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THE DATING OF TIMBER FRAMED VERNACULAR ARCHITECTURE IN SUSSEX

by R. T. Mason, F.S.A.

The dating of artifacts is a fundamental duty of the archaeologist; study is ineffective without it. The pre-historian is fortunate as to the wide limits within which his dates may be set; the medievalist needs far greater precision if his results are to be of service. The following remarks are an attempt to apply to vernacular buildings similar methods to those so long used in other fields, that is, dating by style and typology.

In the matter of style we are greatly assisted by our nineteenth century predecessors. Their superb architectural scholarship is beyond question and they bequeathed to us a chronology which, in spite of critical examination by succeeding generations, has withstood the test of time. Today, therefore, all our major buildings, where they cannot be related to documentary evidence, may be dated within reasonable limits by their architectural features. Minor buildings, however, present a much more difficult problem. Not only is documentary evidence almost invariably lacking, but architectural features of the more elaborate kinds are apt to be very scarce. But, because of the exceptionally high quality of vernacular architecture in Sussex the local antiquary is in a more favourable position than many of his fellow-observers elsewhere. Documentary evidence apart, and disregarding for the moment the possible contribution of science, we ought to be able to date our minor buildings by stylistic or typological means, provided always that due regard is paid to historical feasibility in any particular case, and provided also that too much is not expected, leaving the limits of accuracy reasonably broad.

Style was investigated by the Victorians with great thoroughness.[1] In recent years the study of typology has greatly advanced and is a much more useful tool than as recently as twenty years ago. But the two must necessarily be used together and the objective in any particular case must be to arrive at a decision which has as much support from both as can be obtained in the circumstances. They must be both reconcileable and compatible for such a decision to be valid. We are unlikely by these means to achieve a precision greater than that of the Victorians, because changing fashions, though clearly discernable over a period of time, are erratic and irregular within it—varying from region to region. We are, however, probably quite justified in believing that when a man built a house he built it in the latest prevailing fashion—that is, of course, in the latest fashion of which he had knowledge. We surely do not need to envisage a situation where the farmer's mouldings are being cut in an outmoded Decorated style whilst those of his neighbour, the squire, are being cut in the new Perpendicular. Especially so since both may very well be employing the same carpenter.

[1] See, in particular, the numerous works of J. H. Parker.

Accepting the premise that stylistic criteria are as reliable and useful in vernacular architecture as they are in the supra-vernacular the question naturally arises as to whether scientific methods would be more accurate. The Carbon 14 method can now be applied more successfully to medieval carpentry, and advances have certainly been made in the field of dendrochronology. However, it would seem that neither at the present time yields narrower limits than do style and typology together, when they can be successfully reconciled.[1] But there are, of course, numerous examples in which style is virtually non-existent and typology is in doubt. In such cases dating by scientific means is the only resort available, and their application might well reinforce the typological sequences now being worked out.

Whereas style may be regarded as a nation-wide phenomenon, typology can be seen to vary from region to region. The application of typological dating, therefore, requires an extensive regional knowledge and a general appreciation of the national scene so that local idiomatic practices may be recognised and assessed. A typical instance of this need arose in the case of Houghton Place admirably described by W. D. Peckham.[2] The author (in consultation with P. M. Johnstone) suggested a mid fourteenth century date for this building without either knowing, apparently, that the very remarkable roof-structure, which is well illustrated in the article, is an almost exact replica, scaled down, of that covering the thirteenth century church at Higham Ferrers. Typology dictates, however, that neither of these roofs belong to the thirteenth century and that the Higham Ferrers roof is a part of some alterations carried out there about the year 1360.

In vernacular architecture stylistic dating relies very largely upon appreciation of moulding contours; this is particularly true of framed buildings where elaboration of other details is apt to be somewhat rare. But changes of architectural style are based just as firmly on the development of mouldings as they are on sculpture, tracery, and structural form. Therefore there seems to be no good reason why the old, well-tried criteria should not be applied to them. The idea of relating wood mouldings to those worked in stone is not accepted by some authorities, though no convincing argument has so far been advanced by them in support. It seems, upon the whole, very unlikely that carpenters and masons would be working at a given time in different styles. Building demanded, as it still does, close collaboration between all trades.

Wood mouldings can often be somewhat irregular—so much so that on occasion only an approximation of the intended contours is achieved. This may readily have led to some mistrust, but quite apart from discrepancies which can result from warping and shrinkage, we have to consider a basic difference in the nature of mason's as compared with carpenter's techniques and presumably in the nature of the profile-templates used. The mason cuts his moulding stone by stone and may therefore apply a true or *positive* profile which is an exact replica of the finished work. Upon the other hand the carpenter, dealing with a continuous beam, would necessarily use a reversed or *negative* profile and some irregularity might well result therefrom. In this respect wood is possibly less tractable than stone and a really well-cut wood moulding may well represent a higher degree of manual skill than a similar one in stone. Sussex is remarkable for the quality and abundance of its wood mouldings, and in general they are

[1] For a recent list of articles on Dendrochronology and the radio-carbon dating of timber buildings see *A bibliography on vernacular Architecture*, Vernacular Architecture Group (Newton Abbot, 1972), 135-136.

[2] W. D. Peckham, " Houghton Place ", *Sussex Archaeological Collections* (hereafter abbreviated to *S.A.C.*), vol. 63 (1922), 203-215.

Plate I. 48 High Street, East Grinstead. Dais beam moulding, early fourteenth century. End wall of hall re-built in brick

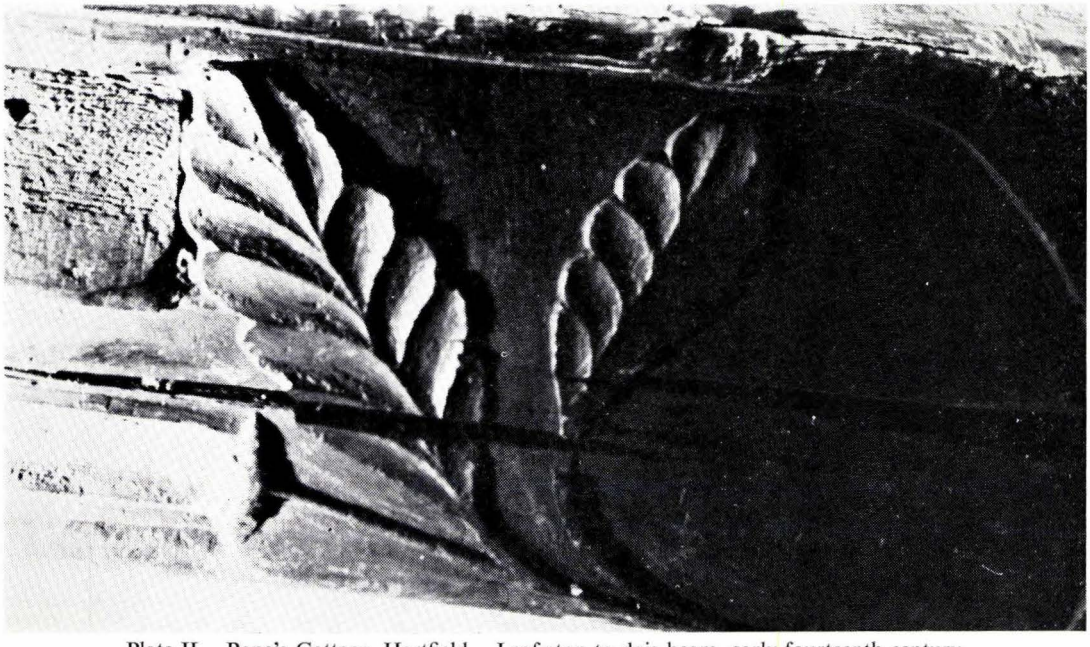


Plate II. Pope's Cottage, Hartfield. Leaf stop to dais beam, early fourteenth century

accepted view that this type of house emerged in the late fourteenth century. It became extremely popular in the Weald and was by no means despised elsewhere; isolated " Wealdens " are to be found in most timber-framed areas and occur as far away as the city of York.

Open trusses are usually embellished with arris mouldings, generally plain or hollow chamfers. But there are a few instances of arris roll mouldings on arch braces and tiebeams as at Sullington Manor and Chennels Brook, Horsham, with another not far away at Greens Farm near Newdigate. The arris roll is most common in twelfth century buildings but was frequently used in the thirteenth. In at least two of the above examples typology considered in association, points to a late thirteenth century date. Sullington Manor has features which suggest a very early date but is too much obscured by later accretions to permit a firm conclusion. The wide chronological range of Perpendicular mouldings must necessarily present a difficult problem, but with a view to at least a very broad separation it might be suggested that in dais beams the very simple arrangement of large cavetto and two small rolls is probably early (say 1370-1450) whereas the more confused arrangements with a proliferation of small rolls are later (say 1450-1540). The inclusion of small battlements as part of the design is common but affords little help towards close dating.

In typological dating much assistance is to be had from a study of changes in roof construction. Recent investigations have shewn a convincing relationship between the medieval roofs of south-east England and those of somewhat earlier date in France.[1] The most significant feature is the " notched lap " joint which, in England, has generally a thirteenth century implication. It occurs in at least one Sussex house (Sullington Manor) which also has the exceptionally wide rafter-spacing noted as a characteristic of early French roofs. In medieval houses in Sussex the crownpost roof is almost universal. We are fortunate that the earliest closely dated example survives at St. Mary's Hospital at Chichester. This roof, dated by documentary evidence to *circa* 1285 shows the type to have been fully developed mechanically before the end of the 13th century.[2] It seems fairly certain that earlier roofs were similar but lacking the collar purlin and crownpost. It may be supposed, therefore, that they consisted simply of pairs of rafters coupled at a high level by short collars, sometimes reinforced by short braces between collar and rafter. This kind of roof is found in a number of early buildings as at Chennels Brook, Horsham, Capons, Cowfold, Longridge Farm, Chailey, and elsewhere but it clearly persisted well into the fifteenth century and perhaps into the sixteenth.

The side-purlin (as opposed to the central purlin-crownpost) roof is of high antiquity in certain parts of England, notably the West Midlands, where it can be of fourteenth century date. This does not seem to be the case in Sussex as our earliest side-purlin examples occur in conjunction with crownposts, a form of hybridisation found at Priory Cottage, Bramber, and the Vicar's Hall, Chichester, which are probably late fourteenth and early fifteenth century, respectively. The crownposts are soon omitted however, and the unadulterated side purlin seems to have become established during the second half of the fifteenth century as at Old Place, Pulborough. It overlaps the crownpost-collar purlin design for up to 100 years as it would appear that the crownpost went completely out of favour by about 1540 or thereabouts. The earlier versions of the side purlin roof have windbraces from principal rafter to purlin to

[1] Summarised by R. T. Mason in *Framed Buildings of England* (1974), 51.

[2] W. H. Godfrey, " Medieval hospitals in Sussex " *S.A.C.* vol. 97 (1959), 130-136.

give longitudinal stability. In the best examples the purlins are framed into the principal rafters whereas in humbler buildings they are continuous and lie upon the backs of the principal rafters. There seems to be no chronological significance in this circumstance.

Towards the close of the sixteenth century a more mature version of the side purlin roof was introduced in which not only are the purlins framed into the principals, but the rafters are framed into the purlins so that a flush upper surface of all components is presented to receive the roof coverings. This continued in use well into the eighteenth century, until the tradition of timber framing was replaced by brickwork and stone. Other roof types occasionally met with are the " queen post " and " queen strut " designs. The latter would seem to belong in general to the sixteenth century and, where the struts are vertical, is sometimes found to be covering an open hall and is smoke-blackened as a result. It is supposed that these must be very late medieval productions—perhaps as late as the second half of the sixteenth century. True " queen post " trussing occurs in association with flush-framed rafters and side purlins in a type of roof which is pretty well confined to the seventeenth century. It is clearly designed to accommodate the demand for attic space and is only found in buildings of two or more storeys. In it the tiebeams are fixed to the wall-posts about two feet or so below eaves level, and has therefore come to be called the " dropped tiebeam " roof; the arrangement leaves the attic space virtually free of obstruction and it is well known that at this period the attic was frequently used as storage and living space. Framed houses of this kind may readily be detected by means of the narrow band of timberwork which runs along under the eaves, but it should be borne in mind that medieval open-halled houses were very often re-roofed in this fashion.

The general overall design of framed buildings affords less help in dating than might be expected. There is, of course, the indisputable fact that open-halled buildings are medieval in both character and date, whereas fully storied buildings (other than those of " continuous jetty " type) are in general post medieval. Here we may reasonably use the deadline suggested by the late Dr. Salzman, i.e. that the medieval period ended about 1540. Among the recognisable medieval types are aisled houses and those with one or two crosswings. There is also a simple type which has a great chamber (with open truss) above either the service or solar ends as at the Priest's House, West Hoathly[1] (solar end) and Downstreet Farm, Piltdown (service end). None of these variations yield reliable dating criteria, and aisling, which until recently was deemed invariably early, is now found to exist in association with both fourteenth and fifteenth century mouldings. Skinner's Cottage at Hoath Corner, Chiddingstone, Kent, which has a single aisle, can hardly, on stylistic evidence, be earlier than about 1450. The single-aisled house is much more common in Sussex than the fully-aisled, and, to judge from published work would appear to be a regional characteristic. There are good examples at Apple Tree Cottage, Henfield, The Old Manor House, Keymer, and Priory Cottage, Bramber. None of these seem earlier than the late fourteenth century.

Patterned external framing, where visible and not extensively altered may assist in dating to a limited extent. The common irregular square panels with heavy curved braces, though evidently the earliest of all forms, was used throughout the whole chronological range of surviv-

[1] I. C. Hannah, " Medieval timber houses at West Hoathly and Forest Row," *S.A.C.* vol. 71 (1930), 128-133.

ing buildings and is not therefore of much service. However, the modest local version of the ornamental framing of Cheshire and south Lancashire may generally be placed in the second half of the sixteenth century or occasionally early in the seventeenth. The Middle House, Mayfield, and East Mascalls, Lindfield, are probably the best survivals. Small quadrilaterals of uniform size belong invariably to some date in the seventeenth century, with a possible slight overrun into the eighteenth; it is very doubtful whether the true timber framed tradition persisted after about 1730. Close studding, the architectonic peak of wall framing, first appears in the early fifteenth century and continues well into the seventeenth. It was long thought to be the earliest type of framing but that is clearly not the case; it may be said, even so, to be the earliest type of consciously patterned framing.

In case the foregoing remarks should impress the reader as an admission of imprecision it should be said that they simply attempt to systematise what looks at first glance to be chaotic and to make the best use of very inadequate criteria. No more is claimed than that the methods suggested are at least as accurate as are scientific ones at this time, and should the latter be further refined, it will be interesting to see how typological and stylistic dating stand up in comparison.

THE ECCLESDEN OUTRAGE: A FRESH INTERPRETATION[1]

by Julian Cornwall, M.A.

People who happened to be passing through West Angmering on their way to market one morning, probably early in 1545, were astounded to find this undistinguished village in an uproar. In the midst of it could be seen John Palmer, the local landlord, backed up by seven or more of his servants, doing his utmost to smash down the doors of about half a dozen cottages, against a background of terrified screaming coming from the women and children cowering inside them. As the wayfarers gathered round to watch things simmered down somewhat, enough for Robert Benett's wife Margaret to poke her head timidly through a doorway and in piteous tones ask Palmer:

" Jesu, Sir! In the name of God what mean you thus extremely to handle us poor people? "

The squire snarled back, loud enough for everyone to hear: " Do ye not know that the King's grace hath put down all the houses of monks, friars and nuns? Therefore now is the time come that we gentlemen will pull down the houses of such poor knaves as ye be! "

Abashed by the untimely arrival of witnesses Palmer attempted no further action that day, partially appeased (it may be) by the havoc he had already wrought. Apparently he and his bully boys had already succeeded in forcing their way into one or two cottages, beaten up the inmates, regardless of age or sex, and carried away the copies of the court roll of the manor which served the tenants as title deeds. Convinced that he planned to maim or murder them, further terrified by the loss of their precious documents and his threat—he was a justice of the peace—to cast them into prison, several of the wretched villagers were reduced to a state bordering on madness from which they did not recover for several days.

A reign of terror ensued. Several of the inhabitants were served with notice to quit their houses and farms. Others had to take refuge in flight and dared not return to their homes because Palmer and his men had " fought with and beaten man, woman and child dwelling within the said lordship that would durst speak against his said injuries, wrongs and extortions done by him. . . ."[2]

It was a most unequal contest. John Palmer was " a man of great substance and power, and wholly addicted, inclined and given to cruelty and mischiefs . . ." while his tenants were only " very poor men and of small ability, and in great fear of their lives besides the loss of their poor substance. . ." So John Bune, Thomas Hall, John and Thomas Yonge, Robert Benett and John Attffelld had no other recourse but to appeal to the Court of Star Chamber for remedy. In their Bill of Complaint they described how Palmer, immediately after he had come into possession of the manor of Ecclesden, had occupied certain pieces of pasture ground which the tenants held by copy of court roll, enclosed, and combined them with other land to form a park; a little later he occupied the common waste and turned it into fishponds. As if this was not enough he went on to seize the houses and land of some of his tenants, against

[1] Readers are also referred to the following paper in this volume by Owen Bedwin (*Ed. S.A.C.*)

[2] *Public Records Office, Star Chamber Proceedings,* St. Ch. 2/6/180-1.

their will, pulled down several of their homes, the timbers of which he gave away, burned others and drove the occupants violently out. Certain men he forced to surrender their holdings in exchange for land which was not only further away from their homes but smaller in acreage and inferior in quality. Worse, they got no clear title with it, although compared to those unfortunates who had been evicted without any compensation at all they were relatively lucky. Finally, when some of them refused to submit and vacate their cottages, Palmer descended on them with his retinue and commenced the armed assault which was only halted by the timely arrival of ' the market men '. His final coup was an attempt to wipe out the whole village community. He served notice to quit on the occupiers of one whole street in Angmering, lying close to the sea " where in times past divers and many able persons hath inhabited able to do [the King] good service and to resist [his] enemies in time of need, and now . . . is like to be desolate and uninhabited. . . .".[1]

The tribulations of the Angmering folk are familiar to students of the social and economic history of the 16th century, thanks to the indispensable collection of documents edited by R. H. Tawney and Eileen Power.[2] The case was first mentioned by I. S. Leadam in 1893[3]; subsequently it was used by Phyllis Wragge in the *Victoria County History* (1907) to illustrate the evils of enclosure by means of a full summary of the petitioners' allegations, while the defence was disposed of with the dry comment, " Palmer, however, succeeded in showing that the copyholders had been removed to other places in Angmering by agreement, and the case was dismissed ". After reviewing other analogous incidents she concluded, " It is rather curious to note that in nearly all these cases the presumption of justice is in favour of the incloser ".[4] How she reached this conclusion is even more curious, for the Star Chamber proceedings, the only source quoted, are innocent of any note of the judgment given. Leadam, on the other hand, presented the case as an example of the effective protection of copyholders by the courts, citing a vital piece of additional evidence which we shall consider in due course, and which Wragge ignored even though it furnishes the only clue as to the final outcome. Tawney, possibly influenced by her interpretation, " cavalierly ruled out of court " the whole of Leadam's thesis,[5] and went on to confer on Ecclesden the cachet of being a representative example of " Enclosures, eviction and other oppressions by grantee of estates of dissolved monastery of Syon ", as the transcript is titled—an unfortunate choice of phrase which serves to prejudice the whole issue by marshalling the weight of his profound erudition behind one side of the debate. Most of us have a blind spot or two; he certainly did when, as here, the element of class conflict is present, and in consequence sometimes misread his sources.[6] The sixteenth century has, with good reason, come to be regarded as " Tawney's century ",[7] but subsequent scholars are not thereby relieved of all responsibility in the matter of interpretation, especially since both sides of the case are printed in full, enabling detailed comparison to be made.

[1] Ibid.

[2] R. H. Tawney and E. Power, *Tudor Economic Documents*, 3 vols. (1924), i, 19-29.

[3] I. S. Leadam, " The Security of Copyholders in the Fifteenth and Sixteenth Centuries ", *English Historical Review*, 8 (1893), 684-96.

[4] P. Wragge, " Social and Economic History ", *Victoria County History of Sussex*, ii (1907), 100-1.

[5] E. Kerridge, *Agrarian Problems in the Sixteenth Century and After* (1969), 33; R. H. Tawney, *The Agrarian Problem in the Sixteenth Century* (1912), 289.

[6] See Kerridge, op. cit. passim, for criticism of Tawney's method. Interestingly, the second of the two cases Tawney and Power used to illustrate enclosures, under the heading " Enclosure of commons and oppression of copyholders ", was also used by Leadam.

[7] F. J. Fisher, " Tawney's Century " in *Essays in the Economic and Social History of Tudor and Stuart England*, ed. F. J. Fisher (Cambridge, 1961), 1-14.

It could be that John Palmer's defence has proved self-defeating since his Answer is two and a half times the length of the Bill. It is hardly surprising that he categorically denied every one of the allegations against him. But his version went very much further, saying in effect, " let's start by establishing the facts ".

The dispute had been in the making some ten or twelve years, that is, since about 1530 or soon after. The manor of Ecclesden, then owned by Syon Abbey, contained a tract of waste ground, amounting to some forty acres, on which Palmer enjoyed rights of common by virtue of two yards and half a hide of land which formed part of his manor of West Angmering. The copyhold tenements of Ecclesden were meant to conform to a standard yardland of twenty acres, and if any of them fell short of this minimum size the occupier was entitled to make good the deficit by means of an intake from the waste ground. Palmer himself was a copyholder of Ecclesden, occupying six separate holdings all of which were subject to the minimum acreage rule; in addition he commoned his livestock on the waste in accordance with the custom of the manor.

Arguments had developed. Palmer's extensive property must have entitled him to graze a large number of beasts; no doubt, like many another major landowner, he was tempted to overstock the common, and as a result his fellow commoners were driven to protest. So they all got together and negotiated an agreement. Palmer gave up his right to keep animals on the common, and was awarded in exchange a portion of the waste ground for his exclusive use, leaving the remainder to the other copyholders. With the consent of all concerned a formal partition was made which gave each man a separate allotment. Since the object of the exercise was to prevent the cattle belonging to the various parties straying on to one another's land, Palmer immediately enclosed his own allotment, which amounted to about four acres, at his own expense; later he constructed a stewpond on part of it. He also, he claimed, made a watercourse for the benefit of the complainants' cattle. Whether the other former commoners set hedges round their newly acquired individual plots we are not told. They would surely have wished to do so although it is possible that the cost acted as a deterrent.

A few years later, in 1539, Syon was dissolved, and just twelve months later, on 10 November 1540, Palmer purchased Ecclesden from the Crown to become the principal proprietor in Angmering.[1] Probably shortly afterwards, at any rate a year before the fracas which brought matters to a head, he entered into a new agreement with a number of his tenants to effect an exchange of land, presumably in order to consolidate his own holdings. The six plaintiffs agreed to vacate their cottages, together with certain pieces of land attached which were situated in the West Field, and to take instead other plots lying closer to the sea in West and East Angmering "for the better defence of those parts". In due course they entered into possession of their new allotments which thereafter, so Palmer claimed, they cultivated without interference, but nonetheless they refused to give up the strips in the West Field, so that they now occupied the lot!

There was one exception, Robert Benett. He indeed relinquished his land—it is not clear whether he also vacated the house—but instead tried a different ploy. Claiming that his farm of one and a half yardlands was smaller than the standard acreage, he helped himself to a piece of the waste known as The Breche. Palmer called the tenantry together, Benett included, measured Benett's holding in their presence, and established that it contained the full regulation

[1] D. Knowles, *The Religious Orders in England*, iii (Cambridge, 1961), 221; *Letters and Papers, Henry VIII*, xvi, 305 (23). Syon was dissolved by 2 November 1539.

thirty acres. Faced with this incontestable evidence Benett climbed down. He surrendered to Palmer (as lord of the manor) all his copyhold land, except for a couple of plots held by a different title, and took in exchange land of equal value in East Angmering, plus 26s. 8d. upset money. He moved in " and is now thereof seized and the same doth manure and occupy without let or interruption. . . .".[1]

Here, apart from the rebuttal in detail of all the complainants' allegations, the defence rested, leaving us with two diametrically opposed versions, so different in fact that except for the names they might as well refer to two quite separate events. How can they be reconciled?

In the first place we may believe the peasants to the extent that some kind of physical confrontation took place. The point must have been reached when Palmer's patience was finally exhausted and he found himself with no alternative but to stand on the letter of his legal rights and possess himself of the land awarded to him under the deed of exchange, if need be forcibly. If the six insisted on defending the houses they were supposed to have ceded there were only two courses open to him: to let them get away with it, or to break in and throw them out. In the 20th century eviction scenes are frequently harrowing, in the 16th violence was probably the rule; there is no need to doubt that the incident was ugly enough for Palmer to want to forget it.

As regards the remainder of the complainants' case, it amounts simply to accusing Palmer of harrassing and robbing them until desperation drove them to resist. There may well have been some truth in this, but at the same time we cannot help noticing that the allegations are cast in the most general terms, in contrast to the defence which is spelt out in detail—convincing detail, it might be said. The agreements it cites must have existed in writing, capable of being produced in evidence. Procedure in the prerogative courts such as the Star Chamber was by way of written submissions. The complainant first of all stated his case in a ' Bill ', upon which the tribunal sub-poenaed the defendant to make his 'Answer '. Both parties might submit evidence such as depositions and documents; the plaintiff could restate his case in a ' Replication ' which the defendant countered in his ' Rejoinder '. The court might also prepare a list of ' Interrogatories ' and remit them to local commissioners—justices of the peace or men of similar standing—to be administered to such reputable persons as might possess personal knowledge of the matter in dispute.

In the Ecclesden case only the Bill and Answer have survived, and so the sort of statements that might have been collected can only be conjectured. In general terms, however, we can be reasonably sure about the background. Neither depopulation—the eviction of peasants by landlords in order to convert arable land to sheepwalk—nor large scale enclosures constituted a major social problem in Sussex. Almost simultaneously the tenants of nearby Climping, with the sanction of the lord of the manor, were dividing one of the common fields amongst themselves, an interesting co-incidence because Palmer had actually exchanged this manor with the King for Ecclesden.[2] Enclosure by mutual consent appears to have been the rule in Sussex, whether among the tenants on their own, or between them and the lord of the manor, while Ecclesden seems to have the only case where attempted depopulation was alleged, let alone proved. Other disputes of course found their way into the Star Chamber, nearly all of them more or less aggravated by violence.[3] However, it must

[1] *Tudor Economic Documents*, 1, 27.

[2] Ibid.

[3] *V.C.H.*, loc. cit.

be remembered that society was nothing if not violent, that riot, intimidation and perjury were the special provinces of this particular court, and hence, logically, litigants made the most of any affray of which they could claim to have been the victims. In one case at least the plaintiff was actually the enclosing landlord. All in all we get the impression that in Sussex disputes arose more often than not after agreements had been concluded and that the quarrel between Palmer and the Angmering men was only untypical because it was pursued with exceptional bitterness.[1] In addition, open fields were mostly confined to the coastal plain and parts of the South Downs, and much of the county was pastoral in any case, while the relatively few deserted villages had never been of any great size and mostly occupied unsatisfactory sites.[2]

John Palmer, and for all we know, many other Angmering farmers, had apparently attempted a certain amount of re-arrangement of their land in a way that was by no means alien to that part of the country, but something had gone wrong and six men had tried to welsh. Palmer's Answer described the covenants of partition and exchange so confidently that it is difficult to doubt that they, or something very like them, had been made. There remains always the possibility of grasping landlord, abetted by some wily lawyer, gulling innocent yokels out of their rights,[3] but nowhere do the plaintiffs suggest any form of legal malpractice, thus tacitly conceding that the contracts could not be impugned. Unless their case was the authentic version, and the defence merely an attempt to obscure the issue, two interpretations are worth exploring: the first, relatively simple and not wholly improbable, is that Palmer had put pressure on them to acquiesce in his scheme but at the last moment they had decided to stand firm, or at least hold out for a better deal; the second, rather more complex, revolves round the person of Robert Benett.

The Bill focuses attention on Mrs. Benett and her heated exchange with the defendant. Could this have been, in part at least, designed to camouflage her husband's role in the drama? Unlike his associates Benett had complied with his part of the bargain and vacated the strips he had ceded to Palmer, concentrating meanwhile on (quite literally) ploughing his own furrow, that is to say staking out a claim to the piece of the waste known as The Breche, to which he had no right at all. Had he, one may well ask, egged on his friends to ' renegotiate ' the exchange as a cover for his own designs? If he was a plausible rogue it is by no means inconceivable that he had set out to persuade Bune and the rest of the tenants that they had allowed themselves to be enticed into a trap by their lord, and thus inflame them against him. This might not have been too difficult to do since it was common opinion that gentlemen made a practice of oppressing and cheating poor peasants, and there were probably plenty of rumours of shocking outrages being perpetrated up and down the country that were eagerly listened to and lost nothing in the telling. In repeatedly singling out Benett's personal activities Palmer seems to be telling us that he regarded the man as his real opponent. The fact that even after exposing Benett's alleged encroachment on the waste Palmer was prepared to pay him a couple of marks to soothe his feelings argues that the success of the whole transaction depended ultimately on squaring him. Why Benett should nonetheless have persisted—to the extent (it rather looks) of sending

[1] Julian Cornwall, " Agricultural improvement, 1560-1640 ", *Sussex Archaeological Collections* (hereafter abbreviated to S.A.C.) vol. 98 (1960), 127-32.

[2] H. L. Gray, *English Field Systems* (Cambridge, Mass., 1915), passim; M. W. Beresford, *The Lost Villages of England* (1954), passim.

[3] The hatred of peasants for lawyers at this time is reflected in the demands of the Norfolk rebels in 1549. F. W. Russell, *Kett's Rebellion in Norfolk* (1859), 48-50; B. M. Harl. MSS, 304, f. 75.

his wife to lead the defence of the cottages—defies explanation. He might have been contemplating yet more frauds, alternatively he might have harboured some personal grudge against Palmer. Yet again the fault could have been entirely on the side of the latter.

Any apportionment of blame must give due weight to sixteenth century values. Much the same lust for ' private commodity ' impelled the Conquistadors to smash the great Amerindian empires and English landowners to " pull down towns "; equally it could tempt even the humblest smallholder to plough up his neighbour's baulk or surreptitiously set his hedge round a few rods of the common pasture. Bishop Latimer's verdict on the peasant rebellions of 1549 was that " Both parties had covetousness for both parties had an inordinate desire to have that they had not ".[1] Nevertheless, it is not quite as simple as this. The historian's interpretation of the past cannot entirely avoid being determined by his own experience. Tawney's seminal exposition of Tudor society (1912)[2] must be viewed against the context of the dysfunction of early 20th century society as laid bare by investigators into poverty and deprivation such as Charles Booth and Seebohm Rowntree,[3] and which expressed itself in syndicalism and the genesis of the labour movement. For Tawney it was by no means unnatural to detect parallels with the plight of the peasantry in Tudor England, and characterise them as the hapless victims of an inequitable distribution of wealth which was made all the sharper by the greed of profit-hungry capitalist landlords. Yet in many respects the present decade exhibits parallels that are just as striking, and arguably more pertinent. The struggle waged by the peasants of old to preserve the traditional economy and social order in face of the remorseless advance of capitalist agriculture and estate management is matched by the stubborn defence of their jobs by workers in obsolescent industries regardless of the cost to the community at large. Moreover, not only do they strive to preserve what may not be truly defensible, but even their sympathisers cannot help noticing how some champions, or martyrs, of the working class cause have a tendency to look a trifle tarnished at times.[4] By the same token there is the distinct possibility that just one or two of the poor husbandmen who periodically craved the protection of the Tudor Council were not exactly the innocent victims of hard nosed exploitation.

The fundamental weakness of many of the older studies of the agrarian crisis of the sixteenth century is that they make too many *a priori* assumptions about the persons involved.

West Angmering was one of the larger villages of the district round Arundel, with 44 taxpayers returned for the subsidy levied in 1524. It was not a particularly prosperous place, having only seven men valued at more than £5. Nor was it exactly poverty stricken;

[1] C. H. Williams (ed.), *English Historical Documents, 1485-1558* (1967), v. 313, 354.

[2] R. H. Tawney, *The Agrarian Problem in the Sixteenth Century* (1912).

[3] C. Booth, *Life and Labour of the People of London* (1889); S. Rowntree, *Poverty: A Study of Town Life* (1900); S. and B. Webb, *English Poor Law History*, part two, *The New Poor law* (1924); *Report of the Royal Commission on the Poor Law* (1909).

[4] One of the dockers known as the ' Pentonville Five ', who were imprisoned for contempt of the Industrial Relations Court in 1972, was subsequently convicted at Colchester as a result of an incident there in connexion with the docks strike. Evidence was given of previous convictions for theft and handling stolen property. *Essex County Standard*, 15 September 1972. The ' Shrewsbury Two ', convicted as a result of a violent incident on a Shrewsbury construction site during the building workers' strike, 1973, included a member of the Communist Party and one of the National Front: Bernard Levin, *The Times*, 18 March 1975. One of these organisations, possibly both, advocates the use of force to achieve its objectives.

just over a third were taxed as wage earners (assessed at £1 apiece) which was about average. All but one of the characters in the subsequent drama were present. John Palmer was easily the top man, assessed on goods valued at £100, but since only one source of wealth was subject to tax he could very easily have had almost as much in yearly income from his lands. As it was, but for the presence of two prosperous yeomen he would have been worth as much as everyone else put together. Bune (here spelt Bunne) had £5 in goods and Hall £4, sufficient to place them in the top quartile of the inhabitants; Atteffeild (Afeld) at £3 and Benett at £2 both belonged to the upper half. John Yonge was also assessed at £2; he was almost certainly the younger of two men of that name, while Thomas Yonge was quite possibly the son of Robert who was worth £5. Altogether no mean family.[1] These few facts are sufficient to establish that the incident was in truth a confrontation between a rich landowner and some poor peasants: certainly they described themselves as the King's 'poor subjects', in strict conformity with contemporary usage.

So much for the original state of the community. The return for the subsidy collected in March 1546 is still headed by Palmer, now rated at £140 in land; Bunne too was there with £6 in goods, Thomas Yonge with £5 and John Yonge with no less than £20. Benett was returned in East Angmering with £8—four times as much as in former years—while Hall's assessment, also £8, had doubled. Atteffeild was gone; he could well have died or left the parish. But what is most significant is not so much the relationship of these assessments to the earlier ones —the standard could have become more rigorous, and anyway inflation was biting hard—but the mere fact that the men concerned were taxed at all, for the threshold on this occasion was £5, which almost certainly excluded a good two-thirds of the taxpayers of 1543-4. In short the complainants' standing in the community was no worse than formerly, if anything better. Four of these five were taxed again in 1547. Only Thomas Yonge survived by 1549, but by this date the standard of the subsidy was deteriorating, and further there is reason to suppose that the other men had been elderly, a fact which could go some way to accounting for their reluctance to quit their old homes.[2]

This could very easily have been the whole record of Robert Benett and his neighbours: the annals of the poor, if not precisely short, are usually sketchy, their destinies almost invariably obscure. Palmer, descended from an ancient and respected family in the Angmering district with branches in Kent and elsewhere, moved in more exalted circles. Sheriff of Surrey and Sussex in 1545, he also furnished fifteen foot soldiers for the army to sent Flanders in 1543, as well as the campaign of the following year.[3] When he died in 1563 his net income was estimated by the Court of Wards at almost £283. How much of this was the fruit of efficient exploitation of his estate it is difficult to estimate; much of the increment may have represented little more than keeping abreast of inflation. Ecclesden itself had certainly been improved: as against a net value of £59 4s. 4d. a year when belonging to Syon Abbey, it now yielded

[1] *The Lay Subsidy rolls for the county of Sussex*, 1524-25, ed. J. Cornwall, Sussex Record Society, vol. 56 (Lewes, 1957), p. 54.

[2] P.R.O., E. 179/190/209, 215, 243. See R. B. Smith, *Land and Politics in the England of Henry VIII* (Oxford, 1970), chap. 3, for the coverage of the subsidies of 1543-6; my own observation is that the number of assessments in 1544 should be rather greater than in 1524-5.

[3] T. W. Horsfield, *The History and Topography of the County of Sussex* (Lewes, 1835), ii, 140-2; *Letters & Papers*, xvii part i, 832, xvii part ii, 449 (79), xix part i, 275.

£66 13s. 4d. on top of which the farmer of the demesne paid a rent of £60. But then a good many people in Angmering seem to have been a lot better off in money terms than previously. Included in the survey of the manor were forty messuages or farms which represented holdings he had bought up at various times, among them doubtless the customary tenements acquired —or inherited—before he had purchased the manor itself.[1] This neither proves nor disproves that he ever evicted anyone. A hundred years later there were still Bunnes and Youngs in profusion; the ordinary course of migration is sufficient to account for the disappearance of the other families, the Palmers included.[2]

The final outcome of the Ecclesden affair might have remained unknown had not another of Palmer's tenants sued him independently in the Court of Requests, the conciliar tribunal which exercised a civil jurisdiction. Elizabeth Yonge accused him of having turned her late husband, John Yonge senior, off half a yardland which the nuns of Syon had granted to the pair of them, and also John their son, for their three lives successively as long ago as 1517. Driven to despair by the loss of home and livelihood at the age of eighty, the old farmer had taken his own life, as a result of which the Bishop's officers had confiscated his chattels, and his widow would have been left destitute had not the Crown granted her petition and restored them. Nor was this the end of her troubles, for Palmer had instructed his agent Thomas Nowell to seize one of her cows, presumably as a heriot following the death of her husband, which he duly did on 24 June 1545. After fruitlessly appealing for the restoration of both land and cow she finally took her quondam landlord to court.[3]

In substance Palmer's defence was the same as in the Star Chamber. The Yonges (he claimed) had agreed to exchange the holding, including an old house and barn that were " in great ruin and decay ", for a better house in East Angmering, standing not a furlong from their old home, together with a barn, a garden, and as many acres as they had formerly held, which he granted to them by copy of court roll for their two lives. (John junior had evidently parted company from his parents long since to branch out on his own.) Like the other copyholders they took over their new holding while (said Palmer) trying to hang on to the old one. The old man did not commit suicide; Elizabeth succeeded normally to the East Angmering holding. Palmer took possession of the old one, or part of it—the tale becomes confused—which he enclosed so as to keep animals from straying into his house, for the noise of Elizabeth's hogs, geese and ducks made his life a misery; other people, he asserted (thinking, no doubt, of the Benetts) incited her to harrass him in this fashion. He really believed he had done his best, offering to execute any legal assurances that would satisfy her, and to provide alternative accommodation. As for that cow, it was taken by a certain Leonard Holland from whom John Yonge had held another copyhold; Nowell had merely bought the animal from him for 14s.[4] Young's assessment in 1524 of £6 13s. 4d. strongly suggests that he farmed a good deal more land than the half yardland which formed part of Ecclesden manor.

[1] P.R.O., Wards 9/138, ff. 381-382V; *A Calendar of Post Mortem Inquisitions . . . 1-25 Elizabeth*, ed. L. F. Salzman, Sussex Record Society, vol. 3 (1904), 32-5; *Valor Ecclesiasticus*, i, 424.

[2] *West Sussex Protestation returns, 1641-2*, ed. R. G. Rice, Sussex Rec. Soc. vol. 5 (Lewes, 1905), 21-2; J. H. Cooper, " Religious Census of Sussex in 1676 ", *S.A.C.* vol. 45 (1902), 146.

[3] P.R.O., *Requests Proceedings*, REQ 2/10/68.

[4] Ibid.

Finally, on 28 November 1545, " Upon disclosing and trying of the title afore the King's Counsel . . ." the Court ruled that Palmer was entitled to hold the land in dispute without interference from Elizabeth; she, nonetheless, was to hold for the remainder of her life all the land the defendant had granted to her late husband by way of exchange—*rent free*. Moreover, the Court appointed two commissioners with power to make Palmer let additional land to her should they consider that the new holding was smaller than the one she was now finally obliged to vacate, and also to make sure that the house was repaired if necessary.[1] In other words each party got precisely what he or she was legally entitled to. Indeed the court went out of its way to secure fair play for the complainant. Although the Star Chamber decrees are no longer extant it is difficult to resist the conclusion that it too found that Palmer had demolished the case against him, unless the complainants took the hint and settled. Technically the copyholders lost, but in real terms they gained the sanction of the King's courts for the manorial custom which assured them their lands for life. Morally too they lost, though only to the extent of failing in their bid to virtually double their holdings at Palmer's expense. Yet he did not emerge entirely unscathed. Whatever the truth about the accusations of harrassment and assault, the judges would appear to have decided that his tactics were questionable, in particular that he had flouted the hallowed common law rule—which still prevails that the occupier has the *prima facie* right to peaceable possession and that only the courts have the authority, upon due proof, to order his ejection. The remission of Elizabeth Yonge's rent amounted virtually to an award of damages and a practical expression of the principle that not even the High Sheriff had the right to make life unpleasant for difficult tenants.

The action in the Court of Requests is the vital piece of evidence which clinches the argument, but which everyone except Leadam ignored. Miss Wragge, it can only be assumed, borrowed the judgment from him, without acknowledgment, and married it to the allegations in the Star Chamber to achieve a perverse interpretation. As for Tawney, he should have realised that Ecclesden was not a dispute about enclosure at all, except very marginally.

[1] Ibid. and REQ 1/7, f. 250.

THE EXCAVATION OF THE CHURCH OF ST. NICHOLAS, ANGMERING, 1974[1]

by Owen Bedwin, B.A., Ph.D.

Excavation of the former parish church of St. Nicholas, of East Angmering, revealed the foundations of a sizeable building, in which four construction phases were identified. The earliest of these was a small late Saxon church with an offset apsidal chancel. The church was enlarged c. 1200 by lengthening the nave and replacing the apsidal chancel with a rectangular one. Later came the addition of a western porch and a chapel on the south side. Finally, a tower was built, also on the south side, probably in the 15th century. The church was demolished sometime in the second half of the 16th century.

HISTORY OF THE SITE AND ITS SURROUNDINGS

The village of Angmering is situated on the flat coastal plain of West Sussex, about two miles from the sea and five miles south of the Downs (Fig. 1A). The subsoil is a Tertiary clay, with flints. Evidence of Roman occupation in the area is considerable; part of a Roman villa was excavated at Ham Manor,[2] about a mile to the west of the site, and another is recorded two miles away in Littlehampton. Angmering receives a brief mention, as "Angemare", in the Domesday Book, and there is clear indication of two manors at that time. There is also one pre-Conquest reference, in the will of King Alfred, dating from the end of the ninth century. In this document, the district of Angmering is bequeathed by Alfred to his nephew, Osferth. The present-day parish of Angmering was formerly divided into three parishes: namely West Angmering, East Angmering, and Bargham, each served by its own church. Amalgamation of the parishes took place as a result of agrarian changes during the Reformation, although consolidation was not completed until 1573, following an ordinance issued by Bishop Robert Sampson. The church of St. Margaret, originally serving West Angmering only, was built from 1180 to 1220. It survived the Reformation and is still in use to-day, serving the larger, amalgamated parish. The church at Bargham, the remains of which were excavated by Alec Barr-Hamilton,[3] had unmistakably Saxon origins. Three pre-Conquest building phases were found, but the fortunes of the church seem to have declined during the fourteenth century, and the living had become a sinecure before the time of the Reformation.

As for the church of St. Nicholas of East Angmering, virtually nothing is left above ground level to-day. There are several fifteenth and sixteenth century documentary references to the parish church of East Angmering, mainly concerning burials. In Garraway Rice's "Transcripts of Sussex Wills up to 1560",[4] there are three separate cases of burials within the church itself during the first half of the 16th century. These are as follows: (i) Sir Nycolas Gillam, clerk of East Angmering, August 12th, 1522. "My body to be buried within the church of

[1] Readers are referred to the previous paper by Julian Cornwall (*Ed.*).

[2] A. E. Wilson, "Angmering Roman villa", *Sussex Archaeological Collections* (hereafter abbreviated to *S.A.C.*), vol. 86 (1958), 1-21.

[3] A. Barr-Hamilton, "The excavation of Bargham Church site", *S.A.C.* vol. 99 (1961), 38-65.

[4] R. Garraway Rice, "*Transcripts of Sussex wills up to 1560*", Sussex Record Society (hereafter abbreviated to S.R.S.), vol. 12 (1935).

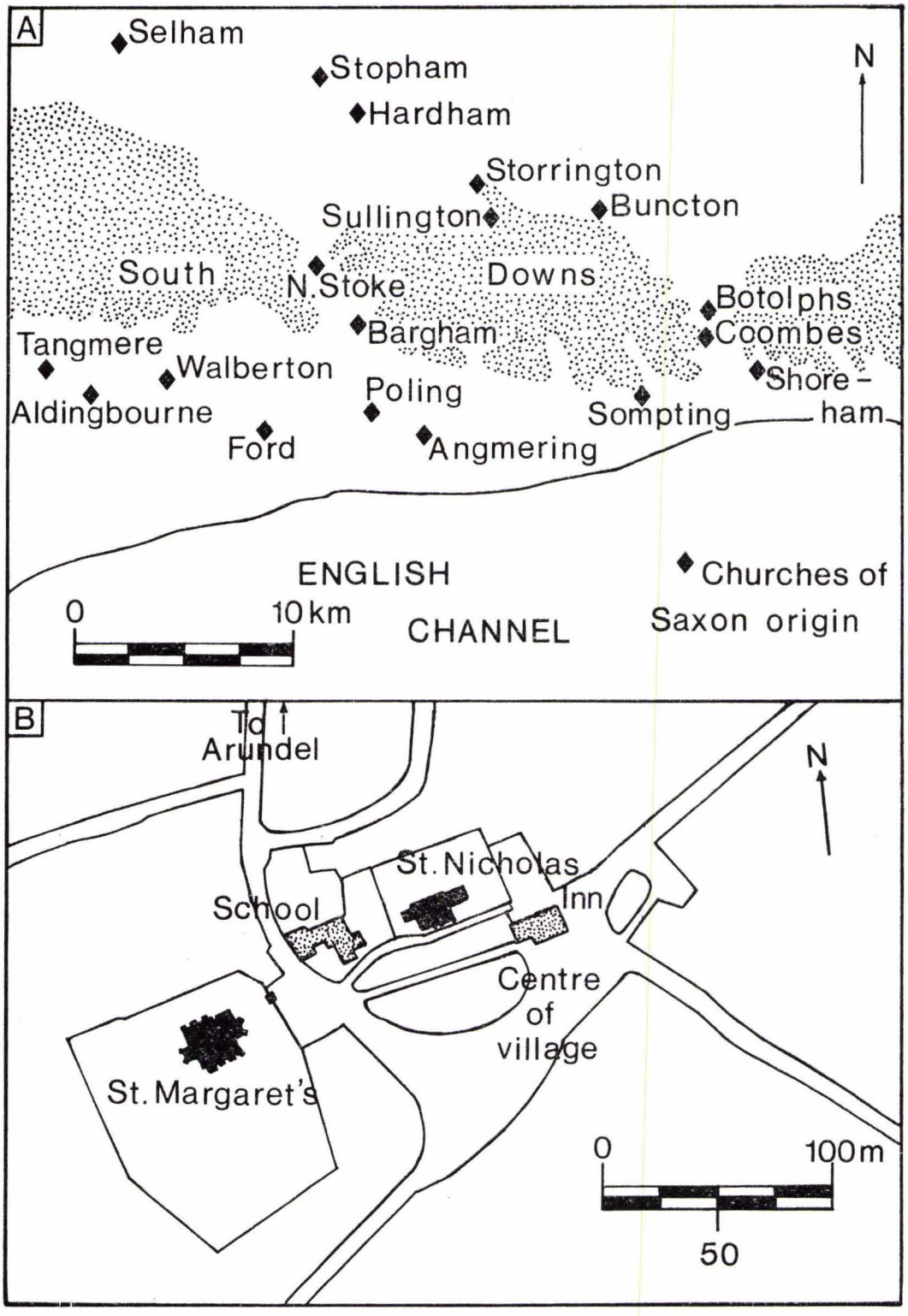


FIG. 1. (A) Location of Angmering and other Saxon churches in Sussex
(B) The village of Angmering

St. Nicholas of Estaungmering; and also I geve unto the sayd church for breaking of the flore 3 shillings and fourpence." The last part may be a reference to the cost incurred in digging a grave inside the church. Sir Nycolas also provided for his brother, Sir Rofe Gillam, to celebrate mass after one year for his soul, his father's soul, and all other Christian souls. (ii) John Janson, April 17th, 1539. " My body to be burryd within the church aforesaid." (iii) John Coby alias Smyth; September 20th, 1540. " My body to be buryed in the chirche of Estaungmeryng before my sete, paying therefore to the saide chirche 3 shillings and fourpence." There are also references to burials in the churchyard, the last of these being in 1559; donations towards the upkeep of the church and gifts to the clergy are also noted.

In 1564, the parish records relating to St. Margaret's begin, but no comparable document from St. Nicholas has come down to us. It is, of course, dangerous to argue from negative evidence such as the absence of a document, but certainly Richard Humphrey, who, according to the parish records, was vicar of St. Margaret's from 1562 to 1593, and also the last rector of St. Nicholas from 1580 to 1593, was buried in St. Margaret's churchyard.

The historical information concerning the final part of the church's existence is thus fairly straightforward; the reference to a burial in the churchyard of St. Nicholas as late as 1559 suggests that the church was still in use at that time, but it had presumably fallen into disuse by 1593, as no incumbent is recorded after that date. The local historian of Angmering, Francis Skeet, links the demise of St. Nicholas to Bishop Sampson's occupation of the See,[1] from 1536 to 1543, but this seems unlikely in view of the later references to burials (see above). Perhaps a more plausible date for the disuse of the church would be about 1573, when the present parish of Angmering was created by the amalgamation of three smaller ones.

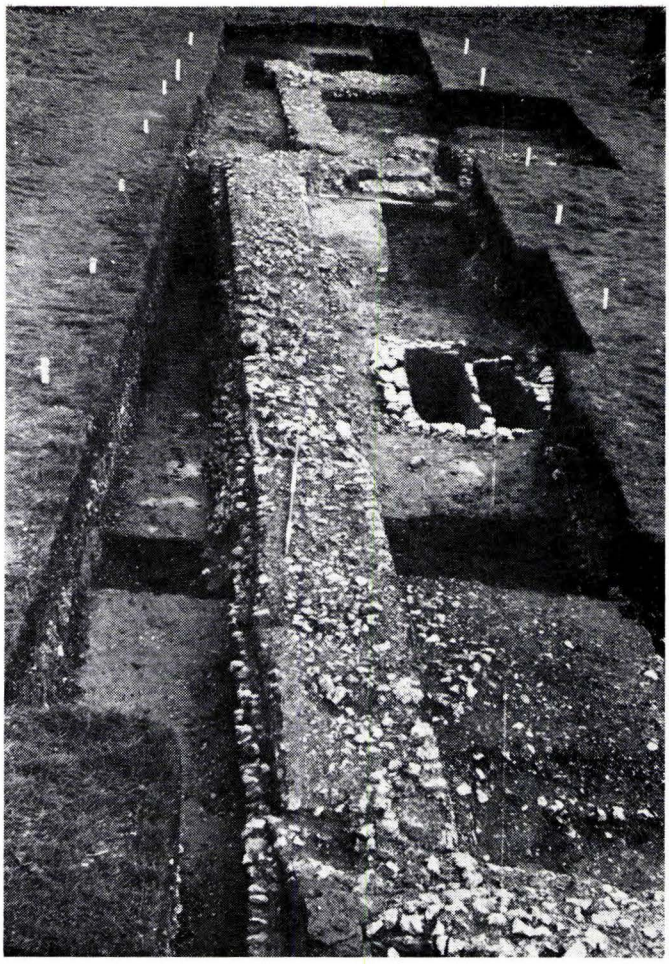
The archaeological evidence on this point is uncomfortably weak, depending as it does on one brass jetton found among the demolition debris at the west end of the church, and on the rather limited amount of pottery recovered. The jetton is dated to the late 16th century (see the coin report below), which accords with the historical data. The evidence presented by the pottery, however, is rather equivocal. Examples of the type which, in the absence of later sherds, dates the destruction of the church, are shown in Fig. 9, *d* to *i*. This pottery type has previously been assigned to a date c. 1500 (the Pottery Report contains a fuller discussion). This is clearly incompatible with the historical records, and it is the author's belief that the historical references are sufficiently reliable to warrant reconsideration of the dating of this type of pottery.

After the demolition of St. Nicholas, the land continued in the ownership of the Church, and was used largely as garden or allotment. The enclosure map of 1809 indicates merely that the site was not built on, and the Tithe map of 1838 describes it as " garden ", owned by the rector of St. Margaret's. Ordnance Survey maps, from 1897 onwards, mark the site, rather confusingly, as the ruins of St. Peter's Church. More recently, it has been the playing field of the Church of England School which abuts the site at the west end. Several years ago, the school buildings were sold to the West Sussex County Council, and the playing field was bought by a local builder. Planning applications to build houses on the site were brought to the attention of the Sussex Archaeological Field Unit, and a short trial excavation was begun in September, 1974. Such was the extent and enthusiasm of local help, however, that the excavation expanded far beyond its original limited objectives, and almost all the masonry was uncovered over a period of 5 weeks.

[1] F. Skeet, *A History of the Parish of Angmering* (1921), 34.

Plate I.

