, often with three chambers. The initial stage involved the partial fusion of the raw materials, a processing called fritting. The process, which occurred at relatively low temperatures of around 600°C–700°C, allowed the alkali and silica portion of the batch to begin to melt; it was stopped before total fusion occurred but at the same time some of the compounds broke down. The frit was ground up, sometimes fragments of scrap glass were added to it together with colorant materials, and the result melted at higher temperatures, as high as 1300°C–1400°C. If these temperatures were achieved then the raw materials could melt completely, most of the gas bubbles in the glass could be expelled, producing a bubble-free glass, and the melt would be properly homogenised, producing a clear glowing liquid which could be moulded, blown and pressed (see Brill 1989 for a concise description of the properties of soda-lime glass).

Chemical analysis

By using chemical analysis it becomes possible to suggest the types of raw materials used in the processes of manufacturing the glass.

The technique of analysis used was electron-probe microanalysis (EPMA). For this technique minute (1mm) samples were removed from the glass artefacts, mounted in epoxy resin and polished flat using a range of polishing powders of increasing fineness down to 0.25um diamond paste. EPMA allows one to analyse separately small (*c* 0.1mm) areas on the surface of the glass sample. Since one can see the specific area of sample being analysed it is possible to avoid weathered and heterogeneous areas (Henderson 1988).

Iron Age glass

An early bead is of colourless glass with a spiral opaque yellow decoration (Fig 96.8). The bead is a typical product of the glass workshop at Meare Lake Village, Somerset, and it conforms in a general way to the chemical composition of all the glass beads of the type analysed from that site. The clear glass is clarified with antimony trioxide (Sb_2O_3) with no detectable manganese oxide (MnO); the iron oxide level which would normally cause a green colour in the glass has been effectively neutralised by the decolorant, producing a clear colourless glass of high quality. The alumina level is relatively low in the colourless glass and this infers that the sand source which normally introduces alumina as an impurity was somewhat different from that found in other examples. This may only indicate that the workshop (probably Meare) which produced the beads occasionally exploited different sand sources, though from the large database for the analyses of the typical types of bead found at Meare, this alumina level would appear to be significantly different. There is also another compositional difference which distinguishes this example of a spirally decorated bead from the others analysed. The opaque yellow glass is opacified with lead antimonate. The manganese oxide level appears to indicate that the yellow glass was produced in the second century BC, or later (Henderson and Warren 1983); before this time the levels of manganese oxide in opaque yellow glass are at *c* 0.5% or lower. The bead therefore appears to have characteristics of glass composition to both before and after the second century BC. Perhaps it represents a transition in the development of glass technology in the later Iron Age at the end of the life of the workshop at Meare.

Meare has produced industrial evidence for the manufacture of beads decorated with opaque yellow glass in spirals and chevrons and has the largest concentration of the bead types made there. The concentration of beads and the distribution zone around the site during the life of the site (*c* 500–200 BC) extended to the borders of the territory of the Dobunni, so the Cadbury Castle find is at the edge of the distribution.

Among the other glass beads from the site are translucent blue ones with opaque white or opaque yellow spiral decoration marvered into the surface (Guido 1978, Class 6). The compositions of their translucent blue matrices shows that they were coloured by levels of up to 0.2% cobalt oxide and fall within the percentage of iron oxide to cobalt oxide for the late Iron Age (Henderson 1992, figs 8a and 8b).

The other bead which is also of a typical late Iron Age type has radial and circumferential trails of Guido's 'ray' type (Guido 1978, Class 7a). Although this may have a continental origin, probably somewhere in central Europe, its chemical compos-ition is similar to that just described. Very few other examples exist of these beads in England, with a contemporary phase at Hengistbury Head producing evidence for possible glassworking (Henderson 1987).

It is notable that the three beads described above which have blue matrices are coloured by cobalt oxide which is accompanied by impurity levels of manganese (MnO) and cupric oxides (CuO), if at rather variable levels. It is sometimes possible to suggest the derivation of cobalt minerals based on their impurity patterns and in this case a likely source is in the Black Forest in Germany where manganiferous cobalt ores are found (Henderson 1985, 280). The chemical characterisation of Iron Age cobalt blue glass has indicated how cobalt source exploitation changed during the Iron Age in Europe (Henderson (1991, 130–2, fig 8b).

The Roman glass

The Roman glass analysed derived from a range of vessel forms and the samples include opaque glass, with the balance being translucent glass. Chemical analysis of Roman vessel glass has provided solid evidence for the use of a soda-lime composition over the broad geographical area of the Roman empire and throughout the period of Roman occupation of Britain (Sanderson *et al* 1984; Brill 1989; Jackson *et al* 1990; Velde and Gendron 1980; Henderson in press). However, there is evidence, given a careful selection of vessel fragments manufactured using relatively specialised glass colours (or colourless glass), and selected according to whether they were cast or blown, that compositional groups can be produced (Baxter *et al* 1995) which may eventually relate to production zones or periods of production.

Chemical analysis of Roman opaque glass has produced interesting evidence for the use of a high lead oxide glass up to and including the early first century AD which apparently went out of use after this time (Henderson 1991; Bimson and Freestone 1983). Cast ribbed bowls, mass-produced in the first century, when decorated with opaque white glass, all had a distinctive chemical composition in that lead oxide is not normally detected or only at low levels. The opaque white glass analysed here, used for decoration of a handle, also falls within the first century AD type of glass in that it contains no detectable lead oxide, but is opacified with calcium antimonate crystals ($Ca_2Sb_2O_7$). It therefore conforms with the established glass composition for the period of production.

Two translucent trailed fragments made from yellow-brown and translucent blue glass conform to the established pattern for Roman glass compositions. Cobalt oxide was detected in the translucent blue glass which caused the colour. The yellow-brown glass is coloured by a combination of manganese and iron oxides; the oxidising-reducing conditions (slightly reducing in this case) can have a marked effect on the glass colour produced (Green and Hart 1987). The inscribed dark blue fragment on the other hand is probably coloured using reduced iron (ferrous oxide) as opposed to cobalt oxide.

10 The residues of production

Introduction

by John C Barrett

Much of the recent literature on Iron Age hillforts has sought to explain the emergence of this particular class of archaeological site in terms of the role they supposedly played in production and exchange. By such processes it is proposed that a range of materials were converted from one form into another; from 'raw' materials into 'artefacts'. It is assumed that not only did such processes converge, for some reason, at hillforts, but that the process of production enhanced the use value and exchange value of the material by the investment of the labour power and the technology established within the hillfort. The population of the hillfort, or some portion of that population, were, we must assume, then able to realise and accumulate that increased value through the exchange of the artefact. Such models place hillforts at the upper levels of a settlement hierarchy defined by an ability to service some aspect of the material requirements of their hinterland, thus securing the political and economic supremacy of the hillfort. They introduce a form of market economy into the Iron Age.

Rowlands has recently argued that models which depict the convergence of political power with the control of production as a developmental characteristic of the European Iron Age must be subject to more critical evaluation than they have so far received (1994). That evaluation may take a number of paths. Rowlands emphasises that models in which trade is deemed to have transformed production, where urban centres, industrial production and markets become commonplace representations of the period, and where systems of inequality through debt are replaced by the exploitation of value, all evoke the rationalities of modern industrial economies. On a more empirical level we might also recognise the continuing difficulty we have in firstly identifying craft workshops of this period and secondly assigning such workshops to a limited range of settlement types.

We will return to these more general issues in Chapter 12. What follows is a consideration of two contrasting processes involved in converting two quite different materials for different forms of exchange and consumption. The first considers the slaughter (or, indeed, natural death) of animals and the ultimate disposal of the carcass. Most of the animals represented presumably arrived on the hill alive, and much of the slaughter was concerned with the consumption of meat and the working of hides, bone, and horn. A good deal of this activity was therefore concerned with on-site exchange and consumption. The second process concerns metalworking. The organisation of metalworking has long been a theme which has dominated the study of European later prehistory, and the evidence from Cadbury Castle was drawn into the debate at an early stage of the excavations (Spratling 1970a). It would appear that a lengthy history of metalworking had taken place on the hilltop and the evidence for this will be discussed below.

The animal bones from a sample of Iron Age contexts

by Sheila Hamilton-Dyer and Mark Maltby

Introduction

Excavations at Cadbury Castle produced a very large quantity of animal bones. They are currently stored in over 300 boxes in Somerset County Museum. Extrapolating from the number of bones per box investigated for this analysis, about 85,000 bones are available for study.

Most of the bones recovered from the excavations have been examined by Barbara Noddle, Department of Anatomy, University of Cardiff. Summary animal bone archives have been produced for individual contexts in most of the areas excavated. For each context this archive includes the number of fragments of each species identified, minimum number estimates for the species represented in that context, a summary of the skeletal parts identified, and counts of bones belonging to animals of different age classes (juvenile, immature, adult, etc). A copy of this information is housed with the site archive.

Unfortunately, a combination of circumstances culminating in ill-health prevented Barbara Noddle from completing the analysis of the bones for this publication. The current authors were subsequently contracted to carry out an assessment of the Iron Age assemblages, with the objective of producing a strategy for analysis of a sample of this material from key contexts in the limited time available prior to the publication deadline. Following this a six-week programme of analysis was proposed and undertaken during February and March 1994.

The assemblages studied

There was clearly insufficient time available to re-examine and analyse all the faunal assemblages from Iron Age features. However, even if this had been possible it is questionable how useful it would have been. It is clear from the pottery assemblages that considerable quantities of residual material occur in most of the stratified later prehistoric deposits on the site, and no control over the residual animal bone can be established in such cases. It was therefore decided to target deposits of animal bone which had resulted from specific depositional strategies in two of the periods of occupation. The sample identified was as follows:

a Middle Cadbury pits: In order to describe the animal remains from some securely dated features in the Iron Age, it was decided (in collaboration with Jane Downes) that assemblages from a sample of 28 Middle Cadbury pits should be examined. Priority was given to large pits (over 1.2cu m) from across the site. Just over 25% of the pits from across the site were chosen to ensure the sample was broadly representative of the overall distribution. Most of the chosen pits were cylindrical in form, with the rest being of overhanging form. The number of layers in these pits varied between 1–13.

The pits included in this analysis are as follows: B431; B714; B732.1; B814; C202; C354; C403; C702; C766; F261; F306; F444; G112; L058; L404; P110; P359; P422; P758; P824; P902; S043; S066; S153; S209; T254; T325; W065.

b Middle to Late Cadbury rubbish layer: This layer of greyish ashy loam lay immediately below the topsoil in the eastern part of the interior and has been described above (see p166ff). It was generally a few centimetres in thickness and was rich in finds including bones in some areas. Some of the faunal assemblage in the layer appears to be from calf burials in varying states of completeness. These are generally from the same area which contained the calf burials recognised below and can be regarded as part of the same deposition episode, perhaps subsequently disturbed by ploughing. There were, however, large amounts of other animal bone debris represented in this layer.

The deposit was excavated in 5m squares and the bones from the following 18 contexts were included in this analysis: N002; N026; N051; N126; N151; N176; N601; N651/N651A (Fig 128); N701; N751; N801/802; N851; N901; N951; T052; T102; T152; T202.

Fig 128 Calf bone assemblage N651A from the rubbish layer of the interior

c Late Cadbury animal burials: A number of burials of cattle were recorded during the excavations. These were concentrated in a zone running 25m eastwards but also to the south-east of the Late Cadbury structure N5 (see p173), interpreted as a possible porched shrine. Two pits, N007 and N028, located respectively about 6m east and south-east of the entrance of N5, each contained the complete skeleton of an adult cow.

The other burials, as discussed in more detail below, were often less clearly defined. A large number of bones of neonatal calves were recovered in a zone running up to 25m to the east of structure N5. These appear to have been placed in shallow pits cutting and contained within the rubbish layer, which sometimes penetrated into the bedrock but at other times only reached the surface of the late cobbling. Stratigraphic interpretation and dating of these burials is difficult, although the likely explanation is that they were deposited in Middle to Late Cadbury, a view confirmed by the radiocarbon dates (see p370ff). Twelve contexts described as containing animal burials, were examined: N007; N028; N031; N603; N604; N606; N653; N658; N659; N663; N666; N710.

The sample (approximately 12% of the total site assemblage) therefore contains material from two distinct phases of the Iron Age and from different deposit types. It is therefore possible to investigate variations in the faunal assemblages in some of the Middle and Late Cadbury deposits and between assemblages derived from pits and rubbish layers respectively. The sample was also designed to investigate further the possibility that some of the animal bones represent ritual depositions, not only in relation to the area adjacent to the suggested Late Cadbury shrine N5, but also within the Middle Cadbury pits.

This initial survey of the bones from Cadbury Castle will concentrate on the basic themes of species representation, mortality profiles, associated groups of bones, and metrical trends. Brief discussion of body part representation, fragmentation, butchery, preservation of the bones, and retrieval rates will also be made. However, a more detailed contextual analysis requires further time and a larger and broader sample of bones to be considered. The results from this analysis can be compared with results from other developed hillforts at Danebury (Grant 1984 and 1991) and Maiden Castle (Armour-Chelu 1990), as well as smaller settlements investigated in Wessex over the last ten years.

Methodology

The methods used for identification and recording were based on the Faunal Remains Unit, Southampton, method 86 system, with some modifications. All fragments were identified to species and element with the following exceptions. Ribs and vertebrae other than axis, atlas, and sacrum were identified only to the level of cattle/horse-sized (LAR) and sheep/pig-sized (SAR). This restriction does not apply to the cow and calf burials and the associated dog bones where ribs and vertebrae were assigned to species. For the skull the occipital, frontal, zygomatic, maxilla, and premaxilla were identified to species. All other skull fragments were divided by size as above. Unidentified shaft and other fragments were similarly divided. Any fragments which could not be assigned even to this level have been recorded as mammalian only. Species identifications were made using the modern comparative collections of S Hamilton-Dyer.

Measurements follow von den Driesch (1976) and are in millimetres unless otherwise stated. A limited measurement programme was undertaken, details of which are given below. Withers height estimations of the domestic ungulates are based on factors recommended by von den Driesch and Boessneck (1974). Withers heights of dogs are calculated using the factors of Harcourt (1974).

Archive material includes metrical and other data not in the text and is kept on paper and floppy disk. The bones are stored in Somerset County Museum.

Retrieval rates

The animal bones from the excavations were all collected by hand using normal excavation techniques (trowelling etc). Despite the lack of sieving, the standard of retrieval seems to have been good, with small bones reasonably well represented. However, it is inevitable that some bones were overlooked. The effects of this on species and anatomical part frequencies will be discussed in more detail in later sections. However, it is likely that the smaller species and the bones of young animals are under-represented.

It also seems likely that small unidentified fragments along with many rib and vertebrae fragments have been removed from the assemblages of many contexts prior to the recording of the material by the current authors. This is reflected by the very low percentages of unidentified fragments in the rubbish layer contexts in particular, where the LAR and SAR categories combined rarely exceeded 10% of the assemblage. They were better represented overall in the Middle Cadbury pits, because it is clear that they were not removed from the assemblages of some contexts (for example in pits from Site C). Very low counts of unidentified fragments can be a reflection of poor retrieval. However, there are a large number of identified small bones in the same contexts, which indicates that the bias is the result of variability in the retention policy rather than on retrieval rates.

Taphonomy

The bones are quite well preserved in all groups of material. There was little surface erosion on the bones. This aids identification and increases the observation of fine details such as knife marks.

A small number of bones had been burnt. In the pit material 148 fragments were recorded, 3.5% of the total. Only 14 were recovered from the rubbish/burial contexts. When calf bones are removed from the fragment total this amounts to just 0.4%. No doubt many more small fragments were missed during excavation, as burnt bone is prone to fragmentation and sieving was not carried out. Many small pieces are likely to be difficult to identify to species, and with the low numbers of ribs, vertebrae, and shaft fragments retained in some contexts after excavation there may be a bias in the material against burnt fragments. However, these excavation and post-excavation processes should act on the two groups equally, and therefore the difference may be significant. Some of the pits are described as having burnt sides and there is the possibility that some of the burnt material is connected with this activity prior to the main infilling of these pits.

Some bones were extremely well preserved with an ivoried appearance. The distribution pattern seen with the burnt fragments is repeated with 203 fragments, 4.8%, recovered from the pits and only 34, 0.9%, from the rubbish layers. From the pits 58 (28%) of the ivoried bones were from unidentified material, mostly sheep-sized ribs and longbone shaft fragments. There were far fewer of this category from the rubbish layers; just two were ivoried, 5.9% of the ivoried fragments from these contexts. Excluding the unidentified material from the calculation does not substantially alter the result; there are more ivoried bones from the pits. This may be related to the burial depth. Preservation is generally better in pits than from shallow or surface features (Maltby 1985a).

Gnawed bones numbered 340 in the pits, 8% of the total. There were 382 fragments in the rubbish layers, a slightly higher percentage of 10%. Some bones, particularly small elements and immature bones, will have been completely destroyed. Shaft fragments with traces of gnawing and no epiphysial ends were frequently noted, particularly for sheep. Fusion data are therefore likely to be less reliable than tooth data for ageing because dogs will preferentially gnaw the softer ends of immature bones.

The differential effects of processes such as canid gnawing, and the loss of information, can be illustrated by the parts of sheep tibia fragments represented (Binford 1981; Maltby 1985a). From the pits just 20 (8%) of a total of 247 fragments are complete. The majority, 133 (54%) fragments, are shafts with no epiphysial ends. The remaining 94 are composed of 59 (24%) distal ends and only 35 (14%) proximal ends. The 240 tibiae from the rubbish layers are composed of six complete (2.5%), 179 shafts (74.5%), 46 (19%) distal ends and only 9 (4%) proximal ends. These differences may be explained by the difference in fusion age; the distal epiphysis fuses early and is then less prone to damage than the late fusing proximal end. The tibiae from the rubbish layers seem to have suffered more damage than the bones from the pits. The relative representation of proximal ends and distal ends and shaft fragments of sheep tibiae in the pits is comparable with other similar assemblages from Iron Age sites in Wessex (Maltby 1985a, 46–8). Despite this the bones are comparatively well preserved and both groups contain at least one complete neonatal tibia. Similar patterns were observed on other limb bones of the major domesticates. It is concluded that the bones from the rubbish layers had suffered greater damage and are more fragmentary than those from the pits.

Species representation

The main domesticates, cattle, sheep, and pig, were the most common taxa identified in the material. The minor domesticates horse, dog, and goat are present. There are also a few bones of red deer, roe, fox, hare, birds, small mammals, and amphibians.

Domesticates

Bones of cattle are second to sheep/goat in terms of frequency at 2920 identified fragments. Over half of these, 1526, are of neonatal calf which come almost entirely from the rubbish/burial contexts. A further 280 fragments are from the two cow burials N007 and N028. In the pits cattle form 19% of the cattle/sheep/pig total. When the burials are excluded, cattle in the rubbish layers remain almost at the same level, 20%.

Cattle burials N007 and N028

These were found in two ovoid pits which were located respectively about 6m and 10m east of the entrance of the seemingly later probable shrine N5. They have usually been assumed to be of late Iron Age date and, although there is no direct stratigraphic link between these and the calf burials, the dating of the latter to Middle/Late Cadbury is confirmed by two radiocarbon determinations (calibrated to two sigma N633B 390 cal BC–cal AD 60 and N031 360 cal BC–cal AD 20, see p371). On the basis of these dates it would appear that the animal burials may be earlier than the shrine (see p173).

The skeleton in feature N007 is essentially complete; the few missing elements (seven incisors, one premolar, one second phalanx, two third phalanges, and eight sesamoids) are small and were probably missed during excavation. The bones were in good condition and close examination did not reveal any evidence of skinning or other butchery, nor was there any sign of gnawing. The complete carcass seems to have been buried. The slenderness of the metapodia and the morphology of the pelvis indicate that this was a female. The skull was not recovered intact but horn-cores, probably of the 'small' category as defined by Armitage and Clutton-Brock (1976), are present. All the limb bones have fused epiphyses with the fusion line still just visible on the proximal femur. The sacrum had fused but two vertebrae show a caudal fusion line indicating that they had not been fused for long. All teeth are fully erupted and in wear, and the first, second, and third lower molars are at Grant (1982) wear stages k, k, and g respectively. The third molar has three distinct growth bands. If, speculatively, these are annual increments this animal would be aged six to seven years. The mandibles are bent slightly outwards and there is also a slight bowing of the tibiae and metatarsi. Metrical details are discussed below in the metrical section. The mean withers height for this animal is 1.038m.

A similar animal is represented in N028. The skull is described in the excavation notebooks as being disarticulated and was found at a higher level in the pit. The left scapula and some cervical vertebrae are missing, perhaps implying that this burial was disturbed at some stage. As for N007 some of the smallest elements were not recovered including 11 phalanges, 11 carpals, all sesamoids, and 13 teeth. Again this skeleton is of a small female with horns. The mean withers height in this case is a little larger at 1.05m. This animal was older than the one in N007. All bones are fused and the molars are at Grant stages l, k, and k. Again, incremental growth lines were visible on the third molar, six bands perhaps indicating an age of nine to ten years at death, assuming they represent annual growth and that the third molar erupted during the third year. Age-related pathology was recorded on some bones; the head of the femur and the corresponding part of the acetabulum showed eburnation on both the right and left sides, indicating some arthropathic deterioration of the hip joint. Both cuboids had the cuneiform fused on but without evidence of exostoses or other pathological response.

Calf burials

A great many bones of calf (1490) were noted during excavations near the presumed shrine. Associated bones were described as burials (eg Fig 128); other calf bones were found in the rubbish layer but were not recorded as discrete burials. Most of the bones were complete, or nearly so, but the skulls were in fragments. From the unworn state of the teeth and the unfused epiphyses it is clear that these are all neonatal. The size of the animals and their location indicates that they are likely to belong to Late Cadbury. Fragment numbers of neonatal calf are listed separately in the species distribution tables for the designated burials and the rubbish layers. There is no indication of burials of animals other than the calves from these deposits. The rubbish layers contain a great deal of other material whereas the burials have little additional bone. Material other than calf in the burials consists of a few disassociated fragments similar in composition and preservation to the large amount of non-calf bones in the rubbish layers.

The analysis has shown that many of the burials contain some calf bones additional to the main animal(s) designated as burials. In the rubbish layers bones were excavated from 5m grid squares. Some associated calf bones were noted, but partly because of plough disturbance, most could not be assigned to a burial. With the large amount of possible overlap an overall minimum number of individuals has also been calculated. It is estimated that at least 30 calves are involved and the total is probably higher given that some contexts in Site T have not been examined in the current study. None of the calf bones showed any marks of butchery or skinning. The minimum number of individuals calculations for the major bones were quite consistent. This suggests that complete carcasses of new-born calves were deposited in some numbers in this part of the site. In some cases it was possible to recognise discrete burials during excavation, but in many instances the stratigraphy had been too heavily disturbed for this to be possible. The burials were disturbed and their bones became scattered and incorporated to a greater or lesser degree within the material from the earlier rubbish layer. There is no evidence for canid gnawing on any of the calf bones, probably indicating that they were buried soon after death.

It is not clear when the calves were buried or whether they were deposited over a long or short period of time. One explanation for their presence is the disposal of natural neonatal mortalities from herds over a period of time. This would presumably suggest that the area was used for calving. However, the location and distribution of the burials is relatively restricted and the arguments for such disposal practices are tenuous.

Calf bones are also present in 16 of the 28 pit deposits examined. There is a total of 36 fragments of neonatal material similar to that from the rubbish/burial contexts. These are distributed across the areas (with the exception of Sites B and S, which also contributed the smallest amounts of material in general). No pit has more than six fragments and these are often distributed throughout the pit layers and are not concentrated in the top or bottom of the pits. Discrete calf burials do not appear to be present although some bones may be associated. The major limb bones and metapodia are present together with fragments of the scapula, pelvis, jaws, skull, and teeth. Small elements and loose epiphyses are absent although there is a single calcaneus. The most notable difference in the material is that at least six fragments showed evidence of skinning or butchery whereas none of the considerably larger sample from the rubbish/burial contexts had any. Details of the butchery marks are given below.

Sheep/goat

Although cattle bones, in the form of burials, form a considerable part of the assemblage, it is the bones of sheep/goat which dominate the material. Of the 3612 sheep/goat fragments 419 were positively identified as sheep. A small number (14) were positively identified as goat (Boessneck 1969; Payne 1985). In the pits, where some calf bones were encountered but did not form burials, sheep/goat are 64% of the cattle/sheep/pig total. In the rubbish/burial contexts, when calf and the two cow skeletons N007 and N028 are excluded, sheep/goat form 55%. The taphonomic bias described above and in the anatomical distribution described below implies that this is an underestimate of the original proportion of sheep.

Pig

When the bones of calf and the two cow burials are excluded pig bones are as frequent as cattle. There is consistently more pig than cattle in the rubbish layers. In the pits the overall number of pig bones is slightly less than cattle but the proportions of cattle and pig vary considerably between pits. The amount of pig in the pits is 17% of the cattle/sheep/pig total. In the rubbish layers, pig fragments increased to 25%.

Horse

Although horse remains are not common they are a consistent presence. Some of the bones were very small and slender. It has been suggested that some might be of donkey. The bones were carefully compared with recent donkey material but several morphological differences indicated that those in the present study are all horse bones. Where present, the supraorbital foramen of the skull has the shape and position of horse; the phalanges are small but broad and the diaphyses of the metapodia have the shape and breadth of horse, although none were sufficiently complete for calculation of a slenderness index (Bökönyi 1972). None of the teeth match those of donkey (Davis 1980).

Horse provided 3.1% of the identified mammalian fragments in the pit sample and 1.4% in the rubbish layers. These low percentages are comparable with the results from Danebury (Grant 1984; 1992). Horse bones are, however, better represented on some other Iron Age sites in Wessex, for example at Winnall Down (Maltby 1985b, 102), where horse provided 8.9% of the identified mammalian fragments in the middle Iron Age deposits, and Gussage All Saints (Harcourt 1979). Two pits, F306 and T254, each produced over 25 bones. In both cases these largely represent skull fragments and are associated with a number of cattle skulls (see below).

Dog

Many bones from the pits and from the rubbish/burials showed evidence of canid gnawing. Dog bones themselves were more frequent (56 fragments) in the pits than in the rubbish layers, where five contexts contributed just one bone each. Several bones in the pits were associated and at least five partial skeletons are involved. From pit C702 seven bones were recovered which all appear to be from one animal; these consist of a right tibia, fibula, and metatarsus, a left humerus and radius, a cervical vertebra, and a canine tooth. From pit C766 there are 11 bones including a skull with mandibles. Other bones from this pit are a right femur, radius, and scapula, and five thoracic vertebrae. Pit P359 contained several bones from the front half of a neonatal pup. Pit P422 contained bones which are probably from one individual although they are from different levels. The right femur, left humerus, left mandible, axis, and os coxa are present. All match an animal of about 0.45–0.50m shoulder height, and some showed evidence of butchery. From pit P824 there are seven bones in the upper levels, a left humerus and ulna, three metapodia, an atlas, and part of the os coxa. Pit T254 contains bones of two animals; in the upper layer a slightly eroded and butchered mandible was recovered. From the third level there are 12 bones including all 7 lumbar vertebrae, the right half of the os coxa, right femur, a metatarsus, and both mandibles. Several of these bones were butchered in an unusual manner, and are described in detail below. Dog bone in four other contexts may also be associated but there are too few bones (just two in each context, from different parts of the body) to be certain.

Other species

Deer

Deer are represented by eight fragments only, four from each context group. All four from the rubbish/burial contexts were recovered from context N802. Red deer is represented by a fragment of antler and distal fragments of scapulae from two individuals. The other fragment is of roe antler. Deer bones from the pits were recovered from four different contexts. A small fragment of red deer antler was recovered from F261, a larger piece sawn off near the tip was recovered from F306, and a shed burr from F444. From C702 there is most of the shaft of a roe tibia. Although incomplete, (the ends have been gnawed) the morphology of this bone clearly matches roe rather than sheep or goat.

Fox

There are a number of bones which have been identified as fox rather than small dog. There are equivalent-sized bones from dogs of around 0.35–0.40m from Iron Age material, although these are less common than those over 0.40m (Harcourt 1974, 163). The bones must therefore be carefully compared with modern material of both. The most frequent observation is that fox long bones are slimmer in comparison with overall length than most dogs. This is true even in the case of small, slender-limbed dogs where the epiphyses are relatively wider than in fox, although the shaft widths may be of a similar small size. Several researchers have investigated these differences, including Babendererde (1976) and Ratjen and Heinrich (1978). Close examination of the bones often reveals subtle differences in morphology which are consistent for fox but are not always so for the more variable dog. The bones thus identified as most probably of fox number 5 from the pits and 13 from the rubbish contexts. Most of the bones from the rubbish contexts are probably associated. There are four bones in N026 of a small individual and eight from N601. This small animal is represented by both sides of the pelvis, both tibia, the right femur, left humerus, left scapula, and a tooth. The tibiae have lengths of 119mm. The right tibia is pathological with some exostoses round the distal joint and some necrosis of the articular surface. A knife cut is also present on this bone. Two other bones have knife cuts: a distal humerus in pit F306 has several cuts across the front of the distal joint and the metatarsus in pit T254 has a fine cut across the front of the shaft, probably made during skinning.

Hare

A few hare bones were recorded. A pelvis and femur matched brown hare and it is assumed that all bones were of this species rather than mountain hare. There was also a smaller lagomorph pelvis which is assumed to be an intrusive rabbit.

Small mammals

The rat tibia in rubbish layer N701 is also likely to be intrusive. The other small mammals, mole and bank vole, are difficult to place as they may also have burrowed into the deposits.

Amphibians

Amphibian bones were noted in four pit contexts, F261, P758, T254, and W065. Both common frog and common toad are represented. Those from pits P758 and W065 are known to be from the lower fills. Information is not available for pits F261 and T254. Amphibian bones are often found in pit bottoms and the frogs and toads are likely to have fallen/jumped in and been unable to get out.

Birds

Bird bones are very few, just 11 fragments in total. In part this is through a lack of sieving but the larger bones of goose would be expected if originally present. Species recorded are ducks comparable with mallard and teal, buzzard, woodcock, gull comparable with common gull, and raven. All of these are from pit contexts with a further buzzard bone from rubbish/ burial context N701. None has evidence of butchery or gnawing. Bones of domestic fowl are absent. They appear only in the latest phases at Danebury (Coy 1984) and Winnall Down (Maltby 1985b). The lack of fowl bones at Cadbury is consistent with the middle to late Iron Age date and the western position of the site. Fowl must have been introduced in much larger numbers to the area by the Roman period as there are considerable numbers at Exeter (Maltby 1979) and Dorchester (Maltby 1993).

No fish bones were found. Fish bones are often very small and rarely recovered without sieving. A few fish bones have been reported from Iron Age sites, usually of freshwater fish.

Anatomical distribution

As described above ribs, vertebrae other than axis, atlas, and sacrum, and skull other than frontal, occipital, zygomatic, and maxilla were not assigned to species. The amount of unidentified material, including long-bone shaft fragments, is unusually low with the exception of some pits. It is suggested that much of this had been removed at the post-excavation stage and does not reflect pre-excavation processes.

The analysis of the distribution over the body for fragments of horse, cattle, sheep/goat, pig, and dog in the pits and in the rubbish/burial contexts has shown that in the rubbish layers loose teeth are frequent at 1126, 35% of the identified domesticate total. This is less obvious in the pits where 511 loose teeth form 17%. Sheep/goat teeth, which are in the majority, are 32% of the sheep/goat total in the rubbish, whereas they comprise only 15% in the pits. These figures are reversed for mandibles as a percentage of the mandible and teeth total, giving 17% in the rubbish and 39% in the pits indicating that mandibles in the rubbish layers have been subject to a greater amount of breakage. Maxillae and premaxillae are similarly rare in the rubbish layers. Loose teeth form 42% of the cattle fragments from the rubbish/burial contexts and 21% from the pits. This again indicates the better survival of bones in the pits but it is unusual for loose teeth to form higher percentages of cattle than sheep/goat in the same assemblages. Differential retrieval rates may be a factor, however, with more of the smaller sheep/goat teeth being overlooked during excavation. In a similar manner teeth comprise 17% of the pig fragments in the pits but this is almost doubled at 34% in the rubbish/burial contexts.

Horse teeth are present in similar amounts from the pits and the rubbish layers, but there are no head or jaw fragments in the rubbish layers. Horse skulls are easily fragmented, which may account for this absence. Other bones are distributed across the body. The number of horse bones is too small to distinguish any further differences.

There are relatively low numbers of phalanges for all species. For each sheep or cow there should be 24 phalanges, six for each leg. In the case of sheep tibiae, one of the commonest elements, the lowest minimum number of individuals represented in the assemblages is 150, a conservative estimate. The expected number of phalanges for this number of animals is 3600. The number recovered is 120. Clearly most have either been lost since the death of the animal or not recovered during excavation. It has been demonstrated by Payne (1972) and Maltby (1985a) that both recovery bias and pre-excavation taphonomic processes are involved. Other small bones such as carpals and tarsals are also infrequent, more so for the small sheep than the much larger cattle. The sheep femur also has a low count in comparison with the tibia, a similarly sized bone from the same body area. In both the pits and the rubbish layers femur forms only 4% of the sheep total, whereas tibia is 13% and 14% respectively. The femur is late fusing at both ends (tibia is late fusing at one end only) and has a much thinner shaft wall which is easily broken. Pieces of tibia shaft are usually sufficiently diagnostic for species and anatomical identification whereas femur fragments are often smaller and less certainly distinguishable to species and anatomy.

In the case of cattle both femur and tibia have similar percentages to each other. These percentages are low, under 3% in the rubbish and under 6% in the pits. This reflects the better retrieval of cattle bones; for example, there are more cattle phalanges than tibia fragments whereas sheep tibia outnumber phalanges by at least three times.

Skulls

It was noted during excavation that some skulls of horse and cattle appear to have been deposited in pits in a manner that suggested careful placement. In one case an almost complete horned skull had been placed on stones at the bottom of a pit (Alcock 1972a, 136). They seem to have been most commonly observed in pits on Site C, the westernmost excavated area of the interior. Deliberate placement of skulls in pits has also been observed at Danebury (Grant 1984).

In most cases skulls do not seem to have been kept separately and labelled as such. Many contexts contain skull fragments. It was decided to count as skulls only those fragments, or fitting fragments, which comprise at least 25% of a complete skull. Also included are groups of much fragmented material which, if it were possible to join the fragments, would qualify as 25% or more.

Of the five pits examined from Site C two contained three possible skull depositions, none of which matches that noted above. Pit C354 layer E contains a pair of maxillae and an occipital which may join and C766 contains a frontal in layer A and one in layer C, but no maxillae or other parts are present. Pit C202 is described as having an 'ox skull 1.3m below the turfline, upright but decayed'. This was not amongst the material examined from this pit, nor does it fit the photographic evidence.

From pit F306 several horse and cattle skulls were recovered. Bones from this pit were in bags labelled only as either F306 (the majority) or F306B. Current context listings describe nine divisions or layers for this pit and three horse skulls are noted in F306.20. There are skull fragments including frontals, occipitals, and maxillae from four horses in F306. One of the occipitals had been cut when detached from the vertebrae. At least three of these were male, as evidenced by the presence of large canines. Other horse bone is restricted to a first phalanx and a metatarsal shaft. There are also skull fragments, some with cut marks, of four cattle in this context together with a large amount of other cattle bone including foot bones. From F306B there is a cattle skull comprising both frontals with a red-earth stain.

Pit L058 contains the rear half of a cattle skull with cuts on the temporal. No maxillae are present. A smaller fragment of another cattle skull was also recorded.

A cattle skull fragment, mostly comprised of the frontals, was recorded for pit S066. Numerous cut marks were observed across the forehead. This is the only fragment available from this pit.

Pit T254 had pieces of three cattle skulls without maxillae; one had a chopped horn core. A fragment of a calf skull was also present. There were parts of two horse skulls which included the maxillae. Canine teeth indicated that at least one was male.

Although there was no clear spatial pattern for the deposition of substantial portions of skulls on the site, some pits did contain several skulls. Unfortunately, the details of their location within these pits are not sufficiently clear to ascertain whether these were 'special' or casual deposits. However, the association of these skulls may be significant and it may be more than coincidence that in two cases (pits C766 and T254), associated groups of dog bones were found in the same pit. In the case of pit C766 the two cattle skull remains were found in the same levels, A and C, as the dog bones. The skull portions from T254 are all recorded from level C, the same level as a group of dog bones with unusual butchery (see below).

Although several cattle skulls were present, and all were horned, very few undamaged horn cores were recorded. The majority of the fragments were of curved, ovate type and appeared to be of the 'short-horn' category (Armitage and Clutton-Brock 1976). The skull from pit F306B had one almost intact horn core which may fall into the 'small' category (the other side had been chopped off at the base). The skull from burial N007 also had a horn core of this type.

Allowing for taphonomic effects and the lack of ribs and vertebrae, the fragments of the major domesticates appear to be well dispersed across the body. With the exception of the skull deposits described above, no discrete dumps of head and foot bones were recorded and it seems that the bones are from a mixture of activities including slaughter and kitchen waste. The cattle assemblage was more evenly distributed across the body than sheep/goat and pig, probably indicating better survival of their bones than those of the smaller species. Detailed comparison of body part representation requires larger samples of material to be studied.

Butchery

An extensive study of butchery was not undertaken. Butchery marks were recorded for bones identified to species. Brief details of the findings are given below.

Two types of butchery marks were observed on the bones, knife cuts and chops made with a heavier blade. More knife cuts were observed than chops. These cuts are mainly of two types. Fine cuts across phalanges, metapodia, and frontals would have been made when skinning the animals. The other cut marks are on or near joint surfaces of the main limb bones, scapulae, os coxae, and occipitals. These would have been made in disarticulation of the joints.

Axial chopping of the bones was very rarely noted. Limb bones sometimes showed spiral fractures. As this can be caused by trampling as well as by butchery this was not recorded unless an associated chop mark was noted. This type of butchery may therefore be under-represented.

A higher percentage of cattle bones showed chops than were noted on sheep bones, probably because the smaller sheep are more easily butchered using knives whereas the larger cattle carcass may need a heavier implement for easy division.

Both cuts and chops were found on jaws. Those on the inner side were probably made during removal of the tongue. Lateral marks may have been made when removing cheek meat or during disarticulation of the jaw from the skull.

There is a higher percentage of knife marks on the cattle and pig bones from the pits than from the rubbish/burials. This may be a reflection of poorer preservation conditions, although a more detailed study is necessary.

Unlike the calf bones in the rubbish/burial contexts several of the calf bones in the pits had butchery marks. These were composed of posterio-anterior knife cuts on two separate frontals, repeated dorso-ventral cuts on the medial part of a jaw (perhaps during removal of the tongue), a knife cut across the front and back of the distal part of the shaft of a humerus, a cut near the acetabulum of a right pelvis, and repeated superficial cleaver marks across the medial (inner) surface of a scapula.

Dog bones had a high number of butchery marks, some of which are notable and warrant detailed description. Butchery marks were observed on 13 of the 56 dog bones in the pit contexts, 6 different dogs are involved. The marks and the bones involved imply disjointing and meat removal rather than skinning.

The humerus is the only bone in pit P824 with butchery evidence. This was in the form of several cuts across the back of the shaft near the proximal joint. These are likely to have occurred when removing the front leg from the scapula joint. In pits C354 and C766 the butchery marks were small knife cuts on the proximal femur near the caput. These would have been made in removing the hind leg from the pelvis. Similar cuts were noted on the femur in layer D of pit P422.

These matched cuts on and near the acetabulum of the pelvis in layer B, presumed to be from the same animal. From layer C in this pit there is an axis with several knife cuts at the cranial end which indicate removal of the head from the neck.

The other butchery marks are all on bones recovered from T254, mostly from one animal. Again the femur has knife cuts, this time across the back of the proximal part of the shaft and on the distal joint. In addition the caput is chopped off obliquely, matching the multiple oblique chop marks on the right pelvis and the ventral aspect of the last (seventh) lumbar vertebra. Lumbar vertebrae 5 and 6 also have an adjoining chop mark running cranio-caudally on the ventral side. There are also fine knife cuts across the lateral process of the third lumbar vertebra. This set of marks form an unusual group. Clearly they would have enabled the hind leg and the vertebral column to be disarticulated from the pelvis. The location of marks on the ventral aspect of the lumbar vertebrae suggests that they were made after the animal had been gutted. The knife cuts on the third lumbar vertebra also suggest that the flank meat of the animal had been removed. The whole process is more heavy-handed than required to remove the hind leg and, as noted in other cases here, the process was usually performed with a knife or similar implement rather than a cleaver as in this case. It is also curious that, despite being disarticulated, several bones of the dog were found in association. The left jaw in this context also has butchery marks, repeated cuts obliquely on the inner side, probably made during removal of the tongue. The final butchered bone from this pit is another jaw, but is from a different animal. There are two marks made with a heavy blade on the inner side, again probably associated with extraction of the tongue.

Ageing data

Ageing evidence was obtained from several sources. Epiphysial fusion of the limb bones and vertebrae was recorded. This method has only limited value in assemblages such as this because of the bias created by the differential destruction of the fusion points by gnawing. The bones of young animals have much less chance of survival than those of the older animals. However, the paucity of other ageing data for cattle in the Middle Cadbury sample in particular necessitated its use in this analysis.

The eruption and wear of premolars and molars from the mandibles of cattle, sheep/goat, and pig were recorded using the method devised by Grant (1982). Maxillary teeth and loose mandibular teeth of these species were recorded in less detail apart from the lower third molars and deciduous fourth premolars.

In addition, any bones which appeared by their morphology, size, and porosity to have belonged to neonatal or juvenile animals were noted and recorded in the archive.

Sheep/goat

Cheek teeth survived within 176 mandibles, 103 from the Middle Cadbury pits and the remainder from the Middle to Late Cadbury deposits. It was not possible to distinguish between sheep and goat mandibles in cases where only the molars and/or permanent premolars were present. However, all the mandibles in which deciduous fourth premolars were present could be assigned to species using the morphological distinctions discussed by Payne (1985). All 86 specimens belonged to sheep. In addition, 42 loose deciduous fourth lower premolars were also from sheep. It can be concluded that all, or almost all, of the mandibles of immature animals in this sample were from sheep. It is assumed that nearly all the older animals represented by mandibles were also sheep.

All the teeth in the mandibles and the loose deciduous fourth premolars and third molars were recorded using the method devised by Grant (1982). The mandibles were divided into seven eruption and wear stages (Maltby 1993). Numerical values were assigned to the mandibles using Grant's method. Because many of the mandibles were fragmentary, it was not possible to assign a single value to all the specimens. They have therefore been placed within wear stage bands of 1–5, 6–10, etc. It should be emphasised that the eruption and wear stages do not represent equal amounts of time. Some fragmentary mandibles with only one or two teeth could not be assigned to wear stages.

The two samples of mandibles from the Middle Cadbury pits and the Middle to Late Cadbury rubbish and burial deposits show a number of similarities and differences. Both samples contained a substantial proportion of mandibles belonging to lambs of under a year old (specimens at Stage 3 (second molar, m2, not in wear) or less or with Wear Values of 15 or less). However, the Middle Cadbury sample included a significantly greater percentage of lambs killed by this Stage (67%) than in the Middle to Late Cadbury sample (38%). It included the mandibles of eight (8%) neonatal mortalities (Stage 1, fourth deciduous molar not in wear), which are not represented in the Middle to Late Cadbury sample. Both samples show a peak in the mortality rate between six and twelve months (Stage 3, m1 in wear; m2 not in wear), although this is more marked in the Middle Cadbury sample.

Both samples contain low percentages of mortalities at Stage 4 (m2 in wear, m3 not in wear, Wear Values 16–25) indicating that few sheep were culled in their second year. Only about 10% of the specimens in both samples were killed at Stage 5 (m3 in wear, m1 not in heavy wear; probably belonging mainly to third and fourth year mortalities). The evidence suggests that efficient meat production was not the principal reason for the exploitation of sheep. Animals at the prime age and size for culling for meat were poorly represented. Conversely, provided they survived their first year, most sheep were not culled until they were over four years of age. The percentage of older animals is significantly higher in the Middle to Late Cadbury sample, which also includes a much higher proportion of mandibles with heavy wear (Stage 7, m1 and m2 beyond Grant wear stage g).

A number of explanations can be put forward to account for these different mortality profiles. If the figures are taken at face value, it could be suggested that there was a change in the exploitation of sheep in the later period resulting in a radical shift in emphasis from the culling of lambs to the culling of adult animals. Such a change could have resulted from an increase in the importance of wool, with fewer animals being killed prior to the production of a number of fleeces. There are, however, a number of problems with this interpretation. First, such a change would have required a much greater amount to be invested in pasture and fodder for the sheep, in order to maintain more animals alive until adulthood. Such radical changes in exploitation could have led to an increase in the numbers of sheep exploited and perhaps in the numbers of older males kept alive. There is no evidence from Cadbury Castle for an increase in the relative number of sheep consumed in the Middle to Late Cadbury period. Metrical analysis did not indicate an increase in the relative number of (larger) male sheep represented in the late Iron Age.

The observed variations in sheep mortality rates can alternatively be explained by differences in preservation and deposition histories of the two samples. The Middle to Late Cadbury sample is not as well preserved. There are more loose teeth, which implies that more mandibles have been destroyed. It is likely that the mandibles of younger animals were more vulnerable to destruction and hence they are not as well represented in the later Iron Age layers. These had a much better chance of survival in the Middle Cadbury pits, particularly if deposited in their lower layers.

Although preservation factors can largely explain the variations in the relative abundance of young lambs, the Middle to Late Cadbury layers did produce more old sheep (Stages 6–7) than the Middle Cadbury pits and it is difficult to account for this on taphonomic factors alone.

The mortality profiles of sheep from Cadbury Castle have similarities with those obtained from Danebury (Grant 1984; 1991) and those from a number of smaller early and middle Iron Age settlements in Wessex such as Winnall Down, Hampshire (Maltby 1985b). They have all produced neonatal lambs but have a peak of mortalities between 6 and 12 months. Comparatively few sheep were culled between 12–36 months on any of these sites but older sheep were well represented. As at Cadbury Castle, the relative percentages of young and old animals varies in the samples from these sites. This may reflect the movement (through trade or redistribution) of some sheep of different ages to different types of settlement, although there is as yet no clear pattern in the age variability to support this. It may reflect a greater emphasis on secondary products such as wool on some sites. Conversely, sites which have produced high percentages of sheep killed between 6 and 12 months may not have been able to afford or have access to the pasture and fodder to maintain large numbers of sheep beyond their first year. However, taphonomic bias and variations in disposal practices cannot be ruled out as being the major factor in this variability.

Cattle

Apart from the Late Cadbury burials of two adult cows and large numbers of neonatal calves, cattle mandibles bearing teeth were poorly represented in the samples. Only four were found in Middle Cadbury pits. Of these, three (from C403, G112C, and W065C) belonged to neonatal mortalities, in which the deciduous premolars had erupted but showed no sign of wear. The fourth mandible, from F444, had wear on the deciduous premolars but the first molar had not erupted. This belonged to an older calf, possibly aged between three and six months. Three loose deciduous fourth premolars, all worn, were also recovered. Adult cattle were not represented by mandibles in these pits but epiphysial fusion data confirmed their presence in some numbers.

The ages of the two adult cow skeletons have already been discussed. Twenty-three of the mandibles of the calves found in the burial/rubbish layer complex had some teeth still *in situ*. All had deciduous pre-molars that were erupted but not in wear, confirming that these animals died or were killed within a few weeks of birth. Nineteen loose unworn deciduous fourth premolars were also found belonging to this same group of animals. Another mandible from N802 had slightly worn deciduous premolars and belonged to a slightly older calf. Calves of a similar age were represented by a pair of loose fourth deciduous premolars from N026 and another slightly worn tooth from N151.

The mandibles of three adult cattle were also recovered from the rubbish deposits. All three had fully erupted tooth rows, although not all the teeth remained in the jaw. Other adult cattle were represented by 8 loose worn fourth permanent premolars and 13 third molars in mature wear (Grant wear stage g and above).

Apart from the neonatal mortalities, mandibles and teeth of immature cattle were rarely recovered in the Middle to Late Cadbury deposits. Only a single fourth deciduous premolar displaying heavy wear and a third molar in an early stage of wear attested to the presence of immature or sub-adult cattle.

To draw general conclusions about the exploitation of cattle on the basis of these mortality profiles is very difficult. Neither sample of mandibles is likely to be representative of the overall pattern of culling of cattle in the periods concerned. The presence of neonatal cattle in both periods could suggest that calving took place within the hillfort. Grant (1984) suggests this also could have occurred at Danebury, where excavations have also produced high percentages of neonatal cattle. Much higher levels of natural calving deaths can be expected than for the present day. Cadbury Castle and Danebury have produced evidence for a much higher proportion of neonatal cattle than other settlements in Wessex, perhaps suggesting that the hillforts were used as centres for such calving activities. Danebury, however, did not produce concentrations of calf burials in any area of the site and the evidence from Cadbury strongly suggests that the burial of new-born calves was a common deliberate ritual act, during the latter part of the Iron Age at least. It cannot be shown whether these calf burials were derived from natural mortalities or deliberate culls.

The low numbers of immature and sub-adult cattle represented at Cadbury also has parallels with Danebury and other Iron Age sites in Wessex (Grant 1984; 1991; Maltby 1981; 1985b). Grant (1984) has contrasted the mortality profiles from Wessex sites with those from the Thames Valley, several of which have produced samples that contain a much higher proportion of immature cattle. She has suggested that there may have been specialisation in different aspects of cattle rearing at different sites (Grant 1984, 514). Further samples from a wider range of Iron Age sites in Wessex are needed to test this idea further. Adult cattle would have provided traction power and possibly milk, although the lack of juvenile calves would suggest milking was not an important factor (McCormick 1992). Cattle were a valuable commodity. It is unlikely that they would have been deliberately culled as immature animals unless their meat was needed urgently or unless they died of natural causes. Older cattle could be killed once their productivity for producing calves or as traction animals declined.

Pig

All pig mandibles with surviving cheek teeth were recorded using Grant's (1982) method of recording. They were then divided into seven development stages (Maltby 1993). Only 12 mandibles with teeth were found in the Middle Cadbury pits. No neonatal mortalities (Stages 1 and 2) were noted among the mandibles, although neonatal pigs were represented by a few limb bones in these deposits. Five of the mandibles are at Stage 5 of the toothwear sequence, when the permanent premolars were in an early stage of wear but the third molar was not in wear. Comparison with wild boar eruption rates would suggest that these pigs were killed between 18 and 24 months (Bull and Payne 1982). Both younger and older pigs were represented, however, and the sample is too small to determine whether there was a peak of slaughter of pigs for their meat in their second year.

The rubbish layers produced a larger sample of 47 ageable pig mandibles. The majority of the mandibles belonged to immature animals with second year mortalities (Stages 4, 4–5, and 5). However, at least 17 specimens (36%) had the third molar in wear (Stages 6, 6–7, and 7) and belonged to animals not killed until at least their third year. Few very old pigs were represented and the consumption of mainly younger animals is normal in a species which can tolerate quite high levels of slaughter of immature stock and has no important secondary products to encourage farmers to keep alive a large proportion of adult animals. Nevertheless, the percentage of mandibles with wear on the third molars is high in comparison to Danebury (Grant 1984; 1991), Winnall Down (Maltby 1985b), and most other Iron Age sites in Wessex investigated to date. Differential preservation may be a factor but not a very convincing explanation, given that mandibles of Stages 3–5 also survived quite well. Grant (1984, 516) noted variations in the mortality profiles of pigs in different periods at Danebury, which produced a much higher proportion of first year mortalities in all phases than in either of the samples from Cadbury Castle. She also noted discrepancies between the epiphysial fusion data and the mandibular ageing data. Again, it should be emphasised that neither sample from Cadbury may reflect a typical mortality profile for the periods involved. Speculation on whether the observed differences can be attributed to variations in exploitation practices, disposal strategies or taphonomic factors is premature at this stage.

Metrical analysis

The good condition of the collection allows measurement of many of the bones. With limited time it was decided to restrict measurements principally to the long bones of the main domestic animals (horse, cow, sheep/goat, pig, and dog) and to select those measurements which are most commonly encountered in reports. Measurements were also taken on the scapula, astragalus, calcaneus, and horn cores but not on os coxa or ulna. The measurements, taken in millimetres, follow von den Driesch (1976). The archive contains all the measurements including those not mentioned in the text. Where possible withers heights were estimated using the factors recommended by von den Driesch and Boessneck (1974) and Harcourt (1974).

Horse

Very few horse bones were measurable under the above criteria, and no bones were sufficiently complete for withers height estimation. The bones are all of small pony size. One, an acetabulum, is from a slightly larger animal than the other bones. It is interesting to note that this was recovered from the earlier pit material. Grant (1984, 521) has observed a trend for greater variability and larger bones in the early and middle Iron Age period at Danebury.

Cattle

Several of the cattle bones were measurable, not only individual bones from the pits and the rubbish/burial contexts but also those of the two complete skeletons N007 and N028.

Several complete bones enabled the estimation of withers heights. The smallest height is of 0.992m, a metacarpus from pit L058. The largest is of 1.133m, also calculated from a metacarpus, from context N802. This bone is likely to have been from a bull. Withers heights for N007 and N028 were calculated using the most complete of each long bone pair. The range of heights calculated for the animal in N007 is 1.006–1.054m with a mean of 1.038m. The other animal is slightly larger with a range of 1.017–1.068m and a mean of 1.048m. Both of these animals are probably female. They therefore fall comfortably within the size range of the other cattle in the assemblage.

There appears to be no significant difference between the two, admittedly small, groups of metrical data from the pits and the rubbish/burial contexts. Analysis of more material may confirm or disprove this. The size range of the current material is more limited than at Danebury with less of the larger animals present. Sexual dimorphism is present in cattle, and the larger animals may be male. As fewer of these are likely to be kept to maturity, the smaller sample may be biased in favour of the majority, smaller, females.

Sheep and goat

Sheep bones provide the bulk of metrical data in this material. Occasionally goat bones were recorded and it is possible that a few measurements in the sheep/goat category, on distal tibia for example, may be of goat. The vast majority were, however, taken on bones identified as definite sheep. There was a single complete goat long bone, a metatarsus from N601.

There were more complete bones from the pits than from the rubbish/burial contexts and therefore more withers height estimates. Although not labelled as such, the three complete long bones from L058 may be from one individual as they have a similar appearance and very close withers height estimates of 0.572m, 0.574, and 0.575m. The range for bones from the pits is 0.527–0.622m with a mean of 0.562m. The mean for the rubbish/burial contexts is very similar at 0.566m but the range of 0.515–0.634m is larger, despite the smaller sample of

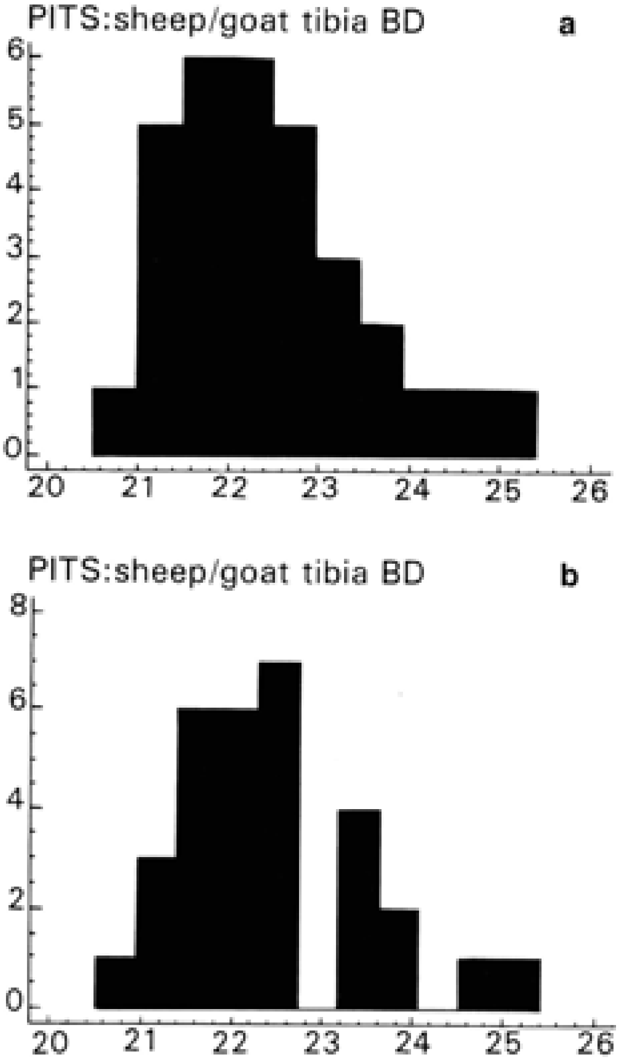


Fig 129 a, b Histograms of maximum distal width of 33 sheep/goat tibias from the pits

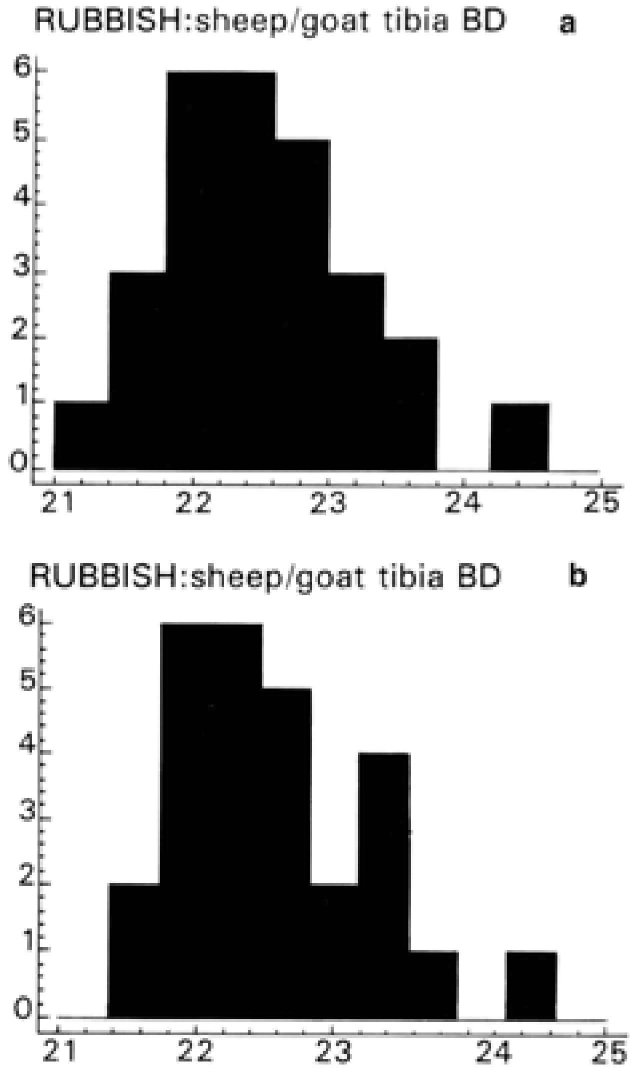


Fig 130 a, b Histograms of maximum distal width of 27 sheep/goat tibias from the rubbish/ burial deposits

15 compared with 34 from the pits. There is a low range of variability in the pit sample. The coefficient of variation is higher in the Middle to Late Cadbury rubbish layers.

Other measurements appear to be very similar between the two groups of material. They represent the small, slender animals reported from Danebury and other pre-Roman Iron Age material. The most commonly reported measurement is of the maximum distal width of the tibia. There were 27 of these measurements available from the rubbish/burial contexts with a range of 21.4–24.4mm and a mean of 22.6mm. The pits offered 33 measurements, range 20.9–25.0mm with a mean of 22.4mm. Figure 129a shows this plotted for the pit material at 0.5mm intervals in the same manner as plots illustrated by Maltby for Exeter (1979). A single population, typically skewed to the left (smaller measurements), is revealed. In comparison with Roman Exeter these are smaller animals. If the data are plotted using finer class distinctions a trimodal distribution is apparent (Fig 129b). This pattern is repeated in the rubbish/burial contexts (Fig 130a, b) and can also be found to some extent for the proximal width of the radius and in the humerus distal trochlea width, and perhaps other measurements as yet untested. It is tempting to suggest that this grouping indicates a large group of ewes, some wethers, and a few rams. The present sample is too small for statistical proof, but with the large amount of unreported material available this merits further investigation.

Pig

As might be expected of an animal kept primarily for slaughter at an early age, most of the undamaged pig bones have unfused epiphyses and have therefore not been measured. A selection of available measurements from the pits and the rubbish/burial contexts indicates small animals very similar in size to those at Danebury (Grant 1984, 517). None of the bones were sufficiently large and sculptured to suggest wild boar. Several jaws had cramped teeth, an indication that these were domestic.

Dog

The rubbish layers contributed just five dog bones, all from different contexts. These were a maxilla, upper canine, upper fourth premolar, astragalus, and a distal humerus. The two measured fragments are in the middle of the range reported by Harcourt (1974) for the Iron Age.

More bones (56) were available in the Middle Cadbury pit contexts, where all bones appeared to be from animals over 0.40m. There are four groups of bones which, although not labelled as burials, appear to be from partial skeletons on the basis of measurements, appearance, and butchery marks. The seven bones from C702 were not sufficiently complete for calculation of withers heights but compare well with a modern specimen of 0.40m. Similarly, the five bones distributed through the four layers of P422 and the seven of another individual from P824 compare with animals of 0.45–0.50m. The more complete femur from P422D can be more closely compared and is from an animal of between 0.48–0.50m. Larger animals are represented by a femur in C354C calculated as from a dog 0.527m at the withers, another in C766 of the same size, a radius from this pit of 0.515m withers height, and the twelve associated bones in T254C. These are the largest dog bones. The butchery on the proximal part of the femur prevents measurement from the caput, but the caput and trochanter are often at the same height in dog and this measurement of 179mm was used to estimate a withers height of 0.549m.

Harcourt (1974) examined dog bones from 28 Iron Age sites, including Maiden Castle. A withers height range of 0.29–0.58m is reported, with the smaller bones in the minority. The remains from Cadbury Castle fit well with these figures.

Conclusions

This report should be regarded as an interim statement. The analysis has concentrated on three groups of contrasting deposits which have produced significant variability in their assemblages. Various interpretations can be put forward to explain these changes (diachronic changes in the exploitation of animals or attitudes towards them; variations in disposal practices; taphonomic variations; changes in site usage). Until a wider range of samples is studied, it is often difficult to determine which of the above (or other factors) is the most likely explanation, or indeed if a combination of two or more factors is involved.

The most common species exploited for meat in both phases was sheep. Pigs and cattle were also commonly slaughtered for their meat. Because of the large carcass size of cattle, beef was probably the most commonly consumed meat.

There is evidence to suggest that all three species were sometimes kept within the hillfort, at least during the periods when their young were born. Neonatal mortalities of sheep were commonly represented in the Middle Cadbury pits. Bones of new-born calves and piglets were also recovered in small numbers from the same deposits. One interpretation of the large number of neonatal calf burials in the later phase could be that calving frequently took place within the hillfort.

