Cambrian Archaeological Monographs No 5

EXCAVATIONS in the BRENIG VALLEY

A Mesolithic and Bronze Age Landscape in North Wales

FRANCES LYNCH

The Cambrian Archaeological Association 1993

Cadw
WELSH HISTORIC MONUMENTS

ISBN 0 947846 04 2
ISSN 0226–539X

Series Editor: Robin G. Livens, F.S.A.

Published by the Cambrian Archaeological Association
with the aid of grants from Cadw/Welsh Historic Monuments,
Dŵr Cymru and Research Centre, Wales

Cambrian Archaeological Monographs may be obtained from:
The Gwynedd Archaeological Trust,
Garth Road,
Bangor,
Gwynedd LL57 2RP.

Phototypeset by The Midlands Book Typesetting Company.
Printed by Quorn Litho, Queens Road, Loughborough, Leics. LE11 1HH.

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A Mesolithic and Bronze Age landscape in North Wales

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Published by the Cambrian Archaeological Association
with financial assistance from
Cadw: Welsh Historic Monuments
Dŵr Cymru
Research Centre Wales (Bangor)
1993

Editor's Preface

The excavations described in this volume were carried out in three summer seasons between 1973 and 1975 before the Brenig valley was flooded to form a reservoir. The excavations were directed by the four major authors and this report has been co-ordinated by Frances Lynch of the University College of North Wales in Bangor. The excavating team, which included the last-named authors, was augmented by many specialists working in the field and in later analysis. Their specialist reports are summarised in the Appendices and given in full in the microfiche section.

Although this was a 'rescue project' it was possible to include unthreatened components of the Bronze Age cemetery so the excavators were able to examine the evidence from a complete ritual landscape, a factor which gives the results a special importance. Through subsequent changes in the reservoir programme it was possible to reconstruct the monuments, providing the public with the opportunity of visiting a uniquely varied display of Bronze Age architecture.

We acknowledge assistance from a number of colleagues: Dr. J.N.G. Ritchie provided most valuable comments and information and Ms M. Mason worked extremely hard and efficiently on copy-editing the text. The Monographs Management Committee of the Cambrian Archaeological Association, under the Chairmanship of Mr H.N. Jerman, was most supportive and helpful, particularly when the bankruptcy of the originally selected printer caused a serious delay in the production and I would wish to record my sincere gratitude to them. The Welsh Historic Monuments ('CADW') was also most helpful and, in company with Welsh Water and Research Centre Wales, funded this volume. The rapid efficiency of The Midlands Book Typesetting Company and Quorn Litho in producing the volume, must also be noted with our very sincere thanks.

Robin G. Livens

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CHAPTER ONE

Introduction

Frances Lynch

The Brenig Reservoir is now a broad expanse of water covering 4.28 sq. km (1.65 sq. miles) of what was previously a shallow moorland valley. In the recent past this valley had supported quite a large population of sheep farmers, but by the time the reservoir came to be built the permanent population had been greatly reduced and much of the grazing land had been covered with the neat conifers of the Forestry Commission. In the much more distant past the valley had been the home of Bronze Age farmers and pastors who had buried their dead beneath large turf mounds arranged as an imposing group below the pass at its northern end. It is the account of the excavation of the barrow cemetery which forms the heart of this report, but other remains of man's occupation of the valley at different periods were also investigated, notably a Mesolithic camp site and a group of late mediaeval *hafodau*, together with clearance cairns and agricultural structures of more recent date.

HISTORY OF THE EXCAVATION PROJECT

The damming of the Afon Brenig was first mooted in 1907 when the nearby Alwen Reservoir was created. At that time little concern would have been shown for monuments to be covered by the water as the fate of the cairn or circle drowned by the Alwen has demonstrated. In 1970, however, the climate of opinion was very different and the project benefited from the growth of awareness of threats to the historical heritage and of interest in landscape archaeology and the academic study of cemeteries, not as separate monuments but as integrated groups. When the archaeological response was first discussed the full extent of the reservoir and the perimeter works was not finalised. The dam was to be built so that it might be heightened and the larger lake to be created when this happened would certainly have covered most of the monuments in the head of the valley. The project, therefore, was essentially a rescue operation, but, through the wisdom of Dr Michael Apted, then Principal Inspector of Ancient Monuments for Wales, it was possible to add an element of research work in order to excavate the whole of the cemetery and to include Brenig 47, 46 and 51 which would always remain above the level of the lake.

In the event the heightening of the dam has been postponed indefinitely so that only a minority of the ancient monuments is at the very edge of the lake and none is actually drowned. Brenig is a regulating reservoir with a seasonally fluctuating water level and water supplies are taken not from the lake itself, but from the rivers which it feeds. As a result the Welsh Water Authority has been able to encourage recreational use of the valley and the lake. This public use dictated that the excavation sites be tidily covered, not normally a concern for rescue archaeology. Through the good offices of the landscape architect for the project, Professor Hal Moggeridge, it was possible to persuade the Recreation and Amenity Committee of the Welsh Water Authority that the sites should not only be tidied, but reconstructed *in situ* to provide an 'Archaeological Trail' as a focus for walks along the north-eastern side of the lake. This idea was accepted with enthusiasm and generosity by the Authority, who organised and paid for the work. They also developed a small site museum where the history of the valley is displayed with the use of casts and models. The Archaeological Trail and the first museum were opened in 1977; the museum has recently been rebuilt and enlarged.

The trail with its rebuilt monuments provides a very good display of the variety of Bronze Age architecture to be seen in the Welsh uplands. The three distant barrows on Cefn Brenig (Brenig 40, 41 and 42) have been simply rebuilt as grass-covered mounds. Boncyn Arian (Brenig 45), beside the path, is similar but its concealed wall has been indicated on the surface by a ring of slabs. At the Ring Cairn and the Platform Cairn (Brenig 44 and 51), the outer stones of the monuments were not moved, so that the stones could be accurately reset within them. The timber circle has been reconstructed around Brenig 44. At Brenig 51 both phases of design can be seen since the inner circle now stands slightly proud of the surface of the platform. At the *hafod* in Nant y griafolen the low stone walls have been turfed over, and short timbers stand in the post holes of the earlier hut, as they do at Brenig 6. Stone cairns have been replaced at Brenig 14 and 46, but not at Brenig 8 where only the kerb has been restored, the grave remaining visible as a pit loosely filled with stones.

The archaeological work began in 1971 when Mrs P. R Lewis, then Miss Shelagh Grealey, of Manchester University was asked to cut an exploratory trench into Brenig 45. This revealed something of the complex nature of the mound and it was decided that future work should be on a

larger scale and a directorial team was assembled. In the following year Mrs Lewis undertook a field survey of the valley which revealed some hitherto unrecorded cairns and agricultural ruins (Brenig 1–5, 9–39, 43 and 52). It was then that the monuments in the valley were given the numbers by which they are now known.

The main season of excavation was in 1973 when, in the course of three months, nine major and twelve minor monuments were excavated with the help of 230 volunteers. The monuments excavated then were Brenig 40 and 41 (under the direction of Dr John Waddell, University College Galway); Brenig 42 and 45 (under the direction of Mrs Lewis); Brenig 47, 44, 8, 9–39 and 14 (under the direction of Miss Frances Lynch, University College of North Wales); and Brenig 1–5, 7, 43, 6 and 48 (excavated by the Rescue Archaeology Group [R.A.G.] under the direction of Mr David Allen). The soil survey of the valley and pollen analytical work were also undertaken in 1973 and largely completed then.

The second season, in the summer of 1974, lasted only six weeks and involved 71 volunteers. Brenig 51 and 46 were excavated under the direction of Miss Lynch, and other possible barrows were investigated. Mr Allen completed work on the wooden structures beneath Brenig 48 and 6, while Mr Chris Musson of R.A.G. investigated Mesolithic pits (Brenig 53) near Brenig 45. In the following summer a small team under Mr Allen, then working for the Clwyd-Powys Archaeological Trust, extended the work on this area to try to define the extent of the Mesolithic camp.

Through the generosity of the Society and the kindness and efficiency of the editor, the late Mr Frank Price Jones, interim reports of the work of 1973 and 1974 were published in the *Transactions of the Denbighshire Historical Society* (Lynch *et al.* 1974; Lynch & Allen 1975).

The finds have been sent to the National Museum of Wales in Cardiff, on the understanding that they will return to the north when a professional museum is established there. The excavation records have also been deposited in the National Museum.

ACKNOWLEDGEMENTS

Thanks must be recorded first and foremost to the 252 volunteer workers whose names may be found in Appendix 12. Their hard work and enthusiasm were the foundation of the whole project. The responsibility and skill of the supervisors and assistant supervisors, especially those who had to work for long periods without direct supervision, must also be recorded with gratitude.

The success of the archaeological work was in large measure dependent upon the smooth running of the camp, which for several weeks contained over 100 people, and here we are happy to record our most grateful thanks to Captain A. J. N. Bennett, who acted as Camp Manager in 1973 and 1974; without his firm, wise, and experienced organisation the whole project might have floundered within a week. In 1973 he was assisted by Mr Harry Partridge, who had also coped admirably with the recruitment of volunteers.

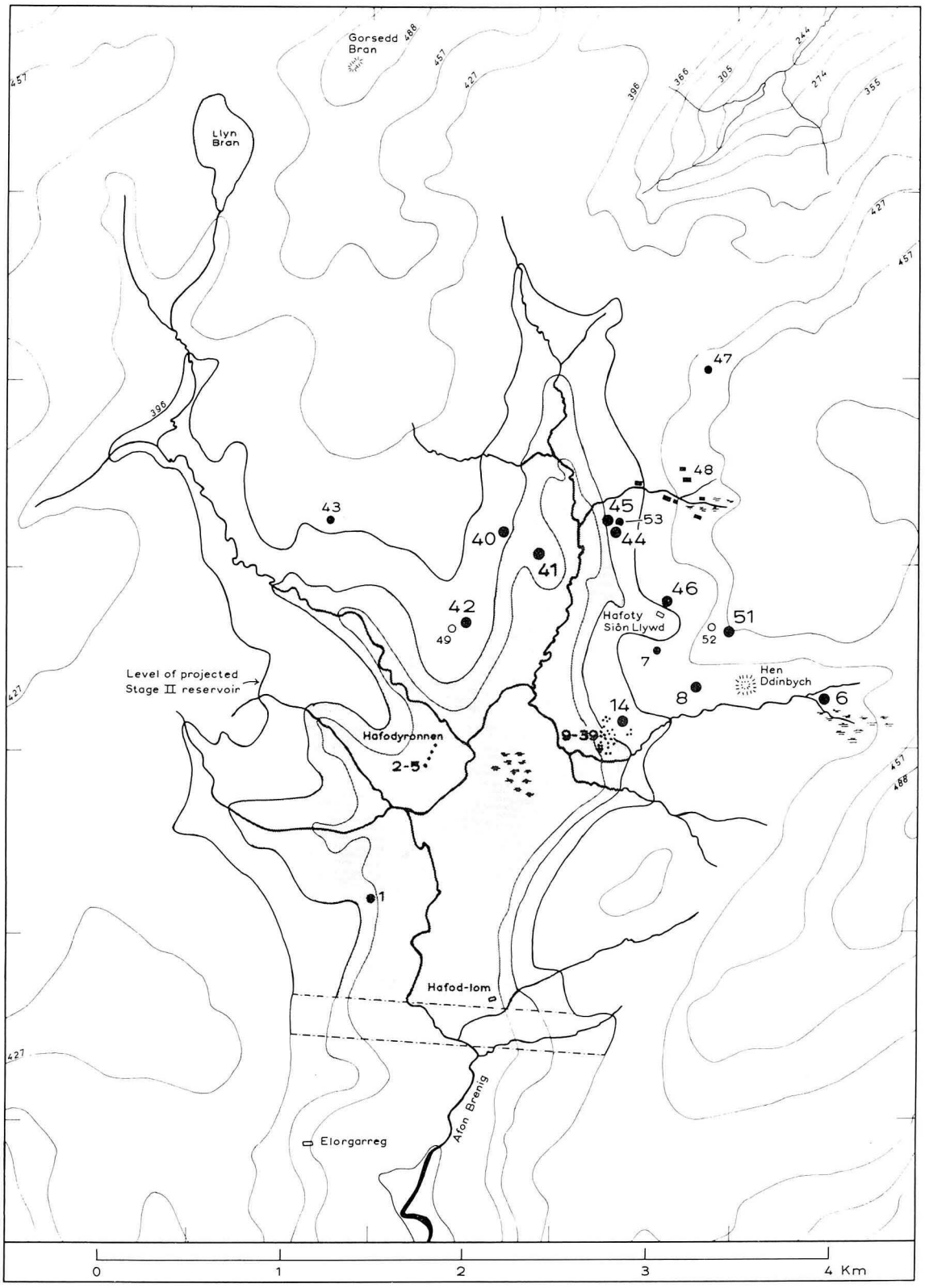
The project was conceived and supported throughout by the Ancient Monuments Branch of the Department of the Environment (now Cadw), and we are grateful to Dr M. R. Apted, Mr David Morgan Evans and Mr Richard Avent for their work on the financial and administrative aspects of the scheme. For other administrative help we are grateful to Dr John Llywelyn Williams, Mr Barrie Roberts and Mr Peter Randall. We would also like to thank Mr W. R. Williams of Llewesog Hall for his help in the early stages of the work when the land was in his ownership.

We received the most close and generous co-operation from the Welsh Water Authority throughout the project, culminating in their imaginative scheme for the reconstruction and display of the monuments and their generous grant towards the costs of publication. We would like to record in particular our thanks to Dr H. H. Crann for smoothing our way through administrative hurdles, and to the Senior Resident Engineer on site, Mr J. W. Reeves, for many practical kindnesses throughout the period of our stay. In connection with the development of the Archaeological Trail we would like to thank especially Professor Moggeridge, Mr Chris Carter and Mr Edwards the stonemason and, in the Welsh Water Authority, Mr Jeff Hampton and Mr John Gittins. The trail and the exhibition were, until his recent retirement, under the care of the Head Ranger, Mr Bill Wynne Woodhouse, who did a great deal to foster among visitors an understanding of the history of the valley.

We would also like to record our thanks to the local people of Denbigh and Cerrig y Drudion for many kindnesses during the period of the excavation. We hope that they are pleased with the result of the work. We would particularly like to thank Dr Davies of Cerrig y Drudion, the generous people who provided us with bathing facilities, and our suppliers in Cerrig, Denbigh and Rhyl.

The authors deeply appreciate the important contributions of the various specialists who have not only written several of the appendices, but have provided help and advice on many matters of more general interpretation. For their knowledge, and also for their patience, we are deeply grateful. We would particularly like to thank Dr Helen Keeley of the D. O. E. Ancient Monuments Laboratory in London who co-ordinated a great deal of the analytical work for the project.

The writing of this report has been a joint effort and I would like to thank my fellow contributors for their co-operation and understanding over many years. The authorship of the various reports and the relevant discussions is indicated in the appropriate parts of the text, but all sections have benefited from mutual discussions and the exchange of texts. Mrs Lewis was unable to revise her report and discussion of the very complex mound, Brenig 45, and so this work has been shared by John Waddell and myself, who are responsible for most of the final text. All the



1.1 Map of archaeological sites in the Brenig Valley

excavation accounts and most of the commentaries were completed by 1979 and it is much to be regretted that the absence of relatively small sections and the problems of final co-ordination delayed the publication for so long thereafter.

Most of the drawings have been prepared by myself or David Allen and we are grateful to David Bibby and to Jean Williamson for help with lettering and some re-drawing and to Carl Akeroyd for checking and other tasks of finalisation in 1989. We are also grateful to Mick Sharp for his preparation of the plates from excavators' photographs and to Mrs Margaret Crowe and Mrs Pauline Jones for typing and word processing. Finally I would like to thank Mr Peter Crew, Dr C. A. Smith and Dr M. J. Yates of Cadw and Dr J. N. G. Ritchie for reading the final text and for making many valuable suggestions and criticisms.

EARLIER REFERENCES TO ANTIQUITIES IN THE VALLEY

The earliest references to the monuments at the head of the valley all concern the most conspicuous earthwork, Hen Ddinbych, which was not the subject of any investigation during the 1973 season. This site (Brenig 49) consists of a bank and ditch, which even now is quite substantial, enclosing an almost square area of approximately 0.65 hectares in extent. There are three entrances which may be original, closer to the corners than the centres of the sides. A cobbled track cuts across the enclosure from north-west to south-east, and in the southern half the remains of a long stone building may be recognised. The site is tucked into the valley of the Afon Llech Daniel, lying on the south-facing slope of the moor overlooking the river. It is concealed from the main valley but numerous references to ancient roads passing close to it suggest that it may originally have been less remote than it now appears.

The earliest reference to the area is in the *Survey of Denbigh* (1334) which mentions a 'certain waste called Bysshopeswall' (Vinogradoff & Morgan 1914, 25). This land adjoins that of 'Havothlum' (Hafod Lom, a surviving farm further down the valley), so the general location is not in doubt, though the identification of Bysshopeswall as Hen Ddinbych was not suggested until 1859. In Leland's *Itinerary*, published in 1549, mention is made of 'Place amedowe' in 'Kinemarch commote', which is probably to be identified with Hen Ddinbych, although both the description and the distances given are inaccurate (Leland 1539, 95). 'Place amedowe' is generally taken to mean 'Plas y Meudwy (Hermit's Place)', which suggests that the area had by then become very isolated and remote. The next reference is in Lhuyd's *Parochialia* (1698, i, 151) under 'Nanklyn' (Nantglyn), where he mentions a *'hen dref'* near Llech Daniel, simply an old settlement without ecclesiastical overtones. Lhuyd also refers to ancient roads, Llwybr Elen and Sarn Elen, which cross the moors in this area, but he does not mention any of the barrows or cairns.

The district does not appear again in the archaeological literature until 1854. The decade 1850 to 1860 saw a good deal of exploratory activity, both official and unofficial. The barrows on Gorsedd Bran, overlooking the Brenig valley, and probably those on Cefn Brenig as well as Boncyn Arian (Brenig 45), were dug into by quarrymen sometime about 1850 and several urns were found. One survived to be exhibited at the newly-formed Cambrian Archaeological Association's meeting in Ruthin in 1854 (Anon. 1854, 233, 252). It was this meeting which stimulated renewed archaeological interest in the area. A small group of the more active excursionists rode over to Hen Ddinbych from Clocaenog. Their local guides told them that the enclosure and the stone building were a church and churchyard, their view presumably reflecting the tradition enshrined in the name 'Plas y Meudwy'. The assembled antiquarians preferred a Roman interpretation and this view held sway for the rest of the nineteenth century. The enclosure was cautiously identified as a Roman Camp in Davis' *Handbook to the Vale of Clwyd* (1856, 110), where the present name 'Hen Ddinbych' is used for the first time. The Roman date was advanced with greater confidence and learning by the Rev. E. L. Barnwell (1859), who linked the site into the network of possible Roman roads. By 1972 these 'roads' were no longer visible and unfortunately the excavation project did not include a search for them.

Hen Ddinbych was obviously the centre of interest at this time but other antiquities were noted in passing. The excursionists of 1854 'also found a large number and variety of primeval antiquities' (Anon. 1854, 241) and in the following year the Rev. H. Longueville Jones (1855) published a list of *Early British Remains in Wales* which includes a number of the monuments near Hafoty Sion Lwyd. He refers to Maen Cleddau with its dislodged portion beside it, to a 'circle of small size' close to it and to another 'Bedd' with a 'cistfaen uncovered with a small circle of stone surrounding it.' Judging from the distances given this, too, must have been close to Maen Cleddau. One of these must be the Kerb Cairn, Brenig 6, but the other cannot now be found. Barnwell, in writing of Hen Ddinbych (1859; 1878) also mentions Maen Cleddau and describes Brenig 8 with its kerb which he identifies as a Stone Circle, a view perpetuated by later writers. In addition he mentions a 'row of stones, placed edgewise and touching each other' which stood on the lower ground to the south of Brenig 8. He thought these were some sort of long grave and dug around them, but found nothing to indicate their date or purpose. He says that they were put back exactly as before, but they were not found during the survey of 1972.

In 1855 it was recognised that the moorland areas of Hiraethog had not yet been adequately searched, and that many more antiquities might be found there. However, for half a century after 1859 no new work appears to have been done in the area. W. O. Stanley published the record of the digging of the barrows on Gorsedd Bran and possibly Cefn Brenig (see Chapter 5) in his

famous article of 1868, but he was writing at third hand (Stanley & Way 1868, 245–47). It is not until the Royal Commission on Ancient Monuments' *Inventory* for Denbighshire was being prepared in 1912 that the valley was visited again (R.C.A.M. 1914, 132–35; 169–71). The Royal Commission's coverage is very disappointing. They note the references in Lhuyd to Hen Ddinbych (No. 476), and to the ancient roads which they are unable to identify precisely. They mention the barrows on the summit of Gorsedd Bran (No. 595) but they do not recognise any on Cefn Brenig; they mention Boncyn Arian, Brenig 45 (No. 475), and what must be the Platform Cairn, Brenig 51 (No. 481). Surprisingly they do not mention the conspicuous ring of kerb stones, Brenig 8, nor Maen Cleddau and the small cairn (or cairns) beside it, Brenig 6, which had previously been listed so often. They add one new monument of doubtful antiquity – Maen Llwyd – a large recumbent boulder beside the road a little way south of Bwlch Du (No. 479). It is not there now.

In the following year, however, the first thorough survey of the area was begun. In the course of fieldwork for his magisterial work, *The Prehistoric and Roman Remains of Denbighshire*, Canon Ellis Davies visited the valley and made an accurate and comprehensive record of all the monuments and archaeological finds in the area (Ellis Davies 1929, 308–17; 379–80). Most of the sites were re-visited in 1918 and 1925 before publication. This work is organised by parishes, a natural and convenient arrangement, but unfortunate for the Brenig valley in that the monuments are separated, divided between the parishes of Nantglyn (Cefn Brenig), and Llanrhaeadr yng Nghinmeirch. This has meant that the archaeological world was slow to recognise the importance of the group as a single complex cemetery, but this should not, of course, detract from the enormous value of Ellis Davies' work in the area.

It was he who first recorded the three large barrows on Cefn Brenig, on the western side of the valley (Brenig 40, 41 & 42) and recognised the Ring Cairn (Brenig 44) beside Boncyn Arian; who identified the small cairn in the pass, Brenig 47; who first recorded the small earthern enclosure, Brenig 7, and who described the group of long huts in Nant y griafolen (Brenig 48). He gives a comprehensive and lucid summary of the literature on Hen Ddinbych which he is inclined to regard as a Mediaeval moated farm, and provides the most reliable version of the traditions associated with Boncyn Arian (Brenig 45). He follows Barnwell and the Ordnance Survey in describing Brenig 8 as a Stone Circle because little but the kerb remained. He mentions Maen Cleddau but not Brenig 6, which had been dropped from Barnwell's 1878 article to which he refers. He does not comment on Barnwell's line of upright stones, which must have disappeared before 1913. The only Bronze Age monuments which are not in Ellis Davies' survey are Brenig 6, Brenig 14, which was amongst a group of field clearance cairns, and Brenig 46, which was thought by local farmers to be a clearance cairn, and may have been left out for that reason. The debt which those involved in the 1973/75 project owe to Ellis Davies cannot be overestimated.

Subsequent archaeological activity in the valley has been recorded in only a very cursory way. The current excavations revealed that the two small cairns, Brenig 46 and 14, had been investigated in 1936 and 1938 in diggings which had not been publicly recorded. In 1954 Brenig 46 was excavated again by Mr Hywel Owen of Denbigh, who briefly recorded what he found and also mentioned the chance find of a stone spindle whorl from the river near Rhyd Sion Wyn (Owen 1961). In 1956 Mr Hugh Thompson, then Curator of the Grosvenor Museum, Chester, cut a single section through the southern bank of Hen Ddinbych, and across the walls of the long stone building exposed by unproductive diggings in the 1850s. No evidence of date was found. A short time previously the first accurate plan of the earthwork had been made by C. A. Gresham and the results of both survey and excavation were published together in a short article which pointed out the affinities of the site with others in north-west Wales which have a more firmly established Mediaeval context (Gresham, Hemp & Thompson 1959; Fox 1939, 222).

When the nature of the threat posed by the reservoir became known in 1971 it was, in contrast to the earlier years, the cemetery of barrows which aroused the greater interest and concern. This was partly because of the research interests of the archaeologists most closely involved, but mainly because they were the features most liable to be either drowned by the lake or damaged by the construction of a perimeter track. The decision to excavate the barrows on the lower slopes led to work on the higher ones as well because of the need to treat the cemetery as a whole. Since the evidence pointed to a Mediaeval date for Hen Ddinbych, which was not to be affected by the reservoir works in any case, it was decided that its excavation should be left to a future generation of archaeologists and only those post-Bronze Age sites which would be affected in whole or in part by the modern development should be examined. The history of this project has already been told and its results are described in the pages which follow.

Numbering System

The original 1972 survey numbers were retained to identify the monuments throughout the excavation and post-excavation work. They are used in this publication, the form Brenig 45 denoting a monument; BG45:F9 a feature and BG45:301 a find. In order to avoid very clumsy notations stake identifications etc. may be abbreviated, but the context should make their origin clear. In stake circle barrow excavation accounts, capital letters are used to denote full circles, and lower case letters smaller groups or runs of stakeholes.

CHAPTER TWO

The Environment of the Valley

INTRODUCTION

Frances Lynch

The Brenig valley lies within the extensive tract of moorland known as Mynydd Hiraethog, now an inhospitable, rather bleak upland massif of little agricultural value. The rolling moorland is divided by a number of river valleys of which Brenig was one of the broadest and shallowest, contrasting with the neighbouring valleys, Nantglyn to the north and the flooded valley of the Alwen to the south-west, which were both narrow and steep-sided.

The valley was fed by three main rivers. The Afon Fechan ran almost directly north-south through Gors Maen Llwyd from the watershed at Bwlch Du; it was on the slopes on either side of this small river that the Bronze Age monuments were placed. The Afon Brenig itself, emerging from Llyn Bran and cutting a narrower valley, entered from the north-west, while the Aber Llech Daniel meandered through a shallow boggy tract to join the Afon Berbo and enter the main valley from the east. The wide central basin, ill-drained but not impossibly boggy, received other small tributaries before the southern end was narrowed by a glacial moraine (the site of the modern dam) which left the river only a narrow outwash channel through which to disgorge into a steeper-sided valley and join the Alwen at Pentre Llyn Cymmer.

Before the reservoir was created the vegetation of the valley was heather moorland, rough grazing and conifer plantation. The north-western side of the valley, Cefn Brenig, had been a maintained grouse moor in the earlier part of the century and retained that appearance. The north-eastern slopes, around the farm of Hafoty Sion Llwyd, were under grass and had recently been improved to support not only sheep but cattle. Only sheep grazed on the wetter land beside the river. In the central portion of the valley the slopes on either side had been taken over after the second world war for conifer plantation, an extension of the long established Clocaenog Forest. In the southern part of the valley the lands of Hafod Lom and Elorgarreg were grazed, but the farmsteads had been abandoned for some years.

Possibly the high point of population in the valley was during the 19th. and early 20th. centuries. During this time several smallholdings flourished in the northern end of the valley. Some, such as Hafoty Sion Llwyd, built in its present form in 1883, still survive; others, such as Pant y Maen, are now only ruins, recognisable by the stands of sycamore planted around the houses to protect them from the wind. The mainstay of the economy was sheep, but each farm was surrounded by a group of small fields. The clear remains of ridge-and-furrow in the larger field behind Hafod yr Onnen (Pl. 2.1b) indicate that a certain amount of ploughing was undertaken in these fields at some time, and the holding would also include rights of turbary in the wetter parts of the valley floor, an economic activity attested by the remains of four abandoned peat mounds (Brenig 2–5). The farms at the southern end of the valley were more substantial with larger houses and more extensive farm buildings serving a more diverse agriculture. The remains of a stone-built byre (Brenig 1) north of Hafod Lom is evidence for the presence of cattle in this part of the valley, although the date of the structure cannot be established.

The farm names – Hafoty Sion Llwyd and Hafod yr Onnen – suggest an origin for these holdings in the temporary summer houses which were part of the Late Mediaeval cattle economy which prevailed in these valleys before the modern dominance of the sheep. As cattle need to be milked daily, they had to be accompanied to their high summer pastures, and houses like those excavated in Nant y griafolen (Brenig 48) were established nearby. These *hafodau* were off-shoots from the main winter farm or *hendre*, and the land would be worked by members of the same family (Davies 1977). *Hendre* names are to be found to the south in the Pentre Llyn Cymmer area but it is likely that Hafod Lom, in spite of its name, was for many centuries a permanent base and not simply a summer establishment. There is documentary evidence for its existence in the 14th. century (Vinogradoff & Morgan 1914, 25) and in the 18th. and 19th. centuries it was a substantial farm with a reputation as a centre of poetry and singing. The ridge-and-furrow around Hafod yr Onnen is also indicative of year-round occupation even though this was only a smallholding in its final form. In the southern half of the valley, therefore, arable farming was practised in the not-too-distant past, and there may even have been some more intensive agriculture in the northern part of the valley around the Aber Llech Daniel, where the massive enclosure of Hen Ddinbych is situated and where long, straight field banks of unknown date can be recognised on air photographs (Pl. 2.1a). In this respect the recent survival of some of that land as higher quality grazing may be significant.

2.1 Map of Hiraethog showing relief, rivers and Mesolithic sites.

This pattern of land use, with moor and rough grazing predominant in the upper parts of the valley, but with more intensive agriculture including some arable in the southern half, and perhaps around Aber Llech Daniel, is likely to have been of great antiquity, for the archaeological and especially the palaeobotanical evidence suggests a similar picture. Unfortunately very little evidence for ancient settlement was found during the excavations because they concentrated on the ritual landscape in the head of the valley; the pollen from beneath and within the barrows, however, indicated a moorland vegetation in the immediate vicinity, but with agricultural activity not far away. The discovery of a Late Neolithic macehead and a Middle Bronze Age rapier at Hafod Lom and Elorgarreg respectively is suggestive of occupation in this lower end of the valley, while the undated enclosures noted by Ellis Davies (1929, 79–80) in what is now forest to the west of Elorgarreg might have included some settlement sites belonging to this period. Recent surveys on Ffridd Bryn Helen and Mynydd Poeth south of Pentre Llyn Cymmer have highlighted the wealth of settlement evidence which might once have been retrievable from the lower end of the Brenig valley (Manley 1985).

GEOLOGY AND GEOMORPHOLOGY

E. Derbyshire

Mynydd Hiraethog forms part of a broad, rolling upland divide from which the drainage systems of the Elwy and Clwyd flow to the north, the Conwy to the north-west and the Alwen and Dee to the south and east (Fig. 2.1).

Bedrock Geology

The bedrock of the southern part of the Denbigh moors consists of gritstones and mudstones of Silurian age disposed in a gently folded syncline disrupted by many faults (Fig. 2.3). Most of the immediate environs of the Brenig and Fechan valleys are underlain by the Denbigh grits. The lower unit is a blue-grey gritstone of fine to medium grain, interbedded with silty mudstones (Warren *et al.* 1984). This is the stone preferred for the construction of monuments. The upper member is a dark blue-grey clay siltstone in which interbedded silty fine sandstones are common.

The northern part of the Brenig and Fechan valleys and the moorland to the north and north-east are underlain by Nantglyn flags, consisting of dark blue-grey laminated or thinly bedded silty mudstones and clay siltstones. This is the rock underlying the monuments, but because of its vulnerability to weathering it was not used in construction except in the historic period (Brenig 48).

Evolution of the Landscape

Pre-Quaternary

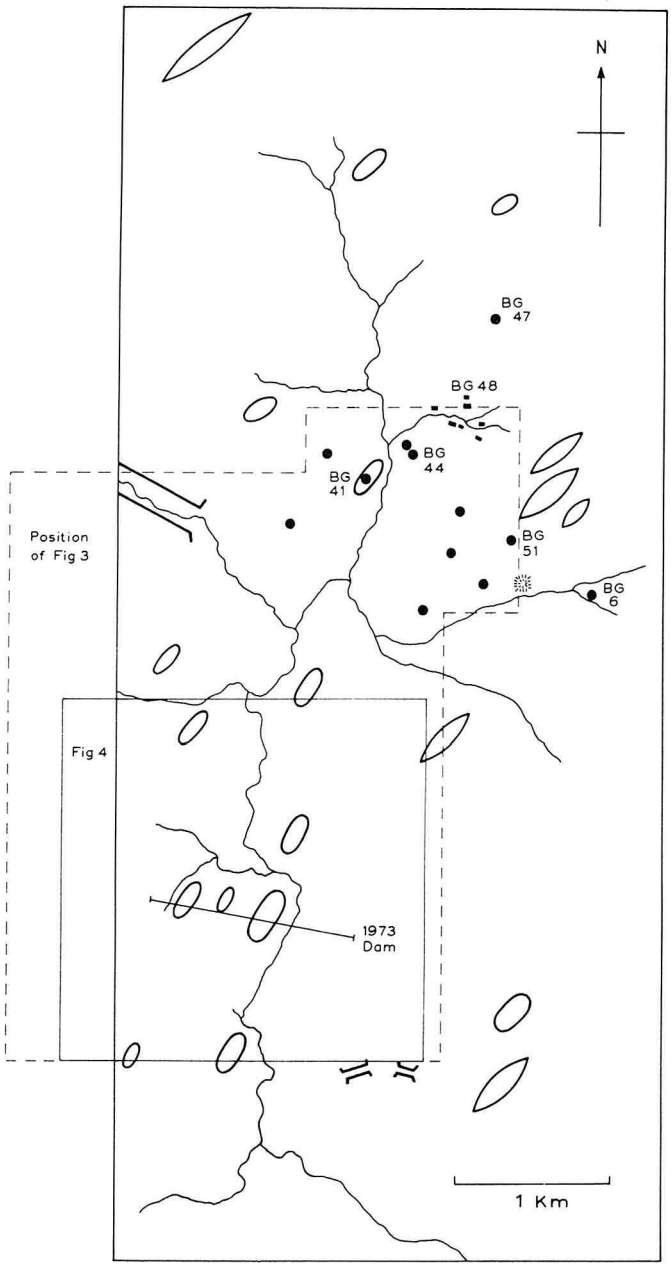
Little is known with certainty about the details of landscape evolution in this part of Highland Britain in the period preceding the Quaternary glaciations, a period when man was intermittently present, as the evidence from Pontnewydd demonstrates (Green *et al.* 1984). One view (Brown 1957; 1960) is that Mynydd Hiraethog represents a remnant of an erosion surface ('Middle Peneplain') of early Tertiary age, high points standing above it, such as Mwdwl Eithin (SJ 918 540), being residual remnants of an even higher surface of peneplain type. The drainage may have originated on an easterly tilted surface of Cretaceous rocks which were later stripped off, the drainage becoming superimposed and cutting a succession of partial peneplains on the Silurian rocks. However, as no remnants of Cretaceous, Jurassic or Triassic rocks have been found on this surface, and as none of the erosion surfaces appears to be warped, the process itself or the rate of the process must be left in question. Certainly, the surface centred on Mynydd Hiraethog cuts discordantly across the folded structure of the Silurian rocks, but the nature of the erosive agent – river planation, glacial erosion or atmospheric weathering – has not yet been determined.

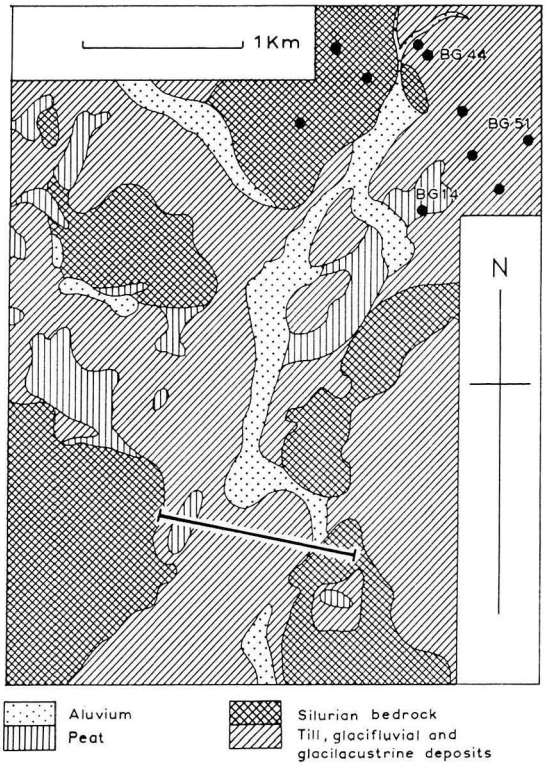
Quaternary

The rolling hill country of the Denbigh moors occupies a position which lies between two major sources of glacial ice in the Pleistocene: the Irish Sea basin to the north and west, and the ice-divide running through Snowdon, the Carneddau and the Berwyns to the south and west. Present evidence from erratics suggests that the Irish Sea ice sheet did not penetrate southward of Denbigh town, the glacial deposits of the southern Denbigh Moors being dominated by local rock types.

The smooth moorland landscape has revealed little in the way of evidence of glacial erosion. However, while there is an absence of over-deepening in the form of rock basins, the widespread cover of glacial till (formerly called boulder clay) testifies to the complete inundation of the area by a Welsh ice-sheet moving northward and north-eastward from the Snowdon-Carneddau-Berwyns ice-shed. This has left a till surface which is streamlined, the distribution and alignment of the drumlins clearly expressing the relatively rapid movement of a wet-based ice sheet across the area (Fig. 2.2).

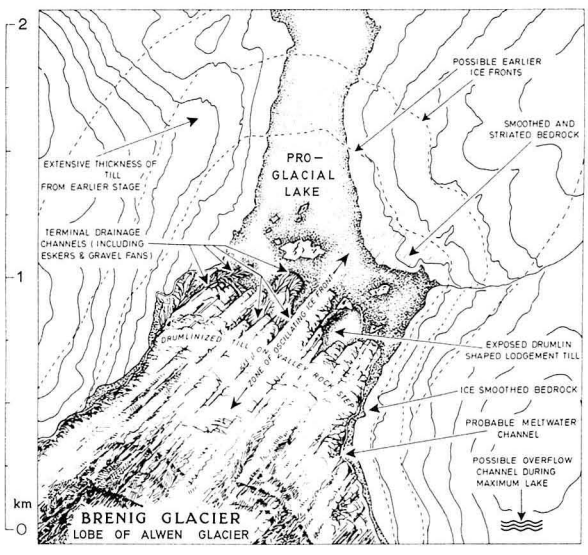
It appears that, during subsequent deglaciation, a tongue of the Alwen Glacier to the south impounded an ice-lake within the Brenig valley for a considerable period (Fig. 2.4). The whole succession was drumlinized as a result of the presence of an irregular bedrock threshold just to the south of the line of the dam. As the ice sheet waned, the Brenig ice-lake finally drained southward by way of a new gorge cut into the eastern flank of the large drumlin at the eastern





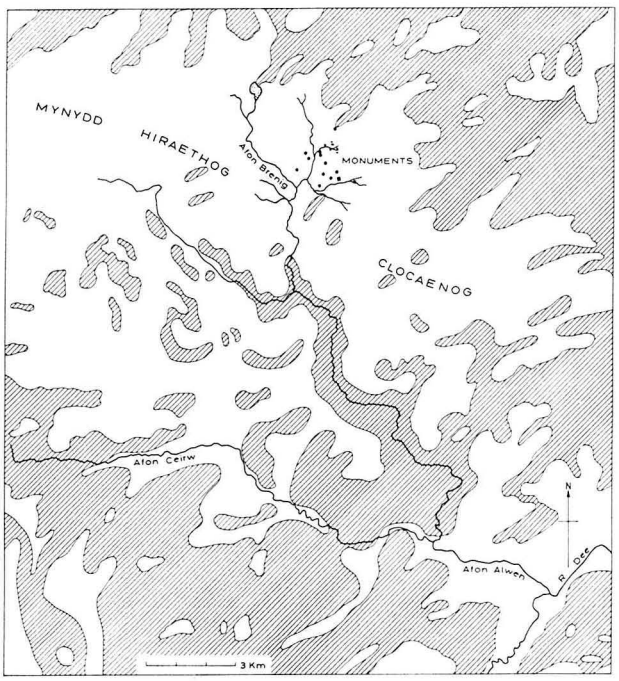
2.3 Map of surficial geology.

2.2 ◀ Drumlins (loop symbols), streamlined bedrock (lens symbols) and meltwater channels (bridge symbols) in the upper Afon Brenig area. Areas covered by Figs 3 and 4 are indicated.



2.4 Reconstruction of the diffluent Brenig glacier during retreat. Base on sedimentological and geomorphological evidence.

2.5 ▼ Generalised slope map of Mynydd Hiraethog and surrounding uplands. Slopes steeper than 13° are hatched.



end of the dam, and the unvegetated, wet surface materials became subject to ground freezing, frost churning and snowmelt processes. This left the valley with a loose-textured gravelly clay silt which is slightly more permeable than other local tills.

The final phase of sedimentation occurred as climate improved in post-glacial times. An extensive tract of clay silts of alluvial (stream deposited) origin floors the upper Brenig and Fechan valleys. This occupies the flat central part of the former glacial lake floor. It is poorly drained and has given rise to marked gleying and the maintenance of sedge and rush vegetation. The peat-covered sediments of the valley side slopes are better drained but local patches of gleyed clay silts of alluvial or colluvial origin do occur.

Glacial erosion and deposition, and particularly the glacial legacy of gently moulded (drumlinized) till and interbedded free draining sands and gravels, have left Hiraethog an area of distinctly gentler average slopes than the surrounding land (Fig. 2.5). Within it, the upper Brenig-Fechan is the only broad, gentle upland valley which faces due south. This combination of gentle slopes, wide horizons, a southerly aspect and shallow, relatively free-draining soils inherited from glacial and glaciofluvial deposition and from phases of frost action on the valley side slopes, may have been of decisive importance in the exploitation by early man of this particular area of high moorland in preference to some others in the north Wales region.

THE VEGETATIONAL HISTORY

F.A. Hibbert

In support of the archaeological work, it was decided to sample the peat deposits in order to establish the vegetational history of the area. The moor soils were not sampled, but soil pollen counts were taken from the buried soil profiles and from the turves used in the construction of the monuments. Two peat profiles were examined – one, here referred to as Waen Ddafad, was from a bog now flooded; the other was from a bog towards the headwaters of the Brenig, in part flooded, known as Gors Maen Llwyd.

Waen Ddafad SH 979 565 (see also App. 9)

This was a valley bog some 2 m deep which had begun as an open water lake. Deposits from the base of the profile were characterised by lake muds with wood remains. The wood was analysed and found to be mainly *Alnus* (Alder) with some *Betula* (Birch). Macroscopic remains were few, and contained fruits and seeds of shallow-water plants. This open water did not persist for long. From 175 cm deep there is a change to *Phragmite* (Reed) fen peat. Again, amongst the remains of reed and other sedges there are wood fragments, principally of *Alnus* and *Betula*. All these deposits had been laid down at, or below, the level of the water table that prevailed in that part of the valley. From 116 cm the peat deposits change from a sedge fen peat to a raised bog peat. *Calluna* (Heather), *Eriophorum* (Cotton Grass) and *Sphagnum* (Bog Moss) remains make up the bulk of the peat. Towards the bottom of the raised bog peat there are fragments of *Betula* wood. This change from fen to raised bog is indicative of high rainfall, certainly above 1 m per year, under which conditions the growth of raised bog is sustained, relying only on rainwater for its maintenance.

The pollen diagram shows that, initially, pollen from forest trees dominated in the deposits. There was some production of grass and sedge pollen but not large amounts. Of the trees represented, the wood remains in the peat indicate that *Alnus* and *Betula* were present locally, so the pollen may have been produced by trees growing around the bog. There are high values for *Pinus* (Pine) but it is more likely that this, together with pollen from *Quercus* (Oak), *Ulmus* (Elm) and *Tilia* (Lime) was derived from lower altitudes than that it was deposited from trees growing at such a height. The evidence for thermophilous trees such as these growing at altitudes around 300 m anywhere in the British Isles is scant. The pollen would have been produced from trees growing at lower levels in the valleys of Clwyd, Conwy and Dee. *Corylus* (Hazel) pollen is present in relatively low percentages in the early part of the diagram; this also would have been blown up from the lowlands. Pollen from those few herbaceous plants that are found represents groupings of plants characteristic of rather poor, acidic soils that are frequently waterlogged. In other words they are typical of many upland areas today.

It was impossible to recover material for radiocarbon dating. On comparing the pollen spectra from the earliest formed deposits with those from Nant Ffrancon and Red Moss (Hibbert & Switsur 1976), it would appear that deposition began here around 4600 b.c., the Late Mesolithic period, when hunting groups were using the valley (see Chap. 3).

There is no evidence of an *Ulmus* (Elm) decline in the diagram. Such a feature would hardly be detectable if the pollen were being produced some distance from the bog. There is evidence for *Plantago* (Plantain) and *Rumex* (Dock) in the deposits, both weeds of a pastoral ecosystem. These may well represent the upgrading of parts of the moors to support sheep or cattle on the part of Neolithic peoples. This might be connected with the use of the fire pits at Brenig 53, which have produced mid-Neolithic dates (see Chap. 3), but the bulk of the archaeological evidence would not suggest a pastoral regime here until the Late Neolithic.

The most significant change is when pollen of *Ericaceae* expands, along with pollen of grasses. These are locally produced and the percentage of tree pollen found in the diagrams falls away at this time. This pollen spectrum is found in the soils associated with the monuments in the area and it would appear that this rapid expansion took place between 2000 b.c. and 1500 b.c. – the period of the development of the cemetery.

There is a rise of *Corylus* pollen at the same time. This could have been due to a systematic cultivation of the shrub. Under normal forest conditions it is a member of the understorey flora and when growing in such conditions it does not flower freely. If however it is grown under more open conditions it produces many more flowers. Such open conditions occur when the trees are coppiced, as then they are grown in large numbers amongst a few standard trees such as oak, lime and so on. When grown in this way each plant would produce a large quantity of long, straight poles that would have many uses in the economy of early communities. The length and thickness of the poles are varied by lengthening the time between harvests. Seven- to nine-year cycles would produce poles about 0.1 m – 0.15 m in diameter and two metres in length. Such poles were extensively used in the construction of turf mounds (see Chap. 7).

As the pollen from *Ericaceae* reaches extremely high levels, pollen from cereals and weeds of arable cultivation appears. The percentages of these are high, particularly the pollen from cereals; this level would be indicative of some farming close by the bog.

Peat deposition ends as pollen from *Fagus* (Beech), together with *Tilia* and *Carpinus* (Hornbeam), becomes part of the pollen rain. Comparison with dated sequences from similar environments suggests that this is likely to indicate that peat growth stopped in the valley in Romano-British times, perhaps during the third to sixth centuries A.D.

Gors Maen Llwyd SH 981 582 (see also App. 9)

The pollen found in this deposit follows the same general trends as indicated by the diagram from Waen Ddafad.

The earliest deposits are of a lake mud and the pollen associated with this mud is indicative of shallow, open water, including *Typha* (Bullrush) and *Myriophyllum* (Water Milfoil). The mud deposits are followed by a fen peat characterised by remains of sedges and *Phragmites*. From 110 cm – 218 cm these fen deposits have remains of *Alnus* and *Betula* wood contained within them. There is a larger representation of *Pinus* pollen than at Waen Ddafad, and this, together with very high values of sedge and grass pollen, would seem to indicate a somewhat earlier commencement of deposition in this fen, around 5300 b.c.–5000 b.c. The very high values of grass and sedge, both locally produced, result in a low percentage of the total pollen figure for tree pollen. As at Waen Ddafad the pollen from trees other than *Betula* and *Alnus* is likely to have been blown up from the surrounding valleys.

There is no indication of the formation of raised bog peat at this site. The remains indicate that a species-poor, acid fen persisted throughout the time represented in the deposits.

As with Waen Ddafad there is an expansion of *Ericaceae* but no early expansion of a *Plantago-Rumex* grassland. Rather is this expansion contemporary with the expansion of pollen from cereals and weeds of arable cultivation.

The truncation of the curves for *Ericaceae*, *Gramineae* and *Cyperaceae* would indicate that deposition ended earlier at this site than at Waen Ddafad.

The environmental picture that emerges from these analyses indicates that towards the end of Mesolithic times and through into the Neolithic the upper moors around Brenig were dominated by a 'grass with sedge' vegetation. Trees would have been few and mainly confined to the watercourses and river valleys of the uplands. Locally these conditions would have varied, there being more waterlogged conditions in and around the major drainage systems. There is no evidence for a widespread burning of the moorland, as charcoal was absent from all of the samples analysed from the deep deposits; in addition there is a lack of early clearance indicators normally associated with Late Mesolithic and Neolithic cultures. Pollen from weeds of pasture is evident at Waen Ddafad, and perhaps this shows some attempt to graze animals in the valley; but this is a picture not confirmed by the Gors Maen Llwyd diagram, which comes from a slightly higher altitude. The effect might have been local and confined to the areas away from the watershed.

Progressively, the grass-sedge moorland gave way to a heather-dominated moorland. Around 2000 b.c.–1700 b.c. there are signs of increased wetness (characteristic of the second millennium elsewhere in the British Isles), and this no doubt is the reason for the change. Blanket peat formation was not widespread – rather the increased rainfall resulted in a still further loss of nutrients from the already poor soils, tipping the balance in favour of heather. Trees were not a feature of the landscape, although *Betula* remains are found in the peat at Waen Ddafad. *Alnus* had retreated somewhat as the fen, in this area, became a raised bog.

The high values of cereal pollen, together with weeds of arable land, must be taken to indicate that man was actively cultivating the upland areas. It is likely that, on removing the heather cover, temporary 'fields' could be created which are likely to have remained fertile for only a short time. Shifting cultivation somewhere within the valley seems to have been established by Bronze Age times and persisted throughout the time represented by the deposits.

Long range vistas would be the rule in the area – no obstruction by forest, and this would add to the impact of the major monuments built around this time. The moor from Bronze Age times onwards would present a mosaic of vegetation and with it a mixture of opportunities. There would be wet fens and valley bogs (to be avoided), grass and sedge and vast acres of heather that, if cleared, would provide a short-cycle field system. The moor would be much as we see it today (minus the activities of the Forestry Commission).

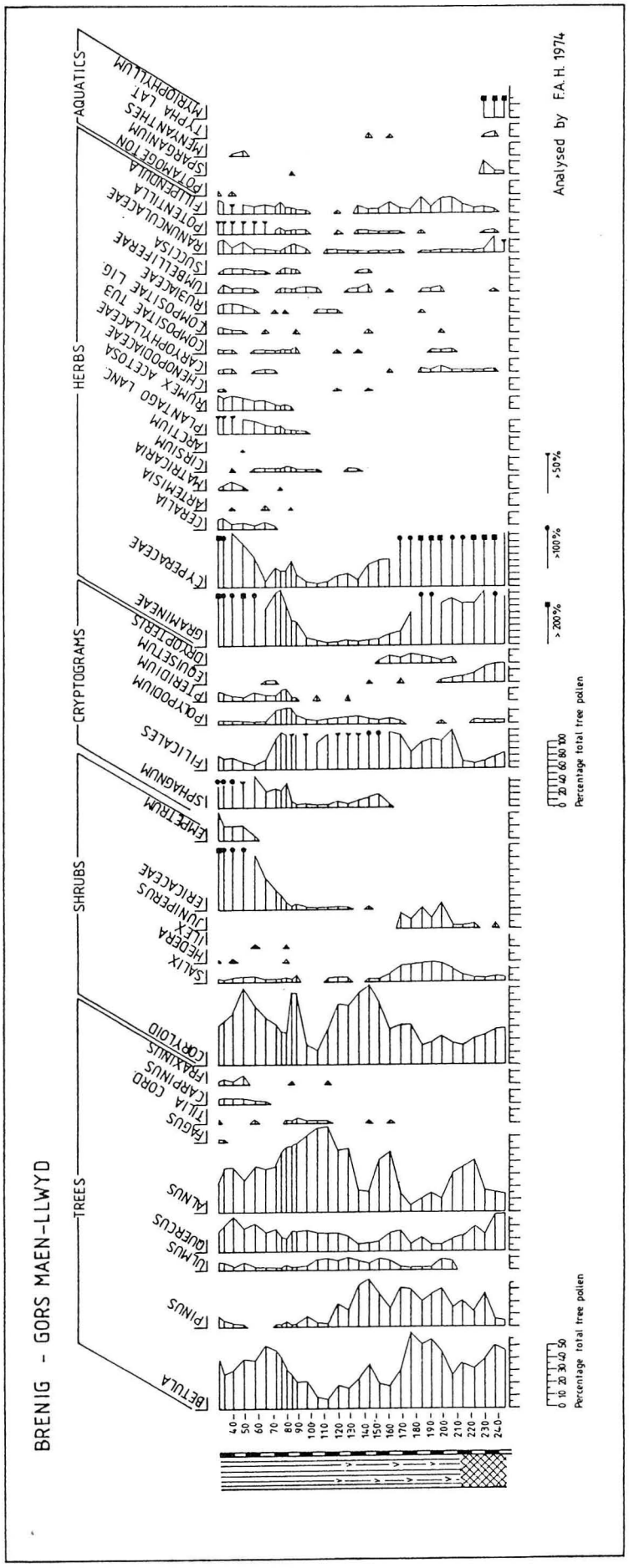
This view of the development of vegetation types is similar to that found elsewhere. Simmons (1969; 1974), working in the North York Moors,

BRENIG POLLEN SAMPLES

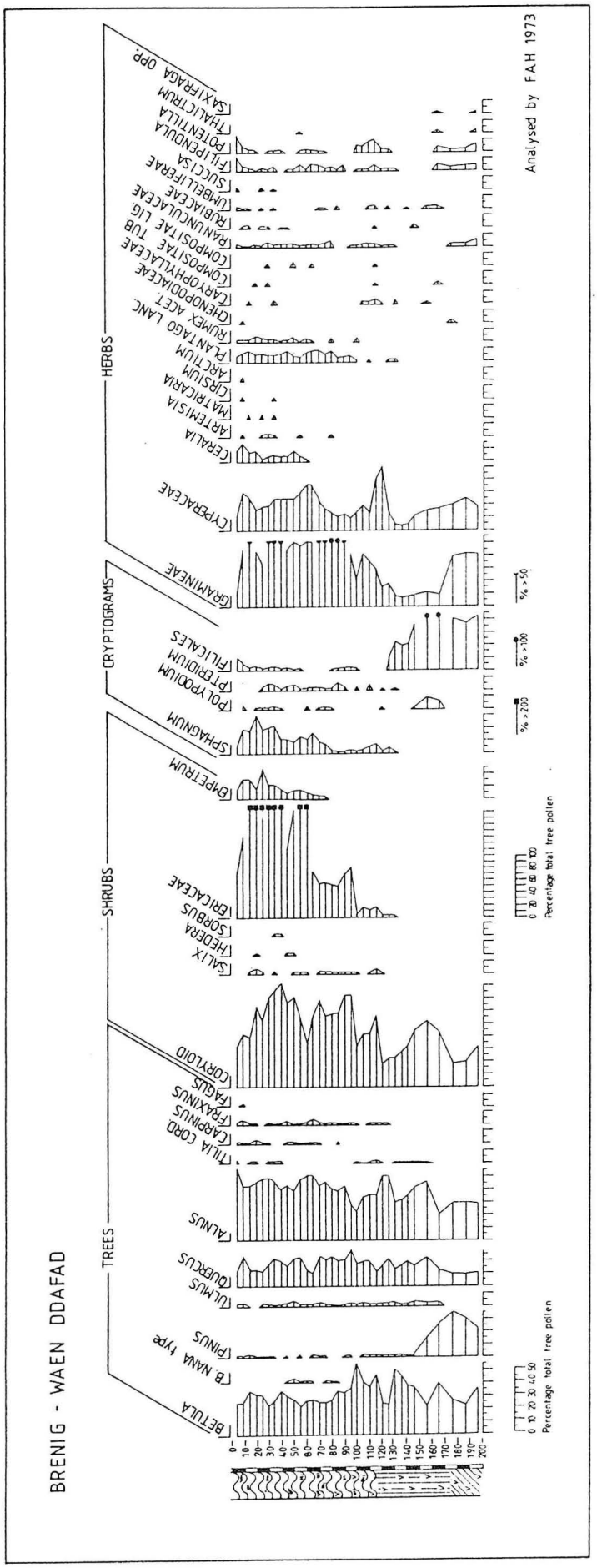
	SOIL SAMPLES (OGS)						TURF SAMPLES			PEAT
	Late Neol.	Cemetery Phase 1			Cem. Phase 2					Post-mon't
Monument Number	BG 47	BG 42	BG 41	BG 45	BG 40	BG 51 Lay.7	BG 41	BG 45	BG 40	BG 51
Tree Pollen										
Betula	20	28	22	16	20	20	26	8	16	36
Ulmus	5	7	--	7	--	5	--	--	--	2
Quercus	10	14	4	1	3	16	29	8	4	20
Alnus	60	46	74	76	74	54	41	84	76	38
Tilia	5	3	--	--	3	4	--	--	4	1
Fraxinus	--	--	--	--	--	1	1	--	--	1
Shrub and Herb Pollen										
Corylus	63	69	73	77	75	90	67	67	74	160
Gramineae	43	48	46	12	13	98	9	3	20	51
Cyperaceae	15	5	6	9	9	33	1	1	1	20
Ericaceae	4	8	21	47	37	103	83	84	58	964
Cereals	--	--	--	--	--	16	22	25	10	6
Compositae lig.	1	2	1	--	--	2	4	--	--	3
Compositae tub.	--	--	1	--	--	2	1	--	7	1
Rumex	--	--	--	--	--	1	--	--	2	4
Plantago	--	--	--	--	--	6	1	1	1	7
Caryophyllaceae	--	2	--	--	--	6	5	--	3	4
Ranunculaceae	--	--	--	--	--	6	--	--	1	3
Umbelliferae	--	7	1	--	--	2	2	1	1	3
Succisa	--	1	4	2	2	37	--	1	6	6
Potentilla	--	1	--	2	1	6	--	--	1	--
Spores										
Sphagnum	--	--	--	--	--	--	--	--	--	916
Filicales	--	--	2	18	1	7	1	2	3	--
Polypodium	10	10	2	7	4	20	4	5	12	--
Pteridium	--	--	--	--	--	--	--	--	--	2

All % of Total Tree Pollen

2.6 Pollen counts from monument contexts.



2.7 Pollen diagram: Gors Maen Llwyd.



2.8. Pollen diagram: Waen Ddafad.

presents a picture of 'alder ruderal' clearances in the Bronze Age just as we have here. His later Romano-British 'heather ruderal' system (Simmons 1964) is also evident towards the top of the deposits from Brenig.

The pollen from the buried soils gives a similar picture and enables a correlation to be made between the bog/fen deposits and the soil profiles. The evidence from the soil is taken to indicate the environment at the time that man was active in erecting the monuments. Pollen in such soils as there were at the time in the uplands is not a time-sequence profile; rather it is taken as one sample, in equilibrium with the contemporary 'pollen rain', preserved from the time the soil was fossilised.

There were two groups of samples, one taken from buried soil profiles beneath the monuments, the other from the soils represented by the turves used in building the monuments (Fig. 2.6).

Tree pollen, as a percentage of total pollen, is very low in all the buried soil samples. Values of 10–16% arboreal pollen are the rule. *Alnus* is the tree with the highest representation. *Betula* is the only other tree with high values for pollen in the soil. Grass and sedge pollen is high and heather pollen is low in some samples, and extremely low in others. These values are similar to those in the long profiles for the two bog sites, where heather is just making its first appearance. *Alnus* is high and *Betula*, although present, does not reach the same high values. Herb pollen is low in all the samples and there are no examples of weeds of arable cultivation.

Whilst the pollen from the soil making up the turves is consistent between sites, there is a marked difference between these samples and those of the buried soils, except for that beneath Brenig 51. The values of heather pollen are very high. Grass and sedge have fallen away and there are ample records of pollen of cereals and weeds of arable cultivation. These are features well represented in the long profiles.

The disparity between the vegetational pictures revealed by the pollen from the soil *in situ* beneath the barrows and by that from the mound material may best be explained by suggesting that the turves were carried in from elsewhere – perhaps from fields being cut out of the heather in the southern end of the valley, always more congenial to agriculture as the presence of the Mediaeval farms demonstrates. Whereas barrows Brenig 41, 42 and 45 were essentially contemporary (see Chap. 7), barrow Brenig 40 was built perhaps some two hundred years later; yet the situation on Cefn Brenig does not seem to have changed very much. However, on the eastern ridge beneath the Platform Cairn, Brenig 51, also built in this middle phase of cemetery activity, the situation revealed by pollen in a remnant occupation soil (layer 7) suggests much more agricultural activity nearby, with pollen from the weeds of open ground together with that from plants of a pastoral economy. The low tree- to non-tree representation is further proof of the absence of tree cover in all parts of the valley at the time.

The climatic inferences that may be drawn from the pollen evidence are that from the Late Mesolithic through to the Early Bronze Age the climate was likely to have been equable, relatively dry and warm. From Early Bronze Age through to Romano-British times a general deterioration in climate took place, the weather becoming wetter and possibly colder. This is reflected in the advance of heather moor at the expense of grass-sedge moor.

This deterioration does not seem to have affected man, whose influence is as marked in the pollen diagrams in post-Bronze Age times as it was earlier. This is shown in both the long profiles where cereals and weeds of cultivation maintain their values with little fluctuation, and is also demonstrated by the analysis of pollen from the peat which eventually engulfed the Platform Cairn, Brenig 51. The pollen from this sample, though it includes much heather and sphagnum, is otherwise comparable to that from the underlying surface and from the barrow turves (Fig. 2.6). It would seem, therefore, that although the blanket peat was developing to cover the monuments, there were still areas of intense agricultural activity elsewhere in the valley which led to the production of such pollen spectra.

This conclusion is of great interest in that it is at variance with the archaeological evidence, which suggests that human activity was greatly reduced in the first millennium b.c., when settlement is attested only at the fringes of the upland (Fig. 13.5). This view, however, may be over-influenced by the obvious cessation of monument building. The rapier from Elorgarreg and the Iron Age sherd from the round house beneath Brenig 48 (see Chap. 13) should remind us that other aspects of human life may have continued within the valley, even though the cemetery was no longer a focus of attention. If the date of the upper layers of the long profiles is correctly identified as Romano-British, it is arguable that the intensification of agriculture traditionally linked to the appearance of nucleated farms and terraced fields in north-west Wales can be seen reflected in the pollen spectra even in this remote valley where there is no other sign of Roman influence.

CHAPTER THREE

Early Man in Denbighshire

INTRODUCTION

Frances Lynch

The Clwyd Valley has always loomed large in any discussion of early man in north Wales because its limestone caves have provided not only an ideal habitat for man while he was alive, but also a protected context in which the evidence for his presence has survived. The archaeological importance of Cae Gwyn and Ffynnon Beuno at Tremeirchion has long been recognized and now the significance of the Elwy caves has been enhanced by the discovery of some of the earliest human bones in Britain washed into the cave at Pontnewydd. Nothing, unfortunately, is known of the campsite from which these bones and the contemporary tools must have come and this underlines the fact that our knowledge of the settlement pattern and the activities of these earliest inhabitants will always be meagre and incomplete.

The discoveries of Pontnewydd (Green 1984) have pushed back the record of man in Wales to about 250,000 years b.c., to a period before the last great glaciation and into a landscape which is unfamilar to us. Other small hunting bands are known in southern England at this time and the family who pushed north to the Clwyd would have been following prey such as the bear and horse who fed on the open steppes at the glaciers' edge when a warming of the climate caused the ice to retreat from these islands. Both hunted and hunter ranged widely and any group who came briefly to north Wales may also have visited the north German plain and central France, where people made all-purpose handaxes in similar styles, although from different, locally-available, materials. Occupation of north Wales, then, may have been brief and intermittent and must have been ended altogether by the return of glacial conditions.

More than 200,000 years later man once again penetrated northwards into the Clwyd Valley. The evidence lies in the flint tools found in the limestone caves of Cae Gwyn and Ffynnon Beuno, near Tremeirchion, together with the bones of animals such as hyaena who, like man, would have found the sunny cave-mouth an attractive shelter. At Ffynnon Beuno the presence of a leaf-point suggests a date for the first occupation of around 36,000 b.c. (Jacobi 1980, 17–22), with other visits attested by the leaving of Aurignacian blades of about 28,000 b.c. The reappearance of man in north Wales is in line with the evidence from Derbyshire and Lincolnshire, suggesting the northern limits of feasible settlement at the time. Findspots of comparable tools are more common in the south and east of Britain and, in a period of low sea levels and extensive tracts of land in what is now the North Sea, it is not surprising to see links maintained right across Europe.

During the last, Devensian, glaciation man must have abandoned north Wales again, for it was certainly covered by the ice-sheets. It is even possible that the whole of Britain was abandoned at this time (25,000–10,000 b.c.), for characteristic tools of the period have not been found north of the Loire; but there are some radiocarbon dates which fall within the later part of this period (Jacobi 1980, 28–35).

After 10,000 b.c., with the final retreat of the ice, the increase in temperature and the gradual spread of pine and birch woodland over the open heathland, man seems to have returned to north Wales in some numbers and – in a broad sense – permanently, even though individuals would still have been highly mobile and might have travelled many hundreds of miles in the course of hunting expeditions. The evidence from north Wales is still to be found in caves, though in other parts of the country several open sites of this date have been found. It is therefore likely that settlement was far more widespread than the single discovery of Late Palaeolithic blades at Plas yn Cefn would suggest (Jacobi 1980, Fig. 2:8), especially as man had pushed further north, well into the Pennines, by this time. The Late Palaeolithic tools, which have Dutch parallels and are ultimately derived from the central French Magdalenian, represent a major expansion of settlement into Northern Europe of which, of course, Britain was still a part. Slightly later, Creswellian, points have been found in caves at Llandudno and Llanferres as well as at Plas yn Cefn, demonstrating the much more extensive human exploitation of the increasingly rich plant and animal life of the region (Jacobi 1980, Fig. 2:10).

With the gradual change from a cold, bare landscape with a sub-arctic fauna to a temperate, even warm, woodland with a different range of normally smaller animals, we move in archaeological terms from the Upper Palaeolithic to the Mesolithic. Although the quantity of our evidence increases, its range does not, being still restricted to the stone element of man's tool-kit, so that the resolution of major problems, such as the continuity and identity of populations, remains extremely difficult. Whereas the distribution of late glacial and post-glacial activity is very much the

same and would suggest continuity, some scholars have recognised a technological discontinuity between the Late Palaeolithic industries and the Early Mesolithic microlithic industries which would suggest some change in population (Jacobi 1980).

The Early Mesolithic of southern England shows close connections with the Maglemosian of Denmark and north Germany, accessible across the North Sea lands, and thus the cultural patterns of the Upper Palaeolithic are maintained or repeated. With the centre of gravity in the east it is not surprising that the Early Mesolithic sites in Wales seem to be generally later than sites with comparable 'large microlith' industries elsewhere both in northern and southern England. Sites with a predominance of the large, obliquely-blunted points are to be found in Pembrokeshire and up the west coast, at Aberystwyth, on the Lleyn and at Aberffraw in Anglesey (Jacobi 1980, 139–69). These sites are on the present-day coast, but when the sea-level was more than 20 m lower than today's this would not have been the case and their occupants could have enjoyed a varied diet, especially in the winter when red deer may have congregated on the coastal plain (Mellars 1976, 381–83).

The establishment of camps at the river-crossing at Rhuddlan, on an area of well-drained sand in a region of heavy clay marshlands, must reflect the richness of such coastal plains in both land and water-based food resources. At least three foci of settlement have been found at Rhuddlan, two with early industries and radiocarbon dates in the mid-seventh millennium b.c. (Miles 1971–72), and the other with a Late Mesolithic industry (Manley & Healey 1982). The frequent return to this spot emphasises its attraction and suggests a continuity in essential economy between the two halves of the period which may be relevant to the question of dislocation between the Early and Late populations in Mesolithic Wales (Jacobi 1980, 174).

The evidence for Late Mesolithic activity across Wales shows a marked increase, with 66 sites with characteristic small geometric microliths as against 17 earlier ones. Although the western peninsulas, Anglesey, and especially Pembrokeshire with its warm frost-free climate, were still much favoured for settlement, there is a noticeable increase in upland sites at this time, on the moors of Glamorgan and on Hiraethog, a situation paralleled by the well-known Pennine sites. This expansion onto the moors has been explained in part by the loss of coastal lands now submerged by the sea and in part by emphasising differences in the stone technology which might hint at changes in populations. However, mixed assemblages, such as those from Cwm Fforch, Glamorgan (Jacobi 1980, 193) and Brenig, where the existence of several large, obliquely-blunted points hints at an earlier component, suggest that upland exploitation was not confined to the later period, just as the use of material like Gronant chert throughout the period suggests continuity rather than discontinuity.

The use of this distinctive black chert, which comes from the limestone hills on the east side of the Clwyd valley, about 25 km (18 miles) from Brenig, links all the Mesolithic sites of the Clwyd valley, from Prestatyn in the north-east to Llyn Aled Isaf in the centre of Hiraethog. It underlines the traditional view of Mesolithic man as a mobile exploiter of varied environments whose annual life-pattern might involve the use of several different campsites and would certainly involve contact and sharing with other local groups. The relative abundance of evidence for Mesolithic activity at the mouth of the Clwyd and the apparently late appearance of characteristic 'Neolithic' traditions such as communal burial, suggests that there may have been many of these groups and that their control over their region was firm.

BRENIG 53: MESOLITHIC AND NEOLITHIC OCCUPATION AREA

David Allen

Centred on NGR SH 983 572 Height above sea level 380 m.

Although several flint and chert implements and a considerable quantity of waste flakes of distinctive Mesolithic type were found during the excavation of the barrow Brenig 45, and Ring Cairn Brenig 44, in 1973, no associated archaeological features were uncovered. Indeed, much of the material came from secondary contexts such as the turf mound of Brenig 45, but even where clusters of flakes were found, apparently *in situ*, beneath the Ring Cairn, examination of the surface of the natural subsoil failed to reveal any contemporary features (see p. 131 below).

During the winter of 1973–4, the excavated areas were left open and the subsoil was broken up by frost. As a result discolorations in the yellow subsoil became visible to the east of Brenig 45 and prompted further investigation in this area. A group of intercutting, bowl-shaped pits was discovered (BG53:F19), just within the original limits of exploration, and these were excavated in 1974. In addition, a 12 sq. m extension was excavated to the east, and this produced 74 pieces of flint and chert, and indications that other features might exist in the area. The stratigraphically latest pit of the excavated group produced seven flints, including a backed blade, and charcoal which proved to be of Mesolithic date. This prompted a month's excavation, in September 1975, to determine the nature and extent of the Mesolithic activity at the site.

Excavation Details

The site was designated Brenig 53. A trench 10 m × 15 m was opened and a similar area reinvestigated along the eastern margin of Brenig 45. The new area had been subject, in 1965, to

a single episode of deep-ploughing, so much of the over-burden was removed mechanically. However, it was found that, in spite of the plough disturbance, very little lateral displacement of soil had taken place. Therefore it was decided to use sieves in order to ensure maximum flint recovery. The finds were related to a 1 m grid (Fig. 3.2).

The natural stratigraphy was similar to that of the other sites in the locality, with a layer of peat covering a podsolized soil of the Hiraethog series, beneath which there was a thick iron pan (see App. 8). On the northern end of the site the peat had escaped ploughing and the soils were deeper, proving intractable to sieving except when very dry. Consequently excavation of this area was deferred in the hope of better weather, which did not materialise, so 42 sq. m had to be left unexcavated.

Sieving produced a total of 1600 pieces of flint and chert, and study of the overall density plan (Fig. 3.2) shows that distinct concentrations occurred centred on squares D6 and E6, and B1, C1 and C2. However, the previous work, and failure to complete the excavation of the northern part of the site, robbed this distribution of its full significance.

The yellow subsoil contained many burnt stones and patches and flecks of charcoal, but the pits were difficult to discover, and required repeated trowelling in damp soil conditions to bring them to light. The final week of wet weather, whilst preventing the successful excavation of the northern part of the site, did enable the excavators to view with confidence the completion of the remainder.

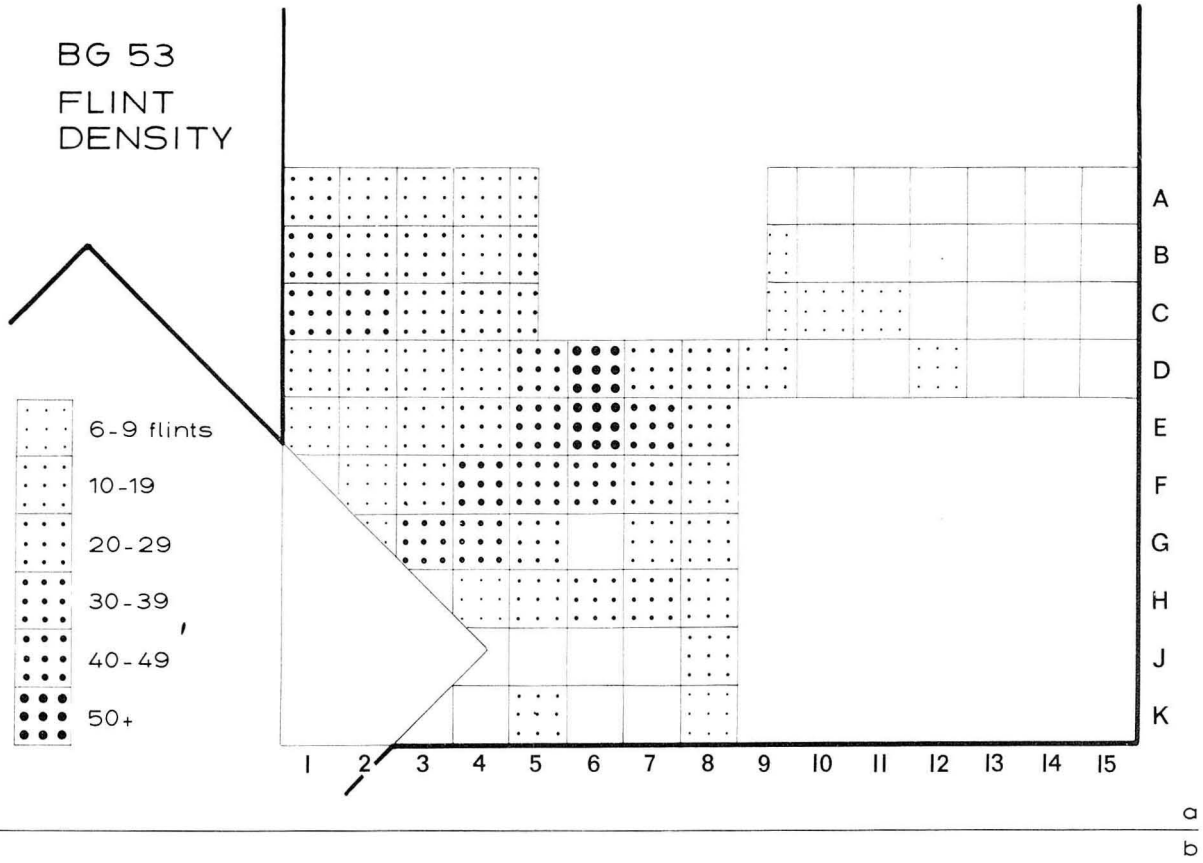
In 1975 the features discovered were numbered from BG53:F20 upwards, to allow the 1974 features lower numbers in the sequence; in the event only two of these numbers (BG53:F18 & 19) were used. Several features excavated in 1975 (BG53:F21, 22, 23, 27 & 36–40) are not described here because they were either very insubstantial, or proved to be of natural or recent origin. Their record and further details of those listed below remain in the excavation archive. Solitary stakeholes were not numbered. Plans and selected sections are shown in Figs. 3:2 & 3.3.

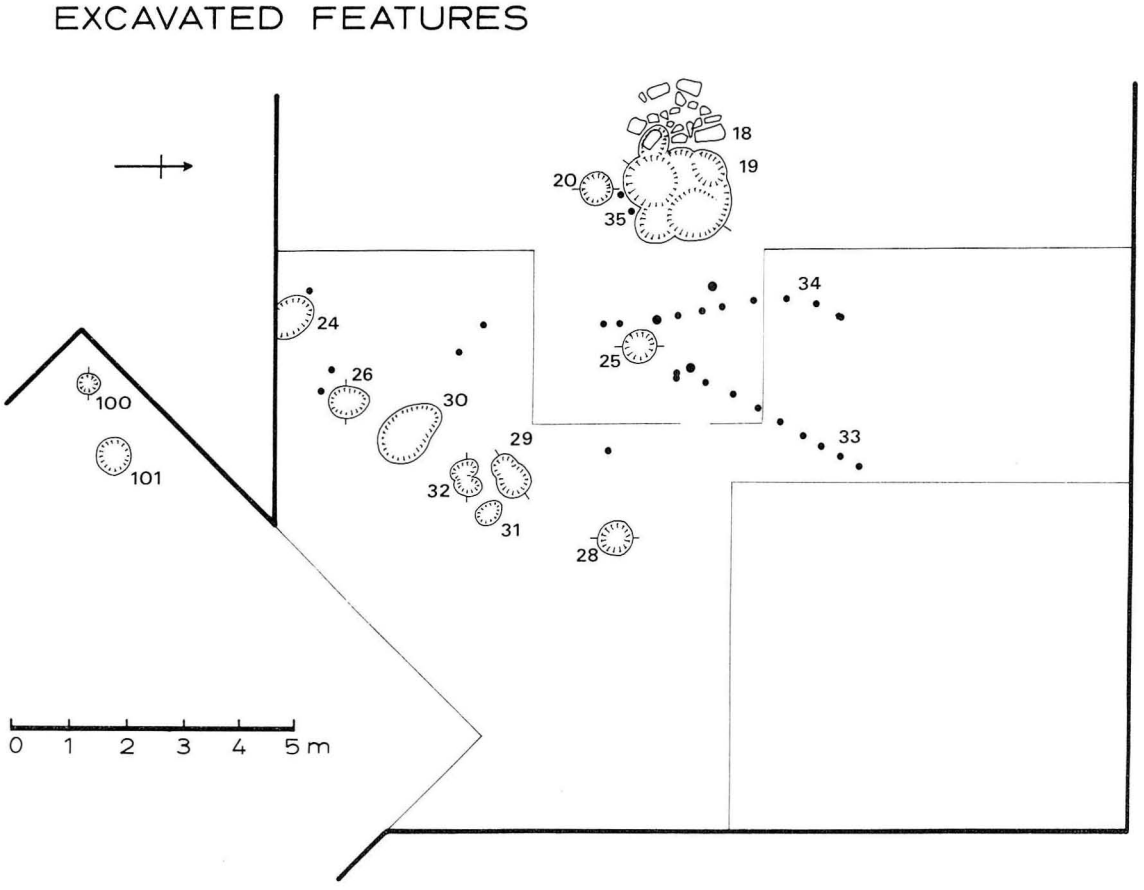
The pieces of flint and banded chert from the pits were mainly chips and none, except the backed blade from BG53:19, was retouched. The impression given in a preliminary discussion of the site (Jacobi 1980, 194), that it produced large quantities of hazelnuts, is misleading. No more than 24 were found, widely scattered over the site as a whole.

Over 30 stakeholes were found. All were pointed, averaged 40 mm in diameter and 120 mm deep and were filled with a light-coloured silt. Identification, often difficult in the variegated

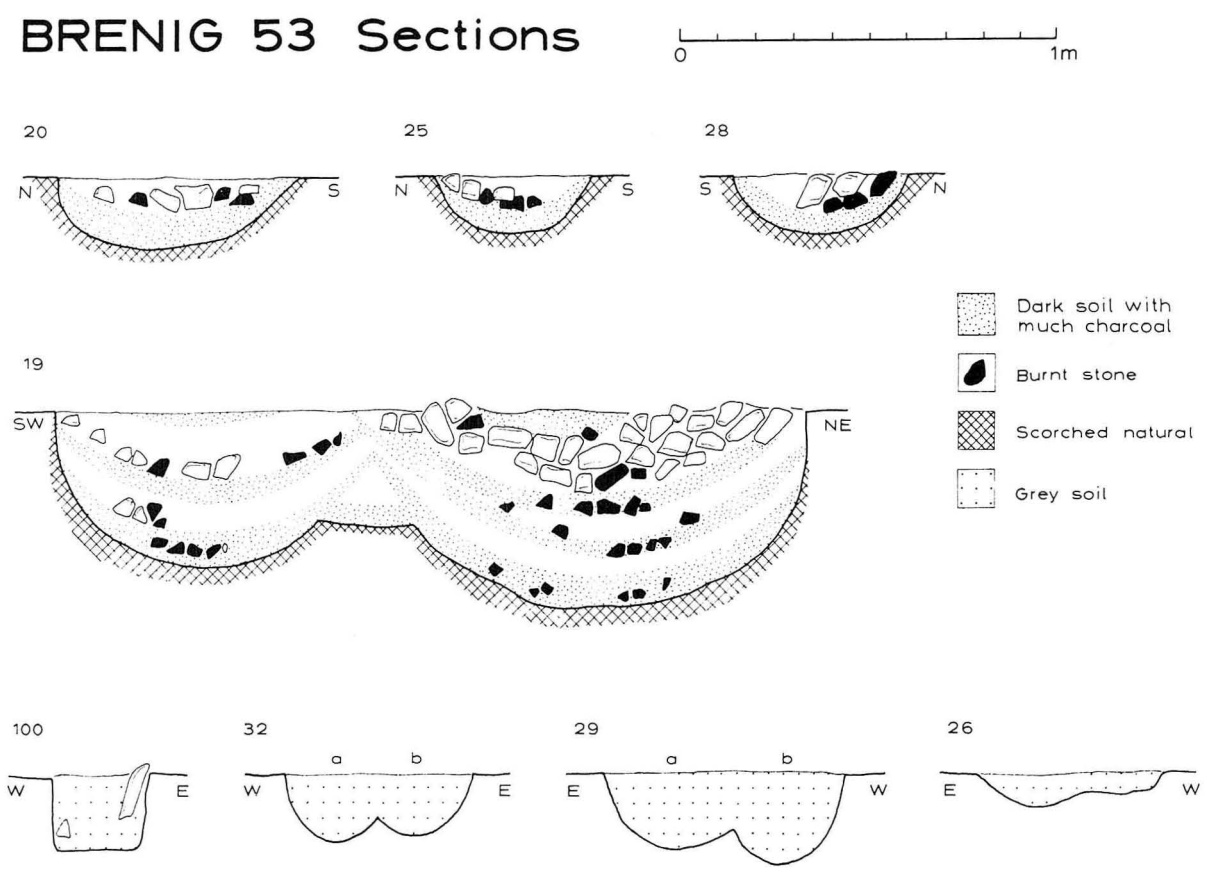
FEATURES

Feature Number	Type of Feature	Size	Fill	Finds
BG53:18 (1974)	Group of stones close to pit complex 19. 5 in a line indicate deliberate setting	—	—	—
BG53:19 (1974) C14 dated	Group of at least 7 intercut bowl-shaped pits with scorched sides	1.6m×1.8m 0.5m deep	Burnt stones above alternating lenses of charcoal and clean clay	1 backed fl. blade 6 flints
BG53:20 (1975) C14 dated	Oval bowl-shaped pit with scorched sides	0.6×0.55m 0.15m deep	Burnt stones above black ashy soil	—
BG53:24	Irregular hollow	0.6×0.55m 0.05m deep	Soft charcoal-flecked silt	3 chert chips 1 hazelnut shell
BG53:25 C14 dated	Circular bowl-shaped pit with scorched sides	0.4m diam. 0.15m deep	Similar to BG53:20	3 chert chips 1 hazelnut shell
BG53:26	Circular hollow	0.5m diam. 0.1m deep	Pale, charcoal-flecked soil	2 chert chips Hazelnuts
BG53:28 C14 dated	Oval pit with scorched sides	0.6×0.4m 0.15m deep	Similar to BG53:20	9 chert chips 3 flints
BG53:29	2 intersecting pits, no sequence recognisable	A.0.5×0.45m B.0.4×0.3m 0.2m deep	Uniform grey soil	A.2 flints 2 chert chips
BG53:30	Ill-defined hollow	1m×0.8m 0.05m deep	Grey soil & charcoal	—
BG53:31	Oval pit	0.5×0.3m 0.1m deep	Grey soil & charcoal	—
BG53:32	2 intersecting pits, no sequence recognisable	A.0.5×0.35m B.0.3 diam. 0.15m deep	Uniform grey soil	5 scraps of flint
BG53:101	Circular pit	0.7m diam. 0.2m deep	Stones & grey soil	—
BG53.100 C14 dated	Posthole	0.25m diam. 0.2m deep	Packing stones & grey soil	1 flint flake

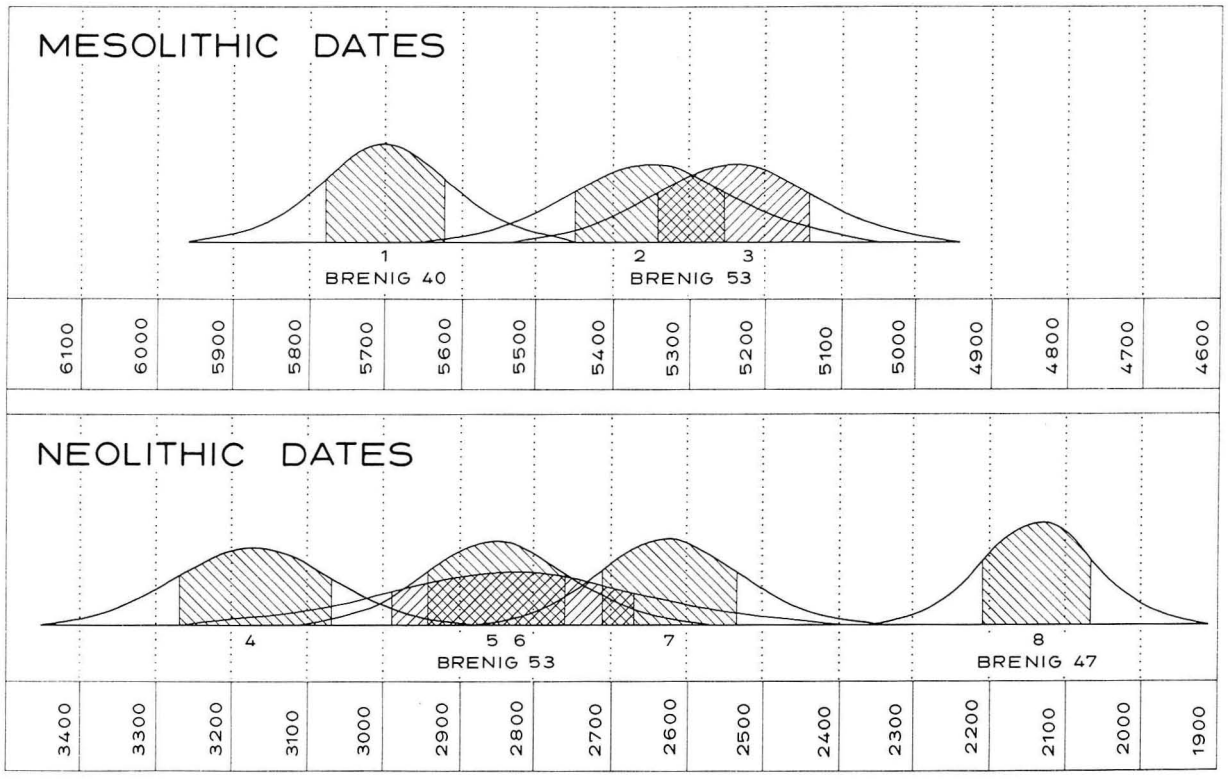




3.2 Benig 53: flint density and excavated features.



3.3 Benig 53: Sections across excavated features.



3.4 Chart of Mesolithic and Neolithic uncalibrated radiocarbon dates.

subsoil, was aided by the fact that the stakeholes occurred in groups beside features (e.g. BG53:F35, two slightly larger holes near the main pit complex) and in rows. In both rows (BG53:F33 & 34) the stakes were set at 0.4 m intervals but those in line F34 were less substantial than in F33.

Discussion

The chief characteristic of the features described above is their variety, and this, coupled with the absence of any relating stratigraphy over the site, necessitates a particular reliance upon spatial distribution and independent means of dating. However, certain similarities are apparent, which suggest that some groupings do occur.

Pit complex BG53:F19 is indeed a group in itself, and excavation showed that this limited area was employed over and over again for the same purpose. The evidence suggests use as fire-pits or hearths, each phase of burning being extinguished by a layer of redeposited subsoil, upon which the next fire was laid. When a pit was completely refilled, a fresh one was dug, and the process begun anew.

The radiocarbon dates obtained from this complex (5350 ± 100 b.c. – HAR 1135 and 5240 ± 100 b.c. – HAR 1667) suggest that these hearths were in use during the second half of the sixth millennium b.c.

The relationship between the cluster of stones BG53:18 and the pit complex BG53:F19 was not clear. The stones overlapped the western limits of the pit group, but this would not have prevented them from being contemporary with the later phases of this feature. Their layout suggests a particular purpose, but one which must remain uncertain. They may, for example, have acted as, or supported, a windbreak which aided the functioning of the fire-pits, but they themselves showed no signs of having been burnt or scorched.

The three individual hearths or fire-pits, BG53:F20, 25 and 28, have similarities in size and shape which suggest that they should be considered together. All three contained material representing a single episode of burning and backfilling. In all cases the charcoal was sufficient for a radiocarbon sample, and the results are as follows:

BG53:F20	2620 ± 90 b.c. (HAR 1668)
BG53:F25	2850 ± 90 b.c. (HAR 1669)
BG53:F28	3170 ± 100 b.c. (HAR 1436)

Whilst these dates all fall within the third millennium b.c., conventionally the Neolithic period, and are not statistically different, they may conceivably represent quite widely separated events. They certainly represent a separate period of activity from that which produced pit complex BG53:F19, though it may be doubted whether the nature of the activity had changed very much. The basic problem of interpretation is in assessing the relationship, if any, of the flint scatter, and the features which did not contain sufficient charcoal for dating purposes, to one or other or neither of these main periods.

The eight pits or hollows (BG53:F24, 26, 29, 30, 31 & 32 – two of them double features) containing pale grey or yellow-grey charcoal- flecked soil, and varying quantities of flint flakes or nutshells, were all similar in character. Their soil content was invariably fine-grained and uniform, and gave the impression that the features had been left open and allowed to fill with silt. Whilst this provided no obvious clue to their function, they did conform in one other way: they lay on a north-east – south-west line, which was truncated by the southern limit of the excavation. A planned extension of the excavation in this direction was abandoned because of the wet weather, but the features which were uncovered do not appear to suggest a random distribution. The impossibility of further excavation also meant that any relationship between the southern end of the line of pits and features BG53:F100 and F101 was not noted. This was particularly unfortunate as charcoal from BG53:100 produced a radiocarbon date of 2830 ± 160 b.c. (HAR 1434). This date is statistically indistinguishable from those of the individual hearths. The obvious conclusion is that the small hearths, hollows and posthole could belong together and represent the northern limits of an area of activity dated to the early third millennium b.c. On the other hand the posthole (BG53:F100) is dug in exactly the same way as the ones around the Bronze Age monument Brenig 44. The stakeholes, the lines of which possibly represent windbreaks, cannot be related with any certainty to either period of occupation.

THE LITHIC ARTEFACTS OF MESOLITHIC DATE

Elizabeth Healey

Introduction

Almost all of the lithic artefacts of whatever date are from residual or stratigraphically mixed contexts (including the old ground surface). The obvious exceptions are the grave goods from Brenig 44 and 51 and the material from sealed pits, which are discussed elsewhere (App. 3). In the absence of clear typological distinctions, the restrictive use of certain raw materials may be a pointer to date but the argument is somewhat circular: non-Mesolithic artefacts tend to be made of a good quality flint, whereas none of the diagnostically Mesolithic pieces are made of such flint. Also the use of chert can only be positively identified for Mesolithic material.

The Mesolithic Industry

The Occurrence and Distribution of the Artefacts

Mesolithic activity is identifiable on the old ground surface of Brenig 44 and in residual contexts in that

monument, on the pre-barrow surface of Brenig 45 and in the mound, as well as in Brenig 53, the area between them. Sporadic finds of artefacts which may be of Mesolithic technology have been made at Brenig 8 and Brenig 48, and occasionally elsewhere on the eastern side of the valley, though these are not included in the totals used in this chapter. The raw materials used for distinctively Mesolithic artefacts include pebble flint, banded chert and black chert (see tables in App. 3).

Information on distribution density is available for the material excavated in 1975 (Fig. 3.2), and it can be shown to extend over a fairly regular area of some 75 sq. m, focussing upon the pit complex, Brenig 53. Some of the Mesolithic material from beneath Brenig 44 appeared to be *in situ* and small concentrations occurred to both north and south of the monument, perhaps minor foci some 25 m apart. Sixty-nine pieces of flint and chert were found in the trenches opened between the monuments (Brenig 44 and 45), suggesting that a thin scatter might have been found to cover the whole of the flat promontory overlooking the river had excavation been more widespread. The nature of the occupation, therefore, may be judged to have been extensive (more than 6000 sq. m at low density), probably containing within it several localised concentrations. It may perhaps be categorised as a Mellars Type III site (1976, 379). The presence of a few Mesolithic artefacts at other points on the east side of the valley would tend to confirm the view of an area either occupied on several different occasions or by several separate groups.

This conclusion has been confirmed by the recent discovery (1985/6) of 36 pieces of flint and chert in molehills and at the eroding edge of the lake some 70 m north of Brenig 45. There is one notched blade and one core in pebble flint amongst this collection, which is otherwise all spalls, chips and unretouched flakes. The presence of three pieces of black chert and several flakes of banded chert together with the pebble flint and two flakes of non-pebble flint suggests an assemblage comparable to that from the earlier excavations. I am grateful to Mr K. Brassil of the Clwyd-Powys Archaeological Trust for bringing this collection to my attention. Over the years Mr Wynne Woodhouse and others have also found flints on the edge of the lake at this point.

Pebble Flint

Most of the cores are simple, partially flaked single platform cores; only a few are more extensively flaked, as BG53:A7. The weight range for complete cores is 5 gm – 40 gm; average 13 gm. Their classification is given in the Table below:

The cores (Fig. 3:5) are generally worked out, some being very thin like BG53:D7, and others small, for example BG53:K5, D1 and E5 which weigh as little as 5 gm each. The flake-beds on the cores suggest that predominantly small blade-like flakes were produced, and a similar picture is gained from the removals.

Despite the small size of the flint pebbles there is little evidence for the use of the 'ecaille' technique, only two probable examples being recognised. The initial preparation of the core seems to have been to split a pebble (this is suggested by the pebble surface on the backs of BG53:H5, D7 & F6) and to form a striking platform by slicing it across the top; the platform was renewed in a similar manner (BG53:H6 and conjoining flake F5). Only one core (BG53:D7), and no surviving flake butts, shows evidence of faceting. This may have been a measure to seat the hammer when the core became very thin. The ratio of core to flakes is quite high:

Brenig 44 1:14
Brenig 45 1:11
Brenig 53 1:22

The lower proportion in Brenig 53 is probably due to the higher recovery rate of spalls and chips through sieving. The apparent imbalance in numbers of removals to cores suggests that the cores went through a number of stages before being discarded.

The range of retouched pieces in pebble flint is shown in the tables in App. 3.

Banded Chert

This chert is predominantly grey in colour, though it ranges from dark grey to almost white, and has bands or veins of a lighter grey colour running through it; in its paler form it is sometimes difficult to distinguish from flint. Its texture is varied; some

CORE CLASSIFICATION : PEBBLE FLINT

	Single		Two Platform			Other	Uncl.	Total
	All	Part	at 90°	Parallel	Other			
BG44	–	3*	2*	–	–	5	2	12
BG45	–	6	–	–	–	4	4	14
BG44/45	–	–	–	–	1	1	–	2
BG53	1	19	1	2	2	2	11	38
TOTAL	1	28	3	2	3	12	17	66

*additional platform truncated

pieces are relatively fine-grained, very like flint, whilst others are coarse or granular. Like flint it breaks with a conchoidal fracture, but unlike flint this is not always predictable, because chert has bedding planes along which it sometimes breaks. It is found in most of the excavated areas, though in small quantities, except at Brenig 44 and Brenig 53.

Technology

A relatively high proportion of the banded chert is unworked; some largish nodules each weighing over 200 gm were recovered, presumably rejected because of the bedding planes. The cores, when successfully flaked (see Fig. 3:5), are small and similar in morphology to the flint ones, for example BG44:138B and 193B; but there seems to be a high proportion of failures. There is also a classic bladelet core, BG44:89C, with a crested edge. The desired end-product seems to have been blade-like flakes suitable for microlith manufacture and there are no other regularly retouched categories in this raw material although a number of pieces are edge-damaged and one is worn smooth.

Artefacts of this chert are found mainly in Brenig 44, and only a few pieces were found in Brenig 53 and Brenig 45, and isolated pieces in Brenig 6, 7, 48 and 51 (though this may be of different origin). See Tables in App. 3. Black chert appears to have been used solely for blade production for the manufacture of broad-blade microliths (three from Brenig 44 and a possible unsnapped micro-burin), although four rejuvenation pieces were retouched as scrapers (BG44:325 & 171J, BG53:H7, and BG44/45:10) (Fig. 3.8; 3.5). Although not completely documented by con-joins, a number of stages in the core reduction process are recognisable as at Hendre, Rhuddlan (Manley & Healey 1982, 28). Core-preparation flakes are of blade-form, but relatively thick and are also recognisable by the amount of outer surface as on BG44:252, 172, 82E, 215A and 171H. Core-rejuvenation pieces are present, including BG44:221D, and imply relatively careful use of the raw material. The residual cores, seven from Brenig 44, one from Brenig 45 and one from Brenig 53, are relatively small and have quite clearly been thoroughly flaked down. The striking platform remnants suggest the use of soft hammers.

The ratio of removals to cores is approximately 20:1, and therefore considerably higher than that

CORE CLASSIFICATION : BANDED CHERT

	Struck Lumps	Single Platform		Two Platform			Other	Uncl.	Total Cores
		All	Part	at 90°	Parallel	Other			
BG44	5	1	4	3	–	3	2	12	25
BG45	5	–	2?	–	–	–	–	11	13
BG44/45	–	–	–	–	–	–	–	4	4
BG53	23	1	10	2	–	4	2	4	23
TOTAL	33	2	16	5	–	7	4	31	65

The ratio of cores to flakes is high, probably due to the difficulty of detaching flakes in predictable manner (rejected lumps and failed cores have been excluded from the following totals):

Brenig 44 1:5
Brenig 45 1:11
Brenig 53 1:35

The size of the flake beds and the surviving flakes show a similar variation to the flint.

Black Chert

This chert is relatively homogeneous in texture, unlike the banded chert, and is generally opaque black in colour, though some banded and brown pieces are present. Its outer surface is simply a weathered version of the inner. It normally breaks with a conchoidal fracture, though it is prone to splitting along bedding planes. Some pieces are very glossy in appearance and it has been suggested that they were heated prior to knapping to improve their flaking quality (I am grateful to C. Wickham Jones for this observation).

for flint and other chert. This may be partly due to ease of recognition during excavation and partly to the better flaking qualities of the raw material. Its restricted occurrence and concentration in two areas beneath Brenig 44, as well as its limited use, may imply that it was used for a short time – perhaps only one or two knapping sessions.

Origin of the Raw Materials

All the raw materials are likely to have been imported to the site from some distance away, tough cherts and flints being completely absent from the Welsh uplands (Smith & George 1961, 77). Flint occurs on the present coastline and possibly into the mouth of the Clwyd where it was deposited by the Irish Sea ice (Smith & George 1961, 82–84 and Fig. 34). Cherts are found in the carboniferous limestone deposits in the Vale of Clwyd and Flintshire as well as in the Holywell shales (Smith & George 1961, 61ff.). They are described in more detail by, for example, Strahan (1890), Sargent (1923) and Davies (1971–72). The black chert is traditionally known as 'Gronant chert' from a quarry of the material near Llanasa,

and the banded chert found at Brenig is not unlike that from Trelogan in the same part of northern Flintshire.

Retouched Pieces

Details of individual retouched artefacts are given in the catalogue (microfiche), and the majority of them are illustrated. The following comment is a summary of that section, together with a discussion of the affinities of particular forms. None of the terminology necessarily carries any functional significance.

Microliths and microlith manufacturing debris (Figs. 3:6 and 3:7)

Some 58 microliths and 16 microburins were recovered. Their classification below is after Jacobi 1978.

details are summarised below; for the most part they have been struck from platforms prepared by retouch, seven of which are on the proximal end of the blank; only one, the double-ended burin, BG45:138, has one of the facets struck from a snapped end.

BURIN CLASSIFICATION

	Retouched End			Intersecting	
	Oblique	Transverse	Snap	Scars	Totals
BG14	1	–	–	–	1
BG44	3	–	–	–	3
BG45	1	4	*	–	5
BG48	1	–	–	–	1
BG53	1	3	–	–	4

Note: BG14:1 is made of non-pebble flint, has an atypical facet, and does not appear to belong to the rest of the series. There are no other putatively Mesolithic pieces from that part of the valley (see Table App. 3.1).
* = Double-ended burin.

MICROLITH CLASSIFICATION

Types	1	2	5	$7a_1$	$7a_2$	9	uncl.	micro burins	Total
FLINT									
BG44		1	1		1	1	1	1	6
BG45	1							1	2
BG53			8	7	11		7	7	40
BG8							1		1
BANDED CHERT									
BG44					1				1
BG45					1				1
BG53			4	2	3		4	6	19
BLACK CHERT									
BG44	3							1	4
BG45									
BG53									
	4	1	13	9	17	1	13	16	74

It is clear that small, narrow-bladed forms dominate. The selection of raw materials is interesting. Flint and banded chert seem to serve more or less equally for the narrow-blade forms, whereas black chert is used only for the larger, obliquely-blunted points.

The presence of microliths of broad- and narrow-blade geometric types suggests a mixed assemblage, the obliquely-blunted points characterising the earlier technology and the small geometric forms the later (Jacobi 1980, 77). However, whether the situation which applies in southern England, where obliquely-blunted points occurring in micro-triangle assemblages can be shown to be metrically distinct, is similar in north Wales cannot be tested here because of the small numbers present (Pitts & Jacobi 1979, 170).

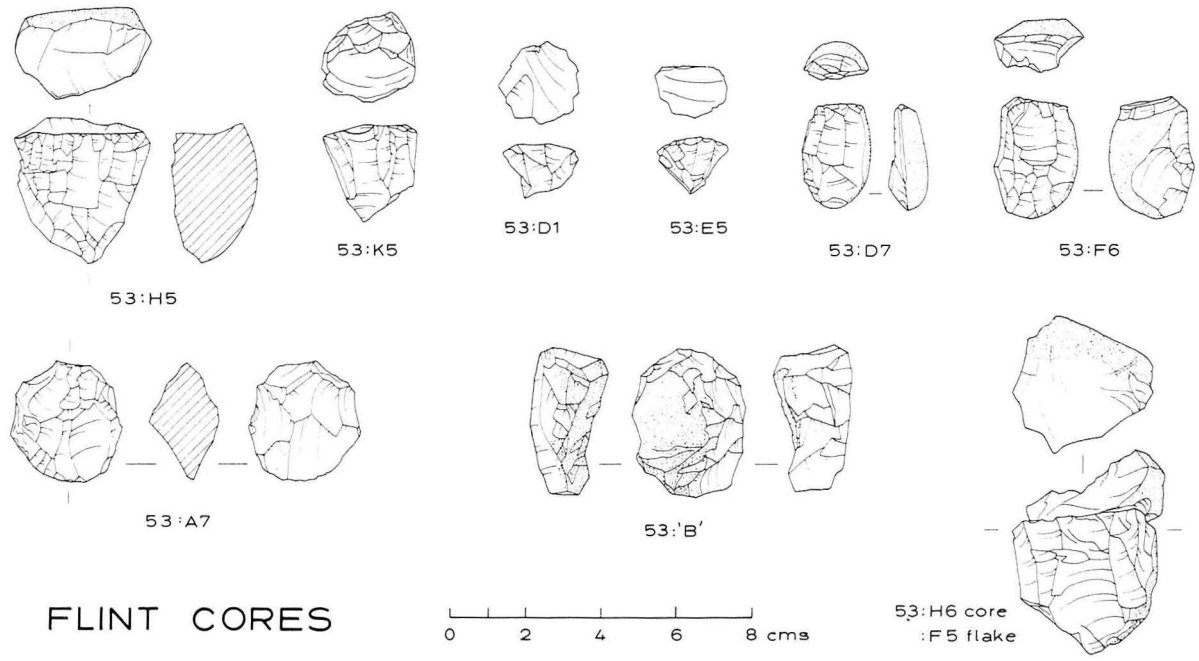
Burins (Fig. 3:8)

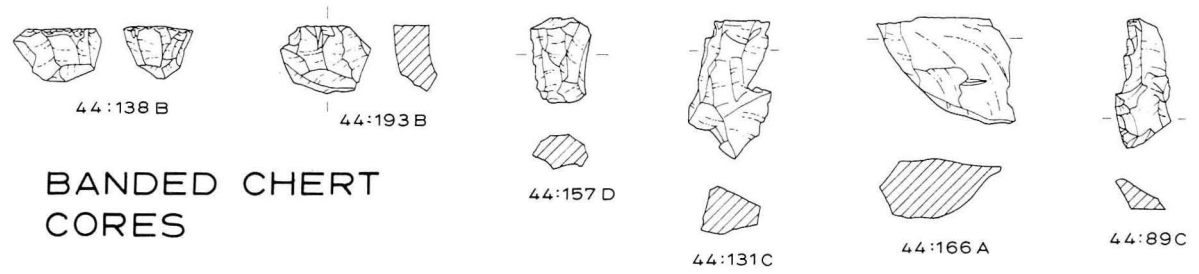
Burins have been classified by the type of platform from which the facet has been detached, and

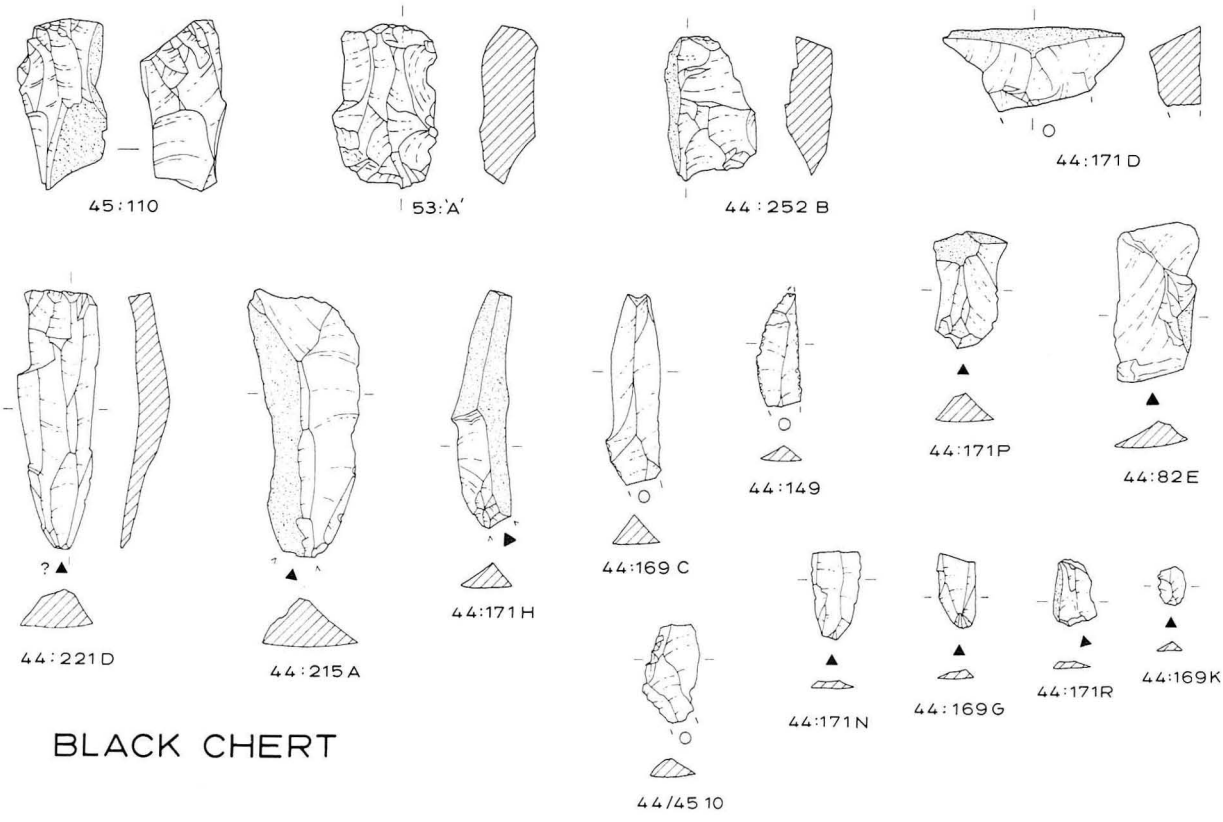
Only one burin can be classified as a compound tool, BG44:141K, the butt end of which has been retouched with scraper-like retouch to form a rounded contour.

Nine of the 14 burins have single facets only; the other five have two, or three at the most. The facets vary in width, which to some extent depends on the thickness of the blank, though in the absence of wear analysis it is difficult to determine whether this is a deliberate choice or simply a function of the raw material that was to hand. There is some evidence on BG44:141K, BG45:85 and BG45:141, for the 'regularisation' or 'strengthening' of the edge of the blank prior to the removal of the spall (cf. Tixier 1974, 11). One burin, BG44:141A, is worn smooth at the corners where the facet and the striking platform join.

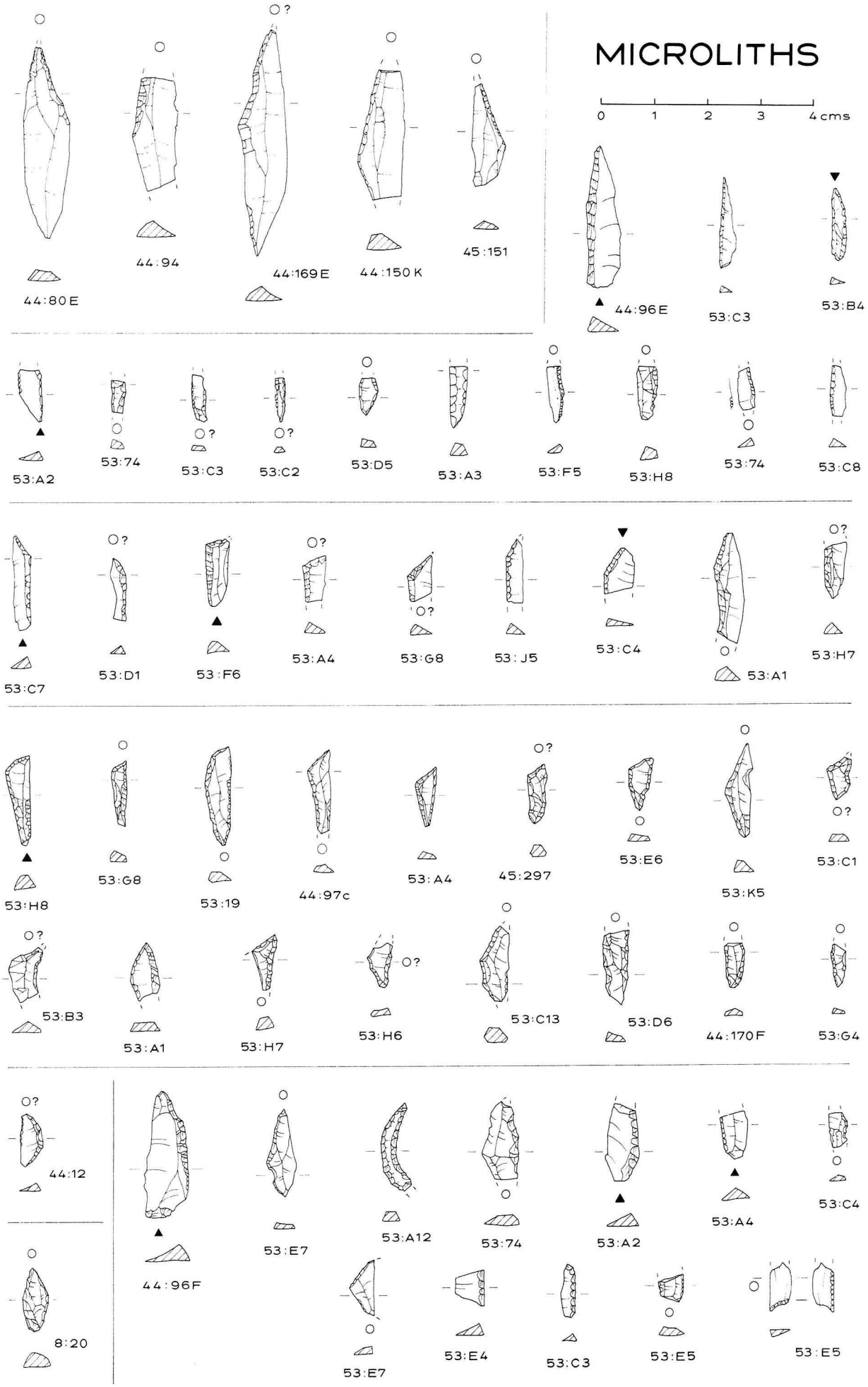
Burins are typical of Mesolithic tool-kits (Jacobi 1980, 177) although they do continue into the Neolithic (Wainwright 1972, 68). However, with the exception of BG14:1, their manufacture on blanks of pebble flint, and their spatial relationship



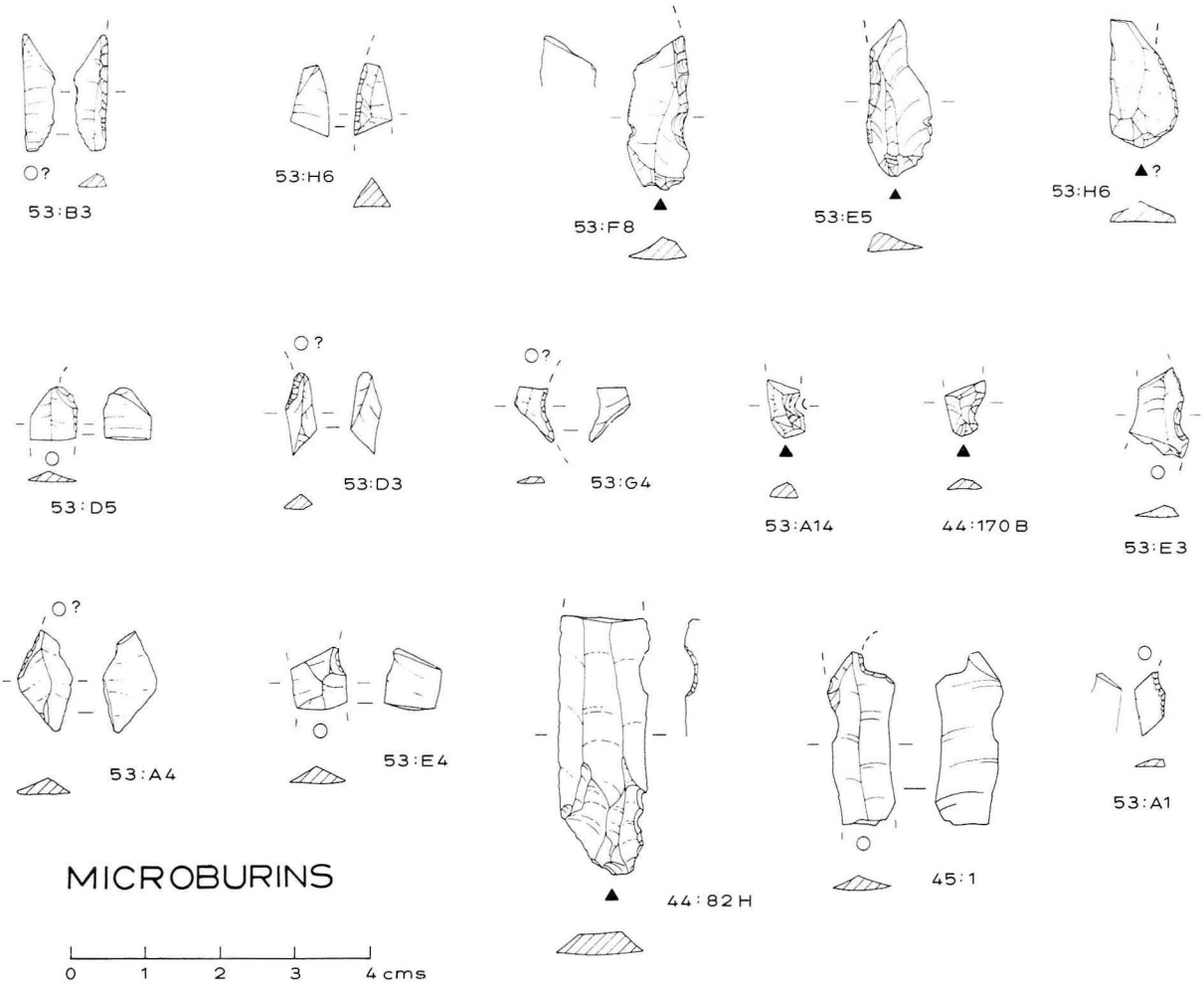


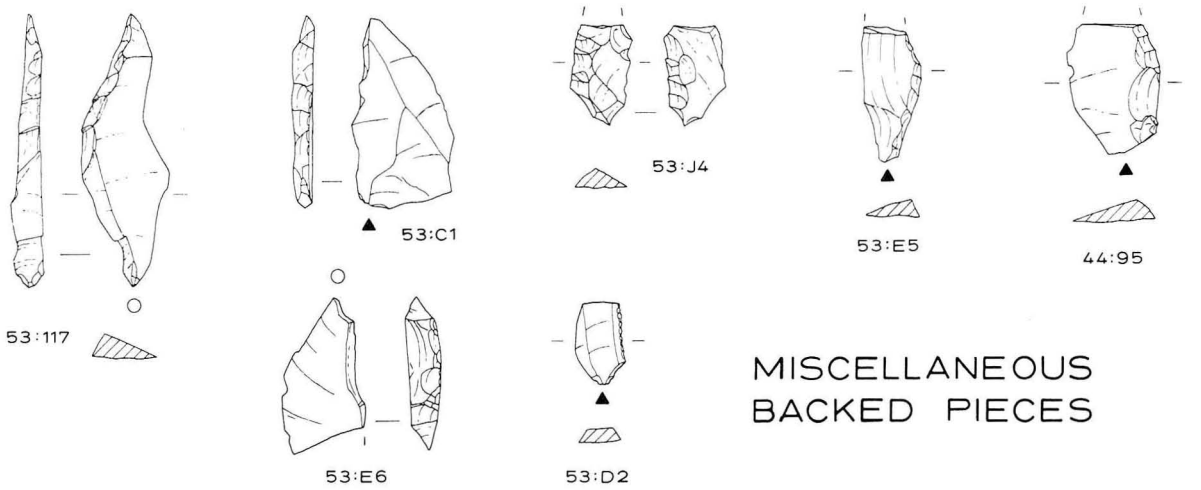


3.5 Flint and chert cores and flakes.



3.6 Microliths from Brenig 53, 44 and 8.

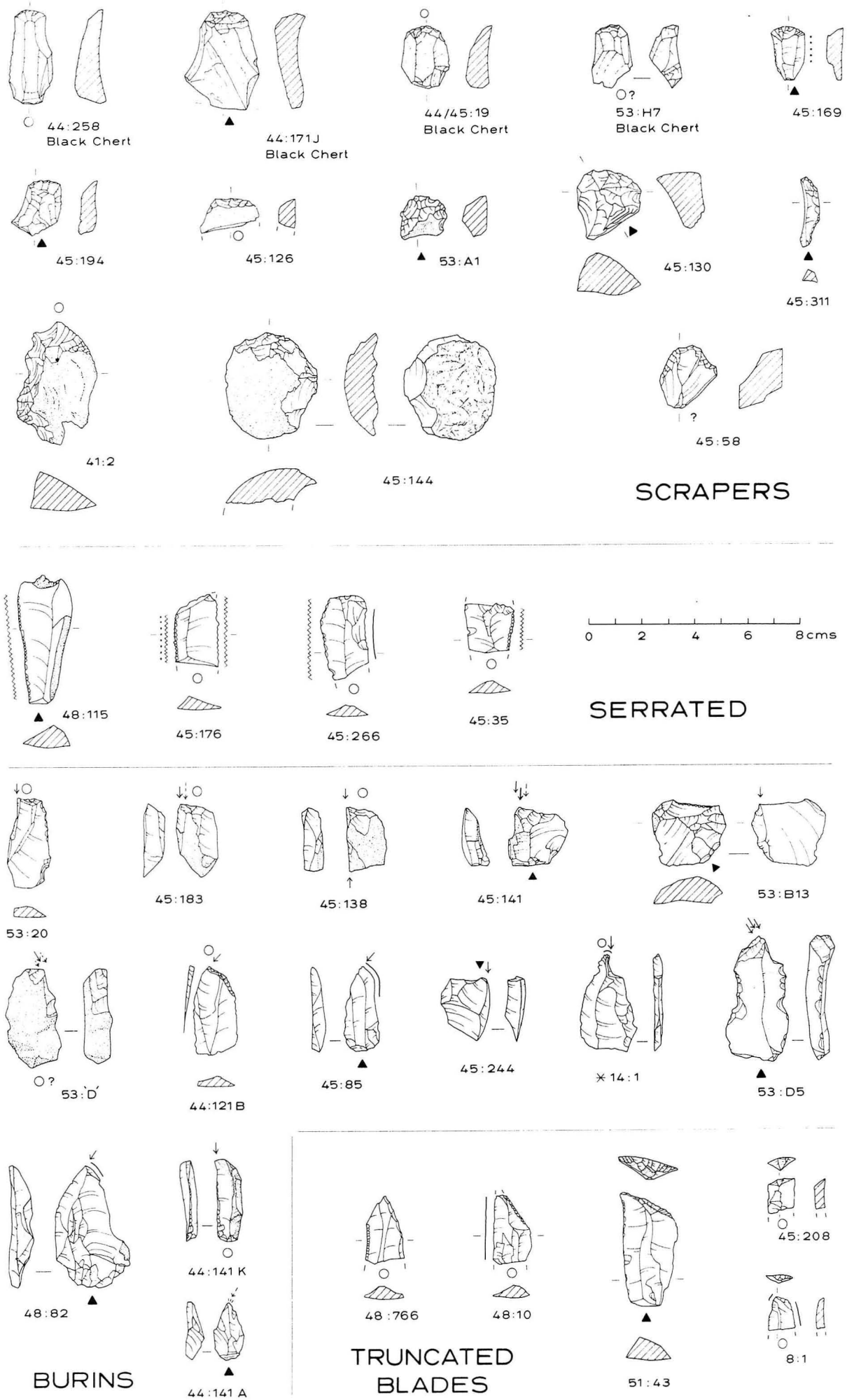




Key to all Flintwork figures

- ▲ Bulb of percussion present
- ○ Bulb of percussion absent
- f Faceted butt
- Direction of flake removal
- Serration
- Heavy wear
- Edge damage or retouch
- Gloss on edge
- * Non pebble flint
- not shown in drawing / on reverse

3.7 Microburins and miscellaneous backed pieces from Brenig 53, 44 and 45.



3.8 Scrapers, burins and serrated and truncated blades from various Brenig sites.

to other demonstrably Mesolithic material, strongly suggests that here they are Mesolithic in date.