General view, looking east, along the north wall of the nave. The double tomb can be seen to the right of the wall. In the distance is the chancel. Scale 2 metres. (All site photographs by Sally White)



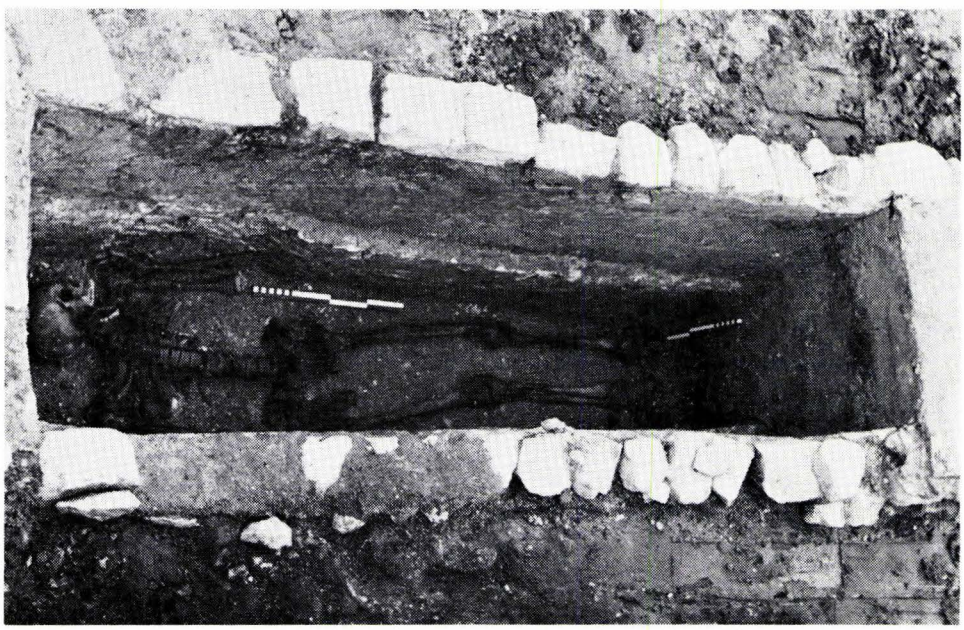


Plate II. Altar tomb with skeleton. The pronounced internal step in the plaster lining is clearly visible, and is seen to be chipped away to accommodate the arms. Scales in centimetres and decimetres

Plate III. Butt-joints between nave and chapel (short arrow), and between nave and western porch (long arrow). Scales in centimetres and decimetres

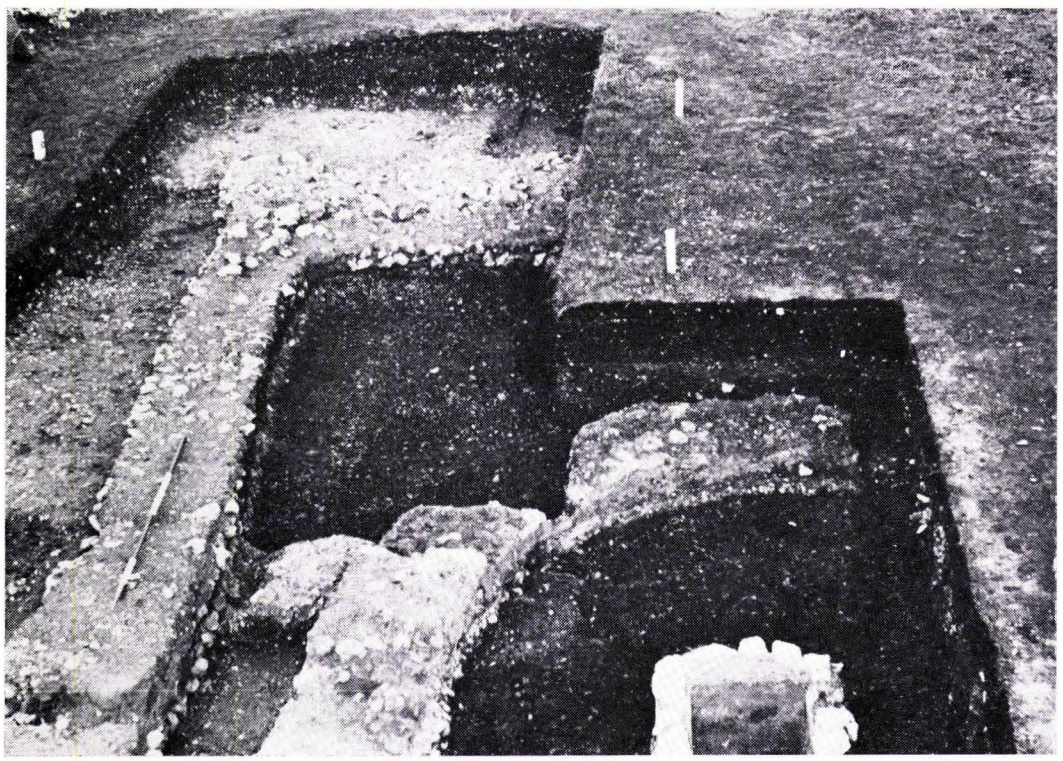


Plate IV. The apsidal chancel (cut in two places by later graves), within the later rectangular chancel. Part of the altar tomb can be seen in the bottom right-hand corner. Scale 2 metres

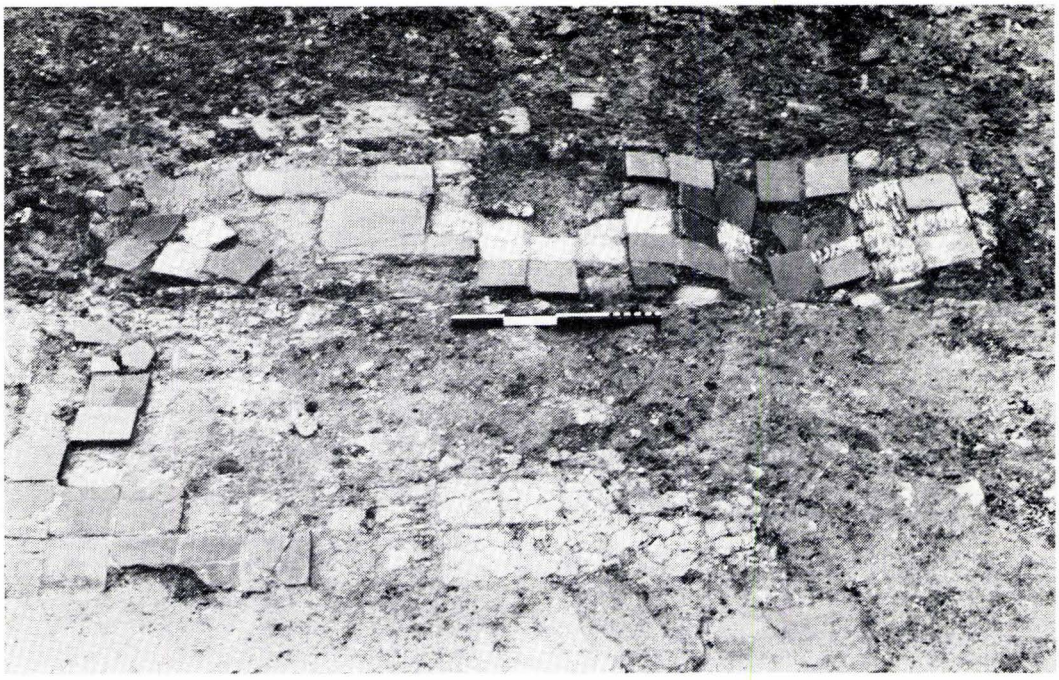


Plate V. Looking south over the remains of the tiled floor (foreground), between nave and tower; square imprints are left in the mortar where tiles have been removed. The tiled feature *r* (FIG. 3) lies behind the scale; the oyster shell cross is clearly visible at the west end. Scale in centimetres and decimetres

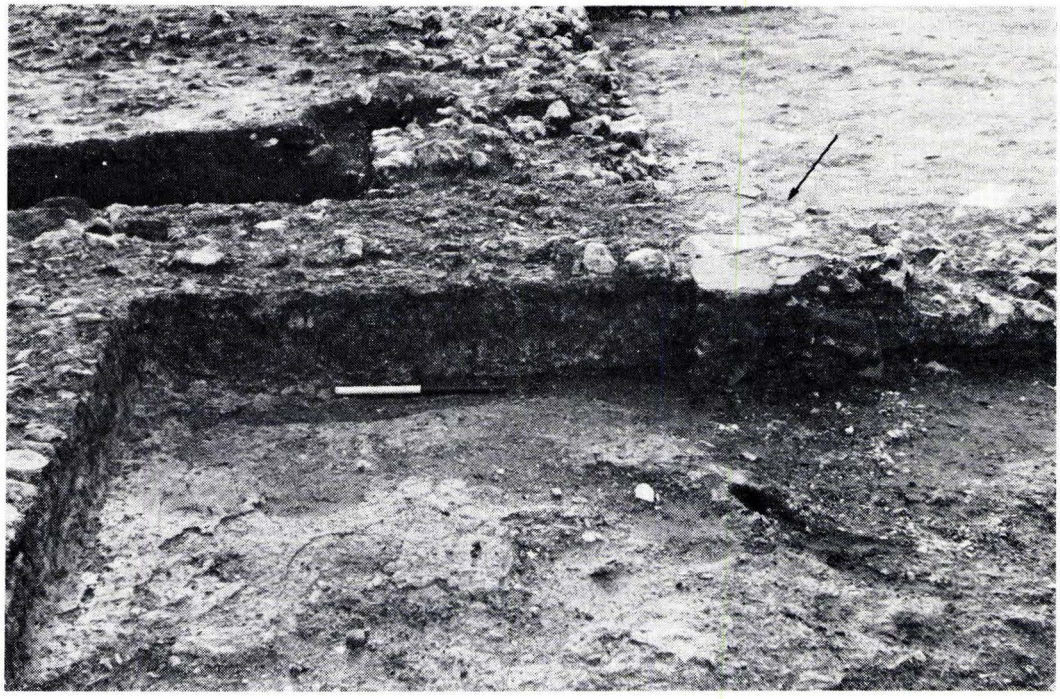


Plate VI. One of the few areas where a floor survived, inside the western end of the nave. Plinth *b* (FIG. 3) is arrowed. Scale 50 centimetres

Plate VII. The papal bull
(a) The inscription reads " BONIFACIUS PP VIIII "

(b) The inscription " SPASPE " is short for " Sanctus Paulus, Sanctus Petrus "

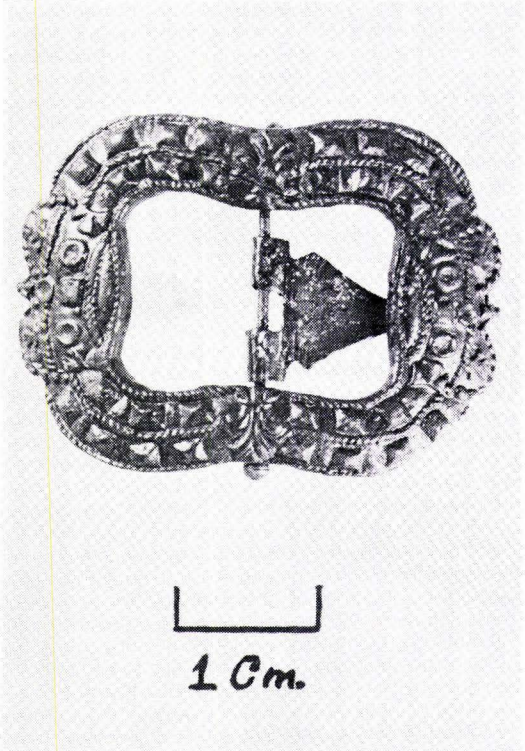


Plate VIII. Bronze military buckle, dated 1730-1740

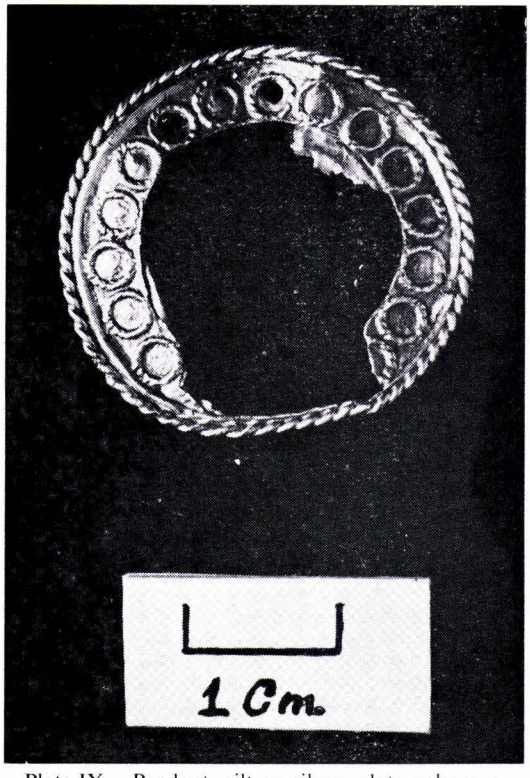


Plate IX. Pendant, gilt on silver; date unknown

THE EXCAVATION

The site (N.G.R. TQ 068044), consisted of a level, thickly grassed field, 32m. by 47m., near the centre of Angmering village, and only 130 metres east of St. Margaret's church (Fig. 1B). The southern boundary of the field was effectively formed by a sharp slope of 2 or 3m. down into the backyards of a row of houses. At the base of this slope was a small twitten, which local tradition connects with access to the church. To the north was a garden wall, to the east the car-park of a public house, and to the west the school buildings already mentioned. The old name for this field is the " lychening field ", which is the Anglo-Saxon word for burial ground.[1] At the eastern end of the field was a shallow depression, approximately 10m. square, which proved to be a recent feature. In the south-west corner of the field, however, lay two large pieces of flint masonry. The bigger of the two, consisting of part of a corner, was 1.2m. high, the smaller about 50cm. Both were tumble, having fallen several metres from their original position as part of the western end of the church, but they were the only guide to the location of the church.

The excavation technique adopted was extremely simple. Starting at the base of the two pieces of flint masonry, turf was removed, and the rich, black topsoil cleared away. Except where modern pits had been dug, masonry and loose mortary demolition debris were thus directly revealed between 20 and 40cm. below the surface. The walls of the church had been robbed down to, or just above, foundation level throughout. This observation, coupled with the fact that not a single piece of masonry with flints still mortared together was found in the demolition debris, strongly suggests rapid, systematic dismantling rather than slow, haphazard decay. On the inside faces of the nave and chapel walls up to 15cm. of brittle white plaster remained above the old floor level. Possibly demolition debris choked these areas sufficiently to discourage further breaking up of the walls. Within the church and immediately outside it, the debris was cleared down to floor level and to the former ground level, respectively. Selected areas were then investigated further; inside the church, down through earlier floor levels, if present, to the subsoil, clay with flints, and outside the church, down to the base of the footings. Floor levels were often hard to recognise. In the final part of the church's existence, at least, the floors seem largely to have consisted of glazed tiles bedded on a thin skim of white mortar, which itself rested on brown clay, or clay with flints. Presumably, demolition of the church included ripping up the tiles, smashing the mortar beneath. In most cases, therefore, all that could be traced was an irregular layer of pulverised mortar not easily distinguishable from mortary demolition material immediately above. In a few small areas, the mortar had fortunately survived intact, and in two places glazed floor tiles were found still mortared in position, namely around the altar tomb, and in the doorway connecting the nave and the tower (see below).

THE BUILDING PHASES

Four main phases have been recognised, primarily on the basis of 4 different mortar types. (N.B.—The words " stage " and " phase " have been used with slightly different meanings in this report.) A building stage represents the extent to which the church has developed at a given time, and may thus be the result of many separate building works, or phases. Stage (i)

[1] F. Skeet, op. cit., p. 33.

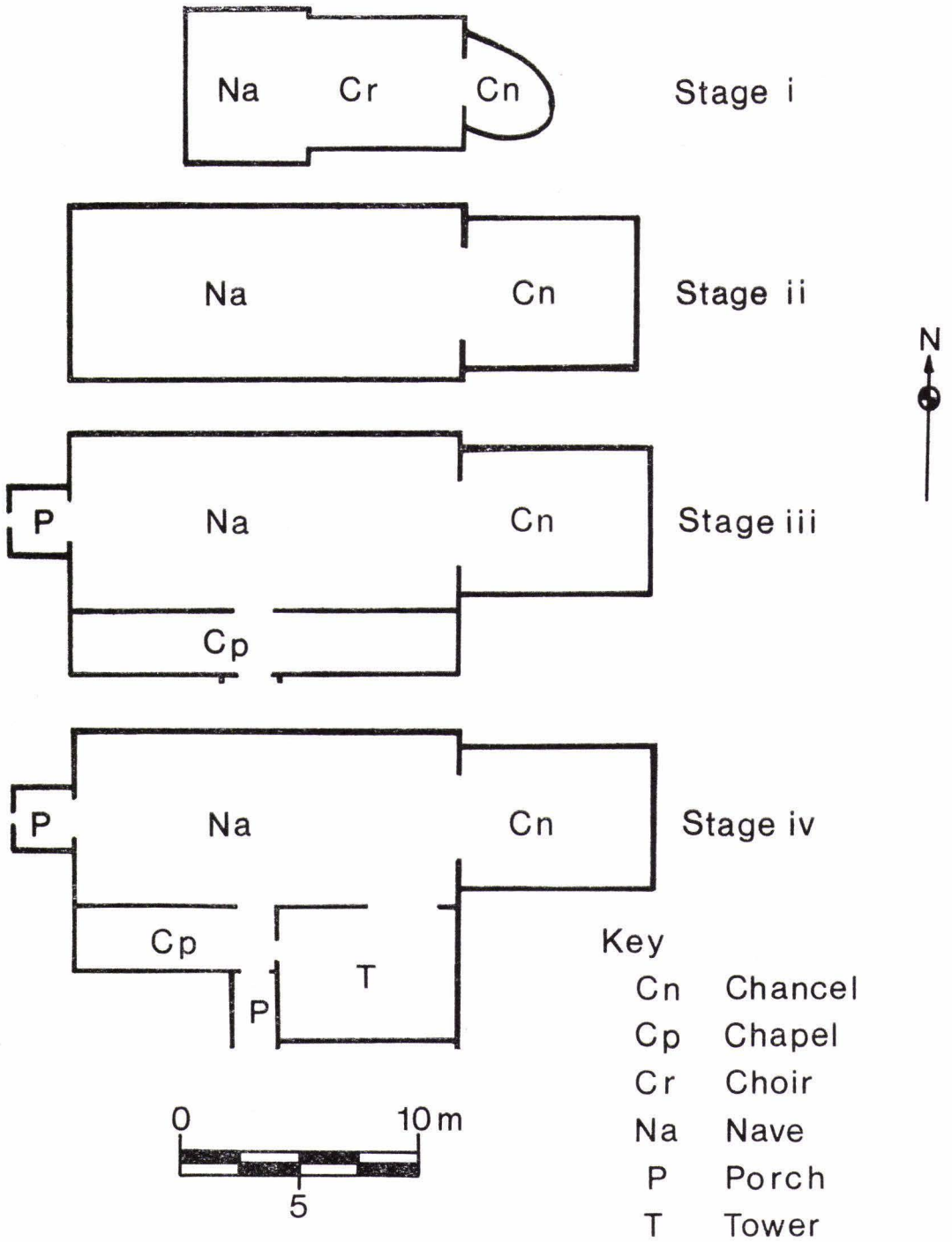
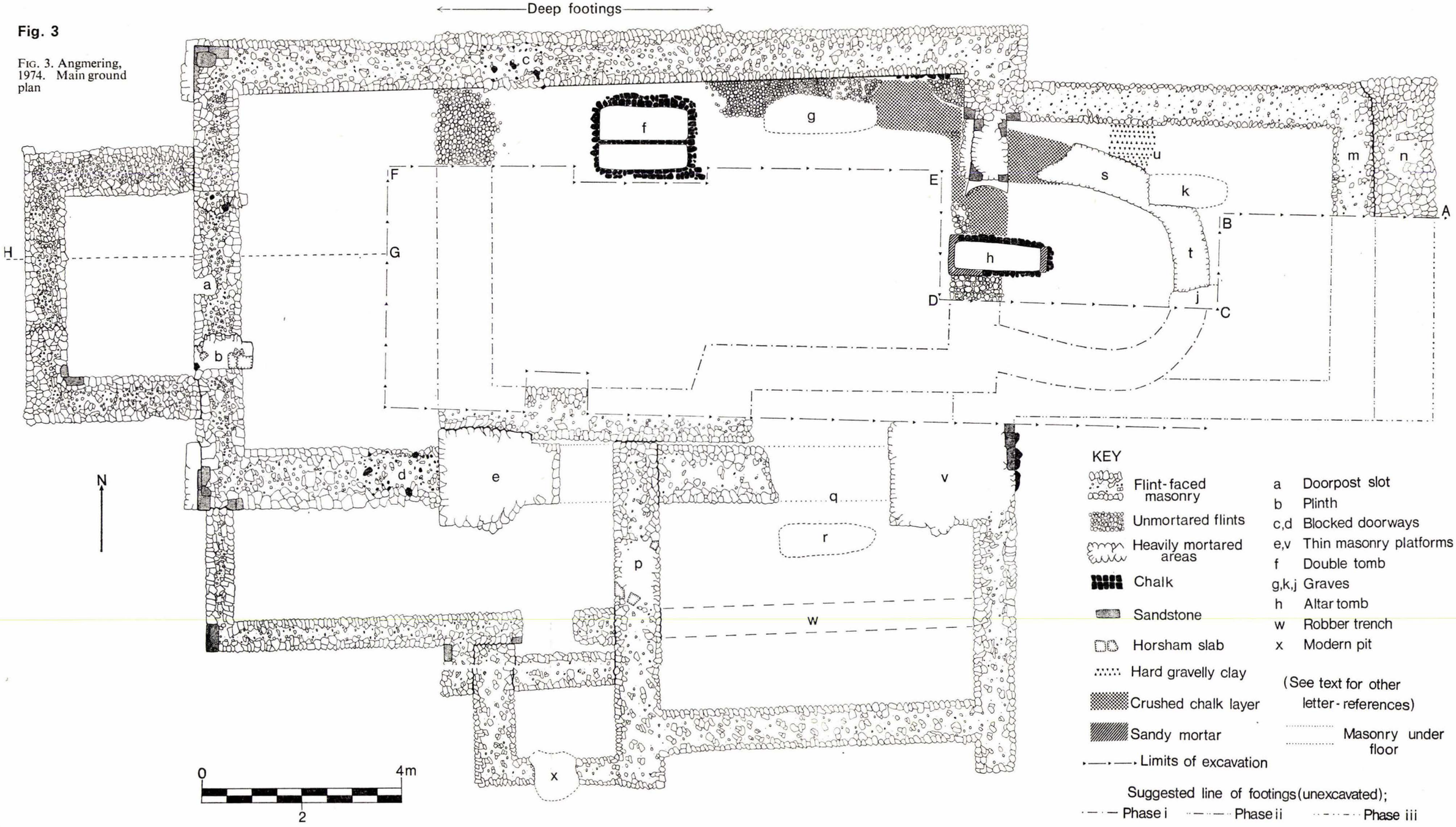


FIG. 2. Angmering, 1974. Ground plans showing the development of the church in outline

Fig. 3

FIG. 3. Angmering, 1974. Main ground plan



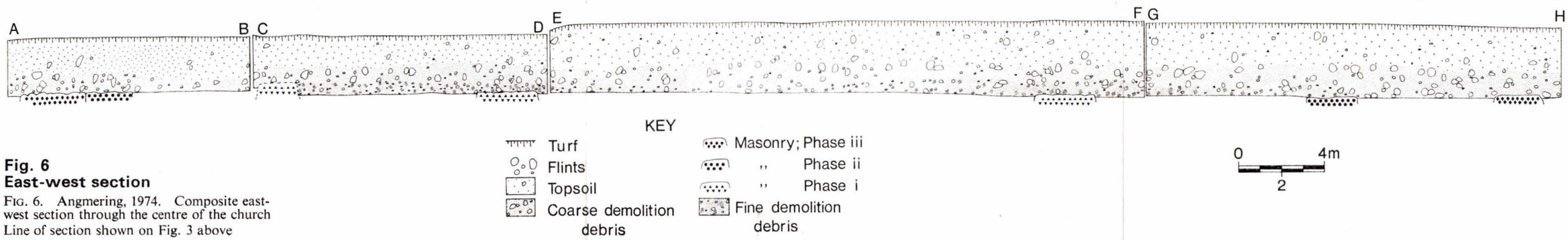


Fig. 6
East-west section

FIG. 6. Angmering, 1974. Composite east-west section through the centre of the church Line of section shown on Fig. 3 above

(Fig. 2), is therefore synonymous with phase (i), whereas stage (ii) is the result of the additions and alterations which constitute phase (ii), to the original phase (i). As excavation proceeded, it became clear that the footings of every wall had been built flush with the sides of the foundation trench. There was consequently no need for backfilling, and so very few dateable objects were found in association with the masonry. In fact nothing was found in a context which would definitely date the earliest building. The last three phases proved less of a problem in this respect, but even so, the dating rests upon extremely scanty evidence.

An unsuccessful attempt was made to sub-divide the four main phases by means of the analysis of mortars from various parts of the church. The technique used, differential thermal analysis, depends essentially on the measurement of physical changes in the mortar as it is heated to about 1000°C. in air. Mr. H. L. Sinclair of the Civil Engineering Department, Brighton Polytechnic kindly carried out these tests, but unfortunately the mortars showed such similar responses to heat, that it was impossible to distinguish between them.

The way in which the church developed is shown in the four outline ground plans in Fig. 2, and a more detailed plan is shown in Fig. 3. Possible reconstructions of the earliest church, and of the church in its final state are shown in Figs. 4 and 5, respectively. A composite section through the demolition debris is shown in Fig. 6.

The masonry of the church foundations was faced with unknapped flint throughout, with the central packing of the walls consisting of a structureless mass of small flints and mortar; the only exception to this was the foundation of phase (i), which was made up of tightly packed unmortared flints. In two places, masonry above the level of the old ground surface survived. The first of these was the apsidal chancel of phase (i), in the areas marked *s* and *t* in Fig. 3. Here, the wall was faced with flints held together by such generous amounts of mortar that the internal structure appeared virtually homogenous. The second place was the north wall of the nave, where the masonry was very like that of the foundations, i.e. faced with flints, except that on the outer surface an attempt had been made to apply a thick mortar coating over the flints to give a smooth appearance.

The mortars were of highly variable quality; phase (i) mortar was particularly tenacious, whereas the mortar of phase (ii) was exceedingly poor. Local green sandstone was used on many of the internal and external corners above foundation level; usually, only one course remained. This sandstone was also used for window mouldings; one very finely worked mullion was uncovered in the thick demolition debris within the chancel. Also from this part of the church several lead window cames were recovered. Large pieces of Horsham slab roofing were found.[1] In some of which was a rough circular perforation, used when pegging them in position. Horsham slab was also used as a flooring material, though only to a very limited extent. Two types of ridge tiles were identified; neither occurred in any great quantity. One type, a green glazed tile with a high peak dates from the fourteenth century, and the other, a plain unglazed type with a stubbier peak, belongs to the fifteenth century.[2] A few pieces of worked chalk were also found, particularly during clearance of the chapel. There was evidence, too, of re-use of Roman materials; several Roman tiles appeared in the foundations of phase (i). These may well have come from the nearby Roman villa at Ham Manor.

[1] Very similar to those described by E. W. Holden in "Slate roofing in medieval Sussex", *S.A.C.* vol. 103 (1965), 67-78.

[2] This information was kindly provided by Mr. C. Ainsworth.

Phase (i); late Saxon

The earliest church was a comparatively small one, 15.5m. long and 8m. across at the widest (Fig. 2). It had an offset apsidal chancel, a choir, and a short nave. The foundations were of unmortared flints, including a sleeper footing across the chancel arch. The mortar in the small areas of masonry surviving above foundation level in the chancel (marked *s* and *t* in Fig. 3), was bright yellow and extremely hard; it was in fact the best mortar on the site. In the absence of pottery from a context which would definitely date this phase, it has been assigned to the late Saxon period on the basis of the apsidal chancel and the excellent mortar.[1] In the chancel, the change from footings to masonry above the former ground surface was marked by a layer of crushed chalk, no more than a few centimetres thick. The areas where this layer has remained intact are shown in Fig. 3, and where it has been lost, the flint foundations are revealed beneath.

The foundations of the entire north wall of the final nave, i.e. the nave of stage (iv), were exposed, and its composite structure could be clearly seen. The Saxon foundations were deeper and more substantial than those of phase (ii); thus the centre section of the wall had a massive foundation, about 90cm. deep, containing several Roman tiles. The east and west ends of the wall, by contrast, had identical shallower raft foundations, about 55cm. deep (Fig. 3).

There were no indications of doorways in what remained of the Saxon masonry; the reconstruction (Fig. 4), shows a conjectural but nevertheless plausible south entrance.

There was very slight evidence for the existence of an even earlier Saxon phase. Excavation of the north wall of the later, rectangular chancel brought to light its shallow, flimsy foundations. However, the western end of these foundations had beneath them a further foundation of unmortared flint, about 60cm. wide. Moreover, at right angles to this unmortared foundation, ran a bar of very hard, gravelly clay, also 60cm. wide (*u* in Fig. 3). This layer was distinguishable from the surrounding clay-with-flints by its higher flint content, and by its greater resistance to the trowel. One interpretation would be that this layer represents the existence of a Saxon church with a very short rectangular chancel. On the other hand, nothing corresponding to this layer was visible in the section (Fig. 6). The footings of the apsidal chancel clearly cut this feature and thus post-date it.

Phase (ii); c. 1200

The nave was lengthened and slightly broadened; a larger, rectangular chancel replaced the apsidal one (Fig. 2 and Plate 4). The powdery yellow mortar of this phase was extremely friable, and the comparatively narrow side walls of the chancel, with their shallow footings, must have been rather feeble. Three sherds of late twelfth century/early thirteenth century pottery found at the base of the raft foundations of the north wall of the nave suggest a date for this phase; two of these sherds are shown in Fig. 9 (*a* and *b*).

The walls of the Saxon choir and chancel, and the south wall of the Saxon nave must of necessity have been demolished at this time, but it seems that the north wall of the Saxon nave, which could have been retained, was also demolished down to footing level. In the north wall of the final nave, up to 10cm. of masonry was left above the old ground level. The structure of this masonry appeared uniform along its entire length, in contrast to the composite footings below (these footings have already been discussed in the section dealing with phase (i), above). Thus it is clear that the north wall of the final nave above ground level was a constructional unit, unlike the footings beneath.

[1] E. A. Fisher, *The Saxon Churches of Sussex* (1970), 25.

The blocked-up doorways (*c* and *d* in Fig. 3) probably represent former north and south entrances into the simple church of stage (ii). The material used to block both doorways, loose mortary rubble with pieces of chalk, was identical. This suggests that they were sealed at the same time, probably when phase (iii) was added. Instead of keeping doorway *d*, it seems likely that the entrance from chapel into nave was moved a few metres to the east (Figs. 2 and 3).

Feature *a* (Fig. 3) was a roughly circular hole about 15cm. deep, packed, not with demolition debris, but with a quite distinct fill of small unmortared flints. Possibly this represents the base of a massive central doorpost at what would have been the western end of the stage (ii) church. With the addition of the western porch of phase (iii), the need for a door, and hence for a doorpost, would have been removed, and perhaps the filling of this hole dates from that time. The former entrance would then have simply become an archway connecting nave and porch. Nothing was found in the fill to date it, however. Symmetrically placed to the north and south of feature *a* were the remains of two flat, semi-circular plinths, presumably providing the bases of an arch. The southern of these two plinths (*b* in Fig. 3), was quite well preserved, with pieces of Horsham slab still mortared in place (Plate 6).

Phase (iii); 14th century

Three additions have been grouped together in this phase, namely the chapel, the porch at the western end, and the outer section of the east wall of the chancel (Fig. 3). The sole reason for assigning these architecturally separate elements to the same phase is that they were each constructed with the same, very distinctive mortar. This mortar was greyish-white in colour, intermediate in strength between mortars of phase (i) and (ii), and contained some coarse beach sand, The paucity of pottery recovered is largely responsible for the absence of further sub-division within the phase. One large sherd (Fig. 9, *c*), found lying against the foundations of the porch, is dated to the fourteenth century. The few sherds found in association with the footings of the chapel support this date; nothing was found to date the outer section of the east wall of the chancel.

(A) The porch at the western end

The foundations of this structure were rather unremarkable, measuring, externally, 5.5m. by 4.5m. They were also insubstantial, and are thus far more likely to represent a porch than a tower. A shallow, irregular depression of up to 10cm. depth, set symmetrically in the centre of the western wall of this addition, was the only indication of an entrance. The joints between porch and nave were clearly butt-joints (Plate 3). No trace of a tiled or even mortared floor was detected within the porch; demolition debris rested directly on a flat clay-with-flints surface.

(B) The chapel

When built, the chapel ran the whole length of the nave (Fig. 2), onto the south wall of which it was clearly butted (Plate 3). The foundations on the south side were relatively deep (about 1m. below the former surface), and massive, almost as deep as those of the tower of phase (iv). Perhaps the substantial nature of these foundations reflected the proximity of the south wall of the chapel to the sharply sloping southern boundary of the site. Access to the stage (iii) church was either from the south side into the chapel and thence into the nave (Fig. 2), or, alternatively, from the western end, via the porch.

Between the entrance into the chapel and the doorway between chapel and nave, an area of white mortar floor had survived. In several places this had slumped considerably due to unmarked burials beneath. It is possible that these burials were originally outside the church

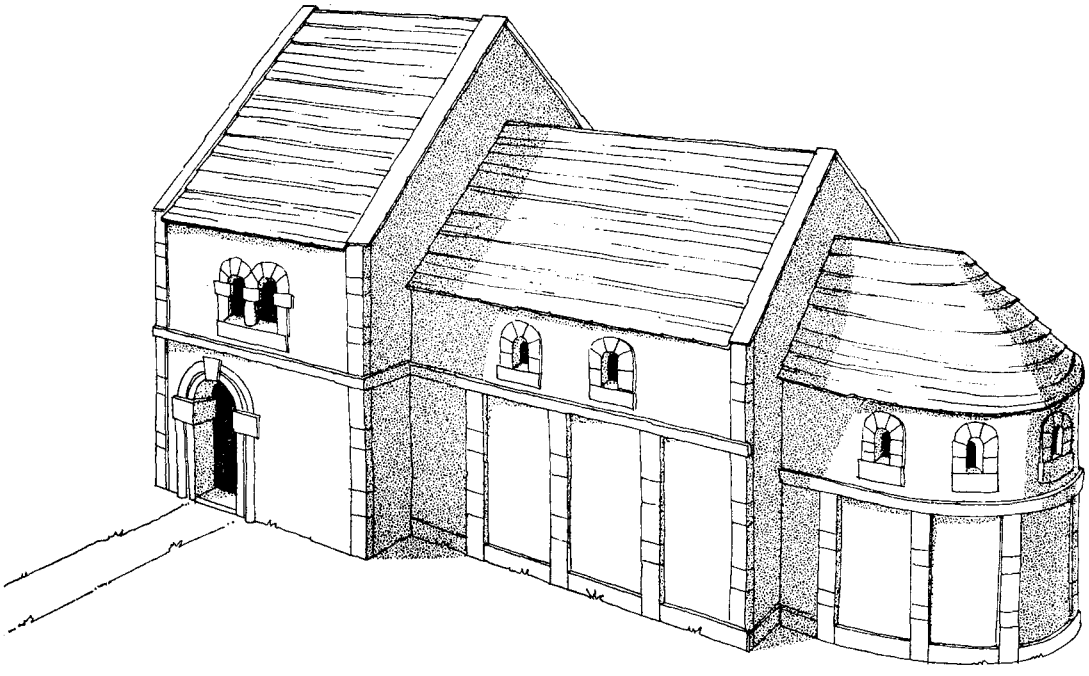


FIG. 4. Angmering, 1974. Reconstruction of the earliest church

on the south side before the chapel was built. There was no indication that this floor had once been tiled, i.e. no square impressions were visible in the mortar as they were in other areas, and yet the demolition debris from the chapel yielded large numbers of fragments of glazed floor tile, both plain and patterned. There was no evidence that this addition ever constituted an aisle.

The chapel may have had a shallow-fronted porch, facing south. One very short footing, integral with the south wall of the chapel and perpendicular to it, was found (Figs. 2 and 3). Since no other matching short footing was located, it may have been incorporated into the later tower. If this was the case, then the two footings, running north-south, could have been the foundations of a very small porch.

(C) The outer section of the east wall of the chancel

The foundations of the end wall of the chancel were about 2m. thick and, though a single functional entity, were clearly made up of two distinct parts (Fig. 3, *m* and *n*). The inner 80cm. was masonry typical of phase (ii), with soft, crumbly yellow mortar. The outer 1.20m. was quite different, having coarse, greyish-white mortar of the type already described. This outer section was extremely well built and looked as if it belonged chronologically with the porch and chapel.

Several interpretations of its presence are possible. The flimsy appearance of the chancel foundations of phase (ii) has already been commented on, and strengthening of the end wall would have been a logical move. The problem is thus to decide whether the later wall replaced the earlier one, or merely bolstered it. The latter explanation is slightly favoured by the fact that both foundations were robbed out to the same level, suggesting demolition in a single step. Given the extent of robbing out, it was impossible to decide whether the later wall came up to

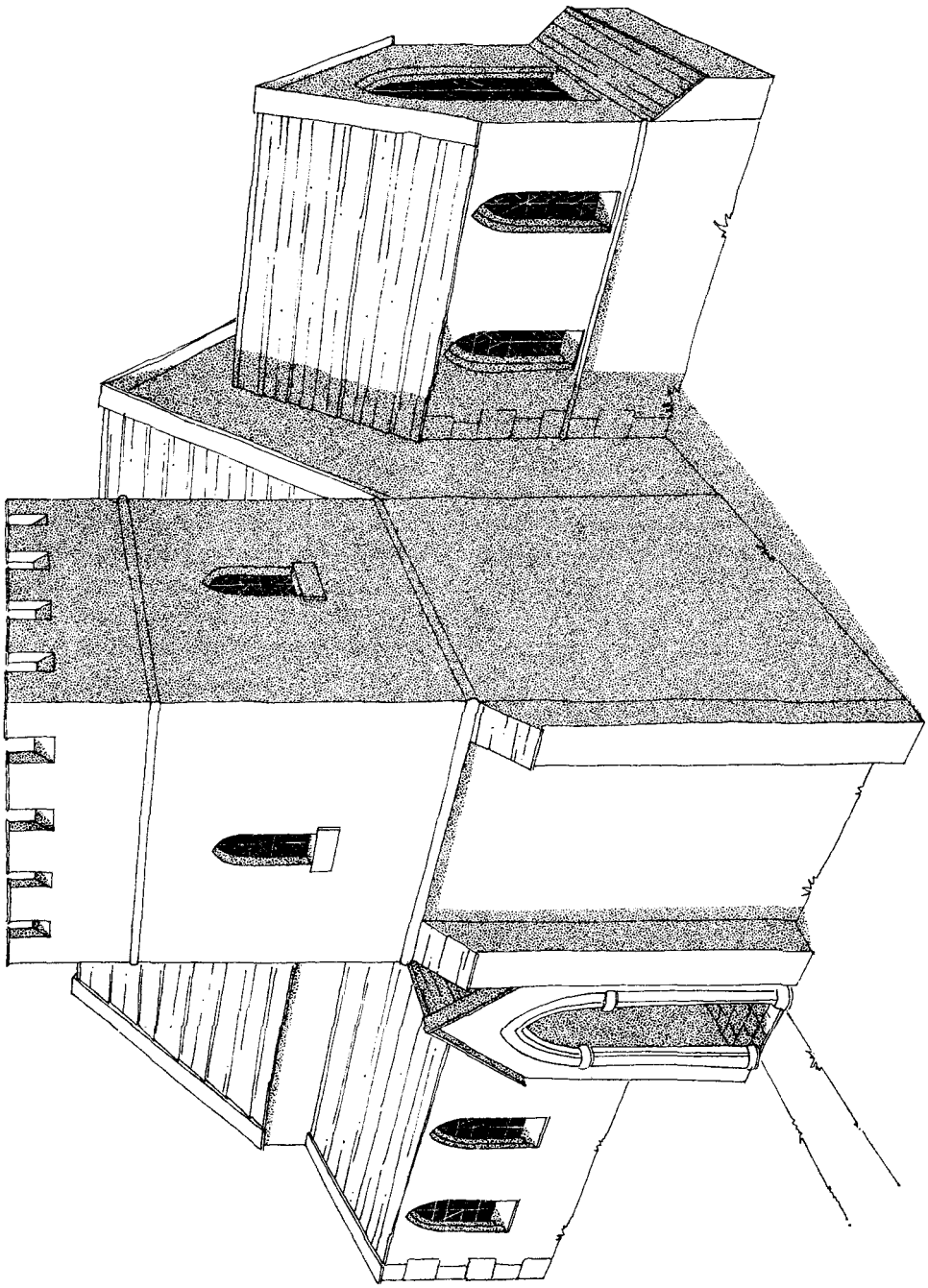


FIG. 5. Angmering, 1974. Reconstruction of the church in its final state

roof height, or only part way up, as the reconstruction (Fig. 5), shows. John Kirby, who drew the reconstructions, has drawn the author's attention to an illustration in M. A. Lower's book, " The Churches of Sussex " (1852), showing a buttress similar to that in Fig. 5, on the south side of Worth church.

Phase (iv); late 14th or 15th century

The final phase consists of the addition of a tower on the south side, with a porch to its west. Reference to Fig. 2 shows that part of the chapel had first to be removed, and this inevitably left its trace as a robber trench running right across the interior of the tower below floor level (marked *w* in Fig. 3). The mortar of this phase was fairly strong with a creamy colour. The tower foundations were by far the deepest on the site, about 1.35m. below the old ground level. Their massiveness, plus the shape and area enclosed, are the evidence on which this final addition is classified as a tower.

The west wall of the tower was not butted onto the south wall of the nave, but cut right through it (Fig. 3). The dating of the construction of the tower depends upon the finding of a single potsherd found in a sealed context. The tower was the only part of the church to possess integral buttresses; both buttresses were small with deep foundations, but the western one was very shallow where it ran over the sleeper footing of the flat-fronted porch of phase (iii) (Fig. 3). From beneath the shallow part of this buttress came one small sherd of green-glazed pottery, dated to the fourteenth century. The deposition of this sherd either pre-dates, or, at the latest, is coincident with, the construction of the tower. Hence phase (iv) has been assigned to the late fourteenth or fifteenth century; the mortar of this phase is certainly quite different from that of phase (iii), which is more firmly dated to the fourteenth century.

There were two entrances into the tower, one from the chapel, the other from the nave. No sign was found of an entrance directly into the tower from the outside. The doorway between chapel and tower was floored with trimmed pieces of Horsham slab (marked *p* in Fig. 3). In the doorway connecting tower and nave, 45 glazed floor tiles were found still mortared in position, and there was residual evidence of many more in the square imprints left in the mortar around the surviving tiles (Plate 5). Those tiles laid in the entrance itself (the area marked *q* in Fig. 3), were of a plain, dark green glaze, laid in regular rows (left foreground of Plate 5). It seems necessary to infer the former existence of a step up into the nave. The extreme north edge of the last row of tiles was quite unworn, suggesting that this area of the doorway was not stepped on. The simplest explanation would be the presence of a step up here. Large pieces of Horsham slab provided the flooring at each side of the doorway, the tiles being in the centre. To the immediate south of these regularly laid green tiles was an interesting feature, consisting of 33 tiles (whole or large fragments) out of the 45 mentioned above. The overall shape was roughly rectangular, with rounded corners, and the east end was slightly narrower than the west end (Plate 5, marked *r* in Fig. 3). The dimensions were 180cm. long by 65cm. at the widest, and although many tiles had been lost, those remaining had clearly been laid in an irregular pattern. Furthermore, several different types of tile had been used, plus one large piece of Horsham slab. Two of the tiles in fact showed signs of re-use, i.e. the glazed surface lay face downwards, and the unglazed " upper " surface retained traces of old mortar. In the west end of this feature was set a cross, constructed of rows of carefully trimmed oyster shells, on edge, cemented in position; part of this cross had suffered distortion due to local subsidence (Plate 5). The size and shape, the east-west orientation, the subsidence, and the

oyster shell cross all suggested the presence of a grave, the top of which, for some reason had been hurriedly tiled over, probably when the tower was built. However, when the tiles and oyster shells were painstaking removed, there was no visible sign of a grave, either when the ground was dry, or after rain.

The doorway connecting tower and nave came into being at the same time as the tower by simply knocking out part of the nave wall. As the ground plan in Fig. 3 shows, this wall was not cut through squarely, and there were several centimetres of loose demolition debris beneath the tiled floor *q*, and overlying the unaffected foundations of the nave wall. This, and the nearby tiled feature, described above, strongly imply hurried and slap-dash construction.

A tower on the south side of a church is far from common, though other examples are known in Sussex, e.g. at Climping, Donnington, Icklesham, and Stoughton.[1] In the case of St. Nicholas, the fact that access to the church was up a slope from the south may have been a factor. The presence of a tower at the top of the slope would have ensured an imposing and impressive appearance.

In addition to the tower, footings suggesting a long, narrow porch belonging to this phase were uncovered (Figs. 2 and 3). At the extreme south of the church, to the immediate west of the tower, masonry running east-west was cut by a modern trench, marked *x* in Fig. 3. This masonry, clearly integral with the western buttress of the tower, was almost certainly a sleeper footing across the mouth of this porch. The western wall of the tower would have effectively provided the eastern side of the entrance.

THE BURIALS

Within the church, two elaborately constructed tombs of similar design were excavated. They were built of shaped chalk blocks, of dimensions up to 40 x 15 x 15cm., and lined with hard white plaster. One, an altar tomb (Plate 2), set in the centre of the chancel, contained the skeleton of a single adult male. The other was a double tomb beneath the floor of the nave, just inside its north wall. The position of both these tombs is shown on the ground plan.

1 The altar tomb

The internal dimensions were 160cm. long by 60cm. wide, and 90cm. deep. The tomb cut right through the flint sleeper foundations of the earliest church. The inside was not quite rectangular, tapering slightly from west to east, with rounded corners. The inner faces of the tomb also sloped inwards very gradually, from top to bottom, and there was a pronounced internal step of about 3cm. in the plaster, all the way round the tomb, about 30cm. from the bottom. Resting on this step had been a slab of coarse gravelly mortar, about 5cm. thick, which had clearly sealed in the body originally. This slab had broken into several pieces, and collapsed inwards onto the skeleton. No nails were found in the sandy fill surrounding the skeleton, implying the absence of a coffin. Across the top of the tomb itself, were the remains of another slab, about a quarter of which was left intact on the eastern end of the tomb, and various fragments of which were found in the demolition debris nearby. The material of this slab was kindly identified by Miss Caroline Cartwright as Petworth marble, who also drew the author's attention to its use in other churches, e.g. for grave slabs and font bowl at Lullington church.[2] The skeleton was complete, with its head at the west end, and appeared to have

[1] E. A. Fisher, op. cit., 197, M. A. Lower, *The churches of Sussex* (1872), 197.

[2] A. Barr-Hamilton, " Excavations at Lullington church ", *S.A.C.* vol. 108 (1970), 1-22.

been both too long and too broad to fit properly into the grave. The skull was tilted sharply upwards against the west end of the tomb, and the top of the spinal column had penetrated through into the oral cavity. Probably the corpse had been too long for the tomb, and so the head was propped up against one end; once the flesh had rotted away, the head then sank down over the spinal column. Furthermore, the plaster step had been chipped away to accommodate the arms at each side (Plate 2). Both forearms had been folded back on the upper arms so that the hands lay, palms down, over the shoulders. Over the lower part of the spine lay the badly corroded remains of a pewter chalice; presumably, it was placed over the abdomen at the time of burial. Only the stem of the chalice was recognisable; the bowl and flared base had disintegrated into many brittle fragments The poor condition of these fragments made dating difficult, but a fifteenth or sixteenth century date seems the most likely.

Burial beneath the altar was an honour usually reserved for members of the clergy. The relevant documentary records revealed no mention of the burial of a clergyman in the church, however.

2 The double tomb

The dimensions were as follows: both compartments were 85cm. deep and 180cm. long. At the widest, the northern compartment was 65cm. across, the southern one 53cm. Each compartment contained a skeleton with the head at the west end. These skeletons were separated by an upright partition of narrow chalk blocks, faced on both sides with plaster. The tomb was divided unequally by this partition and, surprisingly, the smaller skeleton, which had decayed considerably, occupied the larger compartment. The larger skeleton was, however, complete. Several rusty nails were found with each skeleton, distributed at uneven intervals around the periphery of the 2 compartments. These were almost certainly coffin nails, and provided the only surviving evidence that there had been coffins, the wooden parts having rotted away completely. Underneath the complete skeleton in the southern half of the tomb was a sticky, amorphous, dark brown layer, perhaps 5mm. thick, which separated the bones from the plaster lining of the tomb. This unbroken layer, measuring about 160cm. by 35cm., covered most of the floor of the southern compartment. It is tempting to ascribe the far better survival of the larger skeleton to the presence of this layer, due originally perhaps to a thicker wrapping of clothes on the corpse. Certainly nothing comparable was found in the other compartment where those bones resting directly on the plaster had suffered considerable decay.

The report on the human remains (see below), identifies both skeletons as female and, apart from the difference in preservation, there was nothing to indicate that both bodies were not interred at the same time. Unfortunately, there is no historical reference which can be connected with these burials.

3 Other burials

There were several other graves within the church besides these two sophisticated tombs; there was only one other in that part of the nave which was excavated (marked *g* in Fig. 3).

In the chapel and tower, graves were usually marked by subsidence in floor levels above. Many, if not all, may belong to a period before the building of the tower and chapel, and therefore lay originally outside the church.

In the chancel, at least two small graves cut through the foundations of the apsidal chancel (at *j* and *k* in Fig. 3). From the disturbed fill at the edge of grave *k* came a papal bull, dated to the late fourteenth century (see below).

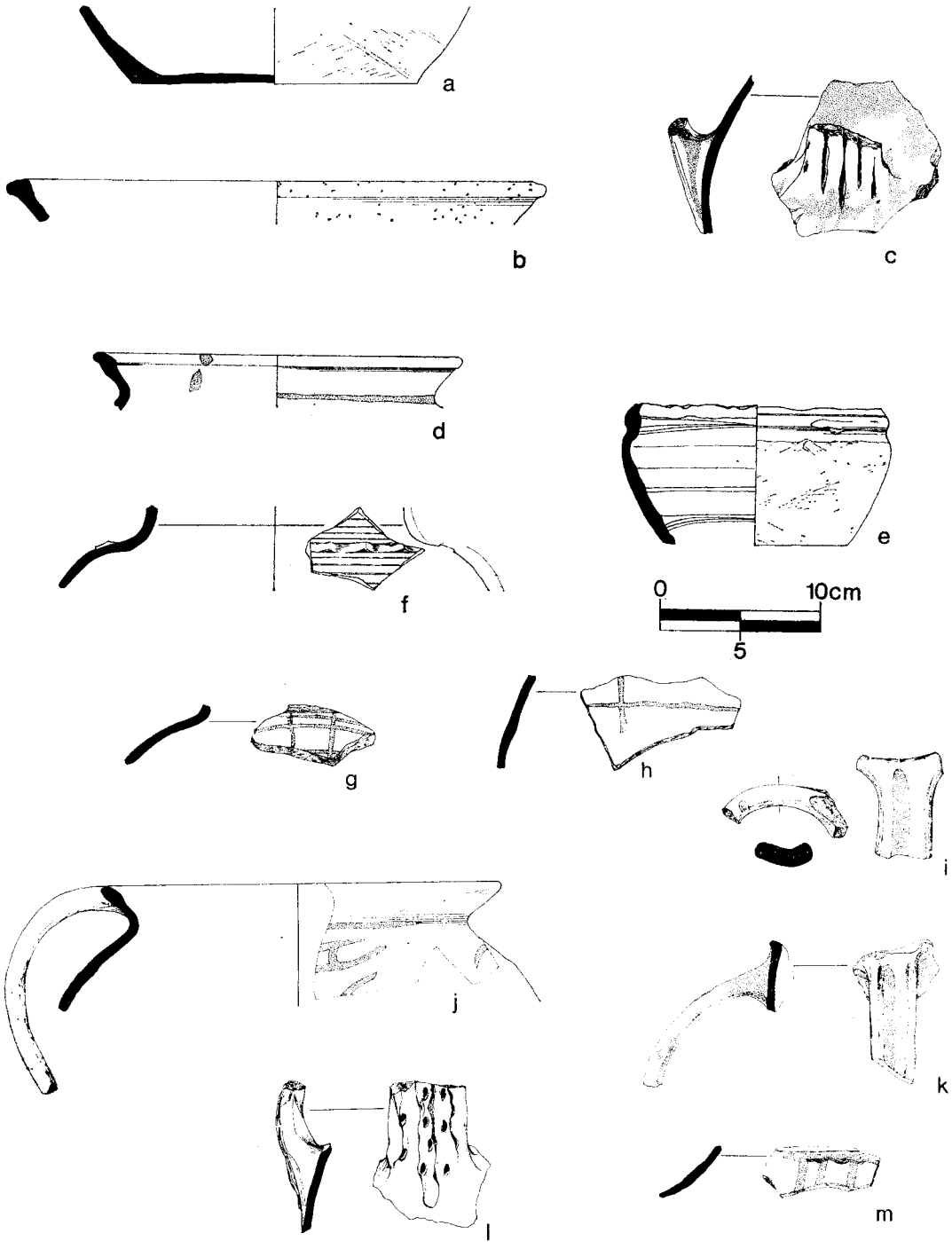


FIG. 7. Angmering, 1974. Examples of the pottery

Outside the church, of course, a grave was found almost wherever a trowel was put into the ground. The main graveyard, lying, unusually, to the north of the church, was not investigated.

Although they cannot strictly be called burials, four groups of bones were found immediately outside the church, just to the north of the western porch. The report on the human remains (see below for Groups I to IV), shows a minimum of 12 individuals, very incompletely represented. These bones were recovered from the lower part of the demolition debris; none of them were articulated, nor was there any indication of a grave-cut. It seems most reasonable to assume that they were somehow disturbed during demolition of the church, and simply flung aside. Several sherds of fourteenth century pottery were associated with these bones.

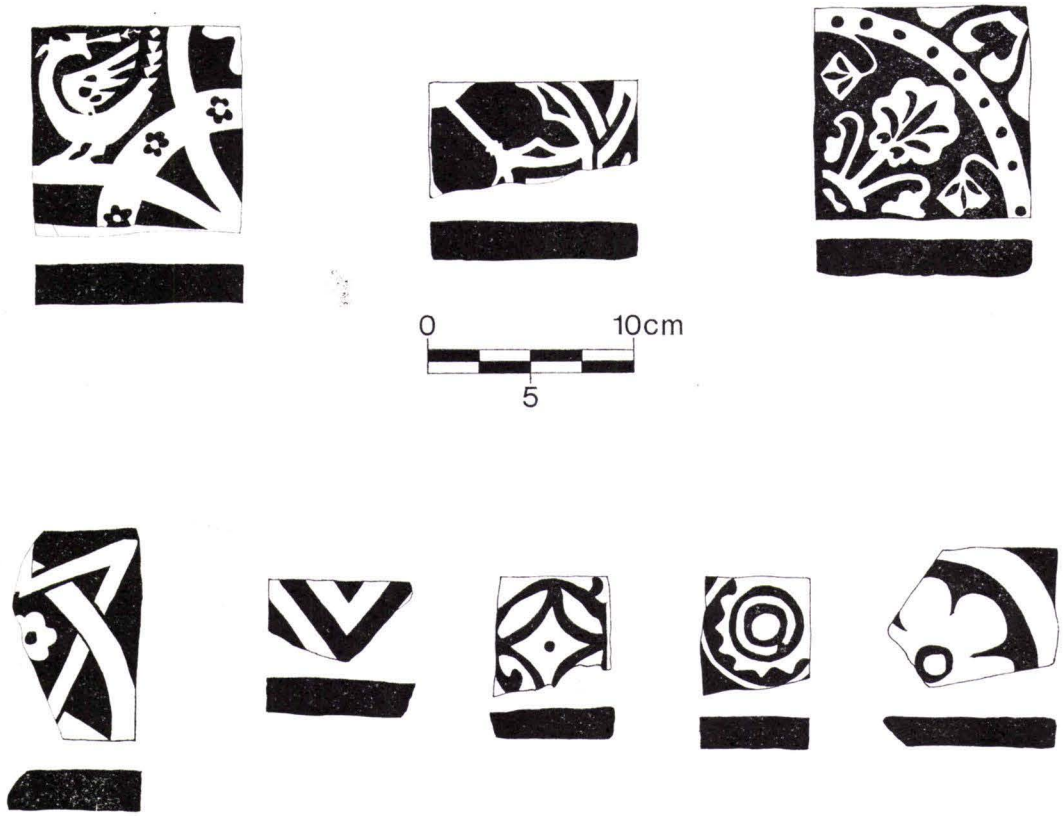


FIG. 8. Angmering, 1974. Some examples of the decorated floor tiles

THE SMALL FINDS

1 The pottery

The amount of pottery recovered was fairly small; the main sources were the demolition debris and the topsoil, into which many medieval sherds had found their way, presumably as a result of gardening operations.

As already mentioned, few sherds were found in direct association with any masonry. Two pieces found at the base of phase (ii) footings are shown in Fig. 7, *a* and *b*. Sherd *a*, unglazed, consists of part of the base and side of a possible cooking vessel. The exterior was thickly encrusted with charcoal, and the interior revealed an uneven surface and variable firing. The fabric is uniformly gritty, and its colour, though varying slightly because of the firing, is mainly grey. Sherd *b*, unglazed, is part of the rim of a large vessel. The fabric is grey and gritty, with occasional buff patches, and also signs of uneven firing. Both *a* and *b* date from the 13th or even late 12th century.

Sherd *c*, also unglazed, was found close to the footings of the western porch, and consists of part of the handle and body of a large vessel. The very dense fabric is smooth with a uniform dull buff colour, but both surfaces have uneven patches. There are four coarse parallel slashes in the handle, dated to the 14th century.

The unglazed sherds *d* to *i*, though recovered from various parts of the demolition debris, constitute part of a distinct group. They all have a smooth reduced fabric, with a dark brown or black slip. Each fragment has some form of white-painted decoration, either linear or a criss-cross pattern. These sherds are very similar to those recovered from a medieval well at West Tarring,[1] a few miles to the east of Angmering. The dating of the Tarring material depends upon the association of coins with the pottery. Although a Nuremburg jetton, dated to c. 1515 was found in association with this type of pottery in the well, a nearby site produced similar wares associated with a soldino of Giovanni Mocenigo, Doge of Venice, 1478-85. On balance, more weight was given to the latter findings, and by implication, this type of pottery was dated to c. 1500. In the case of St. Nicholas, historical references to burials in the churchyard continue up to 1559, and it is thus unlikely that the church would have been demolished before this. Furthermore, there is the association with a late 16th century jetton (see coin report below) also recovered from the demolition debris. On historical grounds, a post-1560 date for the destruction of the church seems probable, and so this pottery type should be assigned to the second half of the 16th century.

Sherd *j* is very similar to the type just discussed; it has white-painted decoration, but the overall slip is orange-buff.

Sherds *k* to *m* came from a demolition layer about one metre to the north of the western porch. They were associated with the bones of Groups I to IV, and date from the fourteenth century. The sherds have a dense, buff fabric, an irregularly applied green glaze, and closely resemble pottery found on the kiln site at Binsted.[2]

There were numerous finds of post-medieval sherds in the topsoil, including some Bellarmine fragments.

2 Painted wall plaster

The wall plaster that survived in situ on the inside face of the north wall of the nave was a dull greyish-white. More interestingly, many small fragments of painted wall plaster were recovered from demolition debris within the nave, chancel, and chapel. The predominant colours were dull red, scarlet, apricot, cream, and a very dull blue, almost black. It is therefore, highly likely that at the time of demolition, the inside of the nave, chancel, and chapel was decorated with murals in much the same way as many of the early churches of Sussex still extant, e.g. at Hardham and Clayton. The presence of dull red and apricot is particularly reminiscent of this type of wall painting. Several pieces, from within the nave only, had been whitewashed over; the whitewash had then partially peeled off to reveal the original colour beneath. This suggests that part, at least, of the murals within the nave were painted out, a process which has known parallels, e.g. at Hardham, where the murals were covered with plaster at an unknown date.

3 Glazed floor tiles

A few complete glazed floor tiles were found and many fragments. They can be conveniently divided into two classes, plain and decorated. Mrs. E. Eames, of the Department of Medieval and Later Antiquities at the British Museum, examined most of the complete tiles and some of the larger fragments. In her opinion, virtually all the plain tiles came from the Netherlands, and date from the 15th century; one fragment may be English, perhaps Tudor. Some of the patterns (yellow on a red background), from the decorated tiles are shown in Fig. 8. They belong to a local tradition,[3] and probably date from the 15th century, though an earlier date cannot be ruled out. According to James Dallaway and Cartwright,[4] " the painting and preparation of these tiles for the kiln was among the employment of the monks in their leisure hours, in which they eventually excelled ". Details of the tiles are summarised in Table 1.

1 K. J. Barton, " Worthing Museum archaeological notes for 1961 ", *S.A.C.* vol. 101 (1963), 20-34.

2 Mr. C. Ainsworth, personal communication.

3 W. Figg, " Sussex Tiles ", *S.A.C.* vol. 3 (1850), 239; W. H. Blaauw, " Dureford Abbey—Its Fortunes and Misfortunes ", *S.A.C.* vol. 8 (1856), 41-96; Lord Ponsonby of Shulbrede and the Hon. Matthew Ponsonby, " Monastic Paving Tiles ", *S.A.C.* vol. 75 (1934), 19-64.

4 " History of Western Sussex " (1815), Vol. I, 122.

4 Painted glass

Numerous fragments of painted medieval glass, from 2 to 4 millimetres thick, were found, particularly inside the chancel and the east end of the nave. Most were very small and friable; the patterns, in dull red paint, from some of the larger pieces are reproduced in Fig. 9. Glass is notoriously difficult to date, but it is likely that most of the fragments found date from the 14th or 15th century.

The base of a glass urinal, found in debris cleared from inside the tower is also shown in Fig. 9, H. It is tentatively dated to the 15th or 16th century. Parallels are provided by finds 311-313 from a late 15th century garderobe at Hadleigh Castle, Essex.[1]

5 The papal bull

This circular lead object, 4 centimetres in diameter and 0.6 centimetres thick, was recovered from a disturbed area below the floor level of the rectangular chancel. It was almost certainly associated with the grave marked *k* in Fig. 3. It signifies direct communication between the Pope and one of the parishioners of Angmering. It was identified by Dr. R. Reece of the Institute of Archaeology as belonging to the time of Pope Boniface IX (written " BONIFACIUS PP VIIII " on the bull; Plate 7), who was in office from 1389 to 1404. The letters "SPASPE" on the other side of the bull are contractions of Sanctus Paulus, Sanctus Petrus, and the two heads represent St. Peter and St. Paul.

6 Jewellery

A small pendant (or brooch) of gilt on silver, was found in the demolition debris inside the chancel. In spite of obvious damage (Plate 9), it is possible to make out two small perforations, just inside the edge, by which the pendant was perhaps attached to an article of clothing, or to a chain. Its date is unknown.

A decorated bronze shoe buckle (Plate 8), was found just above the west wall of the western porch, in a context which suggested that it had been deposited there after the demolition of the church. It was identified by the Metalwork Department of the Victoria and Albert Museum as a military buckle, probably made in Birmingham, and dating from 1730-1740.

7 The coins (by D. R. Rudling)

The only coin to come out of the demolition debris was a very worn brass jetton. It is a copy of a jetton by Hans Schultz, of Nuremburg (1550-1574) and is dated to the late 16th century.

A worn silver penny, unstratified, of Richard I (1189-1199), was also found. It is short-cross coinage of Class 2B, minted in London; the moneyer's name is clipped, but it may be Stivene.

From the topsoil came a very worn William III copper halfpenny. It is a coin belonging to the third issue, and bears the date 1699.