In addition to meat, some cattle and sheep were kept alive long enough to be exploited for secondary products, in the former case, as working animals; in the latter case for wool. There is no clear evidence to suggest that cattle dairying was of any importance. There are some indications that mortality patterns of all three species changed in Middle to Late Cadbury but other factors, particularly disposal practices and taphonomic variation, could account for some of these variations. In neither period need the ages of the animals represent a typical pattern of mortality of the species exploited in the region around Cadbury Castle. The mortality profiles of sheep and cattle in particular, however, have similarities to those from Danebury and some other Iron Age sites in Wessex.

Horses, goats, and dogs also occasionally provided meat. The contribution of wild species appears to have been minimal (although the carcasses of large animals, such as red deer, hunted and killed away from the site may not necessarily have been carried back to the hillfort). There is no evidence that domestic fowl was kept from the sample examined for this report.

Metrical analysis of cattle and sheep revealed that both species were of typical small types commonly encountered on contemporary sites. There is no evidence for any significant changes in size between the two periods. Both species were horned. Measurements also suggested that the majority of adult sheep were ewes in both periods.

There has been a great deal of interest and discussion about the deliberate depositions of whole or partial animals as burials or sacrifices at Cadbury Castle. The excavations, of course, generated this interest and the statements made about animal depositions by Alcock (1972a) have been taken up widely. For example, Alcock (1972a, 136) drew attention to the evidence for the careful placement of cattle and horse skulls in some pits. The probable association of animal burials with the possible shrine N5 was also noted: 'in a narrow zone beside the approach to the shrine we uncovered about twenty burials of young domestic animals: a few pigs, some lambs, but principally newly born calves' (Alcock 1972, 81–4). This and similar statements have been cited and adapted by other authors. For example, 'One of the alleged late Iron Age shrines at South [sic] Cadbury (Som.) is associated with an avenue of burials of young pigs, calves and lambs' (Green 1992) and, 'The South [sic] Cadbury shrine burials included at least 16 cattle, 3 pigs, 3 sheep and a horse, many of them juveniles' (Woodward 1992, 78).

This analysis can update these statements. From our analysis of bones from the burials and rubbish layers, at least 34 neonatal calves were represented. This number may be increased slightly when a few possible further burials from Site T are re-examined. These calves represent deliberate burials disturbed to a greater or lesser extent by ploughing. There is no evidence of butchery or dismemberment nor evidence for disturbance by dogs. They represent a more or less discrete group, albeit mixed with other material. Although the calf burials probably pre-date the shrine, the analysis of the bones and their location indicates that they do represent special deposits.

It is clear that the remainder of the assemblage from these deposits was quite different in nature. No clearly articulated or associated bones of other species were found. The sheep and pig bones in this area were often heavily fragmented and many showed evidence of canid gnawing, indicating that they were accessible on the ground surface prior to deposition. Because of the mixing of the deposits, some of these bones were found close to the cattle burials but they are not part of the same deposition episodes. Contrary to the above statements, bones of neonatal and juvenile pigs and sheep were not found in any numbers in these deposits and there is no evidence for the burial of complete carcasses of these species. The assemblage is better explained as an accumulation of butchery and domestic waste that was for some reason dumped in this area.

There is some evidence to support the observation that there were sometimes careful placements of skulls and other parts of animals in some of the pits, although such a study is handicapped by the fact that many bones appear not to have been allocated to specific contexts within the pits. Some pits certainly had concentrations of cattle and horse skulls, and partial skeletons of dogs were also noted, for example. However, this sample has not produced as high a proportion of such depositions as was encountered at Danebury (Grant 1984).

Further analysis should be able to investigate some of the questions raised in this report as well as further topics. In particular, intra-site variability in the faunal remains needs more investigation, incorporating further material of middle and late Iron Age and Roman date and adding material of earlier origin. Were deliberate depositions, for example, concentrated in particular areas of the hillfort? Were they more common in pits which also contained human remains? Observed variations in the mortality profiles need to be supplemented by samples taken from other parts of the site and from a wider range of contexts, if possible. The analysis of butchery and fragmentation requires a larger sample to justify their study and to obtain a better understanding of how the carcasses of different species were treated. Further metrical data are needed to test the hypotheses raised in this study. The policy of acquiring a large faunal sample from the Cadbury Castle excavations was commendably far-sighted in the 1960s. It remains an important sample that deserves further study.

The metalworking evidence

by John C Barrett, Jane M Downes, Philip Macdonald, Peter Northover, Brendan O'Connor, Chris Salter, and Louise Turner

Introduction

During the course of the excavations at Cadbury evidence was uncovered which pointed to the existence of an 'industrial' area on the hilltop plateau. The form of the evidence for such an area, with furnaces and fired clay as well as metalworking debris, indicates that metalworking was taking place there.

Two distribution plans have been produced for metalwork finds from deposits assigned to Middle Cadbury (Figs 131–32) and these give a good indication of the problems which are associated with the interpretation of this evidence. Figure 131 gives the distribution of artefacts; the iron and bronze objects are fragmentary and much of the bronze material at least appears to be

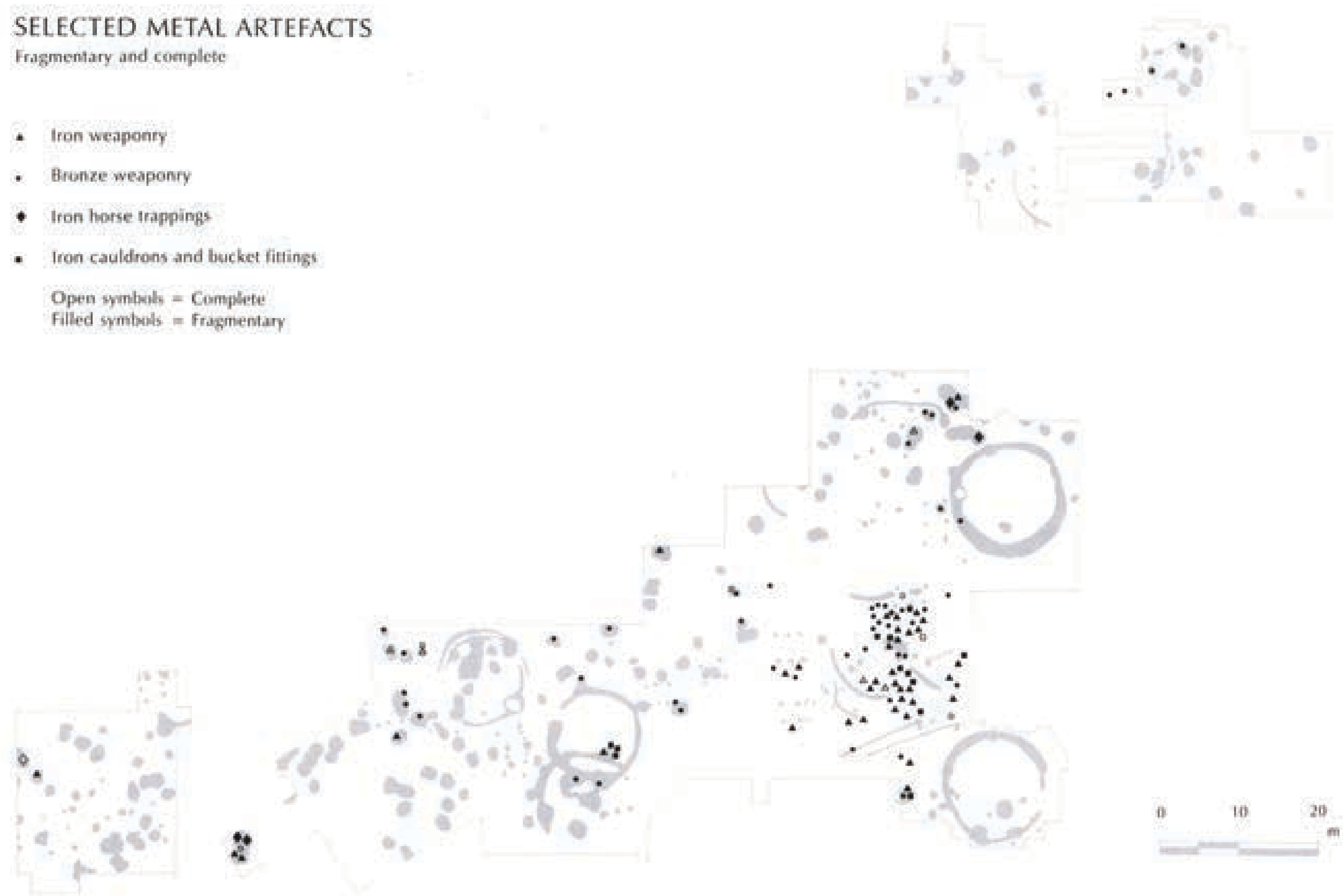


Fig 131 Middle Cadbury distribution of selected metal artefacts

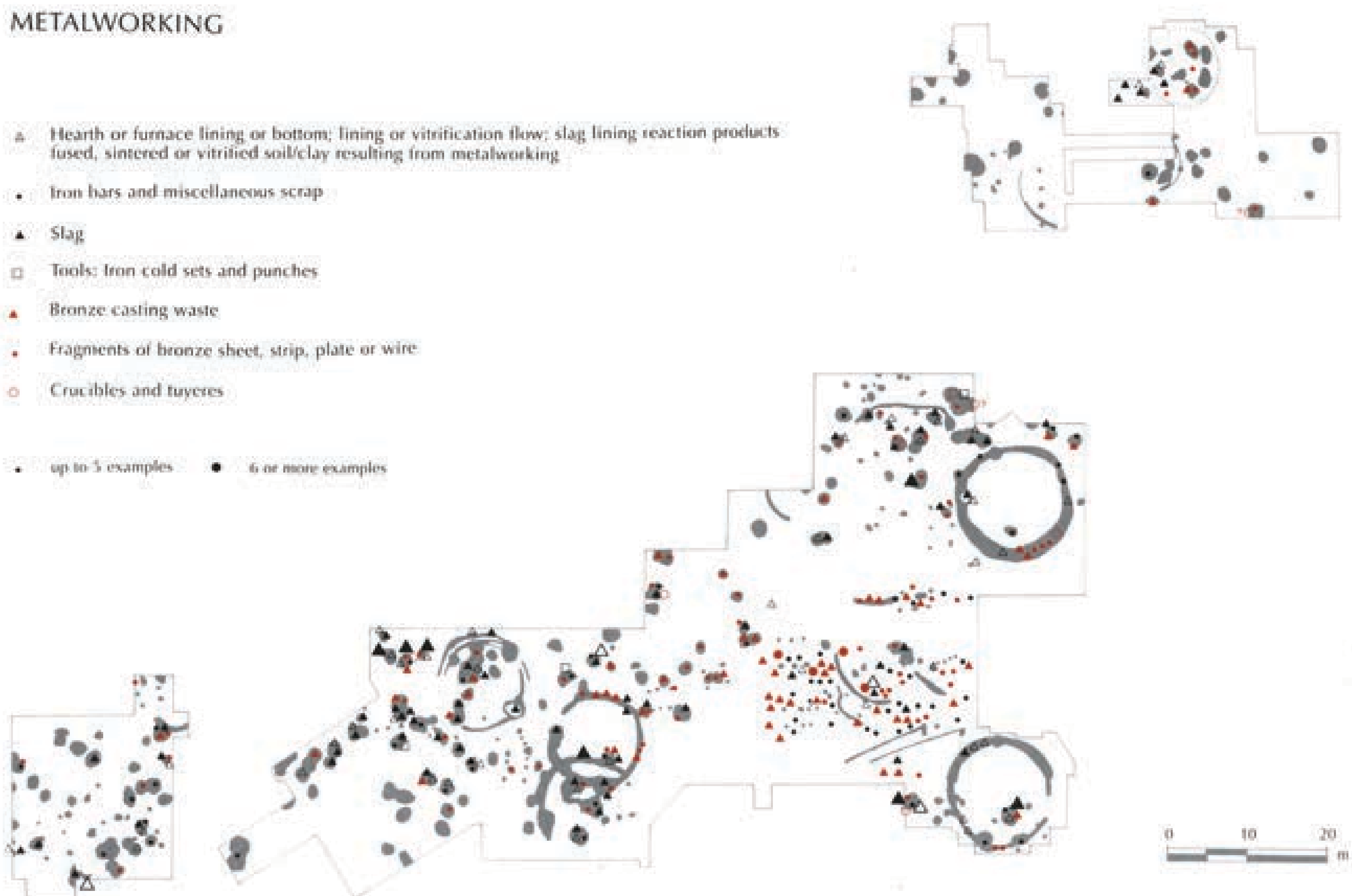


Fig 132 Middle Cadbury distribution of metalworking waste

scrap, presumably awaiting reworking (see below p295). Figure 132 represents the distribution of the waste products of metalworking. There is a clear contrast; the former distribution is restricted to a number of places on the site with an obvious focus at the eastern end of the plateau in the area of the surviving surface deposits, while the latter presents us with a far more general distribution of material.

A third strand of the evidence is the distribution of furnaces and hearths associated with industrial activity. Here we face further problems. The identification of these *in situ* features is primarily based upon the evidence for burning, a process obviously unspecific in terms of the practices with which it was associated. Most of the evidence for furnaces, where we can identify these with any degree of certainty, is concentrated at the eastern end of the plateau.

One final problem must be mentioned at the outset. The excavation strategy does not appear to have involved the sampling of *in situ* material from structures. Although these structures were recorded in the field (see p166), only loose and thus largely redeposited material in the form of artefacts, fired clay, and slag was removed from site and then assigned, on the basis of the raw material represented, to a variety of specialists for further study. Consequently the record, for example, of fragmentary furnace lining is of a different order from the record of the furnaces themselves, and the material associated with a quite restricted range of metaworking processes has been split between different specialist studies.

The nature of the evidence

The evidence for metalworking will be considered here for Early, Middle, and Late Cadbury. A large number of *in situ* features recorded as being associated with fire presumably represent a range in function, from hearths and ovens to furnaces and possibly kilns. Hearths and ovens have been discussed in Chapter 7 (see p212) and no definite kiln structure has been identified. Hearths are identified as surfaces upon which fires have been set, and ovens are set into shallow pits with the additional evidence of a domed clay superstructure and a lack of associated metalworking debris.

Different metalworking procedures demand different levels of pyrotechnology. The successful melting and casting of copper and copper alloys as witnessed at Cadbury Castle requires temperatures in the range 1000–2000° C. This can be achieved in a simple bowl hearth with bellows and either wood or charcoal. While copper can be smelted at lower temperatures this was not the case in the later Bronze Age. Continental examples suggest that in this period the smelting of copper was done in furnaces with a definite superstructure such as a small shaft. Melting hearths need not become heavily slagged and can leave the most ephemeral traces. Thus the *in situ* features associated with such activity may not be readily distinguishable from hearths and oven bases.

In addition to the ambiguous structural evidence there are the by-products of metalworking, the main categories of which are defined below.

Copper alloy metalworking debris

Slag: The only copper-working processes which produce substantial quantities of slag are smelting and refining. These have not been recognised at Cadbury. The melting and pouring of copper alloys will also produce slags, usually in small amounts. There are three categories: crucible slags are formed by combinations of fuel ash, vitrifying crucible fabric, and metal oxides. They may also contain prills of copper alloy, often partially oxidised, Ceramic hearth linings vitrify and can form slags similar to those found in crucibles, and finally fuel ash slags are common to all high temperature hearths. These are formed by reactions between the fuel ash (mainly alkalis) and the hearth or crucible fabrics.

Lumps of oxidised metal are not strictly slag, but heavily oxidised bronze (in the form of copper + cuprite + cassiterite) is often labelled as such. The total recovery of copper-related slags at Cadbury Castle is very small. None has been analysed in detail but as the majority of metalworking evidence refers to the Iron Age it is assumed that this material also does.

Casting waste: 143 pieces of solidified bronze in the form of drips, runs, and small accumulations, together with one piece of sprue can be classified together as casting waste. These will have formed either as splashes during pouring, spills into around the hearth, or dregs being emptied from crucibles. There are no dense concentrations of this material but the core of the site distribution is across areas of the northern and eastern parts of the plateau. Datable contexts suggest a spread of waste through Early to Late Cadbury, but it is difficult to be more precise than this.

Many of the fragments were too corroded for analysis, or even to give a realistic weight, but 20 pieces were sampled, generally drips up to 10–15mm across. All the analyses are of unleaded medium to high tin bronzes, with 13 (65%) having 10–14% tin, and the remaining 7 (35%) having 6–10% tin. The measured lead contents are all well below 1% but it is possible that three or four of the samples were originally leaded with large lead particles, now completely replaced by corrosion products. The absence of lead is one of the factors arguing against a Bronze Age date for the casting waste. The low lead levels also tend to argue against a Roman date, although this is not so precise a criterion here.

The analyses are arranged in Table 18 (p274) in ascending order of cobalt content. Given the importance of Group 1 (cobalt (Co) greater than nickel (Ni)) metal among the analysed pieces of U-shaped binding and its appearance in a number of diagnostic Iron Age artefacts it might be thought this importance would be reflected in the composition of the casting waste. This is not the case, with only four (20%) of the analysed pieces of waste definitely belonging to Group 1, and two more (10%) on the borderline. This contrasts with Maiden Castle where the great majority of bronze waste was of Group 1. There are two possible answers, the first that a different metal was being used in the workshop at Cadbury, or that the metalworking represented by the waste postdates the mid-first century BC when Group 1 metal largely disappears from use. As will be seen, this might indeed be the case.

Almost all the non-Group 1 waste could be placed in Group 5 in the Maiden Castle scheme; this group comprises arsenic and arsenic/nickel impurity patterns with the other significant impurities at low levels (usually less than 0.05%). The two main exceptions are two samples, one from the south-west gate (K710) which is an arsenic / tin (Sn) / nickel (Ni) / silver (Ag) pattern from Group 2c, the other from the northern slopes of the interior (B031) which could be described as arsenic / silver or Group 7. This last comes from a context which could be Late Cadbury. Returning to the Group 4 waste, close parallels for the composition among casting waste come from Beckford (Northover unpublished). At Beckford there is a switch from Group 1 to Group 5 metal in what the excavators term the latest middle Iron Age contexts. Chronologies are unfortunately not precise enough to determine how this relates to the demise of Group 1 metal elsewhere. However, if the appearance of Group 5 metal among the Cadbury waste is related to the same phenomenon as observed at Beckford, then we can suggest that the casting waste at Cadbury dates to the first century BC or a little later, and that at least some of the Group 1 casting waste at Cadbury is the result of the recycling of scrap accumulated on the site, such as some of the fragments of binding that have been analysed (see above). We have also noted that Group 5 metal is quite common among the analysed artefacts of the Iron Age and the chronology of the use of the metal could eventually be adjusted by detailed consideration of the typology of these objects.

Although this outline is very plausible it cannot be ruled out that the production of some or all of the Group 5 waste took place earlier. However, it is possible to suggest that it is not much later. Firstly, zinc is a trace element only; although the Romans practised a degree of alloy selection for particular tasks, the routine of a small workshop, which is perhaps all there was at any one time at Cadbury, would inevitably lead to some mixing of zinc containing alloys with the bronze. We have already noted the implications of the absence of lead. A further factor is the absence of antimony. Many Roman bronze compositions (Craddock 1985) have an antimony impurity and it is interesting that the only relatively elevated antimony content among the waste analysed here is one that could come from a Late Cadbury context.

If we accept the proposed dating for the waste, we can then draw some other interesting conclusions. The suggestion has been made that there is a distinction between cast bronze and sheet bronze workshops (Northover 1984; 1991a), with the former being on village sites and the latter being associated with hillforts. The contrast was underlined by the observation that 60% of the waste at Maiden Castle hillfort was in the form of sheet, and that over 60% of the waste at Beckford village was casting waste, with many crucible fragments to be added to that. The proportions at Cadbury Castle are more difficult to evaluate because what is waste in the way of sheet products is not always identifiable. The totals are 144 fragments of casting waste to 80 fragments of sheet, rod, wire, etc, a preponderance in favour of casting of 65%:35%; even if a quantity of the U-shaped binding is added in the ratio is still in favour of casting. This could point to a shift in the way in which metalworking was organised, although this conclusion must be regarded as very tentative. If the dating were in fact earlier, then we must conclude that Cadbury was temporarily host to a small foundry at a time when such an event appears unusual for a hillfort.

Scrap: There were 80 pieces of obvious copper alloy scrap recovered at Cadbury, some for recycling, others new pieces of copper alloy for repairs or reworking. For example, there were five pieces of sheet rolled into tubes; all four needles from Cadbury were made from rolled sheet tubes, probably on site (see p186). Accumulation of scrap for reworking is also suggested by 23 folded pieces of sheet, 8 of cut sheet, 2 cut strips, 10 pieces of wire with cut or flattened ends that are not broken scraps or fragments of pins, 4 pieces of ring-shaped rod, and 6 deliberately bent or cut objects such as lengths of U-shaped binding or pieces of bracelet in the process of demolition or ready for recycling. There is also one semi-melted fragment of folded sheet. It is to be regretted that the state of corrosion of the copper alloy metalwork from Cadbury is such that tool or cut marks cannot be clearly identified on so much of it. Some of the Roman military items may also be scrap like those from Camerton (see p246; Jackson, 1990b, 22). The only non-copper alloy scrap comprises a piece of lead sheet with cut marks and a piece of lead rod bent into a ring.

The distribution of the scrap is a little different from that of the casting waste; both have a major concentration on the eastern plateau, but the scrap tends not to occur on the northern part of the plateau.

In addition to these metallic by-products there occurs the ceramic by-products of moulds and crucibles. The few examples of the latter are not particularly diagnostic. The moulds will be discussed in more detail below.

Iron metalworking debris

The ironworking, or assumed ironworking, debris recovered in the excavation may be classified as indicative of the following processes:

1 metalworking unclassified: the debris could be produced by any type of metalworking process (both ferrous and non-ferrous)

2 ironworking diagnostic: the debris could be produced by smithing, welding or smelting operations (ferrous only)
3 ironworking forging and welding: the debris is likely to have been produced by hammer-welding during blacksmithing
4 non-specific pyrotechnical process: the debris could be a result of any high temperature process, such as pottery making, glass working, metalworking, cremation, etc
5 ironworking forging: debris produced during hot-forging (blacksmithing)
6 ironworking unknown process: a newly recognised type of debris of a very characteristic form which almost certainly forms during ironworking, although this has yet to be confirmed by experimental reconstruction

Finally, material that could have been used as iron ore is either natural, or transported to the site. Some ores are definitely exotic to the site.

The chronological sequence of metallurgy

By examining the chronological and spatial distribution of these different categories of metalworking debris, it was hoped that some kind of a historical narrative could be constructed for metalworking on the site.

Early Cadbury

There is, unfortunately, a paucity of evidence regarding metalworking in the late Bronze Age. The absence of any identifiable late Bronze Age compositions among the 20 samples of casting waste analysed offers a very strong hint that the majority of the casting waste recovered was generated in other periods.

The composition of the Cadbury assemblage is more characteristic of a settlement site than a hoard (either *in situ* or dispersed, cf Coombs 1991, 132–3), and the presence of metalworking is not supported by Northover's analysis of the casting waste. Cadbury has not produced any crucibles or furnaces stratified in late Bronze Age deposits, nor are there any freshly made bronzes of the type which might suggest metalworking (Needham 1993, 48, no 2).

Typical of settlement finds are the pins, razors, tweezers, socketed knives, and gouges, and the pegged spearhead. The awls may have been used for some aspects of metalworking, but are unlikely to have been exclusively metalworking tools.

However, the Cadbury assemblage contains several items unusual on settlement sites, which represent scrap and were probably brought from some distance away. Among the bronzes, the barbed spearhead and bucket base-plate are both fragments that appear to have been broken up for reuse and at Cadbury. They are well outside the usual distribution of complete examples of these types. The cauldron rivets and the ring-handle and the broken gold bracelet (judging from its context) may be similarly interpreted. The gilded ring is more difficult to interpret because few British examples have been found, but it too may have been intended for reuse.

We therefore have a collection of tools and ornaments characteristic of late Bronze Age settlement sites. In addition, we have items of bronze and gold which were intended for reuse and brought to the site from some distance away. This is not conclusive evidence of late Bronze Age metalworking on the site, but it does suggest that the collection of metal intended for reuse took place alongside normal domestic activity. The working of the scrap may have taken place somewhere other than the excavated areas of the hillfort.

There is, however, evidence for the possible working of copper alloys in the early Iron Age. A shallow hollow lined with stone slabs (P807) produced finds including crucible fragments and a copper stained hearth lining. The forging and welding of iron is associated with a small pit (N737.1) which also yielded a plano-convex hearth base. A nearby pit (N736) produced frag-ments of highly fired ceramic which may represent furnace lining, although some of the material recovered from this pit may also be interpreted as oven furniture. Another group of features, lying centrally within the area which has been associated with 'industrial' activity, are the pits N826, 827, and N828. N826 was a small bowl-shaped pit lined with thin stone slabs set on edge. N827 was similar, although it appears to have had a stoke-hole and was lined with clay and may have been relined at least once. It contained burnt clay which may include oven or furnace superstructure. N828 was a rock-cut pit which also cut N827. Again this pit was lined with stone slabs and clay, while burnt clay, possibly representing some form of superstructure, was recovered from the fill. In all cases no metalworking debris was recovered from these structures although an early Bronze Age flanged axe came from N828 (Fig 83). To the west of this group of features P061 (p167), another small stone-lined pit produced more oven or furnace superstructure and some possible oven furniture. It also contained a fragment of bronze and the tip of a bronze gouge. The nearby pit P062 contained further fragments of bronze and a whetstone. Although all these features are associated with fire, unambiguous evidence for metalworking is limited.

This structural evidence is, however, supported by a spread of metallic by-products. The areas of lower cobbling at the eastern end of the plateau can be characterised by the presence of a high density of finds among which were considerable amounts of bronze casting waste and iron slag.

Additional finds of metallic debris elsewhere on the interior of the hillfort include slag and bronze casting waste and a fragment of furnace lining from the post-holes of structures T1, T2, and T5, situated to the south-east of the main focus of supposed metalworking activity. Similar finds were also made from postholes

Fig 133 View of possible metalworking area including Structure N807

lying to the north of the area. All these finds presumably reflect the general spread and redeposition of debris associated with metalworking over a quite restricted area of the plateau.

Middle Cadbury

In this period the evidence for metalworking is spread more extensively on the plateau (Figs 131, 132), and more definite features associated with this activity can now be identified. Bronze-working occurred at the western end of the plateau adjacent to, and perhaps in the lee of, Structure L2 (p165) where a copper-working hearth lining and crucible fragments were found in pit S027. In the same general area ironworking slag came from pit S066, while oven furniture also came from this and surrounding features. At the extreme south-west of the excavated area iron forging appears to have taken place in the hollow of the top of an infilled storage pit T254. Finds include slag, a piece of tuyère plate, an oven brick, and daub. At the eastern end of the plateau an iron-smelting furnace (N874, see p167) was identified by the excavators on the basis of slag recovered from the feature.

The material recovered from the deposits on the eastern end of the plateau known as the greeny layer and higher cobbling produced finds of metallic by-products, including iron slag and bronze casting waste. The manner in which this appears to have been scattered throughout these layers might suggest that the material had been left where it fell during production. This further supports the view that the eastern plateau marked the actual site of manufacture, even though finds of crucible fragments and furnace lining are uncommon. Some of this material may also have found its way in to the top of open or partly filled rock-cut features, such as the iron slag and hearth base (indicative of iron welding and forging), as well as sheet bronze fragments and bronze casting waste, from the southern side of the gully around structure G1.

The high density of metallic debris at the east of the plateau can be contrasted with the finds to the north, where deposits equivalent to the greeny layer and the higher cobbling are encountered. Although this area also played host to pyrotechnical activities, a lack of *in situ* furnaces makes it difficult to assign a particular metalworking process to these areas. None the less a more dispersed pattern of metalworking does appear to be represented. On the northernmost slopes of the excavated areas bronze casting waste comes from pits within the floor of BW6 and similar material comes from pits located to the west of the building. On the northern part of the plateau two intercutting pits (E800 and E800.5) contained debris, comprising slag and fired clay, which is unclassifiable and accompanied by oven furniture. To the west another pit (P256.1) contained a spongy mass of copper alloy, charcoal, burnt clay, and fragments of bent copper alloy sheet, clearly debris from a workshop floor if not from a hearth itself. Bronze casting is attested at the northern edge of the plateau where pit F303 produced a piece of lining from a hearth used for working copper alloys and a clay crucible. Slag and hearth lining are also recorded in F304. The nearby storage pits F305 and F306 produced four terret moulds (not illustrated). In fact, these together with further moulds from F306 comprise almost all the mould fragments from the site. F306 also produced a tuyère or bellows plate, two oven bricks, a sprue cup, a gate, a possible horn cap mould, and two unidentifiable fragments of mould. Additional material was also found in the neighbouring pit G192, including a bridle bit side-link mould and a bone modelling tool similar to one from Gussage All Saints. An iron side-link also came from this pit. The proximity of these pits would seem to reinforce the notion of a modest focus of bronze casting activity.

Two of the four terret moulds are decorated with a raised ridge along the loop. This is not paralleled at Gussage All Saints (Foster 1980, fig 3), although it is found at Weelsby Avenue. Terrets with this decoration have not been found, although this should not occasion surprise as six out of the ten Gussage varieties also do not have matching types in the archaeological record to date. The sprue cup is also unlike those from Gussage (Foster 1980, fig 14) inasmuch as the entry was rectangular rather than rounded. The bridle bit side-link mould from pit G192 was decorated with a bifurcated incised line running from the hole down towards the terminal bulb. The gate clearly feeds from the side, unlike the side-links from Gussage All Saints which were cast from the top (Foster 1980, fig 12). This side-link is notably slim with a width at the waist of 10mm, and is most closely paralleled by an example from Hagbourne Hill which is 13mm (Foster 1980, fig 1).

This small collection of investment moulds is closely comparable in type to moulds from other later Iron Age sites such as Gussage All Saints (Foster 1980) and Weelsby Avenue, Grimsby (Wise 1990; Foster forthcoming), but there is no comparison in size of assemblage. There are 7318 mould fragments from Gussage All Saints, and a similar number from Grimsby, with only 11 from Cadbury Castle. Two other large hillfort excavations, Danebury (Northover 1991b) and Maiden Castle (Northover 1991a), both yielded evidence for bronzeworking, including crucibles, but little or nothing in the way of moulds. The interpretation offered was that the bronze workshops there were connected much more with the manufacture and use of bronze sheet. To date, the mould evidence from Cadbury Castle is rather unusual for a hillfort site.

Clearly a number of perhaps small-scale metalworking events were taking place widely across the plateau of the hill in Middle Cadbury, but metalworking was certainly not limited to the eastern end of this area. The location of such activity near structures L1 and T6 and the iron slag and copper alloy waste from the southern side of the ditch around structure G1 might indicate that these activities were occurring outside and in the lee of standing buildings.

Late Cadbury

Given that some of the material discussed above may come from the top of earlier rock-cut pits and gullies, and thus relate to metalworking activity which took place during Late Cadbury, additional evidence for Late Cadbury metalworking continues to come from the eastern end of the plateau. Two probable furnaces (N079 and N099, Fig 83) were located in this area, as was the complex furnace or oven feature N451. None of these structures appear to have produced metallurgical residues and N451 may be an oven which had been rebuilt at least once (Fig 83). Once again intermittent production may be taking place more extensively over the hilltop. Waste material comes from a number of features, such as the fired clay, fuel ash, and slag from a number of late pits on the western part of the plateau (L012.1, 053, 065, and L118) and the iron slag incorporated in the cobbling of the hollow-way on the northern slopes of the interior.

In post-conquest Cadbury there are no *in situ* features associated with metalworking although the finds of military equipment certainly indicate the repair of this material on site (see p246).

Conclusion

Metalworking, certainly the working of copper alloys and of iron, took place at Cadbury Castle throughout most of the later prehistoric occupation. It would appear that an early focus for small-scale metalworking was on the eastern end of the plateau, roughly in the area of the late Bronze Age settlement. By Middle Cadbury the distribution of debris indicates a more widespread if episodic pattern of iron and copper alloy working across the hill. It appears to have been associated with the extension of settlement down the northern slope of the hill, and ironworking debris occurs in the south-western gate passage. In the latter case the material is associated with deposits dating from Early to Late Cadbury and much of it appears residual, presumably washed down from the interior of the site. One exception may be a period of ironworking on the floor of structure K2, the guard chamber of Episode IV/V (see p90).

Ironwork deposits

The distribution of fragmentary iron and copper alloy artefacts has already been referred to (see p295 and Fig 131). Much of this material lies on the eastern end of the plateau, particularly in the layers of surface deposits which survived there and are dated to Middle and Late Cadbury.

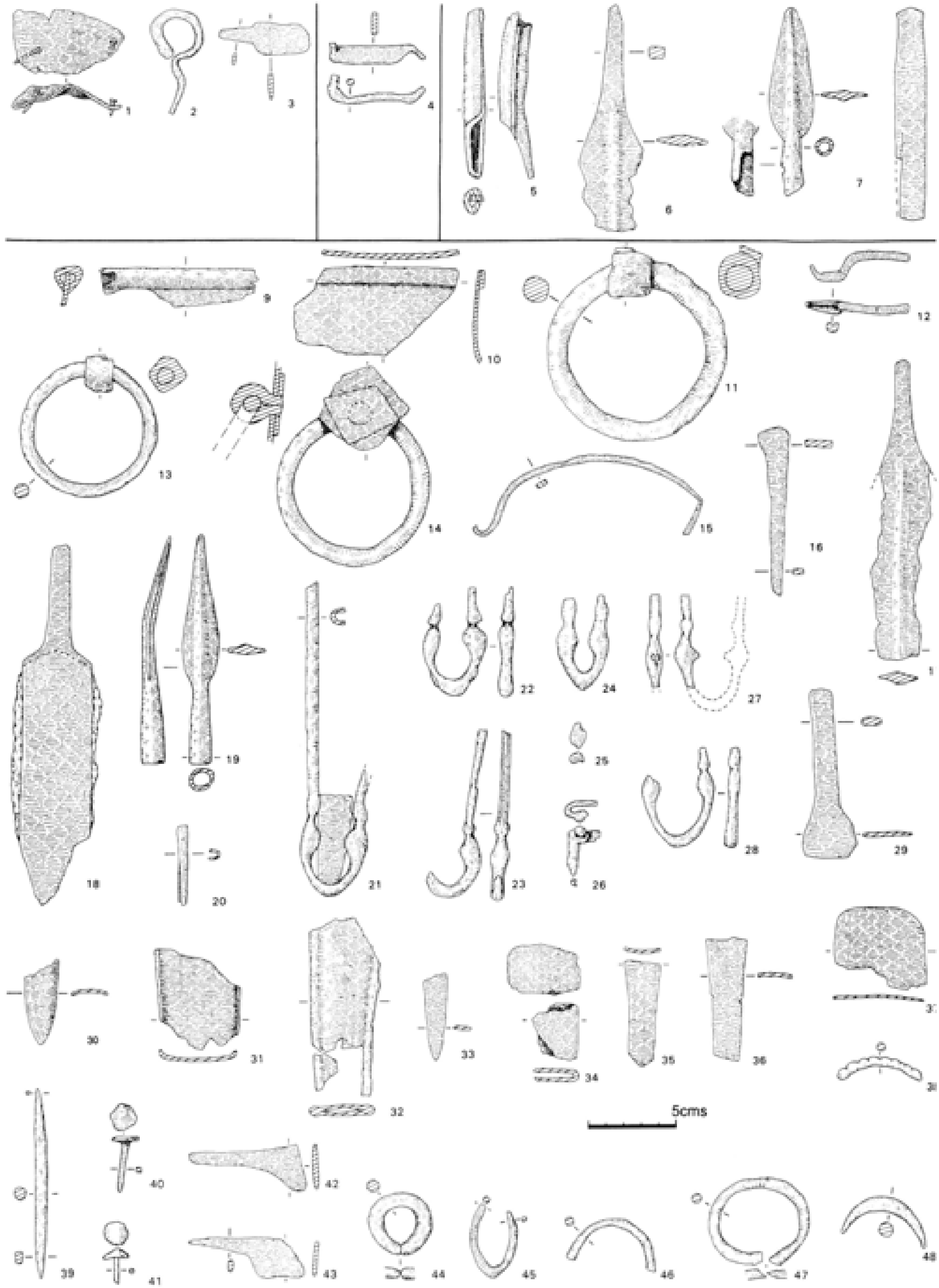


Fig 134 Iron objects from surface deposits of the interior, 1-48. Scale 1:3

Some of this material is probably scrap debris associated with copper alloy working; most of the U-shaped shield binding, for example, is scattered over the eastern and northern parts of the plateau. In addition there is a considerable number of iron finds from this area. When originally recovered (mainly from topsoil, the rubbish layer, and some features cutting the rubbish layer) it was suggested that these represented votive deposits which were contemporary with, but placed slightly to the north of, the animal deposits, and that both were ultimately associated with the shrine N5 (Alcock 1972a, 84, 164). It seems clear from the radiocarbon dates for the animal burials (see pp279 and 371) and the pottery associated with N5 that a longer and more complex set of processes was at work. From Middle to Late Cadbury a number of fragmentary artefacts was incorporated in the rubbish layer, as were animal burials, although few of the iron objects can be assigned to single, grouped deposits. They do not cluster around the somewhat later shrine but increase in number towards the north-east of the area where the highest levels of metalworking had taken place.

The iron assemblage is unusual (Figs 134–5); it is mainly weaponry and bucket and cauldron fragments

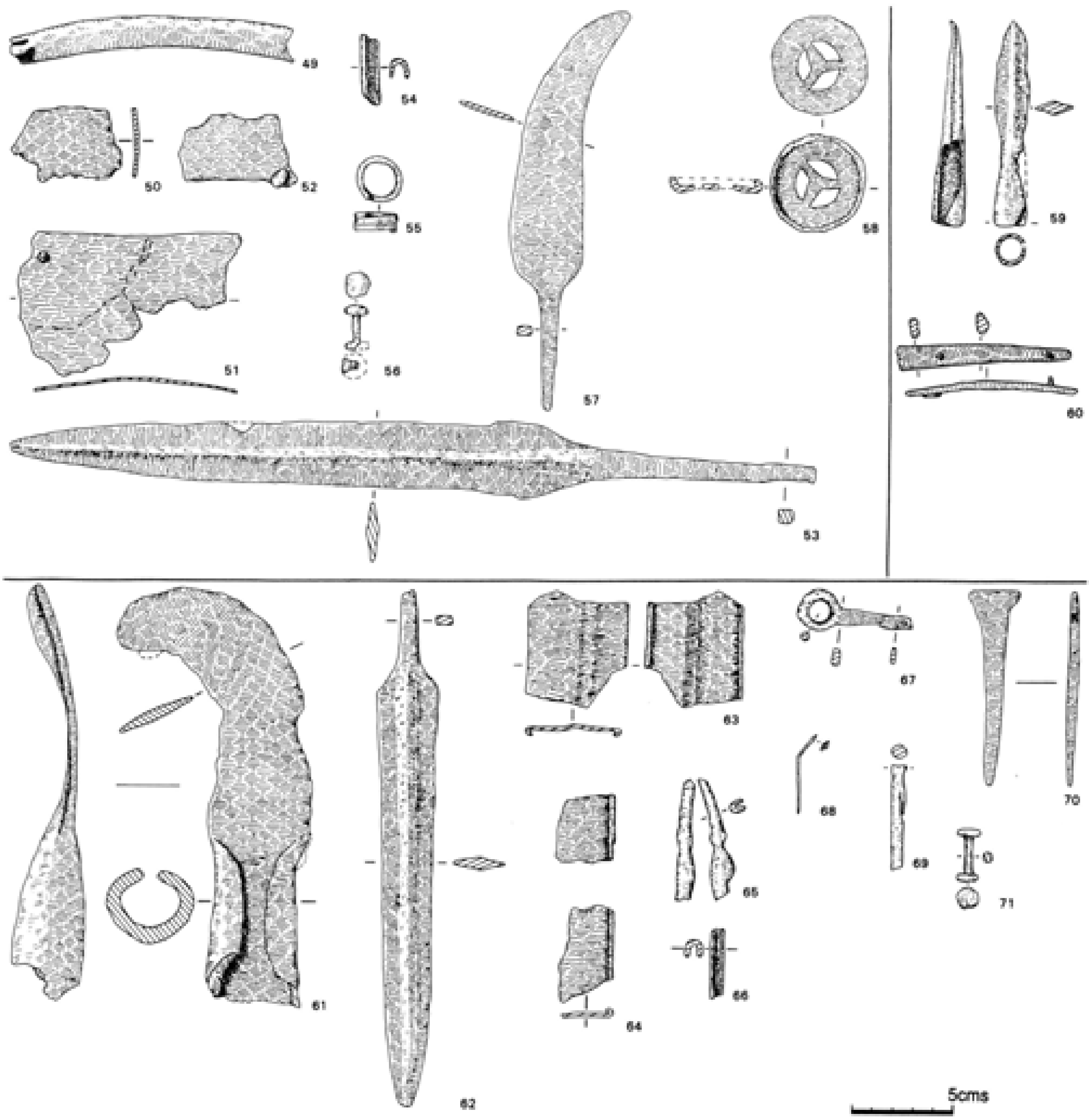


Fig 135 Iron from surface deposits of the interior, 49-71. Scale 1:3

and there is evidence of deliberate breakage. Only a few objects are relatively undamaged. Within the rubbish layer the bucket and cauldron fragments have a tighter distribution (in contexts to the north-east of the area N051, 701, 751, and N802) when compared with the more widespread distribution of weapon fragments.

These fragments may be votive deposits or the debris of metalworking. They confirm the quite specific nature of activities in this part of the plateau and remind us that our analytical distinctions between the utility of production and the ritual of consumption may be misplaced in such cases as these.

11 The residues of deposition

Introduction

by John C Barrett and Olivia Lelong

We have been concerned in the previous two chapters with the archaeology of production by considering many of the raw materials used and the residues resulting from animal slaughter and metalworking. In the last two cases the production of food and of metal artefacts also consumes; it consumes life, time, energy, and materials.

Other activities, the routines by which humans occupied the various structures described in Chapter 5 and used the artefacts discussed in Chapters 6–8, will have left more ephemeral traces. In an attempt to search for any regularities in the organisation of such routines a series of distribution plans were prepared (Figs 131–2, 136–141). These selected finds from deposits which were dated to Middle Cadbury, the period to which most of the roundhouse structures are assigned and during which most of the storage pits were dug and infilled. The distribution plans represent certain assumptions, for example that finds associated with leatherworking and textile production such as awls, needles, spindle whorls, and weaving combs may have been lost or discarded near where they were used. The cumulative biographies of such artefacts, leading to their deposition, might collectively speak of the routine organisation of human activity. Plotting these distributions was the first step toward trying to make sense of how these things got where they did, of how they were involved in people's lives up to the moment of their entering the archaeo-logical record. Such plots are obviously plots of final deposition, incorporating the post-depositional move-ment of material. They also tend to offer a too mechanistic view of human activity; material slips out of human touch in a number of ways, discarded objects may be reused and adapted for other tasks. What follows is a discussion of two categories of material, pottery and worked stone, whose distributions are explored for what they might tell us of the organisation of human activity within the hillfort.

Spatial analysis of the pottery from Middle Cadbury contexts

by Ann Woodward

Before any consideration of spatial aspects of the pottery assemblages from the interior can be attempted, the nature of any chronological variation must be investigated. The pottery from the small numbers of pits dating to Early Cadbury, Ceramic Assemblage 7, and Late Cadbury periods has been analysed elsewhere (see Chapter 2) and this section will concentrate on the pit deposits containing the Middle Cadbury pottery of Ceramic Assemblage 8. These pits contained most of the Iron Age pottery from the interior and can be related to round and rectangular structures of the same period. To investigate the possibility of spatial progression across the site through time, the occurrence of a series of potentially late pottery types was plotted (Fig 140). These 'late' or 'developed' types are discussed in Chapters 2 and 7, and include saucepan pots (type PB), Glastonbury jars (BD6) in sandy fabrics, copies of Hengistbury-type cordoned bowls (BD1/2), and the large flat-rimmed storage jars of Durotrigian style (JC4). The pits containing Ceramic Assemblage 7 material are few in number and cluster on the eastern and northern sides of the plateau. This is in the area formerly occupied by the Early Cadbury settlement and probably represents an organic growth from it. In contrast, the pits containing Ceramic Assemblage 8 material (Fig 141) show a wide distribution from the western edge of the plateau to the northern slopes of the interior, with far fewer pits on the eastern side of the plateau. The pits appear to form clusters relating to the major Middle Cadbury structures – the rectangular post-building C1, roundhouses L2, P2, G1, and BW6, and four-post structure T9. All clusters contain substantial amounts of Ceramic Assemblage 8, and it can be seen from Figure 140 that the distribution of the possibly 'late' types is equally wide-ranging. Thus, there is no ceramic evidence for any gradual expansion or planned progression of development across the excavated interior during the Middle Cadbury period.

From the total of 177 pits containing material of Ceramic Assemblage 8, the details of 23,480 sherds have been recorded. The pit assemblages were initially described by Sylvia Stevenson in the illustrated catalogue and, from this database, a tabulated and coded archive has been compiled. For each pit, the following details have been recorded:

- form code
- fabric
- rim diameters
- decoration codes
- drawing number and layer number for all decorated items and plain vessels with reconstructable diameters
- a quantified summary of the other forms represented
- numbers of non-diagnostic wall sherds by fabric type
- totals of rims, base angles, decorated sherds
- total diagnostic sherds
- total non-diagnostic sherds
- the weight of non-diagnostic sherds (the weight of the diagnostic sherds was not recorded originally)
- the mean sherd weight of the non-diagnostic sherds
- the total number of sherds
- the number of layers in the pit and the number of non-ceramic small finds.

From analysis of these details a period range and estimated date of deposition were deduced for each pit.

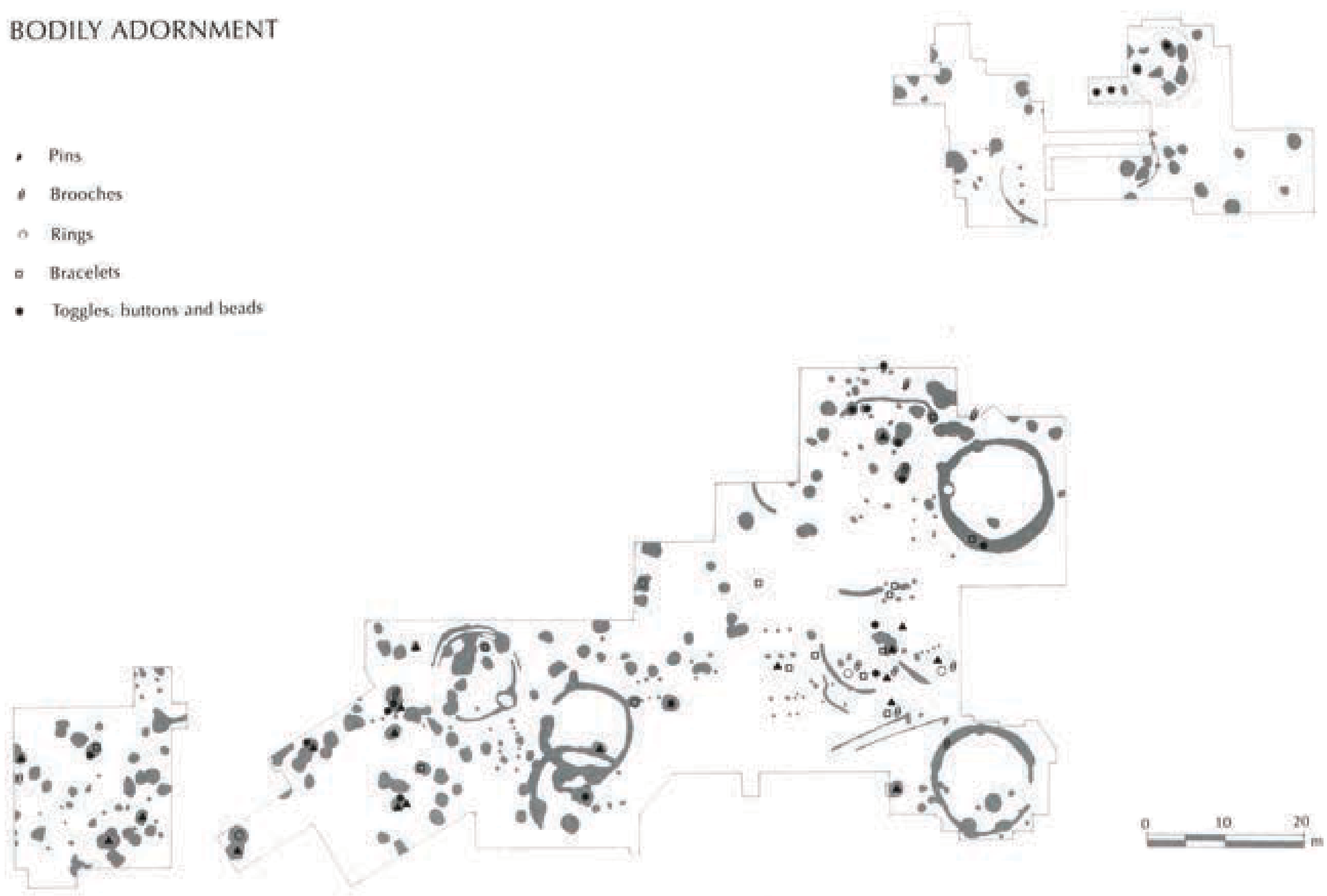


Fig 136 Distribution of artefacts relating to bodily adornment from Middle Cadbury

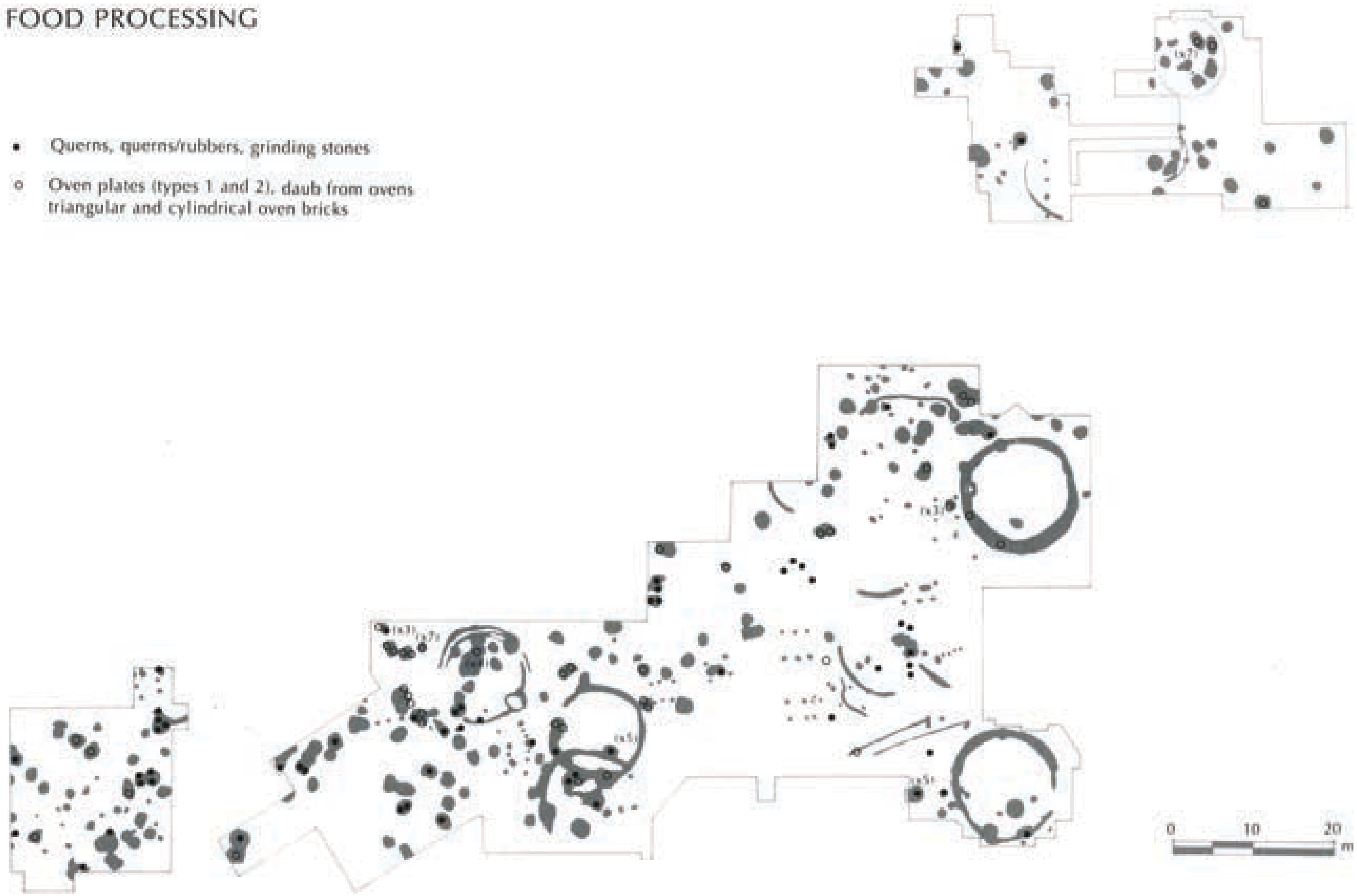


Fig 137 Distribution of artefacts relating to food processing from Middle Cadbury

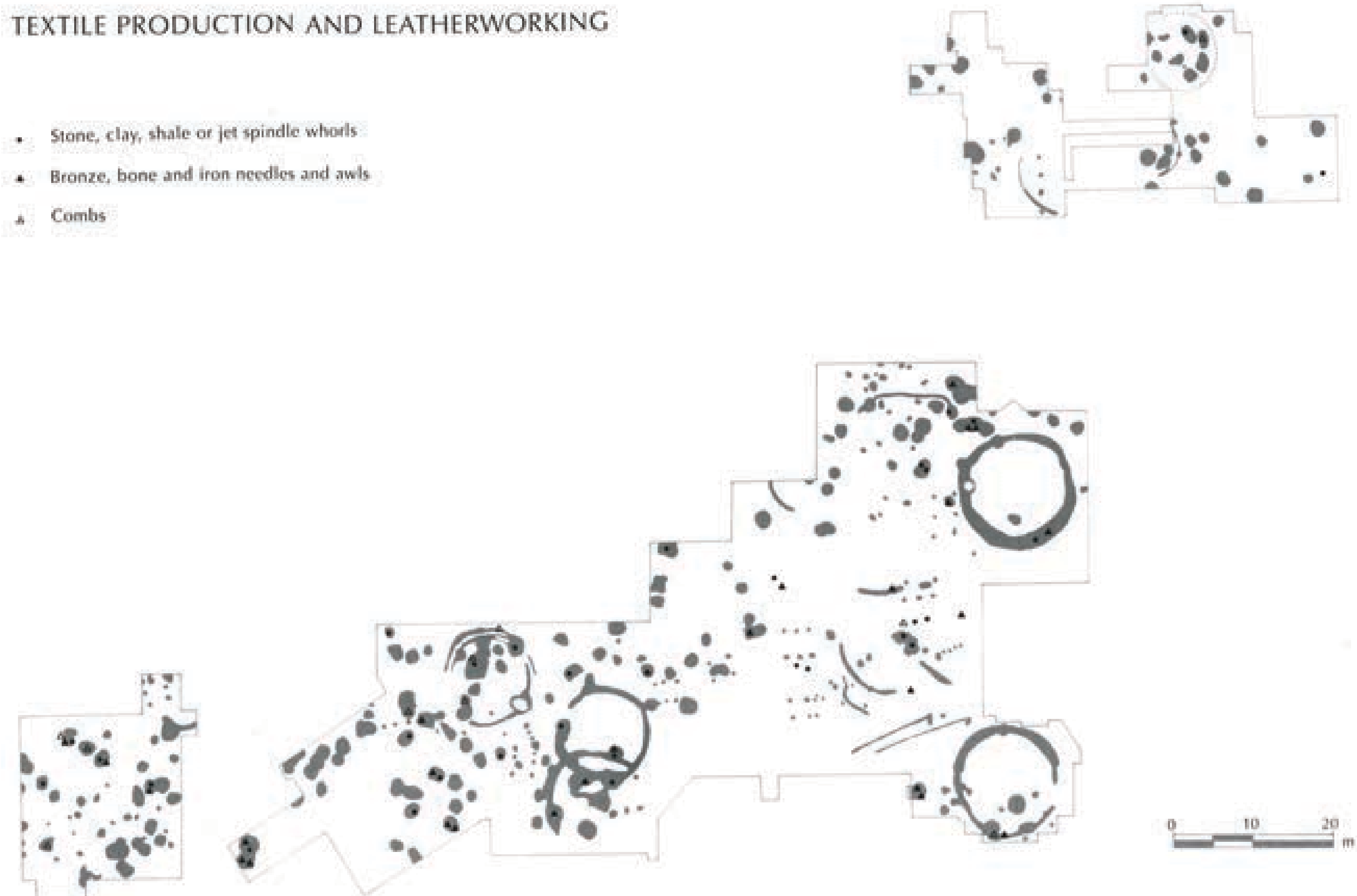


Fig 138 Distribution of artefacts relating to textile production and leatherworking from Middle Cadbury

BONE WORKING

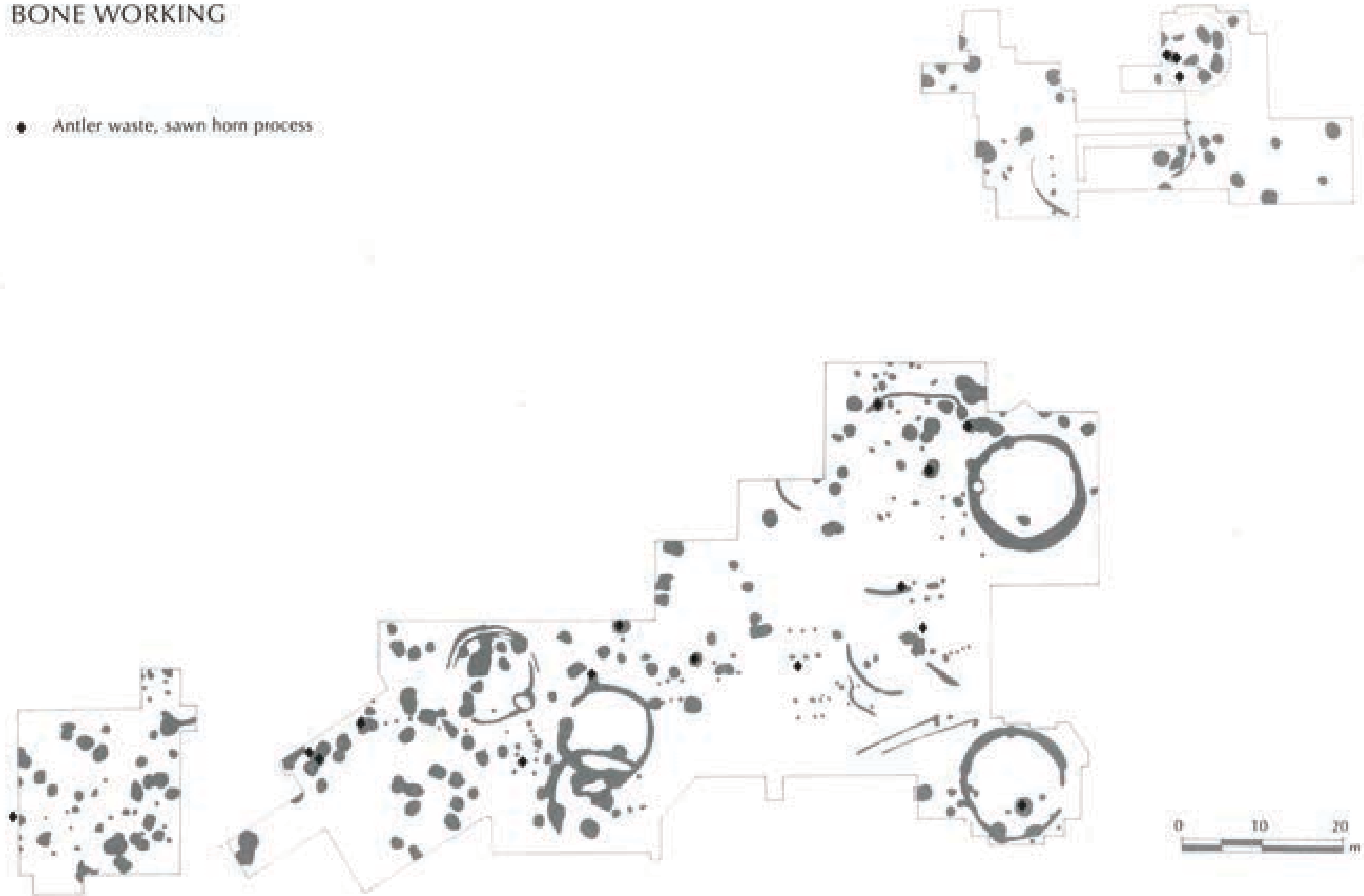


Fig 139 Distribution of artefacts relating to boneworking from Middle Cadbury

Figure 141 shows aspects of the nature of ceramic deposition within the Middle Cadbury pits. Recent research (eg Hill 1995a) has suggested that much of the pottery and other material deposited in Iron Age pits may not simply be the result of casual rubbish disposal but the remains of structured, deliberate deposits which had been placed within the pits at particular times and for particular purposes. To investigate the nature of ceramic deposition at Cadbury Castle distributional studies have been devised to investigate the density of ceramic deposits, the occurrence of exotic items, the disposition of vessels which may have been deposited in a complete or near-complete state, and the possible relationships between these parameters and the incidence of other small finds. Information concerning the associated animal bone assemblages was not available at the time of analysis.

A consideration of the total number of sherds per pit showed that there was a gradual progression of totals leading from 54 pits with 50 sherds or less through to single examples containing 501 to 550 and 551 to 600 sherds. No peaks of occurrence were apparent, but there seemed to be a break-off point at the 300 sherd level. Thus, for mapping purposes, two categories of pit have been plotted: those containing more than 300 sherds and those containing between 151 and 300 sherds (Fig 141). Pits containing more than 150 sherds are fairly evenly distributed amongst the pit clusters, except for the north-facing slopes of the interior where they are almost absent. The very large ceramic assemblages of over 300 sherds show a less even pattern, and two distinct concentrations may be discerned. These lie around the rectangular structure C1, and to the north-west of the round building G1.