Truncated Blades (Fig. 3.8)

The five truncated blades include two small blades, BG8:1 and BG45:208, with abrupt retouch across their distal ends at a slightly oblique angle to the flake axis; and a larger, heavier example, BG51:43. The retouch on the two larger blades, BG48:766 and BG48:10, is marginal and scarcely modifies the shape of the blank, though they are morphologically similar to other truncated blades.

Truncated blades are frequently found in Mesolithic tool-kits and may have served as blanks for burins.

Scrapers

The 14 scrapers illustrated in Fig. 3.8 have been selected as Mesolithic on grounds of raw material, technology and morphology. The main distinguishing feature, apart from the use of chert and pebble flint, is the economy of retouch compared to the later scrapers and the relatively narrow, straight ends (compare Fig. 3.8 with App. 3 Figs. 1 & 2). Examples like BG44:258, BG44:171J, BG53:H7, BG45:169 and BG45:194 are similar to scrapers from Hendre (Manley & Healey 1982, Fig. 12) and Prestatyn (Clark 1938, 331, Fig. 1). Scrapers BG45:130 and BG53:A1 have been included with the Mesolithic examples partly because they are made on blanks of pebble flint and partly because such forms are a feature of the Mesolithic in north Wales at this time (Jacobi 1980, 169, 177). The scraper BG51:86, though morphologically similar (App. 3, Fig. 2), has a different style of retouch and is made on a blank of non-pebble flint; it has therefore been assigned to a non-Mesolithic tool-kit. The other scrapers are too fragmentary to classify.

Serrated pieces (BG45:176, BG45:266, BG45:35 and BG48:115; Fig. 3:8)

The context of these forms is ambiguous and again the possibly Mesolithic examples have been separated on grounds of raw material and on the fineness of the denticulation compared to the demonstrably post-Mesolithic examples such as BG41:5, BG44:57, BG46:14 and BG46:17 (App.3 Fig. 1) etc. Only one of the serrated flakes included here (BG45:176) had gloss on the edge of the teeth, whereas on the Neolithic examples this is more usual.

Jacobi (1980, 177) associates serrated blades with an early technology.

Denticulate (Fig. 3:8 under 'Scrapers')

The single denticulate, BG41:2, is made on a thick (?preparation) flake of pebble flint and typologically could have derived from an earlier Mesolithic tool-kit (Jacobi 1980, 162).

Notched Flakes (App. 3. Fig. 3)

Small semi-circular notches, possibly accidentally caused, were noted on the sides of three flakes. The concave area on the distal end of a blade-like blank, BG44:172, is more likely to have been deliberate. Notched pieces occur in many industries and are not diagnostic (cf. Alexander & Ozanne 1960, 249–50).

Piercers (App. 3, Fig. 3)

Three blade-like flakes have retouch on their sides, which converge to form a point. The retouch is minimal on BG44/45:18, but somewhat more extensive on BG45:287, where it removes the bulb of percussion. None of the piercers is of a definitive type, but piercers in Mesolithic tool-kits tend to have only minimal retouch and these forms would not be out of place in such a context. There is also a core fragment of banded chert, BG53:C11, which has been retouched around a pointed area and has been worn smooth, which might be described with piercers or with fabricators.

Miscellaneous retouch

This category comprises artefacts of pebble flint and cherts which are broken and therefore unclassifiable, as well as artefacts with 'retouch' or edge-damage which do not fall into any recognisable tool category. They can be summarised as follows:

Position of Retouch	FLINT	BLACK CHERT	BANDED CHERT
Edge retouch on all or part of one edge	6	–	–
Bifacial edge retouch	–	–	–
Both edges retouched	–	–	2
Fragments	2	–	1
Others	1	–	–
Core frag. with ret. edge	1	–	–

Discussion

The artefacts of Mesolithic character are mainly distributed on the small 'promontory' at about 360 m OD, overlooking a bend in the river, on which the Bronze Age monuments Brenig 44 and 45 are sited. The flint scatter (Brenig 53) appears to be concentrated in the area between and beneath the two monuments; however, it is difficult to pin-point the exact area(s) of concentration and to define the full extent of the Mesolithic activity. The general scatter of typologically Mesolithic flints from most of the excavated areas on the east side of the valley and a Mesolithic radiocarbon date from the west (Brenig 40) suggests that it must have been widely scattered, though not all necessarily contemporary – in fact a multi-focal site of Mellars Type III (1976, 379).

The radiocarbon determinations of 5240 ± 100 b.c. (HAR 1667) and 5350 ± 100 b.c. (HAR 1135) from

BG53:F19 and of 5700 ± 80 b.c. (HAR 656) from Brenig 40 (no associated artefacts) indicate that the assemblage probably falls relatively late in the range of dates available for the Mesolithic of Britain, though some sites in Yorkshire are later (Morrison 1980, 143 ff.). This is not altogether unexpected because of the relatively remote geographical location in the north Welsh uplands, and because industries of Maglemosian type are of a later date in Wales than elsewhere in Britain (Jacobi 1980, 146).

There is no suggestion from any of the radiocarbon determinations of an earlier Mesolithic presence, nor is there stratigraphic evidence, but two aspects of the assemblage suggest that it may in fact contain an earlier element. In the first place the microlith types could come from two chronologically different assemblages. The obliquely-blunted points at Brenig are large, comparable in size to those from early tool-kits (Jacobi 1973; 1976; Mellars 1974). Although such points may appear alongside small geometric forms in later assemblages, they are usually reduced in size (Pitts & Jacobi 1979, 169–70). However, before the establishment of precise size ranges for local Welsh points and for points made from chert, as here, perhaps too much weight should not be placed on this hint of the presence of earlier industries.

In the second place, the use of different raw materials may indicate chronological diversity; as demonstrated in the Pennines, north Yorkshire and south-west England (Jacobi 1978, 305; 307; 1980, 54; Barnes 1982, 33). At Brenig the microliths made from black chert were exclusively obliquely-blunted points, which might possibly represent an early component. However, examination of the use of this material elsewhere suggests a less clear-cut situation: the earlier industry at Rhuddlan (sites E and M) uses black chert almost to the exclusion of other raw materials (Miles 1971–72, 2–3) but the assemblage from the adjacent but later site of Hendre (Manley & Healey 1982, 21–24) uses black chert for all types of microlith, both obliquely blunted points and small geometric forms, as does the late assemblage from Prestatyn (Clark 1938, 330). Therefore we cannot conclude that black chert is a reliable indicator of an early industry.

Two pollen sequences were obtained from peat deposits in the Brenig valley (see Chap. 2). Dr. Hibbert's interpretation of the pollen evidence suggests that these uplands were essentially bare of trees, though birch and alder may have grown in the bottom of the valley along the banks of the river itself and in sheltered corners. The dominant vegetation was grass, with reed fen in the hollows; the herbaceous plants were acid-tolerant and indicate a soil rather poor even then, and prone to waterlogging. There is no indication of woodland clearance by fire, for which there would be no need, it being a naturally open landscape. In contrast, the lowland valleys of the Conwy and Clwyd are likely to have been densely wooded at this date, the pollen from their warmth-loving trees blowing up onto the surrounding moors to register in the Brenig diagrams.

This reconstruction of a treeless moorland here at a height of some 360 m is not one which should necessarily be applied universally. In south Wales oak logs have been found *in situ* at higher altitudes (F. Chambers pers. comm.), yet at the same time blanket peat was developing on the Black Mountain north of Swansea (E. W. Cloutman pers. comm.), demonstrating that in the south there was certainly a very varied environmental situation, and the same may be expected in the north. The undoubted presence of pollen from woodland species in the Brenig diagrams may suggest to some workers that the landscape was less bleak than Dr. Hibbert believes, but his interpretation that the pollen was derived from the lower valleys is to be preferred since there is no sign of charcoal at this level – a phenomenon which might be expected if Mesolithic hunters were operating here in a true woodland environment, such 'fire-clearance horizons' being common in other upland areas (Simmons 1979, 114; 121–22; Barnes 1982, 29; 37).

Twenty years ago activity by Mesolithic man in the uplands of north Wales was scarcely known (Wainwright 1963, 125), although it had long been recognised in other regions such as the Pennines, the North York Moors and Dartmoor. The Welsh material remains poorly documented, so this assessment of the Brenig material is based, in part, on the information and interpretation available from these other areas. Evidence for late Mesolithic activity consists of microlith-dominated flint scatters and palaeo-environmental evidence for land clearance (cf. Simmons 1979, 114; 119 ff.). Two main reasons are given for this sometimes intensive activity in the uplands; firstly that Mesolithic man was exclusively hunting red deer and secondly that it was a response to the reduced amount of land available, due to rising sea-levels, increasing population and, ultimately, farming (Taylor 1980a, 117).

Both these explanations, however, may be a little simplistic. It should not be forgotten that upland settlement can be documented since Upper Palaeolithic times and, in the absence of good evidence for population and territory size, land pressure is difficult to quantify (Simmons 1975, 58). The traditional interpretation of microliths as arrow points should not blind us to the possibilities of other uses connected with cutting (Barton & Bergman 1982, 238–42) and perhaps harvesting (Clarke 1976, 452). And, while studies of the behaviour of deer herds (Chaplin 1975; Mellars 1976, 381–82) demonstrate that adult males could reliably be found in the uplands in summer and could be conveniently hunted from camps on the moors, the wealth of vegetable food sources at the forest edge should not be ignored (Jacobi 1980, 194; Barnes 1982, 37). Unfortunately the acid soils of the uplands do not permit the survival of the evidence which would resolve these interpretational dilemmas.

It is principally the limited range of tools normally found in upland camps, together with the winter inaccessibility of the sites, which has led to their interpretation as temporary 'task camps' (e.g. as 'first aid' posts for the repair of arrows) used while culling or hunting red deer (Mellars

1976, 388–89; Barnes 1982). This is contrasted by Mellars (1976, 389–94) with the wider range of tools found in the intermediate zones, which thus may be seen as forming more permanent settlement or core areas, lying between uplands and lowlands. Lowland sites may also have a limited, but not consistent, range of tools and were probably as temporary and as specialised as their upland counterparts.

The traditional view, therefore, is that upland sites like Brenig were seasonal, occupied during the deer-hunting season, the rest of the year being spent in the lowlands and intermediate regions. To test this hypothesis, direct and detailed comparison between upland lithic assemblages is needed, but this is limited by the unevenness of the data-bases because of bias in collection and analysis. Mellars (1976, 386) has to some extent compensated for the analyst factor by comparing only cores, microburins and 'essential tools', but problems of differences in assemblage size still remain. However, if the tool kits found at upland sites really belonged to mobile hunting bands one might expect to find only a very limited quantity of cores and waste, for reasons of weight, so that their presence or absence may be crucial to our interpretation of a site; those with more being caches for several returns, those with less perhaps being 'overnight' stops. Recovery techniques also vary; for example at Brenig some areas were sieved and others were not, so that the proportion of microliths might in fact be artificially depressed from the non-sieved areas (Healey & Green in Britnell & Savory 1984).

However, even with these caveats in mind, and despite the disadvantages of the incomplete data-bases, it would seem that the assemblage from Brenig is not a traditional upland one, but is more like a Mellars Type B assemblage (1976, 389–94) usually found in the zone between the highlands and lowlands (cf. Simmons 1979, 118, Table 2; Morrison 1980, 144). The distinction lies in the predominant tool forms. Type A assemblages, thought to reflect hunting, are dominated by microliths of various kinds, while those of Type C contain a very high proportion of scrapers, suggestive of skin preparation. Both assemblages tend to occur on small sites, further emphasising their specialist and short-term occupation. Type B assemblages are more varied and 'balanced' and usually contain more cores. The sites which produce them are often quite extensive. The proportions of microliths, scrapers, burins, microburins, saws and cores at Brenig, it must be admitted, do not conform very well to any of the three types but are closer to Type B than to the others.

No details of the precise composition of the other tool-kits from the north Welsh uplands are yet published, but it would be interesting to see whether the Llyn Aled Isaf assemblage has a similar composition to Brenig or whether it is more typical of upland sites elsewhere. This divergence from the expected specialised 'hunting assemblage', therefore, is a particularly interesting aspect of the Brenig study, but it would be premature to build too much upon it at present.

The extent and pattern of annual settlement and/or territories in north Wales can only be guessed at, as there is still so little archaeological and palaeo-environmental evidence available (contrast the information for the Yorkshire Moors (Simmons 1979, 114)). The lithic raw material indicates contacts (whatever the actual mechanics of raw material distribution) perhaps 30 km (20 miles) away, probably north-eastwards, in the areas of the Gronant and Trelogan chert outcrops, and similarly northwards (now coast) where flint might have been obtained from glacial deposits. This is similar to the situation existing between the south Welsh uplands and the coast (Jacobi 1980, 195). The presence, on what is now the coastal plain, of late Mesolithic assemblages (Prestatyn and Hendre) which used similar raw materials and, at least in the case of Hendre, an apparently similar technology, suggests that this area was also exploited 'syn-culturally' with Brenig. Manley has indicated that a wide range of resources would have been available that might even have provided the basis for a year-round settlement (Manley & Healey 1982, 41). However, the tool-kits from Hendre and Prestatyn appear to be more specialised than that from Brenig: burins for example are absent (Manley & Healey 1982, 24; Table 2; Clark 1938, 330) and it seems, by analogy with other areas, that we should be looking at the zones between the uplands and coastal plains (like the Upleatham Hills in Yorkshire, (Spratt *et al.* 1976)) for the more permanent 'base' settlements.

This, however, is a problem that can only be resolved by future research. It might then be possible to establish whether Brenig is truly anomalous, or whether north Wales has a different pattern of settlement from other upland areas. For, by any geographical/environmental definition, the Brenig valley must be considered an upland location, and yet the range of activities attested by the lithic artefacts would seem more suitable to a 'permanent base' camp. Current interpretations of the available evidence from sites in the Pennines and the North York Moors (Simmons 1979; Morrison 1980; Barnes 1982) suggest that Mesolithic man, far from being at the mercy of his environment, was able to exploit it and to manipulate it and the deer herds to his own advantage. Maybe we have been too quick to assume that man would not wish to camp for long on the high moors, at least during the more clement weather.

CHAPTER FOUR

The Neolithic Period in Denbighshire

Frances Lynch

The evidence suggests that occupation and activity by the first farming communities in Denbighshire was largely peripheral – it was concentrated in the great river valleys to the east and west. As in all periods, the coastal fringe was a focus of activity, and there are signs that the Dee valley to the south was a route for the movement of people and ideas, but the heartland of Hiraethog and the narrow wooded valleys to the north of it seem scarcely to have been penetrated during the fourth millennium b.c.

The large stone tombs remain the most striking evidence for the existence of early farming communities in Wales, but it is not certain that all groups followed this tradition of monumental burial. The Conwy valley contains several Portal Dolmens, an early class of tomb whose builders had connections along the west coast of Wales and with Ireland, but the Clwyd valley does not share this tradition, and in fact there is a notable absence there of monumental tombs of any kind (Lynch 1969).

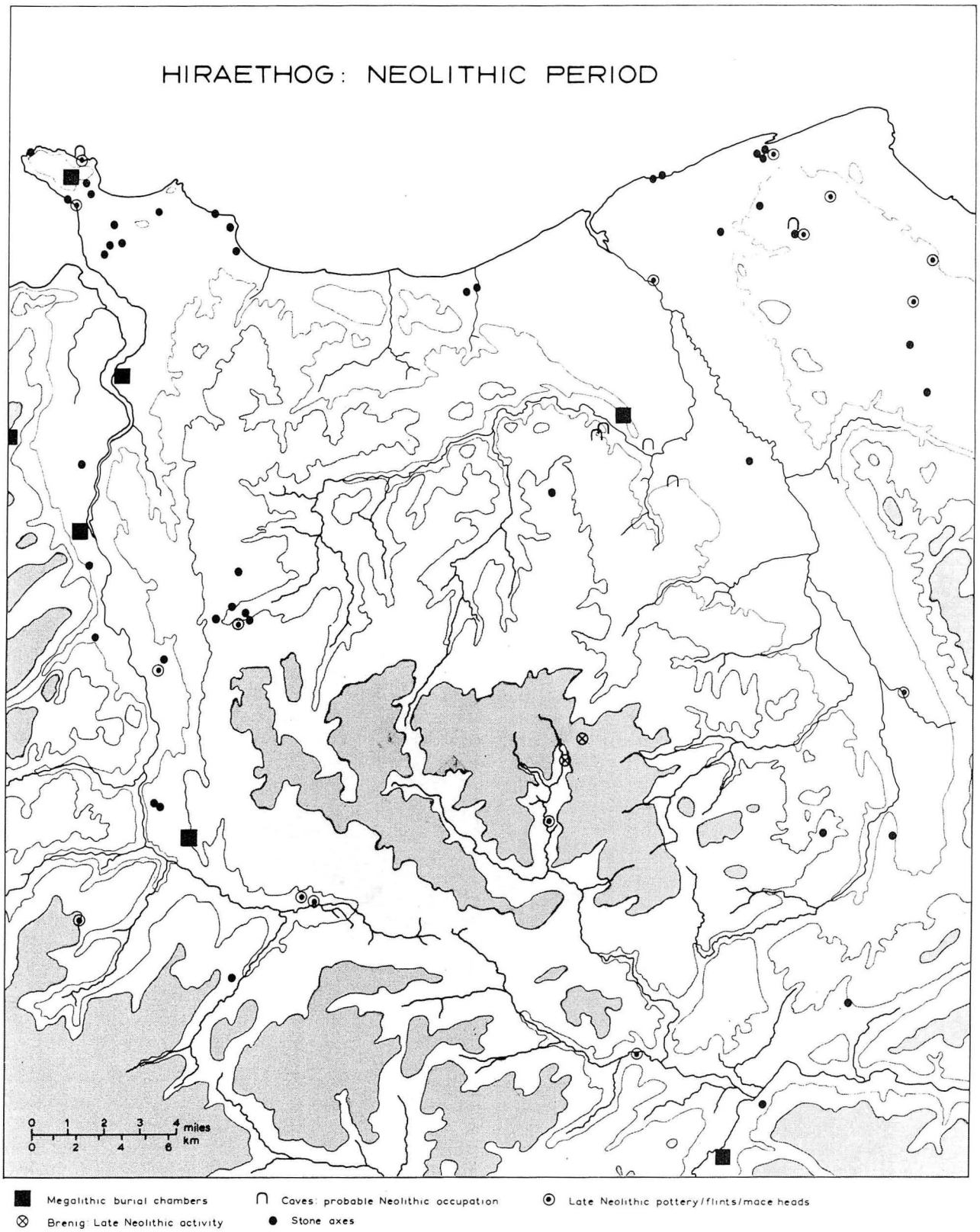
Evidence from flintwork, stone axes and, to a lesser extent, pottery, shows that the valley did support a Neolithic population, but one which perhaps retained a stronger element of native Mesolithic tradition than is found further west. The Mesolithic population in the region had been comparatively large, both in the valley and on the inland moors, and its continuing influence can be seen in the styles of flintwork from sites such as Gop, above Prestatyn (Nash Williams 1946, 34), and perhaps in the preference for cave burial which is such a feature of the region.

The discovery of inhabited caves in the limestone hills on either side of the Clwyd and the Elwy valleys provides some evidence for settlement but open sites, such as that beneath Field 56, Prestatyn (Ellis Davies 1949, 316), undoubtedly existed alongside these natural shelters. Since the caves were occupied from Palaeolithic to Romano-British times it is often difficult to distinguish the Neolithic layers, but the best evidence for the activity of farming communities is the frequent discovery of communal burials tucked into side passages and sealed behind roughly built walls. At Rhos Ddigre, near Llandegla, an axe of Graig Lwyd stone was found with the burials (Boyd Dawkins 1874, 156–58). It would seem that these simple communal burials take the place of the more complex constructions used by other contemporary groups in the west, although towards the end of the period artificial graves, such as the Long Cairn at Tyddyn Bleiddyn, were constructed. The dry-stone-walled chamber built inside the cave at Gop may reflect a mingling of the two traditions (Boyd Dawkins 1902). The tomb at Tyddyn Bleiddyn is ruined, but it is recognisable as a laterally-chambered long cairn, a design of tomb which has connections with south-east Wales (Lynch 1969, 145). Similar contacts no doubt explain the presence of the elaborate transepted chamber at Capel Garmon (Hemp 1927), an indication of a presumably important movement northwards of people or ideas, a movement perhaps connected with the economic attraction of the 'axe factory' at Graig Lwyd, Penmaenmawr.

The stone axehead hafted in an efficient wooden handle was an essential tool to early farmers, who had to carve their fields from the dense natural woodlands of the valley sides. Its distribution, therefore, is an indication of the lands settled at the time, and in Denbighshire it reflects that of the tombs in indicating a concentration on the Conwy and the Clwyd with relatively little penetration of the uplands between. The majority of the axes from the area is derived from the Graig Lwyd outcrops, Penmaenmawr, where particularly suitable rock is to be found, and axes were made on what must have been a professional or commercial scale (Cummins 1979). Similar 'factories' are found elsewhere in Wales, in the Lake District, and in the north of Ireland, and chips and broken axes from such a variety of these sources have been found at Prestatyn that it may be suggested that there was a trading depot there, at the foot of the hills which are a conspicuous landmark from many parts of the Irish Sea (Houlder 1961, 138).

The presence of this 'depot' may explain the discovery of decorated pottery of southern English Peterborough type at the Gop cave, and at Rhuddlan (Stead unpubl. coll.), together with more exotic objects rare in Wales such as the jet belt slider and polished flint knife also found at the Gop (Boyd Dawkins 1902, 171–74). Though the finds are not numerous the impression that they produce is of an area open to new contacts, ideas and stimuli, particularly towards the later part of the Neolithic. The date of the production of maceheads with cylindrical perforations, made from decorative stone, is not precisely known (Roe 1968), but is generally attributed to the centuries around 2,000 b.c., and these objects, too, are found in notable numbers in north-east Wales, another indication of an increase in activity here at this time.

Neolithic material from the Brenig valley itself is sparse; it consists of a few flint implements



4.1 Hiraethog in the Neolithic period.

(App. 3), together with some enigmatic dates from Brenig 53 and a more acceptable one from Brenig 47 (Chap. 6). The early fourth millennium dates (App. 10 nos. 4–7) for some pits at Brenig 53, the focus of Mesolithic activity in the valley, are not directly associated with Neolithic flintwork and may derive from continued hunting on the moors – a survival of the older economy. The neatly-cut posthole (BG53:F100) certainly does not look Mesolithic in character, but its apparently Neolithic dating (no. 6) is equally anomalous because the technique of its digging is so similar to that of the posts surrounding the Bronze Age Ring Cairn. In spite of the radiocarbon dates, therefore, it is probably true to say that serious occupation of the valley began in the later Neolithic at a time of expansion and activity in the region as a whole. This conclusion is supported by the discovery of a Late Neolithic macehead near Hafod Lom (NGR SH 891 547, Ellis Davies 1929, 316) (Fig. App. 3.1) and by a study of the Neolithic material from the excavations.

Neolithic flintwork (App. 3) which has been recognised amongst the material from Brenig 44, 46, 48, 51 and 53 would seem to have been dropped *in situ* and not carried into the cemetery area on turves. This flintwork, quite widely dispersed on the east side of the valley, is largely Late Neolithic in character, perhaps contemporary with building activity at Brenig 47. Leaf-shaped arrowheads, ostensibly Early Neolithic in date, in fact cannot be tied down chronologically, so there is little artefactual support for the idea that the radiocarbon dates of 3100–2600 b.c. at Brenig 53 represent any serious exploitation of this upland at that early date.

In some regions of Britain, notably the Milfield Basin in Northumberland, it can be shown that settlement at the end of the Neolithic was moving up into the higher ground, leaving the long-established lowland fields to ritual use (Burgess 1984, 141–5). The details vary from one region to another but it is now generally accepted that the settlement shift, so easily recognised by the Early Bronze Age in most parts of the country, was beginning at an earlier date. The discovery of Late Neolithic material in a moorland valley such as Brenig, therefore, can be seen to conform to a wider pattern of land use probably occasioned by a combination of soil exhaustion on lower lands due to long use, and climatic improvement making the uplands a newly exploitable resource (Taylor 1980a).

CHAPTER FIVE

The Early Bronze Age in Denbighshire

Frances Lynch

During the second millennium b.c. the population of Denbighshire seems to have increased quite markedly. Whereas the evidence for Neolithic activity was sparse, especially in the central uplands, the evidence for Bronze Age man's occupation is much greater, particularly when one looks at the distribution of tombs – although allowance must be made for the fact that a single Neolithic tomb may have served a larger community for a longer time than the equivalent Bronze Age monument. It is these round barrows which reveal most clearly the increased penetration of the uplands.

The distribution of the first metal tools is too sparse to be truly indicative of settlement areas, although a hoard of early copper axes from Moel Arthur, Flintshire (Forde Johnston 1964), and a mould for a flat axe from near Penmachno (Britton 1963, 268) indicate actual manufacture at an early date in the region. Even at the end of the Early Bronze Age when an important local industry, the Acton Park Complex (Burgess 1980, 261–62), had developed the production of Shield Pattern Palstaves, one of the first types of bronze tool to be widely used, the number of findspots in central Denbighshire is relatively small, despite the presence of the crucial Moelfre Uchaf hoard at Betws yn Rhos in the Elwy valley (Ellis Davies 1949, 434–36).

The visible legacy of the Early Bronze Age in Denbighshire today, therefore, lies in the fine burial mounds which in many places still dominate the moorland ridges and provide a commanding focus to the landscape. Over one hundred of these barrows still survive, their distribution giving us an insight into the areas settled by their builders (Fig. 5.1). Monuments in the Clwyd valley are vulnerable to agricultural destruction (Lynch 1977), so their absence there may not be significant, but the interesting point about the distribution of the barrows is the evidence it provides for the settlement of the narrow fertile valleys of the Elwy and the Aled, and the penetration of the areas around the headwaters of the Alwen and the Clwyd. However, the central massif of Hiraethog itself still remained unoccupied, as it does today. The barrow-builders made use of the commanding ridges which run north from it, but the Brenig group and the destroyed sites near the Alwen Reservoir are the only monuments actually to occupy a truly moorland valley.

The Bronze Age environment in the uplands is widely recognised to have been very different from that of today. The extent of original woodland is debatable but most pollen profiles from Wales show that this cover had been or was being reduced by the Late Neolithic and an open landscape established (Simmons & Tooley 1981, 240–49). At Brenig, tree pollen accounts for no more than 16% of the pollen rain in the buried soils beneath the monuments, which carried a cover of grass and sedge. Such vegetation could have provided reasonable grazing and, in a climate a few degrees warmer than our own with lower lapse rates (Taylor 1980a), would have had considerable agricultural potential. The pollen from the turves of the mounds themselves suggests that somewhere not very far away were fields with cereals and arable weeds. However, these fields were already being threatened by encroaching heather which was also present in the head of the valley and would come to dominate the landscape.

Apart from the broad considerations of agriculture and of settlement patterns, the siting of individual barrows is of interest because of the insight it provides into the less tangible aspects of land use, division of territories and spheres of influence. Some barrows are placed in the bottom of the valley and, although they may be large, their impact is restricted to the area immediately around them and therefore their 'territory' must be small. Many such barrows have probably been destroyed, but a good example survives at Plas Newydd, Llansannan (SH 947 666). Other barrows at the confluences of rivers, such as those near Rug (SJ 056 439 & 060 430) and Cerrig y Drudion (SH 956 482), have a similar situation but a rather more dominating position because of the broader plain that surrounds them.

Most of the Denbighshire barrows, however, are set in more conspicuous positions, on ridges or hill summits where they can dominate a valley or perhaps a whole region. On the northern fringe of Hiraethog there are three barrows which have an extraordinarily commanding position, visible for miles, dominating the horizon from many points of view. The barrows in question are the northernmost one on Mwdwl Eithin, Eglwysbach (SH 839 685), Boncyn Crwn on Rhyd y Beddau (SH 919 623), and the larger mound on the southern end of Gorsedd Bran (SH 969 597). All three are intervisible and so provide a great chain of contact running right across the county. One cannot escape the conclusion that their siting was planned to provide some link between their builders, bringing one into the realm of political or religious networks at which archaeology can do little more than hint.

One or other of these commanding monuments, which are not exceptionally large, but simply dominate because of their siting, can be seen from nearly all the other barrows in the region; and from them all the major groups on the fringe of Hiraethog, not themselves intervisible, can be picked out, so that the whole tract of country is linked by a complex network of contacts, the smaller groups tied in through their view of one of the major barrows. Many of the minor barrows, such as Rhiwiau and Blaen y Cwm (SH 944 606 & 939 609) and Brenig 42 (SH 976 567) are large and are themselves carefully placed so as to be visible on a horizon, but as they can only be seen there from a limited area, their impact is restricted to the valley in which they lie.

It would be interesting to speculate whether excavation would reveal any essential difference between the major barrows, visible for miles, and the less conspicuous majority – whether the former might represent markers rather than burial mounds, as will be suggested in the case of Brenig 47 which holds a similar focal position within the local grouping. There is no record of finds from Mwdwl Eithin North, nor Boncyn Crwn; it is normally assumed that the urn from Gorsedd Bran came from the prominent southern barrow, but there is in fact some doubt about its exact origin (p. 39).

Nearly every barrow in Denbighshire has been damaged in one way or another. Many of the smaller examples have been eroded by ploughing and most of the larger ones have a tell-tale depression in the centre. Records suggest that most barrow-digging activity dates from the 19th century when there was a good deal of curiosity, both informed and uninformed, about the contents and purpose of such mounds. From their rounded profile and from exposures in damaged areas it is possible to see that the larger mounds in the Hiraethog area are built of turves and covered by a clay capping, so one may assume that the structure of those in the Brenig valley was typical of the area as a whole. Only complete excavation could show whether the use of stake circles, such an important feature of the Brenig group, was equally common.

Whereas the bulk of these burial monuments may be assumed to be roughly contemporary with the building and use of the Brenig cemetery, only excavation can reveal the precise date and the cultural background of the builders. The practice of building round barrows marks a change from the traditions of Neolithic burial with their large stone chambers and long cairns; it is a practice which is not common in north Wales until the full Early Bronze Age.

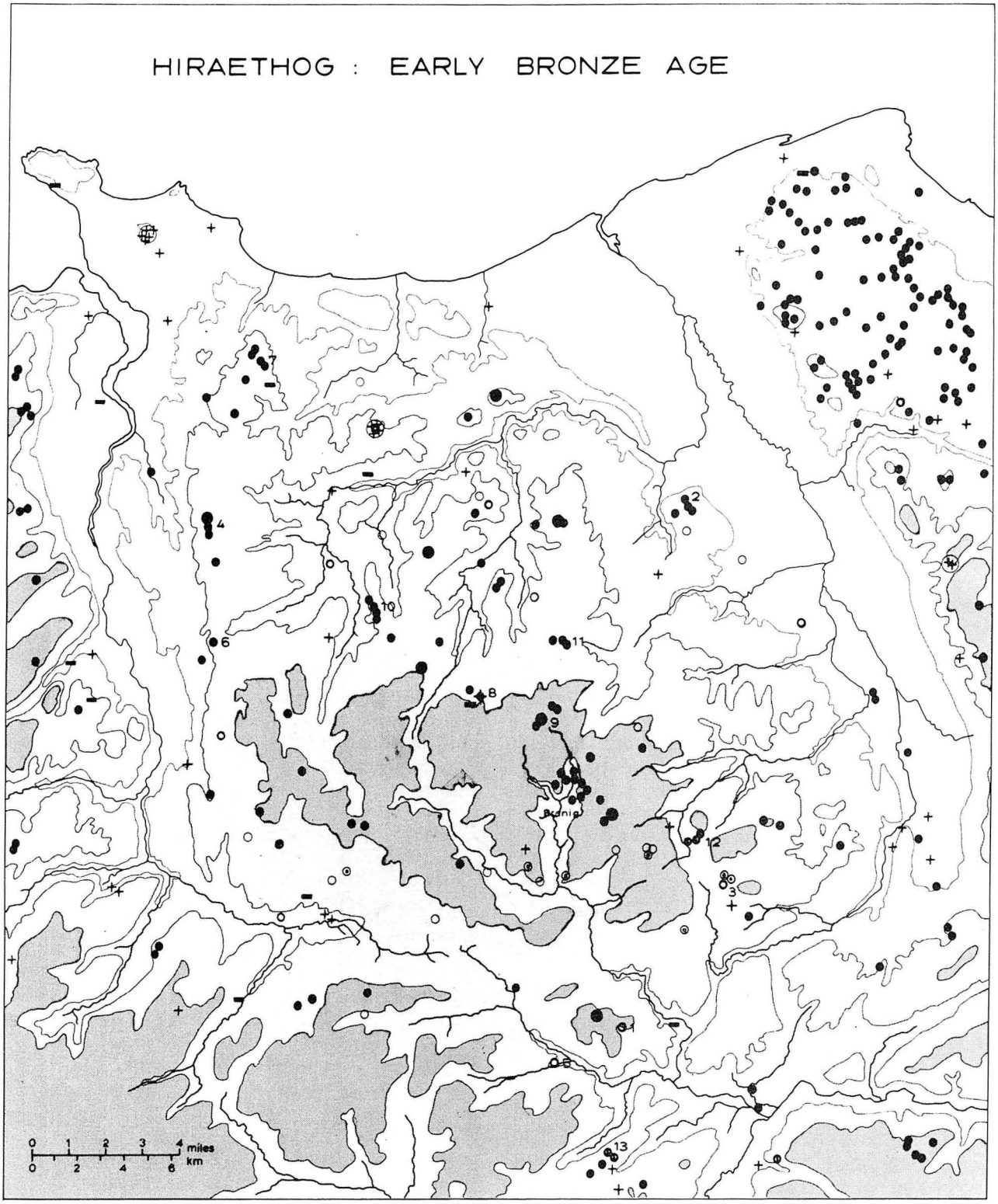
Certain mounds in Denbighshire, however, are known to cover inhumation burials with Beaker pottery, suggesting that they belong to a slightly earlier period than the majority, a chronology confirmed by the fact that some of them have been re-used for the insertion of cremation burials in urns. Re-use of this kind indicates an essential continuity of population in the area during the second millennium b.c., in spite of the fact that during that time one can see variations in pottery styles and the development of trading links which suggest some mobility.

The appearance of Beaker pottery in Britain has been the subject of a great deal of study and has given rise to a variety of historical explanations. Until recently it was assumed that this superior pottery, with obvious similarities to Continental styles, arrived with invaders, probably from the Netherlands, who rapidly established themselves in power over the native population because of their command of the new technology and their adherence to a more sharply stratified and aggressive social structure (e.g. Clarke 1970). More recently, this view has been questioned. A greater understanding of the native Late Neolithic cultures has led to the realisation that many changes pre-date the appearance of Beaker pottery of which the earliest styles often occur in highly traditional native contexts. The explanation for the pottery, with its undoubted Continental parallels and surprising uniformity across the country, as suggested in this new view, lies in the spread of a prestigious cult (in which the pots were necessary adjuncts) among the upper echelons of native society (Burgess & Shennan 1976). Through the contacts thus set up, other aspects of contemporary Continental culture and technology followed. The promulgation of this 'Beaker Package' view has certainly led to a reassessment of the scale of foreign intervention in Britain at this time if not to the total abandonment of a belief in some settlement from the mouth of the Rhine to initiate some of the new trends in Bronze Age society.

Whatever its ultimate origin, in Wales Beaker pottery can be said to arrive in small numbers and at a late date (Griffiths 1957). The long-necked pots used are related to those in England, and suggest a secondary movement over the border. Although the debris of settlements such as that under Brenig 51 (Chapter 7) is being found more frequently now, the bulk of this pottery is still found in graves where it accompanied an unburnt body normally buried in a stone cist.

Typical burials, which may be relatively early for Wales, have been found to the east of our area at Brymbo, Wrexham (Savory 1959) and Ysgwennant (Day 1972). Another might possibly have existed at Bodidris, Llanarmon yn Ial, where an inhumation burial was found in a stone cist with an unidentified pot (Ellis Davies 1929, 178). However, the majority of Welsh Beakers are later, like the local group of small pots, represented in Denbighshire by one found in a very small cist perhaps designed for reburied bones, from near Bodtegir (Livens 1965). The barrow at Plas Heaton, Henllan, covered a central cist with an unburnt body accompanied by what is certainly a late Beaker (Wynne Ffoulkes 1851). This grave had been reused on several occasions, for two other inhumations were found above the cist, and a fourth one elsewhere in the mound. Finally a cremation in an urn was placed in a hole dug into the top of the barrow. Other barrows in the vicinity bear witness to the development of a cemetery around this early monument.

A similar situation may be seen amongst the group of monuments just west of Bedd Emlyn.



5.1 Hiraethog in the earlier Bronze Age.

Several monuments were recorded here before the forest was planted, but few of them now survive (Ellis Davies 1929, 95–96). In 1956 an urn was exposed by the construction of a forestry road, and subsequent excavation (Savory 1961) revealed two large pits dug into the old ground surface; they contained no surviving burials, but the acidity of the soil could account for the disappearance of an inhumation. Remains of carbonised wood, perhaps a bier, and the distinctive shape of one of the pits suggest that these primary burials belonged to a Beaker context. Dug into the filling of the larger pit was a cremation burial in a Vase Urn accompanied by a pair of bronze tweezers. Nearby was another cremation burial in a similar pot with 11 arrowheads and a small plano-convex flint knife similar to those found at Brenig and in several contemporary burials. Although the cairn or barrow which covered these burials had been destroyed, the insertion of the cremation into the fill of the primary pit shows that there was a succession of burial here just as there was at Henllan.

The other Denbighshire barrows whose contents are recorded seem to be very closely comparable in both date and burial tradition to those at Brenig. The most interesting comparisons may be made with the central barrow on Mwdwl Eithin, Eglwysbach, where the extensive excavations in 1913 revealed a wall similar in many details to that found beneath Brenig 45 (Willoughby Gardner 1913). The central burial was an unaccompanied cremation and two further cremations were added to the mound, one in a Collared Urn with an arrow-shaft smoother, an unusual implement occasionally found with other specialist archery tools in certain rich graves in the south of England. The faience bead from a grave at Llangwm shows similar contact with wealthier areas (Ellis Davies 1929, 277–78). Another concealed wall was found beneath a barrow at Farmyard, Llanrwst, but the record is brief and details of its construction are not known (Ellis Davies 1929, 329–31). It seems to have surrounded a small central cairn which covered a cremation in a pit. Two other cremations in Food Vessels were found in the same mound. Another monument in the western part of the county, one of the cairns at Gloddaeth, Llaneilian, shares the combination of earth and stone construction, but the straight-sided urn within the central cist suggests that it might be rather later in date (Ellis Davies 1929, 203–04). As such it would be a rare instance of a barrow built in the later Bronze Age.

Barrows just to the west of Brenig were dug in the middle of the 19th. century, but the record is so vague that it is impossible to identify precisely the monuments in question. The large mound at Rhiwiau was certainly dug into on three occasions between 1830 and 1851 (Ellis Davies 1929, 350; Stanley & Way 1868, 247). Two cremation urns were found in the south-east side on the first occasion, and a third, with a bronze dagger, was found later. When a shaft was dug through the centre in 1851 nothing was found there, but a kerb was discovered at some point in the mound. A plano-convex flint knife (Ellis Davies 1929, 353), and an axe-hammer (Savory 1961a) have been found in the neighbouring fields and on the other side of the valley there is another large barrow, making a smaller version of the Brenig cemetery in a rather similar environment.

The main uncertainty attaches to the four barrows on Gorsedd Bran (Ellis Davies 1929, 376–79). On the southern end are the two very conspicuous monuments mentioned earlier. They do not appear to have been seriously disturbed, but a shaft might have been refilled when the triangulation point was erected on the larger mound. Further north there are two larger, but less conspicuous, monuments, both of which show clear signs of disturbance. These are likely to be the first two 'on the summit of Gorsedd Bran', whose investigation is described at third or fourth hand by Stanley and Way (1868, 217). One is said to have contained a central cairn surrounding a small stone cist with a cremation, the other a cremation in an urn which did not survive. The quarrymen who did this digging, shortly before 1854, are reported to have opened six tumuli; it is possible that the other four may have been those on Cefn Brenig (Brenig 40, 41 & 42), and Brenig 45, although they are more than the reported 'half a mile to the east' of Gorsedd Bran. The third one opened was found to have been previously disturbed (this might have been either Brenig 47 or 45); in the fourth they found an urn full of bone, but it disintegrated because it was so soft and friable (therefore it is unlikely to have been that from Brenig 40); while in the fifth they found two urns side by side and managed to salvage one. The sixth barrow is not described and presumably proved unfruitful – it might well have been Brenig 41. The surviving urn from the fifth barrow is normally referred to as 'from Gorsedd Bran', but there is a local tradition that it was in fact found at Boncyn Arian (Brenig 45) (Ellis Davies 1929, 378), though internal evidence would suggest that it is more likely to have come from Brenig 40, accompanying the large pot whose shattered remains were found in 1973.

In Wales and many other parts of western Britain and Ireland barrows were designed to cover not a single burial, but a group of cremations normally buried at the same time (Waddell 1970; Lynch 1971). These 'cemetery mounds' no doubt hark back to the earlier tradition of multiple burials practised in the megalithic tombs of these same regions. In Anglesey, for instance, nearly all the excavated barrows covered grouped cremations, from six to twelve in number, and there was evidence to show that they had been buried at one or two communal ceremonies and not added individually to a monument originally designed to cover a single, central interment (Lynch 1970, 109–72). Such multiple burials occur in Caernarvonshire and in Merioneth and, less frequently, in Flintshire. However, the evidence from Denbighshire does not suggest that this system was prevalent here. The early record of the opening of a barrow at Llanarmon yn Ial speaks of the discovery of 'several' urns in the centre of the mound (Pennant 1778, II 18), but, apart from that, the number of individuals buried in the Denbighshire barrows is small and in most cases it is obvious

that the second and third burials are additions, and that the monument was conceived as covering a single central deposit.

The absence of the true 'cemetery mound' may partly explain the proliferation of barrows in central Denbighshire, and also their grouping into what are clearly cemeteries. These cemeteries are not very large but even a line of three, as at Eglwysbach, or four, as at Rhosdomen, is rare in the rest of Wales, since the 'cemetery mound' naturally tends to be an isolated monument. The linear cemeteries on Mwdwl Eithin, Rhosdomen and at Bylchau, as well as the group of four barrows on Gorsedd Bran, all appear to be standard burial monuments of uniform design (Ellis Davies 1929, 113, 224, 59, 376–79). In this they differ from the larger cemetery in the Brenig valley where there is in addition a clearly differentiated ceremonial site. A similar mixture may also have existed amongst the Bedd Emlyn group which seems to have included Ring Cairns of some kind (Ellis Davies 1929, 95–96). Its position on either side of the stream at the head of the shallow valley would also seem to have been comparable, but unfortunately the destruction of so many sites makes it impossible to confirm this.

The area to the east of the Brenig valley, now largely blanketed under the Clocaenog forest, is one of great interest in terms of Bronze Age ceremonial sites. Across the watershed between Nant Ladur and Nant Llyfarddu lie three circles (Ellis Davies 1929, 101–02). The eastern one has been badly damaged and its exact nature cannot be determined, but it was probably some kind of Ring Cairn. The middle one is now a ring of earth and stone broken by a trackway. Earlier in this century it was possible to recognise six or seven holes in the outer slope of the bank, from which large uprights had been removed. There is also a record of the removal of a great deal of stone from the interior, so it is possible that the monument was a Cairn Circle, a low mound from which large stones protrude, rather than a Ring Cairn or an Embanked Stone Circle. The third monument is a Stone Circle surrounding a low central mound. Three of the stones survive and many of the stone-holes can still be recognised. Ellis Davies (1929, 103–04, 77) records other circles to the west of this group on the slopes of Y Foel Frech and at Hafoty Wen, but unfortunately nothing can be seen of them now, and since other 'circles' that he mentions on Mynydd Poeth are almost certainly huts of some kind, it is difficult to be certain of the nature of lost sites. Two circles were also recorded near the Alwen reservoir; one (SH 944 534) was drowned by the lake, and the other (approximately SH 964 532) obliterated by the forestry plantation (Ellis Davies 1929, 78, 79). This latter was very probably a ceremonial site of some kind.

Together with the Ring Cairn (Brenig 44) and the unusual Platform Cairn (51) in the Brenig cemetery, these Clocaenog sites form a notable concentration of ceremonial monuments, rare in north-east Wales despite the number of contemporary burial monuments. However, the similarity of the Brenig barrows to those on the northern fringes of Hiraethog does not suggest that their builders were isolated from communities in the other Denbighshire valleys, but rather that burial ritual was perhaps more elaborate and more specialised in this valley because of its proximity to the religious centres which may be represented by the circles in Clocaenog.

The cemetery at Brenig, set on either side of the Afon Fechan, in the head of the valley, consists of four large burial monuments (40, 41, 42 & 45), a Ring Cairn (44), three small stone cairns (8, 46 & 14), a large Platform Cairn (51), and a Kerb Cairn (6) in a side valley. The major monuments seem to be placed so as to focus attention on the small cairn (47) set in the pass of Bwlch Du, which forms the apex of the cemetery. This monument did not cover a burial and was, by many centuries, the oldest structure in the group; it may perhaps have formed a boundary-marker to the community's territory. The distant barrows on the southern summit of Gorsedd Bran may be seen from almost all the monuments of the Brenig cemetery, and thus this inward-looking group is tied to the wider network of the Denbighshire Bronze Age.

CHAPTER SIX

Mound Without Burials

BRENIG 47

Frances Lynch

NGR SH 9891 5805 Height above sea level 451 m.

This small monument stands in the pass at the apex of the cemetery group, commanding a wide view northwards down the Clwyd valley to the sea, westwards across the moors to Snowdonia and southwards to Arenig Fawr. The mound, though small, is quite prominent, silhouetted on the horizon at the head of the valley. It is particularly clearly visible from the three barrows on the western side, and it seems to be the focus of their siting. It was thought, therefore, that this would be the earliest monument in the group, and so it has proved, though the radiocarbon date of 2140 ± 70 b.c. (HAR 123) is a good deal earlier than would have been expected, placing its construction within the Late Neolithic period. However, this date does not conflict with any other evidence, since the monument does not appear to have been a burial mound like the others, and no datable artefacts were found. The mound was 11 m in overall diameter and, before excavation, appeared to be about 1.2 m high. Excavation, however, showed that it had been contrived from a natural promontory; the sides had been scarped and only a low mound (0.5 m - 0.6 m high) had been added on the top.

The eastern slope of Bwlch Du moor rises in a series of broad shelves to a final height of 480 m overlooking both the Brenig and the Nantglyn valleys. The promontory used for the monument projects westwards from the second of these shelves immediately above the pass separating the two valleys. On all sides except the south the natural slope of the hill had been steepened by removing the grass and subsoil, which, thus, survived only under the mound itself, where it was relatively well preserved as a thin band of grey-white clay. In addition, on the west, the easily quarried mudstone bedrock had been cut back to a near-vertical face and on the east the monument had been emphasised by cutting a very shallow ditch across the neck of the promontory. The excavation extended for some 1 m - 2 m outside the monument and everywhere, except in parts of the northern quadrant, the brown mineral soil (leached Ea horizon) lay directly on the bedrock, suggesting that the original orange subsoil had been dug away over a considerable area, probably to obtain material for the mound. The two soils, the mound and the surviving subsoil, were found to be morphologically indistinguishable (Helen Keeley, pers. comm.).

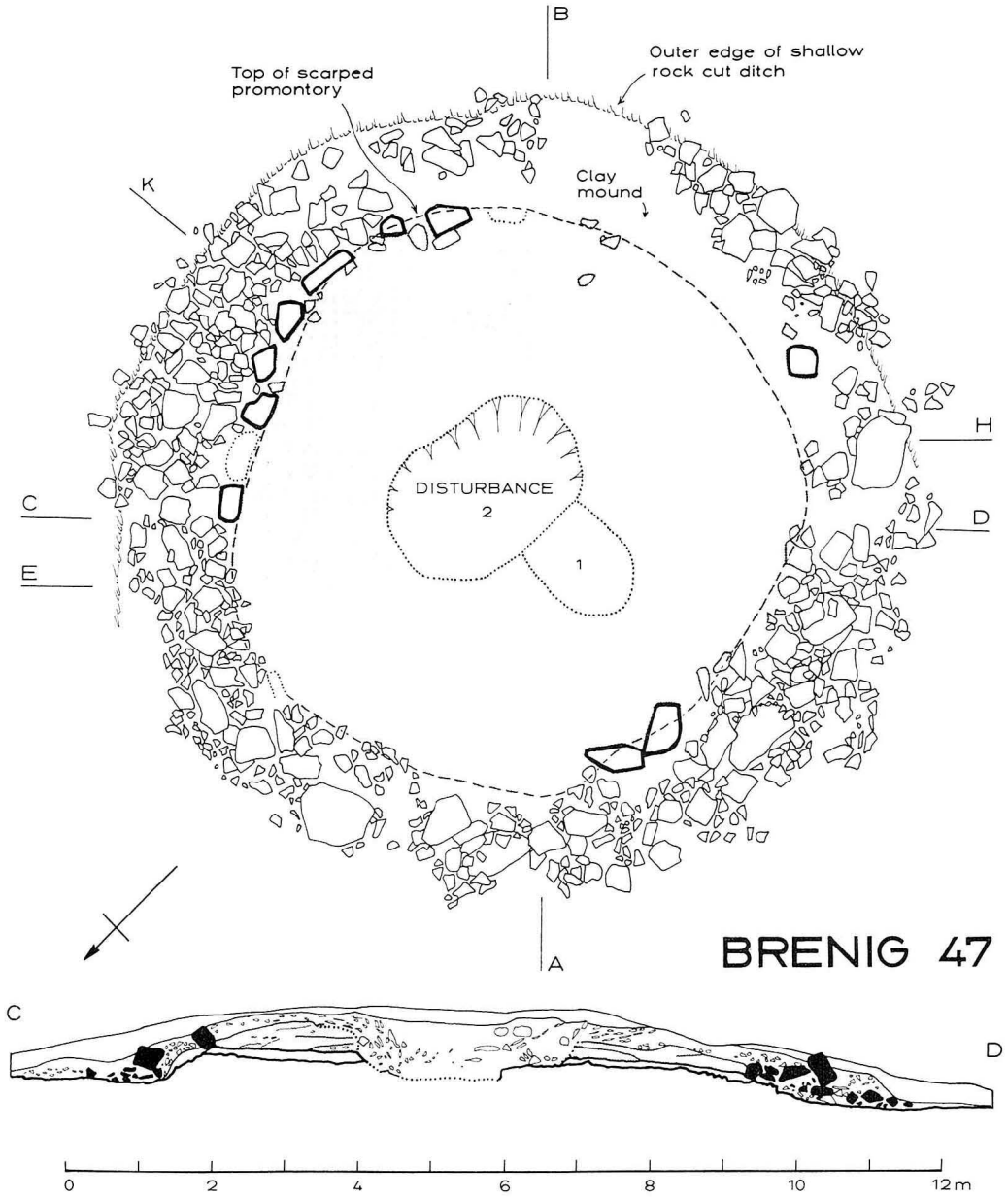
Structure of the Monument

The monument built above and around this scarped promontory consisted of a low, flat-topped mound of orange clay and perhaps turves surrounded by a ring of boulders set upright at the top of the slope. Below these, covering the scarped sides of the hill, was a stone 'skirt' about 1.5 m - 2.0 m wide, without any formal edging.

The original surface of the hill was sprinkled with oak and hazel charcoal which provided a date for the construction of the mound. There were no true concentrations of this charcoal, and no sign of burning *in situ*, though it appeared in small, denser patches in hollows in the old ground surface on the east side.

The first act in the construction of the monument was the building of the central clay mound on the charcoal-stained old ground surface. A heap of orange clay with a good number of stones had been laid just east of the centre. This in turn was covered by a low mound of much whiter clay (3b) with streaks of blue-grey material flecked with charcoal, presumably representing turves stripped from the sides of the promontory. Above this white mound, the monument was completed with a thick layer of orange clay incorporating a good deal of broken mudstone (3a). This material was undoubtedly derived from a stripping of the area immediately around the promontory. In the upper levels this merged with a browner orange clay which was, however, distinguishable from the dark stony soil of the disturbances which spilled over the whole central part of the mound. There were no finds, except occasional flecks of oak, hazel, and heather charcoal - a similar picture to that from under the mound. This mound seems never to have been higher than 0.6 m, having been finished with a very slightly domed surface approximately flush with the top of the boulder ring.

The inner ring of upright stones was well preserved only on the eastern side of the mound where six contiguous examples survived, and the positions of two lost stones could be recognised. They were all gritstone boulders such as could be collected from the moor; they were of more or less similar size (0.4 m - 0.5 m high), and stood on an arc of a reasonably accurate circle 8 m in diameter. On the west, only two stones of this ring survived, both somewhat larger than average, while only a single one was left on the south side, and none remained on the north, though the site of one could be recognised in the upper levels there. It is not entirely clear whether or not this ring



6.1 Brenig 47: plan and section.

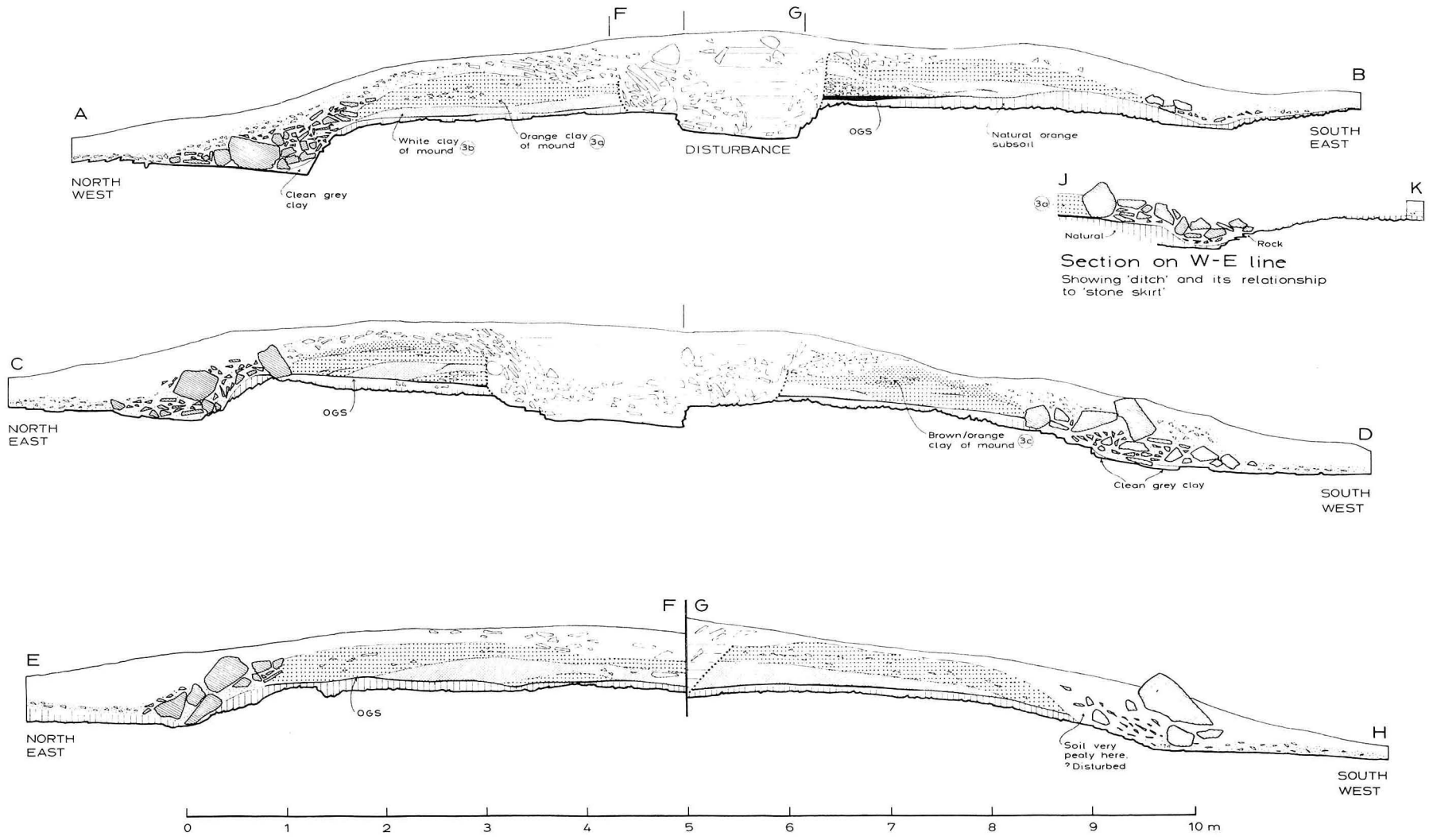
was originally complete since, though the loss of some stones is obviously due to relatively recent disturbance, Section E-F shows the orange clay of the mound abutting directly on the haphazard stonework of the 'skirt'.

The stone 'skirt' consisted mainly of gritstone boulders, some of them very large, but also included a mass of mudstone slabs and slivers which seem to have been thrown over and between the better stones. These stones did not appear to have been placed with any care, and there was no formal edging - they simply tailed out at the bottom of the slope where they had rolled away from the scarped sides. However, they succeeded in giving the impression of a solid stone cairn rising up to just below the top of the inner ring of upright boulders and concealing the natural rock of the lower part of the monument.

On the south side a good number of the stones had disappeared, perhaps because they were closer to the surface here, but because of the casual nature of the building it was impossible to identify specific areas of disturbance. When the peaty topsoil, which had been recently ploughed, was removed, the brown Ea horizon was revealed, covering the slopes of the mound and concealing most of the stone 'skirt'. This layer contained a very large quantity of small stones, which were very common everywhere on the moor, but whose presence over the mound is rather difficult to explain. They are unlikely to have been part of the original design, which they obscure; nor would the central disturbance seem to have been extensive enough to produce them in such quantity.

Central Disturbances

The centre of the mound had been very extensively disturbed on two occasions in the past. There was no evidence that either of these diggings had



6.2 Brenig 47: sections across hill and mound.

found and removed any central burial. In fact the larger of the two penetrated well into the bedrock, which suggests a degree of mindless desperation on the part of the searchers. The smaller hole in the western quadrant would seem to have been the earlier of the two investigations, though it contained a great deal of split mudstone in the upper levels of its haphazard, stony fill. Unfortunately the junction of the two pits, falling at the crossing of the sections, did not help the study of their relationship. It is possible that the top of the earlier hole was dug out when the much larger pit to the east of the centre was opened. This pit was sunk 0.3 m into the bedrock and had been refilled first with broken stone thrown in from the north-eastern side, and then with the orange clay of the mound. There were some gritstone boulders in this filling which suggests that some disturbance of the stone 'skirt', probably on the south side, had taken place at the same time. It is conceivable that these diggers had removed a very small stone cairn at the centre, but there is no real evidence for this, and the other explanation is the more likely. No scrap of cremated bone nor any artefact was found in the fill of these pits. There were some lumps of charcoal amongst the stones in the top of disturbance 2 but it is likely that they resulted from heather burning for the management of the grouse moor.

In 1972 Bwlch Du moor, which had been a heather grouse moor, was ploughed for improved grassland. This double ploughing had passed over the monument and may have dislodged some stones on the south-west side, but by and large the damage was superficial, having removed little more than the modern heather and bilberry vegetation. The bottoms of the furrows could just be traced in the top of the clay mound on the east side.

Finds (App. 3, Fig. 2)

The only artefacts found were two flint flakes lying on the old ground surface under the mound. Both are of a blotched grey flint, distinguishable from the poorer-quality material used by the Mesolithic flint workers. One has been burnt, and both show signs of a regular secondary retouch along one edge, but neither is a classifiable implement.

Discussion

Brenig 47 is essentially a natural feature converted by scarping and by the addition of a low mound into a stone-girt marker standing in a prominent position just above the pass. Although there was a scatter of charcoal on the old ground surface, there was no evidence that the mound had ever covered a burial or any other focus for specific ritual, such as a charcoal-filled pit, or a post. However, it is not possible to be completely certain of this since the centre had been badly damaged; but, for reasons given above, it is unlikely that previous investigators had found anything there.

No distinctive artefacts were found, but a radiocarbon date was obtained from the charcoal scattered on the surface beneath the mound, a situation which in strict terms provides only a *terminus post quem* for the building of the monument. However, the charcoal was quite plentiful in certain patches, and it did not have the appearance of having been trampled into a long-exposed surface, so there is no strong case for rejecting the date, which was 2140 ± 70 b.c. (HAR 1134). This date places the structure in what is traditionally known as the Late Neolithic and, more importantly, indicates that it could have been built as long as 500 radiocarbon years before the cemetery which appears to focus upon it. It has been often said that 'one date is no date', but it has been unavoidable in this case and, again, there is no good reason for ignoring this date, since it cannot be said to conflict with any other evidence from the site.

Barrow mounds which cover no burial have been recorded from most parts of the country. Their interpretation is difficult. Are they to be considered cenotaphs built as memorials to someone buried elsewhere; are they simply insufficiently well excavated mounds in which the bones have been removed previously, dissolved completely away, or not been reached by limited trenching concentrating on the centre; or are they something else entirely, important to the communities who built them for reasons now beyond recognition and, more especially, proof? Greenwell and Mortimer, perhaps the most experienced barrow excavators of the last century, did not believe in cenotaphs and favoured the second view - insufficiently excavated mounds (Greenwell 1877, 27-28; Mortimer 1905, xxxix). Greenwell subsequently modified this view and admitted some instances of completely excavated mounds in which animal bone had survived but in which no human burials were found (Greenwell 1890, 24). By the middle of this century the truth of his later view was generally recognised, largely due to the work of Fox (1941 and 1941a), but no all-embracing explanation could be put forward.

The concept of a mound which is not just a covering for a grave but has some significance as a monument in its own right may now be recognised in the earlier Neolithic. The excavation of the 'empty' Windmill Hill and South Street long barrows, both lying on the bone-preserving chalk of Wiltshire, and the recognition that certain megalithic tombs might be altered by the addition of a long cairn without the provision of extra burial space, demonstrate this beyond doubt (Ashbee, Smith & Evans 1979; Henshall 1972, 207-25). It has been argued that these mounds, whether or not they cover burials, become the outward sign of a community consciousness, marking out for their builders, and presumably their neighbours, a centre in both time and space.

In the Late Neolithic the apogee of such trends must surely be Silbury Hill, the largest artificial mound in Europe, and one in which no excavator has yet found any burial (Atkinson 1970). Silbury Hill may be unqiue but the series of very large mounds in east Yorkshire, Duggleby Howe, Willie

Howe and others, though they cover many burials, may be another example of the idea of the mound as a statement of identity, ownership and power (Kinnes 1979). It is to this horizon, that of Silbury Hill and Willie Howe, that Brenig 47 must belong if one accepts the radiocarbon date, although it can scarcely match them in size.

However, in view of the dates of the other mounds in the valley, it is relevant to consider parallels of a later period as well. Because of the uncertainty attaching to the identification of truly 'empty mounds' it is not possible to say whether or not this phenomenon is more or less common in the full Early Bronze Age, in proportion to the number of mounds built. Nor is it possible to link the 'empty mound' with any particular structural preference. Some 'cenotaphs' may be very simple piles of earth or stone, others may be quite complex in their construction.

One distinction which may usefully be made within this group of Bronze Age mounds is that between barrows which cover nothing at all and those which cover some focal pit or deposit which is not a burial. In this latter category fall some of the better-known examples such as Six Wells 267' which had at its centre a 'ritual pit' containing only a pile of very dark fine soil (Fox 1941a, 118-22). In others such as Combe Beacon, Somerset (Gray 1936), and Dagger's Piece Cairn near Honiton (Pollard 1967, 34-35), the pits contained charcoal as well as dark earth, thus linking these mounds to rituals which often accompany burials under barrows, and to the rituals carried out in Ring Cairns such as Brenig 44. At Flotmanby Wold CCXLIX, one of Greenwell's few 'cenotaphs', the centre was occupied by a very large hole containing some pottery but no bone (Greenwell 1890, 17). At Caerloggas III, Cornwall, the focal point of the stone-rimmed mound was apparently a small orthostat only 0.4 m high, wedged upright between turves (Miles 1975, 45-50).

On the other hand there are mounds which cover nothing at all except perhaps a random scatter of charcoal. Recently, examples of this kind have been excavated in the cemetery of nine barrows on West Heath Common, Harting, Sussex (Drewett 1976; 1985). Seven of the variously sized mounds proved to be completely empty, even though one had been built in two stages and incorporated stakes and hurdling. Greenwell found two such barren mounds, CCXLVI on Folkton Wold, and XLVII at Weaverthorpe which had, like West Heath III, been enlarged (Greenwell 1890, 16; 1877, 202). On Stanton Moor there were two barren cairns, 9 and 14, the latter covering a patch of charcoal (Heathcote 1936, 27, 33-34).

The recognition that Bronze Age burials are only part of more complex and varied ceremonials, and may not be the most important part of them, has enabled us to accept these empty mounds more readily into our picture of the religious life of the time, but it has not helped us to be much more precise about the role and nature of these rituals (Miles 1975, 71-76; Drewett 1976, 142).

Brenig 47 is most prominently sited; from the valley below it is in the centre of the pass, outlined against the sky; from the summit of Gorsedd Bran to the west it can be clearly seen on the col, the only one of the Brenig monuments to be visible beyond the valley. But even more notable than the view of the monument is the view from it (Pl. 6.1 a&b). To the north this lies over Nantglyn to the green and wooded valley of the Clwyd, an agricultural landscape now of small fields and hedges. If one turns to the west the contrast is striking - a wide expanse of heather moorland, bleak and open, with a distant view of the mountains of Snowdonia. The basic geography of the region and the evidence from pollen analysis suggest that the contrast would have been as marked in the late third millennium as it is now, with Brenig 47 set at the boundary between two distinct ecological zones.

It is possible to argue, though impossible to prove, that Brenig 47 may accordingly be a marker of territory rather than a component of the ritual landscape. The barrow as a boundary mark has often been commented upon, but the boundaries involved are, naturally, always later ones (Grinsell 1959; 1970; 1971; Bowen & Fowler 1978). This may indicate the appropriateness of the siting, but cannot tell us anything about the contemporary land divisions. Even with the advances that have recently been made in understanding the surprising complexity and permanence of land-holding and use in the second millennium b.c. in many parts of the country, in the matter of barrow siting it is not possible to express more than a statement of possibility (Fleming 1971, 155).

The Dorset Ridgeway, a stretch of dramatic landscape with many barrows, has been studied from the point of view of siting, clustering and impact (RCHM 1970, 423-27 and map). Among the 114 barrows, many cemetery groups may be recognised with barrows closely set and focussing on a col or on the head of a valley. In contrast to this siting, however, there are some lines of widely-spaced barrows running along the tops of ridges, into the less hospitable heath areas, which it is tempting to suggest may mark the lines of boundaries between communities, be they tribes or simply families.

Another region where regularity of valley and moorland lends itself to the easy recognition of territorial units is that between the Black Mountain and the Brecon Beacons in south Powys. The best known of these monuments, standing sentinel at the head of the pass, is Maen Llia, a huge stone standing not far from a ruined cairn. In the next valley westward is a similar group, stone and cairn, just below the watershed and marking the entrance to the upper Tawe valley. East of Maen Llia in the Taf valley the stone is fallen and the cairn ruined, but their role as markers can still be recognised (W. E. Griffiths pers.comm.). It is not possible to prove that these stones were set up to remind the traveller of a change of ownership or jurisdiction or of celestial protection, but it is tempting to suggest that this may have been one of the factors in their siting.

The social situation in Late Neolithic Britain is undoubtedly a complex one. We see the older burial traditions withering or altered, to be replaced

by a multiplicity of new ones; new pottery styles gain acceptance in many areas, some being linked to other new features and suggestive of foreign settlers, others perhaps reflecting some native social distinction. These changes, however, are not uniform over the whole country; some may be recognised in one area and not in another, some adopt different expressions in different regions, for at this time it begins to be possible to divide the country into a series of cultural provinces which may pursue quite separate histories. This incipient regionalism, allied to an increase in population for which there is growing evidence, must have led to a greater consciousness of territory. In Wessex there are hints, in the clustering of monuments, in their enclosing and in the suggestion of conflict at some sites, that territories were being formalised, that control was becoming more sharply defined.

Elsewhere the situation cannot be studied so fully, and social developments need not have been the same; but evidence that populations were increasing is now to be found in many parts of the country, and in north Wales we can see a colonisation of new areas which implies some pressure on older centres of settlement (Figs. 4.1 & 5.1). It is in such a context that the setting up of mounds to define new territories, to mark boundaries, might become a worthwhile activity, especially if the expansion of cleared land had made less easy the recognition of settlement units, previously identifiable as clearings in the forest.

Assuming that this mound at the head of the valley is contemporary with the earliest artefacts from a settled agricultural community (the few Neolithic arrowheads and the Hafod Lom mace-head), the fact that it then becomes the visual focus of the later cemetery suggests a continuity of society in the valley from about 2200 b.c. to 1200 b.c. Such a continuity might seem to be at variance with the traditional view of the impact of the 'Beaker Invasions' (coming in north Wales in the middle of that period) which are thought to precipitate such a sharp break with the past. In many ways, however, this view has been modified (Burgess & Shennan 1976), and in the Brenig Valley the overlapping use of Beaker, Urn and Food Vessel pottery would tend to confirm that we are dealing here with the religious centre of a homogeneous community, first exploiting this valley for agriculture in the last centuries of the third millennium, and persisting there as long as environmental conditions would allow.

CHAPTER SEVEN

Major Barrows

BRENIG 42, 40, 41 and 45)

Method of Barrow Excavation

All four mounds were excavated in the same way. The trenches cut into Brenig 45 in 1971 had shown it to be a clay-capped turf mound and it was correctly surmised that the others would prove to be similar. It was recognised that there would be pressure on time in the first season and it was decided that machines could be used to remove the upper layers of the mounds.

The barrows were excavated by the traditional quadrant method and were eventually removed in their entirety. In each case the stratigraphy was established by hand-digging two trial trenches, then a Hy-Mac was brought in to remove the upper metre or so of each quadrant. This machine could stand well outside the monument and scrape down parallel with the contour of the mound. After the removal of a spit 0.15 m deep the surface was cleaned down with spades and, if nothing of interest was found, the next spit was removed by the machine. In this way the heavy clay capping and part of the sterile turf mound was removed quickly and relatively effortlessly. The paucity of finds from the lower half of the turf mounds, dug by hand, demonstrates that little, if anything, was lost by the use of the machine.

Profiles of stakeholes at Brenig 40 and 41 were obtained by making plaster casts since the subsoil was too hard to cut good sections.

Details of all stake circles are to be found in App. 1 – the raw data in microfiche with summarised dimensions in the main text.

BRENIG 42

Shelagh Lewis

NGR SH 9756 5678 Height above sea level 395 m.

This monument survived as a low, peat-covered mound standing on the top of the ridge at the western side of the valley and visible on the skyline from many parts of the cemetery. Excavation showed that the mound was built mainly of turves, was 19 m in overall diameter and covered a central rectangular structure and two stake circles. At the edge of the mound there was an annular bank of clay and stones formed by the upcast from an encircling ditch. Visible in the summit, before excavation, was an oval depression (2.5 m x 1.5 m, and 0.5 m deep). This was the result of the 19th-century disturbance that had damaged all the large monuments in the valley and, in this instance, had effectively destroyed all trace of any burials. It can be argued that two phases of activity can be identified at the site: Phase I was represented by a fence that had, at least partly, enclosed the top of the ridge; and Phase II by the building of the mound and its associated structures.

The barrow was excavated in its entirety and the ground was cleared for a distance of about 2 m beyond the ditch. The soil conditions were generally similar to those noted elsewhere in the valley; beneath the mound was an orange, gravelly subsoil which was covered by an old turf line, magnificently preserved over quite large expanses as a thin (20 mm) layer of blackish-purple clay occasionally flecked with grey (further detail in App. 8). In places, however, this turf had been stripped off before the mound was built.

The Ditch

Brenig 42 was the only monument in the valley to be surrounded by a ditch. The approximately circular, and continuous, ditch was cut through the subsoil into the easily-broken mudstone to an average depth of 0.5 m. It varied in width from 0.8 m to 1.5 m but was quite neatly cut to a U-shaped profile. The fill of the ditch consisted largely of mound material in the form of turves, originally deposited at the outer edge of the barrow, which had slipped into the ditch. In one or two sections small portions of the bank of redeposited natural had also slipped back into the ditch. The second major component in the fill was light grey clay from the mound capping which must have been added after the ditch had already partially silted up; it extended some distance beyond the outer lip of the ditch.

The Clay Bank

When the ditch was dug the spoil was cast up onto its inner edge to form a sloping annular bank of clay and stones. This bank was built directly on top of the old ground surface where that existed, and otherwise lay immediately above the orange gravelly subsoil, its average height being 0.4 m and its basal width varying between 0.75 m and 1.5 m. Underlying the bank in its north-eastern and south-western sections were the remains of an irregular stake circle (B, see below). The profile of the bank was approximately triangular, sloping back from a vertical inner face. The verticality and sharpness of this inner face, which was strikingly preserved all round the bank, suggests both that the loose upcast from the ditch must have been thrown against a solid fence (stake circle A, see below) and that the bank was not exposed as a free-standing feature for a long period.

The Turf Mound

The area inside the clay bank was filled with a mound of turves. This mound had a diameter of about 13.5 m and survived to a height of just over 1 m. It was very well preserved, the individual turves being clearly defined by black lines of decayed vegetation with attached grey and yellow clay. The method of construction was random; some turves were placed with their vegetation uppermost, others upside down. Where the turf mound met the annular clay bank and its stake revetment the turves of the mound were clearly curled upwards and had evidently been tossed down into the narrow space, rather than carefully placed in position (Pl. 7.1d). The profile of the mound indicated that it had been so constructed as to incorporate smoothly the silhouette of the clay bank. This latter was not covered by the turf mound which stood flush with the top of the inner lip of the bank. Some few turves were stacked at the base of the outer edge of the bank to serve the dual purpose of revetting the sloping heap to prevent it slipping back into the ditch, and at the same time completing the smooth profile of the monument. It was a number of these turves, together with part of the bank material, that eventually slipped into the ditch.

The Clay Capping

The final act in the construction of the monument was the throwing up of a capping of stiff light grey-yellow clay, a feature common to all the large barrows. However, the capping of Brenig 42 differed from that of the others in that it began at a point some 4 m from the centre of the mound and seems never to have covered the apex. The normal thickness of the capping was 0.2 m but it thickened gradually towards the base, a phenomenon perhaps due in part to the clay having washed down the slope. The capping not only covered the whole of the lower part of the mound but continued approximately 0.75 m beyond the lip of the ditch. The fact that it was able to spread in this way suggests that the lower fill of the ditch, turves and clay from the outer edge of the mound, must have reached that position before the clay capping was added.

Stake Circle A and Evidence of Hurdling

At the junction of the turf mound and the clay bank there was a circle of 94 stakeholes. The holes occurred at intervals of approximately 0.5 m, and enclosed an area about 13.5 m in diameter. They had an average diameter of 80 mm and an average depth of 0.23 m (range 0.15 m – 0.36 m), although on the south-east the holes were shallower, averaging 0.13 m, as the stakes had to be driven into bedrock which rose close to the surface on that side. Sixty-seven holes contained loose earth, while the other 27 were void.

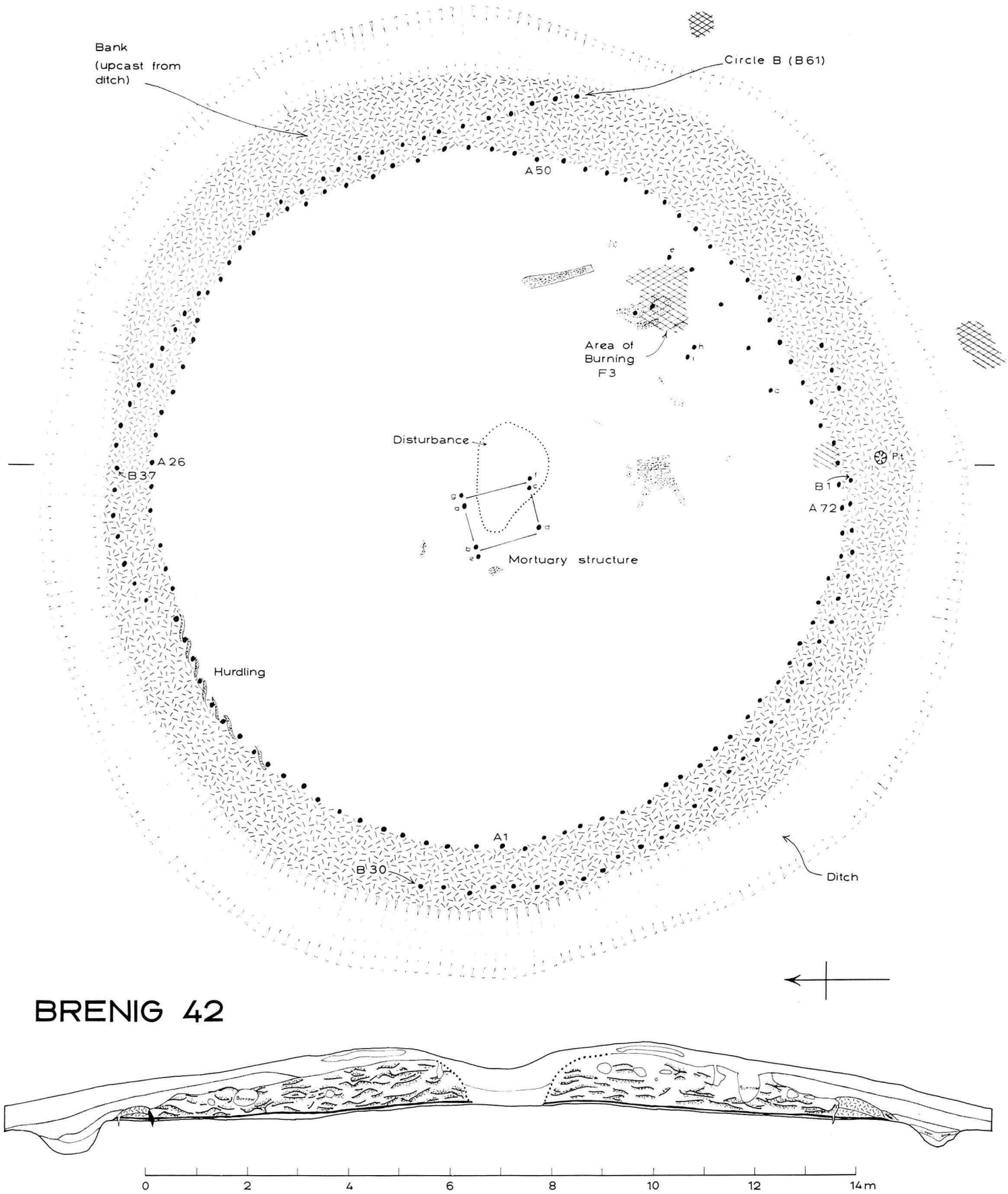
There was evidence that the spaces between the stakes had been filled with hurdling. In the north-western part of the circle this evidence was exceptionally good, for the hurdles had survived in the form of vertical and horizontal slats imprinted on the inner face of the clay bank that lay outside, but pressed up against them (Pl. 7.1c). The clearest imprint showed the uprights to have diameters of 50 mm while the horizontal members were 20 mm – 30 mm thick and woven quite closely so that three bands occupied 80 mm – 100 mm. The uprights in this case were placed 0.37 m apart, and the horizontal slats began 0.1 m above the ground level. On average these hurdle impressions survived to a height of 0.26 m, indicating that the circle remained *in situ* within the completed mound. The verticality of the entire circumference of the inner face of the bank, simply built of redeposited subsoil, suggests that the stake-and-hurdle circle was intended to act as a revetment for this feature to prevent it spilling over into the area demarcated for the construction of the turf mound, and also implies the original presence of hurdling around the whole circuit of the bank even though evidence for it survived in only one segment (see App. 1).

Stake Circle B

Outside this complete and fairly regular stake circle with its good evidence for hurdling was an incomplete and irregular stake circle with an approximate diameter of 14.5 m. It enclosed the summit of the ridge and comprised 65 stakeholes occurring at intervals of about 0.5 m. The stakeholes, which averaged 70 mm in diameter, were cut through the old ground surface where this was preserved, and survived to an average depth of 0.22 m (range 0.13 m – 0.34 m). The majority contained a loose earth fill; 24 were void. The area in the immediate vicinity of the circle had been partially de-turfed and no evidence was forthcoming to indicate whether the stakes had ever been linked with hurdling. The stakes themselves had certainly been removed prior to the construction of the mound, for all the stakeholes were covered by the clay bank and no trace of stakes occurred in the bank itself. The 'circle' was quite irregular and incomplete; indeed, it might more accurately be described as a pair of opposed arcs of stakes. No stakes were found on the north-west despite a careful search of that area; on the south-east the stakeholes were infrequent and erratic, but on the east side a good, consistent run of stakeholes appears to have been cut away by the digging of the ditch. Search outside the ditch failed to reveal a continuation of the line. As far as may be judged, the centre of this 'circle' lay slightly south-west of the burial area which formed the focal point of the barrow.

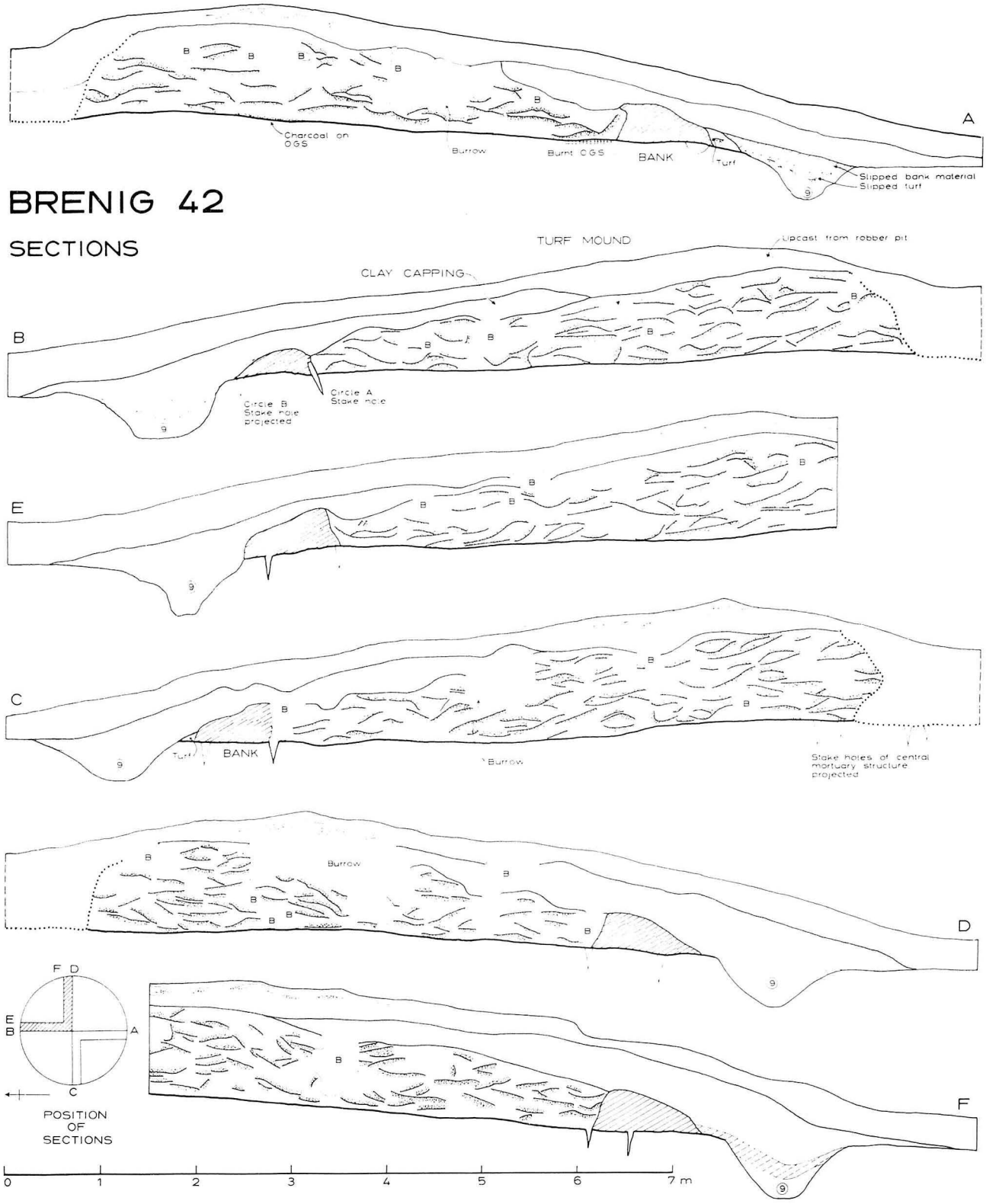
Central Feature

At the centre of the monument, on the highest point of the ridge where the bedrock lay close to the surface, there had been a small rectangular wooden structure. Regrettably the 19th.-century robber pit had encroached on about two-thirds of



7.1 Brenig 42: plan and section.

the central area, and had cut away the old ground surface. The surviving evidence for a possible 'mortuary structure' at the centre of the mound comprised seven stakeholes forming a rectangle 1 m x 1.5 m. Pairs of stakeholes occurred at three of the corners, but at the fourth only a single hole could be found. These stakeholes averaged 80 mm in diameter and penetrated the natural to depths varying between 0.15 m and 0.23 m. Two appeared as voids and two were earth-filled,



7.2 Brenig 42: sections

while the remaining four were plugged with charcoal. The charcoal in the stakeholes, as well as traces of charcoal both inside and immediately outside the 'mortuary structure', suggest that it might have been fired *in situ* like the one at Brenig 40. Charcoal from one of the stakeholes that formed part of the central structure has produced a radiocarbon date of 1660 ± 70 b.c. (HAR 713). Unfortunately, probably due to the extensive disturbance mentioned above, no traces of a burial or associated artefacts were found.

South-east Quadrant – Area of Burning and Stakeholes

In the south-eastern quadrant of the mound, evidence came to light of activity undertaken before the construction of the turf stack. The first feature to be considered is an irregular area

of burning (1.25 m x 1.2 m) on the old ground surface (BG42:F3) which incorporated four pieces of charred oak that were recognisably portions of former planks. The evidence of burning *in situ* comprised burnt clay with a spread of charcoal and a very few fragments of unidentifiable cremated bone (BG 42:15; App. 5). This rather amorphous feature was possibly connected with nine stakeholes found nearby. Five of these, which were rather larger than average and more widely spaced (see App. 1), formed a short arc just inside Circle A and the bank, and were found with a filling of earth and charcoal. Fronting these, but not centred on them, was a group of four small stakeholes which formed a narrow trapezoid measuring approximately 1.5 m x 0.3 m. These four stakeholes were found as voids.

Several other patches of burning were noted beneath the mound, all concentrated in the south-eastern quadrant. Slightly to the north-east of BG42:F3 lay a carbonised oak plank 1.5 m x 0.25 m, and to the west there was another irregular patch of oak charcoal in which one short plank and the less well defined remains of at least three more could be recognised. Several smaller areas of burning could be identified in the same vicinity, as well as a patch of heat-reddened clay (0.4 m x 0.45 m) lying close to Circle A at the southern side of the mound.

Pit Beneath Bank

A small, unexplained pit, 0.2 m in diameter and only 0.1 m deep, was found beneath the clay bank on the south side of the mound. It was filled with grey clay flecked with charcoal, and must pre-date the building of the bank. It lay outside the line of Circle B, which was discontinuous in this area.

Patches of burning outside the barrow could not definitely be related to any activities within it.

Finds (App. 3, Fig. 2)

Very few finds were made in the course of the excavation; there were no artefacts associated with the central burial area, and only six undiagnostic pieces of struck flint (one (BG 42:4) a piercer) and a core were collected (Table App. 3.4). This paucity of finds is typical of the barrows of the western side of the valley.

Discussion

The excavation of Brenig 42 has provided good evidence for the sequence of events at this burial monument, and also for the planned and protracted nature of barrow-building in the Early Bronze Age.

The most interesting discovery concerns Stake Circle B which pre-dates the barrow and was removed when the bank was built. The stratigraphic evidence is clear; it was completely covered by the bank in which there were no traces of stakeholes. Its separation in time from the barrow-building activity is based on the more subjective impression that the line of this fence had been cut by the digging of the ditch, at which time it became redundant.

If this view is accepted, this rather irregular ring of stakes may be interpreted as a fence delimiting the area at the summit of the ridge designated for future ceremonial use. Evidence for a similar fencing of a burial area emerged from Brenig 41. Such pre-emption of sites would fit well with the idea that the cemetery was planned as a group from the outset (see below p. 149), with the setting of each monument very carefully chosen. It is not possible to judge how long the fence survived.

The only other feature to belong to a pre-barrow context is the unexplained pit under the bank. It is interesting that this should be outside the fence and it is possible that it belongs to a very much earlier period. A small pit beneath Brenig 40 produced a sixth millennium b.c. date; possibly this one belongs to the same context, even though no contemporary artefacts were found on this western side of the valley.

The mound itself reveals a sequence in its construction, but here the two main stages must have followed each other fairly rapidly. The ditch and the clay bank with its hurdle revetment were built before the centre was filled with turves. The way in which the turves curl up against the face of the bank demonstrates this beyond doubt. However, the sharpness of the inner lip of the bank suggests that the period during which it was a free-standing feature was not a long one. It is possible to suggest that the burning in the south-eastern quadrant took place during this time, as at least one patch of burning, and the arc of stakeholes, seem to be related to the bank. Fronting the arc of stakes was a narrow, trapezoidal structure with a stake at each corner which overlapped the area of burning on the old ground surface. It is strikingly similar in shape and size to a structure beneath Brenig 45 on the other side of the valley. In neither case can the structure have been very substantial since the stakeholes were shallower than average. There is no certain evidence that the two groups of stakeholes and the area of burning belong to the same period of activity, but it is tempting to consider that they belong in some way to the framework of a pyre, from which the bulk of the bones had been removed for deposition elsewhere. The 'pyre', therefore, may have been built and fired within a low circular enclosure before the centre was filled in with turves to form a mound of more conventional type.

The 'mortuary structure' must also have stood within this enclosure. In size it is very similar to that found at Brenig 40 but the nature of the structure is quite unknown. Whereas the one at Brenig 40 gives an impression of solidity, this one looks more like an open enclosure, perhaps formed from small, separate hurdles (one possibly a gate) – hence the paired stakeholes. Whatever its shape it seems to have been burnt before the turf mound was built. The similarities between

Brenig 42 and Brenig 40 are interesting because they reveal the conservatism of burial rituals in this community, for radiocarbon dates (App. 10) suggest that the two barrows are separated in time by several hundred years.

The filling of the ditch suggests that the mound had begun to slip before the final capping of clay was added to it. This implies that there was an interval before the mound was completed, an interval for which there is no evidence at the other mounds, which were similarly capped with clay. However, since they had no ditches to preserve the evidence this contrast may be more apparent than real. What does seem to be genuinely different is the absence of clay from the apex of the mound. The sections do not suggest that this is due to subsequent erosion or disturbance, and we must accept that this mound was eventually completed in a rather different way from the others – that the familiar elements were combined in a slightly different fashion.

BRENIG 41

John Waddell

NGR SH 9787 5706 Height above sea level 369 m.

Brenig 41 was set on the summit of a small spur projecting from the flank of Cefn Brenig, which is now an island in the lake. Although it does not appear on a skyline like Brenig 42 it is placed on a well-chosen and conspicuous site.

Before excavation Brenig 41 was a large circular mound, 17.5 m across and 1.4 m high, covered with peat and heather; sadly there was a large depression in the top indicating previous disturbance. Excavation revealed that the mound was very similar to Brenig 42 and to the other barrows in the valley; it was built mainly of turves, and the turf mound was capped with a layer of light grey clay; it covered two stake circles and a disturbed and empty grave pit, probably designed to contain an inhumation. As at Brenig 42, two phases of activity were discernible, for a third stake circle apparently pre-dated the burial mound and its associated features.

The excavation strategy was the same as that adopted at the other large barrows (p. 47). Beneath the modern humus and peat was a thin layer of clay, a capping of irregular thickness, which covered a well-preserved turf mound. The upper levels in particular had suffered considerable animal disturbance (Fig. 7.4).

Old Ground Surface

Beneath the turf mound, the old ground surface was poorly defined, appearing as a rather tenuous black layer 15 mm thick. Below this old vegetation horizon was a narrow layer of varying thickness (maximum 70 mm) of grey-white, leached clay with a stony yellow subsoil beneath. Here and there, particularly in the southern quadrant, shale bedrock approached or protruded through the surface. In a few places, just beneath the vegetation horizon, traces of truncated turf-line were located (e.g. section A-B); these will be discussed below. At the centre of the mound a deposit of shaly stones on the old ground surface proved to be the upcast from the grave pit (see below).

The Turf Mound

The turf mound averaged about 15 m in diameter and had a maximum height of 1.25 m in its compressed state. In spite of a great deal of animal disturbance, individual turves and groups of turves could be clearly recognised as lenses of black, decayed organic material, with accompanying deposits of grey-white, leached clay and orange clay. The turves varied in size but, where clearly defined, were usually 0.1 m to 0.15 m thick (in their compressed state) and usually varied from about 0.2 m to 0.4 m in length. Turves were stacked in a variety of ways – vegetation to vegetation, vegetation upwards or downwards; they were frequently more or less horizontal, although in the north-eastern part of the mound they presented the appearance of having been stacked at a slight angle (see section C-D). In size, they were comparable to those of Brenig 40.

The Clay Capping

The layer of clay (a grey, silty loam) which covered the turf mound averaged about 0.18 m in thickness; however, in places, particularly near the summit of the mound, the clay could not be traced. Sometimes its absence could be attributed to animal activity. It was thickest (up to 0.4 m) on the north-eastern edge, where it extended up to 1.7 m beyond the limits of the turf mound. On the northern slope of the mound a thin layer of peaty material, with a narrow lens of humic clay beneath it, occurred on the clay capping (see section C-D) and below the layer of humus; it possibly represents a localised alteration in the formation of the general humus which covered the tumulus.

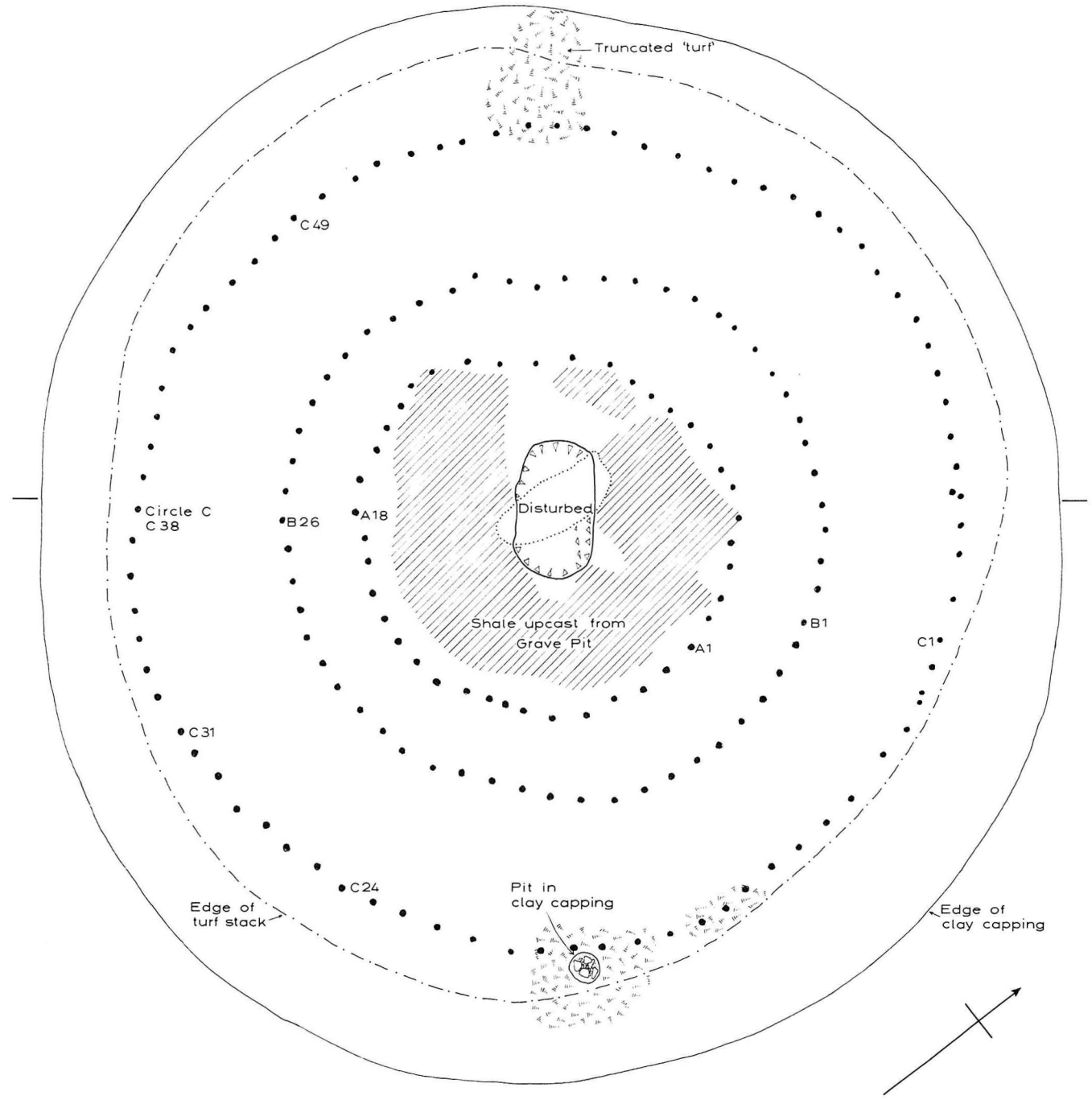
The Stake Circles

Traces of three concentric stake circles (A, B & C) were found beneath the turf mound; the outermost circle, C, is believed to represent the earliest structure on the site.

Circle A comprised 41 stakeholes set about 0.4 m apart, forming a rather irregular circle averaging about 6 m in diameter. It enclosed the grave pit and its upcast. The majority of the stakeholes appeared as partly empty, circular, holes in the old ground surface. Their lower halves usually contained a loose fill of brown or orange clay with small fragments of shale. The stakeholes

were first recognised in the lower 0.1 m (approx.) of the turf mound. Most of them were vertical but a few sloped gently towards the edge of the mound. Many also contained the last remains of iron-impregnated wood, usually unidentifiable, but one (A32) was oak and another (A20) was hazel. Three contained minute flecks of charcoal. The average diameter was about 80 mm, and the average depth 0.17 m (range 0.09 m – 0.28 m).

Circle B comprised 56 stakeholes also set about 0.4 m apart; the circle was approximately 8.75 m in diameter and lay more or less concentric with, and 1 m to 1.5 m from, Circle A. The stakeholes resembled those in Circle A, normally appearing in the lowest level of the turf mound, or in the old ground surface, as circular holes with their lower parts containing a loose fill. The majority (some 66%), sloped outwards, a few centimetres



7.3 Brenig 41: plan and sections

from the vertical, towards the edge of the mound. A number contained traces of iron-impregnated wood (hazel in the case of B52 and B4) or flecks of charcoal. The average diameter was about 80 mm and the depth approximately 0.18 m (range 0.07 m – 0.32 m).

Circle C comprised 82 stakeholes and averaged about 13.5 m in diameter. The stakeholes were placed about 0.47 m apart; they did not form a true circle but, particularly in the south and west, presented in plan an irregular aspect which might suggest several straight lines of stakes, each placed end to end to form a rough ring. Stakeholes C19–23, C24–27, C28–31, C32–35, C36–41 and C42–49 appear to form such rows. It is perhaps conceivable that this circle of stakes was constructed in prefabricated sections or hurdles; the overlapping stakeholes C78 (albeit a dubious example) and C79 on the north-east, and the closely-placed holes C3 and C4 on the east might support this suggestion. The majority of stakeholes were circular and vertical; they contained a loose fill of yellow and brown clay, and a few contained flecks of charcoal and possible wood traces. They averaged 65 mm in diameter and 0.15 m in depth (range 0.06 m – 0.38 m). They tended to be smaller and shallower than those of the other circles.

Unlike the stakeholes of Circles A and B, those of C were not easily found in the old ground surface, and none was identified within the base of the mound. Indeed the majority was only discovered when the pre-barrow vegetation surface was being trowelled off. Most of the stakeholes (66) were first located beneath the old ground surface in the grey-white leached horizon of the subsoil; the upper parts of nine stakeholes were too ill-defined to say precisely where they first appeared. When the remaining portions of the quadrant baulks were being removed, the opportunity was taken carefully to examine the stratigraphical position of the Circle C stakeholes. Of the stakeholes beneath the four baulks, nos. 16, 18, 56–58, and 81–82 were located in the old ground surface (nos. 18, 56, 58 and 82 appeared as shallow pipes, the others as brown patches), and nos. 15, 17, 27–29 and 59 quite definitely occurred below the old ground surface, in the subsoil.

Relict Turf

In the course of excavating the eastern quadrant to yellow subsoil, a thin, patchy lens of decayed organic material was noted in places in the upper leached B horizon of the subsoil 20 mm – 30 mm below the pre-barrow surface. This lens was separated from the latter by a layer of grey-brown clay about 20 mm thick. As already noted, the leached horizon itself varied in thickness, with a maximum of 70 mm. The black lens was described by Dr Hibbert as a 'truncated turf line', representing a partial or very rough de-turfing which removed the greater part of the vegetation, perhaps leaving only the roots. The thin humic layer which survived measured only 5 mm thick on average and, in places, was very difficult to detect. It was first uncovered in the vicinity of stakeholes C11 to C13, and faint traces of it were found in the immediate area of stakehole C7. It was not found elsewhere in this eastern quadrant; very faint traces of it were noted in the southern and western quadrants. The removal of the baulks permitted a meticulous search for this feature which, however, confirmed its intermittent nature. It was not found on the north-east or south-west; it was recorded on the north-west and south-east but only in the vicinity of Stake-Circle C (see plan). The significance of the apparent association of this circle with a truncated turf-line is discussed below.

Evidence for hurdles

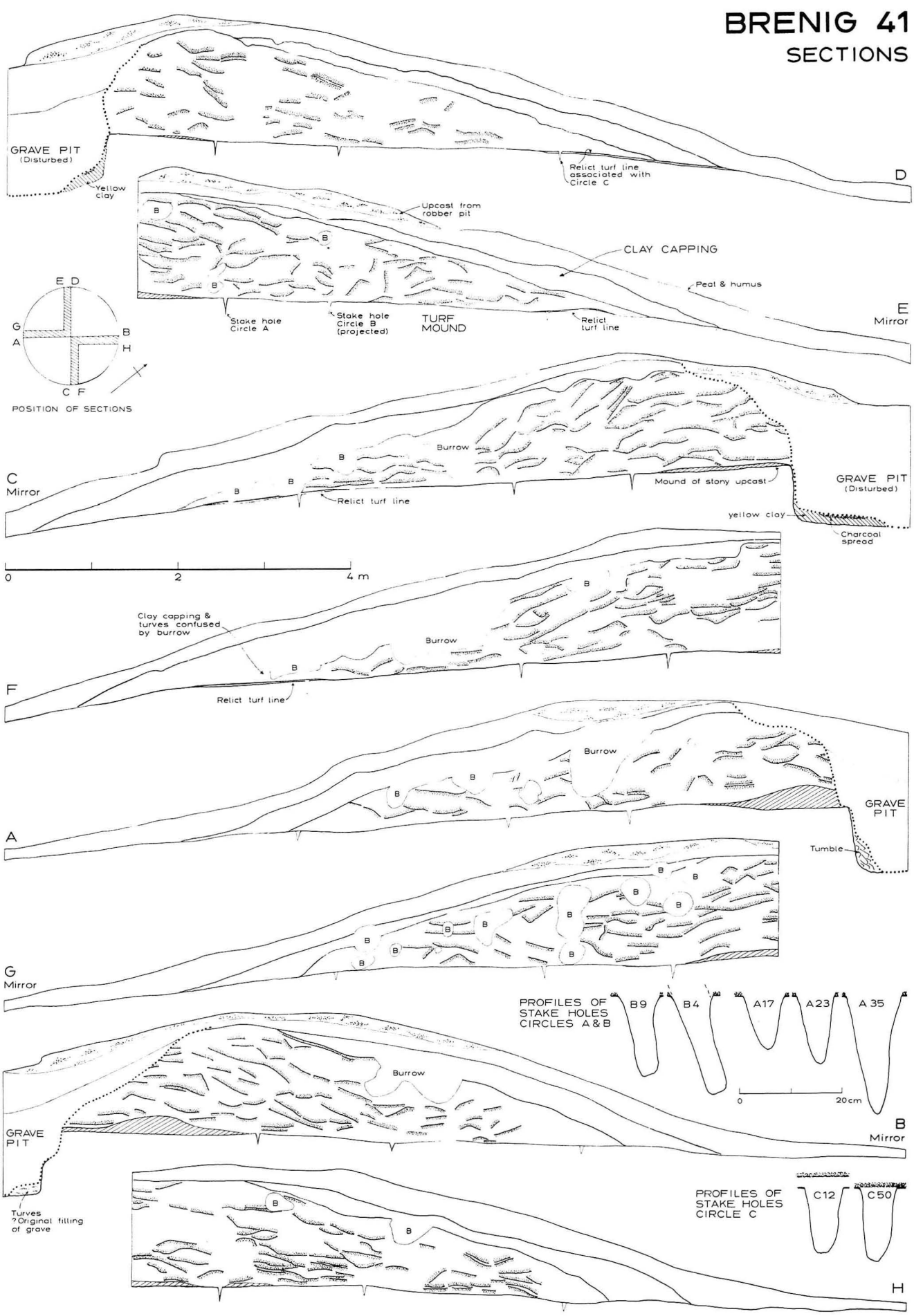
Traces of wickerwork or hurdling between the stakes of the circles were found occasionally. None were found associated with Circle C, several with B and a few with A.

A smear of iron pan (containing traces of unidentifiable wood) 0.9 m long (with one short break) and 60 mm wide was found between stakeholes B27 and B29; it rested on about 30 mm of turf mound. Similar, sporadic traces of wood (probably hazel) were recorded between stakeholes B37 and B40, resting on 40 mm – 50 mm of turf; some of these fragments included a thin skin of iron-replaced bark completely enclosing disorganised iron deposits oval in cross-section, representing the remains of branches of wood a few centimeters in diameter. In places between B39 and B40, and between B37 and B38, a groove was traceable in the turf; 30 mm – 40 mm wide and 30 mm deep, it appeared 40 mm – 50 mm above the old ground surface. Traces of unidentifiable wood were found between stakeholes B54 and B56 and another slight groove in the turf (50 mm – 60 mm above old ground level and some 0.35 m long and 40 mm wide) was noticeable between B56 and B1. Wood traces and iron-staining were found between stakeholes A27 and A34 and a deposit of iron pan 30 mm – 50 mm wide and 30 mm deep occurred in the bottom layer of turf between stakeholes A19 and A20. A fragment of iron-replaced wood from the lip of stakehole A21 was identified as hazel.

The sporadic traces of hurdling, invariably flecks of wood heavily impregnated with iron, were only located in the very lowest levels of the turf mound, never more than 0.13 m above old ground level. Unlike Brenig 40 (see below), careful examination of the baulks did not produce any trace of the stake circles in the body of the mound. Assuming that Circles A and B were incorporated in the turf mound, it would appear that the settling of the mound obliterated their traces except at the very base of the barrow.

The Grave Pit

At the centre of the mound, a deep, sub-rectangular grave pit had been dug. It was partly surrounded



7.4 Brenig 41: sections

by its stony upcast of broken shale and grey-yellow clay. This upcast formed a low, irregular mound all round the pit except on the north-west (Fig. 7.3). The mound was nowhere more than 0.25 m high and at its edge it was very thin. It lay within Circle A, but whether the circle was erected before or after the grave pit was dug is not known; stakehole A24 appeared as an empty pipe in about 30 mm of the upcast but it is uncertain whether the upcast once surrounded the stake *in situ*, or whether the stake had been driven through the upcast.

The grave pit was roughly sub-rectangular in plan, with rounded corners. The long axis lay east-south-east - west-north-west, the sides were nearly vertical, the base slightly concave and it measured 2.4 m x 1.35 m. At its centre it was 0.73 m deep, and for most of its depth was cut into bedrock. Unfortunately, it had suffered considerable disturbance in the last century, a fact emphasised by the discovery of the remains of a 19th. century plasterer's trowel on the southern lip of the grave pit.

The robber-pit was a deep, irregular excavation through the turf mound which disturbed much if not all of the upper levels of the grave pit and even disturbed the floor of much of the western half. A partial collapse of the southern side of the grave pit and a cut-away portion on the north (Fig. 7.5) may possibly be attributed to this disturbance. The disturbed portions of the grave were filled with a loose mixture of redeposited turves, black earth, and flecks of charcoal. A narrow deposit of turves and yellow clay along the north-eastern side of the grave pit rested on the stony floor. It was some 0.15 m thick, fairly compact, contained no charcoal flecks and may represent the original fill. At what appeared to be the bottom of the disturbed fill a roughly rectangular deposit of carbonised wood, possibly oak, measuring about 0.7 m x 0.58 m, and only a few millimetres thick, lay on a few centimetres of yellow clay on the floor of the grave pit towards its eastern end; a thin smear, which analysis revealed to be decayed bone (BG41:27. App. 5) lay in this deposit (Fig. 7.5). An even lighter scatter of carbonised wood (only 1 mm - 2 mm in thickness) was found immediately to the north, in fact lying beneath the narrow deposit of turves, and more was found beyond the area of disturbance, at the western end. This wood may be the remains of a timber coffin or plank floor. Unfortunately there was insufficient material to provide a radiocarbon date. These traces of wood lay at the very base of the disturbance, which possibly explains why they were so tenuous. Nothing else was found in the grave.

A simple field analysis of a series of soil samples from the floor of the pit provided positive evidence for phosphate enrichment and a pattern of high and low concentrations was discernible. Unfortunately, the area of high concentration coincided with the area of disturbance on the grave floor and the fact that the upper levels of the grave were also disturbed must be remembered. All that can be said is that the grave pit very probably had held an inhumation; the pit was sufficiently large to contain either an extended or crouched skeleton, but the acid nature of the soil was inimical to the preservation of unburnt bone.

Three pieces of what appeared to be iron-impregnated wood were found on the disturbed western edge of the grave pit. The southernmost piece was probably hazel. It was 0.3 m long, 50 mm thick and 80 mm - 100 mm wide and rested on the old ground surface. The other two pieces were hardly more than thin smears, each about 0.4 m long and 30 mm - 70 mm wide. Analysis revealed no identifiable wood in either of these iron-stained deposits; one, however, was probably decayed bone, which may have been pulled out of the grave pit. Another thin remnant, most probably wood, measuring 60 mm x 70 mm, and only 1 mm - 2 mm thick, was found in a deposit of iron pan on the old ground surface between, and just inside, stakeholes A26 and A27.