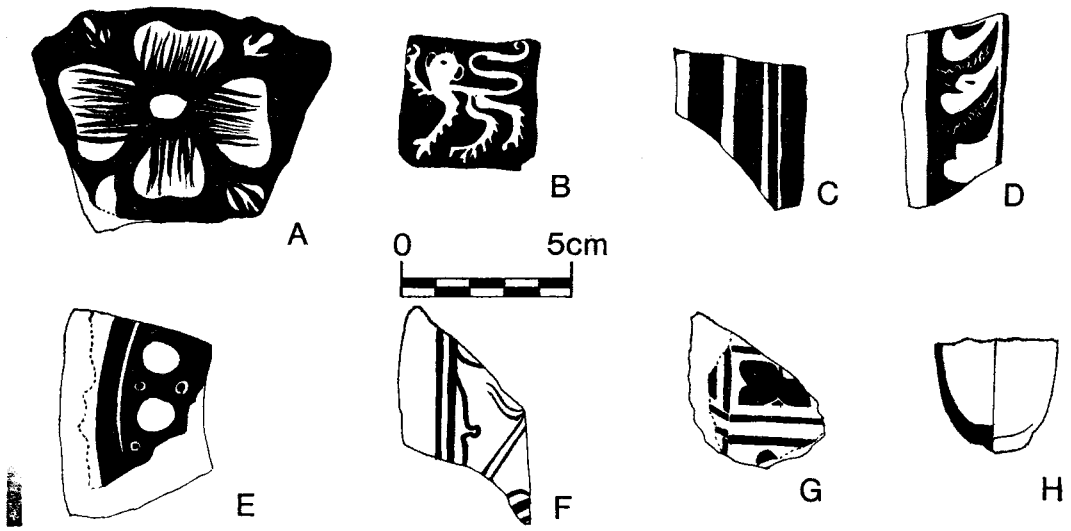


FIG. 9. Angmering, 1974. A-G: Examples of painted glass
H: Base of a glass urinal

1 P. L. Drewett, " Excavations at Hadleigh Castle, Essex, 1971-1972 ", *Journal of the British Archaeological Association*, Third Series, vol. XXXVIII (1975) (forthcoming).

THE HUMAN REMAINS

By T. P. O'Connor

1 THE SKELETON FROM THE ALTAR TOMB

This individual was a tall, well-built male, standing about 5 feet 11 inches, and whose age at death was 60±5 years. His hands were large and the muscle impressions very distinct. Dental health was excellent, with no caries and only traces of periodontal disease.

The non-metrical characteristics were as follows; there was gross arthropathic lipping of vertebrae resulting in kyphosis in the thoracic region, with concomitant fusion of ribs to vertebrae. This lipping is present throughout the spine, to the extent of apparent sacrilisation of lumbar vertebrae V. All this is probably attributable to osteoarthritis, and the knees show slight arthritic damage also. The left leg appears to be a little longer than the right; if it is anything other than a minor congenital fault, then it is probably associated with the spinal arthritis noted above. This arthritis does not follow the pattern normally shown in osteoarthritis developing in old age, i.e. in this individual the worst arthropathy is in the thoracic, not the lumbar area. In spite of his great age, this would appear to be a case of congenitally transmitted arthritis. Thus one gets the impression of a man, once strong and sturdy, crippled in old age by arthritis.

2 THE SKELETONS FROM THE DOUBLE TOMB

(*a*) *The northern compartment*

This individual, very badly decayed, was tentatively identified on the evidence provided by the skull and pelvic fragments, as a female aged 14±1 years. Her probable height was about 5 feet and a number of non-metrical characteristics were noted:—

(1) the right humerus had a small ellipsoidal intracondylar foramen;
(2) sagittal and lambdoidal wormian ossicles were present;
(3) a small left parietal notch bone was present;
(4) the occipital bone was effectively bi-partite due to the presence of a very large Inca bone;
(5) there was a double zygo-maxillary suture, a most unusual feature.

(*b*) *The southern compartment*

This was a female of 30±4 years. Her height was about 5 feet and her muscle impressions were very pronounced, indicating an extremely robustly built woman.

There was pronounced rheumatoid arthritis in both feet, accompanied by inturning of the hallus. This could have been caused by arthropathy, or even by ill-fitting footwear, but is, in any event, unlikely to have been of traumatic origin. There was slight arthropathic phytosis (" lipping "), present at both knees and ankles, and the left elbow. The hands, however, were quite normal.

In the mouth, both lower third molars showed exposure of the pulp cavity, probably due to occlusal caries being allowed to run riot. Moderate dental calculus was present in the mandible.

A cervical rib was also present, probably from the right side, and a parietal notch bone also on the right.

Given the dissimilarity between the two skeletons from the double tomb, it seems unlikely that they were closely related.

3 *Groups I-IV.* (N.B.—These bones are all derived from a small area in the demolition debris just outside the church.)

Group I

These were mainly cranial fragments of 2 infants aged between 0 and 3 months, and probably newborn. There were also 3 pieces of adult foot and one sheep metatarsal (Ovis aries L.).

Group II

This comprised several fragments of the skeleton of a newborn human infant and also one adult metatarsal.

Group III

There were 2 incomplete adult feet, 2 fragments of the rib of a small mammal (perhaps Ovis), and one fragment of the rib of a large mammal (perhaps Bos). There was also a fragment of metacarpal (Bos sp.), and the femur of a very small mammal (Rattus sp.), which looked rather more recent than any of the other bones in this group.

Group IV

Due to the mixed and fragmentary condition of the bones, it was difficult to assess this group. However, the bare minimum would be about 10 individuals, 9 of them adults (one definite male and one definite female), with one juvenile (7-14 years).

Considering all 4 groups together, we have a minimum figure of 14 individuals recovered from this small area just outside the church.

ACKNOWLEDGEMENTS

First of all, thanks are due to the landowner, Mr. E. Hilton, for permission to excavate.

I am extremely grateful to those who helped during the excavation, especially John Friar, Jill Craddock, Sally White, who also took the site photographs, Alison Macaulay, John Wildman, Con Ainsworth and the Worthing Group, Alec Barr-Hamilton and members of the Brighton and Hove Archaeological Society, and John Kirby, who also drew the reconstructions of Figs. 4 and 5.

Many of the inhabitants of Angmering showed great kindness during the excavation, notably Mr. and Mrs. L. Baker, Miss J. Russell, Miss E. Young, and Mr. and Mrs. F. Kessler. The Angmering Society also gave us a very generous donation which helped the excavation through a critical stage.

I also wish to thank T. P. O'Connor for the bone report, D. R. Rudling for the coin report, Dr. R. Reece for identifying the papal bull, Lys Drewett for Figs. 7-9, and Caroline Cartwright and Geoff Denford for printing the photographs. The conservation students at the Institute of Archaeology have done excellent work on preserving some of the finds. I am also very grateful to P. L. Drewett for reading through the manuscript. Finally, I would like to thank Mr. Con Ainsworth for his advice on all things archaeological, particularly the pottery.

The Society is much indebted to the Department of the Environment for a generous grant towards the cost of publishing this paper.

TABLE 1

Some details of the glazed floor tiles

Type	*Colour*	*Dimensions*	*Date/Origin*	*Other Comments*
Plain	Beige	11.6 cm. square 2.5 cm. thick	15th century	Nailholes in glazed surface
	Dark green	9.5 cm. square 1.5 cm. thick	Netherlands	
	Black	12.3 cm. square 2.6 cm. thick		Slightly chamfered
Decorated	Creamy yellow on red background	10.5 cm. square 1.5 cm. thick	15th century (or earlier) Local origin	No chamfer Possible monastic manufacture

URBAN EMPLOYMENT AND POPULATION IN SUSSEX BETWEEN 1550 AND 1660

by C. E. Brent, M.A., D.Phil.

This article seeks to examine the range and volume of employment opportunity in the four major towns of eastern Sussex between 1550 and 1660, and to correlate this, where possible, with the course of demographic change. Although three of these communities—Brighton, Hastings and Rye—were primarily dependent on maritime employment, especially fishing, such employment decreased sharply at Rye but expanded at Brighton and Hastings. This divergence is reflected in their demographic history. By contrast the employment structure of Lewes, also a maritime community, was much more broadly and securely based, reflecting its role as a major regional centre for marketing, retailing, manufacture, administration, professional services and residence by local gentry.

Even the most significant of the inland market centres of eastern Sussex never achieved more than a very limited economic and administrative function. The lines of Wealden communication which they controlled tended to be relatively unimportant, while Wealden manufacturing, although varied and substantial in aggregate, was firmly rooted in a countryside dominated by family farmers and smallholders. By contrast the coastal communities, dependent on fishing and commerce, and from the later eighteenth century on fashionable recreation, have always provided the dynamic element in its urban history. But until the engineering triumphs of the nineteenth century their maritime prosperity was always precarious, being dependent on harbourage facilities which were at the mercy of a shifting coastline and silting estuaries. Thus by 1550 the commerce of Winchelsea and Seaford had been fatally impaired and that of Pevensey gravely disrupted. Between 1550 and 1660 the maritime activity of eastern Sussex was largely confined to the harbourage and shipping of Brighton, Lewes (with Newhaven), Hastings and Rye, and these were the only towns to achieve a population in excess of a thousand inhabitants during this period.

By 1750 only East Grinstead, Battle and Cuckfield survived as inland market centres in eastern Sussex.[1] East Grinstead parish contained 600 " housling people " (1,000) in 1548, 800 communicants (1,300) in 1676 and 310 families (1,550) in 1724.[2] But in 1564 its market nucleus, which lay within a parish of 15,000 acres, only included just over 70 dwellings and shops,[3] and clearly did not approach a thousand inhabitants by 1660. Similarly at Cuckfield the whole parish of 11,000 acres returned only 800 communicants (1,300) in 1676 and 270 families (1,350)

[1] G. O. Cowley, *Sussex Market Towns 1550-1750* (London University M.A. thesis, 1965), 159.

[2] Sussex Archaeological Trust (hereafter S.A.T.), G6/63; J. H. Cooper, " A Religious Census of Sussex in 1676," *Sussex Archaeological Collections* (hereafter *S.A.C.*), vol. 45 (1902), 142; West Sussex Record Office, Ep I/26/3. The bracketed figures represent estimates of total population achieved by using a multiplier of 10/6 for communicant totals and 5 for household totals.

[3] P. D. Wood, " The topography of East Grinstead Borough," *S.A.C.* vol. 106 (1968), 49-60.

in 1724. Population indices are scarce for Battle, which extended across 8,000 acres, but in 1611-40* 44 conceptions leading to baptism were registered annually, the same number as at Cuckfield and slightly fewer than at East Grinstead (50 per annum).[1] In 1569 approximately 130 houses and shops were included within the " borough " at Battle,[2] and again it seems unlikely that this market nucleus housed more than a thousand people by 1660, or indeed as many.

The demographic insignificance of Winchelsea, Pevensey, Eastbourne and Seaford, the coastal market-centres of eastern Sussex, is even more apparent. Winchelsea, which contained 109 households (545) in 1565 and 120 able-bodied men in 1577, included only 91 communicants (150) in 1676, and in 1652 was " all in rubbish, and a few despicable hovels and cottages only standing."[3] In Pevensey households numbered 64 in 1565 and 26 in 1724. Eastbourne possessed 140 households (700) in 1565, 120-140 in 1621,[4] 420 communicants (700) in 1676 and 140 households in 1724, while Seaford contained only 38 households (190) in 1565, 62 able-bodied men in 1577 and 40-50 households (200-250) in 1620,[5] although the borough increased to 202 communicants (340) in 1676 and 70 families (350) in 1724.

Our four major urban communities were all commercial ports handling seaborne cargoes. The shingle stades at Brighton and Hastings lacked water-links with the interior of Sussex and, as at Eastbourne, and Seaford from the 1540s, commodities were drawn from, or destined for, a very localised area. By contrast Rye harbour, although at the mouth of the river Tillingham, commanded the river Rother, which was navigable up to Udiam near Salehurst and consequently carried much of the commerce of north-eastern Sussex. Some commerce, however, was deflected southwards to the river Brede, on which barges plied between Brede bridge and Winchelsea harbour, and to the navigable streams crossing Pevensey levels to Pevensey harbour.[6] Iron was probably shipped from Pevensey throughout the period and from Winchelsea until at least the 1590s.[7] Lewes lay on the Ouse four miles below the head of navigation at Barcombe Mills.[8] The route by barge between Lewes and the sea was shortened and facilitated by the engineering of a ' New Haven ' in Meeching parish by the 1540s.[9] Lewes and its outport at Newhaven commanded, therefore, much of the commerce of Lewes and Pevensey rapes, but unlike Brighton, Hastings and Rye, Lewes was also a significant road centre. On to its bridge, which was the only crossing-point over the Ouse (except for ferries) between the Low Weald and the sea, converged the east-west traffic which followed the downland scarp of the Greensand Way below it.

The commerce of these four ports reflected the contrasting economies of their downland and Wealden hinterlands, Brighton tapping the former, Hastings and Rye the latter, and Newhaven both. Wheat, barley and malt, produced on a large scale in the downland, were exported

[1] Conceptions leading to baptism, burials and marriages have been aggregated from the appropriate parish register and checked with W. H. Challen, *Baptisms, Marriages and Burials from the Bishops' Transcripts* (typescript, Sussex Archaeological Society Library, 1945-54). An asterisked date denotes the harvest (August to July) rather than the civil year.

[2] East Sussex Record Office (hereafter E.S.R.O.), BAT 42.

[3] Public Record Office (hereafter P.R.O.), S.P. 12/38/28; S.P. 12/116/23; John Evelyn, *Diary* (Everyman, 1907), 279-80.

[4] S.P. 12/39/11; Ep II/12/14.

[5] Ep II/11/106, 154.

[6] Ernest Straker, *Wealden Iron* (1931), 189; L. F. Salzman, " The inning of Pevensey Levels," *S.A.C.* vol. 53 (1910), 59.

[7] C. E. Brent, *Employment, Land Tenure and Population in Eastern Sussex 1540-1640* (Sussex University D.Phil. thesis, 1973), 141.

[8] E.S.R.O., RA/C/1/1/15.

[9] P. F. Brandon, " The origin of Newhaven and the Drainage of the Lewes and Laughton Levels," *S.A.C.* vol. 109 (1971), 94-106.

through both Newhaven and Brighton (lumped inextricably in the port-books with Shoreham), mainly to Rye and Hastings, London, and north European ports, but also occasionally to the Mediterranean.[1] In 1605 Herbert Morley of Glynde shipped 144 quarters of wheat through Newhaven to Seville; John Stade, a weaver from Southover in Lewes, ' ventured ' wheat into Spain.[2] The heavy import of malt into Hastings and Rye emphasised how little barley was grown in the Weald. Wheat imports were more erratic, being dependent on a substantial but usually insufficient Wealden production. The central role of livestock in Wealden agriculture was reflected in a straggling traffic in oats to London from ports serving the Weald. By the early seventeenth century the export of hops replaced their import as Wealden cultivation expanded, and wool from the marshland flocks near Rye and Hastings also began to be shipped to London. The best downland wool appears to have been sent overland to supply the Kentish broadcloth industry. No livestock was exported by sea, other than horses from the coastal marshland to France, but a dribble of Wealden leather and oak-bark was shipped away.[3] Foreign grain was imported only in years of harvest failure. In 1597 Lord Buckhurst, " As his Relief to the Poor in pinching Times of Dearth," sent Baltic rye freely into Sussex; in July and August 1598 Spanish wheat was unshipped at Rye.[4]

A less complex cross-current within the coastal trade of eastern Sussex was the shipment of timber, woodfuel and wooden products. Their source was the Weald, their destination the downland regions of Sussex and Kent and further afield. Both Brighton and Lewes were, of course, supplied directly with wood carted from the Weald. Waggons loaded with faggots for Brighton crossed Danny Park in the scarpfoot, and much wood was sent to Lewes from the Pelham coppices in and around Laughton.[5] At Rye under Elizabeth local dues were paid on the export of large timber, woodfuel and an immense range of wooden products—planks, logs, laths, posts, rails, arrowtimber, spokes, mats, coopers' boards and whipstocks, as well as frames for a house, a mill, a bridge, and a " pier " for Margate.[6] Most of this coastal traffic seems to have been to the downland ports of Sussex and east Kent, and to London. At Hastings in the 1630s the corporation rescinded a local duty on the export of timber because it was recognised to be a major element in the port's commerce.[7]

Wood was also exported overseas. In the 1540s Rye and Hastings had a considerable trade in fuel with Calais and Boulogne. Arthur Young junior noted that " In the reign of our sixth Edward the hoys that were laden with timber went out of Rye harbour to the number of thirty-seven one tide, and never an English mariner among them."[8] In 1566-7 fuel was shipped from Rye to ports in Holland, Zeeland, Flanders and northern France,[9] but thereafter this traffic seems to have slackened steadily, as did the export of timber.

[1] These and later generalisations about the character and direction of inward and outward trade at east Sussex ports are based on an analysis of the surviving port-books for 1565-1641 (P.R.O., E. 190/737-767), supplemented on occasion from the records of local dues at Rye (E.S.R.O., RYE 66 *passim.*). This material has been discussed at length in Brent, op. cit., 48-52, 78-87, 92-7, 128-9, 132-3, 137-143, 165-173, 296-304.

[2] P.R.O., E., 190/754/12; E.S.R.O., W/A/12/251.

[3] P.R.O., E., 190/738/12, 740/5, 764/9, 767/21; RYE 66/66.

[4] Arthur Collins, *The Peerage of England* (1768), ii, 295; RYE 66/51.

[5] E.S.R.O., DAN 2072; British Library (hereafter B.L.), Add. MS. 33142.

[6] E.S.R.O. RYE 66/8, 48, 55, 87.

[7] Hastings Museum, Hastings Corporation MS. C/A(a)/2.

[8] Rev. Arthur Young, *A General View of the Agriculture of the county of Sussex* (First edition, 1793), 85.

[9] P.R.O., E. 190/737/24.

Wealden wrought-iron and cast-iron pots, pans, anvils, anchors, plates, bolts, weights and kettles were despatched from Newhaven, Hastings and Rye. At least until the 1640s the shipment of ordnance and shot may have been largely confined to Newhaven, although the port-book evidence for Rye may give an incomplete picture. The Ouse certainly tapped that area of the central Weald around Buxted, Framfield and Mayfield where gun-founding was largely concentrated; prominent gun-founders, such as Ralph Hogge, Robert Hudson and Arthur Milton, used Newhaven. Most coastal iron shipments were to London, but under Elizabeth Newhaven also supplied Chichester and ports further to the west with significant amounts of wrought-iron. Only small quantities of iron were exported to northern Europe, but substantial consignments of ordnance were shipped abroad under licence, principally to Dutch ports. Wealden glass was despatched from Rye between 1574 and 1581, and apparently, from Newhaven in 1589, but production in the hinterland seems to have been short-lived.

The inward seaborne trade of eastern Sussex was largely channelled through Lewes and Rye. Brighton, Seaford, Eastbourne, Pevensey, Hastings and Winchelsea imported commodities for only very local consumption and distribution. Command of the Ouse and the Rother allowed Lewes and Rye to distribute across a wider area a range of imports from foreign ports which included salt, hops, prunes, vinegar, wine, fish, spices, dried fruit, textiles, glass, paper, coarse canvas, naval stores and, in time of local harvest failure, grain, to which were added " Newland " fish, tobacco and Irish beef and hides. By the later 1630s Wealden hop-growing had cut back foreign imports, and salt shipments were prohibited in the interest of English monopolists. Under Elizabeth trade-links with Antwerp, Dunkirk and other Flemish ports in Spanish hands were slowly extinguished, to be briefly revived during the Twelve Years' Truce (1609-1621). Rye and the other Wealden ports imported mainly from the Pas de Calais, especially Dieppe, and from Norman and Biscayan harbours, while Newhaven and the other downland ports maintained stronger links with the United Provinces, especially Zeeland, which imported large cargoes of downland grain.

Coastal imports, other than seacoal and grain, were dominated by composite cargoes from London of groceries, mercers' and haberdashers' wares, beer, wine, soap and textiles, " as if the general shop had been bodily transported on board ship for conveyance to a more profitable district."[1] A slighter traffic in wine, fruit, spices, sugar and salt from south-western English ports may have lapsed in the early seventeenth century. Grain was shipped into Wealden ports from downland ports in Sussex and eastern Kent, and occasionally from East Anglia, and dyes and oils into Rye and Newhaven. A sharp increase occurred in shipments of seacoal from Newcastle and Sunderland. At Rye seacoal imports, which averaged 147.5 cauldrons yearly in 1581-4, reached 377 cauldrons in Christmas 1638-9 and 354 cauldrons in Christmas 1640-1. At Hastings 243 cauldrons were unloaded in Christmas 1638-9 compared with 16 in Michaelmas 1573-4 and 14 in Michaelmas 1599-1600. Imports were heaviest at Newhaven where 691 cauldrons were unshipped in Christmas 1632-3; shortage of woodfuel was acute in the downland hinterland of the port.

Rye was, however, commercially unique among the ports of Sussex during this period since through its port and Dieppe still passed a vigorous transit traffic between London and Paris. Under Elizabeth its imports included large consignments of spices, rich textiles, expensive haberdashery and millinery, pedlars' wares and fruit. Its exports were dominated by textiles

[1] T. S. Willan, *The English coasting trade 1600-1750* (1967), 51.

and leather goods from all parts of England. This transit trade overspilled briefly to Hastings, Newhaven and Shoreham in the late 1570s, largely disappeared, even from Rye between 1600 and 1628, but was flourishing again in the 1630s. Few local men were involved in its control except as factors for merchants in the two capitals. The royal mail used the port until 1636 when it was confined to Dover-Calais.[1] In 1632 14, and in 1634 18 shipmasters were licensed to carry passengers across the Channel.[2] Between 1 August 1635 and 30 March 1636 215 of the King's subjects used the " passage."[3]

In the early sixteenth century Rye also enjoyed command of the only major harbour of refuge between Portsmouth and the Thames. The " Camber " consisted of a large lagoon into which the rivers Brede, Tillingham and Rother all flowed. The harbour was a focus for men and materials about to be conveyed to campaigns in northern France, and many ships put in to provision, refit and recruit.[4] But the Camber was a wasting asset. By 1548 shoaling had reduced its capacity; only 30 or 40 vessels could be accommodated instead of 300 or 400 as previously. Silting later restricted space near the quays on the Tillingham; in the 1570s no ship was to remain more than 12 hours after loading, and fishermen were moved to a jetty on the west side of the Camber mouth. By 1590 a pilot had been appointed to guide ships into a harbour " much Swarved with Sande and Slubbe brought in by the sea." The shoaling was ascribed partly to erosion of the shingle reef protecting the Camber, which also exposed the harbour to growing storm damage, and partly to the reclamation of saltmarsh which was alleged bitterly by Rye corporation to reduce the scouring action of the ebbing tide.[5]

A crisis-point was clearly reached in the mid-1590s when the town's authorities undertook to divert the waters of the Rother through marshland to the north of Rye into the Tillingham to augment the scouring of the harbour. In 1596 £600 was spent on a sluice there. Large sums were raised by briefs, rates, loans and the sale of municipal assets from palmier days which included marshland, a ship, a common, an inn, a storehouse and two rows of shops. A subsidy to the parish church was withdrawn " by reason the chamber of the town is so far weakened." But the scheme failed and in 1610 the sluice was dismantled, and further harbour work was confined to maintenance. The harbour continued to deteriorate, and in 1636 booms, buoys and lights were set up "by reason of the great banks of sands encreasinge more and more."[6]

Although by the 1590s Rye had been deprived of its harbour of refuge, the town still retained command of the commerce along the Rother navigation. At Newhaven the eastward shingle drift at the outfall of the Ouse and the silting of the estuary, consequent on the reclamation of saltmarsh, required periodic expenditure to keep the main channel open.[7] As at Rye this contest with nature did not prohibit commerce, although it must have raised the costs. Both ports were regularly visited by boats of between 20 and 40 tons, no smaller than those normally frequenting other provincial ports.[8] By Sussex standards the London vessel of 65 tons, which loaded iron at Pevensey in February 1595, was aptly named " The Nonsuch."[9] At Brighton the open shingle stade remained adequate for its very localised commerce.[10] At Hastings the

[1] *The Victoria History of the County of Sussex* (hereafter *V.C.H.*), ii (1907), 154.
[2] E.S.R.O. RYE 1/12/24, 124.
[3] *Calendar of State Papers Domestic* (hereafter *C.S.P.D.*) (1635-6), 353-4.
[4] *Acts of the Privy Council* (hereafter *A.P.C.*) (1589-90), 98, 307-8; RYE 47/80.
[5] RYE 99/1, 1/4/207, 227, 47/39/1, 47/44/50, 98/1, 99/5, 97/2, 3, 98/1.
[6] RYE 95/1/1-13, 99/11, 1/5/363, 1/6/30, 57, 59, 60, 70, 112, 1/7/311, 325, 1/6/182, 1/8/232, 1/12/205.
[7] J. H. Farrant, " The evolution of Newhaven Harbour and the Lower Ouse before 1800," *S.A.C.* vol .110 (1972), 44-7.
[8] E. 190/737-767, *passim*.
[9] E. 190/748/35.
[10] *V.C.H.*, vii (1940), 244-5.

open beach was protected by a "pier." In the 1590s two major rebuildings were destroyed by storm. Expenditure had exceeded £600 and to liquidate a debt of £200 the corporation sold land and property and retrenched on mayoral allowances. Thereafter a less ambitious structure was maintained.[1]

Since even those port-books which survive give little evidence of such a basic seaborne traffic as that in woodfuel, any calculation of the annual number of vessels loading and unloading at these Sussex ports is certain to be too low. They record, however, that between 1565 and 1640 annual inward and outward overseas shipments each numbered 40-95 at Rye (except during the temporary departure of the transit trade), under 25 at Newhaven, under 18 at Shoreham which included Brighton, and under 12 at Hastings. The few surviving coastal port-books suggest that annual outward shipments were normally 43-104 at Newhaven, 39-61 at Rye, 26-53 at Shoreham and under 17 at Hastings. Inward shipments numbered 22-60 at Newhaven, 4-24 at Shoreham and 12-23 at Hastings. An upward trend at Hastings and Newhaven was due to increased imports of seacoal which accounted for 17 out of 23 shipments at Hastings in Chris'mas 1638-9. But at Rye increased seacoal imports failed to arrest a marked fall in shipments from 76-112 before the 1590s to 21-43 afterwards.[2]

This fall was almost certainly due to declining demand for imported consumer goods within Rye itself. For if the shoaling of the Camber had no serious effect on Rye's local and transit commerce, it spelt near-ruin for its fishing fleet. Seafish was probably a crucial element in the diet of Sussex during this period. Little is known about the local consumption of coarse fish by the poorer classes, although it was often a staple food in the eighteenth century.[3] Coarse English fish was, however, imported into Rye during the famine years 1594-8, when local supplies were clearly being exhausted.[4] Geese were driven by Wealden farmers to the fishmarkets at Rye, Hastings, Brighton and Lewes to be bartered for herring,[5] and the same markets were drawn on by the rippiers who supplied affluent Wealden households at Battle, Ticehurst and Sedlescombe with choicer seafish.[6]

But under Elizabeth the major fishing fleets at Brighton, Hastings and Rye supplied a far wider market than the downland and the Weald. At Rye local dues were paid on the export of barrelled herring and sprats, and the port-books of Rye and Hastings intermittently record cargoes destined for London and overseas ports.[7] Good road-links with London from Rye and Hastings allowed fresh seafish to be transported to the capital and the royal household within 24 hours.[8] Although royal purveyance caused problems of belated payment and disputed privilege,[9] a common interest between these Sussex fisheries and the London distributors is suggested by an offer in 1637 from the Fishmongers' Company of £300 initially, and more thereafter, towards a new harbour at Hastings.[10] Whether by this period Brighton's fishermen supplied fresh fish to London is unclear, but they certainly exported to Southampton, Poole and other western ports "where they have been accustomed to sell their herrings taken at Yarmouth and upon this coast, being the chief gain that the fisherman hath."[11]

[1] J. Manwaring Baines, *Historic Hastings* (1963), 199-203.

[2] Brent, op. cit., 296-304.

[3] A. J. F. Dulley, "The early history of the Rye fishing industry," *S.A.C.* vol. 107 (1969), 53.

[4] RYE 66/43-50.

[5] QR/E/37/62, QR/E/66/84.

[6] E.S.R.O., PAR 236/7/4/3, 5, DUN 37/1/10, FRE 520/31, 33, 36.

[7] RYE 66, passim; E. 190/739/28, 740/25.

[8] Dulley, loc. cit., 54; RYE 47/93.

[9] E.S.R.O. RYE 1/4/347; Manwaring Baines, op. cit., 228.

[10] *Ibid.*, 203.

[11] P.R.O. S.P. 12/39/11.

Herrings " taken at Yarmouth " were caught in the rich fishing grounds of the North Sea to which two " northern voyages " were organised yearly from Brighton, Hastings and Rye—to Scarborough in June, July and early August for cod, and to Yarmouth in late September, October and November for herring.[1] The catch was mainly sold at Scarborough and Yarmouth to agents of the London fishmongers, but part was clearly shipped home.[2] Although Irish fishing grounds were fitfully visited and links existed with the Bridport fishery,[3] the northern voyages remained for these Sussex fisheries " the greatest means of the year for their maintenance."[4] " Newland fish " was imported,[5] but no evidence exists of direct involvement in the Newfoundland fishing ground. A common fishing cycle had evolved, although differences of tackle and catch existed, principally the emphasis at Rye during the summer on trammel fishing for plaice, and at Hastings and Brighton on trawl fishing for mackerel.[6]

By the 1560s the employment generated at Rye, Hastings and Brighton by seafishing was of crucial economic and demographic importance. At Rye in 1565 the heads of 225 households, out of a total of 530, were returned as being fishermen. The same return ascribed over half the households in Hastings to fishermen, 146 out of 280.[7] At Brighton, estimated to contain 200 households in 1565, 137 men were reported to be away at Scarborough in July 1570, leaving in the port only 11 men suitable to join the 22 already impressed.[8] The fishing industry was clearly labour-intensive, and the northern voyages in particular made such heavy demands that seasonal labour was recruited from local villages. Such men, overcome by sickness and cold, were sent home by land from Yarmouth to Udimore in 1610, to Preston in 1612, to Lindfield in 1616 and to Angmering in 1633.[9]

The absence of so many men on the Yarmouth voyage affected the seasonality of marriage in the three fishery towns. In Wealden parishes marriages were most frequent in May and June, and in October and November, before and after a period of intensive agrarian employment. By contrast at Brighton 45 per cent of marriages between 1581* and 1640* occurred in November, December and January, compared with 24-25 per cent in the Weald. In All Saints parish, Hastings, these winter marriages accounted for 43 per cent and in St. Clements parish for 34 per cent. At Rye the low figure of 27 per cent. suggests that by 1640 either the Yarmouth voyage or the fishery as a whole was in decline. At Brighton in 1641-60,* when the Yarmouth fleet expanded in some years to 50 sail, 54 per cent. of marriages were registered in these winter months. Clearly the return of the Yarmouth fleet and the payment to each fisherman of his " share " was an economic focus comparable to the harvest in the Wealden hinterland and an especially propitious moment for marriage and the setting up of a household.[10]

The size of the annual fleets from Rye to Scarborough and Yarmouth[11] is some guide to the overall prosperity of the fishery there. These fleets seem to have been at their largest in the early 1550s. In 1551-6 about 30 boats set out annually to Scarborough, although in 1555 41 may have sailed. The Yarmouth fleet built up from 14-24 boats in 1545-50 to 38 in 1553 and to 41 in 1554. Since on average one master, 11 or 12 men and two boys crewed each boat

[1] Dulley, loc.. cit., 43-4; C. Webb & A. E. Wilson, *The ancient customs of Brighthelmston 1580* (1952), 16-19.
[2] E.S.R.O. RYE 47/44/21; S.P. 12/39/11.
[3] E.S.R.O. RYE 47/16/13, 118, 47/30/33-4, 29, *passim*.
[4] E.S.R.O. RYE 47/135.
[5] P.R.O. E. 190/748/24.
[6] Dulley, loc. cit., 41-5.
[7] P.R.O. S.P. 12/38/28.
[8] P.R.O. S.P. 12/39/11, 12/71/76.
[9] Kent Archives Office, CP Y2/14, 16, 36; *Sussex Notes & Queries*, vol. 4 (May, 1933), 184.
[10] Brent, op. cit., 75-7, 311-2.
[11] Annual details of masters sailing to Scarborough are given in RYE 60/5-10 (1541-69, 1575-87, 1602-5), 62/1-3 (1590, 1597-8) and 62/4-9 (1606-14), and to Yarmouth in RYE 147/1 (1530-69) and 1/4-14 (1571-1616, 1618-21, 1623-59). From 1575 details of the crews are also given with the Yarmouth masters.

to Yarmouth in 1575-80, at least 360 masters and men probably sailed to Scarborough in the early 1550s, and 450 to Yarmouth. That the size of these " northern " fleets at Rye in the early 1550s was symptomatic of a wider prosperity is suggested by the General Brotherhood of the Cinque Ports electing in July 1554 an additional and fourth Bailiff to supervise the conduct of their fishermen at Yarmouth.[1]

This level of activity was not sustained. Compared with 1553-4 the size of the Yarmouth fleet fell somewhat. In 1559-66 25-30 boats sailed, 20-25 in 1568-78 and 25-30 in 1579-96, although numbers were slightly higher in the Armada years. The labour-force engaged shrank accordingly. More severe was the contraction of the Scarborough fleet which numbered 10-17 in 1559-68, but fell to four in 1569 and to two in 1574. Thereafter until 1614, when information ceases, the Scarborough fleet never exceeded ten sail. In 1572 the decline of the Scarborough voyage was ascribed to a glut of imported cod and ling.[2] More generally, the recurrence of warfare and privateering in the Channel and the Straits, encouraged by civil war in the Netherlands and France, laid fishermen open to pillage, capture and impressment. In July 1557 the General Brotherhood lamented " For that theire is warres . . . almost none of our Fysshermen of the portes wylbe at Yermoth this yere," and in 1559 a jury could not be empanelled " by reason the men of the portes there beying in Fysshinge were taken up to the Queene's warres."[3]

From the 1590s, however, the Yarmouth fleet suffered a further and far more serious contraction from 25-30 in 1579-96 to 14-18 in 1600-21 and 7-11 in 1623-49. In 1651 no boat sailed and in 1652 only one; five made the voyage in 1658 and 1659. Significantly in 1596, 1626 and 1629 the boats setting out for Yarmouth still included almost all the larger fishing boats returned in those years as being based at Rye.[4] In January 1608 only 16 fishing boats were reported as being at sea, and in September 1608 17 sailed for Yarmouth.[5] A petition drawn up about 1620 lamented the recent decline of the total fleet from 40 to 16 or 18 sail.[6] But by 1653 when ten fishing boats of 12-35 tons were returned as being " at home," not all the shrunken fleet was still committed to the voyage.[7] The labour-force shrank. Only 66 " mariners and fishermen " were listed in 1626 and 52 fishermen in 1629. In 1660 only 15 fishermen were rated for a comprehensive demobilisation tax.[8]

A decline in local fishing is also suggested by a fall in the volume of fish sold in the fish-market at Rye.[9] Sales to agents of the London fishmongers (usually measured in " seams ") were normally distinguished from those made to " strangers " and to local people (usually measured in " dosses "). In 1582-5 sales totalled approximately 3,100, 4,300, 5,900 and 4,500 seams. The heavy sales in 1584 were a prelude to the despatch to Yarmouth in 1585 of the largest fleet since 1562. The surviving evidence points thereafter to a fall in sales between 1599 and 1620 from 3,300 to 1,200 seams. In 1607, however, 4,000 seams were bought, a peak coincident with a bad harvest which may have swollen demand locally and in London. Sales measured in dosses also declined.

About 1620 it was alleged that many of the surviving fishermen " are ready to beg and starve for want and . . . forsaking the town have left their children to a parish charge."[10] Almost all the fishermen and seamen identified in the demobilisation tax of 1660 were exempted from

[1] F. Hull (ed.), *A Calendar of the White and Black Books of the Cinque Ports 1432-1955* (1966), 249.
[2] RYE 47/2/35.
[3] Hull, op. cit., 255, 258.
[4] E.S.R.O. RYE 47/53/7 (1596), 47/106 (1626), 47/110 (1629).
[5] RYE 47/71/9.
[6] RYE 47/93.
[7] RYE 47/147.
[8] RYE 82/82.
[9] RYE 66, passim.
[10] RYE 47/93.

the hearth tax in 1663.[1] This fall in the numbers and purchasing power of fishermen coincided with a decline in retail trading and in the import of grain, wine and groceries. About 90 shops were licenced in the 1570s, and about 85 in the early 1590s. Their number fell to 60-65 in the early 1620s and to 50-55 in the early 1630s. Over the same period brewers and bakers declined from 13 to five or six. Eight vintners were in business in the 1570s, but none were licensed after 1624.[2]

Clearly the decline at Rye of the fishing fleet and of the range of economic activity dependent upon it coincided with the failure to arrest the decay of its harbour. That inadequate harbourage was the major cause of the fishery's decay is further suggested by the very different fortunes of the fisheries at Hastings and Brighton which, although close enough to have shared any loss from war, impressment, piracy and deteriorating fishing grounds, did in fact enjoy a period of heightened activity between 1600 and 1660—at least intermittently.

At Hastings in 1565 25 fishing boats were listed, of which 11 were between ten and 20 tons and capable of making a northern voyage.[3] Between 1576 and 1581 the fleet was returned as being 16 strong, although only the larger boats may have been listed.[4] In September 1625, however, 24 boats sailed for Yarmouth, carrying 247 masters and men and 76 boys. The fleet was twice the size of that setting out from Rye.[5] In 1627 the mayor of Sandwich claimed that there were " more fishermen in Hastings than in any other of the Ports."[6] The fleet expanded further until the Civil War. In 1638 27 boats sailed for Yarmouth and 33 in 1641, the latter carrying 396 masters and men and 76 boys.[7] This heightened vitality was not entirely maintained after 1641; in 1653, 1654 and 1657 the Yarmouth fleet numbered 21, 23 and 22 vessels.[8]

At Brighton in July 1570 seven boats of 45-60 tons were claimed to be away fishing at Scarborough with 137 men, leaving in the port only 11 men suitable to join the 22 already impressed. These figures suggest a more modest industry than the 80 ships, 400 mariners and 10,000 nets mentioned in 1580.[9] Until recent disruption by warfare and piracy in the Channel the fishery was alleged in 1626 to have employed 60 boats, sent 28-30 vessels to the North Sea and brought £7,000 or £8,000 annually into the town. If the Hastings fleet is any guide, then the Brighton fleet probably expanded before the Civil War. Certainly in 1653, 1657 and 1658 50, 30 and 50 Brighton boats were given naval protection to the North Foreland.[10] Such fleets of 50 sail, requiring to be crewed by perhaps 600 masters and men, were the largest recorded between 1540 and 1660, and their impact on the marriage pattern in the port during the 1640s and 1650s has already been explored.

At Rye the ownership of the fishing fleet was largely in the hands of practising fishermen, who as working " masters " were responsible during the northern voyages for the crews of boats which they either owned or part-owned. Few men without personal experience of fishing seem to have invested in the fleet. Returns of owners at Rye made in 1565, 1580 and 1626[11] suggest that no monopolists controlled the industry, either from within or without. In 1580 the masters and owners of 27 of the 31 largest boats were listed. Only two masters did not own either wholly or partially the vessel which they commanded. The largest pluralist, Thomas

1 RYE 83/2-4.
2 RYE 65/1-127.
3 P.R.O. S.P. 12/38/28.
4 *V.C.H.*, ii, 146.
5 RYE 47/1, 1/11/91.
6 RYE 47/109.
7 CP Y4/3; W. D. Cooper & T. Ross, " Notices of Hastings," *S.A.C.* vol. 14 (1862), 95.
8 CP Y4/17, 20, 25.
9 Webb & Wilson, op. cit., 9.
10 *V.C.H.*, ii, 157, vii, 246.
11 S.P. 12/38/28 (1565); RYE 47/24/7 (1580), 47/106 (1626).

Chiswell, owned two boats and part of a third. When a Brotherhood of Seamen was proposed, all the four wardens nominated and 11 of the 16 Elder Brethren had been master-owners in 1580.[1] At Hastings, and probably at Brighton, ownership was similarly dispersed.[2]

Many of these master-owners combined freight-carriage with fishing, and some also traded personally in salt and seacoal. In 1634-41 at Hastings and Rye almost all seacoal cargoes, and much other freight besides, were carried in boats which sailed to Yarmouth under the same masters.[3] At Rye master-fishermen also engaged in the ferrying of passengers to and from Dieppe.[4] That local freight-carriage was interrupted by the Yarmouth voyage is suggested by a lull during the autumn in iron shipments from eastern Sussex—in January-February 1,760 tons, in March-April 1,242, in May-June 1,752, in July-August 1,749, in September-October 387 and in November-December 1,560.[5] Participation in freight-carriage is also indicated by a survey of ships " trading the waye of merchandise " at London between Michaelmas 1571 and 1572,[6] which listed 32 from Rye, 24 from Hastings, two from Winchelsea, two from Pevensey (" Meresey "?), 14 from Newhaven with Meeching, 22 from Brighton and eight from Shoreham. Thus the predominantly fishing ports of Hastings and Brighton possessed a larger fleet trading with London than the predominantly commercial ports of Newhaven and Shoreham, which suggests that many of the ships " trading the waye of merchandise " from Hastings, Brighton and Rye were also engaged in Channel and North Sea fishing. Moreover the 1565 return listed only 13 boats at Rye " occupied in merchandise or passage, but gave a further 21 as fishing boats of 12-27 tons going " daily to the seas."[7] This combined fleet of 34 vessels equates well with the total of 32 visiting London in 1571-2. The same return listed seven " cryars " and 25 fishing boats at Hastings. Brighton-based ships were active in the commerce of Arundel, Shoreham and Newhaven, and Hastings-based ships in the trade of Pevensey and Winchelsea.

The involvement of fishing boats in freight-carriage probably reduced significantly the number of local merchantmen. At Hastings four cryars were listed in 1563 and seven in 1565, while in 1626, 25 out of the 28 boats returned as being the largest in the port were engaged in North Sea fishing.[8] At Rye 13 " Barks and cryars " were returned in 1565; between 18 and 20 merchantmen were listed in 1580 and 1587, ten in 1596, and between five and six in 1626, 1629 and 1630.[9] Although none of the 14 ships based at Newhaven with Meeching in 1571-2 were probably fishing boats, most of the 22 based at Brighton probably were. The port-books suggest that not more than one or two freighters, of whatever kind, were normally based at Hove, Eastbourne, Seaford and Pevensey.

The fisheries generated much ancillary employment. Many sprats and herrings were pickled, packed and barrelled and these activities were subject at Rye to official regulation.[10] The making of rope and net was widespread.[11] In 1581 it was claimed that men came from Brighton,

[1] RYE 99/6.

[2] S.P. 12/38/28; W/A/3/107, W/A/4/299, 325.

[3] The port-books covered are, at Hastings Christmas 1634-6 and 1637-9 (overseas) and Christmas 1638-9 (coastal), and at Rye Christmas 1634-7 and 1638-9 (overseas) and Christmas 1635-6, 1638-9 and 1640-1 (coastal). Details of masters sailing to Yarmouth are given for Rye in RYE 1/12-13 (1634-41), and for Hastings in CP Y4/3 (1638) and in Cooper & Ross, loc. cit., 95.

[4] RYE 1/12/124.

[5] The port-books used are, at Newhaven Michaelmas 1588-9, 1590-1 and 1594-5, at Pevensey Michaelmas 1592-5 and 1598-9, at Hastings Michaelmas 1584-5, 1592-4 and 1599-1600, at Winchelsea Michaelmas 1599-1600, and at Rye Christmas 1629-30, 1632-3, 1635-6, 1638-9 and 1640-1.

[6] P.R.O. S.P. 15/22.

[7] S.P. 12/38/28.

[8] S.P. 12/28/2, 12/38/28; *V.C.H.*, ii, 156.

[9] S.P. 12/38/28 (1565); RYE 47/24/7 (1580); S.P. 12/198/29 (1587); RYE 47/53/7 (1596), 47/106 (1626), 47/110 (1629), 47/114 (1630).

[10] E.S.R.O. RYE 1/3/14.

[11] W/A/13/32; Manwaring Baines, op. cit,. 239.

Newhaven, Eastbourne, Lydd, Romney, Sandwich and Thanet to have their barques and fishing boats built at Rye, Hastings and Winchelsea which could draw on Wealden timber and expertise.[1] The export through Rye of frames, for a mill, a bridge, a house and a pier, has already been noted. In 1589 18 shipwrights at Rye complained of competition from French refugees.[2]

So pervasive economically was the influence of the fishing industry at Rye, Hastings and Brighton that fluctuations in the prosperity of their fisheries seem to have been of crucial demographic importance. At Rye between 1556* and 1564* mortality from influenza and plague helped to cause burials to exceed baptisms by almost 1,400.[3] The population of 2,468 inhabitants in 530 households returned for the town in 1565 may therefore have been still abnormally low.[4] In 1576 448 inhabitants, occupying 407 houses, were assessed on land or goods towards local taxation.[5] By contrast, only 281 men were listed for Watch and Ward in 1652, while just under 300 householders contributed to the demobilisation tax in 1660.[6] But the clearest evidence of a sharp fall in households since 1565 is provided by the hearth tax returns for 1663 in which 140 households were charged and a further 141 were exempted. Another 27 houses were returned as " empty."[7] A fall is also apparent in the numbers listed for local taxation and for militia service in the latter decades of the period.[8]

Evidence of this character, although less abundant, points to an expansion of population at Hastings and Brighton. In 1565 Hastings was returned as possessing 280 households, which must have contained about 1,300 inhabitants if the average household size at Rye in that year held good in Hastings.[9] In 1676 the Compton Census gave an adult population of 1,072 in the two major parishes.[10] Brighton in 1565 was returned as containing 200 households;[11] in 1664-5 268 households contributed to the hearth tax and many others were probably exempted.[12] " Near 600 Families " were claimed for the town about 1650 and " about 4,000 souls " in 1657.[13] About 3,300 " souls " may have been resident in 1676 if the Compton Census estimate of 2,000 communicants is approximately correct. The apparent size of the population increase at Brighton could well reflect the heightened activity of its fishing industry in the 1650s when its Yarmouth fleets were the largest recorded in eastern Sussex between 1540 and 1660.

These demographic trends are broadly mirrored in the parish registration of the three fishery towns.[14] At Rye conceptions leading to baptism and marriages averaged annually 127.4 and 42.6 respectively in 1551-5,* but fell to 99.9 and 32.9 in 1581-90* and then slumped to 62.0 and 15.8 in 1631-40.* That conceptions leading to baptism and marriages reached this early peak at Rye in 1551-5*, a period free from major epidemic, is especially significant since the size of the " northern " fleets despatched from the port during those years suggests that the fishery enjoyed an interlude of vitality not subsequently attained during the period. The decline in household totals confirms that this marked fall in conceptions leading to baptism and in marriages was partially due to a declining population, although a steadily more widespread postponement of marriage probably also occurred as economic opportunities in the port grew bleaker for the young worker. At Hastings these trends were reversed. Annual conceptions

1 *V.C.H.*, ii, 235.
2 RYE 1/5/160.
3 Brent, op. cit., 328.
4 P.R.O. S.P. 12/38/28.
5 E.S.R.O. RYE 1/4/228-32.
6 RYE 47/146, 82/82.
7 RYE 83/2-4.
8 RYE 1/7/535-43, 1/10/73-82, 1/11/44-9, 85/3-19.
9 S.P. 12/38/28.
10 Cooper, loc. cit., 146.
11 S.P. 12/39/11.
12 P.R.O., E. 179/258/18.
13 J. D. Parry, *The coast of Sussex* (1833), 57; C. E. Welch, " Commonwealth unions of benefices in Sussex," *Sussex Notes & Queries*, vol. 15 (1959), 116.
14 Brent, op. cit., 328-30.

leading to baptism and marriages averaged 49.6 and 15.8 in 1561-70* but reached 75.8 and 18.2 in 1631-40*. From 1618-9 these annual totals become generally higher than those at Rye which had been estimated to contain in 1565 almost twice as many households as Hastings. At Brighton, where registration is fragmented, annual conceptions leading to baptism rose from 55.0 in 1561-70* to 56.5 in 1621-30,* to 63.8 in 1631-40* and to 75.4 in 1641-50.*

A further contrast is apparent. At Rye in 1556-64,* when influenza was succeeded by plague,[1] just over 1,000 conceptions leading to baptism were registered and almost 2,400 burials, the latter being less than 100 short of the total population returned in 1565. The only decade in which burials did not exceed conceptions leading to baptism between 1571* and 1640* was 1601-10*; in 1581-1600* the excess was 431 and in 1611-40* 446. Clearly in 1556-64* the imbalance was partially made good by immigration, aided by an apparent spate of marriage and re-marriage, otherwise the community would have disintegrated. After 1581,* however, falling household totals and declining registration levels suggest that no such immigration took place on any scale. In 1596 Henry Kennett, a shearman in Rye who owned three houses outside the walls, advised his wife in his will to depart to London " for this place will not bee for her to gayne anything."[2] By contrast at Hastings conceptions leading to baptism exceeded burials in every decade between 1601* and 1640.* Brighton achieved a substantial surplus between 1611* and 1640,* although burials seem to have been under-registered by comparison with marriage levels.

In the earlier decades of the period the death-rate at Rye must have been extremely high. The town lay on a congested and eroding hilltop, inadequately supplied with water and ringed with marshland, the traditional haunt of ague.[3] The close commercial contacts maintained by land and sea with London increased the vulnerability of such a community to plague. In 1563* 705 inhabitants were buried, and in 1596* 452, mostly during plague outbreaks, compared with 183 and 108 at Hastings. Thereafter, as depopulation slackened human pressure on its environment, epidemic mortality played a less cataclysmic role.[4] The plague epidemic of 1624-5* did however disrupt commercial life and precipitate the final departure of some businessmen.[5]

Grain shortage aggravated the port's problems. Besides its normal sources of grain supply in Sussex and east Kent, Rye until about 1600 sometimes tapped Dorset, East Anglia and Lincolnshire for wheat and malt.[6] In harvest years when the price of wheat was high in other counties, such as 1555, 1556, 1573, 1576 and 1586, " great want and scarcyty of all kind of grayn " seem to have occurred.[7] High grain prices in 1594-7* precipitated a crisis of supply. In 1581* about 1,000 quarters of wheat and 2,500 quarters of malt had been unshipped.[8] But in September to December 1595* only 80 quarters of wheat, 396 of malt and 176 of wheat and malt were imported. In 1596* no wheat dribbled in until mid-December, and in all 184 quarters of wheat and barley, 723 of malt and 927 of rye were unshipped.[9] In April 1596 the corporation actually sanctioned the seizure of 20 quarters of barley from a boat bound for London.[10] In 1608* failure of local supplies obliged Rye's purveyor to buy grain " in foreign Counties, in London and in other markets."[11]

[1] *Ibid.*, 275-7, 328.
[2] W/A/10/21.
[3] W. Holloway, *The history and antiquities of the ancient town and port of Rye in the county of Sussex* (1847), 333-6.
[4] Brent, op. cit., 275-7, 328-30.
[5] RYE 65/122.
[6] RYE 1/1/41, 1/2/2.
[7] J. Thirsk (ed.), *The agrarian history of England and Wales*, iv (1967), 818-21; RYE 1/1/40 (1555*), 1/2/2 (1556*), 47/7/68 (1573*), 47/16/30 (1576*), 1/5/100 (1586*).
[8] RYE 66/15-26.
[9] RYE 66/43-48.
[10] RYE 47/53/12.
[11] RYE 47/78.

From the 1590s the corporation of Rye frequently lamented the town's declining prosperity.[1] The wholesale liquidation of municipal assets to pay for unsuccessful harbour improvements has already been noted, so too the decline of the fishing fleet and of retailing. That just over half the households in the town were exempted from the hearth tax in 1663 underlines the extent of individual poverty. The progress of urban decline is apparent in the changing attitude of the corporation towards demolition. Heavy fines for unauthorised demolition were instituted in 1616, but in 1658 the corporation itself initiated the removal of a ruinous house near the fishmarket.[2] In 1639 the machinery of public order was contracted by a reduction from 12 to four in the number of constables, and in 1649 a proposal was made " for the laying in of Bromehill to our parish towards the relief of our poor "—Broomhill being a defunct parish composed of very valuable marshland.[3] By contrast, the early seventeenth century saw an expansion at Hastings of the built-up area and rebuilding, sometimes in brick.[4]

By comparison with the monolithic economic character of Brighton, Hastings and Rye in which most employment was ultimately dependent on maritime pursuits, the economy of Lewes was more broadly-based and its employment pattern diversified, a pattern which reflected the town's importance as the major distributive, administrative and cultural focus in eastern Sussex.

Already by 1640 its vitality as a market centre may have seriously undermined others at Ditchling, Alfriston and Seaford, where no reference to marketing has been encountered during the period. By 1750 the market area of Lewes had probably expanded to absorb all or part of areas formerly served by defunct centres at Seaford, Alfriston, Eastbourne, Ditchling, Heathfield and Hailsham.[5] The importance of Lewes as a river and road centre has already been stressed, so too the key role of its outport at Newhaven in the commerce of eastern Sussex. Lewes's marketing role was further enhanced by its position at the junction of the downland and the Wealden regions, each with its distinctive range of marketable products. By the early seventeenth century the town contained more victuallers and taverners than any other in Sussex.[6]

Lewes played a major role in the corn trade of eastern Sussex, its corn market being best sited to supply the rapes of Lewes and Pevensey. The heavy export of corn through Newhaven to London and the west country, to the United Provinces, France and the Mediterranean was partially controlled by Lewes dealers, some of whom were charged in 1638 with the illicit shipment of grain.[7] Among those who had earlier " ventured " wheat into Spain was John Stade, a weaver from Southover.[8] The town was also a centre for the storage of grain. In 1603 the earl of Dorset employed a " granator " there, and his will projected a sumptuous and fitting charity in the town—a granary to be built at a cost of £1,000 and to be endowed with a further £2,000 for the purchase of grain " against times of dearth."[9] Milling, malting and brewing were carried on in Southover and Cliffe.[10] Among the brewers were James Bush who was " brewer to Lord Buckhurst's brewhouse in Southover,"[11] Thomas Trayton who in 1619 purchased from the earl of Dorset 406 quarters of rent-barley,[12] and Thomas Pelland who in 1577 rebuilt " The Vine " with a handsome Renaissance porch.[13]

1 RYE 47/74/3, 47/93, 47/102, 47/115, 47/127.
2 E.S.R.O. RYE 1/9/558, 1/14/281.
3 RYE 1/12/339, 1/13/267.
4 Hastings Museum, Hastings Corporation MSS. C/A(a)/1, 2; W/A/21/179, W/A/26/25.
5 Cowley, op. cit., 157, 159.
6 Ibid., 198.
7 QR/E/41/21.
8 W/A/12/251.
9 Kent Archives Office, Sackville MS. U269/A/2/1; Collins, op. cit., 295.
10 Ep II/5/17/51, Ep II/5/6/109; S.A.T., M241, D275.
11 Ep II/5/5/350.
12 E.S.R.O., ADA 45/113; *C.S.P.D.* (1603-10), 416.
13 *V.C.H.*, vii, 12.

Lewes was also a centre for the distribution of leather, fish and iron. In 1652 its leather market attracted tanners from Waldron and Rotherfield to the east, and in 1654 from Steyning to the west.[1] At its fish market much of the local catch of the Brighton fishing fleet was probably sold to Wealden buyers. " Juggs Road " which connects Brighton and Lewes traditionally commemorates the carriage of fish along it by women. Lewes businessmen took part in the export of iron, iron products and ordnance, especially to the west country. In 1573 " one John Harman of Lewys " was cited by Ralph Hogge as a merchant who illicitly exported ordnance from Newhaven to France and Flanders.[2] Much dealing in armaments was clearly conducted within Lewes. There in 1576 Sir Thomas Griffin and Mr. Turberville purchased for £300 41 tons of shot from Thomas Henslowe of Buxted, and in 1578 William Nutshawe of Southampton and John Martin of Torbay bought guns to equip a ship.[3] Lewes dealers also exported overseas composite cargoes of local origin—tan, laths, ashes, broken glass, wool clippings and shreds, skins and bones.

The wide range of English and foreign consumer goods, which constituted the bulk of the inward coastal and overseas trade of Newhaven, was almost entirely imported by Lewes men for sale in the town or in its hinterland. The slight import of such commodities at Shoreham with Brighton and Pevensey with Eastbourne suggests that Lewes was the principal centre for their sale in the rapes of Lewes and Pevensey. In 1599 William Kidder, a tailor from East Grinstead, bequeathed wares worth £40 which he had bought in Lewes.[4] In 1593 Thomas Foster, a servant at Halland in East Hoathly, had a doublet made in Lewes.[5] " Stuffs and laces " for the wedding clothes of a Cuckfield bride were supplied from Lewes in 1640.[6] In 1580 glass was fetched from Lewes for the repair of Lindfield church, and in 1594 lead and solder.[7] In 1656-8 Giles Moore, the rector of Horsted Keynes, bought medicines, blankets and a clock in the town.[8]

The many commodities flowing through Newhaven fostered in Lewes probably the most significant group of locally-based merchants in eastern Sussex. Some participated in almost the full range of this commerce. Such was Richard Bishop, a Constable in 1591 and 1599, who during that decade exported iron and ordnance to London, the west country, St. Malo and La Rochelle, and imported wines, salt and fish. Between 1613 and 1638 Ralph Akehurst, a Cliffe merchant, traded coastwise in groceries and grain and overseas with Ireland, Dieppe, Calais and Flushing in grain and other commodities. Equally varied were the goods dealt in by William Peake, a Constable in 1638, and by George Bindles, a Constable in 1612 and 1620.[9] The most celebrated Lewes-based entrepreneur, however, was probably John Stansfield, the maternal grandfather of John Evelyn.[10] During a long commercial career which can be traced between 1580 and 1613 he seems to have been especially active in the export of iron and grain to the west country and wheat to Marseilles, and in the import of salt, wine and fish. He was clearly the owner, or part-owner, of " The Elinor Stansfyld," a merchantman of 50 tons based at Newhaven.[11] He married his daughter to Richard Evelyn, a High Sheriff for Surrey and

[1] QR/E/95/15, 16, QR/E/106/10.
[2] Straker, op. cit., 150.
[3] R. A. Foakes & R. T. Rickert (ed.), *Henslowe's Diary* (1961), xix; *A.P.C.* (1577-8), 338.
[4] W/A/10/200.
[5] W/A/9/15.
[6] Ep II/5/17/56-7.
[7] E.S.R.O., PAR 416/9/1/1, 17.
[8] R. Bird (ed.), *The Journal of Giles Moore*, Sussex Record Society, vol. 68 (1971), 18, 25, 137.
[9] L. F. Salzman (ed.), *The Town Book of Lewes 1542-1701*, Sussex Record Society, vol. 48 (1946), 38, 46, 49, 54, 63. Details of their trading are derived from the surviving port-books for Newhaven (E. 190).
[10] J. Comber, *Sussex Genealogies (Lewes Centre)* (1933), 66.
[11] E. 190/754/18.