Among the large assemblages of coarse ware jar and bowl forms, and the plain burnished barrel jars, the highly decorated and finely finished Glastonbury jars (BD6, JD3, BD5) and saucepan pots (PB) stand out, according to modern perceptions, as exotic items. Knowing that many of them were imported to the site from several different and far-flung sources (see p259–261), it seems likely that in the Iron Age these pots may have been used for special purposes in relation to such factors as ritual, feasting, and individual or group status. To investigate the distribution of this distinctive pottery across the site the percentage of decorated sherds found in each pit was calculated. A very large number (70%) of the pits contained decorated sherds, but 52% of pits contained them at a rate of between 1% and 4% only. A total of 15% contained decorated sherds at the 5–9% level and only five pits (3%) produced 10% or more decorated sherds, the maximum level being 14%. The distribution of pits containing 5% or more decorated sherds is shown in Figure 141. No obvious clustering is apparent, but there is a lack of high incidences of decorated sherds in the pits around roundhouse P2. These ranges of occurrence of decorated sherds may be compared with those calculated for the layer deposits on the eastern side of the plateau containing pottery of Ceramic Assemblage 8. These are generally low, at 3% for the greeny layer and only 1% for the rubbish layer. The only available comparable data from other Iron Age sites is that published for Meare East. On that settlement site in the Somerset Levels, the percentages of decorated sherds from the four mound assemblages studied in detail were considerably higher than most contexts studied at Cadbury Castle. The Meare East figures were 11.8%, 10.3%, 6.6%, and 2.6%, giving an average of 7% decorated pottery (Rouillard 1987, 199). It can be concluded that a large number of the pit assemblages at Cadbury contain higher proportions of decorated pottery than the surviving occupation layers, but that nearly all these proportions are significantly lower than those recorded for selected mound assemblages at Meare East.

Assuming that the occurrence of complete or near-complete vessels in a pit might indicate deliberate and structured deposition, the distribution of such vessels among the pits has been plotted (Fig 141). Most of the pottery was in a highly fragmented state and the totals of decorated vessels for which most or all of the profile could be reconstructed are low: 39 Glastonbury jars (BD6), in three cases occurring more than one to a single pit, and 25 saucepan pots (PB). Pots of form BD6 were much commoner on the site than PB, so these figures suggest that saucepan pots were more often retained for deposition as complete vessels than were the Glastonbury jars. The distribution across the site is fairly even, as shown in Figure 140. In addition to these exotic deposits there were also 32 almost complete plain vessels from the pits. These included a full range of jar and bowl forms (JC1–3, PA1–3, JD1, JD4, JB4–5, and BC3), the commonest examples being of form JC2 and PA1, the proto-bead rim and simple-rimmed barrel-shaped jars. Interestingly, in four cases these complete vessels possessed perforations in the wall and/or base, a characteristic which was otherwise distinctly rare on the site. As with the decorated vessels, the plain complete pots are again distributed evenly across the excavated areas (Fig 141). In 9 cases (out of a total of 32) the complete pots, including 3 of those with perforations, came from pits which also produced reconstructable decorated vessels.

Many pits also contained non-ceramic small finds. Most of these contained between 1 and 4 items, with a few producing higher numbers up to a maximum of 17 for one pit. There was a clear relationship between the total number of sherds per pit and the number of small finds. All the pits containing 8 or more small finds also contained more than 200 sherds, and most of these containing 12 or more produced more than 350 sherds. (A graphic presentation of this data is available in the archive.) The groups of small finds were also related to the incidence of the deposition of complete pottery vessels. The average number of small finds from pits containing complete pots is four, a figure well above the mean for the incidence of small finds per pit across

Fig 140 Distribution of later pottery types in Middle Cadbury

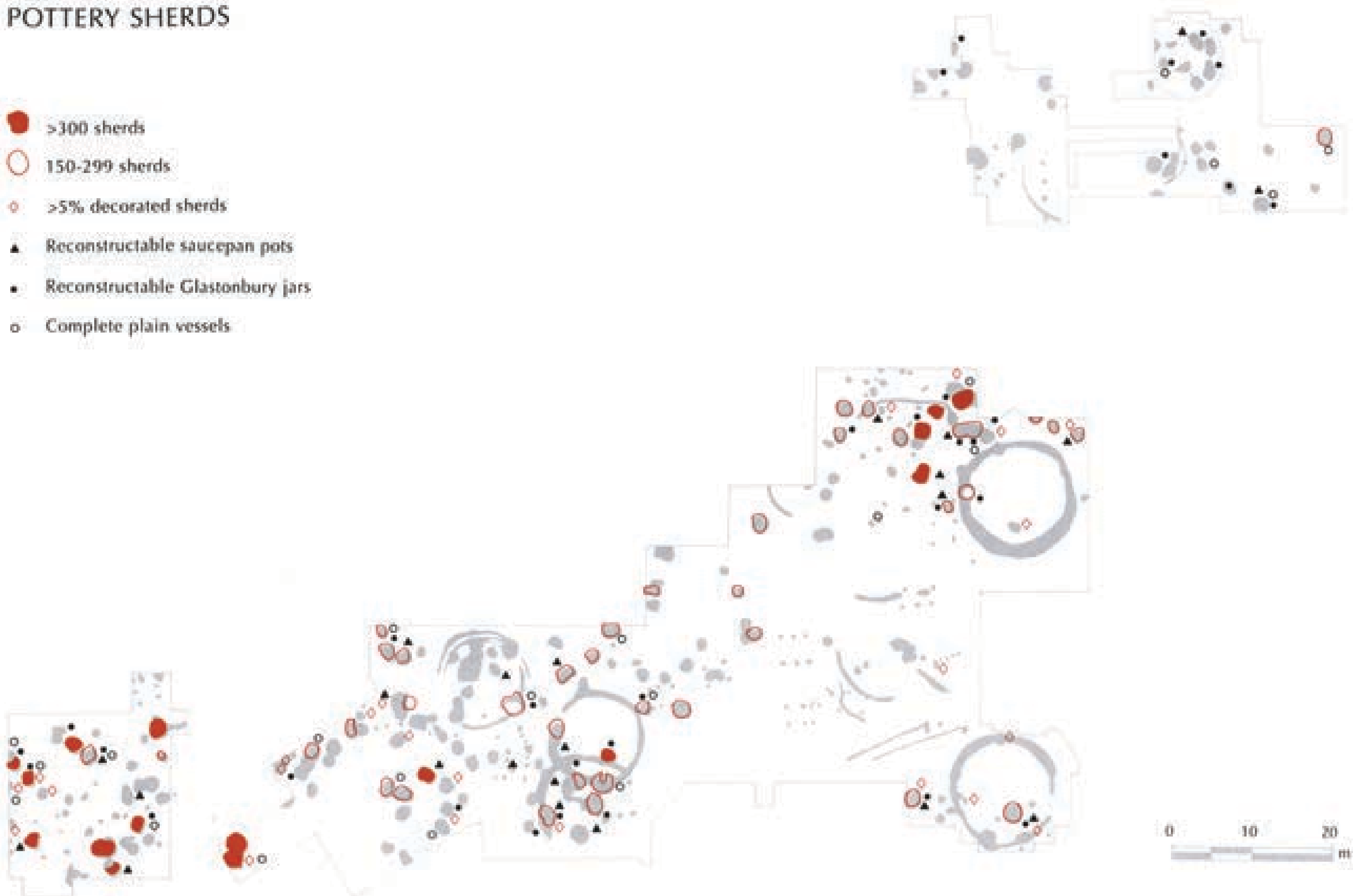


Fig 141 Aspects of pottery deposition in Middle Cadbury

the area in general.

In order to compare further the nature of deposition in the pits, the mean sherd weights for each pit were calculated. It was then possible to contrast these with the mean sherd weights relating to groups of other types of context around the site. The results of these comparisons are shown in Figure 142, while the detailed tabulations may be found in the archive. For the pits, the actual pattern of mean sherd weights per pit is shown. It can be seen that this approximates to a unimodal distribution, centring on a mean sherd weight of 8 or 9g, although there is a subsidiary peak at 11g. For the other types of layer, groups or blocks of related and similar contexts have been lumped together for the purpose of analysis, and each square in the diagram represents such a group of contexts. The total number of contexts per context type is also indicated. A few general observations may be made. The figures for the occupation and activity layers preserved within the interior suggest that most of the pottery within them was fragmented to a similar degree to that in the pits (mean sherd weights 7 to 11g). However, there were also significant occurrences of much larger sherds which did not appear to have entered the pits at all. The group of layer contexts with very high mean sherd weights during the Middle Cadbury period belong to the rubbish layer; these contexts contained many deliberate deposits of pottery and non-ceramic items. The two interior structures G1 and N5 which produced large assemblages of pottery from their construction gullies also contained pottery in pieces of a similar weight range to those from the pits. The structures behind the bank structures in the gate, however, produced, along with pottery of average mean weight, several significant groups of heavier sherds.

The Early Cadbury lynchet and banks in the gate contained a mixture of groups containing sherds of low mean weight, and a few groups with far heavier fragments. These groups represent residual pottery in the bank materials and, secondly, large sherds used as packing material in some of the related postholes. The low figures for the bank material relate well to those for the presumably residual fragments in the Late period entranceway cobbling, but not to the results from the upper layers in Bank 1. The latter contained residual occupation material from the Middle Cadbury structures in the vicinity, alongside fair quantities of Late Cadbury pottery from related contemporary activity areas. The context groups associated with the 'massacre', filling the entranceway during the Late Cadbury period, produced pottery of low to medium mean weight; the main characteristic of these groups, however, was the almost total absence of any diagnostic rim, base angle or decorated sherds.

Thus, a detailed study of mean sherd weights by context and context groups has begun to demonstrate some interesting patterns. There is much potential for further work of this kind at Cadbury, and when data of

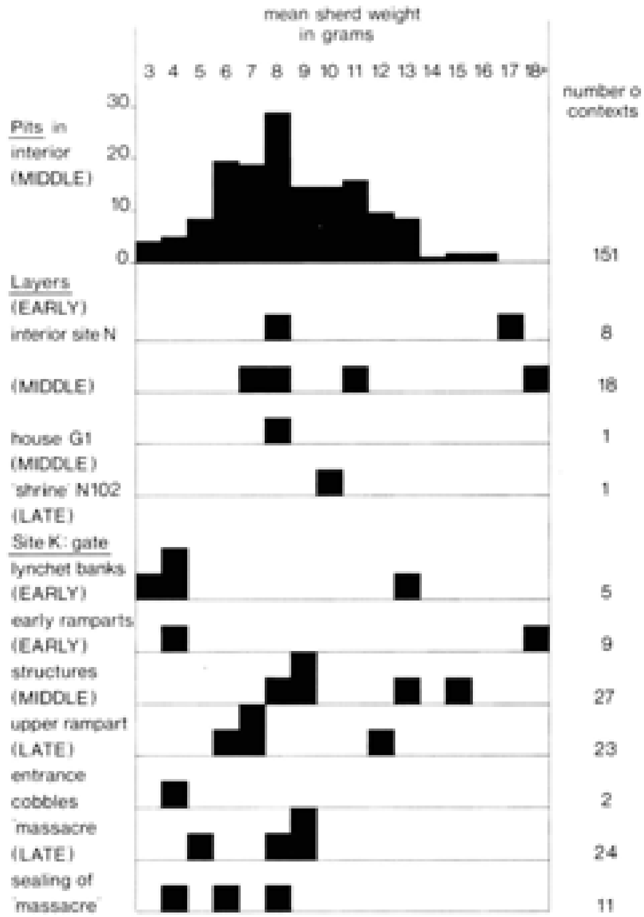


Fig 142 Mean sherd weight of pottery from pits and other contexts around the site

a similar order become available for other Iron Age sites which have been excavated on a large scale, the results will provide a powerful tool to assist in the understanding of the different patterns of activity and deposition represented by the surviving stratification. Similarly, the results of the studies concerning density of pottery per context, the incidence of decorated sherds, of complete vessels, and the correlation with quantities of finds of other raw materials presented in this section could usefully be compared with data from other Iron Age sites. Unfortunately at the present time, no such data sets are available.

Spatial analysis of pottery decoration

Among the Middle Cadbury pottery assemblage from the pits in the interior it is the decorated Glastonbury jar and saucepan pot categories that stand out as potential fine wares used for particular, and possibly ritual, purposes. It was decided therefore to record the decoration in some detail and a systematic classification for the decorative elements and motifs represented was developed. This classification is described in Chapter 13. A full record of the occurrence of all elements and motifs by vessel, layer, and context may be found in the archive. For the purposes of the spatial investigations presented here analysis has concentrated on the motifs present and ignored the greater mass of 'element only' occurrences. This is because each element will have belonged to an unknown motif category, and because it is only the incidence of whole motifs that can be compared across the site, and with the components of other site assemblages. The results of the analyses are shown in Table 19. Within the motif codes, I denotes incised, G geometric, and C curvilinear, while the final letters A to H refer to the motifs listed in the classification in Chapter 13 (see page 346).

In order to examine the distribution of motifs across the site, the total number of motif occurrences (216) has been divided according to five major varying activity zones. The westernmost area of the plateau (Site C) is an area containing four-post structures and a dense cluster of large pits. The remaining western and northern parts of the plateau and the north-facing slopes of the interior (Sites L, S, P, F, G, and BW) are areas containing circular structures and associated small pit clusters, while the eastern end of the plateau (Sites E, N, and T) contained very few Middle Cadbury structures or pits. Several groups of observations may be made from the distributional figures. Firstly, by far the most pottery bearing identifiable motifs came from the west of the plateau (Sites C, L, S, and P: 59% of the total). There was very few from the eastern side of the plateau (Sites E and T 9%, and none from Site N). To the north (Sites F, G, and BW) the areas were similar to each other in this respect, with motif occurrences of 19% and 13% respectively. Secondly, it is pertinent to consider the relative occurrences of geometric versus curvilinear motifs in each site area (see Table 19). It can be seen that the results were remarkably uniform for all areas except in the most westerly of the excavated areas. The averages of occurrences elsewhere (Sites L, S, P, E, T, F, G, and BW) are 71% geometric and 29% curvilinear. These figures may be compared with those for Site C where curvilinear designs were far less common (8%), and geometric motifs predominated.

The results were further investigated to test whether any individual motifs showed any specific distributions patterning. Among the geometric motifs, IGA, IGC, IGD, IGF, and IGG seemed well distributed but most of the IGB designs (multiple hatched zones) appeared at the western edge of the plateau. The chevron (IGH) was very rare but occurred at both extremities of the excavated area. By far the commonest curvilinear motif was ICC, the multiple pendant arc or festoon. This was evenly distributed across the interior. The more complex designs incorporating lentoid segments and lobes (ICE and ICF) were fairly widely distributed, although the filled swag motif (ICG) and compass-drawn patterns (ICH) were confined to north (Sites F and G) and west (Sites L, S, and P) of the plateau.

Finally, the distribution of complete or restorable decorated vessels should be considered. Of the 50 such vessels recorded, 40% came from the west of the plateau (Sites L, S, and P), followed by 24% for the northern slope of the interior (Site BW) and 18% for the north of the plateau (Sites F and G). All areas contained roughly similar proportions of restorable vessels with geometric motifs only, vessels bearing curvilinear motifs, and examples with roughly executed

Table 19: Percentage occurrence of decorative motifs across the site and inter-site comparison

SITE			*Cadbury Castle*			*total*	*Meare*	*Meare*
	C	*L/S/P*	*E/N/T*	*F/G*	*B/W*	*(average)*	*East*	*West*
IGA	19	8	12	15	7	12	4	5
IGB	10	3	-	7	-	5	5	10
IGC	13	12	5	5	14	11	-	1
IGD	15	7	5	7	7	9	12	8
IGE	4	5	5	12	-	5	8	5
IGF	23	28	42	12	36	26	18	11
IGG	6	8	5	10	4	7	5	6
IGH	2	-	-	-	4	1	-	-
total geometric	92	71	74	68	72	76	52	46
ICA	-	1	-	-	4	1	2	-
ICC	6	11	5	17	10	10	17	8
ICD	-	-	5	-	4	1	1	4
ICE	-	5	-	9	10	3	-	-
ICF	2	7	16	12	-	6	10	13
ICG	-	-	-	3	-	0.5	3	5
ICH	-	5	-	-	-	2	5	13
dimple	-	-	-	-	-	0.5	3	1
stamped rings	-	-	-	-	-	-	7	10
total curvilinear	8	29	26	32	28	24	48	54
total motifs	(52)	(75)	(19)	(41)	(28)	(216)	(103)	(118)

geometric motifs only. It may be concluded that no area of the site contained any particular concentration of vessels decorated with specific motifs. The only significant variations seem to be that most of the pots with surviving complete motifs came from the western part of the plateau (Sites C, L, S, and P). Site C produced pots with the least incidence of curvilinear motifs, but the highest occurrence of multiple hatched zones. Finally, the most complex curvilinear designs derived from pits adjacent to the roundhouses G1, L2, P1, and P2. These areas, along with the north-facing slopes of the interior, also produced the highest numbers of restorable decorated vessels.

In a study of the Glastonbury ware sherds derived from stratified deposits in the ramparts and gate it was established that the sandy Glastonbury sherds were mainly of later date within the Middle Cadbury period, and that they tended to bear more complex decorative motifs. The latter trend was confirmed by an analysis of the decorated pottery in sandy fabrics from the pit assemblages. On the 44 vessels in sandy fabrics, the motifs represented comprised 48% curvilinear against 52% geometric. This can be compared with the figures for the total assemblage of 216 vessels which were 24% curvilinear against 76% geometric.

It is instructive to compare the fabric occurrences among the Glastonbury jars recorded at Cadbury Castle with those established at some other Iron Age sites. Very little comparative data are available but a few conclusions may be drawn. At Cadbury, most of the Glastonbury jars were shell-tempered, but with a significant occurrence of coarse and fine sandy wares. From the descriptions of illustrated sherds from Meare East (Rouillard 1987) it can be deduced that there almost all of the decorated jars were tempered with sand and sandstone (Meare East Fabric 1 which equals Peacock Group 2). This appears to be in direct contrast to the situation at Cadbury, although bearing in mind the relatively later concentrations of sandy Glastonbury wares at Cadbury, it must be admitted that chronological variations may be involved. On the other hand, the vast bulk of coarse plain wares from Meare East resemble the general forms belonging to the Middle Cadbury period. A similar pattern is found at the Somerset Levels sites of Westonzoyland and Alstone, where all the decorated Glastonbury ware sherds were sand- or sandstone-tempered, and some were confirmed by Peacock as belonging to his Group 2 (Miles and Miles 1969). To summarise, the Cadbury jar assemblage is dominated by shell-tempered vessels of Peacock Group 4 with a significant addition of Group 2 sandy wares, while the sites on the Levels are almost totally dominated by vessels in Group 2 fabrics. As Peacock himself noted, the groups of vessels made in the different fabrics tend to be decorated with distinct motifs and overall designs (Peacock 1969).

Peacock observed that Group 4 vessels may have been locally manufactured, that they lacked internal rim grooves, and that the predominantly geometric ornament included many hatched and cross-hatched triangles (1969, 50). In contrast to this, the sandy Group 2 wares derive from a single source, north of the site, probably near Shepton Mallet, and are characterised by carefully executed complex geometric and curvilinear motifs, including stamped circles (Peacock 1969, 46). In order to compare the overall occurrence of the different motifs at Cadbury it was decided to tabulate comparative data from other sites, but unfortunately very little quantified data are available. For Meare East most of the decorated vessels were drawn or described by Rouillard (1987). A motif analysis was not provided, but from the published data it has been possible to classify the decorative motifs represented there according to the Cadbury system. The results are shown in Table 19. Figures for Meare West have also been presented, calculated from the illustrations in the 1948 Bulleid and Gray report. However, it is known that not all the different designs found on that site were illustrated for publication (Rouillard 1987, 219), so they are less accurate than the figures for Meare East. It can be seen that the greater incidence of curvilinear designs in the Group 2 assemblages from Meare confirms Peacock's original observation. In comparison with the largely Group 4 assemblage from Cadbury, it may also be observed that the general distributional occurrence of the different geometric motifs is broadly similar. This is not so, however, for the curvilinear designs. At Cadbury, the simple pendant swags were by far the commonest, while at Meare complex shaded lobe and leaf motifs (ICF) and compass-drawn patterns (ICH) are much more dominant. In addition, the stamped circle designs, which are fairly common on the Meare pottery, are totally absent at Cadbury. This is rather surprising, considering that vessels bearing these motifs have been found on sites as distant as Cannington (Rahtz 1969, fig 7,1), and that they are represented at Ham Hill.

Finally, a comparison was made between the range of rim diameters at Cadbury (see Fig 107) and those calculated from the illustrations in the Meare East report (Rouillard 1987). This study showed, interestingly, that the general run of decorated jars and bowls at Meare is considerably smaller in size than those found at Cadbury. This may imply differences in function. Certainly the Meare vessels are more densely and more carefully covered with decoration, and this point is amplified by the common occurrence there of very finely embellished vessel bases and knobbed lids (eg Bulleid and Gray 1948, pl V, VII, VIII). This might imply that the vessels were stored upside down, in order that the design on the base could be seen, or that some were inverted over others as covers. The presence of the lids themselves implies the need to keep the contents of the pot warm, or to hide it from the eyes of onlookers. The motifs found on the lids and bases, including two clear examples from Cadbury, are extremely standardised, comprising intersecting arcs with partial shading or a large-scale triskele on the bases, and repeating shaded leaf or lobe patterns on the lids.

The distributional studies of decorated pottery at Cadbury Castle have not provided any clear guidelines concerning function. No vessel type or motif group shows any definite spatial concentrations in relation to the known structures. If such vessels were used in a ritual context, then it seems that such rituals would have been those that occurred regularly in the domestic context. However, the greatest concentrations of complex curvilinear designs and of the deposition of more complete pots did occur in areas adjacent to the possible area of ritual deposits on the eastern end of the plateau. If such vessels are more representative of special status, then their distribution indicates no obvious concentrations of wealth in the excavated area at Cadbury. Alternatively it could be argued that the 1–14% and 7% levels of occurrence of decorated pottery at Cadbury and Meare respectively are indicative of wealthy, high-status sites in different categories of site location. However, although no quantified data are readily available, it seems that smaller Iron Age sites in the area were using similar quantities of decorated vessels.

Conclusion

Study of pottery from the pits in the interior has concentrated on the investigation of aspects of deposition and a spatial analysis of selected factors in relation to the distribution of the Middle Cadbury structures. These studies have established interesting patterns concerning the distribution of pits with high densities of ceramic finds, the occurrence of decorated pottery and of reconstructable decorated or plain ware vessels, and their correlation with quantities of non-ceramic small finds. A study of average sherd weight in the pits was related to results from context groups of varying nature, including the surviving stratified deposits in the interior and from the lengthy bank sequences in the south-west gate. Many interesting results were pointed up by these analyses but it is difficult to interpret these further in the absence of comparable data from other Iron Age sites. The fragmentation pattern of the pottery from the pits was similar to that calculated for Iron Age structures and stratified occupation layers around the site. The largest sherds were found in just a few pits and in certain non-pit layers such as the rubbish layer. Pottery from some of the bank material groups and from road surfaces was significantly more comminuted.

Most decorated pottery and near-complete vessels were concentrated near structures P2/L2 and G1, while the densest concentrations of pottery in general occurred around the four-post structure C1. It appears that the use of decorated jars and saucepan pots was related to the domestic context, but that the concentrations could represent a clustering of more structured, ritual activity in buildings nearest to the area of special deposits on the eastern side of the plateau. A comparison of the motif repertoires from Cadbury Castle with those for some other Somerset sites has shown that the Cadbury pots are relatively large, and decorated with a restricted range of largely geometric designs. In part this relates to the source of the vessels, locally made shelly wares of Peacock Group 4 being predominant. However, even the more elaborate Group 2 sandy examples do not bear such complex schemes of embellishment as many of the vessels at Glastonbury or Meare. There is not yet enough data available to allow a quantified comparison of the occurrence of decorative motifs at sites of varying size and status in the region.

Spatial analysis of the stone artefacts of all later prehistoric periods

by Peter S Bellamy

Querns

The majority of the querns recovered from the excavation comprised small fragments. When a quern initially breaks, it is likely to be into large pieces and the number of small pieces may therefore point to some secondary reworking of the quern material for other purposes. The only definite, though slight, evidence for reworking comes from pit L012 which contained two flakes struck from a quern. Similar evidence for reworking of quern material was found at Gussage All Saints (Buckley 1979, 90). Many of the quern fragments from Cadbury Castle were fire-blackened, which may indicate that some querns were broken up by the use of fire. However, a close examination of the contexts which produced querns shows that many of the fire-blackened pieces were found in association with ovens, specifically on the north-facing slope (Site BW) and the eastern end of the plateau (Site E). In the former about half of the quern fragments, both saddle and rotary, came from either the Roman oven or from layers adjacent to it. Some, but not all, of these quern fragments were fire-blackened. In the latter area 20 quern fragments, all rotary or unidentified quern fragments, several fire-blackened, were found in association with oven E982. It seems likely that all these quern fragments were used as building material in the structure of these ovens (Fig 143). Quern fragments were also used as building material in the entrance structures at the south-western gate, as part of the cobbling on the plateau, and as possible post packing in postholes.

About 26% of the quern fragments came from pits. These included both saddle and rotary querns. In two pits (L152 and T325) both saddle and rotary querns were found together. The size of the pieces of

Fig 143 Photograph of reused quern in oven/furness

quernstone recovered from pits ranges from very small fragments to complete or almost complete examples. A number were fire-blackened. Many of the quern fragments were probably deposited in the pits as rubbish, but the possibility that some ritual deposition of querns also took place cannot be discounted. For example, a complete rotary lower stone was deposited in pit P758; two-thirds of a rotary upper stone Type 1a was deposited in pit C102; half of a large rotary upper Type 1b was found in pit T254; and also an almost complete rotary lower stone, together with a saddle quern fragment, was recovered from the foundation trench of the rectangular shrine structure N5. Without more evidence of their positioning within these features, it is difficult to assess the nature of the deposition of these quern stones.

The distribution of the querns can be divided into two zones: areas where they occur mainly in pits, and areas where they were mainly found in contexts reused as building material (Fig 137). On the north-facing slope of the interior, for example, the number of querns found in features other than the oven is quite small, and the same is true for the northern side of the plateau (Site E). Many of the querns from the eastern end of the plateau (Sites N and T) also come from contexts where they were reused. Conversely, on the west of the plateau (Site C and Sites L, P, and S) nearly all the querns were found in pits. In general, there is only a single piece of quern in each pit, very few having more than two pieces. The quern fragments were distributed fairly evenly over the western part of the plateau, where they were found mainly to the west of houses P2 and L2. There is only one instance of conjoining pieces of quern found in different features: pits S207, L002, and feature L822 all contained fragments of a single rotary upper stone. These three features were spaced about 15m apart. The impression gained from this is that the western end of the hilltop was an area where querns were being discarded as part of the general disposal of rubbish in pits, and it is possible that this also reflects the zone of their utilisation.

The general pattern of quern distribution holds true for both saddle and rotary types. There do not seem to be any specific concentrations of saddle querns across the site. An examination of the different types of rotary querns, shows that there is a differential distribution of Types 1 and 2. The Type 1 querns were found on the western side of the plateau (Sites C, S, L, and P), while the Type 2 querns were found only on the northern slopes (Site BW, except for one example from Site E). The Type 2 querns were also found only in Late Cadbury period contexts, suggesting that they also had a limited chronological as well as spatial range.

In conclusion, it seems that the querns were being discarded in specific parts of the hillfort, namely the western end of the interior, which was also likely to have been the area of greatest use of the querns (though there were small quantities of quern fragments found over the whole of the excavated area). The large number of quern fragments reused as building material in the eastern part of the interior and on the northern slopes masks this distribution.

Whetstones

Whetstones were found in most of the excavated areas of the hillfort. The main concentration, however, was on the plateau, especially towards the eastern end (Sites E, F, G, N, and T). Some of the whetstones were clearly residual, or are likely to have been accidentally incorporated into a number of features such as post-holes or gullies. Of the 48 whetstones (36%) recovered from pits it is likely that some, if not all, were deliberately discarded. Many of the whetstones were broken and some (12) were burnt or fire-blackened. Nearly all the burnt examples were recovered from pits. It is possible that some of the whetstones had been deliberately discarded before being incorporated into pits at a later date. In the eastern part of the plateau (Sites N and T), where there was a greater depth of intact stratigraphy, about 40% of the whetstones were recovered from either the cobbled surface (14%) or the rubbish layer (26%) and only three (7%) from pits. This may suggest that, in general, the whetstones were not disposed of in pits, possibly partly as a result of their small size (though this does not hold true of spindle whorls which are generally even smaller). Some of the whetstones which composed part of a portable personal toolkit may have been accidentally lost.

Spindle whorls

Spindle whorls are conventionally regarded as being an element of spinning equipment, and thus the spatial distribution of these artefacts could highlight activity areas where spinning and perhaps other aspects of textile production took place (Fig 138). There are, however, dangers in this type of interpretation. The spindle whorls may have been used for a range of purposes not necessarily associated with textile production such as weights and flywheels. Also the small size and portability of these objects means that they may not necessarily become incorporated into the archaeological record close to their area of use.

In general, the distribution of spindle whorls (both stone and fired clay) reflects the density of archaeological features across the hilltop, with the greatest number coming from the interior of the hillfort (Fig 138). There are some anomalies to this pattern. The north-facing slopes of the interior, for example, produced very few examples, but the area behind Bank 1 on Site D, on the other hand, had a fairly high concentration. The stone and clay whorls do not occur in similar proportions in the different areas of the site – it is noticeable that the plateau, especially the eastern end (Sites E, F, G, N), produced a much greater quantity of fired clay spindle whorls than stone ones, and that at Bank 1 (Site D) and the south-western gate the reverse is true.

The spindle whorls were recovered in roughly equal numbers from pits and from general layers. However, on Site D they were found incorporated into the make-up of the banks and also in the layers of soil build-up behind the defences, and at the south-western gate they were mainly from general layers, so on both these sites the deposition of spindle whorls seems to be the result of residual incorporation into the defences, accidental loss or colluviation, which may explain why there are fewer clay whorls from these sites, since they are more fragile and may not have survived. On the other hand, in the central area of the site, the spindle whorls were almost all recovered from pits, which suggests a more deliberate disposal pattern. A closer examination of the central area reveals a dispersed distribution of spindle whorls with no major concentrations evident. There does not seem to be a preferred area of disposal and it is difficult to highlight any individual area or structure where spindle whorls were used. The overall impression is that there was no specific area of the site reserved for activities using, or discarding, spindle whorls. This should perhaps be anticipated given that spindle whorls may be associated with very portable activities, such as spinning. However, the lack of spindle whorls from the northern slopes of the interior may indicate that they were not used in all areas of the hillfort.

Conclusion

by John C Barrett and Olivia Lelong

This and the preceding two chapters have considered the evidence for the production and the deposition of a range of animate and inanimate resources which occurred during the occupation of Cadbury Castle. Chapter 9 began with a review of certain raw materials which were brought, in one form or another, to the site. Chapter 10 then examined the evidence for two processes which transformed such material, the selective slaughter and deposition of animal carcasses and the evidence for metalworking. Finally, this chapter has presented a wider range of activities in which the patterns left by the discard of artefacts used in those activities have been traced and interpreted.

Much of this work has assumed that the spatial patterning which is recognisable, mainly across the area of the interior which was excavated, reflects the organisation of human activity, an organisation of activity which will also be demarcated in the arrangements of buildings and other facilities, such as hearths, furnaces, and storage pits, found in this area. These distributional plots are one technique by which archaeologists have traditionally sought to understand how people behaved in the past. But does such work give us an adequate sense of a hillfort which was inhabited, known, and transformed throughout the Iron Age?

We see something of the different uses of space without perhaps fully appreciating how that space was occupied. The reality of that habitation was dynamic; people may have moved out of the house to grind corn, away from the areas of habitation to slaughter animals. They threw things away, picked up a discarded object, and re-used it, and they moved, either accidentally or by design, the discarded rubbish of centuries from one place to another. The movements by which these activities were linked wore down some surfaces and built up others; houses were constructed, repaired, and demolished.

Our distribution plans and discussions of individual processes only go part-way toward building images of this kind, of an occupation by which people coped on a day by day basis. These plans and discussions frame the material in a certain way; they give it a context in which it makes sense to us by displaying the distribution of metalworking or the deposition of animal burials. Another kind of context, however, is gained when we consider the occupation of the hill not in terms of the traces which it left but in terms of the way the body was itself situated among these buildings and activities. It walked between them, faced towards the hearth, and turned its back on the house which it had just left; it understood the logic of these places and the activities which they contained in terms of the times and sequences of its perambulations over the hill, of feeling at home or out of place. There may have been many places on the hillfort which were claustrophobic, but other areas were private and secure and others still were open to public gaze. Some activities may have seemed harmless, while others were bound by taboo. To know what was auspicious, correct, was to be at home among the community.

It would seem foolish to claim that the archaeologist may still hear the voices which expressed such concerns, but we do trace the material conditions which housed them. We register the slight shifts in alignment of house doorways which give out onto the threshold and the outer world, and the contrasts between the open and more public spaces and the ground dominated by the house. House L2, on the western part of the plateau, may have had an entrance facing north-east, although this alignment is uncertain. The pits behind it may have been contemporary. On the north-west these pits collected the debris of ovens but also the debris of metalworking, and on the other side, to the south-west, pits contained quern fragments. We need not seek clear-cut patterns for none are to be found. We may recognise intermittent activities which may have taken place in the lee of and behind a standing building. The house faced away from the westerly end of the plateau, where animal skulls in some of the pits may indicate an area of butchery. It faced towards and past that area on the eastern plateau where metalworking also took place but where surface debris accumulated and, ultimately, where animal burials were deposited alongside the discard and deposition of broken metalwork. If the world had an order, and it must have done, then that order was not simply an order of space but also one of time. Time linked these places and marked out the cycles of life and death, birth and decay. The metaphors of time allowed activities and places to be held in place, an order which was experienced by living among it.

12 Writing the Iron Age

by John C. Barrett

Archaeological interpretation

The previous chapters have dealt with many aspects of the archaeology of Cadbury Castle. The excavations have been discussed by moving from the various cuts through the encircling earthworks to the excavation of the south-west gate, and then into the interior. The decisions which were once taken about where to excavate now mould our perception of the structural remains. It is almost as if we have visited the hill with excavation in progress, and while we could not help but be impressed by the overall scale of the earthworks we have moved from one excavation trench to another, peering at the stratiphication revealed and the finds assembled. Everywhere else such material remains hidden beneath the turf. The unexcavated archaeology may appear to limit our understanding of the site, but all excavation is partial and the interpretation of the results is always provisional. This chapter is not intended as a final statement which reduces the enormous and complex possibilities of Cadbury Castle to a single model of what it might all mean.

We established at the outset our desire to write this book more as interpretation than as description, to do more than simply describe the ways observations of material remains are recorded in the field archive or have been gathered as part of the post-excavation analysis. A great deal of archaeological writing seems to regard any observation on archaeological material as relevant to an understanding of the past, although exactly how the relevance is established is often far from clear. It appears that observations are recorded and published in the hope that one day someone, somewhere will be able to say what they mean. Consequently the description of the material appears to stand apart from the way we make sense of it in terms of human history. This break between observation and interpretation is often presented as essential because it ensures the objectivity of the former. Recorded observations on the material are intended to stand for all time, and the importance of the written report is to make a final and permanent record of those observations. The interpretation of the material, by which it gains its historical relevance, is on the other hand open to challenge and may change with time; interpretation comes later and is seemingly regarded as supplementary to the more essential matter of record.

The traditional path therefore is for fieldwork to record sets of material relationships which are mapped at different spatial scales, be they the pattern of different categories of settlement site distributed across the landscape, or the pattern of artefact and soil deposits found in a single pit. Interpretation then attempts to identify the causes for the changing patterns of material, and writing the Iron Age is a matter of writing about the sum total of the processes we believe created the Iron Age archaeological record. Notice that we never decide what the real historical issues are which we believe require further investigation, and so we do not select observations relevant to the investigation of those issues. Instead we accept that the history of the Iron Age is revealed by the archaeological record; it is simply a matter of how much of the record we can observe, the constraints imposed by that record, and the adequacy of our methodologies. Consequently the Iron Age emerges as a set of relatively abstract processes, all of which operated at different spatial scales. They are disembodied processes which appear to have arisen from radically different points of origin; there are the processes of building and erosion which created the units of stratigraphic record, and there are the ways those processes were organised spatially in the pattern of buildings or the distribution of a particular kind of artefact residue. Such interpretation is not normally undertaken with reference to the ways humans actually inhabited the landscape. Instead the processes which dominate the interpretive narrative are more abstract and they appear to have controlled the lives of those who lived at that time. These processes are often expressed in vague organisational terms, in which the 'social system' looms large as the fundamental organisational category which the archaeologist is attempting to recover.

The reality of 'the Iron Age' appears to be inscribed directly upon the material and our only role as archaeologists is to trace the contours of that inscription. The past (ie the Iron Age) therefore appears to be determined directly by the material which we observe, as if our own interventions had no part to play in its making. Perhaps this is why the process of writing the past is one which has received so little attention. It is assumed that the role of writing is merely to describe as transparently as possible the material remains, and thus to lay before the reader the patterns which will reveal the truth of the past. However, any writing *transforms* its object, and through the task of writing we might be expected to contribute to our *making* the past. Once we begin to write of our discoveries (and this is a process which starts with the field record) we are making an understanding of the past. The effectiveness of that understanding depends heavily upon our own skills; it is not something entirely determined by the nature of the evidence.

If reportage is to cover relevant material in this way then it cannot attempt to cover everything on the assumption that one day someone may see the significance of the observations which have been made. Instead the material is discussed as a way of exploring its relevance to our understanding of history. The excavation report now becomes the place not simply for the description of material but for the practice of historical writing, and the kind of history which is written will in part be created by the way the report is itself structured. The descriptive record does remain in the site archive, although this is itself a product of the excavators' attempts to understand the deposits they have observed and the specialists' selective understanding of the finds they have considered.

If the Iron Age of Cadbury is to be present in our writings on the material, rather then being something introduced later, then we have to consider the strategies by which that presence can be created in the transformative power of our writing. The approach which has been employed here, tentatively we admit, is to write of the hill as being inhabited. The hillfort was made by people who raised the ramparts and the buildings within the interior, but they also occupied the hill, lived among and understood the facilities which were available, and recognised Cadbury Castle, perhaps from afar, as a place of some significance. The creation of Cadbury was more than the physical transformations of digging and building which were worked upon the hill, it included the creation of the idea of the place and the creation of people's various identities in relation to that place.

The writing of history becomes an exploration into an understanding of the ways people once inhabited the material conditions recovered archaeologically. Inhabitation of a particular place requires knowledge of that place and an understanding of how to live there. To inhabit, that is to live within the world, involves more than simply acting upon that world; it involves the ability to interpret and to understand. It is people's knowledge, their comprehension of the conditions in which they found themselves, and thus the realisation of how to act given those conditions, which is missing from so many archaeological accounts, not only of the Iron Age and but of all other periods. An archaeology of inhabitation will explore how people lived among the given material conditions of a period and what the consequences of that inhabitation were. This will require a different kind of historical narrative from that which enquires into the mechanisms by which these same material conditions were created.

Expressed as generalities these ideas appear abstract, but they address the fundamental materiality of human experience. That experience is gathered by the body as it moves and acts in the world. Archaeologists do not observe that inhabitation and although they may recover some trace of the body's vanished presence, identifying for example the material residues of a particular action, that is not the central point. Inhabitation is only effective when the body understands the world around it. What makes the human body an issue of history, in a way quite unlike other members of the animal kingdom, is that not only are the cultural conditions which the body occupies of a historically specific form, but the ways in which the body understands and communicates its understanding are also culturally and historically specific.

The analytical frame is now shifted for archaeology. We are no longer attempting to explain the formation of a material record by reference to a number of relatively abstract processes, such as economic or social organisation. We will not proceed by 'examining any patterning' in the material 'and then building the observed regularities into simple systems' which represent a model of a social system, only to admit defeat because the 'mechanisms by which such a model could have worked are beyond recovery' (Cunliffe 1995, 102, 94). Instead, we will recognise that the mechanisms by which any social arrangement works are simply the abilities of people to act routinely, to know what to do and to know what is expected of them, to understand their own skills and their relations with others. In short the social system, however we wish to define it or to characterise it in terms of some abstract social typology, has no life beyond the abilities of people to live knowledgeably. Social systems do not make the archaeological record, people do so by living through and understanding the consequences of their actions and the actions of others. It is these lives which both created and inhabited the material conditions which are recovered by archaeologists.

As a first step in this kind of analysis, the material remains recovered in the excavations at Cadbury Castle have been written and edited as a series of material contexts which the body would have inhabited. These contexts are the spaces the body would have moved through on the hill itself – the enclosing earthworks and the architecture of the interior – and the mechanisms by which the body was sustained by food and clothing, and the tools which were used in the actions which the body undertook on the world around it. This discussion, however, only offers us a material context for the Iron Age body to inhabit. It opens up a space in the material record for that body, but it tells us little of the historical context by which that body knew of its own existence and was thus able to act competently within its particular cultural setting. In other words, the writing of the Iron Age which has taken place in this report has re-ordered the descriptive accounts of the material to evoke the human presence, without exploring how that presence may have inhabited its own world, what that world may have meant, how those meanings could have been understood, and how they were acted upon.

The body has therefore appeared as a literary device, allowing us to organise our thinking about the material remains of Cadbury Castle. However, the body housed a social being who understood the diversity of experiences available to it and was able to communicate with others. Each understanding depended upon realising prior expectations about the world. It was through those expectations that people were able to find a place for themselves among those who they expected to be able to understand.

An archaeology of belonging: the community

To speak about the world in a way which was unsurprising and taken for granted was to draw upon commonly held and deeply embedded values. The differences between people could each be perceived as marking a place in an understandable totality, as if in a constellation. Such a constellation of social identities may have had a centre, common roots, a mythical history, distinguishing it from others who did not share that same centre and whose stories were different, whose lives and values were those of strangers. The social body belonged to a world of things and of people. The meanings of the material world which was worked, exchanged, and consumed, to some extent harmonised with relationships between people expressed as debts, alliances, and political authority. Into this network of exchange and meaning was embedded the organisation of the 'economy' and of 'society'; no longer need these be described in their abstract form, rather they must be understood as arising as the routine consequences of social discourse – of life.

It was out of routine, day to day practices that communal life was made. These routines held together human diversity by maintaining certain common principles which bounded the community from the world around it. To examine the community as an identity (which was constantly made between people) is to recognise the tensions which must necessarily have existed between the diverse experiences and expectations of the members of that community and the common principles to which they adhered – the principles by which the group named itself. These principles must have in part informed the image of a bounded collectivity which the community presented to the outside world. The diverse, day to day routines by which people entered and maintained any allegiance must have appeared to conform with some larger principles which embraced such diversity within the longer-term project of the community's own identity. In this way the community could be recognised as outliving its individual members and the principles which united it were likely to evoke a timeless quality.

One perspective of the Iron Age community was that gained by an outsider who recognised the mechanisms by which the community was identified as a totality, bounded and set apart from others. Those outsiders probably saw a relatively simple identity represented, stark and easily named. The second perspective was that of the community's members for whom internal differences were subsumed in an idealised imagery of unity. Here the identity of the community was more complex as people with different experiences could none the less recognise a common identity (Cohen 1985).

The building and occupation of Cadbury Castle also contributed to the creation of a number of communities. Communities of people work together (as well as against each other) with the material conditions at their disposal. They utilise their common and conflicting understandings of their place in the world, while also recognising something of a common identity among themselves which they collectively present to outsiders (Cohen 1985). If we are going to come close to understanding the inhabitation of Cadbury we are going to have to explore how those who converged upon the hill – who engaged in the major building projects of rampart construction, who drove animals onto the site, who occupied the buildings – lived among and worked the materials gathered there as an expression of their common identity. Such communities were of their own time. Their members may have resided upon the hill or may have come from different parts of the landscape to converge there at certain times of the year. The community was created because people could express some form of common identity with place and time.

Early Cadbury was a small agricultural settlement situated on the crest of the hill. This settlement, with its post-built structures, possible roundhouse, pits, and fenced yard, would have been approached along a number of well established and eroded trackways which ran up onto the hill from the countryside beyond. There appears to have been no enclosure around the hill at this time but its form was changing as ploughing created lynchets and erosional scars around the break in slope. The link of a community with the hill may have been constituted seasonally as the numbers of people waxed and waned with the phases of the agricultural cycle in which, for example, the movement of animals drew people to and from the hill.

The end of Early Cadbury witnessed the establishment of a more permanent claim to the place by a larger residential group. Ploughing gradually ceased, the agricultural land was perhaps now further away from the settlement, and the first enclosure bank was constructed, an undertaking which must have demanded a considerable workforce gathering again for at least part of the year. The identity of that workforce surely remained linked to the allocation of time demanded by, but displaced from, agricultural labour. The bank, where it is seen (and we must remember that the evidence comes from the south-west gate and the southern line of the ramparts, not from elsewhere around the hill), is of stone with timber revetting. The limestone was quarried from the hill, the timbers must have been hauled in from some distance. The bank refashioned the hill it encircled; the margin was now sharply drawn by a vertical face of stone and timber, and the entranceway was controlled by gates. Labour and resources came to the hill from beyond this perimeter which had been created, but that perimeter also encircled a community whose residence on the hill helped give the members their identity. The bank and gates increased the isolation of the hill, although the perimeter was constructed on its shoulder ensuring that the domed interior remained visible from the surrounding countryside, and thus with it many of the buildings which came to be constructed there. It was as if the occupants sought to represent their communal identity as enclosed and withdrawn, but certainly not invisible, from the outside world. A larger and more permanent occupation of the hill occurred, as is indicated by the four- and six-post rectangular buildings which stood alongside one of the roadways through the interior. These buildings are normally taken to have been raised-floor storehouses and with their appearance we also find the earliest roundhouses established in most of the areas excavated. By Middle Cadbury there was also a regular refurbishment of the inner bank and a substantial residential population is indicated. Roundhouses were now accompanied by storage pits. Many of these houses appear to have been repaired or rebuilt on a number of occasions, sometimes on the same spot, sometimes by shifting the siting of the building slightly. It is difficult to be certain, but the impression gained is that the houses were associated with specific groups of rock-cut storage pits. The residues which entered these pits when they were abandoned included groups of domestic vessels and butchery waste.

It seems obvious that what was being created at Cadbury Castle during the Iron Age were groups of people whose outward displays of solidarity were identified simply and dramatically with that place. The raised plateau of the hill bounded by a single bank which was regularly refurbished and to which additional outer banks were eventually added. The establishment of gateways through the banks helped to present a vivid imagery of isolation and enclosure. That imagery effectively distinguished those who belonged to the hill from those who were excluded, or whose entry was that tolerated as the transient presence of allies and visitors. Such belonging to this place seems, by Middle Cadbury, to have been based upon the rights of habitation.

If the hill and surrounding bank created the relatively simple image of a single residential community from the outside, then once through the gates it was the spatial complexity of the settlement which would have been the most striking impression gained by a visitor. The roundhouses were all roughly the same size and there are no indications that the houses, either individually or in groups, were surrounded by any additional form of enclosure. They also appear to have faced in a number of different directions. The density of settlement is difficult to gauge, but buildings probably occupied a large part of the central plateau, extended down the long northern slope of the hill and were also set behind the bank. Long-established roadways spread out over the hill, and some of the houses faced away from the roads which ran behind them. Whatever the density of settlement there was no consistency in layout, other than the feeling of a localised, almost private range of spaces immediately in front and to either side of the house entrances. Residues accumulating in the sunken tops of some of the abandoned storage pits indicate activities, including some metalworking, taking place outside and immediately in the lee of the standing buildings. This private external space around the house fronted the hidden interiors of the buildings themselves. Once through the gateway of the hillfort, therefore, the spatial organisation of the interior was substantially determined by the residential pattern of the community. There is little indication of an area of relatively neutral public space, the kind of place where strangers might congregate. To enter the hillfort was to be immediately precipitated into a community in which one had to find a place. With no regularity of plan and no obviously dominant structure which might mark a focal point or signpost a route through the settlement to the stranger, outsiders would have had to submit rapidly to the will and the guidance of members of the community in which they now found themselves. Each life will have traced a path over the hill. It will have found a residence among kin, where the architecture of the houses and the topography of the land will have enclosed a foreground in which to belong. It will have carried with it experiences and skills learnt over the years which taught the way the land and its raw materials should be worked. Cumulatively these lives lay down a residue of things in which might be revealed a familiar history. The contrast is between the familiarity of the residents who would have known their way around the settlement and might have described the process in terms of the residency of people, their biographies and genealogies, and the routine activities which were taking place and an outsider who having observed so clearly the demarcation of the hill and those who resided there would have been confronted, once inside, with the enormous complexity of individual and residential identities, of different experiences and rights due to age, gender, and personal status.

For those who lived these distinctions as members of the larger community what mattered was the practical recognition of the extent to which such social categories were either relatively open or more tightly restricted and bound by convention, the ease with which they could approach others or required more formal routes into another's presence. Practically, these differences meant that people either found themselves constrained or to have been rather less under the pressure of others. To experience and to practise such distinctions was a matter of bodily discipline; it was about understanding how to act and to speak or knowledge of the places which were open or were closed to access, of conventions of dress, food, and labour. The material conditions of the hill – the buildings and their organisation, the artefacts – all contributed to make possible the practice of these different lives. This materiality did not itself determine the extent to which social conventions were either rigidly drawn or were more relaxed, but if such things as food taboos marked out distinctions between categories of people, then the technologies of cooking and food service must have ensured that such taboos could be accommodated. Where social categories were tightly drawn we might expect complex sets of material culture whose use clearly signalled the categorical distinctions between people and their actions. We have no evidence that the spatial organisation of activities within the hillfort changed to a more hierarchical order between Early and Middle Cadbury, and the impression is more of the steady aggregation of settlement units which were all broadly similar in their organisation (Hill 1995). The artefact categories also appear to have been relatively simple; pottery bowls, which were presumably used for the service of food, changed from a series of tightly defined categories in Early Cadbury to a wide range of forms with a similarly broad range of decoration by Middle Cadbury. Processes of food storage and cooking – both partly indicated by jar forms, the rare occurrence of oven plates, and an increasing use of storage pits close to the house – as well as the service of food obviously changed over the period, but we have no indication of a significant departure towards more tightly drawn categories by which these and other demarcations of domestic life were lived.

We may now be in a position to say something about the creation of the hillfort's community in terms of the way its own members were able to identify with that community and to fix their own place within it. The community was reproduced over a number of generations in the latter half of the first millennium BC and with it the institutions of social order which those routine lives maintained. It was one of a number of such communities whose members found a common identity within the landscape based upon their residence at a particular place. Such residential communities are likely to have created for themselves a form of common history, perhaps even linking them to some founding ancestor or lineage, but that history will have lain firmly in a mythical past which could be recalled orally through memory and story-telling. There is a strong contrast between the ways these communal identities were constructed in later prehistory with their origins projected into the past, and the communities of the Neolithic and early Bronze Age. In the earlier times we find groups whose common identities appear to have extended to include metaphysical forces of ancestors and spirits whose very presence was manifest in the contemporary landscape itself (Barrett 1994). This presence was perhaps revealed at certain locations and at certain times of the year through ritual, ceremony, and the mediation of human authorities. In the Neolithic and Bronze Age the past lived alongside the present as expressed in a language of the present tense, but by the Iron Age it had become possible to speak of a past as temporally displaced.

The tension between individual experience and a communal identity was resolved because the practices of an individual's life appeared to subsume within it some portion of the larger body of communal values. These larger values outlived the life of the individual and expressed the ideological coherence of the group; they were one way in which individuals might recognise a resonance between their own lives and the timeless order governing the world. It was these values which gave life in its fullest meaning.

The shape of the hill means that the hilltop plateau was raised as the local skyline when viewed from any point within the perimeter, as well as being visible from outside the hillfort. A number of the routeways lead towards the plateau from each of the hillfort's entrances. Standing buildings would have masked this topography, but the plateau will have remained a dominant visual feature throughout the occupation of the site. On its eastern side was an area of open ground, flanked to the south and probably also to the east by roads. Devoid of houses and storage pits, the area was characterised by layers of debris which were covered by cobbled surfaces, all of which accumulated throughout the later prehistoric occupation of the hill. The accumulation of material was also associated with hearths and furnaces with indications that metalworking had taken place there. The distribution of items such as scrap bronze fragments would also support this, although the more general spread of metalworking debris over the entire plateau warns against too direct a correlation between these activities and a single area within the hillfort (Fig 132). The situation is obviously complex. It is likely that metalworking was taking place elsewhere on the hill, but it is also possible that debris from metalworking was carried from the eastern plateau into the pit fills lying further to the west. The significance of the eastern plateau remains; it lacks any of the obvious residential structures which were built around it, parts of it seem to have been fenced off and some of the fence lines were maintained for a number of generations, and it was an area long associated with metalworking. The area was dirty; rubbish and ash had accumulated and been covered by the laying of cobbles. Among the rubbish and cobbled surfaces were fragments of metal, both copper alloy and iron, but the quantities of metal in the upper levels of these deposits increased significantly enough to suggest that they resulted from more than the casual loss or discard of debris. Certainly the material is fragmentary (Figs 134–5) and among the iron we find pieces of weaponry, containers, and tools, but it is possible that a small proportion of these finds were votive deposits.

On the face of it the eastern plateau was an area of production, separated and fenced off from the surrounding domestic activities (Downes 1997, 148). It lay centrally within the hillfort. At the end of Middle Cadbury complete or semi-complete animal carcasses are buried in this area, predominantly neo-natal calves (see p281–2). The distribution of these deposits may appear fortuitous, merely the archaeological survival of burials in an area which escaped plough erosion, and where the burials indicate a change in the use of this part of the site. But to appeal to such a simple coincidence is to ignore the lengthy continuity of use already recognised for this part of the site. The animal burials began to occur at the same stratigraphic level in which the metal objects were being deposited, while the latest burials cut the upper surfaces. The juxtaposition is surely one of meaning and significance rather one of coincidence. Significance differs from coincidence when a relationship can be established, in this case the relationship between the different activities represented may have been constructed simile and metaphor. Processes of production and creation were juxtaposed with those of death where the deposits marked a moment in the cycles of life–death, production–consumption (Downes 1997). These are the biographical cycles which can be ascribed to plants and animals, as well as material culture and people. The biography of material objects describes the path of the object from its creation through use and exchange to its decay and abandonment. In following the biography of the object in this way we will also trace the way material culture became bound into the biographies of people who, by various forms of exchange, took on and maintained certain social identities throughout the course of their own lives. Placed in the context of an inhabited world, which was seasonally renewed, where raw materials were worked upon to give them cultural form, and into which people were born and out of which they passed at death, then we can sense the power in metaphors which linked these biographical rhythms. The life of an individual, acts of creation and killing, may have all evoked the endless cycles of life and death, renewal and decay. If the status and identity of people were practically sustained in the roles they played and the authority those roles claimed – be it the ploughing of the land, the preparation of food, the taking of life – then the material world would always be more than a backdrop to social processes and more than a materiality upon which social processes have left their mark. It was the very medium through which it was possible to know and to rethink the world as inhabited; it made, as it continues to make, a life of understanding possible.

If these indications are read correctly, then they expose something of the way the differences of human experience, and the asymmetries of power and authority which divided the members of a community, were transformed into an image of coherence. The means by which the members of the community could have spoken of their unity may have come from their ability to recognise, in the metaphor of a life cycle, a narrative which linked daily and seasonal experiences, including the passing of an individual's life, the annual cycle of fertility and harvest, and the transformation of the inanimate resources. The political power of such a metaphor did not simply lie in saying that ploughing was 'like' fertilisation or that the harvest was 'like' death and that from death came life, it arose because certain groups of people were seen to mediate at moments where the comparisons took shape. They may have ploughed, slaughtered animals, served food, all acts which not only worked upon and exchanged resources but spoke of people's place in sustaining an order in the world itself, of reproducing the community. It meant that all could find, in their different ways, a place in the larger order of the world, an order which in turn justified the demands placed upon each of them.

It was the residential communities of later prehistory who bequeathed the considerable range of settlement residues which typify the archaeology of the period. The range of evidence includes not only hillforts such as Cadbury but the extensive settlements such as Glastonbury and Meare as well as the smaller settlement sites of the period. The relatively rapid developments of the larger residential units, a pattern recently discussed by Hill (1995b), may have resulted in some disruption in the settlement patterns of the later Bronze Age. It will be instructive if the current Cadbury Environs Project were to reveal a diminution in the number of smaller settlement units in the wider landscape from the late Bronze Age through into the Iron Age, the period in which the major nucleation of settlement begins at Cadbury Castle. To belong to such communities was more than a matter of simply living at these places, it was expressed when the act of entry to the settlement was to return home, to return to a place of belonging. As we have implied above, that belonging distinguished the community's member from the stranger because the former not only gained entry but was also able to find their place in the dense and confusing pattern of residences through which they passed. To find a place in the community was to know oneself, to be accepted, to share food and to find the shelter to sleep; this is what the pottery sherds, oven plates, and postholes amount to, the means to express a security that the world remained as it was expected to be.

Transformation

Inhabiting Cadbury gave the occupant a place; not just a physical location in which to live, but a place where that living could be understood. This was the recognition that the differences which separated people, differences of status, rights, and obligations, all of which were recognised in every exchange which took place, also bound them together. It was as if the stories which people would tell of their own lives, explaining who they were by reference to what they did, their physical appearance, identifying the ways they were related to others, made sense when seen in terms of a larger story. That larger story was of a community which saw itself set apart from strangers and allies and it would have been told in different ways in the lives of its members.

Communities are vulnerable, they may face assault from outside and the coherence which their members found once in the obligations which bound them may disintegrate as other allegiances take their place. Such vulnerability is seen in the history of Cadbury. The community changed during the first century BC. It was finally destroyed and replaced in the opening decades of the first century AD.

The changes are complex. The enclosure of the hill is elaborated by the addition of further lines of bank. The dating of these is uncertain but some of the activity may belong to Late Cadbury. Perhaps this occurred just before the density of settlement on the hill began to decline. In Late Cadbury there were no recognisable houses and few storage pits, and a road surface survived in the south-western gateway for the first time indicating a lessening in the passage of traffic. If the making of the community was more than simply the aggregation of settlement, being the ability of people to link themselves to that place and to the creation of an ideal image of that community, then the beginning of a process of fragmentation must also mean a loss in the ability to realise that ideal.

This turning away, by at least some, from the traditional demands of social discourse was followed by violent assaults on part of the remaining population. The dismembered and partly burnt remains of the dead, broken weaponry, and clothing (the latter presumably represented by the brooches) spread down the south-western gate passage. The wreckage had been picked over; spearheads remained, uselessly attached to broken shafts, while swords were looted from the dead. It is ironical that a very rich archaeological deposit should stand as mute testimony to the death of a way of life that had developed on this hill over some eight centuries.

The memories of the hill's earlier significance remained, as did a memory of the more recent events. What appears to have been a small shrine was erected in the area of earlier industrial activity and the animal burials. It stood to the west overlooking this area. In the south-western gate a number of attempts were made to reinforce the unstable earthworks around the passageway and the destruction deposits were finally buried beneath a roadway before further burning affected the area. Access was therefore re-established quite rapidly after the initial destruction by means of an impressive gate structure, at least for a while, but what was it access to, and for whom did it operate?

At some time in the middle decades of the first century AD a military occupation was established on the hill. Barrack buildings and ovens are witness to the presence of this new community whose identity, practices, and allegiances lay in another world altogether from the one which had been displaced. The spatial order which the garrison occupied was regular and presumably similar to the architectural order found in other auxiliary forts of this date. Appearance, forms of recruitment, and routines of the day - none of these will have matched what had taken place on the hill a century earlier. It is probable that this occupation followed upon the building of the shrine and the final destruction in the gate, and it appears to have been short-lived.

We see in such a disjointed sequence of abandonment, destruction, decay, and re-occupation extending over a century or more the trace by which this area of south-western Britain was incorporated into the Roman empire. There is no simple continuity, no processes of Romanisation by which some portion of the earlier political structures was realigned to serve the new imperial authority. Instead it is the simple destruction of the Iron Age community which we witness, although the processes of that destruction are drawn out and complex. Military activity is certainly involved, and conquest unsurprisingly involved death and mutilation, but the context may have been a community already in decline. The contacts made, by military expedition, trade, and political alliance, between the imperial power and the Iron Age communities of southern Britain may have begun to fragment those communities, as some of their members began to shift allegiances towards a new set of ideals, recognising the authority not of indigenous tradition but of the emperor and of Rome itself. Such a fragmentation, perhaps instigated by certain elite elements who began to recast themselves to become 'Roman' and thus necessarily reinventing their own histories and identities along the way, will have cut adrift others who either by desire, incomprehension or lack of opportunity, continued to speak of themselves and their identities in traditional terms. In this fluctuating state of changing political and moral values, military intervention eventually strove to appropriate the hill and presumably displace those whose allegiances remained focused there. It is significant that in this period Cadbury Castle, like a number of other hillforts, saw the construction of a shrine. Earlier shrines may well have existed on the hill (Downes 1997), but the continuing emphasis upon ritual and dedicatory activities in this one area of the site at a time of rapid political change and military conquest was significant. Identities and the vitality of moral order, once embedded in the routine of life to the extent that their truth was empirically recognised on a daily and familiar basis, no longer seemed effective. And with that loss came the loss of security, the impossibility of knowing one's place in a world whose cultural and political language was now so unfamiliar. Inhabitation was now almost reduced to seeking an explicit map through an unknown terrain; it was as if the inhabitants had become strangers in the heart of their own community. The isolation felt by some at this time was perhaps adequately expressed by the scale of the shrine. This building was not the monumental expression of communal effort and celebration, the hillfort had once itself been that, but instead it was a smaller focus for cult activity and supplication.

The creation of a Roman community necessarily dismantled earlier identities, but no such transformation could simply wipe away the expectations of an earlier order. To rethink the question of identity involved making sense of, and acting with reference to, new conditions, a process which required reading the new order from a position still rooted in earlier expectations. The unthinkable eventually became possible because traditions of knowledge were able to recognise the demands of a new order and, for some, were able to speak of belonging to a new community. The importance of the hill must have remained, therefore, but no longer as the place for the identification of a residential community. What was required was to convert that place into something else which, while its significance was preserved, was used to recognise a new way of belonging. In the case of Cadbury Castle that appears to have been achieved by re-establishing the significance of the site as a religious centre. The evidence for a temple complex on the hilltop, perhaps by the second century AD, is ambiguous, but some form of masonry structure is indicated and a temple is the most likely candidate. This transformation in the use of the hill may be understood if we accept the hill as having once been the place where assumptions about the order of the world were empirically validated by routine and diverse experience, and to accept that the location and the means of such validation was displaced by the first century AD. The hill remained and demanded inclusion in the new stories people might tell of themselves and their place in the world, an inclusion achieved by finding the significance of the hill no longer in the diversity of experience but in the conventions of myth.

13 Pathway to the archive

The data presented here are drawn upon in the interpretations presented in a number of places in earlier chapters. This material should offer one route between the published account and the site archive, which is held by Somerset Museums Service. The material is presented in four sections: the late Bronze Age and Iron Age ceramic type series, a concordance of interior structures, a catalogue of the artefacts illustrated in Chapters 6, 7, and 8, and the radio-carbon dates.

The late Bronze Age and Iron Age ceramic type series

by Ann Woodward

The pottery from Cadbury Castle has been studied during two major programmes of analysis. Following on from the excavation seasons a substantial portion of the pottery was archived by Leslie Alcock and his assistant Sylvia Stevenson. Their archive comprises long-hand free descriptions of each diagnostic sherd and scale drawings in pencil, which were, for the most part, converted into composite pages ready for publication. The primary aim was to achieve full publication of all the pit groups, including any diagnostic small finds, and a more selective publication of the key ceramic items and groups which provided dating evidence for the sequences of contexts defined within the rampart cuttings. The general aims were well exemplified by the publication of the ceramic sequence from rampart trench Site KX (Alcock 1980).