Pit in Clay Capping

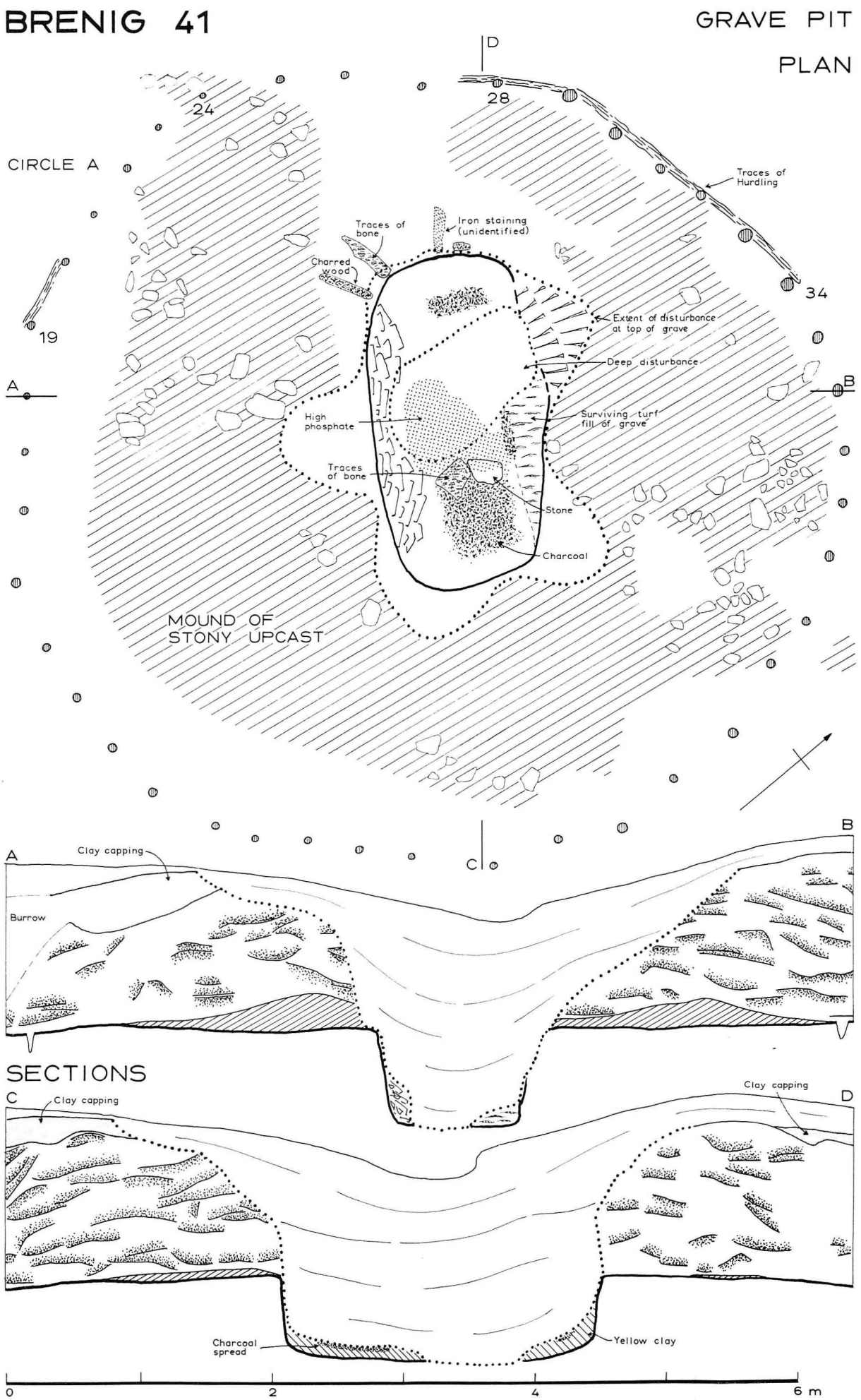
The only other feature recorded in this barrow was found near its south-eastern edge in the clay capping. It was a shallow oval depression 0.5 m x 0.45 m with a maximum depth of 0.1 m. Its edges were well-defined in the clay capping, and its base was formed by the surface of the turf mound, which was 0.28 m high at this point. It contained about six small rocks (measuring about 0.2 m x 70 mm), a few pebbles and dark earth with numerous flecks of charcoal (hazel, willow, alder, birch, oak and possibly ash); a rectangular lump of quartz rested on top of this deposit. (The depression is projected on the ground plan, Fig. 7.3).

Trench between Brenig 41 and Brenig 40

Brenig 41 was excavated in its entirety and examination of an area around the site up to 5 m from the edge of the mound produced no further results. Simply to ensure that no feature such as an 'avenue' of stakes lay between it and Brenig 40, a trench 11 m long and 2 m wide, with its long axis north-east - south-west, was cut roughly midway between the two. The only find was a flint flake with some secondary trimming (BG41:17) found beneath the humus on the underlying subsoil.

The Finds (Fig. 3.8, App. 3.1 & 2)

The finds, with the exception of some tangible evidence of the 19th.-century disturbance (an iron chain link and the plasterer's trowel), comprised 39 pieces of flint. Of these only six were recognisable artefacts: three knives, a serrated flake, a fabricator and a denticulate scraper. The distribution of the finds is similar to that at the other turf barrows, in that most came from amongst the turves of the mound or from the old ground surface immediately below it. Both may be considered Bronze Age contexts although the pollen evidence (Chap. 2) suggests that the turves may have been brought from elsewhere, so that the material from



7.5 Brenig 41: details of grave pit.

the mound indicates activity not here, but at their source. The pieces from the old ground surface could have been dropped during the building activity, or at the time when the outer fence was erected, for some pieces (e.g. BG41:26 & BG41:35) were associated with the lower turf line.

Only one piece (BG41:2) is of possible Mesolithic date; a denticulate scraper in poor quality flint, a material notably rare amongst the finds from the west side of the valley, despite the Mesolithic date for a pit under Brenig 40 (App. 10, date 1).

Discussion

It would appear possible that the history of activity on this site falls into two distinct phases.

Phase 1: the truncated turf line suggests a partial de-turfing of the area before the construction of the mound. Its intermittent nature would indicate that de-turfing in some areas was more thorough than in others. In the opinion of Dr Hibbert the formation of a new humus and vegetation, the pre-barrow old ground surface, would have taken 'decades'. This de-turfing activity may have been associated with the construction of Circle C. If any structure had stood in the centre of this circle, no trace of it survived the digging of the grave pit. Two waste flakes and the flint 'fabricator' were found in the truncated turf line. Unfortunately such 'fabricators' suggest no more than a Late Neolithic or Early Bronze Age date.

Phase 2: at some later date, presumably when traces of Circle C still survived, two further circles (A & B) were erected, the central grave pit dug, and all were covered by the turf mound with its clay capping.

The most interesting and important question of interpretation which is raised by the excavation of Brenig 41 is this possible difference in date between Circle C and the other stake circles. Since all three rings are concentric, the conclusion that they are not all broadly contemporary is one that needs to be examined with care, because it may have implications for other 'Stake Circle Barrows', although the tenuous nature of the evidence here would not allow confident re-interpretation of old excavation reports.

The association of Circle C with the relict turf line provides the strongest evidence for its priority. The stakeholes of Circle C could not be easily found when the pre-barrow surface was first cleared, whereas those of Circles A and B had immediately appeared as voids. Further trowelling, however, revealed this outer ring at the level of an elusive and intermittent vegetation layer which has been interpreted as the lower part of a humic horizon, partly de-turfed and subsequently grassed over. This natural sequence would suggest that a few years at least separated the construction of Circle C and the development of the vegetation surface on which the barrow was finally built.

Other facts tend to confirm the distinction between Circle C and Circles A and B. Whereas several stakes from the inner circles had survived into the base of the mound, none from Circle C was found to have done so. The average size of the stakes in Circle C is slightly smaller than those in the inner circles, and they were driven in a little less deeply. Furthermore, the stakeholes produced much less evidence of wood when compared with those of the other circles. In plan Circle C is rather more angular than the others, suggesting the use of straight lines of stakes, perhaps hurdles. None of these observed differences is very striking on its own, but together they support the conclusions suggested by the two turf lines.

The first activity at this site, therefore, was the construction of a ring of stakes, perhaps with hurdles, which enclosed the top of the hill, already partially cleared of vegetation. There is no evidence for any structure within the circle at this stage and it is reasonable to interpret this stake ring as a fence set up around an area designated for future use as a burial place. Evidence for a fence pre-dating the barrow at Brenig 42 has been interpreted in the same way. Both of them mark carefully chosen sites, in each case the exact summit of the ridge, and suggest that the placing of monuments was a matter of some forethought and planning. In the case of Brenig 41 it is possible to claim that the site had been demarcated for some years before it was finally used.

The monument that was built covered a large central grave - certainly big enough to contain an inhumation, either extended or crouched. The rough heap of gravel and stone around this grave is so untidy that it suggests that the mound must have been built over the grave as soon as it was filled and the construction of the monument went ahead quickly. The only subsequent activity recorded here was the burial of stones in a shallow pit in the clay capping.

The tiny remnant of bone which survived in the bottom of the grave was too decayed for one to be certain that it was unburnt, although the weight of the evidence (the size of the grave, the lack of bone in the material thrown back into the robber-pit) would suggest that it was. Thus, Brenig 41 may have contained the only inhumation in the cemetery. The fact that in other ways the monument is so similar to the rest of the barrows only reinforces the impression gained from a study of the pottery from the valley - that the traditions of the Early Bronze Age were already thoroughly mixed by the time these barrows were built.

BRENIG 40

John Waddell

NGR SH 9780 5713 Height above sea level 380 m.

Brenig 40 is the largest burial monument in the valley, measuring some 24 m in diameter and 1.8 m in height, but, although it commands fine views, it is less conspicuously sited than its neighbours on Cefn Brenig. It stands on rising

ground some 250 m behind and to the west of Brenig 41.

Before excavation it was, like the others, a large, roughly circular, heather- and peat-covered mound with a depression in the top indicating some previous disturbance. Excavation revealed that this monument, too, was built mainly of turves and was capped with a layer of light grey clay. It covered a complex of four stake circles, the remains of a timber 'mortuary structure', and a cremation burial in a Collared Urn. The edge of the barrow had been delimited by a timber palisade. Radiocarbon dates obtained from the planks of the 'mortuary structure' suggest that this monument was added to the cemetery at a late date in its development.

The excavation strategy was similar to that used at the other mounds (see p. 47). The mound was totally excavated, and an area extending 2 m – 3 m beyond its perimeter was trowelled to bare subsoil without result.

Old Ground Surface

Everywhere beneath the turf mound the old ground surface could be identified without difficulty, in plan and in section. It appeared as an iron-stained, blue-black layer of decayed humus which averaged 15 mm in thickness. Beneath this layer the natural subsoil consisted of a narrow, leached B horizon averaging 20 mm in thickness above a hard, orange-coloured boulder clay subsoil.

The Turf Mound

The turf mound was roughly circular, averaged about 20 m in diameter and had at the centre a maximum height of 1.65 m. The only major disturbance proved to be the central robber-pit, a large conical excavation, which cut through the mound into the old ground surface. A certain amount of animal disturbance had also taken place, particularly near the surface and at the perimeter of the turf mound. In general the turf-stack was well preserved and the horizontal stacking of turves was clearly visible. It was often possible to distinguish the sequence, from decayed vegetation through grey-white leached clay to orange clay, forming individual turves. Where this sequence could be observed it was possible to see whether the turf had been laid vegetation upwards or downwards. While there was nothing to indicate that the turves had not originally been laid horizontally, their stacking had apparently been random, some being laid vegetation to vegetation, some clay to clay, and some neatly stacked, vegetation upwards. As far as could be judged from all sections, this situation occurred throughout the greater part of the mound. The stacking appeared particularly neat near the centre of the mound, perhaps indicating special care in its construction there (see Fig. 7.7 A & B). Slightly more gravelly deposits of orange clay, in which turf lines were less evident, occurred in parts of the eastern and southern quadrants. The deposits were observed only in the sections in that side of the mound in the vicinity of Stake Circles A and B (and dotted on sections A, H & F). The identification of 'slightly more gravelly deposits' was, not surprisingly, sometimes a rather subjective exercise and the dotted lines merely emphasise areas in which there was an abrupt change in the make-up of the mound. It is not surprising that there should be some variation in the material used in the construction of the turf mound, but only once was such a variation observed to coincide with a stake circle (p. 61). The turves varied in size but, where clearly defined, were similar to those used in Brenig 41, 0.1 m – 0.15 m thick and 0.2 m – 0.4 m long.

The Clay Capping

The turf mound was covered with a deposit of grey, silty clay which varied greatly in thickness. In places, particularly near the summit of the mound, it was virtually untraceable between humus and turf; on occasion its lower limits were difficult to define because it appeared to merge gradually into the turf mound. On the slopes of the mound this capping averaged 0.15 m in thickness. At the edge it extended in places up to 2 m beyond the turf mound and was sometimes up to 0.25 m thick.

A scatter of about fourteen small boulders, found on top of the mound immediately to the west and south-west of the mouth of the robber-pit, was set in this clay capping, resting on top of the turf mound; the stones may have been placed there as a very rough stone capping. Others may have been removed by the diggers of the robber-pit, and a few similar rounded stones lying in the heather in the vicinity of the barrow may have been displaced from there.

The Palisade Trench

A palisade trench surrounded the turf mound; it had an internal diameter of about 20 m and was fairly circular except for some irregularity on the west and north-west. It was roughly straight-sided with a flat to rounded bottom and it averaged 0.35 m in width and 0.3 m in depth; its fill consisted mainly of a hard, compact, pebbly, grey clay with patches of orange and brown clay. The hard, stony fill of the trench was very similar to, and on occasion almost indistinguishable from, the surrounding subsoil. Occasionally, in the lower half of the fill of this trench, a slight difference in the compactness of the fill indicated the former presence of timber posts. Although no neat post 'pipes' were found, the existence of posts was confirmed by the occasional traces of packing with small stones. The 'post sockets' had an average depth of 0.2 m in the trench and they were normally about 0.2 m in diameter. As indicated on the plan (Fig. 7.6), the rather irregular traces of timbers were only recovered in certain parts of the trench; wherever they were well-preserved it

seemed clear that the posts had been placed almost contiguously.

It is clear that the palisade trench delimits the turf mound; however, the height of the turf at this point, no more than about 0.25 m, might suggest that whatever the function of the palisade, it was not merely to retain the mound. The sections clearly demonstrate, too, that the clay capping overlies, but does not fill, the palisade trench, and in fact extends up to 2 m beyond it. It is possible that the palisade was built to retain the clay capping on the turf mound, that it decayed *in situ* and that the outer material represents slip or some additional exterior packing. On the other hand, the hard-packed nature of the fill, and the fact that the traces of posts were only identified in the lower level of part of the trench, raises the possibility that the timbers did not rot *in situ* but were removed and the trench filled before the completion of the monument by the addition of the clay capping. Both the shallowness of the trench and the modest dimensions of the post sockets suggest that the palisade was perhaps only 0.75 m in height, and an insubstantial structure.

The Stake Circles

Traces of four concentric circles of stakes were found beneath the turf mound; these have been labelled (from the centre outwards) A, B, C and E. An arc of stakes lying just inside E in the southern half of the monument has been labelled D. The stakes of circles A and B were usually placed about 0.5 m apart, those of circle C were about 0.6 m apart, while the stakes of E and the arc D were 0.7 m – 0.75 m apart.

Circle A measured about 5 m in diameter and comprised 29 fairly evenly-spaced stakeholes (including one somewhat doubtful example: A26). All but two of the stakeholes appeared as narrow, circular pipes of soft, brown, sometimes gravelly, clay in the natural gravel; sometimes they were visible in the black old ground surface as small, roughly circular patches of brown or grey soil, often ringed with iron pan. When not visible in this surface, they were readily located by prodding. In about six instances (see App. 1) the stakeholes were empty, and suddenly appeared as small circular holes in the course of trowelling.

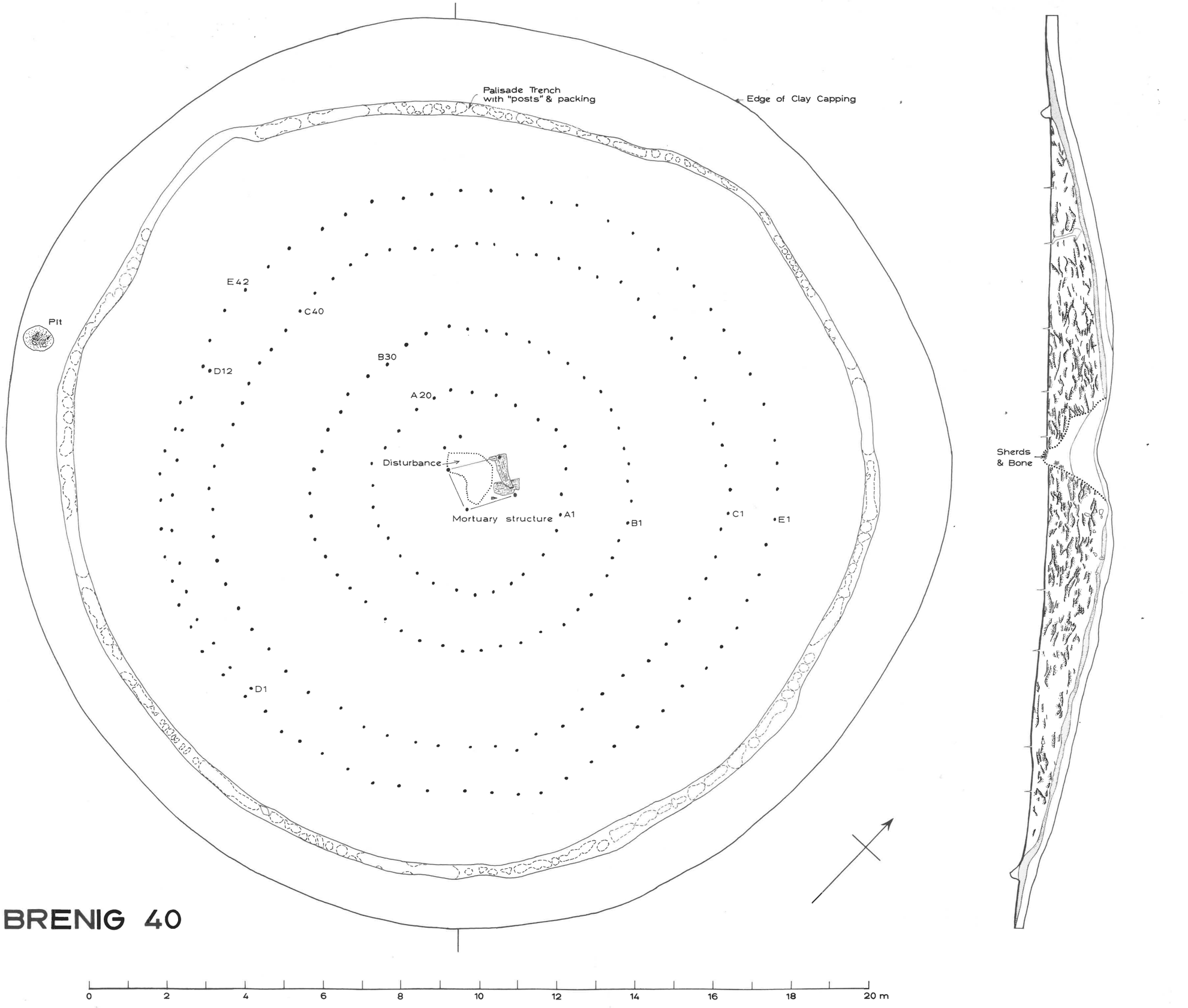
As already noted, two stakeholes did not conform to the general pattern. A15 and A27 were first located (though not immediately identified as stakeholes) in the turf mound. A15 first appeared as an empty hole in the bottom 0.15 m of the turf mound. A27 first appeared as an irregular, narrow (50 mm diameter) pipe in the turf mound (Fig. 7.7 Section E) at a height of 0.4 m above ground level. Its irregular shape was clearly visible in section in the northern quadrant and it was initially assumed to be a mousehole. However the hole proved to coincide with a definite stakehole at old ground level. The lower part of the hole in the turf mound contained only a little iron-stained clay and some fragments of wood, possibly bark. The hole in the ground contained the usual brown clay fill. A27, like the majority of stakeholes in the circle, inclined very slightly outwards. The stakeholes measured on average 80 mm in diameter and 0.21 m deep (into the subsoil), their depths ranging from 0.14 m – 0.36 m.

Circle B measured about 8 m in diameter and lay about 1.5 m from Circle A, with which it was approximately concentric. It comprised 47 stakeholes. All but eight were first located in the old ground surface: six, B4 and B19-B23, were traced to a height of about 0.1 m in the mound. While some of these stakeholes were vertical, others were at an angle and the stakes must have been inclined outwards. The majority of stakes had been circular in section but a few were oval, and two (B36 & B41) were not quite straight. The stakeholes averaged 80 mm in diameter, and 0.2 m in depth (range 0.15 m – 0.29 m).

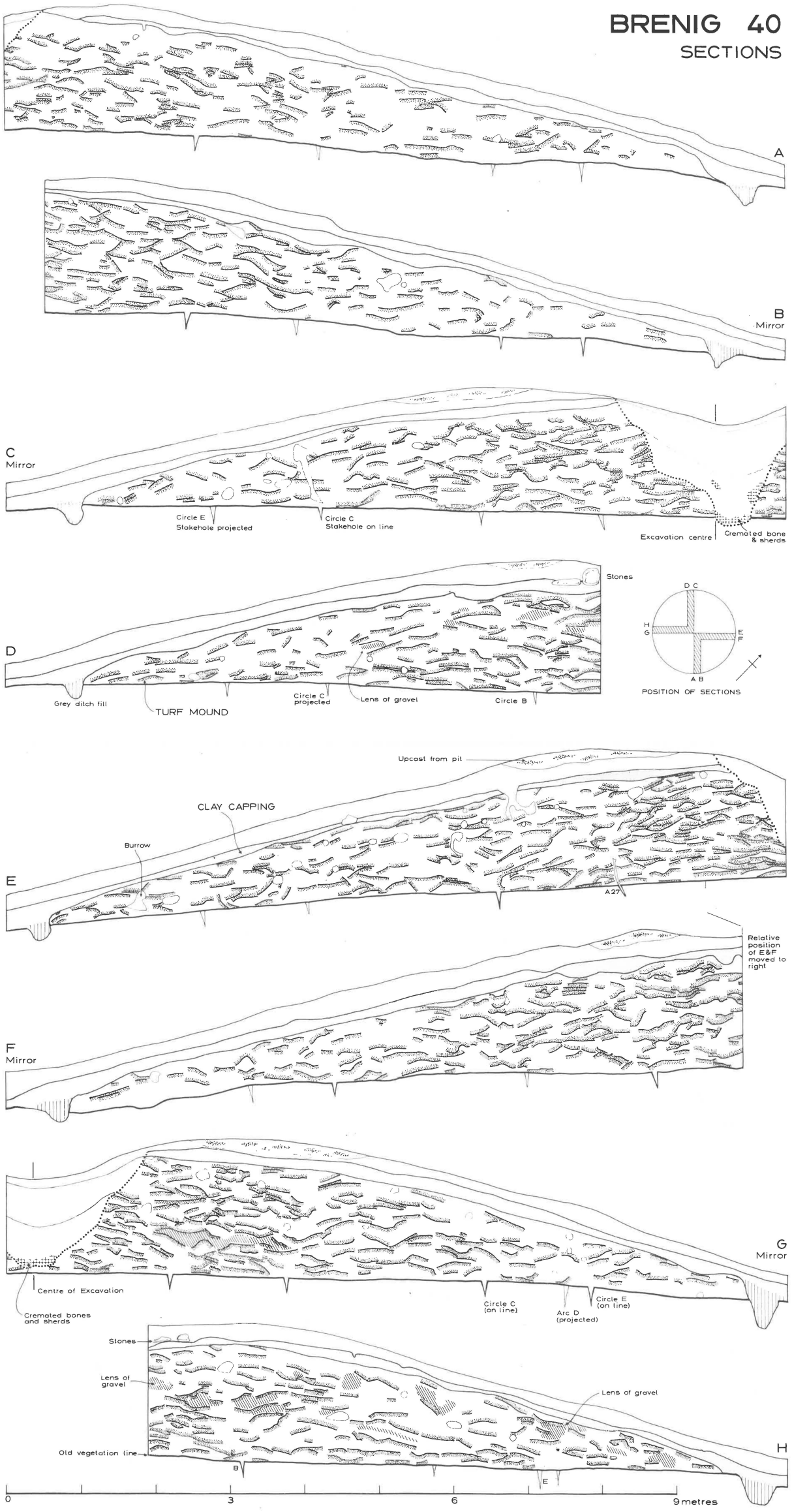
Circle C measured about 12.5 m in diameter and lay 2 m to 2.5 m from Circle B, not quite concentric. It comprised 66 stakeholes. Thirty-four of these were not quite vertical, being inclined outwards, some (e.g. C24) quite acutely. Most of the stakeholes were circular but a few were oval (the long axis of the oval being towards the centre of the mound). Some holes (C26, 46, 47, 53, 54, 56, 57, 59–61, 66) appeared as voids either in the last few centimetres of the turf mound or in the old ground surface. C46 appeared in the turf mound at a height of 0.25 m above the old ground surface, and C26, 53, 56, 57 and 59 were recognised in the last few centimetres of the turf mound. The fill was usually a brown to reddish clay; flecks of charcoal were noted only in C63. The stakeholes averaged 80 mm in diameter, and 0.18 m in depth (range 0.1 m – 0.28 m).

Circle E, the outermost circle, comprised 67 stakeholes and was approximately 15 m in diameter. Some 25 were slightly out of the vertical, inclining a little towards the edge of the mound; only four contained flecks of charcoal. The fills of the stakeholes compared well with those of the other circles and only two stakeholes (E64 & E66) appeared as voids. Like the majority of stakes, those of E were of circular cross-section and were tapered to a blunt point; only two (E46 & E53) were noticeably oval. All first materialised in the old ground surface. They averaged 86 mm in diameter and 0.27 m in depth (range 0.15 m – 0.46 m).

Arc D, a line of 12 stakeholes, forming a shallow arc, was found in the southern quadrant of the mound; it was situated quite close to, and just inside, Circle E. The average depth of all 12 stakeholes was about 0.23 m (range 0.13 m – 0.31 m). The purpose of the arc is difficult to explain, but it may have been intended as an extra support for the southern part of Circle E. A very careful, but fruitless, search was made for more stakeholes beyond D1 and D12. In the course of excavation it was quite clear that many of the stakeholes in the southern part of the mound, both in the arc and in Circle E, tended to be larger and deeper (and more widely spaced) than the rest, if only by a few centimetres.



7.6 Brenig 40: plan and section



7.7 Brenig 40: sections

Evidence for Hurdling

Beneath the turf mound the blue-black old ground surface was heavily stained by iron pan, which was particularly noticeable between and around many stakeholes. Only rarely was this iron-staining sufficiently well-defined to suggest the former presence of what may have been hurdling or wickerwork; a strip of iron pan 0.15 m long and 35 mm wide which contained a smear of decayed organic matter was uncovered running from stakehole B20 towards B19. It lay on the old ground surface, measured some 30 mm in thickness and traces of it were first observed in the turf mound approximately 0.12 m above the old ground surface.

These tenuous traces of possible hurdling, and the fact that no less than nine stakeholes (of Circles A, B & C) were first noted in the lower 0.1 m – 0.4 m of the turf mound, would suggest that the mound was built when most, if not all, of the circles of stakes and the hurdling still stood.

In an attempt to explain why such slight traces of stakes and hurdling survived in the mound, portions of the northern and western baulks were transversely sectioned above the line of Circles A and B. When the section face was cut more or less vertically back to the line of Circle B it became apparent that stakehole B 25 extended upwards into the turf mound to a height of about 0.75 m. It was not vertical, however, but inclined irregularly outwards towards the edge of the mound; it appeared as a narrow (0.1 m diameter), distorted, iron-stained pipe which resembled a mousehole. The possibility that this and other such stakeholes were extended by rodent activity cannot be excluded. Stakehole B26 also extended irregularly upward into the mound but no trace of it survived for about 0.15 m midway along its length. Horizontal but irregular lengths of iron pan rose to a height of 0.35 m above old ground surface between B25 and B26. Surprisingly, no similar traces of stakes or hurdling in the mound were found between stakeholes B26, B27 and B28. Stakeholes B31 to B33 could be traced in the northern baulk to a height of 0.4 m in the turf mound, where they appeared as irregular, sometimes greatly distorted, pipes about 60 mm in diameter, but very little staining occurred between them.

Examination in a similar fashion of the section of baulk which covered stakeholes A17 to A20 revealed irregular strips of iron pan (to a height of 0.25 m) containing very occasional and minute impressions of fragments of wood. Because this iron-staining more or less coincided with the line of the stake circle, it presumably represents the last traces of some sort of hurdling, although no clear and unambiguous traces of stakes survived to a height of more than 0.15 m in the turf mound at this point.

The occasional, irregular, and often warped nature of the remains of stakes and hurdling in the turf mound explains why they were virtually impossible to detect in the course of normal horizontal excavation. The distortion and, more often than not, obliteration of the evidence in the mound was no doubt due to the movement and consolidation of the turf stack over the centuries.

A further indication that the stake circles were incorporated in the turf mound was found in the area of stakeholes B9 to B12. Here, particularly in the lowest levels of the mound, a stony, gravelly, orange clay occurred inside the line of the stake circle, while immediately outside it lay a distinctly different deposit of the normal turves. This difference in the composition of the mound on either side of the line of the stake circle was less evident in the upper levels, but could be seen in section F (Fig. 7.7); it was only apparent in this small part of the southern quadrant, where its coinciding with the stake circle is unlikely to be mere chance, but probably a reflection of the former presence of hurdles, and the deposition of different materials on either side of them. This differential deposition, coupled with the probability that the various stake circles were incorporated in the turf, suggests that the circles of hurdles and stakes may have briefly delimited successive concentric rings of turf mound construction. As a glance at the general plan will show, none of the four stake circles was a true circle, although Circle B approximated most closely to that form. All the circles were more or less concentric, however, and Circles A and B and Circles C and E each appear to form concentric pairs. Nothing was found to suggest that all sets of stakes were not contemporary.

Central Burial

The depression visible in the summit of the mound before excavation proved to be relatively recent disturbance, probably datable to the 19th. century, when a number of barrows in the Brenig valley were summarily investigated. A large, roughly conical pit, its mouth approximately 3 m in diameter, had been dug into the centre of the mound. The sides of the pit, though somewhat irregular, tended to slope steeply inwards; its bottom cut into the natural subsoil beneath the barrow to an average depth of about 0.1 m. The fill of this pit differed greatly from the surrounding turf mound. The upper half of the fill consisted of black, silt-like, peaty materials; the only find was a small fragment of the stem of a clay pipe. The lower half of the fill consisted of loose, redeposited turves and black, peaty clay; it contained small lumps of charcoal, sherds of pottery and fragments of cremated bone. As the pot sherds are in no way weathered, it seems that this lower fill of the robber-pit may be due to partial back-filling. Some 800 gm of cremated bone was recovered, scattered in a restricted area of the robber-pit 0.75 m below the surface. Most of the sherds also came from this part of the pit (although a few fragments and a very small amount of burnt bone came from the very bottom).

The pottery consisted of approximately 20 large fragments and a number of smaller pieces representing the upper part of a large, well-made Collared Urn (Fig. 7.9). The urn and the cremated bones, representing one individual, probably elderly

(App. 5), were presumably associated, but since neither was recovered undisturbed, the original position of the burial must remain uncertain. It is possible that the urn and cremated bones had rested on or among the planks of the 'mortuary structure'.

Mortuary Structure (Fig. 7.8)

At the centre of the mound, in the middle of Circle A, a rectangular setting of stakeholes and a number of timber planks were found (for details, see App. 1). For convenience this feature is referred to as the 'mortuary structure', although there are no details of any superstructure. The four stakeholes (a – d), which had held vertical stakes rather stouter than average, but driven no more deeply into the ground, delimited an area about 1.25 m x 1.1 m. Its longer axis lay approximately north-east – south-west. The south-western end of this setting and stakehole b were disturbed by the robber-pit.

Stakehole a first appeared as an almost circular patch of pure charcoal in the black old ground surface. When the charcoal crust was touched, it collapsed into a vertical, empty stakehole which had perfectly retained the shape of the stake, a squared piece of wood. The charcoal from the stakehole consisted of oak and birch. Stakehole b was found in the disturbed area at the base of the robber-pit, which at that point had been dug through the old ground surface to a depth of 0.12 m; the surviving portion of the stakehole contained a loose fill of grey-brown clay and some fragments of charcoal. Stakehole c was not found until one of the timber planks (see below) was removed. It appeared in the old ground surface and was filled with a loose grey-brown clay similar to b. Stakehole d appeared as a void in the old ground surface; its bottom contained a loose fill like that in b and c.

Six charred oak timbers were uncovered more or less within the stakehole setting. On the south-west they had been disturbed by the digging of the robber-pit. Timber 1 was clearly the remains of a thin plank, surviving for a length of 1.88 m, stretching from stakehole c almost to d. The narrower, eastern, end of this timber rested on Timber 2, which lay roughly at right-angles to it. Timber 2 was also part of a plank, of which 0.6 m remained. Timber 3 had been part of a slightly thinner plank, which lay between c and b roughly parallel to 2. Timbers 1, 2 and 3 rested on a 0.1 m thick layer of grey to brown clay and some turves, laid on the old ground surface; some of this clay and turves and the western end of Timber 1 overlay stakehole c, no trace of which appeared in the superimposed clay layer. Timber 4, to the east of 2, was a narrower, thinner piece of wood. Timbers 5 and 6 lay beneath the layer of clay and turves, below and roughly parallel to Timbers 2 and 1 respectively, and, like Timber 4, they lay directly on the old ground surface.

Numerous small fragments and flecks of charcoal (representing oak, birch and heather) occurred on the old ground surface in the vicinity of the 'mortuary structure'. These, the charred timbers and, in particular, the crust of charcoal which plugged stakehole a, all suggest that a timber structure constructed of at least four stout vertical stakes and some timber planking had been burnt *in situ*. The absence of any notable oxidation of the underlying soil would indicate that the fire was neither large nor prolonged. The layer of clay and turves beneath Timbers 1 – 3 contained some flecks of charcoal but showed no sign of burning. This layer was indistinguishable from parts of the basal material of the turf mound, and the fact that it covered those timbers (4 – 6) which lay directly on the ground surface and lay beneath other timbers (1 – 3) suggests that the burnt planks were not simply the remnants of a structure which had collapsed where it stood. It would seem that some burnt timbers were removed, some clay and turves laid on the site of the structure, and then some timbers replaced. This activity may have coincided with the deposition of the urn burial but, unfortunately, there was no indication at all where the vessel had been placed. All the fragments of pot and bone came from the disturbed levels of the robber-pit, and it seems that this disturbance also destroyed some of the timbers of the mortuary structure (all the charcoal sampled from the robber-pit proved to be oak). The surviving timber fragments offered no clue to the original form of the structure supported by the four stakes.

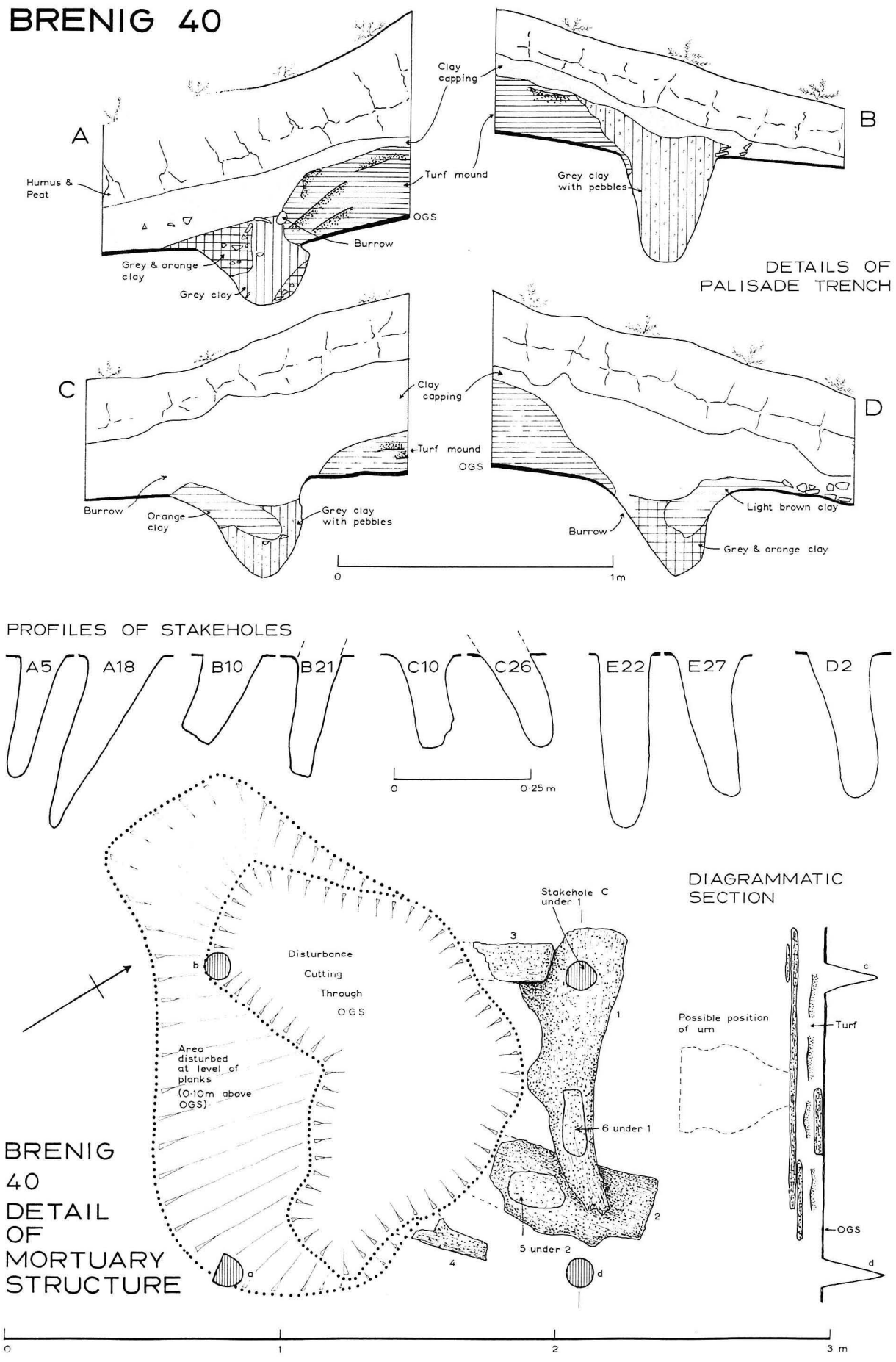
Two radiocarbon dates were obtained from the timbers of this mortuary structure; Timber 1 produced a date of 1470 ± 80 b.c. (HAR 799) and Timber 2 yielded a date of 1380 ± 80 b.c. (HAR 800) (App. 10).

Other Features

Two stakeholes (e & f) were discovered in the old ground surface immediately to the west of the 'mortuary structure'. A careful search revealed no other stakeholes in the area, and stakehole f itself was a rather dubious example. However, a comparison might be drawn with similarly puzzling stakeholes near the central grave at Brenig 45 (see below).

Three small, rounded stones (each measuring about 0.3 m x 0.1 m) lying on the old ground surface in the southern quadrant appeared to have no retrievable significance.

While the old ground surface was naturally a little uneven in places, two irregular depressions perhaps deserve mention. The first measured 0.8 m x 0.7 m with a maximum depth of 0.15 m, and lay just near stakeholes B11 and B12. The second, similar but slightly shallower, depression occurred inside Circle A near stakehole A9. The black old ground surface ran down into each of these features, but presented a cracked and broken appearance. They might conceivably be due to the removal of some heavier vegetation, such as a bush, before the construction of the barrow.



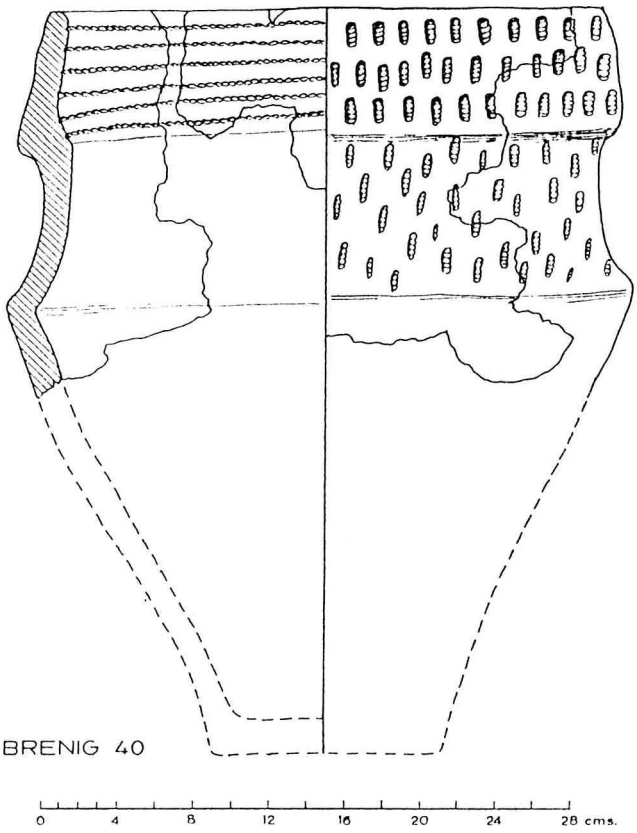
7.8 Brenig 40: details of palisade trench, stakeholes and mortuary structure.

Charcoal within the Mound

Bearing in mind that three of the planks in the central area rested on some 0.1 m of turves, it is worth pointing out that two small deposits of charcoal were found lying on a few centimetres of turves inside the western part of Circle A. The first, immediately inside the circle near stakeholes A17 and A18, was a smear of birch charcoal only 3 mm – 4 mm thick and measuring about 100 mm x 50 mm, resting on 80 mm of turf; the second, about 0.6 m inside Circle A, near stakehole A21, was a roughly rectangular deposit of oak charcoal, measuring 100 mm x 40 mm and in places 10 mm deep, resting on 90 mm of turf.

Mesolithic pit

At the western edge of the mound, outside the palisade trench and beneath the clay capping, a shallow, roughly circular depression was found in the natural subsoil beneath the old ground surface. It measured 0.8 m x 0.75 m but was only 60 mm deep; it contained a mixture of a little decayed organic material (resembling the black vegetation layer of the turves of the mound), some small stones up to 0.12 m in length, and sufficient oak charcoal to provide a radiocarbon determination which indicated a Mesolithic date (5700 ± 80 b.c. – HAR 656). This date is a salutary reminder that not all pits and other features found beneath burial mounds are necessarily related to them in any significant way.



7.9 Brenig 40: Urn from central disturbance.

Finds (Fig 7.9, App. 3.2)

Apart from the disturbed remains of the central burial, the finds from Brenig 40 were extremely meagre, comprising no more than 12 pieces of flint, of which only two can be classified as implements, both scrapers. Almost 50% of the flint is of high quality and comes from the turves of the mound, both factors which suggest a Bronze Age date (see p. 56). Although the radiocarbon dates (App. 10) imply that this barrow is significantly later in date than its neighbours it is interesting that the pattern of finds and the use of raw material is almost identical. It is noteworthy that the artefacts provide no evidence of Mesolithic activity here although a 6th. millennium b.c. date has been obtained from charcoal in a pit beneath the mound (date 1).

Pottery

Some twenty sherds from the upper part of a large, well-made Collared Urn (Fig. 7.9) came from the disturbed material of the lower half of the robber-pit. The urn has a simple, flat rim with gently rounded edges. The broad collar is slightly irregular and has an internal moulding. The neck is concave and the shoulder pronounced. The internal moulding is decorated with six horizontal lines of impressed twisted cord; the cord was thick and coarse, there being about five twists to every 20 mm. The exterior of the collar is decorated with three irregularly horizontal rows of vertically placed, deeply impressed, whipped-cord 'maggots'; a scatter of similar, lighter impressions decorates the neck. The fabric is hard and fairly well-fired. It is coarse (containing some grits up to 6 mm across) but the exterior is well smoothed. The external colour is buff to reddish-brown, the inner surface dark brown to black. The estimated external rim diameter is about 0.32 m, the original height was probably about 0.4 m, and the average thickness of the body sherds is 13 mm. The pot falls into Longworth's Primary Series, having six of the traits which define that group (Longworth 1984, no. 2030).

Cremated Bone

There was 800 gm, representing most parts of the body of one individual, probably elderly (App. 5).

Discussion

Excavation revealed that the largest of the Brenig barrows had covered a simple cremation in a Collared Urn; no grave goods, if any there were, had survived the 19th-century plundering of the grave. The apparent simplicity of the burial contrasts with the size of the mound which, presumably, is a testimony to the importance

of the individual interred therein. Like the other large barrows in the Brenig valley, Brenig 40 was more than a monumental pile of earth; the burnt mortuary structure and the several stake and hurdle circles are evidence of a complex ritual which we can only very partially comprehend. It is regrettable that the burial and the mortuary structure had suffered such disturbance, as this central area was clearly the focus of activity. However, the construction of the barrow was also a major and complex undertaking; it may have been built in several stages, each stage delimited – for a time – by a circle of stakes and hurdles.

The radiocarbon dates obtained from the timbers of the mortuary structure indicate that the mound was probably built in the 15th. century b.c. Since the use of turf mounds, stake circles, and mortuary structures is recorded in monuments such as Brenig 42 with initial dates in the early 17th. century b.c., the large barrow, Brenig 40, is also a monumental tribute to the conservatism of funerary tradition in the valley. Its less conspicuous siting may result from its being an addition to the original cemetery plan.

BRENIG 45

Shelagh Lewis

NGR SH 9830 5731 Height above sea level 380 m.

The barrow Brenig 45, known as Boncyn Arian (the Mound of Silver or Money), is situated on a level promontory on the eastern side of the valley. It stands about 54 m from the Ring Cairn (Brenig 44), and is within view of barrows Brenig 40, 41 and 42. Although relatively small, this monument proved to be the most complex barrow in the cemetery.

The mound, 16 m across and 1.8 m high, covered a central burial area surrounded by three stake circles which, in turn, were encompassed by a low, poorly-built wall of spaced uprights and dry masonry incorporating what appeared to be a 'blocked entrance'. Encircling the wall was a further, irregular, stake circle. Surrounding the mound was a palisade whose southern arc included a small standing stone erected prior to the cutting of the palisade trench. The mound itself, like the other large barrows in the valley, was built of turves with a clay capping. Excavation produced seven cremated burials and over 300 flints from the mound and its vicinity.

Before excavation, a large depression, just under 2 m in diameter and 0.5 m deep, was visible in the top of the mound. It transpired that the centre of the monument had been dug into on at least two occasions in the 19th. century, and once in the more recent past. It is recorded that, in about 1850, an urn containing cremated bone was discovered here; both urn and contents have disappeared (Ellis Davies 1929, 309).

In 1971, two trial trenches had been cut at right-angles to each other in the south-east quadrant of the mound to determine the nature of its construction; a secondary cremated burial (Burial 4, see below) had been found. In 1973, the remainder of the mound was totally excavated (see p. 47) and an area 3 m beyond the perimeter was stripped.

Old Ground Surface

The mound rested on an orange, gravelly, silty clay from which the humus had been partly stripped. Where it survived, the Bronze Age ground surface appeared as a thin line of black, humic clay with an average thickness of 10 mm. A variable iron pan had developed in places both in and beneath the mound, causing considerable difficulty in the interpretation of details on the old ground surface at the centre of the monument.

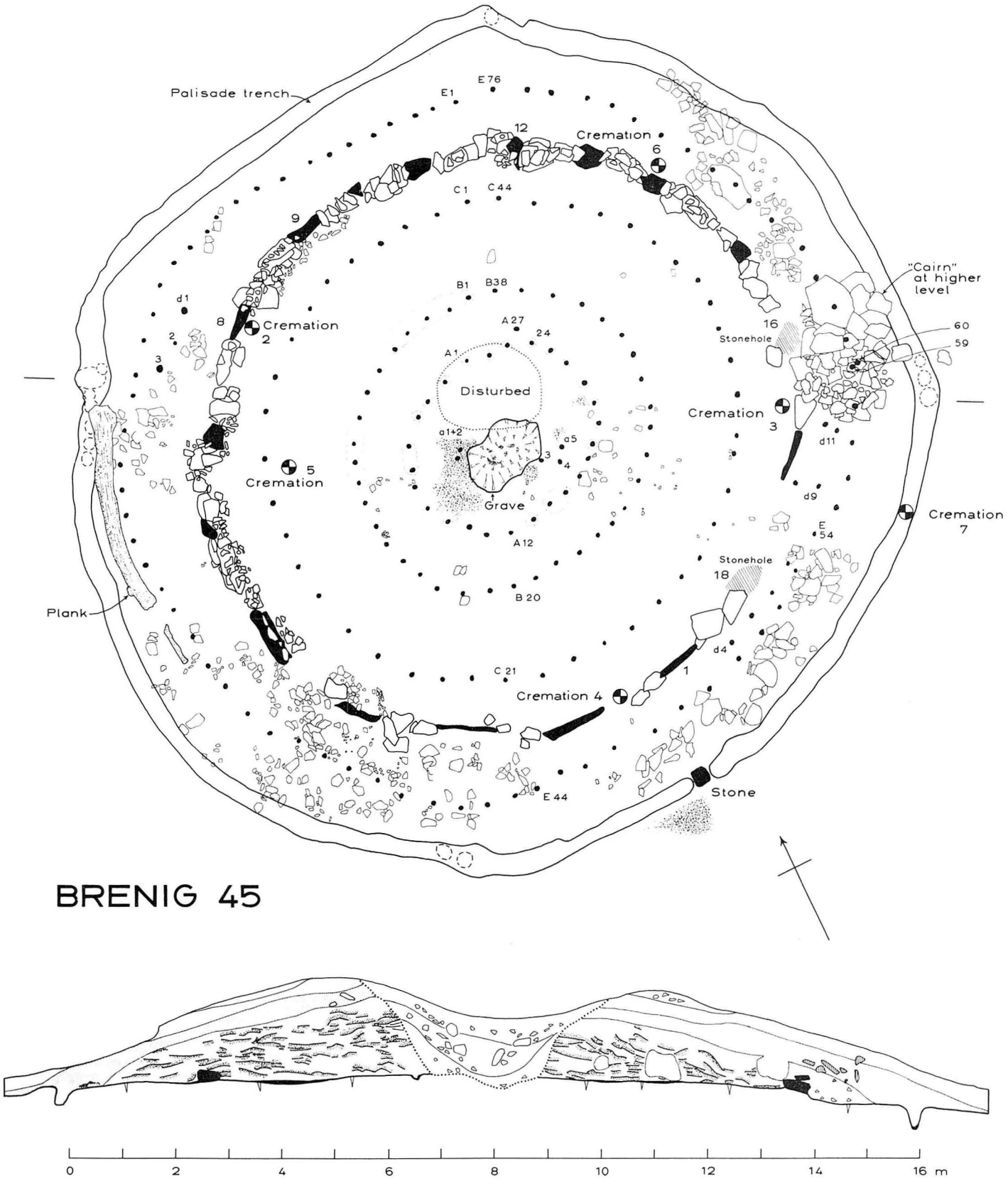
The Central Burial Area

Beneath the centre of the mound the remains of a shallow oval grave pit were discovered. Its longer axis lay east – west, its dimensions were approximately 1.4 m by 0.8 m, and it apparently had a maximum depth of only 0.23 m. These measurements are approximate because the 19th.-century barrow-diggers cut into the north-eastern edge of the pit and proceeded to tunnel south and south-westwards into the grave, almost completely obscuring much of its original form. A little of what may have been the original fill of the grave survived: the remains of some turves, lightly flecked with charcoal and horizontally stacked. The greater part of the fill, however, resembled that of the robber-pit, mixed earth and redeposited turves. Not surprisingly, it was often impossible to distinguish clearly between original turf fill and redeposited material.

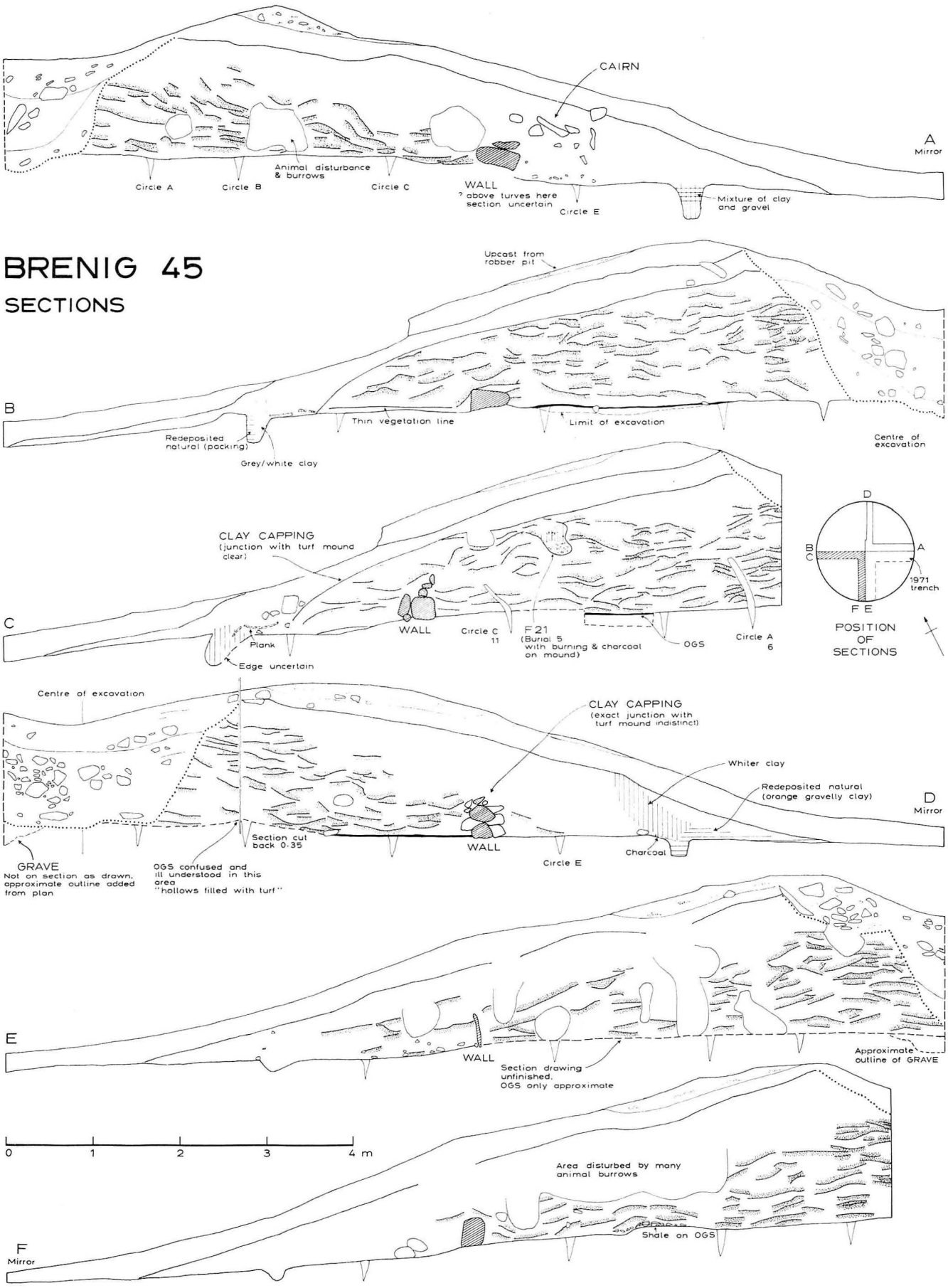
On the floor of the pit were four very tenuous patches of what was thought to be carbonised wood; analysis, however, failed to reveal any traces of wood. Some small fragments of calcined human bone (App. 5) were found both on this apparently carbonised material and in the disturbed parts of the grave pit.

Three stakeholes were found on the south-east of the pit, and two on the north-west (numbered a3 – a5 and a1 – a2 respectively); they averaged 90 mm in diameter and 0.25 m deep. All but a3 appeared as empty pipes in the old ground surface and a2 was first recognised in the lower 50 mm of the turf mound; a3 contained some charcoal. These five stakeholes clearly do not form a rectangle (as did those beneath Brenig 40 & 42), and their function is a matter for speculation.

A number of very thin deposits of carbonised wood was found in the area between the grave pit and the inner stake circle; all lay on the old ground surface: three roughly circular patches, none more than 20 mm thick and 0.35 m in diameter, lay in a straight line south and east of the grave pit. Analysis of samples from the deposits near stakeholes a3 and a2 revealed oak charcoal and a fragment of birch twig. To the west of the grave



7.10 Brenig 45: plan and section.



7.11 Brenig 45: sections

pit lay another, larger, irregular scatter of charcoal measuring about 1.5 m x 1 m maximum; here the grain of some of the larger fragments suggested that burnt timber planking may have been placed near the grave pit.

Stake Circles

Within the area enclosed by the wall to be described below, three approximately concentric stake circles (A, B & C on plan) surrounded the grave pit.

Circle A, the innermost, comprised 26 stakeholes, which did not form an exact circle; they in fact enclosed a slightly oval area with its longer axis (3.5 m) lying east – west (the same alignment as the grave pit); the northern side of the oval was slightly 'flattened'. The stakeholes were found about 0.5 m apart and averaged 80 mm in diameter and 0.2 m in depth; all appeared as empty pipes in the old ground surface. Traces of three of the stakeholes (A4, 5 and 6) were first recognised in the lower 0.1 m – 0.19 m of the turf mound. A flint scraper was found well embedded in the side of stakehole A11. Sixteen individual stakeholes, and two pairs, were found within rings of lighter, softer soil (dotted on plan). The interpretation of these puzzling rings is problematical; they are probably the result of iron pan formation. This pan hindered the interpretation of several ephemeral features in this area.

Circle B lay about 1 m outside Circle A, had a diameter of about 5.5 m and comprised 38 stakeholes set at intervals of 0.5 m. These stakeholes averaged 90 mm in diameter and 0.31 m deep. All appeared as empty pipes in the old ground surface; five (B9, 17, 18, 31, 32) were recognised in the body of the turf mound between 50 mm and 0.18 m above old ground level. During the excavation of the baulk between the north-western and south-western quadrants, the cutting of a vertical section on the line of the stake circle revealed distorted traces of stakeholes B8 and B10 to heights of 0.62 m and 0.4 m respectively in the turf mound. In the northern and western parts of this circle stakeholes B1 – B5 and B8 – B11 were found in the same sort of puzzling leached patches encountered at Circle A.

Circle C, the third concentric circle of stakeholes, lay about 1.75 m outside Circle B. This third circle consisted of 44 stakeholes averaging 0.1 m in diameter and 0.26 m deep; they were placed 0.5 m – 0.75 m apart. All appeared as empty pipes in the old ground surface; two (C16 & C44) were identified in the lower 30 mm – 70 mm of the turf mound, but cutting of transverse sections through two of the baulks on the line of the circle enabled irregular and distorted traces of stakeholes C10, C11 and C43 to be located to heights of 0.6 m, 0.47 m and 0.58 m respectively in the turf mound.

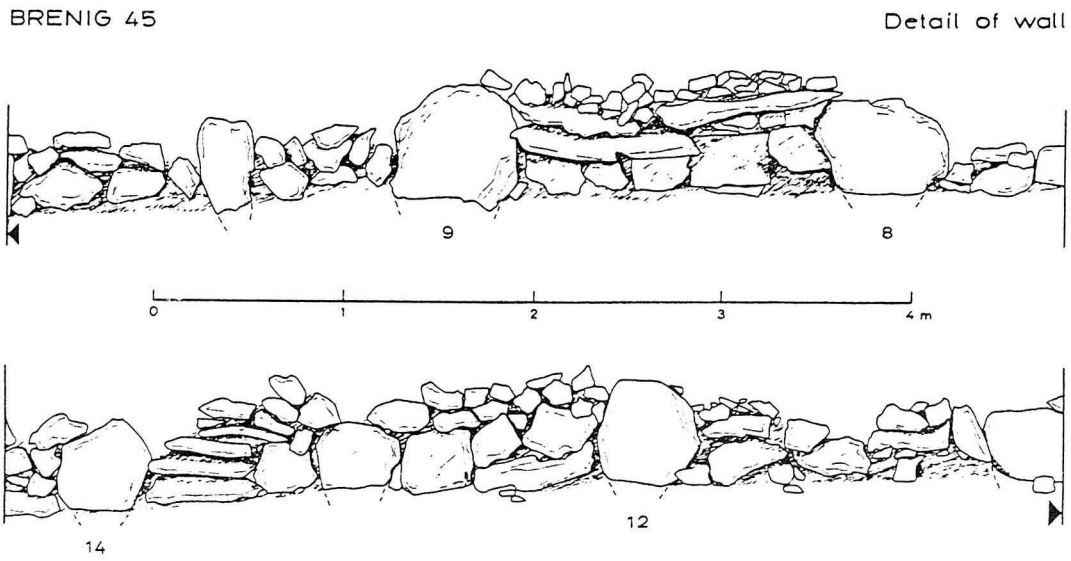
Evidence of Hurdling

Little trace of hurdling survived: none was observed in the course of the quadrant excavations. However, in the course of the excavation of the baulk between the north-western and north-eastern quadrants, a short line of iron-staining in the lower 0.2 m of the turf mound coincided with the line of Circle B (between stakeholes B37 & B1). A sample analysed was found to contain a fragment of unidentifiable wood virtually entirely replaced by iron. Irregular lines of iron-staining which sometimes coincided with these circles (and with Circle E below) may indicate the former presence of hurdling.

Stone Wall

A circle of stones lay about 1 m outside, and concentric with, Circle C. It had an external diameter of approximately 11 m and was, for most of its circuit, poorly constructed, consisting of a series of stones placed upright in sockets in the old ground surface, the spaces between them being roughly filled with smaller stones (Fig. 7.12). The majority of the uprights were gritstone boulders averaging about 0.6 m in height and usually measuring 0.3 m - 0.5 m in thickness. However, six of the uprights in the southern half of the circle were fairly thin slabs of slaty siltstone set on edge; of similar height, they measured 0.15m – 0.4 m in thickness and 0.85 m – 1.3 m in length. All these stones were placed in sockets excavated in the old ground surface; the sockets varied in depth from 80 mm (Stone 7) to about 0.35 m (Stone 12). There were sixteen upright stones in situ and the possible sockets of two others (16 & 18) were found. In the northern half of the circle the spaces between the uprights, varying from about 0.75 m to 1.5 m in length, were filled with stones. Medium-sized boulders formed a basal layer, about 0.5 m wide, on top of which smaller stones were piled rather haphazardly to a height of 0.5 m – 0.75 m. Some of the basal stones rested on the old ground surface, others were apparently placed on a few turves (see elevation, Fig. 7.12). In the southern half of the circle the spaces between the upright slabs were filled much less systematically; normally two or three flat stones were laid horizontally. However, at three places (between Stones 4 & 5, 2 & 1, and south-west of Stone 17) gaps from 0.5 m to 1.5 m wide occurred in the circle. What was probably a socket for an upright was found on the south side of the gap near Stone 17; this socket (18) measured 0.8 m x 0.52 m x 0.4 m in maximum depth, and contained a mixed fill of clay, small stones, and turf-material. It was partly overlain by one of the wall stones and there was no indication of what had happened to the orthostat. The other empty socket (16 on plan) had presumably also held an upright stone.

In the north-western part of the circle a pair of larger than normal upright stones were set 1.5 m apart; the stones (8 & 9) measured respectively 0.5 m and 0.6 m in height above old ground level. The area between them was rather clumsily filled



7.12 Brenig 45: elevational view of wall.

with a number of horizontal slabs placed on a layer of boulders which in places lay on up to 0.2 m of turves: a mass of small stones rested rather precariously on top of the horizontal stones, and the whole had the appearance of a 'blocked entrance' to the circle (Pl. 7.5a).

Inside the stone wall the turf mound rose to a height of about 0.4 m, and a strip immediately behind the wall was filled with numerous small stones, this 'stone crust' giving the impression that the wall was 0.65 m to 0.95 m wide. In view of the apparent importance of the area of the 'blocked entrance' it is perhaps not surprising that this 'stone crust' was most clearly defined in that northern part of the circle; in places in the southern half it did not occur at all. The considerable number of stones outside the wall which are recorded as lying on the old ground surface (see plan and section E, Fig. 7.11) may be interpreted as tumble from the wall. The southern half of the wall was of flimsier construction; hence, perhaps, its greater state of dilapidation.

Features outside the wall

There were various indications that the immediate area of the 'blocked entrance' may have been of particular significance. Burial 2 (see below) was found immediately behind the southern upright (Stone 8) and it was probable that it was placed there before the completion of the stone wall. Scorch marks occurred on the upper half of the outer face of Stone 8 and, in front of this stone, 0.3 m outside the wall, a shallow, sub-rectangular depression in the old ground surface (BG45:F7, measuring 0.4 m x 0.36 m) contained burnt earth and stone and some charcoal; a scatter of charcoal extended south-westwards from this shallow pit for about 0.4 m (Fig. 7.13). Three stakeholes (d1 – d3) were found about 1 m outside and just to the south-west of the 'entrance'. Two (d1 & d3) were rather wider and deeper than average, and one of them contained thin (1 mm) traces of iron-replaced bark and some carbonised wood. The other two appeared as voids.

Eight stakeholes were found outside the wall on the south-east side of the mound. Four, d8 – d11, which were shallower than average, appeared as voids and formed a long narrow trapezoid measuring about 1.1 m x 0.35 m, but careful examination of the area produced no explanation for this configuration. This narrow rectangle clearly resembles the similar feature found in the south-eastern quadrant of Brenig 42. Another group in this area (d4 – d7) may have been part of an overlapping hurdle, belonging to Circle E. They, too, appeared as voids and d5 – d7 are exactly comparable in size to the stakeholes of Circle E, though d4 is smaller. Like many stakes of Circle E, d5 and d6 survived into the mound.

Outer Stake Circle

A fourth and much more irregular stake circle, Circle E, lay outside the stone wall. Its maximum diameter was about 14 m and it comprised 76 stakeholes set at rather irregular intervals from 0.3 m to 0.85 m apart. The stakeholes averaged 85 mm in diameter and 0.21 m deep. All were revealed as empty pipes in the old ground surface; three contained carbonised wood and four were somewhat distorted (probably due to pressure from the turves). Traces of 27 stakes were found in the lower 20 mm to 0.15 m of the turves. Parts of this circle were markedly flattened (e.g. stakeholes E1 – E8), and it is possible that it was constructed of pre-fabricated lengths of hurdling.

Palisade Trench

Excavation revealed a narrow, partly rock-cut and quite irregular palisade trench near the perimeter of the mound between 0.5 m and 1 m from Circle E. It had an approximate diameter of 15 m. This feature had suffered considerable animal disturbance. When first discovered it was assumed to be merely a narrow ditch and was excavated as such. However, more careful examination of the parts of the trench beneath the four baulks revealed traces of the sockets of timber posts.

The trench averaged about 0.35 m in width and 0.3 m in depth (the same as at Brenig 40, p. 59). In plan, it was very irregular, and would appear to have been dug in a series (perhaps eight) of nearly straight or slightly curving sections; a particularly poorly-jointed meeting point between two sections occurred on the north-east. Where animal disturbance had not removed it, the fill consisted mainly of a stony, orange-brown soil (redeposited natural) and a greyish clay which sometimes clearly represented a 'post-ghost' (see Fig. 7.11, section B). The few and rather nebulous traces of posts found suggested that they may have varied in diameter from 0.16 m to about 0.3 m and that they had been placed almost contiguously. The limited evidence suggests it was similar to the rather more clearly defined palisade at Brenig 40. In about thirty instances stones lay on or in the upper fill of the palisade trench – some at least had probably served as packing stones.

Thirteen flint flakes were found in the palisade trench, all but two of them from the south-eastern quadrant, no doubt due to the proximity of Mesolithic activity (see Brenig 53, above).

A small scatter of charcoal of alder and oak was found at a depth of 60 mm in the fill of the palisade trench in the north-eastern quadrant where it was about 0.32 m deep. However, the radiocarbon date from this trench (App. 10 no. 15) was obtained from 'charred soil'.

Just inside the western edge of the trench, excavation revealed a thin, burnt, rough-hewn oak plank lying on the old ground surface. The plank was 4 m long, 0.4 m wide in places and was approximately 10 mm thick; when found it had a slight plano-convex cross-section. The northern end of the plank slightly overlapped the edge of the palisade trench, resting on a stone, possibly a packing stone, which lay on the upper fill of the trench. A smaller piece of oak, 0.75 m long, 0.2 m wide and 10 mm thick, also lay along the inner edge of the palisade trench, just south of the plank. Numerous flecks of charcoal occurred in the vicinity of both these timbers. These, like the piece of carbonised wood found in the outer bank of the Ring Cairn (Brenig 44), are possibly simply discarded timbers whose function, if any, is unknown.

Stone in Palisade Trench

On the south a roughly rectangular standing stone, 0.75 m high and 0.30 m wide, stood in a shallow socket on the line of the palisade trench, which was rock-cut at this point. The socket was not cut through the rock and thus when the stone was removed it was found to be standing on a narrow causeway of rock. It had been assumed that the stone was standing in the trench. Unfortunately, the immediate area had been heavily trowelled before it was moved so that the top of the socket had been removed before its relationship to the ends of the palisade trench which abutted it had been observed. However, the balance of evidence and of likelihood is that the stone was in position before the palisade trench was dug. The relationship of a shallow (30 mm thick) and irregular shaped patch of charcoal (BG45:F6), found beneath the slip of the mound, to the nearby standing stone is uncertain.

The Turf Mound

The central burial pit was covered by, and the stake circles and stone wall were incorporated into, a turf mound with a maximum height of 1.7 m. Although some parts of the mound were well-preserved, the greater part was ravaged by animal disturbance, particularly on the southern side. Individual turves could be distinguished and as far as could be judged they were stacked horizontally with no attempt being made to place them the same side up. They usually varied in length from about 0.2 m – 0.4 m and, in their compressed state, were usually 0.1 m – 0.15 m in thickness. Rarely was any material other than turves used in the construction of the mound, but a deposit of shale and grey-green clay occurred in places on the old ground surface (e.g. section F). A few natural hollows in the old ground surface near the grave pit were filled with turves (see section D), and small spreads of charcoal were found within the mound on occasion.

Outside the wall, the turves, which extended just beyond Circle E, were to all appearances identical to those inside the wall, and study of the sections does not provide any clear distinction between them. However, stones were found beneath these outer turves, but not beneath the mound inside the wall; a point the significance of which is discussed below (p. 74). Some stones were also found on top of or beyond the limits of these turves, and their origin is obscure unless they represent further disturbance to the 'stone crust' during completion of the mound.

Almost 200 flints were recovered from the mound, very many more than were found in the other barrows (see Table 7.1). The presence of so much flint and chert in both the turves and clay capping of the mound, and its similarity to the finds from beneath Brenig 44 nearby, is somewhat at variance with the findings of pollen analysis (Chap. 2) which suggest that the turves had been obtained at some distance from the site.

Small Cairn

A small, roughly oval cairn (2 m – 3 m in diameter and 0.3 m high) was found in the north-eastern quadrant at the level of the top of the stone wall. Its western edge clearly rested on top of this structure (Fig. 7.11, section A) and, not surprisingly since it was built so near the edge of the mound, considerable collapse had taken place; some stones had fallen into the palisade trench.

A thin, amorphous deposit of oak charcoal (0.2 m x 0.4 m) mixed with a very little unidentifiable bone was found immediately beneath the cairn, lying on an oval patch of burnt charcoal-flecked clay, which in turn rested on what appeared to be turf mound. Some oak, and possibly alder,

charcoal was found among the stones of the cairn.

Clay Capping

The whole of the turf mound was eventually covered by a capping of pale grey clay varying in thickness from about 0.15 m to 0.6 m, being particularly thick at the base of the mound. This clay filled the tops of two of the cremation pits which had been cut into the turf mound. It extended a little beyond the palisade trench but it is likely that it was originally retained by the palisade and only slipped beyond it when the posts decayed.

The Burials (Fig. 7.13 & App. 5)

The barrow contained one primary (no. 1) and at least six secondary burials (nos. 2 – 7).

Cremation 1. A few fragments of cremated human bone in the central grave pit (p. 65) represented the remains of the primary burial. It is possible that the lost urn and cremated bone found in 1850 had been part of this deposit. Charcoal from close to stakeholes beside this grave produced a date of 1620 ± 100 b.c. (HAR 657).

Cremation 2 (BG45:F9). This pit-burial was found immediately inside the wall, beside the southern upright (Stone 8) of the 'blocked entrance'. The somewhat kidney-shaped mouth of the pit measured 0.76 m x 0.5 m and first appeared in the top of the turf mound below the stone crust of the wall, which partly overlapped it. The inside face of Stone 8 formed one side of this pit, which was 0.6 m deep and cut into the old ground surface to a depth of 0.1 m. The upper 0.25 m of the pit contained a mixed fill of earth and fragments of oak charcoal. At a depth of about 0.25 m a stone slab measuring 0.4 m x 0.3 m x 35 mm thick was placed horizontally in the pit, almost completely blocking it. A thin skin – 25 mm to 50 mm thick – of dark brown soil adhered to the underside of this slab and beneath this was a compact deposit of cremated bone. The well-calcined bones were those of an adult, perhaps female. The bone deposit was uncontaminated by soil, charcoal or any other substance, and it rested on a deposit 0.1 m thick of fine charcoal which filled the remainder of the pit. Charcoal from the upper fill, above the stone, provided a radiocarbon date of 1570 ± 70 b.c. (HAR 714).

Cremation 3 (BG45:F4). This secondary burial was discovered in the eastern part of the mound about 0.5 m to the west of the cairn. It was found below the clay capping, cut at an inward slope through the turf mound to a depth of 0.6 m. The upper part of the pit (0.3 m in diameter) was partly closed by a thin, flat slab and was filled with a mixture of earth and charcoal; the lower third contained a deposit of cremated bone resting on a bed of charcoal. The well-calcined bones were those of mature adult, perhaps male, who had probably suffered from osteo-arthritis.

Cremation 4. During the 1971 exploratory excavation, a circular pit was found beneath the clay capping immediately inside the stone wall. It measured about 0.55 m in diameter and was cut to a depth of 0.23 m into the turf mound. The northern edge was covered by a deposit of about twenty small stones, with a thin slab (0.35 m x 0.1 m), whose underside bore traces of burning, lying at the centre of the pit mouth. The fill consisted of earth, charcoal, and some fragments of cremated bone, the latter concentrated towards the rounded base of the pit.

Cremation 5 (BG45:F21). A circular pit (c. 0.37 m in diameter) dug into the turf mound but beneath the clay capping, about 1.59 m inside the stone wall, was found close to the baulk in the south-west quadrant (Fig. 7.11, section C). The upper 0.2 m of the pit contained yellow clay, fragments of redeposited turves and a little charcoal; below was a mixture of a little earth, charcoal and cremated bone. Only a very small amount of bone was present, mainly tooth roots and fragments of phalanges, probably representing an adult. A small scrap of burnt flint (283) was found with the burial. North and north-west of the mouth of this pit, an irregularly-shaped area (1 m x 1.2 m) of reddened, burnt clay and charcoal (oak and possibly alder) occurred on the top and within the upper layer of the turf mound.

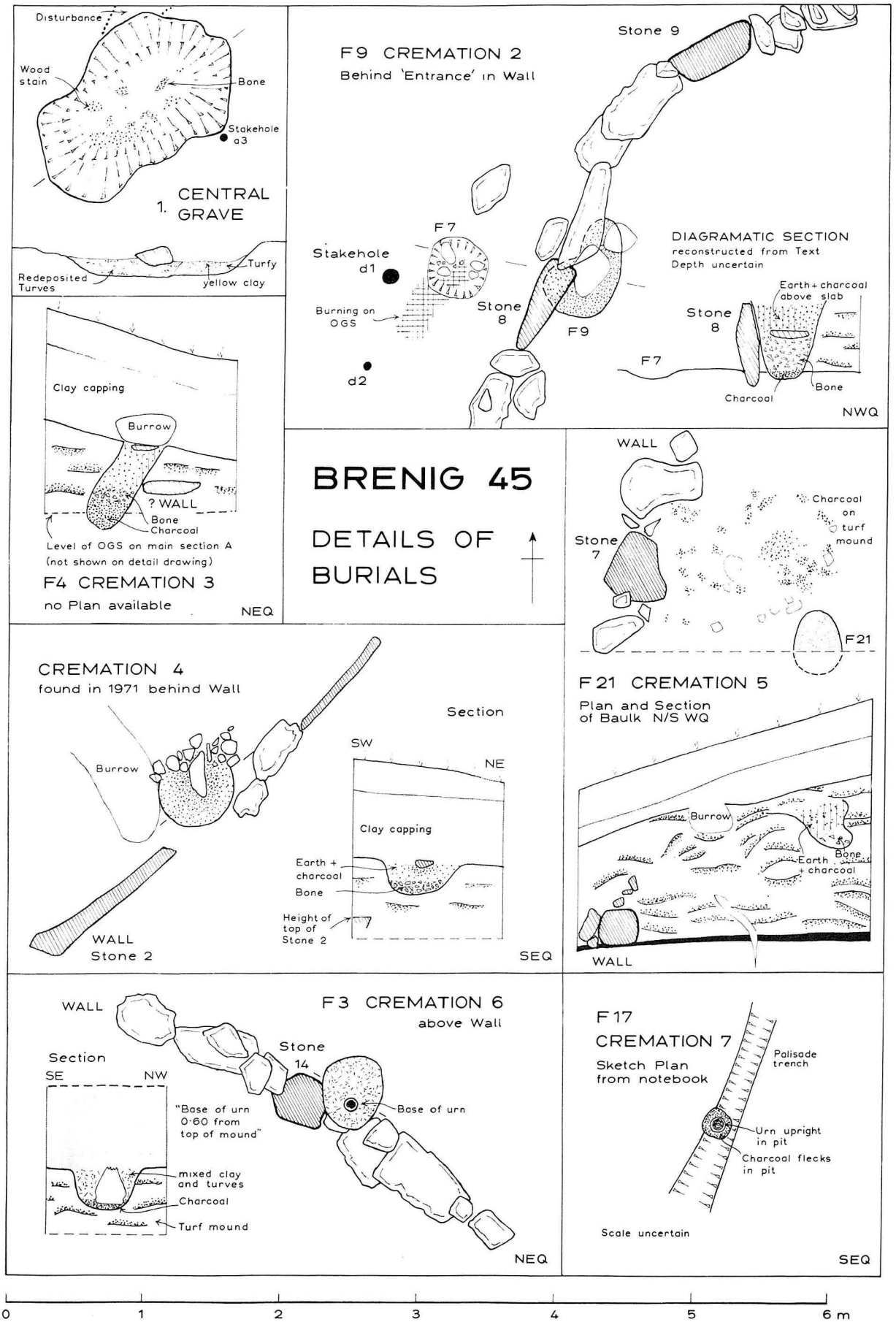
Cremation 6 (BG45:F3). In the north-eastern quadrant, virtually against the outer face of the stone wall, excavation revealed an oval pit in the turf mound beneath some 0.5 m of clay capping. It appeared as an area of dirty yellow clay flecked with charcoal and contained, towards its western end, an inverted Collared Urn (Urn 1). The mouth of the urn rested on a deposit of charcoal and clay (which contained some traces of turves). The remainder of the fill of the pit consisted of clay with some turves and some small fragments of charcoal. The turves were presumably redeposited after the digging of the pit, which measured 0.48 m x 0.44 m x 0.3 m deep. A few fragments of cremated bone were found in the lower fill of the pit, having apparently filtered through cracks in the wall of the urn.

Urn 1

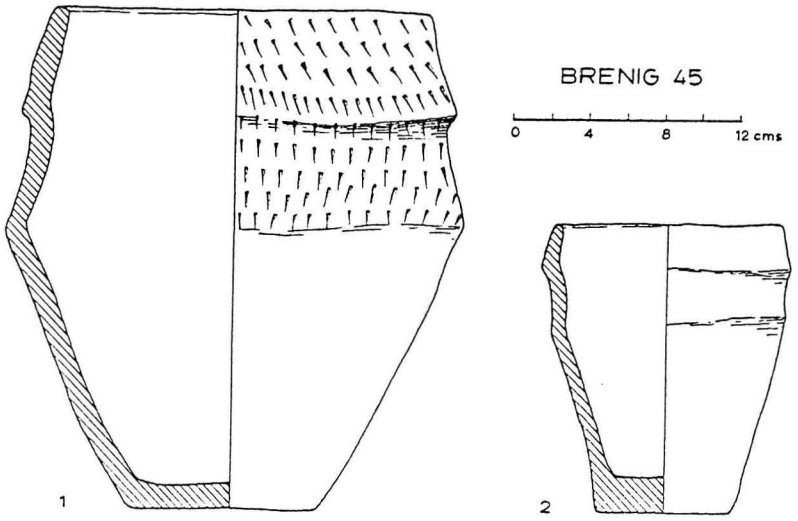
Diameter 0.2 m. Height 0.325 m.

Contents : The cremated bones of a young adult, probably male, together with a considerable quantity of oak charcoal and a little earth almost entirely filled the urn. Presumably the mouth had had some organic closure. The charcoal from the urn supplied a radiocarbon date of 1670 ± 60 b.c. (HAR 712).

The urn is a medium-sized Collared Urn, rather coarsely made, poorly fired, and roughly decorated. The buff-coloured clay contained a good deal



7.13 Brenig 45: details of burials.



7.14 Brenig 45: urns from cremations 6 and 7.

of stone grit, but the surfaces were smoothed. The collar and neck were simply decorated with horizontal lines of stab marks, quite deeply cut with some fairly broad point (Fig. 7.14). The urn has two of the traits, simple rim and repetitive decoration, which define Longworth's Primary Series (Longworth 1984, no. 2025).

Cremation 7 (BG45:F17). A small pit (0.2 m in diameter and 0.2 m deep) was dug into the palisade trench in the south-eastern quadrant, its base being the bottom of the trench. A little of the inner edge of the trench had been cut away in the course of digging this pit, which was found to contain a small Collared Urn (Urn 2). The urn had stood upright in the centre of the pit, which had been filled with earth flecked with charcoal. A small, flat stone showing signs of burning had been placed on the mouth of the pot, which was intact but for a small fragment of rim which was not found.

Urn 2

Diameter of rim 0.12 m. Height 0.15 m.

Contents : a mixture of earth and charcoal, with a few well-calcined bones (two molar crowns and earbones) near the base of the pot, representing a child less than six months old. The charred soil from the pot provided a radiocarbon date of 1670 ± 100 b.c. (HAR 1027).

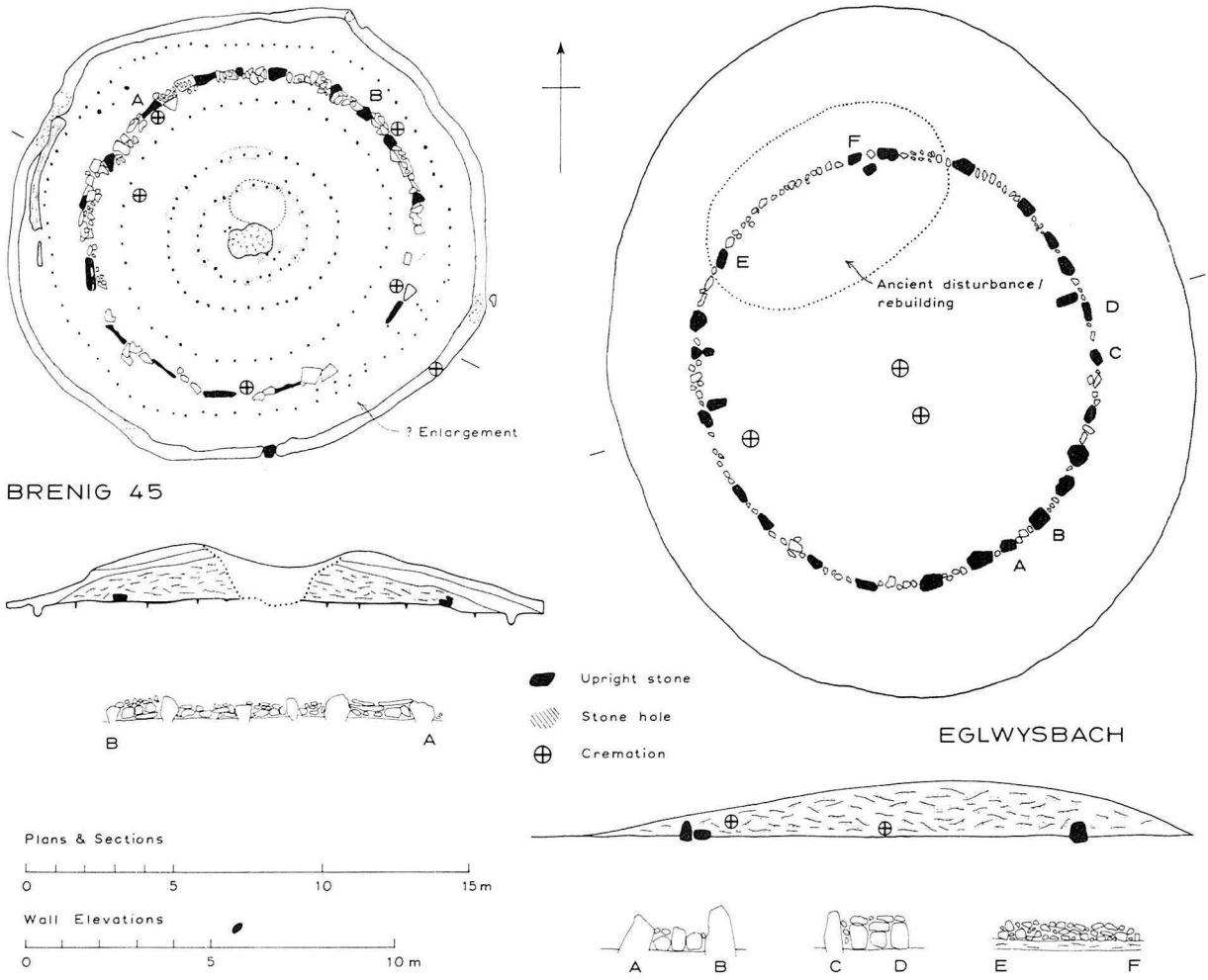
The urn was a small Collared Urn, completely undecorated and without a sharply defined profile. The narrow collar slopes inwards and is wider than the slack shoulder. The fabric is coarse with a good deal of stone grit, though the inner and outer surfaces are smoothed. It is fairly well fired and the colour, both inside and out, is dark brown. It is deemed to belong to Longworth's Secondary Series (Longworth 1984, no. 2026). The use of these small Collared Urns as Accessory Vessels, or as containers for very small quantities of bone, as here, is a recognised feature of Early Bronze Age funerary practice.

Discussion

Frances Lynch and John Waddell

The history of this barrow is clearly a complex one and it is unfortunate that so many uncertainties must remain. There must be a sequence of events in any construction, and such a sequence need not be prolonged, nor imply any change of intentions. Here the series of radiocarbon dates suggest that the main period of activity was in fact a short one, but can the complexities of design, especially the appearance of the stone wall, be explained by suggesting that within that span there was a serious modification of the monument?

The central grave, Stake Circles A, B and C, and the uprights of the stone wall, which were set into dug holes, must all predate the turf mound. The stone wall is very close to a perfect circle; the stake rings are more oval but all four could have been set out from a common centre, a point within the area of the central grave. In this they differ from Stake Circle E and the palisade, which are both noticeably irregular and should probably not be considered concentric with the others, though the irregularity makes it impossible to be certain on this point. All the stake circles were probably still in position when the turf mound was built, for several stakes in each ring survived into the mound. The completion of the wall linking the uprights must have gone hand in hand with the building of the turf mound, for some of the boulders rested on turves, while others apparently lay upon the old ground surface. When the mound had reached the height of the top of the uprights in the wall, Cremation 2 (BG45:F9) was placed in a hole dug down behind the western stone of the 'entrance'. The mouth of the pit was then covered with the small stones of the 'crust', which was placed on top of the turf mound just behind the wall to create an appearance of breadth and solidity. It is probable that Cremations 3 (BG45:F4) and 4 (found in 1971) were also inserted at this stage. They were both in pits dug into the turf mound; like Cremation 2 both were capped with



7.15 Plans of walled barrows: Brenig 45 and Eglwysbach. (Eglwysbach after Willoughby Gardner 1913).

flat slabs, and both were placed close behind the stone wall. There was no 'stone crust' in their vicinity, so their relationship to the process of completing the mound cannot be determined.

The period of activity outside the wall, represented by the pit with evidence of burning (BG45:F7) in front of the 'entrance' (perhaps the cause of scorching on Stone 8), the row of stakes (d1 – d3) and the elongated rectangle of stakes on the other side of the mound (d8 – d11), cannot be exactly determined, but these features were all subsequently covered by more turves. The nature of this activity must also remain uncertain, but the location serves to emphasise the importance of the 'entrance'; and the close similarity of the rectangular structure on the other side to that found close to the presumed pyre at Brenig 42 must suggest some special purpose.

Many stones were found lying on the old ground surface between the wall and the palisade. These stones are significant if one assumes that they came from the loosely-built filling of the wall and its 'stone crust'. Since many are specifically recorded as lying 'on the old ground surface' the area beyond the wall must have been free of turves for a period during which there was some dilapidation of the wall. Since the wall was so roughly built it could have collapsed very rapidly, but the presence of the 'stone crust' would suggest that the builders envisaged a period when the wall was to form the visible edge of the mound. The fact that one, and very probably two, uprights were missing from the wall (without obvious signs of late disturbance there) would also suggest that there was a period when they formed the outer edge of the mound and could be easily removed.

The ring of stakes, E, in this outer fringe contrasts with those inside the wall in several respects (see App. 1). It was much more irregular both in spacing of stakes and layout, and looked as if it had been constructed in a series of straight runs, which suggests the use of separate hurdles. Comparison with a compass circle drawn from the centre of the other stake circles suggests that it was not laid out from that point; it seems more likely that it was constructed around a pre-existing mound, perhaps as a rough fence protecting a revetment which must have been very vulnerable to people, cattle or other animals tempted to climb on it. This fence also enclosed the wooden structures outside the wall.

On the western side of the valley, at Brenig 41 and 42, the area designated for burial was fenced off for quite some time before the mound was built, when the earlier fences were demolished. This cannot be the explanation for Circle E here because several stakes (34%), in fact more than in any other circle, survived to quite some height within the mound.

The chronological separation of the turf mound

and all its underlying features *inside* the wall from the features outside it, and the turves and clay capping which covered that area, cannot be demonstrated with complete certainty. The best factual evidence is the presence of stones on the old ground surface outside the wall. It may be legitimately assumed that they tumbled from it and this can only have happened while the wall was exposed. The loss of uprights 16 and 18 is best explained in this way, assuming that easily recognisable evidence for later disturbance was not overlooked. The arguments based on the concentricity of the inner circles, on the irregularity of the outer ones, and on the significance of the 'stone crust' are admittedly more subjective, and the weight given to them must be a matter of judgement for the reader. The series of radiocarbon dates (App. 10) neither supports nor contradicts this division of the barrow construction into two phases for, with one exception (see below), they all cluster around 1620 b.c. and there is no significant statistical difference between them. What they do suggest is that the entire period of activity was a short one, comparable to that which covered the alterations to Brenig 51 (see below). The second stage would be the addition of more turves against the outside of the wall and over the top of the 'stone crust'. This may have caused some further disturbance, for some small stones are recorded 'on a ledge' in the turves and 'on top of turves' in this area outside the wall.

Cremation 6 (BG45:F3) must belong to this second phase because it was placed in a pit dug through turves on the outside of the wall. The top of the pit was sealed with clay similar to that in the 'clay capping', therefore one may assume that it immediately pre-dates the addition of that layer. Cremation 5 (BG45:F21) was also in a pit capped with clay but it was dug into the central part of the turf mound, and therefore could have been placed there in the earlier phase. On the other hand it lies at some distance from the wall, which may indicate a later date. The cairn, or spread of stone, which covered a patch of charcoal, burnt earth and bone (BG45:F27), must also have been built on top of the added turves at this stage. The excavator thought that stones from the wall might have been used in this cairn. There is nothing to prove it, but if it is so, it would be another indication of the rapidity of the sequence of events, for the stones must have been taken before the additional turves were placed in position.

The mound was completed by a capping of clay which was retained by a close-set palisade. Like Circle E, the palisade was irregular in plan, and does not appear to have been laid out from a centre, but rather built around an existing mound. The stone on the line of this palisade is puzzling. In the course of its removal the strong impression was gained that it predated the palisade, the ends of the palisade trench abutting it and cutting away the edge of the socket on either side. Unfortunately the surrounding area had been heavily trowelled at that stage and direct proof had gone, but it seems more than probable that the stone was standing before the palisade was built. Its relationship to the earlier stages of the barrow's history, however, cannot be established, and the phasing implied in the Interim Report (Lynch *et al.* 1974, 14) should be abandoned. It was a slight stone, only 0.75 m high, and it is difficult to see it as a monument in its own right, but the patch of charcoal near it (BG45:F6) may indicate that it had some special significance.

Cremation 7 (BG45:F17), the scant remains of a very young child, was found in a small Collared Urn standing in the palisade trench. The bones include fragments of skull, teeth, long bones and the two petrous temporal bones, bones which are more resistant to burning and decay than most parts of an infant skeleton (App. 5). Their presence may, therefore, have little significance, but in north Wales there are several instances of just these two bones being separately buried, with presumably ritual connotations (Lynch 1972, 57–8). Because of the presence of other parts of the skeleton it remains uncertain whether Brenig 45 should be added to the list of such unusual infant burials.

The record of this important find is inadequate because of lost drawings, but it is clear that it must be either coaeval with, or later than, the palisade. In the latter case one of the posts must have been removed for its insertion. In any event, this burial would seem to be the final act in this barrow. The radiocarbon date, however, obtained from burnt soil accompanying the burial (1670 ± 100 b.c. – HAR 1027) is at variance with a much later date (1340 ± 70 b.c. – HAR 658) for charred soil in the fill of the palisade trench; statistically they are significantly different. The date from the urn accords well with the dates for the other burials; statistically it is not significantly different from them, which suggests a rapid sequence of events. The origin of the burnt material in the palisade trench is uncertain. The evidence of clay replacement and the collapse of the burnt plank (BG45:F20) suggests that the posts decayed naturally and were not burnt down; therefore, this burnt material may not be relevant to the date of the palisade's construction. On the other hand it accords well with the date (1380 ± 80 b.c. – HAR 800) for the building of Brenig 40, which was surrounded by a very similar palisade, and a late date for the palisade, representing a refurbishment of the monument, would suit the stratigraphy quite well. However, in that case it would be necessary to argue that the small urn and its contents were already very old when they were buried. This is not impossible, especially as the contents may be claimed to be unusual, but it is a rather far-fetched supposition. The fact that Cremation 6 (BG45:F3), which must belong to the second phase of the mound, also has an early date (1670 ± 60 b.c. – HAR 712) would not support the view that the palisade was a very late addition to the mound, since there is no evidence of any interval between the first enlargement with turves and the spreading of the clay capping with its retaining palisade. We are forced, therefore, to admit the anomaly and to point out that both samples are 'charred soil', a rather unsatisfactory material for dating, and that whereas HAR 1027 does come from inside the pot, the origin of HAR 658 is very uncertain.

The structure of Brenig 45 is rather more complex than that of the other barrows, though it shares many important features with them. It is the stone wall around the mound in its first phase which is the unusual feature, its design hinting at pre-mound rituals not suggested by the evidence from the other barrows. The wall was built with upright stones placed at regular intervals, with a wider gap on the north-west. This 'entrance' might have been functional if there was ever a stage when this circle of stones was free-standing. It is tempting to suggest that there was once an Open Stone Circle on the site, perhaps with the stone in the later palisade as an 'outlier', but there is nothing to prove it and no other features could be legitimately associated with it. The loosely-built walling which now links the uprights certainly belongs with the first turf mound, for many of the stones rest on turves and the walling is so badly constructed that it could never have stood alone. Although any idea of 'entry' would have been impossible at this stage the entrance gap was emphasised by a different blocking, and external features seem to suggest some special activity there. The wall, therefore, would seem to embody ideas more complex than that of a simple kerb, but the evidence does not permit certainty on any of the points raised, especially the isolation of a pre-barrow ritual monument.

The unusual design of the wall, whether it results from one or two periods of building, is almost exactly parallelled at another Denbighshire barrow (Fig. 7.15). On the summit of Mwdwl Eithin, Eglwysbach, is a group of three barrows visible for many miles both to east and west. The central mound was excavated in 1913 and proved to be a mound of turves covering a stone wall very similar in construction and scale to that at Brenig 45 (Willoughby Gardner 1913). The primary burial was in the centre, an unaccompanied cremation lying on the old ground surface, and there were two secondary cremations, one with a flint knife, the other in an early Collared Urn associated with an arrow shaft smoother. The wall was composed of upright blocks about 1 m high, set rather irregularly between 1 m and 2 m apart and linked by smaller stones, some placed horizontally one above another. (*Op. cit.* 324, Fig. 5). On the west side two stones, 2 m apart, projected from the wall towards the centre of the barrow; they suggest an entrance feature like that at Brenig 45. This wall was completely covered by the mound, which extended some 4 m beyond it. A change in construction on the north-west led the excavator to suggest that it might have been rebuilt in this sector, where the stones lay above turves, perhaps implying a two-phase construction of the mound as at Brenig. No stake circles were found, but such features were not looked for at that date and might have been missed.

Other monuments of this design are not known so it is particularly interesting to find both examples in the same region. On the other hand, the enlargement of the barrow does not call for special comment, for it is a quite common feature and may be found in all parts of the country. The conversion of a ritual monument to a burial mound (if this did happen at Brenig 45, which is by no means certain) is a less frequent occurrence, but instances may be quoted in Wales at Letterston, Pembrokeshire (Savory 1962–64), and less certainly, on Mynydd Epynt (Dunning 1943; Lynch 1972). The use of Brenig 44 for burials in the later phase of its history is another example of the very close inter-relationship of burial monuments and of ceremonial sites.

Whatever uncertainties remain in the analysis of the sequence of events at this mound, it is clear that it is essentially a burial monument, that it belongs to the first phase of barrow-building activity in the cemetery, and that several points about it suggest that it may have been the most important burial monument in the valley. In many ways it is similar to the other barrows; it had a central grave containing a cremation burial, it covered a series of stake circles and it was built of turves. In some other respects it was exceptional. Its design involved a stone retaining wall which was probably exposed for a certain time, so that the mound was built in two distinct stages; it contained additional burials, some of which (Cremations 4, 5, & 7) were only token deposits of bone. The meaning of such small quantities of bone is obscure, but they are often found at ceremonial or ritual monuments, and so may represent religious activities which were not normal funerals. Their presence at Brenig 45 may hint at some special ritual element in this monument (perhaps identifiable in the uprights of the wall) – an element not present in the simpler barrows across the valley.

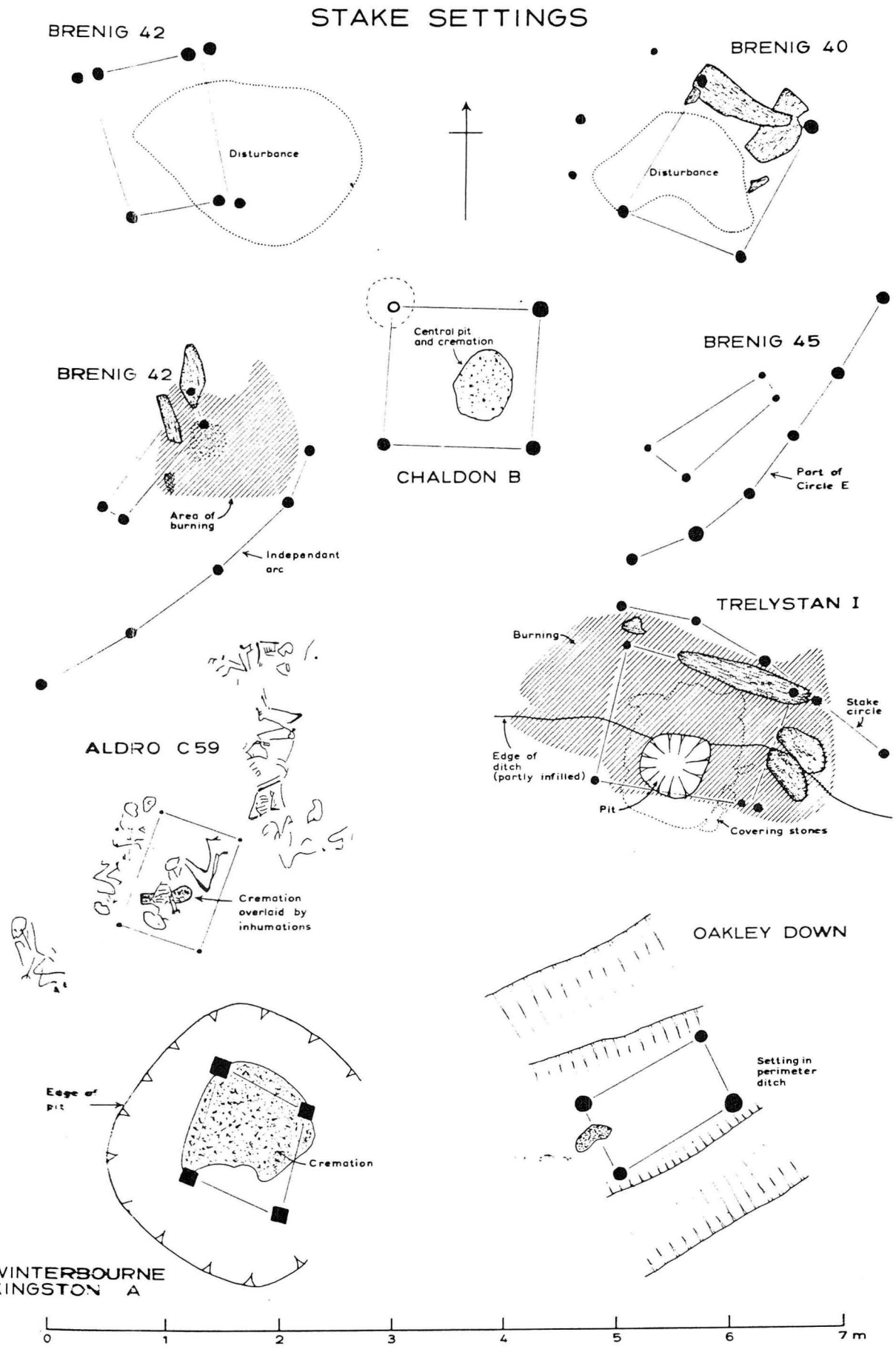
DISCUSSION OF STAKE CIRCLE BARROWS

Frances Lynch and John Waddell

Despite the presence of a Ring Cairn and the unusual Platform Cairn, the monuments grouped around the head of the valley constitute what is essentially a cemetery. Although we may suspect that the motives for building a barrow were complex and included considerations we will never know or understand, we can be certain that the burial of human bones was central to the ceremonies performed at the four large mounds – Brenig 40, 41, 42 and 45 – all of which share many features of ritual and construction, even though Brenig 40 may be later than the others by some two hundred years.

Burial Practice

One of the most unusual features of this cemetery, in terms of the Bronze Age in north Wales, is that each barrow was built initially for a single burial. Each has a central burial feature, be it grave or mortuary structure, which is obviously primary to the monument and only one, Brenig 45, has any secondary deposits added to it. This contrasts with normal practice in Wales



7.16 Comparative plans of stake settings.

where the use of cemetery mounds is widespread, reflecting, it has been claimed, a distinctive social structure which may have persisted from earlier traditions of burial in megalithic tombs (Lynch 1980). On the other hand, recent excavations in Montgomeryshire (Britnell 1982) have shown a development from single-grave monuments to cemetery mounds within a single community, and this chronological model may be the one to adopt here at Brenig, especially when it is remembered that these uplands had been newly colonised in the later Neolithic. But the picture is not a simple one for, though the later phase of Brenig 45 could be interpreted as a cemetery mound, supporting such a development, Brenig 40, probably built after Brenig 45 was modified, is still a single-grave monument. Moreover, the structure of Brenig 45 has unusual 'ritual' connotations and several of the burial deposits contain no more than token quantities of bone, one of them being the 'infant earbone' burial commented on above.

With the sole exception of the traces of decayed bone from the large grave pit beneath Brenig 41, possibly the remains of an unburnt burial, all the bodies were cremated. The exact method of deposition varied. The central grave in Brenig 45 was a large, shallow pit, obviously larger than necessary for a cremation deposit; in Brenig 42 and 40 the burials were associated with rectangular wooden structures, but whereas the bones in Brenig 40 had been enclosed in a large urn, it is unlikely that the lost bones from Brenig 42 had had any protection. The secondary deposits in Brenig 45 were placed in small, deep holes; two were protected by urns but the others were not; some were covered by flat stones, but not all. Only at Brenig 42 was the site of the pyre identified. It had probably been built inside the low, circular enclosure formed by the ditch and rubble bank and may have incorporated some quite elaborate wooden elements.

At least half of the ten cremations from these four barrows were those of adults; in only three cases was it possible to determine sex. In one instance the bones were those of a child, and in two others, of elderly persons (App. 5). The bones of the child constituted one of the three 'token burials' amongst the later deposits from Brenig 45. The selection of bones in this burial, which seems to fall into a pattern recognisable elsewhere in north Wales, has already been commented upon. One of the other 'token burials' was an adult, the third unidentifiable. Exceptionally small quantities of bone, less than might be explained simply by careless collection from the pyre, have been found in Bronze Age barrows in many parts of the country, but there has been no extensive study of the phenomenon. A rather cursory examination of the question (Lynch 1984) suggests that there is a notable association with Ring Cairns and Variant Circles, monuments with ceremonial connotations, as Brenig 45 may have had at one stage in its history. However the local circles, Brenig 44 and 51, do not contain any such token burials.

Even if the monuments of this cemetery were the work of only a single extended family and their descendants, just over 20 burials (including those from the other monuments to be described later) over a period of 500 to 600 years seems to be an unduly modest number. For reasons unknown to us it would appear that only certain adults and children were accorded the privilege of burial in the cemetery, so that funereal activity on the site must have been only sporadic.

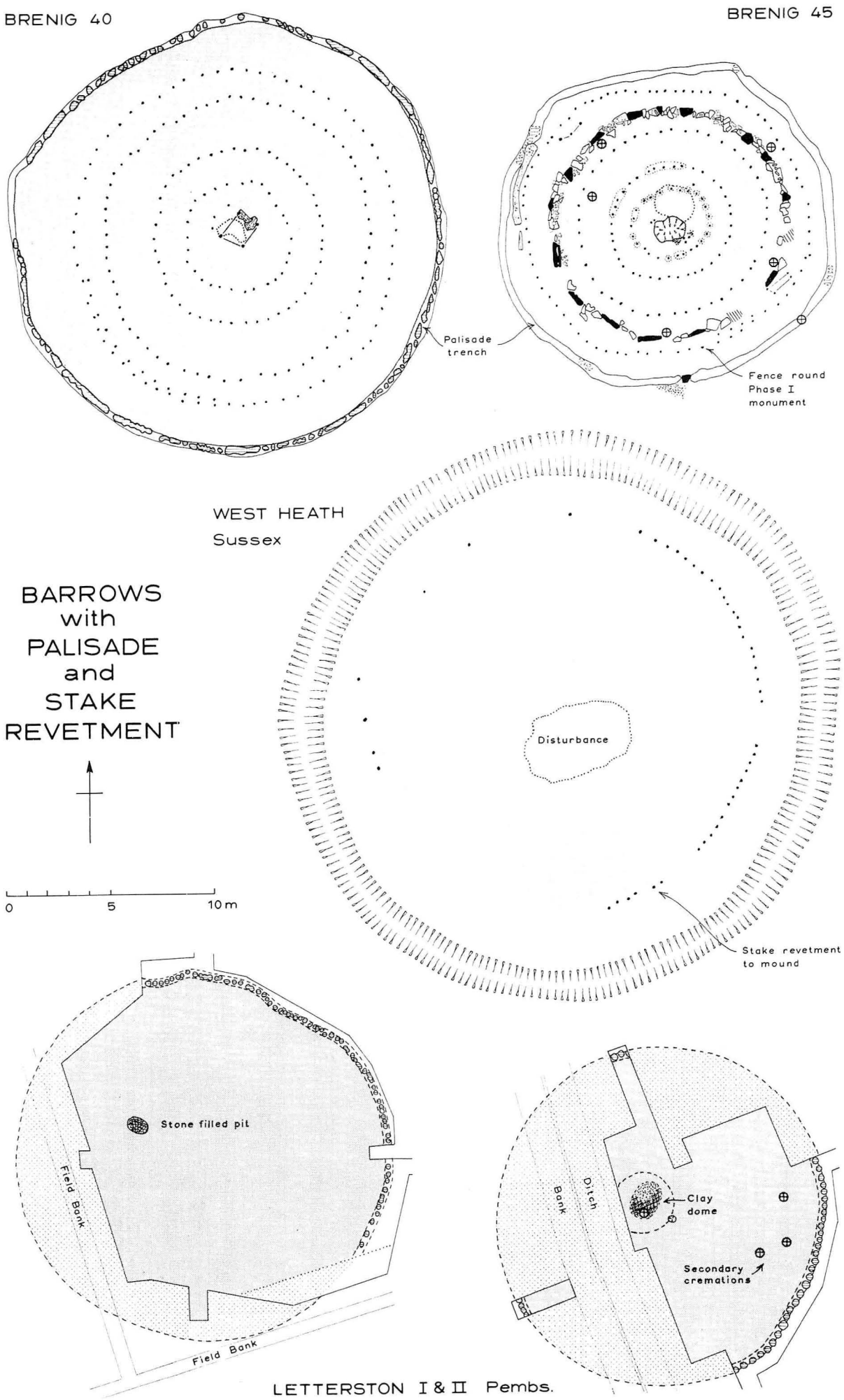
In spite of the infrequency of burials, the ritual practice of the community remained surprisingly uniform. Single central cremation remained the norm; circles of stakes were used in the construction of all the mounds – whether for practical or ritualistic reasons is not always entirely clear – and all of them were built of turves and capped with clay. These practices remained compatible over several centuries for, though Brenig 45, 42 and probably 41 are broadly contemporary, Brenig 40, which shares detailed points of comparison with Brenig 42 and with the modified Brenig 45, must have been built a hundred, or even two hundred, years later (App. 10).

Mortuary Structures (Fig. 7.16)

Possible mortuary houses are occasionally found in British round barrows and, on present evidence, their most striking feature is their great variety. Ashbee (1978, 27–34) has presented a comprehensive survey of these structures, pointing out that the number of accounts of holes, stakeholes, turf structures and other phenomena found beneath round barrows and cairns suggests that mortuary structures were more frequent than is commonly believed.

Even the few stakeholes around the central grave in Brenig 45 might be susceptible to interpretation as supports to some structure above or around it, but nevertheless this discussion will concentrate upon the much more formalised rectangular settings in the centres of Brenig 40 and 42. These structures were very much the same size and both were finally burnt. They may, therefore, have served the same purpose, but could have been quite different in appearance. There is no evidence for any superstructure at Brenig 42 and, since the stakes did not penetrate the mound, the structure must have been temporary. Since there is evidence that the pyre was sited a few metres away, these stakes cannot have supported its framework, but must have been connected with the final resting place of the bones, although disturbance had removed all trace of them. At Brenig 40 some substantial timbers survived within the area of the mortuary structure but since they are separated from the stakes by elements of the turf mound it is equally difficult to be certain of the original form of the structure. They might have been part of a low platform which was burnt and the burnt timbers perhaps gathered together to support the bones in their large urn. There was no evidence for a pyre, either within the rectangular setting or elsewhere beneath the barrow.

Rectangular or square stake settings about 1 m across are the most standardised and most common of the mortuary structures beneath British round



7.17 Barrows with palisade and stake revetment.

barrows. With the exception of the very much more substantial, tent-like 'house' beneath one of the barrows at Wrangworthy Cross, Devon (Ashbee 1960, 54, Fig. 16), all these structures are associated with cremation burials. Several of them partially enclose areas of intense burning, quite probably the site of a pyre, and it has been suggested that they form its framework . The presence of a burnt surface is not universal, so the structure, albeit temporary, is more reasonably to be associated with the final disposal of the bones.

The closest parallel to the structure beneath Brenig 40 is the only other Welsh example, the stakes surrounding Burial 4 in Trelystan Barrow I near Welshpool (Britnell 1982, 153–55). This structure was closely comparable in size and was also associated with burnt planks resting on turves a little above the level of the stakes (Fig. 7.16). However, in this case the burial urn was not standing on any platform, but had been buried in a pit just within the area of the rectangle and covered with slabs which rose to the height of the burnt planks. The ground in its vicinity had been intensely fire-reddened but the digging of the pit, and perhaps the rest of the structures, were subsequent to this burning.

Similar structures have been found associated with areas of intense burning at other barrows in the south of England. At Winterbourne Kingston A the excavator believed that the four stakes had supported a pyre set in a large central pit, but a disturbed deposit of cremated bone remained within the structure (White 1973). At Roundwood in Hampshire, Crawford found three stakes of a square with both reddened earth and cremated bone (Crawford 1920–25, 192) and at Bulford G49, Wiltshire, a rectangle of stakes was found to contain logs which had been burnt into a mass of ash and charcoal (Rolleston & Lane Fox 1879, 185–94). The excavations at Simon's Ground, Dorset, have produced evidence for two rectangular stake structures, one, beneath Barrow B, enclosing an area of charcoal and burnt logs or planks, but no bone (White 1982, 5–7).

Elsewhere very similar structures are associated with cremated bone, often in a pit, but without areas of intense burning. Beneath Barrow 5 at Chippenham, Cambridgeshire, four secondary cremations in pits were each neatly enclosed in an almost square arrangement (average 0.6 m x 0.6 m) of four stakeholes (Leaf 1938, 9). At Chaldon, Dorset, a similar square of stakeholes surrounded the main burial, a shallow pit containing only a token cremation (White 1973), while at Oakley Down (White & Reed, 1970) the stake rectangle was set in the primary silt of the ditch and was undoubtedly a temporary structure within which the cremation deposit is strangely eccentric, raising further questions about the nature of the structure supported by the stakes and the sequence of events which the remains reflect. At Aldro C59 Mortimer (1905, 69) found that the primary cremation had definitely been enclosed within some wooden structure with 'traces of timber which had apparently formed the sides and ends of a rectangular space . . . and at each corner . . . a stakehole over two inches in diameter' but unfortunately he does not elaborate on the exact nature of the superstructure.

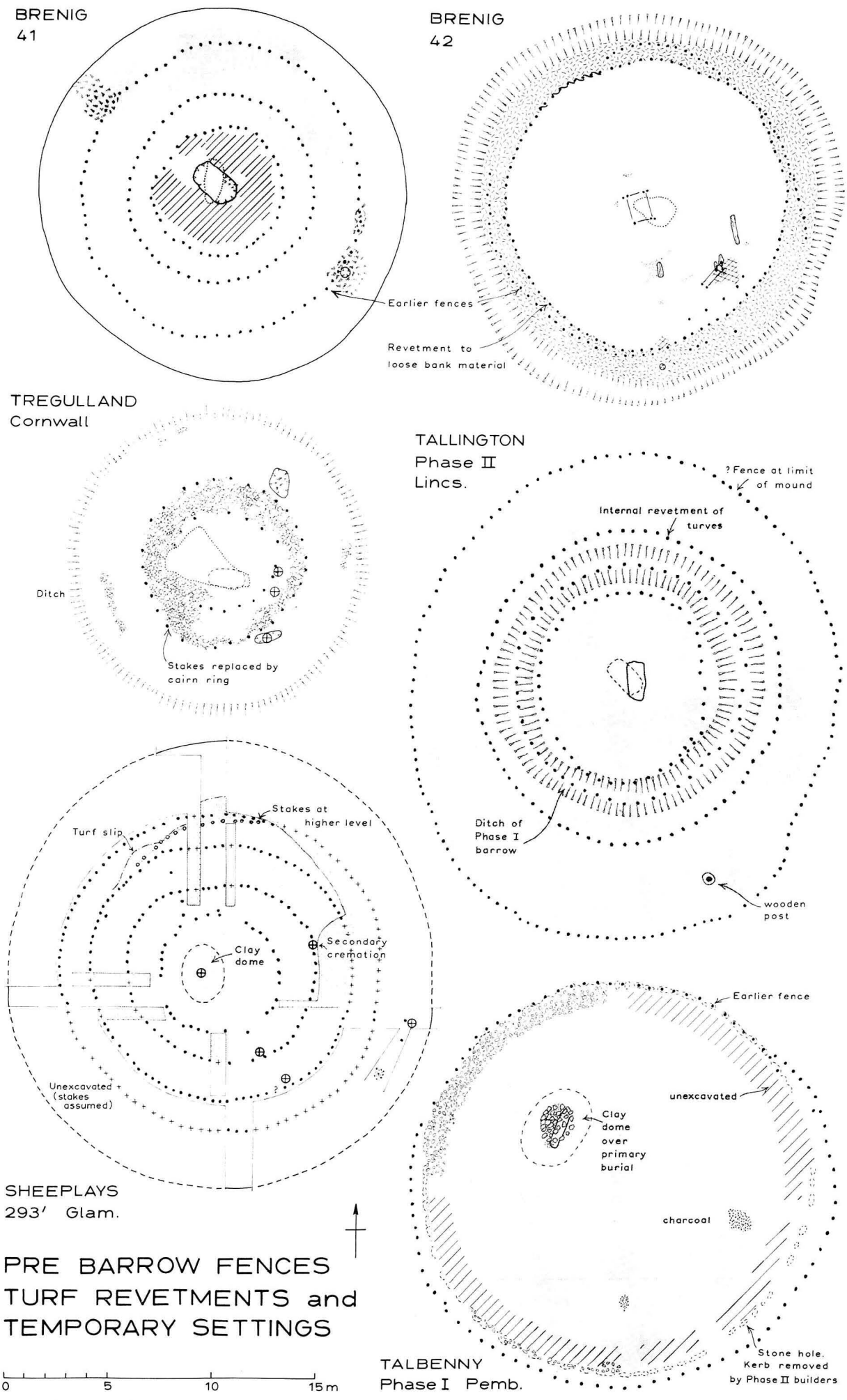
The situation in which the stake rectangle straddles a deposit of cremated bone would seem to be the most common arrangement in Britain. The bone was sometimes placed in a pit and seldom very symmetrically placed in relation to the stakes, which may suggest that the wooden structure was removed before the burial was finally made. This arrangement is also frequently found, in rather elongated form, beneath the heathland barrows of the Eight Beatitudes in North Brabant (Glasbergen 1954, Tumuli 1, 5, 8, 10, 11, 14 & 15), a cemetery which has produced so many instructive parallels for turf and wood constructions in Britain.