Sussex. His pious works included the rebuilding and endowment of the parish church of South Malling.[1]

Lewes was also an important centre for livestock trading. In 1603 and 1606 Walter Everenden from Sedlescombe bought runts at the Whitsun fair there.[2] By the 1690s farmers from the vicinity of Ashburnham patronised both the Whitsun and the Michaelmas cattle fairs as well as the sheep fairs in September when " great quantities of sheep of all sorts " were sold.[3] By the early seventeenth century many butchers lived in Lewes, at least 43 being resident there at some period between 1601 and 1640.[4] In part they may reflect the high level of affluence to be expected in such a community, but some were probably engaged in livestock trading over a wide area. " Holter and Matthew," who were prominent Lewes butchers, bought 144 sheep at Laughton in 1608.[5]

The town's vitality as a distributive centre is evident from the prominence of mercers, grocers, haberdashers, drapers, tailors and shoemakers among its governing elite by the early seventeenth century,[6] and from the diversity of skilled craftsmen who produced for a specialist or affluent demand—pointmaker, cutler, goldsmith, wiredrawer, pewterer, gunsmith, bellowsmaker, locksmith, upholsterer and watchmaker.[7] Such a galaxy of skills was hardly to be found in the three fishery towns. Between 1585 and 1622 five benefactors gave £210 to the town in trust for the assistance of young or needy tradesmen and artificers.[8] Lewes was also a minor textile centre, producing for local consumption rather than for export through Newhaven. Besides a colony of general weavers,[9] silk and dornix weavers were resident.[10] " Frames for serge-makers " were imported through Newhaven, although their destination is unknown.[11] Dye-works were located in the town which were patronised by residents from Chailey and Fletching,[12] and a group of glovers took advantage of the water supply in the adjacent brookland.[13]

Secular and ecclesiastical administration further diversified Lewes's employment structure. The town housed the county jail. From 1504 the county court was held alternatively at Lewes and Chichester. Quarter sessions were held there in rotation and assizes on occasion.[14] The archdeacon's court based at Lewes extended its jurisdiction across the three eastern rapes, except for the peculiars of Battle and South Malling.[15] Regular legal activity nurtured a body of resident lawyers, among whom was John Rowe, antiquarian and estate steward to Lord Bergavenny.[16] Lewes offered other professional services. The grammar school was founded, or refounded, in 1512, and in 1647 John Everenden of Sedlescombe " layd out at Lewes for Bens boord, scooleing, etc."[17] An apothecary was Constable in 1631.[18] In 1624 a Lewes saddler bequeathed a "french booke of Surgery."[19] More formally trained was John Panton, a Lewes physician,

[1] W. H. Godfrey, " The Stansfield effigies, Lewes," *Sussex Notes & Queries*, vol. 7 (1938), 1.
[2] E.S.R.O., FRE 520/131.
[3] E.S.R.O., ASH 1178/259-260.
[4] Brent, op. cit., 107.
[5] B. L., Add. MS. 33142/102; S.A.T., A87; Salzman, *Town Book*, 45, 48, 54-5.
[6] Ibid., 47-65; W/A/11-27, passim; E. H. W. Dunkin (ed.), *Marriage licences at Lewes 1586-1642*, Sussex Record Society, vol. 1 (1901), passim.
[7] *Ibid.*, 34 (pointmaker), 50 (cutler), 120 goldsmith), 172 (wiredrawer), 219 (pewterer), 227 (gunsmith); W/B/3/206 (bellowsmaker), W/A/15/1 (locksmith), W/A/26/28 (upholsterer); QR/E/36/112 (watchmaker).
[8] T. Horsfield, *The history and antiquities of Lewes* (1824), i, 313-4.
[9] Brent, op. cit., 107.
[10] *V.C.H.*, ii, 248.
[11] E. 190/763/4.
[12] QR/E/16/71; W/A/8/164.
[13] W/A/20/100; Brent, op. cit., 107.
[14] *V.C.H.*, vii, 15-16.
[15] F. W. Steer, *A descriptive report on the Quarter Sessions, other Official, and Ecclesiastical Records . . . of East and West Sussex* (1954), 2, 92.
[16] W. H. Godfrey (ed.), *The Book of John Rowe*, Sussex Record Society, vol. 34 (1928), *passim.*
[17] *V.C.H.*, ii, 413; FRE 520/59.
[18] Godfrey, *John Rowe*, 14; Salzman, *Town Book*, 60.
[19] W/A/18/196.

who in the 1640s supplied medicines and advice to the Stapley household at Hickstead in Twineham and to the Dacre household at Herstmonceux.[1] Also resident was Thomas Twyne, who was " justly famed for the extent of his acquirements and successful practice as a physician."[2]

A number of local landowners chose to maintain houses in Lewes. The house " builte of stone " constructed in 1579 for George Goring, Receiver-General of the Court of Wards and Liveries, was valued at £2,100 in 1594. William Newton and Sir Henry Goring each erected a substantial town-house nearby in 1572 and 1583.[3] During these decades the " Priory House " in Southover was a residence of Lord Buckhurst; in 1586 townsmen locked in dispute agreed to " staye the matter until the Lord of Buckherst came home."[4] In 1625 Sir John Shurley of Isfield and Sir Thomas Pelham of Halland held houses in the High Street.[5] Besides the convenience of a house in the commercial, political and professional capital of eastern Sussex, the vicinity of Lewes offered facilities for racing, hunting, fishing and fowling. Moreover, later commentators emphasised that its site was both healthy and attractive. Defoe described it as a " fine pleasant town, well built, agreeably scituated in the middle of an open champaign country . . . on the bank of a little wholesome fresh river," while Dean Milles thought it " very neat dry and pleasant and there are a good many well-built houses in it."[6] Only later did fashion allow Brighton far to outstrip its neighbour in size and in sophistication.

Huzel has suggested a population of 1,850 for Lewes in 1676, derived from the Compton Census.[7] If Cornwall's estimate of 1,500-1,600 for 1524-5 is at all accurate, then the town can have experienced little sustained demographic growth during this period, in spite of its diversified economy, especially as Cornwall's estimate excludes Cliffe parish.[8] Any calculation, however, based on the 1524-5 lay subsidy rolls must be regarded as hazardous. What is reasonably clear is that by 1621-40* Lewes remained about equal in population with the three fishery towns. In five of its parishes—All Saints, St. Michael, St. John-sub-Castro, St. John Southover and St. Thomas, but excluding St. Anne for which registration is fragmentary—conceptions leading to baptism averaged annually 69.4 in 1621-30* and 68.8 in 1631-40,* compared with 63.2 and 62.0 at Rye, 69.3 and 75.8 at Hastings and 56.5 and 63.8 at Brighton.

CONCLUSION

The impoverishment and contraction of Rye between 1550 and 1660 underlines how dependent upon their harbourage were the fishery ports of eastern Sussex. From the 1660s Brighton was to suffer a similar fate as its fishing quarter below the shingle cliff was slowly overwhelmed by the sea. This sensitivity to the impact of a very local factor makes hazardous any attempt to generalise about the maritime communities of eastern Sussex. Each had its unique chronology of prosperity and decline, of demographic growth and contraction, which allows no tidy correlation with " national " economic and population trends. By contrast the much more broadly based economy of Lewes, serving the manifold needs of a wide region, supported a stabler community immune to the vicissitudes experienced by its coastal neighbours.

[1] Joseph Foster, *Alumni Oxonienses 1500-1714* (1892) 1112; E.S.R.O., HIC 467/184, XA11/1.
[2] Horsfield, op. cit., i, 319.
[3] *V.C.H.*, vii, 9-10, 45.
[4] Ep II/5/4/38.
[5] W. H. Godfrey, " The High Street, Lewes," *S.A.C.* vol. 93 (1955), 6.
[6] Daniel Defoe, *A tour through England and Wales* (Everyman, 1928), 129; E.S.R.O., XE6/34.
[7] J. P. Huzel, " Population change in an East Sussex Town: Lewes 1660-1800," *Sussex Industrial History*, vol. 3 (1971), 7.
[8] J. C. K. Cornwall, " English country towns in the 1520s," *Economic History Review*, 2nd series, 15 (1962), 60.

OLD BUXTED PLACE

By C. F. Tebbutt, F.S.A.

Buxted Place and Park have now been bought by His Highness Sheikh Zayed, President of the United Arab Emirates and Ruler of Abu Dhabi, as his official residence in this country. Among other changes that he wished to make was to enlarge the rather small lake to the SE. of the house (at TQ. 487226) and during the early part of 1973 this was done by mechanical diggers on the NW. side of the lake. This affected an area at the end of the well known lime avenue where the old mansion was supposed to have stood, facing down the avenue.

Macdermot[1] records the succession of the Manor of Buxted from medieval times, but the first mention of " Buxted Place " is at the time of its inclusion in a sale of the Manor to Richard and Edward Amhurst in 1620. Before that the Manor had been the property of the Waller family for ninety-eight years. The house is again mentioned in a lease of 1684. In 1711 Humphrey Fowle of Rotherfield purchased the property and sold it, in 1722, to Thomas Medley of Coneyborough who, Macdermot says " marked his ownership by pulling down the old mansion which stood on low ground at the end of the lime avenue, and by building the present house . . . near the church." This apparently was completed in 1725. Elsewhere Macdermot says that the old mansion was pulled down in 1722. No records appear to exist to prove the original building or appearance of the old mansion.

A close watch was kept as the 1973 excavation proceeded and it was soon apparent that it covered the site of former buildings, as stone and brick foundation walls began to appear as well as small sections of brick floors and square stone lined soakaway drains and ditches. At a place towards the south end what appeared to be the brick foundation of a square bay window, measuring 10 feet 9 inches by 5 feet 9 inches on the outside, could be seen. From the method of excavation it was quite impossible to recover any sort of plan, or even determine if this was the site of a house, or only of stables or outbuildings. An estate worker explained that more foundations existed just to the north. It was therefore only from the finds of building materials and pottery etc. that any evidence of the old mansion could be obtained.

All the stone revealed seemed to come from foundations or drains, and this was also the case with the bricks, although some were laid flat for floors. Most of the bricks were $8\frac{3}{4}/9$ x $4\frac{1}{4}/4\frac{1}{2}$ x $2\frac{1}{8}/2\frac{1}{4}$ inches in size and and were over fired, producing a semi-glazed surface, probably second quality goods. The main roofing material was almost certainly red plain tiles, $9\frac{1}{2}$ x $5\frac{1}{2}$ x $\frac{1}{2}$ inches in size, with tapered square nail holes. A few examples of Horsham type slates were found and a number of broken west country slates. When stone walls are taken down in this district, many blocks break up, and if there had been stone walls here, there would have been some signs of this. Again no bricks of good quality were found, although many of second quality were left *in situ* in floors. I therefore formed the definite opinion that the building had been timber framed. The only sign of an ornamental garden was a stone ball, $5\frac{1}{2}$ inches in diameter, once attached to a stone gate post cap, or a terrace wall.

[1] K. H. MacDermot, *Buxted the Beautiful* (1929).

THE FINDS

Finds threw more conclusive light on the date of the building. Many clay tobacco pipe bowls were found, mainly in the soakaway drains, and a large number of pottery sherds. Some of these I was able to recover while still stratified in the main building site, others at the ends of soakaway drains and ditches. Of all the datable finds none is earlier than the 17th century, or later than the early 18th, i.e. consistent with the destruction of the house about 1722. The main finds are described below:—

Ceramics. These are a very interesting collection and it is hoped they may form the subject of a future study. They include Bellarmine, Bristol, Lambeth, Southwark,and Wrotham wares, as well as many examples from local kilns, some of unusual and unidentified types.

Clay tobacco pipes. I am indebted to Mr. D. R. Atkinson for the following report: " All but one are of the late seventeenth century London type, and can be dated quite closely. This type is common in London and examples are known dated 1683. Those with the initials I H are particularly interesting as this type is very rare with moulded initials. These are the same as examples found at or near Lewes, and can be safely attributed to the maker John Holcom (of Lewes), who died in 1699. The odd one has a more upright bowl and the initials T H. These were made at Lewes also, the maker being Thomas Hannan (born 1697, died 1781). The pipe dates to c. 1720 . . . You can date your deposit to about 1690-1720. The small one is much earlier; about 1640 by its size."

Roofing slate. I am indebted to Mr. E. W. Holden for the following report on the slate found:—

" About twelve fragments of grey slate were recovered from and near the site of the demolished mansion. Most pieces are too small to have any distinctive features, but one has part of a hole, has the reduced " shoulders " at the head and is the right width of 4⅛in. for a slate that would originally have been *c.*9in. long (a very common size). They resemble, in colour and texture, slate found elsewhere in Sussex which propably was quarried somewhere along the south coast of Devon or Cornwall.[1] Such roofing slate was traded along the south coast from the SW. peninsula to the Channel ports during the medieval and early post-medieval periods, but without other evidence cannot be closely dated. The pieces found may not even belong to the building demolished in 1722 (though they may), as they could be debris remaining from an earlier building, or could have been brought in from some nearby demolished structure just for the purpose of being utilised as packing and levelling pieces in masonry footings or walls.

" Nevertheless, it is of interest to note Buxted as one of the few Wealden sites in Sussex where slate has been found, as most sites are close to the ports, or where there was good river access. It has to be borne in mind that a branch of the R. Ouse runs close by the Buxted site and it may be that slate was brought up as far as was possible at the time by water."

Window glass. There were many fragments of window glass, of domestic glass, the globular stem of a 17th century wine glass, and parts of many 17th century wine bottles were found.

Professor R. G. Newton, O.B.E., D.SC., F.S.A., kindly examined samples of the window glass and I am greatly indebted to him for the following report:

" The analytical results of the glass, obtained by the courtesy of the British Glass Industry Research Association, are us ander:—

Silica (SiO_2)	=55.5%
Potash (K_2O)	= 8.2%
Soda (Na_2O)	= 2.1%
Lime (CaO)	=23.2%
Magnesia (MgO)	= 5.6%
Alumina (Al_2O_3)	= 2.7%
Iron Oxide (Fe_2O_3)	= 1.1%
	98.4%

1 E. W. Holden, "Slate roofing in medieval Sussex," *Sussex Archaeological Collections* (hereafter *S.A.C.*), vol. 103 (1965), 67-78; J. W. Murray, " The origin of some medieval roofing slates from Sussex," ibid., 79-82.

"This glass is relatively high in potash, low in soda, and high in lime and magnesia. In this it differs markedly from nineteenth and twentieth century window glass, where the lime is less than 15%. There is also less magnesia, and the alkali is almost entirely soda. This is one of those glasses which mark the transition from the 'Forest' type, where the ashes from the wood-burning furnaces were used as the source of alkali for melting the glass,[1] and the later glasses where the alkali was imported as barilla. It would be of interest to know the date when the glass was installed in the building so that the date of manufacture might be assessed. The use of wood ash was still being advocated by Christopher Merret in 1662[2] but the import of barilla had become established by the end of the sixteenth century. Thus the transition period is diffuse and still ill-determined[3]; any study like this one will help us to explore the gap."

Wood. Coming from waterlogged conditions under the floor levels, in what might have been a filled in cellar, were a number of lengths of hardwood timber. Among them was a wooden trough, ten feet long, hollowed from a single length of hardwood and with solid ends.

Careful search was made for pottery or other signs of medieval or post-medieval occupation of the site, before the seventeenth century, but none was found. The conclusion must therefore be reached that the building found had been built in the early seventeenth century and pulled down about 1722. If any earlier Manor House ever existed it must have been elsewhere, perhaps nearer the medieval village.[4]

Prehistoric occupation

During the course of the excavation about 130 flint artifacts were picked up, some, and probably all, of Mesolithic date.

All the finds will be presented to the Barbican House Museum, Lewes.

In gathering the above information and recording it I am especially grateful for the help and cooperation of Mr. A. A. Schmid, agent to the estate, and to Mr. P. Harman, who assisted in many ways. Mr. and Mrs. F. G. Sheard and Mrs. D. M. Meades also gave valuable help.

1 W. E. S. Turner, "Studies in ancient glasses and glassmaking processes," Part V, Raw materials and melting processes, *Journal Society of Glass Technology* 40 (1956), T.277-300.

2 C. Merret, *The art of glass* (1662) (Translation in English of Neri's *L'Arte Vetraria*).

3 E. S. Godfrey, "The development of English glassmaking, 1560-1640" (1957), unpublished Ph.D. thesis, University of Chicago.

4 C. F. Tebbutt, "Two newly-discovered medieval sites," *S.A.C.* vol. 110 (1972), 31-4.

THE EXCAVATION OF A TURF BARROW AT MINSTED, WEST SUSSEX, 1973

By P. L. Drewett

A small, oval turf mound some 1.50 metres high was excavated on top of a natural knoll to the west of Stedham Common sand pit, Minsted (Fig. 1). *The central area had been robbed so no evidence for a burial was found. The finds consisted of flintwork, some being in Mesolithic tradition, and more, perhaps post-dating the barrow. Pollen analysis established aspects of the environment in the Early Bronze Age and exceptionally high concentrations of ivy in the Mesolithic horizon.*

INTRODUCTION

In August, 1973, the Department of the Environment invited the Institute of Archaeology, University of London, to undertake the excavation of this small barrow prior to its destruction by sand quarrying. The excavation was undertaken by the Sussex Archaeological Field Unit, under the direction of the author, in September, 1973. I should particularly like to thank the owners of the sand pit for permission to excavate. I should also like to thank my two principal assistants on the excavation, Richard Williams and Owen Bedwin, and the many archaeologists who visited the excavations and offered valuable advice; particularly Professor J. D. Evans, Dr. G. J. Wainwright, Miss P. A. M. Keef, Mr. E. Holden and Mr. R. Bradley. I am also indebted to Professor G. W. Dimbleby for his report on the pollen and Martin Millett for his report on the Romano-British pottery. Mrs. L. Drewett prepared all the illustrations.

GEOLOGY

The barrow is situated on the Folkestone Beds of the Lower Greensand. The soil is a well-developed humus-iron podzol, with a deep bleached layer and a thick accumulation horizon which extends into the undisturbed Folkestone Sands. The natural knoll on which the barrow was situated originated because of a local ferruginous concretion of the sand, a feature visible in the quarry section as it formerly existed to the east of the barrow. Until commercially planted with conifers, the site held heathland vegetation.

THE BARROW CEMETERY

The barrow excavated in 1973 appears to have been one of two outliers of the Iping Common barrow group. The whole group of twelve barrows is situated on Folkestone Beds heathland (Fig. 1). The barrows tend to be built on the slightly higher ridges or isolated knolls. Several, like the one excavated, show hollows in their highest points, perhaps indicating previous excavations. However, it must be remembered that some may indicate collapsed internal structures. No record has been located of anything being found in these barrows, and indeed, there is little evidence for any Bronze Age material in the immediate area. However, future fieldwork could remedy this lack of evidence. In contrast, considerable evidence for Mesolithic occupation is known from the area.[1]

[1] P. A. M. Keef, J. J. Wymer and G. W. Dimbleby. "A Mesolithic site on Iping Common, Sussex, England", *Proceedings of the Prehistoric Society*, 31 (1965), 85-92.

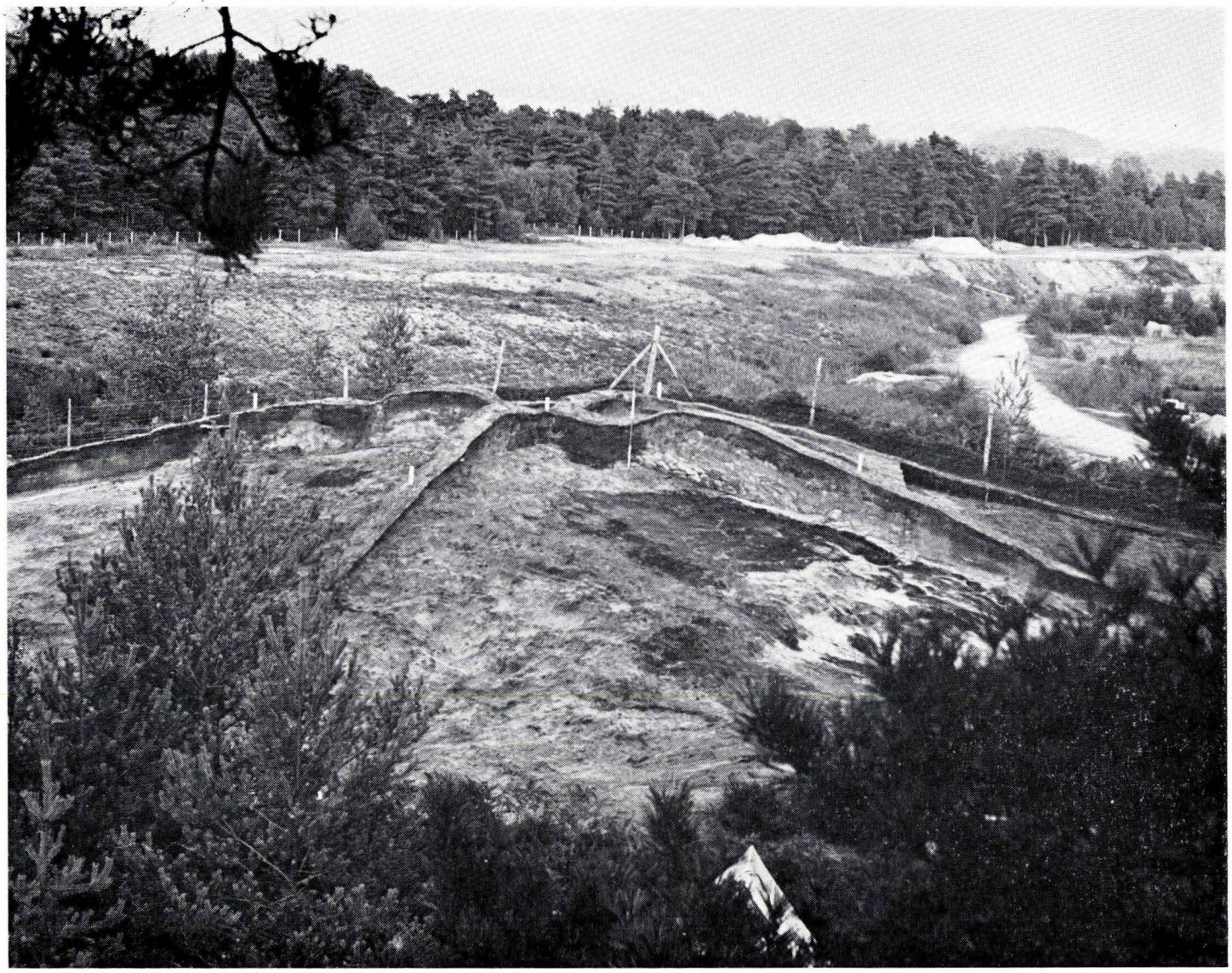


Plate I. Minsted, 1973. General view of the barrow excavation from the south-west. Scale 2 metres
(Photo: P. L. Drewett)

Plate II. Minsted, 1973. Detail of west face of north-east quadrant showing turf mound resting on wind blown sand above Mesolithic horizon. Scale 1·5 metres. (Photo: P. L. Drewett)

FIG. 1. Minsted, 1973. Location map. Black dots on map 3 indicate barrows of the Iping Common group. The Minsted barrow is circled

The 1973 Barrow excavation (Fig. 2)

The barrow was excavated using the standard quadrant method (Plate I) but because of the excessively friable and fine nature of the sand, which blows about readily in the wind, the southern quadrants were partly excavated using a modified strip method.[1] All the material over the turf stack was removed by machine as it was badly disturbed by roots and rabbit burrows. The disturbed material was, however, sorted and flintwork recovered from it. Although a J.C.B. (3c) was used for the stripping, it was most unsatisfactory on this soft sand. In later work on similar sand on West Heath Common, a Massey-Ferguson tractor with bucket and back actor proved much more satisfactory. The north-east quadrant was machined right down to the old land surface in narrow spits, while the turf stack in the other three quadrants was excavated by hand.

[1] P. Ashbee. *The Bronze Age Round Barrow in Britain* (1960), 188.

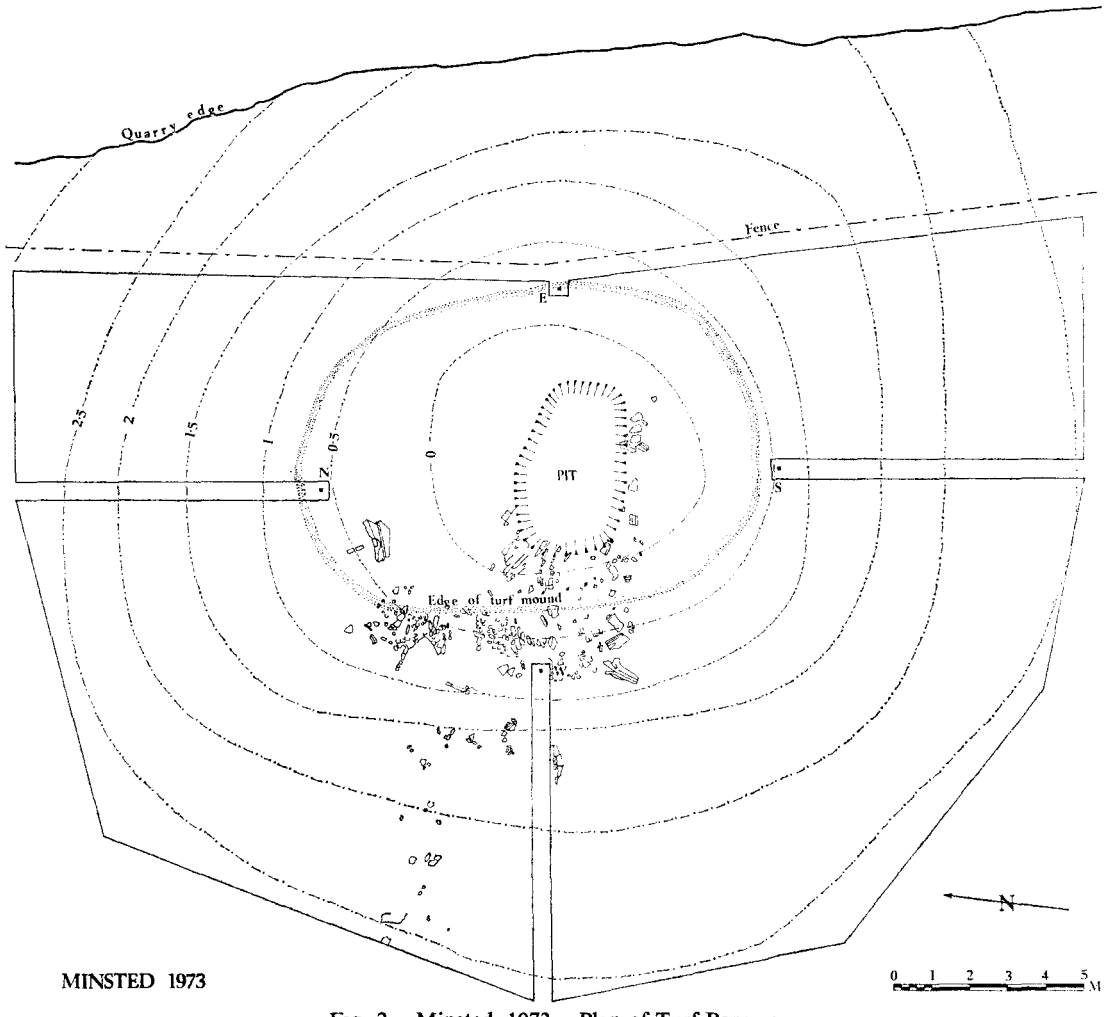


FIG. 2. Minsted, 1973. Plan of Turf Barrow

The Barrow structure

The barrow appears to have been constructed on a localized knoll, perhaps occupied intermittently by small Mesolithic hunter-gatherer bands. Although there was no great concentration of Mesolithic material under the barrow a general scatter, together with more on and around the barrow, indicates at least some occupation. Considerably more Mesolithic flintwork has been found to the north-west of the barrow in areas now destroyed by the sand pit.[1] These appear to have been actual flint working floors. The high concentration of ivy noted by Professor Dimbleby from a horizon under the buried Bronze Age land surface (see below), is explained by him as possibly indicating the use of ivy as a winter fodder, perhaps for red deer. If this is so, the knoll could perhaps be seen as a local feeding point from the height of which the herders could survey the safety of the herd.

[1] P. A. M. Keef, personal communication.

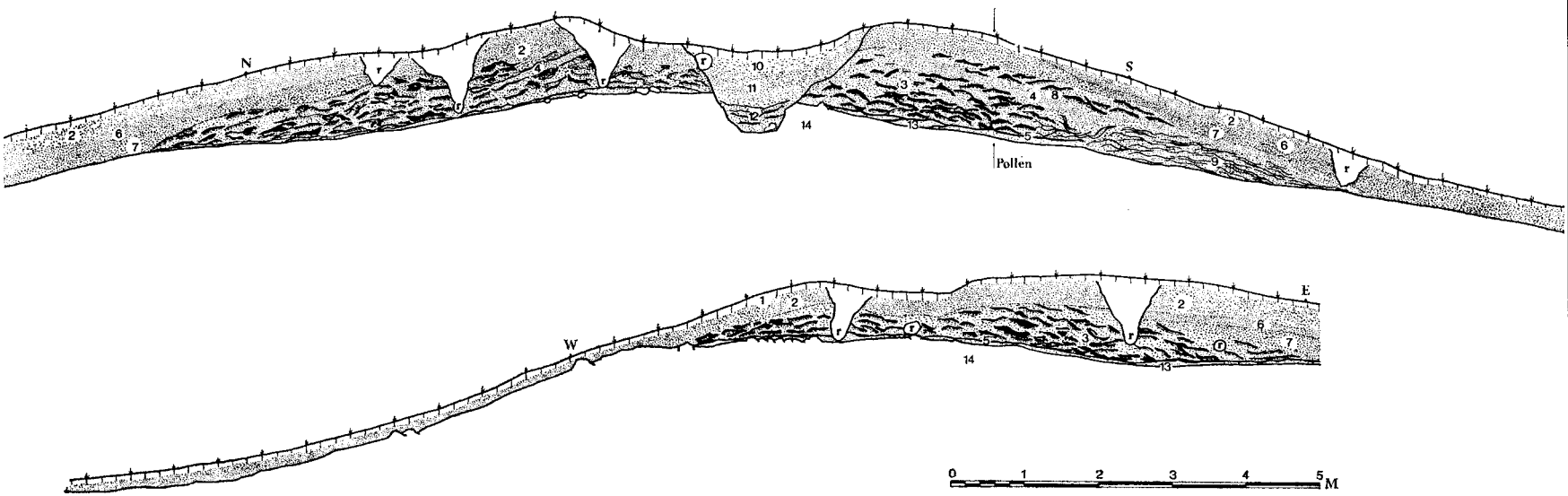


FIG. 3. Minsted, 1973. Sections of Turf Barrow

Key:

1. Top soil with matted heather roots.
2. Light grey sand.
3. Bands of black sand in grey and white sand. Turf mound.
4. Light grey sand.
5. Black sand. Bronze Age land surface.
6. Light grey sand.
7. Dark grey sand.
8. Bands of black sand in grey and white sand. Turves.
9. Fine white sand with thin wavy black bands.
10. White sand with matted roots.
11. Fine light grey sand.
12. Bands of black and white sand.
13. Black sand with white sand above. Mesolithic land surface with wind blown sand above.
14. Natural yellow sand.

r Rabbit disturbance and collapses above rabbit holes.

Towards the end of the Mesolithic period wind-blown sand appears to have buried the Mesolithic horizon (Plate II) and above this a soil horizon developed (Fig. 3, layer 5) on which heather, together with light alder, oak and hazel woods flourished. (See Pollen report, below). The barrow itself is constructed almost entirely of turf, which pollen analysis would suggest came from a similar environment to that indicated by the buried old land surface. Presumably, therefore, a large area round the barrow was cleared of turf. If so, the structure in its original state would have consisted of a turf mound surrounded by a wide zone of clean, white sand. The turves in the stack were not particularly regular in shape or size, although they tended to average some 30cm. square. They were mainly placed on the stack the right way up, although some were inverted (Plate II). After the mound had been constructed to a height of about 70cm., the mound was capped with a layer of grey sand (Fig. 3, layer 4). Finally, this layer was capped with a few more turves. Although it is possible that more sand was heaped over the turf stack (Fig. 3, layer 2), because of the ease with which this sand becomes airborne it is more likely that layer 2 consists of material resulting from the breakdown of turves and the development of a soil cover. Layers 6 and 7 appear to be wind-blown sands that built up against the side of the mound.

No sign of a burial was found, but this is most likely due to the acidity of the soil and the fact that the barrow had been robbed in the past. (Fig. 3 layers 10, 11, 12). Although few artifacts were found in the barrow material, much worked flint was found on the surface of the slopes of the mound. This may possibly be related to some primary ceremony, but it is perhaps better explained by the use of the sheltered slopes around the mound by wandering herdsmen knapping occasional flint tools. The few finds of Romano-British pottery could perhaps be explained in a similar way.

THE FINDS

Flintwork (Fig. 4)

The flint industry from the site appears to be the result of at least two distinct traditions. The first appears essentially Mesolithic and the second may well be Bronze Age. However, because of the method of construction of a turf barrow, none of the material in the barrow can be seen as strictly contemporary with its construction as it may well have already been incorporated in turves used. Likewise, although the material on top of the barrow may appear to be a homogenous group, it must be remembered that much of it may in fact have been the result of erosion of the top layers of turf. None of the material from this site can therefore be considered as even relatively homogenous, closed groups and so any detailed statistical analysis would have little value.

The flintwork can, however, be divided into four stratigraphical groups although none are closed groups. All the flintwork is made out of black chalk flint with the exception of one flake of honey-coloured flint (Fig. 4, No. 8).

Group I. From Layer 2 over turf stack

(a)	Prepared cores	4
(b)	Rough cores	43
(c)	Rough flint waste	738
(d)	Broken flakes	192
(e)	Waste flakes	278
	Total	1,255
(f)	Fire cracked flints	4

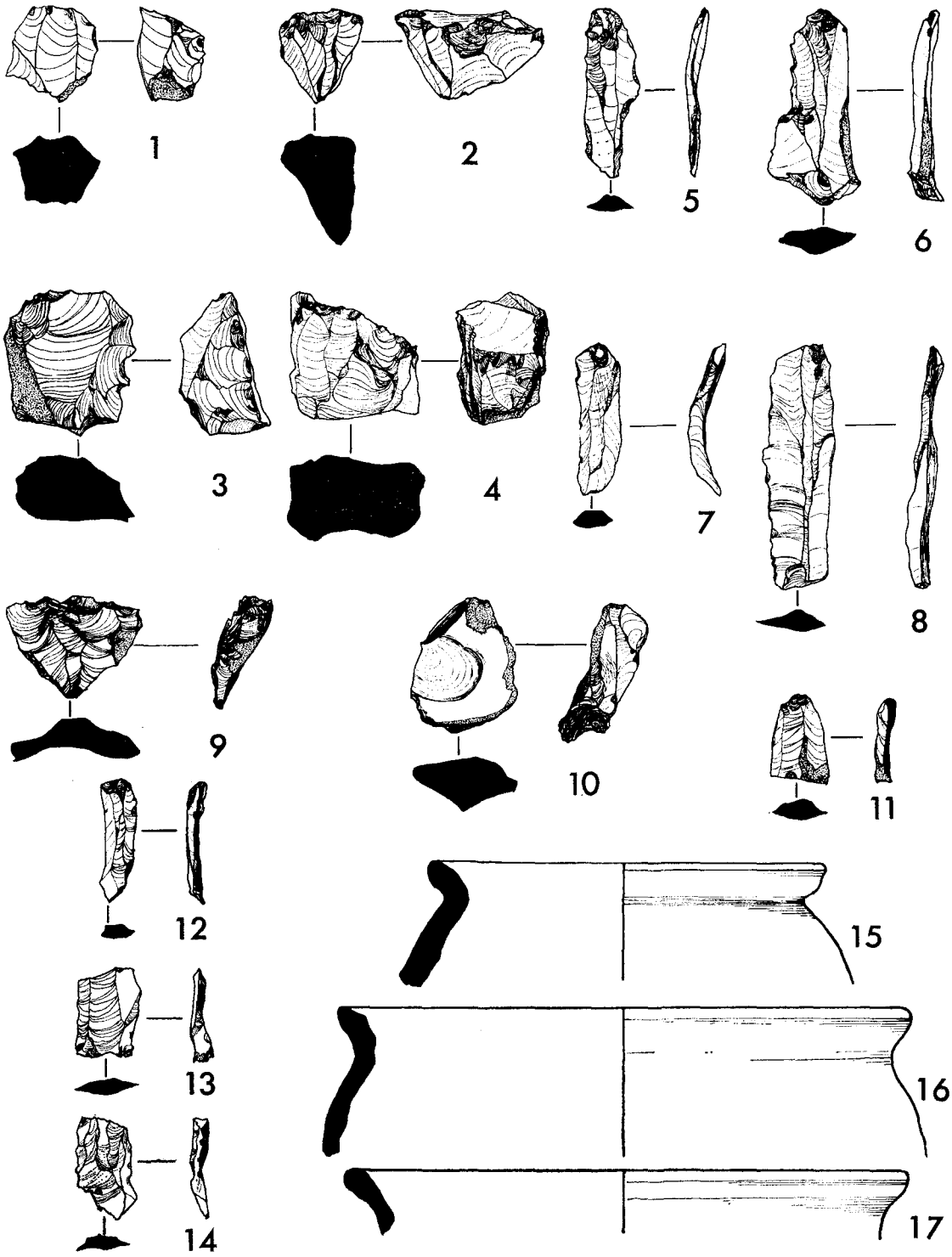


FIG. 4. Minsted, 1973. Mesolithic and later flintwork (1-14) and Romano-British pottery (15-17). (Scale $\frac{1}{2}$)

(a) The prepared cores (Fig. 4, Nos. 1, 2, 3) are almost certainly Mesolithic as they are designed for the removal of small, parallel sided blades.

(b-c) Rough cores consist of flint nodules from which two or more flakes have been struck off, more or less randomly, without preparing a proper striking platform. Rough flint waste is irregularly broken pieces of flint resulting from the use of very rough cores. Many of these pieces have cortex remaining.

(d-e) The waste flakes have been divided into those broken and those whole, as a high percentage clearly have been broken. The whole flakes were all measured for length and breadth (see Fig. 5) simply to demonstrate their relative size.

(f) The four fire-cracked flints may well be the result of heath fires.

Group II. Layers 3 and 4. Barrow material.

(a)	Prepared core	1	(Fig. 4, No. 4)
(b)	Rough flint waste	12	
(c)	Waste flakes	30	
	Total	43	
(d)	Fire-cracked flints	3	

The core and at least one of the waste flakes (Fig. 4, No. 5), would fit well into a Mesolithic assemblage.

Group III. Layer 7. Around turf stack.

(a)	Flint flakes	22	(Fig. 4, Nos. 6, 7 and 8)
(b)	Core rejuvenation flake	1	(Fig. 4, No. 9)
(c)	Rough flint waste	13	
	Total	36	

The core rejuvenation flake and parallel sided blades illustrated are almost certainly Mesolithic. Other flint flakes and waste may well be Mesolithic, but lack diagnostic features. The one long, finely worked parallel sided blade (Fig. 4, No. 8) is made of a honey-coloured flint and bears a high gloss. Although likely to be Mesolithic, it would not be inconsistent with an Upper Palaeolithic industry.

Group IV. Layer 11 in Robber Trench.

This group is almost certainly a mixture of Groups I and II, and is separated both on those grounds and by the fact that the contents of the trench were all sieved using a 5mm. mesh.

(a)	Flint flakes	18	
(b)	Prepared core	1	
(c)	Rough flint waste	1	
	Total	20	
(d)	Fire-cracked flints	4	

The prepared core (Fig. 4, No. 10) is of Mesolithic type as are at least three of the flakes (e.g. Fig. 4, No. 11).

Group V. Surface finds near barrow.

Although no real concentrations of flints were found around the barrow, odd flakes were picked up along all the access paths to the barrow. The majority were Mesolithic in character, and three blades from the west of the barrow are illustrated. (Fig. 4, Nos. 12, 13, 14).

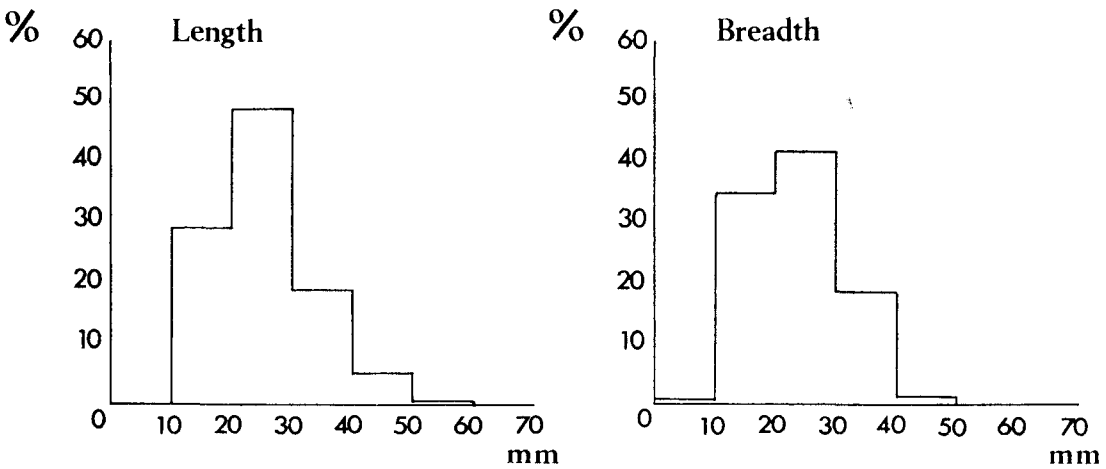


FIG. 5. Minsted, 1973. Length and breadth of flint flakes from layer 2

CONCLUSION

The presence of parallel sided blades, prepared cores and core rejuvenation flakes of Mesolithic type indicate that at least a part of the assemblage is Mesolithic. The absence of microliths in this element of the industry resembles a similar group from West Heath Common, Sussex, where a C-14 date of 6150 ±70 B.C. was obtained from a pit indicating a later Mesolithic industry.[1] It also resembles an industry found on Croham Hurst, Surrey, where again a later Mesolithic date was suggested.[2] These industries contrast with the well known Surrey-Sussex Mesolithic industries characterized by microliths, for example that found under the turf barrow at Deerleap Wood, Wotton, Surrey.[3] The industry from over the surface of the mound, however, contains much coarser elements not normally associated with Mesolithic industries, and so a post-barrow, Bronze Age tradition would not be inconsistent with the material. It is probable, however, that this assemblage is the result of periodic flint knapping on the mound over a long period. The absence of tools in the assemblage is, however, peculiar, so the possibility that this flint knapping was part of some final phase in the burial ritual should not be ruled out entirely.

Romano-British Pottery (Fig. 4) *by M. Millett*

Five sherds of Romano-British pottery were found scattered over the barrow in layer 2.

15. A rim sherd of a wheel-made everted rim jar in dark grey ware with fine sand tempering. The external surface is covered with a thin, lighter grey slip. A very common local type with a broad chronological range, being common throughout the 3rd century A.D., but starting earlier and continuing later. The slip is usually red rather than grey.[4]
16. Wheel-made everted rim jar in dark grey ware with sand tempering. The pottery is rather 'soft' indicating poor firing. A common local type with a broad time range. At Fishbourne the majority of the sherds date to the 2nd and 3rd centuries A.D., although this is not exclusive.[5]
17. Small rim sherd of a wheel-made, everted rim jar in grey ware with a light grey core. Fine sand tempering. This sherd is too small and too common to date accurately, this type having a date range from the late 2nd century to the late 4th century A.D.[6]
18. A small sherd of wheel-made grey ware with a buff core. Sand tempered. Date uncertain.
19. A sherd of wheel-made ware similar to No. 16. Date uncertain.

This group represents a minimum of three pots, none of which can be closely dated. The general character, however, points to a 3rd century date. All the sherds have similar tempering of sand which is common throughout the Weald and thus the pots may have been made locally or have come from further afield. None of the sherds are particularly abraded, and this would indicate that they had not been about for long at the time of burial: this is particularly true with Nos. 16 and 19 which are of 'soft' ware and would abrade easily.

Pollen Analysis by G. W. Dimbleby

A series of samples was taken at 1in. intervals from below the estimated position of the old land surface up into the base of the mound. (Fig. 3). They were treated by acetolysis and hydrofluoric acid and analysed in the usual way.[7] Fig. 6 represents the distribution of the important pollen types expressed as both absolute frequencies (grains per gm. soil) and percentages (of total pollen plus fern spores).

[1] P. L. Drewett. "Rescue Archaeology in Sussex, 1974; a Progress report on the Sussex Archaeological Field Unit. *Bulletin of the Institute of Archaeology*, 12 (1975), 19-24.

[2] P. L. Drewett. "The Excavation of a Turf Walled Structure and other Field Work on Croham Hurst, Croydon, Surrey, 1968/69", *Surrey Archaeological Collections* (hereafter *Sy.A.C.*), 68 (1970), 1-19.

[3] J. X. W. P. Corcoran. "Excavation of the Bell Barrow in Deerleap Wood, Wotton", *Sy.A.C.* 60 (1963), 1-18.

[4] B. Cunliffe, *Excavations at Fishbourne*, II, Type 313, Fig. 114, p. 238 (Fig. 4, No. 15).

[5] B. Cunliffe, ibid., Type 316.2, Fig. 115, p. 239 (Fig. 4, No. 16).

[6] C.f. kiln groups in *Sy.A.C.*, "A Survey of the pre-history of the Farnham district", (1939), 221-251.

[7] G. W. Dimbleby, "Soil pollen analysis", *Journal of Soil Science*, 12 (1961), 1-11.

Interpretation

The old land surface at the time the barrow was built is clearly seen at 48in. on the arbitary scale of depth. At this level the absolute frequencies of the pollen of alder (*Alnus*), oak (*Quercus*), hazel (*Corylus*) and heather (*Calluna*) are at high levels and progressively fall off with depth down the profile, the characteristic distribution of pollen in an undisturbed soil with an intact soil surface. At 52in. there is a dramatic change, with ivy (*Hedera*) pollen becoming predominant. The cultural significance of this will be discussed later, but for the present it only needs to be said that at this level there appears to be another buried surface, much earlier than the date of the barrow.

Turning now to the part of the diagram lying above the 48in. level, it is seen that the curves are inverted versions of the distribution already described, with the exception of the topmost sample (44-45in.) which has no close parallel in the rest of the diagram. From this pattern it is apparent that the profile from 45 to 48in. represents an inverted turf, which has been cut from a soil having a pollen sequence closely similar to that seen from 48-52in. From the cultural point of view, both the old land surface and the buried level beneath it can contribute information. Let us dispose of the lower (52in.) level first. At and below this level tree pollen is scarce and what there is, with the possible exception of pine (*Pinus*), could have become incorporated from the overlying soil. This explanation, however, cannot account for the curves of hazel and ivy. Here we have a profile very reminiscent of Mesolithic sites such as Addington[1], Oakhanger[2] or Iping[3], in which Mesolithic occupation layers have become covered over with transported sand of local origin. Indeed, Mesolithic artifacts were recorded in the barrow excavation. If this is so, the dominance of hazel in the pollen assemblage and the paucity of thermophilous trees might suggest a Boreal date for this phase.

The ivy pollen is particularly interesting in such a context, and is a further example of such an accumulation in a Mesolithic context. It has recently been suggested[4] that such high percentages of ivy pollen, which seem inexplicable on grounds of normal pollen distribution, are due to the use of ivy as a winter fodder in animal husbandry. In the Mesolithic this was possibly the herding of red deer. It is interesting to note that the 45-46in. sample of the inverted turf contains an even greater quantity of ivy pollen than in the 52-53in. level of the *in situ* soil.

The 4in. depth of sand which overlies the 52in. level contains the pollen of not only hazel, but also the thermophilous trees. It also contains some ivy pollen, but at much lower frequencies than in the two peak samples. This pollen could have been contained in the sand when it was carried on to the 52in. surface. Taking this 4in. zone as a whole, the pollen assemblage is a forest one. Even excluding ivy pollen, which appears to be artificially introduced to the site, most of the pollen is of woodland species. The light-demanding grasses (*Gramineae*) and herbs (e.g. ribwort plantain, *Plantago lanceolata*), are very poorly represented; nor does the bracken (*Pteridium*) curve show the response which is to be expected when the canopy is opened up. The only curve which does respond in this way is that for heather (*Calluna*), and this clearly shows increasing dominance in the period prior to the construction of the barrow.

What, then had been happening on this site when the barrow was constructed? On the negative side it can be said that there was no arable farming; there is no cereal pollen and weeds of any sort are weakly represented. Furthermore, the clear pattern of pollen distribution in the soil is conclusive evidence that the soil on this spot, at least, has not been disturbed by ploughing. Nor, it must be admitted, is the evidence of pastoral farming much stronger; there are a few weeds of pasture represented spasmodically, but the weakness of the grass pollen curve hardly suggests the dominance of pasture grasses. Heather could provide food for sheep, though grass would normally be preferred, but the increase in heather may be connected with the persistent use of fire, perhaps suggesting that the site was not primarily a farming site, but a site in a woodland setting on which the use of fire was frequent, perhaps seasonal. The NAP/AP percentage of the 48-49in. sample is only 85 (compared with 53 for the whole 48-52in. zone), clearly indicating that such clearance as had been made was quite local in a general matrix of primary forest of Sub-Boreal age.

This interpretation is reminiscent of another round barrow, that at Moor Green (West End), Hants. Here, too, the setting was apparently woodland, though birch and bracken were well represented, showing that the woodland was anthropogenically modified. Here, too, grass pollen was scarce and agricultural weeds were at low frequency and heather showed a similar increase in dominance towards the Bronze Age surface.[5]

1 G. W. Dimbleby. "Pollen Analysis of a Mesolithic Site at Addington, Kent", *Grana Palynologica*, 4 (1963), 140-148.

2 W. F. and W. M. Rankine and G. W. Dimbleby. "Further excavations at a Mesolithic site at Oakhanger, Selbourne, Hants", *Proceedings of the Prehistoric Society*, 26 (1960), 246-262.

3 P. A. M. Keef, *et al.*, op. cit.

4 I. G. Simmons and G. W. Dimbleby, "The probable role of ivy (*Hedera helix* L.) in the Mesolithic economy of Western Europe", *Journal of Archaeological Science*, 1 (in press).

5 P. Ashbee. Report on excavation of a barrow at Moor Green (West End), Hants., with report on pollen analysis by G. W. Dimbleby (in preparation).

DISCUSSION

Unfortunately, no direct dating evidence was obtained for this barrow. However, turf structures of this type are usually ascribed to the Early Bronze Age. For example, a Carbon 14 date of 1680 ±100 bc was obtained from the old land surface beneath a similar turf barrow on West Heath Common, Sussex. However, the West Heath Cemetery continued in use for at least 400 years as the latest date is 1270 ±180 bc.[1] Little other direct dating evidence is yet available from Sussex turf barrows as although field evidence would suggest a considerable amount of previous excavation, generally ascribed to the 18th-19th centuries, finds of materials other than flint appear to be non-existent. The absence of primary burials and grave goods such as pottery is generally ascribed to the high acidity of the soil, together with its highly pervious nature, exemplified by the development of well-developed humus-iron podzols. The absence of burials will be returned to below.

The actual shape and structure of the mound is also of little use in suggesting parallels for dating as the shape of this mound appears to be largely predetermined by the contours of the pre-existing mound. The use of natural mounds for burial is of course a widespread phenomenon in the Bronze Age, for example at Maesmynan, Denbighshire.[2] However, on its face value, this barrow is more oval than round and it may have been that the builders deliberately selected an oval natural mound as it was intended to construct an oval turf mound. Oval barrows, as a class defined by Colt Hoare,[3] tended to be considerably larger than this one and were considered a variation of long barrows rather than round barrows. However, some such barrows appear towards the end of the Long Barrow tradition. For example, an oval mound at Winterbourne Stoke covered two axially placed contracted inhumations, one with a beaker. Similarly an oval mound recently excavated at Alfriston, Sussex, proved to be Neolithic in date.[4] In the case of the Minsted barrow, however, it appears best to suggest that the little evidence we have would not be inconsistent with a Bronze Age date, perhaps between 1800 and 1100 B.C.

Ashbee has noted that often turf mound barrows are ditchless[5] and that although most occur on heathland, for example at Beaulieu, Hampshire and Wotton Common, Surrey[6] others occur on a variety of soils, for example at Letterston, Pembrokeshire. It must be remembered, of course, that although actual turf structures rarely survive on the chalk lands due to worm action, many such barrows had substantial turf cores, for example, Barrow 9 on Ashey Down, Isle of Wight.[7] The widespread use of turf for barrow construction on sandy heathlands, at least, may well be a direct result of the most unsuitable nature of fine sand for mound construction. During our excavations considerable amounts of sand were frequently blown off our spoil heaps, whereas turf stacks remained solid. Likewise ditches dug in sand slump very quickly. Ditchless turf barrows are therefore most likely simply a modification of the general barrow tradition to suit local environmental conditions.

[1] P. L. Drewett, op. cit. (Note 4).
[2] P. L. Drewett. "The Excavation of a Bronze Age Burial in a Natural Mound at Maesmynan, Denbighshire, 1969; *Bulletin of the Board of Celtic Studies*, 23 (1970), Part 4, 411-416.
[3] R. Colt Hoare. *The History of Ancient Wiltshire* (1810).
[4] P. L. Drewett, op. cit. (Note 4).
[5] P. Ashbee, op. cit., 44.
[6] J. X. W. P. Corcoran, op. cit.
[7] P. L. Drewett. "The Excavation of two round barrows and associated field work on Ashey Down, Isle of Wight, 1969"; *Proceedings of the Hampshire Field Club and Archaeological Society*, 27 (1970), 33-56.

Finally, we have the problem of a lack of burials from both this mound and all other Sussex turf mounds. It is generally assumed that a lack of burials is the result of the high acidity of the soil, which at best may leave only a soil silhouette. This remains the most likely explanation in this case, although even if such evidence did survive, it may have been destroyed by the robber trench. However, none of the four turf barrows excavated by the Sussex Field Unit in West Sussex during 1973-74 contained any sign of burials.[1] This, together with the absence of previous discoveries in Sussex turf barrows, leaves us in the position that it is impossible to say at present, with any degree of certainty, that these mounds were burial structures at all. However, their resemblance to burial structures is so close that some function in relation to a funerary rite seems most likely. The possibility remains that some or all were cenotaphs, the construction of which is widely known ethnographically, for example in Dahomey[2] and suggested archaeologically, for example at Crig-a-Mennis.[3] However, in the case of the Sussex turf barrows the exceptionally high acidity of the soil remains the most likely explanation for the absence of burials. This property of the soil may well have been known to the builders and indeed, the many examples of hollows in the tops of these mounds, normally considered robber trenches, may have been part of a continuing rite related to this knowledge. Unlike areas on the Chalk, there are few documentary references to the robbing of heathland barrows in Sussex in historic times. Also the Minsted barrow ' robber trench ' has two peculiarities which may suggest that it is not a recent robber trench. Firstly, layer 12 (Fig. 3) consisted of well structured turves and any recent excavation would have destroyed the turf structure. Secondly, no obvious spoil heap was located with a protected turf line as found, for example, adjacent to the robber trench in Ashey Down Barrow 9, Isle of Wight.[4] It may well be therefore that this, and many other such holes in turf barrows were dug in antiquity, perhaps to establish that no trace was left of the human form and that it had departed to wherever it was meant to depart. Mr. F. Petersen has noted numerous burial mounds in the Neolithic and Bronze Age in England, in which bone has been preserved, that contain both incomplete and badly disturbed burials. He interpreted some cases as being the result of disturbance through later additions to the barrow,[5] but it seems likely that some may be the result of deliberate exhumation for some religious reason, perhaps like that suggested for the turf mounds.

The Society is much indebted to the Department of the Environment for a generous grant towards the cost of publishing this paper.

[1] P. L. Drewett, op. cit. (Note 4).
[2] M. J. Herskovits. *Dahomey I* (1938, New York).
[3] P. Christie. " Crig-a-Mennis: A Bronze Age barrow at Liskey, Perranzabuloe, Cornwall," *Proceedings of the Prehistoric Society*, 22 (1960), 76-97.
[4] P. L. Drewett, op. cit. (Note 21).
[5] F. Petersen. " Traditions of multiple burial in Later Neolithic and Early Bronze Age England ", *Archaeological Journal*, 129 (1972), 22-55.

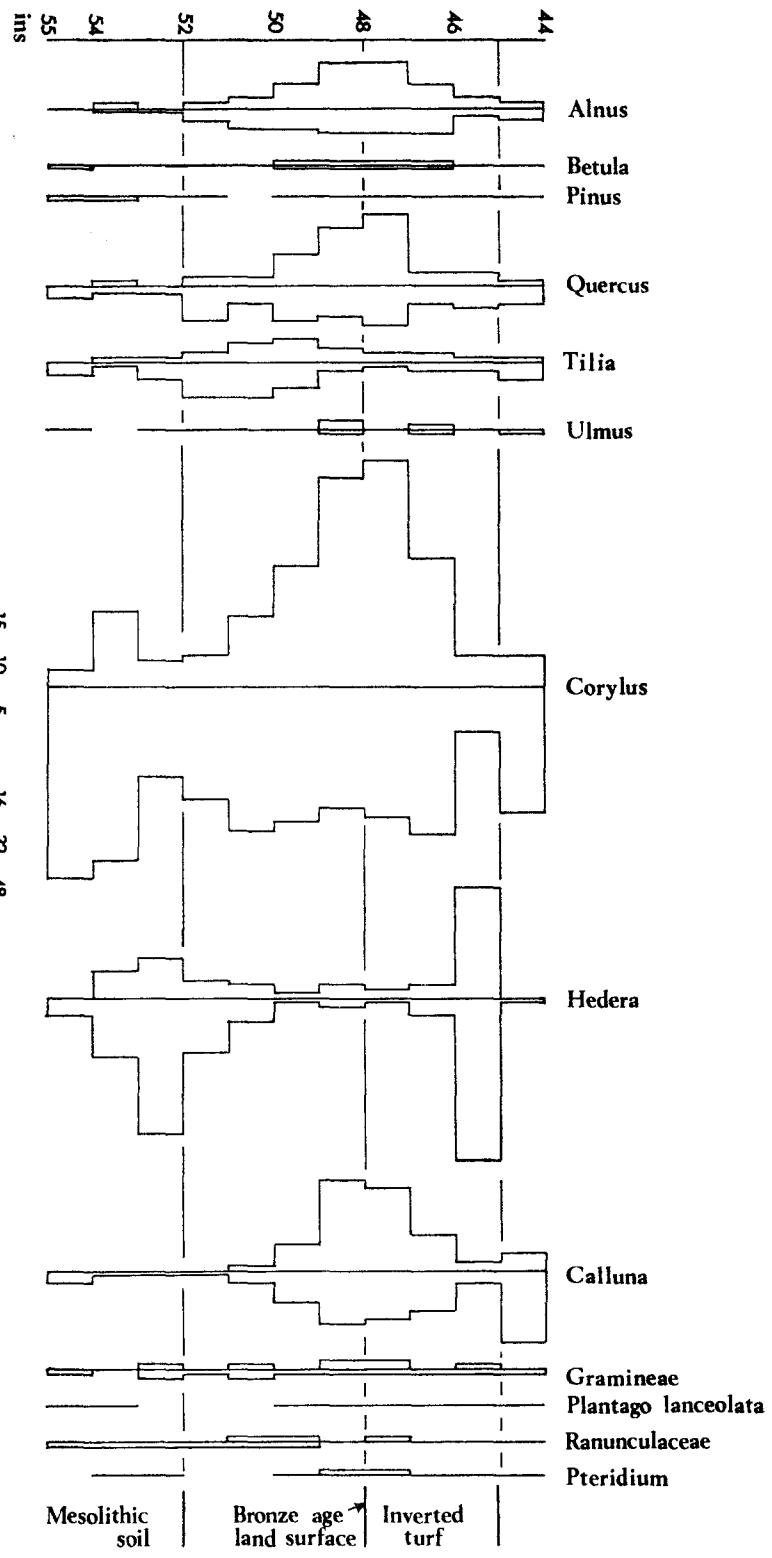


FIG. 6. Minsted, 1973. Pollen diagram

EXCAVATIONS IN LEWES, 1974

By D. J. Freke

In July and August, 1974, three trenches were opened in parts of Lewes which are threatened by development. The excavations were pilot studies into the early history of the town and the areas were chosen with the intention of checking and extending our knowledge of its Saxon and medieval origins. They were carried out with a grant from the D.O.E. by the Sussex Archaeological Field Unit and the Lewes Archaeological Group under the direction of the author. The finds are deposited in Barbican House, Lewes, and the detailed plans and notes are in the files of the Sussex Archaeological Field Unit.