In order to accomplish completion of a ceramic archive, and to attempt some general analytical work, it has proved necessary to devise a coded series of pottery forms, fabrics, and decorative motifs. This has allowed the completion of the archive for the interior (non-pit context groups for Sites B, C, E, F, N, P, and W; completion of pit groups from Sites E, F, and N) using a pro-forma system. Time has not allowed, however, the inclusion of measured drawings. The same form and decoration series have been used for the detailed analysis of pottery from Site K and selected contexts within Site D. This task was achieved by Lynne Bevan and Jane Evans, except in the case of pottery from non-pit contexts in Site B, which was recorded by Olivia Lelong. Using the existing detailed archive, information relating to form, fabric, and decorative motifs within the pit assemblages has been coded by Ann Woodward.

After careful consideration, it was decided to base the pottery form series on that devised by Cunliffe for the Danebury assemblage (Cunliffe 1984, 259–307). Modifications and extensions of that system developed during the analysis of the further assemblages from Hengistbury Head (Cunliffe and Brown, in Cunliffe 1987, 205–321) and Maiden Castle (Brown 1991) have also been used to the full, while some further new types have needed to be designed specifically to describe elements within the assemblage. The fabric series and the index of coded decorative motifs have been devised specifically for the Cadbury Castle assemblage.

The ceramic fabric series

by David Williams and Ann Woodward

Within the Alcock and Stevenson archives fabrics were described consistently, but simply, in free text. This simplified system was continued throughout the work involved in completing the archive, and was coded as shown below.

Simplified series

Inclusions	*Code*
shell, plate shell	SH or sh
sand	S
calcite	C or ca
quartz	Q
oolite	O or ool
flint	F
limestone	L
micaceous sand	MS or micS

For those assemblages which had not been recorded previously (Sites K and D), a more complex and detailed system was devised. This was formulated macroscopically and then checked, and further described petrologically, by David Williams (see p259–61).

Full series

Code	*Inclusions*
a	calcite: large pieces of calcite in the form of rhombs, clearly visible in the hand-specimen
b	calcite and shell
c	shell: frequent plates of fossiliferous shell; fragments of limestone and small quartz grains often present also
(d)	(not used)
e	oolitic: medium-sized concentric oolith grains
f	quartz sand and shell, coarse inclusions
g	shell and mica
h	fine quartz sand: well sorted quartz grains, average size between 0.20–60mm, with some shale and a little quartzite and mica flecks; some specimens display an even finer texture. 'Poole Harbour' fabric
i	shell and grog
j	fine quartz sand: frequent well sorted grains of quartz generally under 0.40mm in size, set in a fairly clean clay matrix
k	calcite and grog
l	quartz sand and shell, fine inclusions
m	flint and shell: the flint pieces are angular and subangular shell
(n–r)	(not used)
s	coarse quartz sand, average grain size > 0.40mm

t grog: a moderately frequent scatter of argillaceous material
u quartz sand, mica and shell
v quartz sand and mica: fine-textured sandy fabric with flecks of mica scattered throughout.

For the purposes of numerical comparisons and analysis, some of these detailed fabric types have been grouped, as follows:

f, i, l, m shell mixtures
b, k calcite mixtures

Further discussion of the incidence of fabric types, and consideration of the probable source areas for the different classes of inclusion, will be found in Chapter 9 (see p259–61) and in Chapter 7.

The ceramic form series

The pottery is divided into four major classes defined on metrical criteria:

J jars
B bowls
D dishes
P saucepan pots and barrel-shaped jars

Each class is subdivided into a series of forms, and sometimes into sub-varieties. On the whole the system has been kept as simple as possible, with a minimum of sub-varieties defined. This has been intentional, owing to the foreseen difficulties involved in the coding of forms from an existing drawn archive. Owing to the high incidence of sherd material (as opposed to complete vessel profiles), base angles have been provided with a separate classification.

The main departures from the systems devised for Danebury, Hengistbury Head, and Maiden Castle are as follows, in chronological order:

a) the addition of a new form of late Bronze Age bipartite jar, JA.3
b) the addition of three new forms of early Iron Age sharp-shouldered bipartite jars: JB1.3–5
c) the redefinition and extension of the barrel-shaped jars, types PA1–3
d) the addition of a new variety of slack-profiled early/middle Iron Age jar, JB4.2
e) the addition of a new form of large jar with straight sides, JB5
f) the addition of a code for Butt Beakers, BD8

In the detailed exposition of the form series that follows, the fabric occurrences refer to the total numbers of vessels per fabric within that form type, using the more detailed fabric series (see above), and as recorded for the fully processed assemblages only, from Sites K and D.

Middle Bronze Age (Fig 144)

1 Type II Globular Urn (Calkin 1964): one shoulder sherd decorated with wide incised grooves. Context N763.
2 Sherd from below the rim of an urn with a slight neck and a raised slashed cordon in the neck. Context E2C (Ellison 1975, Central Wessex Type 2).

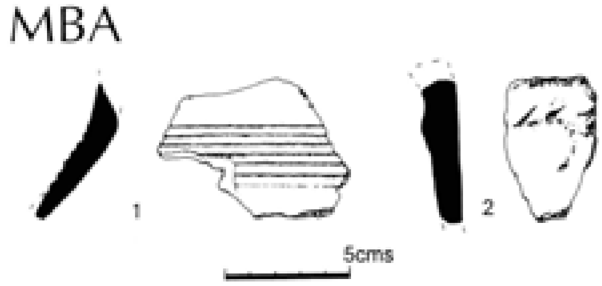


Fig 144 Middle Bronze Age pottery. Scale 1:3

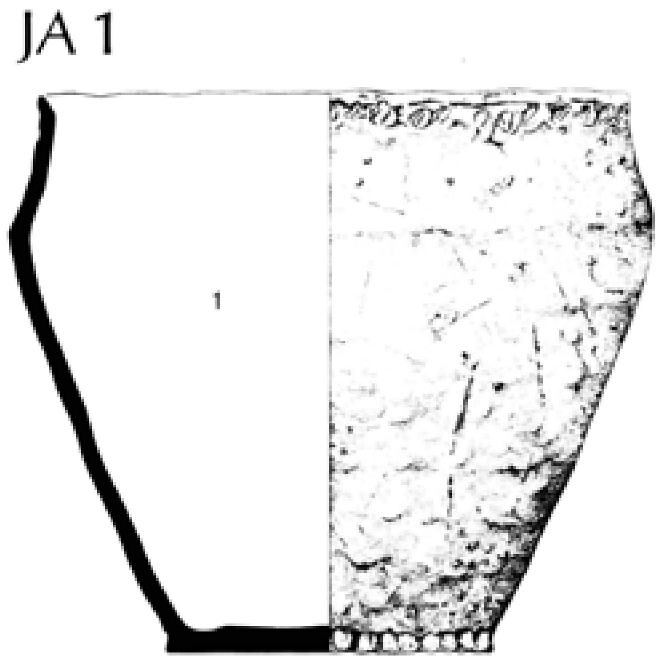


Fig 145 Ceramic form JA1. Scale 1:3

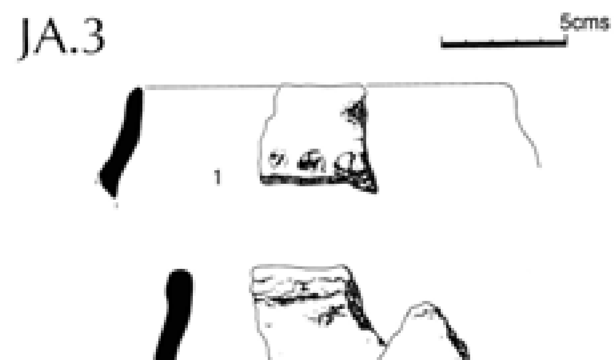


Fig 146 Ceramic form JA3. Scale 1:3

Late Bronze Age and Iron Age

Jars

The height usually exceeds the maximum diameter: rim diameters are usually less than maximum body diameters.

Type JA: Bipartite with maximum girth at the shoulder above which the upper body slopes evenly inwards.

Form JA1 (Fig 145): Large bipartite jar with fingertip impressions just below the rim and around

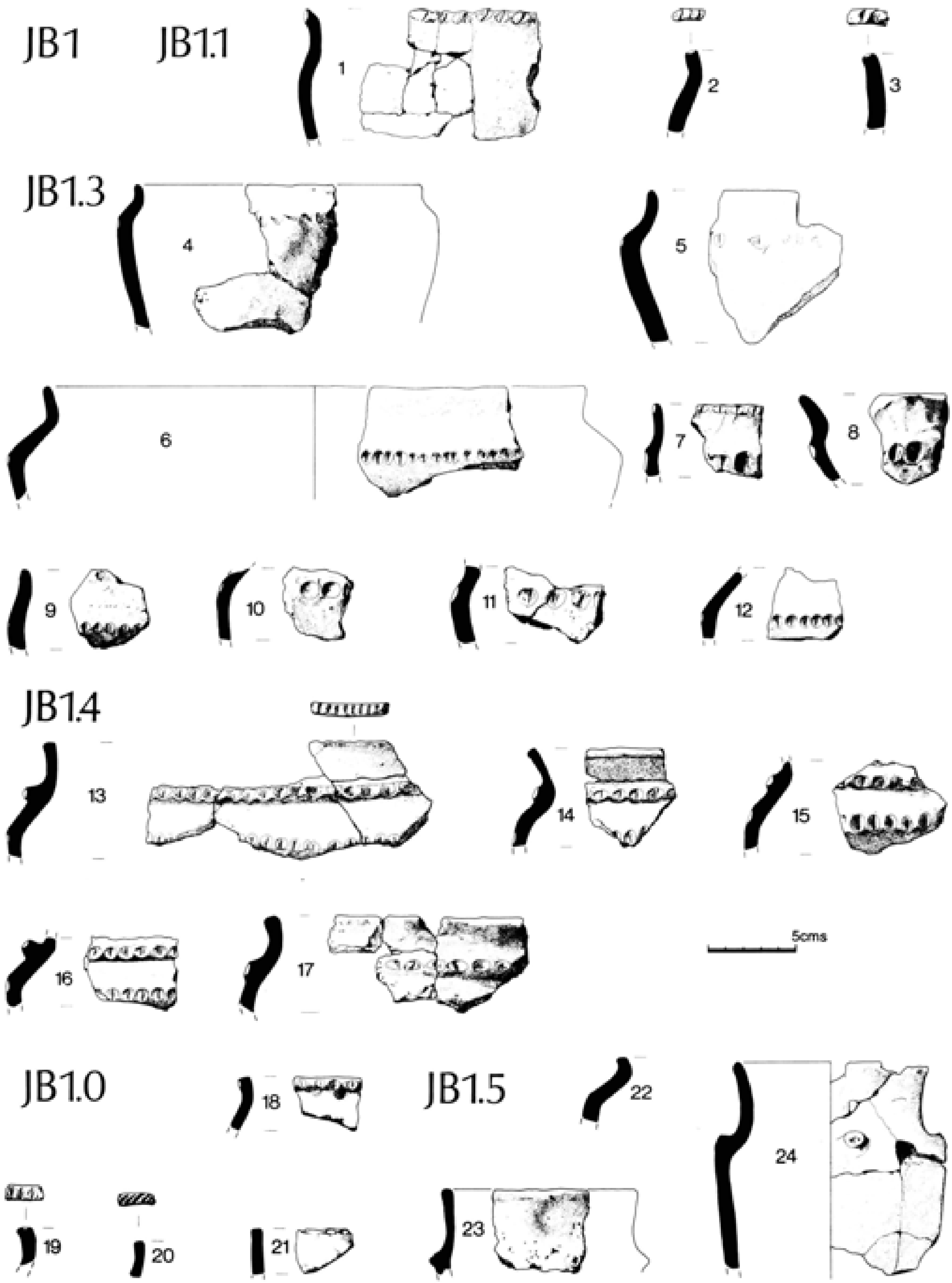


Fig 147 Ceramic form JB1 varieties. Scale 1:3

the base. This example (but not all examples) possesses an internally bevelled rim and an extruded base.

Fabrics: shell (3), shell mixtures (1). Ceramic Assemblage 4 (late Bronze Age).

Form JA2: a Danebury form not recognised at Cadbury.

Form JA3 (Fig 146): Medium-sized bipartite jar with simple or slightly flattened rim, embellished with rows of fingertip impressions or rough rustication below the rim and/or at the shoulder.

Fabrics: shell (2). Ceramic Assemblage 4 (late Bronze Age).

Type JB: Tripartite with a rounded or sharp angle between body and shoulder; out-flaring or upright rim; finger moulding common.

Form JB1 (four varieties) (Fig 147): High shouldered jar with slightly out-flared rim. Variety JB1.1 (which is equivalent to varieties JB1.1–2 at Danebury) is characterised by a row of fingertip impressions along the top of the rim, which is often flattened (Fig 147, 1–3 and 19–20). Three further newly defined varieties occur at Cadbury Castle. Form JB1.3 includes vessels with a plain rim and a row of fingertip impressions or slashes around the shoulder (Fig 147, 4–12). Occasional examples with finger rustication at both rim and shoulder eg Figure 147.7 have also been included in this variety. Vessels of form JB1.4 possess plain or fingertipped rims, fingertipping at the shoulder, and the addition of an applied neck cordon which is also decorated with fingertip impressions (Fig 147, 13–17). Form JB1.5 includes a series of tall and narrow plain-shouldered jars with four or more plain roughly circular lugs or knobs located at shoulder level (Fig 147, 22–4). One vessel from the eastern part of the interior (Site N) was decorated with a series of incised horizontal lines, multiple chevrons, and lines of punched circles (Fig 148).

Fabrics: shell (34), shell mixtures (2), shell with mica (5), quartz sand, mica, and shell (1). Ceramic Assemblages 5–7, with a concentration in Ceramic Assemblage 6.

Form JB2 (Fig 149): Shouldered jars with upstanding or slightly everted rims. The rim tops are usually flattened and the vessels are plain. A wide size range is represented but the form has not been subdivided for the purposes of analysis at Cadbury Castle.

Fabrics: calcite mixtures (4), shell (170), shell mixture (1), coarse quartz (1). Ceramic Assemblages 6–7, with slight occurrence in Ceramic Assemblage 5.

Form JB3 (Fig 149): Large jars with rounded shoulder and upstanding or slightly out-flared necks. The vessels are plain and slightly better finished than those belonging to form JB2.

Fabrics: shell (77), quartz (1). Ceramic Assemblages 5–7, with a concentration in Ceramic Assemblage 7.

Form JB4 (two varieties; Fig 149): Large slightly shouldered plain jars with a slack profile and simple or flattened rims. At Cadbury Castle two very distinct varieties could be defined. Vessels of form JB4.1 are generally large and the rims are often flattened. The JB4.2 jars are of more even and medium size and are characterised by a gentle out-flaring but simple rim. The two varieties appear to have slightly different date ranges.

JB4.1: Fabrics: shell (23), shell mixture (1). Ceramic Assemblage 7.

JB4.2: Fabrics: shell (15), fine quartz (1), coarse quartz (1). Ceramic Assemblages 6–7.

Form JB5 (Fig 150): Large plain jars of such slack profile that they are almost straight-sided. The rims are simple, flattened or slightly bevelled internally. This is a newly defined type. At Danebury such vessels might be classified within the range of form PA2, but at Cadbury Castle the PA forms are more specifically defined (see below).

Fabrics: shell (22), shell mixture (1). A concentration in Ceramic Assemblages 7–8.

Type JC: Bipartite jars displaying an even curve from shoulder to rim. Rim tops are frequently beaded. In sherd material it is often difficult to say whether a vessel is a JC or BC type; in doubtful cases the vessel has been assigned to BC.

Form JC1 (Fig 150): Large storage jars with rounded shoulder and flattened sometimes upstanding rims.

Fabrics: shell (14), shell mixture (4), shell with mica (1), fine quartz sand (1), coarse quartz (2). Ceramic Assemblages 6–7, with a concentration in Ceramic Assemblage 6.

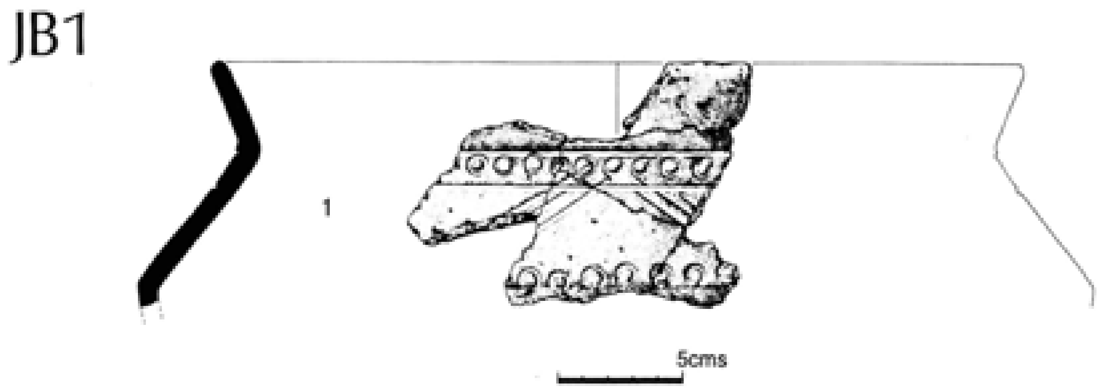


Fig 148 Ceramic form JB1, decorated sherd. Scale 1:3

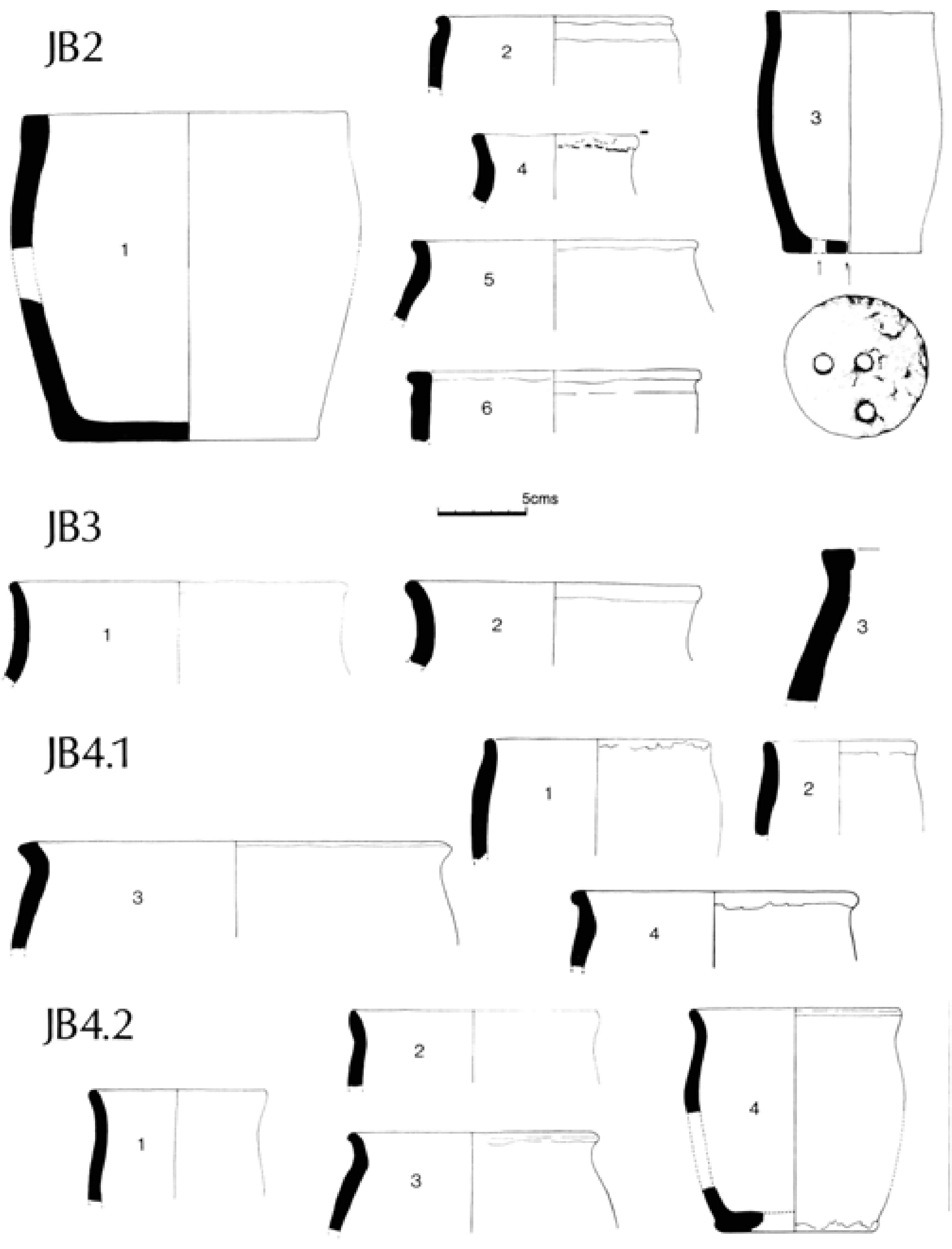


Fig 149 Ceramic forms JB2, JB3, JB4.1, and JB4.2. Scale 1:3

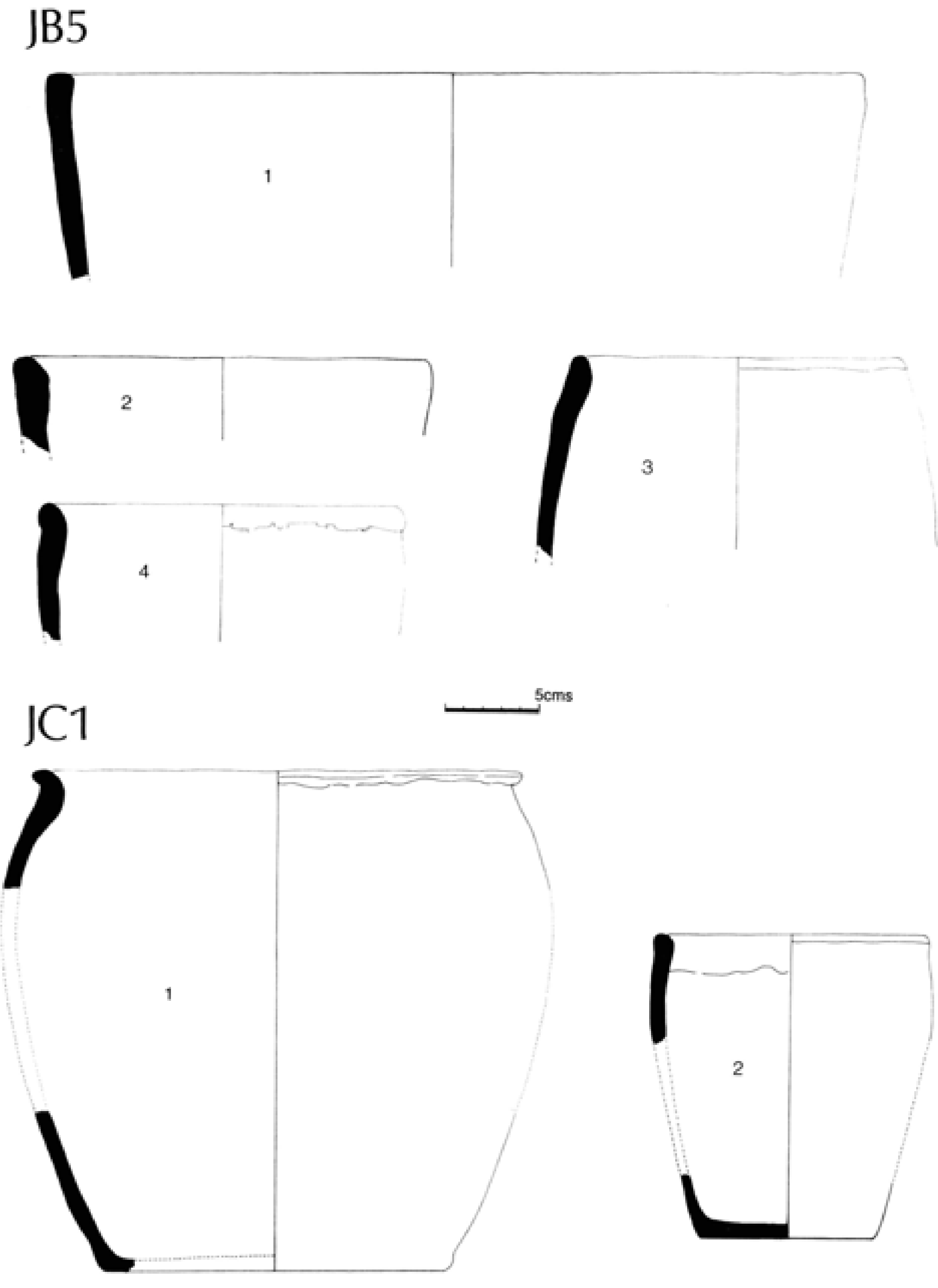


Fig 150 Ceramic forms JB5, JC1. Scale 1:3

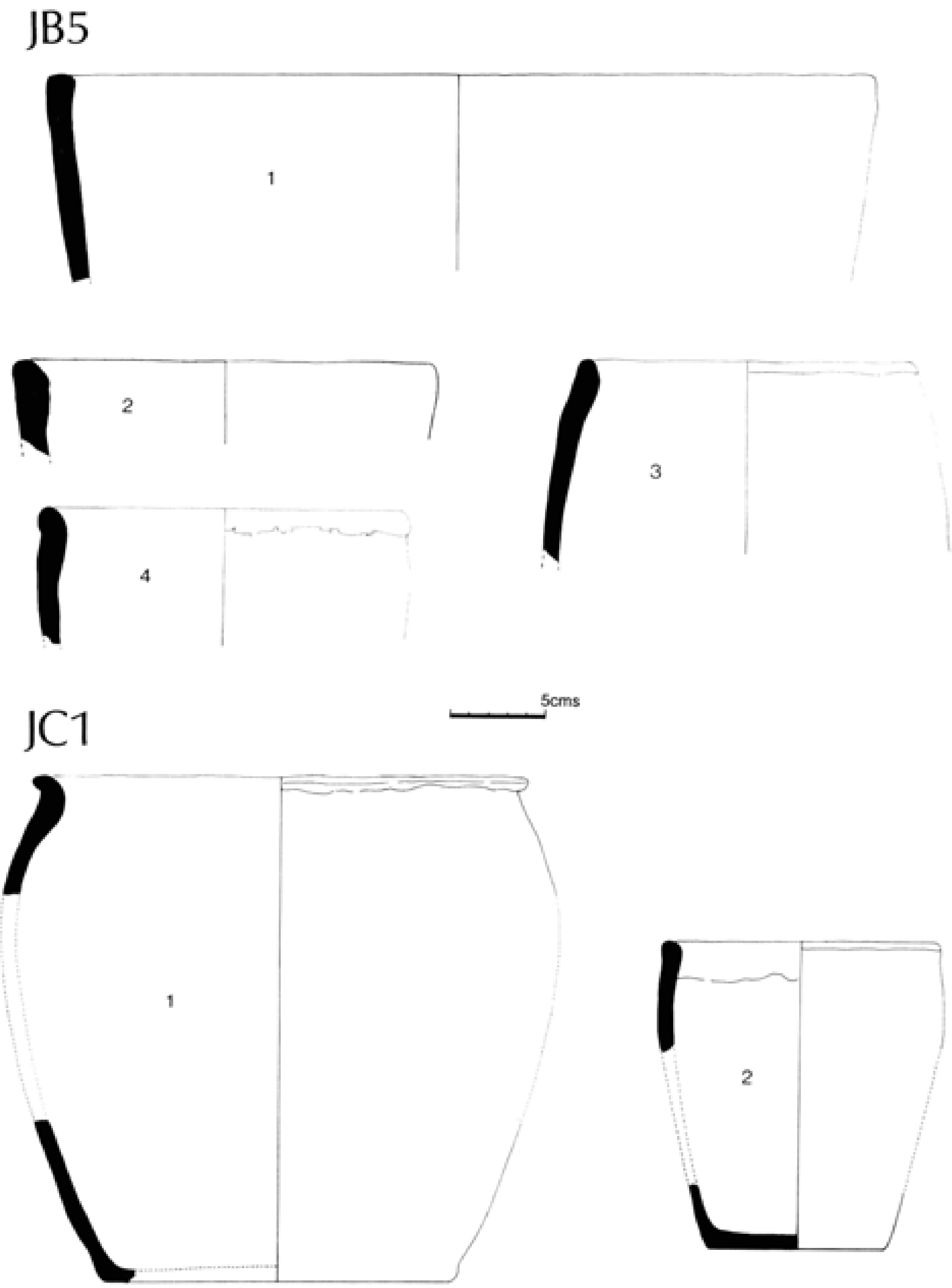


Fig 151 Ceramic form JC2. Scale 1:3

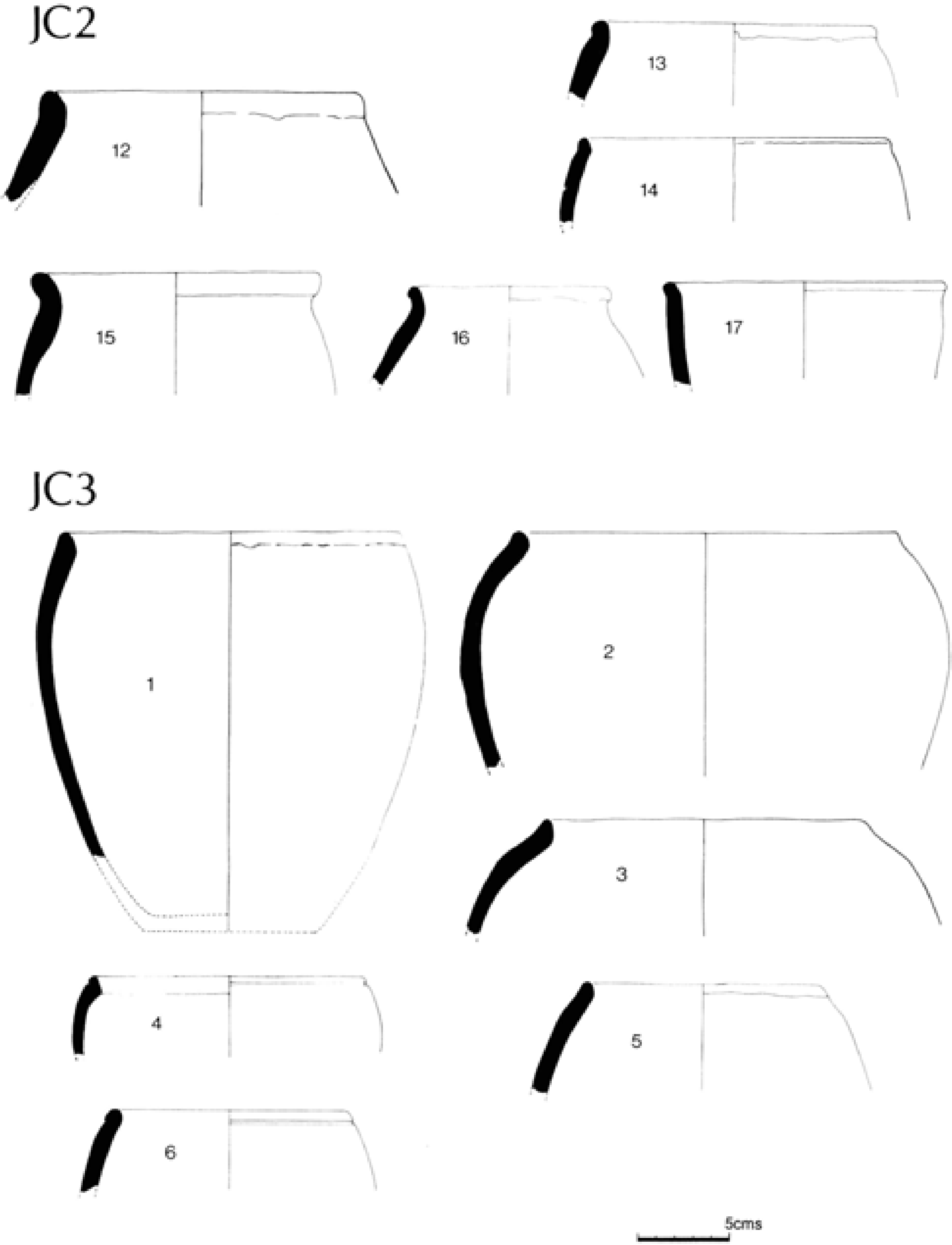


Fig 152 Ceramic forms JC2, JC3. Scale 1:3

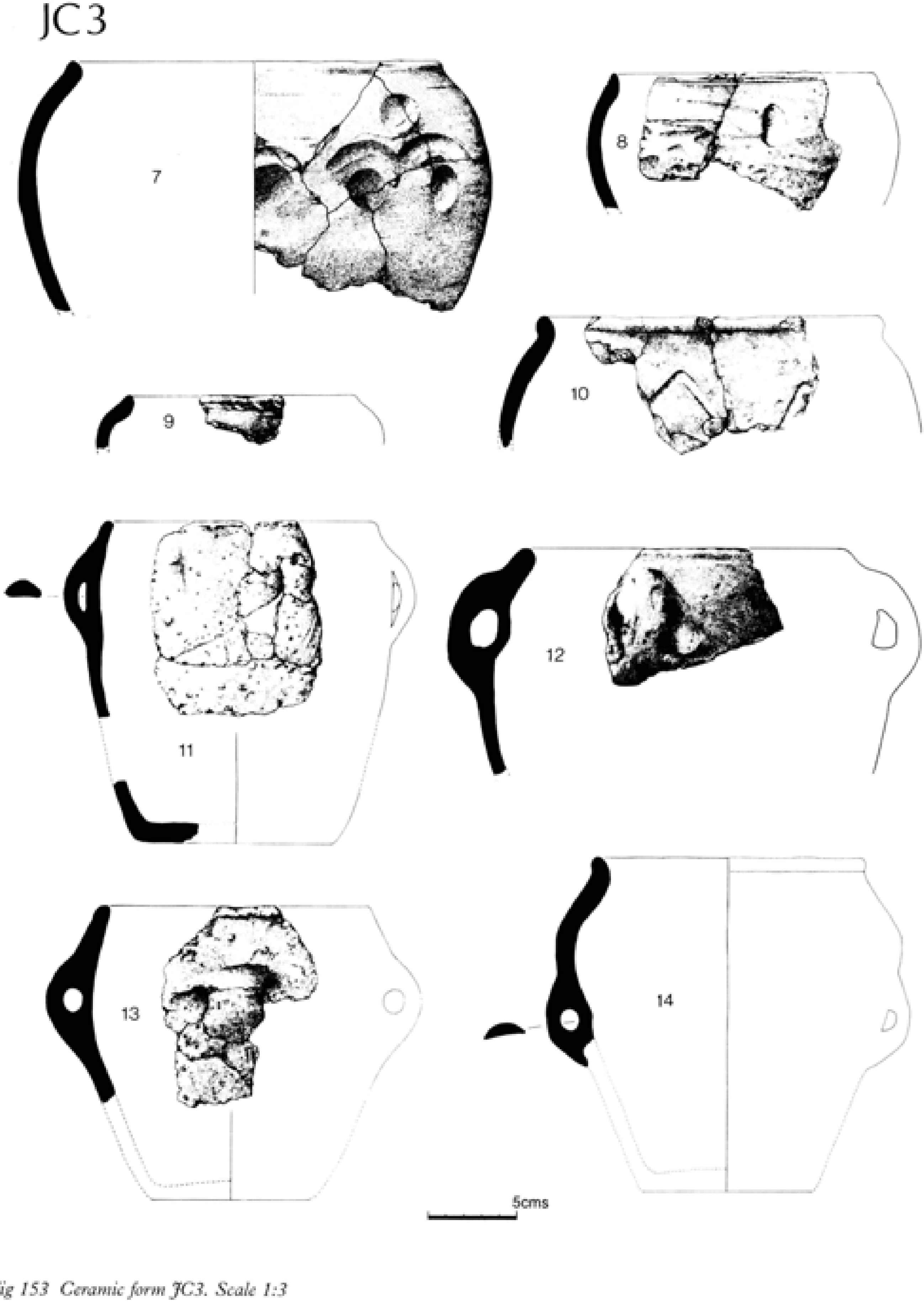


Fig 153 Ceramic form JC3. Scale 1:3

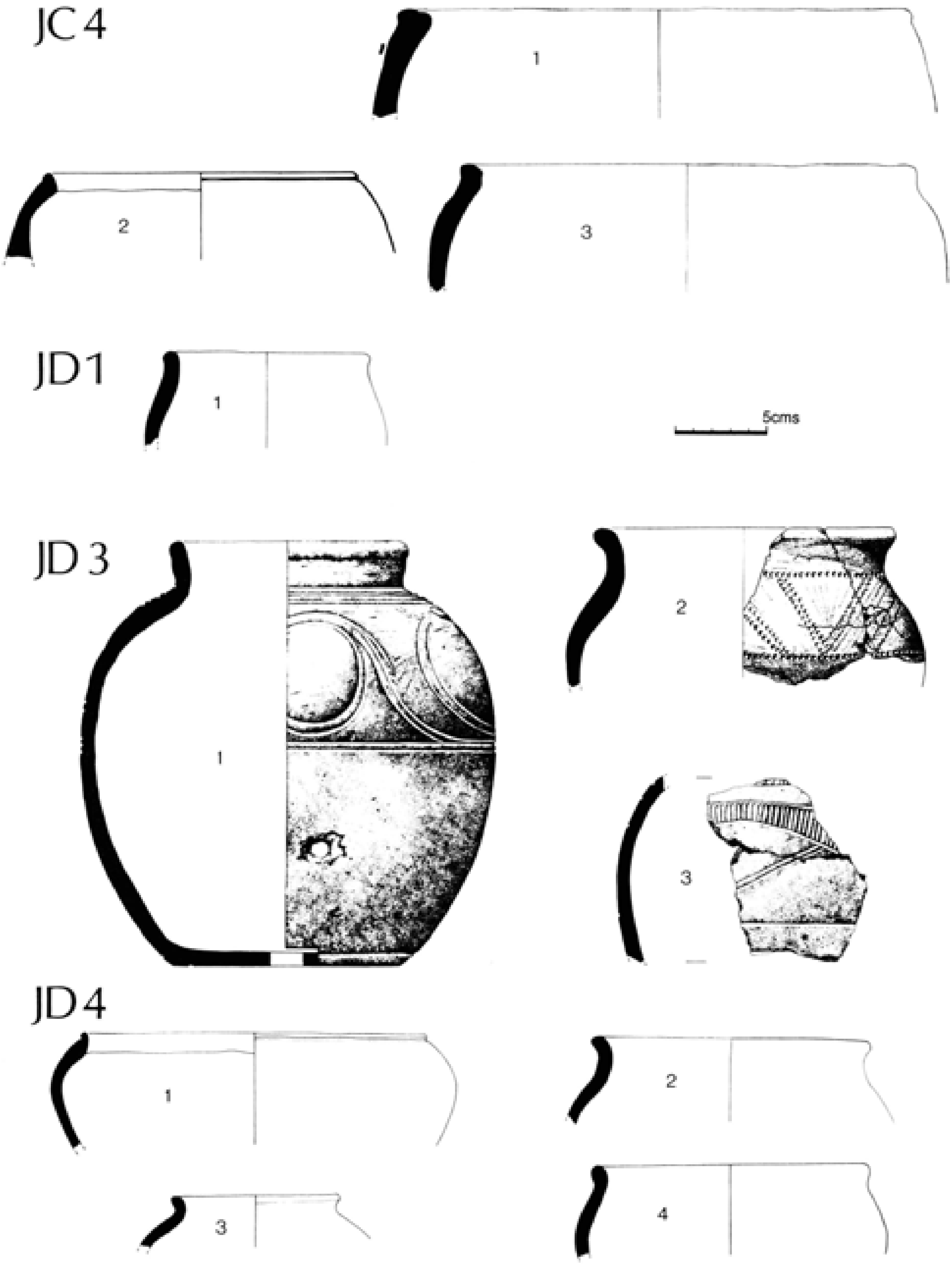


Fig 154 Ceramic forms JC4, JD1, JD3, JD4. Scale 1:3

JE4.2

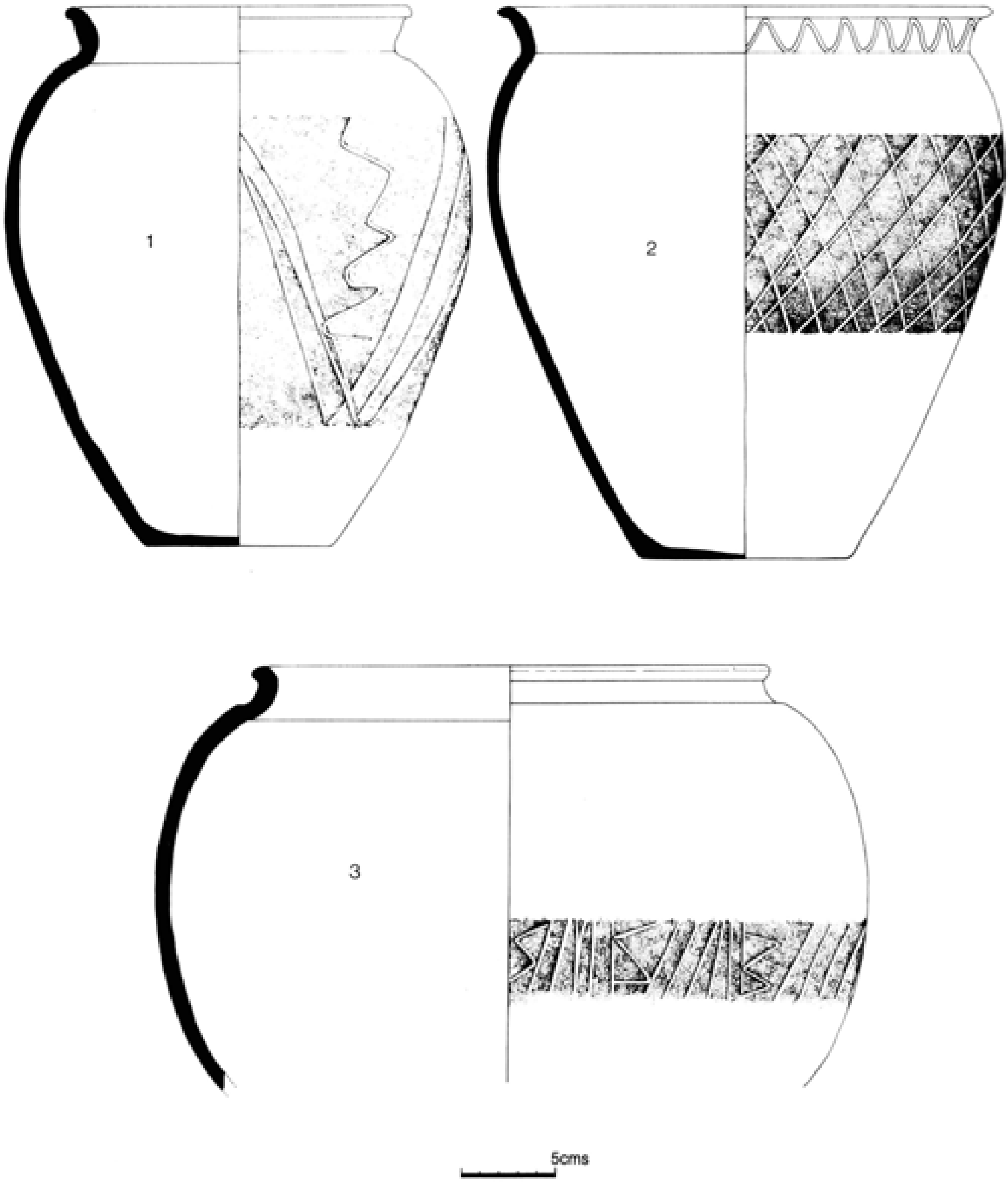


Fig 155 Ceramic form JE4.2. Scale 1:3

Form JC2 (Figs 151–2): Medium to large sized jars with distinct high shoulders. The rims are often slightly thickened and rolled outwards to form a 'proto-bead' rim. At Cadbury Castle the form has not been sub-divided. The shallow-tooled decoration which occurs sometimes on these vessels at Danebury has not been observed here.

Fabrics: calcite (1), calcite mixture (1), shell (52), shell mixtures (3), Poole Harbour fabric (15), coarse quartz sand (10), coarse quartz (25), grog (1). Ceramic Assemblages 7–8, with a concentration in Ceramic Assemblage 8.

Form JC3 (Figs 152–3): High-shouldered jars with upright beaded rims. The vessels are often wheel-finished but otherwise reflect the range of shapes found in form JC2. The tooled decoration found sometimes at Danebury is absent, but the dimple and eyebrow motifs and the countersunk lugs found at Maiden Castle are quite common at Cadbury (see Fig 153).

Fabrics: calcite mixture (1), shell (16), Poole Harbour (6), sand (1), coarse quartz (49). Ceramic Assemblages 8 and 9.

Form JC4 (Fig.154): (Note: this jar form was first defined for the Hengistbury Head assemblage: Cunliffe and Brown 1987, 209.)

Rounded jars, usually very large, with a flattened beaded rim; not subdivided at Cadbury where they are relatively rare.

Fabrics: shell (7), Poole Harbour (5), coarse quartz (17). Ceramic Assemblage 9.

Type JD: Jars with an even S-curved profile.

Form JD1 (Fig 154): Globular jar with gently out-curved rim. The profile is more gently S-curved than in the case of form JB4. Fairly uncommon here.

Fabrics: calcite mixture (1), shell (13), shell and mica (5), Poole Harbour (2), coarse quartz (3). Ceramic Assemblages 6–8.

Form JD3 (Fig 154): Globular S-profiled jars with up-right but slightly out-flaring simple rims. At Cadbury Castle they are decorated with sharp-tooled geometric and curvilinear designs, similar to those used on the form BD6 bowls.

Fabrics: none recorded from Sites K or D. Ceramic Assemblage 8.

Form JD4 (Fig 154; see Cunliffe and Brown 1987, 209). Tripartite jars with everted rims; the rims may be flattened or beaded; not subdivided here.

Fabrics: shell (11), shell mixture (7), shell and mica (1), Poole Harbour (6), fine quartz sand (3), coarse quartz (10), grog (1). Ceramic Assemblage 9.

Type JE: Wheel-made high-shouldered jars with straight or slightly out-flaring rims. The Cadbury examples appear to be the form JE4.2 defined at Hengistbury Head (Cunliffe and Brown 1987, 210).

Form JE4.2 (Fig 155): Wareham/Poole Harbour products which are forerunners of the BB1 cooking pot. They are equivalent to Brailsford's Type 5 (Brailsford 1958). The burnished decoration included zigzags on the neck and zigzag or cross-hatched lines on a matt zone around the body.

Fabrics: shell (2), Poole Harbour (44), fine quartz sand (14), coarse quartz (34), grog (2). Ceramic Assemblage 9.

Dishes

Type DA: Open wide-mouthed dish with straight or slightly curved sides.

Form DA1 (Fig 156): Open dish with slightly curved sides. Rims are thickened and flattened. The decoration sometimes found at Danebury is absent at Cadbury Castle where the form is uncommon.

Fabrics: shell (5), shell mixtures (3), Poole Harbour (1), coarse quartz (4). Ceramic Assemblages 7 and 8.

Saucepan pots and barrel-shaped 'jars' (vessels with near vertical sides)

Type PA: Medium sized vessels with slightly incurved sides. The common name for such vessels in the south-west, where they are extremely common, is barrel-shaped jars. At Danebury the varieties PA1 and PA2 are divided, as here, by differences in rim type, but PA3 denotes vessels smaller in size. The Cadbury Castle varieties have been defined rather differently and note should be taken of this departure from the Danebury system. Some larger straight-sided vessel which at Danebury would have been classifed as PA are at Cadbury Castle assigned to the new jar type JB5.

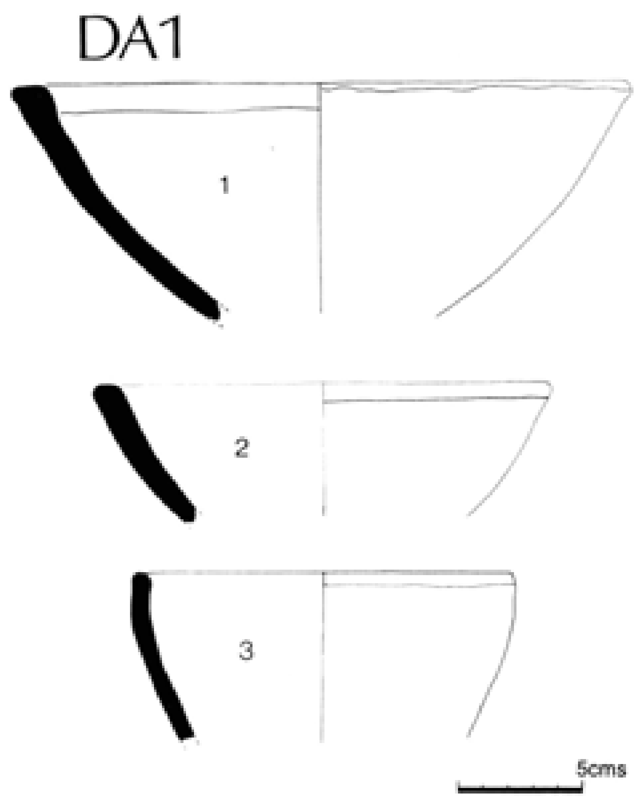


Fig 156 Ceramic form DA1. Scale 1:3

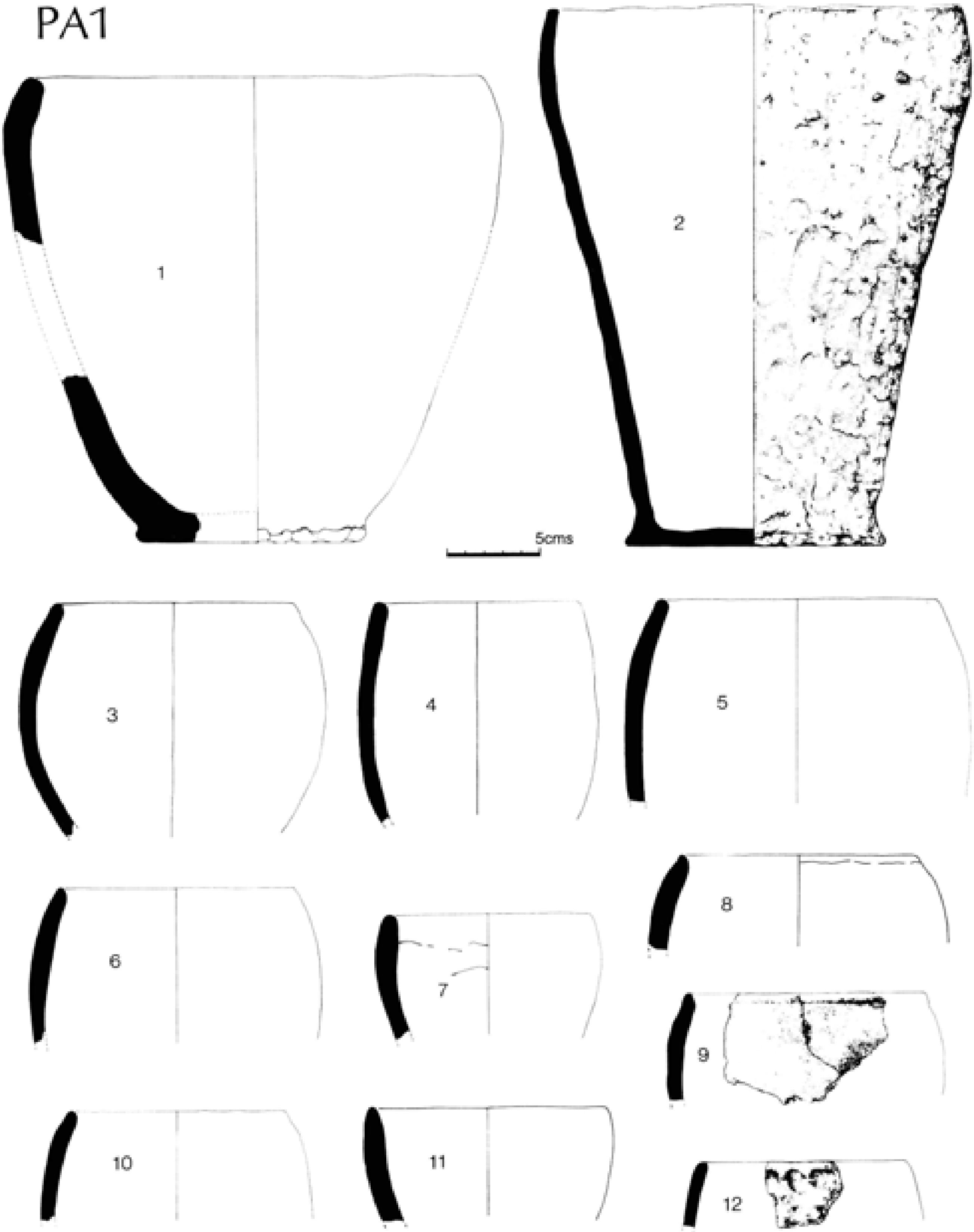


Fig 157 Ceramic form PA1. Scale 1:3

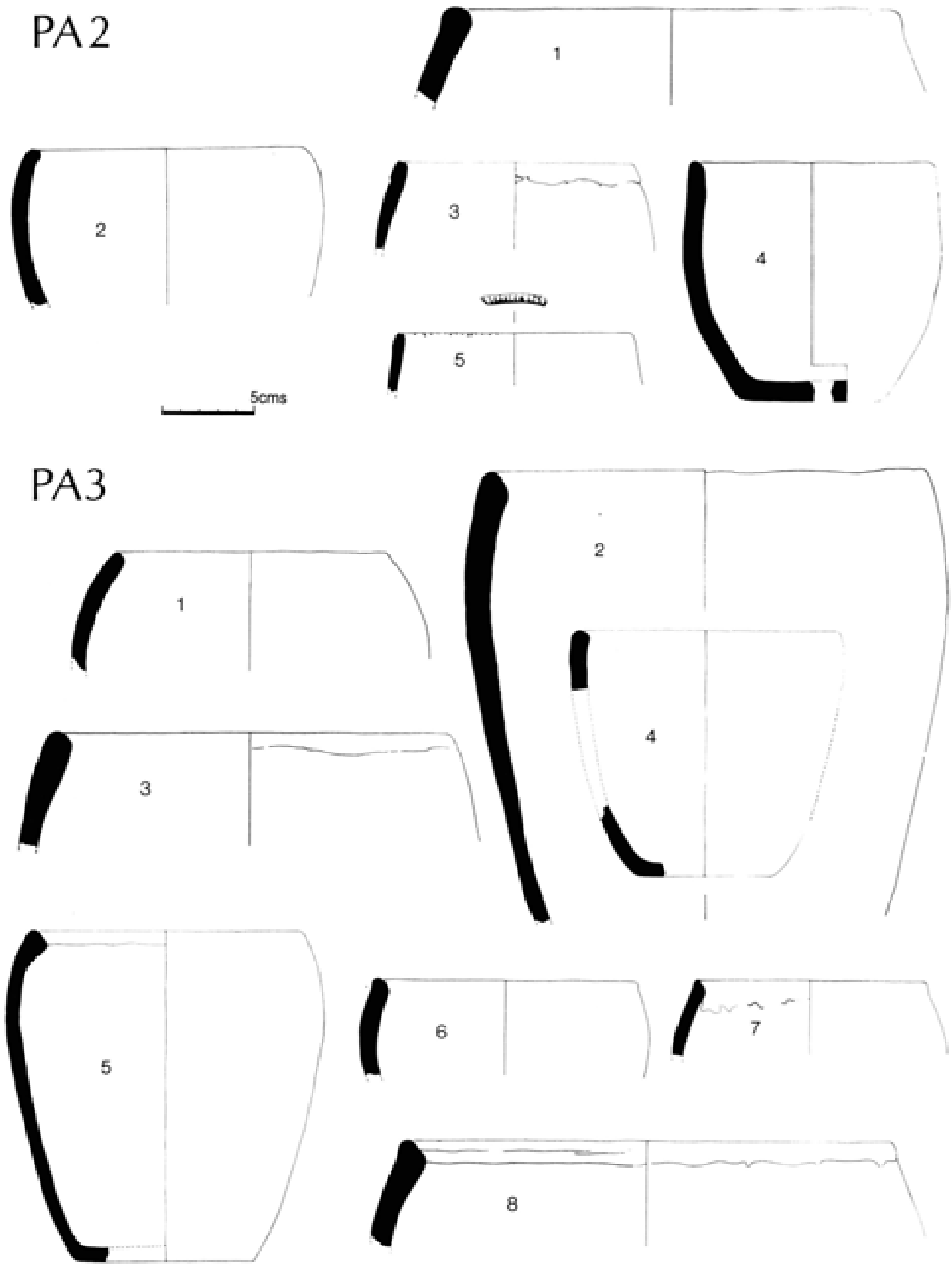


Fig 158 Ceramic forms PA2, PA3. Scale 1:3

Form PA1 (Fig 157): Vessels with a curving profile and a simple inturned rim. Included in this category are hook-rim jars of the late Bronze Age (eg Fig 157.1–2) and vessels with proto-bead rims of the middle Iron Age (Fig 157.8–9), but most are very plain and simple. Occasional thumbed decoration is present (Fig 157.12).

Fabrics: calcite mixtures (2), shell (71), shell mixture (1), shell and mica (1), Poole Harbour (1), coarse quartz (1). Ceramic Assemblages 4–8, with concentrations in Ceramic Assemblages 4 and 5, also in Ceramic Assemblage 8.

Form PA2 (Fig 158): Vessels with a curving profile and a flattened rim.

Fabrics: calcite mixtures (3), shell (81), shell mixtures (5), shell with mica (5), sand (2). Ceramic Assemblages 5–8, with a concentration in Ceramic Assemblage 7.

Form PA3 (Fig 158): Vessels with a curving profile and rims displaying a marked internal bevel. Less common than forms PA1 and PA2.

Fabrics: calcite mixture (1), shell (16), coarse quartz (1), shell with mica and quartz (1). Ceramic Assemblages 4–8, with a concentration in Ceramic Assemblage 4 (late Bronze Age).

Type PB: Vessels with straight or slightly curved walls and simple or slightly beaded rims. Saucepan pots.

Form PB1 (Fig 159): Plain and decorated examples are present. The decoration is sharp-tooled and is in marked contrast to the curvilinear shallow-tooled schemes generally used in Wessex.

Fabrics: shell (17), shell mixtures (2), Poole Harbour (3), coarse quartz (3). Ceramic Assemblage 8.

Bowls

The height is less than the maxiumum diameter. The rim diameters may exceed the maximum body diameters.

Types BA and BB: The range of early bowls at Cadbury is very limited, but can be described within the Danebury system of classification. Bipartite bowls belong

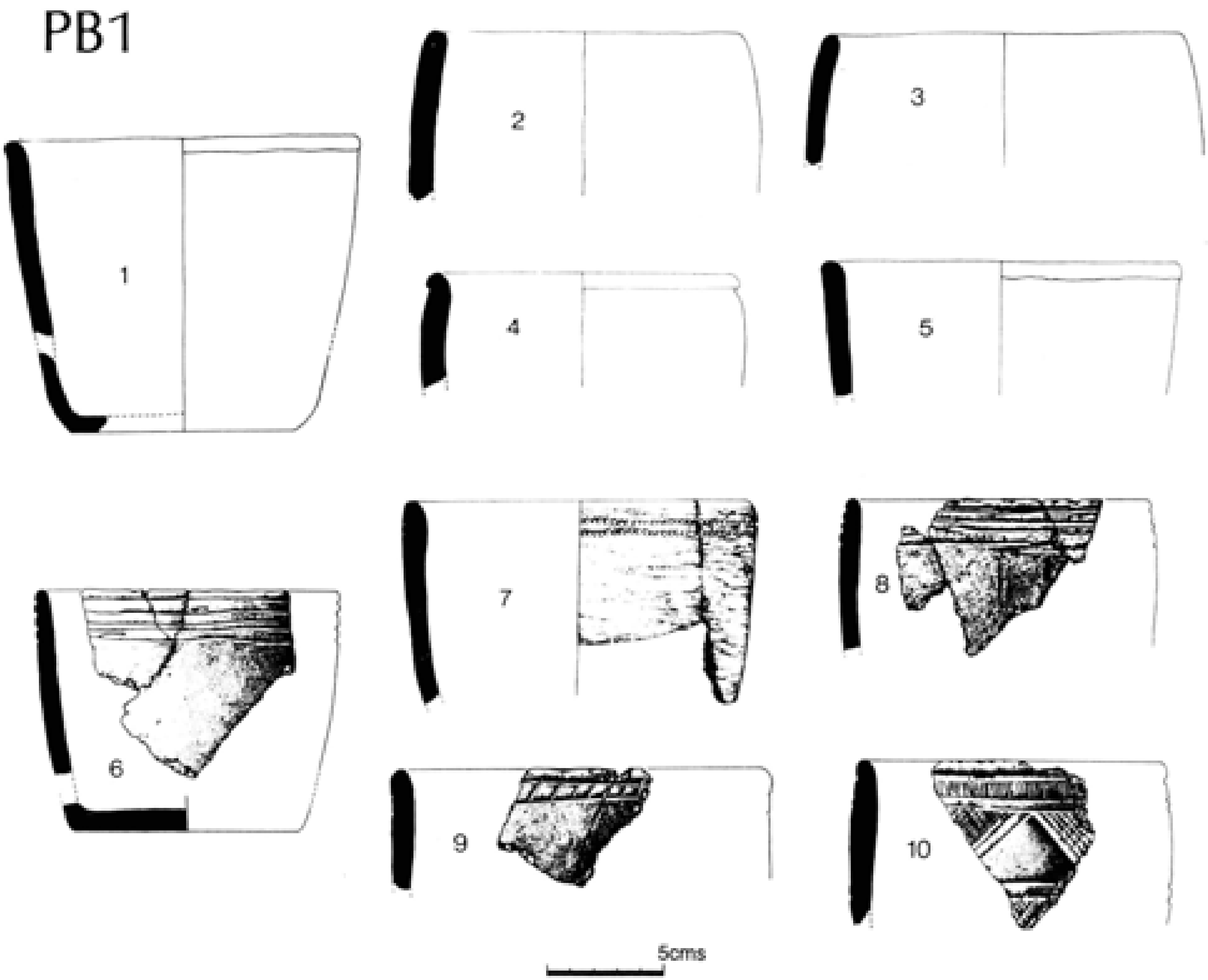


Fig 159 Ceramic form PB1. Scale 1:3

to type BA1 while the tripartite forms with body angles (but not usually, at Cadbury, with emphasising cordons) can be assigned to types BA2 and BB.

Form BA1 (Fig 160): Simple shouldered bowl with sloping neck. Zones of incised and impressed decoration are found, including geometric designs and rows of dots. The variety BA1.2 is characterised by a more vertical neck.