In date these rectangular structures belong in the main to the second half of the Early Bronze Age, but may continue later in some regions. At Aldro (Mortimer 1905, 69) the enclosed cremation was primary to several inhumation burials with Yorkshire Food Vessels. Radiocarbon dates are available for Trelystan I (1695 ± 70 b.c. – CAR 280) which compares very well with that for Brenig 42 (1660 ± 70 b.c.) but is several generations older than its close parallel at Brenig 40 (approx. 1420 b.c. App. 10, Dates 10 & 11). This date in turn lies within the lifespan of the cemetery of the Eight Beatitudes (1500 b.c. – 1100 b.c. (Lanting & Mook 1977, 106)). In Dorset the tradition seems to have lasted much longer, for dates of 1250 ± 90 b.c. (NPL 216) (Simon's Ground B), 1020 ± 90 b.c. (NPL 237) (Winterbourne Kingston) and even 604 ± 47 b.c. (BM 692) (Simon's Ground G) have been obtained, the last associated with Deverel-Rimbury pottery (White 1972; 1982, 41).

Little can be said about the trapezoidal arrangements of stakes at Brenig 45 and 42 beyond drawing attention to their similarity. That beneath Brenig 42 would seem to have been set up on the site of the pyre but did not itself provide positive evidence of burning. The quadrilateral beneath Brenig 45 had stood outside the original kerb to the barrow but had been enclosed within its protective fence (Circle E). There was no positive sign of burning and it had been built with stakes rather smaller than average and less deeply driven in.

Stake Circles (Figs. 7.17–19)

One of the most consistent and striking features of all the barrows at Brenig is their use of stake circles. Rings of stakeholes have been regularly recognised beneath earthen, and especially turf, barrows since the 1930s, but a good deal of uncertainty still surrounds their interpretation: whether they should be considered functional revetments to stabilise the mound or whether they had some ritual role in the funeral ceremonies. The evidence from Brenig and from other recent excavations such as Trelystan (Britnell 1982) has shed light on these problems and has shown that no single answer is universally correct; that circles beneath the same mound may have quite different functions – some quite mundane, others still tantalisingly within the realms of 'ritual'.



7.18 Pre-barrow fences, turf revetments and temporary settings.

Firmly within the functional sphere are the palisade revetments of close-set posts around the bases of Brenig 40 and 45. The relationship of the palisade trenches to the mound and the scale of the posts set in them make it clear that they were designed to retain the clay capping of the mound within a wooden wall about 1 m high. Exactly the same arrangement may be seen at two Pembrokeshire barrows, Letterston I and II (Savory 1949) but, rather surprisingly, it has rarely been found elsewhere. The very narrow 'ditch' around the Arreton Down barrow (Alexander & Ozanne 1960) must originally have held a wooden kerb of this kind, but no other British examples are known. By contrast, Beaker barrows in Holland are regularly surrounded by such palisade kerbs (Lanting & Van der Waals 1976, 46). The more widely-spaced posts which surround the base of many later Dutch barrows (Glasbergen 1954) and are set in the ditches of Crichel Down 2 (Piggott & Piggott 1944, 64) and of Itford Hill (Holden 1972) would seem to be less obviously functional and the famous free-standing palisade around the Bleasdale monument is, of course, *sui generis* (Varley 1938).

However, although the substantial 'palisade kerb' is rare, it is probable that some form of wooden revetment giving the mound a drum-like profile was more common than we now imagine. Several barrows have a ring of quite slender stakes at the original foot of the mound, usually now covered by collapsed material, or at the edge of a primary mound subsequently enlarged. Such stakes must have been firmly linked by horizontal members, probably wattle-work, if they were to have any power to retain the mound, but in any case this function might have been important for only a short time as the masking of some fine stone kerbs suggests (Britnell 1982, 149–51). The provision of a double or even triple ring around many of the Dutch barrows (Glasbergen 1954, Tumuli 17, 18, 19, 23 for instance), and around the second phase of the barrow at Barnack, Cambridgeshire, may result from the need to strengthen these rather flimsy wooden kerbs (Donaldson 1977). Stake outer revetments may be found with other stake circles which appear to have had different roles, as at Newbarn Down (Tomalin 1979) and Trelystan I (Britnell 1982, 156–57) or they may occur alone, as at West Heath III (Drewett 1976, 132–34), West Meon Hut (Page 1974) or Caebetin Hill, Montgomeryshire – an early Welsh example (Jerman 1932).

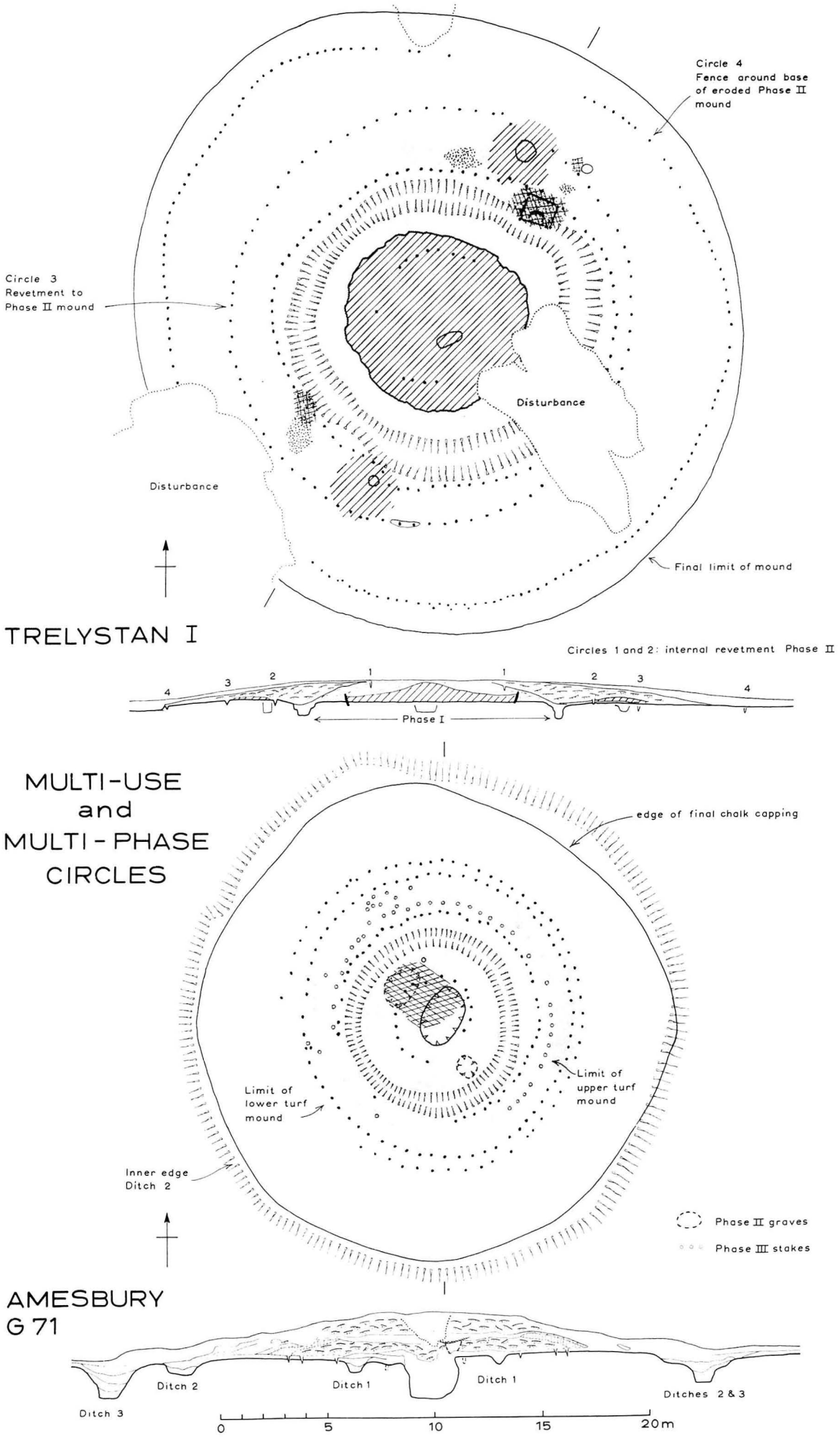
More problematic are those stake circles which are completely covered by the mound. These may be single or multiple and may have been incorporated into the mound or have been removed or cut down before the barrow was built. It has been argued that those that remained standing within a mound were internal revetments stabilising its construction or operating as a template to maintain its shape. Most stake circles are found beneath turf mounds and this almost invariable link might provide support for this argument were it not for the fact that a turf stack must be one of the most stable earth mounds which can be built and scarcely needs such lacing, especially the multiplicity of circles which is sometimes provided. In cases such as Brenig 42, Carvinack (Dudley 1964) and perhaps Chippenham 5 (Leaf 1938–39), where the material revetted was loose, it is easy to accept a functional explanation. But at the other Brenig barrows, at Sheeplays 293' (Fox 1941a), at Trelystan II and at Tallington (Simpson 1976), with their carefully concentric multiple rings beneath well-built turf mounds, it is difficult to believe that their role was solely functional.

Where the stakes have been removed before the mound was built we cannot be dealing with a constructional aid. At Six Wells 271' the single circle was intimately related to a burial cist and its stakes were only 0.2 m high when that was built (Fox 1941). Buzzard pellets at the foot of the single circle at Snail Down XV (N. Thomas pers. comm.) showed that it had been free-standing (and a convenient perch) for a period, and at Sproxton (Clay 1981) the four concentric circles had been removed before the mound was built. Where stake circles have been combined with stone structures, as at Tregulland (Ashbee 1958), it can be shown that the wooden circles were temporary, to be replaced by the permanent cairn ring. With these cairn rings (Lynch 1971, 55–56) there is no question of 'revetment' but there is a plausible link with the Ring Cairns whose ritual connotations are discussed more fully in another section of this report.

Another interpretation may be appropriate to some circles which clearly predate the monument above them: they may represent fences built to delimit the area set aside for burial use. The incomplete and rather ramshackle outer circle at Brenig 42 was a fairly obvious candidate for this mundane explanation but the realisation that the outermost circle at Brenig 41 was also an earlier fence demonstrates that such fences may be built as carefully as any other ring. Fox, in his pioneer study of the stake circles beneath barrows in south Wales, had recognised this pre-emptive role in the single stake circle partially overlain by the mound at Talbenny (Fox 1942, 26–27) but it is not an explanation which has often been presented, although it might be preferable to that of a hut at sites such as Six Wells 267' (Fox 1941, 122) – an interpretation which has never been very convincingly demonstrated, although it is ethnologically attractive.

Fences may also have been set up to protect barrows from the clambering of people or animals after they had been built. This would seem to be the explanation of the very irregular Circle E at Brenig 45 and may also be applied to the outermost circles at Trelystan I (Britnell 1982, 157) and at Bishop's Canning (Smith 1965, 133) which were set at the foot of an already eroded mound. Characteristically such circles, built around an obstacle rather than set out from a central point, may be irregular and made up of straight runs of stakes, suggesting the use of separate hurdles.

The excavation of these four barrows at Brenig with their apparently similar stake circles has demonstrated that the explanations for their presence may be quite varied and that perfectly functional fences may lie alongside quasi-ritual



7.19 Multi-use and multi-phase stake circles: Trelystan I and Amesbury G71.

settings beneath the same mound. At Brenig 42 the stakes seem to have been entirely functional, forming a demarcating fence and a necessary revetment to a bank of loose material. At Brenig 41 the demarcating fence was followed by two, less obviously functional, rings. At Brenig 40 there were four concentric stake circles of uncertain role and a solid wooden kerb. At Brenig 45 there were three concentric stake circles beneath the primary mound which was retained by a stone kerb, itself eventually protected by a hurdle fence which stayed in position when the barrow was enlarged and finally surrounded with a wooden kerb. Similarly varied interpretations may be adduced to explain the stake circles beneath the enlarged barrow at Trelystan I – quasi-ritual or internal revetments, a stake-and-wattle kerb and finally an enclosing fence (Britnell 1982). Much the same interpretations may be appropriate at Bishop's Canning (Smith 1965) as well. Nor should it be forgotten that the circles beneath or within a mound need not be all of the same date, even if no variation in purpose can be demonstrated. This was clearly the case at Amesbury G71 (Christie 1967), at Sproxton (Clay 1981)) and probably at Arreton Down (Alexander & Ozanne 1960), where the circles are fragmentary and overlapping.

If we are to develop our understanding of these enigmatic circles it is clear that the quality of excavation technique must continue to improve. It is crucial to know whether or not the stakes remained in place when the mound was built, whether at that time they were linked by wattle, and what was their approximate height. Where there is no evidence of their survival into the mound it is important to know their exact relationship to the old ground surface and its turf line. Needless to say questions of concentricity and regularity are as relevant to practical problems of interpretation as to more abstruse points of geometry or astronomy. It is also interesting to note that there is very little physical difference, if any, between circles of differing purpose, beyond the observation that separate hurdles may be more easily recognised among the ad hoc fences. When Fox analysed the data in 1959 (175–77) he recognised two series, those placed some 0.3 m apart and those approaching 0.45 m – 0.5 m. The majority of the Brenig circles (App. 1) fall into the wider group, but a third series, 0.6 m – 0.7 m apart, was used in the outer rings of Brenig 40 and Circle C at Brenig 45. Comparison with the straight boundary fences beneath the Trelystan barrows (Britnell 1982, 160–61) shows the pattern of construction of circles and straight runs to be essentially the same.

Mound construction

The material of the Brenig barrows was identical in all cases, a mound of turves cut from a podsolised soil which produced a striking kaleidoscope of colour, a soil which had been obtained at some distance, for it contained evidence of agricultural use (Chap. 2). The use of humus and vegetation for the construction of mounds may at first sight seem wasteful, but where a sward could not be easily cut by the plough, such turves were in fact a by-product of agriculture, especially new intake, and their use in barrows might be a convenient method of disposal. The clay capping must have been local, but not immediately so, for no quarries for this subsoil were found.

The turf mounds contained a few flint implements and flakes and the table of their occurrence (Table 7.1) points up the similarities between all three mounds on the west of the valley and underlines a contrast with Brenig 45. Raw materials have been distinguished because it may be argued (p. 187) that the use of chert and of non-pebble flint are indicative of Mesolithic and Bronze Age date respectively. It may be seen that there is no chert on Cefn Brenig and the material carried in on the turves is mainly of high quality. The clay capping is virtually sterile as befits a subsoil origin. By contrast there is a good deal of chert in the turves and the clay capping of Brenig 45, indicating that it cannot be from the same source as the others. Moreover its presence calls into

Site	Raw Material	O.G.S	Turf Mound	Clay Capping and Topsoil	Features/ Disturbance	Total
BG 42	Non-pebble Flint	–	2	–	–	2
	Black & Banded chert	–	–	–	–	–
	Other	1	2	2	–	5
BG 40	Non-pebble Flint	–	5	–	–	5
	Black & Banded Chert	–	–	–	–	–
	Other	5	1	1	–	7
BG 41	Non-pebble Flint	5	8	1	2	16
	Black & Banded Chert	–	–	–	–	–
	Other	9	9	3	2	23
BG 45	Non-pebble Flint	2	23	2	3	30
	Black & Banded Chert	–	39	12	2	53
	Other	23	126	47	33	229

Table 7.1. Large Turf Barrows: Location of Implements and Struck Flakes.

question the conclusion that the turves in this case were brought in from a distance, although the botanical evidence is as strong here as for the others. However it should be noted that chert does not come from the old ground surface beneath Brenig 45, so the contrast may be noted but not satisfactorily explained.

Although all the components were the same, the final appearance of the four barrows varied. Brenig 41 had a smooth, rounded profile without any kerb; Brenig 42 was surrounded by a shallow ditch and it seems that the clay capping, which was not put in place immediately, did not cover it completely but formed a ring around the sloping sides; at first Brenig 45 had no clay covering and had a drum-like profile retained by a stone wall, but subsequently it too was given a clay capping and the drum was maintained by a wooden kerb. This shape was also preferred for the latest of this group of barrows, Brenig 40, set rather behind the others in a less conspicuous position, but making up for this by its much greater size. One of the functions of the pale grey-yellow capping must have been to make the barrows stand out at a distance and be clearly visible in the head of the pass, perhaps as a reassurance to the community further down the valley.

CHAPTER EIGHT

Small Cairns

BRENIG 8

Frances Lynch and Peter Murphy

NGR SH 9879 5636 Height above sea level 415 m.

This much ruined cairn stands on the southern end of the ridge between the Aber Llech Daniel and the main valley. Brenig 51 lies to the north, higher up the same ridge, and Brenig 42 is sited directly opposite, on the western side of the valley. It is a conspicuous site, though the monument was difficult to see because so little remained – only the kerbstones in fact – which had led to its previous classification as a Stone Circle.

Unlike the larger barrows in the cemetery this monument seems to have been built entirely of stone, having a kerb (diameter 11 m – 12 m) of large boulders, and a filling of small stone of which only a thin scatter survived. The central feature was a large but shallow rock-cut grave containing a small, unaccompanied cremation. Like several other monuments in the cemetery, this cairn had been very skilfully sited to take advantage of the lie of the land. Bedrock in the centre stood some 0.3 m higher than outside the kerb, where it fell away sharply on the south-west, giving extra prominence to the monument.

The monument was totally excavated and a considerable area outside was cleared to bedrock, which was very close to the surface. The area had been ploughed within the last ten years for pasture and the 0 (peat) and Eag horizons of the soil had been mixed. In many places this ploughing had reached the bedrock, only 0.2 m below the surface, but occasional patches of a thin brown mineral soil, a remnant of the Bronze Age surface, had survived in the vicinity of the remaining large stones.

The Kerb

Only four stones of the kerb were unquestionably in their original positions, but four more were in approximately the correct setting; others had been rolled away to the south-west where they lay in a jumbled heap at the bottom of the slope. The kerb had been composed of gritstone boulders, variable in size and none more than 0.5 m high. Most were rather lower than that and there seems to have been little attempt to stand them upright since they had been placed in shallow depressions without the consistent packing which would have been necessary to keep them vertical.

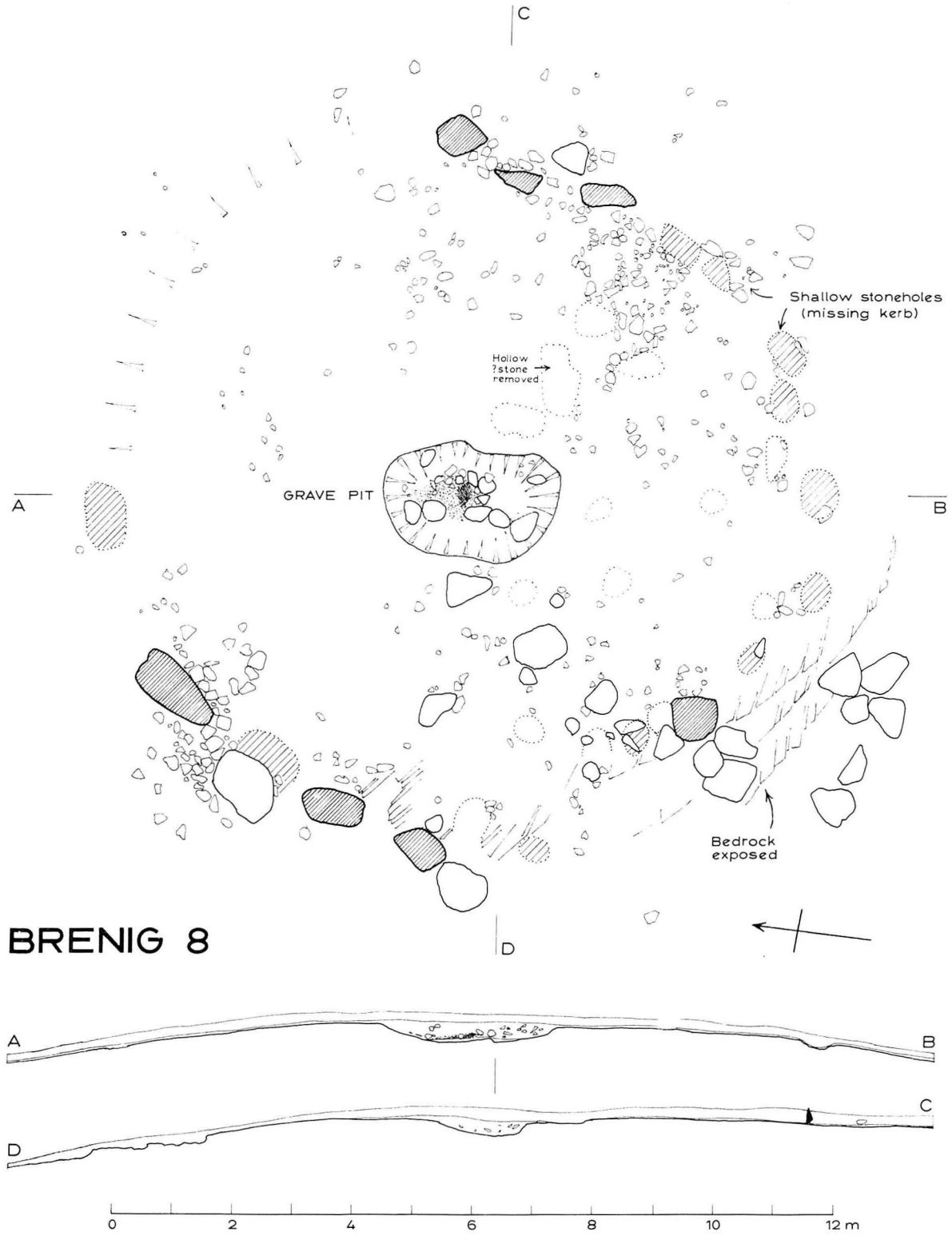
On the south-east four small stones remained, only one of which seems to have been pulled out of its original position. The line of the kerb to the south of these stones was recognisable in a series of shallow depressions in some of which there were stones which could be interpreted as packing. These hollows were visible in the brown mineral soil when the topsoil had been removed; in most cases they penetrated through it to the solid rock beneath, and they were normally about 0.1 m deep. They did not give the impression of being deliberately dug stone-holes, but rather depressions caused by the pressure of the stone and accretion of soil over the years. Removal of the kerbstones which had remained *in situ* revealed a similar situation.

On the south-western and western sides the situation was complicated by the unevenness of the bedrock and the absence of any identifiable Bronze Age soil. Three appropriately-situated hollows in the rock and a large stone which seemed to be in place were taken to indicate the line of the kerb on the south side. Outside them, the bedrock was exposed in steps with many cracks and hollows which might have held the bases of kerbstones, but the exact positions could not be confidently identified. It is clear that the kerb here must have stood rather precariously on the edge of the bare rock, and it is possible that there might have been some scarping of the slope to increase the apparent height of the monument. On the north-west most of the kerbstones survived, but they had been shifted slightly. Again, the ragged edge of the rock made it impossible to identify the exact settings with certainty.

On the north-eastern side the ground was flat; all the stones had gone and ploughing had removed even the traces of the stone-holes. A very slight scarp, recognisable when the topsoil was removed, may indicate the line of the kerb in this quadrant.

The Cairn

Most of the cairn material had been robbed, perhaps during the occupation of nearby Hen Ddinbych. Only a thin scatter of small stones survived, mostly in the south-east quadrant. In the interior there was a random series of shallow depressions similar to those which had held the lost kerbstones. These may have been caused by the presence of larger stones in the basal cairn; in the south-west quadrant some larger stones still survived and were visible on the surface before excavation began. They were all

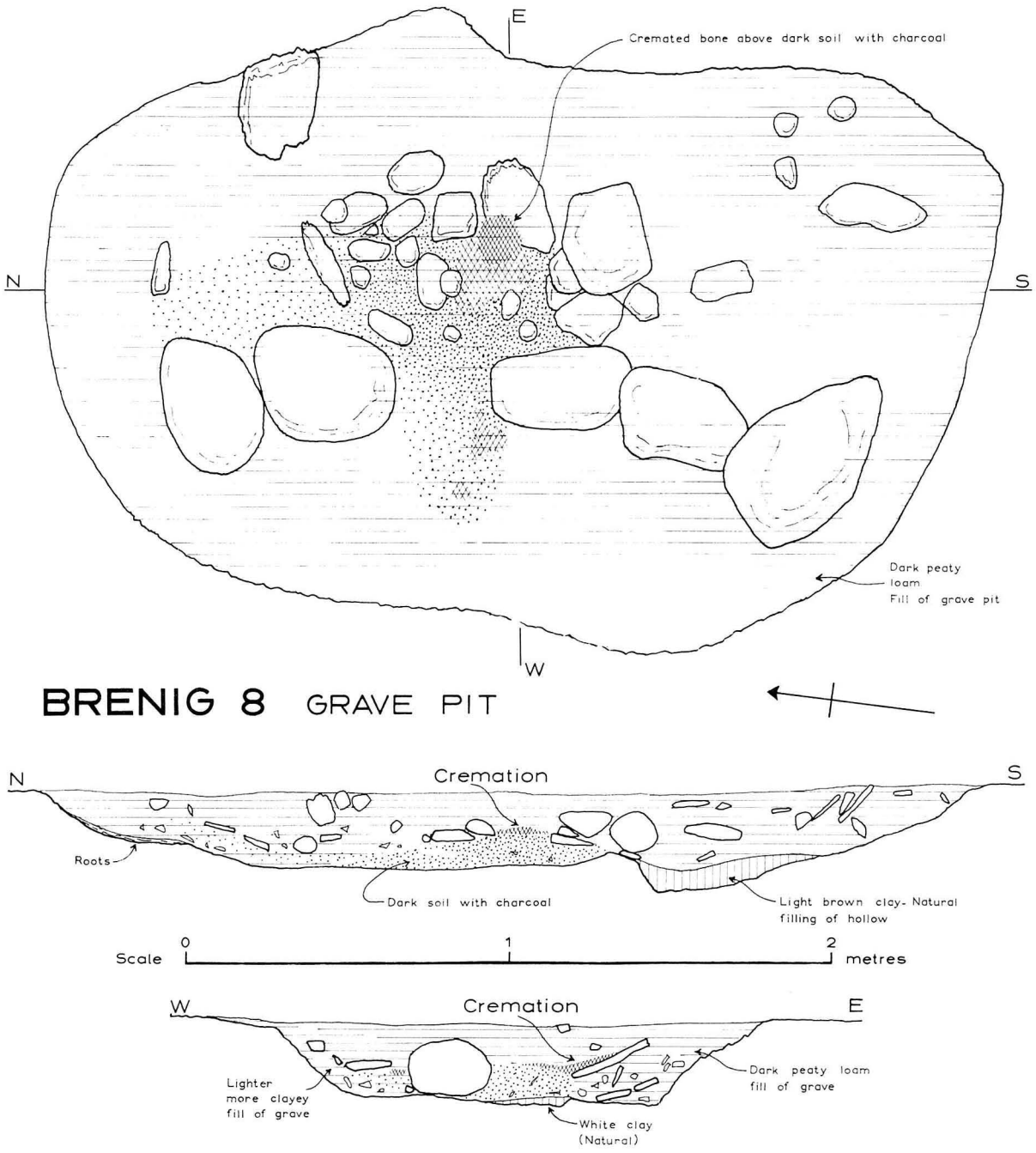


8.1 Brenig 8: plan and sections of denuded cairn.

gritstone boulders like the kerbstones. There was no evidence that earth or turves had formed any part of the mound; the scatter of small stones lay directly on the mineral soil, which must represent the ground surface at the time of its building. As it had been so thoroughly robbed it is impossible to know the original profile of the cairn, but, since some stones had spilled out beyond the kerb on the north-west, one may assume that it had been quite a high pile of stones.

The Grave Pit

When the surface in the middle of the cairn was stripped down to bedrock, a rectangular area of darker soil was revealed at the centre. This dark soil contained a great deal of broken mudstone and a few gritstone boulders, and was found to be the filling of a rock-cut pit. This sub-rectangular pit (2.9 m north – south x 1.7 m east – west) was 0.35 m deep in the centre with an uneven bottom



8.2 Brenig 8: details of grave pit.

and gently sloping sides. It had been cut by prising out the easily broken bedrock and adopting its natural planes and fissures. Consequently the pit was rather amorphous and ill-defined.

Some gritstone boulders, mudstone rubble, and dark earth intermixed with a few flecks of charcoal lay on the bottom of the pit. In the centre, above this initial infilling, there was a small deposit of burnt bone (BG8:11) and charcoal. The bone was very poorly preserved and seems to have consisted mainly of long bone fragments, their thinness suggesting an immature individual. This burial lay partly on a mudstone slab and was surrounded by a 'nest' of small boulders. The earth in the immediate vicinity was flecked with charcoal, but the total quantity was small, and insufficient for a radiocarbon determination. The charcoal consisted mainly of birch with some hazel, blackthorn, and perhaps broom. The larger gritstone boulders formed a line down the centre of the pit, but there does not seem to be any significance to this arrangement since some lay directly on the bottom and others lay on the earth and rubble filling. The 'nest' of stones did not give the impression of having been carefully made to protect the burial; rather they had been thrown in casually around it. Close to the centre and a little above the main burial deposit there were a few fragments of bone (BG8:8) which had probably not been burnt; they are not certainly human and their presence with the burial is unexplained.

Above the burial the grave was filled with a dark, peaty earth containing a great deal of broken mudstone and some lenses of gleyed clay, a

mixture which suggests that the material dug from the pit was simply thrown back into it. Analysis showed that it was very similar to the surviving Bronze Age soil. The soil definitely became darker towards the top, but this is probably due to a greater admixture of peat from the modern ploughing which had skimmed the top of the grave.

Finds (Figs 3.6, 3.8 & App. 3.2)

Finds from the site came from the topsoil and from the very dark, greyish-brown mineral soil (Bronze Age surface), mainly in the southern quadrant, which is not surprising in view of its better preservation in that area. Nothing was found in the fill of the grave pit. The finds include a small whetstone, 28 pieces of flint and chert and a tiny sherd of pottery.

The whetstone (Fig. App. 3.2) was found in the topsoil of the eastern quadrant; it is not burnt and there is no evidence to suggest an original association with the central burial. It is made from a soft, grey-brown mudstone, is 66 mm x 22 mm x 8 mm (maximum dimensions), has been carefully shaped and ground on all surfaces and has no obvious sign of wear. A good deal of one face has split off leaving a rough scar; one corner is thinned but the bevel has been ground smooth, and it appears to be an original fault in the stone rather than evidence of use.

Very little can be said about the single sherd of pottery found on the Bronze Age surface. It is only 9 mm across and only one surface survives. The colour is black and the surface smooth but not burnished; it is most likely to be Bronze Age in date.

The presence of chert, especially banded chert, and of three microlithic fragments (BG8:1, BG8:20 and BG8:22s, Fig. 3.8 & 3.6) suggests that some of the pieces in the old surface may be residual finds of Mesolithic date. With a few pieces from Brenig 51 they may indicate activity on this ridge at some distance from the main camp site near the river.

Twelve objects, including the whetstone, are likely to be of Bronze Age date, while eight pieces of flint are indeterminate. As elsewhere, high quality material has been assigned to the Bronze Age (App. 3), an ascription confirmed by a finely worked scraper (BG8:17, Fig. App. 3.2) made of this material.

BRENIG 46

Frances Lynch and Lynda Alker

NGR SH 9858 5691 Height above sea level 400 m.

This small, damaged cairn stood on a shelf of the eastern ridge just north of Hafoty Sion Llwyd farmhouse, and in the centre of one of the small, embanked fields which must date from the earliest occupation of the farm. The cairn is cleverly set on a slight eminence between two projecting peaks on the ridge and is thus visible from down the valley to the south-west, but dominated by higher ground in other directions.

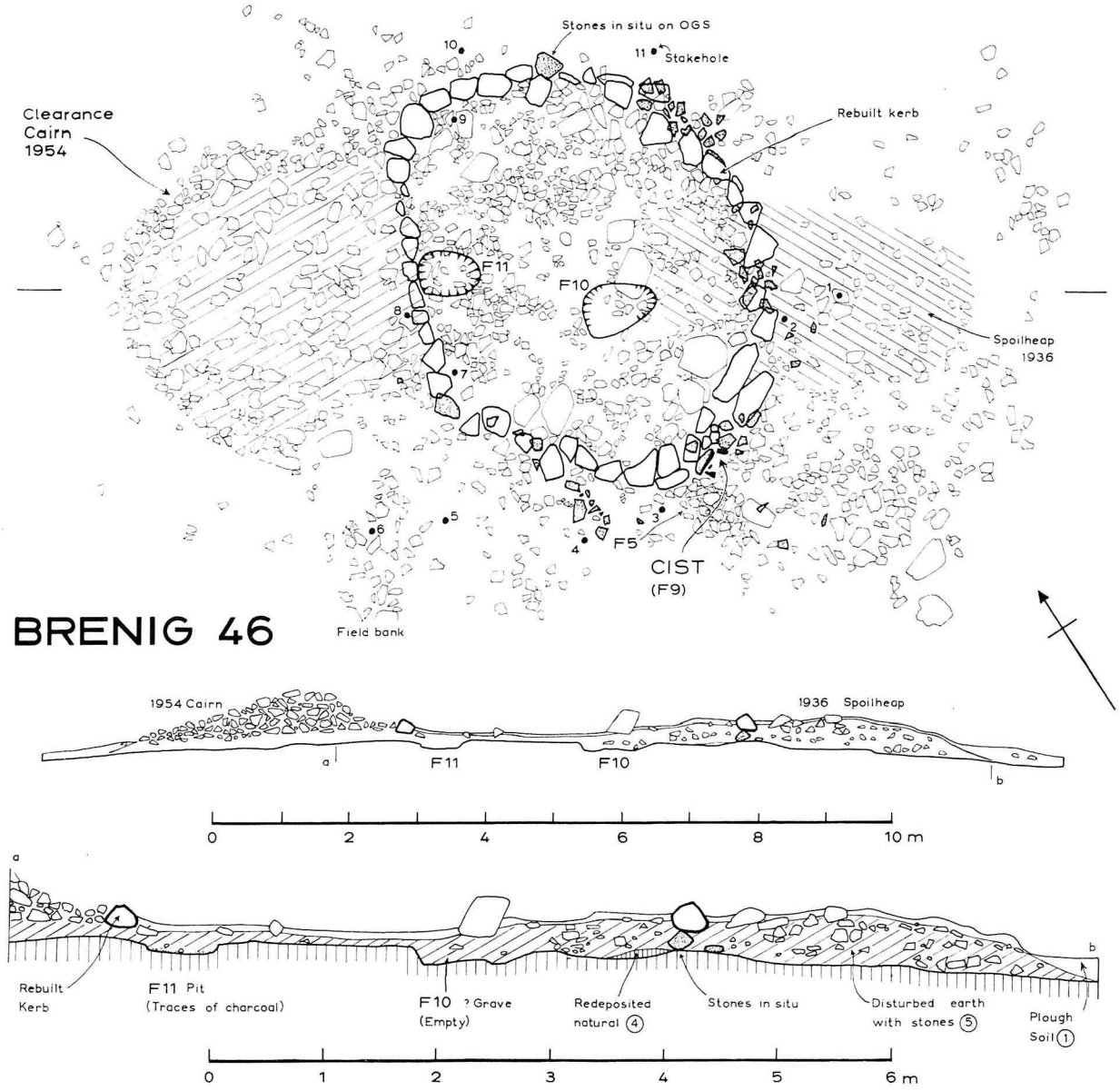
It was clear from surface indications that the cairn had been badly damaged, for it consisted of a hollowed ring of boulders with beside it a pile of stones which had obviously been removed from the centre. Excavation, however, revealed that this was not the first disturbance, for the cairn had been almost entirely removed on a previous occasion, and rebuilt. Consequently very few of the stones remained *in situ*, though a cremation burial in a small cist had miraculously survived on the southern side, and two shallow rock-cut pits were recognisable within the central area. It is possible, therefore, to state that this had been a small stone burial cairn, undoubtedly of Bronze Age date, but a good deal less monumental than the other components of the cemetery, except Brenig 14 which it closely resembled.

A rectangular area 17 m x 10 m was totally excavated to bedrock, which was reached at no more than 0.2 m – 0.3 m below the modern turf in most places. The soil sequence, therefore, was very simple (Fig. 8.3). Outside the monument a brown, stony topsoil (1) lay directly on the bedrock (2); in the vicinity of the stones disturbance had rendered this black (5) with a particularly sticky black deposit (3) just to the east of the cairn. A few small patches of very dark grey (10YR 3/1) silty clay loam (6, which may represent an old turf) and a spread of clay and broken rock (4; probably what was dug out of the central pits) were the only Bronze Age soil layers to survive.

Recent History of the Cairn

A series of five 1954 halfpennies provide a date for the latest disturbance; three of them were found scattered amongst the stones of the rebuilt kerb, one just outside it and the fifth amongst the stones of the 'clearance cairn' to the north-west. Since they are all stamped with the letters H O it is reasonable to identify Brenig 46 with the 'most wonderful cairn' mentioned by Hywel Owen (1961, 249), although it is difficult to reconcile some of the details of his account with what was found in 1974. He says that the cairn, in the centre of a field near Hafoty Sion Llwyd, was built of very large stones and covered a burial pit without pottery, but full of 'charcoal and bone ash'. This last point is the most difficult since, although it was impossible accurately to plot the extent of his digging within the central area, BG46:F10 had already been cleared out, and there was no sign of 'bone ash' in BG46:F11, although some scraps of charcoal survived in the bottom. It did not give the impression of ever having been 'full'. The clean stone of the clearance cairn suggests that his work consisted of little more than the removal of stone which had been piled back in the centre after the previous investigations.

This earlier disturbance may be dated to 1936 by the discovery of a penny of that year lying beneath the rebuilt kerb at a point where this was



8.3 Brenig 46: plan and sections of disturbed and rebuilt cairn.

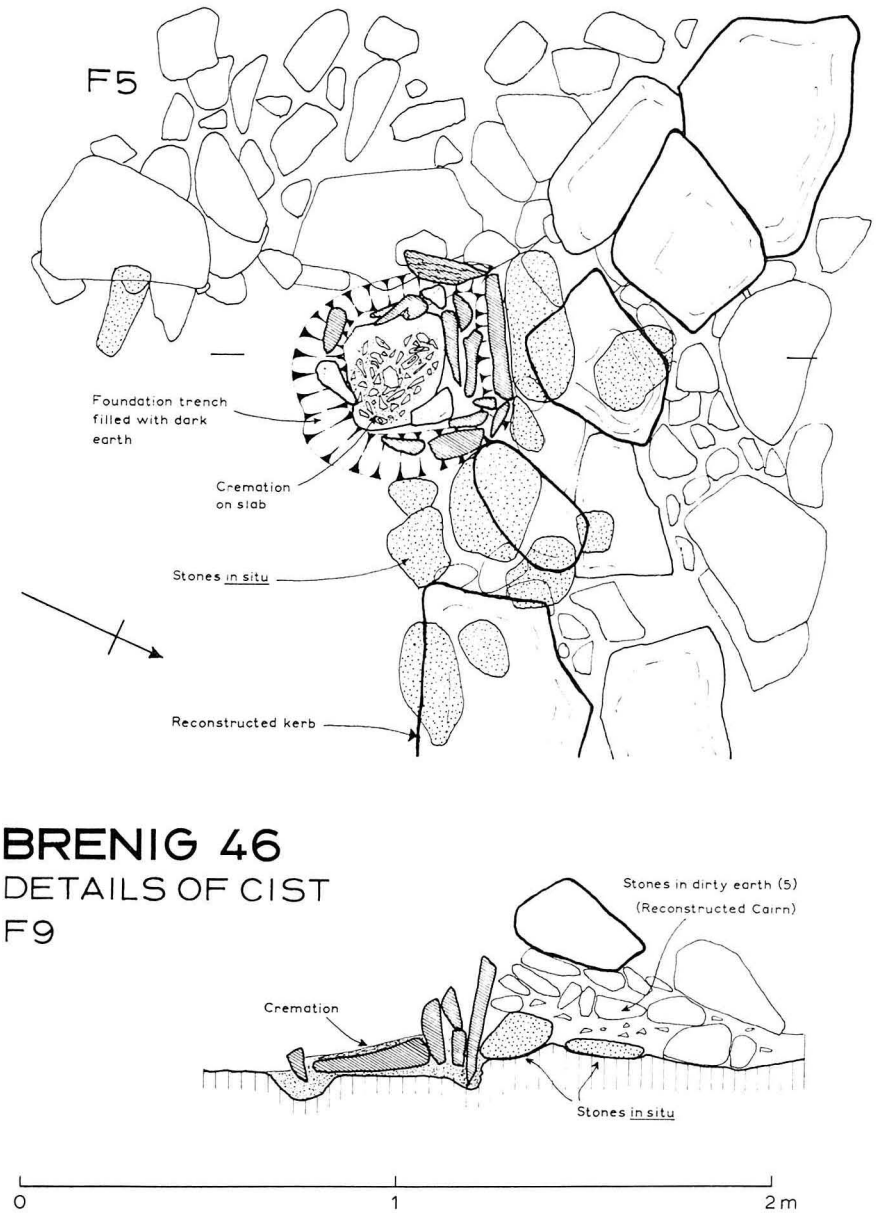
overlain by the later clearance cairn. This coin is uninscribed but the investigator may be identified with the person who was digging in Brenig 14 a year or so later. Almost the whole of the cairn must have been removed and then replaced with some care, the larger stones being built into a rough wall around the edge. Most of these 'kerbstones' lay on a thickness of dark, disturbed soil (5), but in places similar stones were found at a lower level, lying on, or very near, the bedrock. The distribution of these stones, which are marked on the plan, suggests that the reconstructed cairn followed broadly the lines of the original one, but whether or not it had such a formal edge cannot be known.

This extensive digging left a recognisable spoil heap on the south-eastern side of the site – a low, earthy mound incorporating many small stones and some modern rubbish. This mound overlay some undisturbed stones of the original cairn and extended into the interior to just beyond BG46:F10. This shallow pit was filled with dark earth and stones – material indistinguishable from the mound of spoil, so it is likely that it had been discovered and cleared out in 1936 rather than in 1954. It is not quite certain whether BG46:F11 was also found on this earlier occasion, though it is likely in view of its position very close to the edge of the 1954 spoil heap. However BG46:F11 is the only feature which could conceivably fit Hywel Owen's description, so it may not have been emptied in 1936.

Before the recent disturbances a field bank must have run up to the edge of the cairn. Some fallen fence posts lay just beneath the turf and a line of stony bank material could be recognised to the south-west of the site. This may have been a temporary division of the field because the bank was very much slighter than the main boundaries.

Bronze Age Features

Within the area enclosed by the rebuilt kerb the only features which are likely to have been original



8.4 Brenig 46: details of cist.

are the two rock-cut pits, BG46:F10 and BG46:F11, and the limited spread of clay and broken rock (4) which survived beneath the 1936 spoil heap just south-east of BG46:F10. This was probably the spoil obtained in digging the shallow pit, BG46:F10. The pit was roughly oval (1.12 m x 0.72 m) and was only 0.18 m deep but, as far as one can judge, it was approximately in the centre of the cairn, so it is possible that it was the primary grave pit. Unfortunately it had been completely cleared out in 1936 and nothing survived to support this identification. BG46:F11 was a smaller (0.9 m x 0.7 m), shallower (0.1 m) pit cut into the rock some 1.5 m north-west of BG46:F10. This, too, had been dug out, but a few scraps of charcoal remained on the bottom. There was no sign of cremated bone nor of 'bone ash'.

However, one cremation, that of a young child, did survive virtually undisturbed just outside the rebuilt kerb on the south side of the monument. This cremation had been placed in a compact heap (perhaps originally in a bag) on the stone slab which formed the floor of a small, carefully-built cist (BG46:F9). The upright stones which formed the sides of the cist (0.5 m x 0.5 m) had been set into a square trench cut into the undisturbed natural clay above the bedrock and had been packed with dark earth. Only three of the six main side-stones remained, the tallest being 0.32 m high. Between these main stones and the floor slab a number of smaller vertical stones had been pressed in. Any covering slab must have gone when the southern half of the cist was destroyed.

On the north and east it could be seen that the cist was built against two of the few remaining stones of the original cairn; on the west it abutted against a solidly packed area of stone (BG46:F5) which did not show obvious signs of disturbance. The kerb was reconstructed in such a way as to leave the cist outside it but there is no certain evidence to show that the surviving stones from the original cairn had marked the edge. The existence of the small heap (BG46:F5) might suggest that

it did not, though this would indicate a markedly oval monument, or one that was rather bigger than the reconstruction would suggest. The discovery of a cist built against the kerb of a pre-existing monument is not unparalleled, but unfortunately the evidence here is not sufficiently definite to allow certainty.

An apparently random scatter of eleven stake-holes was found during the final cleaning of the bedrock. None was unequivocally Bronze Age since none was stratigraphically related to undisturbed cairn material; but they were not recognised at a higher level, which suggests that they may have been early. They varied in diameter from 50 mm to 70 mm and in depth from 70 mm to 0.18 m; they all contained a very dark (10YR 3/2) loamy soil containing organic matter and fine sand. It is conceivable that the three shallower ones (5, 9 & 10), which lie roughly on the line of the field boundary, may be modern. However, it would be equally possible to explain the group as part of an initial enclosure of the site before the monument was built. Such a fence had existed at both Brenig 42 and 41.

Finds (Figs. App. 3.1 & 3.2)

No grave goods accompanied the cremation and only three small pieces of flint were found on the undisturbed surface beneath the cairn. Two were struck flakes and the other was edge-damaged. Twenty-three other pieces of flint were found in the topsoil or in the disturbed areas: 17 were unretouched, two had come from very rough cores and only four showed signs of genuine working. One, BG46.15, was a small, leaf-shaped arrowhead, similar to that found at Brenig 45, and another piece of burnt flint, BG46.16, might be part of a plano-convex-type knife. If a serious distinction may be made in this valley between flintwork of Neolithic and Bronze Age traditions, it is perhaps noteworthy that this monument, on a level area subsequently enclosed with small fields associated with the farm of Hafoty Sion Llwyd, has more Neolithic-type material than any other location.

BRENIG 14

Frances Lynch and Richard Kelly

NGR SH 9836 5617 Height above sea level 386 m.

This cairn stands on Waen Ddafad, an open area of gently sloping ground on the east side of the valley, overlooked by the prominent ridge on which Brenig 8 lies. It is sited much less conspicuously than the main monuments of the cemetery, but it enjoys wide views over the valley. It is a small stone cairn which had been badly disturbed in recent years, but a cremation burial survived in a pit beneath the untouched southern portion.

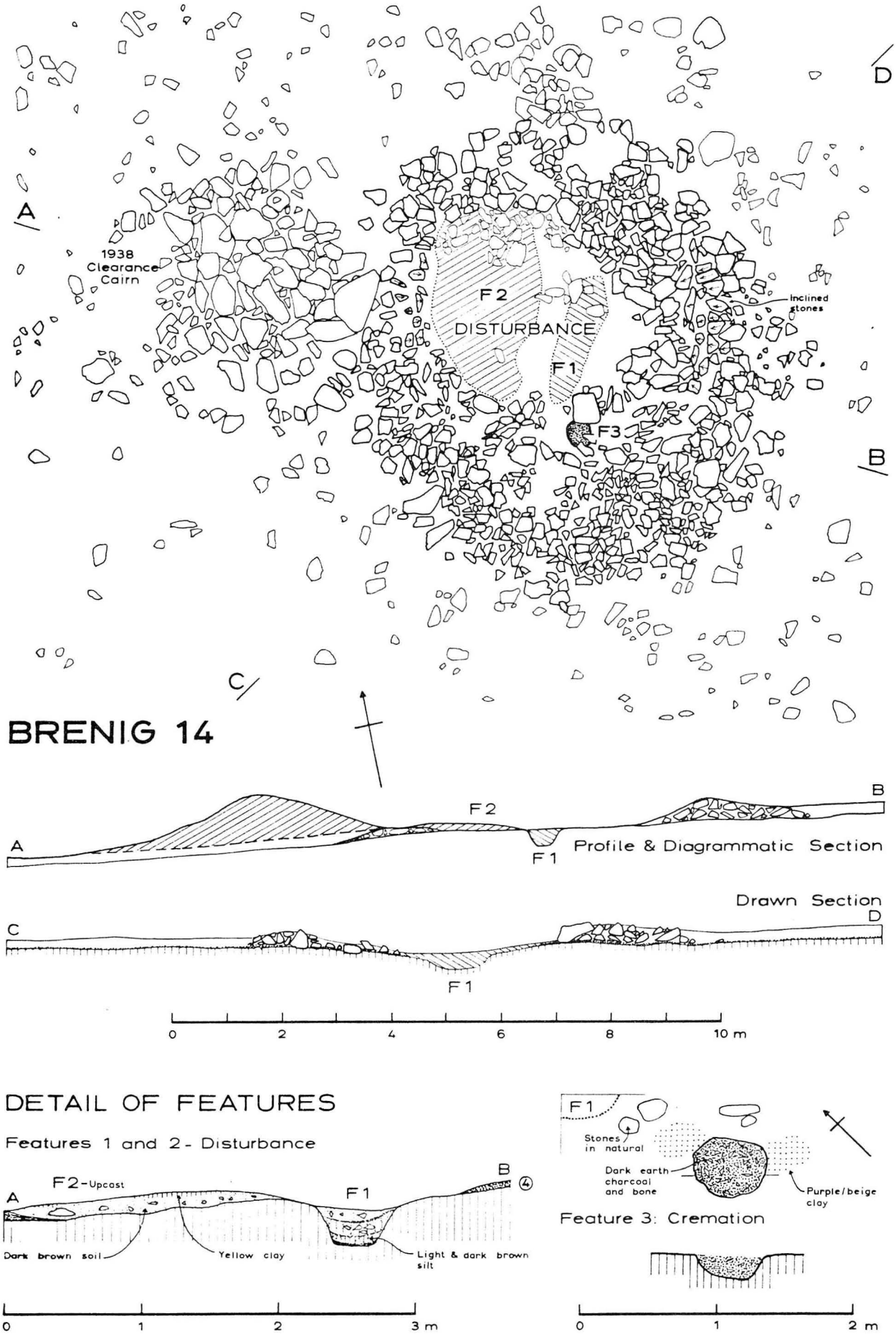
The cairn was surrounded and partially covered by dark peaty soil similar to that elsewhere in the valley, which had resulted from a post-Bronze Age growth of blanket peat. Beneath this peat there was a grey-brown mineral soil which was also present beneath the outer fringe of the cairn, but in the centre there was some evidence to suggest that the Bronze Age soils had been partially stripped. Disturbance made certainty on this point impossible, but in places the orange subsoil (Bs horizon) was exposed and a very slight dip towards the centre could be observed. At monuments such as Brenig 44 and 51, where initial stripping was clearly demonstrated, it could be shown that a grey mineral soil had developed since the monuments were built. The fact that Brenig 14 and the clearance heaps nearby (see below) lay upon such a soil might be interpreted as evidence for a later date, but it is inadvisable to try to use the natural soil sequence over a large area as a chronological tool.

Recent History of the Cairn

The recent removal of stone from the central part of the cairn had been so complete that the monument was originally interpreted as some kind of stone hut; however, excavation rapidly revealed its true nature. The stones removed from the centre had been piled up into a small conical cairn just to the west of the monument; the discovery of a 1938 halfpenny and modern sheep bones amongst these stones, and the condition of the surface beneath them, suggested that this disturbance had taken place only some 35 years previously. At this time, when the central stones of the cairn were removed, a long, narrow pit (BG14:F1) had been dug across the centre, the spoil being thrown in a heap to the west (BG14:F2). This pit (2 m x 0.5 m x 0.28 m deep) had been dug down through a dark old ground surface and had penetrated the orange clay subsoil beneath, but there was no evidence that any central burial had been disturbed, nor was there any sign of slabs from a destroyed cist among the displaced stones, which were all medium-sized boulders similar to those remaining in the undisturbed portions of the cairn. Dark soil on the bottom of the pit (BG14:F1) and the silting lines visible in the fill suggested that the hole had been left open. The presence of stones overlying the spoil heap (BG14:F2) can also be explained by a gradual collapse of the sides of the hole opened up in the cairn.

Cairn Structure

What remained of the outer periphery of the cairn showed that it had originally been roughly circular, approximately 8 m in diameter and without any formal edging or kerb. However, it was noticed that many of the stones on the outer edges on the east and west sides had been carefully set at an angle, inclined inwards towards the centre,



8.5 Brenig 14: plan, sections and details of features.

indicating a certain care in construction in spite of the lack of 'architectural' features. The quantity of stone used suggests an original height of about 0.75 m.

Bronze Age Features

Approximately 1 m south of the centre, in an area which had fortunately not been disturbed, patches of burning were found on the old ground surface (in this case the orange subsoil since the Eag horizon was not present here). This burning did not form a consistent layer, no charcoal was found with it, and it did not seem to be extensive enough for a pyre. Subsequently a shallow pit (BG14:F3) was neatly cut through the burnt surface. It was oval in plan, 0.22 m x 0.3 m across and 0.2 m deep in the centre. It was filled with dark brown earth containing cremated bone and charcoal. The bones were those of one individual, probably an adult. A small scrap of burnt flint (BG14.5) with a utilised edge and a high gloss was found in the upper fill of this pit. The high gloss is similar to knives from other cremation deposits in the Brenig valley, and suggests that this piece was gathered up with the bones from the pyre. The bones, earth and charcoal were completely intermixed, indicating that the pit had been filled in a single operation. Nothing in the arrangement of the cairn above it marked the presence of this burial.

Finds (Figs. 3.8 & App. 3.2)

Apart from the burnt scrap from the cremation, three pieces of flint were found in the course of the excavation, one (BG14.4) in the fill of the robber-pit (BG14:F1), and the other two (BG14:1 & BG14:6) in the grey mineral soil beneath the cairn. BG14.4 is part of a thick flake, one surface of which is covered with shallow working. It may perhaps be the end of a well-used plano-convex-type knife. Unlike the casual finds from other sites in the valley, all show signs of working, are struck from well-worked cores and are of high quality material. It is also interesting that no Mesolithic material (a possible burin (BG14.1) being non-diagnostic of date) was found here, nor in the other areas excavated in the immediate vicinity, although there was considerable activity of this date only a little further up this side of the valley.

Brenig 14 stands close to a group of stone heaps which had originally been interpreted as a 'cairnfield' with funerary implications. Excavation of four of these revealed, however, that they were simply clearance piles and did not cover any burials or features of interest (see below). Brenig 14 is considerably larger, more compact and more carefully built and, moreover, stands a little apart from them, so surface indications did not suggest that any of the unexcavated 'cairns' would have proved to be similar burial monuments.

DISCUSSION: SMALL STONE CAIRNS

Frances Lynch

These three monuments, Brenig 8, 46 and 14, may be considered together because they all share certain characteristics linking them to one another, and at the same time differentiating them from the rest of the monuments in the cemetery. These characteristics are stone construction, small size and, less fortunately, a lack of diagnostic finds or material suitable for radiocarbon dating, which makes it difficult to place them with any certainty within the sequence of cemetery development (see p. 148–9).

Brenig 8 was the largest and most elaborate of these cairns. The kerb of large boulders which enclosed it suggests a certain architectural finesse, as does the subtle use of the natural contours to add to the impression of height and size. The monument is placed on the nose of the ridge, a conspicuous setting within the valley, but since this ridge was originally used for habitation of some kind, it is unlikely that Brenig 8 was built until the ridge was brought within the orbit of the cemetery proper with the construction of Brenig 51. Consequently one can suggest that it belongs to the second phase of major activity here, completing the eastern side and balancing Brenig 42.

The central feature of this cairn was a large rock-cut grave, comparable to that beneath Brenig 41, but containing only a small pocket of cremated bone. The soil is acid and unburnt bones might be expected to have disappeared, but the presence of the line of boulders along the centre of the grave destroys any argument for the existence of a body on the floor of the pit beneath the level of the cremation. One must accept, therefore, that the grave was quite intentionally made far larger than was necessary. Although we cannot guess the reason for this – it may result from confused ideas inherited from traditions of inhumation burial during a period of transition – it is a not uncommon phenomenon. Not only do cremations appear in large graves or in full-length coffins, but crouched inhumations may be found in graves long enough to take an extended burial.

The position of *Brenig 46* is cleverly chosen in relation to its immediate surroundings, and to the view from the south, but it is not easily seen from the other components of the cemetery, particularly the earlier monuments. Therefore, one may guess that this is a late addition, a very small cairn probably added in the third phase of cemetery development.

The monument had been so badly disturbed in the recent past that it is impossible to make any comment on its structure except to say that it must always have been small, no more than about 7 m – 8 m in diameter, and that none of the surviving stones could have belonged to a large kerb or other elaborate construction. However, the presence of stakeholes which may indicate

that the site was fenced off for some time before the cairn was built suggests that the sequence of events may, nonetheless, have been quite complex and protracted. An initial fence was found at two other sites in the valley, Brenig 41 and 42, which belong to the earliest phase, and it is interesting to see this practice being maintained and used here, where it is not connected with a more formal arrangement of 'stake circles' within the monument as eventually built.

It is impossible to be certain of the interpretation of the two rock-cut pits within the central area of Brenig 46, but it is reasonable to interpret the larger and deeper (BG46:F10) as a grave, roughly central and designed to hold a cremation burial. As such it would be comparable to that beneath Brenig 45, but the type is really too simple to warrant elaborate discussion. BG46:F11 could have been another such grave, but no positive evidence of bone survived. In view of the prevalence of 'charcoal burials' in the valley, it would not be surprising to find that this was another instance. The way in which the pits were dug is very reminiscent of the technique used in the central grave at Brenig 8, but the similarity is no doubt due mainly to the nature of the bedrock.

The only surviving burial had been placed in a small stone cist which must have been set towards the southern edge of the cairn, or even outside it, placed against the kerb. It had been carefully built, with the side stones set in a neatly-cut foundation trench and the cremated bones placed directly on the floor slab. Such an arrangement was not found elsewhere in the cemetery. The cist (BG51:F7) beneath Brenig 51 was conceived in a different way. It lined the pit and protected the base of the pot; it was not designed as a box to contain the bones. However, such boxes are a fairly common device for protecting Bronze Age burials, and a similar feature seems to have been found in one of the barrows on Gorsedd Bran opened in the 19th. century (Ellis Davies 1929, 377–78). Close parallels to several of the features of Brenig 46 may be seen at Ystrad Hynod, near Llanidloes, Montgomeryshire, where a cist of similar, if less careful, construction was set close to the edge of the cairn and contained a compact mass of cremated bone lying on the floor slab (ApSimon 1973, 41–43).

The only burial at *Brenig 14* was also placed eccentrically, although it was well within the area covered by the cairn. This burial was a much simpler affair than that at Brenig 46, since it was just placed in a small hole without any further protection. However, the evidence for stripping of the surface and the patches of burning in the vicinity suggest that, even here, there was some ceremony attached to the interment. In detail the basin-like hole is comparable to BG51:F6, and to the deeper and more precisely cut pit in the centre of Brenig 44. However, the date of Brenig 14 is likely to be somewhat later than these two, for its siting and its simplicity suggest that it is a late addition. The siting in particular lacks definition; although it enjoys wide views it has no prominence and seems to bear little relation to the cemetery as a whole. It gives the impression of being an afterthought.

CHAPTER NINE

Kerb Cairn

BRENIG 6

David Allen

NGR SH 9953 5640 Height above sea level 405 m.

This small but distinctive monument stands beside the Aber Llech Daniel, a tributary of the Afon Brenig, at a point where the sloping moorland meets the widening, flat valley bottom. Although hidden from the main valley it is easily visible from the higher ground around it and has open views to the west. More important factors may be its proximity to the stream and the very large glacial erratic known as Maen Cleddau.

The cairn is some 5 m in diameter, its edge marked by unusually large flat boulders and the centre filled with smaller stones amongst which were found the remains of a cremation deposit. This combination of features, recognisable despite some disturbance and displacement of kerbstones, places the monument in the class of Kerb Cairns, a classification which is discussed below. Beneath and beside the cairn a ring of postholes and traces of a hearth provided evidence of both contemporary and pre-cairn activity, the precise nature of which remains uncertain.

The cairn and some 130 sq. m around it were excavated over three weeks in 1973, and a further week was worked in 1974 to investigate pre-cairn activity.

Stratification

Immediately below the modern turf (01) was a brown, stone-free soil and yellow silt (02 & 03) which lapped around, but not over, the cairn, and must result from relatively recent flooding since it overlay a 'blocky' peat layer (04) and grey mineral soil (05) which represented a post-monument development. The cairn itself had been built on a stripped surface of clean yellow subsoil (06). This was clearly a deliberate scouring, undertaken immediately prior to cairn construction, for continuity between the monument and the underlying hearth (BG6:F60) was proved by the fact that cairn material formed the upper fill of this fire-pit, sitting directly on burnt stones and ashy soil (Fig. 9.1).

The Cairn (Fig. 9.1)

The principal element of the cairn was the kerb (BG6:F99). This was originally composed of 11 or 12 recumbent gritstone boulders, arranged in a precise oval, 4.6 m north – south x 5 m east – west. An eastern arc of six boulders was still intact, and two remained in situ on the west side, with gaps of one to the south-west, and two or three to the north. In these gaps, concave settings of stones and shallow hollows filled with grey silt (BG6:F90-BG6:92) indicated where the boulders had once been. In the north-west quadrant, where unfortunately there had been much damage, it appeared that a deeper and more precise feature (BG6:F89) had contained a single boulder which was contemporary with the rest of the cairn, but had stood outside the kerb.

The boulders had been placed with their flattest faces upwards, and several had been underpinned with small stones so that they maintained this position. Some were contiguous, others were separated by as much as 0.4 m and there may have been a gap of 0.8 m on the north-west. The boulders varied in size, with the largest on the southern and western sides. It seems that the builders strove to produce a regular outer, rather than inner, edge to the kerb, and may even have tried to maintain a uniform height, for small stones in the base of BG6:F92 appeared to be a prepared foundation, presumably to raise this subsequently displaced boulder to the common level.

The core of the cairn (BG6:F98) consisted of a low mound, nowhere more than 0.25 m in height, of friable yellow soil and stones. The soil was in general very clean, despite disturbance, and the stones varied greatly in size. Towards the centre of the monument and at the base of the core material, a small patch of grey soil (0.15 m diameter) produced a few fragments of unidentifiable burnt bone (App. 5). The only other finds made within the kerb were a broken rubbing stone and a quantity of quartz stones.

The core material had clearly been deposited after the construction of the kerb. It was not, however, bounded by that feature, an irregular border (0.15 m – 1.15 m wide) being present outside it around the whole circuit of the cairn. This was probably part of the original design, and not the result of spillage or weathering. In the south-west quadrant there were five hollows (BG6:F93-BG6:F97) in this stony border. BG6:F93 and BG6:F96 contained dark grey soil and many stones, while BG6:F95 was stone-free. BG6:F94 had been damaged by a recent stone-capped hole, possibly a mole-trap. BG6:F97 seemed superficially the most interesting, an oval setting of stones, several of them quartz, but excavation revealed nothing extraordinary about the grey-brown soil beneath. The hollows seemed to have been made by scooping through the core material into the

underlying subsoil. Their similarity to BG6:F90-BG6:F92 was striking, but it is difficult to see how boulders could have played any part in their formation.

Associated Features (Fig. 9.1)

To the north of the cairn several features came to light which suggested that this was an area of special activity. They occupied the same level in the overall stratigraphy as the monument itself, and the implication is that they were contemporary with it.

Foremost among the features was a damaged hearth (BG6:F86) and its attendant spread of burning (BG6:F85). The hearth, originally composed of several small slabs, had been disturbed in antiquity, and many small unburnt stones were scattered across it. The spread of burning, present as small pieces of charcoal impressed into the subsoil, skirted BG6:F89 in such a way as to suggest that this stone was in position before the fire took place. This burning produced the only substantial charcoal sample from the site, producing a radiocarbon date of 1120 ± 90 b.c. (HAR 536).

Other, smaller, patches of burning and clusters of stone suggested that the associated activity may have been fairly widespread along the northern side of the cairn, or taken the form of more than one episode. Two postholes (BG6:F69 & BG6:F80) were possibly part of this complex, since they do not fit into the earlier ring and differed somewhat in character.

Earlier Features (Chap. 13, Fig. 13.1)

The most striking of the earlier features, the hearth or fire-pit (BG6:F60) and an accompanying area of scorched subsoil (BG6:F59), were sealed beneath the limits of the cairn. The pit (0.6 m diameter, 0.1 m deep) contained grey, ashy soil, some charcoal and several small, reddened, heat-fractured stones. Similar stones were found scattered across the area covered by the monument. The scorching of the subsoil spread over 3 m from the pit in a south-westerly direction. Work in 1974 showed that this hearth was located at the centre of a circular setting of nine probable postholes (BG6:F70, the recut BG6:F71/72 and BG6:F73-BG6:F79).

The straight-sided, flat-bottomed holes varied a little in size, but their average dimensions were 0.32 m diameter and 0.3 m depth (from the surface of the yellow subsoil). There was little variation in content. All were filled with redeposited subsoil with a few stones and charcoal flecks. In no case was there clear evidence for post-pipe or packing. Indeed, if the holes did once accommodate posts, as their form and spacing suggests, then these must have been removed and the resultant voids filled with freshly-quarried subsoil. Only four of these holes, those outside the monument where brown soil had filled their slightly sunken tops, were discovered in 1973. Those under the cairn could only be detected by deeper excavation, when their uniform fill eventually contrasted with the changing colour of the natural.

The nine holes formed a circle some 5 m in diameter. BG6:F74-BG6:F78 were uniformly spaced, being 2 m apart, but on the south of the ring the gaps varied from 1.1 m to 2.3 m. This suggested that if the circle had a formal entrance it was in the south-eastern quadrant, either at the narrowest gap (70–79) or the adjacent one (70–72). Symmetry favours the latter choice, but despite the apparent complexity of the southern 'doorpost', the evidence showed that it existed in its final state as a single posthole, and no extra holes were found there to indicate the presence of an elaborate entrance structure.

Several smaller features were discovered in the vicinity of the post-ring, but identification was hindered by widespread animal activity. Near BG6:F72 was an unexplained patch of redeposited subsoil (BG6:F63). The stakeholes (0.1 m in diameter and 0.2 m deep) are also unexplained, but they too were redundant before the cairn was built.

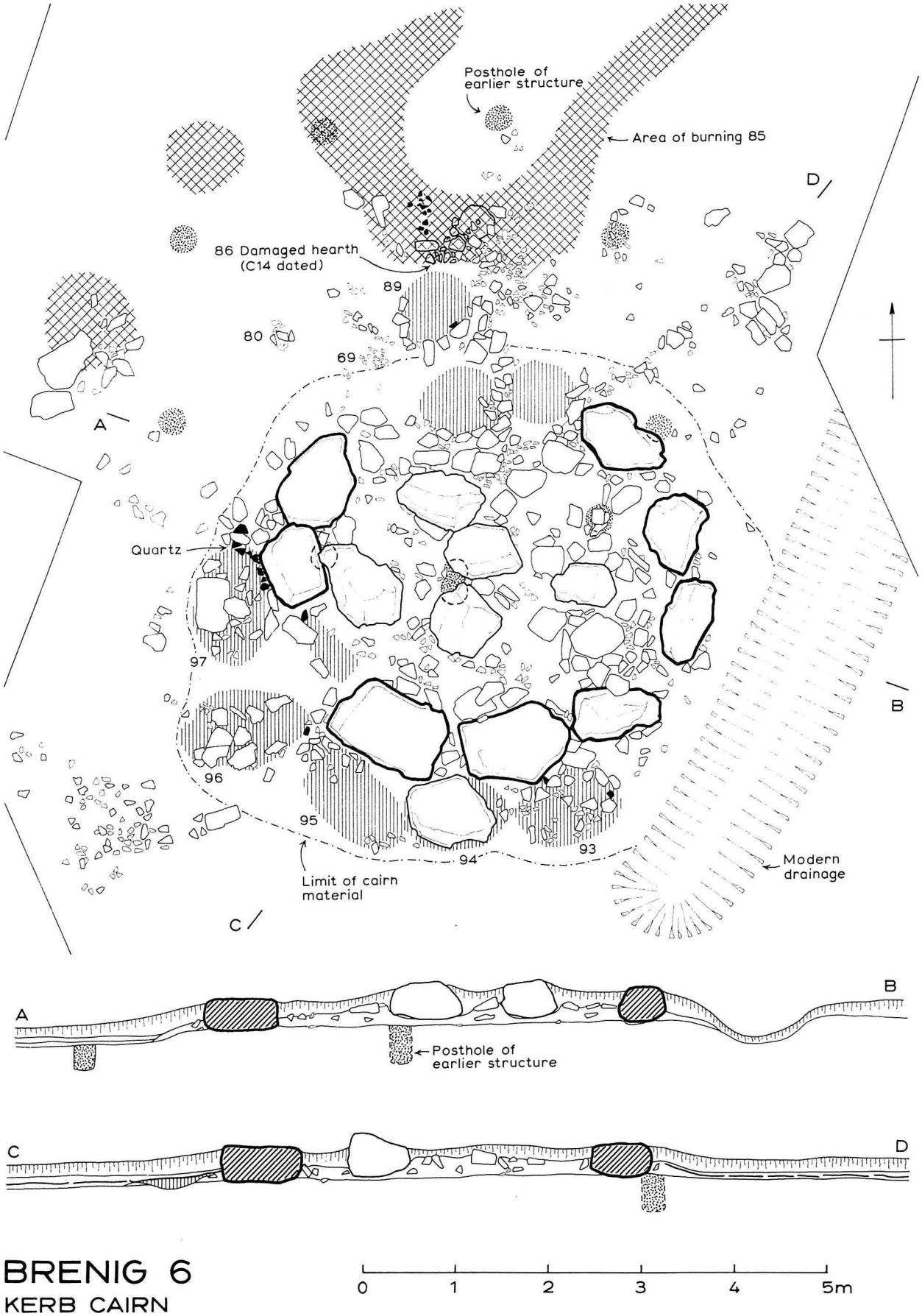
Discussion

Disturbance of the cairn, which had removed all but the slightest traces of the cremation burial, had not, however, hidden its essential features, and it was recognised as a Kerb Cairn. It is clear, however, that no such well-defined label can be used to describe the timber structure discovered beneath it. In scouring the surface, the cairn builders reduced the evidence for this earlier phase to a minimum, and left it open to more than one interpretation.

The postholes and hearth could be regarded as the last traces of a domestic roundhouse. The plan suggests that an entrance existed in the south-east quadrant, and whilst no extra holes were found to indicate the presence of an external porch, this was not a necessary feature of such buildings. Unfortunately any surface remains, such as an occupation floor, or wall slot, which could have established its domestic status, would have been swept away by the cairn-builders. The hearth had no flanking stakeholes for a cooking-spit, but this again was not essential. However, the area of scorched subsoil to the south surely indicates an uncontrolled spread of burning which suggests a domestic disaster if it did, in fact, take place within a building.

It has often been suggested, and indeed shown, that barrows were sited on abandoned settlements (Grinsell 1953, 38). The equivocal nature of the Brenig evidence discourages too much discussion on this topic, but the realisation that such activity need not be confined to the area immediately beneath the monument should encourage excavators to look well beyond it, when this is feasible.

If not a house, the posts might represent a timber circle playing some part in the funerary activity. Five other monuments in the valley included stake or post circles at certain stages of their development, but these were all concentric with the structures of turf and stone, and none focussed on a hearth area. Careful investigation



9.1 Brenig 6: plan and sections of Kerb Cairn.

of the hearth failed to produce any traces of burnt bone to suggest a direct link with the funeral rites.

Whereas the true form and function of this timber structure will always be a matter for conjecture, the stratification makes it clear that it immediately preceded the burial monument. The posts had been carefully (and easily) withdrawn, and the holes neatly backfilled, which suggests a short life-span for the structure. This might be more in keeping with sepulchral rather than domestic use.

The large gritstone boulders employed in the kerb give the cairn its distinctive appearance. Once these were arranged in their oval setting the core of soil and stones was added. The burial may have been deposited at ground level before the infilling, or in a pocket amongst the stones, but disturbance did not allow certainty on this point.

In contrast to the unexplained hollows on the south-west side, the features to the north of the cairn had more specific functions, but the part they played in the overall activity must remain a matter for debate. The two postholes BG6:F80 (which held a post-ghost) and BG6:F69 may have held uprights which served as marker-posts. The slab-hearth contrasted with the earlier fire-pit, but this difference may have been occasioned by their respective functions. The scatter of small, unburnt stones across the slab-hearth suggests that it went out of use whilst activity still went on around it. The position of this hearth in the overall chronology of the site is important, because the associated burning produced the radiocarbon date (1120 ± 90 b.c.; HAR 536). Whilst the shortcomings of a single date are well known, the result is interesting because it compares well with similar sites in Scotland (Ritchie *et al.* 1974–75, 21–22).

When the cairn was abandoned, natural processes took over and a thin mineral soil and eventually peat developed. Subsequently the valley floor was flooded, depositing 0.1 m of silt over the peat. Such flooding might have resulted from the general climatic deterioration of the Late Bronze Age (Burgess 1974, 166), but the 'blocky' nature of the peat suggests that it was more recent.

KERB CAIRNS

Frances Lynch

This type of cairn has only comparatively recently been identified as a distinct group amongst the multiplicity of Bronze Age cairns (Ritchie & MacLaren 1972, 8–13; Lynch & Ritchie 1974–75). It is defined as being small (between 2 m and 6 m diameter), with large kerb stones and a low filling, rising no higher than the top of these stones. Not all small cairns are Kerb Cairns, however, because the classification depends essentially on the size of the kerbstones in proportion to the area enclosed and the height of the cairn, a deliberate effect which can be easily recognised in the field, but may not be identifiable from measurement alone.

Excavated examples in Scotland have shown several recurrent features; a burnt old ground surface, a basal layer of large stones, a concentration of white quartz pebbles, and the burial of cremated remains. Occasionally these remains have been enclosed in small stone cists, but as yet no standard urn burial has been found. A few sherds of undiagnostic pottery were discovered at Monzie, but no cremation has been accompanied by any datable grave goods. Consequently, in the absence of cultural material, the class may only be dated by association with other types of monument, and radiocarbon assays.

Two of the four features mentioned above are certainly paralleled at Brenig 6. Although little survived, the burial was identifiable as a cremation. The quantity of quartz found was not enormous, but its presence is significant, and it seemed to have been concentrated towards the base of the kerbstones as at Strontoiller and Monzie (Ritchie 1971).

Although burnt earth was found beneath Brenig 6, it was associated with an earlier hearth and is not strictly comparable with the distinct layer of burnt earth and charcoal which is frequently coterminous with the cairn at Scottish sites (Young & Mitchell 1938–39; Burl 1976, 198). At Brenig the surface had been stripped immediately before the cairn was built.

The kerbstones of some of the Scottish cairns appear to be graded in height (Ritchie 1971). It is not surprising that the recumbent boulders of Brenig 6 show no such distinction, but some care does seem to have been taken to produce a flat and even top to the kerb. Also, the stones may well have been ordered in terms of size, with the largest ones occupying the south-western quadrant. The Kerb Cairns of eastern Scotland are frequently sited in prominent positions, visible from many directions, and commanding wide views. Those in the west, by contrast, are often set in valley bottoms, and some seem almost intentionally hidden (Lynch & Ritchie 1974–75). The Welsh examples are closer to the western Scottish group, since they tend to lie in saddles, or mid-slopes, where even though the views are wide, they themselves are not conspicuous. Brenig 6, on the valley floor, is virtually hidden.

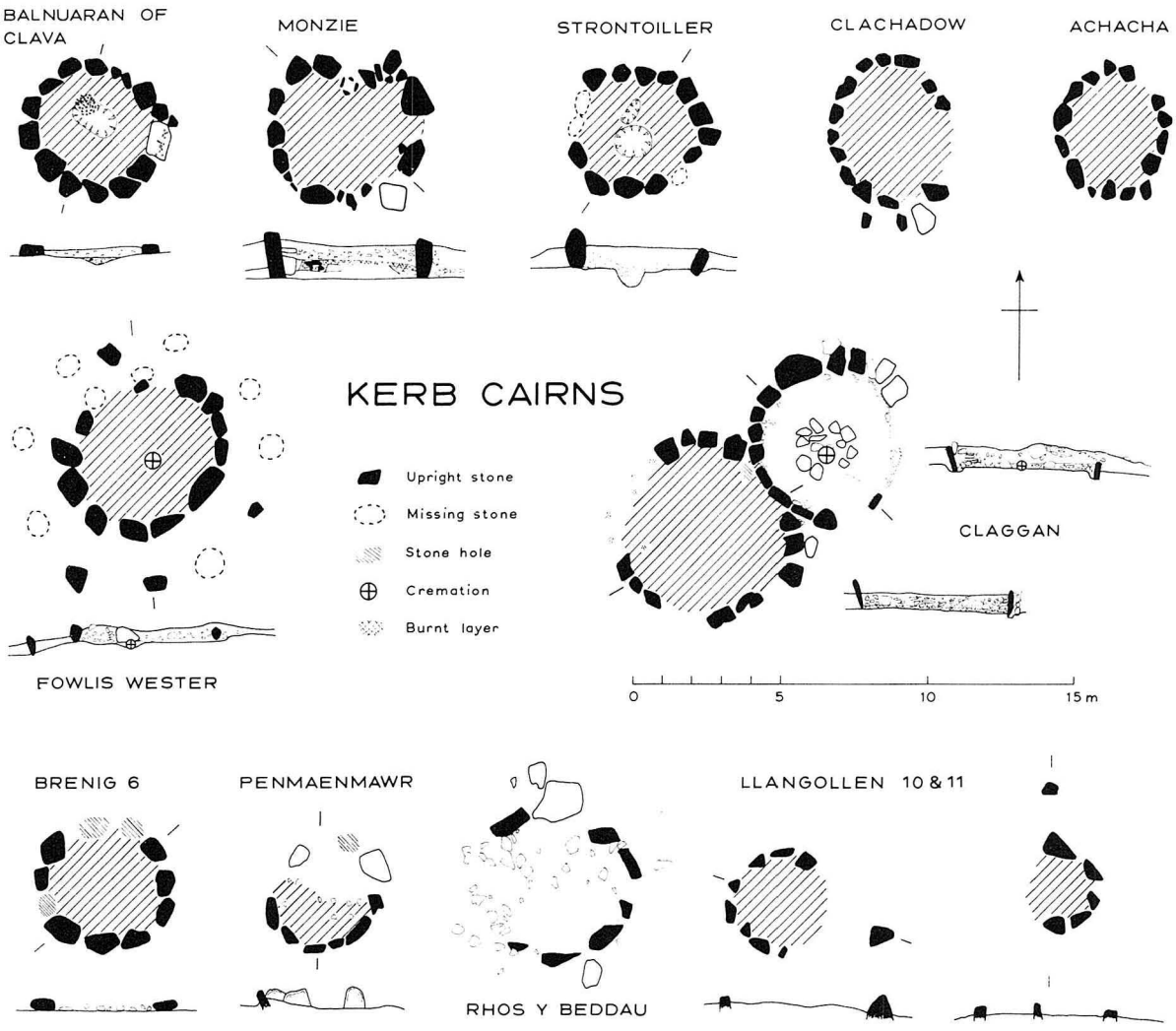
The general distribution of the type is not yet established. Fieldwork by the Scottish R.C.A.H.M. has shown that several exist in Argyll, especially in the Lorn region, and they are also known in south west (Yates 1984) and eastern Scotland, in Aberdeenshire and Perthshire (Ritchie & MacLaren 1972). Elsewhere they have not been reliably reported, but one may expect them to be found in the uplands of northern England and in the south-west peninsula, wherever parallels for other specialised types of Bronze Age monuments occur.

Of the 11 known Welsh examples, ten are in the north: Brenig 6, two on Eglwyseg Mountain, Llangollen (Beaton, unpubl.), two among the large group of Bronze Age monuments on Penmaenmawr, Caernarvonshire (R.C.A.M. 1956, no. 271, i and no. 429, vi), one near the Rhos y Beddau

circle and alignment (R.C.A.M. 1911, no. 630), one on Y Glonc (Dorling 1986) and one near Twr Gwyn Mawr cairn on Trannon (unpublished), all three in Montgomeryshire, and finally two recently discovered just north of Brenig itself, on Tir Mostyn, Nantglyn (Lynch 1984a, 93–104). Descriptions of others, such as the destroyed monument, Cerrig y Cledd III, Merioneth (Bowen & Gresham 1967, 92), are suggestive, but since the main criterion is the massiveness of the kerbstones in proportion to the size of the cairn it is impossible to be certain of the classification without visiting the site and thus it is ill-advised to include destroyed monuments. In South Wales one example has been identified on Carn Edward, Pembrokeshire (P. Crew, pers. comm.), but it is likely that more will be found.

In Wales Brenig 6, one of the Tir Mostyn sites and the badly damaged cairn on Y Glonc have been excavated (Lynch 1984a; Dorling 1986, 43–45). All three have the small diameter and monumental kerb which distinguishes the type, and the first two covered unaccompanied cremations. However, details of construction and ritual were not identical even between such neighbouring monuments as those at Brenig and Tir Mostyn, for the kerb at Tir Mostyn B stood in a deep foundation trench (like that at Claggan I, (Ritchie *et al.*, 1974–75) and at Y Glonc (which, because of disturbance, provided no other comparative data)). The burial at Tir Mostyn was placed in a neatly-dug pit. No evidence of date was obtained and it was impossible to establish whether or not the pattern of small stones emerging from the subsoil around the two cairns was of human origin. If it was it would not be entirely surprising for all the other north Welsh Kerb Cairns have some connection with ceremonial sites of one kind or another, particularly Ring Cairns. A similar coincidence of siting may be seen in other areas. In Scotland the groups at Kintraw, Ballymeanoch (Mid-Argyll), Strontoiller (Lorn), Ardnacross (Mull) and Fowlis Wester (Perthshire) show this association between Standing Stones, Circles and Kerb Cairns, while in Devon, Mardon Down (Fletcher, Grinsell & Quinnell, 1974), is an instance of this same connection.

Other links with the Variant Circle family of quasi-ceremonial monuments may be inferred from the 'false portals' at Lochbuie (R.C.A.H.M.S., 1980, 58) and Clachadow (Ritchie & MacLaren 1972, Fig. 4), comparable to those at Culcharron, Argyll, and



9.2 Comparative plans of Kerb Cairns in Scotland and Wales.

Cefn Caer Euni, Merioneth (Peltenburg 1971–72; Lynch 1986), and the ring plans of Claggan I and Knappers (Ritchie et al. 1974–75; Davidson 1934–35).

These links with ritual monuments which are traditionally assigned to the Early Bronze Age are somewhat at variance with the radiocarbon dates which are now available for Kerb Cairns in Scotland, quite definitely associated with the construction of the monument, but lying consistently within the later half of the period (Ritchie et al. 1974–75, 21–22). The date from Brenig 6 falls in the same period, but it must be remembered that it is not associated in the same way with the construction of the cairn.

The Scottish dates, however, come only from one group, the three Kerb Cairns at Claggan (Argyll), and they may prove to be unrepresentative. Nevertheless it may be appropriate to think of the Kerb Cairn as the last development in the tradition of complex and standardised cairn design. Any later burials are rare and undistinguished and by the Late Bronze Age the intertwining traditions of funerary and ceremonial monumental architecture, so well expressed in the Brenig valley, had been eclipsed – to be replaced perhaps by the natural grove and the bog as foci for religious ritual.

CHAPTER TEN

Platform Cairn

BRENIG 51

Frances Lynch

NGR SH 9894 5662 Height above sea level 450 m.

This monument, a very fine example of a Platform Cairn, lies on the flat top of the ridge which divides the Aber Llech Daniel from the Afon Fechan. It is very inconspicuous, except when seen from the higher ground of Marial Gwyn, but the site itself commands extensive views and all the other monuments in the cemetery to the west and south are visible from it (Brenig 6, 8, 14, 40, 41 & 42).

Immediately before the Platform Cairn was built, the site was occupied by people using a domestic style of Beaker pottery. The monument itself was built in two stages; initially it was a broad, flat ring with an open centre; subsequently the central area was filled to produce a continuous, level platform of stone with a small semi-circular cairn abutting the kerb on the north-east. The interval between these two stages is unknown, but it probably was not long.

The monument was fully excavated and the area outside it was cleared for a distance of 4 m – 5 m beyond the kerb. Before excavation the surface of the cairn was covered by 0.2 m of peat and there was a dense growth of rushes around the outside. Some of the kerbstones were visible and the stone filling was exposed in a large kidney-shaped depression just east of the centre and in other, smaller, holes whence stone had been removed (Fig. 10.1). The ground immediately around the monument had been ploughed within the last ten years, but the cairn itself had not been touched.

The sequence of soils was a very simple one similar to that found elsewhere in the valley. The grass surface covered a layer of peat (0 horizon) beneath which was a brown mineral soil (the Eag horizon), which overlay the reddish-yellow stony clay subsoil (the Bs horizon). On the eastern side of the site these layers were divided by a well-developed iron pan which was not present on the west. The sequence inside and outside the monument was the same; only at one point beneath the cairn was an old ground surface present. Everywhere else, the subsoil had been exposed and the mineral horizon which covered it, both outside the monument and amongst the basal stones of the cairn, must be largely due to a subsequent build-up and development. This initial stripping, therefore, probably involved a larger area than that subsequently occupied by the cairn.

Period I:

Beaker Occupation Site

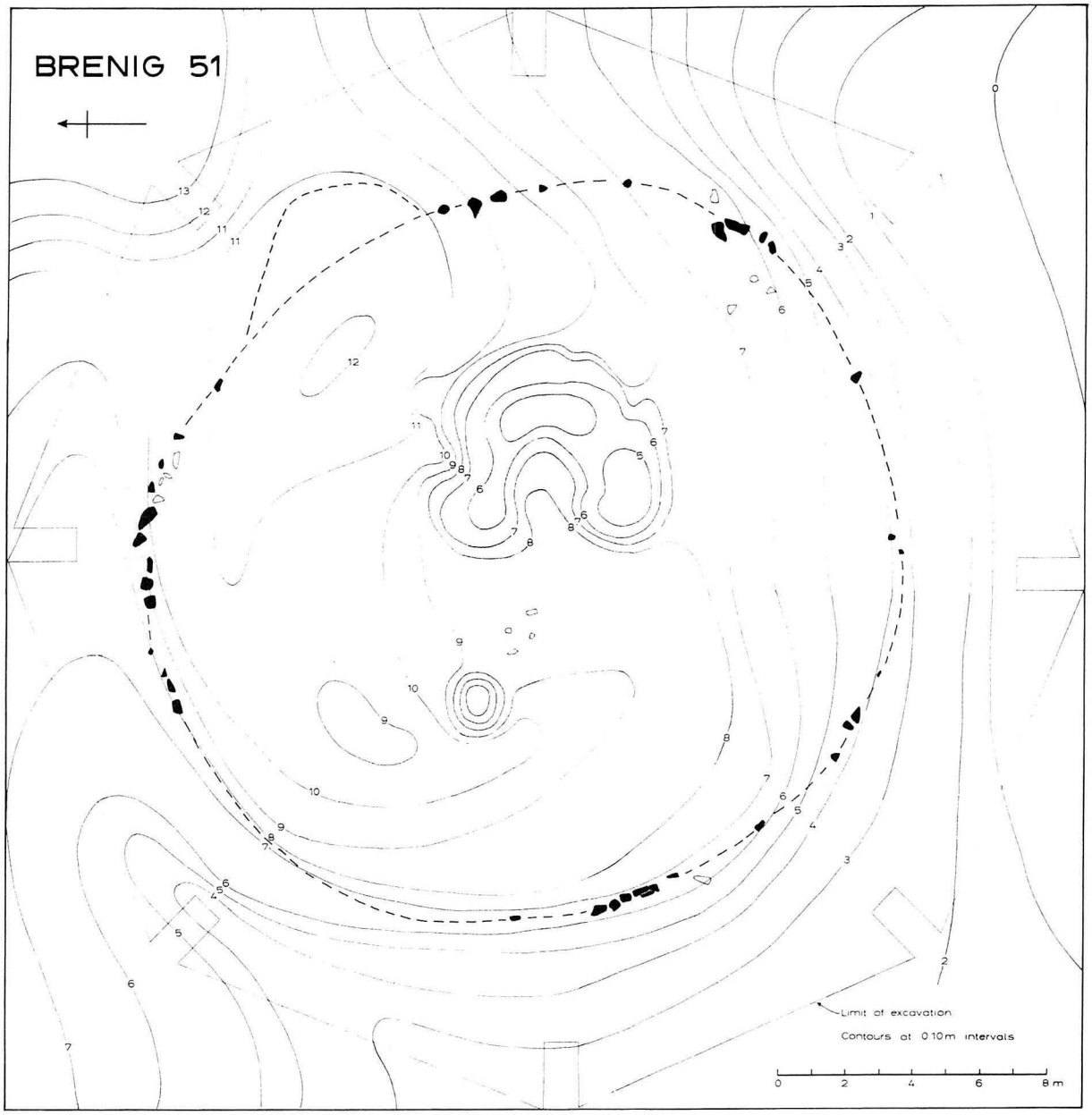
The evidence for the earlier occupation of the top of the ridge lay in a patch of grey 'occupation soil' (layer 7) which had accidentally survived the stripping of the area. This layer covered an area of about 20 sq. m beneath a clay bank in the south-western quadrant. It was coterminous with the kerb and with the eastern edge of the bank, but to the north it extended a little way under the stones of the cairn, where it ended on a meandering line. It was no more than 50 mm thick and had probably been truncated by de-turfing; further north under the bank the surface was a soft, pale brown, silty clay which must represent the C horizon of this shallow relict soil, and confirms the impression that its partial preservation on the south side was entirely accidental.

This soil contained a good deal of trampled charcoal (birch, oak, hazel and hawthorn) which yielded a radiocarbon date of 1550 ± 70 b.c. (HAR 803). Flotation of the soil failed to find any seeds but analysis of the pollen in it shows that a significant quantity of cereal pollen was present, together with other plants indicative of open arable conditions (Chap. 2, Fig. 2.6). However, heather pollen was predominant, suggesting that the immediate surroundings of the site had an open moorland vegetation, similar to that beneath the western barrows, where no evidence of occupation was found. The cereal pollen may have been introduced to the site by way of food and it is surely significant that this evidence for food crops should only occur here, in association with pot sherds and trampled charcoal.

Despite this, however, there was no evidence for any structures on the site. There were no hearths, neither patches of burnt earth nor more formal stone-edged features; nor were there any post- or even stakeholes. Hearths might have been swept away when the area was stripped, but truncated stakeholes might have been expected to survive. However, the presence of 104 small, abraded pot sherds and the scuffed appearance of the charcoal are both more consistent with occupation than with a short, perhaps 'ritual', activity.

The Beaker Pottery (see also App. 4)

The distribution of the pottery was reasonably uniform throughout the area covered by layer 7; some of the sherds had been trodden right down into the bottom of the blue-grey soil, others were closer to the top; but no real stratification was

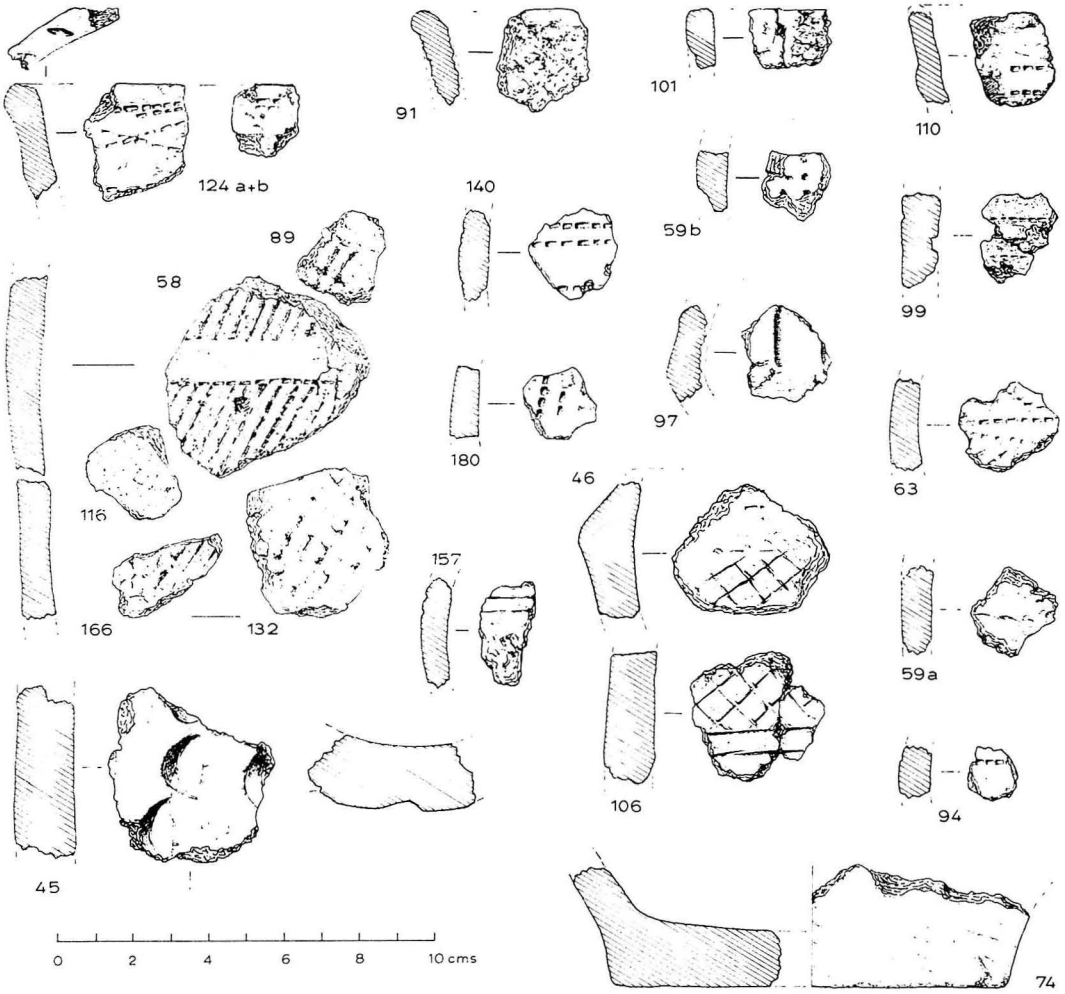


10.1 Brenig 51: contour plan of site before excavation; disturbed areas shaded.

observable within the 50 mm thickness which survived. Sixty-two of the 104 pieces found were tiny fragments or crumbs which suggested that the material had been kicked around a good deal, as did the fact that sherds from the same pot were fairly widely scattered. For instance the ten sherds of Pot 1 were scattered over 4.5 sq. m. Only three small, featureless fragments were found outside the area of occupation soil; they came from the C horizon (layer 6) surviving in the north-west quadrant.

Judging by variation in decoration and fabric treatment, the remains of at least 16 pots are present, but only six of them were represented by more than one sherd (Fig. 10.2 & Table 10.1). The dominant fabric is a rather greasy pink-buff clay without visible grits; it is well fired but has a soft, easily-rubbed surface which has suffered abrasion and root penetration. The average thickness is 8 mm and it is broadly similar to the fabric of Pot 1. Analysis (App. 4) has shown that all the sherds could have been essentially the same in composition, differing only in treatment during manufacture. The clay contained very small fragments of grog and stone inclusions which could have come from outside the region, probably from the Welsh borderland.

Twenty-one sherds are decorated, though the precise nature of the decoration is not clear on all of them. Comb-stamped hyphenated lines can be recognised on eight pieces (six pots) and this would seem to be the most popular technique. The channelled line on BG51:97 is unusual, as is the very hard fabric; it is perhaps more akin to Food Vessel sherds. An association here would not be unexpected, but it is too small for certainty. Undecorated sherds seem to be as rare as decorated ones; the majority is simply abraded and worn.



10.2 Brenig 51: Beaker pottery from Layer 7.

No pot can be reconstructed, even on paper, so there is little that can be said about shape. The large, straight pieces of Pot 1 suggest that it had a tall neck, or may even have had no waist, a profile indicative of a late date within the Beaker series. A pattern of two bands of diagonal lines running in the same direction is unusual, but can be found on a late Beaker from Cassington, Oxfordshire (Clarke 1970 no. 722). The sloping rim of BG51:46 is also a feature of later Beakers, especially in

Pot No.	Sherd Nos.	Fabric	Colour	Decoration	Dec. Technique	Shape
1.	*58,89**, 95, 100, *116. 132*, 133*, *166*, 169, 170.	soft, slightly greasy.	pale buff /pink	Panels of diagonal lines (often only recognisable as worn grooves).	Comb-stamped hyphenated lines.	Tall, straight neck or waistless.
2.	*59a*, 96, 113, 122, 125, 131.	hard, medium grits.	pink/ buff	Horizontal line.	? Impressed cord.	–
3.	*46, 106*, 154, soft, 158.	buff/ slightly pink greasy.	Lattice pattern.	Sharp incision.	Sloping rim.	
4.	*91*, 73*, 111.	friable.	dk orange	–	–	Rim only.
5.	*94, 104*.	hard.	dk brown	Horizontal lines.	Comb-stamped, hyphenated lines.	–
6.	45, 83*.	Thick, unlike others.	orange/ brown	'Thumb-nail rustication'.	made with a flat spatula (cf. Day 1972, 32).	–

Table 10.1. Pots represented by more than one sherd. Numbers in italics, sherds illustrated; asterisks, sherds analysed.

the south of England. The overall impression, therefore, is that this pottery, with its complex patterning and use of incision, belongs to the later range of Beaker styles, a conclusion supported by the radiocarbon date of 1550 ± 70 b.c. (HAR 803) obtained from the associated charcoal.

Flintwork (see also Figs. 3.8, App. 3.1 & 2)

Surprisingly little flint was associated with the pottery in layer 7. Only 14 pieces were found; nine of them were struck flakes, and two were small, round scrapers (BG51:78 & BG51:86). They call for little comment except to note that nearly all of them (except BG51:78, which is pebble flint) are pieces of translucent flint, material which seems to be associated with the Bronze Age activity in the valley.

Although flint was rare in the occupation soil, 37 pieces were collected from the top of the orange subsoil exposed elsewhere under and around the cairn. These finds were scattered without significant concentration around the margin of the cairn and beneath its basal stones. They lay on or in the stripped surface and were not associated with residual occupation material. However, it is likely that they originated in the Beaker settlement horizon, although none is a distinctive tool of recognised Beaker type. Most of the flint is high quality and there are seven worked pieces, two scrapers (BG51:36 & BG51:43), one point (BG51:16) and four pieces with worked edges (BG51:3, BG51:11a, BG51:19 & BG51:21). Eight other flakes show signs of edge damage, and there are two core fragments. Just over 50% is waste material, largely from the later stages of manufacture, a situation comparable to that in the small sample of flint from layer 7. It is noteworthy that it is only at this probable occupation site that there is evidence for flint working on the spot (App. 3). Only three pieces of chert – a raw material popular amongst the Mesolithic inhabitants of the valley (Chap. 3) – were found beneath Brenig 51, but there was rather more further down the ridge beneath Brenig 8 (p. 89), suggesting some activity away from the main camp.

Period II:

The Platform Cairn

Before the monument was built the surface was prepared by stripping off all the turf and much of the A and B horizons of the soil, presumably to provide a clean and tidy surface for the new building. The partial preservation of the earlier surface (layer 7) may be due to the piling of this debris there at some stage, although it was not retained for later use in the monument.

A quantity of fresh oak and hazel charcoal (BG51:F1) lay on the stripped surface in the north-west quadrant; it was probably the site of a fire, but the earth beneath was not scorched. The charcoal, which consisted of large, fresh-looking pieces quite unlike the flecks and scraps found in layer 7, provided a radiocarbon date of 1560 ± 70 b.c. (HAR 801) which suggests that the monument rapidly succeeded settlement on this spot. Apart from the primary burial, this fire was the only feature on the stripped surface beneath the stones.

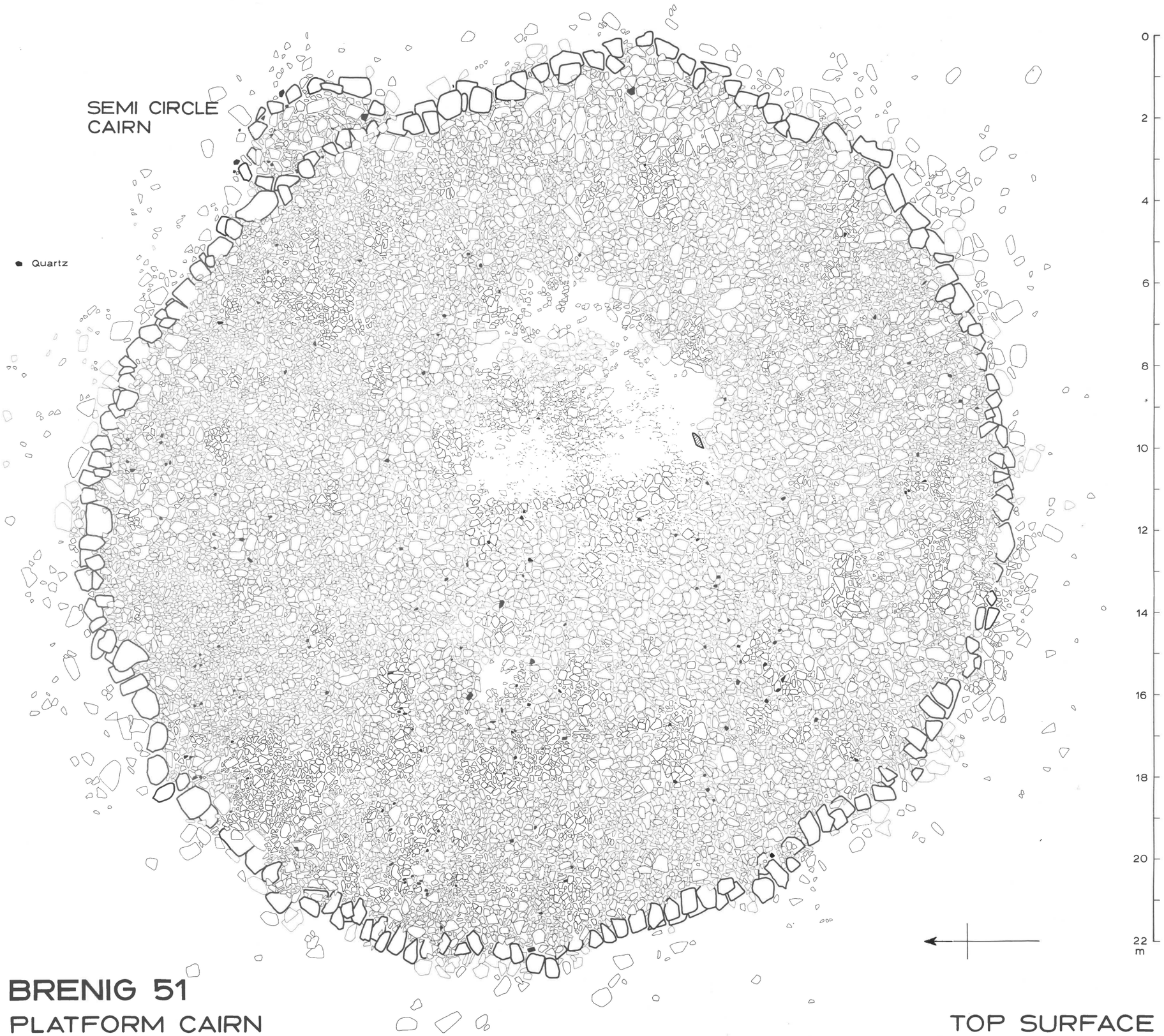
Primary Burial (Fig. 10.6)

This cremation was placed in a small pit dug into the subsoil and covered by one of the basal stones of the cairn. The pit was roughly circular, some 0.55 m in diameter, neatly cut with vertical sides, and 0.44 m deep. A few scraps of cremated bone, including an adult molar, were found at the bottom, beneath a scatter of small, flat pieces of stone onto which the urn had been inverted. Three flat stones stood against the sides of the pit, closely surrounding the burial urn. Other upright stones which leant against the sloping body of the pot had clearly been put in later. The arrangement was capped with a small, flat stone; the sloping top of the pit was finally filled with smaller rounded stones.

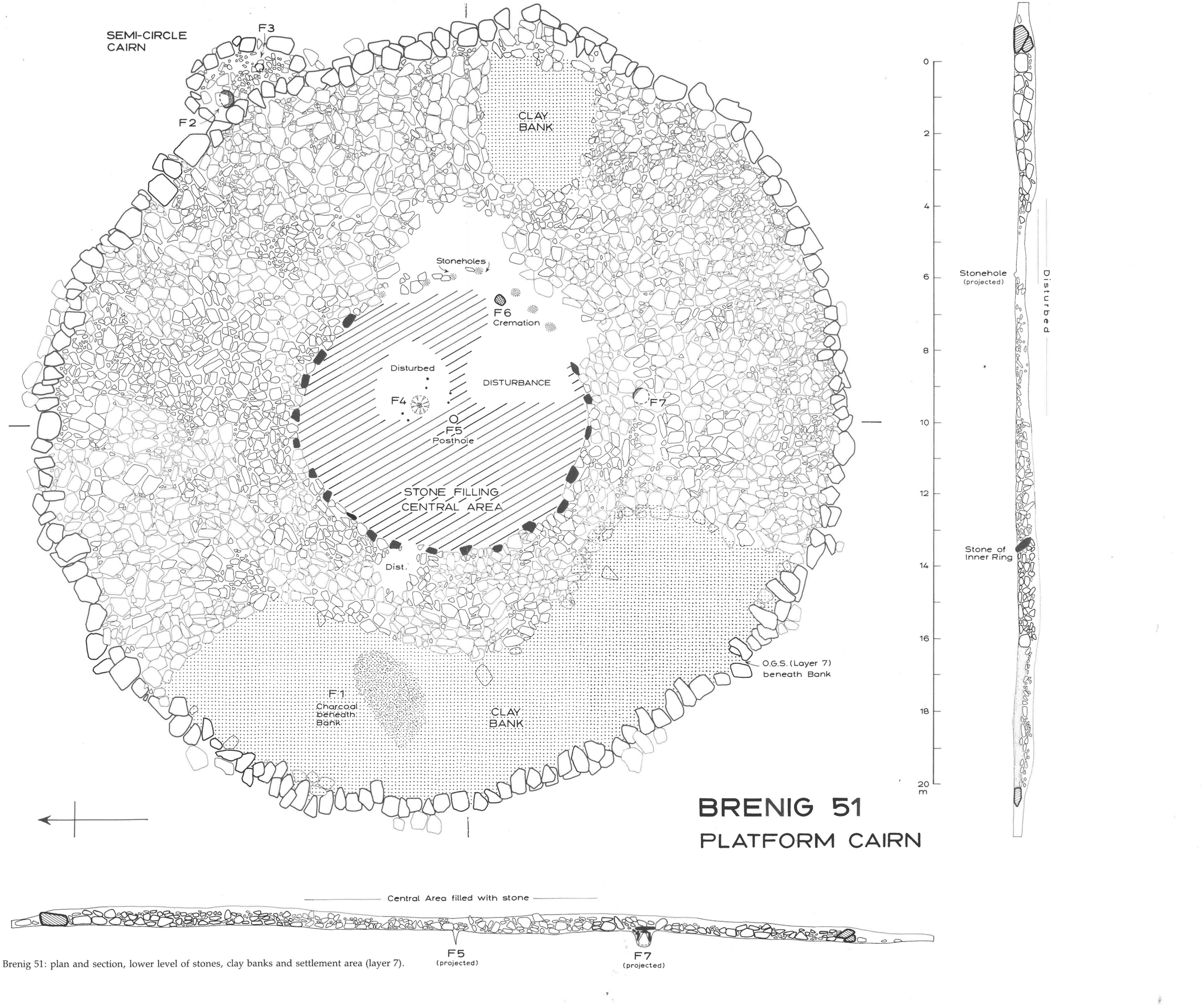
The urn, a Vase Urn or Enlarged Food Vessel with incised herring-bone decoration on the outside and three cord-impressed lines on the inner bevel of the rim, contained the cremated remains of two adults and of a small bone pommel. Due to subsequent concretion the bones formed a solid block in the neck of the pot; the rest was filled with earth and small stones. The base of the pot was missing when the cist was opened and the sherds were not found inside it, so one must presume that it was never present, in which case the urn must have been closed at the mouth and carried to the site upside-down. There is no reason to suppose that the few pieces of bone at the bottom of the pit belong to a third individual, but it is difficult to explain their presence if the urn was sealed. However, the practical difficulties of extracting the pot, which had been concreted into the pit by iron pan, made it impossible to record the exact arrangement of the small stones on the floor and it is conceivable that these bones had fallen through them.

A very finely-made flint knife (BG51:171, Fig. App. 3.2) was found on the surface beneath the cairn close to BG51:F7. It was not burnt and, apart from its proximity, there is no reason to connect it with this burial, although its quality and freshness might suggest that it had been prepared as a grave offering.

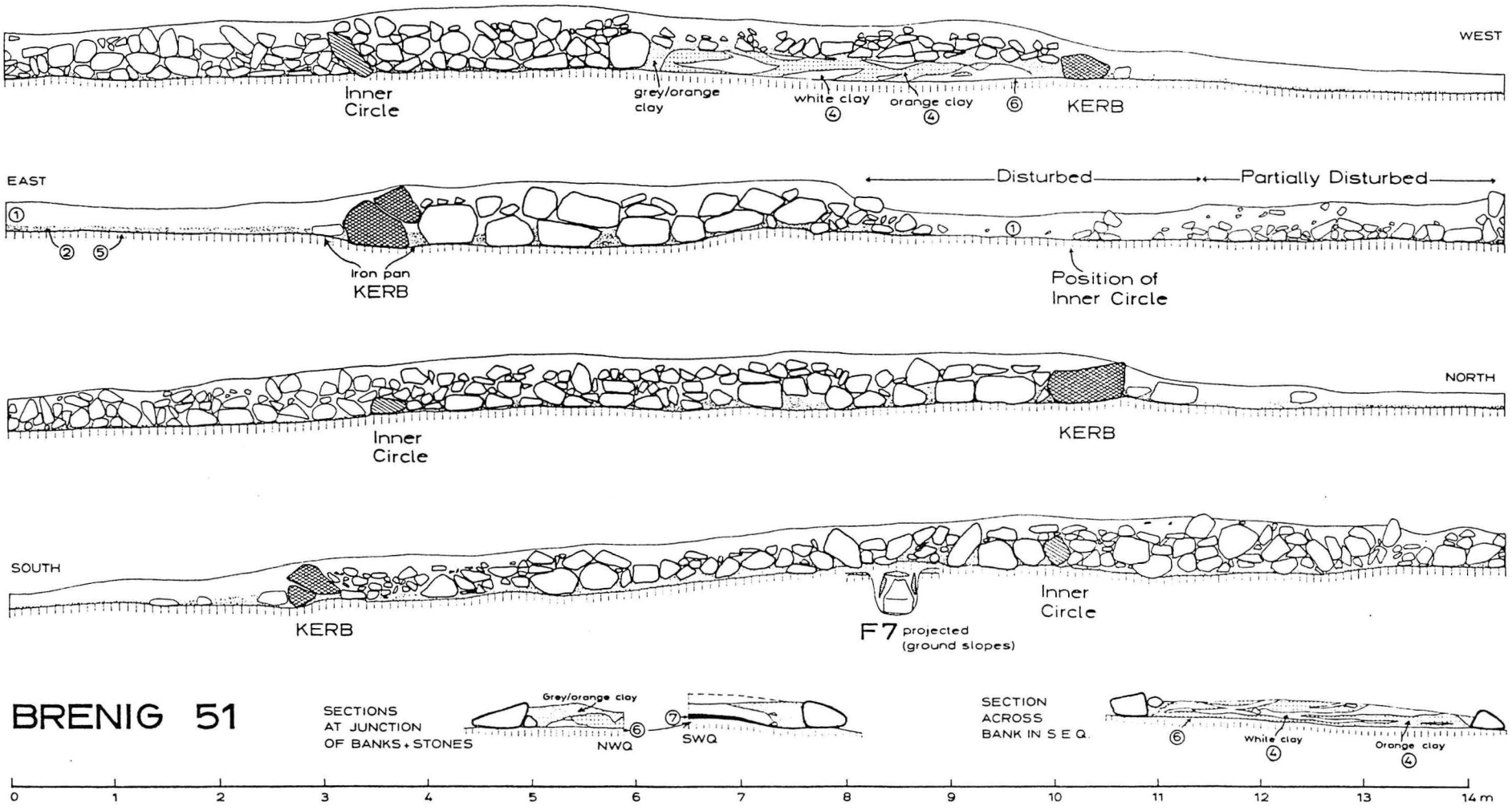
The final covering for the burial was a large, flat slab of schist which was incorporated into the basal layer of the cairn. This slab stood out amongst the stones of the cairn because it was larger and flatter than most of them, for they were normally rounded gritstone boulders. However, the northern end of it was accurately sited in relation to the clearest of the basal rings, and it seems that the positioning of this stone marked the first move in the construction of the cairn. Apart from the innermost circle of uprights, this was the only ring which had been accurately set out.



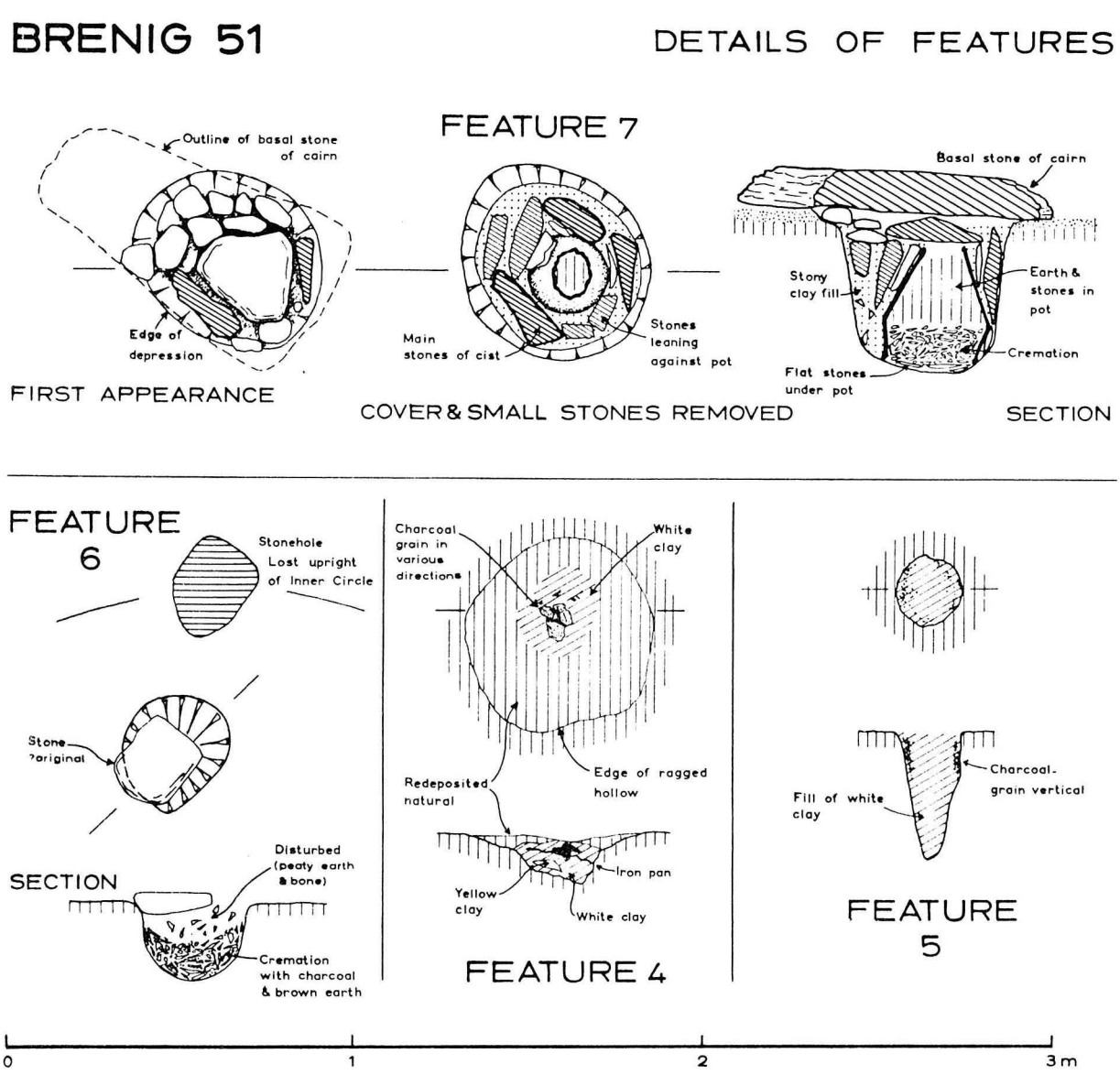
10.3 Brenig 51: plan of top surface of Platform Cairn.