INTRODUCTION

Lewes is one of the four Sussex towns mentioned in the Burghal Hidage (Fig. 1c), a document in existence by 919 A.D., but no unequivocal archaeological evidence has yet been found of either the walls or the focus of this important Saxon town. Two recent excavations which produced quantities of Saxo-Norman material did not uncover any evidence of early urban structures, but they were carried out in circumstances which militated against the survival of such evidence.[1] There appeared to be two areas, however, which offered most promise of further information: the supposed line of the medieval town wall along Brook Street as shown by the Ordnance Survey and the so-called ' fosse ' along the north of Lancaster Street. The line of the medieval town wall is of interest when investigating early Lewes because its length —approximately $1\frac{1}{8}$ miles, is near to that which can be derived from the Burghal Hidage— $1{,}787\frac{1}{2}$ yards. Also it has been shown that sometimes the medieval wall of a town has followed the earlier Saxon structure, as at Wallingford, Cricklade, Wareham and, possibly, Tamworth.[2] The north-east section of the wall seemed to be particularly promising because of the proximity of the only Saxo-Norman material so far discovered in Lewes. Trenches were opened to the north and south of Brook Street to investigate these possibilities.

The so-called ' fosse ' in Lancaster Street is part of an enclosure now occupied by the burial ground of St. John-sub-Castro, which contains the site of the only identifiable Saxon church in Lewes. The enclosure is at present formed by massive banks falling away on three sides of a small tongue of high ground projecting into the flood plain to the north of the town, and by a bank and ditch (the ' fosse ') which cuts across the neck of the projection on its south side. This enclosure has aroused speculation for nearly two centuries.[3] The demolition of 19th century houses along the north side of Lancaster Street in the spring of 1974 gave an opportunity to investigate the ditch and bank near the south-east corner of the enclosure.

[1] The Naval Prison site, 1962-5 and the Greenwall site, 1967, excavated by D. M. Thomson and C. E. Knight-Farr, *S.N.Q.*, vol. 16 (1963), 35 and 337-9 respectively.

[2] C. A. Ralegh Radford, " The Later Pre-Conquest Boroughs and their Defences ", *Medieval Archaeology* 14 (1970), 84.

[3] It has at various times been considered to be Roman, Saxon, part of the medieval wall, and the site of the Saxon burgh. It is first mentioned in P. Dunvan, *The Ancient and Modern History of Lewes and Brighthelmstone* (1795), 332-3.

FIG. 1. Lewes, 1974. Location maps

THE EXCAVATIONS

Brook Street South

As the plan and section (Figs. 2b, 4) of this site show, there was at no time a defensive wall, or bank, or ditch within the area of our trench, and the few early features seem to suggest that this site was outside the Saxon and medieval urban settlement. Recent demolition and levelling had removed perhaps half a metre of soil[1] leaving naturally deposited sands and gravels exposed in the north-east corner of the site after the mechanical stripping of the car-park surface. Some flint flakes, possibly Mesolithic, were found associated with the gravels (Fig. 6, Nos. 10, 13, 17, 19, 20). Two pits cut into this produced a few sherds of Saxo-Norman pottery (Fig. 7, Nos. 46, 47), while a shallow irregular scoop which occupied the south-eastern half of the site and cut into the natural sand yielded many small fragments of fourteenth century pottery (Fig. 7, Nos. 48-58). There was no evidence of any kind of structure before the nineteenth century, but no less than eleven cesspits and five other pits of uncertain function dating from the last century were found.

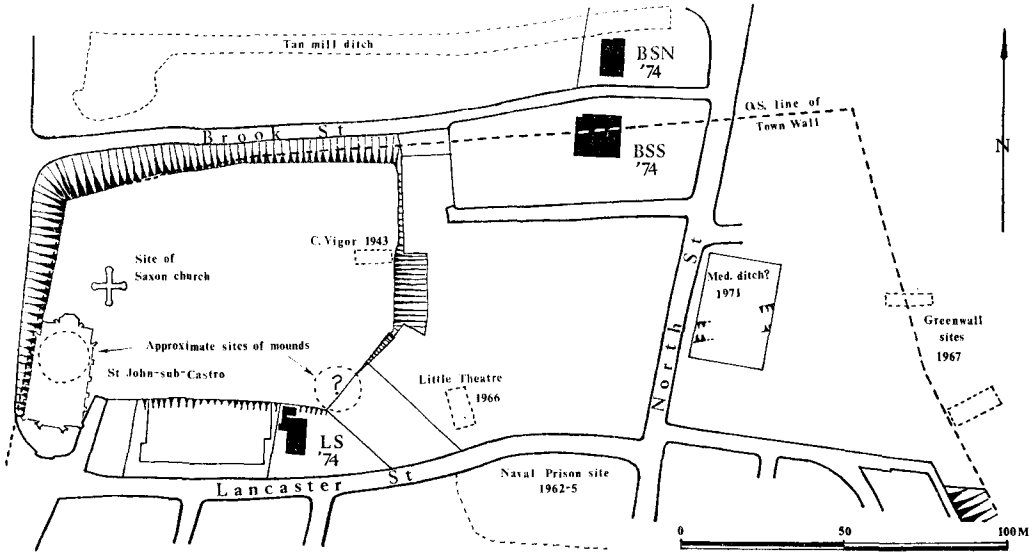
Brook Street North. (Fig. 3a, b; Fig. 4)

The earliest archaeological layers in this trench were at a depth of about 3.1m. below present ground level; they consisted of a level layer of rough flints laid on a layer of grey clay 2 to 10cm. thick immediately above natural chalk. The layer of flints seemed to cover the entire area of the trench except where it had been disturbed by later features, but could not be dated. A 4.5m. wide track or bridle path with a pronounced camber of about 25cm. had been made up on the early surface with layers of gravel and small stones 50cm. deep. It was surfaced with flint cobbles and ran east-west across half of the southern part of the trench (Fig. 3a) but had been completely removed by the later brick pits to the west, and cut by a sixteenth century gully and several undated pits. The track seems to have been made as a causeway across the marshes, for on both sides of it were thick deposits of organic silt. Its highest point is below the present water table. The track was worn over its entire surface but particularly in the middle; there were no cart ruts. The track eventually seems to have succumbed to the rising water level, and was abandoned and covered by at least 20cm. of organic silt. A layer containing late fourteenth or early fifteenth century pottery (Fig. 7, Nos. 43-45) covered part of this silt at the southern end of the site, but this may not be its original context.

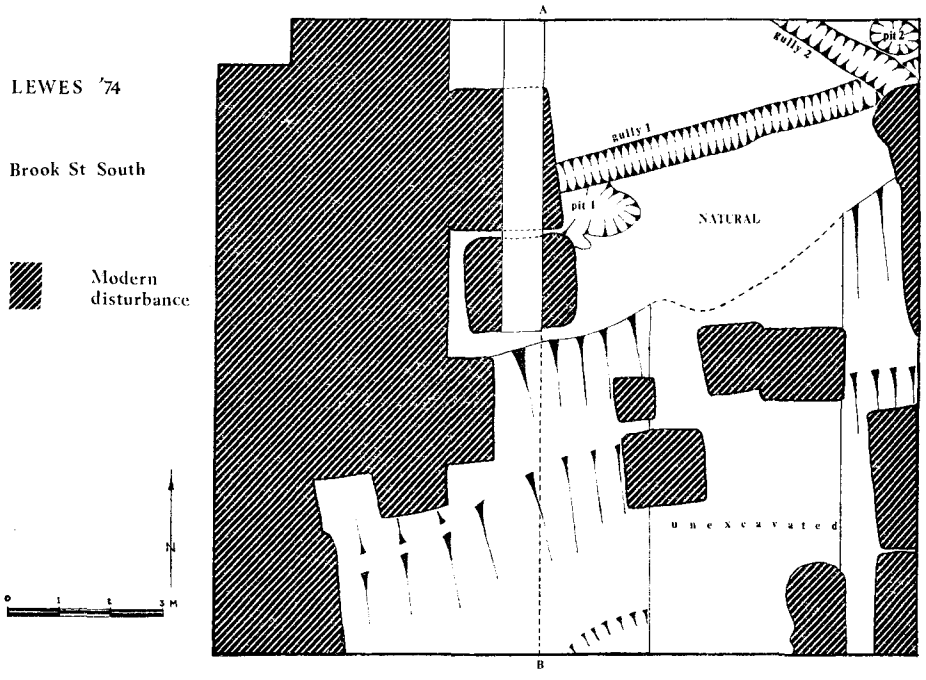
The next use of the site was as a dump for cattle horn cores about 1700, the entire area was covered with many hundreds of them, some with parts of the skull still attached but otherwise with very few other bones. The date was obtained from clay tobacco pipe fragments (Fig. 8, Nos. 78, 79).

A pit (Fig. 3b, pit 1) 3m. wide in its north-south dimension and at least 1m. east-west was cut through the horn cores and was near a barrel set into the ground, only the lower half of which remained. When this pit had been back-filled (not silted up), a sluice or drain made of oak planks held together with iron clamps with Horsham stone slabs across the top was laid diagonally across the southern end of it. This in its turn was cut by a large clay-lined pit (Fig. 3b, pit 3) 4.5m. north-south and at least 1.5m. east-west, with a brick lined sluice or drain along its western lip. An even larger, more irregular pit (Fig. 3b, pit 2) covered most of the rest of the site, but later disturbances obscured its full extent.

[1] This was shown by the fact that the walls of the houses along Brook Street were reduced to a single course of the foundations, and the arched cesspits had lost their top courses.



NORTH-EAST LEWES, PLAN OF ARCHAEOLOGICAL SITES a



b

FIG. 2. Lewes, 1974. (a) North-east Lewes, plan of archaeological sites; (b) Plan of Brook Street South excavation

The next phase of pits and sluices culminated in a block of at least six brick-lined pits floored with planks 40cm. wide, surrounded by considerably worn brick paths with a brick walled building erected on wooden piles to the east. A complete barrel was found set into one of the pits, and a brick lined drain ran under the paths. The entire complex was filled in and covered with chalk rubble at some time in the first half of nineteenth century and stables which existed until 1966 were built.

Lancaster Street. (Figs. 3c, 5)

A section was cut across the ditch and the very battered remains of the bank round the churchyard were examined. The ditch proved to be very much bigger than expected—at least 7.5m. below road level—and the bottom could not be reached because of the proximity of Lancaster Street. It was dug into Chalk through 1.5m. of Coombe Rock. The earliest artifacts were Mesolithic flints associated with this layer (Fig. 6, Nos. 1, 5). The ditch itself produced two small worn fragments of late Saxo-Norman pottery, but there were layers containing twelfth century pottery (Fig. 5, layer Nos. 22a and b) lower in the ditch. The ditch silt was composed of a primary layer of gravel (layer No. 23b), derived from the Coombe Rock, overlain by a substantial thickness of large chalk lumps (layer No. 23a), presumably from the original bank on the north. There followed a period of gradual silting by fine clays (layer Nos. 17a, 18, 19, 20, 21, 22b) and then a very thick deposit of large chalk lumps was laid down (layer Nos. 16a, b, c and d), which would appear to be material from the bank, possibly deliberately pushed down. A gully was cut into this (layer No. 15) along the line of the original ditch. This was followed by a gully cut at right angles to the line of the ditch (layer Nos. 13, 14), then a period of slow silting (layer Nos. 10, 11, 12) and finally by the cellar floor of the nineteenth century house standing on the site until 1974. A fragmentary inhumation was found under the foundations of a garden partition wall (layer No. 8a). This was probably the re-burial of remains disturbed in the construction of a bakehouse actually cut into the bank of the churchyard.

The early layers were very disturbed by nineteenth century cesspits and walls, which meant that at no place could a continuous section north-south be obtained. The section illustrated (Fig. 5) is a composite one with a section of the bank 7m. to the west projected on to the main west facing section (see Fig. 3c for locations of sections).

The bank had been seriously damaged both by the nineteenth century builders and by the recent demolishers, and the relationship of the bank and ditch was difficult to interpret. However, there appears to have been a deep pit, square with rounded corners, dug into solid Chalk, underneath or on the outer edge of the bank. It had a filling of twelfth century material, but could not be totally excavated. The material of the bank was sandy or gravelly clay and displayed clear tip lines.

A shallow, narrow gully cut into the Coombe Rock ran along the lip of the ditch. It contained twelfth or thirteenth century pottery and there were suggestions of posts and packing in the eastern portion but not enough to draw conclusions about the nature of the structure it held. However, this gully must represent the very last remnant of a trench which contained a timber revetment. This is suggested by the position of the gully on the lip of the ditch, and the tip lines of the bank, which (where visible) indicate that the bank material was thrown up against a revetment. The large pit may have been dug as a post hole, or it may have been

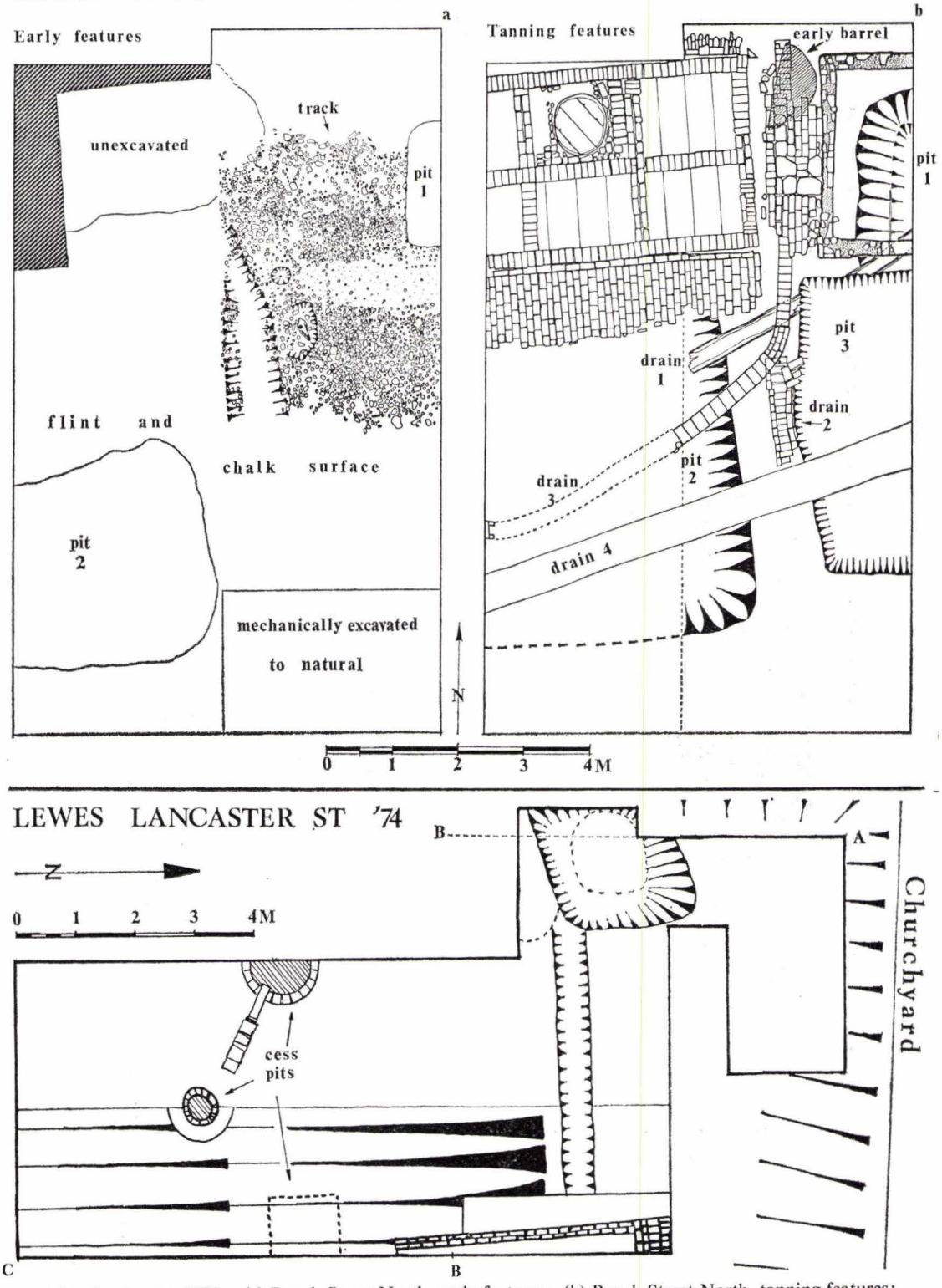
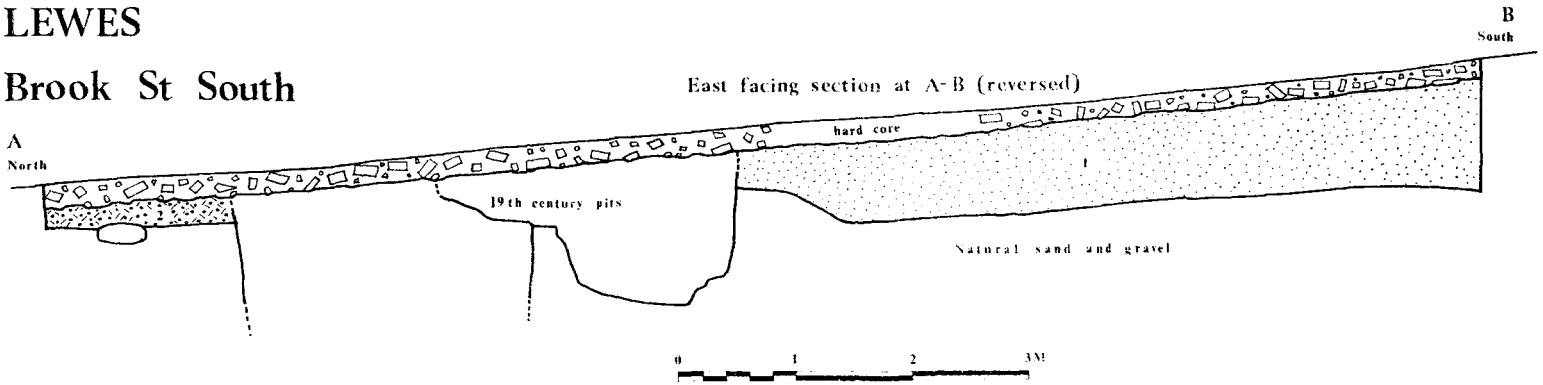


FIG. 3. Lewes, 1974. (a) Brook Street North, early features; (b) Brook Street North, tanning features; (c) Lancaster Street, plan of excavation

LEWES

Brook St South



Brook St North

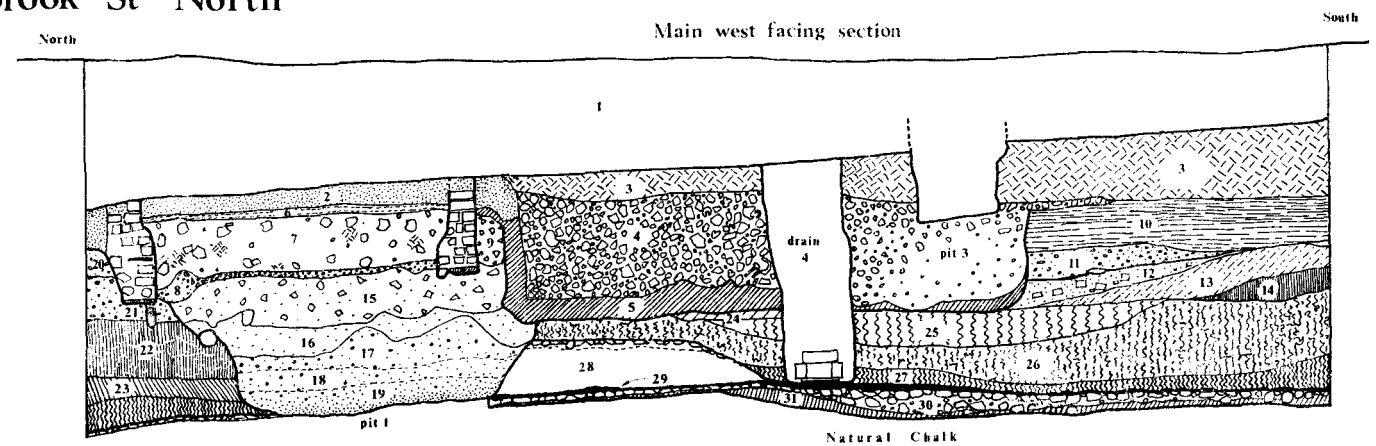


FIG. 4. Lewes, 1974. (a) Brook Street South, north-south section at A-B; (b) Brook Street North, main west-facing section of trench

an earlier pit re-used as a post hole. The filling of the inner hole (socket?) fell away from the packing which may suggest that the buried post rotted in situ. The fill of this socket contained twelfth or thirteenth century pottery (Fig. 7, Nos. 21-27), and at the top contained wall plaster, rolled up lead window cames and drips of lead, a piece of Roman tile, worked chalk blocks, painted window glass, and heat-reddened clay with charcoal flecks. This must be the debris from a robbed church, presumably the Saxon church of St. John-sub-Castro only 100m. away. The debris had been deposited after the post had rotted or been removed, and the ramparts were no longer functional in the twelfth or thirteenth century.

DISCUSSION

The town wall

The town wall does not appear in either of the Brook Street trenches, despite the fact that the southern site straddles the Ordnance Survey line. Furthermore the trenches contain no evidence of any urban structures before the nineteenth century. The few Saxo-Norman features do not suggest a wall or bank in the vicinity, but the two trenches are 13m. apart—ample room for a medieval rampart which may have enclosed an area of the town which, for whatever reason, was not built up. This possibility, although unlikely, cannot be ruled out. The only information on the alleged defences along Brook Street is in recent sources. The earliest mention is by Dunvan, in 1795: " From that (Brack) Mount to *St. Johns Church*, there were two very high and strong lines of vallation, and from the Churchyard to *Greenwall*, and thence to the East-gate, there seems to have been but a single line, which was sufficient, with deep ditches and morasses in front, to prevent or resist an assault on those sides."[1] The wall is marked on J. Edward's map of 1799 in substantially the same position as that indicated by the Ordnance Survey since its first edition in 1873 and is similarly marked on J. Marchant's map of 1824. Horsfield, in 1825, describes a line for the wall which differs from the one shown on all these maps but nonetheless refers to Marchant's map as showing the correct line.[2] It is significant that these descriptions were speculative, they imply or actually state that this section of the wall had disappeared at the time of writing.[3]

An alternative explanation for the " single line . . . with deep ditches and morasses in front . . ." is that Brook Street and the Greenwall appear to be on the line of a river terrace. A section drawn across both Brook Street sites shows that the depth of the archaeological deposits north of the road is more than 3m. while to the south the depth to the undisturbed natural sands and gravels is less than 50cm. Although there can be little doubt that this is the line of a natural rise, it does not rule out the possibility that it was utilised for defensive purposes—as indeed it was for the northern boundary of the churchyard and for at least some of the Greenwall—but the rise may have misled early historians and cartographers. *If* Brook Street is not the line of the defences, they should be sought further to the south, and in any case the northern limit of both the Saxon and the medieval settlements must be further south, too.

[1] P. Dunvan, op. cit. pp. 332-3

[2] T. W. Horsfield, *History of Lewes*, 1 (1824), 164-5. Mr. J. Houghton drew my attention to this anomaly.

[3] Ibid., 165. " From the south-eastern(?) extremity of St. John's Churchyard to the Greenwall there are no vestiges remaining of either wall or embankment." (My question mark.)

The features north of Brook Street

The earliest features of the site north of Brook Street show a gradually rising water level which swamped the track at the north end of the trench at some time before the eighteenth century. It is impossible to estimate how long the track had been in use, but it was considerably worn and had been patched. It may have been in use during the general respite from flooding which occurred at the beginning of the fourteenth century[1] and then succumbed to the disastrous floods which occurred throughout the fourteenth century from 1331, which resulted in 400 acres in Southeram being turned from pasture to fisheries by 1421[2]. The dating of the track to this period is possible but the stratification is not secure, and some evidence suggests that it may be post-medieval. If this is the case then the track may date from the improvement in the drainage of the area resulting from the cutting of a new channel for the Ouse at what was to become Newhaven in 1539.[3] The subsequent inundation may relate to the deterioration of drainage in the early seventeenth century. The layers securely dated to about 1700 may be too close to the flood deposits to allow their interpretation as being fourteenth or fifteenth century, and the sixteenth century gully which cuts the track is inconclusive.

The pits which were dug on the site in the eighteenth and nineteenth centuries seem to represent a tanning industry. The land was rented from 1798[4] by the Chatfield family, first mentioned as tanners in a survey of 1760.[5] The three phases of reconstruction bear functional similarities (water-tight pits, careful drainage, barrels set into the ground or a pit) and the final brick pits have a striking resemblance to the convention used by J. Marchant to designate tanneries on his map of 1824. However, this map does not show the area of Brook Street as a tannery as does J. Edward's map of 1799. The Chatfields are called tanners for the last time in a poll book of 1818.

Lancaster Street

The pottery in and under the bank dates its construction to the twelfth century (a carbon 14 date is awaited), and the ditch must be presumed to be the source of the bank material and therefore of the same period. This result was most unexpected and alters the whole picture of medieval Lewes. The churchyard of St. John-sub-Castro, allegedly a fortified position *within*—supposedly—a walled town with a strong castle, presented a puzzle which was not solved by the traditional dating of the fortification of the churchyard to a pre-Norman period whether it was a site of a Roman camp or the Saxon burgh. The bank and ditch were clearly features in the medieval town and the suggestions of earlier origins for them did not solve this problem. There is also documentary evidence that the fortifications faced *uphill* against the town—two mounds are recorded from the churchyard, one on the site of the present church

[1] P. F. Brandon, "The Origin of Newhaven and the Drainage of the Lewes and Laughton Levels", *Sussex Archaeological Collections* (hereafter abbreviated to *S.A.C.*), vol. 109 (1971), 97.
[2] Ibid., 97.
[3] Ibid., 99.
[4] Verena Smith (ed.), *The Town Book of Lewes*, 1702-1837; Sussex Record Society, vol. 69 (1973), 101.
[5] T. Woolgar, *Spiceligia*, Vol. 1 (1790-1822), 526. MS. at Barbican House, Lewes.

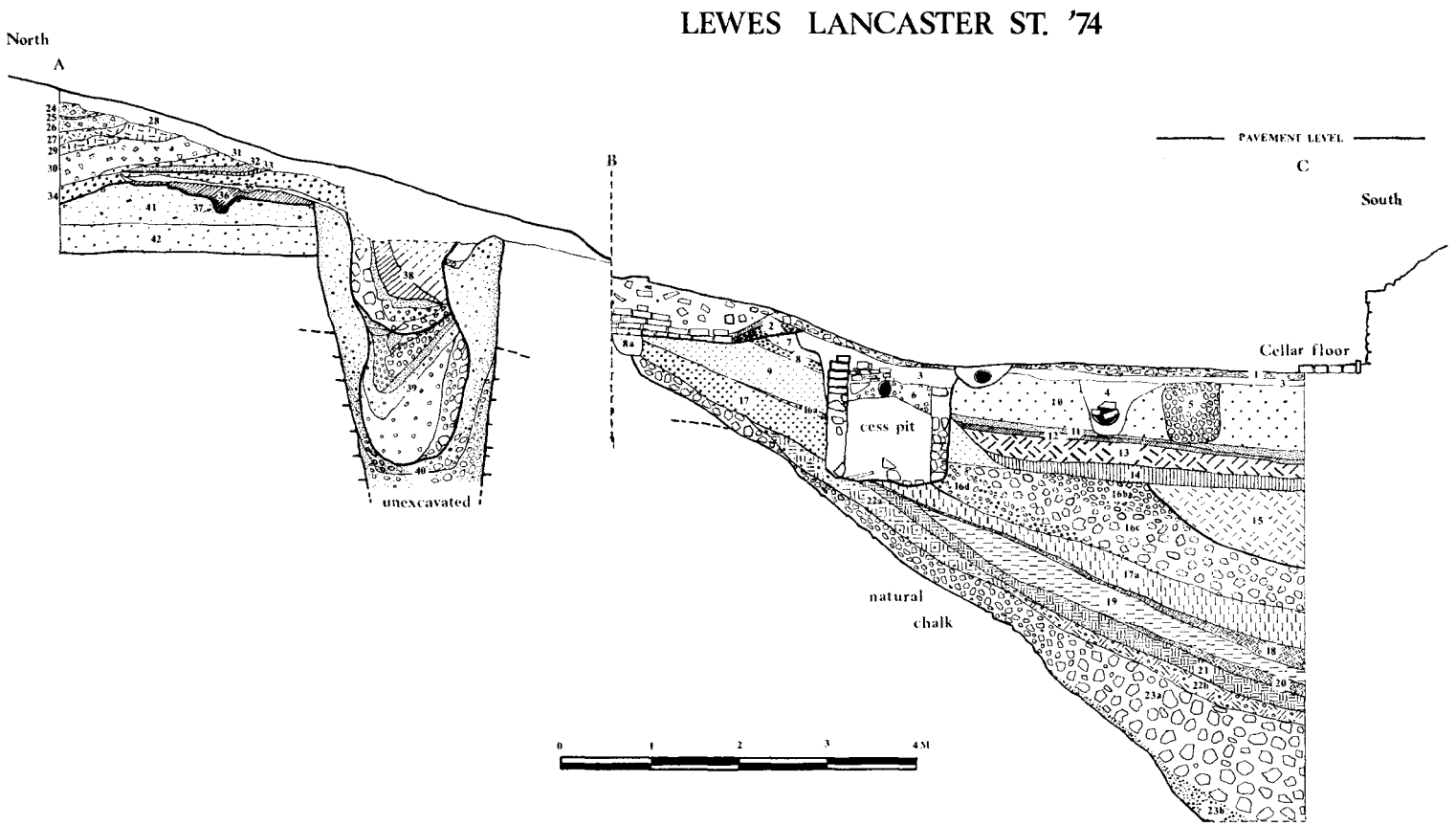


FIG. 5. Lewes, 1974. Lancaster Street, main north-south section of trench (west facing), with section of bank 7 metres to the west projected (reversed)

in the south-west corner and one apparently in the south-east[1]—which argues against the camp being used as an outpost of the castle. The date and the proximity of this camp to Lewes castle suggests the period of civil war and anarchy in the middle of the twelfth century, but there is as yet no documentary evidence of a local feud in Lewes during Stephen's reign.

The pottery found in the mass of chalk debris in the ditch (Fig. 5, layer Nos. 16a, b, c, d) which has been tentatively interpreted as the result of the destruction of the rampart, is too similar to that found under the bank to be clearly distinguished in date and may indeed have been derived from that source. There was nothing of a later date in this material to lead one to doubt that the rampart was not very long lived as a defensive feature. The latest possible date for the deposition of this material is given by the recut in the late fourteenth or early fifteenth century (Fig. 5, layer No. 15).

CONCLUSIONS

This first year's pilot study of Lewes has answered some questions about the origin of the town and raised others. It is now clear that even if—by the remotest chance—the town wall did follow the line of Brook Street, the Saxon and medieval urban areas did not spread so far north. The Naval Prison site, the Greenwall site and these excavations have not produced any evidence of urban structures, and the same is true of the Edward Street excavations of 1971[2] slightly further to the south. These facts, taken together with the strong possibility that in the twelfth century the fortified area round St. John-sub-Castro was outside the town, suggest that the northern boundary of medieval Lewes may lie south of Lancaster Street. One piece of positive evidence which supports this hypothesis is a large medieval ditch observed in 1971 by M. Bell during building operations just to the north of Wellington Street, where it joins North Street.[3]

It is hoped that continued work of excavation and observation may make the picture of medieval Lewes clearer.

[1] P. Dunvan, op. cit., 342; M. A. Lower, *Handbook of Lewes* (2nd ed.), (1852), 75-76: "In levelling the ground for the erection of this church (St. John-sub-Castro, 1838-9) a large artificial mound was removed, and another tumulus of colossal dimensions occupied the site of Mr. Barrett's new house." A MS. by Thomas Wakeham of 1783, discovered at the East Sussex Record Office by R. Gilbert in 1963 (MS., *History of St. John-sub-Castro* (1969), Barbican House), which says that the east mound in the churchyard was demolished in 1779 to provide material for raising the level of the nave. R. Gilbert MS., p. 7.

[2] M. S. Page, "Excavations at Edward Street, Lewes, 1971," *S.A.C.*, vol. 111 (1973), 113.

[3] Mr. M. Bell has kindly allowed me to consult the notebook and finds relating to his observations of this site. They are now deposited at Barbican House, Lewes.

DESCRIPTION OF LAYERS

Brook Street South

Layer 1 Heavy mid-brown sandy clay, few small stones, becoming sandier with depth, otherwise homogenous.
,, 2 Orange-brown sandy clay with small stones.
Pit 1 Soft, clean, mid-brown sandy clay.
,, 2 Brown friable sandy clay, flecked with charcoal.
Gully 1 Dark brown sandy clay, few small stones.
,, 2 Dark grey-brown friable sandy clay with small flints.

Brook Street North

Layer 1 Mixed layers of chalk rubble and rubbish, levelling.
,, 2 Yellow mortar, fragments of brick.
,, 3 Orange-yellow loam and clay.
,, 4 Chalk rubble, very clean to North, clayey to South (fill of pit 3).
,, 5 Very solid clean greenish clay (lining of pit 3).
,, 6 Charcoally layer, with brick, chalk and mortar fragments.
,, 7 Orange-yellow to brown loam, patches of clay.
,, 8 Loose brown soil with much broken glass (19th century).
,, 9 Mid orange-brown clay, with some flints.
,, 10 Several layers of brick rubble, clay and chalk.
,, 11 Pale ashy, charcoally layer.
,, 12 Grey sandy clay layer, with many brick fragments.
,, 13 Friable greenish-grey gravelly clay.
,, 14 Pale green solid clay, very hard.
,, 15 Brownish dark layer, crumbly and ashy, with brick fragments and flints in Pit 1.
,, 16 Orange-brown sandy clay in Pit 1.
,, 17 Dirty pale grey clay in Pit 1.
,, 18 Dirty grey sandy clay with brick fragments in Pit 1.
,, 19 Compact clean buff clay in Pit 1.
,, 20 Dirty orange-brown sandy clay with brick fragments.
,, 21 Dirty orange-brown sandy clay with brick fragments and flint.
,, 22 Dark grey charcoally sandy clay.
,, 23 Dark charcoally layer of sandy clay.
,, 24 Pale brown compact clay.
,, 25 Pale grey clay with charcoal flecks and rust coloured streaks.
,, 26 Grey brown peaty clay, full of organic material.
,, 27 Clean, pale green compact clay with chalk flecks.
,, 28 Several layers of gravel, stones and sandy clay forming the foundations of a track, surfaced with flint and chalk.
,, 29 Black gritty layer of gravel and sand.
,, 30 Packed chalk and flint surface, not very worn.
,, 31 Very clean grey clay.

Lancaster Street

Layer 1 Cinders and ash.
,, 2 Brown sandy soil with pebbles and clay.
,, 3 Black layer of ash and cinders.
,, 4 Brown clay with much brick.
,, 5 Compact chalk rubble.
,, 6 Chalky clay with brick rubble (modern sewer trench).
,, 7 Brown sandy soil.
,, 8 Grey soil with pebbles and small stones.
,, 8a Mortary soil with brick fragments.
,, 9 Brown clay with small flints.
,, 10 Brown clay, with chalk, brick fragments, ash.
,, 11 Brown clay and chalk lumps.
,, 12 Fine grey loam.
,, 13 Orange-brown, very compact clay.
,, 14 Clean grey clay, very compact.
,, 15 Pale brown or buff clay with chalk lumps.
,, 16a Small chalk fragments.
,, 16b Small chalk lumps with light brown soil.
,, 16c Medium chalk lumps with light brown clay.
,, 16d Medium chalk lumps with pale brown clay.
,, 17 Light brown clay with chalk flecks.
,, 17a Orange-brown clay with chalk flecks.
,, 18 Mid-brown stony clay.
,, 19 Yellow-brown sticky clay.
,, 20 Mid-brown clay.
,, 21 Orange-brown clay.
,, 22a Light-brown clay.
,, 22b Mid-brown clay.
,, 23a Large lumps of chalk.
,, 23b Gravelly flinty layer.
,, 24 Hard yellow-orange clay with flints.
,, 25 Hard buff-yellow fine clay.
,, 26 Hard yellow-orange clay with small flints.
,, 27 Hard buff-grey clay with flints.
,, 28 Hard buff-grey fine clay with small flints.
,, 29 Hard grey fine clay with small flints.
,, 30 Mixed layer of yellow-orange and orange-grey stoney clay.
,, 31 Stoney mixed grey clay.
,, 32 Fine green-grey clay.
,, 33 Fine green clay.
,, 34 Mixed charcoally sandy clay.
,, 35 Small chalk fragments.
,, 36 Dirty yellow charcoally layer.
,, 37 Charcoal lumps.
,, 38 Mixed layers, heat-reddened clay surrounded by chalk lumps.
,, 39 Mixed layers of chalk and clay, with near vertical run of large flints.
,, 40 Mixed layers of gravelly clay with chalk lumps and flint.
,, 41 Sandy, gravelly clay with angular flint lumps.
,, 42 Gravelly clay with large angular flint lumps.

FINDS

I am grateful for the advice of several experts in the evaluation of the finds, particularly K. J. Barton, M.PHIL., who examined the pottery. They are, of course, not responsible for any errors I have made in drawing conclusions from their work.

The animal bones are being studied separately, and a general animal bone report will be published after further excavations have provided more comparative material.

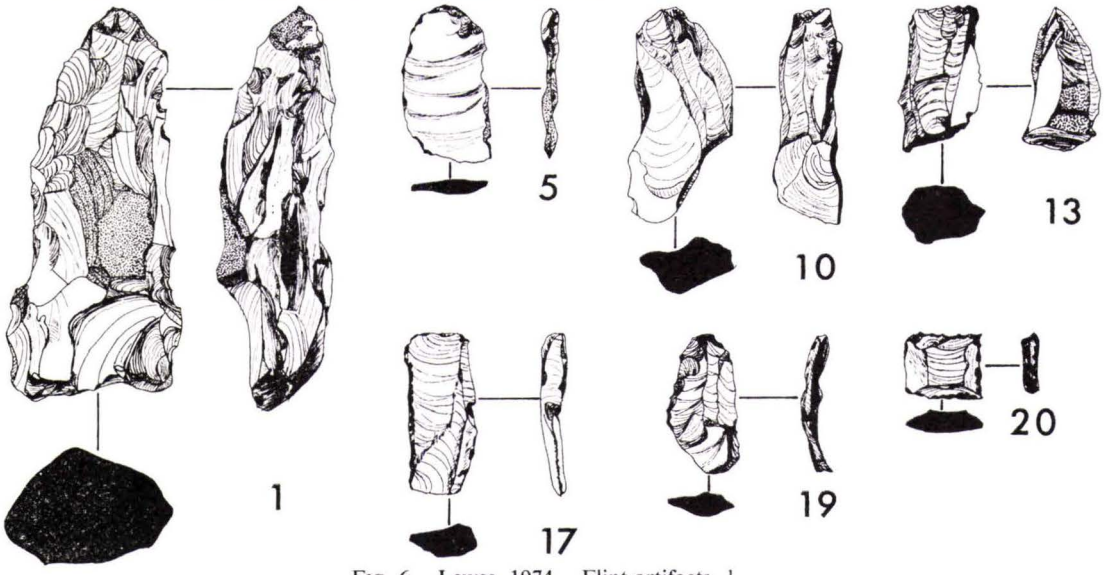


FIG. 6. Lewes, 1974. Flint artifacts, ½.

Flint Artifacts from Lewes (Fig. 6, Nos. 1, 5, 10, 13, 17, 19, 20) by P. L. Drewett

During excavations in medieval Lewes nineteen prehistoric struck flints were found together with one post-medieval gun-flint. Although they consist of a mixed group found disturbed by medieval and later occupation they have some interest in that they are the first published discovery of prehistoric flintwork from this area of Lewes. During the Mesolithic to Bronze Age periods the Brook Street site would have been on a raised terrace above the flood plain of the River Ouse while the Lancaster Street site was a chalk promontory capped with Coombe Rock. This small group of flints appears to indicate periodic flint knapping in the area from the Mesolithic period onwards but it must be remembered that flints ascribed to any particular period below are only done so tentatively as, without a large sample, flint waste is particularly difficult to ascribe to any specific period. (Illustrated flints are marked with an asterisk).

1.* A roughed-out axe made of a grey cherty flint. Although areas of cortex perhaps indicate the axe was not completed it appears to have been used in this state as there is evidence of battering at several points along its perimeter. Possibly Mesolithic. (Lancaster Street, layer 38).

2. Core-rejuvenation flake with three flake facets on its upper surface. Dark grey flint. Perhaps Mesolithic. (Lancaster Street, layer 38).

3-4. Waste flakes (Lancaster Street, layer 40 and revetment trench).

5.* Retouched flake. Grey cherty flint. (Lancaster Street, layer 40).

6-8. Waste flakes. (Lancaster Street, layer 29).

9. Waste flake. (Lancaster Street, nineteenth century disturbed layer).

10.* Core-rejuvenation flake with parallel sided flake facets. Grey flint. Mesolithic. (Brook Street South, nineteenth century disturbed layer).

11. Waste flake. (Brook Street South, nineteenth century disturbed layer).

12. Waste flake. (Brook Street South, Gully 1).

13.* Micro-core for parallel sided blades. Dark grey flint. Mesolithic. (Brook Street South, surface of natural gravel).

14. Waste flake. (Brook Street South, surface of natural gravel).

15-16. Waste flakes. (Brook Street South, layer 1).

17.* Retouched blade possibly used as side scraper or saw. Steep retouch. Grey flint. Mesolithic. (Brook Street South, nineteenth century disturbed layer).

18. Waste flake. (Brook Street South, nineteenth century disturbed layer).

19.* Core-rejuvenation flake. Black flint. Possible Mesolithic. (Brook Street South, nineteenth century disturbed layer).

20.* Rectangular gun-flint from a flintlock gun. Post-medieval. (Brook Street South, pit 1).

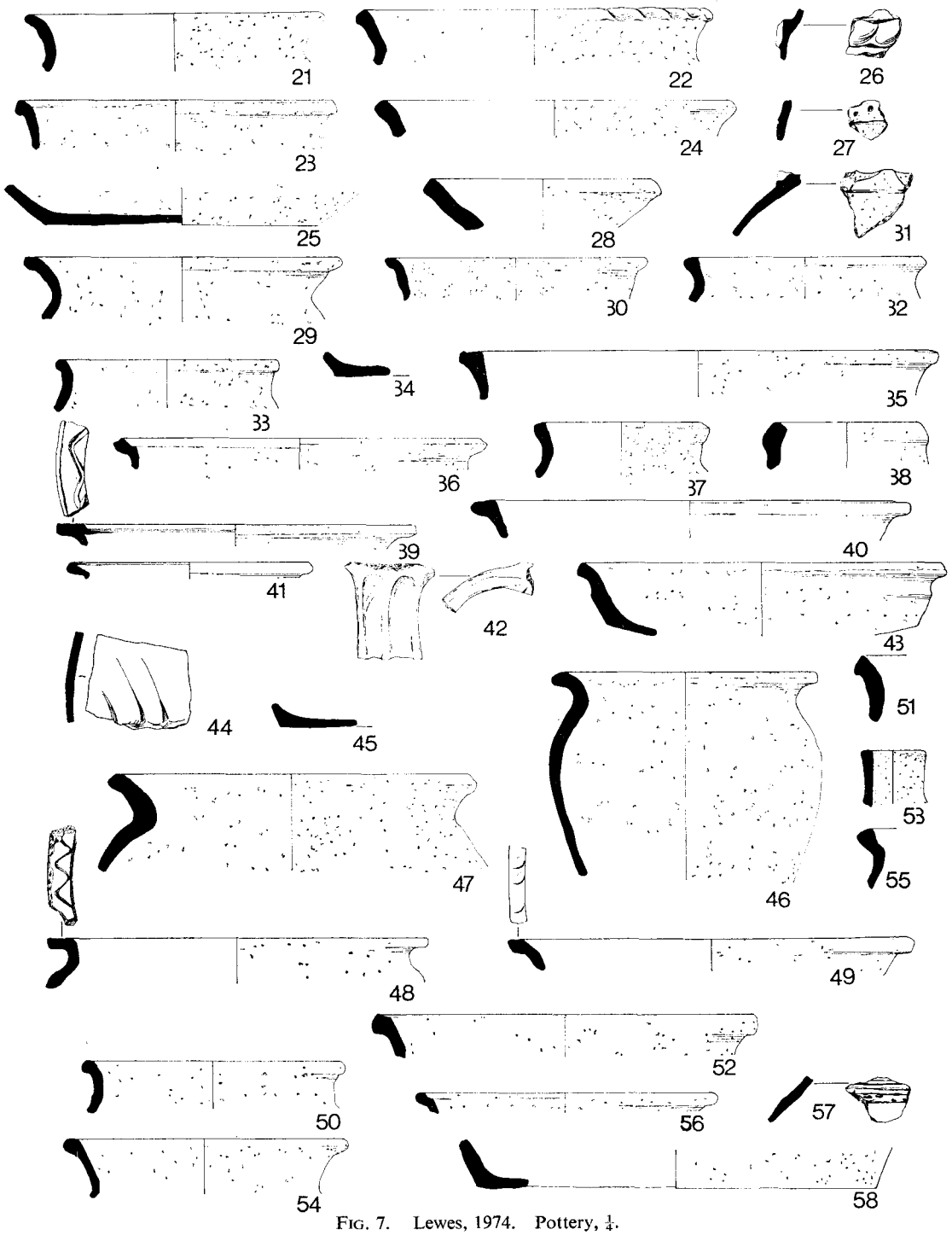


FIG. 7. Lewes, 1974. Pottery, $\frac{1}{4}$.

Pottery by D. J. Freke

The numbers refer to Fig. 7

Lancaster Street

21. Rim of pale grey fabric with large but fairly regular flint tempering. Partially oxidised inside and out to a pinky grey. Twelfth or early thirteenth century. Layer 38.
22. Thumb impressed rim of grey fabric with medium sized flint tempering. Patchily fired. Twelfth or early thirteenth century. Layer 38.
23. Rim of pale grey fabric with medium sized flint tempering. Partially oxidised inside and out to a pinky grey. Twelfth or early thirteenth century. Layer 38.
24. Rim of grey fabric with medium sized flint tempering. Partially oxidised inside, reduced outside. Twelfth or early thirteenth century. Layer 38.
25. Base of grey fabric with large angular flint tempering. Oxidised inside and out to a pinky grey. Twelfth or early thirteenth century. Layer 38.
26. Fragment of thumb impressed strip decoration, in grey fabric with medium to large flint tempering. Reduced inside and out. Twelfth or early thirteenth century. Layer 38.
27. Fragment of stamped fabric, grey with smallish angular flint tempering. Reduced inside and out. Twelfth or early thirteenth century. Layer 38.
28. Rim of shallow bowl in grey fabric with medium flint and shell tempering. Reduced inside and out. Twelfth or early thirteenth century. Layer 36.
29. Rim of grey fabric with medium sized flint tempering. Partially oxidised inside and out. Twelfth or early thirteenth century. Layer 36.
30. Rim of grey fabric with medium sized flint tempering. Partially oxidised inside and out. Twelfth or early thirteenth century. Layer 36.
31. Fragment of thumb impressed strip decoration in grey fabric with medium sized flint tempering. Reduced inside and out. Twelfth or early thirteenth century. Layer 36.
32. Rim of hard grey fabric with medium to small flint tempering. Reduced inside and out. Twelfth or early thirteenth century. Layer 40.
33. Rim of hard grey fabric with medium to small flint tempering. Oxidised outside to salmon pink, reduced inside. Twelfth or early thirteenth century. Layer 40.
34. Base of grey fabric with medium to large flint tempering. Reduced inside and out. Twelfth or early thirteenth century. Layer 40.
35. Rim of grey fabric with medium flint tempering. Partially oxidised inside and out to a salmon pink colour. Thirteenth century. Layer 17a.
36. Rim of grey fabric with sandy flint tempering. Oxidised inside and out to an orange colour. Thirteenth century. Layer 17a.
37. Rim of buff-grey fabric with medium to large flint tempering. Partially oxidised inside and more completely outside to a salmon pink colour. Thirteenth century. Layer 17a.
38. Rim of brownish grey sandy fabric, partially oxidised to a salmon pink inside and out. Thirteenth century. Layer 17a.
39. Rim of fine sandy grey fabric, partially oxidised to a buff-pink inside and out. Decorated with an incised wavy line on upper surface of rim. Fourteenth or fifteenth century. Layer 15.
40. Rim of fine sandy grey fabric, reduced to a buff-grey colour. Fourteenth or fifteenth century. Layer 15.
41. Rim of very fine orange fabric. Fourteenth or fifteenth century. Layer 17.
42. Strap handle of jug of hard very fine orange fabric. Post medieval. Layer 9.

Brook Street North

43. Rim and base of shallow pan in dark grey smooth fine sandy fabric including shell and flint fragments. Heavily reduced. Late fourteenth to early fifteenth century. Layer 14.
44. Fragment of hard, very fine grey fabric, oxidised inside and out, but with a grey slip over exterior. Decorated with overlapping fingerprinting. Late fourteenth to early fifteenth century. Layer 14.
45. Base of hard, fine sandy grey fabric, slightly oxidised with patches of olive green glaze. Late fourteenth to early fifteenth century. Layer 14.

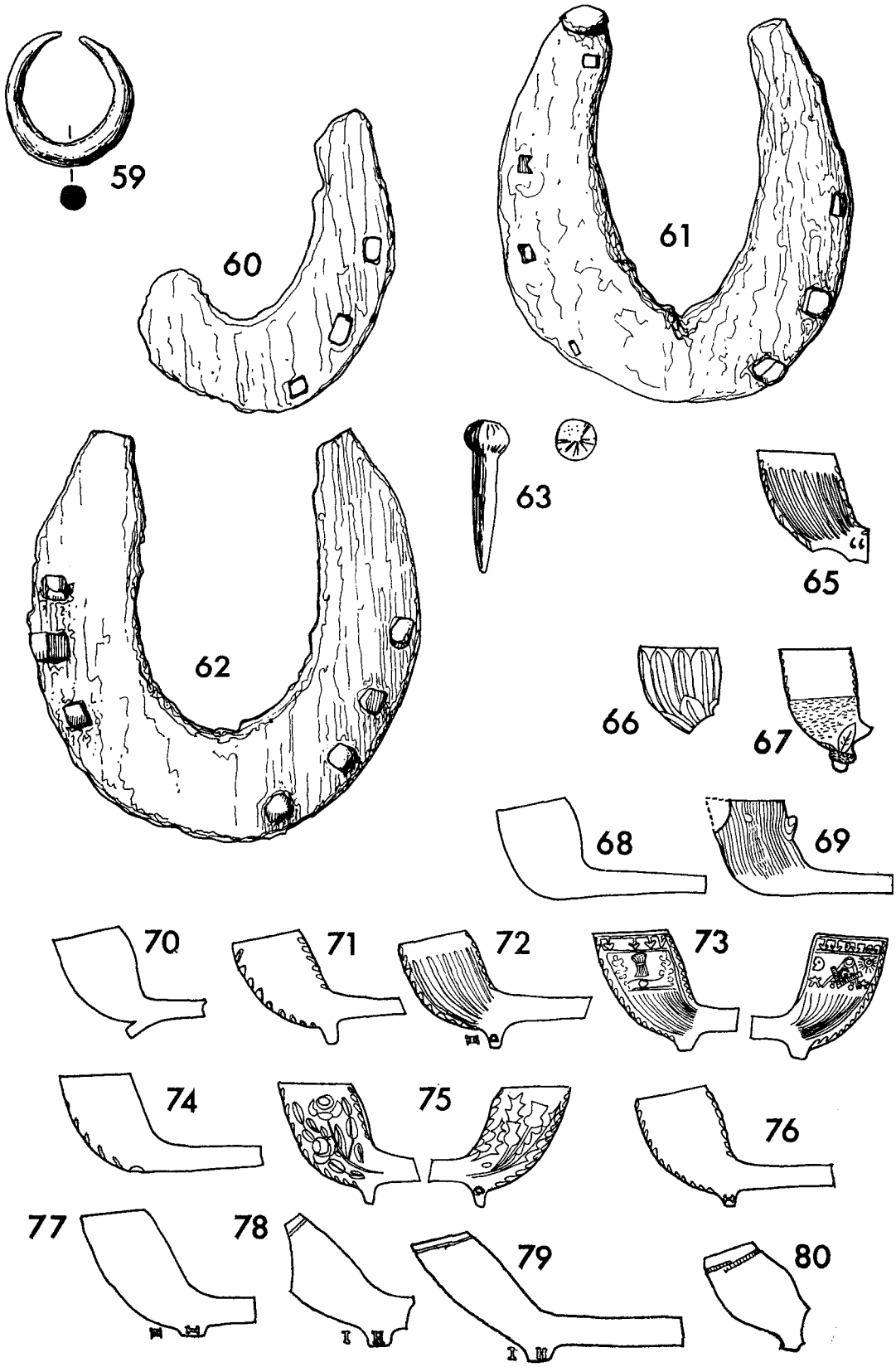


FIG. 8. Lewes, 1974. Metalwork and clay pipes (59 and 63 full size, remainder half size)

Brook Street South

46. Rim of grey fabric with large but regular angular flint tempering. Patchily reduced to dark grey on surface. Late tenth or eleventh century. Pit 1.
47. Rim of grey fabric with large but regular angular flin ttempering. Exterior shows patches of oxidisation. Late tenth to early twelfth century. Pit 2.
48. Rim of fine sandy grey fabric, oxidised to salmon pink inside and out. Very worn, with incised wavy line on upper surface of rim. Fourteenth century. Layer 1.
49. Rim of sandy grey fabric, oxidised inside and out with patchy smoke marks. Fourteenth century. Layer 1.
50. Rim of grey sandy fabric, oxidised to a salmon pink inside and out; worn. Fourteenth century. Layer 1.
51. Rim of grey sandy fabric, oxidised to a salmon pink outside, reduced to buff-grey inside; worn. Fourteenth century. Layer 1.
52. Rim of grey sandy fabric, slightly oxidised to a buff-pink inside with smoked patches outside. Fourteenth century. Layer 1.
53. Rim of grey sandy fabric with small flint tempering, oxidised inside and out to a salmon pink; worn. Fourteenth century. Layer 1.
54. Rim of grey fabric with medium to small flint tempering. Reduced outside, slightly oxidised inside to buff-grey. Thirteenth or fourteenth century. Layer 1.
55. Rim of grey sandy fabric, reduced with patches of oxidation; worn. Fourteenth century. Layer 1.
56. Rim of grey sandy fabric with a little shell tempering, oxidised and slightly smoked inside and out to a grey-pink. Fourteenth century. Layer 1.
57. Decorated body sherd of grey sandy fabric with small flint tempering. Decorated with roughly incised lines and stamped dots. Fourteenth century. Layer 1.
58. Base of grey sandy fabric with small flint and shell tempering. Reduced inside and out to dark grey. Fourteenth century. Layer 1.

Metal Objects

Lancaster Street

59. Bronze penannular ring. Twelfth or thirteenth century. Revetment trench.
Not illustrated. Lead window cames, rolled up. Twelfth or thirteenth century. Layer 38.

Brook Street North

60-61. Horse-shoes, iron. Fifteenth century? Layer 25.
62. Horse-shoe, iron. Sixteenth-seventeenth century? Layer 13.

Brook Street South

63. Bronze nail/pin. Fourteenth century. Layer 1.

Miscellaneous Objects

64. Roman tile, with wavy grooves. Layer 38. (Not illustrated).

Clay Tobacco Pipes by D. J. Freke

Brook Street South

Most of the pipes from this site came from back-filled cesspits and they are all nineteenth century. Numbers in brackets refer to Fig. 8.

Layer 5 (65) Decorated bowl, very late nineteenth century.
,, 8 (66) Decorated bowl, very late nineteenth century.
,, 9 (71) Bowl decorated with leaf-pattern front and back. c. 1850. Long spur, no initials.[1]
,, (72) Ribbed bowl with leaf-pattern front and back. c. 1850. Intials D. H., unidentified maker.
,, (75) Bowl decorated with rose and thistle pattern. Initials J. G., John Goldsmith, Brighton, active 1826-46.
,, (76) Bowl decorated with leaf-pattern front and back. Initials I. T. This maker may be John Tanner of Lewes, active 1823-29, when the use of I for J had not been superseded.[2]

Other interesting fragments in this group were two items with the marks of I. (John) Winter, of Keere Street, Lewes, active 1832-34.[3]

1 D. R. Atkinson, "Sussex Clay Tobacco Pipes and Pipemakers", *Sussex Notes and Queries*, vol. 16 (November, 1964), 126.

2 D. R. Atkinson, "A New List of Sussex Pipe Makers", *S.A.C.*, vol. 110 (1972), 38-41.

3 D. R. Atkinson, op. cit. (1964), pp. 80, 171.

Layer 10 (67) Two complete bowls and one fragment in the shape of an acorn. No initials. Examples of this pattern were found when the kiln in Pipe Passage, Lewes, was excavated. Its dates were c. 1840 to c. 1880.[1]

,, (68) Plain bowl, fluted internally, no spur. c. 1870. Two examples were found.