Form BA2 (Fig 160): Tripartite bowls with rounded shoulders. Variety BA2.1 shows slightly sharper shoulders while BA2.2 examples have less well defined profiles.

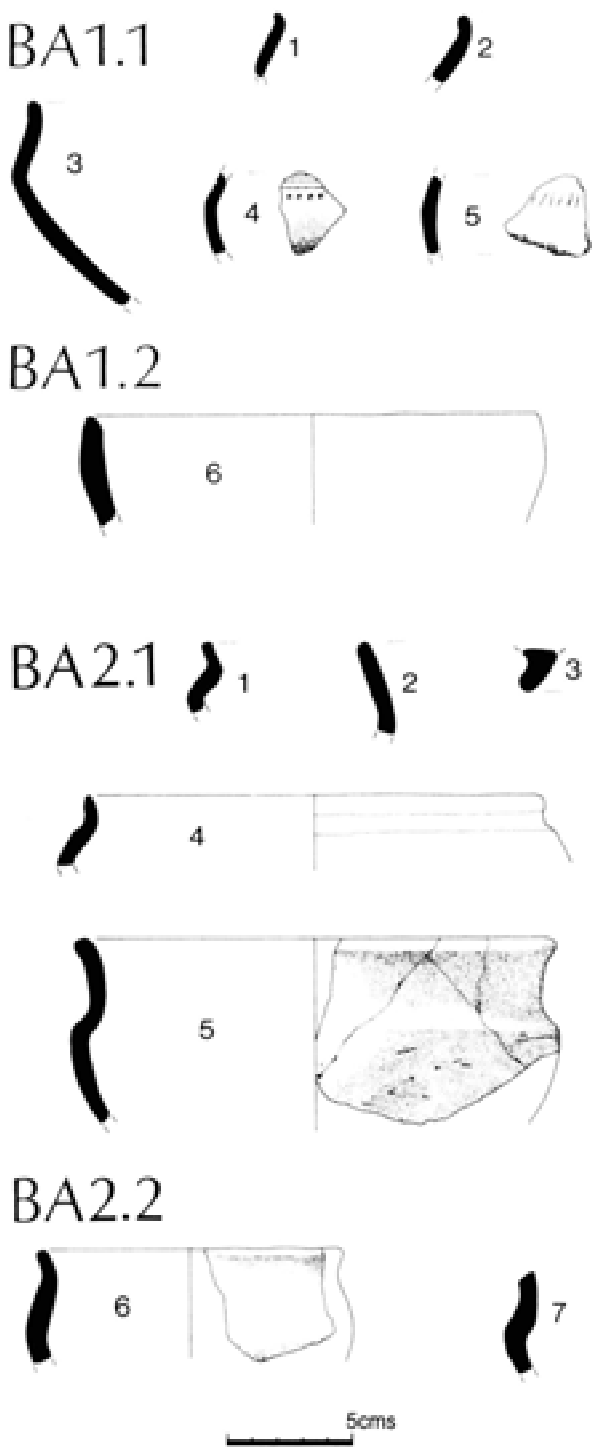


Fig 160 Ceramic forms BA1, BA2. Scale 1:3

Fabrics: BA1–BA2: calcite mixtures (2), shell (17), shell and mica (1), fine quartz sand (1), grog (1), sand and mica (1).

It should be noted that in the interior of the hillfort bowls are characterised by micaceous sandy fabrics. Ceramic Assemblages 5 and 6.

Type BC: Bowls with simple even-curved profiles.

Form BC1 (none illustrated): Simple hemispherical bowls with thickened everted rims.

Form BC2 (none illustrated): Simple hemispherical bowls with simple rims, sometimes decorated.

Fabrics: BC1–BC2: shell (12), shell mixtures (2), Poole Harbour (2), coarse quartz sand (1). Ceramic Assemblages 4–8.

Form BC3 (Fig 161): Shallow bowls with straight or convex sides and bead rim. Form BC3.1 bowls are more straight-sided: these and a few examples of 'devolved' bead rim occur late in the sequence at Maiden Castle and at Cadbury Castle (Lisa Brown pers comm).The variety BC3.2 (equivalent to Brailsford Type 1a) has a foot-ring base, straight sides, and may be decorated with vertical ribs (Fig 161.1). This form is commonly known as a 'war cemetery bowl' after the vessels recovered by Wheeler from Maiden Castle. The commonest variety is form BC3.3, plain bowls with rounded profile, simple bases, and beaded or plain rims. BC3.4 bowls are characterised by an expanded rim.

Fabrics: shell (53), oolitic (2), shell mixtures (18), shell with mica (1), Poole Harbour (171), coarse quartz sand (60), coarse quartz (132), grog (1). Ceramic Assemblages 8 and 9.

Type BD: Shouldered bowls with distinct straight necks. The angles are sharp and all vessels are wheel-turned or wheel-finished.

Form BD1 (Fig 162) (for first definition see Cunliffe and Brown 1987, 221): Wide-mouthed bowl with at least two cordons at or above shoulder level and a pedestal base. Black burnished surfaces. Some vessels of this form derive from north-western France but copies were produced probably within Durotrigian territory.

Form BD2 (Fig 162): Wide-mouthed bowls with a single cordon at the junction of neck and shoulder.

Fabrics: BD1–BD2: Poole Harbour (10), coarse quartz sand (16), coarse quartz (4). Ceramic Assemblage 9.

Forms BD3 and BD4: French rilled wares etc. Not present at Cadbury.

Form BD5 (Fig 162): Bipartite bowls, sometimes decorated with sharp-tooled ornament, geometric or curvilinear.

Fabrics: shell mixture (1), Poole Harbour (3), coarse quartz sand (1), sand and mica (1). Ceramic Assemblages 8 and 9.

Form BD6 (Figs 162–5): Glastonbury ware bowls. These vessels have marked shoulders and upright necks. The rims are usually everted and may be plain,

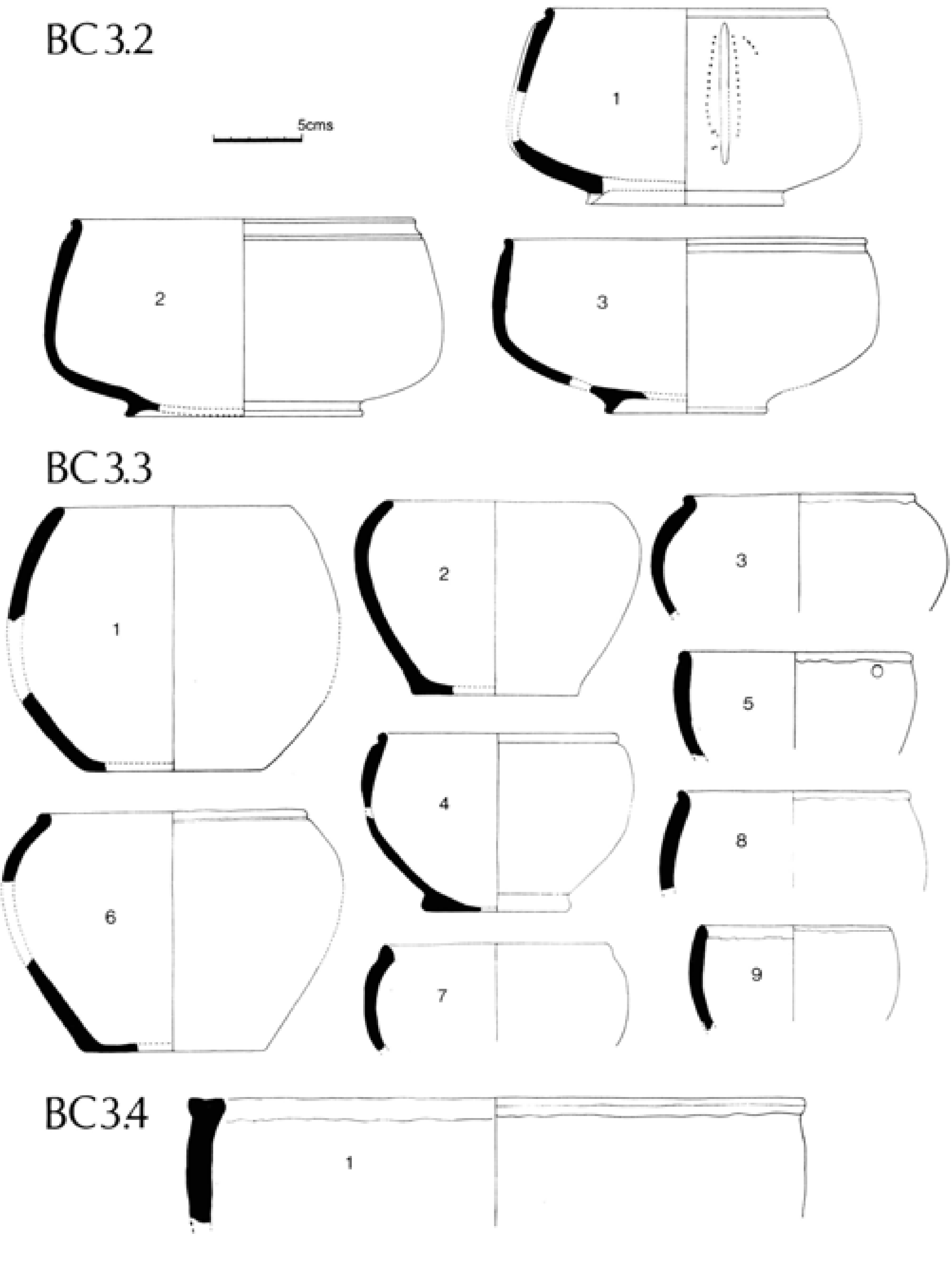


Fig 161 Ceramic forms BC3.2, BC3.3, BC3.4. Scale 1:3

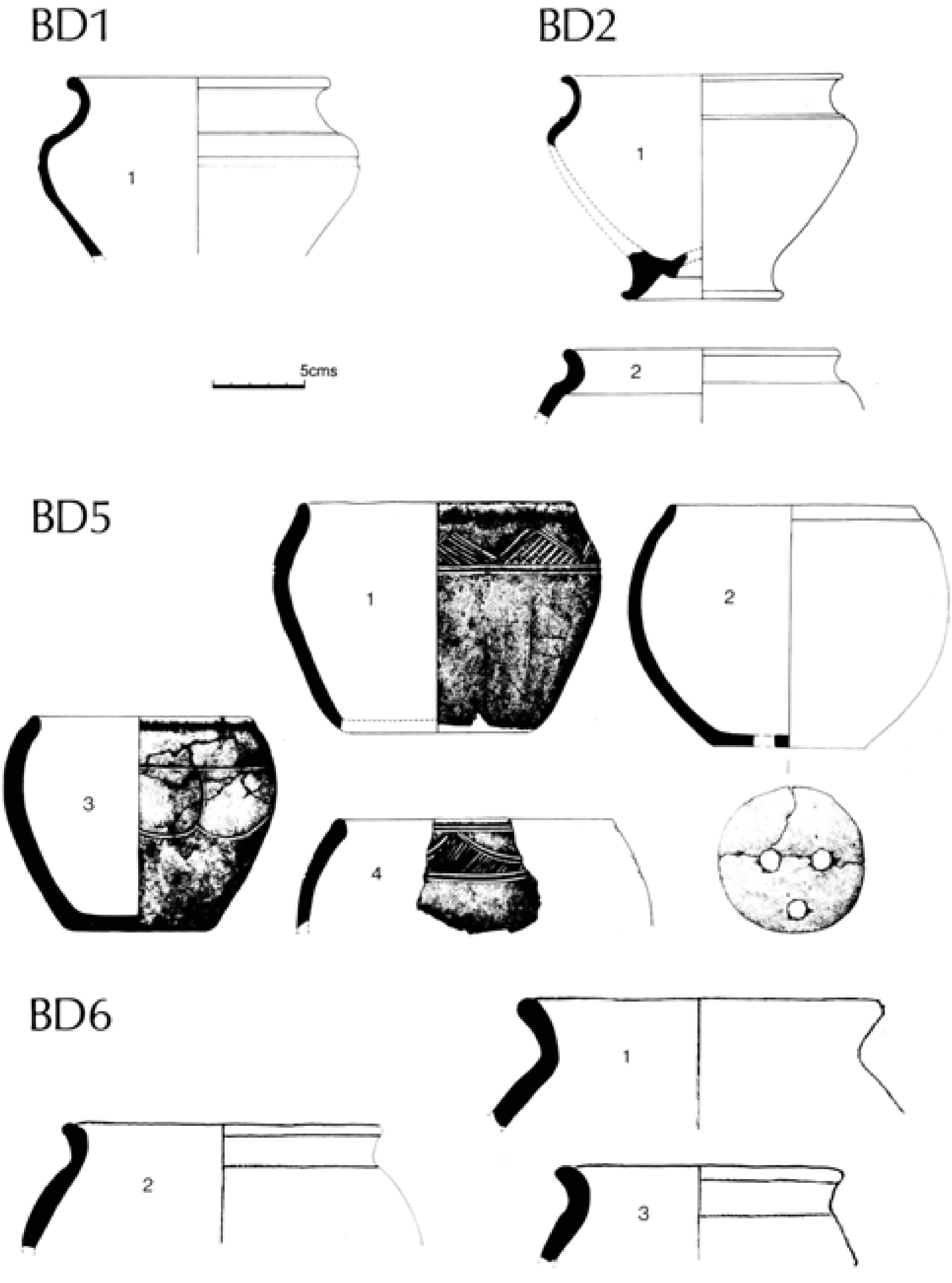


Fig 162 Ceramic forms BD1, BD2, BD5, BD6. Scale 1:3

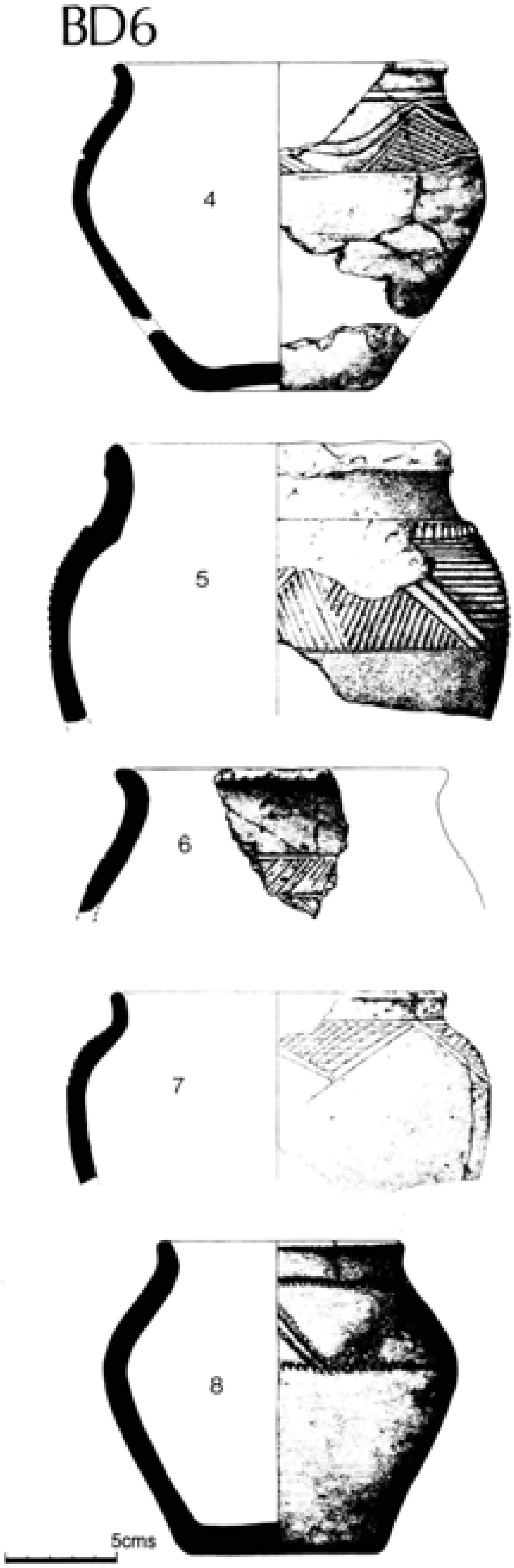


Fig 163 Ceramic form BD6, 4-8. Scale 1:3

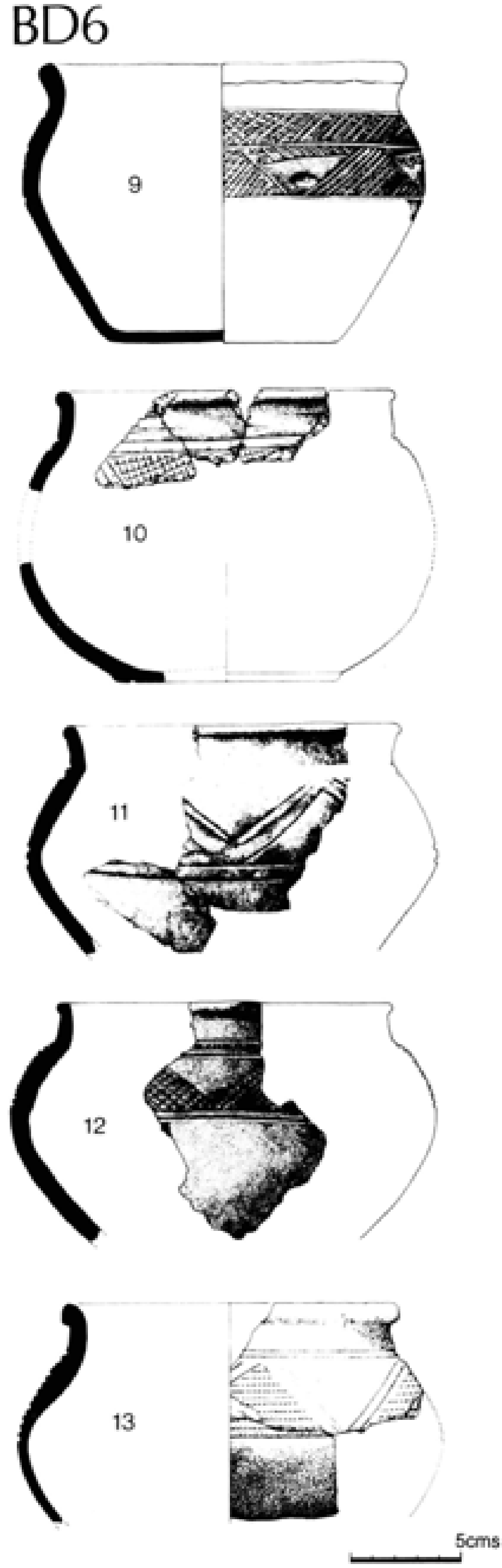


Fig 164 Ceramic form BD6, 9-13. Scale 1:3

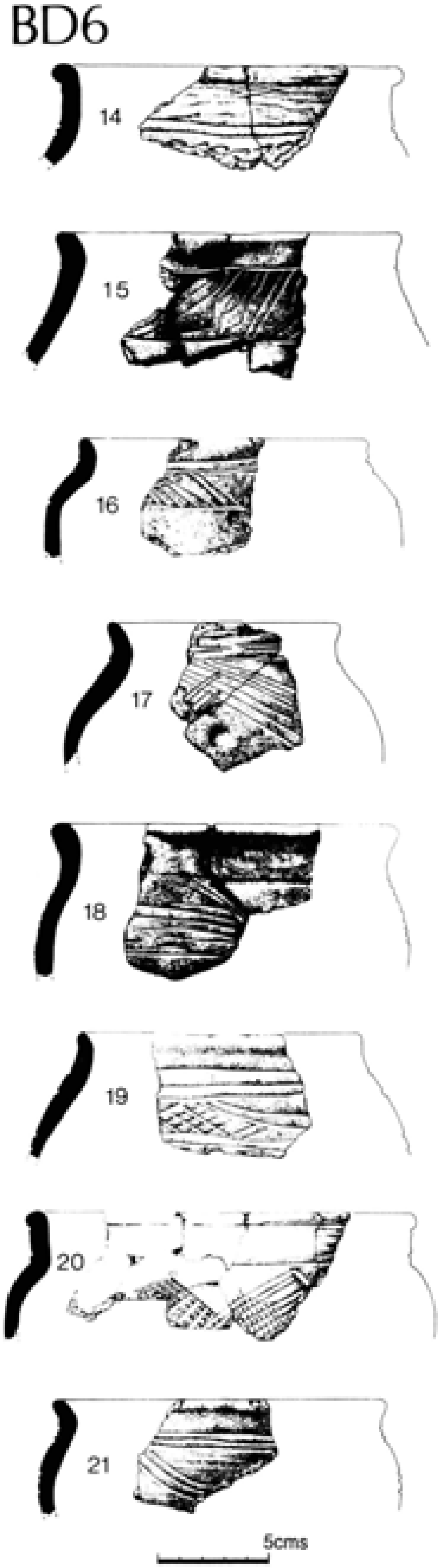


Fig 165 Ceramic form BD6, 14-21. Scale 1:3

beaded and/or expanded externally. The distinctive sharp-tooled geometric and curvilinear decoration occurs at and above the shoulder. The shapes vary from tall with high shoulder (Fig 163) to a more squat profile with sharp or rounded shoulder (Fig 164). Alongside these variations, the decoration may be crisp and accurate (eg Fig 164.9, 10, 12) or decidedly roughly executed (Fig 165).

Fabrics: shell (65), oolitic (2), shell mixtures (3), Poole Harbour (57), coarse quartz sand (36), coarse quartz (29), grog (2). Ceramic Assemblages 8 and 9.

Form BD7 (not illustrated): Tazze, produced in local Durotrigian fabrics.

Fabrics: shell mixture (2), Poole Harbour (3), coarse quartz sand (5), coarse quartz (3). Ceramic Assemblage 9.

Form BD8 (not illustrated): Butt Beaker types.

Classification of base forms (Fig 166)

This classification follows that devised initially for the Hengistbury assemblage.

BS1 pedestal base
BS3 bases with a foot-ring
BS4 flat with outstanding foot
Fabrics (BS 1–4): mainly Poole Harbour, sand and coarse quartz
BS5.1 simple base, sharp angle
BS5.3 right-angle base
BS5.4 splayed-angle base
Fabrics (BS5.1–4): mainly shell or coarse quartz
BS5.5 a newly defined type: coarse base with external expansion
Fabrics (BS5.5): calcite mixtures and some shell mixtures

Classification of decorative elements and motifs

The codes listed below have been used throughout the more recent archiving and analysis. They refer to vessels of all dates, including early Iron Age jars, the Durotrigian wares, saucepan pots, and the Glastonbury jars. The system has been devised specifically for the site of Cadbury Castle. It is divided into separate sections describing design 'elements' and 'motifs' in order that different levels of decorative scheme may be researched direct from the archive.

Finger rustication (FP):

FP1 row of fingertip impressions on top of rim
FP2 row of fingertip impressions below rim
FP3 row of fingertip impressions around shoulder
FP4 random all-over fingertip or fingernail rustication
FP5 fingertip impressions around base

Grooves (GR):

GR1 'eyebrow' motif
GR2 dimple or other circular impression
GR3 double eyebrow with dimples
GR4 dimple 'cross'

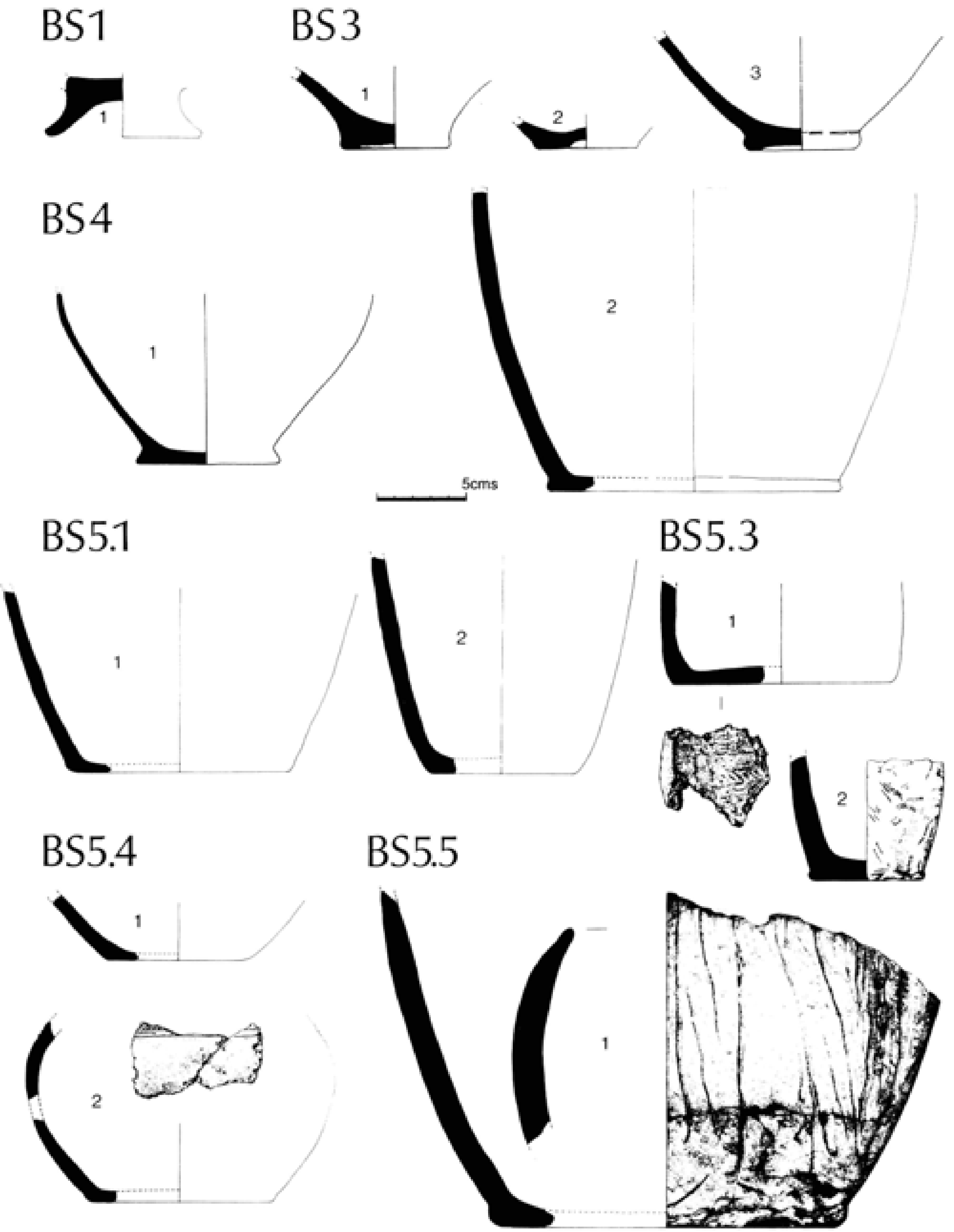


Fig 166 Ceramic base forms BS1, BS3, BS4, BS5.1, BS5.3, BS5.4, BS5.5. Scale 1:3

Geometric incised decoration (IG):

Elements:

IG1 horizontal line
IG2 multiple lines
IG3 vertical strokes
IG4 diagonal strokes
IG5 hatching
IG6 diagonal cross-hatching
IG7 straight cross-hatching
IG8 open hatching
IG9 standing triangle
IG10 pendant triangle

Motifs:

IGA diagonal strokes between horizontal lines
IGB multiple zones as IGA
IGC vertical strokes between horizontal lines
IGD diagonal cross-hatching between horizontal lines
IGE triangle filled with diagonal strokes
IGF triangle filled with cross-hatching
IGG multiple standing triangle
IGH chevron between horizontal lines

Curvilinear incised (IC):

Elements:

IC1 row of circular impressions
IC2 dots or pointillé
IC3 standing arc
IC4 pendant arc
IC5 spiral

Motifs:

ICA alternate standing and pendant arcs
ICB interlocking waves
ICC multiple pendant arc
ICD arc filled with cross-hatching
ICE filled lentoid segment (diagonal lines or cross-hatching)
ICF filled lens (diagonal lines or cross-hatching)
ICG filled swag (diagonal lines or cross-hatching)
ICH complex compass pattern

Concordance of major structures

This concordance is arranged in alphabetical site order. There is a short description of the structures giving the main structural elements, dimensions, and illustrations (Figs 167–174) for those structures not so far illustrated in the report.

Site BW

BW1: In the south-west corner of the trench, west of the hollow-way, there was part of a late Iron Age roundhouse with an estimated diameter of 11m. This was defined by a wall of stakes and an inner concentric ring of deep large postholes at 2–5m intervals, of 0.25–0.30m diameter set up to 1m into the bedrock (Fig 167).

BW2: On the northern edge of the trench there were a series of limestone blocks set in a rough semicircle with a diameter of 4m. These may represent the remains of a stone-built structure (Fig 167).

BW3: Cuts BW1. This was an elliptical scarp marking the one side of a flat bottomed hollow, with postholes apparently cut into it. The available evidence suggested an oval sunken floored building (Fig 167).

BW4: This structure is interpreted as a group of barracks which had been built on the north-facing slope of the hill. Although grouped together as one structure they comprise three components. The gullies were flat-bottomed with a number of postholes and stakeholes scattered along their line without forming a regular pattern. These structures appear to have been one-cell structures about 5m in width with only 8–9m in length surviving (Fig 88).

BW5: This roundhouse was represented only by a fragmentary arc of stakeholes set into a slight terrace (Fig 167).

BW6: This was the best preserved stake-walled roundhouse in this site. It stood on the east face of the hollow-way, but with the threshold of the entrance facing north-east and thus away from the road. The floor area of the house occupied some 95sq m while the line of stakeholes suggest rebuilding on a number of occasions (Fig 167).

Site C

C1: Four-post structure identified in 1966, and in 1968 two further postholes were identified inset slightly from the centre points of the shorter sides. The original four postholes were of a depth 0.60–0.67m, whereas the later two were 0.33–0.34m deep (Fig 173).

C4: A curving gully roughly 0.70m wide by 0.30m deep, in the extreme north-eastern corner of Site C, possibly the gully of a roundhouse. With an indeterminate termination just north of the original edge of Site C. The diameter was unclear. Section drawings showed the centre of the gully to have a concentration of large slabs of stone slanting downwards (Fig 168).

C5/C6: These six-posted structures are both the same size (4.5 by 3.0m) and are aligned in the same direction. They have opposing postholes along their longest axes. The postholes for C5 ranged from 0.40–0.50m in diameter and were 0.13–0.29m deep. The postholes for C6 were somewhat larger, being 0.50–0.70m in diameter and 0.38–0.62m deep (Fig 173).

Site E

E1: Cruciform trench. The overall dimension, across the arms, measured to the outside edge of the foundation trench, was just short of 25m, the arms themselves beings 8–9m wide and about 8m long; internally, the arms were 4.5–5m wide and 7.5–8m long. The width of the trench varied between 1.5–2.1m. There was a particularly narrow and irregular portion on the south-eastern arm, perhaps implying that the work of digging the trench was incomplete. The sides were generally

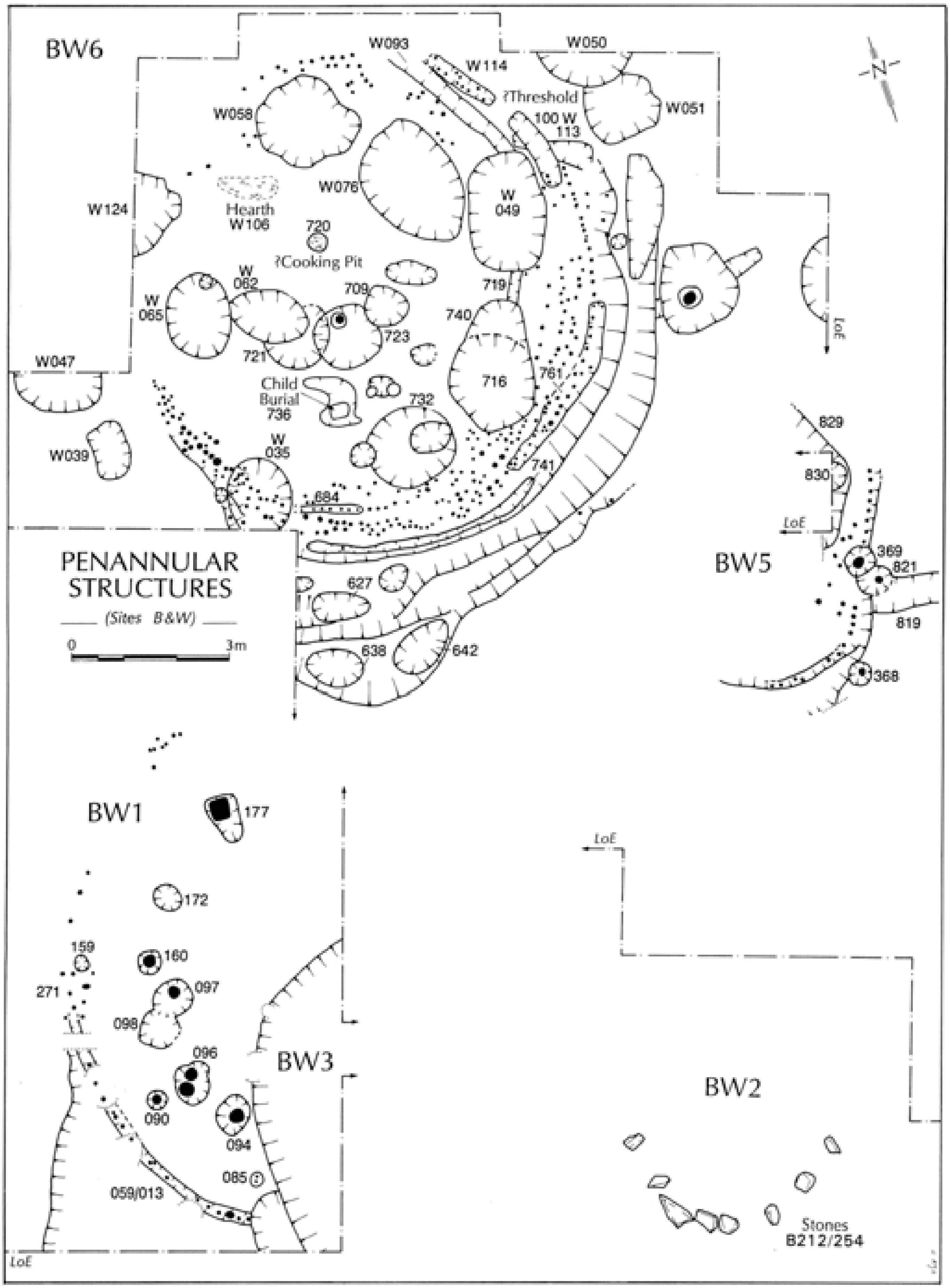


Fig 167 Penannular structures: BW1, 2, 3, 5, and BW6

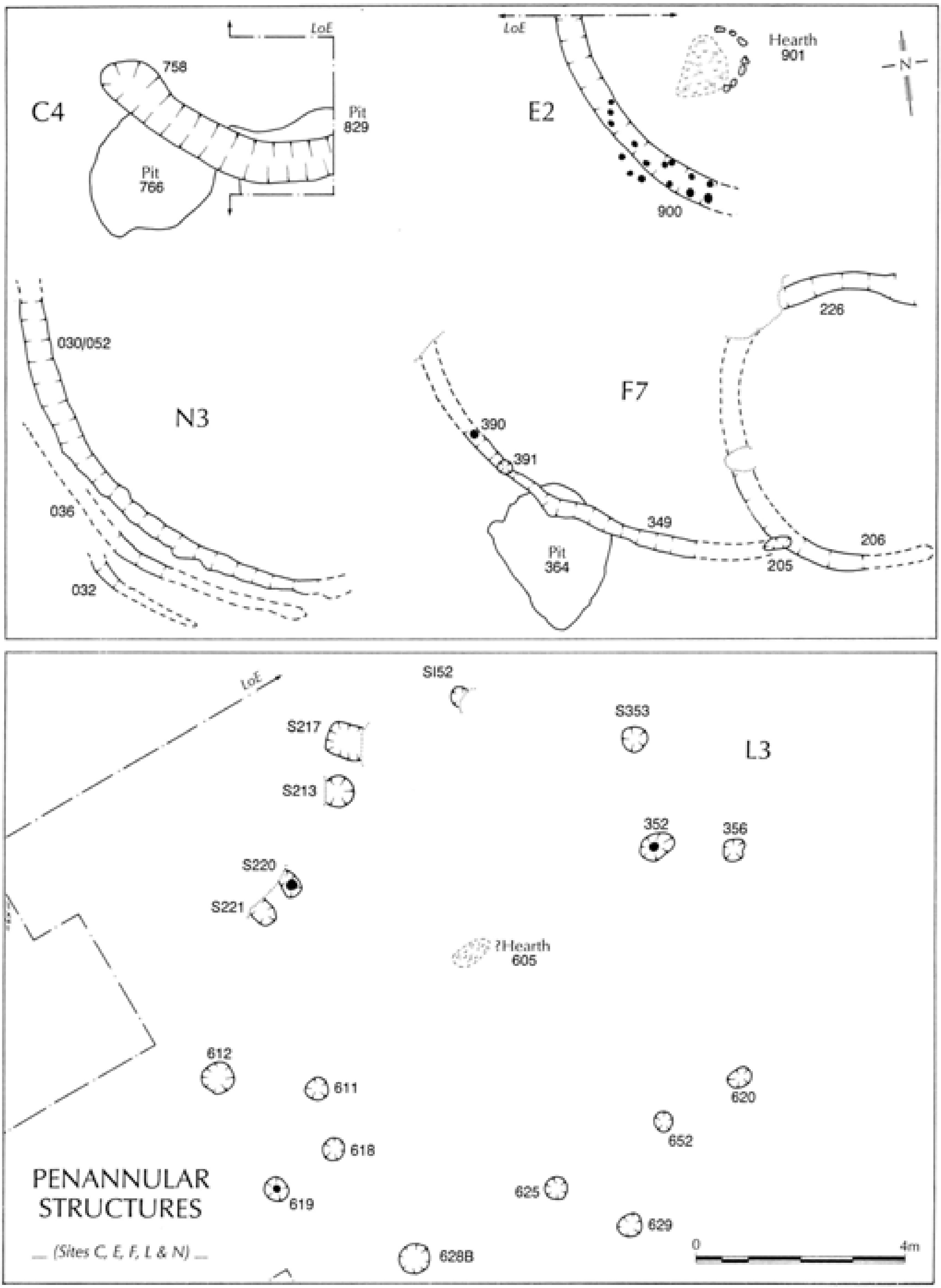


Fig 168 Penannular structures: C4, E2, F7, L3, and N3

steep-sloping with a flat bottom varying in depth from about 0.25–0.60m below the level of the bedrock. The excavator suggests that it appears to have been dug, perhaps incompletely in parts, left open for a while, and then refilled either deliberately or as a result of ploughing (Fig 91).

E2: A roundhouse gully on the northern edge of the site. The greater part of this feature either lay within the area obliterated by E1 or outside the excavated area. Its diameter must have been about 7m to the centre of its wall trench. It was 0.35–0.45m wide and about 100mm deep, apparently with a line of at least ten stakes driven into the subsoil along either side, perhaps to form a double-skin wall (Fig 168).

E3: A small rectangular structure represented by short lengths of wall trench 0.20–0.25m wide by 0.15m deep. The longest side to remain measured 2.5m. No other structural details were recovered (Fig 173).

E4: A small four-post arrangement 1.6m sq. Three of the posts were nearly identical in diameter and depth, *c* 0.30m. The fourth remained unexcavated (Fig 173).

E5: Possible four-post setting roughly 1.75 by 2m in the south-east corner of the trench. Two posts were both 0.35m deep and 0.50m in diameter. The southern corner post was removed by a pit.

Site F

F1: A six-posted structure at the junction of Sites E and F measuring about 3.3 by 4m. Two of the corner post-holes lay wholly in trench F and measured 0.70m and 0.85m in diameter respectively and 0.40m and 0.47m deep. Midway between these postholes was another truncated by the cruciform trench of Structure E1. Most of the north-west corner post lay under the section. The fourth corner post was not excavated (Fig 173).

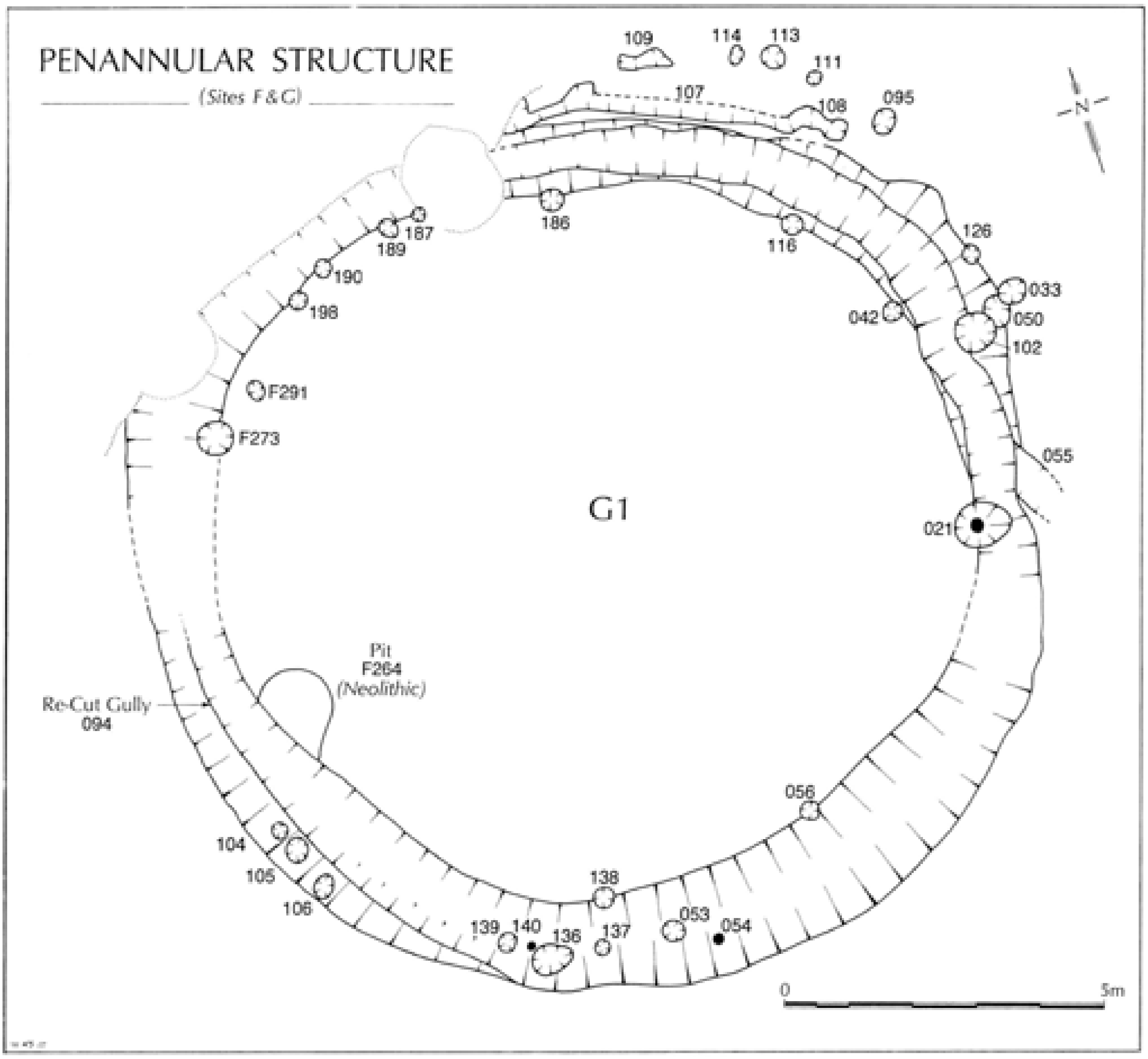


Fig 169 Penannular structure G1

F2: This group of six postholes defined an area 2.8 by 3m and lay towards the north-western corner of Site F. The central postholes were confused by later or earlier features alongside. The depths of the postholes were around 0.20–0.35m (Fig 173).

F3: This six-post structure, covering an area of 2.25 by 2.8m, lay at the south-eastern corner of Site F. The postholes were of no great depth at 0.20m and the eastern three postholes may have been rebuilt at least once. Gullies 206 and 226 form part of a circle of 5.5m diameter surrounding this feature (Fig 173).

F4: At the junction of Sites E and F, there is a group of eight postholes outlining an area of 2.75m sq. None of the postholes were over 0.15m deep and they ranged from 0.25–0.45m in diameter. Two of these postholes were left unexcavated in Site E (Fig 173).

F5: This is a possible four- or six-posted structure. The south-west part comprises three posts. A supposed fourth was cut away by a later pit. The three postholes were 0.30m in diameter and 0.22–0.28m deep. They would have formed a structure 1.75m sq (Fig 173).

Site G

G1: This comprises a wall trench for an Iron Age roundhouse. This was detected as a clear ring-shaped anomaly. It varied from 0.90 to 2m in width with a particularly narrow stretch 3m long on the east. The depth varied from 0.85m on the southern (uphill) side to about 0.35m on the northern (downhill) side. In the narrow stretch on the east the depth was about 0.30m. The internal diameter was about 11.5m, the average diameter to the centre of the house being 12.5m (Fig 169).

Site L

L2: Wall gully of a roundhouse lying in the north-eastern end of Sites L and S. The diameter appeared to be approximately 11m. The walls were represented by rock cut gullies 0.30–0.60m wide and up to 0.28m deep. In several areas substantial parts of the circuit were missing either because of plough erosion or because they had never penetrated below the level of the topsoil. The number of extant gullies varies from one to three, but there is little doubt that there were originally three gullies. They are generally flat-bottomed and shallow

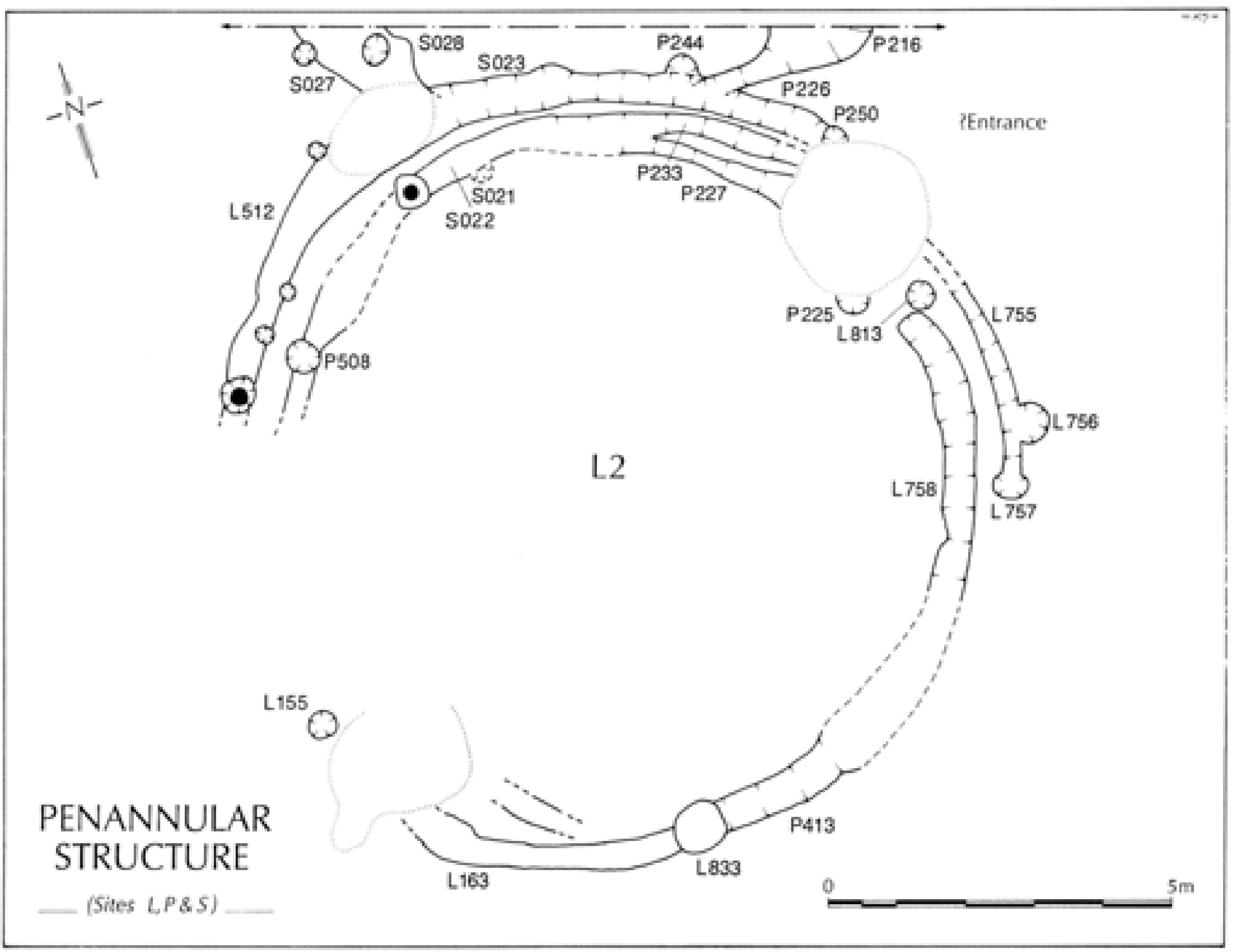


Fig 170 Penannular structure L2

with a maximum depth 0.21m and a maximum width 0.51m. No postholes were found (Fig 170).

L3: The presence of this post-built roundhouse was first suggested by an area of burnt rock (L605) which was probably a hearth. The structure is represented by a ring of posts about 11m in diameter and centred roughly on the hearth. The structure itself also extended into Site S by about a third of its circuit. The average depth of the postholes is 0.19m (Fig 168).

L4: A four-post structure about 1.4 by 1.4m, rather off-square. It lay within the confines of L2 and had smaller postholes than S2 with depths ranging between 0.25 and 0.35m and average diameter of 0.38m (Fig 173).

L5: Lying south of S2, this four-post structure covered an area 2.8 by 3m. The postholes were 0.60m in diameter and varied in depth between 0.26–0.45m below the modern rock surface. Unlike L4, these postholes lay very precisely at the corners of a near square, its alignment north-south. It is unclear whether this structure was the porch of circular structure L3 (Fig 173).

L6: This six-post structure measuring 2.8 by 2.5m is by no means a positive identification due the concentrated mass of postholes in the south-eastern end of Site L. The postholes were compatible with each other in size and depth. The average depth of these postholes was 0.27m. Diameters ranged from 0.50–0.65m (Fig 173).

Site N

N1: A tentative six- or seven-post structure in the northern edge of the site straddled Sites N and E. It enclosed an area 3m sq. Three posts lay in Site N; the largest was 0.40m in diameter and 0.56m in depth while the smallest was 0.25m in diameter and 0.40m in depth. Of the postholes in Site E the two main corner posts were evident, 0.55 and 0.50m in diameter and 0.50 and 0.40m deep respectively (Fig 173).

N2: To the east of N5 and possibly a predecessor of it lay a small six-post structure. The area enclosed by this structure measured 2 by 3m. It was aligned roughly east-west. The four corner postholes were all slightly oval with diameters of 0.30–0.35m and depths of *c* 0.30m (Fig 173).

N3: In the east of the site, curving gullies represented one quadrant of a circle about 12m in diameter. At its deepest it was cut 0.20m into the bedrock but it decreased to nothing on the east (Fig 168).

N4: Further to the east of N3 was a curving line of large stakeholes traced in the cobbling.

N5: At the extreme south-western corner of the site, a porched rectangular building aligned roughly east-west was discovered. Overall, it measured 3.4 by 4.6m with timber walls set in a foundation trench. It first appeared as a linear trench. It was revealed as a small cell 2.6 by 2.5m internally, fronted on the east by an open porch 1.25m deep with a doorway 1m wide linking the two. Excavation of the foundation trench generally 0.50m wide by 0.35m deep failed to produce a convincing pattern of posts or wall timbers (Fig 173).

N042: Fragment of a gently curving gully sealed by the cobbles in Site N. If extended along the curve, a circle of about 14m in diameter is described. The gully was a maximum of 0.25m wide and cut 0.90m into the bedrock.

N734: This gully south of the rectangular buildings in Site N described a semicircle with a very much smaller radius than N042, at most 1.5m.

Site P

P1: Roundhouse represented by a rock-cut wall gully in the south-western part of the site. The gully was never more than 0.30m deep and 0.95m wide and faded out with the slope of the ground to the south. The diameter of this structure was unclear but was somewhere between 10.5–11.5m (Fig 171).

P2: Roundhouse represented by rock-cut circular wall gullies which cut the gully of P1 and lie to the north of that structure. It was clear that more than one phase of construction was involved. Successive gullies sometimes coincided precisely while elsewhere they diverged, leaving a wider gully. The gullies were preserved to a depth of 0.45m at their deepest and a maximum of 1m wide. This structure also had a clear entrance on the north-west more than 1.5m wide. The diameter of this house was somewhere between 10.5–11.5m (Fig 171).

P3: A small six-post structure to the east of the centre of Site P. The postholes were well cut but relatively small, generally about 0.30m in diameter and 0.30–0.40m in depth. They were consistently deeper than other postholes in the area. They defined a structure 2.3 by 2.5m (Fig 173).

P4: To the south of roundhouse P2 lay a six-post structure, of which five postholes remain. Each posthole was about 0.40m deep and roughly 0.25m in diameter. The size of this structure was roughly 3.5m sq (Fig 173).

P5: The pattern of this rectangular building was confused by additional postholes and irregular patches of Neolithic soil. With the presence of a gully as a guide, it is possible to suggest a four-posted or six-posted structure 3.5 by 2.2m. The postholes were 0.40–0.55m in diameter and 0.30–0.35m deep (Fig 173).

P6: A pair of postholes in the extreme east of the site.

P7: A pair of postholes within the confines of roundhouse P2.

P8: A pair of postholes within the confines of roundhouse P2 to the west of P7.

P9: A small four-post structure measuring 2.5m east-west and 2m north-south. One posthole was recut. The post diameters ranged from 0.15–0.50m with depths between 0.12–0.25m. Postholes at the north side of this structure form what appears to be a small entranceway (Fig 173).

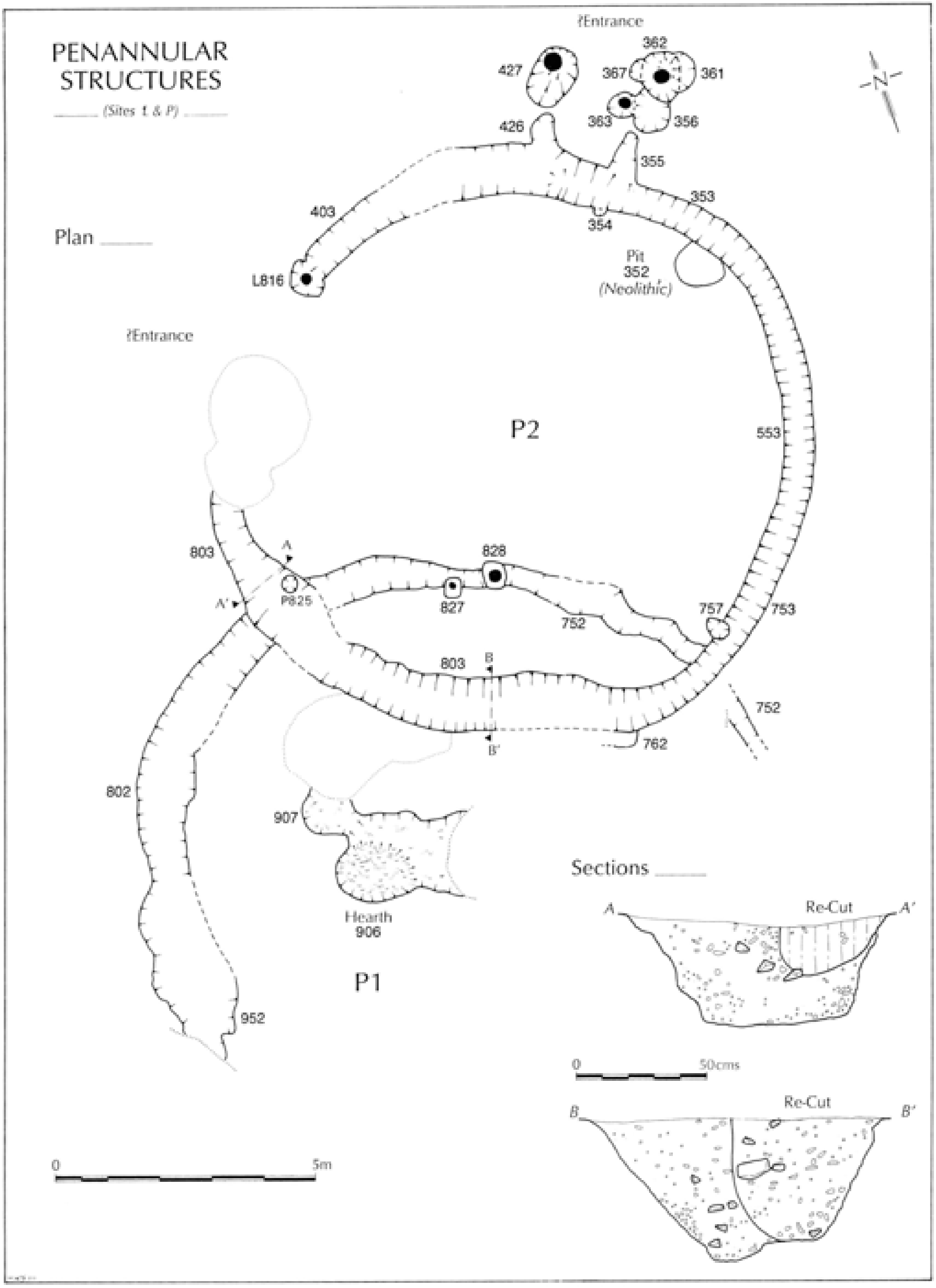


Fig 171 Penannular structures: P1 and P2

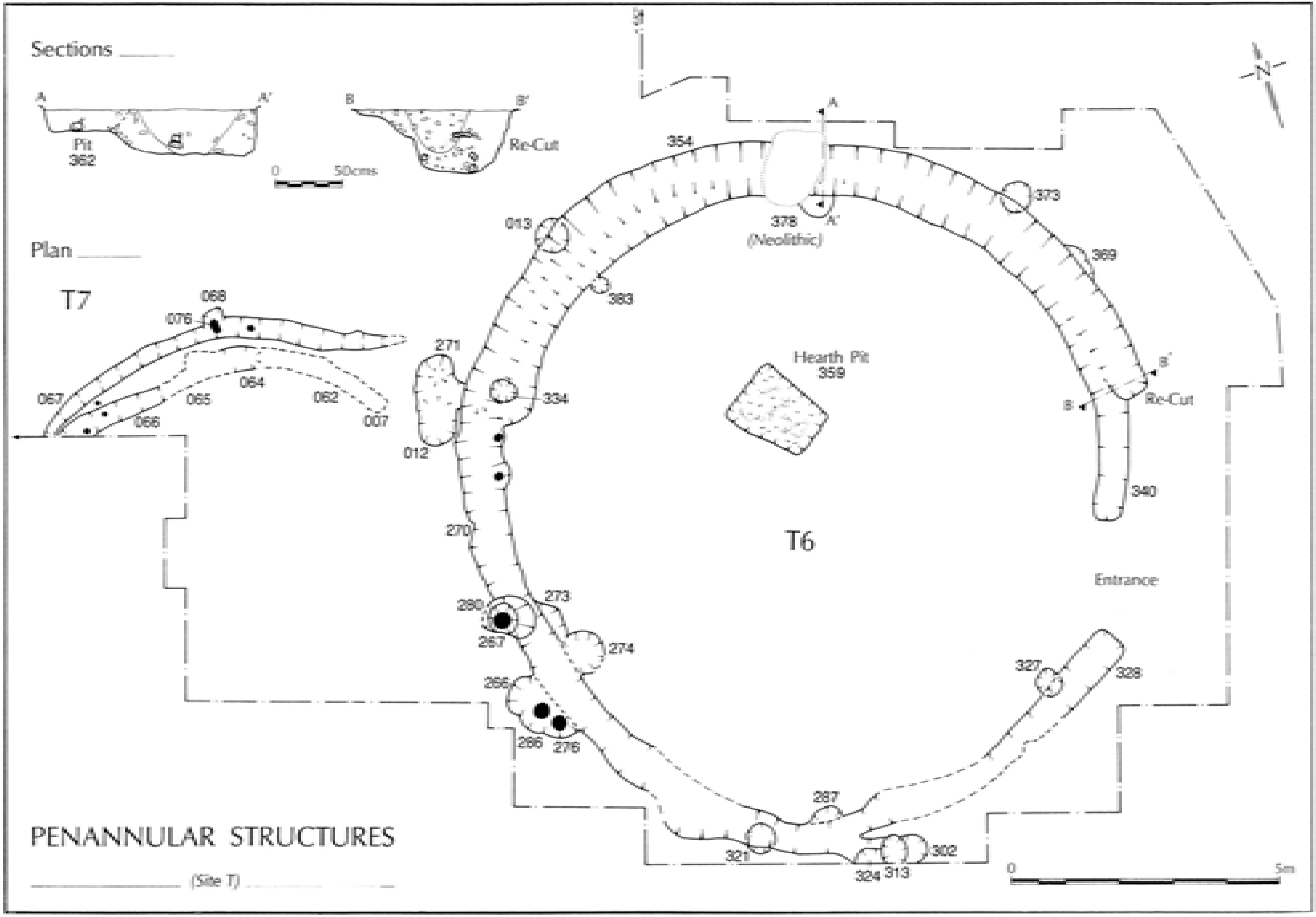


Fig 172 Penannular structures: T6 and T7

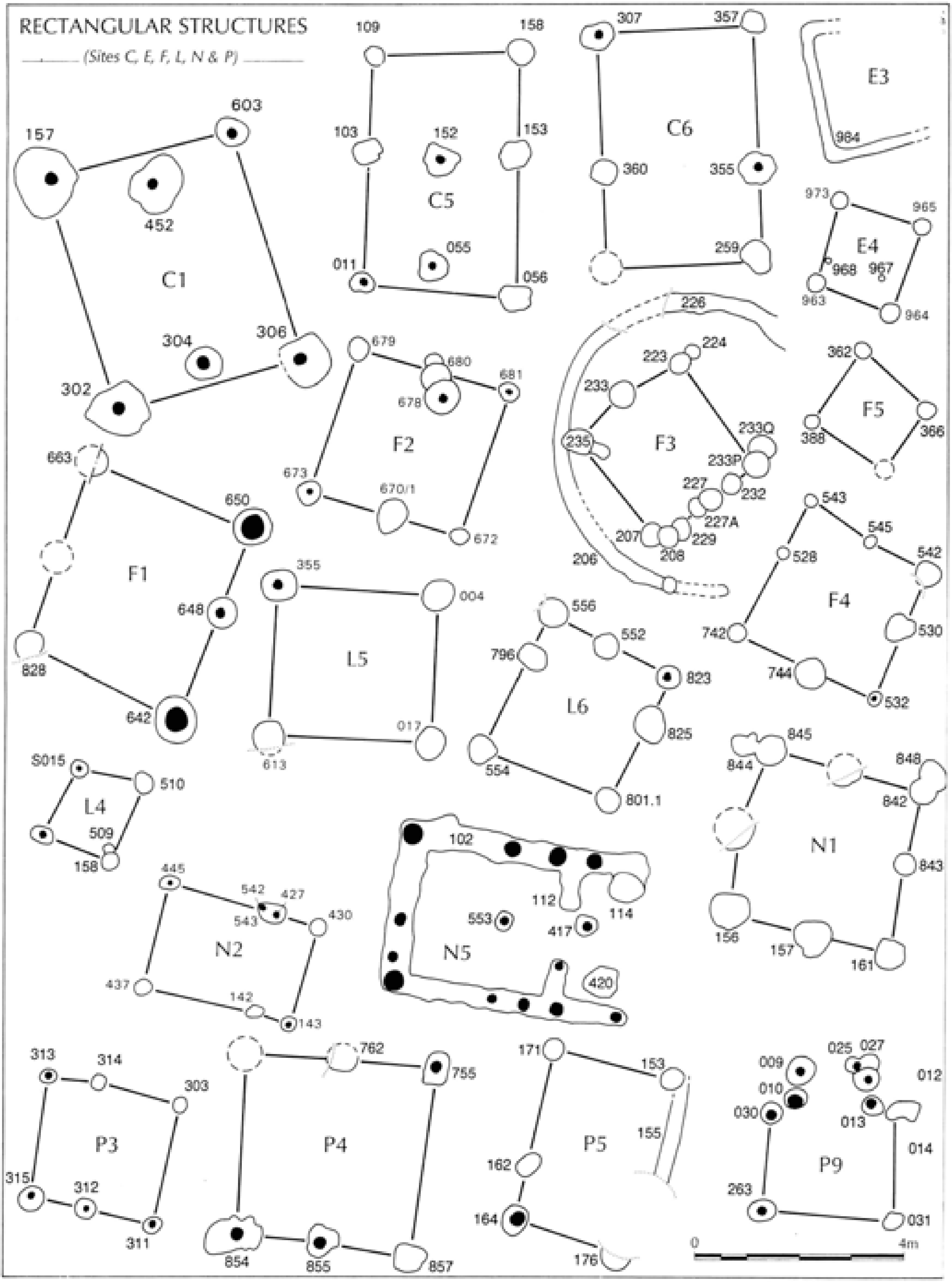


Fig 173 Rectangular structures: C1, C5, C6, E3, E4, F1, F2, F3, F4, F5, L4, L5, L6, N1, N2, N5, P3, P4, P5, and P9

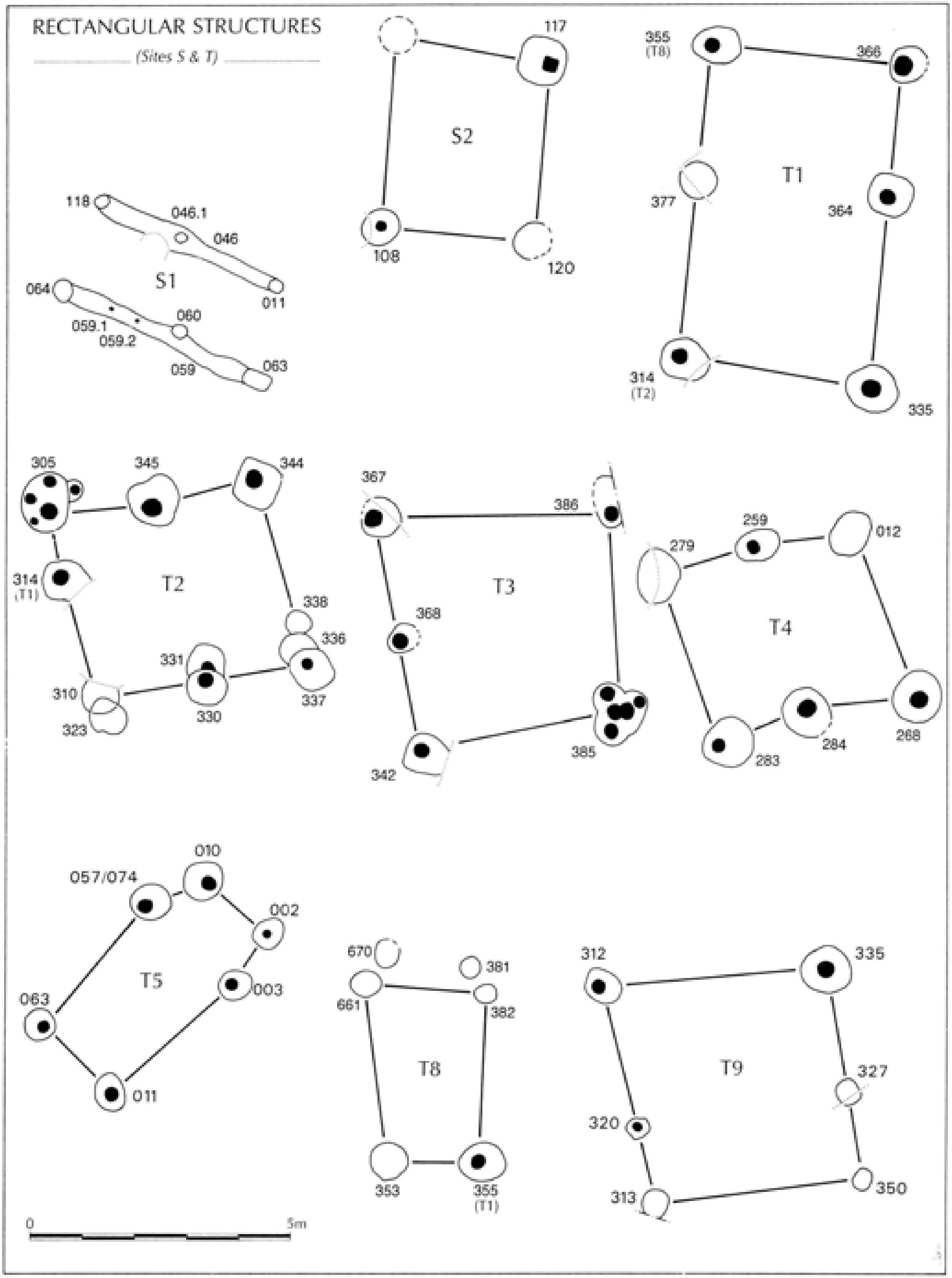


Fig 174 Rectangular structures: S1, S2, T1, T2, T3, T4, T5, T8, and T9

Site S

S1: Five metres north of L1 and set at an angle to it was a small building represented by two parallel narrow gullies 0.30m wide, 0.15m deep, just under 4m long, and 1.75m apart centre to centre. In both cases there was a slightly deeper posthole at either end of the gully. These suggested a building 4 by 2m (Fig 174).