10.4 Brenig 51: plan and section, lower level of stones, clay banks and settlement area (layer 7).



10.5 Brenig 51: sections.



10.6 Brenig 51: details of Features 4–7.

Construction of the Cairn

The main body of the cairn consisted of a broad, flat ring of stone, the inner edge marked by a circle of low uprights and the outer one by a kerb of laid boulders. The overall diameter was 22 m – 23 m and the height not more than 0.5 m, made up essentially of two layers of stone, a basal layer of large, carefully-placed boulders and a covering of smaller, haphazardly-laid pieces. Nearly all the stones used were gritstone boulders such as might be gathered from the moor. There was a good deal of quartz amongst the smaller stones of the upper layer but its distribution was random, and the discovery of a vein of the material close by (Brenig 52) provides an adequate explanation for its presence. However, white quartz was occasionally an intentional embellishment to the more elaborate Bronze Age monuments in many parts of the country, and the quantity in the Semi-Circle Cairn here does seem to be significant.

The outer kerb had been set directly onto the soft, stripped surface into which the large flat boulders had tended to sink. Where it was well preserved the kerb consisted of two courses of stones laid so that the upper one sloped gently upwards to contain any slip amongst the small stones of the cairn surface. There was no evidence that the kerb had ever been higher than two courses, e.g. about 0.5 m high. In may places the upper course had slipped or been pulled forward, and lay in front of its true line. Particularly large stones may never have had a second course, for the aim seems to have been to maintain an even height. The kerb appears to have been laid out as a series of straight lines, particularly apparent on the eastern side, rather than a true circle.

The central area of the cairn was demarcated by a circle of 26 upright stones. These stones were not large, being only 0.3 m – 0.4 m high, and were not designed to rise above the cairn which backed them. They were fairly evenly spaced and the intervals were filled with two or three laid stones neatly completing the arc of the circle. The uprights were standing in shallow sockets no more than 0.1 m – 0.15 m deep. On the eastern side seven stones were missing, removed by the extensive robbing of stone in that area, but

the small stone-holes were identifiable. Several of the laid stones covered small fragments of quartz, presumably a deliberate arrangement since quartz was not found beneath the rest of the cairn.

The basal layer of the cairn immediately within the circle of uprights was built in carefully-laid concentric rings, the clearest being the one which incorporated the stone covering the primary burial, perhaps the first ring to be laid out. Beyond that point the circularity of the design was broken by the presence of clay banks and the regularity of the construction was disturbed. In fact the stones in the area between that ring and the kerb seem to have been laid in segments rather than in expanding circles. At several points it was possible to recognise radial lines which no doubt reflect the practical organisation of the work. At one point in the north-eastern quadrant where the basal stones were uniformly large, there was a circular patch of smaller ones suggesting, perhaps, an early (Bronze Age) disturbance of this layer. However, careful excavation produced no evidence to support this idea.

A considerable proportion of the basal layer of the cairn was built of a mixture of clay and turves. This material was arranged in two low, flat banks, a large one on the west covering an arc approximately 64 sq. m in extent, and a very much smaller one on the east side, only 10.5 sq. m. Neither was more than 0.25 m high, and together they amount to about 18.6 cubic metres of material. It was very similar to the material used to build the mound at Brenig 47, which was considered to be subsoil; there may have been turves incorporated in it, but the characteristic black lines had not developed in this lightly-covered bank. The easily recognisable habitation layer (7) did not appear in these banks, a fact confirmed by the great rarity of finds; only one piece of chert and a flint blade were found, both in the smaller, south-eastern bank.

The western bank covered the whole of the area between the concentrically-laid rings and the kerb. The basal course of the kerb had been in position before the bank was built because the clay covered several backing stones, but the upper course was laid onto the sloping surface of the bank. Where it was thus bonded into the clay bank the kerb had survived rather better than elsewhere. At the north-western end the junction of the stones and the bank was marked by a neat line of stones which seem to have been laid against the end of the bank; at the other end, the position was less clear but the bank had obviously been built later than the concentrically-laid rings. The eastern bank simply filled a ragged gap in the stones and had no formal edging.

The presence of these banks was carefully concealed by the top layer of cairn material and they do not seem to have had any special or ritual significance in the design of the monument, but merely supplemented the stone, which is rather scarce in the Brenig valley. The concealed use of earth is an expedient which can be parallelled at Brenig 44 where the core of the stone ring was in fact built of turves. The neat and symmetrical appearance of the western bank gives the impression of having been planned from the outset, whereas the small eastern one looks like the response to a more unexpected shortfall of stone.

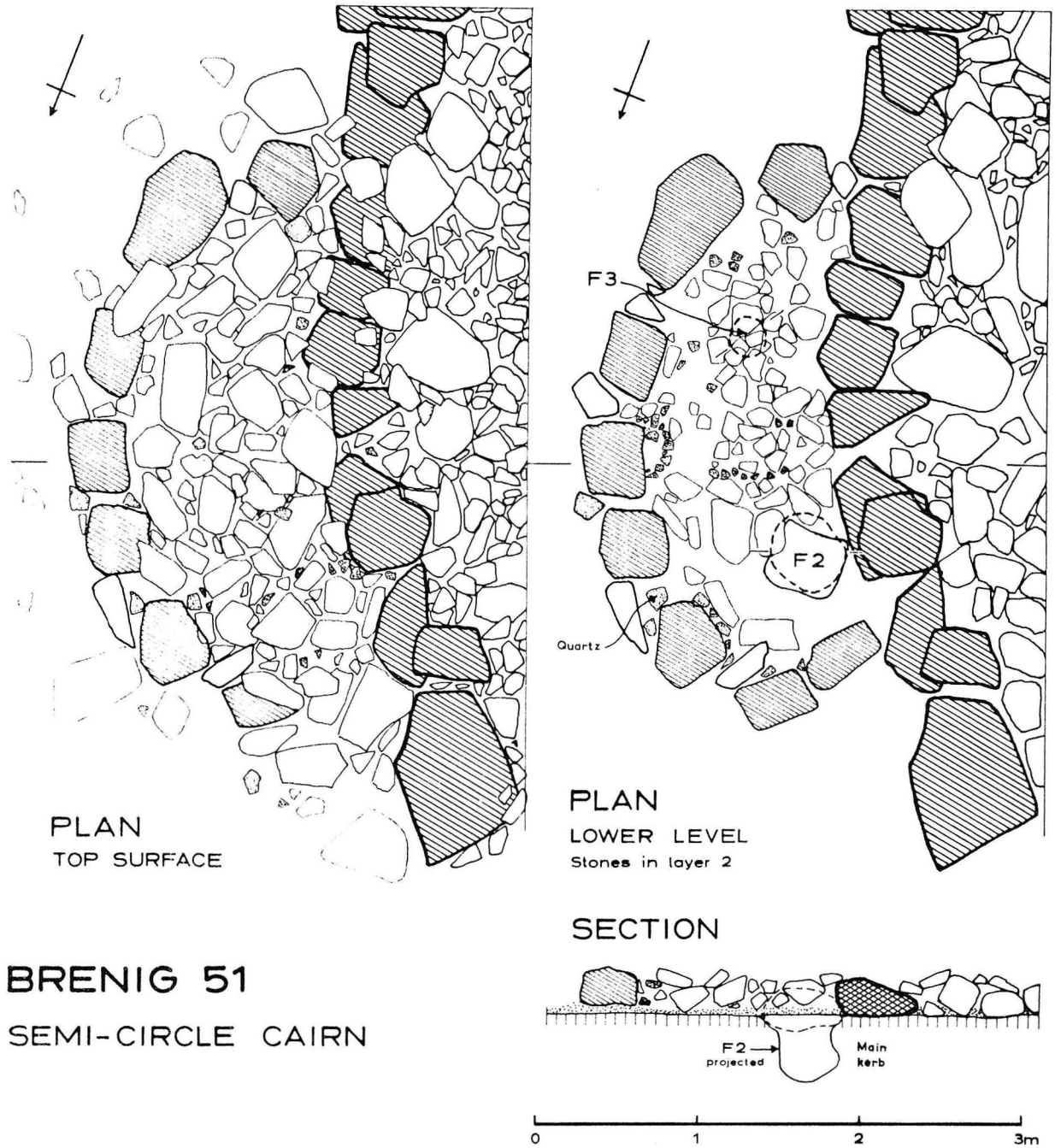
The upper surface of the cairn was composed of small, flattish slabs of gritstone laid uniformly over the basal stones and the banks to provide an even surface, level with the top of the uprights in the central ring and with the outer kerb. Where the stones overlay the smooth surface of the banks they looked almost like a paving, elsewhere they were naturally more jumbled and the quantity of material varied according to the scale of the basal layer beneath; on the north-east the upper layer was relatively thin. These stones were not laid in any pattern, but they had been carefully selected for size to give an impression of uniformity to the finished surface of the cairn at the period when it stood as a broad, open ring. The subsequent filling of the central area with rather larger stones was consequently observable at this level.

Central Area

The central area of the monument, 7.5 m – 8.0 m across, was defined by the ring of small upright stones mentioned above. It was found to be haphazardly filled with stones but there was evidence to suggest that it had originally been open and that it had stood thus for some period of time. Several of the uprights had been pushed forward by the pressure of the cairn behind them. Although the stripped surface with its lack of a clear old ground level was not ideal for the definition of precise levels, it was possible to recognise that the surface of the central area was a few centimetres lower than that beneath the cairn. Although this drop in level was difficult to record convincingly it was noticeable to those working on the site.

Within this enclosed area there were three features of particular note. In the very centre there was a large, deep stakehole (BG51:F5). This first appeared as an irregular patch of softer earth. When surrounding iron pan was removed it showed as a circular patch of white clay 0.17 m in diameter, the fill of a stakehole tapering to a point at a depth of 0.35 m. Pressed against the sides of the hole there were quite large pieces of birch charcoal with the grain running vertically. The hole is almost exactly in the centre and it might have held a peg for laying out the inner rings. However, it seems to be unnecessarily large for such a purpose and may have held some more important post or totem, no doubt higher than the broad, flat ring which surrounded it. Two other patches of soft earth and charcoal were investigated, but they proved to be only 40 mm – 50 mm deep.

Nearby there was an amorphous scoop (BG51:F4) containing at its centre some lumps of oak charcoal, their grains lying in various directions. This unexplained scoop contained white clay and the gritty subsoil which had been dug out of it. Close by were four small patches of charcoal, making six in all in this area, but since the grain of the



10.7 Brenig 51: details of Semi-Circle Cairn.

charcoal ran in various directions it is not possible to interpret them as burnt stakes although they bore a superficial resemblance to those at Brenig 44 (BG44:F42, p. 127). BG51:F4 was found at a point where the modern disturbance had reached the old surface, but there was no evidence that it was not ancient.

The central area was particularly wet, the water seeping up from a point just to the north-west of BG51:F5. However, there was no sign of prehistoric interest in that particular spot and, since such mountain springs are notoriously transient, it is unlikely to have held the answer to the function of the central area. The two worked flints found on the stripped surface of the central area (BG51:85 & BG51:93) are not helpful in the interpretation of its use.

One feature close to the edge of the area is more easily understood. It was a neatly-dug pit containing a cremation burial (BG51:F6, Fig. 10.6). The pit had been dug close to one of the missing stones of the inner circle; it was 0.3 m in diameter, 0.2 m deep, with a rounded bottom, and contained a mixture of earth and cremated bone, the remains of a child about eleven years old. The sex could not be determined. There were a few fragments of charred oak with the bone. Although the pit was partly covered by a flat, square slab the upper part seemed to have been disturbed since it contained loose, brown, peaty soil. Part of a heavily-burnt flint knife (BG51:6, Fig. 10.8) had previously been found in the disturbed soil above this spot and it is reasonable to suggest that it may originally have accompanied this cremation. This burial presumably predates the filling of the central area but it is impossible to guess at the interval which separates it from the primary burial beneath the cairn.

The final appearance of the platform was achieved by filling in the central area with a jumbled mass of stones. There was no attempt to lay these stones as the original basal layer had been laid; they were thrown in haphazardly, but were levelled off at the height of the upright stones so that the final effect was that of an uninterrupted circular platform. Only the very observant would notice the difference in size between the central filling and the outer ring. The only unusual feature observed in this filling was the concentration of quartz at the very centre. However, too much weight should not be placed on this since the eastern half had been greatly depleted by modern disturbance and stone robbing.

Semi-Circle Cairn (Fig. 10.7)

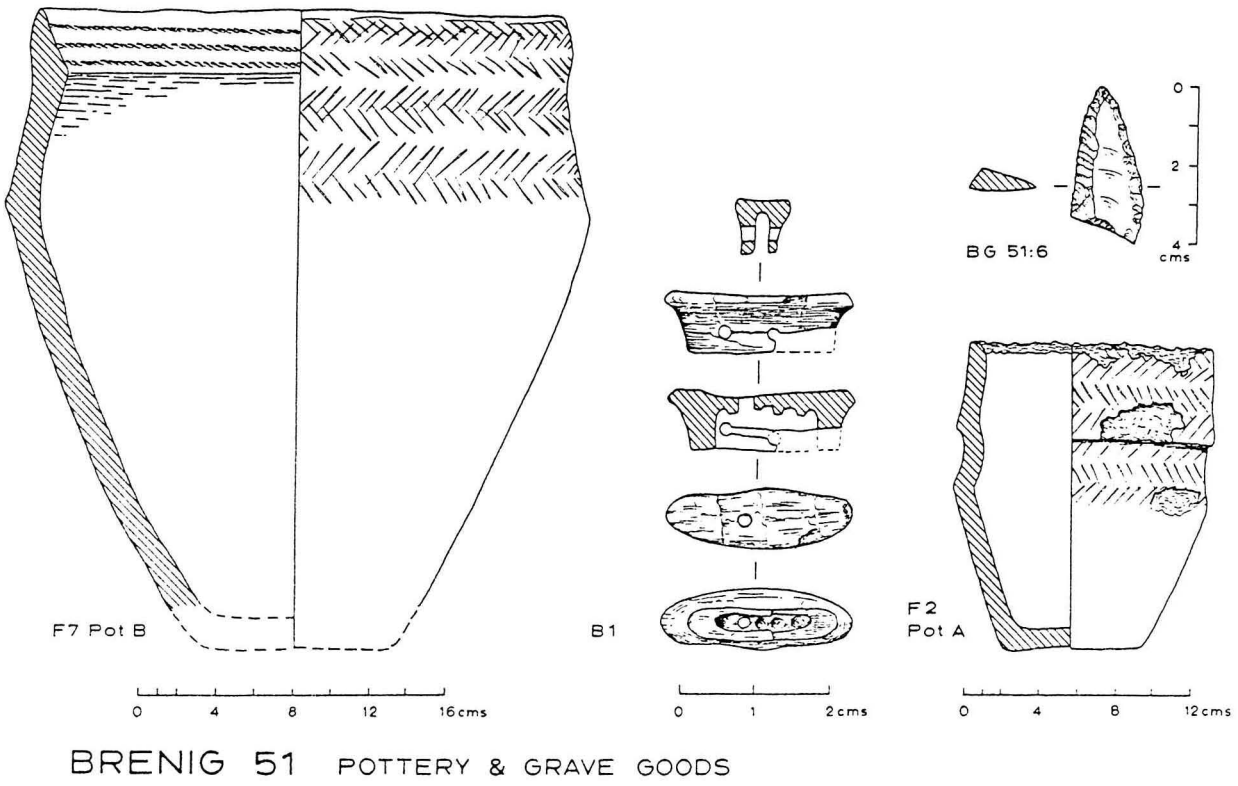
Abutting against the kerb on the north-east was a small semi-circular cairn neatly edged with a single line of boulders and filled with smaller stones. The cairn was 3.5 m long and 1.6 m wide and the filling was only 0.3 m thick, less than the height of the main cairn. Amongst this fill there was a large proportion of quartz, concentrated particularly in the northern half. Although quartz occurred sporadically in the main cairn, the quantity here (c. 120 kg) suggests that its deposition was intentional.

Amongst the lower stones of the filling there was a large, square boulder which was obviously more deeply set than the others which lay in the grey mineral soil (layer 2). It was placed just in front of one of the kerb stones of the main cairn. The removal of this heavy stone revealed a concentration of charcoal in the centre of a shallow depression into which the stone was set. This charcoal proved to come from the base of a small inverted pot which had been crushed by the weight of the stone. This pot (A) was standing in a roughly circular pit (BG51:F2) 0.47 m in diameter and 0.43 m deep. It was dug with a rounded bottom and an approximately bell-shaped profile, very like those at Brenig 44. The bottom of the pit was filled with a conical heap of clean charcoal, predominantly oak with hazel and birch. On top of this cone stood the small Collared Urn (A) which itself contained only charcoal and a heavily-burnt lump of flint. The rest of the pit was filled by packing a mixture of brown and orange charcoal-flecked clay around the charcoal heap and the pot. In doing this the poorly-fired pot was cracked and a piece of the base detached. It was found a few centimetres away beneath the final filling of clean orange sandy clay – the material dug out of the pit.

BG51:F2 in the northern half of the Semi-Circle Cairn was balanced in the southern half by a very much smaller pit (BG51:F3) whose status is much less certain. Initial clearance showed nothing on the surface; however, the removal of c. 50 mm of the orange clay (layer 5) revealed a patch (0.2 m across) of greyer clay with tiny flecks of charcoal. This filled a small hole 0.12 m deep (originally 0.17 m deep, presumably) with a rounded bottom. Between this 'pit' and BG51:F2 there was a narrow, meandering area of similar slightly darker clay with a few tiny flecks of charcoal. This channel ran into the side of BG51:F2 and might be explained as an animal burrow. This was possibly also the explanation of BG51:F3, though the symmetry of pits and cairn suggests a man-made origin, while it is impossible to explain its purpose.

Four small pieces of flint were found within the area of the Semi-Circle Cairn. One (BG51:26) came from the peat overlying the stones and the others from the mineral soil (layer 2) beneath them. All were tiny scraps of translucent material except one (BG51:27c), which was a small, heavily-burnt piece retaining part of a worked edge, perhaps part of a knife. This might have had some connection with the burial of charcoal in the area, but the others would seem to be part of the general scatter of material beneath the cairn (see above).

The Semi-Circle Cairn is very similar in many ways to the cairn on the western side of Brenig 44; the two are of comparable size, shape and general construction and both abut the kerb of the main monument. At Brenig 44 the cairn was built at a late stage in the history of the site to cover an area of earlier activity which had probably been attracted to that spot by the presence of especially large white stones in the wall. At Brenig 51 the



10.8 Brenig 51: pottery and grave goods.

reason for the choice of site is less clear; the kerbstones against which the cairn abuts are by no means the largest nor are they distinguished by colour or shape. However, there is evidence to suggest that this, too, is a late addition to the cairn, though whether before or after the centre was filled, one cannot say. The section of the main kerb against which the Semi-Circle Cairn was built was quite dilapidated; the stones were not very large and the second course was missing for most of its length. Such damage would be very unlikely to have occurred once the line had been protected by the construction of the Semi-Circle Cairn. Moreover the edging stones and the stones filling the Semi-Circle Cairn lay on layer 2, which was absent under the stones of the main kerb which had been laid directly on the stripped surface. The mineral soil here, where stripping can be demonstrated, would seem to be a later accumulation blown over the cairn and settling amongst the lower boulders where it could be recognised as a layer of variable thickness. The conclusion that the Semi-Circle Cairn is a later addition to the monument finds some support in the radiocarbon date of 1470 ± 70 b.c. (HAR 820) for charcoal from the pit (BG51:F2).

Finds from the Monument

Apart from the pieces which can be associated, more or less certainly, with the two cremations and the charcoal in the Semi-Circle Cairn, very few finds came from the monument itself. The bulk of what was found came from the surface beneath the cairn or from immediately outside and has been dealt with in discussing the evidence for earlier occupation.

Pot A from BG51:F2 in the Semi-Circle Cairn (Fig. 10.8)

Diameter of rim : 13 cm. Height 15.5 cm.

Contents : Charcoal and one piece of heavily-burnt flint (BG51:25a), a waste flake struck from the top of a module.

The pot is a small Collared Urn decorated on the collar and the neck with seven lines of diagonal incisions arranged in a herring-bone pattern. It belongs to Longworth's Secondary Series (Longworth 1984, no. 2027). The inner and outer surfaces are brick red for the most part, occasionally pinky-buff with only a thin black core. However, the surface was very friable and it did not give the impression of having been well-fired. The top of the rim had been damaged in antiquity and much of the decorated surface of the collar had flaked away.

Pot B from BG51:F7, the primary burial (Fig. 10.8)

Diameter of rim : 28 cm. Height (estimated) : 32 cm.

Contents : 728 gm of cremated bone, representing the remains of two individuals, both adult and one perhaps middle-aged or older, since two vertebrae show signs of osteo-arthritis. Their sex could not be determined (App. 5). Amongst the bones were the burnt remains of a small, polished, bone pommel (BG51:b1).

The pot is a Vase Urn with a well-smoothed, buff outer surface. The neck is decorated with seven lines of oblique incisions forming a rough herring-bone pattern, and the inner bevel of the rim carries three lines of impressed twisted cord.

The *bone pommel* (Fig. 10.8) is a good example of a type found frequently with cremations, especially in northern England and north Wales. These small examples are never found in association with bronze blades and they may have belonged to specially-made funerary knives, perhaps of wood (Hardaker 1974). The pommel is 25 mm long and 8 mm wide; the breadth of the hilt would have been 20 mm but it would have been only 4 mm thick; the length of the socket for its tang is 13.5 mm. This socket was made by drilling five holes, one of which passed right through the top. It would have been attached by two rivets or pegs from the side. The pommel had been split and broken by the cremation fire; seven pieces were recovered but the rest could not be found.

Flintwork (Figs. 10.8 & App. 3.2)
The two most notable implements are the knives, one (BG51:6) burnt and almost certainly associated with the cremation in BG51:F6, the other (BG51:171) in pristine condition, from the surface near BG51:F7. The few flints from the central area and from the Semi-Circle Cairn have already been mentioned in discussion of those areas. Only two pieces came from the clay banks, supporting the suggestion that they were essentially subsoil; two more were found among the stones of the cairn and a further five pieces came from the peat overlying the monument, and the disturbed areas.

Discussion

Burial rituals may be considered primary to Brenig 51, an integral part of the purpose for which it was designed, for the urn containing the cremated bones of an adult and a child had been placed in its pit before the foundation stones of the cairn were laid down. Moreover the slab covering this burial seems to have been the starting point in the construction of the ring and thus its importance to the builders may be considered fundamental.

The role of Brenig 51 in the cemetery may, therefore, be interpreted differently from that of Brenig 44 (see below) where the burials belong to a later stage of its use. However, the design reflects several of the features of the Ring Cairn, notably the open centre, the use of stone, the lack of height and, most importantly, the evidence for rituals connected with charcoal. So it is reasonable to suppose that this monument was built for some ceremonial activity in addition to those strictly connected with burial, for this had been performed before the broad ring was built or the central space defined.

The importance of the monument may perhaps be judged by the preparation of the surface on which it was to be built. This preparation involved the stripping of turf from the entire cairn area and beyond, and the removal of much of the B-horizon as well. It contrasts strongly with the situation on the other side of the valley where barrows were built on untouched vegetation. The presence of domestic debris may have necessitated this cleaning but, elsewhere, barrows such as those on Snail Down, Wiltshire (N. Thomas pers.comm.), Chippenham, Cambridgeshire and Swarkeston, Derbyshire, (Leaf 1935; 1940; Greenfield 1960) could be built directly over occupation layers, so clearly it was not essential to be so fastidious.

The ceremonial use of the open centre may have been a contributory factor, for at Snail Down there was some preparation of the surface within the ditch of a disc barrow (Thomas & Thomas 1955, 134) and on Cefn Caer Euni, Merioneth, the surface within the kerb of a Kerb Circle, a surface exposed for some time before the stone filling was put in place, was freshened by laying down a thin spread of clean orange clay (Lynch 1986). In this last instance occupation debris was concealed rather than removed, but in any case a clean surface may have been ritually desirable, whatever the state of the ground originally. With Brenig 51 the clearance went much further than was necessary, for most of the stripped area was rapidly covered by the cairn and only the small central space remained exposed. Presumably, therefore, there must have been some concern with cleanliness for its own sake.

Initially one may suppose that ceremonies took place within the small open space around the central post. The importance of this area would seem to be emphasised by the fragments of quartz placed beneath the walling stones, and subsequently by the concentration of quartz in its filling. Although the central post had been driven into the ground like a stake and no hole had been dug for it, its size suggests that it was much more than simply a surveyor's peg and it could have stood well above the height of the surrounding ring. The restricted area in the centre of Brenig 51 would seem to be suitable for rituals focussing on a tall central feature, perhaps some kind of totem or maypole, whereas the activity concentrating on the base of the wall at Brenig 44 would seem to require a wider space if spectators outside the monument played any role in the ceremonies.

Apart from the central post hole the only other intelligible feature within the central area was the child's cremation (BG51:F6) in a small pit close to the outer edge, near one of the upright stones. It is impossible to judge whether this was primary or secondary. The simple pit and its non-focal position do not give the impression that this burial was of major importance in the design or purpose of the central space, but this must remain a subjective judgement. The fact that the bones were those of a child of about eleven recalls the child burials in The Druid's Circle, Penmaenmawr, which were legitimately interpreted as foundation burials carrying some sacrificial overtones (Griffiths 1960, 330), and there are several other children's burials which could be seen in the same light (Pollard & Russell 1969, 73). There is nothing except its presence within this rather exceptional, probably ceremonial, space

to suggest that such an interpretation would be appropriate in this instance.

It is not possible to guess at the period which elapsed between the building of the broad flat ring with its open centre and the filling of that centre to achieve the final appearance of the solid platform. Since the broad ring and the relatively small central space are not typical of Welsh Ring Cairns like Brenig 44, it is unlikely that this is a Ring Cairn changed by later generations to a solid platform; it seems rather a monument with its two stages envisaged by its original builders. However such a conclusion must remain in the realms of speculation and interpretation for there is no direct evidence from excavation on the question. The use of mudstone for some of the uprights, however, would seem to preclude a long exposure, for such a slab, exposed in the restored monument, was badly shattered after four years.

It is impossible to determine from the remains themselves whether the Semi-Circle Cairn was built before or after the central space was filled. It can be argued from the presence of soil beneath its kerb and the dilapidated condition of the main kerb that the Semi-Circle Cairn is a late addition to the monument and, therefore, likely to post-date the filling of the centre – which might otherwise have been the site for burial of the charcoal. The radiocarbon date (App. 10 no. 20) (not significantly later than that from the pre-monument surface (no. 18)) confirms the impression noted above that the sequence of changes at this monument was a relatively rapid one, and that its period of use was appreciably shorter than the 400–500 year span of activity at Brenig 44.

Comparisons between Brenig 44 and 51 are perhaps closest in this later phase of activity at the Platform Cairn. The digging of a pit close to a wall face for the separate burial of charcoal is an obvious parallel. The charcoal was not in any container in Brenig 44, but at another Welsh Ring Cairn, Circle 278 at Penmaenmawr, a small urn very similar to BG51:A was used (Griffiths 1960, 327). At about the time, therefore, that the Ring Cairn was being modified and was first used for burials, its charcoal rituals were transferred to another ceremonial site which had previously received only cremated bones. The traditional use of the Ring Cairn, however, did not cease, for more than one charcoal pit was dug in the final phase of its life. The two added semi-circular cairns at Brenig 44 and Brenig 51 are very similar in size, construction, and, presumably, purpose. Moreover, radiocarbon dates suggest that they were roughly contemporary, belonging to the middle period of cemetery use (p. 148) when one may suspect a blurring of those differences in ceremonial and ritual which originally distinguished the closed mound and the open ring. The design of the Platform Cairn itself may be a product of this merging.

Finally reference may be made to the hint of deliberate damage to the monument which may be seen in the stones pulled off the kerb. The pressures of the cairn are unlikely to have caused such a collapse but the moment when the sharp profile of the platform was softened and blurred is unknown. The effect, however, would be not unlike that achieved elsewhere in the cemetery by the modification of the Ring Cairn and by the addition of an extra clay capping which obscured the ditch at Brenig 42. We cannot know the reason for such masochistic behaviour but it may have a long history, for some Neolithic tombs show similar signs of deliberate mutilation by their final users, masking their original sharp outline beneath 'extra-revetment material' (Scott 1964, 150).

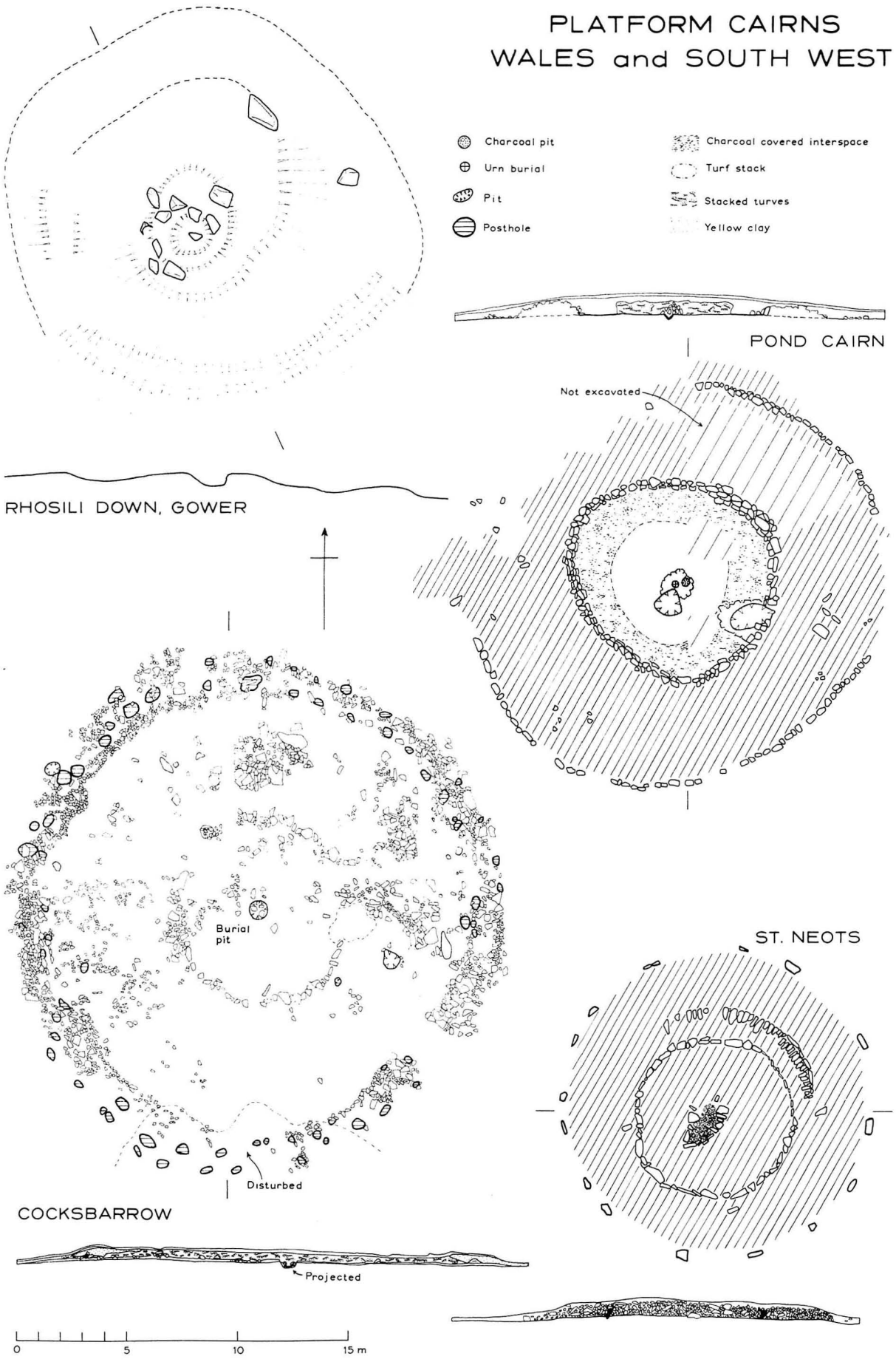
The essential features of Brenig 51 may be summarised briefly: the flatness of the top surface at both stages of its history is the most notable distinguishing characteristic. The differentiation of the central area can be shown to be crucial to the understanding of its structural history and this, too, should be a criterion for comparison although the difference may not always take the same form. The presence of the Semi-Circle Cairn abutting the kerb is another obvious design feature but it may not be integral to the definition of the Platform Cairn as a class. Excavated examples of such extensions at Burn Ground, Gloucestershire (Grimes 1960, 101–12), and at Stanton Moor, Derbyshire (Heathcote 1939, T.18 and T.20) and field observations elsewhere in Wales show that many types of cairn may have such additions.

PLATFORM CAIRNS

Frances Lynch

As the name implies, the level top surface should be the main criterion for identifying a Platform Cairn but in practice this is by no means easy and consequently this variation of cairn design has not been much studied. Low spreads of stone are usually identified as the remains of badly-robbed high cairns and where a Platform Cairn has itself been robbed the two are virtually indistinguishable. A preference for built, rather than orthostatic, kerbs, and for a relatively large diameter, may give a lead to their recognition. Particular attention should also be paid to the surface of the cairn close to the kerb where disturbance is normally slight; if this is level with virtually no slip beyond the kerb it is reasonable to classify the monument as a Platform Cairn. Whether this external distinction necessarily implies internal structural characteristics and functional uniformity it is still too early to say.

Using these criteria it is possible to recognise some likely examples in Wales. Moel Ty Uchaf II (SJ 056 371), the cairn below the well-known Kerb Circle close to Ffordd Saeson, Merioneth (Bowen and Gresham 1967, 82), and the northern cairn at Cefn y Ffordd (SN 958 605), both about 20 m in diameter, less than 1 m high and incorporating a significant quantity of quartz in their make-up, are two of the most promising candidates. The large low 'stony platform', Carnedd Pen y Berth Goch on the summit of Drum (SH 708 696) (RCAM 1956 No 171), the small grass-grown platform on the slopes of Allt Lwyd, Llanegryn (SH 207 074), perhaps the Druid's Circle, Nantmel (SN



10.9 Platform Cairns: comparative plans from Wales and South West England.

987 661) (Grimes 1963, 148), and the monument at Bwlch y Garreg near Llyn Mawr (SO 014 971) previously described as a Ring Cairn (*Archaeology in Wales* 1973, 27), may be included in the class. Other monuments listed as Platform Cairns in the RCAM inventories (RCAM 1956; 1960; 1976) have large cists exposed in the centre, which indicates considerable disturbance, although it does not preclude their having been built as platforms. Most of them, especially those in Glamorgan, and certainly Aber Camddwr (Hogg 1977, 25–28) are also a good deal smaller (6 m – 12 m) than Brenig 51, and are not comparable.

The other important aspect of the design of Brenig 51 is the open central space. Except under special circumstances this feature will not be recognisable at unexcavated sites and, even where present, may not necessarily have the same sequential implications. There is one unexcavated cairn in the Gower (SS 420 888) (RCAM 1976 No 171) which has a compact mass of stone in the centre contrasting with that used in the outer rim and which, though smaller, has similar proportions to Brenig 51 (Fig. 10.9). These proportions, a broad ring with a relatively small central space, are unlike those of the normal Welsh Ring Cairns such as Brenig 44 or Circle 278 at Penmaenmawr (Griffiths 1960), and enables one to state with confidence that this is not a Ring Cairn converted to a solid cairn at a late date. One excavated monument which has been classified as a Ring Cairn by the writer (Lynch 1972, 72), Pond Cairn in Glamorgan (Fox 1937), had these broad proportions and probably a flat surface and should perhaps be reclassified in the light of the results from Brenig 51 (Fig. 10.9). The central features combined aspects of burial and of 'charcoal ritual' as at Brenig 51. At Pond Cairn the independent filling of the central space is clearly distinguished by the use of turf but the time lapse is, again like Brenig 51, unknown. Where both the ring and the central filling are stone the distinction may not be so easy to recognise, for covered circles with no chronological significance are reckoned to be a commonplace of cairn archaeology, and protracted activity has seldom been postulated in connection with Bronze Age burials.

In Cornwall, where a great variety of types of cairn may be found, there are two monuments with several points of similarity to Brenig 51. The first of these is a 15 m cairn less than 1 m high which stood on the southern edge of Bodmin Moor at Higher Draynes, St. Neots (Wainwright 1965). The cairn had a level surface and a ring of close-set orthostats demarcating the central space, within which there was a charcoal-flecked surface and a large (empty) grave (Fig. 10.9). It was noted that the stones within the circle were larger than those used in the outer area of the cairn, possibly an indication of later infilling. There were no datable finds from the cairn.

The other comparable Cornish monument, Cocksbarrow, St. Mewan (Miles 1971, 12–25; 1975, 58–60), was very similar to Brenig 51 in size – 22 m in diameter, 0.45 m high, with a central space 8 m across – but it was built mainly of turf (Fig. 10.9). The outer edge was marked by a rough stone 'wall' which may have incorporated a double ring of posts at this stage; the inner edge by a circle of small granite slabs leaning back against the ring-filling of turf and stone. There were two pits filled with dark soil beneath the ring and one filled with pieces of quartz just outside it but not covered by any additional structure. At the centre there was a cremation burial with a horn ladle. This pit had been covered almost immediately by turves filling the central space and spreading over the pre-existing ring.

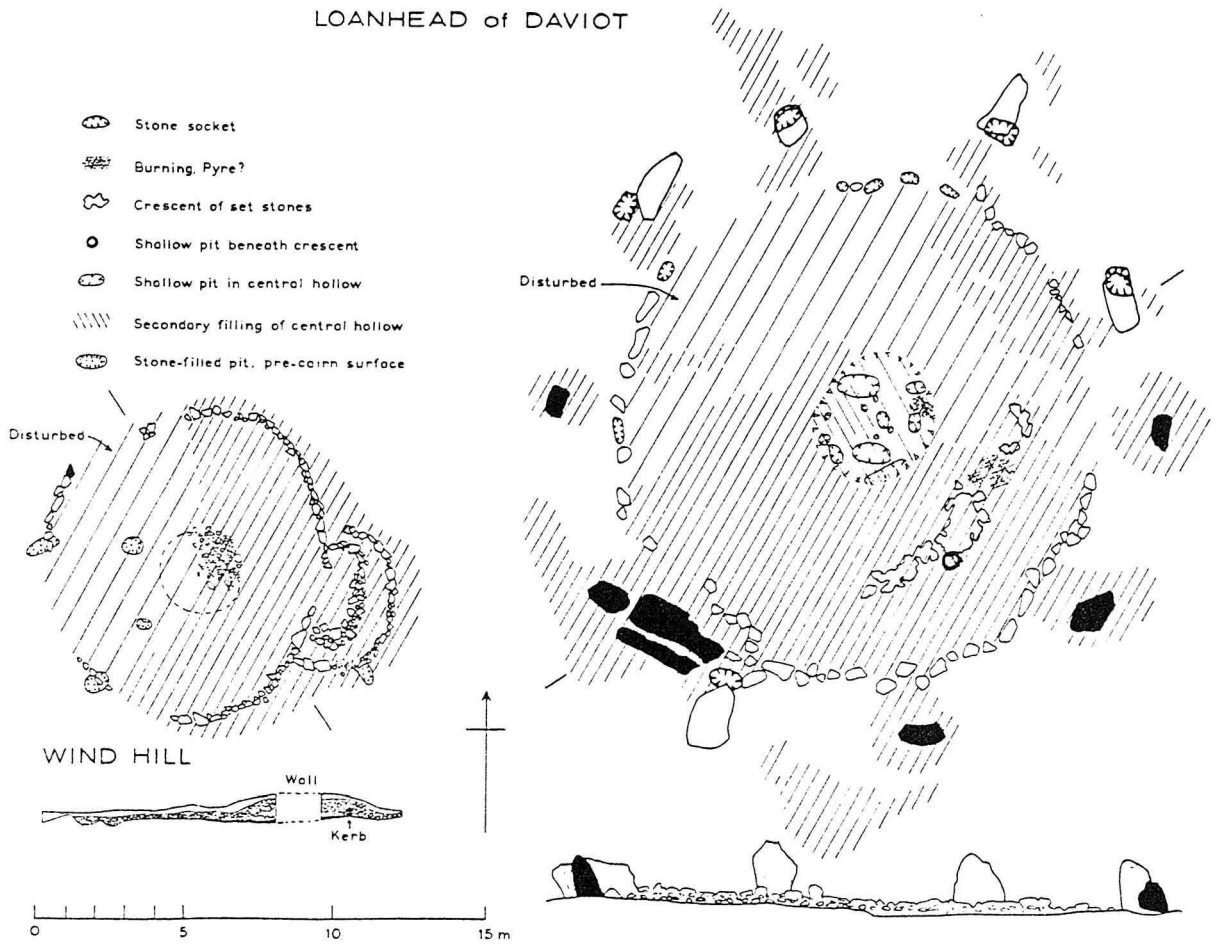
Other sites in Devon and Cornwall, such as Challacombe 4 (Worth 1906) and Gloweth, Truro (Dudley 1967) may have had similar open central spaces, but the details are not sufficient for full comparison. The same is true of many of the accounts of early excavations in the north of England where several internal circles have been found beneath both barrows and cairns.

One northern cairn, Wind Hill, near Heywood, Lancashire (Tyson 1972), although smaller and badly disturbed, has several points of comparison with Brenig 51, notably a differentiated central area and a semi-circular cairn built against the west side (Fig. 10.10). The outer kerb was dry built and the basal stones of the cairn had been laid 'in a concentric pattern round a circular or oval setting of larger stones'. Among these stones were found a flint knife, a pebble hammer and a V-bored button of Beaker type, but there was no sign of any burial. The excavators assumed that there had been one there, just as they thought there had been one in the satellite cairn abutting the west side, which was more probably simply disturbed.

In Derbyshire there are three monuments, Rolley Low, Great Longstone, Long Low, Grindlow, and Sheffield Plantation, Hathersage, which may be comparable in that they have differentiated central spaces, but they are smaller and not indubitably platforms (Marsden 1977, 40, 42, 55). Greenwell's cairn, Hutton Buscel CLIV (1877, 362–4), had a very small central space which may have been separately filled, for he says 'over the circle and the space included within it the stones composing the mound were much burnt and a considerable quantity of burnt earth was mixed with them'.

Mortimer (1905, 119) seems to have found something similar on Painswick Wold where, in No.83, a low earthern barrow, he came across a ring of sandstone slabs enclosing a paved area with burials. A more recently excavated, large, flattish cairn near Normanby is also relevant, having a central space 8 m across which had been partly paved and was enclosed by a wall three to four courses high (Sockett 1971). Another site in the North Riding, at Boulby, may have had a similar construction, but the details are vague (Hornsby & Laverick 1918).

In Scotland several of the Ring Cairns have the broad, flat proportions of Brenig 51 (Kenworthy 1972), but most of them are true Ring Cairns in that the centre remained open (Fig. 11.14). The structure of the Ring Cairn at Loanhead of Daviot, which may be an addition to the Recumbent Stone Circle, is especially relevant to Brenig 51 since the small central space there was subsequently filled



10.10 Wind Hill, Lancs. and Loanhead of Daviot, Aberdeen.

flush with the ring (Kilbride-Jones 1934–5). Details of activity on the site which, as is often the case in Scotland, involved the burial of pyre material, do not compare so closely with the Welsh site (Lynch 1979, 14). Muirkirk in Ayrshire is possibly a comparable monument not associated with a Stone Circle. It had a differentiated central space later filled in with stone forming a cairn 1.22 m high (Fairburn 1921–2).

The date of Brenig 51 is well established by radiocarbon dates from the fresh charcoal from beneath the clay bank, and from the contents of the urn in the Semi-Circle Cairn, most likely the latest deposit on the site (App. 10). The pottery used runs through the full gamut of Early Bronze Age styles, with Beakers being used in domestic contexts just before the cairn was built, a Food Vessel containing the primary burial and a Collared Urn the final charcoal deposit. The other monuments which have been mentioned as comparable show a similar date range, if pottery may be used as a chronological tool. Beaker pottery or goods appear most frequently, but Painswick Wold shows an overlap with a cremation in a Food Vessel and Pond Cairn and Cocksbarrow lie entirely within the cremation tradition. The central posthole of Brenig 51 is not found at other monuments where the central feature is normally a burial of one type or another, nor is the link with charcoal rituals always present. At Pond Cairn, Cocksbarrow, and Painswick Wold there were 'ritual pits' with dark earth or charcoal, but at sites such as Wind Hill there was neither an incontrovertible grave nor clear signs of other 'ritual activity'.

It is too early to say anything worthwhile about the distribution of this type of flat cairn with a briefly exposed centre, but the parallels adduced suggest that they may be expected in most parts of Britain where stone was used. This brief survey, however, does show that, by contrast with Ring Cairns, the Platform Cairn is most often found as an isolated monument; it is not a structure whose role is ancillary to other monuments in a cemetery, but one which can act as an independent entity. The primary nature of the burial at Brenig 51 and at other such sites suggests that they are essentially burial monuments, though involving a ceremonial more elaborate and perhaps more protracted than in many cairns.

CHAPTER ELEVEN

Ring Cairn

BRENIG 44

Frances Lynch

NGR SH 9834 5720 Height above sea level 381 m.

The Ring Cairn stands on the east side of the valley, close to Brenig 45 and within view of Brenig 40, 41 and 42. It is set on a natural flat-topped promontory projecting into the broad, shallow valley of the Afon Fechan. It is overlooked by the steep slopes of the subsidiary moorland ridge, Blaen Nant y griafolen, but, viewed from further down the main valley, the site is quite a dominant one. Such a position would be appropriate for a monument which seems to have served some ceremonial purpose, perhaps ancillary to the funerals, throughout the history of the cemetery.

The monument had a long history, perhaps four centuries or more, during which the structure was modified. Originally it consisted of a stone ring 21.25 m in outer diameter and 2 m wide with carefully-built inner and outer walls some 0.5 m high. Outside the Ring there had been a circle of free-standing posts. At a later phase in its history the walls of the Ring had been masked by sloping clay banks both inside and out. The central area was level and almost entirely empty of features, which concentrated instead against the inner face of the Ring, particularly on the north-western side where a group of them were eventually covered by an added cairn. The burial of charcoal, which continued throughout the history of the site, would seem to have been the major activity, but in the later phases human burials were also made.

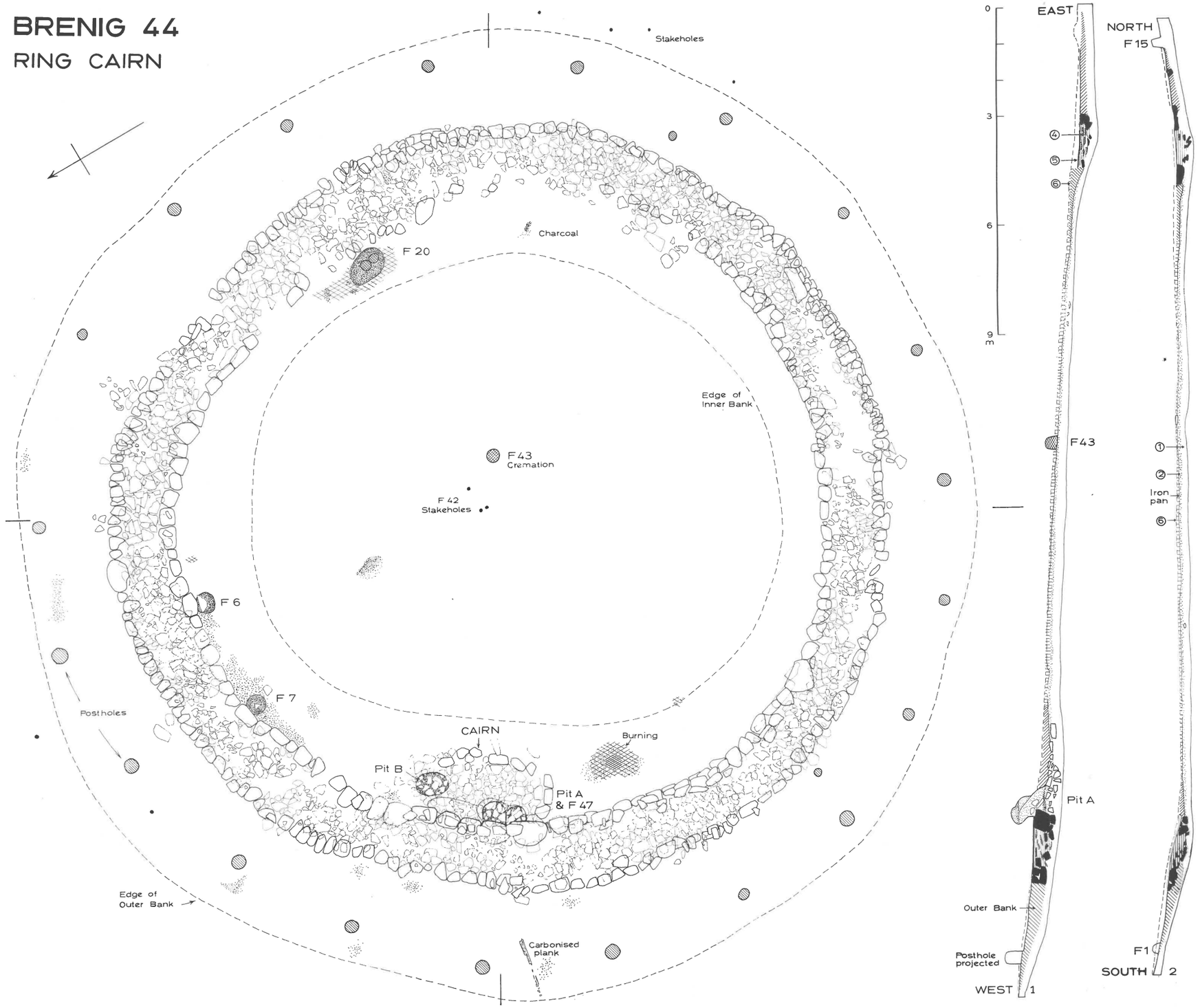
The site was totally excavated by the quadrant method and the ground was cleared for a distance of 5 m outside the stone ring. Because the monument was to be reconstructed the well-built sections of the walls were not dismantled, but where there was only one course this was removed in order to examine the surface beneath. Nothing was found to indicate any marking-out system in the northern third of the site, which was examined in this way.

Soil Conditions (see also App. 8)

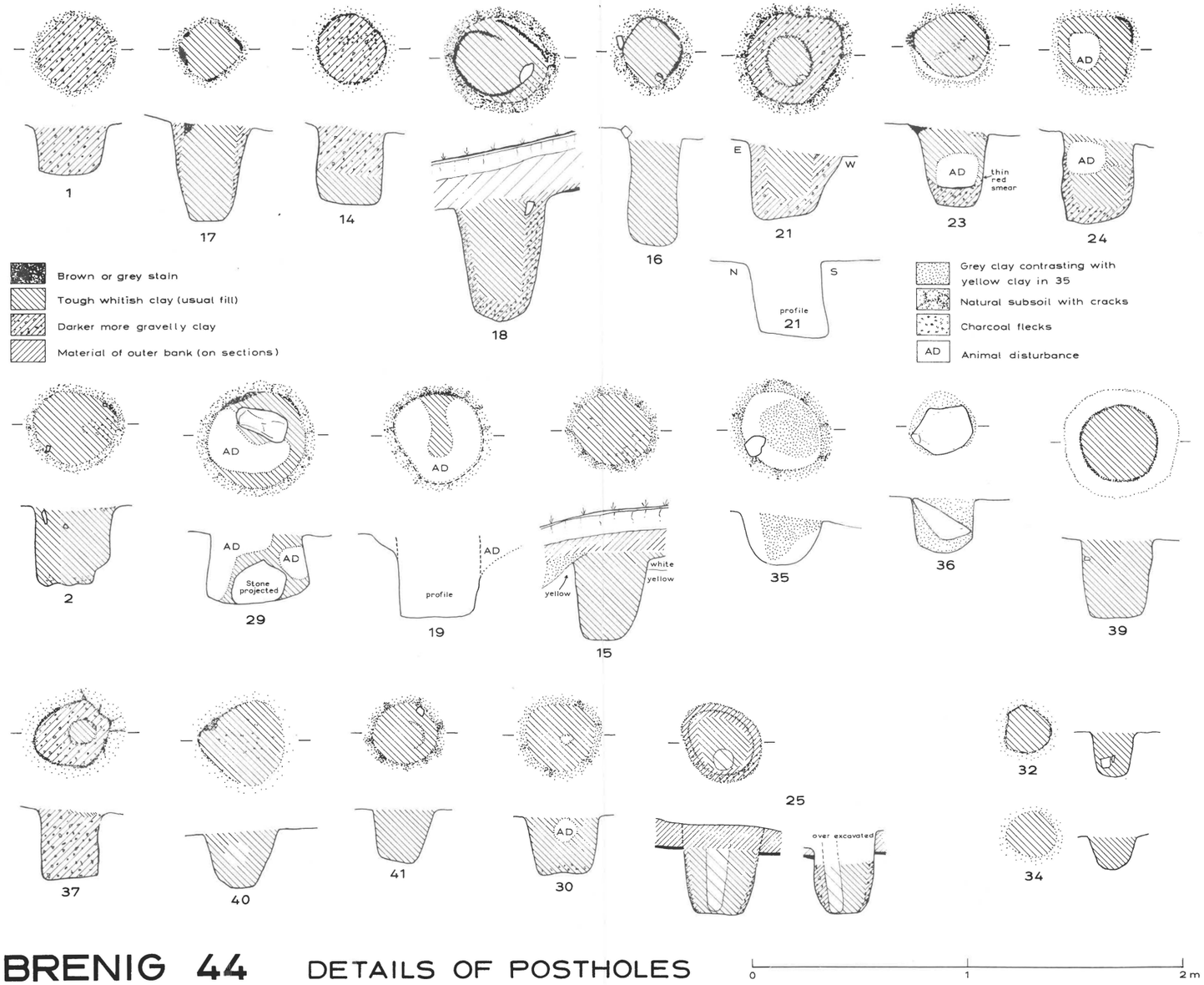
The general soil conditions were similar to those elsewhere in the valley (App. 8), but local circumstances led to some difficulties in interpretation. In the Outer Bank on the north and east, waterlogging had caused striking soil colour changes (layer 42), and in the interior a thick iron pan had developed, due in part to restricted drainage caused by the Ring itself, and had caused major colour changes which cut across the archaeological layering. The sequence of soils in the interior was as follows: Modern turf covering a build-up of black peat overlay a brown leached mineral soil (Ea horizon) with a hard pan beneath it. This covered a reddish-yellow gravelly clay (B_3 horizon) sometimes flecked with grey – the Bronze Age surface from which the upper part of the profile had been stripped. Close to the Ring the iron pan ran up over the Inner Bank and had formed under the stones on top of the Ring itself. Outside the Ring it was not always present and its position in relation to the Outer Bank was erratic. Although the iron pan was a post-Bronze Age development it happened to lie on the Bronze Age surface of the interior as far as this could be accurately determined. However, the very presence of this line and its sharp colour change may have obscured more subtle distinctions, particularly in the sensitive area at the tail of the Inner Bank (Fig. 11.4, Sections 4 & 6), where it could have risen into the post-Bronze Age build-up of mineral soil which did not then have its characteristic leached colour. This was almost certainly the case in Section 4. Alternatively the orange gravelly clay overlapping the tail of the bank (also an orange gravelly clay, but slightly softer) may have resulted from soil creep (e.g. Section 1 where an erratic dip in the iron pan made identification of the Bronze Age surface in the centre very difficult). It must be admitted that, with the Inner Bank composed of a yellow-orange gravelly clay almost identical to the stripped surface beneath it, the accurate determination of levels in this area in the course of excavation was not always possible. Consequently some of the questions relating to the extent and history of the Inner Bank cannot be satisfactorily answered.

Structure of the Ring and Surface of the Interior

The stone Ring had been fairly accurately laid out; the walls were concentric and the plan was very nearly a true circle, except on the north-eastern side. Details of the plan suggest that it was built in a series of fairly straight segments, and a discontinuity on the south side indicates that work may have begun there. The Ring was set at the very edge of the promontory to take full advantage of its naturally commanding position. The monument is at present flanked by shallow depressions which drain a marshy area to the east



11.1 Brenig 44: plan and section of Ring Cairn.



11.2 Brenig 44: details of postholes.

(Sections 4 and 8). Excavation suggested that the southern one might be partly artificial, but the visible cutting was certainly relatively modern. However, it is possible that there might have been some Bronze Age scarping of the sides of the promontory, but positive evidence had been destroyed by waterlogging.

The inner and outer faces of the Ring were formed by boulder walls, the inner one using larger stones than the outer and indeed, for much of the circuit, being only one course high. However, on the south-west the inner face was three courses high, producing a fine wall with a noticeable inward batter. The outer face was normally at least two courses high and on the south-east rose to five. The height, however, remained fairly constant at about 0.5 m. The materials used were gritstone boulders such as might be collected locally.

Occasionally, notably on the south-west, an additional line of stones supported the back of the wall, but normally the core of the ring was filled with earth. In places a turf structure like that of the adjacent barrows, together with spreads of gravel and yellow clay, was recognisable in spite of a great deal of animal disturbance. Finds were rare in this material, only about a dozen pieces of flint were found in all, but on the west, just behind BG44:F47, there was a deposit of heavily burnt earth and some birch charcoal, and there was another small patch on the east side (Section 10). These were incorporated into the core at a high level and must have been shovelled from under a fire burning in the vicinity before the construction of the monument was complete. However, they could have been the residue of clearance rather than ritual activity.

The top of the Ring was completed with a crust of small stones, concealing the turves and giving the impression of solid stone construction. These were gritstone like the walls and seem to have been thrown down quite haphazardly. The cover was originally fairly even but in places the stones had sunk into the turf core below the level of the walls and had become hidden by a deposit of yellow clay (9) which may be a continuation of the Outer Bank (Sections 6 and 9).

The old ground surface beneath the Ring was a grey layer (4), sometimes 50 mm thick but usually a good deal thinner, overlying the gleyed B horizon (5) of an incipient Bronze Age podsol (see Section 5, where iron pan had formed beneath it). This grey layer must represent a grass surface surviving beneath the Ring, in contrast to the interior which had been de-turfed at the time of construction (see Section 8, where layer 4 ends abruptly within the Ring). This stripping of the interior, which involved not only the removal of the turf (perhaps used for the core of the Ring) but also of the B horizon (layer 5) and perhaps some of the gravel subsoil (6) must have been a major undertaking and may have been done to level the top of the promontory.

The original surface of the promontory may have risen to a slight crest somewhere west of the centre of the Ring, for the surface there was pared to a coarser gravel than in the eastern half. Close to the Ring on the west rather more of the pre-monument soil profile survived, the gleyed B horizon (5) being recognisable in places up to 2 m beyond the wall (e.g. Section 3). In the eastern half, where the natural surface was rising gently, the levelling process involved cutting right through layer 5 to expose the reddish-yellow, gravelly clay B horizon (6) (Sections 9 & 10 and Pl. 11.3b). This cutting-back in the south-east quadrant had obviously been done after the Ring was built, for projecting stones had protected patches of layer 5 close to the face. It is possible that some of this work may date from a later phase of activity and could be connected with a cleaning of the site rather than the original levelling. It is perhaps significant that the cutting back on the south (Section 8) produced a slight hollow rather than a level surface. However, no pre-existing spreads of charcoal or burning were cut, so it is not possible to demonstrate this conclusively.

The cutting, or re-cutting, of quite a deep step just below the inner face of the Ring on the east may help to explain the loss of a good deal of the wall on this side, for it was noticeable that more stones had rolled into the recent peat filling of the interior here than elsewhere. Some of the stones may have been removed during this century, for Ellis Davies records (1929, 310) that stones had been exposed on the south-eastern side in 1925. Unfortunately animal disturbance, the tenuous nature of the Inner Bank and the difficulty of recognising the difference between the redeposited gravelly clay of that bank and the pared gravelly clay of the Bronze Age surface all combined to make the full interpretation of this area very difficult and one cannot be dogmatic about the date or cause of dilapidation in the Ring here. The loss of a single stone in the otherwise well-preserved wall on the north-west is equally difficult to explain, for there was no sign that it had been dug out in recent times.

The stripped surface of the interior was remarkably clean and there was no indication that grass had grown on it in the century or so before the Inner Bank was built (App. 10). This would seem to imply either heavy use, or, more likely, periodic maintenance. However, beneath the bank discrete patches of burning and scatters of charcoal were present, most of them in the north-western arc of the circle where features of greater significance were also concentrated. BG44:F9 and BG44:F10 were small areas of burnt earth, presumably the sites of fires which had been carefully cleared away, for very little charcoal (mixed hazel, birch and oak) remained. BG44:F5 was a larger area of burning with a scatter of oak charcoal, though this fire, too, had been partially cleared away. A radiocarbon date (App. 10, no 31) was obtained for this feature but, due to technical problems with the sample, it is not consistent with the stratigraphy. BG44:F8 was a small patch of charcoal containing alder, birch and hazel, on the eastern side. The difficulty of distinguishing the lower levels of the bank and layer 6, and the added complication of an animal hole, make it impossible to say whether this spread of charcoal was on the original surface or within the bank, but those mentioned on the

western side were certainly on the old ground surface and represent an early phase of activity in the monument.

BG44:F11 was the only spread of charcoal out in the centre of the interior. It lay in an amorphous shallow scoop some 70 mm deep, and showed up just beneath the iron pan level. On the surface quite large lumps of charcoal, mainly hazel twigs and birch, were visible, and it was noticed that the area around did not dry out as quickly as elsewhere, but it did not resolve itself into a major charcoal deposit and must be ranked with the other unexplained scatters.

Ring of Posts

An unexpected feature of the monument was an outer ring of 20 free-standing wooden posts set in a reasonably accurate circle some 1.7 m away from the stone Ring, and about 3 m – 4 m apart. The postholes vary between 0.3 m and 0.52 m in diameter, and between 0.22 m and 0.55 m in depth, suggesting fairly substantial, but rather low, posts, perhaps only a little over 1 m high. Those on the west may have been slightly larger and taller than those on the east. The distances between them make it unlikely that they were linked by any form of lintel.

Most of the postholes were carefully cut, with hard, fairly vertical sides and, normally, a flat bottom. However, they were often very difficult to recognise on the surface, for they were filled with a tough, uniform yellow/whitish clay which was almost indistinguishable from the surrounding subsoil. Some were surrounded by faint grey or brown lines where roots had in the past concentrated on the junction of hole and fill, but in other cases the only hint of their presence was a disruption in the honeycomb cracking of the natural clay (Pl. 11.3e).

Unfortunately two major questions about this circle of posts cannot be answered satisfactorily. First, were the posts removed or did they rot *in situ*, and second, were they still standing when the Outer Bank was built? In eight instances (17, 18, 21, 23, 24, 25, 35 & 41) it was possible to see some hint of a post within the hole, but in none was it entirely convincing (Fig. 11.2). Analysis (samples 194 & 195) showed that the fill of the postholes contained much organic matter, which permits the interpretation of a post rotting in situ, but does not prove it. The best was 21, with an inner ring suggesting a post 0.25 m in diameter, but both this section and that of 18 show that the core filling did not reach the bottom, unusual for a 'post-ghost'. In 23 there was a ring of iron-staining at a low level (0.2 m in diameter), but the hole had been disturbed by burrows. The very small core in 25 was recognised during excavations as a softer area, but was not distinguishable in any other way. Against this tenuous evidence for the survival of the posts must be set the fact that there were large stones in 29 and 36 which almost completely blocked the holes and cannot be interpreted as packing. The posts must obviously have been removed from these holes and the weight of the evidence – the absence of packing and the uniformity of the fill which was morphologically indistinguishable from the outer bank material (samples 177 & 286) – suggests that they were removed from the others as well.

The concentricity of the post circle and the stone Ring suggests that they were built at the same date, or at least that the posts were set up before the wall of the Ring was masked by the banks. The Outer Bank runs out just beyond the line of posts but at this point it was extremely low and it was not possible to demonstrate whether they were removed at this time or whether they stood projecting through it. In the majority of instances it proved impossible to find the postholes, even when their position could be predicted, until the area had been trowelled to bare gravel. With posthole 21 very great care was taken at this point, but it proved quite impossible to see it in the tail of the bank, whereas it showed fairly clearly in the old ground surface. With 15 and 18, where the section was retained above the hole, the situation was ambiguous because the nature of the bank material, never distinctive, was not sufficiently clear. However, in the case of 25, which had been located in the old ground surface next to a temporary baulk, it was possible to recognise the other side of the hole as a very faint circle in the surface of the bank, though the continuation of the posthole was not visible in the section. Posthole 40 was just recognisable in the last few centimetres of the bank, but could not be clearly defined until these had been removed. The evidence, therefore, is conflicting or unsatisfactory but again its weight would suggest that the posts had been removed and the holes filled in before the Outer Bank was built because the majority of the holes were impossible to recognise except at the lowest level.

Two smaller postholes (13 & 32), similar in both shape and filling to those of the main circle, were found much closer to the Ring. They definitely pre-date the Outer Bank but, since they cannot be part of the main circle, nor of another inner circle, for a search was made, their purpose must remain a mystery.

Equally unexplained are the six stakeholes found outside the circle of posts. These were well-defined holes very similar to those found beneath the nearby barrows. Those on the south-east side looked as if they might be part of an outer concentric ring, but no others were found to confirm this. Stakehole 1 on the north-west was covered by the bank, but the others were beyond it.

The Outer Bank

This sloping bank masked the outer face of the Ring around the entire circuit of the monument. Close to the Ring it stood between 0.3 m and 0.4 m high, but some 2 m – 3 m out it tailed away to nothing and the exact edge was often impossible to define. On the west the material of the bank (layer 8) was a mixture of turves and reddish-yellow clay or gravel; on the east it was

Posthole No.	Diameter	Depth from OGS	Distance from Ring	Distance to Next Post	Remarks
1	0.33	0.23	1.55	3.30	White fill
17	0.40	0.50	1.60	3.00	Enlarged, ?Post ghost
14	0.32	0.37	1.46	3.00	–
18	0.45	0.54	1.63	2.95	? Post ghost
16	0.33	0.55	1.55	3.10	Narrow but no sign of larger hole around it.
21	0.34	0.35	1.55	3.55	Cut at leaning angle, ?Post ghost Small chert blade in fill.
23	0.39	0.37	2.10	3.20	Ring of iron-staining, animal disturbance, charcoal flecks.
24	0.52	0.50	1.75	3.35	Animal disturbance void, ?Post ghost
2	0.38-40	0.35	1.20	3.20	–
29	0.45	0.40	1.70	3.55	Large stone in hole
22	0.43	0.43	1.80	3.15	Badly disturbed by burrowing
15	0.34	0.36	1.75	3.15	Confused by waterlogging
35	0.36	0.22	2.10	5.05	Lemon coloured fill due to waterlogging, ?Post ghost.
36	0.26-30	0.26	2.18	3.90	Large stone in hole
39	0.34	0.36	1.80	3.50	Very slight ring of iron-staining outside
37	0.32	0.35	1.60	3.85	Central patch on surface had no depth, uniform fill.
40	0.38	0.30	1.47	3.75	Charcoal-flecked fill, visible in last few cm of Outer Bank.
41	0.30–33	0.25	1.65	4.00	Faint inner arc, ?Post ghost
30	0.34	0.25	1.54	3.80	White fill, rather soft
25	0.34	0.30	1.42	3.95	Visible in top of Outer Bank, ?Post ghost A fabricator (BG44.345) was found pressed into the side of this hole.
32	0.17	0.20	0.50	–	Does not belong to main circle
13	0.18	0.22	0.26	–	Does not belong to main circle

Stakehole	Diameter at top	Depth
1	0.09	0.27
2	0.09	0.30
3	0.10	0.19
4	0.09	0.17
5	0.10	0.17
6	0.09	0.25

[Numbered features which proved to be natural : F12, 26, 31, 33, 38, 45.]

Table 11.1 Details of Postholes and Stakeholes outside the stone Ring

made of a more uniform light yellowish-brown clay, though this colour may have been due to wetter conditions on that side. Because of the thinness of the deposit, individual turves were seldom recognisable and in fact they may have formed only a small proportion of the material, which consisted mainly of a gravelly clay very like the soil outside the monument. This similarity made it difficult to decide the status of layer 9, material directly below the peat outside the Ring (e.g. Fig. 11.4, section 6) or overlying the stone crust on the Ring (e.g. Section 9). The general impression, however, was that the bank was designed to cover the wall face, but not to conceal all the stonework of the Ring.

The Outer Bank represents a modification to the design of the monument at a time when the stone Ring had already become slightly dilapidated. The material of the bank covered fallen stones on the south and north-east and several sections (e.g. 4, 5, 7, 8 and Pl. 11.2b) show that the wall face was beginning to collapse before it was covered by the bank. In contrast to the interior, the slope outside the Ring seems to have been grass-grown at this time, though the grey horizon (4) was seldom well-developed. The problem of the relationship of the bank and the circle of posts has already been discussed and it may be concluded that they did not survive to this phase. Perhaps their removal may have been part of the refurbishment connected with the construction of the bank, for by this time they might have been standing for a hundred years or more.

The secondary nature of the bank is shown by the structural evidence for the dilapidation of the Ring and is confirmed by the radiocarbon date (App. 10, no. 26) for a carbonised plank (BG44:F46) incorporated into the bank on the western side. This oak plank lay a few centimetres above the old ground surface, which could be quite easily recognised at this point. It had been a thin, rectangular plank 1.63 m long and 0.13 m wide, slightly plano-convex in section, 15 mm thick in the centre and 5 mm at the edges. A thin plank

such as this is unlikely to have been part of the circle of posts and it seems to be no more than an accidental inclusion in the bank.

Also incorporated in the tail of the bank was an amorphous scatter of charcoal (BG44:F3) which lay a few centimetres above the old ground surface. Other small concentrations of birch, oak, alder and hazel charcoal (BG44:F4, BG44:F27 & BG44:F28, and other unnumbered ones nearby, Figs. 11.1 & 11.3) lay on the old ground surface. It is remarkable that, as in the interior, this evidence for 'ritual activity' was concentrated on the western side of the monument.

The Inner Bank

The Inner Bank was rather more elusive and complicated than the outer one. It was built of a reddish-yellow, gravelly clay (layer 7) virtually indistinguishable from the stripped surface of the interior on which it was laid; often the merest difference of shade or variation of texture separated the two and problems of excavation were considerable, especially since it was not uniform in width or thickness.

Like the outer one it was a sloping bank, rising up against the inner wall of the Ring, but it had been built up gradually and it may even have been dug away again from time to time. In the north-western quadrant where there had been a great deal of activity it was possible to recognise three stages in the building of the bank (Pl. 11.5b). The first level of the bank covered evidence of burning such as BG44:F10, on the stripped surface of the interior, and may have been only quite a narrow band of clay pressed against the walling stones. Other fires had been lit on this new sloping surface (BG44:F7) and there were concentrations of birch and oak charcoal (e.g. BG44:F34, Fig. 11.4, section 5). More clay was added to the bank to cover these and this level in turn was burnt and received scatters of charcoal (BG44:F7a) perhaps connected with the digging of a pit from this surface (BG44:F6). This pit was finally covered with more clay which brought the bank almost to the top of the large boulder which constituted the full height of the wall at this point. In other places where there was less activity it was not possible to demonstrate this sequence, but the occasional line of charcoal flecks within the bank (e.g. Section 10) suggests that something of the kind was repeated round the circuit. Radiocarbon dates (App. 10, nos. 27 & 28) from BG44:F6 and BG44:F7 demonstrate the protracted nature of this sequence.

A patch of burnt earth close to BG44:F7 had an unnaturally straight edge parallel to the face of the Ring, the clay between it and the wall being quite clean as if the original surface had been cut and the hole refilled with new material. A larger-scale example of the same thing could be seen under the Cairn at BG44:F44, a shallow scoop dug from an intermediate level in the bank whose only purpose would seem to have been to re-expose the wall of the Ring. On the south and east, exceptionally deep cutting-back below the wall might be part of the same process, but it is impossible to correlate the two sequences. The evidence is tenuous, and unfortunately was not well recorded, but it is reasonable to suggest that, since the inner wall of the ring was a focus of interest, it became necessary, as the bank built up, to re-expose certain parts of it from time to time.

Features in the Interior

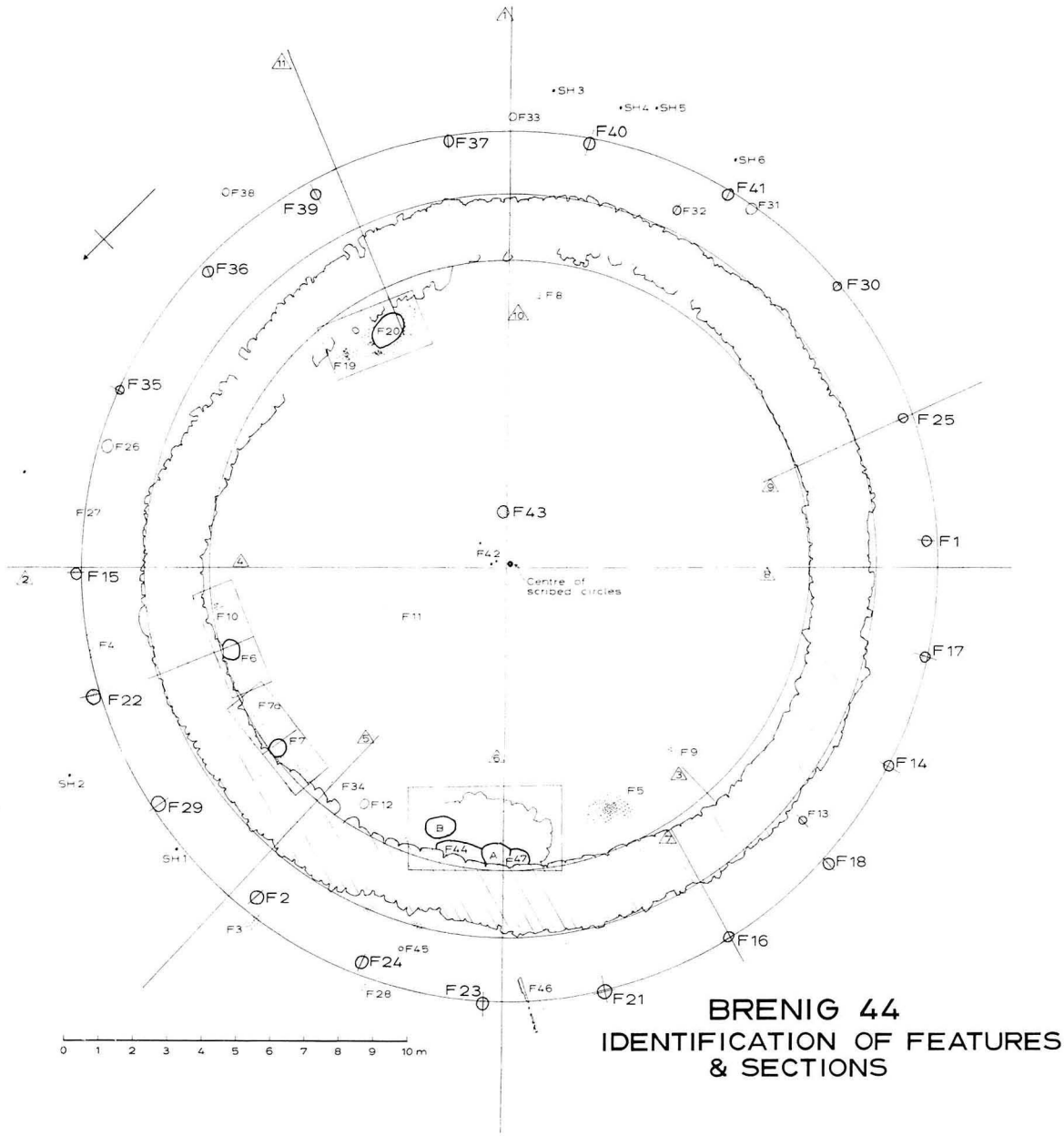
All but one of the major features of interest were placed close to the inner wall of the Ring and most of them were concentrated in the north-western quadrant, where they were often placed immediately in front of some of the largest stones in the wall. Most of the pits were dug for the burial of burnt material, principally charcoal, and this presumably ceremonial activity continued throughout the history of the monument, for some of these pits (BG44:F47) were dug from the original ground surface, while similar pits (B and BG44:F6) were dug from the top of the Inner Bank. Radiocarbon dates confirm a timespan of about 400 years or more.

Pits beneath the Cairn (Figs. 11.5 & 11.6)

On the western side of the Ring there was a notable concentration of pits which spanned the whole history of the site. During a late phase of its use the area had been emphasised by the construction of a small sub-rectangular cairn, so these pits and their enigmatic contents must presumably constitute the most significant features of the monument. The choice of this spot may have been dictated by the presence of exceptionally large stones in the bottom course of the wall and by the striking whiteness of two of them.

The earliest pit dug here was BG44:F47, a deep, round hole dug at an angle in under the wall. At the bottom there was a small concentration of oak, birch, hazel and willow charcoal, with some soft, reddish earth (11), which had been burnt, though it was not brick red. Similar material occurred at the bottom of Pit A, BG44:F43, and BG44:F20. Above this the fill of the pit was a uniform yellow-orange gravelly clay with charcoal flecks (10), which was also similar to the fill of other pits and to the material of the Inner Bank. This filling had been covered with a slate slab standing almost vertically just below the top of the pit and leaning against the Ring (the other stone present had fallen from the wall). The status of the darker, gravelly clay in front of the stone is uncertain, but eventually this pit was covered by the Inner Bank with just the tip of its closing stone remaining visible.

Just north of BG44:F47 there was another very similar pit (Pit A) which was dug in under a large stone with a vein of white quartz on the face. The history of this pit is complicated because it was re-dug from a higher level. The original pit was probably dug from the old ground surface like BG44:F47, and, like that pit, it projected

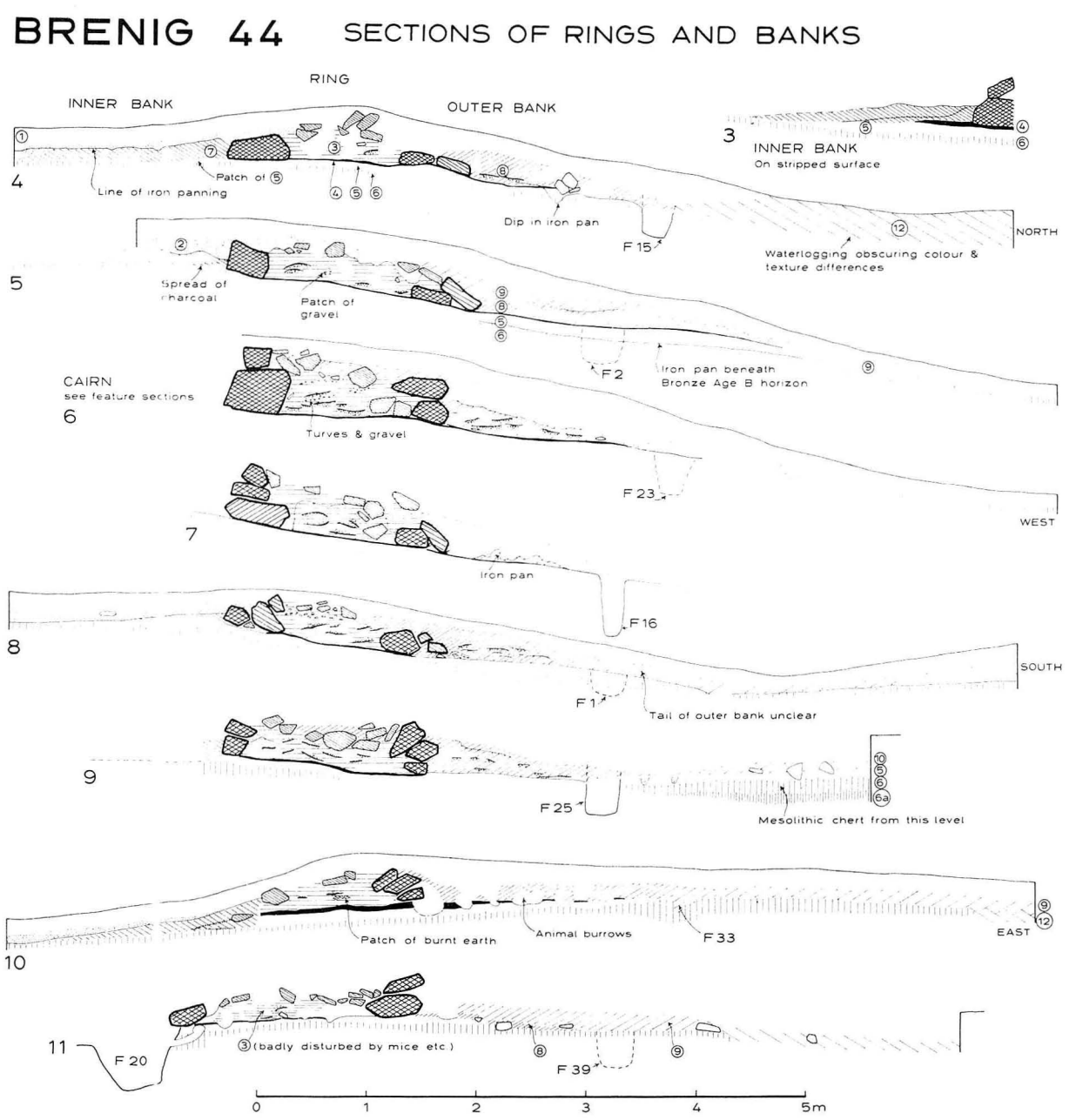


11.3 Brenig 44: identification of features and sections.

westwards under the Ring to produce a profile rather like a foot-muff. The deeper part of the hole belongs to this original cut because the reddish earth (11) which filled the bottom ran over the step and into the outer half. On the very bottom there was a good deal of oak, hazel and willow charcoal, together with some slivers of burnt stone and a scrap of burnt chert. Above this, the fill of reddish earth (very similar to that in BG44:F47; samples 319 & 329) contained much less charcoal; it is likely that this reddish earth and charcoal had filled the whole of the original pit.

Pit A and BG44:F47 are intercut. In the upper level, with the stone filling which belongs to the re-cut, it is obvious that BG44:F47 is the earlier; lower down the situation is rather less clear since the fillings were difficult to distinguish in the restricted space, but the general agreement was that BG44:F47 was the earlier and the contours confirmed this. However, logic might wish to see the centrally placed Pit A as the earlier, with BG44:F47 later dug as close as possible to this crucial white stone. It is perhaps significant that it was Pit A which was re-dug at a later date. Samples for radiocarbon dating were obtained from the lower fill of both pits and the results confirm the priority of BG44:F47 (App. 10, nos. 21 & 24).

Both Pit A and BG44:F47 must next have been covered by a thin layer of yellow clay – the first stage in the construction of the Inner Bank. The material which had been placed against the face of the Ring north of the pits was subsequently dug away again producing a long, shallow scoop (BG44:F44) which contained nothing except a featureless fill of reddish-yellow, gravelly clay with charcoal flecks (7c) – material indistinguishable from the upper levels of the Inner Bank. This cut could not be seen in the upper surface of the bank, but at the intermediate level its edges were clear and the filling came away easily. The best explanation would seem to be that it had



11.4 Brenig 44: sections of ring and banks.

been dug to re-expose the face of the Ring, but was filled in again when more material was added to the Inner Bank.

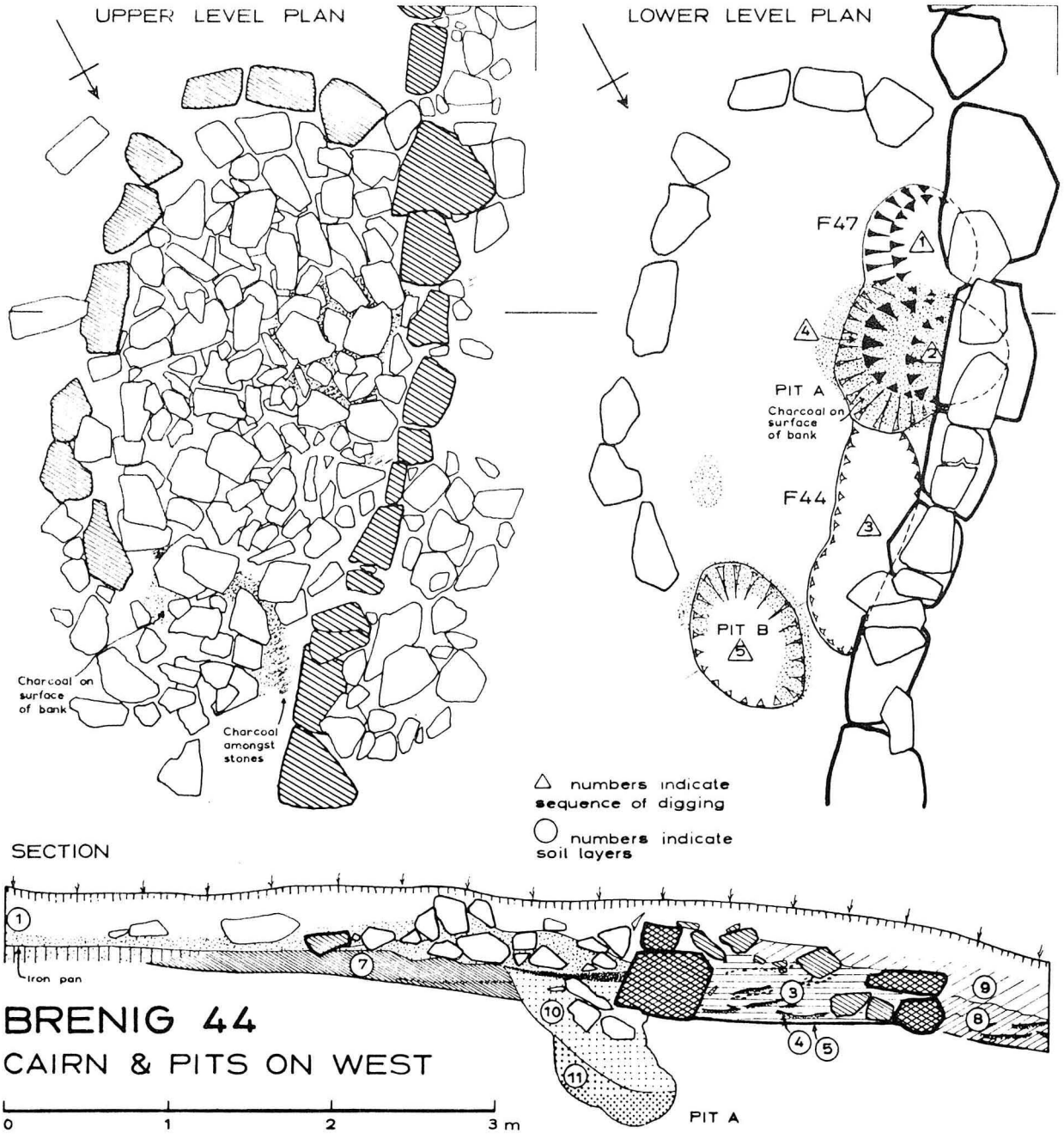
The Inner Bank when complete in this area was a good deal wider than elsewhere. When the overlying cairn had been removed the top of Pit A was revealed as a sub-rectangular patch of charcoal. This charcoal and black earth was the uppermost filling of a sloping pit which was filled at a lower level with stones set in yellow, gravelly clay (10). Further excavation revealed that this cleaner material cut into the previous filling of Pit A and that the sloping front of the re-cut had removed the original edge of the pit. Nothing was found at the bottom of this re-cut hole except an L-shaped void stiffened by iron panning. There were clear signs of animal disturbance immediately below the stone wall and the best explanation of this strange feature is that it is a mousehole, although a connection with an upper burrow was not observed.

Although the re-cut pit contained nothing except a few flecks of charcoal in its gravelly clay filling, the top had been elaborately packed with stones, all pushed in under the edge of the white stone. In the uppermost level these stones included a lot of small slivers of slate set vertically; lower down the filling resolved itself into three larger pieces of gritstone (see plan, Fig. 11.6). Two of these (c & d) had been part of the same slab which had been burnt on one side. This slab had been broken, one half turned upside down, and both jammed into the pit. Interestingly just the same thing had happened to the stones covering BG44:F20. Finally the top of the pit was filled with charcoal, including some very large lumps, from birch, hazel, oak and broom. A radiocarbon date (App. 10, no. 25) was obtained from this charcoal,

which confirmed the stratigraphic observations. The charcoal divided the stone filling of the pit from the cairn above, but its cleanliness suggests that it was rapidly covered by the stones of the cairn.

This cairn was built on the surface of the completed Inner Bank and consisted of a relatively thin covering of gritstone, edged with flat kerb-stones. The cairn was sub-rectangular in shape, 3.6 m x 2 m, and abutted against the upper courses of the wall. On the south and east sides the stones were neatly contained within a well-set kerb of slightly larger slabs. On the north the end of the cairn was ragged and a kerb was not recognisable. Excavation showed that this was due to the digging of Pit B which had disturbed the cairn whose stones had then been thrown back haphazardly.

Pit B was an oval pit dug through the cairn, though its shape was clearly definable only at the level of the top of the bank where the charcoal filling the sides of the pit could be seen encircling a central pocket of yellow clay. Beneath the yellow clay there was a patch of heavily-burnt earth which in turn covered a mass of very black earth and hazel, alder and birch charcoal. Amongst this lower deposit were a few scraps of badly-decayed burnt bone, not necessarily human (BG44.147, App. 5). On the south-western side a number of small stones, most of them burnt, had been pushed in on top of the charcoal and these were covered by a larger gritstone slab which had also been burnt. On the north a number of other burnt stones were set into the sloping top of the pit and these merged with the disrupted cairn material. Although there were patches of burning around



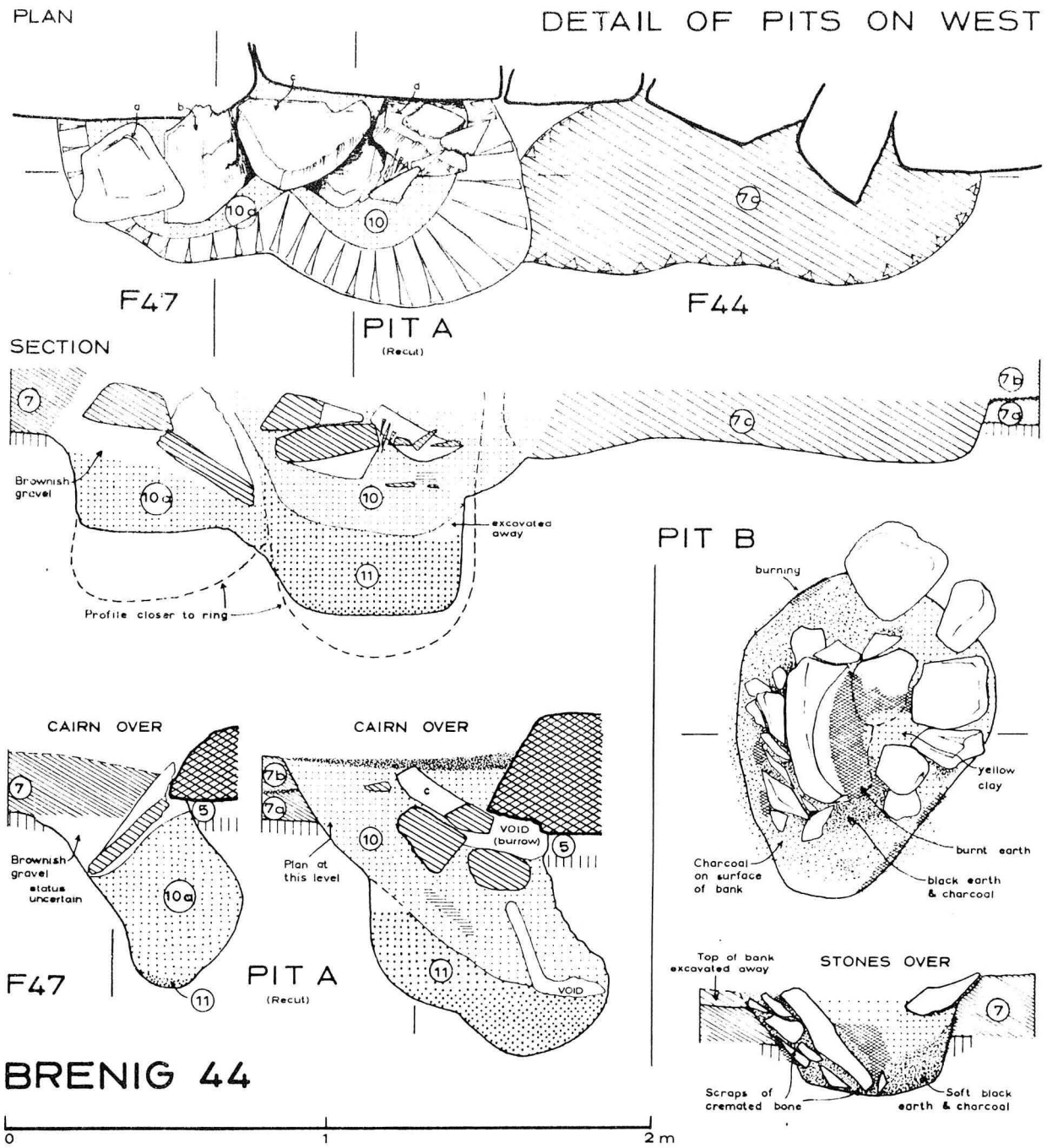
11.5 Brenig 44: plans and section of Cairn and pits on west.

the top of the pit, the bottom was not scorched and it is unlikely that a fire had been burning *in situ*. However, the contents of the pit may be explained as the remains of a hearth sited elsewhere, carefully scraped up and buried; in this case much more than just the twiggy charcoal being included.

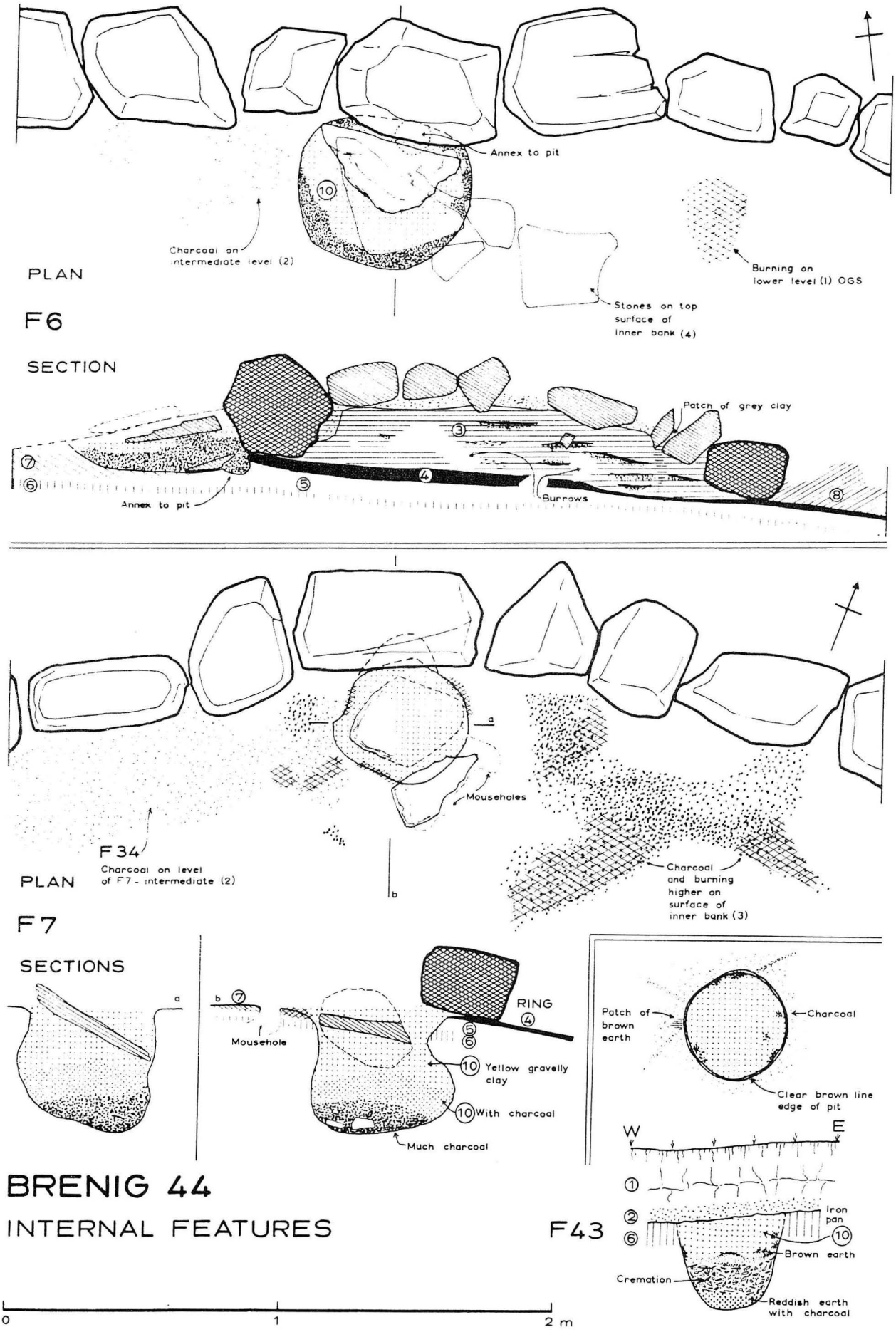
There was a good deal of birch and hazel charcoal (some recognisable branches and twigs) scattered amongst the upper stones of the cairn, some of which showed signs of burning. Again the distribution of burnt stones does not suggest a fire *in situ*, but further material from a hearth may have been scattered more widely over the cairn.

Feature 7 (Fig. 11.7). Further along the Inner Bank where it was not covered by the cairn there were several burnt areas and patches of charcoal. These lay at various levels, but strangely enough there was little sign of activity on the original surface under the bank in this area. On the intermediate surface there was a scatter of birch and oak charcoal (BG44:F34) and a patch of burning with birch, oak and alder charcoal which surrounded a deep pit dug close against one of the larger boulders of the Ring wall.

This pit was roughly circular in plan but rather bell-shaped in section, projecting beneath the ring after the manner of BG44:F47 and Pit A. The top edge was damaged by mouse-runs which had penetrated the softer fill. In the bottom there was a patch of white clay and two small flat stones. On top of these had been poured a mass of almost pure charcoal consisting of birch, oak



11.6 Brenig 44: details of pits on west (F47, Pit A and Pit B)



11.7 Brenig 44: detail of internal features (F6, F7 and F43)

and alder including a good deal of bark. This had been tipped in from the east and formed a roughly conical heap which was covered with a layer of earthy charcoal, in its turn topped with yellow, gravelly clay, similar to that filling the other pits, but rather less clean. A slate slab had covered the top of the pit, but one end of this had fallen in and when excavated it lay at an angle. The clay above it, which must have been part of the Inner Bank, was noticeably cleaner than the true filling of the pit. Just in front of the pit was another flat slab which must be connected with the covering of this feature. The burning around the edges and on the surface of the bank near this pit suggest that a fire might have been lit here, the site being cut through when the pit was dug, though it must be admitted that there was no sign of burning on the stones of the Ring. Amongst the charcoal in the pit there was a single find, part of a heavily-burnt flint knife (BG44.163, Fig. App. 3.2). The burning had produced a characteristic gloss on the flint, identical to that on the plano-convex knife found amongst the cremated bone in Pot B, which suggests that this, too, had been brought to a very high temperature and had perhaps come from a pyre.

Feature 6 (Fig. 11.7). Feature 7 was covered by an addition to the Inner Bank, but this area of the Ring remained a focus for activity. On the new surface there were signs of burning and scatters of charcoal (BG44:F7a); the wall-face may have been re-exposed in places and further northwards another pit had been dug from this upper surface. This was much shallower, a round, basin-like hole which scarcely penetrated the old ground surface. In the bottom there was a small round annexe which projected under the Ring (cf. Burgess 1976, 168–69). This contained birch and twiggy hazel charcoal with bark and was cut off from the main part of the pit by a small, flat slab. The filling of the main pit was similar, large lumps of the same charcoal (birch and hazel twigs, bark and a little oak), with black earth. This had been covered with a thin spread of yellow clay and a flat slate slab. Above this on the topmost surface of the bank were other flat stones which must have been part of the covering of this pit, suggesting that the bank had been raised to its final height in this section by the time this pit was dug. There were no flints or other finds.

The Burials

Altogether four people were buried in the monument, but the structural emphasis laid upon the non-burial pits and the late radiocarbon dates for the features containing cremations both show that this use was a secondary one and that the burial of charcoal remained the major activity in the monument even after interments had taken place.

Central Cremation BG44:F43 (Fig. 11.7). This neatly-cut pit was sited some 1.5 m east of the true centre of the monument and as such might appear to be a primary feature of the plan. However, the radiocarbon dates (App. 10, nos. 22 & 23) (the only means of relating this isolated feature to any others) show that it belongs to a secondary phase, contemporary with the building of the Outer Bank.

This circular pit was just recognisable from the iron-panned level – confirming that this was indeed the Bronze Age surface in the interior – but was only clearly defined when a few centimetres of layer 6 (see section, Fig. 11.7) had been removed and the edge showed up as a thin brown line. Like several of the postholes there was a patch of dark brown earth close to the edge at one point, but there was no indication that this represented a stake to mark the site. In fact the spot seemed to have been quite unmarked, for the upper filling only differed from the surrounding subsoil by the inclusion of some scattered pieces of charcoal.

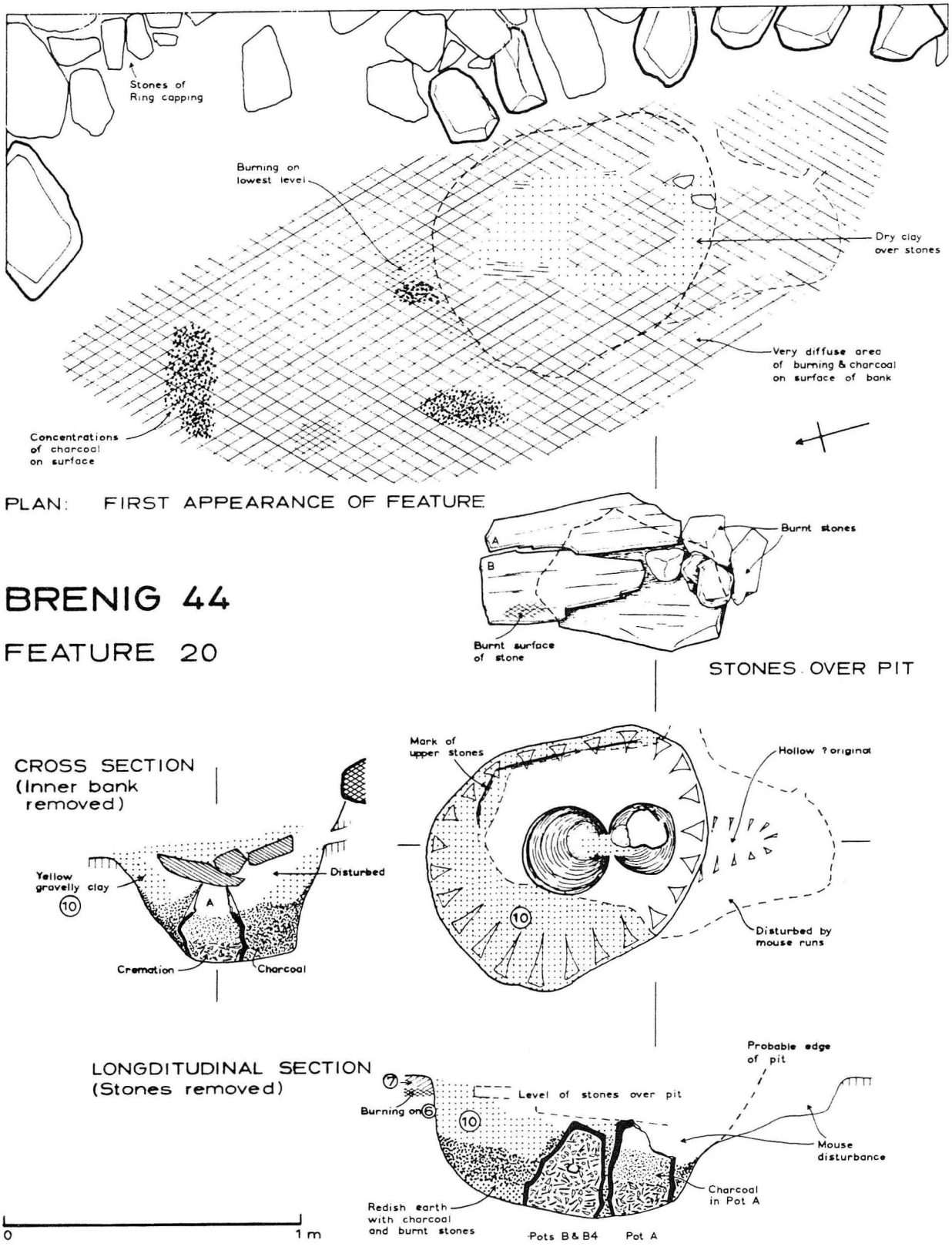
The neatly-cut pit had straight sides and a rounded bottom; it was 0.4 m in diameter and 0.33 m deep. At the very bottom there was a layer of soft, reddish earth (11) with some oak charcoal and above this a cremation deposit, the remains of one adult individual (App. 5). The bone was rather soft and mixed with a good deal of earth. Above this, the pit was plugged with some brown earth and charcoal and had been refilled with the reddish, gravelly clay which had been dug out of it.

Close to this cremation was a group of three stakeholes (BG44:F42) arranged in an elongated triangle. These holes appeared just below the iron pan as patches of oak charcoal. The grain of the charcoal did not lie in a consistent direction which makes it difficult to interpret it as the burnt tip of a stake, though it is hard to think of another explanation for these small pointed holes, which were between 50 mm and 60 mm across and 90 mm and 130 mm deep.

Feature 20 (Fig. 11.8). In the north-east quadrant, in an area where both the inner face of the Ring and the Inner Bank were poorly defined, there was a large pit which contained two cremation urns and a great deal of charcoal.

The pit was dug, like the others, at the foot of the Ring, but the wall face here had virtually disappeared and what remained consisted of uncharacteristically small stones. It is impossible to reach a firm conclusion about the cause of this dilapidation, largely because what remained of the turf core was so badly damaged by animal burrows (section 11). Equally, the history of the Inner Bank was difficult to reconstruct at this point. No disturbance showed at the topmost level immediately below the iron pan, but the removal of a few centimetres of material revealed a diffuse area of burning with some scattered patches of charcoal. At one end a patch of clay which dried out very rapidly revealed the presence of the flat stones which covered the pit, but the edge of the pit itself was not recognised at that level. However, even at a lower level it was not possible to see the junction of old ground surface and

fill except with the aid of the upward curve of charcoal at the sides of the pit showing in the section. This difficulty is relevant to decisions about the relationship of this pit to the build-up of the Inner Bank. The digging of the pit was not the first activity on this spot for it cut through a lower area of burning on the old ground surface. The upper area of burning, however, would seem to have covered the pit and that was in turn covered by a final spread of bank material. Thus it might be possible to argue that this was one of the earlier group of pits, later covered by the Inner Bank, were it not for the exceptionally late radiocarbon date (App. 10, no. 30) for the good sample of charcoal around the urns. The situation is further complicated by some tenuous evidence for the removal and replacement of the bank in this area and by the fact that the multi-phase Inner



11.8 Brenig 44: details of Feature 20.

Bank may not have been placed around the entire circuit of the Ring at one time.

Removal of the dry clay revealed a group of stones, most of them burnt, lying on an area of yellow, gravelly clay (and brown earth caused by animal disturbance). At the northern end there were two large, flat pieces (a & b) which had originally formed one slab. It had been burnt on one side, broken and then laid in the pit with one half turned upside-down, just as the stone in the re-cut of Pit A had been. These slabs lay on a larger slate slab which had not been burnt.

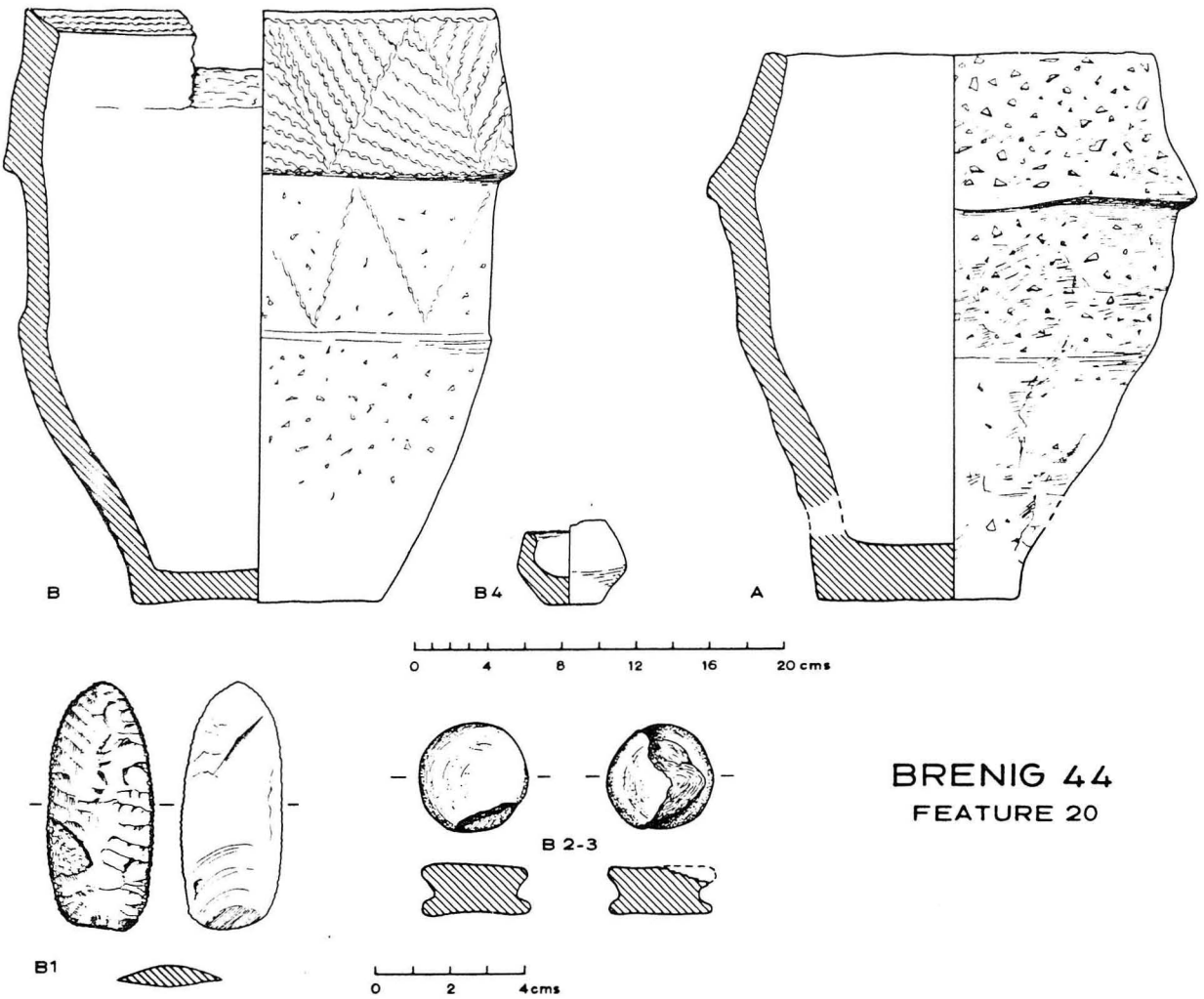
When these stones had been lifted out, the bases of two urns became visible. Where the filling had not been disturbed by mice it was a clean, gravelly clay, identical to the Inner Bank. Beneath this top layer there was a mass of charcoal and black earth. This charcoal consisted of birch, hazel, oak, alder and willow, and included a large number of recognisable branches and twigs. This had been poured in from the north-west end and had been piled up against the sides of the inverted pots. On the floor of the pit there was a deposit of soft reddish (partially burnt) earth with charcoal and spalls of burnt stone. This surrounded the rims of the pots, which had been placed directly on the bottom of the pit; Pot B in the centre (standing at an angle because more than half the rim was missing at the time of burial) with Pot A leaning against it. This latter pot was in bad condition; it had been poorly made and badly fired and it seems to have been crushed by falling against Pot B and then was further damaged by mouse-runs. Both the pots contained cremation burials but all the other aspects of this pit are very similar indeed to the pits which contained only burnt earth and charcoal. The quantity of charcoal itself is significant, together with the stone covering and the detail of its arrangement, and the siting against the inner face of the Ring. The fact that burials were included in this pit suggests that the contents of the others might have had some connection with funerals and with cremations buried elsewhere.

Finds from BG44:F20 (Fig. 11.9 & App. 4).

Pot A : Diameter of rim 0.21 m. Height approx. 0.29 m.

Contents : the cremated bones of one individual, probably adult (App. 5). These bones were mixed with a good deal of grey, ashy material. The bottom had been filled with charcoal and the bone had filled only the upper part of the pot.

The fabric is coarse and poorly-fired with a



11.9 Brenig 44: pottery and grave goods from Feature 20.

tendency to break at the coils. The reddish-brown outer surface is extremely rough, with large stone grits projecting from it, especially in the upper part. The smoother inner surface is black. The pot is undecorated and the traditional Collared Urn profile badly distorted. It is an urn of the Secondary Series, said to belong to the North-Western Style (Longworth 1984, no. 2023).

Pot B : Diameter of rim 0.252 m. Height 0.315 m.

Contents : the cremated bones of at least two individuals, one adult and the other probably a child of about five years old (App. 5); a very small Accessory Cup (B4); two pottery 'ear studs' (B2 and 3); a burnt plano-convex flint knife (B1), and a scrap of burnt flint. In this case the bone filled the entire pot and was mixed, not with ash, but with brown earth. In the centre of the mass of bone was the Accessory Cup. It contained some tiny scraps of bone, but as it would have been upside- down when it was put into the pot these are unlikely to be significant. They were not identifiable pieces. The flint knife had been placed vertically amongst the bones in the collar area and the 'ear studs' had been pressed into the top of the bone mass before the pot was inverted.

This pot was much more competently made than Pot A, though it did not reach the standard of the urn from Brenig 40. The outer surface is buff, the inner, grey; the lower half and the inner surface are smooth, but the upper half shows much quartz grit. Two-thirds of the rim had broken away at a coil join before the pot was buried. There is twisted cord decoration on the inner bevel of the rim (three lines), on the collar (alternately hatched triangles) and on the neck, where the cord has been only lightly impressed and the pattern is scarcely visible. This pot also belongs to Longworth's Secondary Series (1984, no. 2024).

Accessory Cup. Like the large urn, the Accessory Cup had been slightly damaged before it was buried - about half of the circuit of the rim was broken. It is a very small cup, only 58.6 mm maximum in diameter and 42 mm high, moulded out of a solid lump of clay and consequently rather thick at the bottom. It has a slightly pointed rim which must have been rather uneven, even before it was damaged. The clay is compact and rather sandy; there is very little stone tempering, but a good deal of grog which is pale buff in colour in contrast to the pink matrix. The clay is well-fired, but there are several cracks in the wall. It is undecorated and neither the base nor the shoulder is sharply defined.

Flint Knife. This is a very fine example of its kind and does not show any sign of use. It was made in the characteristic way on a straight flake, 65 mm long, 27 mm wide and 6 mm thick. The working is restricted to the upper side which is covered with very fine, shallow, ripple flaking. In addition the edge was serrated by minute chipping all the way round. The piece has been very heavily burnt so that it is totally white with a sparkling sheen all over it. At one point the burning has caused a part of the surface to flake off. The scrap of waste flint in the pot had also been in the cremation fire, for it too was white and shiny.

Pottery 'Ear Studs'. These were both slightly damaged and, although they look a good pair, being very much the same size, they do not appear to have been made from the same clay. B3 is a grey-buff colour, harder and more abrasive than B2, which seems to be made of the same clay as the Accessory Cup. B3 is 27.5 mm in diameter and 12.3 mm thick, while the other is slightly larger, 28.2 mm – 30.3 mm across and 13.5 mm thick. There is no sign of wear in the groove which in each case is not quite central, and it is difficult to guess at the purpose of these objects, which do not always occur in pairs. Other pottery examples are known, as well as pieces in more exotic materials such as jet.

Small Finds. Small finds from BG44:F20 include a small piece of red flint from the bottom of the pit and six scraps of flint and chert from the upper fill amongst the stones covering the pots. These include the butt of a small blade and a flake of striped Trelogan chert and are characteristic of the material which was included in the make-up of the Inner Bank on most parts of the site. Their presence, therefore, does not bear any significant relationship to the burials beneath.

Other Finds. A total of 446 pieces of flint or chert was found in the course of the excavation but

	Outer Bank	Crust of Ring	Core of Ring	Inner Bank	O.G.S.	O.G.S. in Interior	Above Iron Pan
Non-Bronze Age							
NW Quad	22	7	–	25	28	3	11
NE Quad	36	4	1	29	50	–	13
SE Quad	16	11	9	10	101	–	19
SW Quad	–	2	2	6	14	–	12
Total	74	24	12	70	193	3	55
Bronze Age	–	1	2	6	3	–	3 = 15

Table 11.2 Distribution of flints from Brenig 44

very few of these were implements and even fewer were demonstrably of Bronze Age date. Just over half of these pieces came from the old ground surface, or below it, and the rest were redeposited in the material of the Inner and Outer Banks and in the Ring. Some 55 pieces came from above the level of the iron pan, but these were not exclusively post-Mesolithic.

Nearly all the finds were of Mesolithic date and have been discussed in more detail on p. 22–32, as has the use of distinctive raw materials which facilitates the dating of waste flakes. Here one need only comment on the relationship of the Mesolithic material to the monument. Most of it came from the old ground surface where it may be assumed to have been *in situ*, although no pits or other features were found. For the most part the finds were scattered haphazardly but there were two concentrations of black chert, near BG44:F15 and BG44:F25. On the south-east near BG44:F25 this Mesolithic material came from a band of gravel below the level of the old ground surface, a gravel which appeared to be undisturbed material in which this chert may have become incorporated through the movement of water which must have flowed down this hollow (Fig. 11.4, section 9). Near BG44:F15 the Mesolithic flints came from below the level of the Bronze Age turf but elsewhere, because of the absence of this turf, it was difficult to be so precise.