,, (69) Copy of briar bowl with mock wood bark. c. 1870 or later. Uninitialled.

Other fragments in this group included a fragment of bowl with leaf-pattern front and back with " BURNS CUTTY," stamped on both sides of the stem;[2] and the stem and spur of an internally fluted bowl initialled S.S. (?).

Layer 13 (Not illustrated). One fragment of a stem in the style of John Winter of Keere Street, Lewes, but the name was broken off.
One fragment of stem with " G. Corner " on one side and " (LE)WES " on the other, stamped. George Corner worked at the Pipe Passage Kiln, and was active 1866-74.

Layer 31 (74) Bowl decorated with strip of widely separated leaves at front. c. 1850 bowl. Spur broken off.

Brook Street North

Layer 1 (70) Plain bowl with forward pointing spur. c. 1870. No initials. Similar to some found in kiln in Pipe Passage, Lewes.[3]

Layer 11 (77) Plain bowl. c. 1750. Initials I.H. John Harman (?) of Lewes, active 1734.

Layer 12 (78) Plain bowl, milled rim. c. 1700. Initials H.I. Unknown maker.

,, (79) Plain bowl, milled rim. c. 1700. Initials H.I.

Layer 23 (80) Plain bowl, milled rim. c. 1680.

Lancaster Street

Layer 1 (73) Bowl with masonic design. c. 1850. Uninitialled. Two complete bowls and one fragment were found in this group, which also included: fragments of John Winter's pipe stems with the letters ' I. WINTER ' on one side and ' (KEE)RE ST. LEWES ' on the other, moulded; a fragment of a bowl with a leaf pattern on the front with a stem marked ' (C)UTTY ' one side, and ' HARRI(NGTON) ' on the other, stamped. The latter is presumably by James Harrington (later Harrington & Son), Brighton, active 1867-1910.

Other initialled fragments found elsewhere on the site were: J.G. or C. (perhaps John Goldsmith of Brighton, 1826-46) found in a group containing a stem stamped ' Baltic ' one side and ' Yachter ' the other; a fragment of plain c. 1700 bowl initialled T.H. on the spur (Thomas (I) Harman, Lewes, 1697-1781?); a long spur initialled R.N. (Richard Neeve, Lewes, 1774-1818?).[4]

Tokens by D. Rudling

1. Nuremberg brass jetton. Sixteenth century. Obverse: a conventional single-masted vessel at sea, with a streamer and flag fore and aft. Reverse: four FLEURS DE LYS in a lozenge which is circumscribed by a graduated circle, with five pellets in each segment.
Fictitious legends. (Similar to German jetton No. 9 in " THE CASTING COUNTER AND THE COUNTING-BOARD " by F. P. Barnard, 1916). Condition: fine. Lancaster Street. Layer 9.

2. Lead trade tokens. Probably nineteenth century. Many of these tokens are thought to have served as tallies to be given to field-workers, fruit pickers, and so forth, to show the amount of work they had done and to be given in at the end of the day as a claim for payment.

(a) Uniface token. The design consists of a six petalled geometrical flower. Diameter 20mm. Brook Street South. Surface find.

(b) Token which is convex on one side. Both sides have an embossed " Grid " like design. Diameter 18mm. Brook Street South. Nineteenth century disturbed layer.

(c) Uniface token. Design of a boot. Diameter 18mm. Lancaster Street. Mid nineteenth century disturbed layer.

1 N. E. S. Norris, " A Victorian Pipe Kiln in Lewes ", *Post Medieval Archaeology*, vol. 4 (1970), pp. 168-70. Plate IX, No. 25.

2 D. R. Atkinson, op. cit. (1964), p. 126.

3 N. E. S. Norris, op. cit., Plate IX, Nos. 2, 30.

4 D. R. Atkinson, op. cit. (1972), pp. 38-41.

Charcoal and Wood Identifications by C. Cartwright, M.A.

Lancaster Street

Layer 29	*Quercus* sp.
	Taxus baccata
	Carpinus betulus
Layer 31	*Quercus* sp.
	Cornus sp.
Layer 34	*Quercus* sp.
	Fagus sp.
	Corylus sp.
Layer 36	*Quercus* sp.
	Cornus sp.
	Pyrus sp.
	Crataegus sp.
	Ilex sp.
Layer 38	*Quercus* sp.
	Cornus sp.
	Pyrus sp.
	Fagus sp.
	Crataegus sp.
	Betula sp.
	Taxus baccata
Layer 39	*Cornus* sp.
	Crataegus sp.
	Corylus sp.

Brook Street South

Gully 1	*Quercus* sp.
	Corylus sp.
Gully 2	*Quercus* sp.

ACKNOWLEDGEMENTS

I should like to take this opportunity to thank my principal assistants during the 1974 season: Mr. John Hope, B.A., Mr. Dominic Perring, Dr. Owen Bedwin, and my wife Jane, who took charge of the Finds Shed. I should also like to acknowledge the help and co-operation of the Lewes District Council and Mr. R. L. Stammers, the Chief Technical Officer; the Lewes Archaeological Group whose Chairman and Editor, Mr. E. O'Shea and Mr. J. Houghton, gave valuable advice and aid; Miss Fiona Marsden and her staff at Barbican House Museum; Mr. K. J. Barton, M.PHIL., who kindly examined pottery; Miss Caroline Cartwright, M.A., who analysed the wood samples; Mrs. L. Drewett who drew all the finds; and finally Mr. P. L. Drewett, B.Sc., Director of the Sussex Field Unit, without whose help and advice the season's work could not have taken place.

The information for distribution map (Fig. 1c) was derived from A. E. Fisher, *The Saxon Churches of Sussex* (1970), and C. M. Heighway (ed.), *The Erosion of History* (Council for British Archaeology, 1972).

The Society is greatly indebted to the Department of the Environment for a grant towards the cost of publishing this paper

A LATE NEOLITHIC SITE AT RACKHAM

By E. W. Holden, F.S.A., and R. J. Bradley

The site is on Sparrite Farm 3.2 kilometres south of Pulborough in West Sussex, within the parish of Rackham at TQ 04901520. It lies towards the edge of the Weald on a low tongue of Sandgate Beds belonging to the Lower Greensand series, which projects into a wide bend of the River Arun 2.4km. west of the site. Some 550m. to its south-west and flanking the river is an extensive tract of waterlogged alluvium and peat, the two areas separated from one another by a low sand ridge capped by gravel and flint rubble and rising to a little over 30m. Six undated round barrows are known from its area[1]. The village of Rackham lies about 1.5km. further south at the foot of the downland escarpment which here attains a height of 194m. (Fig. 1).

Until 1970 the northern part of the area had long been under woodland and it was when birch trees were being uprooted in land clearance that worked flints were first discovered. As work proceeded and more material came to light it was possible to mount a small salvage excavation which lasted intermittently from July to December, 1970. Two nuclei were almost totally excavated in this time, between them containing over 13,000 worked flints. Meagre traces of associated features were also recorded. A small quantity of worked flints was found in the disturbed soil on the north-east side of an ancient stream bed, in line with area I; also two other scatters some 50 and 100m. south-east, still on the north-east side of the old stream bed. These flints are of similar character to those excavated and it is possible that other flint-working nuclei exist in addition to areas I and II. The whole field is now pasture.

The excavation was the responsibility of E. W. Holden; discussion of the artifacts and their significance that of Richard Bradley. Pollen analysis was kindly undertaken by Professor G. W. Dimbleby, a shortened version of the results appearing on p. 100[2]. The excavated material is deposited in the museum of the Sussex Archaeological Society at Barbican House, Lewes.

THE EXCAVATION (FIGS. 2-8)

Owing to restriction of manpower the site was cleared upon a uniform 5ft. (1.52m.) grid and only limited areas were left open at one time. The area immediately north of the excavation was taken by a waterlogged, reedy hollow, considered to be a former stream course and this gave rise to intermittent flooding of the site, while extensions in other directions were limited by the presence of large tree stumps. The soil profile is interpreted by Professor Dimbleby as a podzol with a leached A horizon of brown sand extending to 28cm. The soil included a sprinkling of small, cream coloured, angular gravel and rarer fragments of brown sandstone of similar size. This material was cleared entirely by hand in uniform 12mm. levels and all worked or burnt flints were retained. Limits of time made sieving impractical. Although the area had been wooded, tree roots had caused little serious disturbance below the immediate surface soil.

[1] E. W. Holden, " Sussex Barrows ", *Sussex Notes and Queries* vol. 15 (1959), 126-7.

[2] The full report and discussion of the pollen analysis is in *Journal of Archaeological Science* 2 (1975), 179-86.

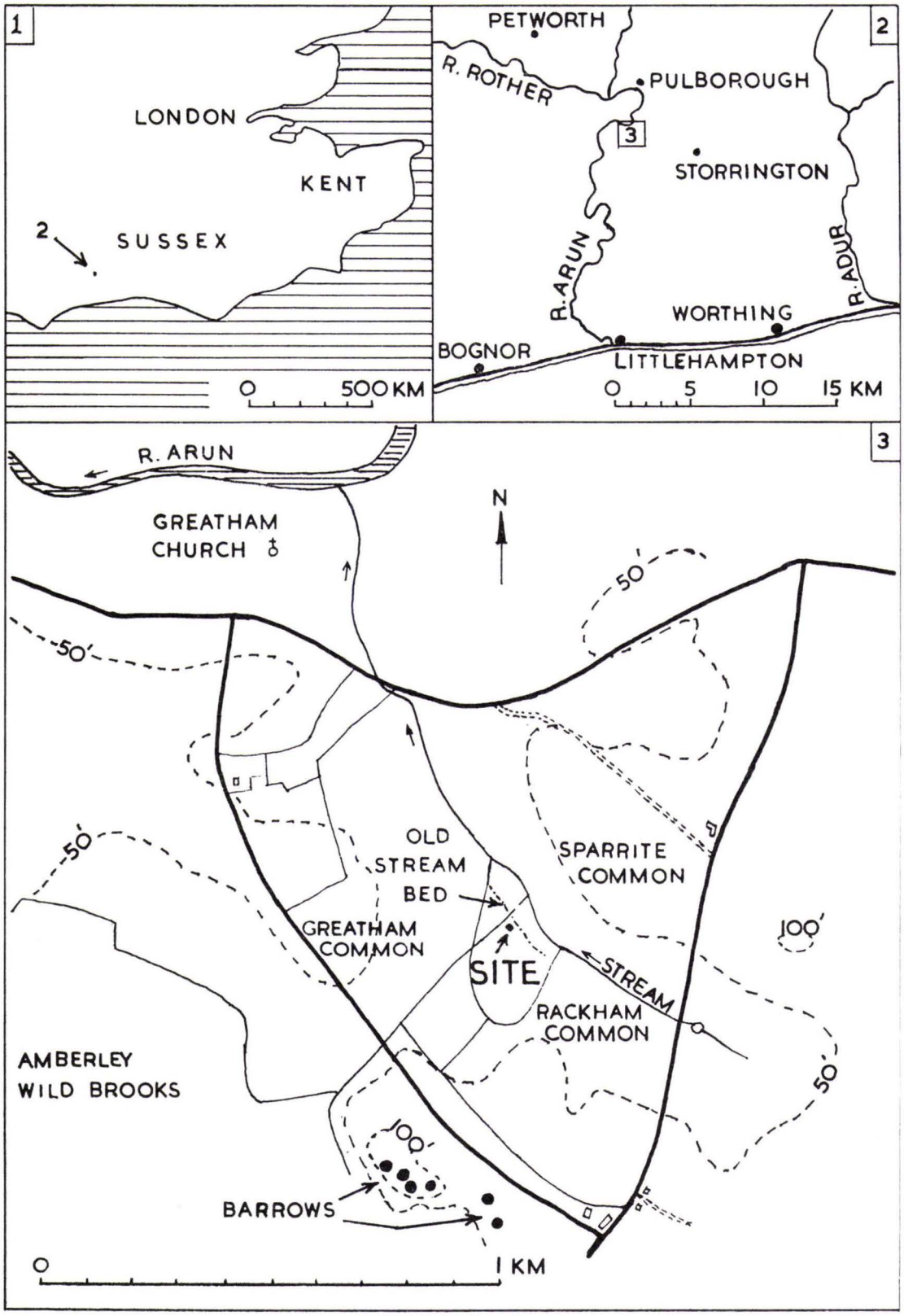


FIG. 1. Location plans

The majority of the worked flints occurred within the A horizon at depths between 15 and 20 cm. (Figs. 5-7) as did the bulk of the charcoal on the site (Fig. 4), although a few flecks could be found up to 7.5cm. below the artifacts. The flints included a high proportion of burnt material and were accompanied by pieces of red burnt sandstone of the type natural to the site (Fig. 3). Pottery and faunal remains did not survive, and so most information must be drawn from the changing density of worked flint about the excavated area. This suggested two adjacent but separate nuclei. In *area I* the possible hearth was recorded as discoloured sand at the same level as the artifacts, although this lacked burnt flints or sandstone (Fig. 2). A rough line of irregular hollows some 18cm. deep could be seen running from north-east to south-west across this area. These were filled with darker sand and included occasional worked flints; but there is no decisive evidence that they were in fact post holes and not the result of root penetration. This nucleus occupied some 700 square feet (65 sq. m.) and is unlikely to have extended much further in any direction.

In *area II*, two hearths of the same type were recorded, as well as three slight hollows filled with blackened sand which seem to have served the same purpose. Six circular intrusions, similar to those already described, were found within this nucleus, in addition to other more poorly defined examples (Fig. 2). These do seem to have been stake holes, some 5 to 7cm. in diameter and 15 to 23cm. deep. They were not well defined in section but contained dark sand with a particular number of charcoal flecks Three also contained worked flints. They seemed to lie in an approximate line. One pointed stake hole 6cm. in diameter and 23cm. deep accompanied the largest hearth. Its filling was again of darker sand. This area could not be totally excavated and covered at least 625 square feet (58 sq. m.).

In area I the line of possible post holes was not reflected by any decisive change in the density of artifacts; but in the other nucleus this was the case. In neither area can any permanent structure be envisaged. In each part of the site the hearths were peripheral to the main concentrations of worked flints. The distribution of burnt flakes and burnt sandstone was virtually the same, but surprisingly they were independent of that of the charcoal and all but one of the hearths. In each area the burnt and unburnt flints showed the same pattern. In area I, cores and waste had much the same distribution; but in the other nucleus the cores were mostly found at the edges of the main concentration of flakes. In both areas they were associated with hammerstones. The finished implements were distributed together with the unretouched flakes and they too avoided the areas with hearths. In area II implements were most frequent about the stake holes (Figs. 2 and 7).

The contents of each grid square were recorded and weighed on excavation with the result that the average weight of flint flakes about the site could be calculated. This was then used as an index of the changing size of the debris (Fig. 8). It appeared that in area I the size of flakes generally decreased from south to north with most of the largest flakes about the edge of the nucleus and with the greatest concentration of debris within the area where these occurred. A lesser concentration to the north included many smaller fragments. Each area had a number of cores but most of the hammers were in areas with the large flakes. By contrast, the densest area of the other nucleus was made up of many small flakes and the lower numbers of large flakes were found only about the edges of the group. In this case cores and hammers were mostly linked with the smaller classes of flakes. The reasons for this will be suggested when the contents of the industry have been reviewed.

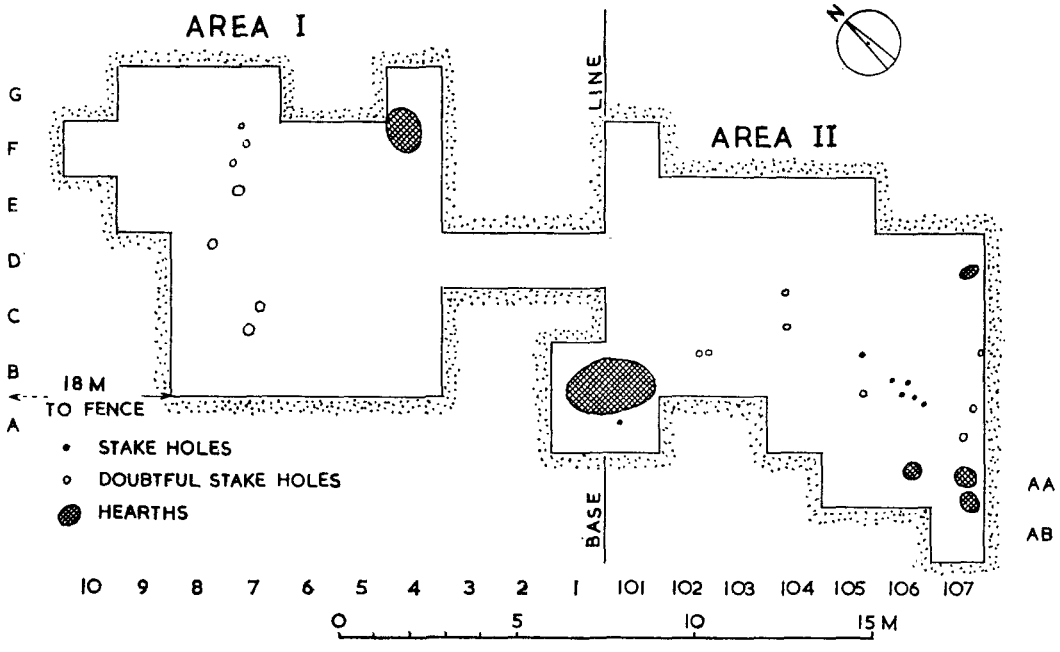


FIG. 2. Rackham. Plan of features

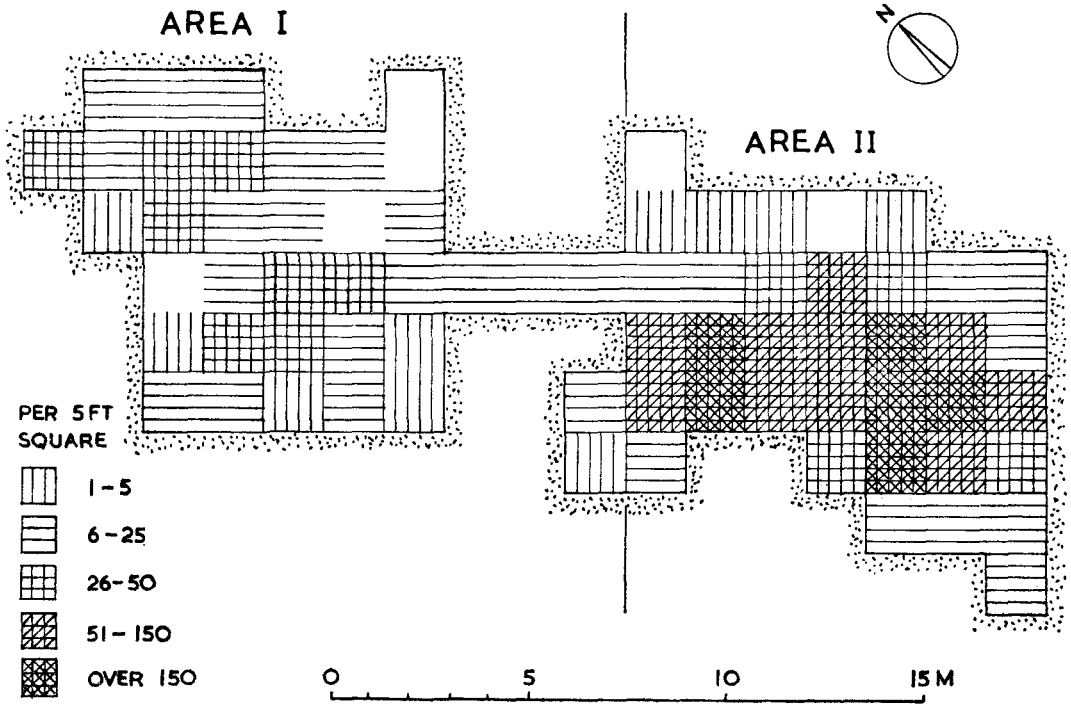


FIG. 3. Rackham. Distribution of burnt flints

THE FLINT INDUSTRY

13,062 humanly modified flints were recovered in excavation, 3,932 from area I and 9,130 from area II. No attempt has been made to exclude smallest flakes from analysis. The industry made use of large, sometimes angular, flint gravel, which can be distinguished from chalk flint by its rather rough, often dark grey, cortex. When struck these nodules were grey, black or occasionally honey coloured and a few showed ochreous inclusions or reddish streaks in the body of the flint. All these varieties could be matched visually among the unstruck nodules in the same field as the site.

Cores. 170 regular cores were recorded in the excavation. They have been classified following the system set out by Clark *et al.*[1]:

Type		*Area I*	*Area II*
A	One platform:		
(i)	flakes struck all round	9	10
(ii)	flakes struck part way round	23	47
B	Two platforms:		
(i)	parallel	8	12
(ii)	at an oblique angle	5	5
(iii)	at right angles	5	14
C	Three or more platforms:	6	8
D	Keeled—struck from two directions	9	6
E	Ditto—but with one or more platforms	2	1
	Total	67	103

The majority of these cores were small and reflected the poor quality of the available material. Maximum dimensions ranged from 2.8 to 7.5cm. in area I and from 3.2 to 7.5cm. in area II. The types in the two nuclei are broadly the same although the more elaborately prepared cores are slightly more common in area II. Statistical comparison of the two groups by the number of platforms and the proportion of keeled cores show a 76% probability that the variation between the two areas is significant ($x^2=4.25$ at 3 degrees of freedom). This variation is largely caused by the keeled cores and if these are omitted there is only a 25% probability that the differences are significant ($x^2=0.58$ at 2 degrees of freedom). In some cases the sharp edges of the platforms had been trimmed, perhaps for easier handling; but there is no certain evidence that any were used as scrapers. Five cores in area I and four in area II had been re-used as hammers. In addition to these regular forms, area I produced 47 roughly broken or struck nodules which had not been further used and another 53 came from area II.

Flakes. 11,855 flakes were recovered, of which about 30% showed some signs of burning. There is, of course, evidence from some cultures that flints can be heated before detailed working; but there is no clear evidence of this here. 3,400 flakes came from area I and 8,455 from area II. A sample of 1,000 unburnt flakes, 500 from each area, was examined in detail with the following results:

[1] J. G. D. Clark, E. S. Higgs and I. H. Longworth, " Excavations at the Neolithic site at Hurst Fen, Mildenhall, Suffolk, 1954, 1957, 1958 ", *Proceedings of the Prehistoric Society*, (hereafter *P.P.S.*) 26 (1960), 216.

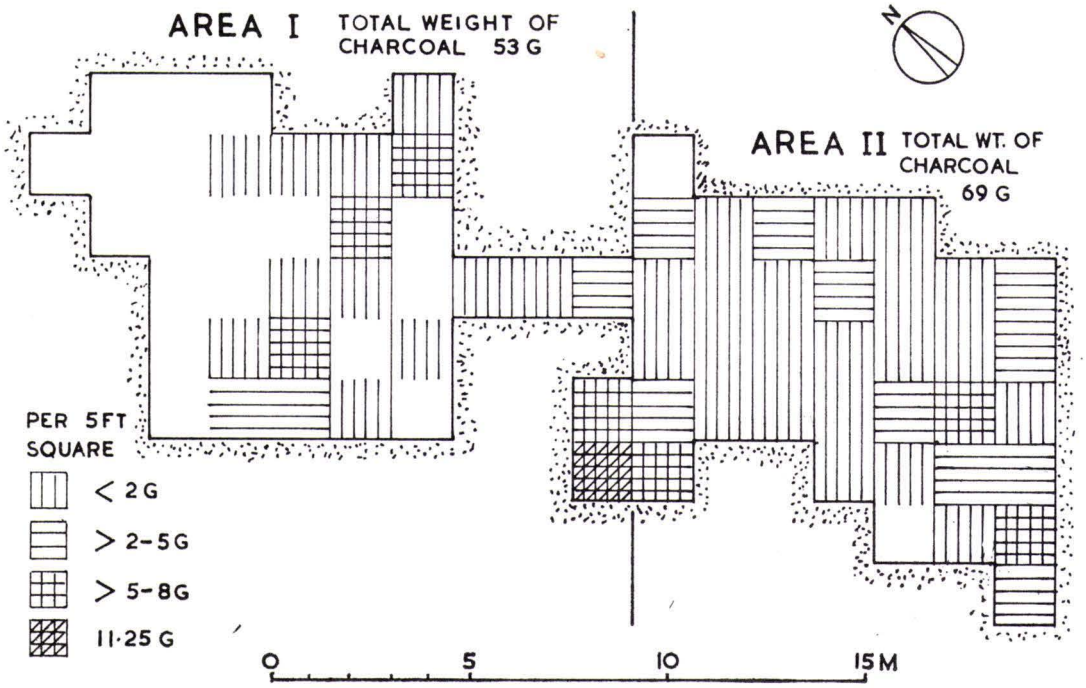


FIG. 4. Rackham. Distribution of charcoal

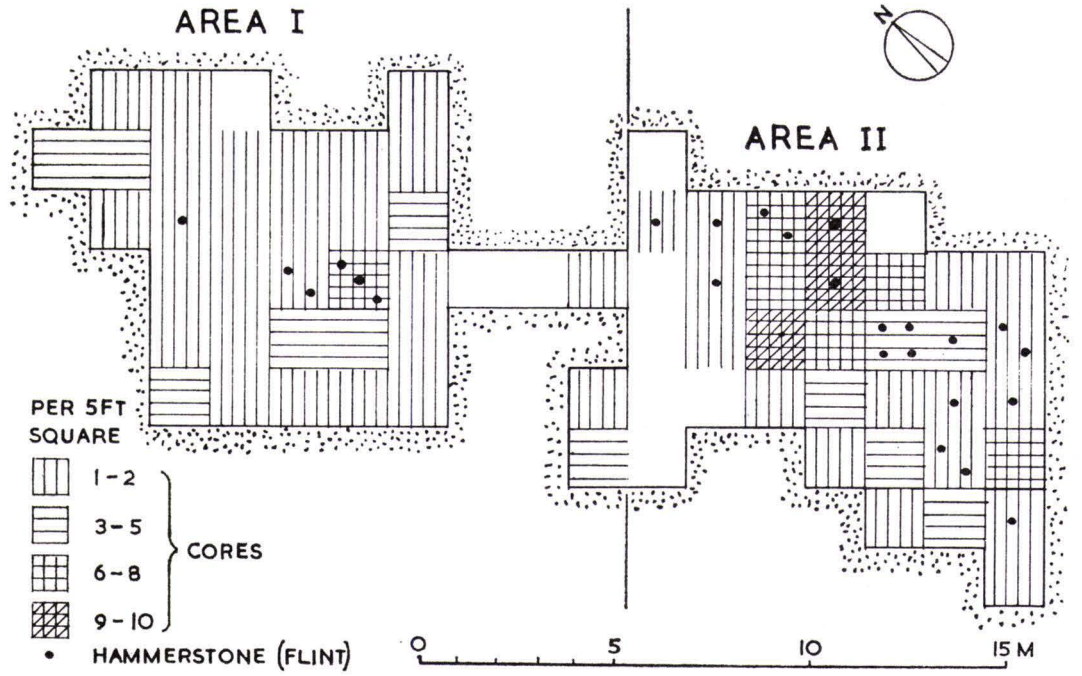


FIG. 5. Rackham. Distribution of cores and hammerstones

Length	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	mm.
Area I ..	—	4	34	32	18	8	4	—	%
Area II ..	—	16	43	26	9	4	1	1	%
Breadth									
Area I ..	—	17	39	26	14	3	1	—	%
Area II ..	1	33	44	17	4	1	—	—	%

Breadth: length	0:5-1:5	1:5-2:5	2:5-3:5	3:5-4:5	4:5-5:5	>5:5		
Area I ..	—	4	17	30	22	27	%	(11% wholly cortical)
Area II ..	—	6	22	24	21	27	%	(17% wholly cortical)

These figures seem to suggest that, while the shape of the flakes in each group was much the same, there were real differences of size. This is confirmed by statistical testing which shows a 99.2% probability that these variations were in fact significant ($x^2=13.68$ at 4 degrees of freedom). For this calculation the very few length measurements over 59mm. were omitted.

In each nucleus a large proportion of the flakes showed signs of slight edge chipping or wear consistent with utilisation. In area I these amounted to 30% of the flake sample and in area II to 32%. Accordingly, the dimensions of the used and waste flakes have been considered separately.

Length	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	mm.
Area I									
Used ..	—	2	14	39	28	10	7	—	%
Unused ..	—	5	40	28	15	8	4	—	%
Area II									
Used ..	—	5	37	33	14	7	2	2	%
Unused ..	—	22	46	22	7	3	—	—	%
Breadth									
Area I									
Used ..	—	16	40	25	16	2	1	—	%
Unused ..	—	20	46	21	10	2	1	—	%
Area II									
Used ..	—	33	40	16	9	2	—	—	%
Unused ..	—	32	45	17	5	1	—	—	%

Breadth: length	0:5-1:5	1:5-2:5	2:5-3:5	3:5-4:5	4:5-5:5	>5:5	
Area I							
Used	—	4	25	37	19	15	%
Unused ..	—	3	13	26	23	35	%
Area II							
Used	1	10	28	23	18	20	%
Unused ..	—	5	17	23	23	32	%

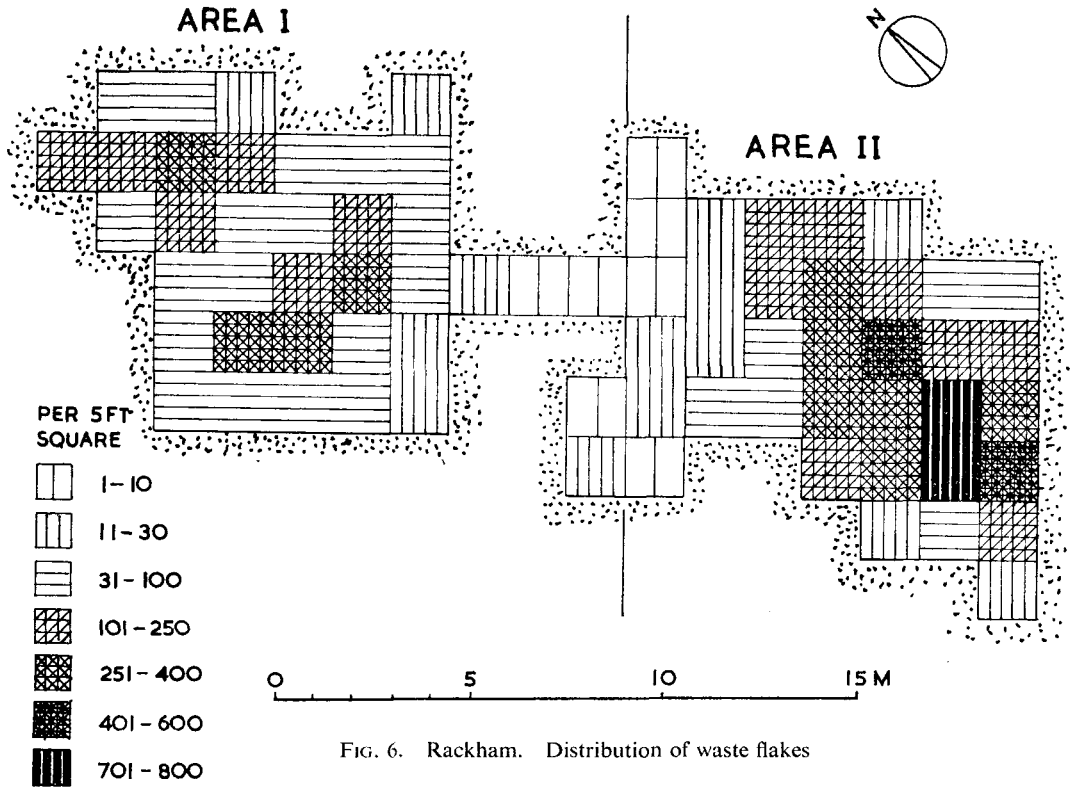


FIG. 6. Rackham. Distribution of waste flakes

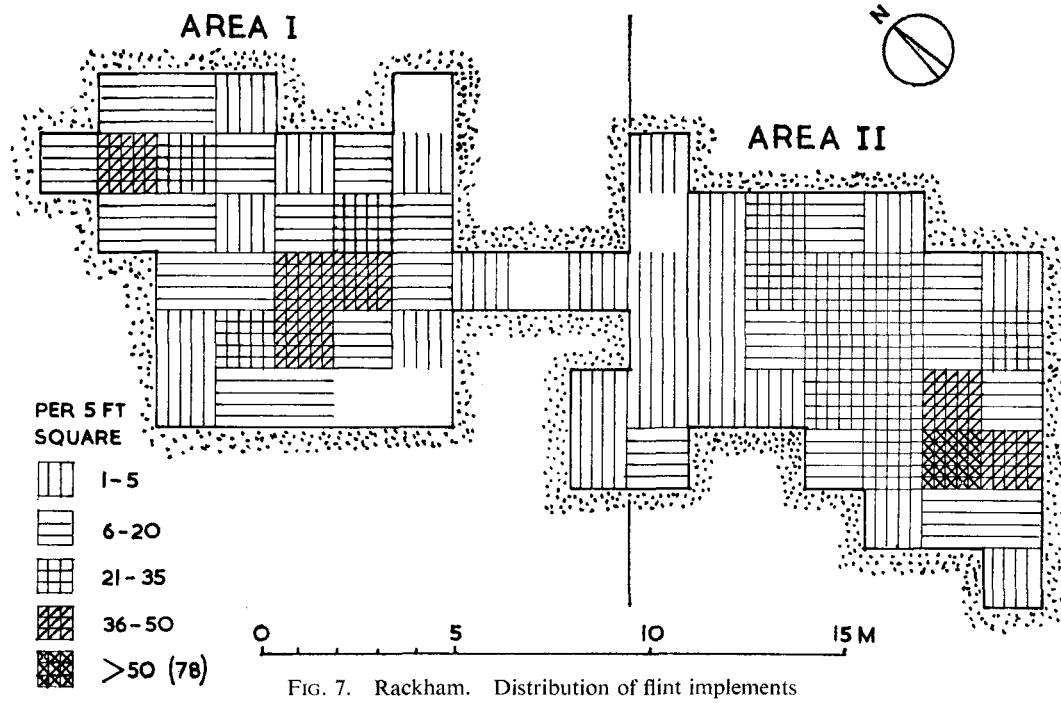


FIG. 7. Rackham. Distribution of flint implements

In each area there was apparently a preference for used flakes in which length exceeded breadth, presumably to ensure a reasonably long working edge. More blades were used in area II than in area I. In each case the flakes selected for re-use were rather larger than the average, although this tendency was more marked in area I than in area II. Both classes of flake were larger in area I, although the unused flakes were of much the same shape over the whole site.

Implements

Scrapers (Fig. 9, 1-13). 397 convex scrapers were excavated from area I and 479 from area II. The majority were roughly worked by direct percussion and retained large areas of cortex. In area I only 20 (5%) showed faceted platforms, and in area II there were only 29 (6%). The majority of the implements were roughly symmetrical and so a simple shape classification, incorporating types defined by Clark *et al.*, Smith and Wainwright,[1] may be appropriate. Illustration numbers follow descriptions.

				Area I	*Area II*
Aa	End scrapers	(i) Long*	(1)	20 (5 %)	23 (5 %)
		(ii) Short	(2)	43 (11 %)	39 (8 %)
		(iii) Broad	(3)	8 (2 %)	1 (¼%)
Ab	End and sides retouched	(i) Long	(4)	25 (6 %)	15 (3 %)
		(ii) Short	(5)	54 (14 %)	89 (18 %)
		(iii) Broad	(6)	—	2 (¼%)
		(iv) Round	(7)	16 (4 %)	37 (7 %)
B	Side scrapers	(i) Long	(8)	21 (5 %)	13 (2 %)
		(ii) Short	(9)	44 (11 %)	69 (14½%)
C	Disc scrapers†		(10)	2 (½%)	4 (1 %)
D	Double ended		(11)	2 (½%)	7 (1 %)
E	On small cortical flakes		(12)	70 (18 %)	96 (19 %)
F	On small irregular flakes		(13)	63 (16 %)	71 (15 %)
G	Broken scrapers			29 (7 %)	31 (6 %)
				397	479

* Defined by a minimum length:breadth ratio of 3:2

† Distinguished from the round scrapers by the presence of retouch along the whole perimeter.

All the unbroken scrapers have been measured with the following results:

Length	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	mm.
Area I ..	—	5	34	38	19	3	1	—	%
Area II ..	—	10	43	34	11	1	1	—	%
Breadth									
Area I ..	—	14	46	27	11	1	1	—	%
Area II ..	—	17	50	27	5	1	—	—	%

Thickness	0-3	3-5	5-7	7-9	9-11	11-13	13-15	15-17	17-19	19-21	mm.
Area I ..	—	7	18	22	29	13	6	2	2	1	%
Area II ..	—	10	18	21	25	9	10	4	2	1	%

Angle of retouch	30-39	40-49	50-59	60-69	70-79	80-89	degrees
Area I	1	12	46	32	8	1	%
Area II	4	15	40	27	11	3	%

[1] Clark, op. cit., 217; I. F. Smith, *Windmill Hill and Avebury, Excavations by Alexander Keiller, 1925-1939* (1965), 107; G. J. Wainwright, "The excavation of a Neolithic settlement on Broome Heath, Ditchingham, Norfolk," *P.P.S* 38 (1972),. 1-97, see 61.

The scrapers are of the same forms in each area and their sizes are more closely related than those of the flakes. Even so, area II again includes some rather smaller items than the other group, perhaps an indication that they were made and used in the same place. Statistical testing shows a 76% probability that these size differences as reflected by the length measurements, are significant ($x^2 = 4.26$ at 3 degrees of freedom). For this calculation the few examples longer than 49mm. were omitted. Of the incomplete scrapers about 40% have broken longitudinally and 60% have snapped across the bulbar axis. The working edges show two characteristic types of wear, neither of which is confined to any particular size or shape of tool. In the first type wear was limited to tiny chips along the retouched edge. This edge was usually shallow. This first type accounted for 42% of the scrapers in area I and 39% of those in area II. The second type was characterised by a rather crushed working edge in which individual flake beds had been fused together by an abrasive action. The working edge was generally blunted and showed many very small deep chips apparently pressed off in use and frequently hinged or stepped. This accounts for the remaining examples. Very few scrapers showed silica lustre.

Knives (Fig. 9, 14-21, Fig. 10, 22-28). Four types of knife are represented:

(a) *Retouched flake knives* (14-19). These usually consisted of the larger flakes, often of rough blade proportions, with shallow retouch along one or both edges. Two examples from each area show invasive scale flaking along one edge and cortex on the other. The same pattern with faint or marginal retouch appears in two flakes from area I and six from area II. In another two cases flakes from the latter area were retouched along both edges. Nine much broader flakes from area I were adapted in the same way and so were three non-cortical flakes from area II, each of which had a roughly pointed outline. Two similar flakes from area II also gave evidence of scale flaking extending to the bulbar surface.

(b) *Blunted-back knives* (20-21). Two examples, both on long flakes, come from area I.

(c) *Plano-convex knives* (22-26). Two broken examples were found in area II. Both show shallow scale flaking about the edges which did not cover the whole dorsal surface. Another four very small flakes, three pointed at the end, show similar, if more intensive, scale flaking over parts of the dorsal surface. All are from area I.

(d) *Discoidal knives* (27-28). Parts of two discoidal knives came from area II. Both were unpolished and showed shallow scale flaking confined to parts of the dorsal surface.

Arrowheads (Fig. 10, 29-32). Three fragmentary barbed and tanged arrowheads were excavated, one from area I and two from area II. All show bifacial scale flaking. One small retouched fragment from area I may be a transverse arrowhead.

Fabricators (Fig. 10, 33-35). Three fabricators of varying cross-section were all found in area II. The edges of all three are bruised by use.

Burins (Fig. 10, 36-37). Three flake gravers are represented, one from area I and two from area II. All show signs of wear on the working edge.

Axe (Fig. 10, 38). The working end of an axe of pointed oval section was found in area II. It was unpolished and may have broken in manufacture.

Miscellaneous (Fig. 10). (a) Two pointed ? core fragments were found in area II (39-40). Both possess one flat face with steep invasive retouch on the dorsal surface. They had been snapped across, but neither shows distinct wear patterns.

(b) The bulbar end of a flake snapped across the striking axis was found in area II (41). It showed shallow inverse retouch and was roughly pointed towards the bulbar end. The broken edge retained wear possibly consistent with hafting, but the implement seems too thick and blunt for use as a projectile point.

The composition of the two groups is summarised in the table below:

	Area I	*Area II*
Scrapers	397	479
Retouched flake knives	13	15
Blunted-back knives	2	—
Plano-convex knives	4	2
Discoidal knives	—	2
Arrowheads	2	2
Fabricators	—	3
Burins	2	1
Axe	—	1
Miscellaneous	—	3
Total	420	508
Flakes : cores	51:1	82:1
Scrapers : flakes	1:8	1:18
All implements : flakes	1:8	1:17
Implements as % of all flakes	11%	6%

Statistical testing shows a 99.7% probability that the different ratios of cores to flakes are significant ($x^2=8.9$ at one degree of freedom). The probability that the different ratios of implements to flakes are significant is even higher ($x^2=113$ at one degree of freedom). Finally there is only a 32% probability that the ratios of scrapers to other tools are significantly different between the areas ($x^2=0.173$ at one degree of freedom).

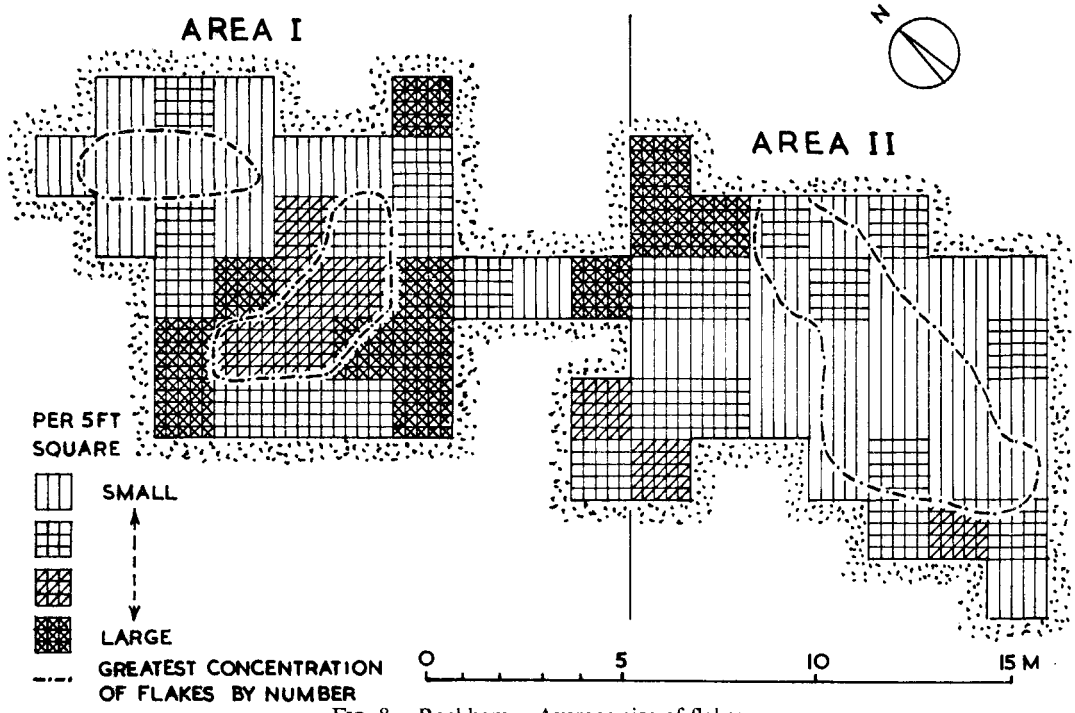


FIG. 8. Rackham. Average size of flakes

CHRONOLOGY

No pottery was found on the site and conditions were not suitable for its survival. The affinities of the industry therefore depend upon its internal typology. Despite the consistent range of the associated tool types, the two nuclei have shown rather different characteristics on metrical analysis and for this reason it is clear that detailed measurements of flakes can be a very crude cultural index. Similar measurements for other British Neolithic and Bronze Age industries show only the most general trend from narrow to broad flakes and no exact correlation with associated pottery styles or absolute chronology. On the other hand the broad flakes on this site are consistently linked with Late Neolithic artifact types. The scrapers are very similar in style and dimensions to the Beaker groups from Plantation Farm and Peacock's Farm as well as Broome Heath and Windmill Hill,[1] and it is possible to distinguish these five measured groups from those with different associations. The retouched flake knives are of types closely matched in a purely Beaker context at Belle Tout, again in Sussex,[2] while the discoidal and plano-convex knives could support a similar date for the group. Such a conclusion finds further support from the three barbed and tanged arrowheads, which are another purely Beaker type. The remaining items have more diffuse associations but need not suggest that more than one industry is represented.

[1] J. G. D. Clark, "Report on an Early Bronze Age site in the South-eastern Fens", *Antiquaries Journal* 13 (1933), 266-96; idem., "Report on recent excavations at Peacock's Farm, Shippea Hill, Cambridgeshire", *Antiquaries Journal* 15 (1935), 284-319; G. J. Wainwright, op. cit.; I. F. Smith, op. cit.

[2] R. J. Bradley, "The excavation of a Beaker settlement at Belle Tout, East Sussex, England", *P.P.S.* 36 (1970), 312-79.

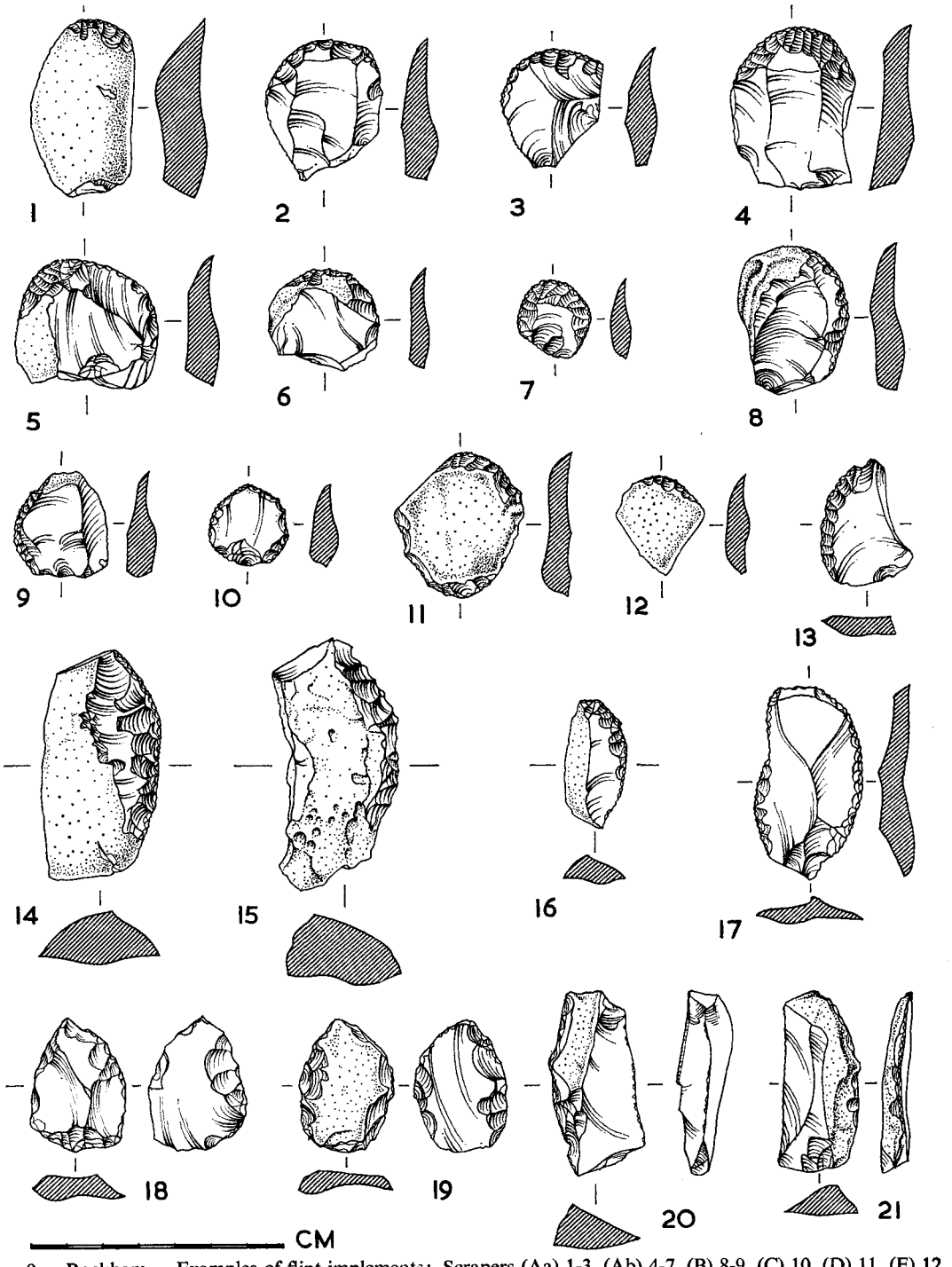


FIG. 9. Rackham. Examples of flint implements: Scrapers (Aa) 1-3, (Ab) 4-7, (B) 8-9, (C) 10, (D) 11, (E) 12, (F) 13; knives (a) 14-19, (b) 20-21

This general dating takes a measure of support from the pollen analysis (p. 100), and especially from a radiocarbon date for charcoal from area II. Two dates were in fact obtained. The first was for a very small bulked sample of charcoal from area I and gave a date of 350 ± 100 bc (HAR-359). This sample was not well sealed and might reflect later land use or even undetected contamination by tree roots and humic acids. The second date, however, was for a slightly larger bulked sample of charcoal taken only from the hearths in area II. This gave a date of 2000 ± 140 bc (HAR-360), entirely compatible with the Beaker context suggested for this industry as a whole.

OTHER FINDS

Stone Rubber (Fig. 10, 42). A small piece of mica-schist, a rock foreign to Sussex, was found at the side of the possible hearth in area I. One end had been ground smooth, probably by rubbing, but the exact purpose of the object is unknown. We are indebted to Mr. S. E. Ellis for the following report:

> The stone is a cleavage fragment of a soft dark mica-schist: to be exact, a tourmaline-bearing quartz-biotite-schist with traces of garnets. By far the nearest and most likely provenance for this type of rock is north-eastern Brittany, east of St. Malo, where the pre-Cambrian (Brioverian) greywackés have been metamorphosed and tourmalinised. The nearest alternative source is the southern Scottish Highlands, by way of glacial drifts of the East Midlands, but this seems very unlikely indeed. This schist has no connection with or similarity to the common medieval 'schist hones' which have been traced to southern Norway (Eidsborg).

There can be no certainty that the schist was dropped by the flint-knappers, for Mr. Ellis informs us that hones made of rocks from the same ultimate source are known in later times, e.g., from the Middle Bronze Age barrow at Itford Hill[1] and from the Saxon site of *Hamwih* (Southampton).[2] Nevertheless, the total absence of finds from any other period suggests that it might have been associated with the Late Neolithic flint site.

A larger piece of mica-schist, with one end bevelled on each face so that the two flattened surfaces meet at an obtuse angle, is recorded from the Bronze Age(?)—Iron Age site on Wolstonbury Hill, Sussex.[3]

Charcoal. Considerable difficulties were encountered while endeavouring to make identifications owing to the fragmentary nature of the charcoal. We are most grateful to Miss Joan Sheldon of the Institute of Archaeology, London, for undertaking this difficult task. It proved to be impossible to name charcoals as found in the different transects (Fig. 4) and the only practical way of presenting the results is to say that *oak*, *hazel*, *birch*, *poplar*, and probably *Crataegus* types were present.

[1] E. W. Holden, "A Bronze Age cemetery-barrow on Itford Hill, Beddingham, Sussex", *Sussex Archaeological Collections* (hereafter *S.A.C.*), vol. 110 (1972), 91.

[2] S. E. Ellis, "The petrography and provenance of Anglo-Saxon and Medieval honestones, with notes on some other hones", *Bulletin of the British Museum* (Natural History), Mineralogy 2 (1969), 165, type IIc (8).

[3] E. C. Curwen, "Wolstonbury", *S.A.C.* 71 (1931), 237-45.

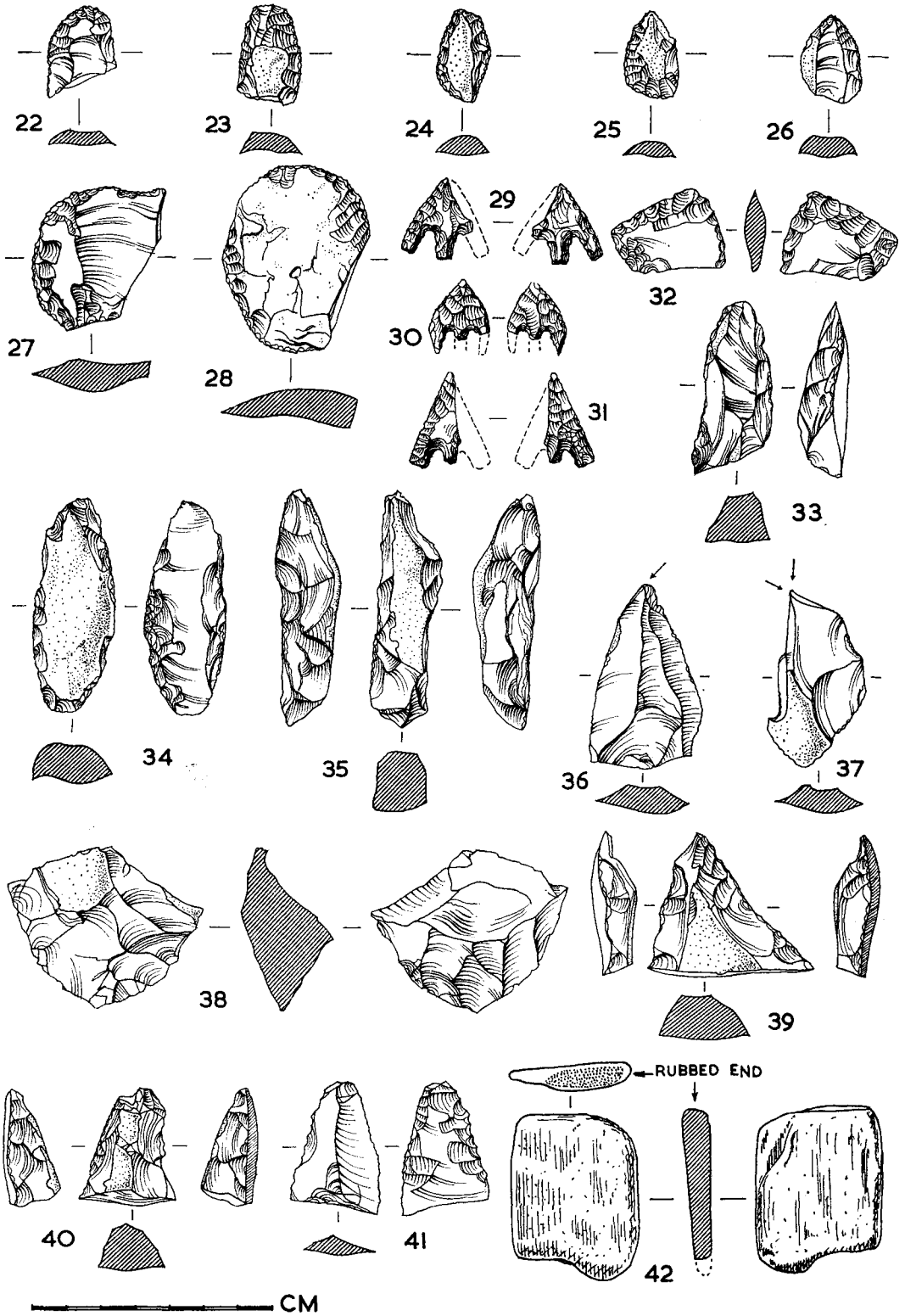


FIG. 10. Rackham. Examples of flint implements: Knives (c) 22-26, (d) 27-28; arrowheads 29-32; fabricators 33-35; axe 38; miscellaneous 39-41. Mica-schist rubber 42

Pollen Analysis by G. W. Dimbleby

The pollen diagram (Fig. 11) shows a dramatic change from a woodland flora at the base, to heath in the upper layers. This represents a chronological sequence, into which must be fitted the zone of charcoal and artifacts lying at about 6-8in. depth (15-20cm.).

It cannot be assumed that the pollen at the 6-8in. (15-20cm.) level is coeval with the hearths. There is no indication in the pollen diagram of a buried surface at that level; indeed the pollen curves seem clearly to be derived from the present surface of the mineral soil. In order to explain the relative distribution of pollen and artifacts two factors need to be appreciated. Firstly, the forest phase represented by the lower layers of the pollen, in which oak (*Quercus*), alder (*Alnus*) and hazel (*Corylus*) are the chief components, is a forest which would probably be associated with a brown soil with earthworms in it, contrasting strongly with the present podzol. The worms would progressively bury objects deposited on the surface, and it is reasonable to believe that the deep position of the hearths is due to their prolonged action.

The second factor of importance is that under these conditions pollen is only effectively preserved in acid soils; that is, with pH below about 5.5. Acidity also affects the earthworm population and as it increases the important soil-mixing species of worm will be eliminated.

On poor sandy parent material such as this Lower Greensand progressive soil acidification may be a slow natural process, but it is accelerated by disruption of the forest cover. It is perhaps significant that the lowest and therefore oldest samples in the pollen series contain traces of pollen of grasses (*Gramineae*), heather (*Calluna*) and ribwort plantain (*Plantago lanceolata*) which may signify an early clearance phase of limited extent.

The detailed interpretation of this pollen diagram is argued more fully elsewhere[1] but for the present purpose the following sequence seems the most probable. In the Sub-boreal period the site was under deciduous forest, but in the late Neolithic minor clearance was made, with which the present hearths were probably associated. The occupation of the site was temporary and the forest returned. The episode of clearance had led to increased soil acidification sufficient to allow the preservation of small quantities of pollen, but not to eliminate the soil-mixing earthworms. In the regenerated forest the latter continued to work, burying the artifacts to the level at which they are now found, a processs which may have taken a century or more.

Then followed a period of more general and permanent clearance, probably still within the Sub-boreal, perhaps Bronze Age; the forest gave way to heath with heather an important element. Under these conditions the soil would rapidly acidify and earthworms would be eliminated. One effect of this would be that the cessation of soil mixing would permit the development of the pollen stratification which is seen in the top half of the profile. At the same time the soil would be converted from an acid brown soil to a podzolized one, culminating in the mature podzol of to-day.

The intermittent occurrence of cereal pollen in the upper part of the sequence shows that arable agriculture was being practised at this time, but the pattern of pollen distribution in the profile makes it clear that this site itself was not cultivated and therefore the agricultural elements in the pollen would be derived from adjacent areas, probably on more fertile soils.