S2: Three postholes of exceptional depth and diameter (0.90–0.95m and 0.45–0.90m respectively) lay close together and may have represented a four-posted structure approximately 3 by 3.5m aligned north-south. The narrowness of the smallest posthole may be due to its not being fully excavated. One of the postholes (S117) held a squared timber 0.24m across its faces and was more or less aligned with post S120. The fourth post lay beneath a dump and was not excavated (Fig 174).

Site T

T1: A six-post structure measured 6 by 3.6m. It was the largest of the four similar structures on this Site with posts 0.70–1.00m in diameter and 0.62–0.72m deep (Fig 174).

T2: A four-post structure nearly square in shape measuring between 3.9 by 3.4m–4.5 by 4m. The posts were less clearly defined than structure T1 and were about 0.25m in diameter. This structure appears to have been rebuilt at least once with the depth of the postholes being reduced from 0.85–0.55m (Fig 174).

T3: This was also a four-post structure similar in size to T2. It may also have been rebuilt though the evidence was much more confused, one of the postholes having been removed by a later pit (Fig 174).

T4: Again similar to T2 and T3, this four-post structure had almost certainly been replaced once if not twice; the three postholes of the southern wall had at least two phases in their filling (Fig 174).

T5: Slightly trapezoid in shape, this six-post structure was 3m long by 1.8–2.2m wide with perhaps another two posts forming a lobby or extension at the northern end (Fig 174).

T6: This main roundhouse gully was a substantial feature which registered strongly on the geophysical survey. It varied from over 1m wide and 0.60m deep on the north to less than 0.60m wide and only a few centimetres deep on the south and south-east. The diameter was between 12–13m measured to the centre line of the gully. The entrance to the roundhouse had clearly lain to the east (Fig 172).

T7: To the west of T6, two other short lengths of truncated curving gully, roughly concentric to one another, marked the position of a separate or subsidiary structure. The diameter, though difficult to judge, would perhaps have been about 9m. Neither gully was more than 0.26m deep, the inner one being so shallow that it only survived intermittently. They could represent successive stages of construction either of a separate roundhouse or an annexe appended to the western side of T6 (Fig 172).

Catalogue to accompany Figures in Chapters 6, 7, and 8

Figure 92

1 Almost complete pair of tweezers, though the lower part of one arm is in two fragments. The original surface is preserved, with patches of corrosion. Open loop, arms separate and expanding slightly to terminals which turn inwards. Length 45mm, width at loop 40mm, width at terminals 60mm. Context E706 (019)

2 Single edged razor. Nearly complete, part of one loop and both blade tips missing, cutting edge damaged. Original surface survives over much of blade, but corrosion extensive. Trapezoidal blade with openwork band containing three rings and surmounted by circular loop at each end. Width 59mm, height 42mm, thickness 3mm, diameter of loops 10mm. Context S210 (021)

3 Bone spindle whorl. The perforation is 4mm in diameter, the cancellous tissue on the lower surface is rough and uneven. Diameter 42mm, weight 21g. Context D610 (043)

4 Bone spindle whorl. Bovine femur head from a moderately young animal. Perforation is almost rectangular 9 by 11mm across. The cancellous tissue on the lower surface has been levelled. Diameter 40mm, weight 13g. Context W003 (046)

5 Stone spindle whorl. Broken, possibly cylindrical type. Straight perforation 7mm across, Shallow tool marks on end. White lias. Diameter 36mm, weight 35g. Context L562 (039)

6 Stone spindle whorl. Straight-sided disc. Smooth finish. Central straight perforation 11mm across. Blue lias. Diameter 32mm, thickness 14mm, weight 25g. Context K659, south-west gate Episode IX, Context Group IV (034)

7 Stone spindle whorl. Slightly broken disc shape. Slightly irregular conical perforation 7mm across. Two opposed grooves at wide end *c* 1.5mm wide and 1mm deep. Blue lias. Diameter 42mm, thickness 11mm, weight 23g. Context N151 (041)

8 Stone spindle whorl. Slightly oval disc with central hour-glass perforation 4mm across. Concentric striations on perforation. Old Red Sandstone. Diameter 28–30mm, thickness 6mm, weight 8g. Context GG3B (009)

9 Stone spindle whorl. Dome-shaped. Perforation 7mm across. Fire-blackened. Possibly Jurassic. Diameter 20mm, thickness 37mm, weight 29g. Context T385 (022)

10 Stone spindle whorl. Disc-shaped with rounded sides and central straight perforation. Inferior oolitic, shelly. Diameter 43–48mm, thickness 17mm, weight 55g. Context C552 (016)

11 Stone spindle whorl. Broken, possible disc-shaped. In two pieces. Side decorated with two rough zigzag lines within two concentric bands. Off-centre perforation. Chalk. Diameter *c* 45mm, thickness 26mm, weight 25g. Context P609B (045)

12 Stone spindle whorl. Disc-shaped with slightly curved sides. Almost central slightly hour glass perforation 5mm across. Smoothed almost polished faces. Incised chevron decoration on sides. Blue lias. Diameter 33mm, thickness 11mm, weight 22g. Context C005 (019)

13 Stone spindle whorl. Disc-shaped, straight-sided with polished flat ends. Decoration on sides. Knife or chisel marks visible on side. Central straight perforation 6mm across. Blue lias. Diameter 45mm, thickness 22mm, weight 71g. Context F311 (030)

Figure 93

1 Antler comb, 12 teeth. Length 121mm. Context N76 (270)

2 Decorated antler comb with base of five teeth remaining. Two fragments of same comb. Lengths 41 and 62mm. Context 552/552A (243)

3 Decorated antler comb, originally eight teeth. Suspension hole. Length 149mm. Context G068A (258)

4 Decorated antler comb with nine teeth. Length 144mm. Context D 'M/BT' (254)

5 Antler comb with eight teeth at each end. Burnt. Length 175mm. Context D630A (249)

6 Small decorated fragment of antler possibly from handle of comb. Length 28mm. Context G 3K (257)

7 Decorated antler comb with nine teeth. Length 128mm. Context D820 (253)

8 Decorated antler comb with nine teeth. Length 127mm. Context K608 (262)

9 Decorated antler comb with nine teeth. Two joining fragments. Length 113mm. Context N800/802 (271)

Figure 94

1 Bone blade. Longitudinal and side perforations. Well worn. Length 112mm. Context A182 (047)

2 Bone blade decorated with three drilled holes. The butt is broken and the blade is missing. Longitudinal and side perforations. Length 76mm. Context D517A (051)

3 Bone blade. Complete except for the tip of the blade and part of butt. Longitudinal and side perforations. Point is flattened and well worn. Length 118mm. Context P061 (079)

4 Bone blade. Complete except for tip. Immature bone with longitudinal perforation only. Not much wear. Length 150mm. Context D737 (056)

5 Bone blade. Tip of blade only with flattened point. Well worn. Length 50mm. Context N854 (078)

6 Bone point. Part of shaft is missing. Length 80mm. Context D29 (091)

7 Bone point. The butt has been made from the proximal end of a large metatarsus. This is the only utilised deer bone identified among the material from this site. Longitudinal and side perforation. Length 168mm. Context Site E unstratified (093)

8 Bone point. Longitudinal and side perforations. The epiphysis at the proximal end has been entirely removed and the top of the shaft squared off. There are three side perforations, none of which are in alignment. Although knife cuts are still quite clear on the point, the tip appears to be well worn. Complete. Length 122mm. Context C601 (094)

9 Bone point. The tip of the point and most of the proximal end of the bone are missing. No traces of perforations. Tip of the blade is heavily worn. Length 151mm. Context E 983D (095)

10 Grooved and polished sheep/goat metatarsal. There are very clear traces of polishing on all the surfaces at each end. At the proximal end, this is confined to a band which varies between 8 and 40mm in width on the various faces and between 13 and 23mm at the distal end. Neither extremity of the bone shows any trace of wear. Length 110mm. Context N204 (164)

11 Grooved and polished sheep/goat metacarpal. Traces of wear are apparent on the medial and lateral surfaces at the distal and proximal ends and also on the posterior surface, especially at the distal end. Length 119mm. Context N751 (165)

Figure 95

1 Bone needle. The head is flattened 4.5 by 9mm and terminates in a blunt point 8mm above the eye. The eye is slightly irregular and up to 4mm in diameter. Length 99mm. Context C653 (002)

2 Bone needle. The head is flattened 3.5 by 6mm and is fairly rough due to the exposure of cancellous bone tissue on one face. The head terminates in a blunt point 4.5mm above the eye which is circular and 3mm in diameter. Length 89mm. Context K696 (010)

3 Bone needle. The head is large and flattened 3.5 by 7.5mm and the eye which is through the shorter axis is oval and 2.5 by 5mm across. Length 28mm. Context K933 (012)

4 Bone needle. The head is flattened 3 by 6mm and is simply rounded 3.5mm above the eye, which is circular and 2mm in diameter. Length 74mm. Context L752 (016)

5 Bone needle. The tip of the head is 18mm from the top of the eye and is fairly sharp. The eye is irregularly oval and 2mm wide. Length 22mm. Context T342 (018)

6 Bone awl made from a sheep/goat metacarpal. The posterior surface has been cut to produce a long round point. Length 82mm. Context C552 (116)

7 Bone awl made from a sheep/goat metapodial of which the distal epiphysis is missing. The bone has been split longitudinally along the furrows on the anterior and posterior surfaces, probably with a burin. The resultant point is formed from either the medial or lateral surface of the bone. Length 91mm. Context F094/262/263 (122)

8 Bone awl made from a sheep/goat metatarsal. The bone is immature and the distal epiphysis is missing.

The posterior surface has been cut to produce a point. Length 48.5mm Context F345B (126)

9 Bone awl made from a sheep/goat metapodial. Formed by splitting the bone longitudinally to produce a point on either the lateral or medial surface. Length 62mm. Context N803 (134)

10 Bone awl made from a sheep/goat metatarsal. The tip of the point and the butt are missing. The posterior surface of the bone has been cut away to produce a point which is round in cross-section. Length 55mm. Context P251 (137)

Figure 96

1 Flat disc amber bead with rounded edges. Diameter 9–10mm, thickness 3–5mm. Context F310 (504)

2 Spherical amber bead. Diameter 20mm, thickness 15mm. Context E776 (502).

3 Biconical shale bead with flattened ends. Diameter 16mm, thickness 10mm. Context E922C (019).

4 Shale bead or small spindle whorl. Diameter 37mm, thickness 20mm. Context C403C (003).

5 Fragment (*c* 25%) of globular glass bead. Deep blue, three opaque yellow marvered spirals set into outside surface. Perforations worn, surface pitted. Greenish glassy weathering. Height 15.5–17mm, diameter 28mm, diameter of perforation 10mm. Context D838 (029)

6 Fragment (*c* 20%) of uneven globular glass bead. Translucent deep blue with opaque white trails radiating from wide perforation and crossed by three trails (now missing) running diagonally across the circumference of the bead. Very heavily weathered, silvery iridescence. Height 8.5–11mm, diameter 18, diameter of perforation 8mm. Context N751 (030)

7 Fragment (*c* 45%) of annular glass bead. Translucent deep blue with opaque white oblique trails radiating from wide perforation and crossed by three trails (now missing) running diagonally across the circumference of the bead. Very heavily weathered silvery iridescence. Height 6.5–7mm, diameter 28mm, diameter of perforation 16mm. Context L115 (031)

8 Complete globular glass bead. Colourless with three opaque yellow spirals covering entire surface. Perforation worn, surface pitted, strain cracks. Light iridescence. Height 10.5–11.5mm, diameter 13.5–14mm, diameter of perforation 5mm. Context catalogued as unprovenanced but given by Guido (1978,188) as coming from a pit (033).

9 Nearly complete annular glass bead. Opaque yellow core, opaque blue coating with opaque white zigzag wave. Heavily corroded especially at ends of perforation. Projected height 7mm, diameter 10mm, diameter of perforation 3.5mm. Context F608 (034)

10 Fragment of possible annular glass bead. Translucent deep purple and dark blue, and opaque white. Broad uneven mixed bands of the translucent colours, thinner bands of opaque white. Outside surface pitted. Projected height 8mm, diameter *c* 30mm. Context N901 (035)

11 Complete annular glass bead. Translucent deep blue. Outer surface slightly worn. Height 5.5–6mm, diameter 10–10.3mm, diameter of perforation 3.5mm. Context L164 (036)

12 Complete annular glass bead. Translucent deep blue. Outer surface slightly worn. height 3.5–4mm, diameter 7.5–8mm, diameter of perforation 3.2mm. Context F439 (037)

13 Complete globular glass bead. Translucent yellow/brown. Very heavy silvery iridescence. Height 8.5mm, diameter 8.5mm, diameter of perforation 2.5mm. Context D719 (038)

14 Fragment (*c* 20%) globular bead. Translucent deep blue. Surface pitted. Height 7.5mm, diameter 12mm. Context C356 (039)

15 Complete ovoid glass bead. Opaque red with narrow black streaks. Surface scratched. Length 5–5.5mm, diameter 3–4mm, diameter of perforation 1.5–2mm. Context L405 (040)

16 Ovoid glass bead, possibly from a segmented bead. Translucent green. Length 5.5–6mm, diameter 3–4.5mm, diameter of perforation 2.5mm. Context N250 (042)

17 Complete segmented glass bead. Translucent green. Four uneven wound segments. Pitted surface. Length 14.3mm, diameter 2.5–5.3mm, diameter of perforation 2.5mm. Context K001 (041)

Figure 97

1 Shale armlet with circular section. Context N951 (038)

2 Shale armlet with circular section. Context C702A (010)

3 Shale armlet with rib and groove decoration and D-shaped section. Context W048 (045)

4 Shale armlet with rib and groove decoration. Context D711 (014)

5 Shale armlet with spiral decoration. Context K696 (026)

6 Shale armlet with rib and groove decoration. Context K597, south-west gate Episode IX, Context Group II (025)

7 Shale armlet. Context D611 (009)

8 Shale armlet. Context G094B (023)

9 Shale armlet. Context F305 (022)

10 Shale object. Context N538, Context Group II (034)

11 Shale armlet. Context N967 (039)

12 Tooth pendant. Perforation 1mm in diameter and countersunk on both sides. Length 42mm. Context N75 (205)

13 Antler toggle. At the larger end some of the cancellous tissue in the centre of the tine has been removed to form a hollow only 10mm deep. The central perforation is 7.5 by 23mm across. Length 68mm. Context N955 (229)

14 Burnt antler toggle. Shape possibly distorted. Perforation is 7 by 15mm across and at each end there

is a narrow cut line which has been partly worn away. Length 83mm. Context S066B (232)

15 Antler toggle made from roe deer antler tine. At the broader end is a countersunk perforation 3mm in diameter which is joined by a longitudinal hole of about the same size. The narrower end has been shaped to a flattened end and towards this end is another traverse perforation, 3mm in diameter. Most of the surface is worn and polished although some of the original antler surface remains. Length 58mm. Context C702A (233)

16 Antler toggle with both ends originally decorated by bands of two or three lines of compass-inscribed circles, 5mm in diameter. There is a single perforation 4mm in diameter at the broader end which cuts through some of the decoration, and both ends and the perforation show considerable traces of wear. Length 102mm. Context S209 (235)

17 Antler toggle with both ends originally decorated around the entire circumference. At the broader end there are two deeper grooves outlined by thinner lines and at the narrower end there is a single line. Circular perforation at the broader end is 4mm in diameter. Both ends heavily worn. Length 81mm. Context 'SLP' (236)

Figure 98

1 Needle with hole possibly pierced before the shank was rolled. Width of hole 1.5mm, length 41mm but with a broken shank. Context T270B (010)

2 Needle, similar to no 1. Broken shank, beaten into a small knob at the top. Width of hole 1.5mm. Length 25mm, Context D837 (011)

3 Fine sewing needle broken at tip and perforation. The join can be seen on both sides. Length 42mm. Context K648, south-west gate Episode IX, Context Group II (013)

4 Simple oval-section bracelet with a hammer-headed terminal. Diameter 65mm. Context E5C (70a)

5 La Tène I–II bracelet. D-shaped section, angled ribbing around circumference, one terminal ending in three knobs, the other possibly a tenon for a mortise and tenon fastening. Exterior diameter 61mm. Context P218 (070)

6 Fragment of bracelet with stamped decoration forming a series of elongated Xs. Simple squared terminal, other end broken, well worn. Context E002B (073)

7 Roundel in the form of a cast ring with broad groove blocked at the four cardinal points by semi-circular pieces of iron. This groove probably held inlay, possibly of coral, which has not survived. Within the ring are five circles 6mm across around a central circle; each was decorated with studs held in place by iron pins, the stumps of three of which survive. The studs are missing although the traces of a white matrix can be seen on one circle. This does not seem to have been a ring-headed pin but bears a remarkable similarity to no 8. Diameter 34mm. Context N147 (089)

8 Cast bronze ring-headed pin head. Missing the pin but with a magnificent head of cruciform design of four circles each 7mm across around an central circle. Both the sides and edge of the circle are grooved for inlay, probably of coral, none of which now survives. Remains of iron spacer bars survive in the grooves. The circles may also have once held coral studs. The outer groove does not entirely encircle the ring but ceases where the pin was attached. Diameter 32mm. Context N092 (088)

9 Short cast pin with circular setting. Originally with a glass inlay, part of which still remains, now cobalt blue, probably originally red. Late Iron Age form. Length 18mm, diameter at head 8mm. Context B616 (044)

10 Globular headed pin, broken shank, decorated from the head down to 12mm with two bands of very finely engraved transverse lines divided by a row of transverse incisions. The decoration ends with a row of lines in a herringbone fashion, probably Bronze Age. Length 26mm. Context D631 (045)

11 Complete cast hair or clothes pin, flattened circular head, slightly dished on top, circular section. Worn shank, very tip broken off, slightly bent. Possibly Bronze Age. Length 85mm. Context G179 (042)

12 Coral stud. Stud fastened with a quatrefoil headed bronze pin. A hole of the same shape was cut into the surface of the knob. The stud is very pitted and worn and is rather irregular, as though it was a shaped pebble. This stud decorated bronze sheeting. Width of head 2mm. Context N052A (087)

13 Fragment of ring-headed pin. Terminal of the pin has two collars made from circular section wire. The pin is missing. Very corroded. Outer diameter of ring 15mm, thickness of wire 1.5mm. Context D619 (043)

14 Coral stud of quatrefoil pin. Context unrecorded (087a)

15 Ring with overlapping terminals, 1.25 turns, expanded loop (Type 2). Incised line top and bottom and waisted along the centre of band, distorted. Internal diameter 15.5mm. Context B661 (054)

16 Ring with overlapping terminals, 1.25 turns, expanded loop (Type 2). Flat section and decorated with two lines of punched dots. Missing its terminals. Context D626 (059)

17 Ring with overlapping terminals, 1.25 turns, expanded loop (Type 2). Flat section and tapering terminals. External diameter 17mm. Context L758 (057)

18 A tiny plain ring but the oval section indicates that it was worn, presumably by a child. Context E051 (067)

19 Ring with overlapping terminals, 1.25 turns, expanded loop (Type 2). Three incised lines along length of band with herringbone above and below centre line. Very worn, almost through in centre of band and distorted, one terminal broken. Internal diameter 19mm. Context N801 (055)

20 Ring with open terminals (Type 5). Swollen terminal. Internal diameter 20mm. Context L601 (062)

21 Ring with abutting square terminals (Type 6). Circular section wire. Internal diameter 19–20mm. Context B252 (063)

22 Ring with overlapping terminals of 1.5 turns (Type 3). Flat section with tapering terminals. Internal diameter 15mm. Context N103 (058)

23 Spiral ring of two turns (Type 4). Rectangular section wire, squared terminals. Internal diameter 17.5–20mm. This is the only ring of this type from the site. Context L649 (060)

24 Ring with overlapping terminals, 1.25 turns, expanded loop (Type 2). Possible incised line top and bottom of loop, obscured by corrosion. Internal diameter 14mm, Context I020 (056)

25 Large plain ring. Internal diameter 20mm. Context B702 (068)

Figure 99

1 and 1A Pair of button and loop fasteners (1 and 1A). Cast copper alloy, each with two lobes joined in the centre by a raised boss surrounded by a raised circle, flat on the reverse, triangular, circular section loops. Sometimes identified as harness equipment, but as likely to be dress fasteners. Although not found together these are obviously a pair; they are not identical as would be expected with items cast by the lost wax method. Late Iron Age form. Width 30mm. No 1 Context G1651, no 1A Context G094A.(077)

2 Toggle comprising a solid cast copper alloy cylinder with circular suspension loop at top. Decorated with incised lines around circumference but stopping short at the loop. Length 29mm. Context T317 (077a)

3 Copper alloy button (one of a pair). Made in two halves: a flat circular base with protruding tang drilled with a circular hole and a domed upper half presumably soldered to the base. Diameter 15mm. Context J001 (078)

4 Copper alloy disc with figure of soldier stamped in relief. Raised indented edge, the reverse is plain and shows no sign of solder or rivet holes. Pre-Flavian context. Diameter 18mm. Context B804B (115)

5 Corner fragment of a piece of copper alloy sheet with late Iron Age/early Roman repoussé decoration. Raised boss with raised ring around. One rivet hole 1mm across. Scrap, cut marks clearly visible. Context N150 (090)

6 Sub-rectangular copper alloy plate, crudely cut. Nails running through holes in each of the four corners, one of these has been bent back over itself. Plate possibly attached to leather. The upper surface has a patch of white deposit with a definite edge, possibly solder. Dimensions 47 by 33mm. Context D307 (082)

7 Two diamond-shaped copper alloy plaques (7 and 7A). Crudely cut from reused piece of sheet. There are curved score marks on the surface that are probably not to do with their use. Both pierced at corners with holes about 2mm across, one hole on no 7 retains a globular headed rivet. Probably for decorating wood. No 7 length 37mm, no 7A length 44mm. Context B024 (092)

8 Copper alloy sheet bronze fitment. Originally elongated with a curved terminal. Curved edge is decorated with a raised repoussé border, bounded by ridges. Two rivet holes, one on the terminal 3mm across, the other torn. Probably Roman. Length 60mm. Context B804B (095)

9 Scrap fragment of decorated copper alloy sheet. Curved along one side, scalloped along the other, one large torn rivet hole, 3mm across, bent and broken. Length 42mm. Context N020 (097)

10 Curved piece of copper alloy sheet, stamped with two opposing rows of a leaf design. One edge broken across the design. Early Roman style. Width 8.5mm. Context B613 (093)

11 Hollow copper alloy ring. Made of hammered sheet metal of two matching halves originally meeting along a horizontal seam but now sprung apart. It has a black core possibly of wood, jet or shale. Outer diameter 41mm, inner diameter 22mm. Context N806 (104)

12 Tubular ring with attached wrought copper alloy sheet, probably a mirror. Diameter of roundel 80mm, inner diameter 66mm. Context N147 (114)

Figure 100

1 La Tène I iron brooch (Hull's Type ICb). The bow is straight and the short everted foot returns parallel to but slightly higher than the bow. The terminal of the foot expands to form a small disc with snout and a central perforation (presumably a setting for inlay or to house a decorative rivet or stud). The head and pin are missing. Context N051 (001)

2 La Tène I or II copper alloy brooch. The spring is broken and its original configuration is unclear although the low obtuse angle at the head suggests that the cord was external. The bow has an almost straight profile. the foot is broken and the shape of the opening above the catch cannot be reconstructed with confidence but was probably rectangular in shape. Context N754 (003)

3 Copper alloy brooch of developed La Tène II form. The bilateral spring originally had 12 coils with an external cord; the profile of the bow is slightly arched and although now broken it is unlikely that the angle of return was particularly acute. The foot does not appear to have looped far over the bow and the opening above the catch was probably rectangular. The foot was originally attached to the bow by a simple clasp. Context D708 (010)

4 Copper alloy brooch of developed La Tène II form. The spring is broken and its original configuration is unclear, although the low obtuse angle at the head suggests that the cord was external. The bow has a low curved profile, the returned foot is now broken but was original triangular in shape, attached to the

lower part of the bow by a simple clasp. Part of a decorative disc lying immediately below the clasp survives. Context N754 (011)

5 Copper alloy brooch of Knotenfibeln type. Although the spring is now broken originally it had two coils connected by an external cord, the lower portion of the bow below the prominent moulded collar has a pronounced median arris. The foot terminates in a moulded knob. Unstratified (012)

6 Copper alloy brooch of La Tène III type with surface moulded collar. A fine and carefully crafted brooch. The bow is short with a high arched, almost P-shaped, profile and a slight reverse curve towards the foot; the upper portion of the bow has an almost rectangular cross-section with cavetto mouldings separated by a central ridge with a short central groove at the head of the bow and just above the collar moulding. The vestigial collar ornament is formed of two pairs of narrow transverse ridges, separated by a wider shallow groove. The lower bow tapers to a point at the foot and has a decorative groove on one side running from the collar moulding to the top corner of the catch plate. The rectangular shaped catch plate has two openings separated by a single narrow stepped bridge and the outer rim of the foot is also ornamented by a narrow groove. Context D507 (013)

7 La Tène III copper alloy wire brooch. The spring originally had four coils connected by an external cord. Most of the foot and catch plate are also broken but the open catchplate was originally probably rectangular in shape. Corroded and broken. Context L403A (014)

8 Simple one-piece British (Camulodunum Type VII) copper alloy brooch. The bow has a high arched asymmetrically curved profile and is formed of rhomboid sectioned wire. The bow is now slightly distorted and the rectangular catchplate may originally have been integral to the profile of the bow. The pin is missing. Context D047 (021)

9 Simple one-piece British flat triangular bow form copper alloy brooch. Nauheim derivative. Not an unfinished brooch but a most unusual form. The upper third of the bow is formed of rectangular wire with a slight shallow groove in its upper surface. This turns at its end to form the first coil of a spring and consequently is not the wire of an unwound spring. The lower portion is flat and triangular in shape. The entire bow has a very straight profile, suggesting that the final stage of production (bending the bow) has not taken place. The spring and pin are missing. Context W034 (029)

10 Copper alloy Colchester brooch (Camulodunum Type III). The bow is very short and the catchplate is unperforated. The hook to retain the external cord is broken and the spring and pin are missing. Context Site B unstratified (039)

11 Copper alloy brooch of Knickfibeln type (Riha Type 2.6, 1979, 71). The upper surface of the bow and foot have been impressed with ladder ornament. Two impressed stamped eyes are at the top of the long foot immediately below the collar moulding. The spring is broken and the pin is missing. Context D703 (040)

12 Copper alloy Aucissa derivative brooch. The pin is broken. Context D507 (059)

13 Copper alloy fiddle brooch. The base of the bow is straight. Each long edge of the bow is decorated by a line of rocked scorper-graver work inside a narrow marginal ridge. A central groove running down the bow contains a line of relief wavy zigzag ornament formed by opposed and slightly offset impressed circles. The pin is missing, burnt? Context A010A (074)

Figure 101

14 Copper alloy fiddle brooch. Each side of the upper bow has a single marginal groove and a band of rocked scorper-graver work. A central groove contains relief wavy zigzag ornament formed by and separating two opposed and offset rows of small impressed circles. The cross panel is oval with two incised transverse grooves. The foot has a small moulded knob, tinned. The pin is missing. Context D506 (078)

15 Copper alloy fiddle brooch. The central ornament on the upper bow is not carefully executed. The cross panel is hexagonal in shape with an upper and lower pair of transverse grooves. The pin is missing. Context D707 (080)

16 Copper alloy simple hinged brooch. Slightly flattened triangular bow is ornamented at each edge by a single marginal groove converging to a point at the foot. The almost rectangular head has incised decoration. The pin is missing. Context B311 (089)

17 Copper alloy simple hinged brooch. The bow is ornamented by a single pair of marginal grooves. The catch plate is broken and the pin is missing. Context D506 (090)

18 Copper alloy strip bow brooch. The foot is missing. Context B616 (100)

19 Copper alloy dolphin brooch of hinged form. The underside of the bow is hollow and the sharply sloping upper surface is ornamented by a series of narrow stepped ridges. The pin is broken and the catchplate is missing. Context D029 (145)

20 Copper alloy strip bow brooch. The short bow splays out towards the foot and is ornamented by two quite pronounced longitudinal (presumably moulded) ridges. The head has a right-angled turn. The pin is missing. Context D507 (124)

Figure 103

1 Saddle quern fragment. Old Red Sandstone. Context N958 (110)

2 Rotary quern, Type 1a. Beacon Hill Old Red Sandstone. Context B092B (074)

3 Rotary quern, Type 2a. Beacon Hill Old Red Sandstone. Context B310 (061)

4 Rotary quern, lower stone. Upper Greensand. Context P758C (101)

Figure 104

1 Mortar stone or saddle quern. Quartzite. Context G180 (059)

2 Rotary quern stone, Type 2c. Beacon Hill Old Red Sandstone. Context B616 (071)

3 Rotary quern stone. Feeder pipe slots. Beacon Hill Old Red Sandstone. Context E982 (057)

4 Rotary quern stone, Type 1c. Beacon Hill Old Red Sandstone. Context E982 (064)

5 Rotary quern stone, Type 1a. Harptree Beds silicified sandstone. Context C102 (109)

6 Rotary quern stone, Type 1b. Buff sandstone. Context G192 (068)

Figure 105

1 Rotary quern, Type 2b. Beacon Hill Old Red Sandstone. Context B322A (062)

2 Rotary quern, Type 1b. Harptree Beds silicified sandstone. Context L002 (077)

3 Rotary quern, Type 1a. Beacon Hill Old Red Sandstone. Context W030 (078)

Figure 106

1 Grinding stone. Grey sandstone. Context K696 (228)

2 Multi-purpose stone. Staddon Grit. Context C202C (225)

3 Multi-purpose stone. Grey sandstone. Context L452B (164)

4 Stone polisher. Quartzite. Context B615 (166)

Figure 108

1 Dressel 20 amphora spike, *c* AD 30–70. Context B612 (002)

2 Dressel 20 amphora rim, *c* AD 30–70. Context B616 (001)

3 Corfe Mullen flagon. Context B613 and B616

4 Corfe Mullen flagon or beaker rim. Context B616

5 Corfe Mullen flagon base. Context B322

6 Dorset BB1 platter. Context B613

7 Savernake storage jar. Context B613

8 Savernake storage jar. Context B339

9 Savernake storage jar. Context B611

10 Savernake storage jar. Context N102

11 Savernake storage jar. Context N102

12 Gaulish lamp fragments. Context B616

13 Lyon cup. Context F2P

Figure 109

1 Body fragment of first-century AD cast glass vessel. Mid-blue. Deep convex side, one narrow vertical rib, trace of second. Inner surface ground. Two horizontal wheel-cut lines within a band of abrasion on lower body. Surfaces scratched, rib edge worn. Heavy iridescence. Dimensions 60 by 26mm, thickness 2–6mm. Context K659, south-west gate Episode IX, Context Group IV (001)

2 Base fragment of first-century cast glass vessel. Deep blue. Wide, slightly concave base, three ribs extending towards centre. Inner surface ground. Strain crack. Surfaces scratched. Dimensions 25.5 by 15.8mm, thickness 2.5–4mm. Context L451 (002)

3 Handle and body fragment of blown first-century AD glass jug. Opaque white handle, mid-blue body. Lower part of straight ribbon handle with claw attachment. Narrow prominent central rib, rounded edge ribs, one missing. Convex body. Lower edge of handle broken and worn smooth. Projected height 35mm, thickness handle 0.5–11mm, thickness body 1.5mm. Context L405 (003)

4 Glass handle fragment from first-century AD blown jug or amphorisk. Deep blue with vertical opaque white streaks. Angular narrow ribbon handle. Thin vertical unmarvered trail on outer surface. Projected height 12mm, width 9.5–10.2mm, thickness 2–2.5mm. Context B613 (004)

5 Convex body fragment of first-century AD blown dark blue glass vessel. Part of two horizontal grooves, and trace of third, probably indicating position of marvered trails, now missing. Strain crack. Surfaces scratched. Dimensions 16.3 by 8mm, thickness 1mm. Context G2 (006)

6 Convex body fragment of first-century AD blown dark blue glass vessel. Part of two horizontal grooves, probably indicating position of marvered trails, now missing. Occasional bubbles, surfaces scratched. Dimensions 14.5 by 12mm, thickness 1mm

7 Body fragment of yellow/brown blown first-century AD glass vessel. Wide slightly convex side, four narrow horizontal trails. Tiny bubbles. Strain cracks. Dimensions 14 by 9mm, thickness 1–1.5mm. Context L2 topsoil (008)

8 Yellow/brown body fragment of blown second- to fourth-century AD glass vessel. Slightly convex body, narrow vertical trail. Elongated bubbles, black specks. Projected height 11mm, thickness 1–2mm. Context L601 (010)

9 Rim and upper body fragment of colourless second- to fourth-century AD blown glass cup. Slightly inturned rim, edge fire-rounded. Straight upper body tapering in slightly. Part of curving horizontal groove, probably indicating position of trail, now missing. Tiny bubbles. Surfaces scratched. Projected height 11mm, rim diameter 70mm, thickness 0.8–2mm. Context E980 (011)

10 Rim and upper body fragment of second- to fourth-century AD colourless blown glass bowl. Irregular tubular rim, edge bent out and down. Straight upper body tapering in. Tiny bubbles, elongated in rim. Heavy iridescence. Projected height 7mm, rim diameter 170mm, thickness 0.2–0.5mm. Context D9 (012)

11 Lower base and body fragment of second- to fourth-century AD colourless blown glass bowl or cup. Convex lower body tapering in to slightly convex base.

Possible edge of pontil mark in centre of base. Tiny bubbles. Base worn. Strain cracks, surfaces scratched. Projected height 13.5mm, base diameter *c* 35mm, thickness 2–3.5mm. Context N200 topsoil (013)

12 Rim fragment of second- to fourth-century AD colourless blown glass jug/bottle. Rim edge rolled in and down and flattened inside. Funnel mouth tapering in. Unmarvered horizontal trail below rim. Elongated bubbles in alignment with rim edge. Strain cracks. Projected height 9mm, rim diameter 50mm, thickness 1–3.5mm. Context E2C ?topsoil (015)

13 Lower body and base fragment of second- to fourth-century AD pale greenish blown glass vessel. Trace of lower body, concave base. Possibly heat distorted. Dimensions 17.5 by 12mm, thickness 2–2.5mm. Context K474 (017)

Figure 110

1 Shale rim fragment. Lathe-turned, upright-sided vessel with a double bevelled rim and an external bead 16mm below it. Context B709 (019)

2 Shale object. Context D619 (010)

3 Copper alloy base plate. Derived from sheet bronze vessel of the late Bronze Age. Length along arc 29mm, width of underside along arc 26mm, thickness at inner edge 3mm, thickness at base of flange 4mm. Context B311 (035)

Figure 111

1 Cast copper alloy cylinder. Typical La Tène moulding with a ridge at either end and a saddle shape in the middle. Not quite joined at the back. The moulding does not continue over the join but stops short on either side, well worn and shiny. Possibly a moulding to decorate the centre of a bucket handle (eg Stead 1971, fig 7). Length 8mm, diameter 8mm. Context F002 (002)

2 Copper alloy fragment of flat-topped rim of a straight sided vessel. Length 38mm. Context Site N unstratified (003)

3 and 4 Two non-joining fragments from a curved copper alloy plate. Simply decorated with a double line of punched dots 2.5mm from the rim. Diameter 45mm. Context no 3 E002A, no 4 E002B (004)

5 Straight copper alloy strip for decorating a straight edge. One end sub-rectangular, the other broken. Two rivet holes pierced from the front, one 3mm across, the other with a dome-headed rivet still in, 3mm in diameter, one of the rivets 7mm of which 2.5mm would have been through the object decorated, possibly a wooden or metal vessel. Decoration out-turned rim with a crimped edge, the lower part of the strip has two slight ridges along its length. Context B616 (091)

Figure 112

1 Fragment of slender bronze socketed hammer. Context F002 (002)

2 Double-edged bronze socketed knife. Complete except for blade tip. Original surface survives on part of socket but mostly obscured by concretion or corrosion. Socket has oval mouth and pair of rivet-holes at right-angles to plane of blade: straight sides run directly into blade edges, faces converge towards blade and the junction is marked by offsets. Blade tapers gradually towards point; flat midrib section. Blade is short in relation to length of socket, but its condition does not indicate whether this is original or due to reworking after use. Length 80mm, blade length 56mm, mouth 19 by 14mm, maximum blade thickness 40mm. Context E003 (003)

3 Double-edged bronze socketed knife. Lower blade broken off and existing portion bent and partly broken. Corrosion covers the entire object and has damaged the mouth, which appears to have been oval and has a ribbed collar. A pair of rivet holes at right-angles to the labe of the blade is set in the upper part of the socket. Socket sides are straight and diverge towards junction with the blade which is marked by distinct offsets from the faces of the socket. Blade has straight sides: section is badly preserved but traces remain of bevels and broad flat midrib. Length 71mm, socket length 29mm, mouth 23 by 19mm, blade width 23mm, thickness 50mm. Context N051 (004)

Figure 113

1 Antler handle. The two rivet holes are 3 and 4.5mm in diameter and are set 15mm apart. Traces of a longitudinal saw cut which would have held the flattened tang indicate that it was cut by a blade only 1.5mm thick. The surface is randomly decorated by ring and dot patterns. Length 61mm. Context F310 (284)

2 Antler handle. The longitudinal slot is 45mm in length and the three lateral perforations are 4mm in diameter. Length 86mm. Context W058C (286)

3 Complete slotted roe deer antler handle. The slot is 39mm long and a minimum of 1.5mm wide. There is an additional rough saw cut in the fork between the two tines and much of the surface has been trimmed. Length 196mm. Context J126 (295)

4 Whetstone. Staddon Grit. Width 42mm, thickness 18mm, weight 121g. Context N954 (143)

5 Whetstone. Staddon Grit. Length 108mm, width 28mm, thickness 26mm, weight 144g. Context N810 (140)

6 Whetstone. Staddon Grit. Length 87mm, width 23mm, thickness 11mm, weight 38g. Context C256B (126)

7 Whetstone. Staddon Grit. Length 83mm, width 28mm, thickness 5mm, weight 27g. Context D630A (009)

8 Whetstone. Staddon Grit. Length 91mm, width 59mm, thickness 22mm, weight 138g. Context C054P (147)

9 Sharpener. U-shaped groove on one face and three smaller grooves on edge. Sandstone. Dimensions 41 by 31 by 21mm. Context T254C (171)

10 Whetstone. Complete small bar, well-worn. Brown sandstone. Length 57mm, width 20mm, thickness 12mm, weight 21g. Context N652 (136)

11 Bone pin or peg. The point is heavily worn. Length 41mm, diameter of perforation 4mm. Context C204 (028)

12 Irregular pointed bone pin with a sharp point at each end, possibly made from a splinter of roasted rib bone. Length 61mm. Context D820 (029)

13 Paddle-shaped bone pin head. Length 42mm. Context E3AJ (030)

14 Irregular bone pin, sharp at one end and made from roasted splinter of bone. Context S052 (039)

Figure 114

1 Plain copper alloy possible harness ring. External diameter 43mm. Context D029 (109)

2 Plain copper alloy possible harness ring. External diameter 28mm. Context D006A (107)

3 Fragment of bridle bit rein ring. Wrought from sheet bronze with the join on the inner side, very worn, possibly scrap. Outer diameter of ring 75mm, inner diameter 65mm, thickness 7mm. Context N800 (106)

4 Copper alloy cast harness strap union (Spratling Group I, Spratling 1972, 107). Undecorated with solid domed double bosses, flat on the reverse. Originally had two curved strap loops; one is now broken. Probably scrap. Width 31mm. Context G656 (105)

Figure 115

1 Barbed copper alloy spearhead fragment. Little of original surface preserved though condition is otherwise good. Lower part of one wing straight edge parallel to socket. Base returning at acute angle, section tapering to blunt edge. One face of broad socket. Length 57mm, width 35mm, blade width 19mm. Context E982 (009)

Figure 116

1 Incomplete cast bronze four-armed pommel mount. The curved arms clasped the oval top of the pommel. In the centre is a rounded rectangular perforation 5 by 4mm for the end of the iron hilt tang. Very corroded and cracked. Length 34.5mm. Context A002 (024)

2 Oval cast bronze hilt mount with rectangular perforation 8.5 by 13mm and low raised border on both faces; used as a washer to divide the hand grips. Length 27mm. Context B616 (025)

3 La Tène I annular openwork scabbard chape end (Piggott Group I) with circular section. Thickness 5mm with a ridge on the upper surface, two projecting knobs on either end of the chape end where it meets the U-shaped binding which clasps the edge of the chape. Very corroded. Length 40mm, width of chape end 29.5mm. Context E943A (018)

4 La Tène II copper alloy scabbard chape (Piggott Group II). The wooden scabbard was edged at its lower end with wrought U-shaped binding, now buckled and broken in several places. There are no rivet holes; the binding was cast onto the chape end, also of U-shaped section, and was held in place on the scabbard by that and the half-bridge. The beating marks on the inner surface can be clearly seen. On the front of the chape the bridge originally extended into two stylised bird-head clamps, but only one now survives with a stamped ring and dot ornament forming the eye. The chape was made in two pieces, first binding and bridge, and then the chape end which was rather crudely cast on. The chape end has several casting flaws. It was well used and worn. The chape is now broken but approximate original length was 160mm. Length of chape end 42mm, width of chape end 29mm, width of bridge 38mm, length of chape end and attached binding 101mm. Context B262 (019)

5 Semicircular cast copper alloy scabbard chape of U-shaped section. No strut at back, possible lip motif at the front is obscured by corrosion. Originally decorated with two raised circular areas with incised circles, now very worn and corroded. Length 45mm, width 46mm. Context B801 (021)

6 Copper alloy cast openwork strap fitting. Outer circle (diameter 35mm) of D-shaped section, with raised decoration, now very worn. Inside are two raised circular bosses with comma-shaped tails looping down to join a spindle shape, thus dividing the circle into three unequal voids. Each of the bosses contains a domed coral stud held in place with a copper alloy pin and a third is at the base of the spindle shape. The holes for the pins have been drilled very precisely to the exact size of the pin. The positioning of the bosses gives the impression of a face, possibly human, with coral eyes and mouth, the pins forming the pupils and a slightly larger mouth the aperture. An incised decoration on the underside of the fitting, very worn now and obscured by corrosion, further emphasises the face design, but on this side it looks more like an owl. All the decoration is well worn, as are the studs; the left hand eye has cracked in antiquity, but was nevertheless used like this. This stud was also worn into a facet, and in fact is much more worn than the other two. At the top of the fitting is a narrow bar bordered by two lobes. The fitting probably hung from this bar, which would allow for a strap no more than 7mm wide. This could be a harness fitting or alternatively a sword suspension ring (cf Parfitt 1991, 216). Context C655B (086)

Figure 117

1 Part of a copper alloy shield mount to cover the wooden boss of a shield. It probably did not completely cover the boss but merely capped it. The mount is made from a sheet of forged bronze that varies in thickness from 0.4mm in the areas of highest relief to 1.1mm at the waisted part. In the centre of the terminal is a 1.8mm hole for the rivet to pass through into the wooden shield boss. Around the hole at the

back is a pronounced burr from 0.2 to 0.5mm high; it is uncertain whether the hole was drilled or punched, though the former is more likely. The ornament consists of two panels of decoration in relief set diagonally worked using the repoussé technique, sharpened in places using a punch. It was decorated by a very competent metal-smith. The motifs include a broken-backed scroll and a comma with a crested wave profile (cf Wandsworth shield boss Fox 1958,146; cf also the Witham shield ibid, frontispiece). Although the motifs were in use from the third century BC, this shield mount dates to the first century BC/AD. Length 177mm, maximum width 68mm. Context N371 (026)

2 Incomplete copper alloy shield mount in four contiguous fragments, twisted at one end and broken off at both ends. Made of sheet bronze and forged and trimmed to shape. Seen from the side the mount curves up gracefully towards the middle from either end. In the middle it swells out and has a flange on either side of a rib beaten up from the back. The flanges die out towards the ends where the rib takes on the shape of a half cylinder. The edges of the rib are sharpened at the front by incised lines as are the slightly turned-over edges of the flanges. These lateral ridges are transversely nicked with a punch at approximately 1mm intervals. On either side of the central rib is a series of very badly executed arcaded lines. Each arch was first lightly drawn out with a scriber and then strengthened by rocking a graver along it. Traces of the scribed line can still be seen. Each arch ends at a dot impressed with a round punch. The fact that this piece curves up towards the middle suggests that it may have been fitted lengthways down the spine of a shield over the wooden boss. Length 201mm. Context N802 (029)

The illustration shows this mount as it was illustrated in 1972 (Spratling 1972, no 329) alongside another (2A) showing the mount as it is now, with one fragment missing. The above description is based on the earlier observations (Spratling 1970a).

3 Pear shaped, semicircular section, shield mount fragment of forged bronze, broken at either end. Length 58mm. Context N051A (027)

4 Copper alloy shield mount fragments of semi-circular section, closed at one end; there are no rivet holes. Length 28mm. Context N751 (028)

5 Rectangular copper alloy shield clamp, one edge broken, slightly raised edge at either end. Made from a reused piece of bronze sheet, originally of rounded edges which have been turned under and beaten flat. Length 15mm. Context G002E (031)

6 Beautifully made copper alloy shield clamp with repoussé decoration. It has not been damaged as the clamp was bent over the edge binding. It has four raised carinations, two at each end, with a raised elongated leaf shape joining the two. Length 42mm. Unstratified (032)

7 Beautifully cast copper alloy clamp with four raised carinations with raised lines in between. Length 20.5mm. Context P453 (033)

8 Cast copper alloy clamp with three raised carinations outlined by rows of tiny raised squares, very worn. Length 26mm. Context N952 (034)

9 Fragment of cast copper alloy clamp with rounded moulding terminal. Length 18mm. Context F002 (035)

10 Fragment of cast copper alloy clamp. Two carinations with a raised rim at either end, remains of the U-shaped binding inside. Length 10.5mm. Context E002D (036)

11 Possible copper alloy clamp cast with sinuous curving raised design. It has broken along the curve. Length 17mm. Context N075 (040)

Figure 118

1 Copper alloy shield binding. Context B061
2 Copper alloy shield binding. Context N036
3 Copper alloy shield binding. Context N701
4 Copper alloy shield binding. Context B229
5 Copper alloy shield binding. Context B229

Figure 119

1 Antler pointed ferrule. Similar to no 2, but with no trace of perforation. Length 41mm. Context N955 (238)

2 Antler pointed ferrule. The longitudinal hollow is conical in shape and is 13mm in diameter at the top and 23mm deep. The perforation is 4mm in diameter. Length 52mm. Context N151 (237)

Figure 120

1 Copper alloy U-sectioned shield binding. Two circular lobes survive on one side, the apex of the U-section is slightly flattened. All four lobes have been bent out perpendicular to the binding itself. The lobes have been punched through from the outside. There are parallel striations on the outside of the apex of the U which may be file marks or perhaps the result of grinding the shield on an abrasive surface. Near one end the body metal appears to be laminated, suggesting that it has been reforged from other sheet metal. Maximum length 129mm, maximum width 36mm, deduced shield board thickness 8mm, lobe width 12mm, hole diameter 3mm, thickness of sheet metal 0.5–0.8mm, binding width 10mm, length lobe centres 107mm. Context B619 (001)

2 Copper alloy plume tube or crest holder base. Curved concavely along its long sides and with rivet holes in each corner, the central section has been folded over to one side and it too is pierced by two metal rivet holes; one dome-headed rivet of the main body remains *in situ*. The object is presumably a reused plume tube with the tube flattened and pierced with two holes (which must have been done before the flattened tube was folded over). The flattening may be the result of its being destined for scrap (one of the rivet holes has been torn through a corner). The holes in the tube

have been punched through from the side now folded down. Length 32.5mm, width 25mm, width of flattened tube 10mm, sheet metal thickness 0.5mm Context B611 (002)

3 Copper alloy plume tube. This has been subsequently modified in a number of ways. The object is flared at either end and has rivet holes in the expansion at each corner, three of the four retaining their original dome-headed rivets. There are widespread traces on the upper surface. The central tube has been pinched together, flattened, and cut down so that it no longer extends to the full length of the body of the fitting. There are five holes pierced in this trimmed section which given that three of them pass straight through must post-date the modification. Webster No 2. Length 40mm, width 45mm, height 11mm, sheet metal thickness 0.4mm, rivet shank length 5mm. Context B616 (003)

4 Copper alloy helmet cheekpiece hinge. Three fragments probably the section originally attached to the helmet bowl. The four rivets have large flat circular heads. The object has been distorted and bent back upon itself possibly caused by the cheekpiece being torn off the helmet. Part of the roll of the hinge is visible at the bottom of the largest plate. Length 29mm (A), 18mm (B), 18mm (C), width 13.5mm (A), sheet metal thickness 0.5mm (C). Context G002 (004)

5 Copper alloy S-shaped, U-section binding from helmet piping. This piece derives from the expansions at the front or rear of a cheekpiece which were designed to protect the cheekbone and jawline. Length 48mm, straightened length 68mm, width 2mm, height 4mm, sheet metal thickness 0.3mm. Context B513 (005)

6 Copper alloy S-shaped, U-section binding from helmet piping. At one end it has been bent back on itself. Length 42mm, straightened length 57mm, width 17mm, height 3mm, sheet metal thickness 0.2mm. Context B613 (006)

7 Copper alloy S-shaped, U-section binding from helmet piping. It has been slightly distorted at one end perhaps damaged during removal from its parent component. Length 47.5mm, straightened length 50mm, width 2mm, height 3mm, sheet metal thickness 0.3mm. Context B611 (007)

8 Copper alloy U-section binding from helmet piping with a 90° curve on the inside. Numbers 8 and 9 may be from the same cheekpiece. Length 42.5mm, width 2mm, height 4mm, sheet metal thickness 0.3mm. Context B804B (008)

9 Copper alloy U-section binding from helmet piping with a 90° curve on the outside. Numbers 8 and 9 may be from the same cheekpiece. Length 19mm, width 2mm, height 3.5mm, sheet metal thickness 0.3mm. Context B804B (009)

10 Copper alloy U-section binding. Probably helmet piping. It has been distorted by pinching near the central point. Length 54.5mm, width 2.5mm, height 3mm, sheet metal thickness 0.2mm. Context B616 (010)

11 Copper alloy U-section binding. Probably helmet piping. It has been distorted by twisting. Length 47mm, width 2mm, height 3mm, sheet metal thickness 0.1mm. Context B078 (011)

12 Copper alloy U-section binding. Probably helmet piping. Numbers 12 and 13 may be from the same cheekpiece. Length 25.5mm, width 2mm, height 4mm, sheet metal thickness 0.4mm. Context B804B (012)

13 Copper alloy U-section binding. Probably helmet piping. Numbers 12 and 13 may be from the same cheekpiece. Length 12mm, width 2mm, height 4mm, sheet metal thickness 0.2mm. Context B804B (013)

Figure 121

14 Copper alloy U-section binding. Probably helmet piping. It has been twisted through 90° and bent back on itself. Webster No 18. Length 86mm, straightened length 175mm, width 3mm, height 3mm, sheet metal thickness 0.5mm. Context B621 (014)

15 Copper alloy U-section binding. Probably helmet piping. It has been twisted and bent back on itself. Length 77mm, straightened length 170mm, width 3mm, height 3mm, sheet metal thickness 0.3mm. Context B513 (015)

16 Copper alloy U-section binding. Probably helmet piping. It was originally a straight length which has been bent sideways through 90°. Both ends have been damaged, one showing the signs of tearing and distortion. Length 33mm, straightened length 51mm, width 1.5mm, height 3.5mm, sheet metal thickness 0.2mm. Context B613 (016)

17 Copper alloy U-section binding. Probably from helmet piping. Distorted, one end has been twisted through 90°. Length 50mm, width 2mm, height 4mm, sheet metal thickness 0.1mm. Context B613 (017)

18 Copper alloy U-section binding. Probably helmet piping. Distorted, one end has been twisted through 90°. Length 29mm, straightened length 35mm, width 2mm, height 3mm, sheet metal thickness 0.2mm. Context B613 (018)

19 Copper alloy U-section binding. Probably helmet piping. There is a slight curvature to the inner edge. Length 95mm, width 3mm, height 3mm, sheet metal thickness 0.3mm. Context B613 (019)

20 Copper alloy U-section binding. Probably helmet piping. It is slightly distorted and opened up towards one end. Length 64.5mm, width 2.5mm, height 3mm, sheet metal thickness 0.5mm. Context B613 (020)

21 Copper alloy U-section binding. Probably helmet piping. It has been opened up (or perhaps never fitted to a helmet), but is crimped at one end where it has been cut obliquely. Length 55mm, width 3.5mm, height 2.5mm, sheet metal thickness 0.1mm. Context B613 (021)

22 Copper alloy U-section binding. Probably helmet piping. Length 21mm, width 3mm, height 3.5mm, sheet metal thickness 0.4mm. Context B611 (022)

23 Copper alloy, free moving element from a *lorica segmentata* hinged strap fitting. Pierced by two rivet holes, only one rivet now remains and that is of the large fat headed variety usually found as repairs on this type of fitting (original rivets having small, domed heads) and this head partially obscures the second rivet hole. The end of the rivet has been crudely bent over. This is suggestive of a repair to the leather strap at some point during the life of the object. The rivet holes are surrounded by double concentric incised circles on the upper face. Webster No 8. Length 25mm, width 15.5mm, deduced leather thickness 2mm, sheet metal thickness 0.5mm, rivet head diameter 7.5–8mm. Context G003 (023)

24 Lobate hinge of double thickness copper alloy sheet metal folded over on itself at the hinge point. One lobe is missing either cut or broken off. The outline suggests that the object was cut out after folding in two. One of the rivet holes has deep dishing around it and two impressions are visible, as if caused by a sharp point applied with pressure (perhaps to remove a rivet). No iron remains on the rear face and no rivets are attached indicating that the item had been removed from its cuirass before being discarded. Length 30.5mm, width 28mm, sheet metal thickness 0.3mm. Context B138 (024)

25 Hinge strap fitting made from double thickness copper alloy sheet metal. The object is still partially articulated on its original copper alloy hinge spindle with its burred ends. Each of the four rivet holes is surrounded by three indented concentric circles. Three of the four original rivets survive *in situ*: small dome headed and burred over on the underside. The object appears to have been cut out once doubled over, although the rounded end of the free element makes it look as if it was not executed in this way. The absence of any sign of iron plate on the underside of the object indicates that it was probably removed from its armour plate before deposition. A small piece of copper alloy sheet, possibly pierced by a rivet hole, is trapped between the leaves of the rounded free element. Length 49.5mm, width 19mm, length fixed element 29.5mm, width fixed element 15.5mm, length free element 24.5mm, width free element 17mm, sheet metal thickness 0.5mm. Context B306 (025)

26 *Lorica segmentata* hinge strap fitting. Free moving element from a hinge strap fitting formed from double thickness sheet. The object does not appear to have been cut out after doubling over. The upper face is rectangular with cut off corners. The (presumably) original rivets with small, domed heads are in situ. Length 24mm, width 16.5mm, thickness 4.5mm, deduced strap thickness 1mm, sheet metal thickness 0.4mm. Context K856, south-west gate Episode IX context Group I (026)

Figure 122

27 *Lorica segmentata* buckle fitting. Double thickness copper alloy sheet with no visible remains of the normal hinge. This suggests that either the hinge did not exist, or that the hinge was removed prior to deposition, either deliberately or accidentally. On the underside the end of the sheet has quite clearly been intentionally cut with a slightly concave edge. The copper alloy spindle is the original with burred over ends. the loop is present and the tongue is still articulated on the spindle. The buckle loop seems to have been formed by working a near-rectangular-sectioned bar in order to roll the central portion, giving it an oval section for much of the loop. The rectangular ends are pierced to take the spindle. The rivet may not be original. There are faint traces of incised lines running parallel to the long sides. Length 27mm, width 18mm, width of body 13mm, length body 15mm, maximum thickness 4.5mm, sheet metal thickness 0.5mm. Context K669, south-west gate Episode IX, Context Group II (027)

28 *Lorica segmentata* hinged strap. Free moving element from a hinged strap fitting formed from double thickness copper alloy sheet. The end is rounded and there are two rivet holes pierced (from the upper surface, causing slight dishing of the body) in the usual positions. There is also a third placed centrally which has caused pronounced dishing. Faint score lines are just visible on the upper surface running parallel with the long sides. Two (now loose) oval shaped flat headed rivets survive, probably repairs, one larger than the other. The long one fits in the central, deeper hole and the shorter in the rivet hole nearest the rounded end. Webster No 7. Length 23mm, width 15mm, maximum thickness 6.5mm, sheet metal thickness 0.5mm, rivet lengths 2.5, 4.5mm. Context B025 (028)

29 *Lorica segmentata* buckle loop from a hinged copper alloy buckle fitting (cf no 27). The loop has been formed from rolling a rectangular sectioned bar which is pierced at either end to receive the bucket spindle. The line of the join is visible on the outer face of the loop. Length 15mm, width 17.5mm, thickness 2.5mm. Context K489 (029)

30 Possible *lorica segmentata* copper alloy fastening hook. The object is near circular in section at one end, broadening out to oval before flattening into a spatulate terminal which may originally have been pierced by a rivet hole or a slit, in which case it is more or less intact, although the spatulate end is slightly distorted. Length 24mm, width 7.5mm, thickness 2.5mm. Context D704 (030)

31 Single thickness copper alloy sheet with a square end, two piercings along the central axis and a hint of a rounded shoulder, largely removed by damage at its broader end. The object has a dark grey surface patina. This is a *lorica segmentata* tie loop but damage has caused the loop itself to be ripped off. There are two rivet holes, but no sign of an attached iron plate. Context B053 (031)

32 Fragment of iron plate with a copper alloy domed rivet secured by a partially surviving washer. The washer seems to have been oval with turned down edges. The object is a *lorica segmentata* leathering rivet, still attached to its original armour plate. Length 20mm, width 14mm,

rivet head diameter 11mm, iron plate thickness 1mm, rivet head height 4mm. Context N802 (032)

33 Copper alloy embossed rosette washer with 33 petals and beaded border. The object has been trimmed around its periphery, pierced centrally and dented by a near central blow suggesting that it has seen service. Damage on the underside around the central aperture may suggest that the washer has been prised off and over its rivet. Diameter 32mm, height 5.5mm, rosette diameter 28mm, sheet metal thickness 0.3mm. Context K855 (033)

34 Copper alloy embossed rosette washer with 25 petals and a raised border. The object has been pierced centrally. Numbers 34, 35, and 36 come from the same stamp. Webster No 11. Diameter 21.5mm, rosette diameter 17mm, sheet metal thickness 0.3mm. Context B616 (034)

35 Copper alloy embossed rosette washer with 25 petals and a raised border. The object has been pierced centrally and is partially covered by a white deposit resembling tinning. Numbers 34, 35, and 36 come from the same stamp. Webster No 11. Diameter 21mm, rosette diameter 17mm, sheet metal thickness 0.1mm. Context B616 (035)

36 Copper alloy embossed rosette washer with 25 petals and a raised border. The object has not been pierced centrally, a small raised dimple indicates the point where it should have been. Numbers 34, 35, and 36 come from the same stamp. Webster No 11. Diameter 21.5mm, rosette diameter 17mm, sheet metal thickness 0.1mm. Context B616 (036)

37 Copper alloy rosette washer with at least 31 petals. A raised border and a raised rim around the central aperture. Webster No 15. Diameter 21+mm, rosette diameter 21mm, sheet metal thickness 0.1mm. Context B616 (037)

38 Copper alloy embossed rosette washer with 25 petals and raised border. It is from the same stamp as nos 34–36. The central dimple is visible but has been pierced from the underside with a small hole, although this has never been enlarged to allow attachment with a rivet. Diameter 22mm, rosette diameter 17mm, sheet metal thickness 0.1mm. Context B621 (038)

39 Copper alloy embossed rosette washer with 25 petals and a raised border. Slightly distorted and damaged around the periphery with a central piercing. From the same stamp as nos 34–36. Diameter 21mm, rosette diameter 17mm, sheet metal thickness 0.1mm. Context B621 (039)

40 Copper alloy embossed rosette washer with 25 petals and raised border centrally pierced. Made from the same stamp as nos 34–36. The outline of this object has been quite irregularly cut out, with two evident straight sections. A fragment of iron adheres to the lip of the central aperture, although it is unlikely to be the original rivet. Diameter 22mm, rosette diameter 17mm, sheet metal thickness 0.2mm. Context B621 (040)

41 Copper alloy embossed rosette washer with 31 petals and a beaded border. The surface of the object is slightly dented with one side being partially flattened. Diameter 25mm, rosette diameter 21mm, sheet metal thickness 0.3mm. Context B621 (041)

42 Copper alloy embossed rosette washer with 35 (?) petals. A raised border around the central rivet hole and a raised border. The object has been flattened, and it is therefore difficult to identify the detail. Diameter 23mm, rosette diameter 21+mm, sheet metal thickness 0.3mm. Context B621 (042)

43 Copper alloy embossed rosette washer with 23 petals, a raised border around the central rivet hole and the vestiges of a raised border . The object has been partly flattened and part of one side torn and twisted out at an angle. The petals are quite uniformly fine. Diameter 18.5mm, rosette diameter 17.5mm, sheet metal thickness 0.2mm. Context B339 (043)

44 Copper alloy embossed rosette washer with at least 16 petals and a raised border. The petals have the appearance of having been double-struck, the second time not quite in register with the first. The object is centrally pierced. Probably from the same stamp as nos 34–6. Diameter 19.5+mm, rosette diameter 17mm, sheet metal thickness 0.2mm. Context B621 (044)

Figure 123

45 Copper alloy hinge possible belt fitting. Retains traces of tinning, with two hinged loops, one of which is partially worn through. The object is cast. The end of the plate appears fractured, but it is reasonable to deduce that this was a dagger frog. The remaining portion of the plate has an incised groove running along its width. The lateral bar at the base of the hinge has a groove. Webster No 9. Width 38.5mm, length 14mm, thickness 4.5mm. Context B616 (044)

46 Copper alloy dome headed stud with inlay in the form of an eight-petalled flower. There is a flat border around the domed head. A square-sectioned shank surviving on the underside is bent over (presumably to secure it to leather). This is a decorated rivet from a cavalry harness strap mount. Diameter 15.5mm, shank thickness 2mm, deduced strap thickness 2mm. Context B613 (045).