Both the Inner and Outer Banks contained a good deal of redeposited Mesolithic material suggesting that the clay and turves for both banks must have been obtained from nearby, since Mesolithic flints were found in any quantity only in the neighbourhood of Brenig 45 and 44. Several flints came from the old ground surface (layers 5 & 6) beneath the Inner Bank, but remarkably few were found in the interior beyond this area, which confirms the deep stripping of the surface there. Chert was also found amongst the turves and clay in the core of the Ring, again suggesting a very local origin. The finds from amongst the stones of the crust, more common in areas where these stones were covered with clay, may be presumed to come from the same source as those in the Outer Bank.

The post-Mesolithic finds (App. 3) were distributed around the monument without significant concentrations. Three came from the old ground surface beneath the banks, while others had been incorporated in the material of the Ring and of the Inner Bank. The fine scraper (BG44:4) and two flakes of good-quality flint come from above the iron pan level, but there were also microliths and pieces of chert in this horizon. The implements and worked pieces are illustrated (Figs. App. 3.1–3) and call for little comment except to note that they include pieces in both the Late Neolithic and Bronze Age working traditions.

Two small scraps of pottery were found on the old ground surface. One (BG44:93), less than 20 mm across, came from layer 5, beneath the Inner Bank in the south-west quadrant. The fabric suggests that it is Bronze Age. The other piece (BG44:302) also came from layer 5, beneath the Ring close to BG44:F20. It has a vesicular texture and is not tempered with grit, which would make it unusual in a Bronze Age context. It might conceivably be Neolithic, but since so little survives it is impossible to be dogmatic.

Discussion

The radiocarbon date (App. 10 no. 21) for charcoal in the bottom of the first of the pits dug against the western side of the ring (BG44:F47) enables us to correlate the building of this largely ceremonial monument with the planning and construction of the major barrows towards the beginning of the 17th. century b.c. (approximately 1680 b.c.). Thus one can see that the cemetery was conceived from the start as a group of inter-related monuments with certain defined roles within the complex web which ties funerary custom to the wider concerns of religion at this time.

The Ring Cairn was built at the same time as the complicated barrow, Brenig 45, which stands close beside it, and Brenig 42, on the opposite side of the valley. It is reasonable to suggest that Brenig 41 also belongs to this phase. The erection of the Ring involved careful planning, and preparatory stripping and levelling of the site. The condition of the site before this work started is unknown. There is evidence for some wooden structure of Neolithic date (Brenig 53, see above) in the neighbourhood, but it is likely that some clearance was necessary since burnt earth and twigs had been thrown in with turves filling the Ring.

Initially the monument consisted of a low, well-built stone Ring incorporating some very large boulders in the inner face. The interior was level and free of obstruction and some effort seems to have been made to keep it grass-free. The stone Ring was surrounded at a distance of 1.7 m by a circle of free-standing posts. These posts were substantial and stood in carefully-dug holes, but it is unlikely that they were structural in any way since they were too far apart (3 m – 4 m) to be conveniently joined by lintels. Their height is unknown but, judging from the depth of the holes, is unlikely to have exceeded 1.5 m, with those on the sloping western front of the promontory being taller than those on the east. It is tempting to imagine these posts elaborately carved like a series of protective totems around the sacred enclosure, rather than as a simple barrier or fence.

Such a timber circle has not previously been found in association with a Ring Cairn; but its discovery here is not altogether surprising since the wooden circle played such a prominent part in the designs of the contemporary barrows. The familiar stake circles, however, are more easily explicable in terms of a fence, perhaps temporary, than as a substantial architectural element in the final construction. Records of large timber circles surrounding barrows or any other Bronze Age monuments are definitely rare, but this may be partly due to confined excavation which has seldom exposed large areas outside the obvious perimeters of a monument. This point

is made very aptly by the discovery on Moel y Gaer, Rhosesmor, of an Early Bronze Age burial pit surrounded by a circle of large posts which was revealed only by area excavations investigating the Iron Age hillfort (Guilbert 1976, Pl. VI).

The closest parallel to the arrangement seen at Brenig 44 is to be found in the large 'Urnfield' cemetery at Roosen, near Neerpelt, in Belgium (Roosens & Beex 1960). Amongst the 127 barrows of varying Bronze Age date there are two which were surrounded by circles of short, thick posts standing about 2 m out from the edge of the mound. The fact that only two of these barrows had this outer circle, though many others had upright posts at the ditch ends, is perhaps an indication of the rarity of the feature. In England it appears also to be very rare. One among several ring-ditches at Standlake, Oxfordshire, was surrounded by 19 substantial postholes (Case & Whittle 1982, 97–102) and the outer enclosure of the exceptional monument at Bleasdale, Lancashire (Varley 1938), though it is a continuous timber wall, has larger uprights at intervals which might have made it generally comparable in final appearance. On Dartmoor the small Encircled Cairns (Worth 1953) may be considered parallels in stone, but without more evidence from air photographs and wider excavation around known monuments it is impossible accurately to assess how common such timber additions might have been.

The only group of monuments in which a Ring Cairn is consistently combined with a circle of uprights is the Clava Ring Cairns in Inverness and Aberdeenshire (Henshall 1963, 12–33). The relationship of the circle and the Ring Cairn is similar to that of Brenig 44 (e.g. Culburnie, Fig. 11.14), but the Ring Cairns themselves differ quite markedly and, in the absence of intervening examples, it would be foolhardy to do more than note the resemblance. The same is true of the later monuments in that area, the Recumbent Stone Circles which frequently surround broad Ring Cairns (Burl 1969–70). In these cases there is the further complication that the two main elements may not be contemporary.

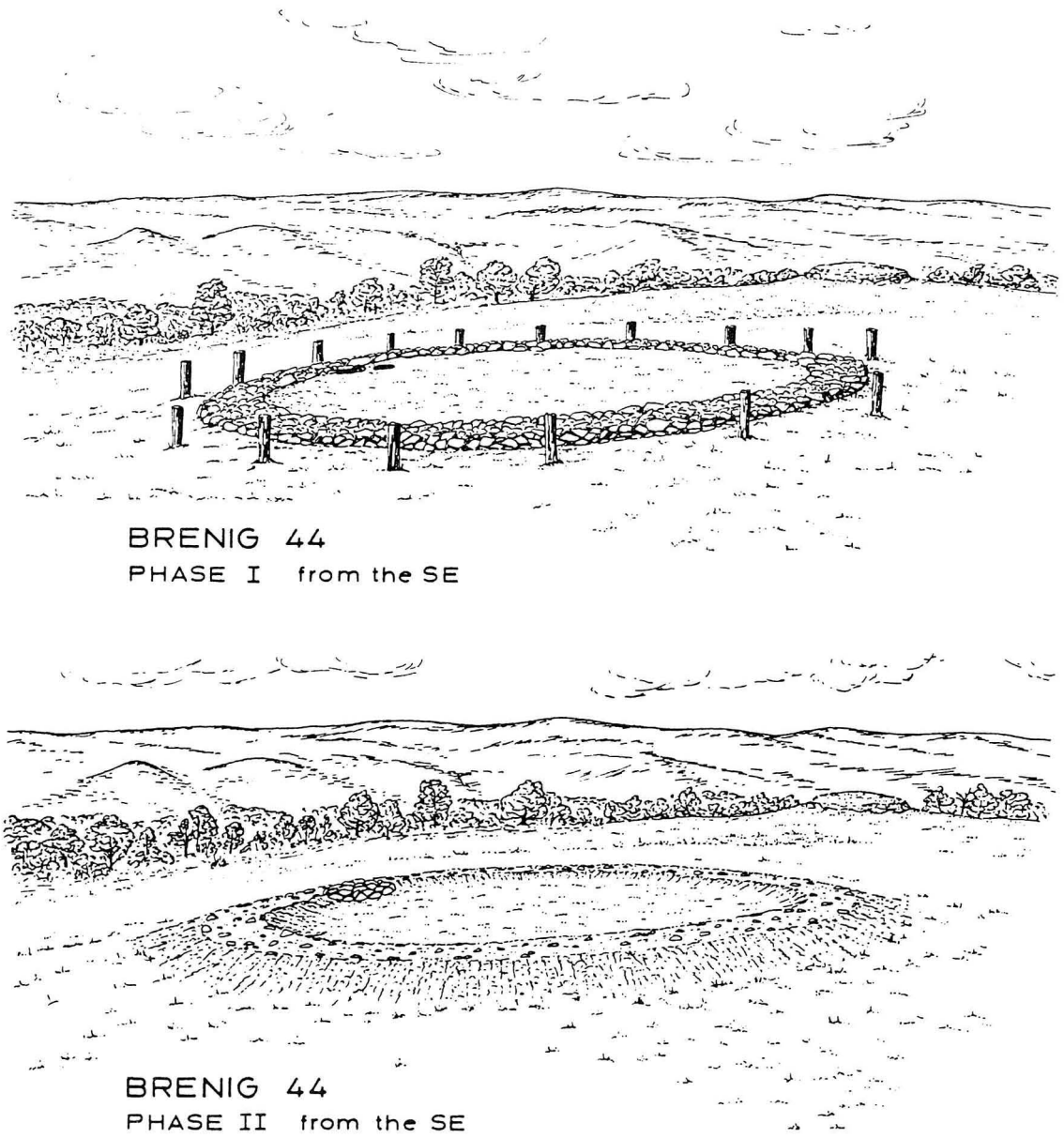
Because this wooden circle surrounds a ceremonial site rather than a purely burial one, it might be tempting to divide the two elements at Brenig 44 and suggest that the outer posts were something in the nature of an Open Stone Circle. However, the topographical relationship of the timber circle and the stone Ring and the evident concentration of interest and activity within the Ring throughout its history make it clear that the circle of posts is only an adornment to the Ring, which contains the essence of the monument. There would be no justification for the view that it might at some stage have been an independent monument in its own right.

One cannot, therefore, draw any specific conclusions about the nature of this outer circle at Brenig 44. The parallels are as yet too few and too widely dispersed in time and place to provide anything approaching a meaningful pattern, beyond the broadest conformity to other architectural and symbolic ideas current in the local community and elsewhere in Britain.

The activity within the Ring was concentrated at this initial stage on the western side, close to the inner wall face. Fires burnt on the stripped surface and were cleared away, and the first pit, BG44:F47, was dug at the foot of the wall. It was filled again with the material which had been dug out of it mixed with charcoal, perhaps from a fire which had burnt within the Ring, but not, as it might have been tempting to suggest, from one that had consumed a body buried in one of the barrows, for the predominance of birch and hazel in the pits contrasts with the use of oak for pyres (App. 6). When nearly full the hole was closed with a thin slab set up against the wall. Whether or not the additional masking against the foot of the wall was laid down immediately one cannot say, but the process of building up the Inner Bank was well under way before the more radical changes to the appearance of the monument were undertaken.

This period of alteration and refurbishment seems to have occurred, according to the radiocarbon dates, in the mid–16th. century b.c., when a number of dates (App. 10, nos. 22–24) shows renewed activity. In statistical terms there is no significant difference between these dates and that of BG44:F47 (no. 21), but stratigraphically and in terms of dilapidation, a time lapse can be recognised. Within the Ring two new pits were dug against the western face of the wall. Pit A (1550 ± 80 b.c. – HAR 1133) was dug close against BG44:F47 and received a similar fill. A fire had been burning on the sloping face of the Inner Bank before BG44:F7 was dug through the charcoal-flecked clay to take a mass of clean, well-sorted charcoal (1520 ± 80 b.c. – HAR 505). This pit was also sealed, covered and marked by a flat stone, the ritual obviously following the same tradition as that enacted in earlier centuries.

While certain things remained unchanged, there were, at this time, serious alterations which affected both the outward appearance of the monument and its religious use (Fig. 11.10). The outer face of the Ring was becoming dilapidated and it was masked by the building of a sloping bank which ran out as far as the base of the timber circle. These posts were undoubtedly removed at the same time. The few instances of post 'ghosts' still visible in the holes may be explained as the remains of those which had already become rotten. Since the posts may have been more than a hundred years old at this time their removal is not surprising. A burnt plank (BG44:F46) incorporated in the Outer Bank gives a date of 1520 ± 70 b.c. (HAR 502) for this activity, which seems to have been carried out as a single process in contrast to the intermittent development of the Inner Bank which must have gone hand in hand with individual ritual acts. The Outer Bank covered some spreads of charcoal on the western side but these did not have the concentration nor, I suspect, the significance of those inside the Ring. The purpose of the bank was obviously to mask the stone wall rather than to cover the charcoal, whereas on the inside the masking of the wall seems to have been incidental to covering the pits and fires. In fact, on several occasions it was thought



11.10 Brenig 44: reconstruction of the Ring Cairn at two stages in its history.

necessary to re-expose the stones of the inner wall face.

The most important change at this time, however, was the adoption of human burial within the circle. The bones in the central, unmarked pit (BG44:F43) were mixed with a little charcoal which provided two dates (1540 ± 70 b.c. – HAR 500, and 1580 ± 90 b.c. – HAR 535), but they were not accompanied by any artefacts or anything which might hint at the condition or status of the individual chosen for burial in this rather exceptional situation.

This period of activity at the Ring Cairn can be matched by other developments in the cemetery as a whole. At this time the Platform Cairn (Brenig 51) was built (1560 ± 70 b.c. – HAR 80) on the ridge to the east, and shortly afterwards another large turf barrow (Brenig 40) was constructed on the western side of the valley (approximately 1420 b.c., App. 10, nos. 10 & 11).

The final stages of activity within the Ring Cairn extend over the 14th. century b.c. and show a continuation of the original concern with the burial of charcoal and the remains of fires. Pit A, which was beneath the largest stone in the Ring, was dug out and refilled with earth and covered with burnt and deliberately broken stones, in turn covered with charcoal and burnt branches, which provide a date of 1380 ± 70 b.c. (HAR 1137). Almost immediately these pits, where most of the activity had been concentrated over the years, were buried beneath a cairn of small stones which concealed the face of the Ring. This may explain why another pit dug through this cairn (Pit B) is unusually far from the wall. This pit differs somewhat from its predecessors in other ways, such as the inclusion of scraps of burnt bone and of burnt earth and stones as well as charcoal, but clearly retains the traditional interest in the burial of the remains of fires. The radiocarbon date for this pit is 1340 ± 80 b.c. (HAR 1138), which is comparable to that from the last of the typical charcoal pits (BG44:F6)

dug down from the top of the Inner Bank (App. 10, no. 28). In this shallow pit was a mass of pure, clean charcoal like that from BG44:F7.

The last of the dated activities within the Ring (1280 ± 70 b.c. – HAR 503) involved the burial of three cremations in a large oval pit (BG44:F20) on the north-eastern side of the monument, an area where there had been little previous activity. In spite of the presence of burial urns this pit shares several of the characteristics of the earlier charcoal pits, especially the very precise analogy in the treatment of the burnt and broken slabs which covered the refilled pit, and the mass of dark earth and charcoal which surrounded the two pots. Thus, through four centuries or more of use, the distinctive role of the monument was still maintained, in spite of structural alterations and a shift of emphasis which brought it closer to the neighbouring burial monuments.

RING CAIRNS

Brenig 44 has all the characteristics of the Welsh Ring Cairns defined in 1972 (Lynch 1972). These monuments have been recognised as a separate class since the pioneering work of W. E. Griffiths in the late 1950s (Griffiths 1960; RCAM 1956), but it was not until 1972 that various sub-groups were defined and an attempt made to unravel the strands which linked them in design and purpose to Open Stone Circles and to burial cairns. The excavation of Brenig 44 has confirmed both the structural distinctiveness of the simple 'stone ring' type of Ring Cairn, and its ambiguity of purpose, by revealing evidence for rituals both involving and not involving burials. The series of radiocarbon dates has greatly increased confidence in the chronology of the group, though the long period of use has shown that a precise typological sequence would be difficult to attain. It is not proposed to repeat the arguments set out in 1972 as they affected all the sub-groups of Ring Cairns, or Variant Circles as they might be more comprehensively called, but to concentrate upon the simpler Ring Cairns without dominant upright stones, with special reference to the ceremonial treatment of charcoal.

Because of the difficulty of distinguishing these simple Ring Cairns from enclosures or from robbed cairns it is not possible to give a definitive list of comparable sites. Ring Cairns in Wales tend to fall into three size groups: small rings at 8 m – 10 m across; medium ones at 14 m – 16 m, and large ones like Brenig 44 at 19 m – 25 m. In this last category, the closest parallels are to be found at Cerrigellgwm-isaf, near Pentrefoelas, Denbighshire (Ellis Davies 1929, 133), Cwm Cadlan III in Breconshire (unpublished), and Nant Troed y Rhiw III near Cwmcorrig, Glamorgan (RCAM 1976 no. 280). The latter two, with diameters of 21 m and 19.2 m respectively, are a little smaller than Brenig 44 but each forms part of a small cemetery group. Three other Glamorgan monuments fall into this size range; Craigllyscwmllorwg I, Twynbrynbychan and the very complex site at Pebyll (RCAM 1976, nos. 337, 385 & 348). The first two are rather dubious Ring Cairns and the last one, with opposed entrances and evidence for at least one cist within the thickness of the ring, would not seem to be strictly comparable.

None of these monuments has been excavated so it is impossible to know how far the comparisons would hold in detail. The evidence from excavated Ring Cairns was briefly summarised in 1972, and the results from Brenig 44 confirm and amplify the pattern set by Penmaenmawr Circle 278 (Griffiths 1960, 318–22), and the Gelli Circle above the Rhondda in South Wales (Griffith 1906). At both these monuments interest was focussed on the inner edge of the ring with deposits buried at the foot of the stones or structures built against them. There was a similar interest in the burial of charcoal with a minor element of human cremation burial.

Circle 278, Penmaenmawr, is a medium-sized Ring Cairn, kerbed with boulders arranged so that the largest stones were evenly spaced around the circle, though they do not give any vertical emphasis to the monument, which is very low and even inconspicuous (Griffiths 1960, 318–22). A fire had been lit against the largest stone, leaving an area of burnt earth and charcoal, and a small quantity of cremated bone had been tucked in behind it. Directly opposite was a pit containing a small Collared Urn filled with charcoal. This pit was covered by a stone and a fire had then been lit on top of it. This sequence of events is very reminiscent of that at BG44:F20 and Pit A, but the stone here was not broken and turned over. Built against the ring on the north side was a small enigmatic structure of unknown purpose, two projecting stones and a flooring slab. It may be likened to some of the small 'false portals' found on Scottish cairns or to the cist-like constructions in the Gelli Circle.

The Gelli Circle was excavated in 1901–06 and unfortunately no drawings survive. However, the account (Griffith 1906) makes it clear that this small ring had dry-stone walls like Brenig 44, but set flush with the inner face were upright stones, about the same height as the bank and regularly spaced around the circle. Against three of these stones were 'cist-like' constructions showing evidence of fire. Nothing was found at the central point but there was a stone cist dug into the old ground surface 2 m from the inner edge on the south-west side. This cist might originally have contained an inhumation but, as at Circle 278 and Brenig 44, other activities within the circle might have been more significant.

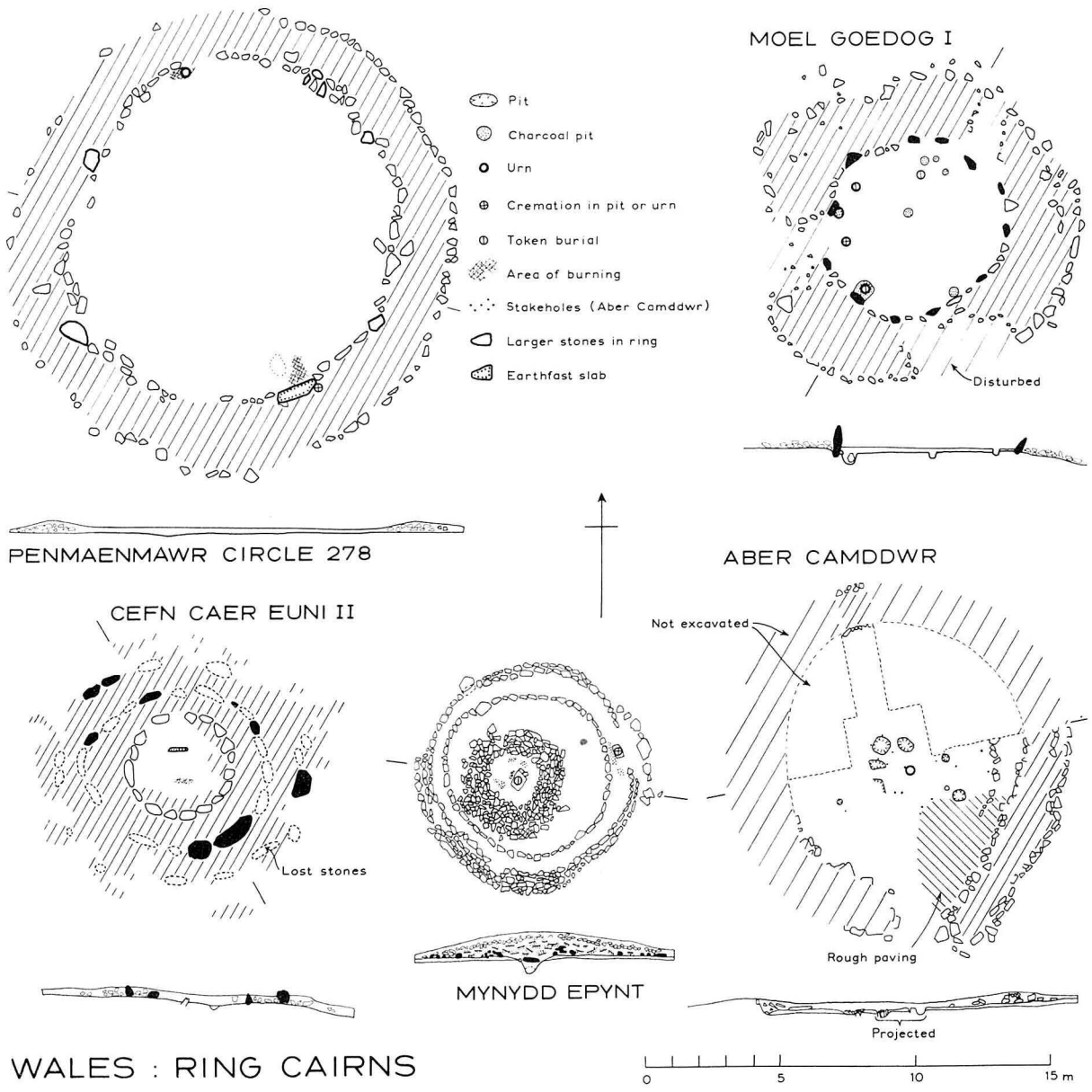
Not only do the results from Brenig 44 agree in broad outline with those from Circle 278 and Gelli Circle, but the pattern thus established has been reinforced by the subsequent excavation of the Complex Ring Cairn on Moel Goedog, Merioneth, and of two Ring Cairns in the Gower. Moel Goedog I is a medium-sized monument, much more impressive than the others in that the stones around the inner edge stand about 1 m above the stone ring (Lynch 1984). The concentration of interest towards the rim of the central arena and the combination of charcoal pits and human cremations is similar to that from the

less conspicuous monuments. Amongst the pits were three which contained token burials, only a few grammes of bone which in two cases had been dug up from elsewhere and reburied within the circle, adding another element of ritual which may be ancillary to burial. Near the Great Carn on Cefn Bryn, Gower, are two Ring Cairns which are structurally rather different from the north Welsh sites in that they have entrances, later blocked (Ward 1988). The activity within them, however, was comparable, involving burning, the burial of 'dirty earth' in pits and, in Great Carn Ring Cairn I, the reburial of a token quantity of cremated bone as at Moel Goedog I. Thus, though burials do occur in these circles, it is clear that more enigmatic activities may take precedence.

Radiocarbon dates for Moel Goedog I, centring around 1590 b.c., confirm a general contemporaneity with the Brenig cemetery but do not suggest such a long period of use, although the stratigraphy, as at Brenig 44, indicated that the pits had been dug at different times. Two radiocarbon dates were obtained for Circle 278, Penmaenmawr, which fall within the period of use of Brenig 44, but the standard deviations are too large to allow firm conclusions about the life-span of that particular monument (Griffiths 1962).

The six sites considered above cover all the three size ranges distinguished, and also show differences in structure with varying emphasis on the vertical element in the design. The fact that all these monuments share a similar range of ceremonial activities suggests that between the class of Ring Cairn and Complex Ring Cairn (distinguished by the use of vertical stones) there is little essential difference. It might be tempting to see a development through time from low-walled rings to tall stones, but where individual monuments may have been in use over several centuries it is unlikely that incontrovertible evidence of such a sequence would be forthcoming. One must assume that factors of taste conditioned the choice of design.

This view represents a slight change from that



11.11 Comparative plans of Ring Cairns in Wales.

put forward previously (Lynch 1972, 68), when it was hoped that architectural variation might reflect some difference in use and purpose. Such a view may still stand with regard to the Ring Cairn group with their open centres and the Kerb and Cairn Circles where the upright stones surround a solid cairn, but within the Ring Cairn group itself the distinctions must be considered fluid (Lynch 1979, 9–14).

One point of practice which is not invariable is the siting of features around the edge of the ring. At small sites the focus of interest tends to be in the centre rather than at the edge. This was the case at Cefn Caer Euni II, where an earthfast slab and an elongated pit with quartz and dark earth formed opposing sides of a rectangular feature (Lynch 1986); at Aber Camddwr (Hogg 1977), where a small urn filled with earth was buried at the centre and other enigmatic pits, one containing a child cremation without a head, were clustered around it; and at Ynys Hir on Mynydd Epynt (Dunning 1943), where the small token burial was placed centrally. However, at all these sites there remains an emphasis on the burial of dark earth or charcoal which links the ritual activity with that in the larger monuments.

The burial of large quantities of charcoal would seem to have played a crucial part in the ceremonies taking place in Welsh Ring Cairns. At Brenig 44 the charcoal was very fresh and pure and in some cases had been poured straight out of some container into the pit. At Moel Goedog I the charcoal was mixed with a varying quantity of dark soil and stones; at Cefn Caer Euni II there was only a very small proportion of charcoal in the pit although the soil looked very black. The pot in the centre of Aber Camddwr contained earth with no charcoal but the packing around it in the pit contained a good deal. Thus the proportions of earth and charcoal in these 'ritual' pits may vary quite considerably.

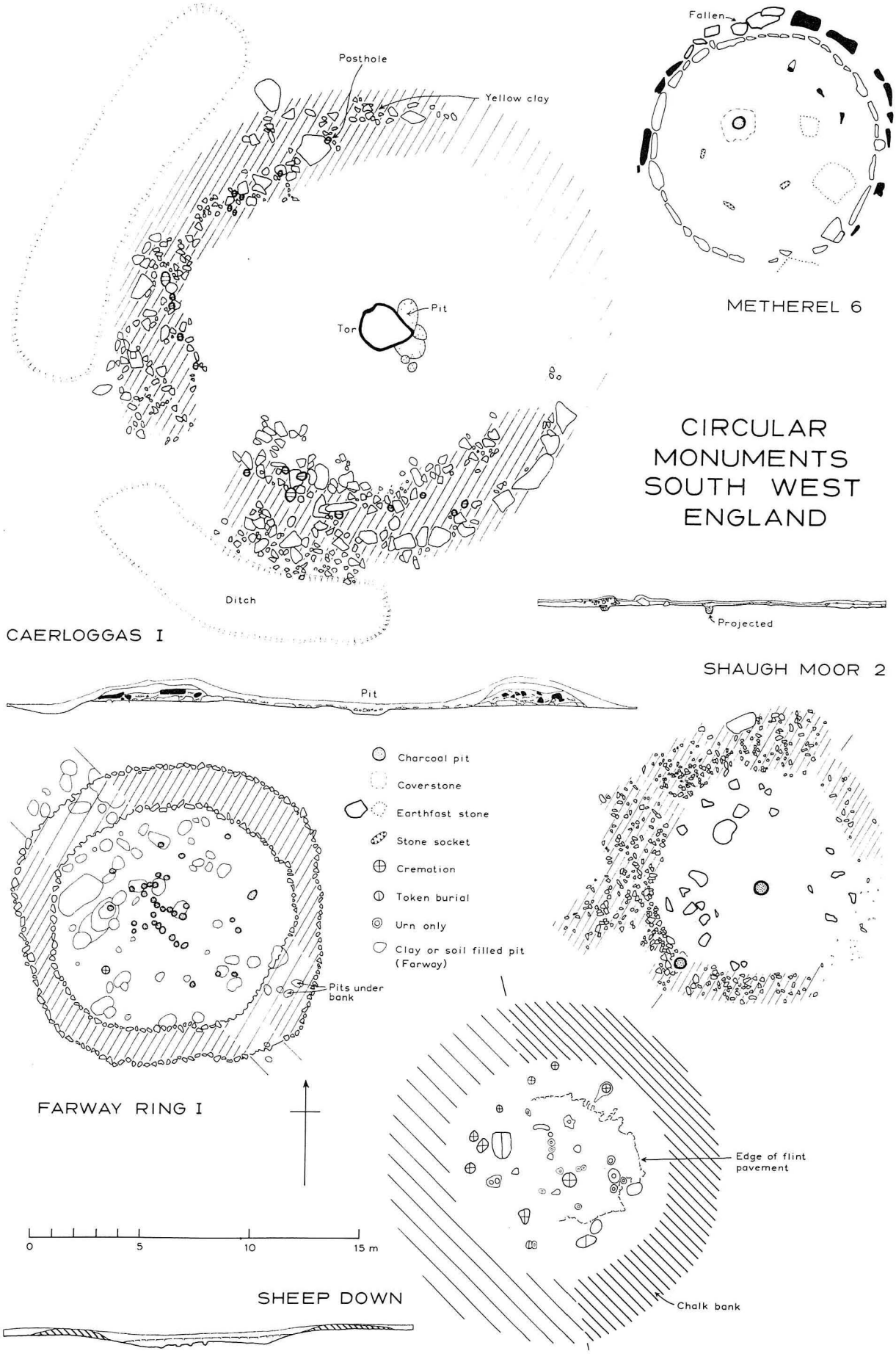
It might be thought that the most likely source of such charcoal would be the pyres on which bodies had been cremated before burial in nearby barrows or cairns. The presence in BG44:F7 of part of a heavily burnt flint knife of a type often found with cremations lent support to the idea that in some cases the remains of the pyre might have been swept up and carefully buried in a separate pit. This theory is attractive since it would also provide an explanation for the almost invariable link with burials and barrows. Unfortunately the identification of the charcoal in these pits and in those which also contained normal cremations shows that they are not the same (App. 6). Whereas the charcoal associated with cremations is predominantly oak, a wood which burns long and well, that from the 'charcoal only' pits is birch, alder and hazel, woods which burn more quickly, with only a small proportion of oak. One must imagine, therefore, separate fires as the origin of this charcoal and perhaps fires specially designed for the production of charcoal since in some cases it is so very clean. In other cases it is not so pure, being mixed with a good deal of dark earth and in Brenig 44:Pit B and at Circle 278, Penmaenmawr (Griffiths 1960, 321) with burnt earth which must have been scraped up from underneath the fire. At Brenig 44 and at Circle 278 the surface within the monument had been scorched and the fires might have burnt on the spot; but at Moel Goedog I there was no sign of any scorched earth inside the monument, although there were several charcoal pits. The fact that this site was used for the re-burial of bones from elsewhere might suggest that the charcoal buried there would also have been carried in. The use of containers, either urns which might be left in the pit, or sacks or boxes whose contents were emptied into the hole, would support this reconstruction of the ceremonies which sees people bringing special charcoal to the monument to be buried and covered with earth, though not completely concealed; for several pits were marked by flat stones and some, such as Brenig 44:Pit A, were dug out on a later occasion. Excavation may hope to add new details to this picture, but it is unlikely that we shall ever know the answer to the central question -'Why?'

Even though these pits did not contain the debris of the funeral pyre, the connection with funerary ritual cannot be denied. Many burial monuments cover pits with charcoal as well as pits containing urned and un-urned cremations. On some occasions burial urns are closely associated with smaller accessory vessels and in many cases these pots contain charcoal (Lynch 1971, 79). Detailed identifications of this charcoal are seldom available so it is not possible to check the universality of the contrast recognised at Brenig 44, and to some extent confirmed at Moel Goedog I (Denne in Lynch 1984), but, since this charcoal does not usually contain tiny scraps of bone as might be expected from a pyre, it is reasonable to suggest that it, too, comes from some separate source.

At a further remove are the 'charcoal pits' beneath barrows such as Six Wells 267' in Glamorgan (Fox 1941a, 118–22), or Combe St Nicholas, Somerset (Gray 1936). These are pits, elaborately prepared and covered, which form the central feature of monuments which are outwardly identical to burial mounds but which cover no burials, or only peripheral ones. At other examples such as Crig-a-Mennis, the charcoal is not placed in a pit, but covered by a special cairn (Christie 1960).

Burial mounds with some charcoal pits, 'empty mounds' centred upon a deposit of charcoal and Ring Cairns may all appear in the same region, so the ceremonies involving the separate burial of charcoal are not exclusive to Variant Circles. These ceremonies link the full spectrum of burial and ceremonial monuments (for they also occur in the Open Stone Circles, but less regularly) but they cannot of themselves explain the structural variety of these monuments.

The distribution of the Ring Cairn in Britain as a whole has not been studied and it is doubtful whether the type could ever be mapped with confidence. Lowland versions, which might have involved wooden structures, must remain elusive, especially in the east where the vast majority of the previously plentiful Bronze Age remains has been reduced to seemingly uniform 'ring ditches'. One is forced, therefore, to concentrate upon the



11.12 Circular monuments in south west England.

western parts of the country where monuments were built of stone.

However, when one surveys this highland zone, the distribution of possible Ring Cairns can be seen to be uneven – they are not found everywhere where cairns are found, nor are they always found in regions where stone circles were built (Lynch 1972, 68–70). For instance there are no Ring Cairns on the Flintshire plateau where cairns and barrows are common; nor are there any in west Cornwall which has several notable Open Stone Circles, as well as many cairns (Miles 1975). In the Pennine area Embanked Stone Circles and Ring Cairns are concentrated in a very marked way in the Derwent Valley and the Burnley district, although it is obvious that other parts of the region were equally well populated at the time (Bu'lock 1961; Radley 1966). On the Wessex pastures, where earthworks, until recently, have been well-preserved, a chalkland equivalent to the Ring Cairn may be recognised in the Pond Barrow; this monument, too, has an uneven distribution, clustering in two centres, on the Dorset Ridgeway and around Stonehenge (Atkinson *et al.* 1951).

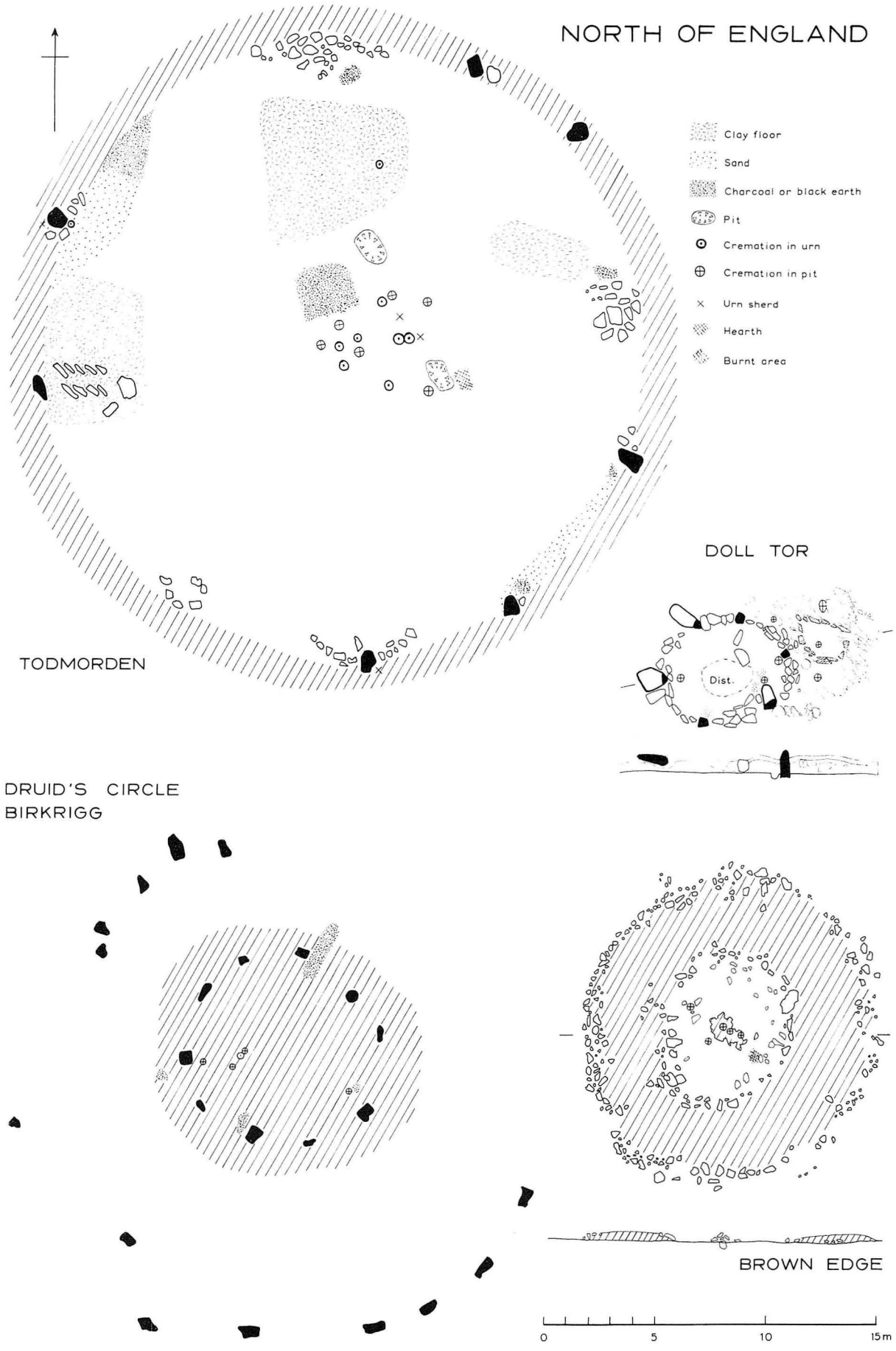
In Wales the clustering is less marked but it can be recognised nevertheless that monuments of this class tend to be grouped, as here in south Denbighshire, on the hills above Penmaenmawr; in Ardudwy; in Edeirnion and, in South Wales, in the Gower and on the Glamorgan moors (Lynch 1972, Fig. 2). It is worthwhile, therefore, examining more closely the similarity in structure and in purpose between the Welsh Ring Cairns and their southern and northern counterparts, since their distributions would seem to display the same peculiarities.

The comparison between Variant Circles, complex circular monuments of divers kinds in south-west England, and the Welsh Ring Cairns is not very close, but is worthy of some comment because they reveal a broadly similar interest in the ceremonial, non-practical aspects of the cult of the dead. In Cornwall there are some notable ring structures, such as Caerloggas I (Fig. 11.12), which have ritual connotations (Miles 1975) but neither the architecture not the activity within is closely parallelled in Wales. On Dartmoor there is a great variety of Bronze Age structures including the Stone Rows and Encircled Cairns (often very closely associated) which are virtually restricted to that region (Worth 1953). Many of the cairns have conspicuous kerbs, but the true Ring Cairn, with or without upright stones on the bank, is rare. Those which have been excavated recently are indeed very ill-defined (Smith 1979) and the distinction between them and ruined cairns must be difficult to recognise on the ground. The Open Stone Circle exists here, but is linked to the burial cairns by other forms of hybrid structure. The same would seem to be true of Exmoor where, in any case, the variety of Bronze Age monuments is less (Grinsell 1970, 37–68).

The role of burial and ceremonial within the sanctuaries and cemeteries of Dartmoor has been rather confused by the use of the term 'interment pit' to cover all pits found beneath cairns or within circles in the belief that even cremated bone would have dissolved in such acid soil. However, it can be shown that this is not the case, for at Langstone, for example, in identical soil conditions, bone was found in one pit but not in another (Baring Gould 1898, 107–12). One may suspect, therefore, that many of the pits dug beneath both simple and complex cairns in this region, for instance Metherel 6 (Fig. 11.12, Worth 1937), were never designed to hold bones. Earlier writers do not mention charcoal in these pits, but two small badly damaged Ring Cairns recently excavated on Shaugh Moor (Fig. 11.12) had central pits which did contain charcoal, though, unlike the Welsh ones, almost exclusively oak (Smith 1979). Though rarely buried in pits, charcoal has been found liberally strewn over the interior of certain Dartmoor monuments such as the Fernworthy Stone Circle (Worth 1953, 222–24). The relationship between the south-western monuments and their Welsh counterparts, therefore, both in architectural design and in ceremonial activity, is unspecific – the concerns may be the same but their expression differs.

On the Blackdown Hills to the east of Dartmoor, there are, however, monuments which are closer to the Welsh analogues. Here there are several stone rings, roughly heaped banks of flint, among the barrow cemeteries, and the practice of burying charcoal in pits is also found. The two, however, are not exclusively associated, for some of the stone rings, such as White Cross and Burnt Common, surround central inhumation graves, while pits with charcoal and dark earth may be found beneath solid cairns (Pollard 1967; 1971). At Burnt Common the central area contained two charcoal pits as well as the grave, and at Farway Ring I (Fig. 11.12) this trend is taken further and the burial of charcoal is dominant. Central to the ring was a possible posthole and three largish pits containing charcoal and dark earth, one of which also held a very small quantity of cremated bone, recalling the pits at Moel Goedog I. In addition there were, clustering towards the centre, 35 small pits which contained oak charcoal either in piles or scattered through the clay filling. These pits and the flint ring itself post-dated a scatter of strange shallow pits which contained no charcoal but were filled with non-local clay.

The burial monuments of Wessex contain a variety of ditched barrows but there is only one monument form which is relevant in the context of Ring Cairns and their probable ancillary/ceremonial role in the cemetery. This is the Pond Barrow, a lowland form of enclosed circle consisting of a low chalk bank surrounding a dished central space (Atkinson *et al.* 1951). These monuments are found within barrow cemeteries, normally one or two to a cemetery and, like Ring Cairns, their distribution is regionally concentrated. Few of these monuments have been excavated, but the one on Sheep Down (Fig. 11.12) is considered typical (Atkinson *et al.* 1951). Within the central depression there were 34 pits, of which nine contained normal cremation burials, four held token burials or reburials and the remaining 23 contained only earth with no bone. There was some evidence to suggest that these pits were dug



11.13 Circular monuments in the north of England.

successively over a long time. Although there was no charcoal in the pits it is reasonable to include these monuments in this survey, especially since other excavated Pond Barrows contain even fewer normal cremations (R. J. C. Atkinson pers. comm.).

In looking at the north of England we find a group of monuments which is much more closely comparable to the Welsh Ring Cairn family, both in architecture and content, although a shift in emphasis towards burial may be discerned. The Open Stone Circle is virtually unknown in the southern Pennines and various forms of the enclosed circle are dominant. The best known are the Embanked Stone Circles with tall stones such as the Nine Maidens on Stanton Moor (Bateman 1848, 114), but others with less conspicuous stones exist on Barbrook Moor (Hart 1981), alongside low stone rings without any upright stones, such as the excavated example at Brown Edge, Totley (Radley 1966).

The Complex Ring Cairn Barbrook II, near Sheffield, is very much the same as the Gelli Cairn, Rhondda, having low, spaced uprights and an eccentric cist (G. D. Lewis, pers. comm.). Elsewhere within the central area were two further cremation burials, one in a pit above which a fire had been lit. An urn buried at the foot of one of the orthostats contained no bone. Here we have a situation which finds many echoes in Wales but, with probably three cremations at Barbrook, the emphasis on burial would seem to be greater.

The same appears to be true of the activity at Doll Tor Circle just west of Stanton Moor, Derbyshire (Fig. 11.13). This very small Embanked Circle, no more than 4 m – 5 m across but with stones about 1.5 m high, was first excavated by Bateman (1861, 84) and later was more extensively dug by Heathcote (1939a). Bateman found urns and presumably bones in the centre, and Heathcote, deposits at the foot of four of the six stones. Those beside Stones 3 and 4 were of pure charcoal and there were only a few scraps of bone near Stone 5. A cairn, about 5 m across, had subsequently been built against the eastern side of the circle and this covered several more cremation burials. At this monument the Welsh emphasis on the inner edge of the ring is very marked and the presence of charcoal deposits and token burials fits the same pattern. But the addition of the burial cairn and the number of urns from the centre of the circle both serve to emphasise the importance of the monument as a place of burial.

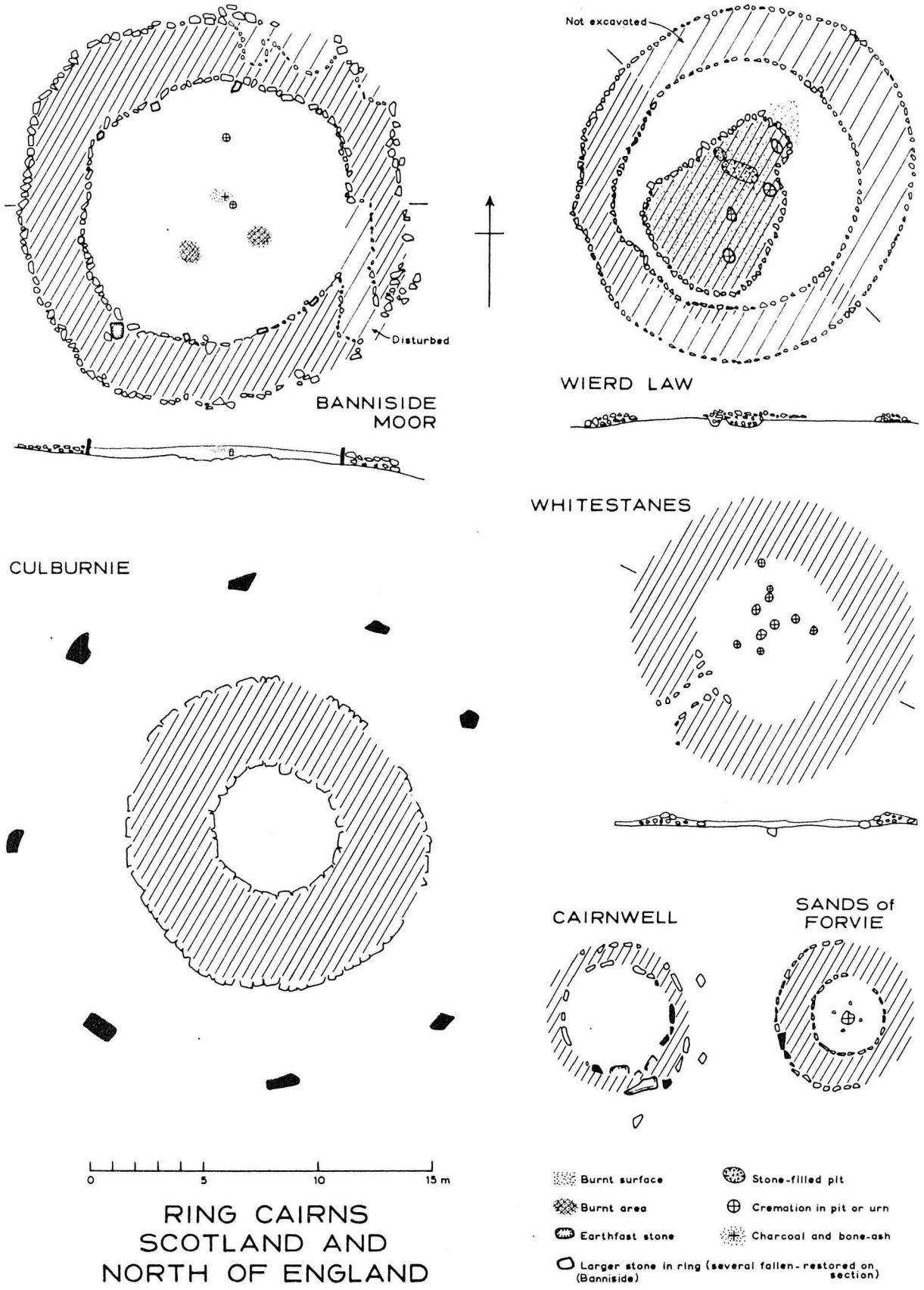
At Blackheath, Todmorden (Fig. 11.13), the narrow bank had widely-spaced boulders on its inner edge and there were patches of charcoal at the foot of several of them, but the centre of the large ring was occupied by a group of 14 cremations, some with rich grave goods (Bu'lock 1961, 15). Clearly the cemetery aspect is dominant, as it is at Moseley Heights, one of the rare orthostatic circles among the monuments of the Burnley area (Bennett 1951).

Stone Circles and Variant Circles are known in some numbers in the Lake District, but the true Ring Cairn is not common. Two monuments claimed as Ring Cairns are more probably stone huts although the one in Levens Park was subsequently used for Beaker burials (Sturdy 1972). However a close analogue to the Welsh Ring Cairn does exist on Banniside Moor (Fig. 11.14), where a ring 3 m wide, faced on the outside with boulders and on the inside with upright slabs, having larger stones at regular intervals, enclosed two pits with urn burials, two spreads of 'bone ash' and charcoal and an area of charcoal with broken sherds (Collingwood 1910). Inside the inner circle of the Druid's Circle, Birkrigg (Fig. 11.13), there was a similar scatter of cremation pits beneath the stone paving (Burl 1976, 62–63); the burials were placed randomly but four patches of black soil at the foot of the tallest stones are reminiscent of Ring Cairn rituals, although the monument itself, a double circle, is unlike anything in Wales. A pit filled with charcoal was found within the inner structure of the Castlerigg Stone Circle (Dymond 1881) but a more common phenomenon is the discovery (at Oddendale, Lacra B and Grey Croft Circles (Anon. 1879; Dixon & Fell 1948; Fletcher 1957)) of a spread of bone and burnt material, perhaps the remains of a cremation pyre. This treatment of the funeral pyre is something which is also found in Scotland, and will be referred to again.

As well as the architecturally complex Variant Circles briefly reviewed above there is, in the north of England, a number of much less conspicuous stone rings which have much in common with the Scottish Enclosed Cremation Cemeteries. These non-orthostatic stone rings in the Pennine area are epitomised by Brown Edge, Totley (Fig. 11.13), where a low clay bank with ill-defined stone facing enclosed five cremation burials and the site of a fire (Radley 1966). Other excavated examples reveal a similar picture, with normal burials being predominant within the circles. There is little evidence here of the rituals seen in the Welsh Ring Cairns, but some link with the more ceremonial side of Bronze Age burial is suggested by the presence of the ten 'fire pits' among the thirteen cremations in the Enclosed Cremation Cemetery on Whitelow Hillock, near Bury (Bu'lock 1961, 40, and N. Tyson pers. comm. re unpublished excavation).

To try to review the full spectrum of Scottish Bronze Age monuments would be to go far beyond the scope of this publication. The variety of circle forms is immense and, to complicate matters further, many were altered during the period of their use. Croft Moraig is a well known example, and more recent excavations are revealing that structural changes may be regularly expected (Piggott & Simpson 1971). In this the Scottish tradition would seem to differ from that in Wales. Whereas the Welsh sites were used over a long period, few were drastically altered during this time. The wooden circle at Brenig 44 rotted and was removed but the main features of the monument were not changed; Letterston III and Mynydd Epynt were covered and used for burial, but they are exceptional (Dunning 1943; Savory 1962–64). In Scotland one may expect a circle to be remodelled more than once, rendering typological argument rather suspect.

The Clava Ring Cairns, like that at Culburnie



11.14 Ring Cairns in Scotland and the north of England.

(Fig. 11.14), are undoubtedly the best known of the Scottish Ring Cairns. They are found chiefly in Inverness-shire, and have a close link, perhaps ancestral, with the Clava Passage Graves (Henshall 1963, 12–33). Excavation has invariably revealed a burial within the small central space. The proportions of the ring are broad, unlike the Welsh Ring Cairns, and they are surrounded by a circle of upright stones, cup-marked and usually graded in height.

The Recumbent Stone Circles found in the same north-eastern corner of Scotland very often surround a similar Ring Cairn, broad and flat with a relatively small central space, more like Brenig 51 than Brenig 44 (Burl 1969–70). Burials have nearly always been found within the Circles but not necessarily in the centre of the Ring Cairn, which in some cases, such as Loanhead of Daviot (Fig. 10.10), may be a later addition (Kilbride-Jones 1934–35; Ritchie 1974, 10–11). Similarity of design and geographical proximity have led to the view that the Clava Cairns and the Recumbent Stone Circles belong to a continuous cultural development in that part of Scotland, a view which has much to recommend it since the type is regionally dominant. Any suggestion of their direct influence on Wales would be less persuasive.

Another small group of Ring Cairns in the north-east of Scotland (Kenworthy 1972) contains monuments which are rarely surrounded by stone circles and some, such as Cairnwell and Sands of Forvie, have the narrower proportions of the Welsh monuments (Fig. 11.14). They tend, however, to be much smaller in diameter and show no specific similarities of function, since burials are dominant.

The west of Scotland contains a great variety of Bronze Age cairns and circles. Several of the Stone Circles are enclosed in one way or another, like the remarkable Templewood in the Kilmartin valley, which was changed from an Open to an Embanked Stone Circle (J. G. Scott pers. comm.). The much rougher monument at Strontoiller, standing close to a fine Standing Stone and Kerb Cairn at the head of Loch Nell, may also be an Embanked Stone Circle (RCAHM 1975 no. 120). Further north, at Culcharron, near Oban, there is a monument which is very similar to the Welsh Kerb Circles (Peltenberg 1972), while Welsh Kerb Cairns are also parallelled in the region (Ritchie *et al.* 1974–75). However, the Ring Cairn, like Brenig 44 or even Moel Goedog I, is not easy to find in western Scotland.

The less conspicuous ring in western and southern Scotland finds expression in the Enclosed Cremation Cemetery. Those which have been excavated in Galloway, Peebles, and in the north of England consist of a narrow, loosely-piled bank of stone, occasionally with an entrance which is subsequently blocked, enclosing a central space which contains several cremation burials placed in pits (MacLaren 1967). Some of these burials may be covered by a low, shapeless cairn like those at Weird Law (Fig. 11.14) or Brown Edge. The monuments are very inconspicuous, but fieldwork is now showing that they are widely distributed in southern Scotland and in the north of England, where they overlap with the distribution of more impressive circles in the Lake District and the southern Pennines. A few have been found in the north of Ireland (Lynn 1974).

Fieldwork might well equate these Enclosed Cremation Cemeteries like Whitestanes (Fig. 11.14) with Ring Cairns such as Penmaenmawr 278 or Brenig 44, but the essential difference is that the Scottish sites are definitely burial monuments, part of the same resurgent tradition of communal burial in the Early Bronze Age which finds expression in the multiple-cist cairns in these regions (Piggott 1962). There are many multiple-cist cairns in Wales, some of them covering cairn rings, but so far no Enclosed Cremation Cemetery of the Scottish type has been found.

Having briefly reviewed the Scottish structures and suggested that there are no very close architectural parallels, one should turn to the question of purpose, and the ceremonies which may have been performed within them. Burial seems to be predominant in most varieties of circle in Scotland. The Clava Ring Cairns are not only associated with Passage Graves, but themselves surround cremation graves. The Recumbent Stone Circles of Aberdeenshire also contain cremations as a general rule, though few have been reliably excavated, and it is likely that ancillary activities also took place in them. The Enclosed Cremation Cemetery, the commonest Scottish ring, is essentially a burial monument with minimal evidence of ceremonial connections. Several Scottish Open Stone Circles contain a scatter of cist burials, either beneath a single cairn as at Balbirnie, Fife (Ritchie 1974), or under small individual cairns as at Templewood, Argyll (RCAHMS 1988, 139–42). These internal cairns are quite substantial structures in their own right and cover full size cists, though some deposits of bone are small, especially those placed at the foot of the tall stones, so we may expect examples of token burials.

The deliberate burial of charcoal in pits is not a common feature of Scottish circles, where charcoal is more usually found strewn over the surface of the interior. Cremated bone, too, is often scattered, rather than contained in pits or urns. On many occasions the old ground surface has been heavily burnt and where charcoal and bone are scattered over it, this has usually been interpreted as the site of the pyre. *In situ* burning, not necessarily a cremation pyre, was found at Cullerlie, and the fire had raged so fiercely within the circle that many stones were scorched (Kilbride-Jones 1934–35). The remains of pyres have been found in circles of different types, such as the Recumbent Stone Circle at Loanhead of Daviot, the Enclosed Cremation Cemetery adjacent to it (Kilbride-Jones 1934–35; 1935–36), and the other Cemeteries at Weird Law and Whitestanes, the strange composite mound at Linburn, Ayrshire (Fairbairn 1921–22, 125–30), and under several of the Kerb Cairns, where it is a characteristic of the type. The phenomenon is also found in the Lake District, which had many close connections with Scotland at this time. It is

not a feature of Stone Circles or Variant Circles further south, though it has been recognised under barrows.

Relatively small fires were lit inside the Welsh Ring Cairns, but there is no evidence that these were pyres; moreover it has been shown that the very clean charcoal carefully buried in pits cannot have been obtained from the funeral pyre. However, it is likely that ceremonies involving fires within the bounds of the monument, which were sometimes undoubtedly funeral pyres, as in Scotland, and those which result in charcoal being brought from elsewhere for burial within the circle, are part of the same cosmological or philosophical scheme. Since in some parts of the country the remains of the pyre are treated ceremonially, we may be witnessing in the Welsh 'charcoal pits' a development of ritual practice, a move away from the real to the symbolic – a path trodden in many religious systems. This should not imply a derivation of the Welsh monuments from the Scottish ones; the structures are insufficiently similar and the chronology does not suggest such a sequence. The various regional types of circles should rather be seen as local expressions of the same age-old religious themes of death and fertility in which differing emphasis may be placed upon a limited number of components of the ritual observances. Within this aspect of life and thought it is possible to suggest that Scotland and northern England form a single province, attested by the presence of spreads of burnt material rather than pits, by a very strong element of burial within their Variant Circles and by the use of Enclosed Cremation Cemeteries; while the situation in Wales shows a different emphasis in which burial and ceremonial monuments are rather more distinct. The southern Pennine region, not surprisingly, can show links with both these provinces.

The ambiguous nature of the Variant Circle – closely connected with the rites of burial, yet partaking of ceremonies which may be distinct from or transcend the business of disposing of human bodies – is exemplified by their presence both in barrow cemeteries and in groups of more elaborate monuments which may be called 'Sanctuaries'. This is particularly clearly shown in the southern Pennine area, where every Variant Circle belongs within a major cemetery and where every cemetery, except two which contain only small cairns, possibly field clearance, contains one or more Variant Circles (Marsden 1977). A similar situation can be found in the Burnley area, and Burn Moor is a good example of a Lakeland group which tends rather towards the 'Sanctuary' definition (Burl 1976, 93–97). In the south the relationship of the Stone Rings to groups of cairns and Barrows on the Black Down Hills is comparable, as is that of the Pond Barrows within the Dorset Cemeteries such as Poor Lot and Winterbourne Abbas (RCHM 1970, Ridgeway Map).

In Wales the pattern is maintained. In Gower the Ring Cairns and more elaborate Variant Circles are intermingled with simple cairns along the summit of Rhossili; on the ridgeways of Gelligaer Common and Mynydd Carn Llechart the circles and cairns lie on the same route (RCAM 1976) as they do in the linear groups along the Merioneth trackways (Lynch 1984, 34–36). The small group of monuments in the centre of the valley at Cwm Cadlan, Breconshire, includes a large Ring Cairn very like Brenig 44, and the surrounding hills are topped by other cairns. In north Wales the best example of a Sanctuary containing a Ring Cairn and other Variant Circles is that on Penmaenmawr (Griffiths 1960), though the smaller group at Clocaenog might also be mentioned (Ellis Davies 1929, 101–02); the best instance of a Ring Cairn as part of a cemetery is undoubtedly that of Brenig itself.

CHAPTER TWELVE

The Cemetery

Frances Lynch

The excavation of this group of monuments at the head of the Afon Fechan has shown that they are all closely related and are undoubtedly the work of a single community. This is not unexpected, for the placing of the monuments within the valley, the selection of the most prominent ridges, and the symmetry of the mounds on either side suggested immediately that the group should be considered as a single cemetery. Within this cemetery it has been shown that there are not only burial monuments, the majority of them covering single cremations, but one essentially ceremonial ring and another exceptionally designed burial cairn which has a strong ritual and ceremonial element in its history. The excavations, and notably the long series of radiocarbon dates (App. 10), have shown that this cemetery was conceived as a group from the start. This is a result which is more unexpected for it is normally assumed that such cemeteries grow organically from generation to generation. The fact that the main outlines of the group were laid down in what appears to be one generation and that a ceremonial focus was provided from the start, does not, however, preclude a long history of activity with renewed phases of building, for the dates cover a span of more than 500 years. The continuity, however, lies more in the ceremonial aspects than in the provision of a resting place for the dead.

Definition of the Cemetery

It has long been recognised that the distribution of barrows is not random; that, though some barrows seem to be quite isolated, others are carefully grouped, revealing the intention of their builders to place their monuments in specific relationships to others, or to the landscape, to increase the impact that the monuments might have upon the living (Lynch 1975). In the south of England such barrow cemeteries have long been known and studied. Cemetery clusters, or lines of monuments, are known in different concentrations, some tightly grouped, others dispersed (Fleming 1971, 141–42). In this scheme Brenig may be considered an 'area cemetery'; Brenig 44 and 45 are only 100 m apart, but the average distance is about 500 m and the group as a whole (excluding Brenig 6 which is in a side valley and not visible from the main complex) covers an area of between 2 and 3 sq. km. The spacing, however, is less relevant than the geography of the valley; the mounds are set on prominent ledges or ridge-tops so as to be clearly seen from further down the valley or from significant points within the cemetery itself, such as the Ring Cairn. It is interesting that the latest barrow on Cefn Brenig (Brenig 40) has a far less dominating situation than the other two (Brenig 41 & 42).

Cemeteries may be found in most parts of the country, but undoubtedly the largest groups are in the chalklands of Wessex and of Yorkshire. In the Highland Zone cemeteries are less common and where they exist they are usually small; less than a dozen mounds, compared with the twenty or thirty which are commonplace in the south. The reason for this may lie in the Highland preference for the 'cemetery mound'. Using the term in its strict sense, this is a single monument covering the graves of many individuals buried at one or two communal funerals, not added successively over a long period (Lynch 1971, 54–55). Such mounds are normally isolated structures, for the single monument may serve a whole community in lieu of a cemetery of barrows covering single burials. Only two 'cemetery mounds', Stanton Moor T2, Derbyshire, and Llanddyfnan, Anglesey (Heathcote 1930; Lynch 1970, 136–45) occur within cemeteries.

'Cemetery mounds' are common in the western regions of North Wales, especially Anglesey, and they can also be found in Flintshire (Lynch 1971, 75–77). However, Denbighshire has few incontrovertible examples of the type, and those mounds which have been dug into suggest that they were, like the Brenig barrows, designed to cover a single central burial, even though some, like Brenig 45, may have received additional deposits. One reason for this regional difference may lie in the absence of Early Neolithic settlement in central Denbighshire which was thus 'new land' whose traditions went back only to the later Neolithic when the literal communality of the earlier period was being eroded. A preference for single burials may explain the preponderance of grouped mounds in Denbighshire, although few of the groups are large and none, except Brenig, has been systematically excavated, so that their internal relationships are undefined.

Welsh Barrow Cemeteries

Few barrow cemeteries have been identified in Wales, let alone excavated *in toto*. All the barrows in the group of three at Porth Dafarch, Anglesey, were opened in the last century (Lynch 1970, 92–95; 153–56). One revealed a Beaker inhumation cist at the centre and had been reused in the full Early Bronze Age, when cremation burials were added and when the other two mounds

would seem to have been built. To the east of Brenig, on the Flintshire plateau, in a region with many fine barrows, only one group has been fully investigated. These are the Bryn Gwyn barrows, which were excavated at the beginning of the century (Stapleton 1908; 1909). There were five monuments in this dispersed group; their construction was variable (stone, earthen and composite) but the four which produced good evidence all covered single cremation burials, one in a Vase Urn, the others without pottery. Only in one was there positive evidence of secondary burials.

In south Wales the best-known excavated cemetery is the Six Wells/Sheeplays group near Llantwit Major in Glamorgan (Fox 1959, 62–70; 97–105; 128–77). There were six mounds in this area cemetery arranged, like Brenig, at the head of a shallow valley. Three of them were fully excavated, two were partially cleared, and the sixth, a small mound at the apex of the group, was not touched. The mound on the north side of the valley, Sutton 268′, had had a long and complex history: originally a small cairn with a Beaker inhumation, it was later enlarged with turves to cover several cremations. The four barrows on the south side, Six Wells and Sheeplays, were all turf mounds covering stake circles. Six Wells 267′ covered only a 'ritual pit', while its neighbour had such a pit in the centre with an eccentric but primary cremation. Further up the valley Sheeplays 279′ covered two cremations, and 293′ had a single primary burial with several secondaries dug into the elaborately stake-revetted mound (Fig. 7.18).

The Six Wells/Sheeplays cemetery resembles Brenig in several ways. The setting around the head of a valley, the presence of a monument devoted to non-burial rituals, the predominance of single burial and the fact that several of the components of the group are likely to have been built at the one time, sharing as they do the same mixing and matching of structural features, are all points of comparison.

The three barrows at Letterston, Pembrokeshire, excavated by Savory (1948; 1962–64) had been dug into by Fenton, which may explain the absence of a burial in no. 1. The second barrow was a large turf mound with a primary cremation and three secondaries with Collared Urns. Both these mounds were retained by close-set palisades like those around Brenig 40 and 45 (Fig. 7.17), but of greater relevance in the context of the cemetery and its components is the fact that the third barrow at Letterston covered a small Embanked Stone Circle, which had clearly existed as a ritual monument for some time before the centre was filled in to convert it to a barrow covering a cremation placed in the entrance to the circle.

Cemeteries with Varied Monuments

The composition of cemetery groups has received little comment except in the context of Wessex 'fancy barrows'. Many groups in that area include Bell, Disc and Bowl barrows, variations which are thought to reflect social distinctions. All these 'fancy barrows', however, are burial monuments and thus the variation between the monuments in terms of function and ceremony is minimal. More interesting are those cemeteries which include among the burial mounds other monuments which have a more ceremonial aspect and may be considered the appropriate setting for ancillary rituals, rather than the funerals themselves. Since the presence of one of these monuments, usually some version of the circle, is by no means universal, one must suppose that these ancillary rituals were optional, or perhaps did not always demand a specific location.

It has been shown (p. 143) that structures like the Brenig Ring Cairn normally occur in association with other monuments, usually barrows or cairns. The converse is not true. The distribution of such ceremonial monuments is sporadic; several examples may be found in one region, as here in Brenig/Clocaenog, while other Denbighshire barrow groups such as Rhosdomen, Bwlchau and Mwdwl Eithin, Eglwysbach, are without them. The same is true of Flintshire, where there are no obvious Ring Cairns among the numerous barrows on the limestone plateau (Ellis Davies 1949). In the south there are Ring Cairns among the cairns on the Glamorgan ridges and on Gower (RCAM 1976), but not in the Vale where the barrows all appear to be normal mounds, though excavation has shown that some cover ritual pits rather than burials.

In Derbyshire and North Yorkshire the situation would seem to be comparable; in the lowlands there are few specifically ceremonial sites, although many barrows cover evidence for non-funerary rituals, but on the moors nearly every group of large cairns contains one or more rings or stone circles. Regional concentration is again apparent, for every example in Derbyshire is in the Derwent Valley (Radley 1966). Unfortunately there has been little excavation of whole groups, except on Stanton Moor (Heathcote 1930; 1936; 1939; Hart 1981, 58). Monuments of all kinds are scattered across this flat-topped hill (Fig. 12.1). In a line down the spine are five ring monuments, of which the best known is the Embanked Stone Circle, Nine Ladies. The other excavated example, T2, had a buried ring structure and enclosed a number of cremation burials. It is best interpreted as an Enclosed Cremation Cemetery (p. 140). The records of the Ring Cairn, no. 61, are confusing (Marsden 1977, 108–09) but at least one charcoal deposit was found (Radley 1966, 15). Nos. 43 and 56 have not been excavated. Surrounding these rings, but not obviously focussing upon them, are 67 other mounds and cairns. Three of these proved to be barren, nine of them covered only a single cremation burial while the other eleven excavated sites produced multiple burials, the majority of them in Collared Urns. On Big Moor near Sheffield a similar combination of Variant Circles of different kinds, small 'empty' cairns and burial cairns lies on the slopes above the Barbrook, opposite an area of fields and huts – amongst them the early Bronze Age Swine Sty (Hart 1981, 57–66 and Fig. 12.1). These distinct but complementary distributions

provide a rare insight into the relationship of settlement and ceremonial, often discussed but seldom demonstrated.

In Lowland England it is less easy to recognise the essential variations of barrow design, since the majority appear only as crop marks and, though the grouped distributions which are now being recognised in the river valleys are relevant to questions of populations and territory, they have not added much to our understanding of ceremonial (Green 1974, 124–36). Further west where visible monuments still survive, it is is possible to recognise a lowland equivalent to the Ring Cairn in the Pond Barrow, also an open circular monument with ceremonial connotations (Atkinson *et al.* 1951). Their distribution shows the same sub-regional concentration and the same association with cemetery groups. Other sites less distinctive than the sunken Pond Barrow may have been built in conjunction with barrow cemeteries in the south – things such as the Saucer Barrow in the Snail Down cemetery (Thomas & Thomas 1955, 134–37) or the 'earthen ring' near the Beaulieu barrows – but their nature has not been tested by excavation (Piggott 1943, 2).

In the West Country where ceremonial ideas once more find expression in stone, and are, therefore, more amenable to retrieval by field-work, it is clear that many of the cemeteries include monuments of a ritual nature. The common arrangement of cairn with surrounding stone circle is itself an expression of that link. As more excavation is carried out at grouped monuments it is becoming clear that monuments which may appear to be straightforward barrows mark the site of activities in which burial played only a minor role (Miles 1975, 73–77; Griffith 1984, 82–86).

Cemeteries and Sanctuaries (Fig. 12.1)

In the West Country, particularly on Dartmoor, there is a number of monument groups which may be best described as 'sanctuaries' or cult centres – groups such as Merrivale and Drizzlecombe which contain almost exclusively circles, standing stones, avenues, and alignments (Worth 1953, 209–12; 215–17). These are groups in which the ceremonial and ritual monuments predominate over those which might cover burials. They should be distinguished from the mixed cemeteries which have been discussed above.

In Wales the clearest example of such a cult centre is the complex of circles above Penmaenmawr which is centred upon the famous Druid's Circle (Griffiths 1960). There are many burial cairns on the moors around this sanctuary but they are outside the central plateau which is devoted to the more complex structures. Similar concentrations of ceremonial sites may be recognised in Ireland at Beaghmore (Pilcher 1969), in Scotland at Callanish and Stenness (Ritchie 1975–76), and also at Machrie Moor on Arran (Burl 1976, 145). The famous series of monuments in the Crinan area of Argyll contains a high proportion of ceremonial sites, but also some notable burial monuments, not on the periphery but in the centre, to emphasise the fact that, though we may wish to distinguish the two aspects of ceremony and burial in order to try to see both in sharper focus, the two are, throughout the Early Bronze Age, inextricably interlocked. The existence of Ring Cairns within sanctuaries and within cemeteries such as Brenig underlines their role as the link between the funerary rites of a community and the wider world of religious ceremonial.

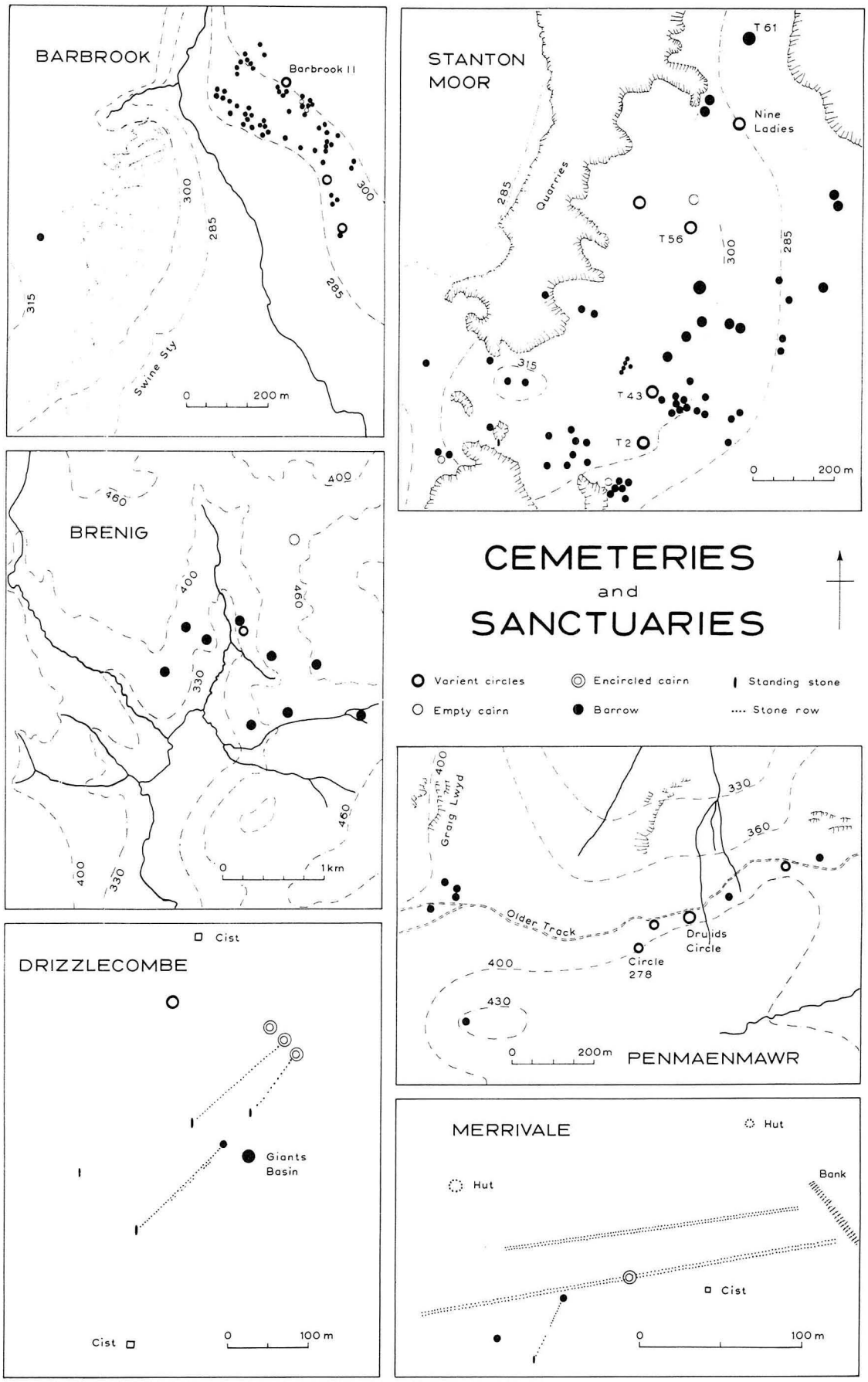
The Growth of the Cemetery

One aspect of the barrow cemetery, its rate of growth, has been frequently discussed. In Yorkshire and in Wessex, both areas of good agricultural land and of relatively dense Neolithic population, the Bronze Age cemeteries often surround Long Barrows or Towthorpe graves, already several hundred years old by the time the round barrows were built. Whether this was a conscious choice or simply the natural result of a continuity of population and settlement it is difficult to say. In Wales there is a conspicuous lack of coincidence between the distribution of Neolithic and Bronze Age tombs (Lynch 1980, Fig. 6:4). Only in the fertile Vale of Glamorgan, at Tinkinswood, and in Anglesey at the Late Neolithic tomb Bryn Celli Ddu, is there any close juxtaposition between Neolithic and Bronze Age monuments. In the less-favoured areas of Britain, therefore, the Late Neolithic shift in settlement which may be easily recognised in Denbighshire (Chap. 5) seems to have led to the establishment of new funerary centres without evidence of previous sanctity.

The other popular candidate for Founder's Grave is a small barrow covering a single inhumation with an early Beaker and perhaps a copper dagger – a Late Neolithic grave at the beginning, in many areas, of the tradition of circular mounds. In several cases evidence from excavation has shown that such graves may occupy central positions within groups, and are often the only ones to have been enlarged and reused on more than one occasion. Warne's excavation of the seven barrows on Lord's Down, Dewlish, is a good example of this situation (Warne, 1866, 46–51).

Whether or not a 'Founder's Grave', be it a long barrow or a Beaker inhumation grave, can be recognised among a group of barrows, and whether one believes that it was proximity to a revered grave or the availability of a good site which was the chief motive for the development of a cemetery, it is normally assumed that it will have grown gradually, barrows being added from generation to generation as chieftains died.

Until recently the main criterion for measuring such a growth was pottery typology. The sequence Beaker – Food Vessel – Collared Urn, ending with various forms of 'crude urn', was thought to cover a period of several hundred years and to represent successive and possibly quite separate social groups. Several cemeteries extensively excavated in the last century in Wessex and in



12.1 Plans of Cemeteries and Sanctuaries.

Yorkshire have produced this mixture of pottery styles and may be thought to confirm this view, a view often strengthened by stratigraphic relationships (Mortimer 1905, Summary table following p. 442). The succession of Bronze Age pottery styles has now, however, been called in question (Burgess 1974, 176). The frequent association of Beakers, Food Vessels and Urns at the same monument, like Brenig 51, and the growing number of radiocarbon dates which indicate an overlap in use, has rendered suspect any sequence based upon typology alone. This is not to deny the possibility of a genuine sequence of building within a cemetery. Grimes' excavations at Burn Ground and at Charmy Down in the Cotswolds demonstrated an undoubted sequence from stratigraphic evidence, one cairn overlapping the next (Grimes 1960, 101–11; 215–23). The frequently-reused barrows on Crichel and Launceston Downs, Dorset, indicate successive burials in the one mound and also the addition of barrows to the group over a long period, for, in addition to several inhumation graves with Beakers, there are mounds with primary cremations and also mounds first built at the time when Deverel-Rimbury pottery was current in the area (Piggott 1944; Green *et al.* 1982).

However, the steady growth from generation to generation, with one mound built at a time, which has been our general model of cemetery development should perhaps be reviewed in the light of the series of radiocarbon dates from Brenig. This was the first cemetery of barrows to be dated as a group. The evidence is not ideal: one of the large turf mounds, Brenig 41, is not dated, and nor are the three small stone cairns; moreover the standard deviation on any date covers a span of almost five generations. However, the pattern of dates is consistent and this encourages some confidence in interpretation. In broad terms the dates suggest that the cemetery was conceived as a group from the start, that it did not grow mound by mound, and that, during a long history of ceremony at the Ring Cairn, the moments of funerary activity in surrounding barrows were few and widely spaced in time, there being no suggestion that the elect of each and every generation were gathered to their ancestors.

Radiocarbon Dates from the Brenig Cemetery

Note: This discussion, which was written in 1979, is based upon uncalibrated dates. The dates were calibrated in 1987 using the University of Washington Program (Stuiver & Reimer). Their inter-relationships, the main topic of this discussion, remain unchanged as is demonstrated in the double chart (Fig. 12.3). This chart places both sets of dates on the same time scale which is, of course, wrong, since radiocarbon time is not measured at the same rate as absolute time, but, since there are no major fluctuations in their divergent relationship between 2000 b.c. and 1000 b.c., it was thought permissible to illustrate in this way the identity of the pattern of dates at both scales.

The dates are listed and the nature of the samples and contexts fully described in App. 10. Using the two-sigma range, they suggest that the cemetery was in use for a period of between 200 and 900 years (realistically perhaps 500 years), and, strictly speaking, this may be all that the dates should be asked to tell us. However, using a combination of the observed stratigraphy and the radiocarbon dates, I would suggest that three main periods of activity can be recognised. All three are reflected in the Ring Cairn, Brenig 44, which maintained its importance throughout, the dates showing a fairly continuous record of deposits there.

The interpretation which follows is not based on any sophisticated statistical analysis of the dates, but the data for such analysis by others is available in App. 10. The points of interpretation which are primarily dependent on radiocarbon dates are, firstly, the contemporaneity of the main group of barrows and the Ring Cairn; secondly, the non-primary status of the central cremation in the Ring Cairn, and thirdly, the relative lengths of time covered by the archaeologically-observable sequences of events at the various monuments.

c. 1700 b.c. – 1600 b.c.

The earliest sites are the Ring Cairn and the main barrows Brenig 42 and 45, which all have initial dates in the early 17th. century b.c. Because of its prominent position we may assume that Brenig 41 also belongs to this horizon, a suggestion reinforced by the likelihood that it covered an inhumation burial. The stratigraphy of Brenig 42 did not suggest a prolonged period of use, but Brenig 45 was a complex monument in which it was possible to suggest a distinction between the central burial and the cremations in pits dug into the top of the turf mound. The radiocarbon dates, however, suggest that there was no significant time lapse and that the burial activity (App. 10, Dates 12–15) was completed in the early phase. However, there was renewed interest in this mound in the latest phase when there may have been some repair of the palisade, giving a date (16) of 1340 ± 70 b.c. (HAR 658); but the context of this determination is particularly uncertain (see p. 75).

c. 1600 b.c. – 1400 b.c.

Statistically there is no significant difference between the initial date for the Ring Cairn (21) and its modification by the addition of banks and a central cremation (Dates 22, 24 & 26), but archaeologically a time-lapse can be recognised in the dilapidation of the wall and, moreover, within the general pattern of the dates it is possible to recognise here and elsewhere in the cemetery a middle period of activity lying broadly between 1600 b.c. and 1450 b.c. Within this period would fall the construction and use of Brenig 51, whose three dates (18–20) show considerable overlap, indicating more rapid modifications to this monument, as, indeed, the plan suggests.

The two dates from Brenig 40 (10 & 11) come

from two substantial oak planks of the 'mortuary structure'. The difference of 90 years is not statistically significant and some variation might be expected in any case since one plank may have been cut from the heart-wood of a long-lived tree. For discussion it may be convenient to assume a mean date of about 1425 b.c. for this barrow, indicating the conservatism of funerary custom in the valley, for features such as the stake circles, turf mound and burnt mortuary structure are all virtually identical to those in the barrows built some 250 radiocarbon years earlier.

c. 1400 b.c. – 1200 b.c.

The final period of activity in the cemetery is represented by charcoal-filled pits (Dates 25, 27, 28), Pit B (Date 29) , and the final burials (Date 30) at the Ring Cairn, Brenig 44, the latest of which are significantly different in date from Phase II of that monument. The latest date (16) from Brenig 45 indicates that there was then some refurbishment of the monument, but it is unlikely that any further burials took place there at that time. The only later monument is the Kerb Cairn, Brenig 6, which is outside the cemetery proper. Here the date of 1120 ± 90 b.c. (HAR 536) is not, strictly speaking, related to the building of the cairn but comes from a hearth overlying the wooden structure which was also covered by the cairn. This Kerb Cairn is a minimal monument and it has been suggested (p. 101) that it represents the waning of the tradition in which the bones of ancestors formed an integral part of the cosmology.

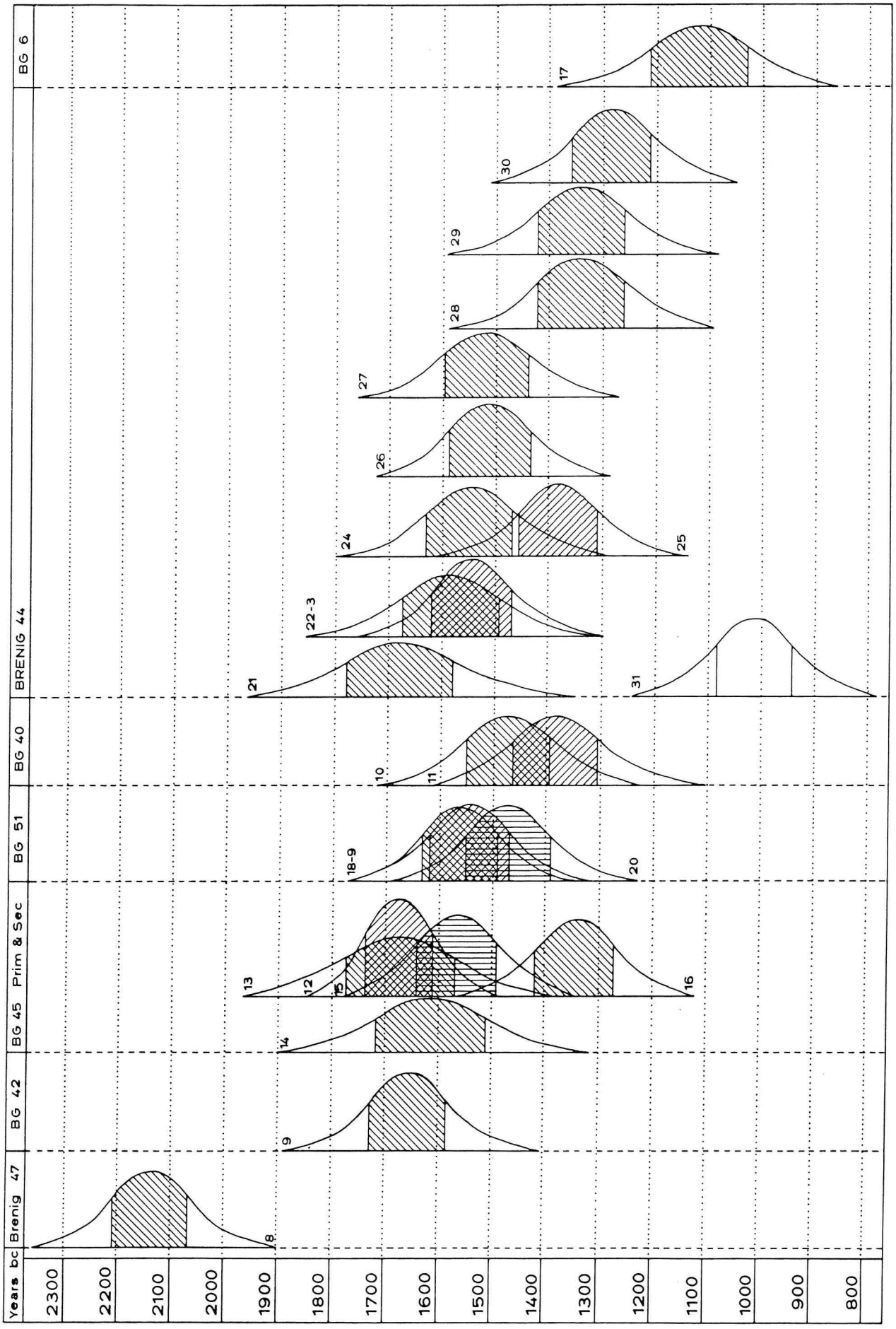
Single-Period Cemeteries

The conclusion that a cemetery such as Brenig might have been conceived as a group of monuments from the start and that any additions would represent peaks of activity quite widely spaced in time rather than an even, generation by generation, development receives some corroboration not only from the very conscious use of landscape that some cemeteries exhibit (RCHM, 1970, Ridgeway) but also from a consideration of archaeological evidence. Mention has already been made of some extensively excavated cemeteries which do seem to show genuine evidence for sequences of building; equally, a remarkable uniformity is to be found among some other groups. Mortimer, speaking of two clusters of barrows within the Blanch Group, comments on the consistency within each group and the contrast between the two, clearly a contrast between sharply defined periods rather than a gradual accretion of monuments (Mortimer 1905, 322). The preliminary results from the extensive excavations at Snail Down, Wiltshire, may be interpreted in the same way, though the group is more complex and the material more ambiguous (Thomas & Thomas 1955). On Stanton Moor, too, the similarity of the pottery and grave goods suggests that all the monuments were built within a short period of time, but without more objective dating systems it is impossible to refine the argument (Heathcote 1930; 1936; 1939). It is noteworthy that Stake Circle Barrows tend to be found in groups, but, though this may be suggestive of contemporaneous construction, the evidence from Brenig itself shows that this is not necessarily the case. Only where a good series of dates is available, such as the three dated Kerb Cairns in the Aline Valley, Argyll (Ritchie *et al.* 1974, 5) or those in the Colliford reservoir basin (Griffith 1984, 49), all very close in date, and the series from the excavations at West Heath, Harting, Sussex (Drewett 1976; 1985) (which suggest a sequence of building), can one hope to draw conclusions about the way in which a cemetery has been developed. However, the continuing imprecision of the dating method means that any hope of firm conclusions is premature.

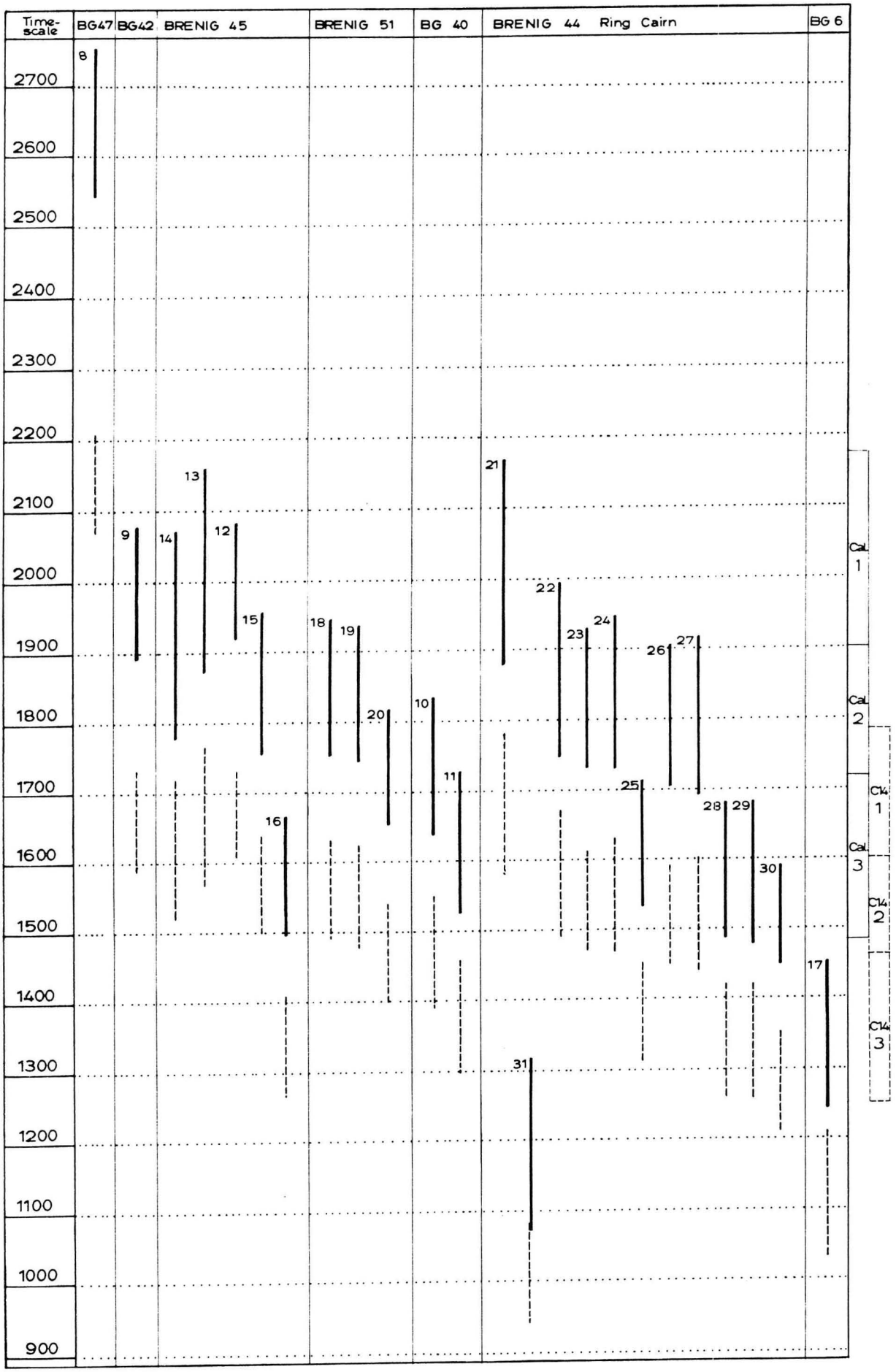
With these provisos in mind, therefore, one can perhaps say that the dates obtained from the Brenig cemetery suggest that such groups may not always have grown regularly from generation to generation; that Early Bronze Age religious practice (at least in surviving, tangible form) may have been subject to peaks and troughs the cause of which we cannot know. The history of most parish churches in Britain reveals a similarly uneven picture over the last 500 years; from a flurry of foundations, through almost two centuries of apparent neglect to a rash of restorations and many new buildings, and now, increasing redundancy. The comparison with churches rather than with burial grounds is apt because the composition of the cemetery and the irregularity of its burial record suggest that the practicalities of burial are less important than the possession of a religious centre. The fact that it is the ceremonial monument, the Ring Cairn, which has the longest and fullest history reinforces this view – a view endorsed by recent excavations from many other parts of the Highland Zone. However, burials did continue to be made within the Brenig cemetery in the later phases of its history and new monuments were even built for this purpose, so it remains appropriate to refer to this centre as a 'cemetery' even though we may suspect that the community who built it and used it through more than five centuries had deeper religious motives when they came to participate in ceremonies at the head of the valley.

The Burial Customs

The funerary rites in the Brenig cemetery have already been discussed in the context of the main burial monuments – the four large barrows, Brenig 40, 41, 42 and 45 (pp. 76–8). Although the large grave under Brenig 41 probably held an inhumation, and Brenig 45 contained several secondary deposits, single cremation was undoubtedly the dominant system. A study of the minor stone cairns and of the more unusual, quasi-ceremonial monuments confirms this pattern and reveals the varied arrangements which might be made for the disposal of the burnt bones. Some cremations were buried in large, shallow graves (Brenig 8 & Brenig 45), some were associated with



12.2 Brenig cemetery: uncalibrated radiocarbon date chart. Equal area curves (Warner 1975, 1976 (modified)) have been used; samples from the same or similar contexts rest upon a common baseline.



12.3 Brenig cemetery: calibrated and uncalibrated radiocarbon date chart to show unchanged date relationships. Solid lines : calibrated; Dashed lines : uncalibrated dates

rectangular wooden structures (Brenig 40 & 42); some were in pits with urns (Brenig 44, 45, 51), others were without an urn (Brenig 14, 44, 45 & 51), yet another was without the protection of an urn or a pit (Brenig 6); while the cremation which survived in Brenig 46 was in a small cist on the old surface.

No more than 21 persons were buried during a period of perhaps 500 years in this large cemetery. This is a surprisingly small number and must be only a very selective sample of the community who built the monuments. Of these 21, 12 were adults, three of them probably elderly, and only four were children. In five instances the quantity of bone surviving was too small for identification; in two (Brenig 51:B & 44:20:B) one urn held the bones of two individuals, and in the large burial pit dug late in the history of Brenig 44 (BG44:F20) the bones of the three persons must have been buried at the same time; elsewhere in the cemetery the funeral ceremonies were strictly individual.

The Pottery (Fig. 12.4)

The discovery of seven burial urns and an accessory cup has more than doubled the number of Bronze Age pots known from west Denbighshire and the fringes of Hiraethog. This is especially true of the Collared Urn series, which was not previously well represented in the area. However, when it is remembered that eleven monuments were excavated and over twenty burial deposits found, it will be seen that the use of ceramic containers was relatively rare in this community.

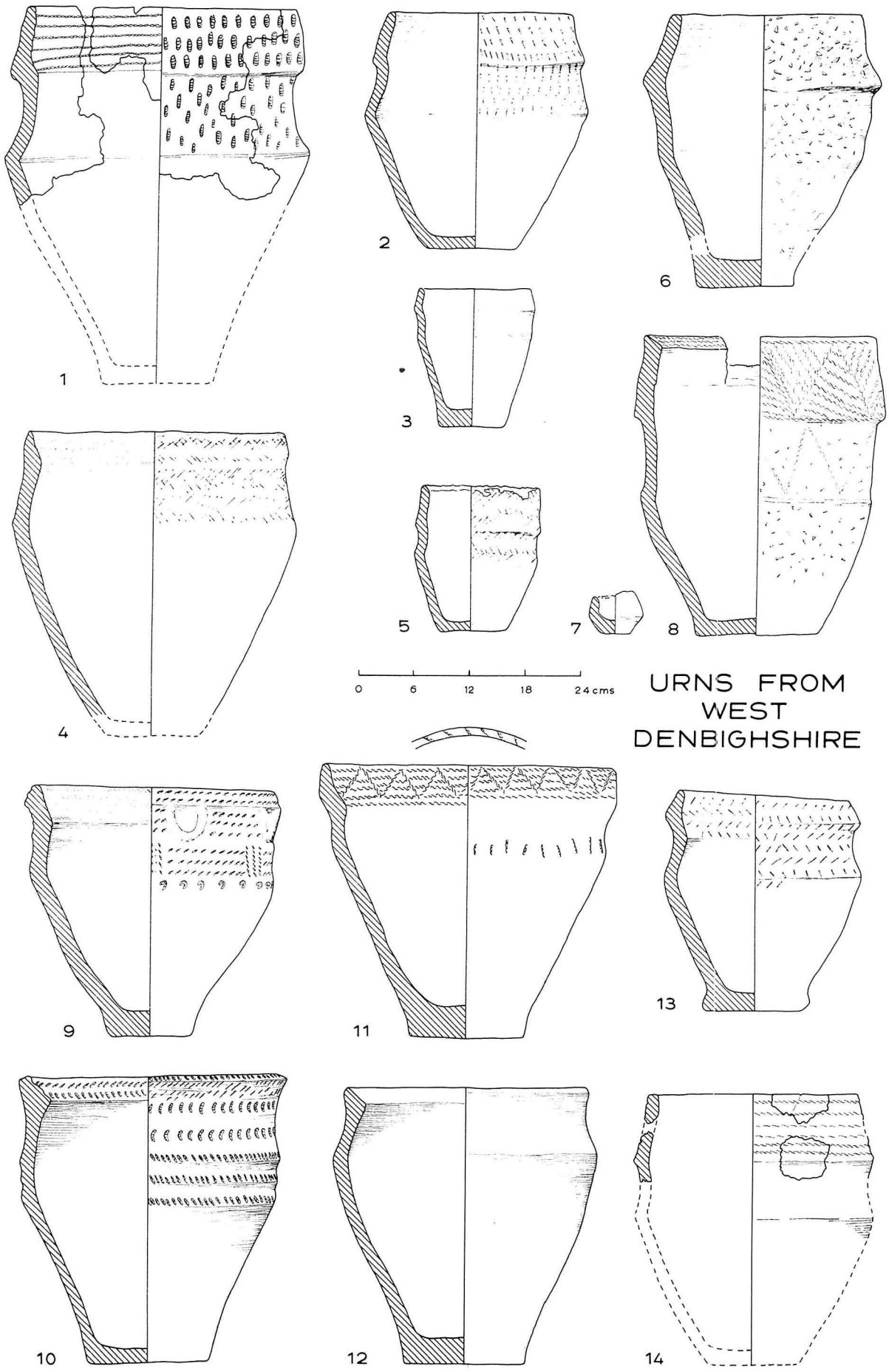
The radiocarbon dates from the monuments suggest that both Collared Urns and Vase Urns were in use at the same time and that, moreover, the Beaker sherds beneath Brenig 51 belong to the same period. Brenig, therefore, provides another instance of the now well-established contemporaneity of the best-known styles of Early Bronze Age pottery (cf. Longworth 1984, 80). The earliest dates are associated with the two Collared Urns from Brenig 45 (both approximately 1670 b.c. (App. 10, Dates 12 & 13), but the other Collared Urns from the valley are apparently a good deal later. The small urn, A, from Brenig 51 has a date of 1470 ± 70 b.c., much the same as the date associated with the large urn from Brenig 40 (Dates 10 & 11), but earlier than the date of 1280 ± 70 b.c. (Dates 18 & 19) from BG44:F20.

Petrographic analysis has been carried out on the clay of all the burial urns and of a selection of the Beaker sherds from beneath Brenig 51 (App. 4). This work has demonstrated differences between the Beaker material and the urns and, within the urn group, some variation between the pottery from Brenig 45 and the rest, with BG.44:B also standing out as slightly different; but the stronger impression is of similarity. It is noteworthy that BG51:B, the Vase Urn, which is typologically within a different tradition, is the same as the others in both fabric and firing. In manufacture, therefore, as in date, the pottery forms a single group – or tradition – in spite of its typological variety. Whereas there are variations within the group, so that an individual sherd may be dominated by clasts or grits of one particular category, no one category occurs exclusively and varying admixtures are to be found in one sherd or another, suggesting that all the sherds (both Beaker and urns) were manufactured from sediments derived from a single region, but one of complex geology.

Such geology is decidedly alien to Brenig itself, which presents a relatively simple solid geology of Lower Palaeozoic mudstones and sandstones and a superficial geology effectively free of exotic rock types. All the pottery, therefore, whether domestic or funerary, must have been imported from elsewhere throughout the use of the cemetery. This conclusion is all the more astonishing because the possible source of such an unusual petrographic assemblage would be decidedly limited geographically, the most likely place being the Welsh Borderlands (Shelve and Malvern areas). The exploitation of the high quality clays of that region is well known in the Iron Age and later and it now seems that 'commercial' pottery-making may have been established there for many centuries before that, for comparable clast materials have been found in later Neolithic pottery from Moel y Gaer, Rhosesmor, which may have had a source in the same region (Jenkins in Guilbert forthcoming). Obviously much more analysis would be needed to demonstrate a convincing distribution pattern, especially in view of the marked absence of Collared Urns in the region (Longworth 1984), but the Iron Age situation shows that such long-distance contacts are possible within relatively primitive societies, and may become even more understandable when their historical depth is realised. Interestingly the only direct evidence for Iron Age activity in the Brenig area is three sherds of 'Malvernian Ware' (p. 160). It should also be stressed that the distinctive suite of rocks which dominates the Anglesey Bronze Age pottery fabrics (Williams & Jenkins 1976) is nowhere present amongst the Brenig material.

The distinction between the two main types of funerary urns, the Vase Urns (or Enlarged Food Vessels) and the Collared Urns, is a puzzling one (see also p. 158). Both types of pot were available at the same time, were in use by the same communities (as their presence in cemetery mounds makes clear) and were probably made by the same manufacturers (Jenkins in Lynch 1984, 45–48) and yet, though they often exchange stylistic features, the two traditions remain recognisably distinct for what must have been several hundred years.

Amongst the Brenig pottery, BG51:B, with its slightly concave neck and internally bevelled rim, is undoubtedly a Vase Urn and as such belongs to a tradition which is fairly well represented in the Hiraethog area. The two pots from Bedd Emlyn and the undecorated one from Farmyard, Llanrwst (Fig. 12.4) are comparable, as are two others on the Flintshire Plateau east of the Clwyd; from Llanasa (Savory 1956, Fig. 3.9) and from Ffrith y Garreg Wen (op. cit. Fig. 4.5). This last is the closest parallel since it has a broadly similar decorative



12.4 Bronze Age pottery from west Denbighshire: 1–8 Brenig cemetery; 9–10 Clocaenog; 11 Eglwysbach; 12 Farmyard, Llanrwst; 13 "Gorsedd Bran"; 14 Llanrhaiadr.

scheme. It suggests an eastward connection which is confirmed by a study of the other pottery.

Most of the pots from the Brenig valley are Collared Urns, but within that group they show considerable variety. Two are considered to belong to the Primary Series of which one, the large urn from Brenig 40, has no less than six of the traits which define this typologically early group, although the radiocarbon date would not suggest that it is especially early in chronological terms. It has been admitted (Longworth 1984, 29) that this purely typological distinction has little chronological validity in detail and the Brenig situation would reinforce that caution. However, the range of dates for the group as a whole conforms well to that obtained from urns elsewhere in Britain, which tend to cluster between 1700 b.c. and 1100 b.c. (Longworth 1984, 79). The sizes range from large (BG40) to half-scale (BG51:A and BG45:2); small pots which, as here, are often used for ancillary purposes. Two of the pots are undecorated but various techniques are used on the others; twisted cord, whipped cord, incision and stab marks. The surface treatment and standard of potting also differs; BG40 has been well smoothed, almost polished and most competently fired, whereas neither BG51:A nor BG44:A has been well fired and the latter pot is badly made in every way. Such variation and especially the poor quality of some is surprising in view of the fabric analysis, which suggests that they have all been imported from far away.

The group, therefore, shows little internal coherence; they are all Collared Urns, but have no familial features. Likewise there are no close parallels among the other Collared Urns from the region. Discounting the urn now in St. Asaph, which probably comes from Brenig itself (see p. 39), the other urns, from Cwm (Longworth no. 2016), Gledlom, Ysceifiog (2034), Cefn Goleu, Llanferres (2020) and Holt, near Wrexham (2018) provide only comparisons of a general type. All these comparisons lie to the east and it is noteworthy that none of the particular characteristics of more westerly Collared Urns in Wales (Lynch 1971, 59) is to be seen in the Clwyd pottery, except at Llangwm (Savory 1980, Fig. 58), well to the south.

The recent corpus of this pottery (Longworth 1984) has listed 2255 urns and shown them to belong to a style or tradition with a limited range of variation, and yet surprisingly few closely similar pots can be found amongst them. Thus they have defied sub-division and regional classification except in the broadest terms. This has led Longworth (1984, 81) to the view that they all result from very localised domestic manufacture, a view which he believes is upheld by the results of analysis of fabrics in the south of England. In Wales, however, the greater variation in geology lends fabric analysis more weight and the results suggest that these urns are not the product of an entirely domestic industry but of 'professionals' with trading networks of varying size (Jenkins & Williams 1976). The network suggested by the Brenig analyses is rather larger than might have been supposed and might be called in question by the remarkable absence of Collared Urns (or perhaps of surviving barrows) from the West Midlands, but nevertheless the real possibility of trade in this pottery should not be rejected out of hand, especially in the light of the undoubted importation of other materials, such as flint, into the valley.

The Pigmy Cup, which was not analysed, is very small and completely undecorated and consequently does not lend itself to elaborate discussion. It is broadly similar to an undecorated group of especially small contracted-mouth cups (Longworth 1984, 53, e) which has a distribution predominantly in the north-east of England, but has been found westwards, in Cheshire and Ireland. In Wales the use of small cups like this, whatever their exact role in the rituals of burial, would seem to be a feature of the west, and especially the south-west, rather than the north-east, but the style of the pot itself conforms to the pattern of northern and easterly contacts suggested by the rest of the pottery.

On the other hand the separate burial of infant earbones is a distinctive and ill-understood ritual which, at present, does seem to have a western Welsh bias, although one may suspect that it was originally more widespread. It is uncertain whether the bones in BG45.2 (p. 73) should be equated with the less ambiguous deposits in Anglesey (Lynch 1971, 57), but it is noteworthy that a small urn was chosen for their burial. The use of Collared Urns of about half the normal size for 'non-standard' deposits is a quite common, but not exclusive, phenomenon. There is another instance at Brenig 51:A which contained only charcoal; other examples could be cited from Anglesey (Bedd Branwen K and M (Lynch 1971, 28)) and from the Ring Cairn on Penmaenmawr (Griffiths 1960, 327).

The Grave Goods

The number of grave goods accompanying the burials in the cemetery was extremely limited; only two had formal offerings with the corpse on the pyre. Although the craftsmanship of the flint tools and of the bone pommel is of a high quality, no exotic materials are involved and they do not give the impression of a wealthy community.

Perhaps the most interesting object is the small bone pommel from the primary burial in Brenig 51 (Fig. 10.8). This is of a type found quite frequently with cremations but never in association with any knife blade. This, together with the small scale of the pommel and therefore of the hilt, has led to the suggestion that these pommels must have belonged to special funerary knives made perhaps from wood (Lynch 1971, 61–62). The blade would be comparable in scale to the small bronze knife from the rich 'Manton' grave at Preshute G1 in Wiltshire, where the pommel was of amber (Annable & Simpson 1964, no. 208). These small pommels, which are broadly similar to the larger, more functional, types, form a very tight group, almost identical in size, shape and system of manufacture (Hardaker 1974), so much

so that one might wonder whether they were made by a single workshop, for the drilling tools and skill demanded suggests some specialisation. There are six examples from north Wales; one from the Lleyn peninsula, three from Anglesey, one from Flintshire and this one from Denbighshire. Their distribution is continued eastward with examples from Cheshire, Staffordshire, Yorkshire and Derbyshire. This pattern of contacts between north Wales and the south Pennines is repeated so often that one may suggest the emergence of a 'culture province' in some aspects of life. This particular custom, however, may not have been exclusive to this region, for one of these pommels has recently been found in Bedfordshire (Hall & Woodward 1977, 4–5 D).

The clay 'ear studs' or 'plugs' from Brenig 44 (Fig. 11.9) are perhaps another example of the same east-west cultural province. None has previously been found in Wales, but there are examples from Cheshire (Rowley 1974) and Derbyshire (Heathcote 1936, 32) and several in jet from Yorkshire (Elgee 1930, 111; Mortimer 1905, 47). In the south of England there is one clay example from the 'Manton' grave (Annable & Simpson 1964, no. 201). Their purpose is far from clear and the name 'ear studs' is simply a term of convenience. Whereas there are four instances of their being found in pairs, single examples are as common; the pair from Wharram Percy Barrow 70 was found close to the base of the skull of an adolescent (Mortimer 1905, 47), but apart from this, there is no useful information about where they might have been worn. The seven Yorkshire examples are all made of jet; the one from Derbyshire (Stanton Moor T13 (Heathcote 1936, 32)), found in a Pigmy Cup with sand and a few bones, was of clay and so was the single example found with a secondary cremation in a Collared Urn from the barrow near Gawsworth, Cheshire (Rowley 1974). The clay examples are relatively soft and if they had been used as some kind of pulley signs of wear might have been expected, but none has been observed. It is more doubtful if use as a garment fastener would have caused wear and this purpose is one which is conceivable since metal studs of approximately this type certainly existed in the Scandinavian Bronze Age (Broholm 1952, 53).

The whetstone from Brenig 8 should not perhaps be considered as a grave offering in the true sense since it was not found actually in the grave. However, since whetstones were frequently placed with the dead, it is reasonable to refer to it here. It is a very simple piece, just a neatly shaped and smoothed stone without a perforation (Fig. App. 3.2), and as such it provides no specific cultural or chronological clues. A very similar piece came from the summit cairn on Drosgl, Caernarvonshire (Crew 1985) and an even less elaborate example from Pot B at Bedd Branwen, with a radiocarbon date of 1307 ± 80 b.c. (Lynch 1971, 29). A more conventional, perforated example was found in Ffrith y Carreg Wen, a frequently enlarged barrow near Holywell (Williams 1921) and several irregular ones were used to line a cremation hollow in the centre of the Druid's Circle, Penmaenmawr (Griffiths 1960, 326). This last example, together with whetstones found in a 'ritual pit' at the foot of a Standing Stone at Miskin, Glamorgan (Vyner 1977, 22–23), serves to emphasise the symbolic importance that these functional everyday objects seem to have acquired.

The plano-convex flint knife (Figs. 10.8, 11.9 & App 3.2) is the commonest of the grave offerings at Brenig, sometimes, one suspects, included inadvertently. The very neatly-made example from BG44:F20, however, was certainly a deliberate deposit, driven into the top of the bones in Pot B. The edge is so finely worked and so undamaged that it may have been made specially for the funeral, but it had certainly been on the body at the time of cremation for the surface had been whitened and glazed by the very intense heat. This characteristic glaze was found on the broken knife tip discovered amongst the bones in BG51:6 and also on the fragment found amongst the charcoal in BG44:F7, a 'charcoal pit'. In this instance it was thought that the presence of the broken knife indicated that the charcoal had come from a funeral pyre, but analysis of the wood employed suggested otherwise (p. 136). Another, unburnt, knife was found beneath the cairn of Brenig 51, close to the primary grave (BG51:171 – Fig. App. 3.2). This was very neatly worked on high quality flint, but since it was not burnt and was not actually in the grave pit, it should perhaps be considered a casual loss by one of the mourners rather than a true grave offering.

The knife from BG44:F20 is a classic example of the type defined by Clark in 1932 and recognised by him as a frequent accompaniment to Food Vessel burials. In Wales, where any cultural distinction between Food Vessels and Collared Urns seems to have disappeared (if it ever existed), it is not surprising to find such knives with cremations in both Vase Urns and Collared Urns (Healey in Ehrenburg *et al.* 1982, 208–10). They were presumably the personal knives of those who could not afford a metal blade, used for eating and all manner of cutting tasks; some might be of high quality, fashioned from good material to a specific pattern; others were made more perfunctorily.

Other Bronze Age Tools from the Valley
(see also App. 3)

Flint implements in Bronze Age work traditions cannot be easily distinguished from Late Neolithic artefacts, already being made from high quality, non-pebble flint. Furthermore their stratigraphy demonstrates that in this valley the distinction has little meaning. There are three main contexts likely to produce flint specifically of Bronze Age date; the remnant occupation layer under Brenig 51, from where there is some evidence of implement manufacture, dated by radiocarbon to the full Bronze Age (App. 10, Date 19); cremations with accompanying grave goods (already discussed), and the make-up of the barrows themselves. This last context is by no means secure for earlier material may have been incorporated in

the turves, which in any case were brought onto the site from elsewhere (p. 56).

Conclusion

A consideration of the typology of the pottery used in the valley is not especially instructive since the styles are, in broad terms, universal, and no strong regional flavour emerges. Analysis of the clay, however, hints at a far more interesting situation; a community with long-standing commercial links eastwards and south-eastwards into the Welsh Marches. Their high quality flint most likely came from the same direction, perhaps mainly as ready-made implements since there is so little waste. Their tradition of single burial would also suggest south-eastern rather than western links, but they shared some details of their funerary customs with people in Anglesey and the Lleyn peninsula. In matters of ancillary rituals and in the accoutrements of the dead they followed a practice to be found right across north Wales and north-eastwards into Yorkshire. This same cultural province may be recognised in their choice of ceremonial monuments.

CHAPTER THIRTEEN

Prehistoric Settlement

INTRODUCTION

During the Early Bronze Age the land at the head of the valley seems to have been devoted entirely to the commemoration of the dead. Excavation on the flat land between Brenig 44 and 45 revealed evidence of earlier activity, but none that could be considered contemporary with the monuments. A trench running between Brenig 40 and 41 was bare of any indication of human activity at any time. The monuments were carefully placed on natural eminences on either side of the river so that they enclosed the visitor or worshipper walking among the barrows and could also be seen well from the broader, southern end of the valley. One may suppose, therefore, that it was in this southern area that the homes of the builders lay, as did the chief farms of a later date.

Analysis of the pollen from the buried land surfaces beneath the barrows shows a picture of moorland vegetation not very different from that of today. The predominance of heather suggests that the valley sides would not have provided grazing of very high quality and the impression is that the area was not under any form of agricultural management. Such a situation, with little grazing land and certainly no evidence for arable farming, supports the view that the Bronze Age communities lived and worked further down the valley.

However, there are, in the upper end of the valley, three sites which did produce evidence for some sort of domestic presence, but in no case was sufficient information available to ascertain the true nature of the activity there. One of these sites consisted of a spread of occupation soil with charcoal and pottery which was certainly contemporary with the use of the cemetery, but there was no evidence for structures or hearths; the other two sites provided plans of two circular wooden buildings with internal hearths but did not produce cultural material in any abundance and would seem to belong to a post-cemetery phase. The group of 30 cairns on Waen Ddafad, evidence of agricultural rather than sepulchral activity, is also considered here, although a prehistoric date was not proved.

BRENIG 51 (for excavation account see p. 102)

Frances Lynch

The earliest and most extensive of these 'occupation sites' lay on the top of the eastern ridge in the area subsequently covered by the Platform Cairn, Brenig 51. The 20 sq. m of truncated occupation soil must represent only a small proportion of the original area of settlement, the extent of which could not be established because the characteristic grey soil had been stripped from a wide area on all sides of the monument. Since only a small area was identified, the absence of hearths or post- and stakeholes may not be very significant, but the lack of structures does make it difficult to make many useful comments on the nature of the activity here.

The site is very exposed, and more suitable living areas may be found nearby; but this does not preclude its choice for habitation. The pollen from this occupation soil (Chap. 2, Fig. 2.6) indicates a predominantly moorland vegetation similar to that on the west, where there was no evidence for occupation, but as well as the heather, there was cereal pollen, perhaps from grain brought in as food. This pollen, together with the worn and abraded condition of the pottery and charcoal, and the well-trodden soil, supports the view that people were living on this spot and that they lived there for quite some time. Perhaps their work was connected in some way with the burial monuments rather than with the normal business of agriculture. Finally this settlement was destroyed to make way for yet another monument. It may have been simply abandoned, but the clearance of the site suggests more deliberation.

Although one cannot be certain of the nature of the occupation on the ridge, one can be sure that the people there used Beaker pottery (see Chap. 5); some of it the thin, fine ware normally found with burials, the bulk of it a coarser fabric, usually dubbed 'domestic'. In view of the fact that Collared Urns and Food Vessels were being used in the vicinity at the same time, a mixture of styles might be expected, but, apart from one sherd (BG51:97) which might belong to a Food Vessel, there is no indication of this. All that can be said of the 16 recognisable pots is that they are consistent with the later range of Beaker styles, as indeed the radiocarbon date of 1550 ± 70 b.c. (HAR 803) would suggest (p. 104 and Fig. 10.2).