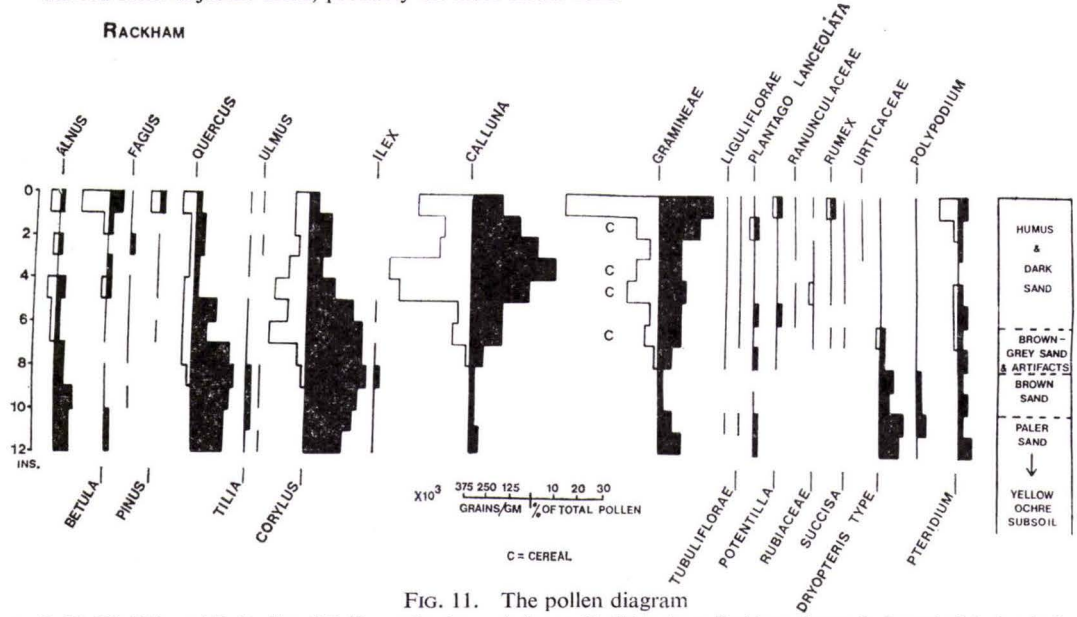


FIG. 11. The pollen diagram

1 G. W. Dimbleby and R. Bradley, " Evidence of pedogenesis from a Neolithic site at Rackham, Sussex ", *Journal of Archaeological Science* 2 (1975), 179-86.

INTERPRETATION

Interpretation of this site is probably more helpful in functional than in directly cultural terms. In each area two stages of activity may be recognised. In neither case are the two nuclei close enough to one another to be taken together while they do not seem to have been wholly complementary. Both areas had initially served as knapping floors making use of nodules collected in the immediate vicinity of the site. In area I the flakes were rather larger than elsewhere and were more directly associated with cores and hammers, perhaps suggesting that intensive core preparation was one function of this nucleus. In area II the greatest density of debris occurred in an area where the smaller flakes predominated, possibly indicating that more implements were made or resharpened there. The shallow angle of retouch on most scrapers suggests that resharpening was not frequently practised. Such a pattern takes support from the wider ratio of cores to flakes in this nucleus and from differences in the size of the measured waste. All the fabricators were found in area II. On the other hand, it is unlikely that the two nuclei served completely different purposes, since the higher proportion of cortical flakes in area II should indicate some preliminary knapping in this area. One possible sign that tools were made in both groups is that the sizes of scrapers in the two areas slightly reflect the different dimensions of the flakes. On the other hand, the proportion of finished implements is higher in area I and some of those made in the other nucleus could have been removed from the site. What is clear is that knapping was organised in an orderly manner with different stages of manufacture taking place in different parts of each floor. This could suggest the participation of several individuals.

The high proportion of utilised flakes in each area makes it clear that flint knapping was by no means the principal activity on the site. In fact the distributions of flakes and finished tools were virtually the same in each area and suggest that many implements were made for use on the spot. The abnormally high proportion of implements on the site strengthens this conclusion. The structural evidence from the excavation on the other hand gives no indication of permanent settlement and suggests no more than a series of windbreaks and open fireplaces.

The dominant characteristic of this industry is the very high proportion of scrapers. When this pattern has been discussed previously it has been suggested that these were merely made together, but here the evidence for wear on both implements and flakes rules out this line of argument. A close comparison might be with the Late Neolithic flints incorporated in the Bishop's Waltham Great Barrow in which 89% of the implements were scrapers and these accounted for 6% of the whole industry.[1] It is known that a scraping action can blunt a flake especially rapidly[2], but this does little to explain the imbalance on this site. Nor does it appear that this is a characteristic feature of the Late Neolithic. In fact it seems that the ratio of scrapers to other implements is consistently between 1:1 and 4:1 on the more permanent Neolithic occupation sites with pits and houses, and this is also true of causewayed enclosures.[3]

Early Neolithic. Hazard Hill 1.5:1; Whitehawk 1.5:1; High Peak 2:1; Haldon 2:1; Hembury 2.5:1; Windmill Hill (primary levels) 3:1; Broome Heath (buried soil) 4:1.

[1] P. Ashbee, " The Great Barrow at Bishop's Waltham, Hampshire ", *P.P.S.* 23 (1957), 137-66, see 154-6.

[2] C. M. Keller, " The development of edge damage patterns on stone tools ", *Man* (N.S.) 1 (1966), 501-11.

[3] R. J. Bradley, " Prehistorians and pastoralists in Neolithic and Bronze Age England ", *World Archaeology* 4 (1972), 192-204.

Middle Neolithic. Broome Heath (pits and postholes) 1:1; Abingdon 2.5:1; Trundle 2.5:1; Hurst Fen 3:1.

Late Neolithic. Kennet Avenue 1.5:1; Avebury G55 3:1; Honington 3:1; Broome Heath (earthwork) 4:1.

Beaker. Beacon Hill 1:1, Easton Down 1.5:1; Belle Tout 2.3:1. At Rackham, however, the ratio is 17:1 in area I and 16:1 in area II. Several other sites, all of Late Neolithic or Bronze Age date, seem to share this characteristic and in most cases evidence of continuous or permanent settlement is absent. The Bishop's Waltham barrow overlooks an area of seasonally flooded land, while nine similar sites in Langstone Harbour, Hampshire[1], occupy areas which may have been marshland in the Neolithic. At Mildenhall,[2] associated faunal remains indicated possible seasonal use of a similar site and at Broome Heath no features accompanied the groups of Beaker scrapers. At Stockbridge in Hampshire a similar Bronze Age industry was found within an isolated chalk-cut pit.[3] On the present site there was no evidence for structures or storage pits and there is a possibility that it had occupied a minor forest clearing (see pollen analysis), apparently peripheral to the main density of contemporary settlement. Most of the industries mentioned above, like Rackham, have been found close to round barrows which may also lie towards the margin of contemporary land use or in areas of seasonal pasture. There are hints in older accounts of similar industries in East Anglia[4] and in Sussex an occupation site with comparable material may have been in seasonal use at Playden.[5]

The precise function of these scrapers is of course uncertain and the severe wear on some edges suggests that they had been used on bone as well as skins.[6] If they were employed on animal products there is no evidence on this site whether these were from domestic stock or from game, and similar problems are posed by the ' cooking places ' or ' boiling mounds ' of the period which may also be found in regularly flooded positions close to barrow groups.[7] The location of this site by a former stream and the unusually high proportion of fire-damaged flints add weight to this connection.[8] The only site of either group to have produced suitable faunal remains is the Bronze Age industry at Mildenhall where the animals were nearly all cattle which had possibly been exploited on a seasonal basis.

The use of these sites is also difficult to decide. If the scrapers were used on hides, it is not immediately apparent why this should take place away from the parent settlement, unless the usefulness of forest products in primitive leatherworking was the main consideration.[9]

[1] R. J. Bradley and B. Hooper, "Recent Discoveries from Portsmouth and Langstone Harbours: Mesolithic to Iron Age", *Proceedings of Hampshire Field Club*, 30 (1974), 17-27.

[2] T. Kelly, "A series of Late Middle Bronze Age sites, Wilde St., Mildenhall", *Proceedings of the Suffolk Institute of Archaeology* 31 (1969) 47-56.

[3] J. F. S. Stone and N. Gray Hill, " A Middle Bronze Age site at Stockbridge, Hampshire ", *P.P.S.* 4 (1938) 249-57.

[4] H. H. Hall, " Implements from a station at Cranwich, Norfolk ", *Proceedings of the Prehistoric Society of East Anglia* (hereafter *P.P.S.E.A.*) 1 (1908), 454-7; H. Dixon Hewit, "A Neolithic site near Thetford ", *P.P.S.E.A.* 2 (1914), 42-5.

[5] R. J. Bradley (forthcoming).

[6] For a fuller discussion of the interpretation of similar wear patterns see R. Tringham, " The function, technology and typology of the chipped stone industry at Bilany, Czechoslovakia, *Alba Regia* 12 (1972), 143-8.

[7] The best account is in M. J. O'Kelly, " Excavations and experiments in ancient Irish cooking places ", *Journal of the Royal Society of Antiquaries of Ireland* 84 (1954), 105-55. For sites on seasonally flooded land in Norfolk, see H. Apling, " Bronze Age settlements in Norfolk ", *P.P.S.E.A.* 6 (1931), 365-70.

[8] Francis Pryor (personal communication) has discussed a similar problem in examining the Grooved Ware flint industry at Fengate.

[9] R. Reed, *Ancient Skins, Parchments and Leathers* (1973).

If domestic stock were being used, it is equally unclear why such intensive culling should have taken place, especially since meat products are not usually the mainstay of a 'pastoral' economy. If the site were associated with hunting on the other hand, it is hard to see why it should have been so intensively used in comparison with the hunting camps of the Mesolithic. Indeed one characteristic of this group of sites is that the proportion of arrowheads is actually less than on ordinary domestic settlements. Only at Stockbridge can these arguments be amplified. Here the flint industry was associated with a distinctive narrow oval pit, 3.3m. long at the base and 2.5m. deep. This was completely unsuitable for domestic use and greatly resembles a class of pit well known in European Neolithic contexts where there are strong reasons for linking them with the tanning of hides.[1] A similar pit, possibly of Bronze Age date, is also recorded from Havant in Hampshire where it is certain that no permanent settlement had existed.[2] Otherwise Mildenhall provides the only useful information. Here the flint scrapers were accompanied by a bronze knife and a series of bone awls, none of which would survive on a site like Rackham, although flint knives were found here and could be supplemented by utilised flakes. Another bone awl and 'many splinters' of ox bone were found in the pit at Stockbridge. The implements at Mildenhall could all have been used in leatherworking and the fact that so many inedible parts of the animals were left on the site there suggests that this may have been combined with butchery. Whether this pattern extends to other members of this group must await excavation in a more generous environment. For the moment it may be enough to raise the possibility of a new class of Neolithic and Bronze Age site.

One final implication must also be noted. If the site really had a specialised function then it is likely that the associated flints were characteristic only in that particular type of situation. The close similarity of the scrapers to those measured from other Beaker sites permits no general conclusion, since all of these sites seem to share a disproportionate number of these implements. By contrast, at Belle Tout, the one settlement site where metrical analysis was attempted, they were rare. In the same way the flint waste in different parts of this one site possessed quite different attributes on analysis and, unless the stage of manufacture is confidently known, it seems unwise to build dogmatic schemes upon the characteristics of waste flakes.

ACKNOWLEDGMENTS

Our thanks are extended to Mr. C. West of Sparrite Farm, Rackham, for giving access to the land and for facilities during the excavations; also to Mrs. V. M. Tritton of Parham for allowing the worked flints to be deposited with the Sussex Archaeological Society at Barbican House Museum, Lewes, and to Mr. A. K. Hughes, Agent to the Parham Estate, for his assistance.

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The Society wishes to record its great indebtedness to the Council for British Archaeology for a grant towards the cost of publishing this paper.

[1] P. Van der Velde, "Rituals, skins and Homer: the Danubian tan-pits", *Analecta Praehistorica Leidensia* 6 (1973), 50-68.

[2] R. J. Bradley and E. Lewis, "A Mesolithic site at Wakefords Copse, Havant", *Rescue Archaeology in Hampshire* 2 (1974), 5-18.

NEW EVIDENCE RELATING TO BRAMBER BRIDGE

By E. W. Holden, F.S.A.

In 1974 a sewer trench, some 16ft. (5m.) deep, crossed The Street, Bramber, 105ft. (32m.) east of the fifteenth century timbered house known as St. Mary's, striking the foundation of one of the piers of Bramber's medieval stone bridge. Timber piles, some 9½ to 11ft. (2.9-3.4m.) below the surface, were encountered both north and south of the pier (Figs. 1 and 2). Recording was difficult owing to the dangerous nature of the subsoil, which required sheet piling, thus exposures of trench faces were rarely seen. The writer recorded the bridge pier and those wooden piles drawn in solid black (Fig. 2), whereas the piles shown in dotted outline were discovered when he was not at the site. However, the watchfulness of the Site Engineer, Clerk of Works, or Agent, enabled the information to be passed on.

Bramber lies on the west bank of the River Adur on a tract of alluvium in a gap in the South Downs, four miles (6.4 km.) inland from Shoreham-by-Sea. A post-medieval brick bridge, known as Beeding bridge, crosses the river to Upper Beeding on the east bank. The surface of the one-time water meadows at Bramber is between 9ft. and 10ft. above Ordnance Datum (2.74-3.05m. O.D.). Below the topsoil the alluvium is mainly a totally waterlogged sandy silt, commonly known as marsh clay, yellow above the fluctuating water-table and blue-grey where permanently wet. Before full embanking of the river and reclamation of the marshes there was a tidal estuary with at least two deep streams (known from historical evidence), the lesser one being to the east, probably where the Adur now flows under Beeding bridge. The configuration of the parish boundary between Bramber and Upper Beeding north of Bramber bridge (the shaded area in Fig. 1) suggests that in earlier times the mainstream split into two on that side, remnants of which still remain as tiny streams.

PREVIOUS INVESTIGATIONS

During repairs to the causeway in 1839 between Bramber and Upper Beeding the foundations of a medieval stone bridge were discovered and a report published ten years later.[1] The stonework of the piers and abutments included the springing of the arches which were some 2ft. (0.6m.) below the surface. All the stone down to about 3ft. (0.9m.) from the footing of the foundations was removed for re-use elsewhere. The piers were said to be constructed with an outside casing of Sussex marble (the local name for *Paludina* limestone) varying from 3ft. to 5ft. (0.9-1.5m.) in thickness, backed up with rubble and filled with concrete. The lower courses of stone were stated to have been laid in a bituminous cement; the arches were also of Sussex

[1] Rev. E. Turner, "On the Ancient Bridge Discovered at Bramber in the year 1839," *Sussex Archaeological Collections* (hereafter abbreviated to *S.A.C.*), vol. 2 (1849), 63-77; W. H. Godfrey, "St. Mary's and Priory Cottage, Bramber," *S.A.C.*, vol. 86 (1947), 102-117.

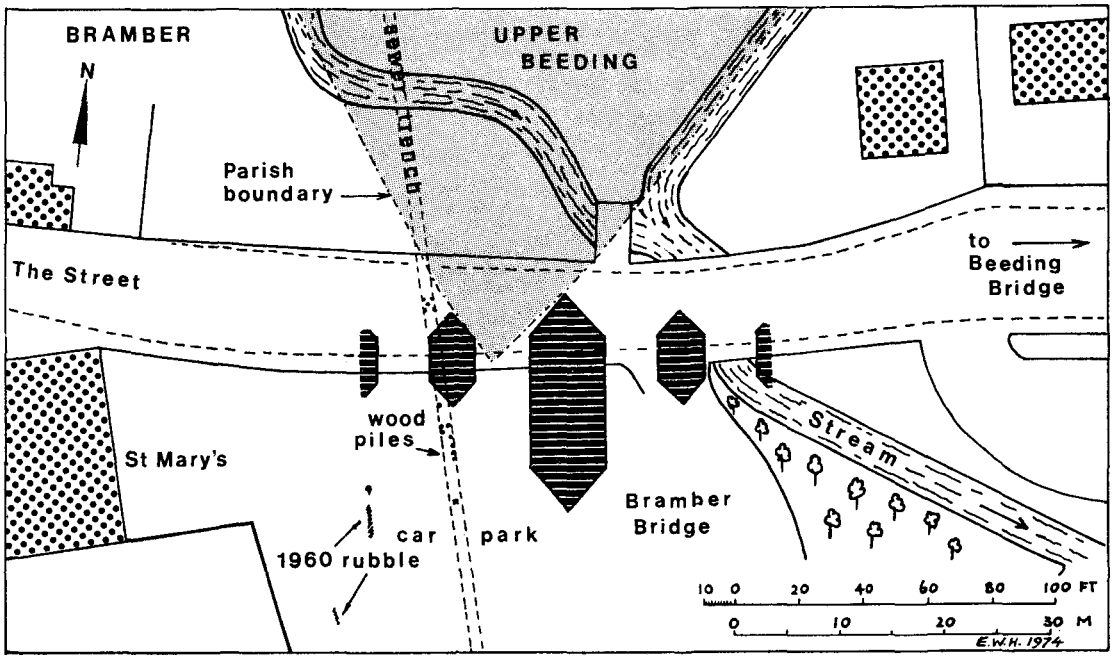

FIG. 1. Bramber Bridge. Plan of the bridge piers (after Figg, 1849) and the sewer trench

marble. The large central pier was presumed to have accommodated a chapel known in the fifteenth century to be dedicated to St. Mary.[1] Window mullions of Caen stone and a black glazed floor tile were found on the central pier, suggesting that a building had indeed once stood there. The 1849 report adds that " the bridge, indisputably of medieval date, displayed in its removal red mortar, having in its composition pounded brick or tile." It continues: " This redness . . . was more particularly observed in the rubble with which the piers were filled up".[2] Because the Romans were known to have used pounded pottery, brick or tile in a good mortar mix, the recorders concluded that the inner portions of the piers formed part of an earlier bridge, and therefore, that *that* former bridge was Roman (see p. 107 where this is disputed by the present author).

It is of much interest that a contract for the repair of the bridge exists, dated 1477 and a second dated 1478-9. These are more fully discussed later.[3]

In 1956 a narrow sewer trench was dug along the entire length of The Street, Bramber, revealing numerous wooden piles of a causeway, as well as slight traces of the medieval stone bridge.[4] The trench, which zig-zagged across the roadway, cut across the alignment of the piles which, it was stated, could be seen intermittently over a distance of 200ft. (61m.), with Bramber Museum in a central position, plus an isolated pile opposite St. Mary's. The piles were said to be of oak, well preserved, 4-5ft. (1.2-1.5m.) long, often 12in. (304mm.) square in section and tapered at the lower end. Several had lateral supports and one had a mortised top with peg-

[1] *S.A.C.*, vol. 2 (1849), 71.
[2] *S.A.C.*, vol. 2 (1849), 72-3.
[3] Shortened versions are given in *S.A.C.*, vol. 22 (1870), 232-3, but a more accurate rendering is by L. F. Salzman in *Building in England* (1952), 538-40.
[4] Recorded by P. N. B. Mabey, "An old Causeway or Bridge at Bramber," in *Sussex Notes and Queries* (hereafter abbreviated to *S.N.Q.*), vol. 14 (1954-57), 239-40.

holes. The tops of the piles were 2ft. (0.6m.) below the road surface in the west, below the castle,[1] and more than 9ft. (2.75m.) in the east. The interpretation was that the piles were part of a wooden causeway crossing tidal marshland. The only solid part was a 30ft. (9m.) length of limestone rubble, 5ft. (1.5m.) deep east of St. Mary's connecting with Sussex marble masonry and limestone 7ft. (2.1m.) thick which was considered possibly part of the stone bridge. The above interpretation is entirely practical and reasonable.

In 1960 the writer saw a shallow drain trench which had been dug in St. Mary's car park west of and roughly parallel to the 1974 sewer (Fig. 1).[2] This trench, which did not exceed 3ft. (0.9m.) in depth below the surface of the car park, passed through rubble consisting of flints, mortar, sea cobbles and boulders, lumps of Sussex marble, fragments of roofing slate, Horsham stone, and there were a few medieval green glazed potsherds. It is not known how far below the trench bottom the remains continued. Later in the same year and throughout part of 1961 boys from Steyning Grammar School dug sporadically around the trees situated between the rubble just described and the angle of the rear garden wall, finding further evidence of a medieval building in traces of a wall, flints, mortar and roof tumble just below the surface.[3] Owing to the high level at which both sets of remains were found their relationship to the bridge has not been established.

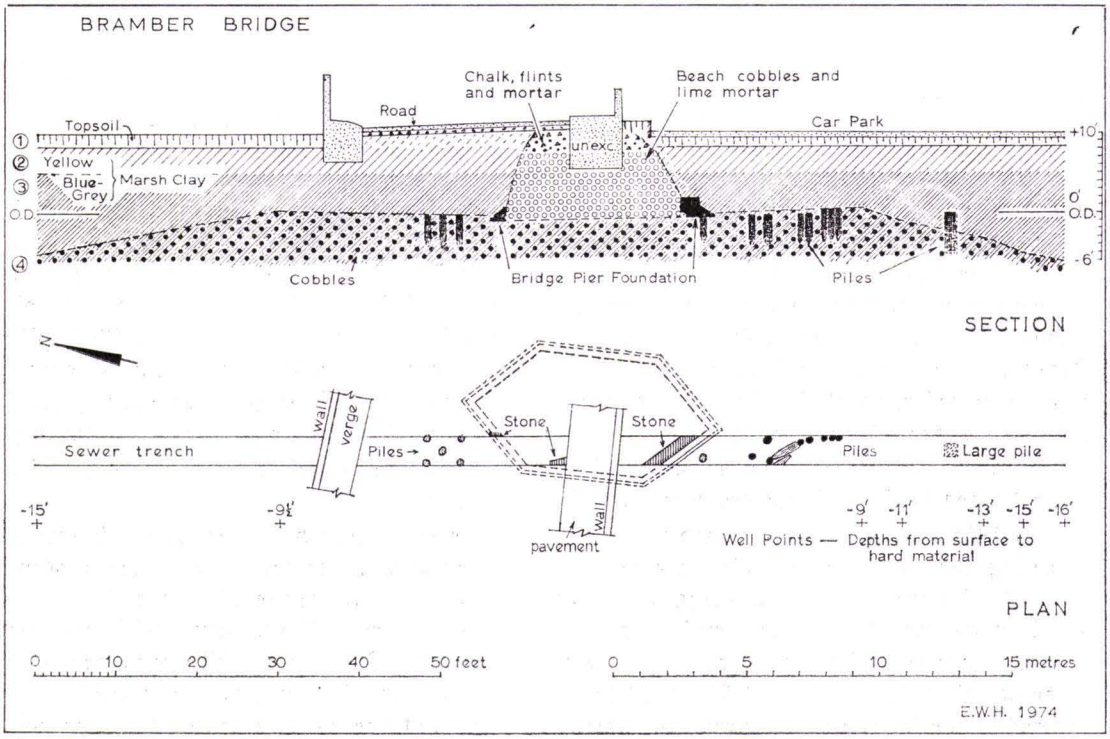

FIG. 2. Plan and section of the trench

[1] There is a discrepancy somewhere, as it is nearer 500ft. westwards from the Museum to " below the castle." Perhaps the length should be 200 *yards* and not feet.

[2] *S.N.Q.*, vol. 15 (1958-62), 238-40.

[3] This excavation remains unpublished.

One further piece of evidence remains to be noted. W. H. Godfrey records: " In the grounds [of St. Mary's] have been found the remains of a wharf, which would have served the river just below the bridge, and of a road connected with the highway, which ran directly north from the wharf."[1] Unfortunately, no records of the wharf were published and Miss D. H. Ellis, the owner of St. Mary's, has no recollection of the details, but was able to point out the approximate place where traces of timbers were seen by Godfrey during works excavations in the northern part of the caravan park south of St. Mary's car park. Godfrey shows a conjectural road to the wharf in his Fig. 1. No trace of one was seen in the 1960 drain trench, but it could be at a lower level.

THE EVIDENCE FROM THE SEWER TRENCH

Vertical iron pipes connected to pumps (known as well-points) were inserted at intervals in the ground, parallel to the sewer trench, for the purpose of de-watering the soil before a mechanical excavator dug the trench (see Fig. 2 for the positions of the well-points). The vertical pipes normally were driven in to a depth of at least 15ft. (4.6m.), but in several instances the pipes struck against a hard unyielding material which prevented further penetration. When this hard layer was exposed at the same depths in the sewer trench it was found to be composed of sea-cobbles and boulders in viscous blue-grey silt, plus rare fragments of chalk (Fig. 2, Layer 4). It was possible to plot the varying depths of the well-points revealing a flattish extent of cobbles some 72ft. (22m.) wide, with the bridge pier roughly central, sloping down at the north and south edges to an unknown depth. The cobbles passed below the bridge pier foundation, but at no point was the bottom of the layer reached. The cobbles surrounded the piles and the tops of the latter in most cases were about level with the top of the cobble layer. It is not known how far, if at all, the cobbles extended eastwards beyond the trench.

The lower courses of masonry encountered in the trench were all of Sussex marble, no other limestone being found other than one tiny chip from a dump. Contrary to the 1849 report none of the blocks of stone was set in a bituminous cement (see Fig. 3, 5 for a section of the footings). The core of the pier stood for a considerable height and consisted of a lime concrete with a matrix of coarse sea sand and cobbles from the beach. Here again, evidence disagrees with the 1849 report. There was *no* pounded brick, tile, or pottery whatsoever in the concrete. It could be that the pea-sized and smaller pebbles in the sea-sand were mistaken for " grog," though their colour is predominantly a warm brown, but with the eye of faith and a determination to find traces of a Roman bridge, they might be thought to be of a reddish tinge. A factor militating against a Roman precursor to the medieval bridge is the fact that no known Roman road approaches Bramber or Beeding.[2]

Fragments of five wooden piles were noted north-west of the bridge pier, and on the south side, below St. Mary's car park, nine piles were encountered. The latter ranged in size from 6in. by 5in. (152 by 127mm.) up to 12in. by 10in. (304 by 254mm.), or *c.*12in. (304mm.) diameter if unsquared. The squared piles had the vertical edges rounded off. Their lengths were rather difficult to define exactly as most had been mutilated by the machine, but it can be said that generally they varied from 4ft. to 5ft. (1.2-1.5m.) in length (Fig. 3, 3 and 4), although one pile would have exceeded 6ft. 8in. (2.1m.) long (Fig. 3, 2). The lower part of this one was octagonal in section reducing to a point, whereas the others, where seen, were more roughly tapered. One

[1] *S.A.C.*, vol. 86 (1947), 112, and see Fig. 1.

[2] None is depicted in I. D. Margary, *Roman Ways in the Weald* (1948).

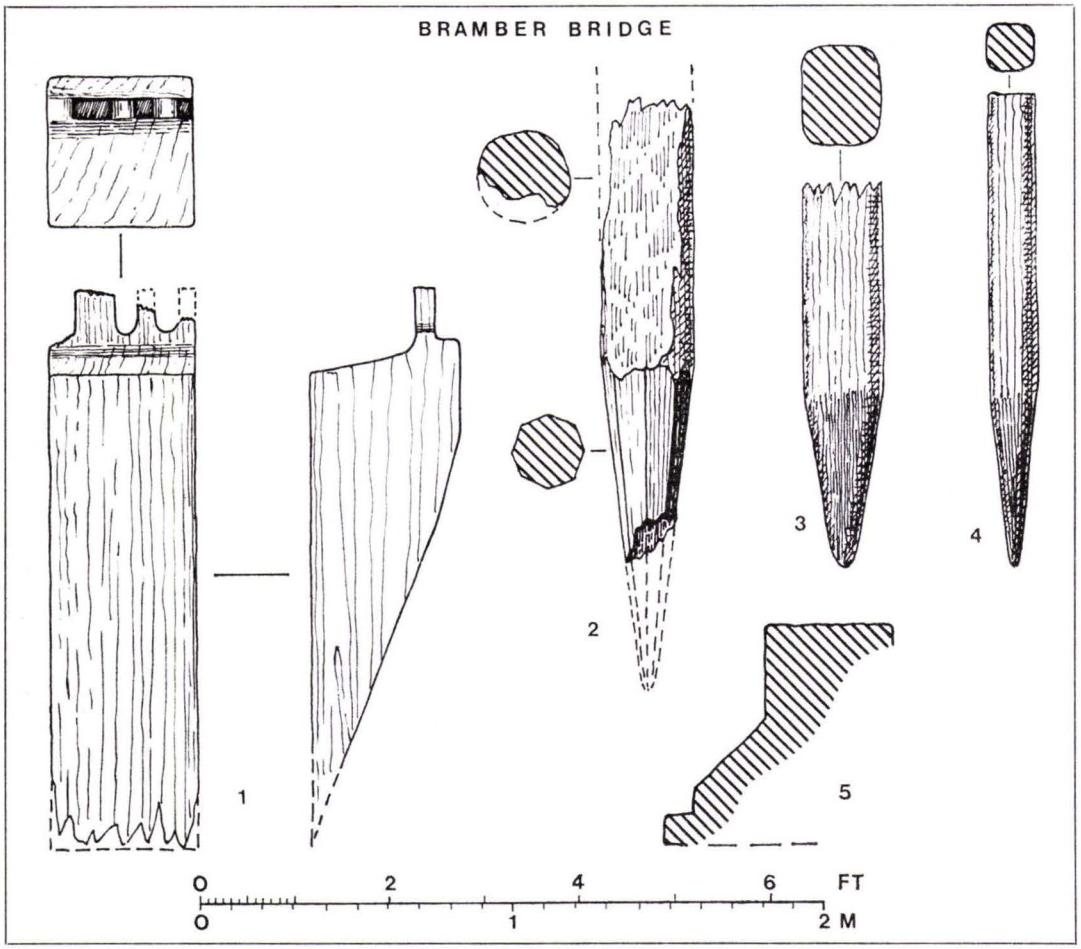

FIG. 3. 1-4: Details of wooden piles. 5: Section through Sussex marble bridge pier foundation

small pile was lying horizontally on top of another two and a further horizontal piece of pile projected from the side of the trench. The three southernmost piles of this group were not removed.

One large pile came from farther south and was quite unlike the others, being 19in. by 18½in. (482 by 470mm.) square, shaped originally at the base to a chisel-like edge, while the top had the remains of three tenons and was bevelled towards the outer face (Fig. 3, 1). It is not known which way the pile was facing when *in situ* as it was not seen by the writer. The depth below the surface is approximate, but it was said by the workmen " . . . to be at about the same depth as the others." This pile had a wide split in the top (not shown in the drawing) in which were wedged some fragments of Horsham stone roofing material and West Country roofing slate. A few small pieces of similar material were found in the upcast from the cobble layer, but the depth at which they were found could not be determined. Only one sherd of pottery was recovered, which came from the trench *c.*50ft. (15m.) north of the bridge pier, but from an unknown depth. It appears to be of late medieval date, judging by its fabric and form.

Nothing more was to be recorded by the writer from the trench, which continued south and then west, but drainlayers saw traces of what appeared to be hurdling of wattles running across the trench from north-west to south-east about 114ft. (35m.) south of the car park wall next to the main road, at a depth of 12-14ft. (3.7-4.3m.).

THE FINDS

Timber identification

Samples of wood from two different piles were kindly examined by Professor G. W. Dimbleby, Institute of Archaeology, London, and by Mr. P. W. A. Wright of Wykamol Ltd., Winchester, both identifying the timber as European beech (*Fagus sylvatica*). Dr. J. F. Fletcher of the Research Laboratory for Archaeology, Oxford, was good enough to examine sections of two round piles and the very large rectangular pile for dendrochronological purposes. All proved unsuitable as they were very fast grown, with wide and few tree-rings. The two round piles inspected were beech, whereas the large rectangular pile was oak (*Quercus*).

Radiocarbon dating

Through the generosity of Miss D. H. Ellis a part section of a pile, *c.* 10in. (254mm.) diameter, was sent to Harwell for dating purposes. Dr. J. F. Fletcher also saw this piece at Harwell and he stated that no growth allowance was considered to be necessary for the actual sample analysed for Carbon-14. The result was: a.d. 1090 ±80 years (HAR-560).[1]

Sediments

Samples of the sediments from the layers below the topsoil were kindly examined at the Department of Human Environment, Institute of Archaeology, London, under the direction of Professor G. W. Dimbleby. Sample 74/8 is from the yellow " marsh clay " immediately below the topsoil (Layer 2). Sample 74/9 is from the blue-grey layer below the yellow (Layer 3). Sample 74/10 is from blue-grey material scraped from the side of a pile, which would be below 10ft. (3m.) from the surface (Layer 4).

The following is the report submitted by Dr. I. W. Cornwall, Institute of Archaeology:

All the samples were fine-sandy loams, Layer 2 (74/8) being fairly well oxidised; the two from Layer 3 (74/9) and Layer 4 (74/10) blue-grey in colour and reduced by waterlogging. All were tested for humus, but all contained almost equal, minimal, quantities:

Uncarbonised organic matter		*Mgs/g (parts per thou.)*
74/8	Layer 2	1.4
74/9	Layer 3	1.2
74/10	Layer 4	1.6

All were calcareous, 74/9 more than the others, giving pH-values as follows:

74/8	8.2	All well on the alkaline side
74/9	7.7	
74/10	7.5	

One would, therefore, expect shell fragments and foraminiferal tests to be well preserved.

In view of their only small and almost equal contents of organic matter, differences in reduction by the samples were not expected to be large, but, on treatment at boiling-point of 1 gram samples of each sediment with acid permanganate (N/10 solution), the following distinct differences emerged:

	ml N/10 $KMnO_4$
74/8	10.2
74/9	11.6
74/10	16.5

These were probably due to the presence of varying amounts of ferrous-iron compounds (e.g., glauconite) preserved from oxidation by a greater or less degree of waterlogging in each case. The bluer samples, as might be expected, were the more strongly reducing, that from contact with one of the piles most of all.

A mechanical analysis of sample 74/8 gave:

74/8	Sand (all but 0.7% fine, less than 0.2mm.)	40.6%
	Silt (0.06-0.002mm.)	41.4%
	Clay (smaller than 0.002mm.)	18%

1 For those new to radiocarbon dating it is to be emphasised that the central date of AD. 1090 must not be taken as the exact date of the timber. There are roughly two chances in three that the latter lies between 1010 and 1170, and one chance that it lies outside those dates. The use of lower case letters for ' ad ' or ' bc ' indicates that the C_{14} result has *not* been calibrated with the bristlecone pine C_{14} curve which is generally considered to be nearer true calendar years than radiocarbon ' years ' based on a half-life of 5570 years.

Small quantities of each sediment were washed in water to remove fines and adhering dirt and the cleaned residues were examined visually at a magnification of x20. All contained fine quartz sand, grains of calcium carbonate of a platy form (molluscan shell fragments, not chalk or foraminifera), white-patinated flint grains, glauconite from the Greensand, and mica. An important difference noted between 74/8 and the others was that the latter both contained plentiful charcoal, in a finely divided state, while the former had none. There were no other artifacts observed and no appreciable differences, other than the charcoal, were seen when the residues were treated with dilute acid to decalcify and remove iron-compounds. In such relatively alkaline sediments, the calcareous tests of foraminifera would be expected to survive if salt water had ever been concerned in their deposition.

Conclusions

All the samples were of fine-sandy calcareous sediments, probably freshwater floodloams, more or less reducing and containing both Wealden and Chalk mineral materials. The only notable differences were the degree of reduction and the presence in the two lower, blue, samples of plentiful charcoal grains. One might speculate from this Layers 3 and 4 were being laid down while the charcoal-using Wealden iron industry in the Adur catchment was still active and Layer 2 since its decline and abandonment at the end of the Industrial Revolution.

The accumulation of 3m. or so of sediments above the summits of the piles (standing at about O.D.) since the Middle Ages can hardly be due to any alteration of this scale in the mean sea-level during that time. It seems more likely to have been caused by the works of man (through the construction somewhere downstream of a weir, for instance), which, by ponding back the river-flow, for meadow-flooding or for a mill, caused the build-up of these fine sediments at the old bridge.

THE DATING OF THE PILES

At the time of the Norman Conquest Bramber was not a thriving community like Steyning one mile (1.6km.) to the north-west, where there was an established port in the time of King Edward the Confessor, known as St. Cuthman's Port.[1] It is possible that there was a small settlement at Bramber of which little archaeological evidence has yet come to light, but with the first building of Bramber castle less than one-quarter mile (0.4km.) to the west *c.*1073[2] by William de Braose, one of the powerful knights who accompanied the Conqueror, the population probably increased. The initial fortification was an earthern motte, but during the last quarter of the eleventh century, a flint-built gatehouse with stone dressings had been erected together with a curtain wall, as well as the church of St. Nicholas, below the castle.[3] Both field flints, sea cobbles/boulders and sea-sand were used in great quantities in addition to timber and imported Caen stone, most of which, apart from the timber, would have been brought up the estuary in boats. Timber from the heavily wooded Weald could have been brought downstream. The most practical way of landing the materials would be to erect a quay and to construct a track, or where marshy, a causeway, from the quay to the foot of the natural mound on which the castle was built, rather than to unload at St. Cuthman's Port farther inland and convey the materials in carts by a longer route to the castle.

The radiocarbon date given by timber from one of the piles has a good chance of lying between A.D. 1010 and 1170 and is crucial in attempting to date the making of the quay. The C_{14} date, when considered in conjunction with the necessity for making adequate provision to land and transport building materials over marshy ground when the castle is about to be built or strengthened after the initial stages, promotes confidence in assigning the making of the quay to the last quarter of the eleventh century.

[1] *S.A.C.*, vol. 102 (1964), 70.
[2] J. H. Round (ed.), *Calendar of Documents preserved in France*, vol. 1 (1899), no. 1130.
[3] K. J. Barton and E. W. Holden, " Excavations at Bramber Castle, 1966-7," *Archaeological Journal* (forthcoming).

Additional support for this time comes from a document of 1086 which states the toll to be paid to William de Braose, at his bridge, by ships ascending and descending the river to and from Steyning: " . . . *unless they should make another market at William's castle.*"[1] An agreement of 1103 also refers to the bridge, generally considered to be a timber bridge over the deep stream to the east, which did not permit ships to pass upstream to Steyning as they could in the time of King Edward the Confessor, and that bridge is to be put

> " . . . into that condition whereby ships shall freely proceed to the harbour . . . " [it is conjectured that a section of the bridge was to be made to lift up, swing, or otherwise be made removable to enable ships to pass through, if not already so constructed, but in need of repair], but if there is a delay in amending the bridge, then " . . . the ships shall go and return peacefully according to that custom *as far as Philip's* [son of William de Braose] *castle* as they might to the Portus Cuthmanni."[2]

The implication behind both these documents is that landing facilities for ships existed at Bramber.

The fragments of Horsham Stone and slate wedged in the split in the top of the large pile are of little value for dating as both materials are common locally from the twelfth century onwards, and they could have worked their way downwards by natural forces while the silt was accumulating above.

INTERPRETATION

The deposition and stratification of the various materials suggest the following sequence of events:

The piles

Wooden piles were inserted on the western side of the estuary in a north-south direction. Owing to the shortness of the piles it is probable that only 2ft. to 3ft. (0.6-0.9m.) would project above the ground. Many piles appear to have been lost or removed, but one can visualise close piling at least as far south as the very stout pile, which may be a corner member, but not necessarily so. This pile showed by the tenons on top (Fig. 3, 1) that it carried a substantial horizontal timber, but the lack of information renders the purpose of the latter obscure, except that it may have supported or tied together the other piling in some way.

The edge of an estuary is dry at low tides and the water is still only shallow at normal high tides, as may be seen today lower down the Adur near the Norfolk bridge at Shoreham. Whether boats laden with building or other materials travelling up or down stream at high tide could get close to the piles (which is doubtful), or had to remain in the deeper channel of the mainstream some distance from the shore, the provision of a landing stage or quay would be a great advantage for unloading and it is suggested that the piles formed the facing to a low quay of modest proportions. After unloading, the goods had then to be conveyed westwards over marshy terrain for some distance before reaching higher ground. It is probable that the wooden causeway traversing the main street, which was at about the same depth below the modern surface at its eastern end as the piles, was constructed at the same time to serve that purpose. The description of the causeway piles seen in 1956 generally corresponds with those close to the bridge, except that they were said to be oak, rather than beech as those found in 1974.[3]

[1] Round, op. cit., no. 114.
[2] *S.A.C.*, vol. 5 (1852), 124, note 23.
[3] Beech is normally considered " perishable," but it is eminently suitable for wet situations such as " keels and planking for sides and bottoms of vessels, *timber for piles*, weirs, sluices, flood-gates, etc.," (see W. Stevenson, *The Trees of Commerce* (rev. ed., 1920), 41).

The cobbles

These are derived from the sea and probably were conveyed by boats from the beach at Shoreham.[1] They seem to have been deposited on the landward side of the piles up to the pile tops, so as to form a solid platform or pavement. It is also possible that a layer of cobbles was placed on the east side of the piles on the bed of the estuary so as to form a hard bottom which would be especially useful underfoot when unloading boats at low tide, but there is no proof of this. It does seem certain that the piles are earlier, but only slightly, than the cobbles, because (a) it would be virtually impossible to drive piles through a pre-existing deep layer of cobbles, and (b) the top of the cobble layer agrees roughly with the tops of the piles, with the piles retaining the cobbles. The cobbles also are earlier than the bridge pier foundation which sits on top of them (see Fig. 2).

Early silting

If, as has been surmised, the bed of the estuary where touching the piles was about 2ft. (0.6m.) below the pile tops, the higher level of the underside of the stone footings of the bridge pier (see Section, Fig. 2) shows that some silting would have taken place during the time between the construction of the quay and the building of the bridge, possibly up to 2ft. (0.6m.) in depth.

The stone bridge

The first stone bridge is built " to span, not the present tiny stream, but the strong tidal ebb and flow from the tidal compartment of the river inland."[2] It is probable that the Sussex marble bottom courses seen *in situ* are original, it being unlikely that during subsequent repair the lower courses below water level would be entirely replaced. The lime, sea-sand and cobble concrete of the pier core is also considered to be original. No remains of the bridge were seen other than those noted in the sewer trench, plus lumps of Sussex marble removed by the machine,[3] but it is clear that the bridge lies below the southern half of the modern roadway, rather than being centrally placed as shown by Godfrey[4] and that the modern roadway has shifted northwards. The plan of the abutments and piers as depicted in Fig. 1 is derived from William Figg's plans and dimensions,[5] also the east-west axis of the bridge in relation to St. Mary's is from the same plan, but the latter is at a small scale and some latitude must be allowed.

HISTORICAL DISCUSSION

Early references to bridges

Sele Priory was established by William de Braose *c.*1080 on the east side of the river where now stands the church of Upper Beeding.[6] The foundation charter mentions the church of St. Peter at Sele, also St. Peter " of Old Bridge " (*de Veteri Ponte*) and other churches, but the situation of " Old Bridge " is a matter of much uncertainty and it is not the object of this paper to discuss that problem. Salzman is inclined to think that Old Bridge equates with Annington, which adjoins Botolphs, three-quarters of a mile (1.2km.) downstream.[7]

[1] Or possibly from the 15ft. Raised Beach deposits which may have been exposed within a reasonable distance. This Raised Beach was seen a few years ago during road-widening near the Sussex Pad, Lancing.

[2] H. C. Brookfield, " The Estuary of the Adur," *S.A.C.*, vol. 90 (1951-2), 153-63, see 161.

[3] Some blocks of Sussex marble have been retained at St. Mary's; also a wooden pile and a piece of another pile, preserved by the Carbowax method through the kindness of Mr. W. R. Beswick.

[4] *S.A.C.*, vol. 86 (1947), 102-3, Fig. 1. W. H. Godfrey did not have the advantage of seeing parts of a bridge pier *in situ*.

[5] *S.A.C.*, vol. 2 (1849), 64-5.

[6] L. F. Salzman (ed.), *The Chartulary of the Priory of St. Peter at Sele*, (1923), Charter 1. (All later references to Charters come from the same volume and are quoted by Charter number, not page).

[7] *Chartulary*, xviii.

The mainstream of the estuary was known in late Saxon times as the *Bremre* (or Bramber) river—not Adur, which is a late innovation. A charter of A.D. 956[1] refers to a deep stream east of the Bramber river, which implies that this eastern stream was navigable. The parish boundary suggests that this eastern stream followed the same line as the modern Adur where the highway meets the river, i.e. at Beeding Bridge.

It has already been noted that there is one bridge in 1086[2] and in 1103,[3] but it is not until *c.*1230 that *two* bridges are recorded. John de Braose, fifth in descent from William, gives to Sele Priory, tithes, etc., " . . . and all my bridges of Brembre, and five saltpits, and three men with their lands at the head of the lesser bridge towards the east, and five messuages close to the bridge on the west of the greater bridge of Bramber."[4] This appears to be the first definite reference to the existence of the greater bridge of Bramber.

There is a charter dating between 1180 and 1204[5] being confirmation of Sir William de Braose's earlier gift to Sele, " . . . all his bridge of Brembre and five saltpits and three men with their lands at the head of the same bridge on the east and timber for repairing the bridge." Note that " bridge " is singular, whereas the *c.*1230 charter regarding the same five saltpits and three men has two bridges.

It is a matter of some conjecture how long before 1230 the stone bridge was built, but it could be early, for the timber bridge at Saumur (to which Sele Priory was subject) was rebuilt in stone in 1162, while London Bridge, begun in wood in 1163, changed to stone in 1179.[6] A stone bridge in the latter part of the 12th century therefore, would be feasible. There is a further hint in an undated document of Henry II (1154-89)[7] concerning lands of Ralph, brother of Savaric and Geldwin. An accompanying document concerning some of the personalities mentioned in the other is dated 1190, so it is possible that the former was written in the 1180's. In this document occurs the phrase, " between the new bridge and La Cneppe." The ruins of Knepp castle are several miles upstream from Bramber and there is no certainty that the " new bridge " refers to Bramber, but the possibility is there, and a date between 1180 and 1190 would not be an unreasonable one for the erection of Bramber stone bridge.[8]

The bridge repairs of 1477-9

At that time the marshes had not been fully reclaimed and estuarine water was still ebbing and flowing under the stone bridge, even though gradual deposition of silt would be raising the level of the bed making the passage of boats through the arches difficult for other than small craft. This rise in the level of the bed of the estuary was caused not only by gradual inning of the marshes, but by complex physical factors such as a possible rise in sea level during the later Middle Ages and the driving shorewards of an offshore shingle bar, among other reasons.[9]

[1] *S.A.C.*, vol. 88 (1949), 80-1.
[2] Round, op. cit., no. 114.
[3] *S.A.C.*, vol. 5 (1852), 124, note 23.
[4] Charter 5.
[5] Charter 26.
[6] I am grateful to Mr. D. F. Renn for these references.
[7] *S.A.C.*, vol. 77 (1936), 257-8.
[8] Especially as at that time the de Braose influence was approaching its greatest and by 1206 had reached the height of its power; William III de Braose holding as fiefs or in custody 352 knights fees and some 16 castles in England and Wales (see S. Painter, *The Reign of King John* (1966)). (I am grateful to Dr. C. R. Sladden for this reference). In 1208 Bramber castle had been confiscated by King John and the de Braose's were in disfavour for some years. Such a state would not auger well for bridge building.
[9] Brookfield op. cit.; A. R. H. Baker, " Some Evidence of a Reduction in the acreage of Cultivated Lands in Sussex duringt he early Fourteenth Century," *S.A.C.*, vol. 104 (1966), 1-5; P. F. Brandon, " Demesne Arable Farming in Coastal Sussex during the later Middle Ages," *The Agricultural History Review*, vol. 19 (1971), 113-134, see 117.

In 1468, John, Bishop of Chichester, granted an Indulgence

> " to all persons in his Diocese who shall contribute to the repair of the bridge at Bramber and the causeway of the common road leading from Bramber towards the eastern parts of England, and from the east to the west, which are now in so bad a condition that they cannot easily be repaired without the help of the alms of the faithful."[1]

In 1473, Richard Aleyne, Prior of Sele, was indicted for many irregularities including:

> " That the Chapel of St. Mary, on a certain great bridge of stone in the highway between Bramber and Sele (Beeding), is, with the bridge, falling to ruin through his neglect, and cannot be sufficiently repaired for forty pounds."[2]

Richard Aleyne was deposed in 1474 or soon afterwards, the Priory having been surrendered to Magdalen College, Oxford, and the following contracts were entered into.

Contracts for the repairs

The wording of the two contracts is given in full in L. F. Salzman's *Building in England.*[3]

1477. " William Waynefleet, Bishop of Winchester, contracts with a mason to hew and work 100 loads of stone, to be used in the piers of the bridge of which he shall pull down all that is defective. For this he shall have £19; if more than the hundred loads is used he shall have 3*s.* 8*d.* a load for the extra, if less the Bishop shall have 3*s.* 8*d.* for each load unused. The Bishop shall have the stone carried and shall provide scaffolding, &c.; and shall also pay 10*d.* for every load, of 15 feet, of the old stone re-used."

1478-9. " The same mason acknowledges receipt of payment for work already done on the bridge, and undertakes to hew and work as much stone as shall be needed to complete it, and to carry out the necessary repairs, for 20 marks and a gown."

The 1477 document called for the stone to be obtained from a " quarr in the Ile of Wight callid Gurnard quarr." For the completion of the work executed in 1478-9 the mason was required to obtain stone not only from the Isle of Wight, but also " at a quarr in the Counte of Sussex." The stone remaining in the bridge pier was all Sussex marble,[4] the exact source of which can only be surmised, but ancient quarries are known in north-west Sussex, especially near Petworth and Kirdford.[5] It occurs sporadically within the Weald Clay and is occasionally available when exposed in pits, etc. Small quantities have been seen recently in clay pits at Small Dole, two miles north-east of Bramber.[6]

A causeway between the two bridges

Reference has already been made to the timbered causeway west of the stone bridge, which has been interpreted as belonging to the pre-stone bridge, castle-building, era. There remains a tract of the estuary between the stone bridge and the lesser bridge to the east about which some

[1] *S.A.C.*, vol. 22 (1870), 233.

[2] ibid., 233; also *S.A.C.*, vol. 2 (1849), 70-1.

[3] Salzman, 1952, loc. cit. A precis of each is given in this volume and are reproduced here by permission of the Oxford University Press, Oxford; Salzman's full text (which is preferred) differs in small details from that given in *S.A.C.*, vol. 22 (1870), 232-3.

[4] Containing the larger sized fossil freshwater snail shells known as *Paludina.*

[5] *S.N.Q.*, vol. 5 (1934-5), 26-7; *S.A.C.*, vol. 99 (1961), 102-6. Pieces of the stone have been retained at St. Mary's, Bramber.

[6] Information from Mr. R. J. Matthews, Site Engineer.

information may be gathered from charters of Sele Priory. Charters 158 (1254-70), 176 (*c.*1285), and 73 (1312) all mention a highway or causeway between the two bridges with plots of land adjoining the south side.[1] The earliest also refers to reclamation of land " for building purposes," the second to " reclamation " and the third to a " tenement." Charter 99 (1254-70) refers to a messuage on the causeway between a house on one side and a saltern on the other. Judging by the presence of the salt-making mounds south of the modern highway, until their removal for agricultural purposes in 1972, it is possible that the tenements were occupied by persons partly engaged in salt production, which was a summer occupation.

Reclamation of the marshes and inning were proceeding gradually, not only at Bramber, but also to the south. Charter 155 (*c.*1260) mentions pasturage of 11 acres in the marsh of Bramber and it permits earth to be taken from the 11 acres for the repair and protection of the sea-wall; while Charter 154 (*c.*1260) shows that similar digging, ditching and enclosure of pasture in the marsh was in progress at Annington (with Botolphs).

Protection of pasture from flooding, either by seawater or the river in spate, has always been a problem in the Adur valley, especially during the fourteenth century when the relative level of the sea to the land appeared to be changing to the disadvantage of the latter. In 1359, for instance, there was a commission to repair sea-walls at La Pende (opposite Shoreham), between Bramber, Lancing and Shoreham, which had been damaged by inundation and, it is alleged, by the ravages of the French and Spanish.[2] Flooding was always a problem and in 1530 the rectory of Bramber was united to the vicarage of Botolphs " in consequence of its impoverishment from frequent inundations."[3]

Crossing of the mainstream

There is doubt as to how the mainstream was crossed before the building of the great stone bridge of Bramber towards the end of the twelfth century or at least by 1230. With the establishing of Sele Priory there would need to be frequent contact between people on the two sides of the estuary, but there is as yet no clue how the mainstream was crossed at that time. A ferry could be utilised, of course, and was used for the whole journey much later, when both bridges were in existence, as the following passage bears witness. In 1282 the Priory of Sele was granted: " . . . the liberty of fishing at Bramber bridge and when the bridge was impassable, of a boat to ferry men and cattle."[4]

One may postulate in the latter part of the eleventh century the presence of a raised causeway running westwards from the eastern bridge across the estuary, which area would be flooded at every high tide, but a causeway would not be able to cross the mainstream which, by implication, was wider than the " lesser " stream to the east. That would need a strong bridge, but about which there does not seem to be any written or archaeological record. It may be that a ferry was used for crossing the mainstream, but it seems to be an unsatisfactory time-wasting method, except in time of flood.

[1] Shown by Godfrey, *S.A.C.*, vol. 86 (1947), 103, Fig. 1.
[2] *S.N.Q.*, vol. 17 (1968-71), 46-9.
[3] E. Cartwright, *The Parochial Topography of the Rape of Bramber in the Western Division of the County of Sussex*, vol. 2 (1830), 211.
[4] *S.A.C.*, vol. 2 (1849), 70.

SUMMARY

The evidence from the 1974 sewer trench in St. Mary's car park suggests the provision of an unloading quay with beech piles, backed by cobbles, at the time of the building of Bramber castle, a few years after 1066. The level of the quay was about 10ft. (3m.) below the present surface of the alluvium. At the same time, a wooden piled causeway led westwards from the quay to the foot of the castle. Not the slightest evidence was found to support the 19th century theory that a Roman bridge once crossed at this point.[1]

In early medieval times Bramber and Beeding faced each other across a narrow part of the tidal estuary, with two principal streams visible at low tide, the main one close to the Bramber side and the lesser, yet deep, navigable, stream to the east. The latter possessed a bridge, at least by 1086, if not before 1066. In 1103 this bridge was unable to pass ships through it to ascend to the Port of St. Cuthman (Steyning) and it had to be put in order. It is not known how the crossing over the mainstream was made at that time, a ferry being a possibility.

Natural forces at the harbour mouth at Shoreham, coupled with some inning of the estuary into marsh for converting into pasture, led to a modest rise in the level of the land by deposition of silt (alluvium) during frequent flood conditions, so that by the end of the twelfth century the quay is buried. A splendid stone bridge was erected over the mainstream, possibly during the 1180s or 1190s, but certainly by 1230, and a causeway or highway made connecting the two bridges.

Salt manufacture had been known in the estuary since late Saxon times and by the thirteenth century, tenements, perhaps used by salt-workers, are reclaimed from the marsh. These were situated on the south side of the highway between the two bridges. By the early fifteenth century at the latest, the rising sea level and other factors cause the salt industry to cease. Meanwhile, the inevitable deposition of silt continues with every flood. The stone bridge receives major repairs in 1477-9. At some time later than 1479 the stone bridge, too, is overwhelmed by silt, the chapel doubtless in ruins and steadily being robbed for its stone, so that eventually no traces of the bridge or chapel are left above ground.

It is possible that by the sixteenth century the eastern course of the river had been embanked, leaving only a minor tributary where the mainstream earlier flowed. Thus, estuarine conditions are eventually terminated and the marshes become water meadows, subject to frequent flooding, the reclamation by gradual stages having begun several centuries before. The relics of the bridge remain undisturbed until 1839 when chance roadworks discover them.

What did the stone bridge look like in its prime? It must have been a magnificent structure, over 170ft. (52m.) long, with four arches. The huge piers had splayed cutwaters on both sides and there was a large chapel above the centre pier on the south side. The roadway over the bridge was 17ft. (5.2m.) wide and there were triangular recesses in which pedestrians took refuge when traffic over the bridge was heavy. One might compare it with Stopham bridge near Pulborough, but only in a generalised way, for Bramber bridge was much longer, wider, possessing a chapel, and was, therefore, a much more imposing structure. If one could go back in time 600 years, the view westwards from Beeding would have been splendid, with the great

[1] Similarly, there is no historical or archaeological evidence to say that the motte at Bramber castle was " the home of Saxon kings," as frequently stated by nineteenth century writers. The motte dates from *c.*1073.

bridge of Bramber in the foreground, a few cottages and salt-workers' hovels nearby; an earlier version of the fifteenth century house known as St. Mary's in the middle distance, a causeway flanked by humble cottages culminating in the gaunt curtain wall of Bramber castle with its massive three-storied gatehouse-keep towering in the background and the church of St. Nicholas nestling below, all reflecting at high tide in the waters of the estuary.

ACKNOWLEDGEMENTS

The investigations would have been impossible without the fullest co-operation offered by Miss D. H. Ellis, of St. Mary's, Mr. R. J. Matthews, Site Engineer, Mr. N. Bramley, Clerk of Works and Mr. M. Campbell, Agent for the contractors, Messrs. Gamble Ltd., all of whom gave every assistance, often in difficult circumstances. I am most grateful for their help and to those who gave specialist advice or in some other way, viz., Messrs. W. R. Beswick, G. P. Burstow, Dr. I. W. Cornwall, Professor G. W. Dimbleby, Dr. J. F. Fletcher and Mr. D. F. Renn.

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THE *MEARE* MARSH OF MERSTON

By E. M. Yates, B.Sc., Ph.D.

The Sussex coastal plain south and south-east of Chichester is drained by several small streams such as Pagham Rife, Aldingbourne Rife and Bremere Rife. The relief is of the order of 5 metres, and at Merston, some 5 kilometres from the coast, the valley floor is still only 3 metres above sea level. The sand spits on the coast would have had the effect of blocking the flow of the small streams, and there can be little doubt that in the past many of the valleys were regularly drowned, either by ponded fresh water or by sea water. Perhaps it is not too fanciful to visualise the landscape of the Dark Ages as resembling parts of Friesland and Saxony with settlements on low rises separated by strips of alluvium, giving rich grazings but periodically inundated, resembling, that is, the original homeland of the South Saxons. The territorial boundaries between the townships followed the streams, and necessarily led to difficulties of definition. These difficulties continued into early modern times and can be exemplified by a series of disputes in relation to Merston and Drayton.

The disputes

The area involved, centred 2 miles south-south-east of Chichester Cross, is today divided between the civil parishes of Oving and North Mundham. In the past it was divided between the townships of Rumboldswick, Runcton, Drayton and Merston. Drayton and Merston are now within Oving Parish, and Runcton is within North Mundham Parish.[1] The disputes involved principally Merston and Drayton, and centred on the division of the meare (boundary) or common marshe.