47 Copper alloy domed bordered stud. There is no trace of inlaid decoration or tinning/silvering on the upper surface. Diameter 17.5mm, height 4mm, body metal thickness 0.4mm. Context B804A (046)

48 Copper alloy embossed stud with a central concavity. There is a hole at the centre where the shank has been detached. There is no sign of inlaid decoration or tinning/silvering. A common type of cavalry stud head. Diameter 21mm, height 2.5mm, body metal thickness 0.4mm. Context B258 (047)

49 Copper alloy junction loop with inlaid design on the upper surface of the body (Webster 1972.1 says this is silver) in the form of seven V-shaped petal pairs. The backing plate survives in tact but the object has been opened out so that the original strap thickness

cannot now be determined. Webster No 1. Length 68mm, width 10.5mm. Context Site B unrecorded (048)

50 Copper alloy spectacle strap mount from cavalry harness. The object has been pierced with rivet holes in each of the circular terminals, although neither is very central. Webster No 14. Length 40mm, width 17mm, body thickness 0.6mm. Context D816 (049)

51 Possible copper alloy strap terminal. It has a body with moulded decoration above a dome headed stud and a rectangular terminal plate from which a terminal knob depends. Possibly a pre-Flavian form. Length 58mm, width 12mm, stud diameter 14mm. Context unrecorded (050)

52 Copper alloy double looped harness attachment. Similar to a button and loop fastener. Part of the shank is upturned where the head has been detached. Webster No 13. Width 22mm, length 19mm, body thickness 1.5mm. Context B893 (051)

53 Copper alloy heavy cast convex phalera with remains of three loops equally distributed around the periphery. Traces of tinning are visible on the convex face, which has a border around it. The inner concave face shows striations possibly made by a tool during formation of the mould (or wax model). Each of the three loops have been broken. Webster No 3. Diameter 43mm, phalera height 14mm, width loop 8.5mm, body thickness 2.5mm, loop internal width 4mm. Context N050 (052)

Figure 124

1 Stone counterweight. Sandstone. Pecked edges, well shaped. Dimensions 58 by 55 by 37mm, weight 202g. Context N254 (160)

2 Stone counterweight. Flint. Rounded cube, pecked all over. Dimensions 55 by 50 by 49mm, weight 222g. Context N254 (162)

3 Stone counterweight. Old Red Sandstone natural flat top and bottom, some shaping of sides. Dimensions 54 by 52 by 44mm, weight 209g. Context C457B (213)

Figure 126

1 Fragment bovine scapula from the proximal end. The glenoid cavity has been pierced by a hole as though for suspension. Context B37 (040)

2 Fragment bovine scapula from the distal end. Broken at both ends. This scapula has been trimmed down very heavily; the spine has been largely trimmed away and the two dorsal fossae have been cut down and their edges smoothed. All the original surfaces are smoothed and polished especially the hollow thoracic surface. The remaining portions of the dorsal fossae are decorated with a pattern of scratch line and dots. Length 106mm. Context K696 (042)

3 Sheep/goat metacarpal with central perforation. Immature bone, the perforation is 5mm in diameter and shows very little sign of wear. There is superficial trimming on the anterior and posterior surfaces. Length 99mm. Context G192 (139)

4 Sheep/goat metatarsal with transverse perforation at the distal end. Immature bone. The transverse perforation through the anterior and posterior surfaces is 3mm in diameter. Length 89mm. Context L103C (142)

5 Sheep/goat metatarsal with longitudinal perforation at the proximal end. Immature bone. Perforation 6mm in diameter. Length 96mm. Context B732 (146)

6 Sheep/goat metatarsal with longitudinal perforation at the proximal end. Perforation 5mm in diameter. Length 130mm. Context C206A (147)

7 Sheep/goat metatarsal with longitudinal and lateral perforations at the proximal end. The distal epiphysis has been removed and the exposed cancellous tissue has been smoothed over, burnt. Length 109mm. Context P824A (156)

8 Perforated sheep/goat metapodial. The distal end of the bone is broken and the proximal articular surface has been removed to form a longitudinal hollow. There is a side perforation between the medial and lateral surfaces. Length 57mm. Context N903 (158)

9 Perforated sheep/goat metatarsal. The distal epiphysis has been removed and smoothed over. The proximal articular surface is pierced by a perforation 7mm in diameter. Length 87mm. Context T254C (162)

10 Pointed rib blade. Trimmed and pointed at one end to form a blade, broken at one end. Length 68mm. Context A23 (171)

11 Thin piece of bone from one surface of a pointed rib blade. The sides are bevelled and smoothed and the surface is decorated with knife cuts. Length 53mm. Context F444 (174)

12 Pointed rib blade. One end has been shaped to a point and although one surface of the bone at this end has been broken away to reveal rough cancellous tissue, this has been subsequently smoothed over. Length 179mm. Context N802J (175)

13 Notched rib blade. Blade with fine knife cut notches on one face. The knife cuts are fairly regular. they are not worn away to any great extent. Compact bone tissue on the edges of the ribs is very thin and the notches have cut through this to reveal softer cancellous tissue beneath. Length 93mm. Context D513 (178)

Figure 127

1 Large pointed blade. The blade is smooth and well finished and there are two small perforations for hafting. Length 122mm. Context B735 (182)

2 Large bone blade. Haft of an implement made from a pig tibia, there are both longitudinal and side perforations for hafting. Context Site I unstratified (185)

3 Large point or blade. Possibly made from a horse metapodial, there is a longitudinal perforation and peg holes for a haft and the blade is well made and smoothed. Context P821C (186)

4 Decorated bone tube fragment. Length 22mm. Context K619 (308)

5 Bone tube decorated with finely cut lines. Length 70mm. Context K850, south-west gate Episode IX, Context Group I (309)

6 Small stone disc. Lias. Chipped edges. Diameter 48mm, thickness 9mm, weight 37g. Context D507 (223)

7 Large stone disc. Micaceous Old Red Sandstone. One face smooth and worn. Broken, chipped edge. Diameter *c* 170mm, thickness 17mm, weight 304g. Context E928 (237)

8 Small stone ball. Possibly white lias Incomplete perforation and small indentations on bottom and sides. Context Site D unstratified (243)

9 Large stone ball. Forest Marble. Slightly broken and slightly flattened ends. One prominent groove and traces of four others, all running roughly end to end. Possibly plough damage. Worked surfaces. Diameter *c* 160mm, weight 4500g. Context G003 (156)

Figure 134

1. Cauldron collar. Context N053 (020).
2. Ring headed pin. Context N083 (174).
3. Knife. Context N652 (093).
4. Cleat. Context N852A (180).
5. Cauldron rim. Context N801 (011).
6. Sword/Dagger. Context N801 (102).
7. Spearhead. Context N801 (140).
8. Cold Chisel. Context N801 (043).
9. Cauldron Rim. Context N051 (014).
10. Cauldron Collar. Context N802 (015).
11. Cauldron Handle. Context N051 (024).
12. Cauldron Handle. Context N701 (025).
13. Cauldron Handle. Context N751 (026).
14. Cauldron Handle. Context N802 (021).
15. Bucket Handle. Context N701 (002).
16. Reaping Hook. Context N651 (010).
17. Sword/Dagger. Context N151 (103).
18. Sword/Dagger. Context N751 (104).
19. Spearhead. Context N802 (141).
20. Chape. Context N025 (136).
21. Chape. Context N051 (128).
22. Chape. Context N051 (129).
23. Chape. Context N051 (130).
24. Chape. Context N601 (131).
25. Chape. Context N601 (139).
26. Chape. Context N701 (133).
27. Chape. Context N751 (132).
28. Chape. Context N802 (125).
29. Shield Hand Grip. Context N751 (151).
30. Scabbard. Context N026 (116).
31. Scabbard. Context N051.
32. Scabbard. Context N051 (113).
33. Scabbard. Context N126 (120).
34. Scabbard. Context N126 (121).
35. Scabbard. Context N701 (114).
36. Scabbard. Context N701 (115).
37. Scabbard. Context N802 (124).
38. Bracelet. Context N601 (158).
39. Awl/Punch. Context N601 (075).
40. Nail. Context N951 (184).
41. Rivet. Context N951 (185).
42. Knife. Context N026 (088).
43. Knife. Context N601 (091).
44. Misc. Ring. Context N026 (204).
45. Misc. Nail. Context N026 (205).
46. Misc. Ring. Context N051 (206).
47. Misc. Ring. Context N077 (207).
48. Misc. Half-Ring. Context N601 (197).

Figure 135

49. Cauldron Rim. Context N834 (012).
50. Cauldron collar. Context N811 (022).
51. Cauldron collar. Context N827 (018).
52. Cauldron collar. Context N834 (019).
53. Dagger. Context N051C (107).
54. Chape Binding. Context N810 (134).
55. Finger Ring. Context N294 (159).
56. Rivet. Context N051C (188).
57. Knife. Context N051C (089).
58. Misc. Openwork Disc. Context N104 (218).
59. Spearhead. Context N750 (148).
60. Misc. Strip. Context N851 (217).
61. Reaping Hook. Context N050 (001).
62. Dagger. Context N001 (106).
63. Scabbard. Context N050 (109).
64. Scabbard. Context N050 (117).
65. Chape. Context N050 (127).
66. Chape Binding. Context N001 (135).
67. Misc. Object. Unstratified.
68. Needle. Context N600 (081).
69. Punch. Context N075 (053).
70. Stake. Context N125 (054).
71. Rivet. Context N075 (189).

The radiocarbon dates

by Alex Bayliss, Philip Freeman, and Ann Woodward

Throughout the course of the excavations a number of samples were taken for radiocarbon dating. At that time there appears to have been a deliberate policy in the selection of samples: '...no C-14 samples were taken from supposedly Iron Age levels. This was because given the counting errors inherent in the method, it seems that dates at least as accurate as C-14 dates could be established by purely archaeological means' (Alcock 1980, 708). The majority of samples were taken in the attempt to elucidate the evolution of the hilltop defences and including events in the gateway.

The radiocarbon dates are listed below. The one and two sigma ranges refer to 68% and 95% confidence ranges respectively. The calibrated date ranges listed in the table have been calculated using the maximum intercept method of Stuiver and Reimer (1986), and they are quoted in the form recommended by Mook (1986) with the end points rounded outwards to ten years. The calibrations have been calculated using the data published by Stuiver and Pearson (1986), Pearson and Stuiver (1986), and Pearson *et al* (1986).

KX016ii, wood charcoal 2g, 2820+/-110 BP (SRR443), 1 sigma 1160–840 cal BC, 2 sigma 1310–800 cal BC

K618, animal bone, 2875+/-90 BP (I5971), 1 sigma 1260–920 cal BC, 2 sigma 1380–840 cal BC

KX906, charcoal 3.4g, 2905+/-140 BP (SRR451), 1 sigma 1380–910 cal BC, 2 sigma 1450–810 cal BC

K530, antler, 2935+/-90 BP (I5973), 1 sigma 1310–1000 cal BC, 2 sigma 1410–910 cal BC

KX016i, collagen fraction, animal bone 397g, 3014+/-75 BP (SRR442), 1 sigma 1400–1130 cal BC, 2 sigma 1440–1020 cal BC

KX034, wood charcoal 15g, 2214+/-110 BP (SRR448), 1 sigma 400–110 cal BC, 2 sigma 520 cal BC–cal AD10

KX039A, wood charcoal 30g, 2061+/-50 BP (SRR450), 1 sigma 170–10 cal BC, 2 sigma 200 cal BC–cal AD60

KX038, wood charcoal 25g, 1952+/-60 BP (SRR449), 1 sigma 40 cal BC–cal AD120, 2 sigma 100 cal BC–cal AD190

KX031ii, collagen fraction animal bones 1000g, 1704+/-55 BP (SRR447), 1 sigma cal AD240–410, 2 sigma cal AD 220–430

KX029, wood charcoal 30g, 2222+/-45 BP (SRR445), 1 sigma 390–200 cal BC, 2 sigma 400–170 cal BC

K659i, twig charcoal 40g, 1814+/-31 BP (GU645), 1 sigma cal AD130–240, 2 sigma cal AD110–320

K659i, twig charcoal 40g, 1845+/-45 BP (SRR693), 1 sigma cal AD110–230, 2 sigma cal AD60–320

K659ii, charcoal large timber 23g, 1961+/-27 BP (GU646), 1 sigma cal AD1–80, 2 sigma 40 cal BC–cal AD90

K659iii, charcoal large timber 44g, 1839+/-26 BP (GU647), 1 sigma cal AD120–220, 2 sigma cal AD90–240

K659iv, charcoal 15g, 2214+/-43 BP (GU648), 1 sigma 380–190 cal BC, 2 sigma 400–170 cal BC

K659v, carbonised grain 50g, 1949+/-26 BP (GU649), 1 sigma cal AD10–80, 2 sigma 10 cal BC–cal AD120

K659v, carbonised grain 40g, 1776+/-50 BP (SRR691), 1 sigma cal AD140–340, 2 sigma cal AD120–390

K659vi, carbonised grain 35g, 1765+/-47 BP (GU650), 1 sigma cal AD210–340, 2 sigma cal AD 120–400

K659vi, carbonised grain 40g, 1666+/-50 BP (SRR692), 1 sigma cal AD260–430, 2 sigma cal AD 240–510

K747, charcoal 10g, 1825+/-48 BP (GU651), 1 sigma cal AD120–250, 2 sigma cal AD70–330

KX022, carbonised grain (including soil) 380g, 1506+/-40 BP (SRR444), 1 sigma cal AD530–610, 2 sigma cal AD430–640

KX031i, wood charcoal 49g, 4022+/-270 BP (SRR446), 1 sigma 2910–2140 cal BC, 2 sigma 3350–1770 cal BC, dismissed by Alcock (1980, 711) as 'wild'

P154i, hazel nut shells, 4705+/-115 BP (I5972), 1 sigma 3640–3350 cal BC, 2 sigma 3780–3100 cal BC

P154ii, antler, 4460+/-120 BP (I5970), 1 sigma cal BC 3350–2920, 2 sigma 3510–2780 cal BC

N633B, animal bone, 2120+/-80 BP (GU5437), 1 sigma 360–40 cal BC, 2 sigma 390 cal BC–cal AD 60

N031, animal bone, 2090+/-60 BP (GU5438), 1 sigma 200–40 cal BC, 2 sigma 360 cal BC–cal AD20

Discussion of radiocarbon chronology in Sites K and KX

In 1979 the results were published (Campbell *et al* 1979) from seven samples taken from the Site K, 'massacre' deposit. These were expected to be of conquest date. Six of these samples were from K659 (Episode IX, Context Group IV), inside the stone built guard chamber of the late Iron Age gate, whilst the seventh came from K747 (Episode IX, Context Group II), a patch of charcoal at the threshold to the gateway and which was thought to be the remains of the burnt gate doors. The salient point to emerge from these dates was the evident discrepancy between the historico-archaeological context of the samples (some time in the mid to late first century AD) and the calibrated dates (spanning the first three centuries AD, discounting determination GU648). The rest of the paper attempted to explain how such discrepancies might have occurred.

These dates were incorporated in Alcock's report on the 1973 excavations (Alcock 1980, 708–12) alongside a number of additional radiocarbon dates for the rampart sequence exposed in the Site KX. Alcock provided a fuller resumé of the reasoning behind taking the samples and the general applicability of radiocarbon results to apparently safely dated archaeological deposits. In all, 13 contexts across Cadbury Castle were sampled, most from the rampart area and from these, including parallel dating by a number of laboratories, 23 dates were published (see above). Two further dates have since been obtained for animal burials in the interior (see Chapter 5, GU5437 and GU5438).

Much of the published discussion (Alcock 1980, 708–12; Campbell *et al* 1979) has centred on the lack of correlation between the radiocarbon dates and expected historic, or prehistoric, dates. The aim here is to present the dates afresh, using the latest calibration methods, and to re-examine some aspects of the dating proposed for the Bank 1 and gate sequence in relation to the newly defined Episodes of activity outlined in Chapter 4.

The results are presented in Figure 175. Two apparently 'wild' dates have been excluded. These are SRR446, a sample from mid-way in the Iron Age rampart sequence which gave a Neolithic date, and SRR444, from the stone multiplex wall, which

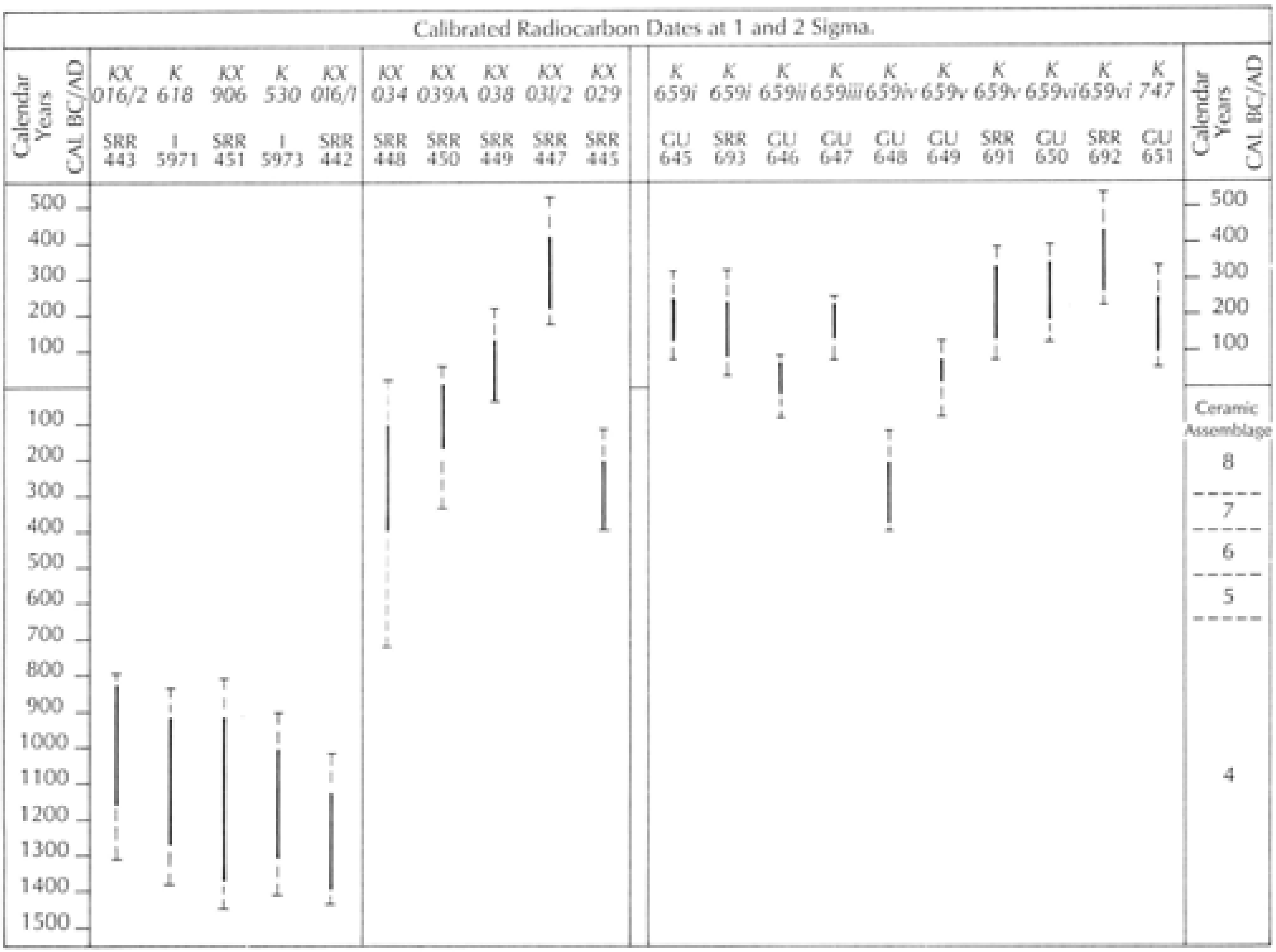


Fig 175 Calibrated radiocarbon dates from Sites K and KX

produced a date ranging from the fifth to the seventh centuries AD.

The five dates relating to the lynchet bank soils below the main sequence of rampart development in Bank 1 (SRR443, I5971, SRR451, I5973, and SRR442), have never posed any problems. They are consistent with each other and provide a date range between the fourteenth and ninth centuries BC. The associated pottery is late Bronze Age plain ware of Ceramic Assemblage 4, and there is a good correlation between the Cadbury dates and those for similar assemblages elsewhere in Somerset and southern England. These have been discussed recently in connection with the dates obtained for the late Bronze Age pottery-bearing levels at Brean Down, Somerset (Woodward 1990, 140). A reassessment of the dating relating to the rampart sequence is given in the discussion of Site KX at the end of Chapter 4.

Most previous discussion has revolved around the problems posed by the dates derived from charcoal and burnt grain samples associated with the massacre event at the south-western gateway (dates GU645 to GU651). Of these, GU648 was dismissed by the laboratory as a small, poor quality sample and, of the remainder, only two, (GU646 and GU649) were felt to be consistent with the supposed historical date of AD 61. The rest give dates spanning the first to the fifth centuries. Possible reasons for this lack of consistency were rehearsed fully (Campbell *et al* 1979). Following the establishment of a more complex sequence of activity episodes at the gateway and, indeed, a sequence of construction which continues well after the major massacre episode, an alternative point of view may be advanced. All but one of the dating samples derive from burnt deposits in the western guard chamber. This chamber was reused, apparently, during phases of refurbishment and extension of the multiplex wall and the gate passage, which took place not only after the massacre episode, but following a subsequent phase of abandonment and intentional sealing or cleansing (Episodes X to XIII). It is quite likely that further episodes of destruction and burning may have taken place during, or at the end of, this late building sequence. The sequence may well have extended into the early second century AD, and charcoal relating to a late destruction phase may have become incorporated in the guard chamber deposits. This then might provide an archaeological explanation for the predominance of charcoal and grain samples which gave rise to radiocarbon dates spanning the first to third centuries AD.

Bibliography

Aitken, M J, Webster, G, and Rees, A, 1958 Magnetic prospecting, *Antiquity*, **32**, 270–1

Alcock, L, 1964 The defences and gates at Castell Collen auxiliary fort, *Archaeol Cambrensis*, **113**, 64–96

——, 1967a 'By South Cadbury is that Camelot ...', *Antiquity*, **41**, 50–3

——, 1967b A reconnaissance excavation at South Cadbury Castle, Somerset, 1966, *Antiq J*, **47**, 70–6.

——, 1968a Cadbury Castle, 1967, *Antiquity*, **42**, 47–51

——, 1968b Excavations at South Cadbury Castle, 1967. A summary report, *Antiq J*, **48**, 6–17

——, 1969 Excavations at South Cadbury Castle, 1968. A summary report, *Antiq J*, **49**, 30–40

——, 1970 South Cadbury Excavations, 1969, *Antiquity*, **44**, 46–9

——, 1971 Excavations at South Cadbury Castle, 1970. Summary report, *Antiq J*, **51**, 1–7

——, 1972a *'By South Cadbury is that Camelot...' Excavations at Cadbury Castle 1966–1970*, London

——, 1972b The Irish Sea Zone in the pre-Roman Iron Age, in *The Iron Age in the Irish Sea Province* (ed C Thomas), CBA Res Rep, **9**, 99–112, London

——, 1980 The Cadbury Castle sequence in the first millennium BC, *Bull Board Celtic Stud*, **28**, 656–718

——, 1982 Cadbury-Camelot: a fifteen year perspective, *Proc Brit Acad*, **68**, 355–388

——, 1987 *Economy, society and warfare among the Britons and Saxons*, Cardiff

——, *1994 Cadbury Castle rampart excavations*, Cadbury Archive File

——, 1995 *Cadbury Castle, Somerset: the early medieval archaeology*, Cardiff

Allason-Jones, L, and Bishop, M C, 1988 *Excavations at Roman Corbridge: the hoard*, Hist Build Monuments Comm Eng Archaeol Rep, **7**, London

Allason-Jones, L, and Miket, R, 1984 *The catalogue of small finds from South Shields Fort*, Newcastle upon Tyne

Allcroft, A H, 1908 *Earthworks of England*, London

Alldred, J C, 1964 A fluxgate gradiometer for archaeological surveying, *Archaeometry*, **7**, 14–9

Allen, D F, 1960 *The origins of coinage in Britain: a reappraisal*, in *Problems of the Iron Age in Southern Britain* (ed S S Frere), 97–308, London

——, 1961 A study of Dobunnic coinage, in *Bagendon, a Belgic Oppidum: a record of the excavations of 1954–6* (ed E M Clifford), 75–149, Cambridge

——, 1968 The Celtic coins, in *Hod Hill, Vol II; Excavations carried out between 1951 and 1958 for the Trustees of the British Museum by the late Sir Ian Richmond* (ed J W Brailsford), 43–57, London

Armitage, P, and Clutton-Brock, J, 1976 A system for classification and description of the horn cores of cattle from archaeological sites, *J Archaeol Sci*, **3**, 329–48

Armour-Chelu, L, 1991 The faunal remains, in *Maiden Castle: excavation and field survey 1985–6* (N Sharples), Eng Heritage Archaeol Rep, **19**, 139–51, London

Baatz, D, 1966 *Zur Geschutzbewaffnung Römischer Auxiliartruppen der fruhen und mittleren Kaiserzeit*, *Bonner Jahrbücher*, **166**, 194–207

Babendererde, C, 1976 *Vergleichende morphimetrische Untersuchungen rezenter Rotfüchse (Vulpes vulpes) und Hashunde* (Canis lupus f. familiaris), Kiel

Balch, H E, 1913 Further excavations at the Late Celtic and Romano-British cave-dwelling at Wookey Hole, Somerset, *Archaeologia*, **64**, 337–46

——, 1914 *Wookey Hole: its caves and cave dwellers*, Oxford

Barnes, I, 1985 The Iron Age non-ferrous metalwork from Hunsbury Hillfort, Northants., Unpublished dissertation of Postgraduate Diploma in Post-Excavation Studies, University of Leicester.

Barrett, A A, 1979 The miltary situation in Britain in AD 47, *American Journal of Philology*, **100**, 538–540

Barrett, J C, 1980 The pottery of the later Bronze Age in lowland England, *Proc Prehist Soc*, **46**, 297–319

——, 1981 Aspects of the Iron Age in Atlantic Scotland. A case study in the problem of interpretation, *Proc Soc Antiq Scot*, **111**, 205–219

——, 1994 *Fragments from antiquity*, Oxford

Barrow, W, 1928 The origins of the name Cadbury, *Bournville Works Mag*, March 1928, 74–8

Bates, E H, 1887 Leland in Somersetshire 1540–1542, *Somerset Archaeol Natur Hist*, **33**(2), 60–136

Batten, J, 1870 Somersetshire sequestrations, *Somerset Archaeol Natur Hist*, **16**(2), 13–34

Baxter, M, Cool, H E , and Jackson, C, 1995 Compositional variability in colourless Roman vessel glass, *Archaeometry*, **37**(1), 129–42

Bayley, J, 1985 Brass and brooches in Roman Britain, *MASCA Journal*, **3**(6), 187–91

——, 1990 The production of brass in antiquity with particular reference to Roman Britain, in *2000 years of zinc and brass* (ed P T Craddock), Brit Mus Occas Pap, **50**, London

Beck, C, and Shennan, S, 1991 *Amber in prehistoric Britain*, Oxbow Monogr, **8**, Oxford

Bennett, J A, 1890 Camelot, *Somerset Archaeol Natur Hist*, **36**(1), 1–19

Bennett, R M, 1974 Unpublished letter, Cadbury Archive File No. 7

Bimson, N, and Freestone, I C, 1983 An analytical study of the relationship between the Portland Vase and other Roman cameo glasses, *J Glass Studies*, **25**, 55–64

Binford, L R, 1962 Archaeology as anthropology, *American Antiquity*, **28**, 217–225

——, 1981 *Bones: ancient men and modern myths*, London

Bishop, M C, 1986 The distribution of military equipment within roman forts of the first century AD, in *Studien zu den Militargrenzen Roms III* (ed C Unz), 717–23, Stuttgart

——, 1987 The evolution of certain features, in *Roman military equipment: the accoutrements of war, Proceedings of the Third Military Equipment Research Seminar* (ed M Dawson), BAR, int Ser, **336**, 109–39

Bishop, M C, and Coulston, J C, 1993 *Roman military equipment from the Punic Wars to the fall of Rome*, London

Boessneck, J, 1969 Osteological differences between sheep (*Ovis aries* Linné) and goat (*Capra hircus* Linné), in *Science in Archaeology: a survey of progress and research* (eds D Brothwell and E S Higgs), 331–58, London

Bökönyi, S, 1972 Appendix A: Once more on the osteological differences of the horse, half-ass and the ass, in *The Caspian miniature horse of Iran edited by Henry Field* (L. Firouz), Fld Res Projects, 12–23, Miami

Boon, G C, 1988 Counterfeit coins in Roman Britain, in *Coins and the archaeologist* (eds P J Casey and R Reece), 102–158, London

Bothamley, C H, 1911 Ancient earthworks, in *VCH Somerset* (ed W Page), **2**, 467–532, London

Bowen, H C, 1961 *Ancient fields: a tentative analysis of vanishing earthworks and landscapes*, London

Boyd-Dawkins, W, 1906 Early man, in *VCH Somerset* (ed W Page), **1**, 167–204, London

Bradley, R, 1971a A field survey of the Chichester entrenchments, in *Excavations at Fishbourne: Vol. 1 the site* (B Cunliffe), Soc Ant Res Rep, **27**, 17–36, London

——, 1971b An Iron Age promontory fort at Belle Tout, *Sussex Archaeol Collect*, **109**, 8–19

Brailsford, J, 1958 Early Iron Age 'C' in Wessex. Part 1: the Durotrigian culture, *Proc Prehist Soc*, **24**, 101–19

——, 1962 *Hod Hill: Vol 1 Antiquities from Hod Hill in the Durden Collection*, London

——, 1975 *Early Celtic masterpieces from Britain in the British Museum*, London

Breeze, D J, Close-Brooks, J and Ritchie, J N G 1976 Soldiers' burials at Camelon, Stirlingshire, 1922 and 1975, *Britannia*, **7**, 73–95

Brewer, R J, 1986 The beads and counters, in *The Legionary Fortress Baths at Caerleon. Volume 2: the Finds* (J D Zienkiewicz), 146–56, Cardiff

Briggs, C S, 1987 Buckets and cauldrons in the Late Bronze Age of North-west Europe: a review, in *Les Relations entre le continent et les Iles Britanniques à la Revue Archéologique de Picardie* (ed J-Cl Blanchet *et al*), 161–187, Amiens

Brill, R H, 1989 Scientific examination of the Jalame glass and related finds, in *Excavations at Jalame, site of a glass factory in Late Roman Palestine* (ed G D Weinberg), Missouri

Bristow, H W, 1855 Horizontal section sheet 22 (from near Lulworth Cove, Dorset to Cadbury Castle) Geological Survey of Great Britain, London

British Museum, 1925 *A guide to the antiquities of the Early Iron Age*, London

Britnell W J, 1976 Antler cheekpieces of the British Late Bronze Age, *Antiq J*, **56**, 24–34

——, 1977 The worked bone, tooth and antler from South Cadbury Castle, Somerset, and its affinities in South-Western England Unpubl MA dissertation. Dept of Archaeology, University College, Cardiff

——, 1994 *Worked bone archive report*, Cadbury Archive File No 253

Britton, D, 1968 The Bronzes, in Ivinghoe Beacon: excavations 1963–5 (M A Cotton and S S Frere), *Rec Buckinghamshire*, **18**(3), 204–13

Brown, L, 1984 Objects of stone, in *Danebury: an Iron Age hillfort in Hampshire. Vol. 2, the Excavations 1969–1978: the Finds* (B Cunliffe), CBA Res Rep, **52**, 407–26, London

——, 1991 Later Prehistoric pottery, in *Maiden Castle: excavations and field survey 1985–6* (N Sharples), Eng Heritage Archaeol Rep, **19**, 185–203, London

Brown, M A, and Blin-Stoyle, A E, 1959 A sample analysis of British Middle and Late Bronze Age material using optical spectrometry, *Archaeometry*, **2**, supplement

Buckland, P, 1978 A first century shield from Doncaster, Yorkshire, *Britannia*, **9**, 247–69

Buckley, D, 1979 The Stone, in *Gussage All Saints. An Iron Age settlement in Dorset* (G J Wainwright), 89–97 DoE Archaeol Rep, **10**, London

Bull, G, and Payne, S, 1982 Tooth eruption and epiphysical fusion in pigs and wild boar, in *Ageing and sexing animal bones from archaeological sites* (eds B Wilson, C Grigson and S Payne), BAR, Brit Ser, **109**, 55–71, Oxford

Bulleid, A, and Gray, H St.G, 1911 *The Glastonbury Lake Village. Vol. I*, Glastonbury

——, 1917 *The Glastonbury Lake Village. Vol. II*, Glastonbury

——, 1948 *The Meare Lake Village. Vol. I*, Taunton

——, 1953 *The Meare Lake Village. Vol.II*, Taunton

Burgess, C, 1976 The Gwithian Mould and the forerunners of South Welsh axes in *Settlement and economy in the third and second millennia BC* (eds C Burgess and R Miket), BAR, Int Ser, **33**, 69–80, Oxford

——, 1982 The Carlington knife and the double-edged knives of the Late Bronze Age, *Northern Archaeol*, **3**, 32–45

Burgess, C, Coombs, D, and Davies, D G, 1972 The Broadward complex and barbed spearheads, in *Prehistoric man in Wales and the West* (eds F Lynch and C Burgess), 211–83, Bath

Burnett, A, and Cowell, M R, 1988 Celtic coinage in Britain II, *Brit Numis* J, **58**, 3–10

Burrow, E J, 1924 *The ancient earthworks and camps of Somerset*, Cheltenham

Calkin, J B, 1935 An early Romano-British kiln at Corfe Mullen, Dorset, *Antiq J*, **15**, 42–55

——, 1955 'Kimmeridge coal-money' the Romano-British shale armlet industry, *Proc Dorset Natur Hist Archaeol Soc*, **75**, 45–71

——, 1964 The Bournemouth area in the Middle and Late Bronze Age, with the 'Deverel-Rimbury' problem reconsidered, *Archaeol J*, **119**, 1–65

Camden, W, 1586 *Britannia*, London

Campbell, D B, 1986 Auxiliary artillery revisited, *Bonner Jahrbucher*, **186**, 117–32

Campbell, J A, Baxter, M S, and Alcock, L, 1979 Radiocarbon dates for the Cadbury massacre, *Antiquity*, **43**, 31–8

Carr, A P, and Blackley, M W L, 1968 Geological composition of the pebbles of Chesil beach, Dorset, *Dorset Nat Hist Archaeol Soc*, **90**, 133–40

Castro Curel, Z, 1985 *Pondera. Examen cualatitivo, cuantativo, espacial y su relación con el telar con pesas, Empúries*, **47**, 230–253

Champion, S T, 1976 Coral in Europe: commerce and Celtic ornament, in *Celtic art in ancient Europe: five protohistoric centuries* (eds P M Duval and C Hawkes), 29–40, London

——, 1985 Production and exchange in Early Iron Age Central Europe *Settlement and society: aspects of western European prehistory in the first millennium BC* (eds T C Champion and J V S Megaw), 133–60, Leicester

Charlesworth, D, 1959 Roman glass in northern Britain, *Archaeol Aeliana (4 ser)*, **37**, 33–58

——, 1976 The glass, in *Excavations at Winterton Roman Villa and other Roman sites in north Lincolnshire, 1958–1967* (I M Stead), DoE Archaeol Rep, **9**, 244–50, London

——, 1979 Glass, in *The Legionary bath-house and basilica and forum at Exeter* (P T Bidwell), 222–31, Exeter

——, 1980 Glass, in *Rudston Roman Villa* (I M Stead), 124–5, Leeds

——, 1981 The Roman glass, in *Chichester excavations V* (A Down), 293–8, Chichester

——, 1984 The glass, in Excavations at Dorchester-on-Thames 1962 (S S Frere), *Archaeol J*, **141**, 152–5

——, 1985 The glass, in *Sheepen: an early Roman industrial site at Camulodunum* (R Nibblet), CBA Res Rep, **57**, London Microfiche 1:A5–A9; 3: F1–F11

Clark, J G D, 1952 *Prehistoric Europe: the economic basis*, London

——, 1966 The invasion hypothesis in British Archaeology, *Antiquity*, **40**, 172–189

Clarke, D L, 1972 A provisional model of an Iron Age society and its settlement system, in *Models in archaeology* (ed D L Clarke), 801–870, London

Clarke, R R, and Hawkes, C F C, 1955 An iron anthropoid sword from Shouldham, Norfolk, with related continental and British weapons, *Proc Prehist Soc*, **21**, 198–227

Clay, R C C, 1924 An Early Iron Age site on Fifield Barant Down, *Wiltshire Archaeol Natur Hist Mag*, **42**, 457–96

——, 1925 An inhabited site of La Tène I date on Swallowcliffe Down, *Wiltshire Archaeol Natur Hist Mag*, **43**, 59–93

Cleal, R, 1992 Significant form: ceramic style in the earlier Neolithic of southern England, in *Vessels for the ancestors* (ed N Sharples and A Sheridan), 286–304, Edinburgh

Cohen, A, 1985 *The symbolic construction of community*, Chichester

Colani, C, 1966 A new type of locating device. 1. The instrument, *Archaeometry*, **9**, 3–9

——, and Aitken, M J, 1966 A new type of locating device. 2. Field trials, *Archaeometry*, **9**, 9–19

Coles, J M, 1987 *Meare Village East: the excavations of A. Bulleid and H. St. George Gray, 1932–1956*, Somerset Levels Pap, **13**, Exeter

Collinson, J, 1791 *The history and antiquities of the county of Somerset*, Bath

Collis, J, 1977 The proper study of mankind is pots, in *The Iron Age in Britain: a review* (ed J Collis), **29–31**, Sheffield

——, 1994 The Iron Age, in *Building on the past* (ed B Vyner), **123–48**, London

Colquhoun, I A, 1979 The Late Bronze Age hoard from Blackmoor, Hampshire, in *Bronze Age hoards, some finds old and new* (eds C Burgess and D Coombs), BAR, Brit Ser, **67**, 99–115, Oxford

Condick, F, Ellison, A, and Aston, M, 1976, A Somerset field monument and land use survey, *Somerset Archaeol Natur Hist*, **120**, 85–97

Cool, H E M, 1990 The problem of third century drinking vessels in Britain, in *Annales du 11e Congres de l'Association pour l'Histoire de Verre, 1988*, 167–75, Amsterdam

Cool, H E M and Price, J, 1995 *Roman glass from excavations in Colchester 1971–85*, Colchester Archaeol Rep, **8**, Colchester

Coombs, D, 1991 Bronze objects, with a contribution by J V S Megaw on bronze ring No 165, in *The Breiddin Hillfort: a later prehistoric settlement in the Welsh Marches* (C R Musson with W J Britnell and A G Smith), 132–141, London

——, 1992 Flag Fen platform and Fengate Power Station post alignment – the metalwork, *Antiquity*, **66**, 504–17

Cornwall, I W, 1956 *Bones for the archaeologist*, London

Coulston, J C, 1985 Roman archery equipment, in *The production and distribution of Roman military equipment, Proceedings of the second Roman military equipment research seminar* (ed M Bishop), BAR, Int Ser, **275**, 220–36, Oxford

——, 1988 Three legionaries at Croy Hill, in *Military equipment and the identity of Roman Soldiers, Proceedings of the fourth Roman military equipment conference* (ed J C Coulston), BAR, Int Ser, **394**, 1–29, Oxford

Cowell, M R, 1990 Scientific report, in *Camerton, the Late Iron Age and Early Roman metalwork* (R Jackson), 69–75, London

——, 1992 An analytical survey of the British Celtic gold coinage, in *Celtic coinage: Britain and beyond. The XIth Oxford symposium on coinage and monetary history 1989* (ed M Mays) BAR, Brit Ser, **222**, 207–33, Oxford

Cowell, M R, Oddy, W A and Burnett, A M, 1987 Celtic coinage in Britain: new hoards and recent analyses, *British Numis J*, **57**, 1–23

Cox, P W and Hearne, C M, 1991 *Redeemed from the hearth: the archaeology of the Wytch Farm Oilfield (1987–90)*, Dorset Natur Hist Archaeol Soc Monogr Ser, **9**, Dorchester

Coy, J P, 1975 Iron Age cookery, in *Archaeozoological studies: papers of the archaeozoological conference 1974 held at the Biologisch Archaeologisch institut of the State University of Groningen, Netherlands* (ed A T Clason), Oxford

——, 1984 The bird bones in *Danebury: an Iron Age hillfort in Hampshire, Vol. II. Excavations 1969–1978: the finds* (B Cunliffe), CBA Res Rep, **52**, 527–31, London

Craddock, P T, 1985 Three thousand years of copper alloys: from the Bronze Age to the industrial Revolution, in *The application of science in the examination of works of art* (eds P A England and L van Zelst), 59–67 and microfiche, Boston

Crowfoot, G M, 1945 The bone 'gouges' of Maiden Castle and other sites, *Antiquity*, **19**, 157–8

Cunliffe B, 1964 *Winchester excavations, 1949–60: Vol.1*, Winchester

——, 1969 *Roman Bath*, Rep Res Comm Soc Antiq London, **24**, London

——, 1976 *Excavations at Porchester Castle, Vol. 2*, Rep Res Comm Soc Antiq London, **33**, London

——, 1982 Iron Age settlements and pottery 650 B.C. – 60 AD, in *The archaeology of Somerset: a review to 1500 AD* (eds M Aston and I Burrows), 53–61, Taunton

——, 1984 *Danebury: an Iron Age hillfort in Hampshire. Vol.2, the excavations 1969–1978: the finds*, CBA Res Rep, **52**, London

——, 1987 *Hengistbury Head, Dorset. Vol.1: the prehistoric and Roman settlement 3500 BC – AD 50*, Oxford Univ Comm Archaeol Monogr, **13**, Oxford

——, 1988 *Mount Batten, Plymouth. A prehistoric and Roman port*, Oxford Univ Comm Archaeol Monogr, **26**, Oxford

——, 1994 After hillforts, *J Oxford Archaeol*, **13**, 71–84

——, 1995 *Danebury, an Iron Age hillfort in Hampshire: Vol. 6: A hillfort community in perspective*, CBA Res Rep, **102**, London

Cunliffe, B and Brown, L, 1987 the later prehistoric and Roman pottery, in *Hengistbury Head, Dorset. Vol. I: the prehistoric and Roman settlement, 3500 BC – AD 500* (B Cunliffe), Oxford Univ Comm Archaeol Monogr, **13**, 205–328, Oxford

Cunliffe, B, and Phillipson, D W, 1968 Excavations at Eldon's Seat, Encombe, Dorset, England, *Proc Prehistoric Soc*, **34**, 191–237

Cunliffe, B, and Poole, C, 1991 *Danebury: an Iron Age hillfort in Hampshire, Vol.5: the excavations 1979–88, the finds*, CBA Res Rep, **73**, London

Cunnington, M E, 1923 *The Early Iron Age inhabited site at All Cannings Cross Farm, Wiltshire*, Devizes

Cunnington, M E, and Cunnington, B H, 1917 Lidbury Camp, *Wiltshire Archaeol Natur Hist Mag*, **40**, 12–36

Curwen, E C, 1937 Querns, *Antiquity*, **11**, 133–51

Darling, M J, 1977 Pottery from early miltary sites in western Europe, in *Roman pottery studies in Britain and beyond* (eds J Dore and K Greene), BAR, Int Ser, **30**, 57–100, Oxford

Davies, D G, 1979 Hatfield Broad Oak, Leigh, Rayne, Southchurch: Late Bronze Age hoards from Essex, in *Bronze Age hoards: some finds old and new* (eds C Burgess and D Coombs), BAR, Brit Ser, **67**, 149–72, Oxford

Davies, S M, 1981 Excavations at Old Down Farm, Andover. Part II: prehistoric and Roman, *Proc Hampshire Fld Club Archaeol Soc*, **37**, 81–163

Davis, S J, 1980 Late Pleistocene and Holocene equid remains from Israel, *Zoological J Linnean Soc*, **70**, 289–312

de Navarro, J M, 1972 *The finds from the site of La Tène. Vol.1: scabbards and the swords found in them*, Oxford
Déchelette, J, 1927 *Manuel d'Archéologie Vol. iv: Second Age du Fer où Epoque de la Tène*, Auguste Picard, Paris
Dehon, D, 1991 *Han-sur-Lesse (Namur-Belgique) et le Bronze Final Atlantique*, in *L'Âge du Bronze Atlantique, Actes du 1er Colloque du Parc Archéologique de Beynac* (eds C Chevillot and A Coffyn), 111–24, Beynac-et-Cazenac
Dineley, D L, 1961 The Devonian system in south Devonshire, *Fld Stud*, **1**(3), 121–40
Dobson, D P, 1931 *The archaeology of Somerset*, London
Donovan, D T, and Kellaway, G A, 1984 *Geology of the Bristol District: the lower Jurassic rocks*, Memoir for 1: 63 360 Bristol special sheet Geological Survey, London
Downes, J M, 1994 *Structures, site stratigraphy and phasing Archive Report*, Archive File no. 257
——, 1997 The shrine at Cadbury Castle: belief enshrined?, in *Reconstructing Iron Age societies*, (eds A Gwilt and C Haselgrove), **145–52**, Oxford
Drew, C D, 1935 A Late Bronze Age hoard from Lulworth, Dorset, *Antiq J*, **15**, 449–51
Dunning, G C, 1976 Salmonsbury, Bourton-on-the-Water, Gloucestershire, in *Hillforts: late prehistoric earthworks in Britain and Ireland* (ed D Harding), 76–118, London
Dymond, C W, 1882 Dolebury and Cadbury: two Somersetshire camps, *J Brit Archaeol Ass*, **38**, 398–419

Eagles, B N, and Evison, V I, 1970 Excavations at Harrold, Bedfordshire, 1951–31, *Bedfordshire Archaeol*, **5**, 17–55
Eggers, H J, 1951 *Der Römishce import in freien Germanien, Atlas der Ürgeschichte*, **1**, Mainz
Ehrenberg, M R, 1977 *Bronze Age spearheads from Berkshire, Buckinghamshire and Oxfordshire*, BAR, Brit Ser, **34**, Oxford
Ellison, A B, 1975 Pottery and settlements of the later Bronze Age in southern England. Unpublished PhD dissertation, University of Cambridge
Evans, J, forthcoming Roman pottery, in *Excavations at Fosse Lane, Shepton Mallet, Somerset* (P J Leach)
Evans, J G, 1972 *Landsnails in archaeology*, London
——, 1991 An approach to the interpretation of dry-ground and wet-ground molluscan taxocenes from central southern England, in *Modelling ecological change* (eds D R Harris and K D Thomas), 75–89, London
Evans, J G, and Jones, H, 1973 Subfossil and modern land-snail faunas from rock-rubble habitats, *J Conchology*, **28**, 103–29.

Fasham, P J, 1985 *The prehistoric settlement at Winnall Down, Winchester: excavations of MARC3 site R17 in 1976 and 1977*, Hampshire Fld Club Monogr, **2**
Feel, V, 1990 Pre-Roman Iron Age metal working tools from England and Wales: their use, technology and archaeological context. Unpublished MPhil thesis, University of Durham
Fitzpatrick, A P and Megaw, J V S, 1987 Further finds from the Le Catillon hoard, *Proc Prehist Soc*, **53**, 433–44
Foster, J A A, 1980 *The Iron Age moulds of Gussage All Saints*, Brit Mus Occas Pap, **12**, London
——, 1986 *The Lexden Tumulus: a reappraisal of an Iron Age burial from Colchester, Essex*, BAR, Brit Ser, **156**, Oxford
——, 1993 Iron Age copper alloy objects, in *Beeston Castle, Cheshire. A report on the excavations 1968–85 by Laurence Keen and Peter Hough* (ed P Ellis), Eng Heritage Archaeol Rep, **10**, 50–3, London
——, forthcoming The moulds from Weelsby, Grimsby
Fowler, E, 1960 The origins and development of the penannular brooch in Europe, *Proc Prehist Soc*, **26**, 149–77
Fox, C, 1946 *A find of the Early Iron Age from Llyn Cerrig Bach, Anglesey*, Cardiff
——, 1958 *Pattern and purpose: a survey of Early Celtic Art in Britain*, Cardiff
Frere, S S, 1987 *Britannia: a history of Roman Britain*, 3rd edn, London
Fulford, M G, 1975 *New Forest Roman Pottery: manufacture and distribution with a corpus of the pottery types*, BAR, Brit Ser, **17**, Oxford

Gardner, W, and Savory, H N, 1964 *Dinorben: a hill fort occupied in early Iron Age and Roman times*, Cardiff
Gerard of Trent T, 1633 The particular description of the County of Somerset, drawn up by Thomas Gerard of Trent (ed R H Bates), *Somerset Record Society volume 15 (1900)*
Gerloff, S I M, 1986 Bronze Age Class A cauldrons: typology, origin and chronology, *J Roy Soc Antiq Ir*, **116**, 84–115
Gillam, J P, 1970 *Types of Roman coarse pottery vessels in northern Britain*, Newcastle-upon-Tyne
Gingell, C, 1992 *The Marlborough Downs: a later Bronze Age landscape and its origins*, Wiltshire Archaeol Natur Hist Soc Monogr, **1**, Devizes
Gough, R, 1806 *Brittania: translated from the edition published by the author in MBCVII: enlarged by the latest discoveries*, 2nd edn, London
Grant, A, 1982 The use of tooth wear as a guide to the age of domestic ungulates, in *Ageing and sexing animal bones from archaeological sites* (eds B Wilson, C Grigson and S Payne), BAR, Brit Ser, **109**, 91–108, Oxford
——, 1984 Animal husbandry, in *Danebury: an Iron Age hillfort in Hampshire, Vol 2, the excavations 1969–1978: the finds* (B Cunliffe), CBA Res Rep, **52**, 496–548, London
——, 1991 Animal husbandry in *Danebury: an Iron Age hillfort in Hampshire, Vol 5, The excavations 1979–1988: the finds* (B Cunliffe and C Poole), CBA Res Rep, **73**, 447–87, London
Gray, H St.G, 1910 Notes on archaeological remains found on Ham Hill, Somerset, *Somerset Archaeol Natur Hist*, **56**, 50–61
——, 1913 Trial excavations at Cadbury Castle, South Cadbury 1913, *Somerset Archaeol Natur Hist*, **59**(2), 1–24
Gray, H St.G, and Cotton, M A, 1966 *The Meare Lake Village. Vol.III*, Taunton
Green, G W, 1984 Outline of geology, Jurassic, British Geological Survey, Sheet 280, Wells
Green, G W, and Welch, F B A, 1965 Geology of the country around Wells and Cheddar, memoir of the Geological Survey for Sheet 280
Green, L J, and Hart, A F, 1987 Colour and chemical composition in ancient glass; an examination of some Roman and Wealden glass by means of ultraviolet-visible-infra-red spectroscopy and electron microprobe analysis, *J Archaeol Sci*, **14**, 271–82
Green, M J, 1992 *Animals in Celtic life and myth*, London
Gruel, K, 1986 Propositions for a relative chronology of the Coriosolitae coinage (first century BC), in *The archaeology of the Channel Islands* (ed P Johnston), 98–106, Chichester
Guido, M, 1978 *The glass beads of the prehistoric and Roman periods in Britain and Ireland*, Rep Res Comm Soc Antiq London, **35**, London
Guilbert, G, 1975 Planned hillfort interiors, *Proc Prehist Soc*, **41**, 203–21
Gunstone, A J H, 1977 *Ancient-British, Anglo-Saxon and Norman coins in West Country Museums*, Sylloge of coins of the British Isles, **24**, London

Hamilton, E, 1995 Was there ever a Roman Conquest? in *Different Iron Ages* (eds J D Hill and C Cumberpatch), BAR, Int Ser, **602**, 37–44, Oxford

Harcourt, R A, 1974 The dog in prehistoric and early historic Britain, *J Archaeol Science*, **1**, 151–76

——, 1979 The animal bones, in *Gussage All Saints: an Iron Age settlement in Dorset* (G J Wainwright), DoE Archaeol Rep, **10**, 150–60, London

Harden, D B, 1952 Glass, in *Roman Exeter* (A Fox), 93–4, Exeter

——, 1961 Glass, in *Bagendon: a Belgic oppidum* (E M Clifford), 199–201, Cambridge

——, 1968 Glass, in *Excavations at Shakenoak Farm, near Wilcote, Oxfordshire I* (A C C Brodribb, A R Hands and D R Walker), 74–81, privately printed

——, 1979 Glass, in Waddon Hill: final report on the excavations of the Roman fort at Waddon Hill, Stoke Abbott, 1963–69 (G Webster), *Dorset Nat Hist Archaeol Soc*, **101**, 51–90

Hardwick, J, 1978 Strip lynchets: the case study of South Cadbury, Somerset, *Somerset Archaeol Natur Hist*, **122**, 29–35

Harfield, M, 1962 Cadbury Castle, *Somerset Archaeol Natur Hist*, **106**, 62–5

Harrauer, H, and Seider, R, 1977 in *Neuer Lateinischen Schuldschein*: P.Vindob. L135, *Zeitschrift für Papyrologie und Epigraphik*, **36**, 109–20

Harwood, G M, 1976 The Staddon Grits – or Meadfoot Beds, *Proc Ussher Soc*, **3**, 333–8

Haselgrove, C C, 1987 *Iron Age coinage in south-east England; the archaeological context*, BAR, Brit Ser, **174**, Oxford, 2 vols

——, forthcoming Kingsholm and Iron Age coin circulation in the western region, in *Kingsholm Vol.II* (P Garrod), Gloucester

Haselgrove, C C and Mays, M 1994 *Coins archive report*, South Cadbury Archive File

Hawkes, C F C, 1940 A Celtic Bronze from Bury Hill Camp near Andover, Hants, *Antiq J*, **20**, 115–21

——, 1941 An iron torc from Spetisbury Rings, *Dorset Natur Hist Archaeol Soc*, **97**, 112–4

——, 1960 The ABC of the British Iron Age, in *Problems of the Iron Age in southern Britain* (ed S S Frere), 1–16, London

Hawkes, C F C and Hull, M R, 1947 *Camulodunum: first report on the excavations at Colchester 1930–39*, Rep Res Soc Antiq London, **14**, London

Hencken, T C, 1938 The excavation of the Iron Age camp on Bredon Hill, Gloucestershire, 1935–1937, *Archaeol J*, **95**, 1–111

Henderson, J, 1980 Some new evidence for glassworking in Iron Age Britain, *Antiquity*, **54**, 60–1

——, 1984 Beads of glass, in *Danebury, an Iron Age hillfort in Hampshire. Vol. 2 the excavations 1969–1978: the finds*, (B Cunliffe), CBA Res Rep, **52**, 396–8, London

——, 1985 The raw materials of early glass production, *Oxford J Archaeology*, **4**, 267–92

——, 1987 Glass, in *Hengistbury Head, Dorset. Vol.1. The Prehistoric and Roman settlement 3500 BC – AD 500* (B Cunliffe), Oxford Univ Comm Archaeol Monogr, **13**, 160–3

——, 1988 Electron-probe microanalyses of mixed alkali glasses, *Archaeometry*, **30**, 77–91

——, 1991 Industrial specialisation in Late Iron Age Britain and Europe, *Archeol J*, **148**, 104–148

——, in press Scientific analysis of selected Fishbourne vessel glass and its archaeological interpretation, in *Fishbourne* (A Down), Chichester Excavations, **8**

Henderson, J, and Warren, S E, 1983 Prehistoric lead glass analyses, in *Symposium on archaeology and science* (eds A Aspinall and S E Warren), 62–8, Bradford

Henig, M, 1984 *Religion in Roman Britain*, London

Henshall, A S, 1950 Textiles and weaving appliances in prehistoric Britain, *Proc Prehist Soc*, **16**, 130–62

Herity, M, 1969 Early finds of Irish Antiquities from the minute books of the Society of Antiquaries of London, *Antiq J*, **49**, 1–21

Hill, J D, 1993 Can we recognise a different European past? A contrastive archaeology of later prehistoric settlements in southern England, *J Euro Archaeol*, **1**, 57–75

Hill, J D, 1995a *Ritual and rubbish in the Iron Age of Wessex* BAR, Int Ser, **242** Oxford

Hill, J D, 1995b How should we understand Iron Age societies and hillforts? A contextual study from southern Britain, in *Different Iron Ages* (eds J D Hill and C Cumberpatch), 45–66, BAR Int Ser **602**, Oxford

Hingley, R, 1990 Iron Age 'currency bars'; the archaeological and social context, *Archaeol J*, **147**, 91–117

Hodder, I, and Hedges, J W, 1977 Weaving combs: their typology and distribution with some introductory remarks on date and function, in *The Iron Age in Britain – a review* (ed J Collis), 17–28, Sheffield

Hodges, H W M, 1956, Studies in the Late Bronze Age in Ireland, 2: the typology and distribution of bronze implements, *Ulster J Archaeol*, **19**, 29–56

Hodson, F R , 1960 Reflections on the 'ABC' of the Iron Age, *Antiquity*, **34**, 138–40