Compared with southern England, Yorkshire and Scotland, the number of Beakers found in Wales is small and, of these, the proportion that comes from settlement sites is even smaller. Such settlements are normally recognised by a scatter of broken pottery and perhaps a few random stakeholes and a pit or two; seldom does any coherent house-plan survive (Gibson 1982, 39–43). Those few which are known suggest a small and rather flimsy structure which contrasts with the earlier Neolithic farmhouses, but seems to be comparable, in size at least, to other types of Bronze Age houses, where these are known. Their light construction has suggested a more mobile, herding economy, but in general the continuing evidence for arable farming does not

confirm this. In Wales no extensive settlement sites are known. Most non-sepulchral Beaker contexts are represented by a few sherds from a surface collection, such as Newborough Warren in Anglesey (Lynch 1970, 87–89); from a protected surface, as at Fourcrosses near Welshpool (Warrilow et al. 1986, 72–73); or an isolated pit like the one in the later enclosure at Collfryn in Montgomeryshire (Britnell 1989, 124; microfiche). Their locations include moorland sites such as Brenig 51, and coastal dunes which might well be appropriate to mobile groups, but the Montgomeryshire sites are on good agricultural land and it is obvious that the present distribution is only a fraction of the real one, for Beaker burials may be found in all types of environment.

Although there are instances of early Beaker material both in coastal settlements in Wales and associated with the final use of some megalithic tombs, most of the Beakers in Wales belong to the later phases of the style and are clearly derived from central England where their use had been established for some time (ApSimon 1976, 48–51). The use of the Beaker is most frequently noted in graves, quite possibly denoting membership of a cult group and, in the middle phase, it is largely restricted to such sepulchral or quasi-ritual contexts. In the later phases of its currency it begins to appear more frequently on domestic sites while becoming rare in graves, a development which suggests a shift in status. The situation at Brenig, in typology and in radiocarbon years belonging to this later period, fits this pattern admirably. The one possible inhumation grave, Brenig 41, contained no pot – perhaps a 'Beaker burial' without a Beaker, while Beaker pottery of quite good quality was used for presumably domestic purposes on the eastern ridge.

While it is possible, therefore, to trace a relatively straight-forward sequence in the use of Beaker pottery in Britain from a first tentative appearance, through a confident and prestigious use in ritual and graves, to a gradual decline into everyday domestic equipment, it is much less easy to explain the relationship of this strand in ceramic history to the other contemporary styles developing alongside it. Variation in the use of pottery has long been the mainstay of archaeological explanation, which has centred on changes through time and changes due to different ethnic backgrounds. To these original explanations have been added differences in status within the same community (which might have an ethnic origin) or differences in function prescribed by tradition (such as the different shape of modern coffee- and teapots). More recently the recognition of the role of trade in the dispersal of pottery has added a new complicating factor. It is probable that all these explanations are true to some extent and at some time in the history of the development of the widespread and long-lived pottery styles of Late Neolithic and Early Bronze Age Britain; but it remains impossible for us to know why a community such as that in the Brenig valley, presumably a social unit of some cohesion by the 16th. century b.c., should choose to use both Collared Urns and Vase Urns for burial while using exclusively Beaker pottery in domestic circumstances, especially as the burial urns were not pristine nor made specifically for a funeral. Moreover, the pull of tradition must have been as strong in manufacturer as customer because it would seem that all this pottery had come from the same production area, well away from Brenig (App. 4).

The continuing stylistic distinction of the three main traditions of Early Bronze Age pottery is demonstrated by the material from Brenig, but their context and dating show just as clearly that these distinctions have little social meaning that we can now explain, and even less chronological significance. This mixture may have been acceptable here because all these styles would seem to have had their ultimate origins far away from north Wales.

OTHER POSSIBLY DOMESTIC SITES

David Allen

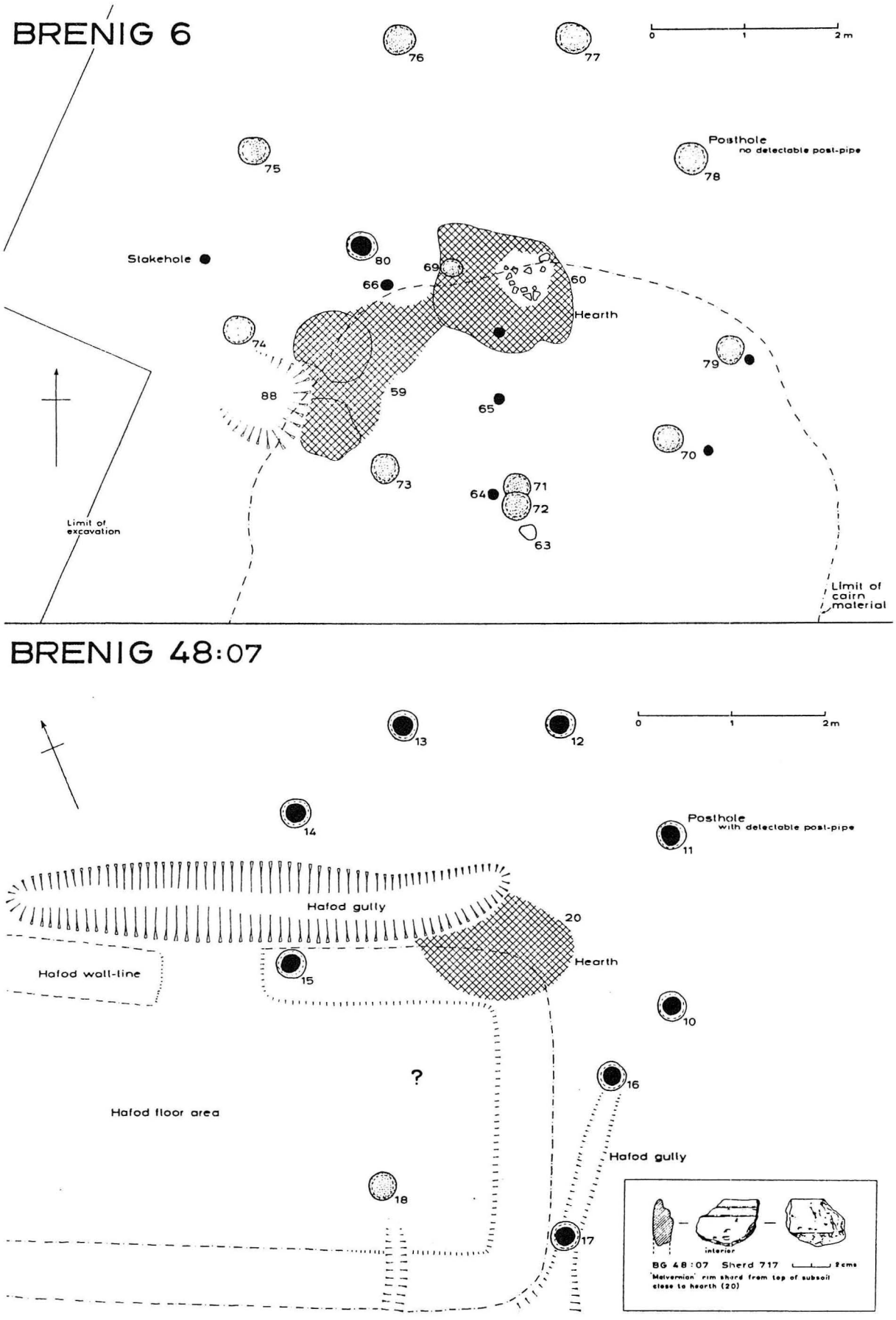
The other sites of potentially domestic occupation in the head of the valley are at Brenig 6 and Brenig 48:07, where circular wooden structures were found (Fig. 13.1). Both might be interpreted as houses but in neither case is the evidence completely satisfactory, since there is a notable absence of domestic debris. It should also be remembered that, though the ground plans are so similar, they differ considerably in date, for the posts at Brenig 6 had been demolished before 1120 ± 90 b.c. (HAR 536), whereas three sherds found in the vicinity of Brenig 48:07 suggest construction in the second century b.c.

Brenig 6 (for excavation account see p. 97).

The domestic interpretation of Brenig 6 is the weaker of the two, for the ring of posts there could well have played some funerary role even though it is not concentric with the cairn. Such wooden circles were obviously popular with earlier generations in the valley and the fact that it was carefully dismantled before the cairn was built would suggest ritual activity.

However, the scale of the structure, the ground plan and the central position of a fire pit, if not a more conventional hearth, are all compatible with its interpretation as a house of common prehistoric type. The substantial posts form a ring some 5 m in diameter, which might or might not have been the actual wall line. No obvious doorway can be recognised but it may have lain between postholes 70 and 71, where a post had been replaced. No central support would be necessary in a building of this size but there are two postholes (80 & 69) which might relate to the roof, though both differed in character from the other postholes and may belong to the later phase. A line of stakeholes running from the 'door' to the central hearth might mark some internal division of the room.

The later construction of the cairn and very extensive animal burrowing may have destroyed



13.1 Circular structures (?houses) at Brenig 6 & 48; Malvernian sherd.

the floor surface but, apart from a few flint implements (App. 3), the absence of domestic debris is worrying; and indeed this position on the very bottom of the valley would seem to be uncomfortably damp for settlement, even though the presence of Hen Ddinbych demonstrates the agricultural possibilities of this side valley, where pollen evidence (Waen Ddafad profile, Chap. 2) suggests rather more, or nearer, arable activity than in the head of the main valley.

Brenig 48:07 (Fig. 13.1 & Pl. 13.1a)

An unexpected result of the work at the Post-mediaeval *hafod* (see Chap. 14), was the discovery of a timber building of probably prehistoric date. It was located above the stream in an area of gently sloping ground, later occupied by one of the rectangular, stone-footed foundations.

The Structure

Ten postholes were found, seven of which (10–16) formed the major part of a circle 4 m in diameter which centred upon a patch of scorched subsoil (20), presumably the remains of a hearth. The likely position of the final posthole of the ring fell within the *hafod* and had been worn away. It may well be that the extra posts to the south (17, 18) formed a porch, but this too would have required an additional post in the damaged area and the full plan remains uncertain. The postholes were similar in character, having cylindrical post-pits which averaged 0.25 m in diameter and 0.3 m in depth. The post-pipe and packing (mudstone slivers and redeposited subsoil) were discernible in all except no. 18, which had been damaged by the wear of the later floor. The fill of the post-pipes was more variable. Five (10, 12, 13, 15 & 16) contained large stones and dark brown soil, whilst the remainder held grey or grey-yellow clay. All these features lacked the pronounced iron pan present on the sides and bases of the Post-mediaeval stakeholes, pit and gullies.

These scant remains could be those of a small round-house. The plan is approximately symmetrical if it is assumed that one post is missing (? on the plan, significantly in an area of maximum disturbance) and postholes 17 and 18 formed a porch. On the other hand the narrowest gap, between 10 and 16, might have been the entrance, with some kind of weather barrier formed by posts 17 and 18. Any other evidence, such as the location of the wall-line or extent of the floor, would not have survived on a surface scoured by later activity.

The building apparently stood alone and unenclosed, for no other features that could be considered contemporary came to light within the quite extensive area excavated around it (Fig. 13.1).

The Finds

The only objects found which did not appear to belong to the Post-mediaeval occupation of the site were four flint implements, three flint flakes, and three small sherds of coarse black pottery. The latter all came from the surface of the subsoil.

The Flint Implements comprise two serrated flakes, a truncated blade, and a possible fabricator. Except for the blade they are post-Mesolithic in character but not closely datable (see App. 3).

The Pottery (App. 4)

717 Rim sherd, vesicular, external tooled groove, double internal groove, encrusted with charcoal or soot. 'Malvernian mudstone ware'. (Fig. 13.1).
739 Body sherd only 10 mm square. As 717.
730 Rim sherd, plain, only 10 mm square. 'Malvernian C ware'.

Rim sherd 717 was submitted to Dr S. C. Stanford, who kindly commented on its form and recognised its likely Malvernian provenance. This origin for all three sherds was subsequently confirmed by Dr Elaine Morris's analysis (App. 4). The sherd can be loosely dated, by virtue of its origin and by analogy with other double-grooved forms, to the mid-second century b.c. It must be the most far-flung product of these potteries, 5 miles (8 km) further from its place of manufacture than the previous record-holder – Pen Dinas, Aberystwyth.

Discussion

Unlike all the other timber circles found in the Brenig Valley, this structure was not associated with a Bronze Age monument. It did not resemble any of those circles in detail, apparent similarities with Brenig 6 fading upon closer inspection. It is unfortunate, therefore, that the postholes failed to produce sufficient charcoal for radiocarbon dating, for a post-ring round-house of the type envisaged could find a home anywhere in the last two millennia b.c. Nevertheless the pottery may perhaps be used as a chronological indicator because, though not securely stratified, the three sherds all came from an area of about 30 sq. m which centred upon the building itself. Moreover no comparable material was found anywhere else in the extensive excavations at Brenig 48, and so the juxtaposition is likely to be significant. If this is accepted then the building has a probable date, and one at which similar, though often more substantial, dwellings are well known.

The evidence for this whole episode is clearly very thin but, if one were to rely entirely on non-funerary evidence, the record of the Bronze Age would be almost as insubstantial, and it should not be forgotten that the pollen record (Chap. 2) does not show any serious diminution in agricultural activity at this time. There are sufficient pointers,

therefore, to suggest that an Iron Age hut once stood in Nant y griafolen and that its occupants brought with them, or had sent up to them, at least two vessels manufactured some 90 miles (140 km) to the south-east in the Malvern Hills. Such contact is less surprising when one remembers that Bronze Age pottery may have followed the same route. The life of these occupants would surely have been governed by their environment, a moorland setting not unlike that of today, but with agricultural activity being maintained nearby. Such surroundings could only have provided light grazing of a seasonal nature and it seems probable that this stream-side location was chosen in the later centuries b.c. for the same purpose as in the 16th. century A.D. – that of transhumance farming.

THE CAIRNFIELD

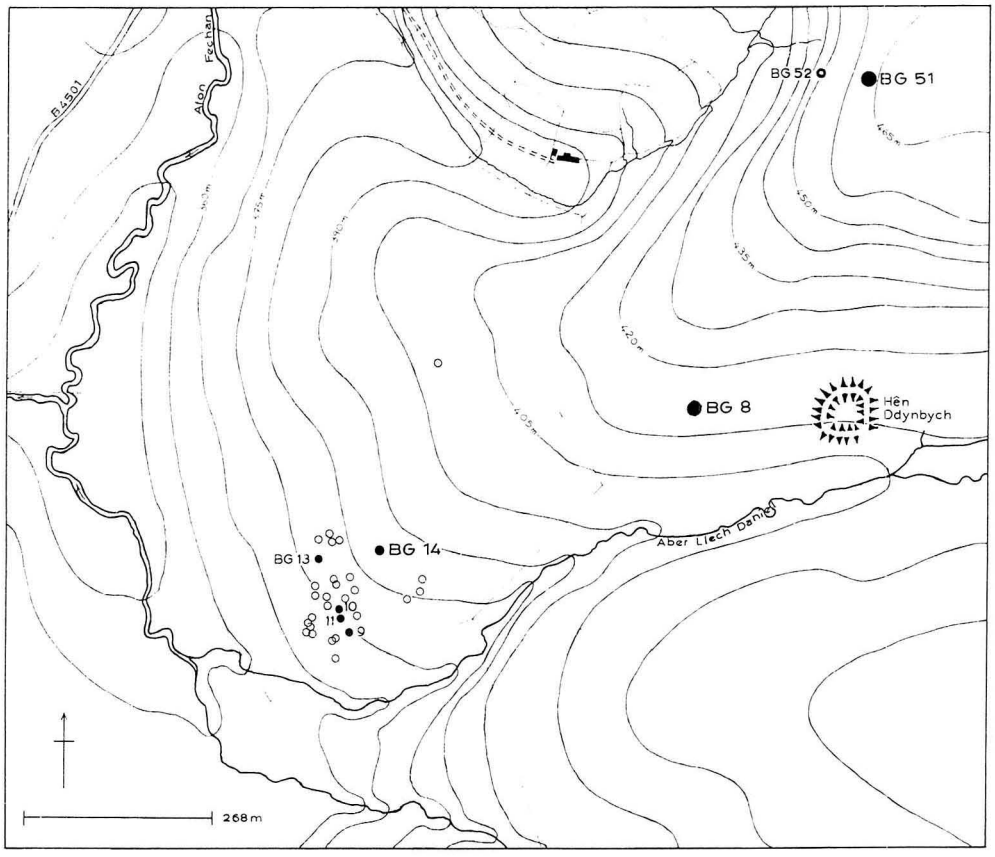
Frances Lynch and Richard Kelly

400 sq. m centring on SH 983 561. Height above sea level 372 m – 382 m.

Thirty small heaps of stone were found on the gently sloping, west facing shoulder of Waen Ddafad. These constitute what is known as a 'cairnfield', a phenomenon of many upland areas, normally ascribed to stone clearance to facilitate cultivation. Such cairns are normally small and structureless and scattered over the cleared ground at what often seem troublesome densities. However, their association with lengths of walling, with areas of particular soil type and with warmer slopes all tend to confirm an agricultural origin and, for spade or hoe cultivation, their presence would not be such a major inconvenience.

The confirmation of an agricultural origin does not, however, clarify the question of date, for such clearances may be made at any time (Ward 1985), and the practice still continues today. Since many of these cairnfields lie at quite high altitudes on what is now moor- or waste-land it may be assumed that they date from a period when the uplands were more actively farmed than they are now. The earlier Bronze Age is such a period, and excavation is showing that many fields and huts, as well as the traditional cairns and circles, preserved in these environments date from that time, so it is logical to assume that cairnfields are but another aspect of this Bronze Age agriculture. However, it must be admitted that excavation of the cairnfields themselves has seldom provided any direct evidence of date beyond the very occasional discovery of an unaccompanied cremation burial and the rather more frequent incorporation amongst the small cairns of a larger, more carefully built structure which may be classified as a formal burial monument (Owen-John 1986).

This situation, well-documented on the hills of



13.2 Brenig 9–39: plan of cairnfield on Waen Ddafad.

south-west Scotland (Yates 1984) and Northumberland (Jobey 1968, 34–50), is confirmed by the excavations at Brenig. Just beyond the main group of stone heaps was a larger cairn, Brenig 14, which had covered an unaccompanied cremation and which may be judged to belong to the main period of cemetery use (see p. 92). However, apart from this juxtaposition, there was no precise evidence for the date of the adjacent clearance cairns.

Waen Ddafad is at present an area of rough grass, heather and reed, vegetation which made the precise location and identification of the stone heaps very difficult. Those listed were small piles of stones breaking the surface at points where probing revealed a larger concentration beneath. In five instances, however, the stones were scattered fairly evenly over an area about 10 m in diameter without any obvious concentration; in five other instances similar amorphous scatters resolved themselves into two or more concentrations of stone (which were individually numbered); and in 13 instances the stones formed quite compact heaps 3 m – 4 m in diameter. These gave the impression of being perhaps cartloads of stones tipped out on the ground.

Before excavation began a pit was dug to examine the soil sequence. Immediately beneath the present vegetation (1), there was a thin, brown rooty layer (2 – the 0 horizon); then a layer of dark, peaty soil (3) some 60 mm thick here but more than 0.2 m thick elsewhere (the Ah horizon). This rested on the mineral soil (4) which overlay orange-yellow clay subsoil (5). The stratification is similar to that found elsewhere in the valley and is typical of the Hiraethog Series (App. 8).

Four typical piles of stones were chosen for excavation. In addition, a long trench was opened between cairns 9 and 10 in order to examine an area without obvious stones. In all cuttings the soil sequence was found to be the same as that in the trial pit. Plans and sections (Fig. 13.3) are given for two of the sites; the information provided by the others was identical.

Brenig 10 (Fig. 13.3)

An area of 70 sq. m was excavated around this elongated pile of quite densely packed stones without a formal edge. The central pile, only about two stones thick and 0.3 m high, was 7 m long and 3 m broad; it ran down the slope and beyond it, on the downhill side, there was a thin scatter of stone. The stones lay in layers 3 and 4; some had sunk to the top of layer 5.

Brenig 11 (Fig. 13.3 and Plate 13.2b)

An area of 77 sq. m was excavated around a horseshoe-shaped pile, 4 m in diameter and 0.4 m high, of medium-sized stones. Like Brenig 10 the stones lay in layers 3 and 4 and above layer 5. The pile was surrounded by scattered stones. A few fragments of charcoal were found in layer 4 and a piece of rock crystal and a waste flake of white chert came from the same level. They were not covered by the stones and their presence must be considered fortuitous.

One other find, a worked flint flake perhaps used as a scraper (App. 3), was found on the surface nearby. Its discovery is less significant than the fact that so little was found in this area, considering the amount of prehistoric activity in the valley.

Brenig 9 (Plate 13.2a)

This was an example of one of the small, compact heaps. It proved to be a small circular 'cairn' 2.5 m in diameter and about 0.4 m high. It was a tidier and higher pile than the others, but there was no indication of any formal edge. Like the others, the lowest stones lay in layer 4 and had sunk to the top of layer 5 in some instances. Root lines, probably of heather, could be seen in the top of layer 5. An area of 15 sq. m was excavated.

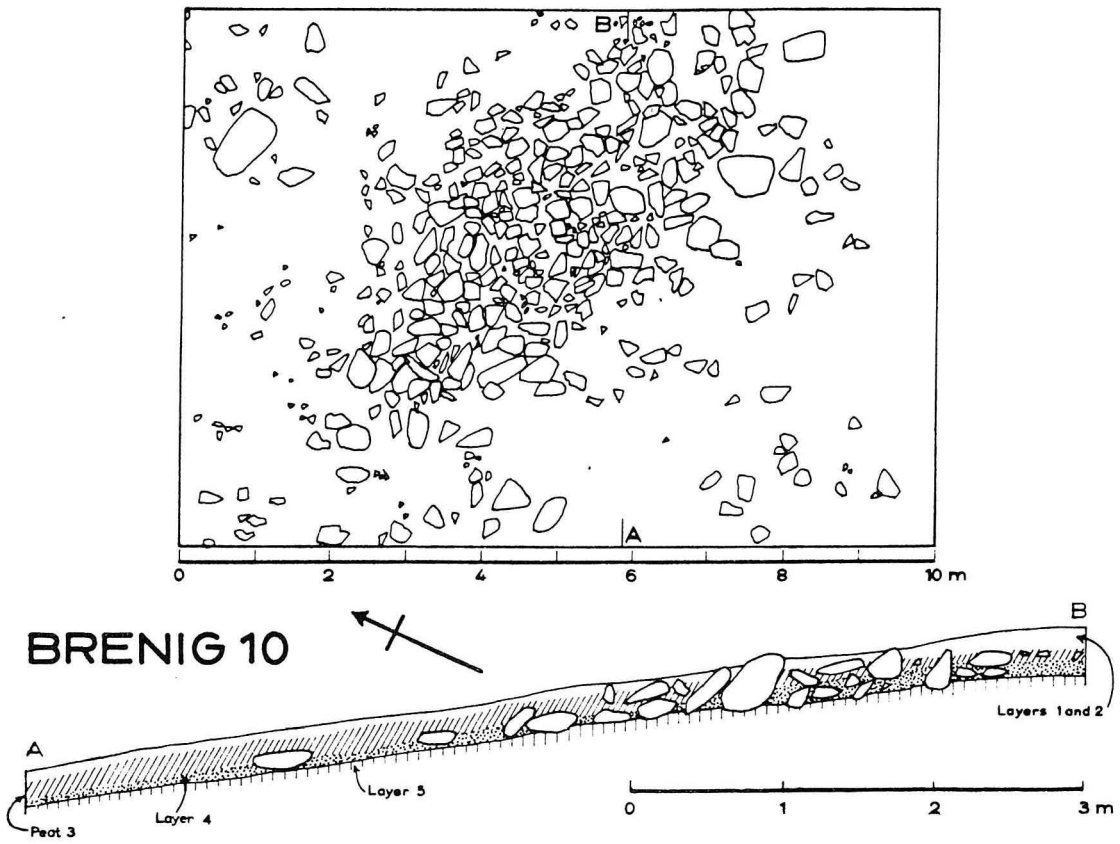
Brenig 13

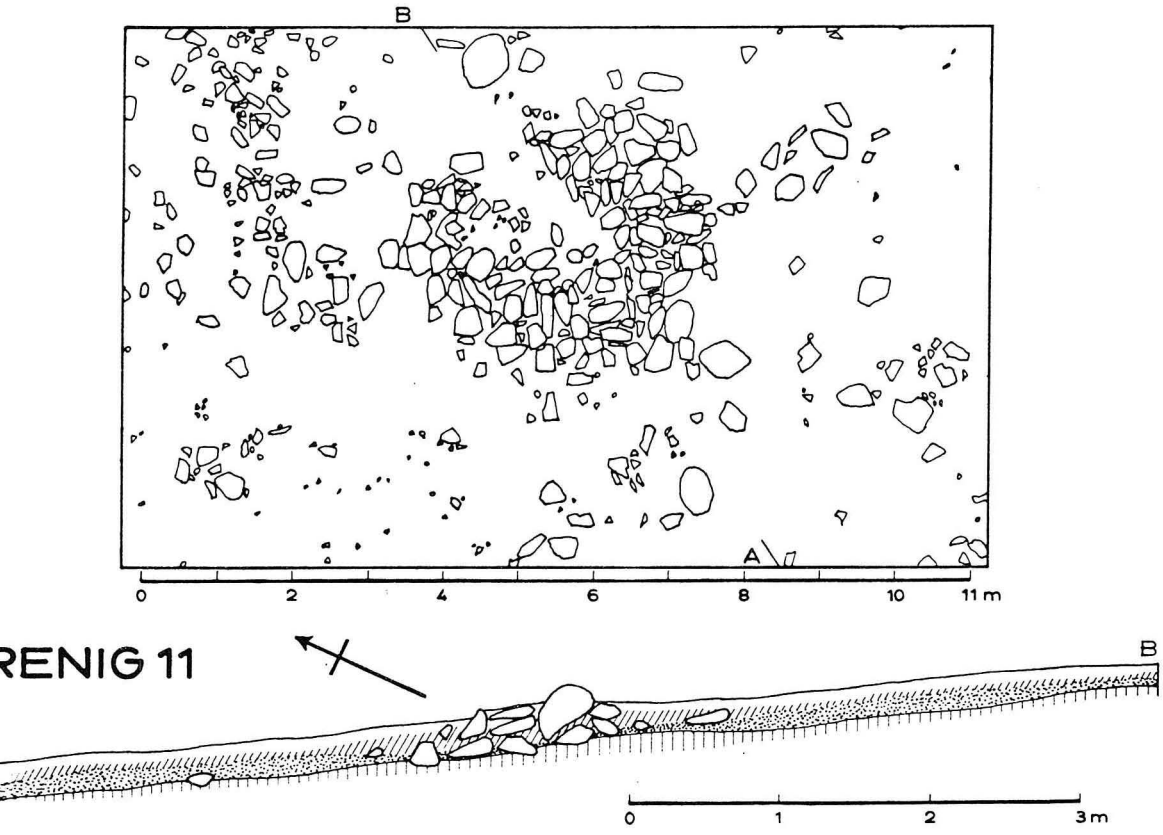
An area of 24 sq. m was excavated around an elongated pile of stones 3 m × 1.5 m. Some scraps of charcoal were found in layer 4 close to this pile. The stones lay in layers 3 and 4 and above layer 5 as they did elsewhere.

Trench between Brenig 9 and Brenig 10

A trench 2 m wide and 19 m long was opened between these two heaps to examine the ground between the stone piles. Excavation revealed a thin scatter of stones similar to those which were found in the heaps; root marks, again probably heather, were observed in the top of layer 5 and an appreciable scatter of charcoal was found on layer 4 at the southern end of the trench. There were no other finds to indicate the date of this burning, which could relate to the management of the moor for grouse.

The excavations did not produce any archaeological evidence for the date of the clearance and dumping of stones beyond the fact that it predated the growth of peat in the area. The pollen diagrams suggest that the development of peat on Waen Ddafad may have begun within the Bronze Age when there was certainly agricultural activity in the valley, although it cannot be exactly located. However, the survival of stone in this soil (the only part of the upper valley where an appreciable number of boulders was noticed) and the close spacing of the heaps do not suggest that this was the ground being cultivated. If small temporary fields had existed at any time on the flatter ground to the north-east, no physical evidence for them had survived and so these heaps of stones must remain without any satisfactory prehistoric, or historic, context.





BRENIG FIELD CLEARANCE CAIRNS

13.3 Field clearance cairns: plans and sections of Brenig 10 and 11.

LATER PREHISTORY IN HIRAETHOG

Frances Lynch

The problem of Bronze Age settlement, especially that of the earlier part of the period, continues to bedevil Welsh prehistory and the excavations in the Brenig Valley exemplify the difficulties very well. Public monuments and the details of ritual life dominate the record, and even structures such as that beneath Brenig 6 are more likely to be ceremonial than domestic. The moorland vegetation beneath the barrows does not suggest that the houses and fields of the living were immediately adjacent to the cemetery and yet they cannot have been so very far away (whether or not the cairnfield is an indicator of Bronze Age clearance), for heavy turves were trundled up from cultivated areas to form the mounds themselves. Moreover the number of barrows on Hiraethog shows that the Brenig situation was not unique; the uplands as a whole must have held quite a substantial population living and working within sight of their ancestral tombs.

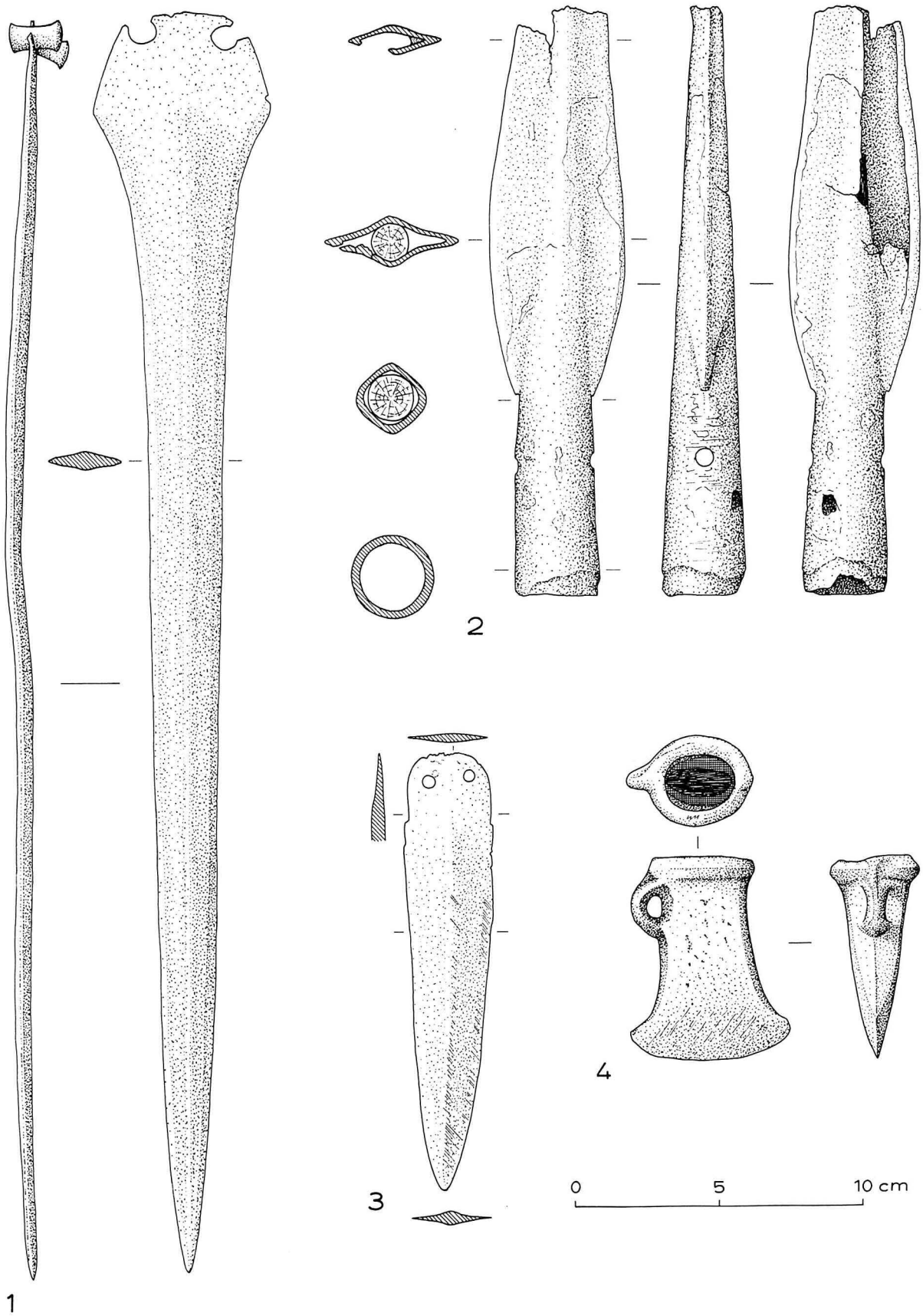
As in all periods, the formal monument was designed to endure while the working buildings were not built to last beyond their useful span. If they were built of stone the evidence of their presence might survive, but that would be incidental. In the Brenig valley good stone was not readily available and, although substantial timber was probably not very plentiful, it is likely that wood, in the form of stakes and wattle, would have been the domestic building material. The houses, therefore, would be elusive in the archaeological record, but they might have been surrounded by enclosed fields whose banks could have been recognisable in an area without intensive later agriculture. However, no such farmsteads were recognised within the bounds of the 1972 survey, and redundant field systems were shown to be relatively modern (App. 11).

Later work in the area between Pentre Llyn Cymmer and Cerrig y Drudion, however, has found several small enclosures and possible house sites, recognisable as low banks, hollows and spreads of small stone (Manley 1984; 1985; 1990). Some of these sites, because of the use of stone, had been noted earlier (Ellis Davies 1929, 77), so their absence from the Brenig area may be real, not simply the result of less determined and careful survey. Other stone enclosures and possible house sites were recorded on Cefn Banog (Ellis Davies 1929, 97) an area to the south-east now almost entirely obscured by forestry. Excavation of one of these very tenuous enclosures on Graig Fechan has provided a series of radiocarbon dates which demonstrate occupation in the 9th. century b.c. (Manley 1990). Such a date, shortly after the onset of bad weather, combines with the pollen evidence from Brenig itself to suggest that agriculture here was not completely destroyed, but these flimsy huts and discontinuous small fields do not imply year-round occupation. Elsewhere in Wales fields and huts of this kind remain undated (Briggs 1985).

As things stand at present in Wales, when the rituals of death were no longer observed, as seems to be the case in the later Bronze Age, most evidence of life disappears. It has been argued above (p. 101) that Kerb Cairns, minimal monuments with consistently late dates, represent the tail of the monument-building tradition with a date here of about 1100 b.c. The religious manifestations which followed the barrow and circle building era are far from clear but in later periods we have positive evidence of the cult of 'offerings' in watery places and in natural groves (Strabo, IV, i, xiii; Piggott 1952–53, 4–8), and when we look at the Middle and Late Bronze Age material, especially weapons, which have been found in bogs and lakes it is reasonable to suggest that this tradition has its origins well before the Iron Age (Burgess 1974, 195–96).

It is interesting that the later Bronze Age material from Hiraethog should all be weapons and that the Elorgarreg rapier (Fig. 13.4.1), an isolated find from deep in the peat at the southern end of the Brenig valley (Ellis Davies 1929, 83), should be approximately contemporary with the final expression of the older traditions – the building of Brenig 6. Whether or not the hollow-bladed Wilburton spearhead from the Alwen valley (Ellis Davies 1929, 84) is an expression of the same offering tradition is uncertain; it has lost its tip and retained some of the shaft; it might be simply a hunting loss (Fig. 13.4.2). In view of the links that earlier communities here maintained with the Marches of Wales, it is interesting that this spearhead is of a type rare in north-west Wales, but best exemplified in the Guilsfield hoard from the Severn valley (Davies 1967). The strange dagger from a similar environment at Nilig in Clocaenog (Ellis Davies 1929, 105) (Fig. 13.4.3) is difficult to date or categorise; it may have been made from a cut-down rapier blade like that from Elorgarreg. These martial pieces from the moorland contrast with the more mundane socketed axes and palstaves which for the most part are from the lower ground. Two socketed axes, for instance, have been found near Cerrig y Drudion (Ellis Davies 1929, 82, 238) (Fig. 13.4.4); one of them from below the enclosure of Caer Caradog, hinting at both the location and nature of settlement at the end of the Bronze Age.

The retreat from the uplands and the concentration of population into enclosed settlements of one kind or another is the hallmark of the later Bronze Age in many regions of upland Britain (Spratt & Burgess 1985). In the Cheviots this process has been particularly well documented with well-dated Early to Middle Bronze Age houses and fields scattered over the higher slopes, to be replaced by fewer but larger groups of huts enclosed by wooden palisades and placed to the edge of the moor overlooking lower lands. In many regions the Late Bronze Age palisades were replaced by more substantial ramparts and the traditional 'hillfort' was created. In spite of the term such fortifications are not to be found in the heart of the uplands, but at their edge where they may dominate the lower slopes on which agriculture must have been concentrated at this



13.4 Bronze implements from the Brenig area. 1 rapier from Elorgarreg; 2 spearhead from the Alwen reservoir; 3 knife from Nilig; 4 socketed axe from Tyddyn Terrace, Cerrig y Drudion.

13.5 Hiraethog in the Later Bronze Age and Iron Age

time. This important social and economic trend is normally attributed to the effects of climate, whereby the upland fields and pastures, already probably over-used by man, were finally ruined by increased rainfall, panning and acidification. The loss of large tracts of usable land naturally had major social implications. Many may have died, through hunger or disease, and amongst those who remained, the competition for land must have been intense, hence the interest in boundaries and defence in areas where good agricultural land still remained (Burgess 1985).

The map of visible monuments and finds of Late Bronze Age and Iron Age date in Hiraethog (Fig. 13.5) would suggest that central Denbighshire as a whole conforms to this pattern, with the moorland almost deserted. However, the evidence from Brenig itself does not support this view in detail. The pollen diagrams (Chap. 2) do not show any appreciable regeneration of forest at this time, nor, more significantly, any diminution of agricultural activity, so presumably farming continued somewhere in the valley at the same level as before. The discovery of the wooden house beneath Brenig 48.07 is another indication that, although there are no major sites of Iron Age date on Hiraethog, some small-scale occupation did continue, even if only in the summer. As the circumstances of BG48.07 have demonstrated, such sites are going to be extremely difficult to find and, in the absence of religious and burial monuments for the period, the archaeologist is going to be very dependent on the enclosure of sites for the recognition of settlement areas.

The high ground of Flintshire has a notable series of impressive hillforts crowning all the major eminences of the Clwydian range. To the west of the river, too, there is a chain of important forts on the limestone hills overlooking the coast, while the upper reaches of the Clwyd and Derwen also have some interesting defended sites. The heart of the moor, however, is virtually empty, even of small enclosures which, like the imposing forts, cling to the fringes. To the south and east of the Brenig valley there are both small enclosures in apparently non-defensive positions, such as those at Caerau, Derwen (Ellis Davies 1929, 108) and the newly-discovered site at Bryn Teg near Cerrig y Drudion (CAR no.1748), and more serious defensive structures like Caer Ddunod and Caer Caradog (Ellis Davies 1929, 231; 234). Other small but much slighter enclosures have been revealed by intensive survey and air photography in the country north of Cerrig y Drudion, and at least one has been shown to belong to the Late Bronze Age (Manley 1990). This period also saw the beginning of larger-scale settlement in the region, for at Dinorben, to the north, radiocarbon dates indicate activity on the hilltop from the Late Bronze Age until at least the end of the Roman period (Savory 1971). Although the 9th. century b.c. dates are no longer considered to derive from the rampart, it is very probable that one of the palisades found in more recent excavations (Guilbert 1980) could belong to that period and be contemporary with the hoard of bronzework from the bottom of the hill (Sheppard 1941). A similar history may be postulated at Caer Caradog, close to Cerrig y Drudion, where air photographs hint at an inner palisade around the crown of the hill with a larger and probably later rampart beyond it. Limited excavations failed to substantiate this possibility (Livens 1963–64), but it should be remembered that a Late Bronze Age axe has been found close to the site.

Another important, but isolated and unexplained, late prehistoric find from the neighbourhood of Caer Caradog and Cerrig y Drudion is the decorated bronze bowl or lid found in a stone-lined cist near Perthi Llwydion (SH 946 502) in 1924 (Ellis Davies 1929, 85). There has been a good deal of dispute about this piece, originally identified as a hanging bowl (Smith 1926) and more recently reconstructed as a lid (or, less credibly, parts of two lids) (Stead 1982) and variously described as an import from Brittany, Central Europe or a native copy. On any interpretation it must represent considerable wealth and sophistication somewhere in the locality at a time which is approximately contemporary with the small wooden house in the summer pastures at Brenig 48 – 200 b.c. – 150 b.c. by analogy with the Wisbech scabbard. The local hillforts, the likely headquarters of the owner of such a fine piece of bronzework, have produced no comparable Early Iron Age material, but since excavation has been so limited this should not be surprising, just as we should not be surprised if we were to find such finery used in relatively simple, or even squalid, surroundings. What is more difficult to explain is its discovery in what must have been a grave. Iron Age graves are exceedingly rare in most parts of Britain, especially in the earlier part of the period. However, when they occur in the west, in Cornwall for instance, they take the form used here, extended inhumation in a stone cist (Whimster 1981). This is also the form used in the only other Welsh example known – the late grave from Gelliniog Wen in Anglesey with its broad Belgic sword (Lynch 1970, 246). Without distinctive grave goods the type will be difficult to distinguish from later, Christian, graves and may perhaps have been more common than we realise at present. The discovery of the Cerrig y Drudion bowl and the wooden house at Brenig 48, at opposite ends of the contemporary social scale, combine to underline our ignorance of the Iron Age in this part of Denbighshire, especially when we venture outside the hillforts, themselves much less well understood or even dated than many imagine.

When the Roman armies arrived on the borders of Wales they recorded the presence of two different tribes within the area of modern Clwyd, the Deceangli to the east of the river and the Ordovices who certainly occupied Snowdonia and are presumed to have extended across Hiraethog (Tacitus *Annals* XII, xxxii). The division of the region is not something which had been apparent before and it should, perhaps, be doubted now since the extent of Deceanglian land is by no means certain (Carrington 1985, 9). In the Mesolithic, mobile groups certainly operated on both sides of the Clwyd (Chap. 3); in the Neolithic

the empty centre of Hiraethog may perhaps have divided two regions with differing contacts, but in the Early Bronze Age, despite minor variation in ritual practice, there is no obvious or consistent difference in 'culture', seen either as behaviour or goods (Chap. 5). Pottery, the traditional touchstone of prehistoric cultures, is perhaps less reliable here in a region where some of it was certainly imported from a distance, but as far as its evidence goes it suggests reasonable uniformity. The metal products of the Acton Park industry circulated right across north Wales from Wrexham to Holyhead. However, in the Late Bronze Age it is possible to discern some slight divergence between the two sides of the Clwyd. To the west more conservative preferences for late palstaves may indicate the Ordovices, while the Deceangli might be identified by their use of socketed axes, in which case they may have held the southern flank around Cerrig y Drudion. Whether or not these Late Bronze Age marketing spheres are truly indicative of tribal territories it is impossible to know, but the map (Burgess 1980, 248–49) has some interesting convergences, especially between the Silures in Glamorgan and the distribution of south Welsh axes, and it is tempting to give it some credence. If this is so it must hint at an essential continuity of population in the region from Late Bronze Age to Roman times without serious interruption by any invading Iron Age/Celtic aristocracy – an explanation for the proliferation of hillforts which has been much favoured in the past.

The Deceangli were defeated by P. Ostorius Scapula in 48 A.D. (Tacitus *Annals* XII, xxxii), and the subsequent Roman impact on their territory was profound. Under the influence of the legionary fortress established at Chester in the 70s A.D., industry in the region which was later Flintshire and East Denbighshire was rapidly developed. There was a tile works at Holt (Grimes 1930), stone was quarried in the hills above Wrexham (Sedgeley 1975, 33) and metal ores were mined from Minera to Halkyn. The mining of lead seems to have been on a large scale if one may judge from the survival of lead pigs and the size of the establishment at Pentre Farm, Flint, which has been interpreted as a management base for the Roman mines (O'Leary & Blockley 1989). Such activities brought prosperity and the Roman army, with its attendant sophistications such as baths and clean water supplies, to the northern coastal fringe, where, in the shadow of a military works depot at Prestatyn, a busy manufacturing centre grew up under legionary patronage (Blockley 1989).

In Gwynedd the Ordovices resisted the Romans for forty years, and the forts built to hold down the region had to be maintained throughout the centuries of Roman rule. However, despite the more obvious military presence, north-west Wales also prospered under the Romans. Mining was developed here too, and agriculture in particular seems to have been improved and intensified. The stone-built farmsteads which survive as striking evidence of this development in Caernarvonshire (R.C.A.M. 1964, lxxxvii-cvi) do not appear east of the Conwy, where the natural building material is more normally wood. It is consequently difficult to judge whether the apparent emptiness of Hiraethog is real, but our present evidence shows very little Roman activity south of their military road from Chester to Caerhun, and the implication is that they had little interest in the high moorland, which had no mineral resources and scant agricultural value by then. Two groups of Roman coins have been found in the neighbourhood of Cerrig y Drudion (Ellis Davies 1929, 89, 109); both have been lost and their dates are unknown, but they are likely to relate to activity south and east of the moor where the route running south-west via Ruthin, Llanfor and Caer Gai towards Tomen y Mur, Brithdir and Pennal (Bowen & Gresham 1967, 253–54; Waddelove 1979) would form a focus for Roman influence in the more accessible valleys. Nineteenth-century antiquaries argued that the Romans would not have left Hiraethog untouched, and were keen to recognise Roman roads and even a Roman fort at Hen Ddinbych (Barnwell 1859), but excavations in this century (Gresham, Hemp & Thompson 1959 and the present campaign) have produced no evidence of a Roman presence.

CHAPTER FOURTEEN

Later History of the Valley

BRENIG 48: HAFOD NANT Y GRIAFOLEN

David Allen

NGR SH 985 574–987 575 Height above sea level 400 m – 420 m.

Introduction

This group of seven hut foundations, and associated enclosures, was designated Brenig 48 by the 1972 survey. It is situated on either side of the Nant y griafolen, clustered between marshy ground to the west and steeply sloping moorland to the east (385 m – 405 m above sea level). The northern limit of the settlement is bordered by a now disused track, which crosses the moor in an east – west direction.

The settlement consisted of at least seven rectangular hut foundations and associated rectilinear and curvilinear enclosures. Five of the hut foundations were examined, as well as large areas of enclosure, and three contemporary middens were located. These produced substantial quantities of glazed pottery, and metal artefacts, which date the occupation to the 15th. or 16th. century A.D.

At this time the economic background of the site was that of the *hafod* – the summer base of a transhumance circuit. The present-day sheep and cattle that graze these slopes continue this tradition, which dates back many centuries. Like their predecessors they undergo a seasonal migration, being brought to the higher pastures in the spring, and taken down again in the autumn. However, this movement is a faint echo of the times when the farmer, or members of his family, accompanied the herd, forsaking their winter quarters for a temporary summer dwelling. This transhumance farming was once widespread in north-west Europe; in Wales it is first mentioned in the tenth-century Laws of Hywel Dda, and was still flourishing in Snowdonia when Pennant toured the area in the late 18th. century. The many place-names including *hendref* (old house) and *hafod* (summer dwelling) in north Wales, and *lluest, meifod,* and *gaefdy* further south, testify to its former universality.

The Excavation

The excavations have been fully described in *The Journal of Post-medieval Archaeology,* (Allen 1979), and only a summary of the results need be given here.

Five areas of varying size were opened, of which **Area 01** (460 sq. m), within an embanked enclosure, was the second largest. The excavation here uncovered the low stone walls of a long, rectangular house (8.4 m × 4.4 m) standing at the top of a large, sloping yard enclosed by a low bank and shallow ditch which had been widened out into a pond near the entrance. Apart from the house, the only features within the excavated part of the enclosure were a system of drains to keep water away from the house and a large midden conveniently placed a stone's throw from the doorway. Unfortunately the acid soils had destroyed the organic content of the rubbish heap and left the metal artefacts in an advanced state of decay. However, the ash and pottery from this deposit provided good dating evidence for the settlement.

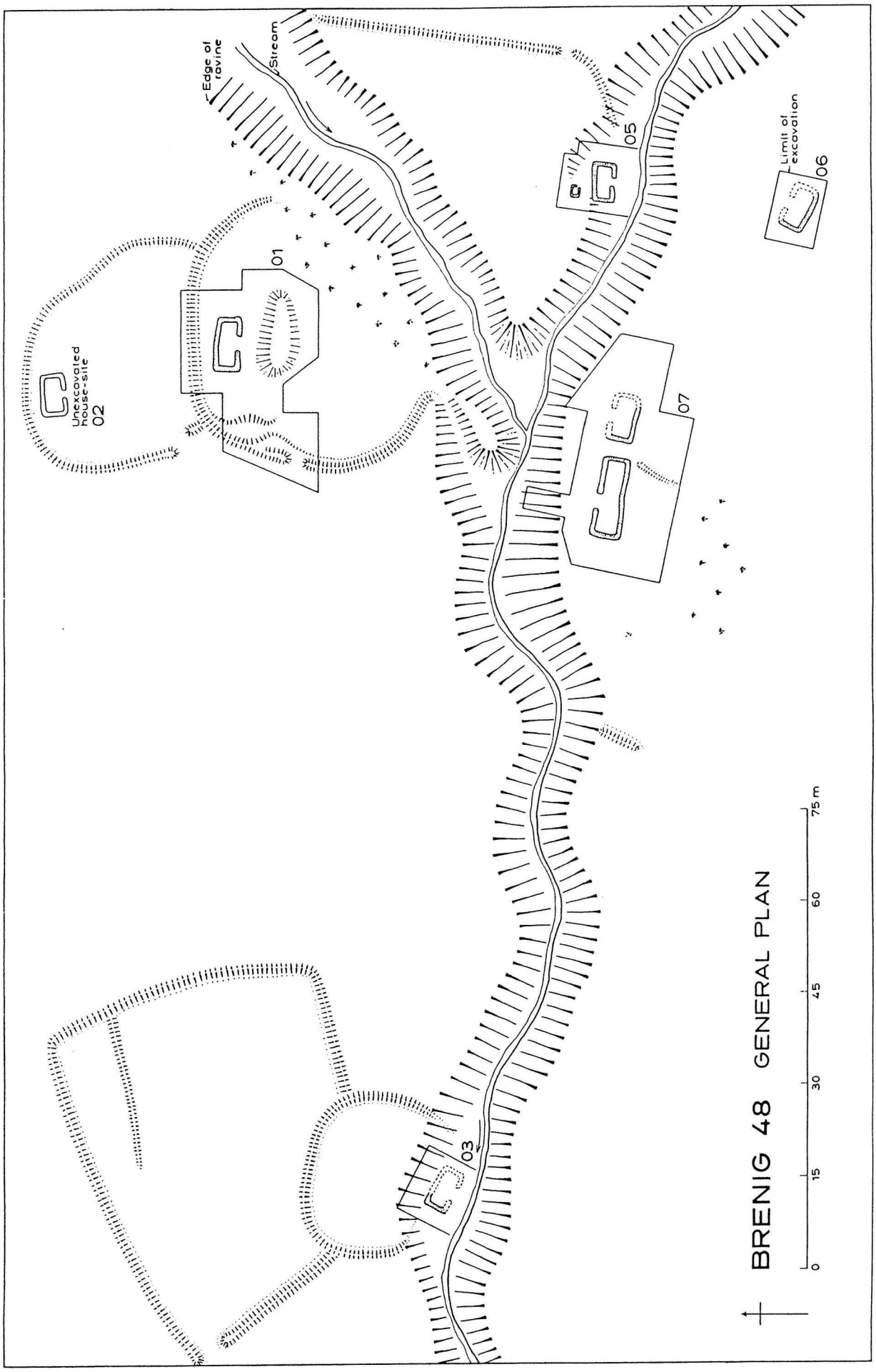
The house foundation had been constructed by laying the walls of gritstone boulders, shale slabs, and soil directly onto the turf. The use of the local shale as a building material resulted in much disintegration and collapse, and the walls must once have stood considerably higher than the 0.4 m revealed by excavation. Several features, including changes in wall construction, an eccentric hearth, and wide entrance, suggested that there had been an internal partition, dividing off the eastern third of the house. The hearth, composed of gritstone slabs, stood directly on the native earth floor. There was little evidence to indicate the final height of the walls, nor the construction of the roof, though four small hollows might have held post-pads. Accounts of surviving *hafodau* (Williams 1899) suggest that the carpentry would have been rudimentary.

The evidence from Area 01 was in many respects repeated in the other enclosures and houses of the settlement, though some had a slightly more complex structural history.

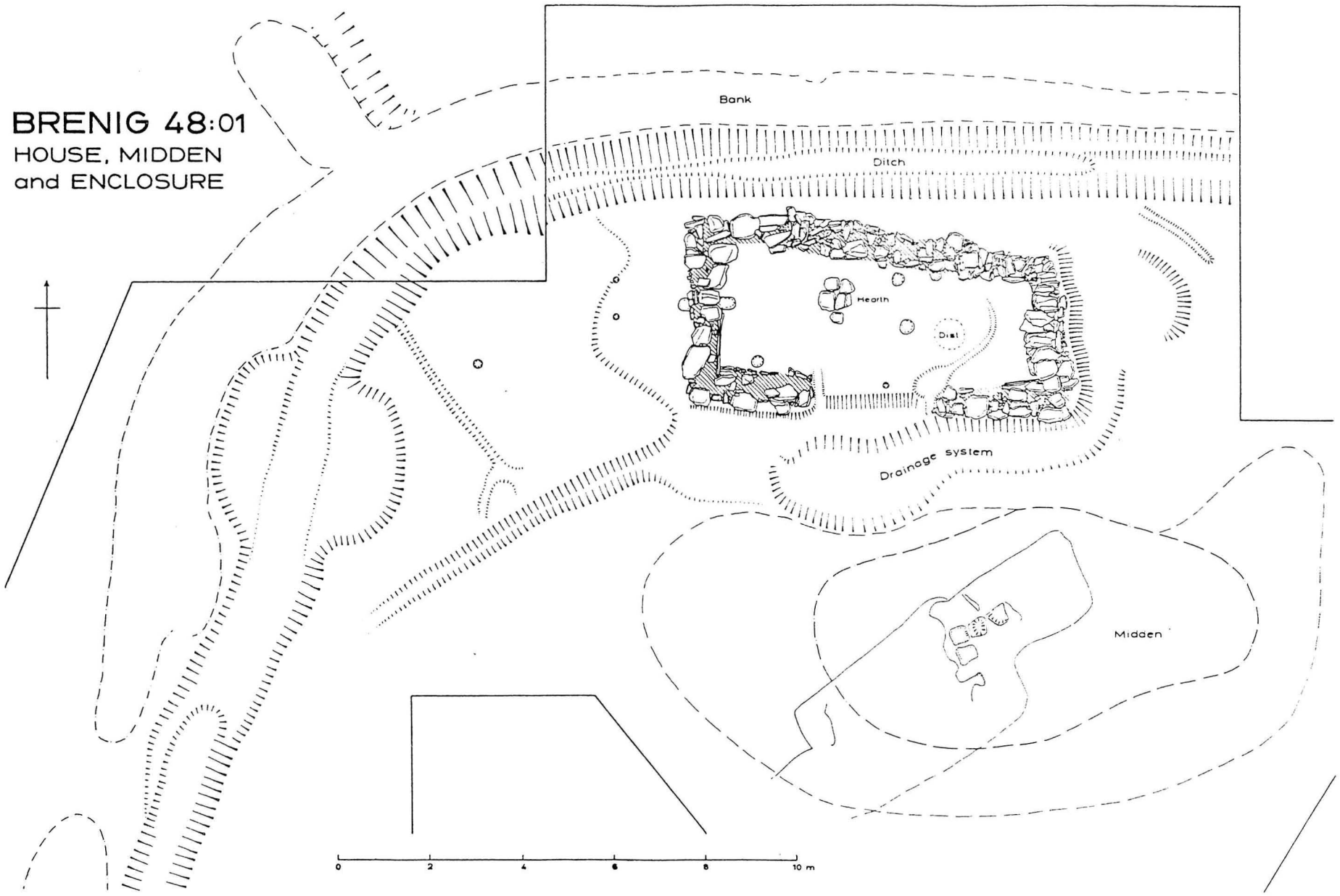
Area 02 contained a house (6 m × 3.5 m) which was not excavated.

Area 03 was a steeply-sloping rectilinear enclosure with a house (6 m × 3.5 m) built on the only flat ground directly beside the stream. The clay floor overlay several large pits containing burnt material suggesting some specialised use of the site before the house was built. The house walls had been extensively robbed, and only the north-west corner with the hearth remained.

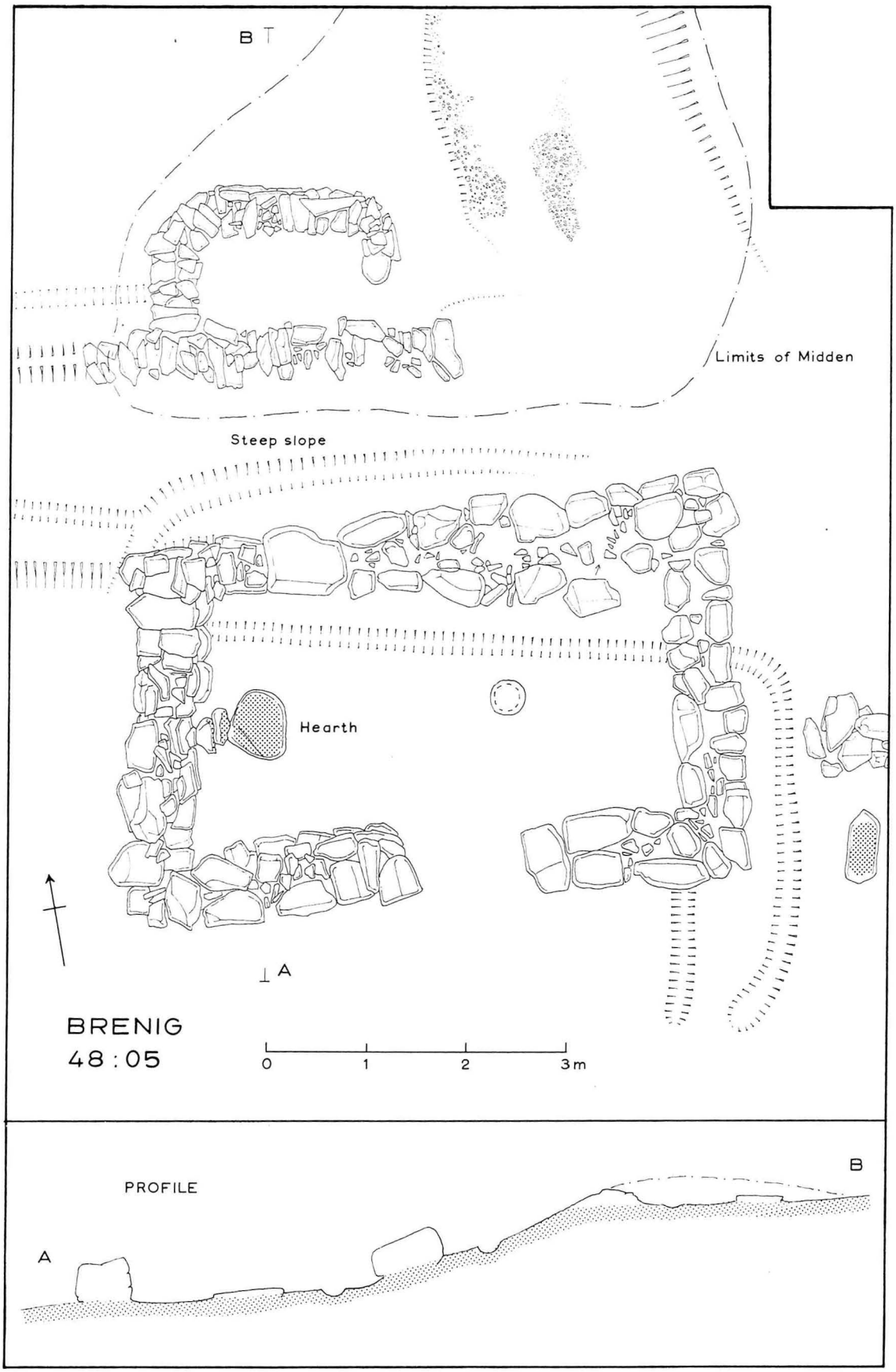
Area 05 contained a 'working area' and a house (6 m × 4 m) whose lowest wall courses were exclusively gritstone boulders. Behind it was a small structure built of the more usual mudstone



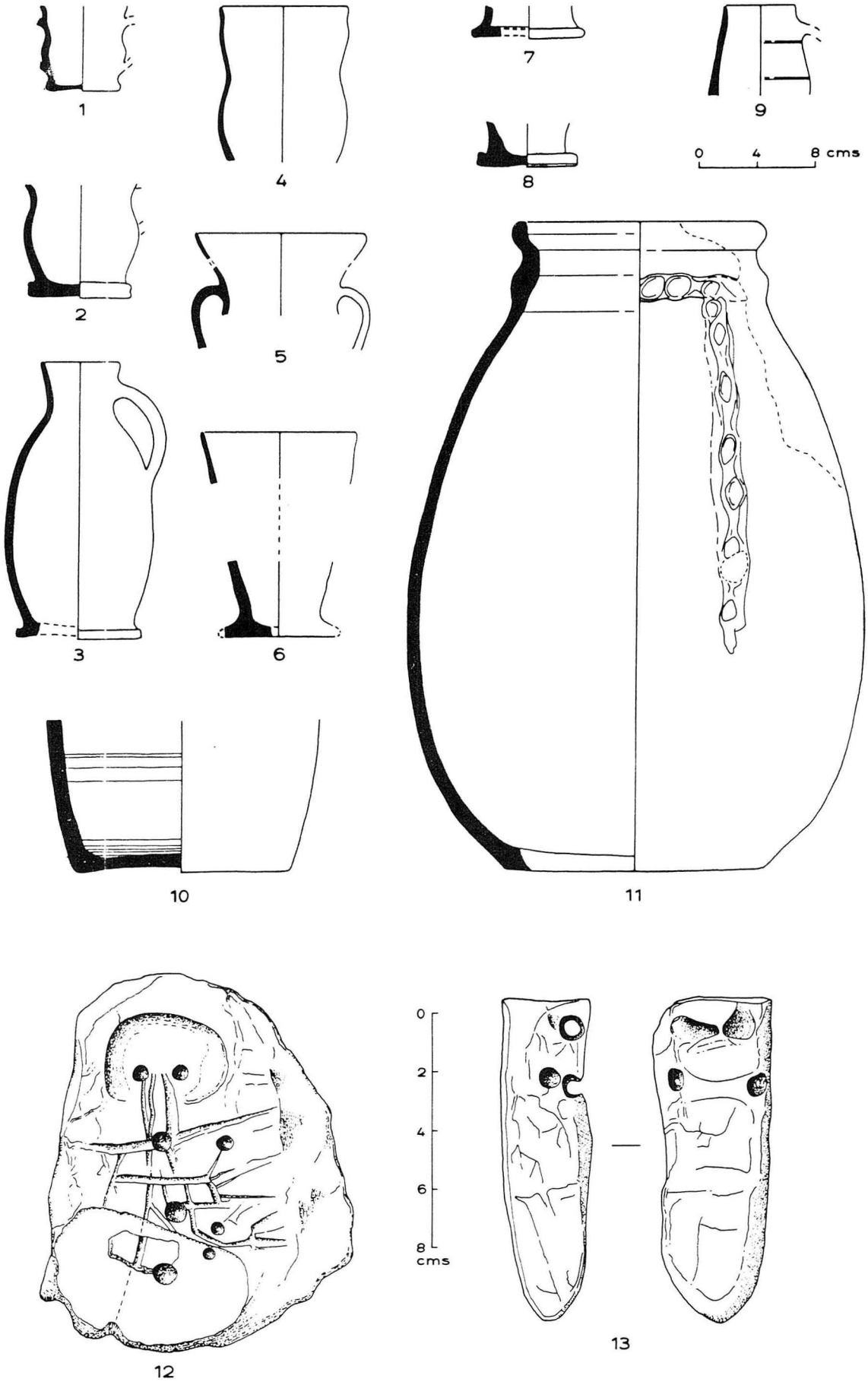
14.1 Brenig 48: general plan of settlement in Nant y griafolen.



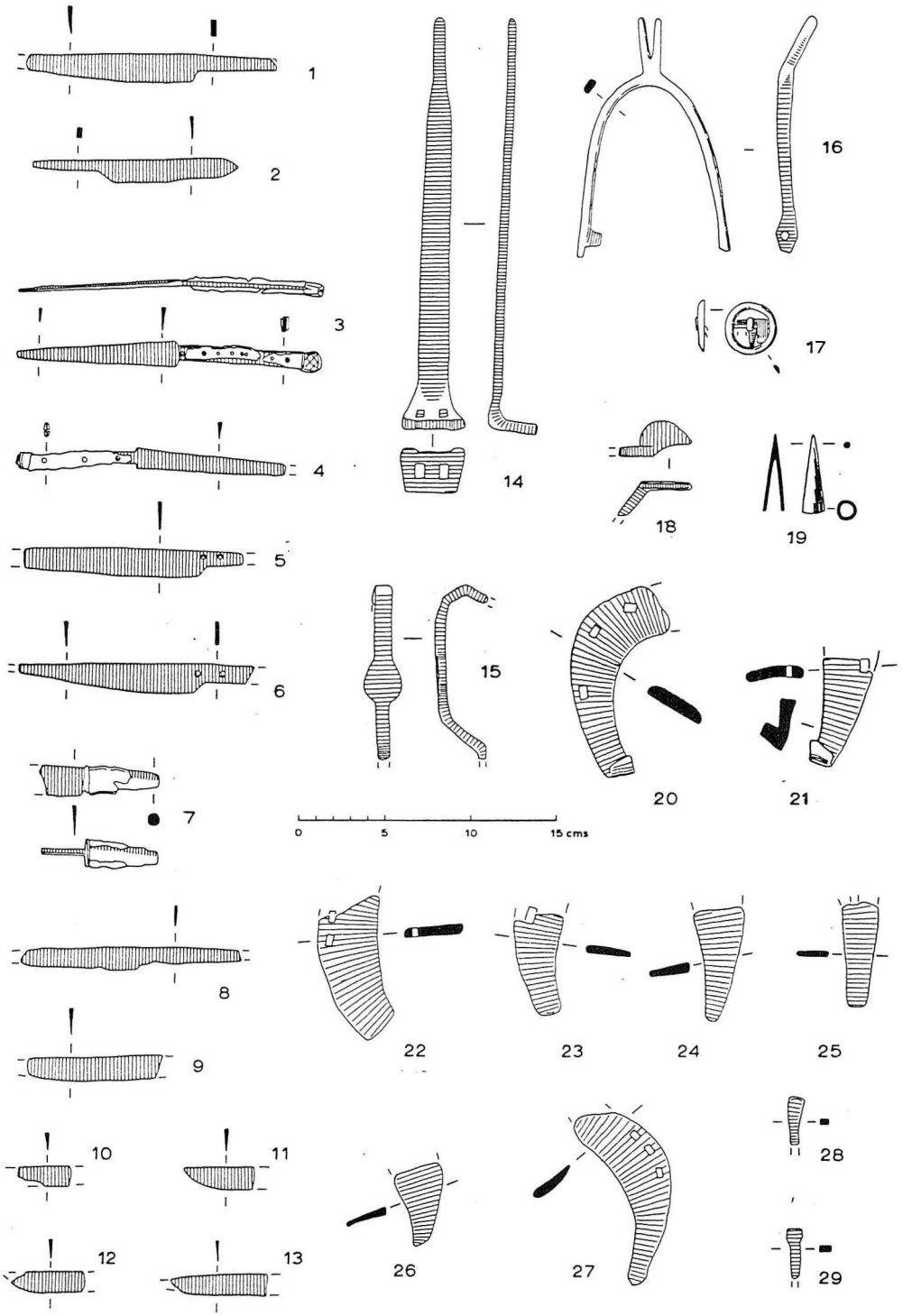
14.2 Brenig 48: plan of house 1, midden and enclosure bank.



14.3 Brenig 48: plan of house 5 and outbuilding.



14.4 Brenig 48: pottery and stone objects.



14.5 Brenig 48: metal finds.

slabs (Fig. 14.3). This had been subsequently covered by midden material.

Area 06, on the southern side of the stream, had been badly damaged by recent ploughing. The long house (7 m × 3.5 m) had been divided by a partition into two unequal rooms, one with a hearth set centrally. The doorway, indicated by a sill in the surrounding drainage gully, had been 2 m wide.

Area 07 was the largest area cleared (495 sq. m) and provided evidence for a more complex structural sequence. Not only had a late prehistoric round house stood on this spot (Chap. 13), but one of the two rectangular houses had been radically altered. The eastern house (7.5 m × 4 m) had been badly damaged but, apart from its size, was similar to others in the settlement. The western house was originally equally traditional but had been enlarged to make a building 12 m × 4 m. The 'double' house had probably been partitioned. A stone bench had been constructed against the south wall and midden material had been thrown down the steep slope of the ravine on the north side.

The Finds

In discussing the problems of estimating the chronology and history of transhumance in Wales, Peate (1940, 147) concludes that even extensive excavations on *hafod* sites could provide little evidence, because of the temporary character of the furniture and utensils employed (wooden bowls, spoons, etc.), and the fact that most of the materials would have been transported to and from the winter dwellings. This may well be the general rule, but it is one to which Brenig happily provides an exception. Because of the comparatively late date of the settlement, or the particular circumstances of the farmers, good quality pottery vessels and metal artefacts were available to them, and some of these were broken and discarded, or lost, at the *hafod*. They themselves fashioned other artefacts from stone, and presumably wood and bone, although the latter materials only survived in exceptional circumstances in the acidic soil.

The majority of the finds came from the middens. These low mounds or spreads of rubbish accounted for two-thirds of all finds, and over three-quarters in Area 01, where the midden was totally excavated. Their main component was a distinctive red ashy soil, liberally flecked with charcoal, and presumed to be sweepings from the hearth. However, several small fragments of bone and tooth, and a clump of grass and straw, fortuitously preserved in the company of a bronze object, suggested that other organic materials also contributed greatly.

The Pottery (Fig. 14.4)

One hundred and sixty-seven sherds were found, representing thirty-four vessels and five fabric types. The majority (28 vessels in four fabric types) consists of brown and black glazed vessels, mostly cups, but also handled bottles and relatively large containers, all closely parallelled at Norton Priory, where the dating evidence suggests the early to late 16th. century (nos. 1–10). Green glazed pottery (no. 11), which almost certainly came from a recently discovered kiln at Ewloe, Clwyd, could be earlier (Davey 1977, 92–99), but evidence from Norton Village, Runcorn, indicates that a continuation into the early 16th. century is possible for this pottery (Greene & Hough ***). Two small sherds of European origin, from Spain and from northern France, indicate a surprisingly cosmopolitan market.

The Metalwork (Fig. 14.5)

Thirty-five iron objects were found, the majority knives (nos. 1–13) and horseshoes (nos. 20–25). Other items found include an ox-shoe or ciw (no. 27), a padlock key (no. 14), a spur (no. 16), buckle (no. 17), a fragment of basket hilt from a sword (no. 15), an incomplete pan cover from a pistol (no. 18), and a socketed arrowhead (no. 19). A few pieces of copper alloy and two fragments of lead were also found.

Utilised Stones

Twenty-three stone objects were found; all were made from raw material available in the immediate or general localities, and were presumably fashioned by the farmers themselves. Most of them, the spindle-whorls, whetstones, thread-separator, bake-stone and scourer, have clearly defined functions and were obviously much used. More mysterious are the two stones with anthropomorphic qualities (Fig. 14.4 nos. 12 & 13).

Worked Bone

One object of worked bone was discovered. It was a fragmentary spoon or scoop, fashioned from an ox tibia, which had been preserved by burning.

Faunal Remains

Several fragments of herbivore tooth were present in the midden in Area 01, including a lower third molar of a cow.

Discussion

Construction of the Buildings and Life at the Hafod

The location of a *hafod* was naturally dictated by the ownership of the surrounding pastures.

Unfortunately we do not know the original name of this group of houses and so the details of its ownership, history and connection with the *hendref* cannot be followed through documentary evidence.

Such a large group of houses and enclosures is unusual. The single house is more common, certainly at the end of the tradition, but since the whole community would move to the hills (Sayce 1957, 45), this group should not occasion surprise. Groups of up to twenty huts are recorded in Ireland (Evans 1957, 38).

Hafod Nant y griafolen occupies a typical stream-side location, for a good water supply was essential for butter- and cheese-making and the watering of stock (Sayce 1957, 44); the importance of this feature is perhaps reflected in the way in which individual buildings face towards the stream, even when this meant confronting the worst of the weather.

The buildings of the *hafod*, even if reoccupied from year to year, would have had a temporary air about them, built only of locally available materials (Palmer & Owen 1910, 179) and providing only minimal shelter for summer activities. Thomas Pennant's description, even though it belongs to a period two hundred years later than Hafod Nant y griafolen, is relevant in the simplicity of life it describes.

> 'The mountainous tract scarcely yields any corn. Its produce is cattle and sheep, which, during the summer, keep very high in the mountains, followed by their owners, with their families who reside in that region in *Hafodtys* or summer dairy houses . . . These houses consist of a long low room with a hole at one end, to let out the smoke from the fire which is made beneath. Their furniture is very simple; stones are the substitute of stools, and the beds are of hay ranged along the sides . . . During the summer the men pass their time either in harvest work or in tending their herds; the women in milking or making butter and cheese . . . Towards winter they descend to their *hendref*
>
> (Pennant 1781,161)

The Brenig structures are clearly a homogenous group, and have certain features in common, notably the inner ditch – outer bank structure of the enclosures and the rectangular ground-plan of the buildings, which are all very similar in construction and details of design. All the stone could have been obtained locally and no doubt the wood or turf elements were also won from the moors.

The rectangular ground-plan of the buildings, with the doorway located in one of the long sides, was probably modelled on the permanent structures occupied by the farmers during the winter months. This form, be it single-roomed cottage or longhouse, was the predominant type in Wales throughout the Mediaeval and Post-mediaeval periods (Peate 1940, Smith 1975). It is interesting to note that the western house in Area 07 adopted 'longhouse' proportions as the result of rebuilding, although it retained a single entrance. A similar occurrence was observed in a group of shielings at Cammock Loans, north-east Cumberland (R.C.H.M. 1970, 14).

All of the structures excavated had 'native earth' floors, a once universal feature that was still to be found in permanent cottages in some localities well into the 19th. century (Edwards 1873, 24; Peate 1940, 196). In Area 03, however, the shale bedrock came very close to the surface, and a layer of yellow clay had been thrown down to take the place of the natural soil.

The building in Area 06 was the only one which contained an obvious foundation for an internal partition, but the layout of features within building 01, and the eventual size of building 07 (W), suggested that these too were divided in some way. Such partitioning, effected by screens of wattle, is well attested in the documentary record (Williams 1899).

The doorways, despite their varying widths, would no doubt all have been closed by 'a hurdle formed of a few wattlings and rushes, which in bad weather is raised perpendicular to stop the gap' (Evans 1957, 161), and the stakehole encountered near the centre of the entrance into building 01 presumably played some part in such an arrangement. The doorways were probably the main source of light, for it is unlikely that windows, never an important feature of folk architecture, would appear in these temporary dwellings.

The bench located within building 07 (W) was the only piece of stone furniture found. The farmers may have brought wooden stools and other small items from their lowland homes, but it is likely that their beds were fashioned from the hay and bundles of rushes noted by Pennant, Evans, and other observers (Peate 1940, 146).

Each *hafod* excavated contained a hearth. This was generally composed of two or more slabs laid upon the floor, but whilst three examples (03, 05, 07 (E)) were set against the west walls of their respective buildings, complete with *pentanfaen* or fireback stone, four (01, 06, 07 (W) twice) were located towards the centre of the main 'room'. The reason for this distinction is not apparent, unless it was because the square-cornered buildings (03, 05, 07 (E)) had more substantial gable walls which lifted the roof well above the fireplace, whilst all the walls of the round-cornered buildings stood to the same height.

Whatever the location of the hearth, it formed the centre of social life, and this importance was fully reflected in the Laws. Once the *pentanfaen* was placed in position, it was an offence to remove it. 'The house itself might be destroyed, the owners might desert the site . . . but the *pentanfaen* was never removed. It stood as a perpetual sign that the site where it stood was the site of an occupied homestead.' (Ellis Davies 1926, 164). This is well illustrated at Brenig where the hearth stones of robbed houses in Areas 03 and 07 remained in place.

In the absence of clear archaeological evidence, it is documentary sources that provide roofs for the buildings. Undoubtedly they would have been thatched in some manner, but thatch in Wales has consisted of many materials: turf, fern, heather,

heath, reeds, rushes and straw (Peate 1940, 201). However, early this century Bwlch Du (1 km (0.5 mile) to the north of Brenig 48) was described as having a heather roof (Davies 1916, 79) and when Peate visited the cottage in 1938 he found 'a heather underthatch covered with rush thatching; the ridge being formed of sods.' (Peate 1940, 201).

The framework of the roof presents more of a problem. It was presumably composed of rough, unhewn timbers resting on the tops of the walls, but these had suffered such collapse that the evidence for the manner in which the framework was anchored had disappeared. It is not even clear whether the gable ends stood to a greater height than the side walls, although this may well have been necessary when the hearth was located at the foot of the wall. Other features, shallow hollows in building 01, the central hollow in building 05, and even the pit within building 07 (W), may indicate the existence of additional roof supports, props rather than well-jointed posts. Such rudimentary carpentry is well illustrated in drawings of a house at Strata Florida, Cardiganshire (Williams 1899).

It is evident from Pennant's description that a simple hole in the roof served as the chimney, but another authority remarked that 'as often as not the smoke escapes by the door, or oozes through the partitions, after mellowing every article of furniture, as well as the complexion of the inmates'. (Thomas 1896, 84).

A phenomenon which evoked much comment from the early writers was the practice of man and beast sharing the same roof; '. . . men, women and children, cows, sheep and pigs promiscuously together' remarked one author (Wigstead 1800, 21), whilst another found his fears of being trodden upon by the cows led into his bed-chamber were soon replaced by such delights as '. . . the sweetness of their breath, which I never was sensible of before, and the pleasing noise they made in chewing the cudd would lull a body to sleep as soon as the noise of a murmuring brook'. (MacLysaght 1950, 333). The practice survived into this century at Bwlch Du (Davies 1916, 77).

Several features at Brenig suggest that the farmers indeed shared their dwellings with some, at least, of their livestock. The east end of building 01, with its drain and fire-pit, seems to have been intended for cattle, and the wide doorway would have allowed independent access to this part of the house. Building 06 had a similar wide entrance and obvious internal divisions, whilst building 07 (W) also had a wide doorway and ample space beneath its roof, although it lacked other corroborative evidence. The small outbuilding in Area 05 with its scoured floor and drain running away to the west was also probably intended for animal occupants. Just which animals were afforded such accommodation in summer must remain a matter for speculation. Perhaps these quarters were reserved for sick and ailing animals, or the stabling of the ponies which were clearly employed, whilst the other stock rested within the adjacent enclosures.

The fold, or *cro*, was an essential part of the *hafod* settlement (Sayce 1957, 43). Its main purpose was to protect the flocks and herds from wild animals and cattle-raiders, but it had many secondary uses. It could be employed to hold the calves and kids from their dams before milking, for the periodical counting and inspecting of the animals and for sheep shearing. The large enclosure (E3) had an apparent subdivision in its north-east corner, which would have been particularly useful if the animals themselves had to be subdivided. A communal function has been suggested for this rectilinear enclosure, but only on the grounds of size, and the fact that no obvious house foundation lies within it. However, the pairing of dwelling and fold in all other recognisable instances suggests that in the main, each farmer's animals were kept apart. For the enclosure to be fully effective, the bank and ditch would have been accompanied by a fence of wattle, gorse, or similar material, the evidence for which has not survived.

The broken pottery and tools confirm the picture emerging from the structural and documentary evidence. The pottery vessels ranged from drinking-cups and bottles to large storage vessels which may have played their part in the dairying processes. Knives, accompanied by several whetstones, were the only implements to appear in any abundance, but tools fashioned of wood or bone would not have survived.

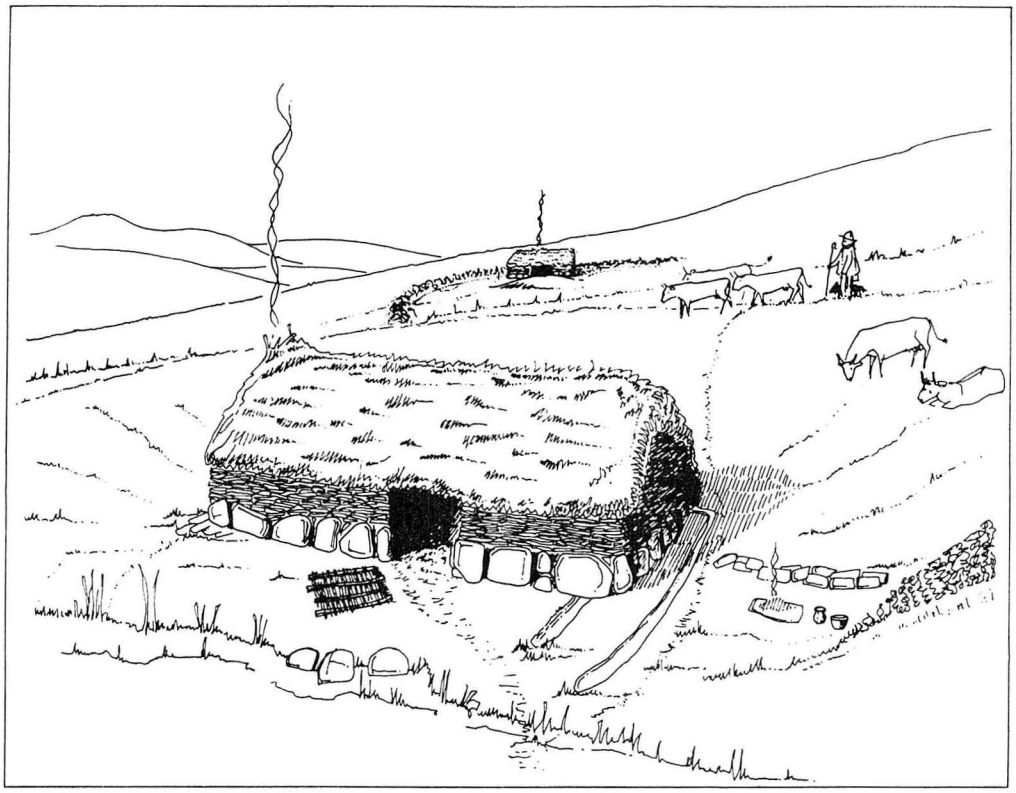
Ten spindle-whorls were found, and these were presumably put to constant use, '. . . for wherein can a woman better skill than in spinning and carding, and what can a child better do than pick wool and wind yarn' wrote the anonymous author of an Elizabethan text who urged cloth-making as a most promising means of alleviating hardship in the 'higher partes of Denbighshyre' and the surrounding region (Fisher 1915, 237).

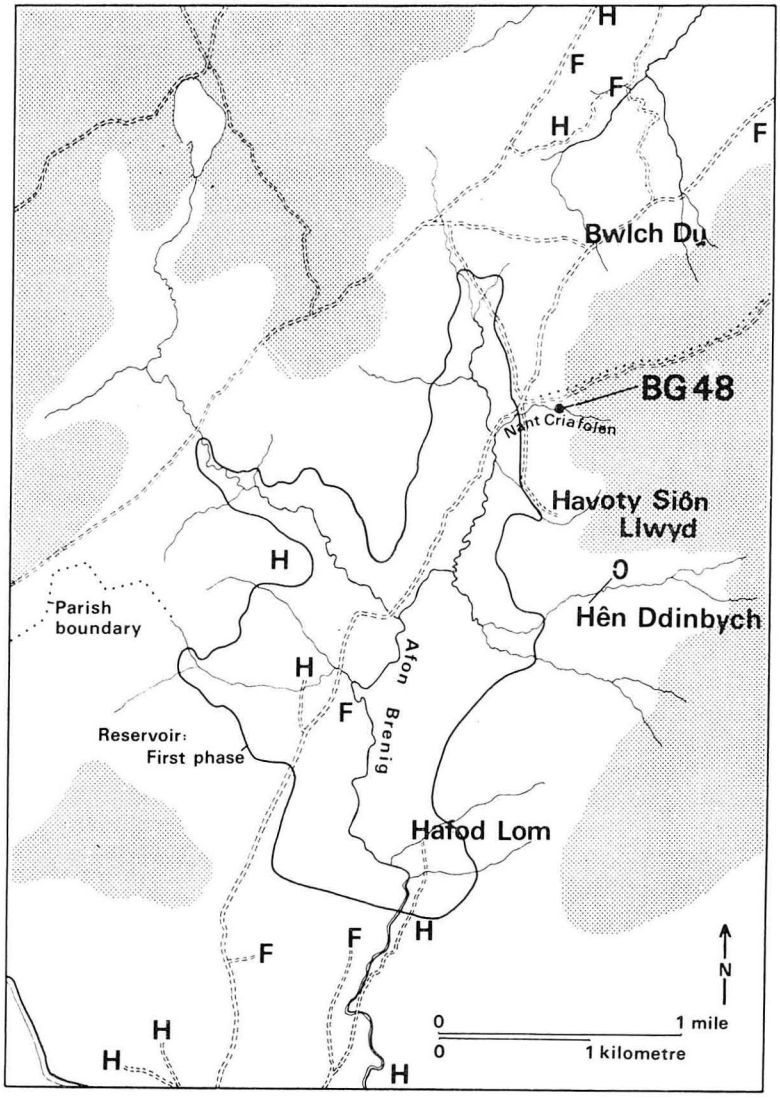
The horseshoes, spur and harness fittings suggest that some, if not all, of the farmers rode on horseback, and some may even have been armed. The discovery of parts of a pistol and sword and a socketed arrowhead reminds us that in this remote area flocks and herds may have been vulnerable to men such as the 'red-haired banditti of Mawddy' who, in the mid–16th. century, were 'the terror not only of the wild parts of the country about them, but of nearly the whole of North Wales' (Edwards 1873, 14).

Protection of a different kind may have been in their minds when the carved and perforated stones (Fig. 8. nos. 12 & 13) were fashioned. Welsh folk-lore is full of references to strange (and not so strange) objects and substances to ward off evil influences and some of these are still considered as good-luck charms today (Sayce 1956, 140). On the other hand the 'Brenig Men' may have been children's toys, rather than objects of superstitious magic.

Date and Duration

The finds provide a clear guide to the date of the settlement, because of the appearance of comparable material in closely-dated contexts on other sites. This applies particularly to the pottery, and the conclusion that these vessels





14.6 Reconstruction of Brenig 48: houses and map of *hafodau* in the Brenig area.

saw use somewhere between the late 15th. and late 16th. centuries is echoed by the evidence of the metalwork. Charcoal from one of a group of pits located beneath and beside building 07 (E), and presumably connected with site clearance and preparation, has produced a date of a.d. 1620 ± 70 (HAR 1435). Whilst the limitations of a single date are well known, this result is at least not at variance with the observations made about the pottery. Calibration by any of the available conversion tables pushes the mean date firmly back into the 16th. century.

Determining the possible life-span of the settlement is altogether more difficult. At one extreme the pottery and other artefacts may have been current for almost a century, and the *hafod* occupied for much of that period. On the other hand, if all the material was available at one time, as seems quite probable, the settlement might have seen just three or four seasons' use.

The evidence of the excavations is not helpful in this respect. The layout of the buildings and enclosures would allow them all to have been occupied at the same time, but the dismantling of houses 03 and 07 (E) and the restyling of building 07 (W) suggest that some changes in the overall pattern did take place. This work, along with the recutting or refashioning of the ditches and gullies in Areas 01, 03 and 07, would presumably have been carried out at the start of each new season, but there is no way in which a sequence of more than three episodes can be built up, and no real means of estimating their duration.

There can, of course, be no estimated 'life-expectancy' for a *hafod* settlement as its success or failure could have been determined by many factors both local and otherwise. A large number became permanent holdings as pressure on land increased (Sayce 1957, 83), and this was particularly true of the area to the south of these excavations, where eight of the first twelve farmhouses encountered include the element 'hafod' in their name, revealing the former role of the pastures. Others, such as Hafod Nant y griafolen itself, fell into disuse and decay, abandoned to the moors and the mists.

The Historical and Economic Background

Transhumance has been an enduring part of the pastoral life of Western Europe for several millennia. The earliest documentary reference to the practice occurs in Pytheas' description of Thule (Norway), written circa 330 B.C., where he records how the people of that country drove their cattle to the mountain pastures in the spring, and remained there for the summer (Sayce 1956, 117). Much earlier beginnings can be inferred, however, from the increasing body of environmental evidence which suggests that pastoralism, nomadic or otherwise, was both widespread and well established by the second millennium B.C. (Bradley 1972; Fleming 1972). Indeed, the Brenig Valley can perhaps provide some testimony for such activity in the prehistoric period, since both the environment and the post-built structure at BG48.07 would seem suitable for the purpose.

Early poems, probably of the 12th. century, refer to the *hafod* without qualification, implying that the institution is well known to readers (*'Elaeth y gant'*, Jarman 1982), but there is no description of the establishments, just as there is not in the first legal references in the Laws of Hywel Dda (Sayce 1956, 117; Peate 1940, 145). These laws, however, provide some indication that the *hafod* of the mid–13th. century (the date of the earliest surviving manuscript) was but lightly constructed, being valued at 12 pence, compared with 50 pence for the *hendref*. In the Brenig valley itself the farm name 'Havothlum' (Hafod Lom), which occurs as early as 1334 in the Edwardian survey of sources of revenue (Vinogradoff & Morgan 1914, 25), suggests that the transhumant way of life was well established before the English conquest and continued beyond it, as the excavations at Nant y griafolen have shown. By then it is probable that Hafod Lom, lower down the valley, had become a permanent settlement, for it was the most notable farm in the neighbourhood during the 18th. and 19th. centuries.

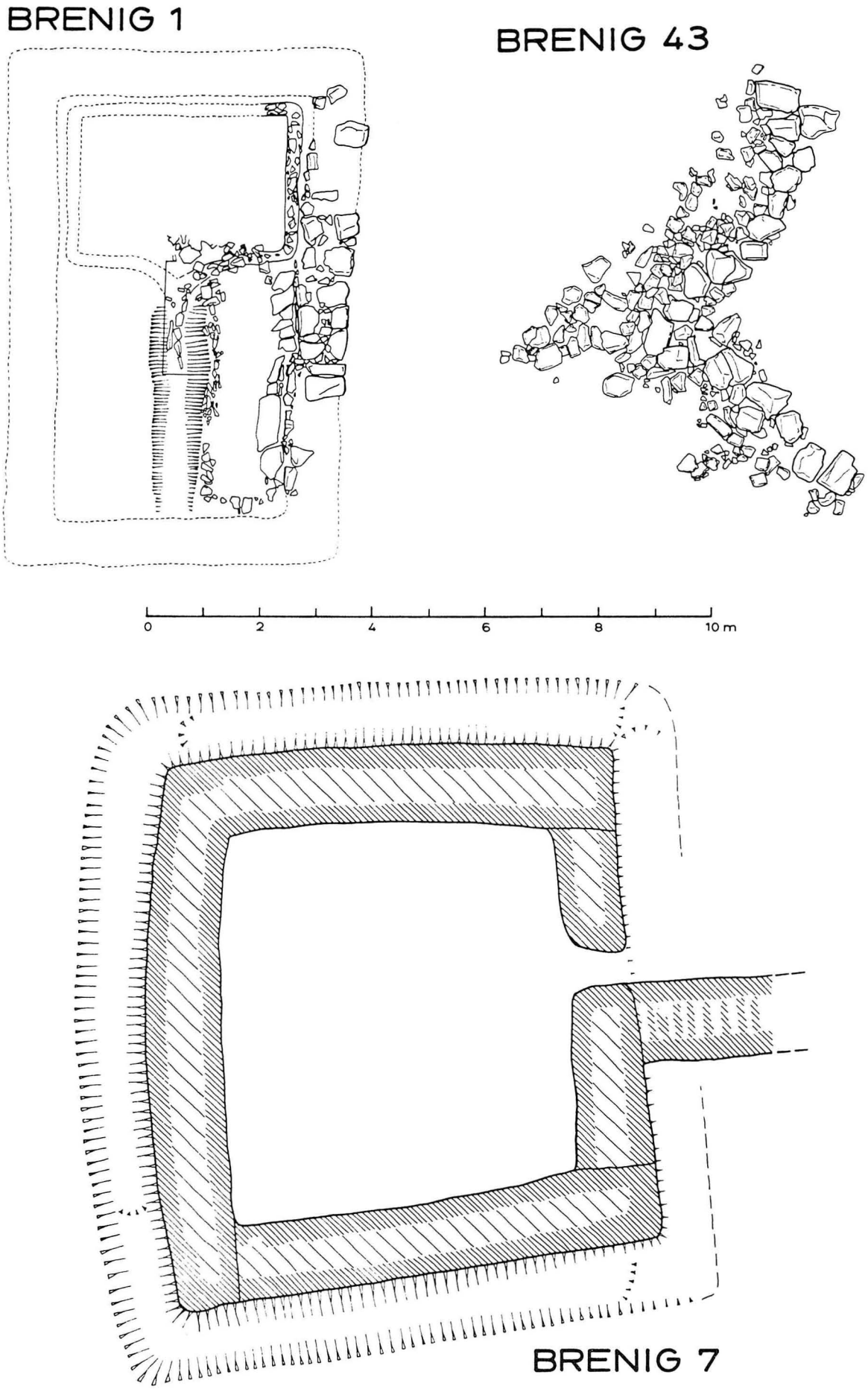
Several geographical and economic surveys survive from the 16th. century, and one that describes the limited prospects for the 'higher partes of Denbighshyre' may be quoted:–

> 'Neither can that Barrayne soylle serve to any other trade or scyence except for (clothmakings), for sommering of cattell, or for Myneralles'
> (Anon., quoted in Fisher 1915, 237.)

Both cattle and sheep played their part in this economy; both are represented at Hafod Nant y griafolen, but the acid soil has rendered any quantative analysis impossible. The ox-shoe and the spindle-whorls, however, are additional indicators of involvement in the two main trading outlets from these hills – the wool and cattle trades. Authorities disagree as to when these markets reached their peak, but there is a general consent that Tudor times saw a period of expansion (North 1949, 372).

It was a very scattered industry, founded on the domestic system, but the Welsh sheep apparently produced so little wool that families often had to pool their clip (Mendenhall 1953). Perhaps only the initial processes of cleaning, sorting, carding and spinning took place at the *hafod*, weaving being carried out at the permanent farmstead.

The cloth, known as 'Welsh Cotton', was a rough material, suitable for hard wear, but not for show, and was specifically exempted from some 16th. century legislation because of its admitted coarseness (Mendenhall 1953). It was purchased by wool buyers or *Broggers* at the periodic fairs (Denbigh, Ruthin and Cerrig y Drudion all held these), who then took it to the main market centres such as Oswestry, Shrewsbury and Welshpool, where the weekly turnover in the 16th. century could be as much as £20,000 (Skeel 1926).



14.7 Plans of Brenig 1, 43 and 7, recent structures.

When cattle droving began cannot be precisely stated, but there is a mid–13th. century reference to the trade (Finberg 1954). Certainly by the mid–16th. century the annual migration of cattle from the rearing regions of Wales to the fattening pastures of England was well established, and was to maintain its importance for the next three centuries (Baker 1972).

Denbighshire lay in the track of drovers bringing their herds from Caernarvonshire and Merionethshire, and cattle reared in the Brenig Valley may have joined them at Cerrig y Drudion, Denbigh, or Ruthin (Hughes 1943; Jack 1972, 196). Their destinations varied, for Welsh cattle were very popular in Leicestershire and Rutland, as well as London and the south-east (Bonser 1970).

Hafod Nant y griafolen apparently fell out of use by the end of the 16th. century, but the pastoral economy of which it was a part continued into the 17th. century and beyond. Even in the 18th. century Thomas Pennant and other travellers were able to write first hand descriptions of occupied *hafodau*. However, by this time, because of the growing dominance of sheep on the remote moors, transhumance farming was in general decline, and the accessible parts of the uplands were being put to more intensive use as permanent farmsteads (Sayce 1957, 83; Davies 1973). The practice of maintaining a *hafod* and migrating to it for the summer months must have been abandoned at different times in different areas, but by the mid–19th. century it was a thing of the past.

The 19th.-century life of a valley such as Brenig is evocatively recreated by Hugh Evans, who lived near Cerrig y Drudion in his youth before moving to Liverpool to become a printer and publisher. His memoirs, *Cwm Eithin (The Gorse Glen)*, written towards the end of his life, recall his own life as a farmworker in the 1860s and look back to the time of his grandfather. He describes all the tasks of the farm, the work with animals, the harvest, the cutting of peat, clearance of land and all the innumerable rural crafts. He speaks of the thatched cottages and small fields, the droving and marketing and incessant work of the womenfolk, knitting stockings to supplement the meagre agricultural income, and also of the excitement at the arrival of some new piece of machinery – a rare event in a farming community which was both poor and conservative – and the companionship of the *noson lawen* and the preaching festival.

The excavation programme touched briefly on this later period in the agricultural history of the valley through work on the ruins of a stone-built byre (Brenig 1), the remains of peat mounds (Brenig 2–5) in the bottom of the valley, and the cruciform sheep shelter (Brenig 43) on the open moor at Bryn yr Hen Groes. A turf-built enclosure (Brenig 7) is less certainly modern but could have been used as a lambing shelter. All these minor excavations, which were carried out by R.A.G. under the supervison of David Allen (Brenig 1–5, 43) and Chris Musson (Brenig 7), are described below.

BRENIG 1 FIELD BYRE

(SH 971 553; height 350 m): (Fig. 14.7)

This site was unfortunately 'bulldozed' before excavation could take place, but enough salvage work was possible to establish that it was a field byre or *beudy*. Before its destruction it appeared as a rectangular foundation (8 m × 6 m) of gritstone boulders, situated on gently sloping ground, with the central gutter still visible as a shallow depression.

Only the west wall survived the damage; it had a stone foundation, a double row of gritstone boulders with soil and small stone infill, averaging 0.4 m high and built to support a timber superstructure of which no trace survived, save for a few badly-corroded nails and clamps. A line of slate slabs had been laid against the inner face, creating a border some 0.4 m wide, but elsewhere the floor was of beaten earth. The central gutter, 1 m wide and 0.2 m deep, was present only in the northern, or downhill, half of the building, although a narrower, shallower drain skirted the southern floor before funnelling into the gutter which had presumably led away through the entrance, although damage made this impossible to prove.

The typical field byre housed both hay and cattle, and stood at some distance from the farmstead (Smith 1975, 145). Brenig 1 stood in the north-west corner of a group of small fields, enclosed by earthen banks, belonging to Hafod Lom, 1 km (0.5 mile) to the east, and this was probably the settlement with which it was associated.

BRENIG 2–5 PEAT CUTTERS' MOUNDS

(SH 973 558; height 340 m): (Plate 13.2c)

These low mounds (maximum size 5 m × 3 m) resulted from peat-cutting activity, presumably of relatively recent date, for the individual turves were still recognisable.

BRENIG 7 ?SHEEPFOLD

(SH 986 566; height 405 m): (Fig. 14.7 and Plate 13.2d)

This small, banked enclosure, approximately 9 m square, was located on a gentle, south-west facing slope, some 300 m south of Hafoty Sion Llwyd. A narrow entrance, less than 1 m wide, on the western side, was flanked by a small, projecting bank, and this, like the remainder, averaged 1.5 m in width, and 0.2 m in height.

Excavation showed that the banks had been neatly constructed from turves, employed as inner and outer facing, with subsoil, excavated from the small surrounding drainage gully, used as core material. There was no evidence that the bank originally stood much higher than the 0.2 m revealed by excavation, nor, indeed, that it had

supported a fence or similar barrier, although this would have been necessary for it to function as a fold.

Three worked flints were found (all deemed to be Bronze Age in date (App. 3)), but since these came from secondary contexts, a sherd of willow-pattern plate from the interior may be a more realistic clue to the date of the enclosure. Perhaps the best dating evidence comes, in indirect fashion, from Ellis Davies (1929, 310), who visited the site in May 1925. He describes it thus:

> 'a green patch in the middle of the heath, on which there is a small platform or enclosure, more square than circular.'

The fact that the monument was turf-covered, in contrast to the surrounding heather (a distinction removed by the 1965 ploughing), suggests that it had been abandoned not long before, and it was probably in use in the 19th. century.

BRENIG 43 SHEEP SHELTER

(SH 971 571; height 375 m): (Fig. 14.7)

This site may have been the source of the name 'Bryn yr Hen Groes' which appears on the Ordnance Survey map in this locality, for upon excavation it resembled a three-armed cross. The northern and south-eastern arms were constructed of large gritstone boulders, many smaller stones, and some turf material, whilst the south-western one was much less substantial. This tripartite arrangement would provide effective shelter from all winds.

Such shelters are common on the Denbigh moors and are the product of increased sheep farming, from the 17th. century onwards. The majority are shown on the O.S. 6″ map cover, but this example was overlooked, perhaps because it was partly submerged in thick peat.

Occasionally shepherds dismantled a burial monument in order to build a shelter (Ellis Davies 1929, 310), but the absence of any prehistoric material (the only find was a piece of bottle glass), and the lack of any hint of a cairn base, makes it unlikely that they did so in this instance.

APPENDIX ONE

Summary of dimensions of stakes in Stake Circle Barrows.

The raw data from which these percentages are derived is listed in the microfiche Appendix 1.

All figures to nearest integer.

	Diameter of Stake (mm)													*Depth of Stakehole (cm)*								
	30	40	50	60	70	80	90	100	110	120	130	140		5–10	11–5	16–20	21–5	26–30	31–5	36–40	41–6	
BG42A	–	–	1	15	19	29	25	4	2	2	–	–	%	3	9	30	33	17	6	1	1	% of 94
B	–	–	5	27	43	21	2	1	–	–	–	–	%	–	6	34	37	14	8	–	–	% of 65
Mort	–	–	–	–	–	71	14	14	–	–	–	–	%	–	14	57	28	–	–	–	–	% of 7
Arc	–	–	–	–	–	–	–	60	–	40	–	–	%	–	–	–	40	–	40	20	–	% of 5
Quad	–	–	–	–	50	25	25	–	–	–	–	–	%	–	50	–	25	25	–	–	–	% of 4
BG41A	–	2	5	14	19	24	19	12	2	–	–	–	%	7	29	41	17	5	–	–	–	% of 41
B	2	–	7	12	16	25	14	14	5	2	–	2	%	5	32	35	12	12	2	–	–	% of 56
C	–	2	24	26	33	7	2	1	–	1	1	1	%	11	44	28	10	3	1	1	–	% of 82
BG40A	–	–	7	7	24	24	14	7	10	7	–	–	%	–	7	39	36	11	3	3	–	% of 29
B	–	–	2	13	25	26	19	8	2	2	–	–	%	–	23	38	30	8	–	–	–	% of 47
C	–	–	–	6	44	29	9	6	2	1	–	1	%	9	23	32	29	6	–	–	–	% of 66
E	–	–	–	2	15	30	31	12	3	6	–	–	%	–	1	9	24	40	16	7	1	% of 67
ArcD	–	–	–	–	25	33	25	–	–	–	8	8	%	–	25	–	41	25	8	–	–	% of 12
Mort	–	–	–	–	–	–	–	50	–	50	–	–	%	–	–	25	25	–	50	–	–	% of 4
Cent	–	–	–	–	100	–	–	–	–	–	–	–	%	–	–	50	50	–	–	–	–	% of 2
BG45A	–	–	–	8	19	50	23	–	–	–	–	–	%	4	15	42	31	4	4	–	–	% of 26
B	–	–	–	–	13	26	30	26	–	5	–	–	%	–	–	2	21	29	21	13	13	% of 38
C	–	–	2	7	4	4	13	25	34	4	4	–	%	2	9	16	7	41	16	9	–	% of 44
E	–	–	2	12	9	24	26	17	5	2	–	1	%	6	18	20	21	29	4	1	–	% of 76
Arc	–	–	–	25	–	50	25	–	–	–	–	–	%	–	25	50	25	–	–	–	–	% of 4
Cent	–	–	–	–	–	60	–	20	20	–	–	–	%	–	–	–	40	60	–	–	–	% of 5
Entr	–	–	–	33	–	–	–	–	–	33	33	–	%	33	–	–	–	–	33	–	33	% of 3
Quad	–	–	–	50	25	25	–	–	–	–	–	–	%	50	50	–	–	–	–	–	–	% of 4

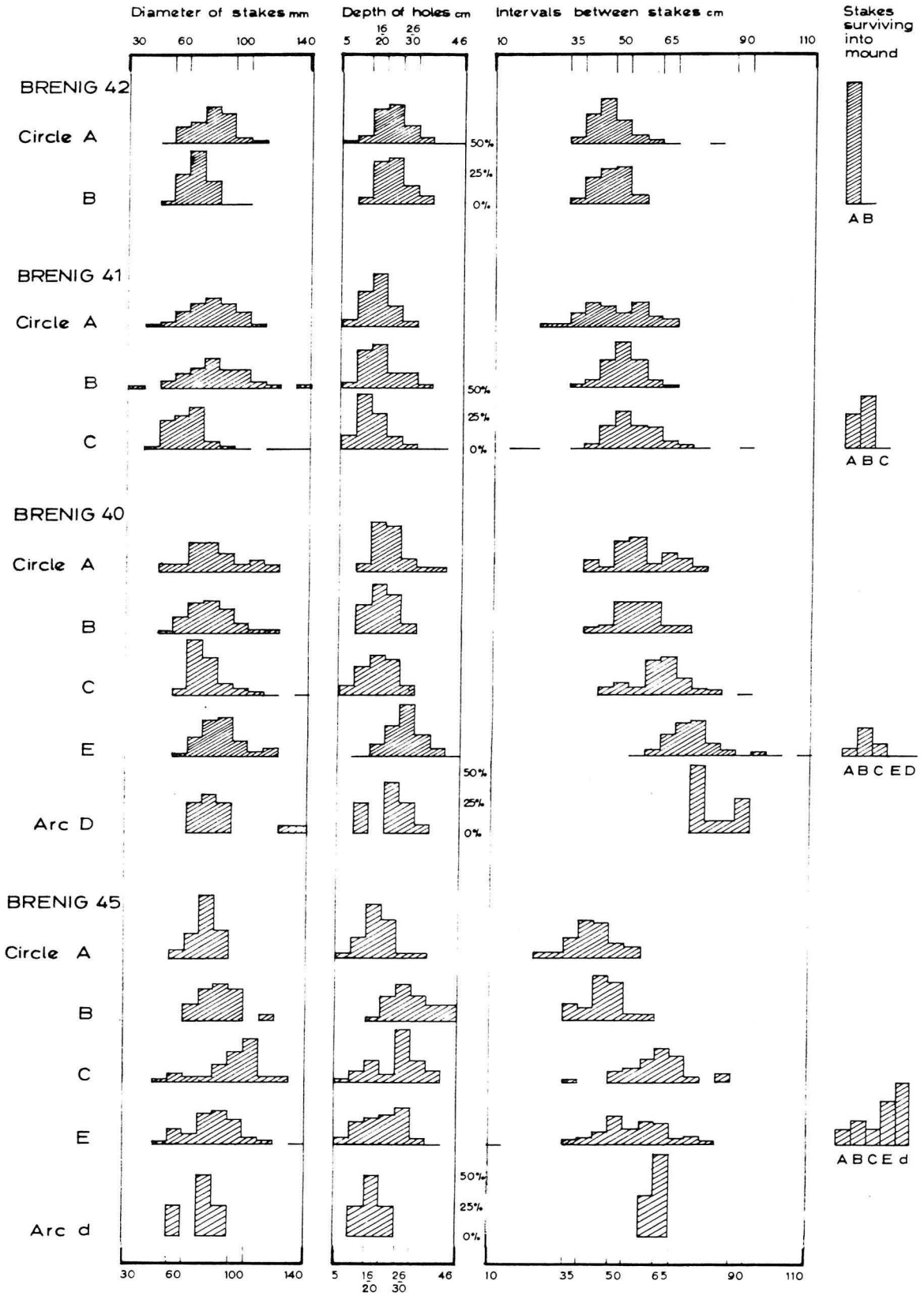
Percentage of stakes visible within the barrow mound

BG 42 Circle A (Revetment of loose bank) : 100%
B (Pre–barrow fence) : 0%
Features of 'burial area' : 0%

BG 41 Circle A : 27%
B : 39%
C (Pre–barrow fence) : 0%

BG 40 Circle A : 7%
B : 23%
C : 9%
E : 0%
Arc D : 0%

BG 45 Circle A : 11%
B : 18%
C : 11%
Various stakes in central area : 20%
Stake features outside wall : 0%
Circle E (protective fence outside wall) : 34%
Arc (? overlap of Circle E) : 50%



App. 1.1 Histogram of metrical variation in stake circles at Brenig barrows.

Intervals Between Stakes (measured in cm)

	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	
BG 42 Circle A	–	–	–	–	–	6	26	35	19	7	3	1	–	–	1	–	–	–	–	–	–	% of 94
B	–	–	–	–	–	6	23	31	32	8	–	–	–	–	–	–	–	–	–	–	–	% of 62
Arc	–	–	–	–	–	–	–	–	–	25	–	–	–	–	–	–	25	25	25	–	–	% of 4
BG 41 Circle A	–	–	–	2	2	11	20	16	11	20	9	7	–	–	–	–	–	–	–	–	–	% of 44
B	–	–	–	–	–	2	7	23	36	23	7	2	–	–	–	–	–	–	–	–	–	% of 56
C	–	1	1	–	–	1	2	17	31	17	16	7	2	1	–	–	1	–	–	–	–	% of 82
BG 40 Circle A	–	–	–	–	–	–	10	3	24	27	7	14	10	3	–	–	–	–	–	–	–	% of 29
B	–	–	–	–	–	–	4	6	25	25	25	6	6	–	–	–	–	–	–	–	–	% of 47
C	–	–	–	–	–	–	–	6	9	6	27	30	12	4	3	–	1	–	–	–	–	% of 66
E	–	–	–	–	–	–	–	–	–	1	6	16	26	27	10	6	2	3	1	–	1	% of 67
Arc D	–	–	–	–	–	–	–	–	–	–	–	–	–	54	9	9	27	–	–	–	–	% of 11
BG 45 Circle A	–	–	–	4	4	15	30	27	11	8	–	–	–	–	–	–	–	–	–	–	–	% of 26
B	–	–	–	–	–	13	11	35	30	5	5	–	–	–	–	–	–	–	–	–	–	% of 38
C	–	–	–	–	–	2	–	–	9	11	18	27	20	4	–	7	–	–	–	–	–	% of 44
E	1	–	–	–	–	4	5	10	22	12	17	16	4	5	2	–	–	–	–	–	–	% of 76
Arc d4–d7	–	–	–	–	–	–	–	–	–	–	33	66	–	–	–	–	–	–	–	–	–	% of 3

Details of Hurdling visible in BG 42 Circle A

Most of the upright sails are 80 mm – 90 mm in diameter (or at least the holes are, perhaps the wood itself would have been a little thinner) and between 0.4 m and 0.5 m apart. They have been driven firmly into the ground, but not to a greater depth than those of the other circles. Within the 0.26 m of height which survived it is possible to see, on average, three horizontal rods forming a band starting 0.1 m above the ground and being 80 mm – 100 mm thick. These rods, where measurable, are about 20 mm – 30 mm thick and are separated by between 10 mm and 40 mm. Unfortunately the measured drawing of this feature was lost and these observations are taken from photographs.

APPENDIX TWO

Calculations of Turf Volume used in Barrows

John Waddell and Frances Lynch

'Another industry was that of stripping the turf from rough hill land. The local word for this was *gwthio*. The mountains of Cwm Eithin were low and grass-covered and the small farmers used the land almost rent-free at that time. It was soon discovered that good crops of oats could be grown if the land was ploughed; I have seen oats higher than my head on some parts of the hill land, a better crop than could be grown on many places of the lowland. But the ploughing of such land was the problem; there was no plough powerful enough to penetrate that tough turf, and if there had been such a plough there were no horses strong enough to draw it or a ploughman who could have held it in the furrow. There was nothing for it but to strip the turf first of all, and this was what we called *gwthio* – literally, pushing. The implement used was the push or breast plough. It had a sharp edge which needed frequent renewal. The edge on the left side was up-turned; this was used to cut the edges of the piece of turf that had been detached. The handle was from five to six feet long and bent like the handle of a spade, with a cross bar at the end, about ten to fifteen inches long. The person using this implement had a piece of leather on his thigh and, holding the cross bar in both hands, he would push with his leg and arms until the blade passed under the turf for the required distance. Then, by lifting one end of the cross bar the turf would be turned over to the right hand side, precisely as a furrow is turned by the plough.

When the pieces of turf were dry they were burned. In early winter the ground thus prepared would be ploughed in the usual way; oats would be sown in the following spring, and a good crop usually matured by harvest time. This would go on for a few seasons, until the soil was exhausted. The good crops, however, lasted long enough for the landowners to raise the rents, with the result that some of those who had laboured to cultivate the mountain land were in the end worse off than those who had been content to use the hill as pasture for sheep according to the usage from time immemorial.

Gwthio, work with the breast plough, was regarded as being the hardest work of any on the land. It was done as a rule in early summer, and the worker was paid by the rood. He commenced work very early in the day, taking with him to the hill a canful of siot (baked oatcake in buttermilk), or a can of buttermilk and some bread and cheese. With this sustenance he would work hard till the evening, and every *gwthiwr* was a hard worker, for the lazy ones took care not to learn how to do it at all. I estimate that it would take a hard worker from a fortnight to three weeks to de-turf an acre of hill land.' *The Gorse Glen* (1948 ed) 103–105

The volume of the turf mound Brenig 40 was, at the time of excavation, approximately 270 cubic metres. The calculation of this figure is based on the assumption that the circular barrow is, more or less, the same as part of a sphere in which Volume = $\frac{\pi h}{6}$ $(h^2 + 3r^2)$, taking the height to be 1.7 m. and the radius to be 10 m. The clay clapping is not included. Applying the Overton Down compression factor of 36% (Jewell and Dimbleby 1966, 318), the volume of the turf mound when first constructed would have been of the order of 420 cubic metres. The freshly-cut turves used in the construction would have been about 160 mm in thickness, and a mound of this size would have required the stripping of some 2100 square metres or about half an acre. This would have been 7–10 days' work with an iron spade – how much longer with a wooden one?

Piggott has calculated (1971–2, 45) that, with primitive tools, cutting and stacking the 1470 cubic metres of turf in the Dalladies Long Barrow would have taken about 5,750 man hours. Brenig 40, therefore, might have taken a group of a dozen men just over two weeks. Assuming that Brenig 45, 41 and 42 were contemporary, all three could have been built in the same time as was devoted to Brenig 40 several generations later.

Site	Height of turf mound (as excav.)	No.of turf layers recognisable	Average thickness compressed	Original thickness (+ 64%)	Compressed volume	Original volume	Square metres stripped
Brenig 40	1.7 m	17	100 mm	160mm	270m^3	420m^3	2100m^2
Brenig 45	1.5 m	16	90 mm	150mm	121m^3	189m^3	945m^2
Brenig 41	1.1 m	10	110 mm	180mm	111m^3	173m^3	865m^2
Brenig 42	0.9 m	11	80 mm	130mm	77m^3	120m^3	600m^2

APPENDIX THREE

The Neolithic and Bronze Age Flintwork

Elizabeth Healey

The catalogue of the illustrated flintwork is in the microfiche Appendix 3

Non-Mesolithic flintwork recovered mainly from or beneath barrows or cairns has been listed in the catalogue and already briefly discussed in the appropriate excavation context. However, the Beaker ceramic evidence from Brenig 51, and its small, but associated, flint assemblage and the radiocarbon dates from Brenig 53 (App. 10) suggest that more than one cultural, or at least chronological, element is present. Consequently the post-Mesolithic lithic material has been examined in this section on a techno-typological basis with this in mind.

Raw Material

The raw material selected is quite different from that used for the Mesolithic tool-kit. Good quality flint is preferred and there is no unequivocal evidence for the use of gravel flint or chert. The flint selected is either brown and translucent or a more opaque pale grey. Cortex, where present, is unabraded and white.

Typology

For convenience the lithic artefacts in question are summarised in Tables App. 1–4; description of individual pieces and details of their stratigraphic contexts can be found in the microfiche Catalogue and in Table 7.1, Chap. 7. The discussion which follows reviews the types present, and their main cultural associations.

Arrowheads

There are three leaf-shaped arrowheads and one chisel-ended one (Fig. App. 3.1). Typologically BG51:16 is of Green's type 3A and the other two type 3 or 4B, a variation which was perhaps only a constraint of raw material (Green 1980, 58) since it is made of different flint and is retouched only on the edges. BG46:15, on the other hand, has been ground on both faces, which suggests something special and perhaps this arrowhead at least had a particular significance.

The chisel-ended arrowhead (BG48:162) has been struck from a discoidal core and is typical of such arrowheads from Late Neolithic contexts (Green 1980, 111–114). The leaf-shaped arrowheads are less closely datable but could be broadly contemporary (Green 1980, 75–97). All four came from the eastern side of the valley, but were widely scattered.

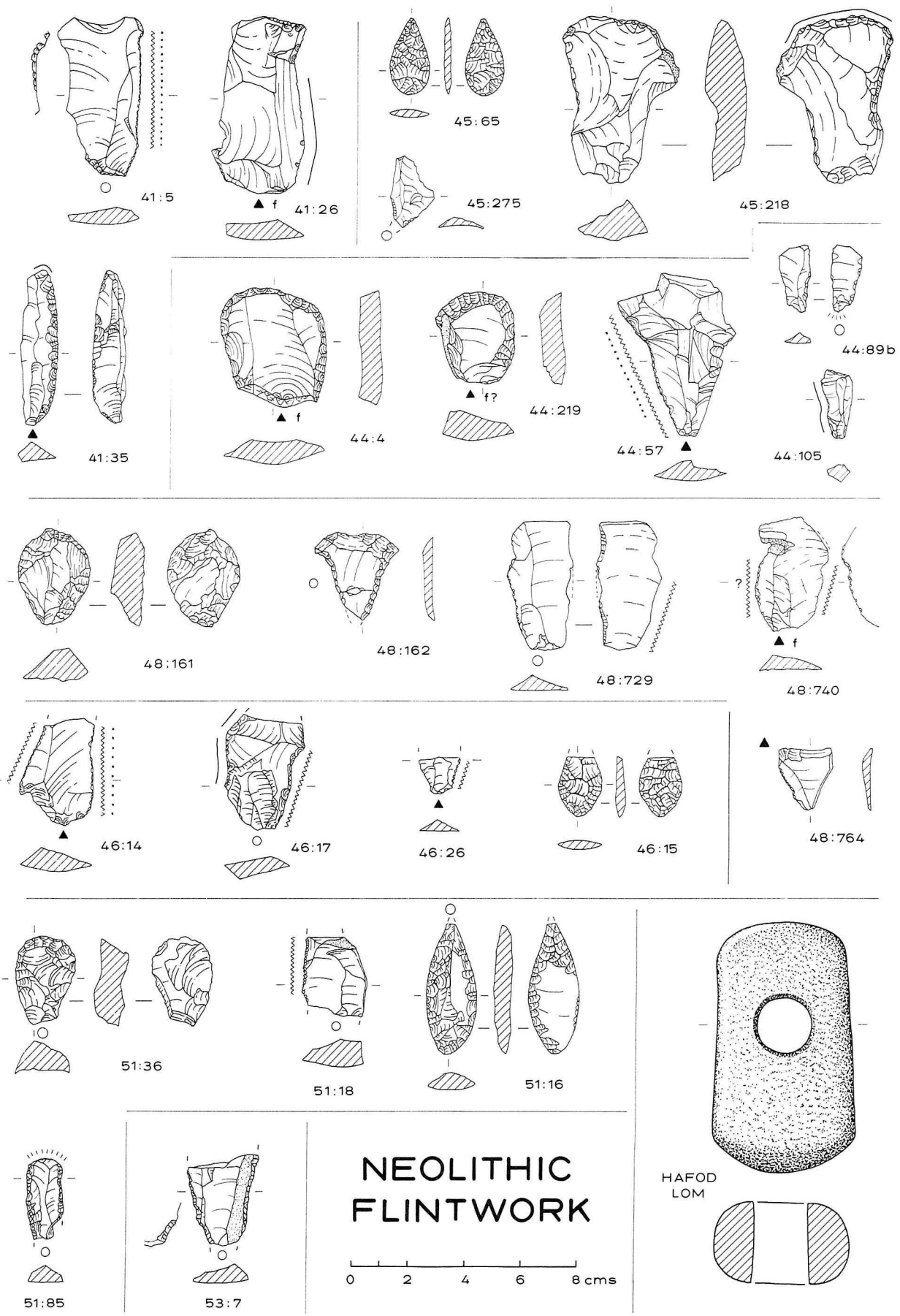
Scrapers

The main features of the 17 scrapers are summarised below:

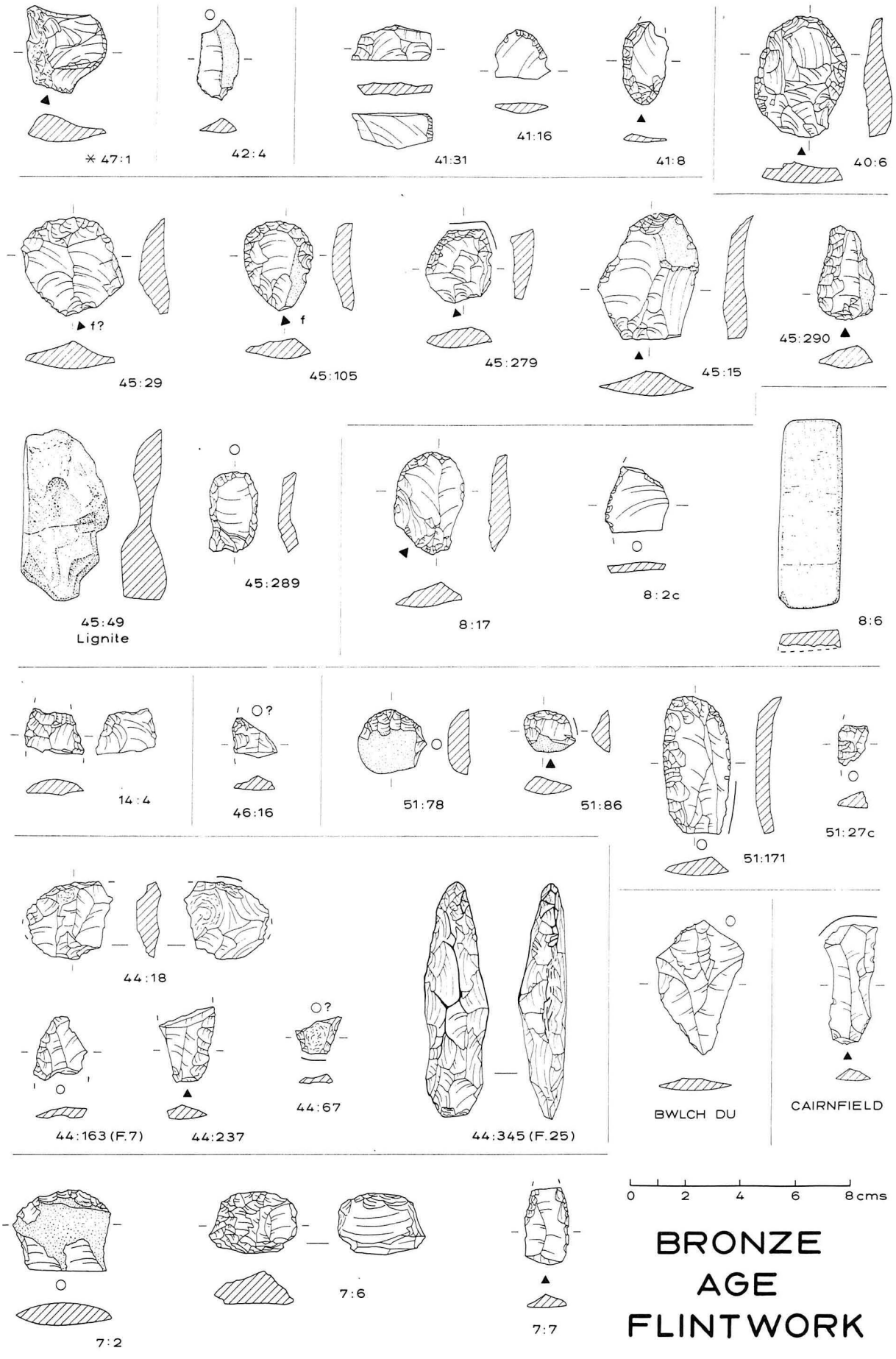
Retouch Position		Faceted Platform	Retouch on ventral face
End	3	–	1
End and Sides	11	4	2
Uncl.	2	-	-
On Core	1	-	1

Most of the scrapers have rounded contours, though BG45:15 and 279 (which may have been re-worked) tend to be angular. The type and extent of retouch varies with its position on the blank. The deeper and more abrupt serial flaking tends to occur on the thicker part, usually the distal end, whereas the sides have more acute scale-flaking which may be semi-invasive. Flaking on the ventral face occurs on BG51:36 and BG48:161 (with BG44:18 and BG7:6 as doubtful examples). Four scrapers, BG44:4 and 219 and possibly BG45:105 and 29, are made on flakes with faceted butts.

The ascription of small numbers of scrapers to a particular cultural tradition is difficult, as traits tend to overlap chronologically (Smith 1965, 96); however, as the lithic material from Brenig does suggest mixed origins, tentative cultural assignments, largely based on raw material, with some technological features and contextual indicators (where relevant), have been attempted. The main diagnostic features include flaking on the ventral face, which has been recognised in earlier Neolithic industries (Clark *et al.* 1960, 220); and the use of blanks with faceted butts, which is more typical of later Neolithic industries than earlier ones (Smith 1965, 95; Saville 1981, 59). Small scale-flaked scrapers, like BG51:86 and 78, which were found in a potentially Beaker context, are characteristic of Beaker industries (Wainwright 1972, 52; 56; Bamford 1982, 27). Though a similar small scraper (BG53:A1) has been described with the Mesolithic material, it may in fact belong here. Invasive flaking like that on BG45:105 and 29 and BG40:6 is a characteristic feature of Early Bronze Age industries (Smith 1965, 107).



App. 3.1 Neolithic flintwork from various Brenig sites.



App. 3.2 Bronze age flintwork from various Brenig sites.

Knives

Three types of knife and a scraper-knife are present:

a) blade-like blanks with abrupt marginal retouch; BG53:7 and BG41:19 (not illustrated).
b) blanks with semi-invasive retouch on edges; BG51:6 with cremation (Fig. 10.8), BG44:67 and 237 and BG45:290, (Fig. App. 3.2).
c) plano-convex knives; BG44 (in Urn B, F.20). (Fig. 11.9).

The association of plano-convex knives and urns has been discussed elsewhere (Healey in Ehrenburg *et al.* 1982, 808–810). Knives with scale-flaking on one or both edges can be documented from the Late Neolithic onwards. However, all but BG45.290 come from closed contexts associated with the use of the monuments and are therefore probably Bronze Age. Artefacts with abrupt marginal retouch are ubiquitous and do not seem to be culturally diagnostic.

The scraper-knife (BG51:171) is best parallelled in Early Bronze Age contexts (cf. Plantation Farm, Clark 1932, 272) and possibly late Neolithic contexts (cf. Wainwright & Longworth 1971, 165, F18).

Serrated Flakes and Saws

The majority of the serrated pieces are on largish, irregular flakes like BG44:57, which contrast with the blade-like artefacts of presumed Mesolithic date. The serrated edge is normally on the side of the blank; three are doubled-sided (BG48:729 & 740; BG46:14); in shape the edge is straight; a line of gloss on the ventral face at the edge of the teeth was recorded on three. Retouch on the opposite edge is not easily distinguished from worn serrations, but was recorded on five pieces. The denticulations are relatively coarse, the finest having only about ten teeth per centimetre.

Coarsely serrated flakes such as those illustrated in Fig. App 3.1 are typical of Late Neolithic industries (cf. West Kennet Avenue, Durrington Walls) and contrast with those from earlier Neolithic industries (Smith 1965, 91–2; 239).

Waisted Core-tool

BG45:218 appears to be the fragment of a discoidal core which has been retouched to form two opposing concave areas on the sides. It has abrasion on the convex butt end. Piggott assigned similar objects to his Secondary Neolithic culture (1954, Fig. 44).

Piercers

A single piercer made on a blank of good quality flint was found on the ploughed surface near Bwlch Du. Two possible piercers or fabricators made in the characteristic non-pebble flint were found in the turf mound of BG45 and at BG48.

Fabricators

Three narrow, triangular-sectioned blanks, BG41:35, BG51:85, BG44:89b, and a narrow bladelet core (BG44:105) have abrupt scale-flaking on their long sides and on to their ends. Three have heavily worn areas. Morphologically they fall into the class of edge-retouched fabricators of Late Neolithic or Beaker type (Smith 1965, 108) and they stand in sharp contrast to the fine lozenge-sectioned fabricator (BG44.345) of presumably Bronze Age date.

Miscellaneous Retouch

A number of flakes of non-pebble flint have lengths of retouch but are otherwise unclassifiable. These include BG41:26, a trimming flake with a faceted butt, and BG41:16.

Technology

Technological evidence is derived mainly from the removals and suggests that some were struck from specialised, prepared cores, BG44:4 being a classic example. Cores only survive from BG51: they are very small (maximum length only 20 mm) and have been struck using the écaillé technique. They probably derive from the Beaker activity there.

Most of the flakes present are either potential tool blanks or are in the form of retouched pieces; very litle evidence of flaking debris such as spalls was recovered.

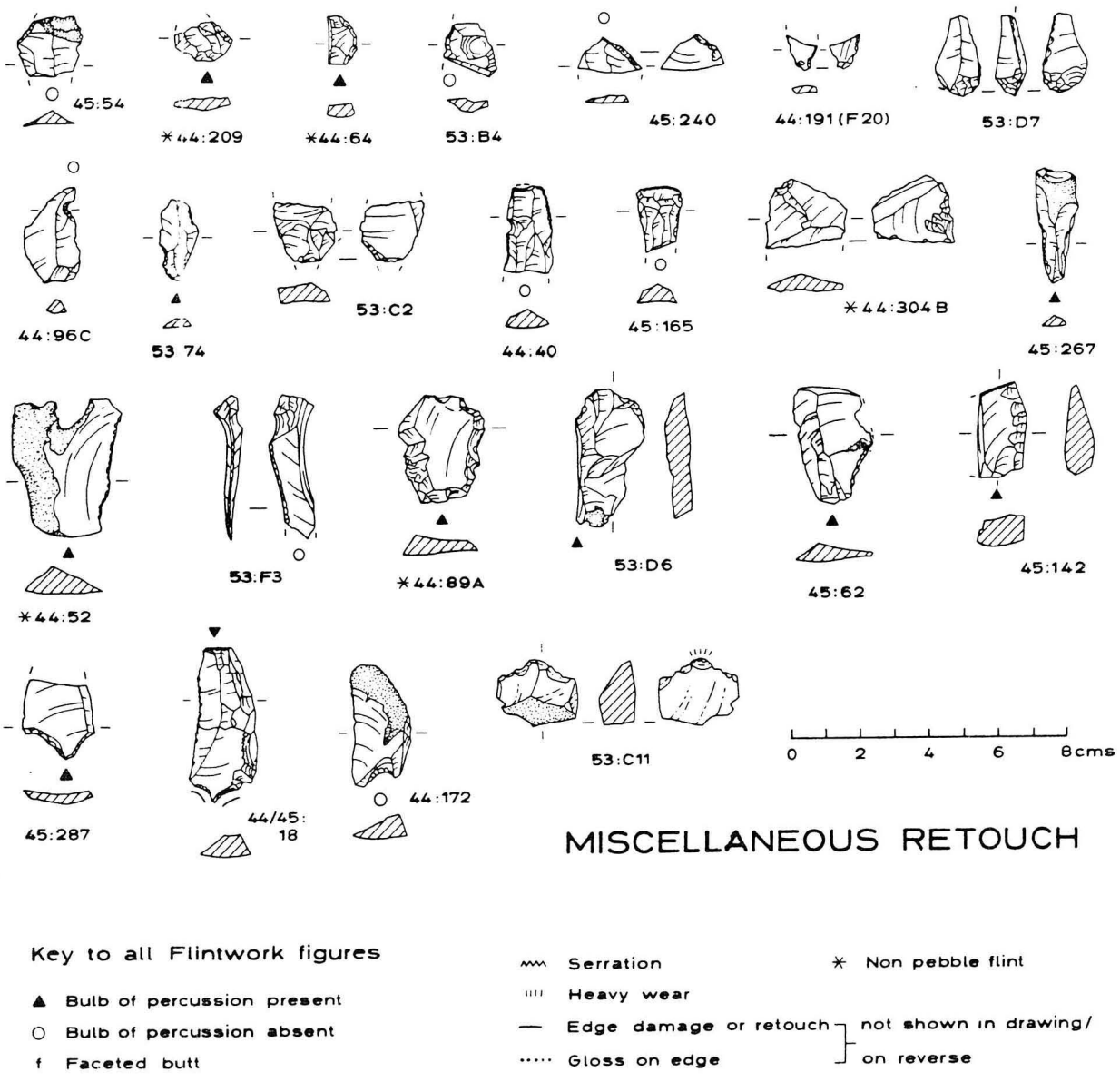
Conclusions

From the preceding discussion it is clear that traits characteristic of later Neolithic and Early Bronze Age industries predominate. Independent dating is provided only by associated grave goods, the radiocarbon dates and the Beaker pottery from beneath BG51. The stratigraphic evidence for much of the the post-Mesolithic material is ambiguous, as most comes from barrow mounds the material of which may have been imported from elsewhere. Some pieces, however, derive from the flint assemblages on the old ground surface, and presumably therefore pre-date the barrow construction, though by how long cannot now be determined. Much of the dating evidence therefore rests on typological grounds. Briefly, for the later Neolithic the lithic evidence is most certain in respect of the transverse arrowhead, the waisted core tool and the use of good quality imported tool blanks often with faceted butts, suggesting that they have been struck from prepared cores. Other artefacts from this techno-complex may include scrapers BG44:4 and 219, serrated blades BG48:729 and BG46:26 and the other objects illustrated in Fig. App. 3.1.

For the Bronze Age the artefacts include the knives found in graves, the fabricator, BG44:345, possibly the saws BG44:57 and BG41:5 and the scrapers and other objects illustrated in Fig.

App. 3.2. A Beaker presence is suggested by the small scale-flaked scrapers. The evidence for earlier Neolithic, which rests largely on the leaf-shaped arrowheads and the flaking on ventral surfaces of scrapers, is ambiguous.

The use of imported flint is documented at other broadly contemporary sites including Trelystan (Healey in Britnell 1982, 175–6), Trefignath (Healey in Smith & Lynch 1987, 58) and Welsh St Donats (Healey in Ehrenburg *et al.* 1982, 810), and seems to have a special significance for grave goods. However, the range of tools and the evidence of flint working, at least at Brenig 51, is suggestive of more extensive activity.



App. 3.3 Miscellaneously retouched flint from various Brenig sites.

	MESOLITHIC						POST-MESOLITHIC					UNSPECIFIC			UNRETOUCHED						TOTAL
	Microlith	Micro-burin	Burin	Truncated Flake	Fine Serrated Flake	Mesolithic Scraper	Post-mesolithic Scraper	Serrated Flake	Arrowhead	Fabricator	Knife	Piercer	Misceilaneous Retouch	Other	Core	Struck Nodule	Flake	Blade/Blade-like Flake	Preparation/Trimming Flake	Spall or Chip	
BRENIG 6																					
Black Chert													1					1			2
Banded Chert																					
Pebble Flint																				2	2
Flint: Uncertain																	1				1
Non-pebble Flint													2							2	4
Flint: Burnt																					
Other																					
TOTAL													3				1	1		4	9
BRENIG 7																					
Black Chert																		1			1
Banded Chert																					
Pebble Flint																					
Flint: Uncertain							2										1				3
Non-pebble Flint											1										1
Flint: Burnt																					
Other																					
TOTAL							2				1						1	1			5
BRENIG 8																					
Black Chert																					
Banded Chert															1					2	3
Pebble Flint																			1		1
Flint: Uncertain	1														2		3				6
Non-pebble Flint							1						1				5		2	3	12
Flint: Burnt				1											1			1	1		4
Other																					
TOTAL	1			1			1						1		4		8	1	4	5	26
BRENIG 9-39 (14)																					
Black Chert																					
Banded Chert																					
Pebble Flint																					
Flint: Uncertain																					
Non-pebble Flint			1?				1				1								1		4
Flint: Burnt													1								1
Other																					
TOTAL			1?				1				1		1						1		5

App. 3. Table 1. Flints from Eastern Ridge

	MESOLITHIC						POST-MESOLITHIC					UNSPECIFIC			UNRETOUCHED						
	Microlith	Micro-burin	Burin	Truncated Flake	Fine Serrated Flake	Mesolithic Scraper	Post-mesolithic Scraper	Serrated Flake	Arrowhead	Fabricator	Knife	Piercer	Miscellaneous Retouch	Other	Core	Struck Nodule	Flake	Blade/Blade-like Flake	Preparation/Trimming Flake	Spall or Chip	TOTAL
BRENIG 47 (Bwlch Du)																					
Black Chert																					
Banded Chert																					
Pebble Flint																					
Flint: Uncertain																					
Non-pebble Flint							1					1									2
Flint: Burnt													1								1
Other																					
TOTAL							1					1	1								3
BRENIG 48																					
Black Chert																			1		1
Banded Chert																		1			1
Pebble Flint			1		1									1	1		1		5	1	11
Flint: Uncertain				2			1										2	2		1	8
Non-pebble Flint							1	2	1	1	1			1			1			1	9
Flint: Burnt																			2		2
Other																					
TOTAL			1	2	1		2	2	1	1	1			2	1		4	3	8	3	32
BRENIG 46																					
Black Chert																					
Banded Chert																					
Pebble Flint													1		1		4		2	1	9
Flint: Uncertain									1								1	1		1	4
Non-pebble Flint								3									3			4	10
Flint: Burnt											1							1	1		3
Other																					
TOTAL								3	1		1		1		1		8	2	3	6	26
BRENIG 51/52																					
Black Chert																1	2				3
Banded Chert								1?										1			2
Pebble Flint							1										2		1	2	6
Flint: Uncertain				1			2								1		4	3		4	15
Non-pebble Flint								1	1	1	1		3		5		11	3		11	37
Flint: Burnt											2						2	1	1	1	7
Other																3	2				5
TOTAL				1			3	2	1	1	3		3		6	4	23	8	2	18	75

App. 3. Table 2. Flints from Eastern Ridge

	MESOLITHIC						POST-MESOLITHIC					UNSPECIFIC			UNRETOUCHED						TOTAL
	Microlith	Micro-burin	Burin	Truncated Flake	Fine Serrated Flake	Mesolithic Scraper	Post-mesolithic Scraper	Serrated Flake / Saw	Arrowhead	Fabricator	Knife	Piercer	Miscellaneous Retouch	Other	Core	Struck Nodule	Flake	Blade/Blade-like Flake	Preparation/Trimming Flake	Spall or Chip	
BRENIG 44																					
Black Chert	3	1				2									7		16	38	14	19	100
Banded Chert	1					1							2		25	5	24	3	8	25	94
Pebble Flint	4	1	3											1	12		72	10	16	47	166
Flint: Uncertain	1									1			2		2		3		2		11
Non-pebble Flint							3	1		2	2		5				16	1		6	36
Flint: Burnt											2		1	1	4		13	1		10	32
Other															1		6		1	2	10
TOTAL	9	2	3			3	3	1		3	4		10	2	51	5	150	53	41	109	449
BRENIG 45																					
Black Chert															1		2	2			5
Banded Chert													2		13	5	30	3	7	7	67
Pebble Flint			5		3	6						1	5		14		94	10	9	18	165
Flint: Uncertain	1	1							1								4			2	9
Non-pebble Flint							4	1		1?	1			1	1		16		2	1	28
Flint: Burnt	1			1			1										9				12
Other															6		3	1			10
TOTAL	2	1	5	1	3	6	5	1	1	1?	1	1	7	1	35	5	158	16	18	28	296
BRENIG 44/45																					
Black Chert						1											2	1	1	2	7
Banded Chert															1		15	1	2	7	26
Pebble Flint												1			2		8	4	8	10	33
Flint: Uncertain																					
Non-pebble Flint																	3				3
Flint: Burnt																					
Other																					
TOTAL						1						1			3		28	6	11	19	69
BRENIG 53																					
Black Chert						1									1		6		3	8	19
Banded Chert	13	6								1?			2	2	23	23	157	116	31	341	715
Pebble Flint	29	5	4			1							2		38	4	216	28	14	531	872
Flint: Uncertain		1											1	4			8	2	2	2	20
Non-pebble Flint		1?									1							2		2	6
Flint: Burnt	4												1								5
Other																					
TOTAL	46	13	4			2				1	1		6	6	62	27	387	148	50	884	1637

App. 3. Table 3. Flints from Valley Bottom

	MESOLITHIC						POST-MESOLITHIC					UNSPECIFIC			UNRETOUCHED						
	Microlith	Micro-burin	Burin	Truncated Flake	Fine Serrated Flake	Mesolithic Scraper	Post-mesolithic Scraper	Serrated Flake	Arrowhead	Fabricator	Knife	Piercer	Miscellaneous Retouch	Other	Core	Struck Nodule	Flake	Blade/Blade-like Flake	Preparation/Trimming Flake	Spall or Chip	TOTAL
BRENIG 40																					
Black Chert																					
Banded Chert																1					1
Pebble Flint															1						1
Flint: Uncertain							1										2	1		1	5
Non-pebble Flint							1										2				3
Flint: Burnt															1				1		2
Other																					
TOTAL							2								2	1	4	1	1	1	12
BRENIG 41																					
Black Chert																					
Banded Chert																					
Pebble Flint						1									1		1			1	4
Flint: Uncertain																	2				2
Non-pebble Flint								1		1	3			5	1?		10	2		3	26
Flint: Burnt																	2	2		3	7
Other																				1	1
TOTAL						1		1		1	3			5	2		15	4		8	40
BRENIG 42																					
Black Chert																					
Banded Chert																					
Pebble Flint												1			1						2
Flint: Uncertain																	1	1			2
Non-pebble Flint																	2				2
Flint: Burnt																		1			1
Other																					
TOTAL												1			1		3	2			7
TOTALS BULKED	According to distribution within the Valley																				
Valley Bottom	57	16	12	1	3	12	9	2	1	5	7	2	27	9	151	37	723	223	121	1044	2462
Eastern Ridge	1		2	3	1		9	7	3	2	6	1	6	2	12	4	44	14	18	32	167
Western Ridge						1	2	1		1	3	1		5	5	1	22	7	1	9	59

MATERIAL TOTALS		Black Chert	Banded Chert	Pebble Flint	Flint Uncertain	Non-pebble Flint	Flint Burnt	Other	
Valley Bottom	(BG 44/45/53/6/9-39)	133	902	1235	41	81	50	20	2462
Eastern Ridge	(BG 47/48/46/51-2/7/8)	5	6	27	36	71	17	5	167
Western Ridge	(BG 40/41/42)		1	7	9	31	10	1	59

App. 3. Table 4. Flints from Western Ridge and Totals

APPENDIX FOUR

Summary of the Petrographic Analyses

The full reports are printed in the microfiche

FUNERARY URNS AND A SAMPLE OF BEAKER SHERDS

D.A. Jenkins

Eighteen thin-sections prepared from resin-impregnated sherds from eight Bronze Age urns and eight Beaker fragments have been prepared and examined microscopically, together with samples of local stream sediments (630 μm – 2000 μm fraction). The nature of the fabric (voids, matrix, grains, clasts and grog) and the petrography of the clasts I have been quantified by point count analyses, and these data are discussed in terms of affinities or groupings between the sherds, and also of possible provenances for the materials used in their manufacture.

The fabric of the sherds is variable but falls into two broad groups, one rich in grog fragments (7–27%) but relatively poor in clast fragments (0.3–13%), the other group conversely poor in grog (<1%) but rich in clasts (25–38%). This distinction links the urns from Brenig 45 with the Beaker sherds and separates them from the other funerary pottery. Voids tend to be low in all samples (5–15%), as are grains (0.4–9%). The grains are as usual dominated by quartz but one group of sherds is characterised by detrital pyroxene and/or hornblende.

The clasts present an interesting and distinctive range of petrology which can be divided into three categories. The first is distinguished by *coarse mafic* igneous material which carries a pale green amphibole and which is generally accompanied by a fine-grained metaquartzite and vein quartz; not surprisingly it is associated with those sherds carrying the detrital hornblende. A second distinctive petrology comprises a *lithic sandstone* containing angular fragments of quartz, slate, sandstone, coarse and fine silicic igneous rocks, and showing evidence of recrystallisation under press: it is commonly accompanied by a fine-grained orthoquartzite, mudstone fragments and vein quartz. The third category comprises *silicic igneous clasts* but may be divided into fine-grained (flow-banded and welded rhyolites) and coarse-grained (perthitic granite) varieties which usually, but not always, occur together.

On the basis of their fabric and clast compositions, these sherds present a relatively homogenous group when subjected to Principal Component analysis (see microfiche). This reveals a general coherence amongst the Beaker sherds with which the 'early' urns from Brenig 45 show an affinity. By contrast the pots from the middle and later periods (Brenig 40, 51 & BG44.F20) can be distinguished by their higher clast and lower grog contents and by the lack of coarse igneous material amongst their clasts. Although one group of Beaker sherds may be separated off through its content of amphiboles as grains and in rocks, these clasts occur in variable association with clasts of both the other two categories.

Thus, *although an individual sherd may be dominated by clasts of one particular category, no one category occurs exclusively and varying admixtures are to be found in one sherd or another. This would suggest that all the sherds were manufactured from sediments derived from a single region,* but one of complex geology such that differing proportions of the rock types noted could be present in sediments in close proximity to each other. Such a geology is decidedly *alien to Brenig itself* which presents a relatively simple solid geology of outcrops of Lower Palaeozoic mudstones and sandstones, and a superficial geology effectively free of exotic rock types.

However, a possible source for such an unusual petrographic assemblage could probably be located in an area such as the *Malverns*, some 120 km south of Brenig, which reputedly contains amongst its Precambrian outcrops rock types similar to those encountered in the sherds from Brenig.

NOTES ON THE BEAKER POTTERY FABRICS FROM BRENIG 51

T.C.Darvill

These analyses were undertaken in connection with Dr Darvill's doctorial research. His full report is printed in the *microfiche*.

Macroscopic inspection of the Beaker pottery assemblage recovered from below Brenig 51 revealed that the dominant fabric present was characterised by its slightly greasy feel and the presence of occasional stone and grog additives to the clay matrix. The basic fabric appeared to have been used for both thin-walled and thick-walled vessels alike.

Five samples covering macroscopically observable variation were selected for thin-sectioning.

Under the microscope it was clear that the basic mineral suites in each sample were essentially the same, the variation being caused primarily by different treatment during production. For this reason it is appropriate to describe only one slide (N345).

Details of the analysis are given in the microfiche. Here one need only say that the groundmass contained flecks of muscovite mica and fine quartz grains and that two principal additives were present, grog pellets and fragments of altered sandstone, probably a greywacke sandstone.

No firm conclusion as to origin was reached, but on balance it was thought that the Ludlow beds of the Silurian system which underlie Brenig 51 (Smith & George 1961, 50–51) were most probably the source.

REPORT ON SHERDS FROM BRENIG 48

Elaine Morris

Three sherds (BG48.717, 739 & 730) were submitted for analysis. All three came from the surface of the subsoil at the centre of the post-ring building at Brenig 48.07 (see p. 160), and constitute the entire collection of prehistoric pottery from Brenig 48.

717 (Fig. 13.1) was a dark brown rim sherd, slightly sandy and vesicular in texture, decorated with a double groove on the inside. The most characteristic element identifiable by analysis (see microfiche) was mudstone, recognisable as inclusions or voids. Such mudstones may be found in pottery from Iron Age contexts at a number of sites in the West Midlands and the Welsh Marches (see microfiche), where their distribution may be related to the Severn Valley.

The rim and vessel forms, rare decoration of stamped and linear tooling, and occasional additional rocks and minerals all suggest that this mudstone fabric may belong to the Malvern Hills complex of Iron Age pottery production in this region. However, the source for this fabric may prove to be up to 16 km (10 miles) from the Hills themselves. Nevertheless, the mudstone material could be considered a candidate for inclusion in the general terminology of 'Iron Age Malvernian pottery'.

739 (not illustrated) is a small body fragment. Microscopically, by thin-sectioning and petrological analysis, the fabric of this sherd proved to be identical to the mudstone fabric of 717 described above.

730 is a small plain rim sherd but differs from the other two in being non-vesicular. Microscopically, the fabric of this sherd is extremely similar (?identical) to the Iron Age *Malvernian Group C Fabric* identified by Peacock (1968,7 423–4; Fig. 3:18–23) (see microfiche). This sandstone fabric is most likely derived from the Cowleigh Park beds located immediately to the west of the Malverns in Worcestershire.

It is interesting to note the similarity in ceramic fabric assemblages between the Iron Age occupations at the Breiddin hillfort and Brenig 48. Petrological analysis of the Breiddin collection by Dr David Williams (Musson, pers.comm.) has demonstrated the presence of both mudstone fabrics and probable Malvernian Group C pottery on that site. Thus, the identification at Brenig 48 of two types of Iron Age pottery probably produced in the Malvernian region of Worcestershire places this seemingly isolated site within the broader social-ceramic network of the West Midlands and Welsh Borderland.

APPENDIX FIVE

Identification of Bones from the Brenig Valley

The human cremations were identified and reported on by Carole Keepax and T. P. O'Connor, Ancient Monuments Laboratory, London. Their report is given in full in the *Microfiche*, the following is simply a summary chart of the results.

Site	Path-ology	Burnt Adult	Burnt Male Adult	Burnt Female Adult	Burnt Unidnt. Burial	Burnt Child	Burnt Token quant.	Bnt.Scraps Ancient Residue	Bnt.Scraps Disturbed	Unburnt Animal Scraps
BG 42								x		
BG 40		x								
BG 41										x?
BG45.1									x	
BG45.2				x						
BG45.3	x		x							
BG45.4					x					
BG45.5							x			
BG45.6			x				x			
BG45.7						x				
BG45.					x					
BG 8					x					x
BG 46		x								
BG 14		x								
BG 6					x					
BG51.F7	x	xx								
BG51.F6						x				
BG44.F43		x								
BG44.F20A		x								
BG44.F20B		x				x				
BG44.Pit B								x		
BG 48										x
Totals	2	8	2	1	3	3	3	2	1	2	1

APPENDIX SIX

Analysis of the Brenig Wood Identification Results

Carole Keepax, Ancient Monuments Laboratory

Wood (including charcoal) identifications from 100, mainly lowland, sites have been used to produce a histogram illustrating the frequency of occurrence of different taxa on archaeological sites (Ancient Monuments Laboratory Report No. 2277). The number of Brenig samples containing each taxon is compared with this general pattern in Fig. 1. It must be stressed that this is intended to provide only a rough basis for comparison and does not represent a statistical analysis of the results. Such a study was not considered feasible because of the variations in sampling, identification procedures, and sample size.

The virtual absence of ash and scant presence of the normally common hawthorn-type and *Prunus* sp. are noticeable, as is the unusually large proportion of birch. Theoretically, this pattern could reflect the range of woody plants available in the local environment, or could be entirely due to human selectivity. Evidence is available from pollen analysis (Chap. 2 & App. 9) which allows some discussion of this point. Pollen results indicate an open moorland environment with heather, grasses, few trees and shrubs (including birch, alder and hazel). The presence of birch, alder, hazel and heather as charcoal therefore represents locally available wood. A small amount of Papilionaceae (eg gorse) charcoal was present, but this was not represented by pollen. Gorse frees little pollen to the atmosphere and any pollen in archaeological deposits is often poorly preserved and difficult to identify. It is therefore quite probable that plants of this family were present in the local environment although not represented by pollen.

Little oak and ash pollen was present, and this was thought to originate from neighbouring areas (e.g. approximately 16 km (10 miles) away in the Clwyd Valley). It might therefore seem surprising that oak is the dominant charcoal type. One obvious explanation is that oak was imported to the Brenig area (e.g. for structural purposes). Only one out of 121 samples containing oak produced any twiggy material, compared to approximately 10% of the birch and alder, and 25% of the hazel samples. This could indicate that oak timbers were being imported without the associated smaller material.

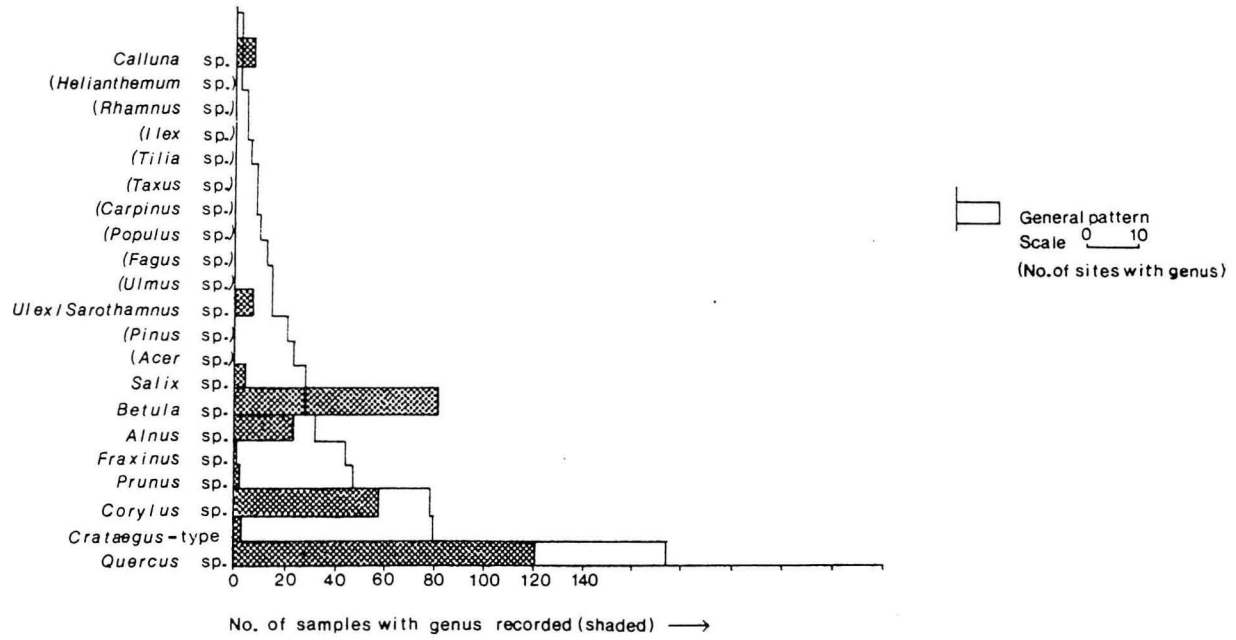
In order to investigate this question further, the samples from Brenig were divided as far as possible into several groups: hurdles, hearths, from the body of mounds or cairns, 'planks' (mortuary structures, including apparently non-structural large timbers), from the old ground surface, cremations, features (pits). A series of histograms were produced illustrating the number of Bronze Age samples within each group which contained each taxon (Fig. 2).

All of the large timbers were oak. One sample also contained birch and one alder, but these might be accidental inclusions. The identified wood (mainly iron-replaced) associated with hurdling was hazel and oak. All of the remaining groups of samples produced results which closely resembled each other. Most apparent variation may be accounted for by differences in the numbers of samples. Although the samples from pits seem to contain less oak than the other groups, the difference is probably too slight to be considered meaningful. The results from the old ground surface and the mounds are particularly alike, which might be expected as the mounds contained turves. It is interesting that all of the groups contain high proportions of oak charcoal, and not only the samples from the mortuary structures or hurdles (for which oak timber was presumably obtained). The import of large timbers primarily for fuel is possible, but perhaps less likely. However, much of the oak in different groups could have originated as structural timbers, as these could be later burnt for fuel or accidentally burnt and the charcoal scattered on the land surface or in the fills of features (see Fig. App. 6.3). The different categories interconnect in so many ways (Fig. App. 6.3) that it does not seem surprising that the results from each are very similar.

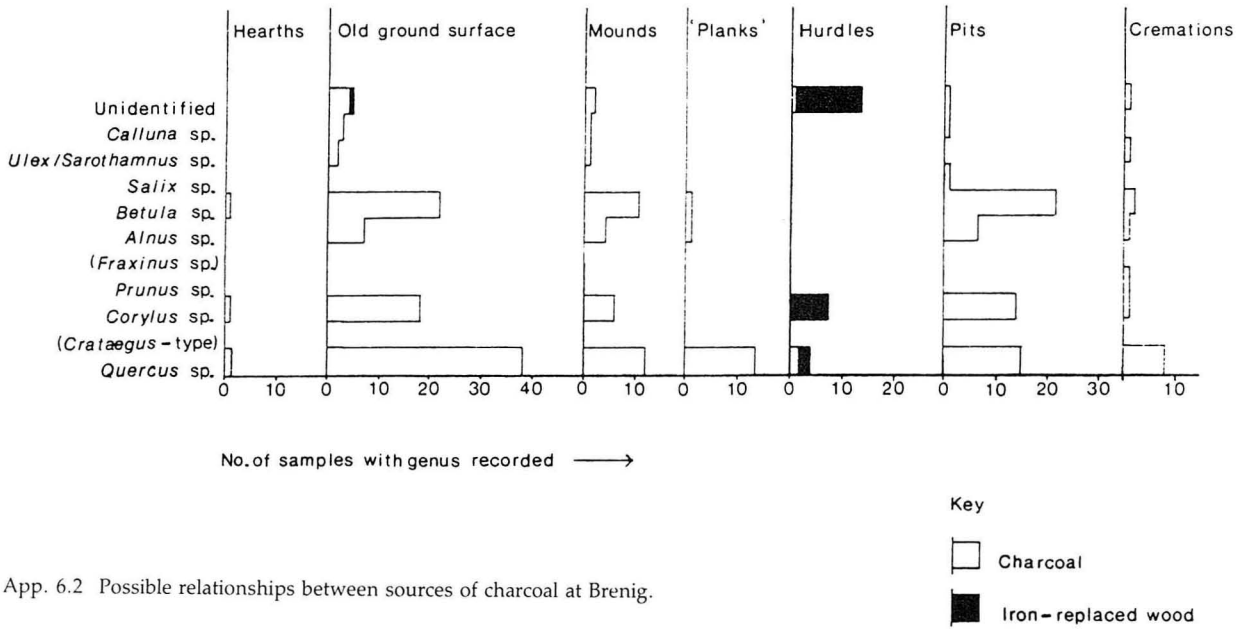
The results were also subdivided into sites and periods and a further series of histograms plotted (Fig. App. 6.4). All of the sites produced similar results.

The presence/absence of heather charcoal on each site does not relate to the proportions of heather pollen obtained. For example, Brenig 47 (low heather pollen) contains charcoal, whereas Brenig 41 (high pollen) does not contain charcoal. Heather charcoal occurs in small quantities and seems to have been missed on most Brenig sites with few identified samples. Its presence/absence is therefore related to sample size and not environmental factors. To a varying extent, the same applies to the other less common species (Papilionaceae, *Salix* sp., *Alnus* sp.). Hawthorn-type charcoal occurred only in Brenig 51 layer 7, but it is not possible to estimate the significance of this.

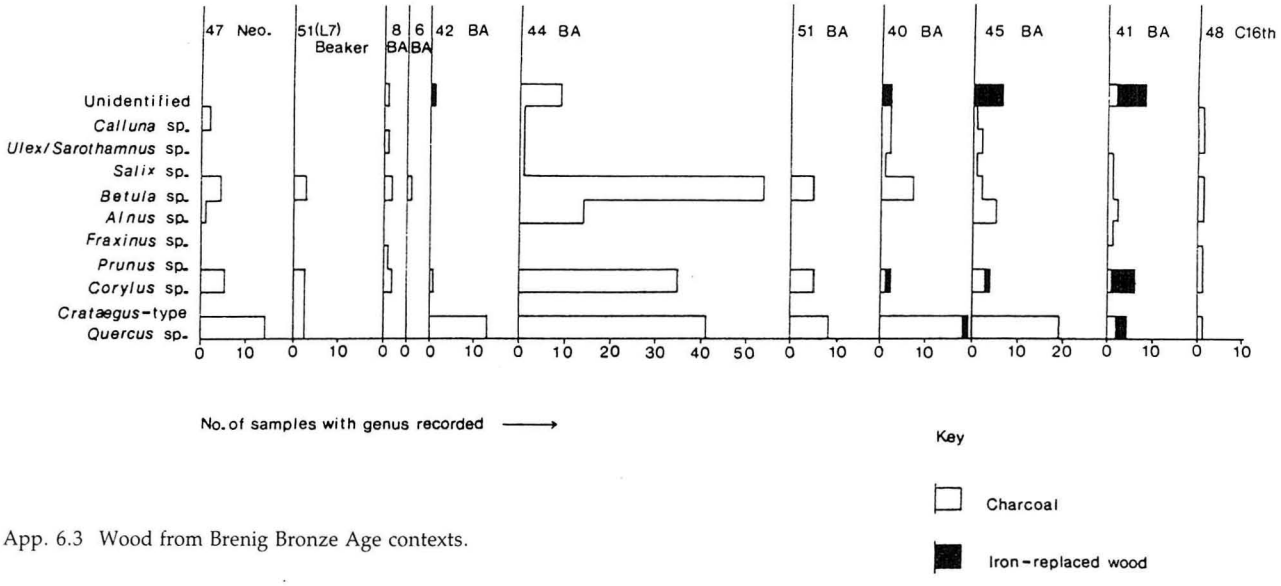
Discounting the sites with very small numbers



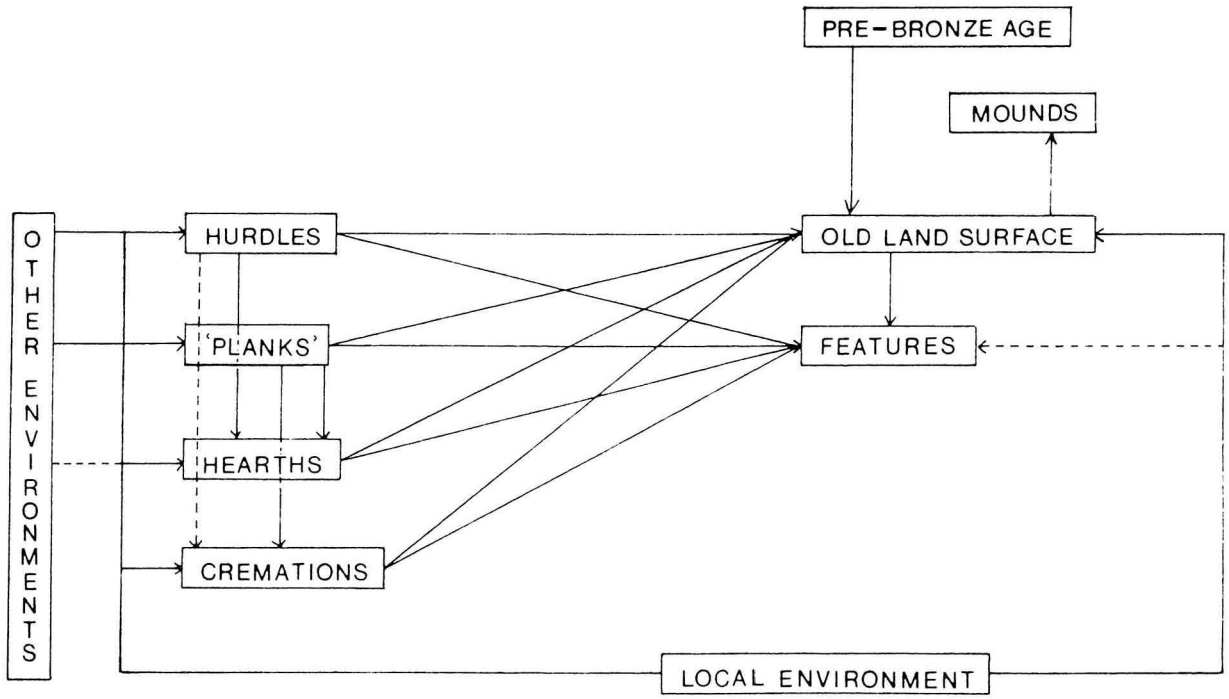
App. 6.1 Brenig wood identifications compared to the general pattern for 100 sites.



App. 6.2 Possible relationships between sources of charcoal at Brenig.



App. 6.3 Wood from Brenig Bronze Age contexts.



App. 6.4 Wood from Brenig sites (all period contexts).

of samples, two patterns seem to emerge. In one of these, oak clearly dominates the results, with less birch and hazel (Brenig 47, 42, 40 & 45). The other has fairly equal quantities of oak, birch and hazel (Brenig 44 & 51). As with all charcoal results, it is difficult to interpret this apparent difference. It is interesting, however, that three sites from the first group had possible 'mortuary structures'. Also, if the samples from 'planks' are discounted from the Brenig 40 histogram, the resultant pattern more closely resembles the second group. It is therefore possible that the higher proportions of oak arise because of the presence of larger quantities of charcoal from structural oak timbers.

The wood identification results from Brenig illustrate the selective activities of man within the local and adjacent environments. They must therefore be interpreted as resulting from a combination of environmental and anthropogenic factors. The results are very much influenced and restricted by sample size, and do not provide any clear evidence for environmental change within the periods represented.

Details of identifications remain with the Ancient Monuments Laboratory in London.

APPENDIX SEVEN

Glacial and Lacustrine Sediments of the Brenig Valley: Analytical Results

Edward Derbyshire

In Microfiche

APPENDIX EIGHT

The Soils of the Brenig Valley

Helen C.M. Keeley

A survey of the soils of the Brenig Valley was carried out during the summer of 1973 and a soil map was produced (Fig. App. 8.3) (Keeley 1977). Soils were examined on a grid system using a screw augur, and pH was determined at every site. This work provided the basis of the soil map and was followed up by examination of soil pits for each soil type, to provide detailed soil profile descriptions.

Detailed studies of soils buried beneath the archaeological monuments were carried out in order to compare these with present-day soils and also with results of pollen analysis (Chap. 2 & App. 9), to provide information about the Bronze Age landscape and subsequent pedogenesis.

I THE PRESENT-DAY SOILS

The following soil series were mapped: Hiraethog, Ynys, Caron, Manod and Cegin. Descriptions of these series for other parts of Wales are available, i.e. for an area of the Denbigh Moors to the north of the Brenig Valley (Ball, 1960) and for parts of north Cardiganshire (Rudeforth, 1970). It was found necessary to expand the classification by identifying several intergrades or complexes, i.e. Hiraethog Intergrade (between Hiraethog and Manod), Ynys Intergrade (between Ynys and Hiraethog), Ynys – Caron complex and Manod with Ithel characteristics. Areas of buried peat and alluvium were also delineated.

Descriptions of Representative Soil Profiles (Fig. App. 8.1)

1. The Hiraethog Series (Iron pan stagnopodzols)

The site was moderately sloping (about 4°. Profile and site drainage was moderate. Vegetation cover was predominantly grasses (including *Nardus stricta*).

0–2 cms was a fibrous root mat.
2–10 cms was very dark greyish brown (10YR3/2) amorphous peat containing abundant roots.
10–18 cms was very dark grey (10YR3/1) amorphous peat containing some mineral matter.
18–28 cms was a brown (10YR5/3) weakly structured silt loam containing few shale fragments.
28–29 cms was a well-developed iron pan, mixed reddish yellow (7.5YR6/8) and reddish brown (5YR4/4) in colour, and appearing to contain both Fe and Mn oxides.
29–39 cms was yellowish brown (10YR5/6) silty clay loam with weak crumb structure containing common shale fragments.
39–45 cms was brownish yellow (10YR6/6) structureless silty clay loam containing abundant shale fragments.
Below 45 cms was weathering shale similar in colour to the horizon above.

2. The Ynys series (Cambic Stagnohumic gley soils)

The site was gently sloping (about 2°) and vegetation cover was mainly *Nardus stricta* and *Sphagnum* spp. Site drainage was poor, profile drainage moderate.

0–10 cms was a fibrous root mat.
10–30 cms was dark brown fibrous peat.
30–37 cms was weakly structured pale brown (10YR6/3) silty clay.
37–57 cms was light brownish grey (10YR6/2) structureless silty clay, with reddish yellow (7.5YR6/8) mottles in root channels, containing abundant shale fragments.
Below 57 cms was weathering shale similar in colour to the horizon above.

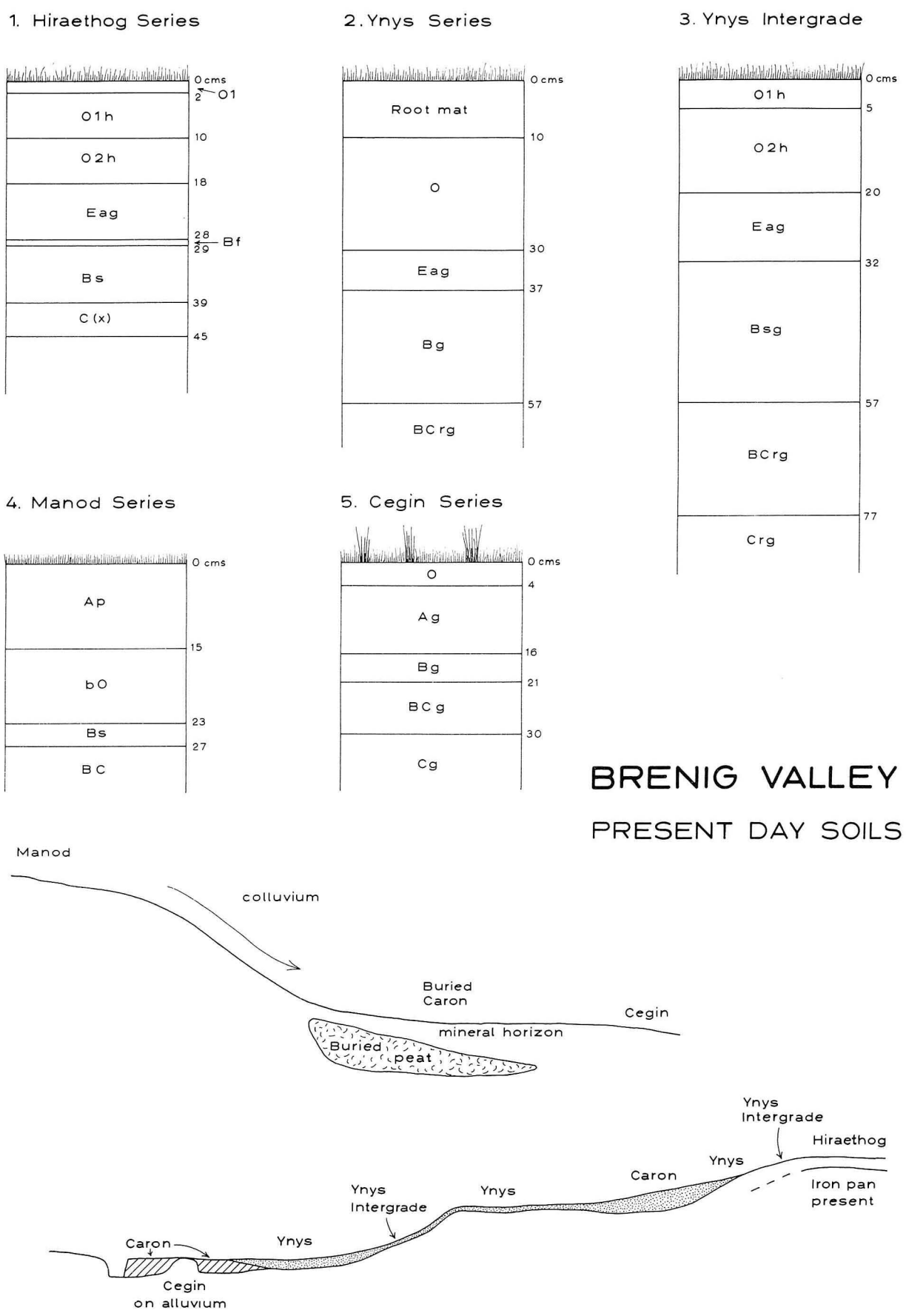
3. Ynys Intergrade

The site was gently sloping (about 3°) and vegetation cover was mixed *Nardus stricta* and *Calluna vulgaris* predominant. Site and profile drainage was moderate.

0–5 cms was a fibrous root mat.
5–20 cms was black amorphous peat.
20–32 cms was brown (10YR5/3) silty loam with weak crumb structure.
32–57 cms was light greyish brown (2.5YR6/2) very heavily mottled (reddish yellow; 7.5YR6/8) silty clay with weak crumb structure, containing common shale fragments.
57–77 cms was light brownish grey (10YR6/2) structureless silty clay containing abundant brownish yellow (10YR6/6) mottles and shale fragments.
Below 77 cms was weathering shale similar in colour to the horizon above.

4. The Manod series (Typical brown podzolic soils)

This profile had a buried peat horizon between 15 and 23 cms. The site was strongly sloping (about 10°) and vegetation cover was cultivated grasses (including perennial ryegrass) and clover,



App. 8.1 Present day soil profiles from the Brenig Valley.

and other grasses. Site drainage was free; profile drainage excessive. Roots were present throughout the profile.

0–15 cms was dark greyish brown (10YR4/2) silty loam with crumb structure.
15–23 cms was amorphous black peat.
23–27 cms was strong brown (7.5YR5/8) silty clay loam with very weak crumb structure, containing abundant shale fragments.
Below 27 cms was weathering shale similar in colour to the horizon above.

5. The Cegin series (Cambic stagnogley soils)

The site was level; vegetation cover included various grasses, thistles and *Juncus* spp. Site drainage was poor; profile drainage moderate.

0–4 cms was a fibrous root mat.
4–16 cms was brown/black brown (10YR4/3) weakly structured (crumb) silty loam containing few stones and abundant roots. Earthworms were present.
16–21 cms was greyish brown (10YR5/2) silty clay loam containing many shale fragments.
21–30 cms was greyish brown (10YR5/2) silty clay loam containing abundant strong brown (7.5YR5/8) mottles and many shale fragments. Manganese oxide staining (black) on shale fragments was noted.
Below 30 cms was alluvium similar in colour to the horizon above.

In these descriptions, horizon notation standard soil survey of England and Wales (Hodgson 1976) has been used.

Soil Correlations

Soil types on the Denbigh Moorland are related topographically (Ball 1960). Certain soil series delineated by Ball (1960), such as the Manod, have subsequently been assimilated into other series, as described by Rudeforth (1970); however, in this survey of the Brenig Valley it was found useful to differentiate the Manod series soils on a pedological and also vegetational basis. The Ithel series (podzols) is really a phase rather than a true series, being a brown earth soil type produced by reclamation of the Hiraethog series, i.e. it has been produced by ploughing in recent years. It is recognised by the occurrence of fragments of the original Eag or Bf horizons in the ploughsoil.

The normal catenary sequence appeared to be as shown in Fig. App. 8.1.

The Manod series occurred on freely-drained hill slopes under short grass and thistles. Concave slopes were generally more waterlogged than convex slopes. In the area where the peaty gleys and peats merge there appeared to be a peaty mud which did not conform to the Ynys or Caron (organic, peat soils) series and was mapped as Ynys/Caron complex. These may have been areas of peat in which alluvium had deposited. The Cegin series as mapped did not have a peaty or humic layer (following Ball 1960; 1963; Rudeforth, 1970). The Hiraethog intergrade was mapped where the Manod tended towards Hiraethog by the presence of a thin 0 horizon and the trace of an iron pan and ochreous B horizon. Ynys intergrade was mapped where amorphous peat occurred overlying a gleyed horizon with very strong ochreous mottling, which is not seen in the Ynys series.

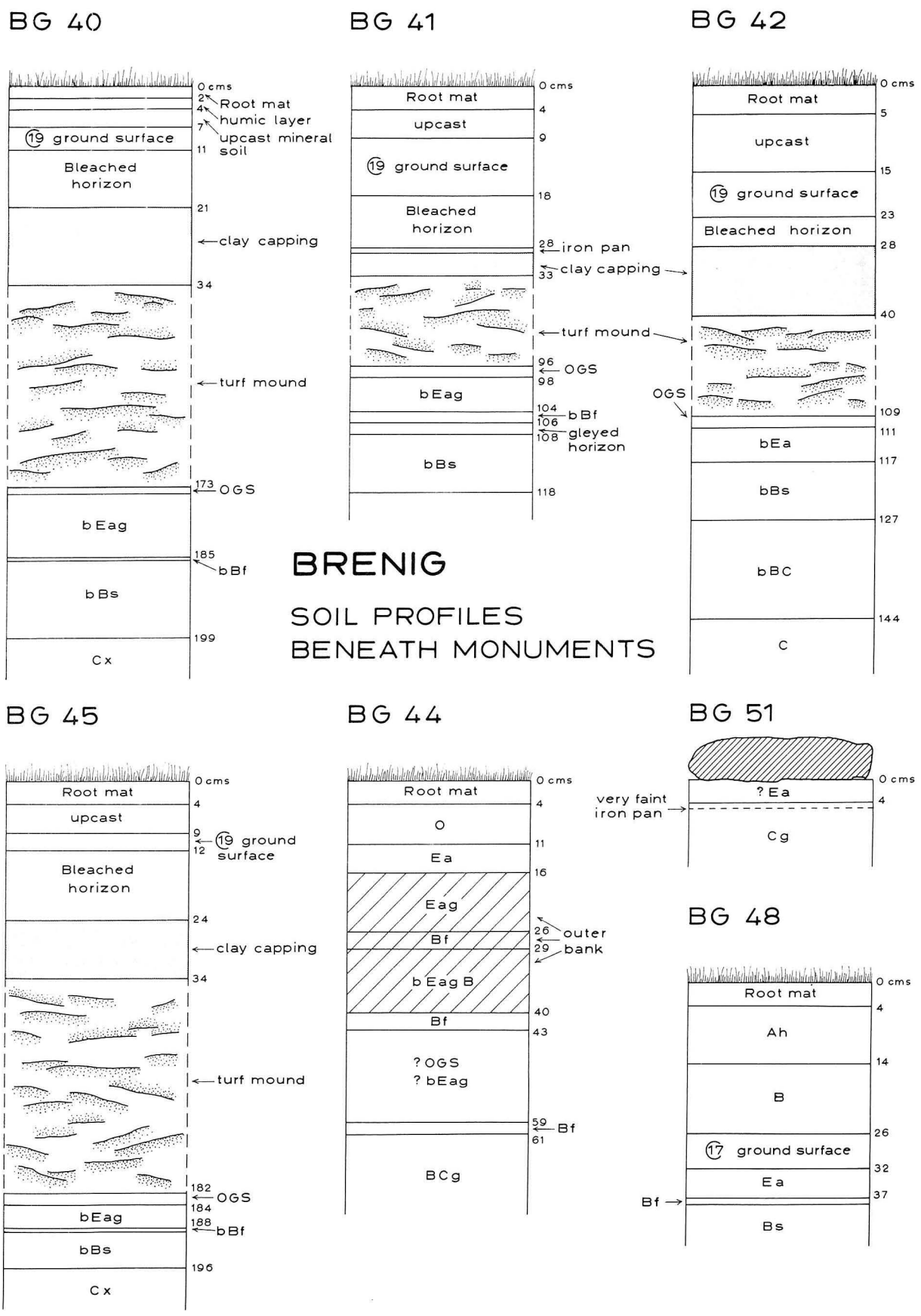
The Hiraethog had often developed not only on the high plateau areas under heather, but also on the sides of river buffs and under thick, tussocky grass. The grassland areas were wetter, the peat generally thicker and the formation of the iron pan quite intense.

Just below the break of slope east of Hafod yr Onnen a peat was found buried beneath a brown A horizon similar to that of the Manod series. The peat appeared to have been buried by colluvium, as shown in Fig. App. 8.1 (presumably brought about by agricultural practices).

Other areas of buried Caron and Ynys were noted below breaks of slope, usually associated with upslope Manod or Cegin soils, which were presumably the source of colluvial material. Areas of Cegin soils appeared to be characterised by pasture-type vegetation – grasses, thistles, etc. – and were less acid than the surrounding areas (earthworms were present), indicating that these were cultivated areas which had been abandoned. Some of these areas were merely small strips several metres wide.

II SOILS BURIED BENEATH THE ARCHAEOLOGICAL SITES

A number of sections of soils buried beneath the monuments were examined and these showed similarities to present day soils in the valley, suggesting that a moorland environment prevailed in Bronze Age times. This has been confirmed by the results of pollen analysis of samples from the buried soils (Chap. 2 and App. 9). It appears, therefore, that the Bronze Age people who built the monuments lived further down the valley in areas of more agriculturally productive soils. They built the monuments in the open moorland environment where they could be easily seen from a distance, enhancing the effect by using a subsoil capping to the mounds. The buried soils have been sealed since Bronze Age times by the turf mounds and remained relatively unaffected by most subsequent pedogenetic processes. The major exception to this appeared to be the formation of iron pans which sometimes did not conform to the original buried soil surface. These pans appear to result from changes in the drainage regime due, at least in part, to compaction caused by the presence of the overlying mound, and indicating a deterioration in soil drainage in the general area since Bronze Age times. Iron oxide precipitation was very marked in some of the buried soils, particularly under Brenig 40 and 41, which, unfortunately, tended to obscure some of the morphological characteristics of the profiles.



App. 8.2 Soil profiles from beneath the monuments.

Description of Individual Soil Profiles
(Fig. App. 8.2)

1. Brenig 40

The monument was a barrow built of turf, beneath which was a series of stake circles. The individual turves used in construction could be clearly seen. The turf had been covered with a 'clay capping' (subsoil) which, over much of the mound, was overlaid by a 19th.-century buried surface – due to the activities of a group of quarrymen who had robbed the centres of all the barrows.

0–2 cms was a root mat – main vegetation cover was *Calluna vulgaris* with some grasses.
2–4 cms was a humic layer.
4–7 cms was upcast mineral material.
7–11 cms was the black amorphous humic Victorian OGS.
11–12 cms was a bleached horizon (Ea).
21–34 cms was the subsoil capping.
34–173 cms was the turf stack in which the individual turves (ie organic top, bleached layer and subsoil) could be clearly seen. In some cases the turves were upside down.
173–174 cms was the Bronze Age OGS, consisting of black amorphous organic matter.
174–185 cms was brown (10YR5/3) silty clay with weak crumb structure; heavily mottled (7.5YR5/6).
185–185.5 cms was an indurated ochreous iron pan, which presumably formed a barrier to water movement, leading to the gleying of the horizon above.
185.5–199 cms was strong brown (7.5YR5/8) friable structureless silty clay containing many shale fragments.
Below 199 cms was a yellowish brown (10YR5/6) weathering drift, containing many shale fragments.

2. Brenig 41

This barrow, constructed of turves, was very similar to Brenig 40. Main vegetation cover was *Calluna vulgaris* and some grasses.

The profile was very similar to that at Brenig 40 except for (1) the presence of a gleyed horizon immediately below the iron pan of the buried soil, (2) the presence of an iron pan in the top part of the mound profile, (3) extreme vertical fluctuations in the position of the B BFe-pan and (4) the presence of an extremely ochreous C horizon. It appeared that water movement at this site had a more extreme effect on the distribution of iron than at Brenig 40, possibly due to its location lower down the slope.

3. Brenig 42

This was another of the 'classic' Brenig barrows (turf-built with a stake circle and mortuary house), similar to Brenig 40 and 41. Vegetation cover was mainly *Calluna vulgaris* and some grasses. A buried soil profile was examined in Quadrant 2.

0.40 cms was similar to the top part of the mound at Brenig 40 and below this (to 109 cms) was the turf stack.
109–111 cms was very dark grey (10YR3/1) black amorphous humic material constituting the b0 horizon of the Bronze Age soil.
111–117 cms was brown/dark brown (10YR4/3) weakly structured (crumb) silty clay.
117–127 cms was strong brown (7.5YR5/8) silty clay containing few shale fragments.
Below 144 cms was weathering shale drift.

The buried soil appeared to be podsolized, but not gleyed, and an iron pan was absent. It is suggested that this site was better drained than Brenig 40 and 41 and, therefore, the iron movement noted at these sites was far less pronounced, the presence of a Bs horizon being due to podzolisation. This could be partly due to the elevation of the site (395 m) and the presence of a ditch surrounding the mound, not found elsewhere in the valley.

4. Brenig 45 – Boncyn Arian

This mound stood on a natural promontory on the eastern side of the valley close to the Ring Cairn (Brenig 44). Although small, the monument was structurally complex.

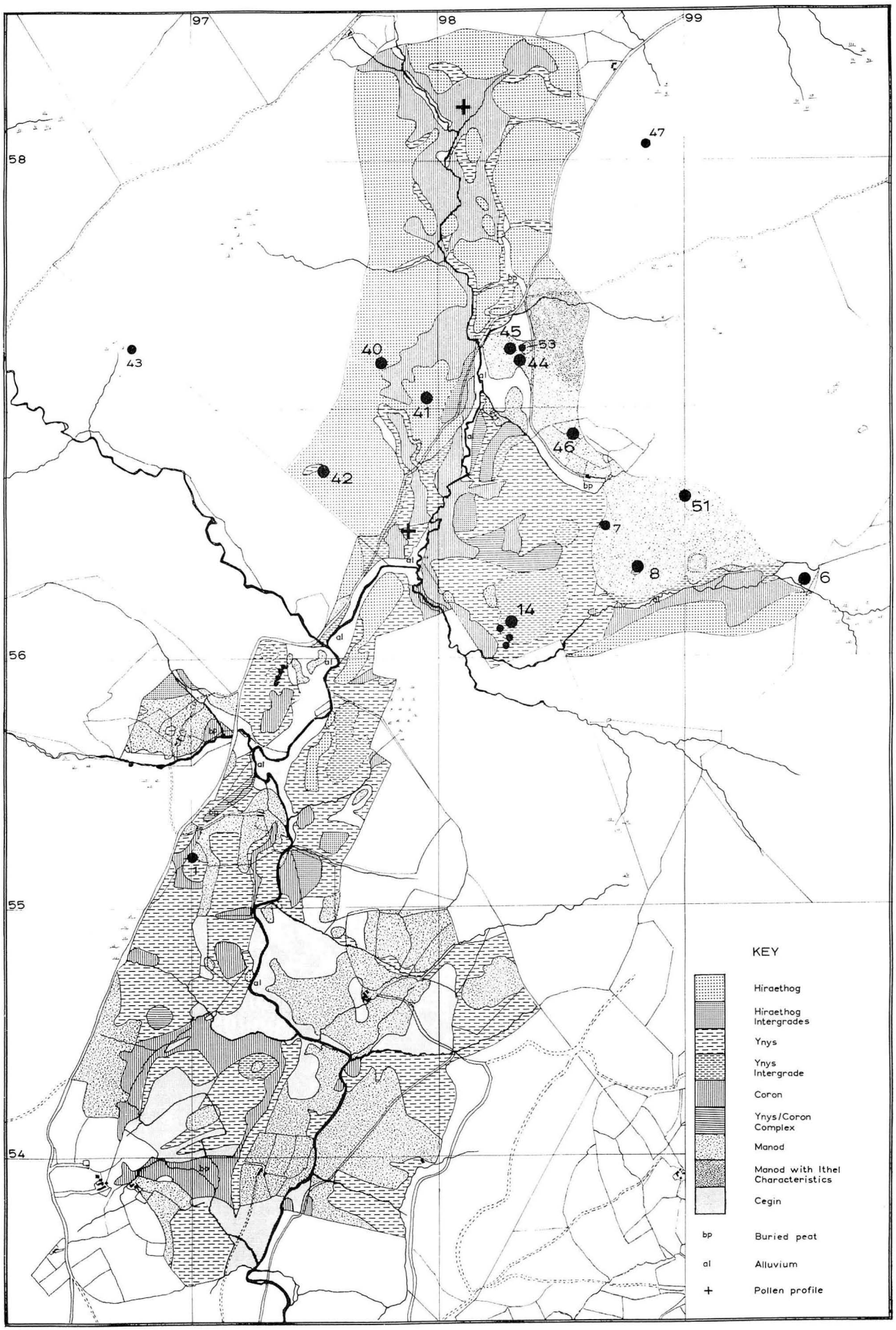
0–34 cms was the normal section seen in the upper part of the barrows.
34–182 cms was turf stack.
182–184 cms was the buried OGS, overlying the AE(g), iron pan, BFe and C horizons as at Brenig 40.

This site was in an area of Manod soils with pasture-type vegetation, and therefore it was interesting to find an iron pan stagnopodzol below the mound. It appears that the soil in that area in Bronze Age times was of Hiraethog type and that subsequent soil improvement by man has led to the development of typical brown podzolic soils. The date of this improvement and development of pasture is not known.

5. Brenig 44 – The Ring Cairn

The Ring Cairn was situated close to Brenig 45 on a narrow, flat-topped promontory, and consisted of a stone ring with a turf core. The monument was considerably lower in height than those already discussed and appeared to have been much affected by water movement, as evidenced by the presence of three iron pans at intervals down the profile.

0–4 cms was a root mat.
4–11 cms was black amorphous peat.
11–16 cms was a bleached brown silty clay loam (10YR5/3) with a weak crumb structure.
16–26 cms was similar to the horizon above but showed evidence of gleying.
26–29 cms was a relatively thick iron pan.
29–40 cms was brown (10YR5/3) silty clay with abundant clear distinct coarse strong brown mottles.
40–43 cms was a second layer of ferric iron oxide deposition.
43–59 cms was (10YR6/2) light brownish grey silty clay with weak crumb structure and probably constituted the Bronze Age OGS.



App. 8.3 Soil map of the Brenig Valley.

59–62 cms was a third iron pan.
Below 61 cms was a yellowish brown (10YR5/6) weakly structured silty clay containing common shale fragments.

The first of the iron pans (i.e. the upper) was indurated, but the lower two were not. The absence of a buried organic horizon suggests that this profile had been truncated, presumably due to removal of turf before construction of the monument.

As at Brenig 45, the buried soil was unlike the surrounding Manod soils of the present day, appearing to be a Hiraethog type of soil which had been particularly affected by water movement – presumably due to the topographic position of the site (lateral movement in this situation would be significant, as well as vertical).

6. Brenig 51

This fine example of a Platform Cairn was excavated in 1974. It was sited on the flat top of the ridge which divides the Aber Llech Daniel from the Afon Fechan. The site had been deturfed and in most places the whole of the original soil was removed prior to construction. In most areas the stones of the cairn rested on weathering shale (the C horizon), but in one place a shallow soil remained which contained abundant charcoal and some pottery fragments. The soil profile was probably A/C with mottling in the subsoil, indicating gleying, and did not fit any of the categories already discussed. It may have been partially truncated, as the usual b0 horizon was absent.

0–4 cms was mixed dark greyish brown (10YR4/2) and brown/dark brown (10YR4/3), in approximately equal proportions, silty clay with medium subangular blocky structures and moderately friable. Abundant roots were present and occasional medium rounded stones, including sandstone and mudstone.
Below 4 cms was pale brown (10YR6/3) with yellowish brown mottles, especially on stones. Some manganese oxide staining on shale fragments was noted. Texture was silty clay, with medium subangular blocky structure. The material was firm and contained abundant shale fragments and a few roots. There was a very faint suggestion of an iron pan at 5 cms depth and this, combined with mottling in the Cg, indicated that this profile had been affected by fluctuations in the water regime.

7. Brenig 48

This site was a Post-mediaeval settlement consisting of a group of seven or more rectangular house foundations and associated rectilinear and curvilinear enclosures situated on either side of Nant y griafolen, the eastern tributory of the Afon Fechan. A buried soil was examined in Area 01.

0–4 cms was a fibrous root mat.
4–14 cms was dark brown (7.5YR3/2) silty clay loam with weak crumb structure, containing common gravel to large pebbles.
14–26 cms was a very dark greyish brown (10YR3/2) silty clay loam with weak crumb structure and fewer stones than the horizon above.
26–32 cms was the 17th century OGS consisting of black amorphous organic matter.
32–37 cms was brown (10YR5/3) weakly structured silty clay loam.
37–38 cms was a distinct iron pan.
Below 38 cms was weakly structured yellowish brown (10YR5/6) silty clay containing shale fragments.

Site drainage was moderate and all horizons were friable. The buried soil appeared to be podzolised, but without the gleying seen in some profiles because the site was fairly well drained. The surrounding soils were classed as Hiraethog intergrade, suggesting that some improvement of the soils has been attempted since the 17th. century, but the effect has been marginal.

III SUMMARY AND CONCLUSIONS

The palaeosols in the Brenig Valley were essentially similar to present-day soils, indicating that this was a moorland area in Bronze Age times, and this has been confirmed by pollen analysis. Some of the buried soils were morphologically affected by post-burial changes in the water regime, suggesting that there has been a general deterioration in soil drainage in the area since Bronze Age times. Soils below barrows appeared to be completely preserved whereas those under the cairns showed evidence of truncation, resulting from de-turfing prior to construction of the monument. There was evidence that soils of certain areas had been subjected to anthropomorphic factors, i.e. post-Bronze Age attempts at soil improvement resulting in a transition in some areas from Hiraethog to Manod soils. Evidence from Brenig 48 (Post-mediaeval settlement) indicated that this improvement may have been post–17th. century, at least in part.

APPENDIX NINE

Pollen Analysis from the Brenig Valley

F.A.Hibbert

There were two main thrusts to this work. The first was to research into the biogenic remains associated with the monuments, the second was to analyse the deeper valley deposits, which had, presumably, been laid down over a longer period of time. The two were then related wherever possible. Whilst there were radiocarbon measurements from the monuments, it did not prove possible to obtain samples from the valley bogs that could be so dated.

Following a preliminary survey that entailed making trial borings up and down the valley, it was concluded that there were two sites that would repay further investigation:

Waen Ddafad (NGR 979 565) was a valley bog that extended for some 500 metres on the western bank of the Afon Fechan beneath the old road. These deposits were completely submerged following the construction of the dam.

Gors Maen-Llwyd (NGR 981 582) is in a basin just below the watershed of the valley and is formed towards the headwaters of the valley in an area of impeded drainage. The lowermost part of this basin has been submerged by Llyn Brenig, but its north-eastern section remains above the water line.

In both cases, line transects were taken across the deposits and samples for pollen analysis were taken from those parts of the profile which were the deepest and were, therefore, thought to be representative of deposit throughout time.

Waen Ddafad

Site Stratigraphy

The deposits became thicker towards the river – shelving out on boulder clay to the north, south and west. It is of interest to note that the deposits to the east of the river were quite different, being in the main very shallow.

The course of the river must have been through the area represented by the valley bog deposits, although there were no indications of its meandering from its present (1973) position throughout time. At the time of the flooding of the basin, the river was cut into till deposits on its eastern bank and into the valley bog deposits on its western bank.

Details of the stratigraphy of the site chosen for pollen sampling are as follows:

0 – 112 cms Compact brown *Sphagum* peat. Occasional *Eriophorumvaginatum* remains, together with stems of *Calluna*.
112 – 175 cms Brown *Phragmites* fen peat, with abundant wood fragments (*Betula* and *Alnus*) and other herbaceous rhizomes.
175 – 200 cms Brown fine detritus mud with abundant *Carex* and other herbaceous rhizomes.
200 cm Fine grey clay.

Modern roots penetrated to a depth of approximately 1.5 metres.

The Pollen diagram (Fig. 2.8)

Samples for pollen analysis were taken at 5 cm intervals from the surface down to a depth of 145 cms, and from there, at intervals of 10 cms to a depth of 195 cms. The results of the analyses are presented in the pollen diagram.

It is difficult to zone this pollen diagram with any degree of precision. It does not appear to represent early post-glacial times nor to extend much beyond late Iron Age-Roman times. The reasons for this truncated profile are not clear. Rainfall is not likely to have been a limiting factor – elsewhere in this region of north Wales such bog deposits are forming at the present day. There was a 'rock barrier' at the southernmost edge of the valley bog deposits at Waen Ddafad and it may be that some breach in this occurred that increased the 'run-off' from that part of the valley and thus prevented further bog growth.

The earliest deposits represented by the detritus mud indicate that a shallow, open water lake existed in the area. There are pollen grains from mire plants and the relatively high values of grass and sedge would be associated with the margins of such a lake. Dry land tree pollen values are high and indicate that mixed-oak forest was well developed and extensively represented in the region.

Values of birch pollen increase whilst values of pine fall at the time that the open water deposits changed to those of a shallow water, fen wood. Whilst many of the wood fragments can be identified as being those of birch, they must reflect only a marginal increase in the representation of a tree already well established at these altitudes. The falling of pine is less easy to document. On a regional basis, such a fall is associated with the expansion of alder, yet it is unlikely that these two trees were competing for the same ecological sites in the Brenig basin. The interchange between

these two species is normally used to mark the opening of the Atlantic period, pollen zone VII (Godwin, 1940), pollen zone FII (Hibbert, Switsur & West 1971). The high incidence of alder from samples toward the base of the deposit show that the opening of biogenic deposition in the area is at least later than that event. The date ascribed to this change is around 7200 b.p. Oak is well established by that time and this is reflected in the deposits from Waen Ddafad, but pollen from elm, a tree basically well represented in the Atlantic mixed-oak forest, is present only in small quantities.

The change in deposition from fen deposits to those of a raised bog is broadly dated to around 7000 b.p. in the British Isles. In the diagram this event is some 70 cms from the base of the deposit, which implies a rather rapid rate of deposition, or a delayed development in the change to raised bog at this altitude. Continuous representation of pollen from lime (*Tilia*) and ash (*Fraxinus*) throughout this period would be more characteristic of events between 5000 b.p. and 6000 b.p. Of interest also is the appearance of pollen from plantain (*Plantago Lanceolata*); this, together with other pollen of ruderals (plants of disturbed ground) is typically represented in Brenig due to the earliest activities of neolithic farmers. Commonly this is associated with a decline in the levels of elm (*Ulmus*) pollen. Whilst there is a clear establishment of ruderal pollen in the diagram, there is no clear decline in the pollen of elm, a feature that is broadly synchronously dated to 5000 b.p. throughout the British Isles (Hibbert, Switsur & West 1971).

The uppermost parts of the pollen diagram represent a stable plant community. There is no appreciable change in the representation of the major forest trees, the exceptions being the appearance of pollen from hornbeam (*Carpinus*) and, right at the top of the deposit, of beech (*Fagus*). The local development of raised bog, together with the continued presence of ruderal pollen, continues without change during this last phase of deposition. The appearance of beech and the continued high values of tree pollen, in particular oak, would place the top of the diagram around 2000 b.p.–2500 b.p.

Gors Maen-Llwyd

Site Stratigraphy

Borings across the basin from north to south and east to west show that the earliest sediments were those of a fine detritus mud, typical of an open water situation, followed by a fen wood peat containing many fragments of wood, which, in turn, was followed by raised bog peat. The basin was nowhere deeper than 2.9 m – 3 m, and its contours were approximately concentric.

Details of the stratigraphy of the site chosen for pollen analysis are as follows:

0 – 109 cms Compact brown *Sphagnum* peat with little *Eriophorum*.

109 – 217 cms Light brown *Phragmites* fen peat with abundant wood fragments (*Betula* and *Alnus*) and other herbaceous rhizomes.

217 – 248 cms Fine, grey clay.

Modern roots penetrated to a depth of 94 cms.

The Pollen Diagram (Fig. 2.7)

Samples for pollen analysis were taken at 5 cm intervals throughout the deposit. The results of the analyses are presented in the pollen diagram.

As with the previous diagram, from Waen Ddafad, it is difficult to determine, on the grounds of the pollen evidence, exactly when the period of deposition began. Alder (*Alnus*) is well represented in the bottom samples, as are other thermophilous trees of the mixed-oak forest. Strong local influence is marked by the pollen of the aquatic plants Bogbean (*Myriophyllum*) and Burr reed (*Sparganium*). It is likely that this is representative of plants from a shallow, open water lake that existed in the area at the time. The pollen zone represented by these deposits is typically zone VII (the Atlantic) and as such the opening of the deposition must part date the time that this zone begins, accepted to be around 7200 b.p. Through this period pine (*Pinus*) is well represented and values of elm pollen are quite high. There is a marked fall in the values of pollen from grasses and sedges towards the end of this period. Of interest is the representation of juniper pollen – a plant not normally characteristic of this zone, but commonly found in older post-glacial deposits.

Unlike the pollen record from Waen Ddafad, there is evidence of a marked decline in the representation of *Ulmus* (elm) pollen in the deposits from Gors Maen-Llwyd. This occurs at around 97 cms on the diagram. This decline is accompanied by a marked increase in the pollen of ruderals, which is taken to indicate the opening up of closed forest by Neolithic man and the establishment of these plants in the disturbed ground that has been created by this activity. Of particular interest is the record of cereal pollen which is represented in the pollen diagram from 75 cms to the top. Such a record must indicate an intensive phase of activity close by the site of deposition.

The representation of oak, elm, lime and ash is very similar, as a percentage of the total tree pollen representation in the diagram, to that found in more lowland sites in north Wales and northern Britain (Hibbert, Switsur & West 1971; Hibbert & Switsur 1976). The proximity of the site of deposition to the nearby Vale of Clwyd may account for this representation for there is no clear indication, such as fossil wood, or fruits or seeds, that these trees were growing at such relatively high altitudes. This contrasts with the find of macroscopic fossil remains of birch, alder and pine in the deposits. It may well be, therefore, that the clearance activity was taking place on lower slopes of the Vale or in the valley itself.

The marked expansion of *Ericaceae* pollen, which is broadly synchronous with the fall of elm and

the appearance of pollen from plants associated with man's activities, is commonly found in other parts of Wales and elsewhere (Hibbert & Switsur 1976). It marks the beginning of the development of bog and heathland, both in the wetter valleys and on the shallower slopes of the higher ground. Expansion of pollen from grasses and sedges is also to be attributed to this change. Whilst the peat deposits sampled for pollen from this site themselves show no evidence of such a change, it is likely that the pollen record is accurately measuring a marked change of environment close by the site.

This change is attributed to an increased rainfall which, when combined with poor drainage and run-off, favours the growth of bog plants such as heathers, sedges and *Sphagnum* moss. It is not likely that the activities of man were responsible for this change – the effect is both synchronous and widespread throughout north-west Europe. On the other hand the otherwise tree-clad slopes of the moorland would be effectively deforested and present quite a changed vista. This period of change is associated with the activity of man in the area and the association of monuments at this time of change is discussed elsewhere in Chaps. 2 and 6.

The uppermost parts of the pollen diagram show the appearance of *Carpinus* (hornbeam) pollen and represent a record both of locally derived pollen and pollen from a wider region. The pollen record would indicate that these later deposits at Gors Maen-Llwyd represent the Iron age-Roman period.

The representation of the upland community is through the continuation in representation of pollen from *Ericaceae, Empitrum* grasses and sedges and of spores of *Sphagnum*. The lower valley and wider pollen rain was depositing pollen both from mixed-oak forest communities and also pollen from the areas that man was cultivating.

The pollen record is incomplete and does not record activities later than the beginning of the first millennium a.d . It is not possible to determine why the record is so truncated. It might have been expected that deposition in such a wet valley on the moorland would have continued until later times.

APPENDIX TEN

Radiocarbon Dates

Frances Lynch

All samples were submitted to the Carbon 14/ Tritium Measurements Laboratory at Harwell through the Department of the Environment Laboratory or through Dr Alan Hibbert. The choice of samples was the responsibility of the individual excavators.

The format given here is that of Harwell in 1975 and should be read in conjunction with their notes of that date, reproduced below. However, the final column gives a calibrated date, for which the University of Washington Quaternary Isotope Laboratory Radiocarbon Calibration Program (1987, Rev. 1.3) has been used (Stuiver & Becker 1986). No laboratory error multiplier has been applied and the dates are quoted at 1 sigma which has a 2 in 3 chance of including the true result. It should be emphasised that this correction does not form part of the official certificate provided by Harwell.

Notes on the method of reporting Radiocarbon results (Harwell 1975)

1. *Age BP* is the Conventional Radiocarbon Age calculated using the following standards and parameters.
1.1 *Half-life*: the old (W.F. Libby) value 5570 years is used. This is in accordance with the decision of the Fifth Radiocarbon Dating Conference, Cambridge, 1962 and reaffirmed at similar meetings since. It is also a requirement of the publishers of 'Radiocarbon' that this half-life value is used in dates reported therein. 'Age BP' results can be converted to the most recent value of half-life, 5730 ± 40 years, by multiplying by 1.03. (*Nature* 195, no. 4845, 1962, 984.)
1.2 *Modern Standard*: This is the accepted standard 0.95 Aox, the activity of the NBS oxalic acid, after correction for fractionation during its preparation. Reference standards are routinely checked against freshly prepared samples of the NBS oxalic acid.
1.3 *Background Standards*: Samples prepared from Marble, Coke or Fuel Oil were used in the initial setting up procedure to determine the best mean value background figure. This is routinely checked against additional samples freshly made using the full sample preparation process.
1.4 *Stable Isotope Correction*: this is expressed as $\delta^{13}C$, the deviation per mil, of the ratio of the stable isotopes $^{12}C/^{13}C$ of the sample from that of an adopted standard (PDB). The 'Age BP' quoted is automatically corrected for the $\delta^{13}C$ value given in column 4. If there is no measurement of $\delta^{13}C$, a value is assumed which causes zero correction to be applied in 'Age BP' calculation, i.e. –25.
2. *Accuracy* of the measurement of 'Age BP' is expressed in the associated error term (± value) as ± 1σ (standard deviation) inherent to the measurement process. It is not an error which can in any way allow for contamination of the sample or any judgement based on geologic or archaeologic grounds. It includes the laboratory's estimate of their own reproducibility ie 68% of all identical replicate samples are expected to give results within the limit of ± 1σ; 95% are expected to give results within ± 2σ. Inconsistent error terms, eg when similar samples are quoted as having significantly different ± values, are generally due to the variations in the yield of CO_2 from the samples supplied. Samples giving inordinately high error estimates because the sample size was below that normally required are usually accompanied by a technical comment.
3. *BP–1950*: In accordance with the requirements of the publishers of 'Radiocarbon' this is reported as dates bc after subtracting 1950 from the quoted 'Age BP' (for ad, subtract 'Age BP' from 1950).

The convention of using lower case 'b.c.' and 'a.d.' to indicate uncalibrated radiocarbon dates has been used in this Appendix, and in the body of the report, where all the dates quoted are uncalibrated. Calibrated dates, in approximate calendar years, have been used only in Column 7. The 'Monument Ref.' gives the monument identification number and the sample number. This must not be confused with feature numbers, which have the prefix F.

The documentation of the samples dates from 1973–75. Charcoal samples sent for dating were not identified, but other samples from the same contexts were (see App. 6). Oak charcoal was judged to be from substantial trees, but this was not professionally checked. Birch and alder, trees with an average natural lifespan of less than 100 years, occurred in the 'mixed' samples, especially from Brenig 44, and included 10% twiggy material (p. 199). Where this word occurs in this Appendix it is the judgement of the excavator.

Mesolithic Period

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
1	**HAR–656**	**BG40:1**	**Charcoal**	**–26.4**	**7650±80**	**5700±80**	**6565–6409**

The charcoal came from a small pit dug into the old ground surface beneath Brenig 40. It contained charcoal (twigs from several trees), dark earth and stones, but no datable artefacts; its presence is altogether puzzling. Excavation context described on p. 101.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
2	**HAR–1135**	**BG53:F19**	**Charcoal**	**–29.4**	**7300±100**	**5350±100**	**6230–6050**

This came from the latest pit in the complex of intercut pits in the area of maximum Mesolithic activity. These pits showed signs of burning *in situ* and contained lenses of charcoal of mixed tree origin (hazel and hawthorn with some oak). Excavation context described on p. 19–21.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
3	**HAR–1667**	**BG53:F19**	**Charcoal**	**–25.9**	**7190±100**	**5240±100**	**6140–5940**

This came from the same pit complex as Date 2, was a sample of similar origin, and the result is not significantly different from Date 2. The test of significant difference used here is that recommended in the *C.B.A. Radiocarbon Index* p. 1.5. Excavation context described on p. 19–21.

General Comment

There were no technical difficulties with any of these samples. During excavation there was no obvious stratigraphic indication that the pit beneath Brenig 40 was so much older than the monument above it, and this evidence for Mesolithic activity is rather surprising in view of the absence of flintwork of that date from the western side of the valley (see Table 4 in App. 3). The two dates from Brenig 53 pit 19 are consistent with the flintwork from the area around it and, with the re-cutting of the pits, suggest a well-used hearth, perhaps returned to on several occasions.

Neolithic Period

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
4	**HAR–1436**	**BG53:F28**	**Charcoal**	**–27.9**	**5120±100**	**3170±100**	**4050–3820**

This date comes from a small fire pit, 28, used only once. The charcoal is derived from several trees but was deposited in a single episode. Excavation context described on p. 20–21.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
5	**HAR–1669**	**BG53:F25**	**Charcoal**	**–26.6**	**4800±90**	**2850±90**	**3701–3481**

Like Date 4, this date comes from a small fire pit, 25, used only once. The charcoal is also of mixed tree origin, mainly oak and field maple. Excavation context described on p. 20–21.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
6	**HAR–1434**	**BG53:F100**	**Charcoal**	**–25.9**	**4780±160**	**2830±160**	**3750–3390**

Only a small quantity of charcoal was available, hence the large standard deviation. The charcoal came from a cylindrical posthole a few metres south of the fire pits producing Dates 4, 5 and 7. Excavation context described on p. 20–21.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
7	**HAR–1668**	**BG53:F20**	**Charcoal**	**–26.0**	**4570±90**	**2620±90**	**3432–3144**

This date comes from a small fire pit, 20, used only once. The charcoal is of mixed origin, oak and hazel. Excavation context described on p. 20–21.

General Comment

This is the most awkward group of dates in the whole series because there is so little archaeological evidence to suggest activity in the valley during the earlier Neolithic. The fire pits, from which most of the dates come, are similar in every way to those which produced Mesolithic dates, while the cylindrical posthole (Date 6) looks identical to Bronze Age ones. Date 4 is significantly earlier than the other three, which are all mutually compatible, though their standard deviations are high. It is difficult to know whether these dates should be interpreted as a single period of activity, or three separate phases within the Middle Neolithic; either would be acceptable within the limits of the statistics. However, it is noteworthy that this enigmatic period of use of the pits at Brenig 53 is well separated in time from the Late Neolithic beginning of monument building in the valley (Fig. 3.4).

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
8	**HAR–1134**	**BG47:7**	**Charcoal**	**–25.5**	**4090±70**	**2140±70**	**2749–2561**

This charcoal lay on the old ground surface under the outer part of the monument (stone skirt). It is reasonable to suggest that this dates the construction of the monument, which produced no datable finds. Since the date is earlier than expected it is unfortunate that there was only enough charcoal to provide one sample for dating. The charcoal is probably derived from several different trees and its presence on the old ground surface cannot be associated with any single identifiable event, so its archaeological status is not as tightly defined as one would wish, but it does provide a *terminus post quem*. Excavation context described on p. 41.

Bronze Age

The archaeological significance of this series of dates is discussed in the context of the cemetery as a whole on pp. 148–9.

Brenig 42

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
9	**HAR–713**	**BG42:49**	**Charcoal**	**–25.4**	**3610±70**	**1660±70**	**2080–1894**

Charcoal from the fill of Stakehole C, part of the mortuary structure at the centre of the mound; the sample is thus from a single tree or branch, unlikely to have been old at the time of cutting and use. This date agrees well with the construction dates of the other barrows. Excavation context described on p. 50.

Brenig 41

No date could be obtained from Brenig 41 because the only suitable sample (charcoal from the floor of the disturbed grave) was too small.

Brenig 40

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
10	**HAR–799**	**BG40:6**	**Charcoal**	**–27.8**	**3420±80**	**1470±80**	**1834–1639**
11	**HAR–800**	**BG40:7**	**Charcoal**	**–25.5**	**3330±80**	**1380±80**	**1728–1525**

These dates are derived from substantial oak planks (1 and 2 respectively) of the mortuary structure at the centre of the mound. It is unfortunate that it was not possible to estimate the age of the individual trees by dendrochronology, for the apparent disparity of date may be due to the use of an older tree or of heartwood. However, the two dates overlap over much of their range and it is possible to combine them to a mean figure of 1425 ± 57 b.c., for the purposes of discussion only. The 1σ range of the corrected dates would be 1744–1619 B.C. It is legitimate to associate the date of this structure with the Collared Urn from the disturbed centre of the barrow, and with the construction of the monument. Excavation context described on p. 62.

Brenig 45

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
12	**HAR–712**	**BG45:4**	**Charcoal**	**–25.7**	**3620±60**	**1670±60**	**2081–1920**

Charcoal from the pit containing a Collared Urn (Burial 6) inserted into the top of the turf mound. The sample is probably derived from the pyre, built from several substantial oak trees, but the event is a single, identifiable point in time. Excavation context described on p. 71.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
13	**HAR–1027**	**BG45:42**	**Soil**	**–25.8**	**3620±100**	**1670±100**	**2160–1870**

The contents of a small, undecorated Urn (Burial 7) standing in the palisade trench. The sample comes from inside the urn, but the relationship of urn and palisade is less certain. Excavation context described on p. 73, and a comment in relation to Date 16 is on p. 75.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
14	**HAR–657**	**BG45:237**	**Charcoal**	**–24.8**	**3570±100**	**1620±100**	**2070–1780**

Burnt wood associated with the central grave; a sample probably derived from several different trees. The role of the wood in the grave is uncertain. Excavation context described on p. 65.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
15	**HAR–714**	**BG45:17**	**Charcoal**	**–24.9**	**3520±70**	**1570±70**	**1957–1757**

Charcoal from Burial 2, inserted during the construction of the turf mound. The sample is probably of mixed tree origin, but its burial was a specific event connected with the filling of the pit above the burial. Excavation context described on p. 71.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
16	**HAR–658**	**BG45:59**	**Charred soil**	**–27.3**	**3290±70**	**1340±70**	**1667–1495**

This sample is from the fill of the palisade trench. Its origin in that position is rather uncertain; it might conceivably come from some activity which post-dates the decay of the palisade. The date is a problem because it is significantly different from that obtained for the contents of the small Urn (Date 13) which had been put into this trench, replacing one of the posts. Excavation context described on p. 69–70 and discussed on p. 75.

General Comment on dates from Brenig 45

The date of construction of Brenig 45 (Date 14) is not significantly different from that of Brenig 42 (Date 9) and Brenig 44 (Date 21). Dates 12 and 15 are also not significantly different from 14 and show that, although the sequence of burial could be separated stratigraphically, this activity was not spread over a long period. Date 16 presents a problem because it is not absolutely certain what the sample dates. It is possible to suggest on stratigraphic grounds that the palisade was added to the enlarged barrow at a later date, perhaps not long separated in time from the palisade at Brenig 40; but one would have to argue that Burial 7 had been very carefully preserved for a long time before it was finally buried among the posts.

Brenig 6

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
17	**HAR–536**	**BG6:90**	**Charcoal**	**–26.0**	**3070±90**	**1120±90**	**1452–1240**

Mixed charcoal from a hearth lying *beside* the cairn, on a surface which overlies the demolished post-ring structure. It thus provides a *terminus ante quem* for that structure, and is not directly related to the construction of the cairn which also post-dates the wooden structure. It is reasonable, however, to suggest that the construction of the cairn is very approximately dated by this sample, whose date is comparable to those from other cairns of this type (Ritchie *et al.* 1974–5, 21–2). Excavation context described on p. 97.

Brenig 51

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
18	**HAR–801**	**BG51:6**	**Charcoal**	**–23.0**	**3510±70**	**1560±70**	**1947–1751**

This date comes from charcoal associated with a fire (Feature 1) on the stripped old ground surface beneath the clay bank. It is considered to date the construction of the monument and thus may be associated with the primary grave. However, it is a sample of mixed tree origin and might derive from more than one fire. Excavation context described on p. 105.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
19	**HAR–803**	**BG51:11**	**Charcoal**	**–26.0**	**3500±70**	**1550±70**	**1937–1741**

This date is derived from charcoal trodden into the occupation layer (7) beneath the clay bank. This charcoal is likely to have accumulated over an (unknown) length of time. It comes from the same context

as the Beaker sherds. Taken at face value Dates 18 and 19 suggest that the occupation was immediately followed by the building of the monument over the site. Excavation context described on p. 102.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
20	**HAR–820**	**BG51:12**	**Charcoal**	**–24.5**	**3420±70**	**1470±70**	**1816–1649**

This date comes from charcoal in the pit (Feature 2) in the Semi-Circle Cairn. It is of mixed tree origin, probably from twigs, and results from a single, specific event. It was fresh and glossy and still formed a conical heap when excavated. It surrounded the small Collared Urn, Pot A. Excavation context described on p. 110.

General Comment on dates from Brenig 51

There is no statistically significant difference in these dates, but the apparent span suggested by Dates 18 and 20 supports the stratigraphy and the impression that the period of activity at this monument was relatively short. The dates as a whole place this cairn in the middle period of cemetery activity. The date for the Beaker sherds (19) is compatible with that for similar pottery at Ysgwennant, Denbighshire (Birm–85, 1473 ± 82 b.c.). Date 18 may be legitimately applied to the Vase Urn (Pot B).

Brenig 44

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
21	**HAR–501**	**BG44:328 F47**	**Charcoal**	**–25.8**	**3630±100**	**1680±100**	**2170–1880**

Charcoal from the lower fill of BG44:F47, a pit dug from the old ground surface and covered by the inner bank. This is a mixed wood sample, twigs and small branches, but derived from a single specific event. It was a small sample, hence the large standard deviation. Excavation context described on p. 121–2.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
22	**HAR–535**	**BG44:295 F43**	**Charcoal**	**–25.3**	**3530±90**	**1580±90**	**1994–1751**
23	**HAR–500**	**BG44:295 F43**	**Charcoal**	**–25.6**	**3490±70**	**1540±70**	**1928–1730**

Both these dates are derived from charcoal found with cremated bones in the central burial pit. They are likely to be from different trees used in the one pyre. Their central values are gratifyingly close. The 1σ range of the average of the five determinations when corrected is 1910–1749 BC. This pit could not be dated stratigraphically, but these dates suggest that it is not a primary feature of the monument, the construction of which is dated by Date 21. However, in statistical terms the three dates are not significantly different at the 95% level, so this cannot be confirmed. Excavation context described on p. 127.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
24	**HAR–1133**	**BG44:323 Pit A:low**	**Charcoal**	**–25.3**	**3500±80**	**1550±80**	**1946–1731**
25	**HAR–1137**	**BG44:133 Pit A:high**	**Charcoal**	**–24.8**	**3330±70**	**1380±70**	**1714–1534**

These two dates support the archaeological observation that Pit A had been re-cut, although strictly speaking they are not significantly different. Both are from mixed tree samples but derive from separate identifiable events. Date 24, which is rather later than might have been expected (though not significantly later than Date 21), comes from the original filling of the pit, dug from the old ground surface. The charcoal was from twiggy wood. Date 25 comes from material filling the re-cut pit dug through the inner bank, which had covered the earlier pit. The charcoal iuncluded large lumps, from branches about 50 mm in diameter. It is compatible with dates 28 and 29 for pits dug from the same level. Sample 133 had been penetrated by rootlets. Excavation context described on p. 121–2.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
26	**HAR–502**	**BG44:314 F46**	**Charcoal**	**–25.7**	**3470±70**	**1520±70**	**1903–1704**

This date comes from a single carbonised plank incorporated into the outer bank. The plank was quite thin but must have come from a substantial tree. Although it does not seem to have been structural it serves to give a broad *terminus post quem* for this modification to the monument. Excavation context described on p. 120.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
27	**HAR–505**	**BG44:162 F7**	**Charcoal**	**–25.8**	**3470±80**	**1520±80**	**1917–1694**

This charcoal comes from the fill of a pit, BG44:F7, dug from an intermediate level within the inner bank. It is a twiggy, mixed tree sample, fresh and glossy looking; the filling of the pit was a single event, creating a neat, conical heap. Excavation context described on p. 125.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
28	**HAR–504**	**BG44:154 F6**	**Charcoal**	**–26.2**	**3290±80**	**1340±80**	**1681–1486**

This charcoal comes from the fill of a pit, BG44:F6, dug from the top of the inner bank. The nature of the sample, twiggy, mixed and glossy, is the same as that from BG44:F7. It is significantly different from Dates 21 and 24 and is compatible with Dates 25 and 29 from the same stratigraphic level. Excavation context described on p. 127.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
29	**HAR–1138**	**BG44:133B Pit B**	**Charcoal**	**–25.4**	**3290±80**	**1340±80**	**1681–1486**

This charcoal is from the hearth material buried in Pit B, cut through the semi-circular cairn on the west side of the ring and through the inner bank. The charcoal is likely to be of mixed origin, twigs and small branches, but its burial with attendant burnt earth and stones was a single, identifiable event. It represents one of the latest acts performed in the monument and the date agrees well with those from other late pits (Dates 25 & 28). The sample was penetrated by rootlets. Excavation context described on p. 124.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
30	**HAR–503**	**BG44:234 F20**	**Charcoal**	**–25.9**	**3230±70**	**1280±70**	**1592–1447**

This charcoal came from the filling of the pit, BG44:F20, on the north-eastern side of the ring. It is likely to be of mixed tree origin, but its presence in the pit results from a single, specific event. The pit contained two Collared Urns containing cremated bone, a flint knife, 'ear studs' and an Accessory Cup. This is a late date, not significantly later than the other late dates (Dates 25, 28, 29) but the stratigraphic relationship of this feature to the inner bank is less certain. This date for two Collared Urns is compatible to those from Bedd Branwen, Anglesey (BM–455, 1307 ± 80 b.c. and BM–453, 1274 ± 81 b.c.), but is significantly later than that for the urns from Brenig 45 (Dates 12 & 13). Excavation context described and discussed on p. 127–9.

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
31	**HAR–1136**	**BG44:123 F5**	**Charcoal**	**–26.0**	**2960±70**	**1010±70**	**1318–1072**

This date comes from a scatter of charcoal on the old ground surface, covered by the inner bank. The charcoal came from a restricted area, but its presence cannot be related to any specific event. There was a high quench correction for this date. It was expected that this sample would give a date compatible with Date 21, since the charcoal lay on the stripped surface and there was no sign of disturbance in the bank above it. Excavation context described on p. 118. This exceptionally late date is inexplicable. As the only 'awkward' date in this series of eleven, and one from a sample which presented some technical difficulty, this aberrant result has been ignored in the discussion of the monument.

General Comments on the dates from Brenig 44

Apart from Date 31, the series of dates from Brenig 44 is internally consistent and supports the stratigraphic observations. Its importance for the interpretation of the monument lies in the

time-span – the long period over which the monument was in active use. Since the sequence of dates conforms so remarkably to the observed stratigraphy, it is tempting to take the results at face value and to accept the mean figures as 'historical points in time'. However, experience elsewhere (Lynch 1984, 37–39) prompts a more cautious approach, in which any sequence of activity must depend on stratigraphic arguments for its validity rather than on radiocarbon assay. Nevertheless it should be pointed out that the radiocarbon dates for the construction of the monument (Date 21) and for its final use (Date 30) are indeed significantly different and thus its longevity, at least, is established. The construction of the ring and the filling of the earliest pit (Date 21) belong to the same period as the building of the major barrows (Dates 9 & 12–14), while its use continued until almost the end of the valley's use for burial (Dates 30 & 17). Dates 22, 23 and 26 are important because they suggest dates for events which could not be tied into the stratigraphic sequence.

Brenig 48

	Harwell Ref.	Monument Ref.	Type	$\delta^{13}C$ (‰/10)	Age BP	Age bc (BP–1950)	Approx Age cal BC
32	**HAR–1435**	**BG48:07 :23**	**Charcoal**	**–26.7**	**330±70**	**1620±70**	**1450–1648**

The charcoal comes from a pit sealed by a *hafod* wall. The pit contained mixed charcoal (hazel, oak, gorse and heather) and showed signs of *in situ* burning. Other, similar, pits cut the buried turf beneath the wall and it is reasonable to link this activity and its date with the construction of the eastern building in Area 07. The calibrated date agrees well with that proposed for the pottery from the site – late 15th. to late 16th. century. Dating discussed on p. 179.

APPENDIX ELEVEN

Unsuccessful Sites

Frances Lynch

Two round mounds which had the appearance of being Bronze Age barrows were investigated, one close to Brenig 51 and the other near Brenig 42. Both were found to be entirely natural.

Brenig 52

This small round mound at SH 9892 5690, just north-west of Brenig 51, had not been previously recorded. Ellis Davies had wisely ignored it. It was excavated by the quadrant method in July 1974 under the direction of Anthony Ward. Superficially it appeared to be 12 m in diameter and approximately 0.8 m high. When the grass and peat were removed, a scatter of quartz was revealed which encouraged the belief that it was a Bronze Age structure. However, further excavation revealed that the mound was composed of solid rock with a vein of quartz running across the centre. This quartz had been scattered by the plough which had run over the mound within the last ten years, and whose furrows were visible across the surface. One scrap of waste flint was found in the topsoil.

No doubt this small outcrop of quartz was the source of the quartz used in the neighbouring Platform Cairn, Brenig 51.

Field Bank beside Brenig 52 (Pl. 2.1a)

The ridge between Hafoty Sion Lwyd and Hen Ddinbych is crossed by a number of field banks. Some of these banks seem to run parallel to the enclosure banks of Hen Ddinbych, while others run close to it but at a slightly different angle. All of them are now low and degraded and had an air of antiquity. One of the longest of these banks ran between Brenig 51 and Brenig 52, close to the small mound, and it was sectioned when that mound was dug.

It was found that the bank was 1.75 m wide but only 0.3 m high, and built entirely of dark, peaty soil. It had been built on a surface of soft black peat with characteristic cracking. It was concluded, therefore, that this bank was of no great age and more likely to have been associated with the 19th. century Hafoty Sion Lwyd than with the much older site of Hen Ddinbych, already the subject of antiquarian speculation by the 16th. century.

Mound on Cefn Brenig

Just south-west of Brenig 42, at SH 9745 5676, a mound was noticed which appeared artificial from certain angles. A hollow in the top revealed that it had looked promising to previous diggers. A small trench (1 m x 4 m) was laid out on the top of this mound and excavated to natural clay, which was found immediately below the peat, the surface recognisable by the regular honeycombing of pale and dark soil. One small pit represented the bottom of the previous fruitless investigation. This work was carried out by Anthony Ward in July 1974.

APPENDIX TWELVE

Names of those who worked on the excavations

Directors of Excavations

Allen, David (1973, 1974, 1975)
Lewis, Shelagh (1971, survey 1972, 1973)
Lynch, Frances (1973, 1974)
Waddell, John (1973)

Administrative Staff

Bennett, Capt. A.J.N. (Camp Manager 1973, 1974)
Partridge, Harry (1973)
Williams, Dr. John Llywelyn (1973)

Soil Survey

Keeley, Dr. Helen (DOE Laboratory)
McPhail, Richard

Pollen Analytical Survey

Hibbert, Dr. F. Alan (then of Liverpool Polytechnic)

Bone and Wood Identification

Keepax, Mrs. Carole (D.O.E. Laboratory)

Conservation

Robinson, Ms Wendy (DOE Laboratory)

Cooks

Donkin, Tony, South Shields
Ellis, Lynden, Manchester
Franks, Anne, Manchester
Hutchinson, Denise, Newcastle upon Tyne
Janes, Anne, Ormskirk, Lancs.
McDonald, Brian, Consett, Co. Durham
Robinson, Joyce, Manchester
Wilce, Kay, Barnsley
Wiseman, Kay, Kirby Stephen, Westmorland
Eastwood, Penny, Sheffield
Martindale, Pam, Chorley, Lancs.
Musgrove, Nan, London

Supervisors and Assistant Supervisors

1973 and 1974

Alker, Lynda, Prestwich, Manchester. (BG 42 and BG 46)
Goddard, Helen (Now Mrs. P.L. Murphy), Liverpool. (BG 42 and BG 46)
Murphy, Peter, Hornchurch, Essex. (BG 41, 44, 8 and 51)
Ward, Anthony, Llanelli (BG 41, 8 and 52)
Winsor, Peter, Birmingham (BG 51)

1973

Barnbrook, John, Liverpool (BG 45)
Barnbrook, Jennifer, Liverpool (BG 45)
Denford, Geoffrey, Newton Abbott, Devon (BG 40)
Hough, Catherine, Wolverhampton (BG 45)
Hughes, Stephen, Usk, Gwent (BG 47 and BG 44)
Kelly, Richard, Bangor (Cairnfield and BG 14)
Leppard, Susan, Manchester (BG 41)
Lowle, Donald, Liverpool (BG 44)
Marwood, Martin, Sheffield (BG 40)

Excavators 1971

Alker, Lynda
Atkins, Peter
Davey, Elizabeth
Davey, Peter
Daw, John
Green, Michael
Lowle, Donald
Macrae, Peter
Quinlan, Margaret
Spencer, Geoffrey

Survey Team 1972

Alker, Lynda
Allan, Sue
Barnbrook, John
Barnbrook, Jennifer
Ffoulkes, David
Goddard, Helen
Green, Michael
Horgan, Sarah
Lowle, Donald
Quinlan, Margaret
Ransom, Malcolm

Brenig Volunteers : 1973 and 1974 Seasons

ALLEN, Denise (R.A.G.)
BEAMER, David, Denbighshire
BEASLEY, Susan, Doncaster
BELL, Donald, Gronant, Flints.
BENNISON, Bruce, Colwyn Bay
CHAPPELL, Terence, Manchester
COOKSON, Anne (Mrs), Sale, Cheshire
DOWNEY, Benson, Northampton
EDWARDS, Noel, Bangor
EDWARDS, Sian, Llandyrnog, Denbighshire
EGELAND, Martin, Northwich, Cheshire
EVANS, Elwyn, Aberdare, Glamorgan
EVANS, S.J.M., Denbigh
FERLEY, Simon, Bury, Lancs.
FROST, Deborah, Llandyrnog, Nr. Denbigh
GEORGE, Ann, Middleton, Manchester
GOULDING, Anthony, Chorlton-cum-Hardy, Manchester
HARDY-SMITH, Anne (Dr) (Mrs Andrews), Liverpool
HARRISON, Kenneth, Rhosgoch, Anglesey
HARRINGTON, Peter, Manchester
HUDSON, Nigel, Northwich, Cheshire
JEFFS, Gillian, Chirk
JONES, Dilys Lucille, Denbigh
JONES, Timothy, Denbigh
KAVANAGH, Hilary, Birkenhead
KELLET, Lynne, Marianglas, Anglesey
McKEE, Howard, Llanrhaiadr, Denbigh
MABY, Anne (Mrs), Penrhyndeudraeth, Merioneth
MARTIN, Catherine, Liverpool,
MORRIS, Richard, Llangollen
MUMFORD, Cedric (Dr), Caerphilly, Glamorgan
MUSSON, Chris (R.A.G.), Shrewsbury
OWEN, D.A., Prestatyn, Flints
PITT, Diana, Solihull, Warwickshire
PRYTHERCH, Robert, Rhosneigr, Anglesey
PYE, Brian, Northwich, Cheshire
RICHARDS, Haydn, Corwen, Merioneth
ROBERTS, Rosalind, Llandyrnog, Denbigh
ROE, David, Craven Arms, Salop
SPRUCE, Jeremy, Northwich, Cheshire
SUTTON, Deborah, Cork, Ireland
THOMAS, David, Denbigh
WALL, Sheilagh, Tenby
WATKIN, Robert, Llangollen
WILLIAMS, Ann Lloyd, Llangollen
WOODFORD, Christina, Northamptonshire

Brenig Volunteers : 1973 Season

ADAMS, Paul, Manchester
AKGULIAN, Mark, U.S.A.
ANNABLE, Maureen, Rhyl
ASHWORTH, Paul, Rhyl
ATKINSON, Catherine, Chester
BAILEY, Elizabeth, Penmaenmawr
BANYARD, Sheila (Mrs Oakley), Rochdale
BASKOTT, M.S. Sherfield-on-Loddon, Hants
BLAKEBROUGH, Ian, Liverpool
BLEASE, Eleri, Colwyn Bay
BOWERS, Therese, Manchester
BREMON, Michel, France
BURCZAK, Garry, Stalybridge, Cheshire
CADOUR, Yves, France
CARDWELL, Elaine, Llangefni, Anglesey
CARTER, Jo Anne, Stansted, Essex
CHILTON, Tom, Edinburgh
CLEMENTS, Angela, Barnsley
COLGAN, Janet, Birkenhead
COLLING, Clariss, U.S.A.
CORBISHLEY, Michael, Harwich
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THOMAS, Susan, Solihull
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TRAIN, Stella, Wetherby, Yorkshire
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WALSH, Cynthia, U.S.A.
WALMSLEY, Fiona, Blackpool
WATSON, Carole, Preston
WAUGH, Linda, Manchester
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WEETMAN, Anne, Bath
WHEELWRIGHT, Brian, Belfast
WHITELEY, Simon, Leatherhead, Surrey
WILSON, Margaret, Bootle, Lancs
WILLIAMS, Bethan, Denbigh
WILLIAMS, Jean, Caeathro, Caernarvonshire
WILLIAMS, John, Llanddeiniolen, Caernarvon
WILLIAMS, Judith, Chirk, Wrexham
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WINTERBOTTOM, Susan, Liverpool
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Brenig Volunteers : 1974 Season

CAMERON, Pat, (Mrs), London
CHAPPELL, Sylvia, U.S.A.
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DONNELLY, Pauline, Salisbury
DZIADUL, Christopher, Manchester
EVANS, David, Caergwrle, Nr. Wrexham
GOODWIN, Karen, Saundersfoot, Dyfed
GRAF, Silvio, Italy
HAWKSEY, Ricky, Birkenhead
HOLBERRY, Julia, Wolverhampton
JONES, Dilys Yvonne, Chester
JONES, James, Artro, Wrexham
JONES, Lynn, Abergele, Denbs.
KENT, Paul, (R.A.G.)
LEES, Catherine, Rochdale
McNULTY, Garry, Chorlton-cum-Hardy
OWEN, Leslie, Chester
PARRY, Jocelyn, Northwich, Cheshire
PICKORTH, Sarah, Southampton
ROBERTS, Amanda, Wrexham
ROSCHKE, Robert, U.S.A.
SNOWDON, Ceinwen (Mrs), Wrexham
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Brenig Volunteers : 1975 Season

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ISBN 0 947846 04 2