——, 1962, Some pottery from Eastbourne, the 'Marnians' and the pre-Roman Iron Age in Southern England, *Proc Prehistoric Soc*, **28**, 140–155

——, 1964 Cultural groupings within the British pre-Roman Iron Age, *Proc Prehistoric Soc*, **30**, 99–110

Hoffmann, M, 1964 The warp-weighted loom, *Studia Norvegica*, **14**, Oslo

Hook, D R and Needham, S P, 1990 A comparison of recent analyses of British Late Bronze Age goldwork with Irish parallels, *Jewellery Stud*, **3**, 15–24

Horne, P D and King, A C, 1980 Romano-Celtic temples in continental Europe: a gazetteer of those with known plans, in *Temples, churches and religion in Roman Britain* (ed W Rodwell), 369–555, BAR, Brit Ser, 77, Oxford

Horne, P E, 1937 An Early Iron Age site at Camerton, Somerset, *Somerset Archaeol Natur Hist*, **83**, 155–65

Howell, M, 1966 A soil conductivity meter, *Archaeometry*, **9**, 20–3

Huggett, J 1992 *DATASERV* Survey data processing software version 2.1, Department of Archaeology, University of Glasgow

Hyland, A, 1993 *Training the Roman cavalry*, Stroud

Isings, C, 1957 *Roman glass from dated finds*, Groningen/Djakarta

Jackson, C M, Hunter, J R, Warren, S E and Cool, H E M, 1990 The analysis of blue-green glass and glassy waste from the two Romano-British glass working sites, *Archaeometry*, **90**, 295–304

Jackson, R J, 1990 *Camerton, the Late Iron Age and Early Roman metalwork*, Brit Mus Publications, London

Jacobi, G, 1974 *Werkzeug und Gerät aus dem Oppidum von Manching*, Die Ausrabungen in Manching, **5**

Jöckenhovel, A, 1980 Die Rasiermesser in Westeuropa, *Prähistorische Bronzefunde*, **8**(3), München

Jones, M, 1978 The plant remains, in *The excavation of an Iron Age settlement, Bronze Age ring ditches, and Roman feature at Ashville Trading Estate, Abingdon, Oxfordshire, 1974–6* (M Parrington), CBA Res Rep, **28**, London

Jope, E M, (ed) 1961 *Studies in building history: essays in recognition of the work of B H StJ O'Neil*, London

Kains-Jackson, C, 1880 *Cadbury Castle, South Cadbury, Somerset: our ancient monuments and the land around them*, 32–3, London

Kellaway, G A, and Wilson, V, 1941 An outline of the geology of Yeovil, Sherborne and Sparkford Vale, *Proc Geologists Ass*, **52**, 131–74

Kerney, M P, and Cameron, R A D, 1979 *A field guide to the landsnails of Britain and north-west Europe*, London

King, A and Soffe, G 1994 The Iron Age and Roman temple on Hayling Island, Hampshire, in *The Iron Age in Wessex: recent work* (eds A Fitzpatrick, and E Morris), 114–16, Salisbury

Kimes, T, Haselgrove, C C, and Hodder, I R, 1982 A method for the identification of regional cultural boundaries, *J Anthropological Archaeol*, **1**, 113–31

Kirk, W, 1949, Bronzes from Woodeaton, Oxon, *Oxoniensia*, **14**, 1–45

Klindt-Jensen, O, 1979 *Gundestrup Kedelen*, Copenhagen

Laidlaw, J, 1966 South Cadbury *Archaeol Rev*, **1**, 25

——, 1967 South Cadbury, *Archaeol Rev*, **2**, 17

Laws, K, 1987 Quernstones, whetstones and other items of stone, in *Hengistbury Head, Dorset. Vol.1: the prehistoric and Roman settlement 3500 BC – AD 50* (B Cunliffe), Oxford Univ Comm Archaeol Monongr, **13**, 167–73, Oxford

——, 1991a The worked bone and antler, in *Maiden Castle: excavations and field survey 1985–6* (N Sharples), Eng Heritage Archaeol Rep, **19**, 234–8, London

——, 1991b The shale, in *Maiden Castle: excavations and field survey 1985–6* (N Sharples), Eng Heritage Archaeol Rep, **19**, 232, London

——, 1991c The foreign stone, in *Maiden Castle: excavations and field survey 1985–6* (N Sharples), Eng Heritage Archaeol Rep, **19**, 229–232, London

Laws, K, Brown, L and Roe, F, 1991 Objects of stone, in *Danebury, an Iron Age hillfort in Hampshire, Vol 5: The excavations 1979–88: the finds* (B Cunliffe and C Poole), CBA Res Rep, **73**, 382–404

Lawson, A J, 1976 Shale and jet objects from Silchester, *Archaeologia*, **105**, 241–75

Leach, P J, 1982 *Ilchester: Volume 1. Excavations 1974–1975*, Western Archaeol Trust Excav Monogr, **3**, Bristol

——, 1993 *Ilchester: Volume 2. Archaeology, excavations and fieldwork to 1984*, Sheffield

Leach, P, and Jones, A, forthcoming *Excavations at Ilchester, Somerset 1986–1988*

Leech, R H, 1982a *Excavations at Catsgore 1970–1973*, Bristol

——, 1982b The excavation of a Romano-British farmstead and cemetery on Bradley Hill, Somerton, Somerset, *Britannia*, **13**, 177–252

——, 1986 The excavation of a Romano-Celtic temple and a later cemetery on Lamyatt Beacon, Somerset, *Britannia*, **17**, 259–328

Lock, G, 1991 Iron Age pottery: quantifying problem areas, in *Danebury: an Iron Age hillfort in Hampshire, Vol. 5: The excavations 1979–88, the finds* (B Cunliffe and C Poole), CBA Res Rep, **3**, 278–284, London

McCormick, F, 1992 Early faunal evidence for dairying, *Oxford J Archaeol*, **11**, 201–9

McGregor, M and Simpson, D, 1963 A group of iron objects from Barbury Castle, Wilts, *Wiltshire Archaeol Mag*, **58**, 394–402

McNeil, R, 1973 A report on the Bronze Age hoard from Wick Park, Stogursey, Somerset, *Somerset Archaeol Natur Hist*, **117**, 47–64

Macdonald, P and Saunders, C, 1994 *Ironwork archive report*, Cadbury Archive File no. 265

Maltby, M, 1979 *Faunal studies on urban sites: the animal bones from Exeter 1971–1975*, Sheffield

——, 1981 Iron Age, Romano-British and Anglo-Saxon animal husbandry – a review of the faunal evidence, in *The environment of man: the Iron Age to the Anglo-Saxon period* (eds M Jones and G Dimbelby), BAR, Brit Ser, **87**, 155–203, Oxford

——, 1985a, Patterns in faunal assemblage variability in *Beyond domestication in prehistoric Europe* (eds G Barker and C Gamble), 33–74, London

——, 1985b The animal bones, in *The prehistoric settlement at Winnall Down, Winchester* (P J Fasham), Hampshire Fld Club Archaeol Soc Monogr, **2**, 97–112, Gloucester

——, 1993 Animal bones, in *Excavations at Greyhound Yard, Dorchester, 1981–1984* (P J Woodward, S M Davies and A H Graham), Dorset Natur Hist Archaeol Soc Monogr Ser, **12**, 315–40, Dorchester

Manby, TG, 1980 Bronze Age settlement in eastern Yorkshire, in *Settlement and society in the British later Bronze Age* (eds J Barrett and R Bradley), BAR, Brit Ser, **83**, 307–70, Oxford

——, forthcoming Excavations at Thwing, East Yorkshire

Manning, W H, 1964 A Roman hoard of iron-work from Sandy, Bedfordshire, *Bedfordshire Archaeol J*, **2**, 50

——, 1976 The Conquest of the West Country, in *The Roman west country: classical culture and Celtic society* (eds K Branigan and P Fowler), Newton Abbot, 15–41

——, 1985 *Catalogue of the Romano-British iron tools, fittings and weapons in the British Museum*, Brit Mus Publications, London

Manning, W H and Saunders, C, 1972 A socketed iron axe from Maids Moreton, Buckinghamshire, with a note on the type, *Antiq J*, **52**, 276–92

Maxfield, V A, 1986 Pre-Flavian forts and their garrisons, *Britannia*, **17**, 59–72

——, 1989 Conquest and aftermath, in *Research on Roman Britain* (ed M Todd), Society for the Promotion of Roman Studies, 19–30, London

Mays, M, 1987 Durotrigan coins, in *Hengistbury Head, Dorset Volume 1: The prehistoric and Roman settlement 3500BC–AD500* (B Cunliffe), 140–1, Oxford

——, forthcoming *The Durotrigan coinage*, Oxford Univ Comm Archaeol Monogr, **15**, Oxford

Megaw, R, and Megaw, V, 1989 *Celtic art: from its beginnings to the Book of Kells*, London

Miles, H and Miles, T J, 1969 Settlement sites of the late pre-Roman Iron Age in the Somerset levels, *Somerset Archaeol Natur Hist Soc*, **113**, 17–55

Mook, W G 1986 Business meeting: recommendations adopted by the twelth international radiocarbon conference, *Radiocarbon*, **28**, 799

Moore, C, 1867 On the Middle and Upper Lias of the south-west of England, *Somerset Archaeol Natur Hist*, **13**, 119–230

Moss-Eccardt, J, 1965 An Iron Age cauldron from Letchworth, Hertfordshire, *Antiq J*, **45** 173–7

Mottram, B, 1961 Contributions to the geology of the Mere Fault and the Vale of Wardour Anticline, *Proc Geologist's Ass*, **72**, 187–203

Musgrave, W, 1719 *Antiquities Britanno-Belgicae*

Musson, C W, 1991 *Breiddin hillfort: a later prehistoric settlement in the Welsh Marches*, CBA Res Rep, **76**, London

——, 1994 *Cadbury Castle interior*, Cadbury Archive Report

Needham, S P, 1980 The bronzes, in *Runnymede Bridge 1976: excavations on the site of a late Bronze Age settlement* (D Longley), Res Vol Surrey Archaeol Soc, **6**, 13–27, Guildford

——, 1986a Late Bronze Age artefacts, in *Baldock: the excavation of a Roman and pre-Roman settlement 1968–1972* (I Stead and V Rigby) Britannia Monogr Ser, **7**, 141–143, London

——, 1986b A Bronze Age bucket base from Little Houghton, Northants., *Antiq J*, **66**, 374–7

——, 1990a The gold bracelets and class B1 bracelets in Britain, in *Brean Down, excavations 1983–1987* (M Bell), Eng Heritage Archaeol Rep, **15**, 146–150, London

——, 1990b *The Petters Late Bronze Age metalwork*, Brit Mus Occas Pap, **70**, London

——, 1991 The Grimes Graves metalwork in the context of other Middle Bronze Age assemblages, in *Excavations at Grimes Graves, Norfolk, 1972–76, 3* (I Longworth, A Herne, G Varndell and S Needham), 172–80, London

——, 1993 The Beeston Castle Bronze Age metalwork and its significance, in *Beeston Castle. Cheshire, a report on the excavations 1968–85 by Laurence Keen and Peter Hough* (ed P Ellis), Eng Heritage Archaeol Rep, **23**, 41–50, London

——, forthcoming Chronology and periodisation in the British Bronze Age, *Acta Archaeologica*, **67**

Northover, J P, 1982 The metallurgy of the Wilburton hoards, *Oxford J Archaeol*, **1**(1), 69–109

——, 1984 Iron Age Bronze metallurgy in central southern England, in *Aspects of the Iron Age in central southern Britain* (eds B Cunliffe and D Miles), Oxford Univ Comm Archaeol Monogr, **2**, 126–45

——, 1988 The Late Bronze Age metalwork: general discussion, in *Mount Batten, Plymouth, a prehistoric and Roman port* (B Cunliffe), Oxford Univ Comm Archaeol Monogr, **26**, 75–85, Oxford

——, 1991a Non-ferrous metalwork and metallurgy, in *Maiden Castle: Excavations and field survey 1985–86* (N Sharples), Eng Heritage Archaeol Rep, **19**, 159–65 and microfiche.

——, 1991b Non-ferrous metalwork and metallurgy, in *Danebury: an Iron Age hillfort in Hampshire, Vol. 5: The excavations 1979–1988, the finds* (B Cunliffe), CBA Res Rep, **76**, 407–12

——, 1992 Materials issues in the Celtic coinage, in *Celtic coinage: Britain and beyond, proceedings of the 11th Oxford Symposium on coinage and monetary history* (ed M Mays), BAR, Brit Ser, **222**, 235–500, Oxford

——, forthcoming Iron Age bronze in Wales, to be published in *Studia Celtica*

O'Connor, B, 1980 *Cross Channel relations in the later Bronze Age*, BAR, Int Ser, **91**, 2 vols

——,1991 Bronze Age metalwork from Cranborne Chase: a catalogue, in *Papers in the prehistoric archaeology of Cranborne Chase* (eds J Barrett, R Bradley and M Hall), Oxbow Monogr, **11**, 231–41, Oxford

——, 1994 *Bronze Age metalwork archive report*, Cadbury Archive File No. 255

Olivier, A, 1994 *Brooches archive report*, South Cadbury Archive File No. 268

Palk, N, 1984 *Iron Age bridle bits from Britain*, Univ Edinburgh Department Archaeol Occas Pap, **10**, Edinburgh

Palmer, R, 1984 *Danebury: an Iron Age hillfort in Hampshire. An aerial photographic interpretation of its environs*, Roy Comm Hist Monuments Engl Supp Ser, **6**, London

Parfitt, K, 1991 Deal, *Current Archaeology*, **125**, 215–20

——, 1995 *Iron Age burials from Mill Hill, Deal*, London

Parker Pearson, M, 1996 Food, fertility and front doors in the first millennium BC, in *The Iron Age in Britain and Ireland: recent trends* (eds T Champion and J Collis), 117–32, Sheffield

Payne, S, 1972 Partial recovery and sample bias: the results of some sieving experiments, in *Papers in economic prehistory* (ed E S Higgs), London, 49–64

——, 1985 Morphological distinctions between the mandibular teeth of young sheep, *Ovis*, and goats, *Capra.*, *J Archaeol Science*, **12**, 139–47

Peacock, D P S, 1968 A petrological study of certain Iron Age pottery from Western England, *Proc Prehistoric Soc*, **34**, 414–27

——, 1969 A contribution to the study of Glastonbury Ware from south-west Britain, *Antiq J*, **49**, 41–61

Peacock, D P S, and Williams, D F, 1986 *Amphorae and the Roman economy*, London

Pearce, S M, 1983 *The Bronze Age metalwork of south-western Britain*, BAR, Brit Ser, **120**, 2 vols, Oxford

Pearson, G W, and Stuiver, M, 1986 High-precision calibration of the radiocarbon time scale, 500–2500 BC, *Radiocarbon*, **28**, 839–62

Pearson, G W, Pilcher, J R, Baillie, M G L, Corbett, D M and Qua, F, 1986 High precision 14C measurement of Irish oaks to show the natural 14C variations from AD 1840–5210 BC, *Radiocarbon*, **28**, 911–34

Phelps, W, 1836 *The history and antiquities of Somersetshire*, London

Piggott, S, 1950 Scabbards of the British Early Iron Age, *Proc Prehist Soc*, **16**, 1–28

——, 1966 A scheme for the Scottish Iron Age, in *The Iron Age in northern Britain* (ed A L F Rivet), 1–16, Edinburgh

Piggott, S, et al, 1970 *Early Celtic Art: exhibition catalogue*, Arts Council of Great Britain, Edinburgh

Pitts, L F, 1979 *Roman bronze figurines of the Catuvellauni and Trinovantes*, BAR, Brit Ser, **60**, Oxford

Pitt-Rivers, A, 1884 *Report on excavations in the Pen Pits, near Penselwood, Somerset*, published privately

——, 1888 *Excavations in Cranborne Chase. Vol II*, published privately

Poole, C, 1984 The structural use of daub, clay and timber, *Danebury: an Iron Age hillfort in Hampshire, Vol 2: The excavations 1969–1978, the finds* (B Cunliffe), CBA Res Rep, **52**, 110–23, London

——, 1987 Loom weights of baked clay, in *Hengistbury Head, Dorset. Vol 1: The prehistoric and Roman settlement 3500 BC–AD 50*, (B Cunliffe) Oxford Univ Comm Archaeol, Monogr, **13**, 165–167, Oxford

——, 1991 The small objects of daub and clay, in *Maiden Castle: excavations and field survey 1985–6* (N Sharples), Eng Heritage Archaeol Rep, **19**, London

Pound, C J, 1983 The sedimentation of the Lower – Middle Devonian Staddon Grits and Jennycliff Slates on the east side of Plymouth Sound, Devon, *Proc Ussher Soc*, **5**(4), 464–72

Price, J, 1986 Vessels of glass, in *Archaeology at Barton Court Farm, Abingdon, Oxon* (ed D Miles), CBA Res Rep, **50**, microfiche IV.8.15, London

——, 1987 The Roman glass, in Brandon Camp, Herefordshire, (S S Frere), *Britannia*, **18**, 71–6

——, 1989 The glass, in *Pentre Farm, Flint 1976–81: an official building in the Roman lead mining district* (T J O'Leary), BAR, Brit Ser, **207**, 77–86, Oxford

——, 1995 Chapter 11: Glass vessels, in *Report on the excavations at Usk, 1965–1976: the Roman small finds*, (W H Manning, J Price, and J Webster) 139–91, Cardiff

Price, J, and Cool, H E M, 1983 Glass from the excavations of 1974–76, in Excavations at Towcester, Northamptonshire: the Alcester Road suburb, (A E Brown and C Woodfield), *Northamptonshire Archaeol*, **18**, 115–124

——, 1985 Glass (including glass from 72 Dean's Way), in *Kingsholm* (H R Hurst), Gloucester Archaeol Rep, **1**, 41–54, Gloucester

Price, J and Cottam, S, 1995 Late Roman and early post-Roman glass, in *Cadbury Castle, Somerset: the early medieval archaeology* (L Alcock), 99–104, Cardiff

RAF (Royal Air Force), 1928 Aerial photograph RAF 1928 CN 35/3230 Cadbury Castle photgraphic archive

Radford, C A R, and Stevens Cox, J, 1954–55 Cadbury Castle, South Cadbury, *Somerset Archaeol Nat Hist*, **99/100**, 106–113

Raftery, B, 1988 *Hollow two-piece metal rings in La Tène Europe*, *Vorgeschichtliches Seminar*, Marburg

Rahtz, P, 1969 Cannington hillfort 1963, *Somerset Archaeol Natur Hist*, **113**, 56–68

Rapin A, 1991 Weaponry, in *The Celts* (eds S Moscati, O H Frey and V Kruta), London, 321–31,

Ratjen, H, and Heinrich, D, 1978 *Vergleichende Untersuchungen an den Metapodien von Füchsen und Hunden*, *Schriften aus der Archäologisch-Zoologischen Arbeitsgruppe Schleswig-Kiel*, **4**

Rawlings, M, 1991 The Pits, in *Maiden Castle: excavations and field survey 1985–6* (N Sharples), Eng Heritage Archaeol Monogr, **19**, 89–94, London

Rees, S E 1979 *Agricultural implements in prehistoric and Roman Britain*, BAR, Brit Ser, **69**, Oxford

Renfrew, C and Bahn, P, 1991 *Archaeology: theories, methods and practice*, London

Richardson, K M, 1951 The excavation of the Iron Age villages on Boscombe Down West, *Wiltshire Archaeol Natur Hist Mag*, **54**, 123–68

Richardson, L, 1906 On a section of Middle and Upper Lias rocks near Evercreech, Somerset, *Geolog Mag*, **5**(3), 368–9

——, 1909 On some Middle and Upper Lias sections near Batcombe, Somerset, *Geolog Mag*, **5**(6), 540–2

Richmond, I A, 1968 *Hod Hill, Vol.2: Excavations carried out between 1951 and 1958*, London

Riley, H and Dunn, C J, 1993 *South Cadbury Castle, Somerset: a new survey by the Royal Commission on the Historic Monuments of England, Swindon: archive survey report* Cadbury Castle Archive Report

Roe, F E S, 1991a Whetstones, in *Maiden Castle: excavations and field survey, 1985–6* (N Sharples), Eng Heritage Archaeol Rep, **19**, 231–2, London

——, 1991b The origins of the (non-quern) utilized stone, in *Danebury: an Iron Age hillfort in Hampshire, Vol 5. the excavations 1979–88: the finds* (B Cunliffe and C Poole), CBA Res Rep, **73**, 383–90

——, 1995 Stone, in *'Industrious and fairly civilised': the Glastonbury Lake Village* (J Coles and S Minnitt), 161–7, Exeter

——, forthcoming Worked stone, in *Excavations at Fosse Lane, Shepton Mallet, Somerset* (P J Leach)

Roes, A, 1960 Horn cheek-pieces, *Antiq J*, **40**, 68–72

——, 1963 *Bone and antler objects from the Frisian terp-mounds*, Haalem

Ross, A, 1967 *Pagan Celtic Britain*, London

Rouillard, S E, 1987 The Iron Age pottery from Meare Village East, in *Meare Village East: the excavations of A Bulleid and H St George Gray, 1932–1956* (J M Coles), Somerset Levels Pap, **13**, 183–222, Exeter

Rowlands, M J, 1976a The bronze pin fragments from Gwithian, Layer 3, in *Settlement and economy in the third and second millennia BC* (eds C Burgess and R Miket), BAR, Brit Ser, **33**, 67–8, Oxford

——, 1976b *The production and distribution of metalwork in the Middle Bronze Age in southern Britain*, BAR, Brit Ser, **31**, Oxford

——, 1994 From 'the gift' to market economies: the ideology and politics of European Iron Age studies in *Europe in the first millennium BC* (eds K Kristiansen and J Jensen), 1–5, Sheffield

Sanderson, D C W, Hunter, J and Warren, S E, 1984 Energy-dispersive X-ray fluorescence analysis of the 1st millennium glass from Britain, *J Archaeol Sci*, **1**, 53–69

Savory, H N, 1976 *Guide catalogue of the Early Iron Age collections*, Nat Mus Wales, Cardiff

Schmid, E, 1972 *Atlas of animal bones*, Amsterdam

Scollar, I, 1962 Electromagnetic prospecting methods in archaeology, *Archaeometry*, **5**, 146–53

SCRO, (Somerset County Record Office), *c*.1800 Undated estate map, SCRO DD/SAS C212

——, 1839 Tithe map and award. SCRO T/PH/1 South Cadbury

Sellwood, L, 1984a Objects of bone and antler, in *Danebury: an Iron Age hillfort in Hampshire. Vol 2: The excavations 1969–1978: the finds* (B Cunliffe), CBA Res Rep, **52**, 371–95, London

——, 1984b Peripheral Celtic coinages in Britain: new research, in *Keltische Numismatik und Archeologie* (eds G Grasman, W Janssen and M Brandt), BAR, Int Ser, **200**, 406–19, Oxford

Sellwood, L, and Mays, M, 1987 The coins, in *Hengistbury Head, Dorset. Vol I: The prehistoric and Roman settlement 3500 BC– AD 500* (B Cunliffe), Oxford Univ Comm Archaeol Monogr, **13**, 136–141, Oxford

Sharples, N, 1991 *Maiden Castle: excavations and field survey 1985–6*, Eng Heritage Archaeol Rep, **19**, London

Sharples, 1991b *Maiden Castle*, London

Smith, I F, 1965 *Windmill Hill and Avebury: excavations by Alexander Keiller 1925–1939*, Oxford

Smith, L T, 1907 (ed) *The history of John Leland in or about the years 1535–1543*, London

Smith, M A, 1957 Bronze Age hoards and grave groups from the NE Midlands, *Inventoria Archaeologia*, Great Britain, 4th ser

Speed, J, 1627 *Theatre of Great Britain*, London

Speidel, M, 1990 The framework of an Imperial legion. The fifth annual Caerleon Lecture, in *Honorem Aquilae Legionis II Augustae*, Cardiff

Spiler, R and Fletcher, M, 1990 *Surface*, Surface modelling program version 2.8, School of Computing Staffordshire University

Spratling, M, 1970a South Cadbury Newsletter, Unpublished Manuscript

——, 1970b Bronze shield mount, *Antiq J*, **50**, 21–2

——, 1972 Southern British decorated bronzes of the late pre-Roman Iron Age, Unpublished PhD thesis, Institute of Archaeology, London

Stead, I M, 1965 *The La Tène cultures of eastern Yorkshire*, York

——, 1968 An Iron Age hillfort at Grimthorpe, Yorkshire, England, *Proc Prehist Soc*, **34**, 148–90

——, 1971 The reconstruction of Iron Age buckets from Aylesford and Baldock, *Brit Mus Quart*, **35**, 250–82

——, 1979 *The Arras Culture*, York

——, 1984 Some notes on imported metalwork in Iron Age Britain, in *Cross-Channel trade between Gaul and Britain in the pre-Roman Iron Age* (eds S Macready and F H Thompson), 43–66, London

——, 1985 *The Battersea Shield*, London

——, 1986 La Tène III burials, in *Baldock: the excavation of a Roman and pre-Roman settlement 1968–1972* (I M Stead and V Rigby), Britannia Monogr Ser, 7, 51–61, London

——, 1991 *Iron Age cemeteries in East Yorkshire*, London

——, 1991a Many more Iron Age shields from Britain (with a report on metal analyses by D.R.Hook), *Antiq J*, **71**, 1–35

Stead, I M, and Rigby, V, 1986 *Baldock: the excavation of a Roman and pre-Roman settlement 1968–1972*, Britannia Monog Ser, 7, London

——, 1989 *Verulamium: the King Harry Lane Site*, Eng Heritage Archaeol Rep, **12**, London

Stillingfleet, E W, 1848 Account of the opening of some barrows on the Wolds of Yorkshire, *Proc Archaeol Inst*, York, 26–32

Stow, J, 1615, *Annals of England*, London

Stuiver, M and Pearson, G W, 1986 High-precison calibration of the radiocarbon time scale, AD 1950–500 BC, *Radiocarbon*, **28**, 805–38

Stuiver, M and Reimer, P J, 1986 A computer programme for radiocarbon age calculation, *Radiocarbon*, **28**, 1022–30

Stukeley, W, 1776 *Itinerarium Curiosum*, London

Swan, V, 1975 Oare reconsidered and the origins of Savernake Ware in Wiltshire, *Britannia*, **6**, 37–61

Swanton, E W, 1912 *The Mollusca of Somerset*, Somerset Archaeol Natur Hist, Taunton

Taylor, J J, 1980 *Bronze Age goldwork of the British Isles*, Cambridge

Thomas, J, 1991 *Rethinking the Neolithic*, Cambridge

Thorn, C, and Thorn, F, (eds), 1980 *The Domesday survey of Somerset*, Chichester

Thorpe, W A, 1935 *English glass*, London

Tite, M S, and Mullins, C, 1969 Electromagnetic prospecting: a preliminary investigation, *Prospezioni Archeologiche*, **4**, 95–102

Todd, M, 1987 *The south-west to AD 1000*, London

Torrens, H S, 1969 Field meeting in the Sherbourne-Yeovil district, *Proc Geol Assoc*, **80**, 301–330

Tratman, E K, 1959 Maesbury Castle, Somerset, *Proc Univ Bristol Spelaeol Soc*, **8**(3), 172–8

Turner, W E S, and Rooksby, H P, 1961 Further historical studies based on X-ray diffraction methods of reagents employed in making opal and opaque glasses, *Jahrbuch des Römisch-Germanischen Zentralmuseums*, **8**, 1–16

van Arsdell, R D, 1989a *Celtic coinage of Britain*, London

——, 1989b The Badbury-Shapwick hoard and the date of the Maiden Castle coins from Sir Mortimer Wheeler's 1934–37 excavations, *Oxford J Archaeol*, **8**, 347–51

Velde, B and Gendron, C, 1980 Chemical composition of some Gallo-Roman fragments from central western France, *Archaeometry*, **22**, 183–7

von dem Driesch, A, 1976 *A guide to the measurement of animal bones from archaeological sites*, Peabody Museum Bull, **1**, Harvard

von dem Driesch, A, and Boessneck, J, 1974 *Kritische Anmerkungen zur Widerristhöhenberechnung aus Längenmaßen vor- und frühgeschichtlicher Tierknochen, Säugetierkundliche Mitteilungen*, **22**, 325–48, München

Vouga, P, 1923 *La Tène: la station*, Leipzig

Wainwright, G J, 1968 The excavations of a Durotrigian Farmstead near Tollard Royal in Cranborne Chase, Southern England, *Proc Prehist Soc*, **34**, 102–47

——, 1979 *Gussage All Saints. An Iron Age settlement in Dorset*, DoE Archaeol Rep, **10**, London

Wait, G 1985 *Ritual and religion in Iron Age Britain* BAR, Brit Ser, **149**, Oxford

Warre, F, 1858 On the types of British earthworks, *Proc Somerset Archaeol Natur Hist Soc*, **8**, 63–75

——, 1856–1857 Earthworks in the neighbourhood of Bruton, *Somerset Archaeol Nat Hist*, 7(2), 43–63

Waters, G S, and Francis, P D, 1958 A nuclear magnetometer, *J Scientific instruments*, **35**, 88–93

Webster, G, 1972 Roman Military bronzes from South Cadbury, Unpublished Report

——, 1979 Final report on the excavations of the Roman fort at Waddon Hill, Stoke Abbott, 1963–69, *Dorset Nat Hist Archaeol Soc*, **101**, 51–90

Webster, J, 1975 Bone and antler, in *Excavations at Portchester Castle, Vol 1*, Rep Res Comm Soc Antiq London, **32**, 215–225, London

Wedlake, W J, 1958 *Excavations at Camerton, Somerset*, Somerset

——, 1982 The excavation of the shrine of Apollo at Nettleton, Wilts, 1956–1971, Res Rep Soc Antiq London, 40, London

Wheeler, R E M, 1943 *Maiden Castle, Dorset*, Res Rep Comm Soc Antiq London, **12**, London

——, 1954 *The Stanwick fortifications, North Riding of Yorkshire*, Rep Res Comm Soc Antiq London, **17**, London

——, 1972 General editor's preface, in *'By South Cadbury is that Camelot' Excavations at Cadbury Castle 1966–1970* (L Alcock), 7–8, London

Wheeler, R E M, and Wheeler, T V, 1932 Excavation of the prehistoric, Roman and post-Roman site in Lydney Park, Glos, Res Rep Soc Antiq London, 9, Oxford

Whittle, A, 1977 *The earlier Neolithic of southern England and its continental background*, BAR, Brit Ser, **35**, Oxford

——, 1984 The Pits, in *Danebury: an Iron Age hillfort in Hampshire. Vol 2: The excavations 1969–78, the finds* (B Cunliffe), CBA Res Rep, **52**, 128–46, London

Wild, J P, 1970a *Textile manufacture in the northern Roman provinces*, Cambridge

——, 1970b Button and loop fasteners in the Roman provinces, *Britannia*, **1**, 137–55

Williams, D F, 1977 The Romano-British Black Burnished industry: an essay on characterisation by heavy mineral analysis, in *Pottery and early commerce* (D P S Peacock), 163–200, London

——, 1994 *Ceramic analysis*, Cadbury Castle Archive Report

Williams, D F, and Peacock, D P S, 1983 The importation of olive-oil into Roman Britain, in *Produccion Y Comercio del Aceite en la Antiquedad II Congresso internacional* (J Blazquez and J Remesal), 263–80, Madrid

Wilson, V, Welch, F B A, Robbie, J A, and Green, G W, 1958 *Geology of the country around Bridport and Yeovil*, Memoir Geological Survey sheets 327 and 312

Wise, P J, 1990 Archaeology of the Grimsby-Cleethorpes area, in *Humber perspectives: a region through the ages* (eds S Ellis and D R Crowther), 213–26, Hull

Woodward, A, 1990 The Bronze Age pottery, in *Brean Down: excavations 1983–1987* (M Bell), Eng Heritage Archaeol Rep, **15**, 121–145, London

——, 1992 *Shrines and sacrifice*, London

Woodward, A and Leach, P 1993 *The Uley Shrines. Excavations of a ritual complex on West Hill, Uley, Gloucestershire: 1977–9*, Eng Heritage Archaeol Rep, **17**, London.

Woodward, H B, 1906 Geology, in *V C H Somerset, Vol 1*, (ed W Page), **I**, 1–33

Woodward, P J, 1991 The landscape survey, in *Maiden Castle: excavations and field survey 1985–6* (N Sharples), Eng Heritage Archaeol Rep, **19**, 9–36, London

Woodward, P J, and Sunter, N, 1987 *Romano-British industries in Purbeck*, Dorset Nat Hist Archaeol Soc Monogr, **6**

Wright, R P, 1967 New finds of Roman inscriptions, *J Roman Stud*, **57**, 203

Young, A, and Lunt, D, 1994 *Human bone archive report*, South Cadbury Archive File No. 264

Young, C J, 1977 *The Romano-British pottery industry of the Oxford region*, BAR, Brit Ser, **43**, Oxford

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by Susan Vaughan

Illustrations are denoted by page numbers in *italics* or by *illus* where figures are scattered throughout the text. The following abbreviations have been used in this index: CA – Ceramic Assemblage; *f* – following.


CADBURY CASTLE
SOMERSET
ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND
Wall course
Quarry
Queen Anne's Wishing Well
King Arthur's Well
Site of Roman building
SOUTH CADBURY
Castle Farm
Castle Lane
Parsonage Farm
SUTTON MONTIS
METRES
© Crown Copyright

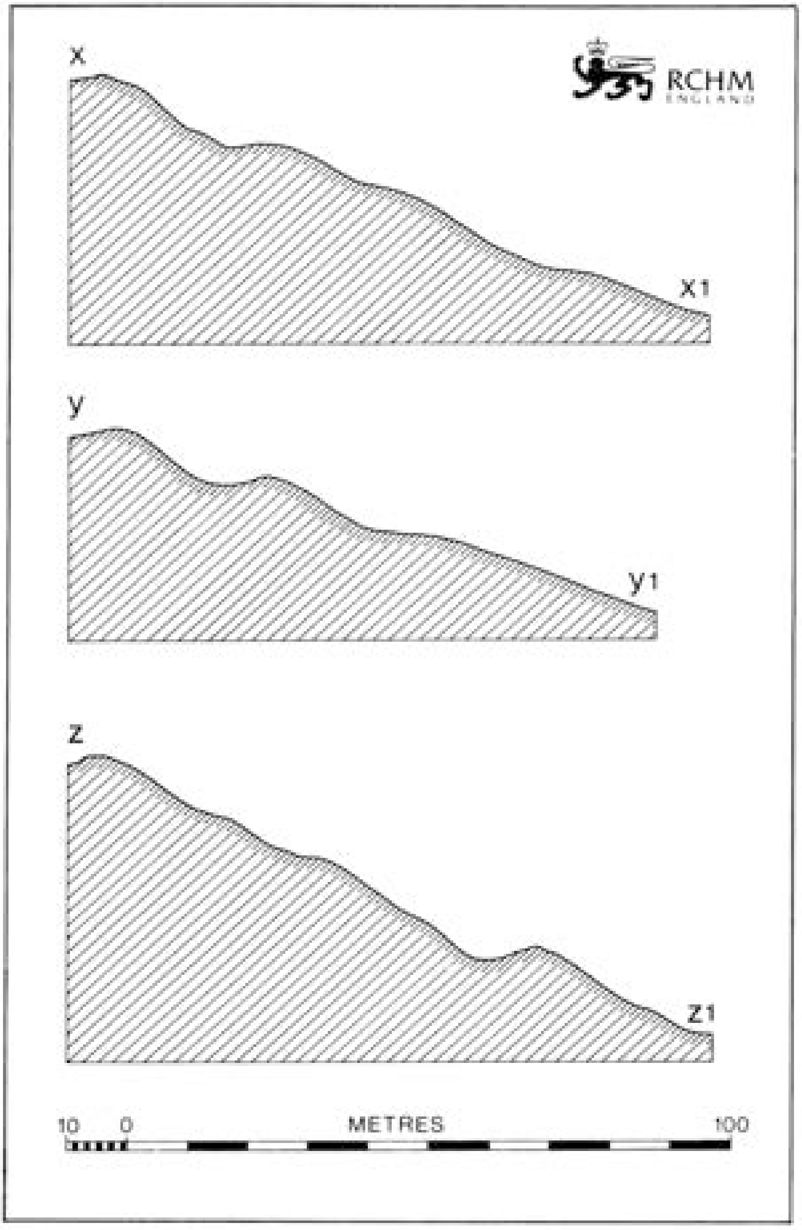

Fig 6 Cadbury Castle: selected profiles, 1:2500, across northern, eastern, and southern ramparts (© RCHME Crown Copyright)

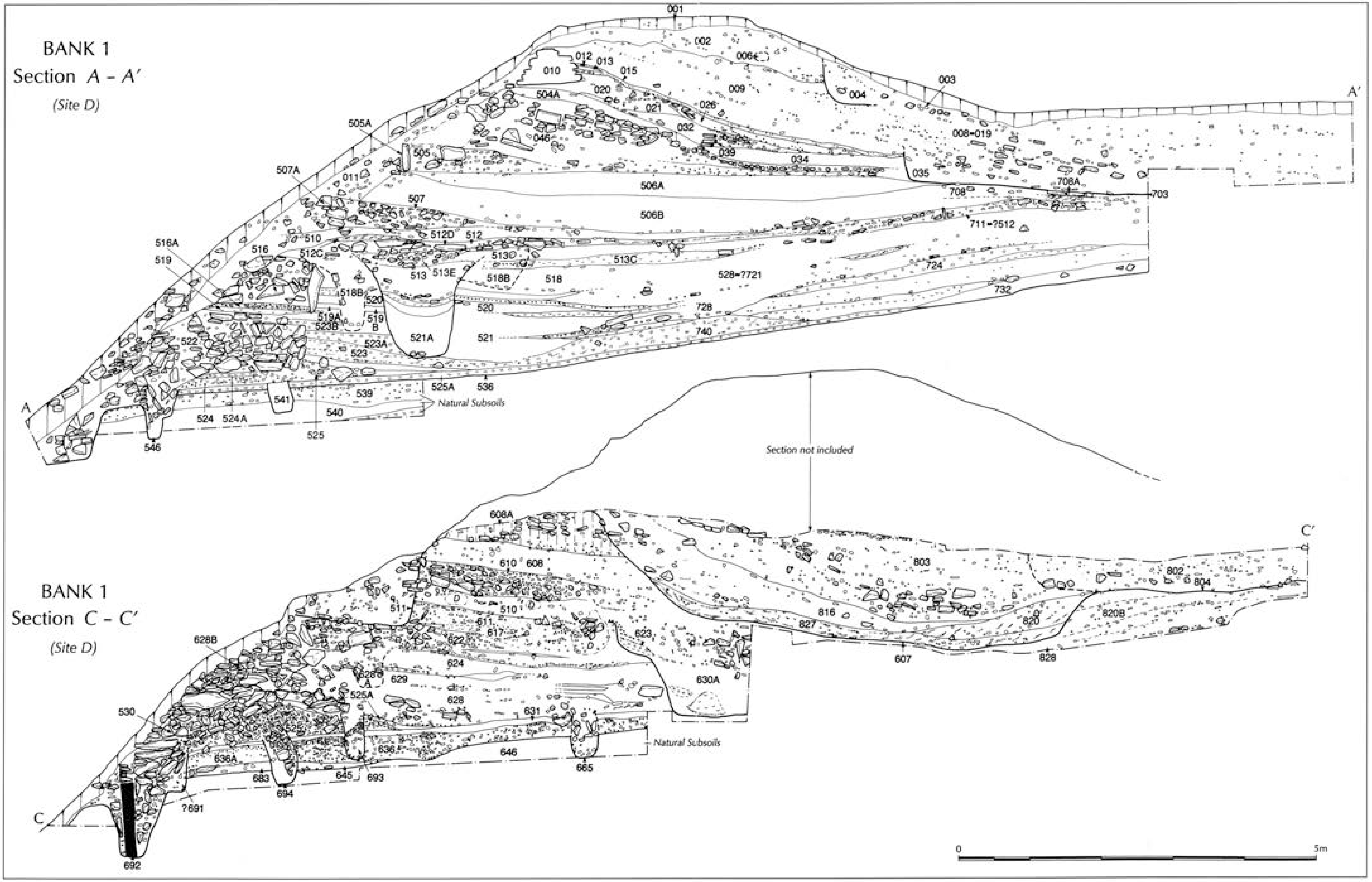

Fig 24 Site D Bank 1 sections A-A′ C-C′

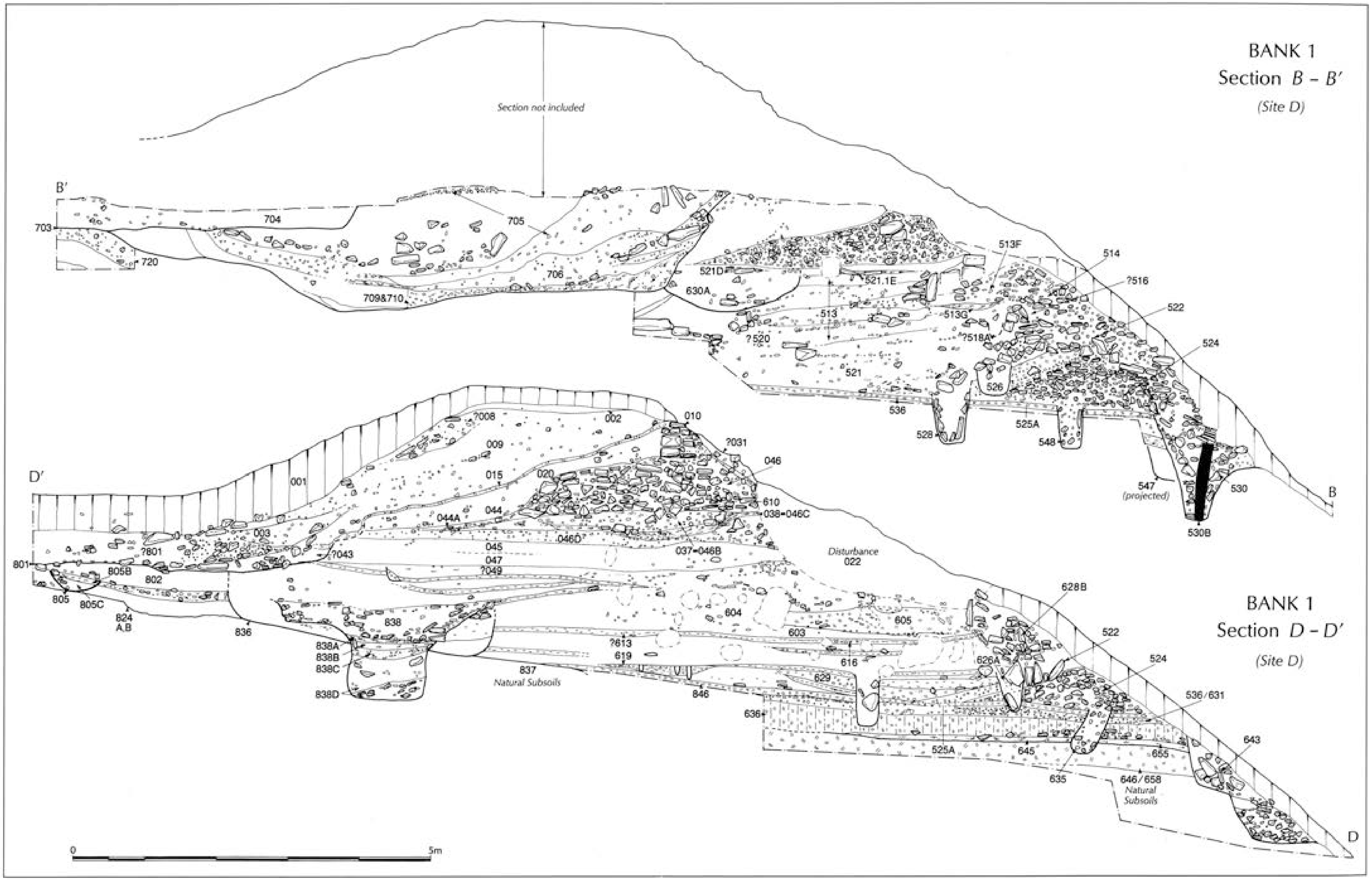

Fig 25 Site D Bank 1 sections B-B′, D-D′

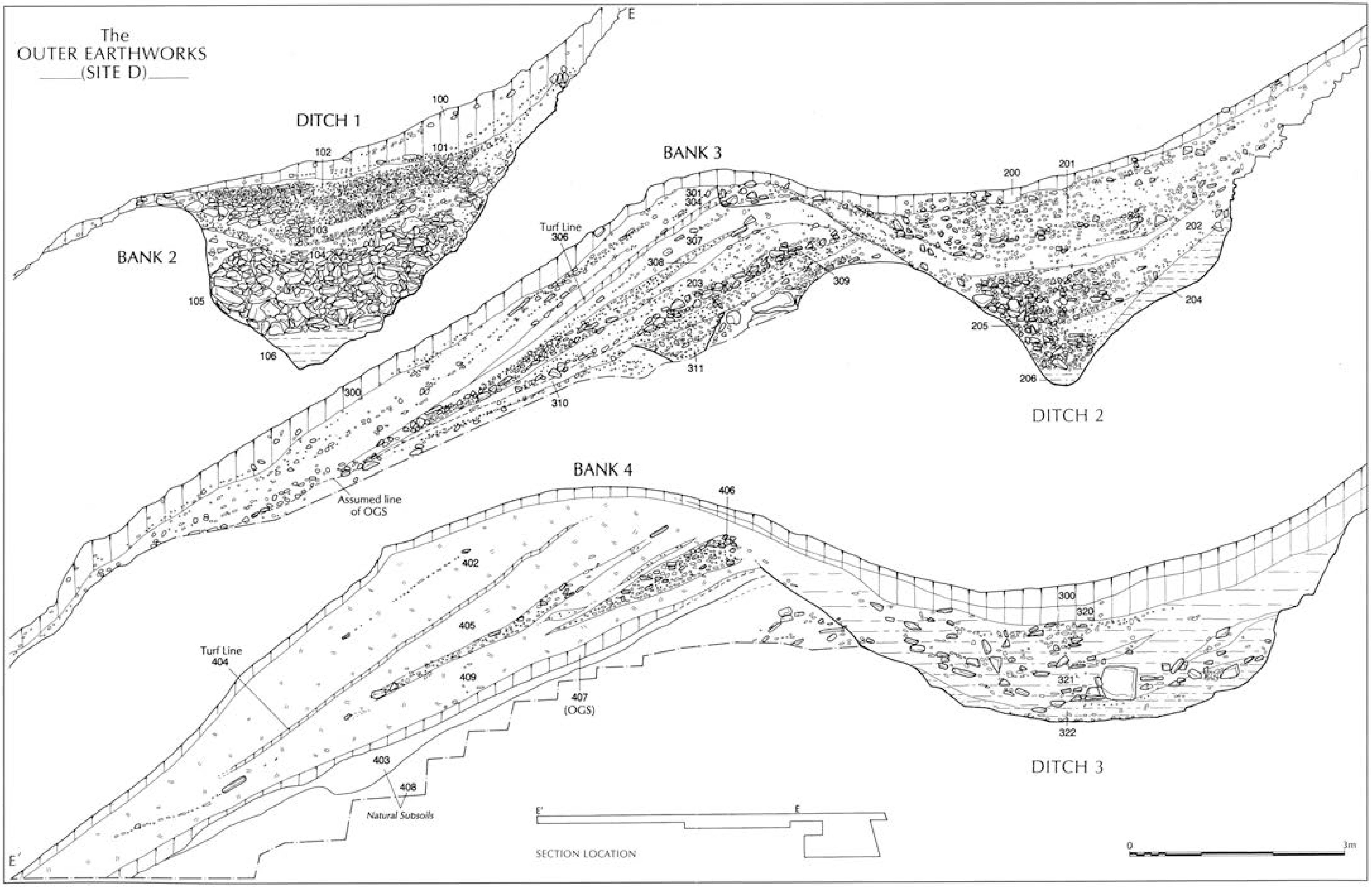

Fig 34 Section of outer earthworks Site D

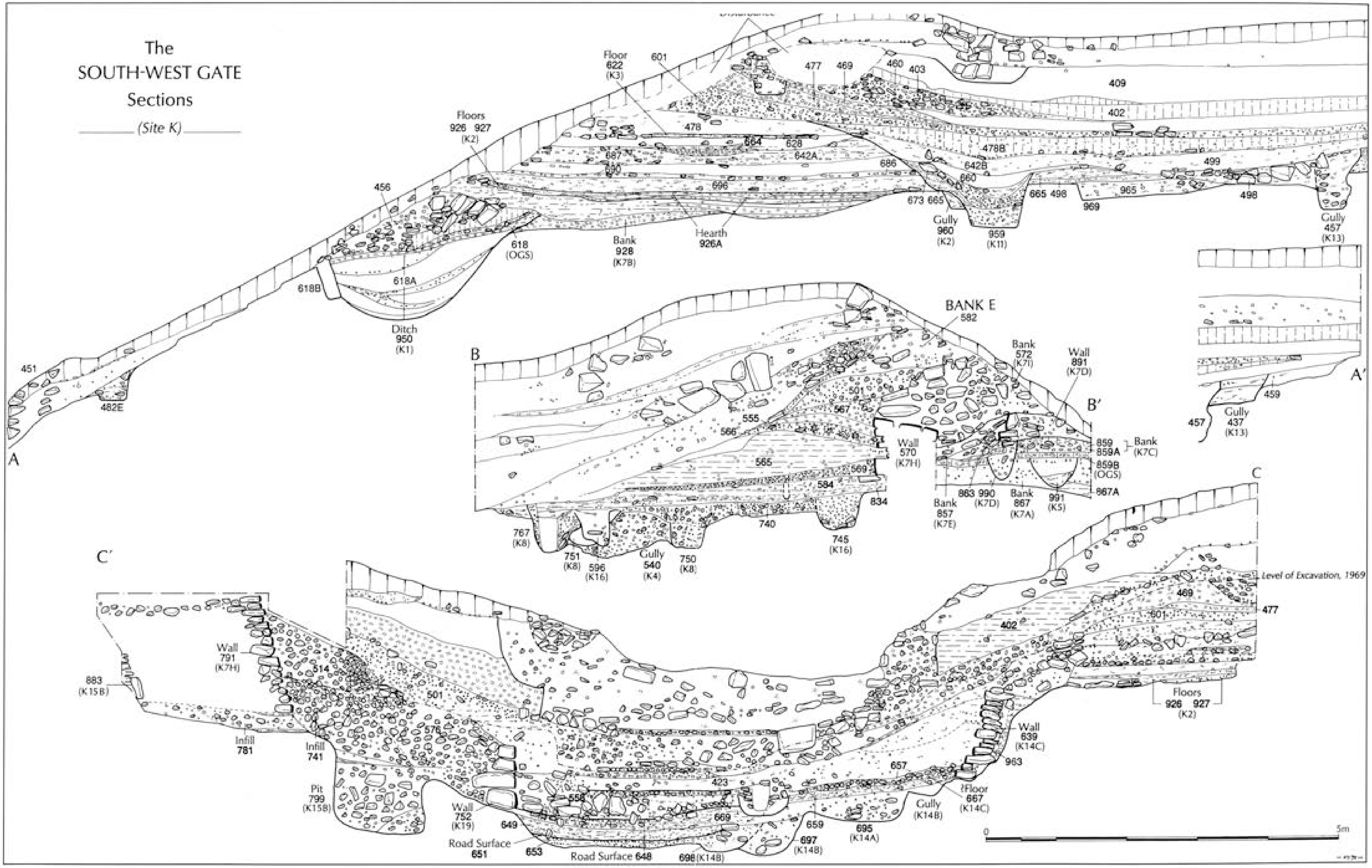

Fig 40 South-west gate sections

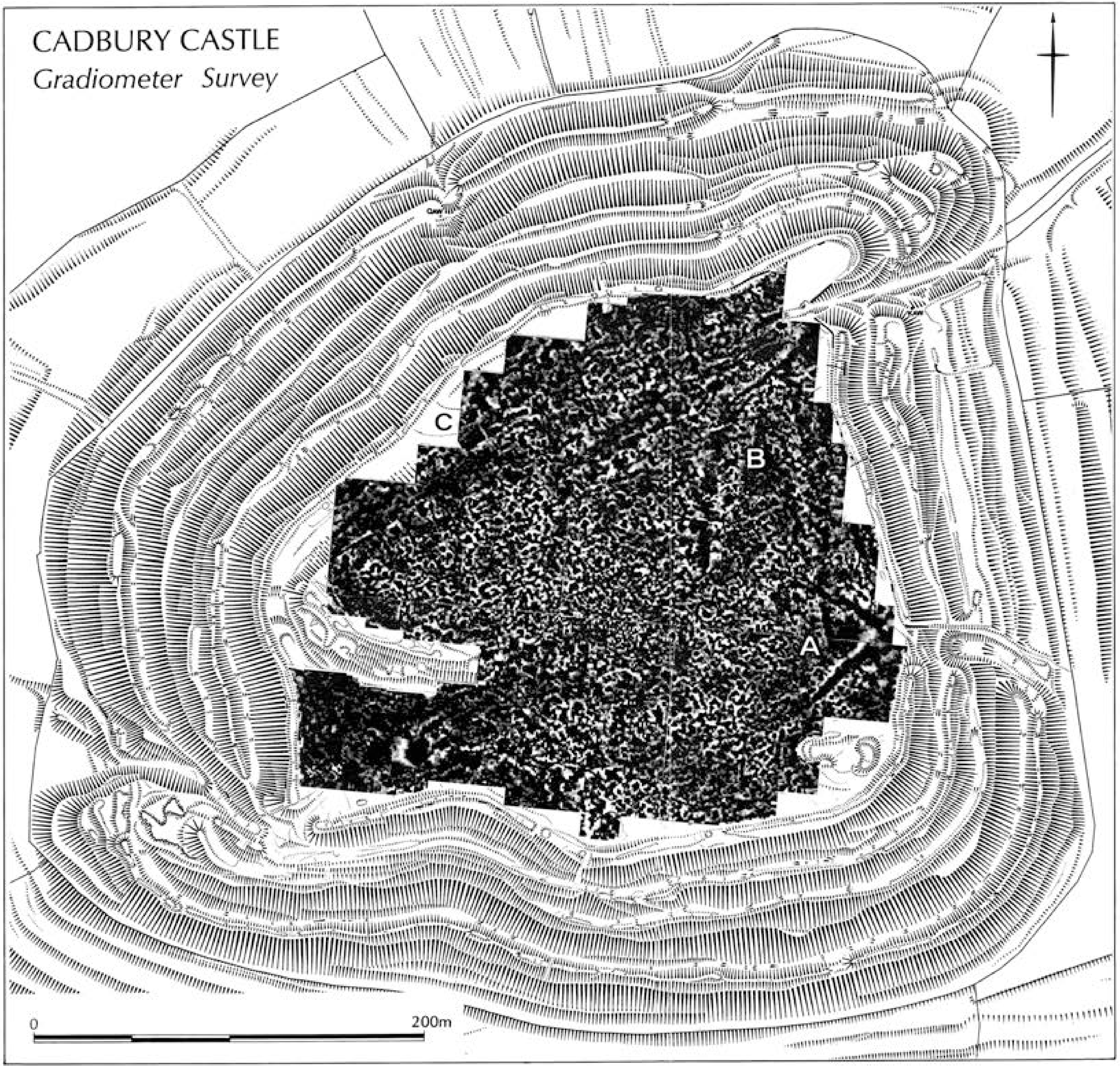

Fig 73 Gradiometer survey

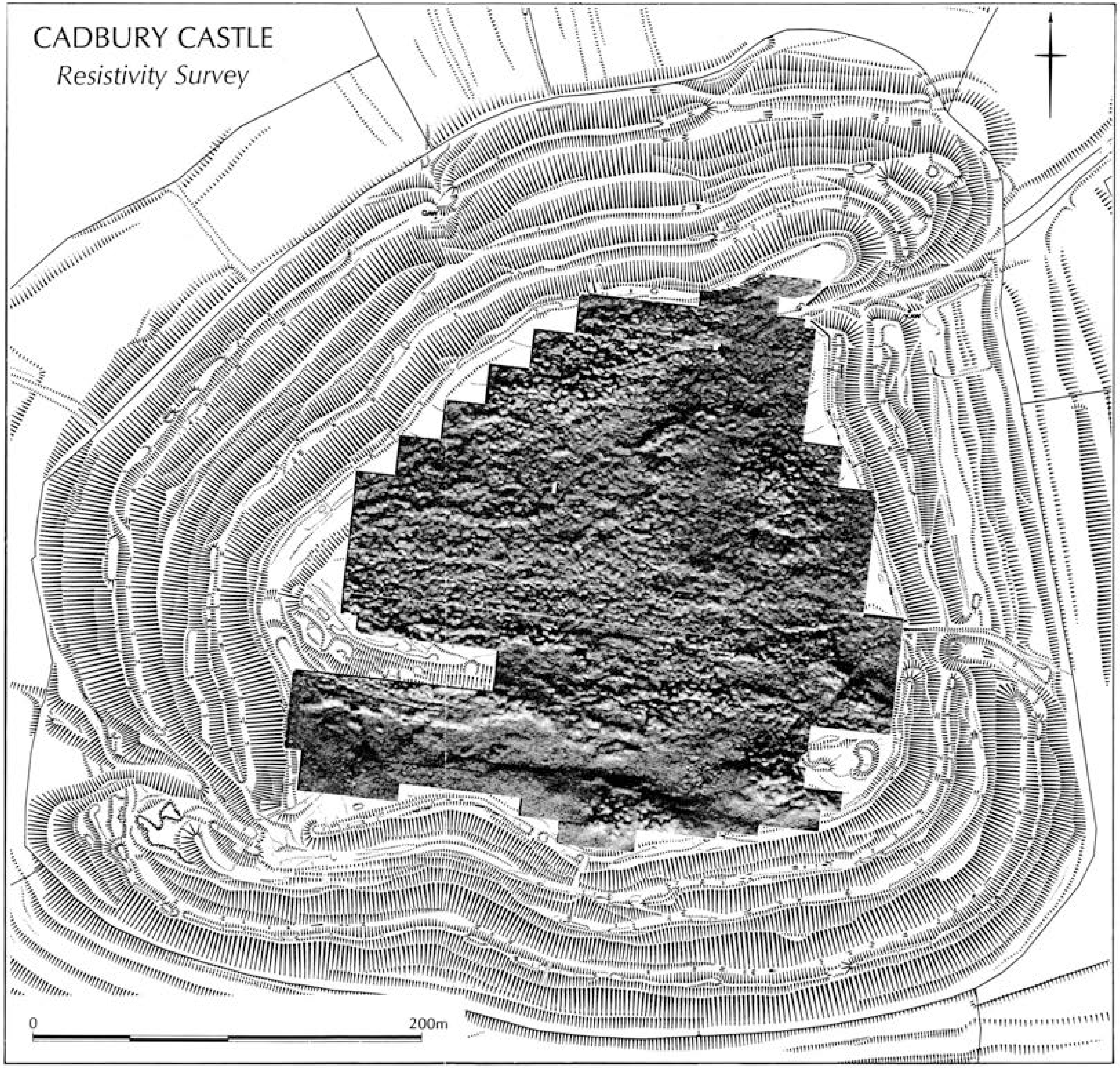

Fig 74 Resistivity survey

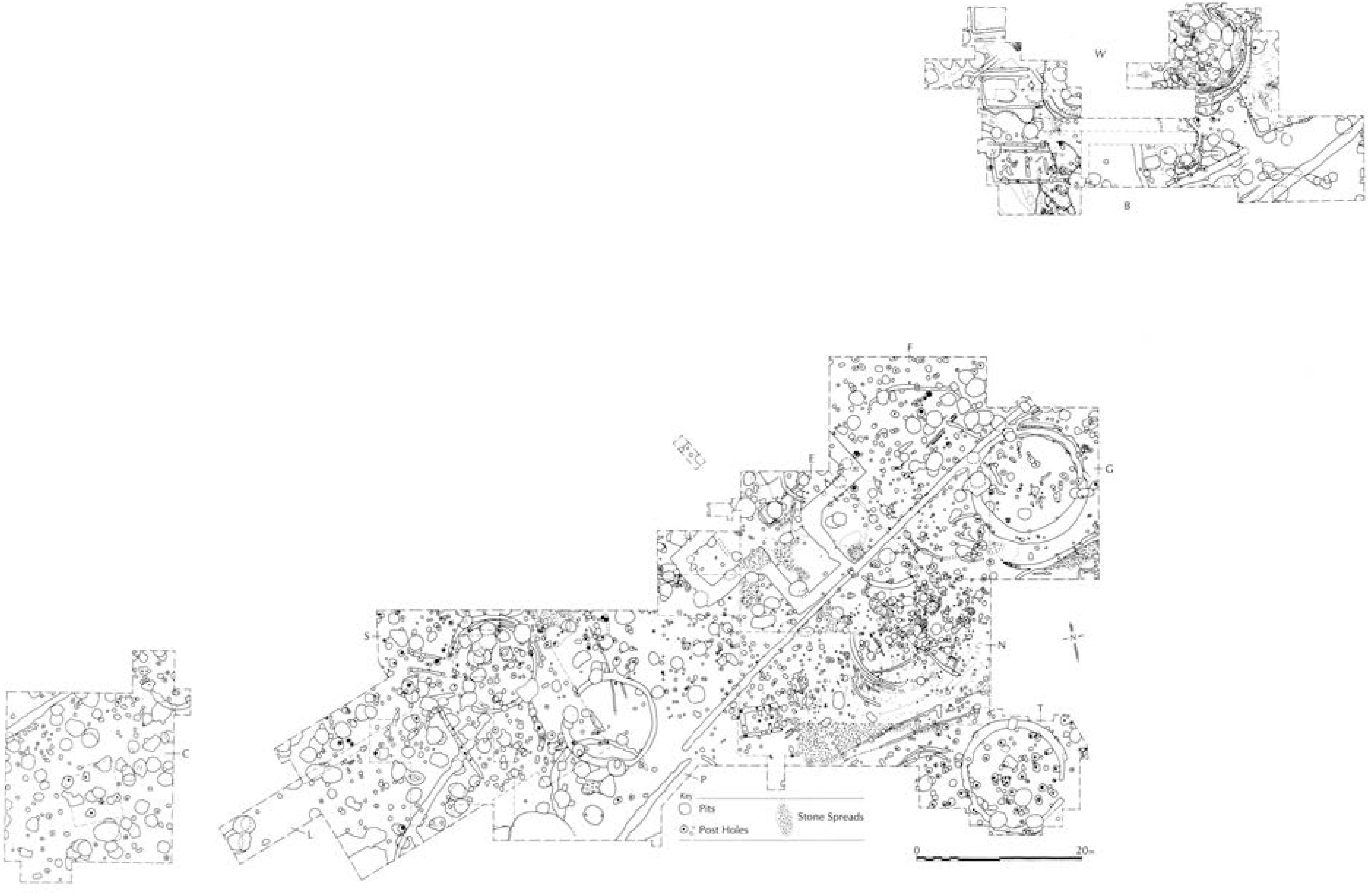

Fig 75 Excavated features of the interior

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Front cover
Aerial view from the south, 1970.