Three disputes are reported from the sixteenth century. Reference to the first is made in reports of the third. It was brought to an end by Mr. Attorney Earnly between 13 Henry VII and 10 Henry VIII, that is about the turn of the century, by the establishment of an hedge to fix the boundary between the two townships. The second dispute over the boundaries arose in the 1550's between Thomas Bowyer complainant, and as defenders Robert Bennett, Edmund Barton, Richard Miles, John Bruer alias Horbridge, and James Hardham. It came before the Star Chamber but only a brief interrogatory has survived, demanding the route followed through the marsh in Ascension week by the vicar and parishioners of Oving and of Merston,[2] presumably when they were beating the bounds. The third dispute arose in 1588 between John Caryll, Thomas Bowyer and others. The surviving evidence consists of two maps signed by the surveyors William Mill, William Barttelot, Anthony Sherley and Owen Onley (Fig. 1) to which they added their findings in relation to the position of the parish boundary (Appendix).

[1] In the assessment of 1334, Oving, Drayton, Mundham, Runcton and Merston were separately assessed and with the exception of Mundham were commensurate. See W. Hudson, "Assessment of Hundreds of Sussex to the King's Tax in 1334," *Sussex Archaeological Collections* (hereafter *S.A.C.*) vol. 50 (1907), 166. In 1676 the population of Merston over 16 years of age was 40, Runcton 45, North Mundham 95 and Oving 162. Drayton was not given separately. See J. H. Cooper, "A religious census of Sussex in 1676," *S.A.C.* vol. 45 (1902), 142-48.

[2] Public Record Office (hereafter P.R.O.) St. Ch. 4/10/14, St. Ch. 2/26/174.

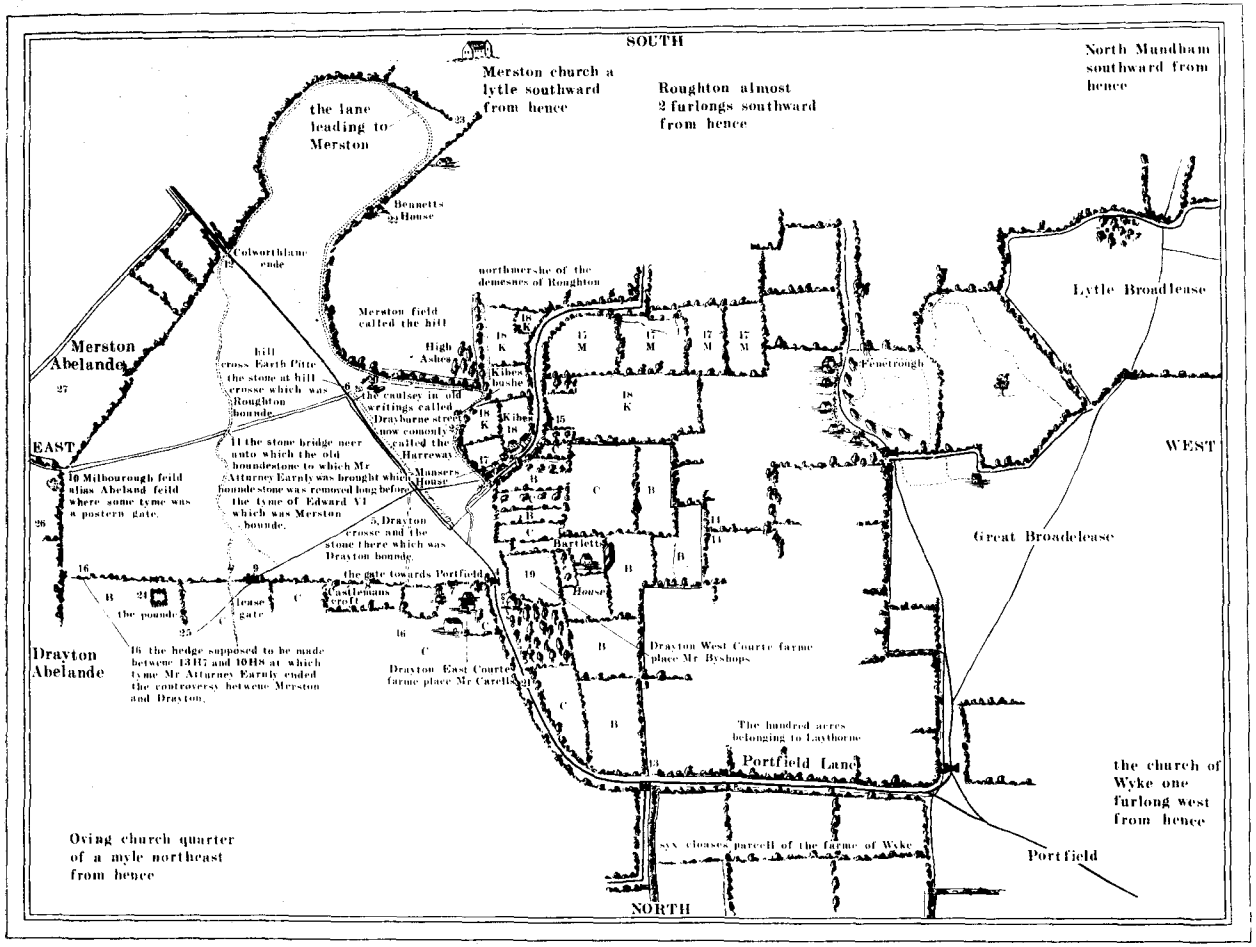


FIG. 1. Copy of the 1588 map

The maps

The use of maps in court proceedings goes back to the beginnings of the sixteenth century. The earliest appear to have been based on paced measurement and sketching. They are sufficiently accurate to be fitted easily to surviving features in the present landscape.

Two maps were drawn for the 1588 hearings, both on the same scale, approximately 1:5,000[1]. One is uncoloured but has various numbered points 1-46 of which details are given on an accompanying key sheet. The other is coloured, has only 27 numbered points (Appendix) but is also annotated. The uncoloured, presumably the field sheet, has more detail than the coloured in that the hedge boundaries are extended further away from the central area, and an additional pound is shown on the south of the common. The coloured annotated sheet has green hedges, blue water, red roofs, and red and yellow roads and boundaries. It is a redrawn copy of the coloured sheet shown here (Fig. 1), redrawn for clarity since much of the original annotation is difficult to decipher. The letters M, K, C, and B indicate ownership by Mansers, Kibes, Caryll and Bishop. Gates and buildings are shown in profile.

The surveyors made the field survey on 26th March, 1588.

The sixteenth century landscape

The maps portray a hedged landscape of many crofts with larger areas of more open land, such as Great Broadlease, Portfield and the disputed common marsh. Some of the crofts (point 25, Fig. 1) are described as recently taken from the commons so that enclosure was in progress, and indeed presumably the *raison d'etre* for the whole series of disputes. " Merston field called the hill " and " Portfield " are probably evidence of surviving open-field arable but the regular enclosed strips, alternately owned by Mr. Bishop and Mr. Caryll, north of Kibes, suggest that enclosure of open-field arable as well as of common grazing was also in progress. The " *inneground* " to which reference is made in the key (points 14 and 15) was presumably consolidated land, free from any common grazing rights. The gated lanes and the pound show that common grazing was still the practice. Vestiges of a manorial organisation are shown by Drayton West Court and Drayton East Court. The lands against Colworth Lane End are described as copyhold in the key to the field map.

Settlement is scattered, with the individual houses named according to the occupants, as for example Bennetts house (point 23). At Kibes (point 18) Mansers house (point 17) and Bartletts house, two separate buildings are shown, presumably houses and byre or barn. The only small cluster of settlement is Fenetrough (now Vinnetrow).

Other features of the landscape are the causeway across the marsh, the earthpit, and the various crosses and stones that had been used to mark the bounds. Opposite to Fenetrough is a large arcuate pond. Many water courses, dikes and ditches are mentioned in the numbered key for the field sheet as for example " water dike reaching from Castlemanscroft to Harway," " the causey or Harway with ditches on either side."

This general impression of a wet lowlying area is confirmed by references in the field-sheet key to Mundham marsh and to the withies, the latter belonging to Sir Thomas Browne.

[1] P.R.O. MPI 258.

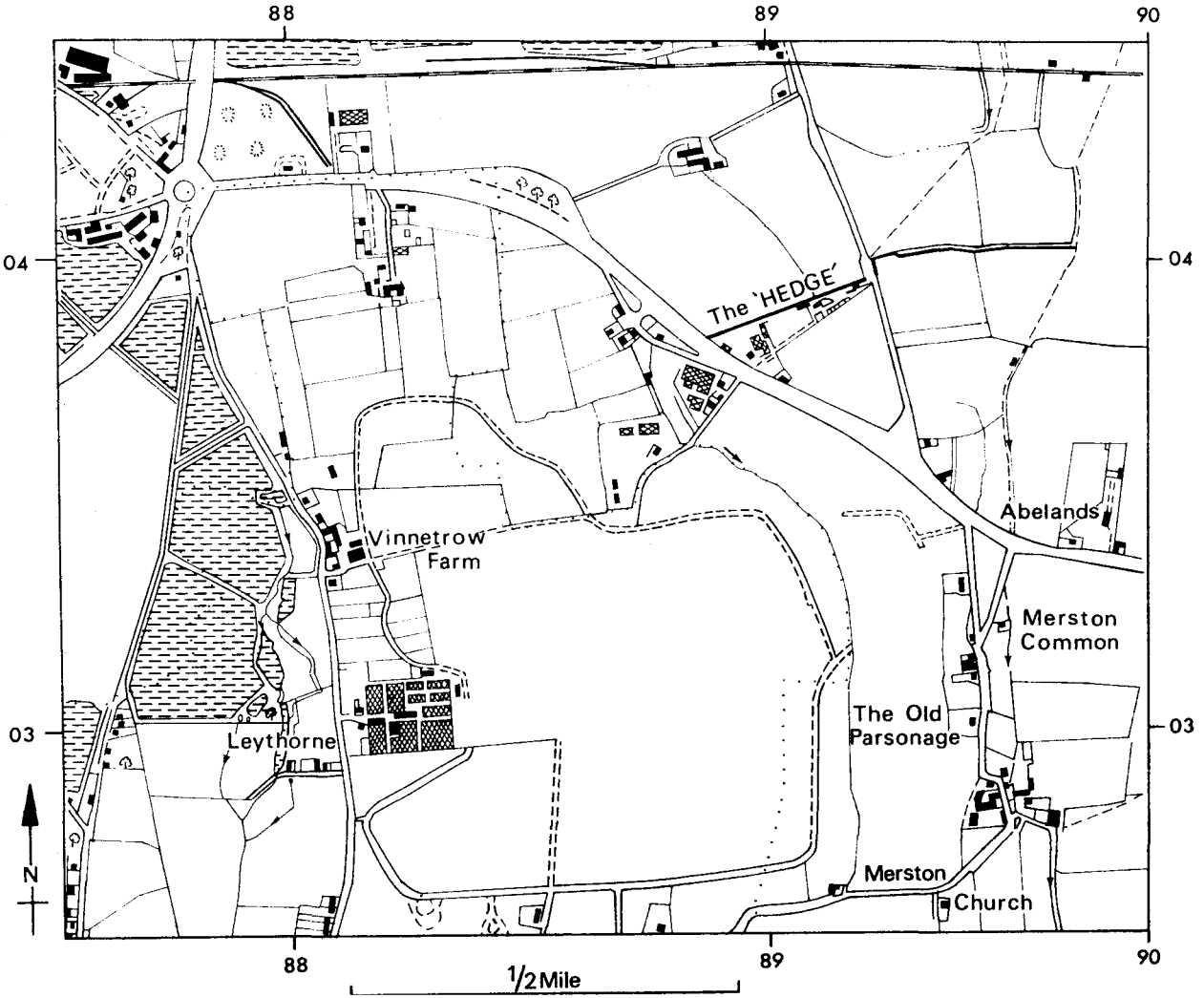


FIG. 2. Based on the modern six-inch map

The people

The Thomas Bowyers of the second and third disputes were father and son. The family probably originated at Knypersley near Biddulph in north Staffordshire, coming from thence first to Petworth.[1] Thomas Bowyer, the father, bought North Mundham and Runcton from the crown in 1540 after having become wealthy as a grocer in the City of London. He died in 1558, and was buried in North Mundham, his tomb being behind the choirstalls. He is representative of the many merchants who established themselves as country gentry, buying church lands and becoming involved in litigation over enclosure. They were the instigators and participants in the district of the social revolution that transformed a peasant society associated with open-field farming to a society of landlords, tenant farmers and landless labourers. Thomas Bowyer the son, also commemorated in North Mundham church, was involved in the third dispute, and it is his land shown as reaching Portfield Lane at point 13. Another son Richard, inherited Vinnetrow and died in 1607.

Drayton was divided into two sub-manors: West Court held by the Countess of March and East Court held by Boxgrove Priory.[2] Like Bowyer in purchasing church lands, John Caryll bought East Court from the crown in 1560. The Caryll family was extensive with branches in Shipley and Warnham, and at Greatham (Hants.), and held West Harting from the latter part of the 16th century. There too Sir Edward Caryll became involved in attempts at enclosure of the commons.

Robert Bennett, Edmund Barton, Richard Miles, John Horbridge and James Hardham (or Hudham) and also Mr. Bishop are all named in court rolls of Merston 1592-95 that survive amongst the Caryll papers.[3] All save Mr. Bishop paid homage at the court. Mr. Bishop, a free tenant, was reported as absent despite the fact he rented manor lands. Robert Bennett died in 1593, and his three virgates, a considerable holding, passed to his daughter and to her husband John Hampyre after payment of a heriot. Most of the work of the court was concerned with tenures but some manorial control of agriculture survived: pigs were to be ringed, the pound repaired, and fences built against Millfield. Rulings were also made against sub-tenancy and against the leasing of common grazing rights or running "foreign" cattle on the commons.

Sir John Earnley, who was responsible for the line of the hedge, became Lord Chief Justice and Attorney General. He was knighted in 1519 and died the year later.

In both Drayton and Mundham ingress by the new landowners, the Bowyers and the Carylls, was achieved by purchase of church land. Boxgrove Priory (north east of Chichester) had considerable holdings in both townships, and Bruton Abbey, Somerset, also held land in Mundham. The "Abeland" to which reference is made and which survives as a place name probably derives from this ownership.

The modern landscape

The landscape of 1588 was the result of generations of unrecorded labour, transforming a marshy coastline into farmland. The evidence for the initial conditions confronting the South Saxons colonists is contained in the place names of the area.[4] In addition to the obvious

[1] J. H. Cooper, "Cuckfield Families," *S.A.C.* vol. 42 (1899), 18-53.

[2] *Victorian County History of Sussex*, vol. 4 (1953), 158-174.

[3] British Museum Add MS, 28241.

[4] A. Mawer and F. M. Stenton, *The Place Names of Sussex*, English Place Name Society, 2 vols., 1929-30. A. H. Smith, *English Place Name Elements* (1956).

Marsh Farm, Withies Farm and Saltham, Vinnetrow means " the tree of the fen dwellers," Merston " marsh farmstead," and Shripey " angular island." Tangmere reveals a lost mere and Runcton may mean " logs set rung-wise to form a track over marshy ground."

In this sense—of land drained and cleared for cultivation—there is continuity even to today, but little of the detail of the sixteenth century landscape survives (Fig. 2). True, the pattern of roads can still be identified, but most of the field divisions between Vinnetrow and West Court have disappeared, replaced by remnants of a wartime aerodrome. Few of the buildings remain. Vinnetrow Farm survives, a timber framed building although disguised with a skin of brick, no doubt substantially as occupied by Richard Bowyer (Plate 1). Bennetts house is probably " The Old Parsonage," and of course Merston Church still occupies its mound, in appearance as on the map (Plate 2). All the other buildings have gone. There is no trace of either East or West Court; Bartletts or Mansers. There is a Kives Farm but on a different site. The Harreway, much straightened and widened, is now the main Bognor Road, although still a little elevated from Mundham Lane End. The arcuate pond opposite to Vinnetrow has also gone, replaced by one of the chain of wet gravel pits. The most interesting survival is the hedge established as the Oving-Merston boundary (Plates 3 and 4), a bank and hedge with many massive old oaks " the hedge supposed to be made between 13H7 and 10H8 at which tyme Mr. Atturney Earnly ended the controversy between Merston and Drayton."

APPENDIX

A The Key to the Coloured Map

The places in the plott of means mershe which wylle muche help to the understanding of matters deposed in the cause between John Caryll Esquire and Thomas Bowyer and others marked in the plott with the numbers hereafter mentioned.

1. Highe Ashes
2. Kybes Bushes als. Beggers bushe
3. Mundham Lane end
4. Drayton Gate als. Portfield Gate
5. Drayton Crosse
6. Hyll Crosse
7. Mr. Carylls farme house of east court Drayton
8. Castlemans Croft
9. Lease Gate
10. Mylborough style als. Abeland style where sometyme stood a postern gate
11. The place where of old tyme was a stone bridge
12. Colworth lane end
13. The end of The Bowyers hundred acres
14. The fardest part northward of the Innegrounde of the manor of Roughton
15. The bounde between Roughton and Drayton Innergrounde
16. Mr. Caryll Inneground of East court Drayton in other places marked with a C
17. Mannsers house and errable land
18. Kybes house and errable land
19. West court Drayton farme place belonging to Mr. Bishop in other places marked with B
20. Earth pytte by hill crosse
21. Portfyeld lane
22. Bennetts house
23. The lane leading to Merston
24. The gate place where was wont to be a way from Merston to Oving within the which stood a pound
25. The two leasues which about the 12 yere of Henry the VIIth were taken into East Court and West Court drayton farmes
26. Drayton Abeland
27. Merston Abeland

B The findings of the surveyors

We finde by our view that the parish of Ovinge Joyneth upon the saide marshe or common from the Lane ende by Kibes house northward unto the corner of Portefilde gate and from thence eastward to the south west corner of Mr. Carrills leaze and from thence to the south east corner of Mr. Byshops leaze which is in controversie and therefore referred to the deposition and from thence southward to Aybeland Stile.

And from thence Merston abutteth to Collworth Lane towards the south west and from thence to Merston lane end from thence northward to Hill Cross and from thence westward to the corner of High Ashes.

And from thence Mundham abbutteth upon the said marshe or common northwards to the lane by Kibes house.

PLATE 1. Vinnetrow Farm

PLATE 2. Merston Church

PLATES 3 and 4. The hedge

A MEDIEVAL TOWN HOUSE IN GERMAN STREET, WINCHELSEA

By Anthony King, B.A.

Excavations have revealed foundations of a stone built house in the centre of the medieval planned town of Winchelsea. The house underwent a major reconstruction in the late fourteenth century, resulting in a quasi semi-aisled type house. Decay set in towards the end of the next century. The type, positioning and final demise of the house are discussed.

INTRODUCTION

Winchelsea is a planned town set up by Edward I in 1292. Although there are many such towns in England,[1] Winchelsea is in a select minority in having at least half of the original area now free for excavation, a substantial proportion of which has been parkland since the seventeenth century. The chance to excavate part of this area came in early 1974 when the town decided to erect some public lavatories in the north-west corner of the park (TQ 90401718). Building work had already commenced when the Council agreed to archaeological investigations, due mainly to the 'Scheduled' nature of the site. Work stopped for about three weeks while emergency excavation was undertaken. Unfortunately, some of the upper stratigraphy had been stripped off and the tops of some of the walls exposed.

The whole of the ancient town is set upon a promontory of Ashdown sand at about 100ft. O.D. The site itself is very clayey, being on the 'argillaceous' Fairlight clays part of the beds[2]; in a contractor's trench visible to c. 2m. depth yellowy grey clay with iron staining occurs 50cm. below the surface and is separated from a lower band of grey clay at 1.70m. and below by a band of iron nodules 2-5cm. thick. The site slopes from north to south at about 1 in 40, causing some of the foundations to be stepped (Pl. I and Fig. 1).

The sequence of the site has been divided into three periods for convenience. Each is dealt with separately with historical information and discussion coming at the end.

PERIOD I

The major feature of this period is the building which occupied most of the excavated site. Virtually nothing else was found except for debris associated with it. The building is a hall running north-south with a cross wall to the east and the possibility of another at the south end of the west wall. It is not known how far south the north-south walls extended. The fabric survives only along the front (west) wall where later walling has preserved it. The lower foundation is probably the base of the original wall of this period, and is of roughly faced stones 5-10cm. thick laid horizontally in mortar, beneath which is a bedding of small unshaped stones set in clay from the site. The bedding only occurs where the foundation has been stepped down, for, further to the north, brown sandstone slabs in thin plates are used instead. (Fig. 2).

[1] M. Beresford, *New Towns of the Middle Ages* (1967).

[2] R. W. Gallois and F. H. Edmunds, British Regional Geology, *The Wealden District* (4th ed. 1965), 24.

PLATE I. Winchelsea from the south. The cross marks the site of the excavations (Cambridge University Collection: copyright reserved)

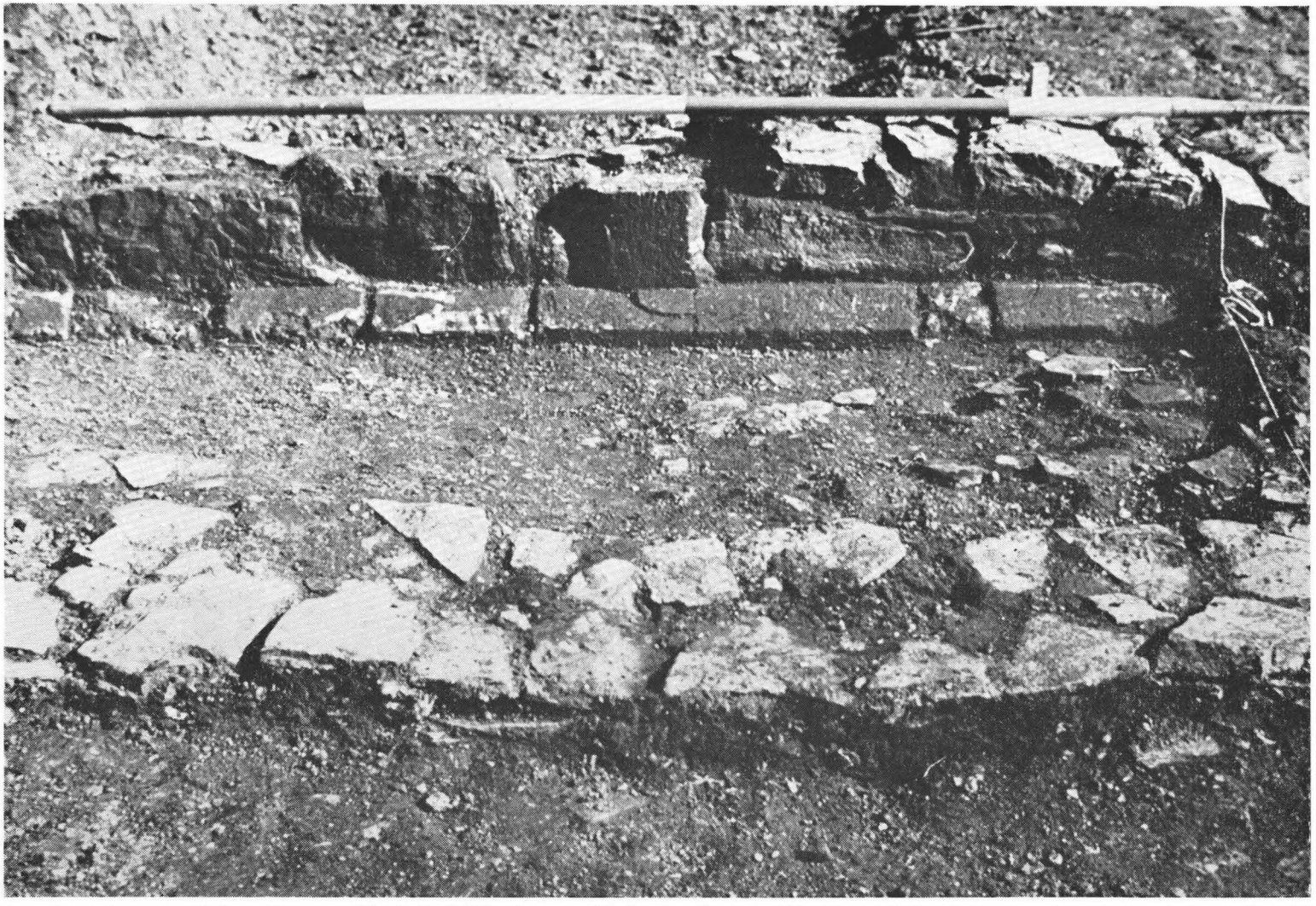


PLATE II. The west wall from the west with the Period II staircase wall in front. The central block is the left-hand Caenstone door jamb, to its left is Period I work, to its right Period II blocking. The greensand chamfers appear below.

GERMAN STREET, WINCHELSEA

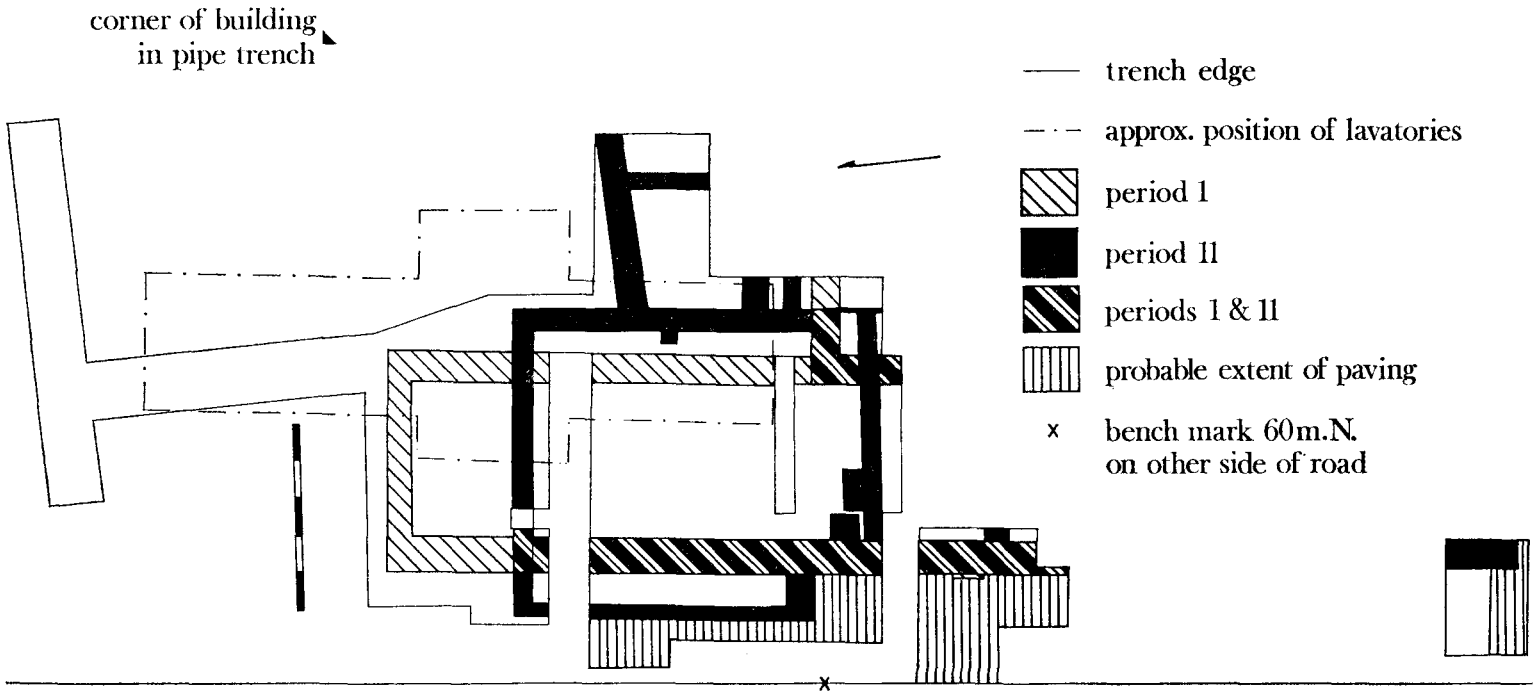


FIG. 1. Scale in metres

There is no indication of what happened above the first six or seven courses as above this a second wall had been built, somewhat narrower than the foundation, with a chamfered offset along the front face. The wall is of good, dressed, but not smoothed, ragstone with a Caen stone door jamb about 6m. from the north end. It seems that this door jamb had been re-used from some other building, since the chamfer on its north-west edge extends down to the offset and does not have a stop to it. (Pl. II). The south-west side, on the side where the door was, has a chamfer with a perpendicular type stop, possibly late fourteenth century[1]. The other side of the doorway has been robbed away in Victorian times and there is no indication of its width.

Other traces of Period I were found further south at a point where a Period II relieving arch had been built over a sag in the wall. (Fig. 4). The appearance of the lower courses is similar to the early wall further north. The sag is not easily explained but was possibly a natural gully or a cross-wall not properly bedded. The indications are towards the latter, since slabs of brown sandstone of Period I type were found jutting west of the wall at its base at this point only, which could be associated with a cross-wall foundation. Another point in favour of this interpretation is that the door would be central if a wall were placed here and also if the door were exactly central, it would be c. 2m. wide—an acceptable limit for monumental arched doorways as this one quite probably was. However, central doorways are rather rare in the thirteenth and fourteenth centuries. The only examples in Wood[2] are at Little Chesterford, Essex and Martock, Somerset.

At the south-east of the site the lower courses of a cross-wall were found under the Period II mortar platform. It had been destroyed where it juts to the east of the Period II hall wall; only a trench was found, at a slightly higher level than the trench for the main back wall (see below), perhaps indicating a less substantial use.

The north wall was only revealed in a small trench and only one course remained of brown sandstone shaped similarly to the foundations of the northern (excavated) part of the west wall. It is not known how far on each side of this trench the foundations extended, but it is presumed that the walls simply met the north-south walls without any complications. The east wall had been removed at all the points excavated, leaving a trench 80cm. wide and 35cm. deep, except where the foundations had stepped up at the point where the main baulk crosses the trench; to the north of this point no trench was located. The stepping up of the trench parallels the situation in the west wall where the bedding gives way to plain sandstone slabs at about the same point along the wall. The stepping in both cases was to encompass the slope economically, although the change in foundation methods is not easily explained by this.

The trench which once held the east wall was virtually clean, showing that considerable care had been taken in its demolition. Subsequently, quantities of clay were dumped to cover up the excavated trenches and to level the site. In places, this clay contained scattered foundation slabs from the walls (especially to the south of the north wall). The clay was possibly removed from the north-east of the site where there is a dip in the natural surface, thus forming a ' house platform ' with a dip around part of the edge. The Period II east wall was built before this layer was deposited, thus continuity between the periods is probable. (Fig. 3).

[1] Information to the author from Mr. D. Martin.

[2] M. E. Wood, ' Thirteenth century domestic architecture in England,' *Archaeological Journal* (hereafter abbreviated to *Arch. J.*), 115 (1950), supplement.

GERMAN STREET, WINCHELSEA

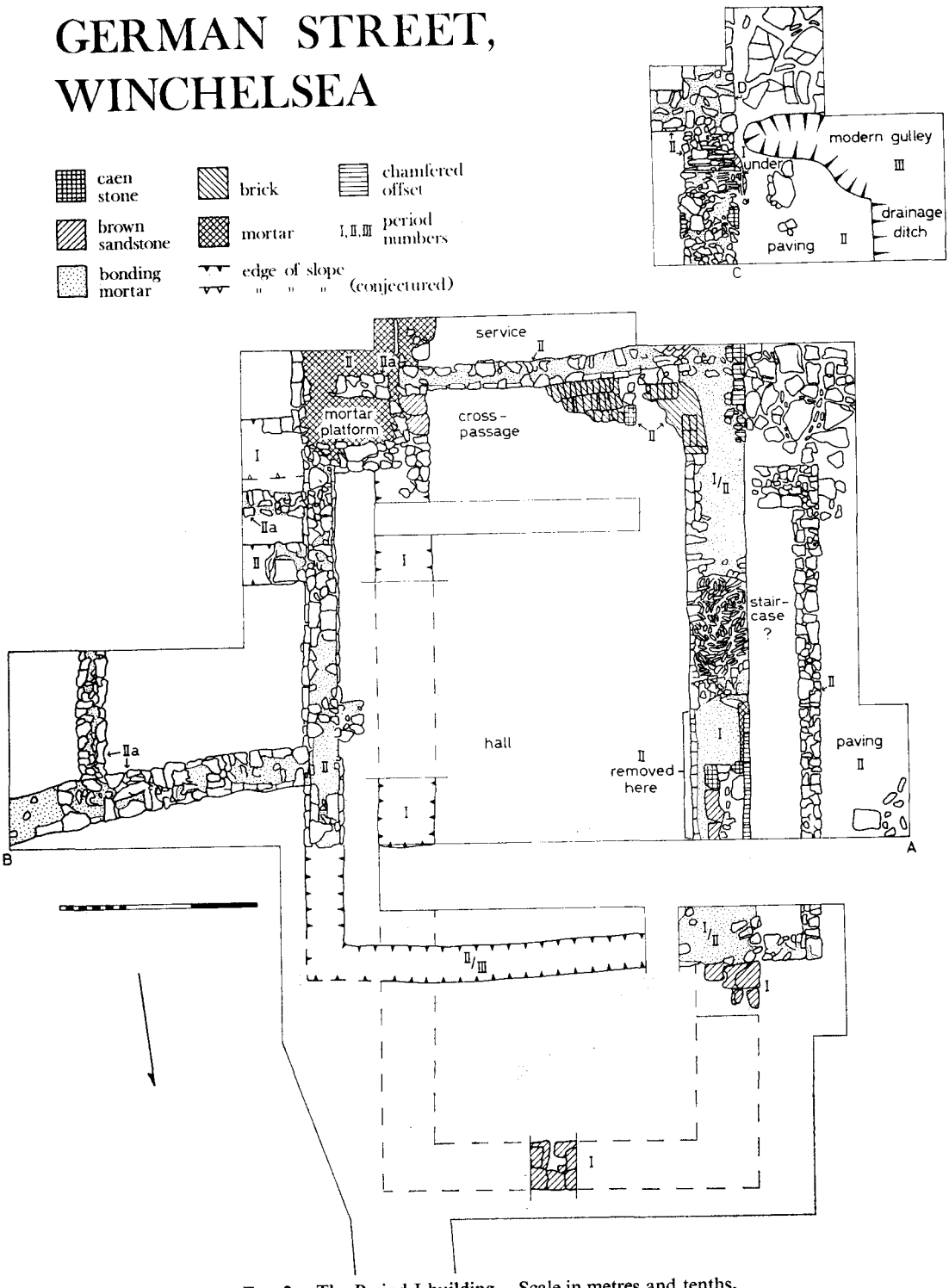
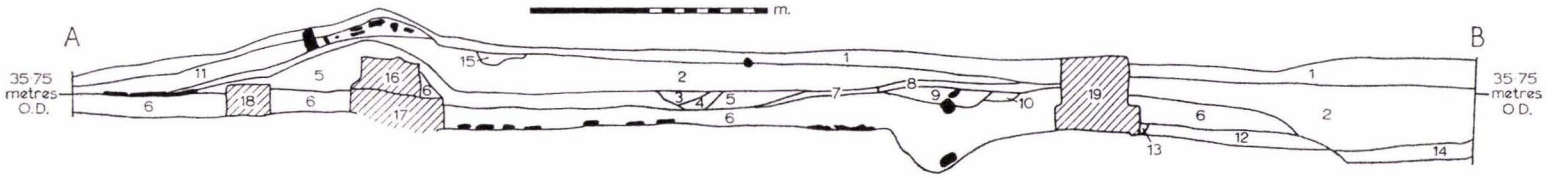


FIG. 2. The Period I building. Scale in metres and tenths.



1. Turf, humus and immediate subsoil; Period III.
2. Loamy brown with smooth gravel inclusions, possibly degraded mortar; III.
3. Black ash and charcoal; III.
4. Burnt brick-dust and ash; III.
5. Loamy brown, lighter than 2, but no sharp distinction; II.
6. Yellow/brown clay with charcoal specks; I.
7. Charcoaly version of 5; II.
8. Orange clay; II?
9. Similar to 5, but with no gravel; II.
10. Red and black burnt soil and charcoal; redeposited; II.
11. Similar to 2, but with much gravel and rubble; III.
12. Yellowy clay, very similar to natural but with slates from I.
13. Dark brown foundation trench for 19; II.
14. Grey silt — water borne? I.
15. Light brown clayey loam with much light-grey mortar dust; III.
16. Wall; chamfered offset and dressed, squared blocks; late I.
17. Wall; small, faced stones with mortar filled core; small unshaped or brown sandstone blocks under; early I.
18. Wall; thin, horizontal plates, faced; mortary core; II.
19. Wall; as 18, but less mortary; II.

FIG. 3. Blacked in portions indicate stones and slates. Hatched portions indicate walls.

Between the redeposited and the natural clay was the only layer associated with Period I. This contained small quantities of building material, a rather larger quantity of broken slates and sparse pottery and bone finds. This layer is probably a destruction layer associated with the Period I house; it is difficult to accept it either as a construction layer for Period I since it would have been destroyed during demolition, or as a similar layer in Period II since it underlies both the clay and the back wall of the new house.

The dating of Period I and in particular the demise of the first house is difficult, and is dealt with at the end of Period II.

The Finds from Period I

Building materials by David Martin and Anthony King

Most of the walling is in Kentish rag. The nearest beds are in the Hythe/Ashford region and stone could be easily transported by sea from Hythe to Winchelsea.[1] The door is of re-used Caen stone. In Sussex its use is overwhelmingly confined to churches[2] and it is possible that the doorway was built of stone from St. Thomas, either the old church in Old Winchelsea or after one of the depredations of St. Thomas by the French in the mid-fourteenth century. No feature on the remaining block is closely datable. Other stones are probably of Wadhurst sandstone from local quarries in the Cripp's Corner-Ticehurst area. This no doubt includes the brown sandstone used in the lowest courses of the walling. The predominance of ragstone may be explained by the ease of sea transport at this time compared with the circuitious land route from the local quarries. The small unshaped stones used in part of the foundation are probably of Tilgate stone from sources near Hastings.[3]

The only certain moulded stone from this period is the door jamb of Caen stone set into the west wall (Fig. 5, No. 4). Originally it was a thirteenth century window jamb but had been recut as a door jamb late in Period I. The window contained a plain chamfer on its front and a splay to the rear. The door contained a rebate to the rear and a 4cm. chamfer with a stop at the front.

The slates found were all in a broken state and were probably broken when they were removed from the roof. They were mainly found outside the hall particularly under the Period II east wall towards its north end. Their colour is dark green/grey with streaks of lighter green. Their provenance is uncertain;[4] they have been submitted to the Geological Museum for analysis and will be discussed in a future note.

Other finds will be discussed in the finds section at the end of Period II.

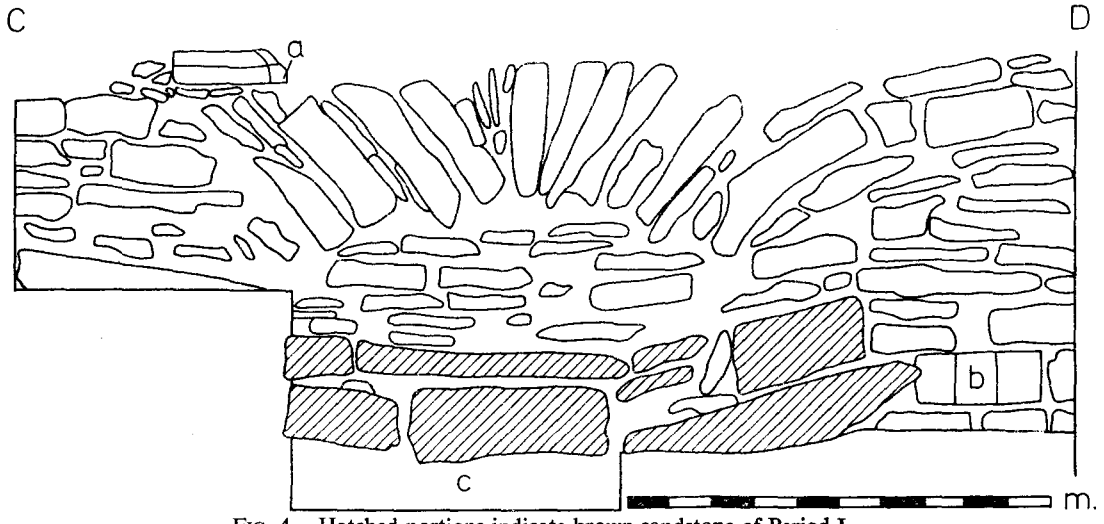


FIG. 4. Hatched portions indicate brown sandstone of Period I.
Some smaller stones and the mortar have not been drawn.
a. A reset chamferred offset of Period I on the Period II wall
b. A chamferred voussoir of Caenstone, probably Period I. c. Natural clay.

1 R. W. Gallois and F. H. Edmunds, op. cit., 86.
2 R. A. Pelham, 'Studies in the historical geography of medieval Sussex," *Sussex Archaeological Collections* (hereafter abbreviated to *S.A.C.*), 72 (1931), 176.
3 R. W. Gallois and F. H. Edmunds, op. cit., 25-6.
4 E. W. Holden, 'Slate roofing in medieval Sussex,' *S.A.C.* 103 (1965), 67-78; J. W. Murray, 'The origins of some medieval roofing slates from Sussex,' *S.A.C.* 103 (1965), 79-82.

PERIOD II

A second house was erected in Period II using the same alignment as the first. There does not appear to be a break between the two periods, as the west wall is re-used as the main front wall and from the demolition evidence given above it is probable that the first house was knocked down deliberately to make way for the second, rather larger, one.

The basic change was to shorten the long axis and widen the short axis. The new east wall survives through most of its length to about ten or twelve courses of stonework in thin horizontal plates. There is an offset on each side of up to 10cm. in width and five or six courses high. There is no evidence of a foundation trench and the wall was probably built up before the clay covering the old foundations was put in place. The discontinuity of this layer in the section on either side of the wall seems also to bear this out. The wall is only roughly dressed and was probably plastered; some half-a-dozen plaster fragments survived from the destruction layer associated with this period near the wall. The presence of plaster seems to suggest that the lower walls were stone rather than frames, since the wattles associated with framing would only support a thin plaster layer and the pieces 3-5cm. thick found on the site would not have held on to such a backing. The south wall of the hall is also the north service wall. It is 40-50cm. wide and probably supported a wooden partition. Brick paving was used as the doorway into both the street and the service. The rest of the floor was probably beaten earth, although little remained of a noticeable earth floor; it was probably destroyed when the house was cleared and other features removed, such as the hearth. (This was not found. It may be under the section baulk very close to the north wall but our speedy investigation of the baulk at the closing stages of the dig revealed nothing of that nature). The south wall of the service was found adjoining the front west wall, making this room c. 2.80m. wide.

The west wall of the house made use of the Period I west wall. Most of the old wall was knocked down and replaced by a rougher dressed stone wall which blocked up the old doorway (Pl. II), thus removing the old doorsill and cracking the Caen stone door jamb mentioned above (a piece was found mortared nearby into the new wall). To replace the gap left by the sill, more chamfers of different length were cut to complement the existing run and inserted, without mortar and with a small greensand one as a filler to replace the sill. Further south a relieving arch was inserted (see above) and the pre-existing chamfers put back over this. It was at first thought that this arch was a cellar entrance, but the wall foundations are normal here and no deep stratification was found. An alternative was a drain exit, but again this was discarded because of the wall sag to the south and the consequent blocking and arching in Period II, and also because the drain would have led into nothing on the street side of the wall. (Fig. 4). For virtually all of its length the new wall replaced the old down to foundation level, using only the lowest courses of the old wall—only in the places mentioned does the old wall survive to any height, and it only does so there because it was later obscured by the secondary front wall (see below). In general, traces of the old house along the front wall were pulled down to make way for the uniform Period II frontage.

The blocked doorway was replaced by an entrance further south in the south-west corner of the hall. Its presence is only indicated by the brick paving inside the hall, which is 1m. wide, about the same as a modern door. The service paving is somewhat wider and there may not have been an actual door. The main doorway is in the position for a cross-passage in a conventional hall of this date. Opposing it on the south-east side of the hall

were some brown sandstone slabs which may indicate a doorway on to the mortar platform. The west wall was traced south for a further 16m. ending in a large block of stone, presumably on the south-west corner of the house. The wall here had been badly robbed and there was not enough time to excavate under this to look for Period I remains. The north and north-east portions of the hall are represented by robbing trenches of Period III which have largely obscured traces in the north-east corner.

Other features belonging to this period are the mortar platform, the rear walls, the stone blocks in the middle of the east wall and the secondary west wall.

The mortar platform is not easily explained. The possible doorway opposite the main door of the hall would suggest that this is a passageway with a tiled floor. The mortar is c. 8cm. thick, set on a hard core of roughly cut stones c. 5-10cm. thick. The makers of this substantial setting must have been worried about the subsoil settling and thus consolidated it. Since no surface traces were found, it could have been used for a number of other purposes, including the setting for an oven, furnace, or a fireplace. The fact that the east wall is set back at this point and is only 20cm. wide gives the mortar platform the superficial appearance of a modern hearth, but since fourteenth century conventions were for central hearths, and no chimneys, its use for this purpose is doubtful. Possibly it is later than the rest of the hall because it is outside the main room. The east wall of the hall butts on to the old Period I cross-wall which could have continued as a major wall in the house until the addition of the platform put an end to this. The walls all around the platform are very narrow, suggesting wooden or flimsy stone partitions. On the whole, the possibility of it being a tiled passage is most likely. Only further excavation will reveal its true extent and further hints as to its use. Some time after the platform was built, a continuation of the service wall east over the top of the platform curtailed its extent and presumably, since whatever was on the mortar had been taken up to make way for the wall, it went out of use altogether.

The rear walls form a sequence separate from the rest of the structure and cannot be related to it except that the southernmost rear wall predates the Period II hall wall and the rest postdate it. The first of these has already been mentioned under Period I, and only survives under the mortar platform where it has been used as a foundation. Its continuation eastwards was dug out in Period II and its newly faced edge formed part of the new hall back wall. The extent of demolition at the end of Period I can be fairly accurately indicated here since a short stretch of Period II walling was built as a filler between the butt end of the main Period II hall wall and its continuation to the south of the old wall. At this point the old wall only survived to some five courses, above which the insubstantial and non-load-bearing wall enclosing the mortar platform was built. The angle of this filler wall is not explicable at present, but the whole north-south wall from this point southwards is placed about 25cm. further east. To replace the lost east wing another larger room was built (the middle wall of those surviving). The wall found was the north wall of this room, of similar construction to the hall wall and butting it. This is possibly a room built at the same time or soon after the main hall. It was eventually replaced by another yet larger room, after the old wall had been knocked down and dug out leaving what seems to be a buttress against the hall wall. This structure seems to indicate that the house was settling on its artificial clay base and that the third back room was built some time after the main building phase of Period II. This new room's north wall, of similar flat-stoned construction to the hall wall onto which it butts, ran off at an angle to the hall and was subdivided by a small, shallowly founded partition, probably

for a wood frame, which reached the hall wall between the remains of the two earlier rear walls. The two sections of this partition excavated are of similar roughly mortared, roughly dressed stone construction and presumably met, but it is difficult to estimate what other walls there were. The north-east part of the north wall had deep foundations; at its west end the foundations were of similar depth to the hall wall but 1.30m. to the east the foundations drop sharply by 15-20cm. This hollow is best explained as the source of the layer associated with the demolition of Period I (see above). This last room represents the end of a sequence whereby the open space behind the house was gradually filled with buildings.

In the middle of the east wall of the hall were found some blocks of stone, one of which was a re-used dressed stone, possibly from the Period I house. (Pl. III). There were two large stones totalling 30cm. across, 20cm. wide and nearly 20cm. from the wall. The offset of the wall is missing at this point, but this seems fortuitous as the blocks do not key into the wall, but have their own rough cut stone foundations c. 20cm. deep. The best explanation of this feature is that it is the emplacement for a quasi-aisle post (or base-cruck), the beam coming down to the ground from the roof structure. The seeming frailty of this feature does not preclude this possibility because although the ground under the posts at this point is artificially made up it is fairly resistant to downward thrust. This seems to run contrary to the thickness of the mortar platform and its foundation and to the buttress formed from an old rear wall. It could be that the buttress was built to prop up the house because these blocks were inadequate to support the roof, but it is more likely that the buttress is to bolster the rear wall of the hall against the sideways rather than the downwards thrust of the roof timbers. Again, the thickness of the mortar platform's construction is due to the need for a thick, crack-resisting surface which would not buckle if the house platform settled; the blocks serve a quite different purpose.

The only other excavated example of a possible base-cruck emplacement is at Joyden's Wood, Kent.[1] They are in essence similar although only thickenings in the walls were found. However, since the foundations were of chalk and flint, presumably for a timber frame, the emplacement would be set back nearer the wall because the cruck posts would have been tied into the ground plates and thus have been an integral part of the wall rather than the separate affair which a stone wall requires. An example of such an emplacement, about 60cm. high, can be seen in use at Bramleys, Shudy Camps, Cambs. (photo N.M.R.).

This is the structural argument for the feature being a quasi-aisle emplacement. An examination of the plan of the house brings the same conclusion in a different way. The blocks are almost exactly 3.50m. from either end of the hall, producing two equal bays up to the cross-passage. The width of the hall is 5.70m., which could be spanned by a large oak beam, or two, if collars were fitted, but it is more likely that a base-cruck construction was used to avoid the expense of such large and consequently rare logs. The width is just under the figure of 6.15m. is given by Mason[2] as the maximum span, with one or two exceptions, of simple halls in the Wealden area. Other factors in favour of this interpretation are that there is no aisle post emplacement, which would have been the alternative construction to a base-cruck or a single span roof,[3] and also that the Period I doorway, which is opposite the

[1] P. J. Tester and J. E. Caiger, 'Medieval buildings in Joyden's Wood Square Earthwork,' *Archaeologia Cantiana*, 72 (1958), 18-40.

[2] R. T. Mason, *Framed buildings of the Weald* (1964), 20.

[3] It may have been taken up, of course, when the building was demolished.

PLATE 3. The quasi-aisle emplacement from the North-West

emplacement, was blocked up in Period II and the doorway moved to avoid the timbering and conform with the normal house plan of this period.

The evidence is in favour of the hall having a quasi-aisle on its east side, but what of the west side? In general, timber roof framing is bilaterally symmetrical so as to spread the stresses equally, meaning that in this case the hall should have a complimentary aisle on the west side. However, there are exceptions, notably in the Weald, when there is only one, and this seems to be the case at Winchelsea where the existence of the road to the west precluded such an expansion. The hall can be classified in Mason's scheme[1] as quasi semi-aisled. A list of similar examples is tabled below (Table 1).

Table 1[2]

Type	*Place*	*Bay Width* (metres)	*No. of Bays*	*Hall Width* (metres)	*Date*	*Source*
quasi-semi	Winchelsea	3.50m.	2	5.70	Late 14C.	—
quasi-semi	Homewood House, Bolney	4.30, 3.70, 3.00	2	6.40	Early 14C.	*Mason*, 1957, 86
quasi-semi	Dunster's Mill House, Ticehurst	3.70, 2.40	2	6.10	Late 14C.	*Mason*, 1960, 151-2
quasi-semi	Moor Hall, Harefield, Middx.	4.70	2(4)	6.70	Early 14C.	*Rigold*, 1966, 106
semi	38 High Street, East Grinstead	3.70	2	6.10	1325-1350	*Mason*, 1957, 90
semi	Priory Cottage, Bramber	4.40	2	6.60	c. 1400	*Godfrey*, 1947, 114-5
semi	Apple Tree Cottage, Henfield	—	—	—	—	*Mason*, 1964, 24
semi	3-4 West Street, New Romney, K.	4.00, 2.20	2(4)	5.60	Late 13C.	*Parkin*, 1973, 124
semi	Warkworth Castle, North.	5.50	3	12.50	1191-1214	*Honeyman*, 1954, 12 and plan

The distribution of these two types of hall is confined to the south-east, as the table shows, with the notable exception of Warkworth Castle. Their size, too, is reasonably consistent except for the church-like size of Warkworth, and the dates span the fourteenth century, with the same exception. Singling out this anomaly, which can be explained by its similarity to church architecture, which does provide early and large examples, and by the fact that the bailey curtain precluded expansion on one side, the group shows remarkable homogeneity. Aisled and crucked houses are commonly found throughout Lowland England[3] with crucks tending to the west and aisles to the east. The combination of the two, the quasi-aisle or base-cruck, is later and more evenly spread[4]. However, their distribution is still predominantly western, excepting a higher than normal density in the Weald and its surroundings, and the semi-aisled tradition is also confined to the latter area. Thus the two carpentry

[1] R. T. Mason (1964), op. cit., 24.

[2] After M. E. Wood, *The English Medieval House* (1965), 48 and R. T. Mason (1964), op. cit., 24, with additions. Sources: R. T. Mason, 'Fourteenth century halls in Sussex,' *S.A.C.* 95 (1957), 71-93. R. T. Mason, 'Dunster's Mill House, Ticehurst,' *S.A.C.* 98 (1960), 150-5. S. E. Rigold, 'Two camerae of the military orders,' *Arch. J.* 122 (1966), 86-132. W. H. Godfrey, 'St. Mary's and Priory Cottage, Bramber," *S.A.C.* 86 (1947), 102-17. E. W. Parkin, 'The ancient buildings of New Romney,' *Archaeologia Cantiana* 88 (1973), 117-28. H. L. Honeyman, *The Description* in C. H. Blair and H. L. Honeyman, *Warkworth Castle, Northumberland*, (Ministry of Works, 1954). Also to be included is D. Martin, 'Chateaubriand, Burwash,' *S.A.C.* 112 (1974), 21-9, which is a quasi semi-aisled hall of 2 bays (3.00 and 4.25m.), 5.90m. wide, dating to the early 15C.

[3] J. T. Smith, 'Medieval roofs; a classification.' *Arch. J.* 115 (1958), 133 and 139.

[4] N. W. Alcock and M. W. Barley, 'Medieval roofs with base-crucks and short principals,' *Antiquaries Journal* 52 (1972), 133.

traditions of aisling and cruck framing are combined in the Weald as an offshoot to the main groups with the regional distinction of a high proportion of halls being semi-aisled. Obviously, it may not be a regional tradition at all; the distribution may reflect the density of field-workers.[1] Having only one aisle is not an obvious local characteristic (churches throughout the country often have only one at some stage). Any confined space would suggest such treatment and any good builder would be able to construct them. The answer probably lies in the conservatism of local architectural traditions, with the innovation of one aisle coming in the south-east as an answer to a particular problem and thereafter becoming established practice. The base-cruck element is later, associated with the desire to clear the aisle posts to the sides and increase the unencumbered floor space.[2]

This type of house is rare in towns, halls of this sort being usually associated with country situations—the farmhouse, parsonage, manor and the like. The small roomed town house, common enough in the older towns[3] is a product of crowding in an already delineated site. Winchelsea, however, was laid out with wide streets and large plots and, as a consequence, the buildings were of a more expansive type. It is also a local tradition to have country type houses in the smaller Wealden towns.[4]

An anomalous feature of the building is the smaller wall built in front of the main west wall. It is 40cm. wide and of a similar construction to the Period II east wall—thin horizontal plates roughly faced and mortared together. At the south end it is thickened by 5-10cm. for its last 1.70m. The returns to the main wall, which do not key with it, are 45cm. wide at the north end and 70cm. at the other. It is not easy to determine the use of this structure. The most likely solution is that it is the stone foundation for a wooden, or possibly stone, external staircase which may account for the thicker south end as a base for the bottom step. The top doorway would have been in the roof framing and may have been entered through a dormer gable porch.[5] A similar stairway to the one envisaged is built on the north side of the Town Hall and prison in Winchelsea. A possible alternative is that the structure was a pentice, albeit a very narrow one. A third possibility is a shop counter, suggested previously,[6] but only the proximity of the market supports this. In any case, and in particular the last two, no doorway was found from the house to the interior of the structure unless it was in the un-excavated baulk. Outside this structure, which is contemporary with, or slightly later than the main Period II building operations, a pavement had been laid which survived in part especially near the doorway. It consisted of large irregular ragstone slabs set in sand and clay with smaller fragments as fillers. It stretched 2m. to the south of the main trench and presumably connected with the paving in the small southerly trench although here paving was

[1] Sussex has been particularly well covered, e.g. Mason (1964), op. cit. The thoroughness of present work does not really bear this out. The Royal Commission on Historical Monuments has only uncovered one possible semi-aisled example at Barrington, Cambs. (R.C.H.M. Cambs. vol. 1, *West Cambs.* p. 9, no. 17) but its width (4.90m) seems to suggest that there were originally two aisles; although later remodellings have extensively altered the walls, there seem too, to be traces in the plan of the lost aisle.

[2] R. T. Mason (1964), op. cit., 21.

[3] e.g. Rye, Hastings and Lewes; see W. A. Pantin, ' Medieval English town house plans ', *Medieval Archaeology* (hereafter abbreviated to *Med. Arch.*), 6-7 (1963), 202-39.

[4] S. E. Rigold, ' Timber framed buildings in Kent,' *Arch. J.* 126 (1969), 200.

[5] T. H. Parker refers to documents of Hen. III mentioning such porches over stairways. See his *Some account of the domestic architecture of England from the Conquest to the end of the Thirteenth Century* (1877), 84.

[6] A. C. King, Interim report on the excavations in *Bulletin*, Institute of Archaeology, London, 12 (1975), 50.

found to the south of the end block only, with an upturned slab marking its northern edge parallel with the south end of the wall. How exactly these slabs related to the main trench is not known, nor is the extent of paving; was it a pavement or a road surface?

Dating the beginning and end of Period II is a difficult problem. No securely datable small finds were recovered and insufficient stratified pottery was found, to be anything but tentative. Some of the pottery in the Period I destruction layer is blackened on its exterior in the Winchelsea black ware tradition which, being comparable to Rye products is datable to the fourteenth century with the second half being more likely on the strength of previous numbers found.[1] The door jamb is simply cut with an early perpendicular stop of similar mid to late fourteenth century date. Further corroboration of this date is provided by the building type which was becoming obsolete by this time and although possibly dating to the fifteenth century, is much more likely to be earlier. The simple aisled hall represents a stage in the development of the late medieval service-hall-solar type and was made obsolete by the latter in the fourteenth century—early in Essex[2] and later in the Weald.[3] Quasi-aisling is a late manifestation of the simple aisle and is likely to come near to transitional phase between aisling and later developments. This puts it in the mid fourteenth century. This partially agrees with the evidence in Table 1 and with Rigold's statement[4] that quasi-aisled halls in Kent have ' surprisingly late detail '. All in all, a mid century date is perhaps the best, with a tendency to the later rather than the earlier half. This leaves the problem of the end of this period which is best left unresolved until the fifteenth century pottery of the area can be dated accurately. However, if the house is typical of the town, and there is no reason against this, it could possibly have been abandoned about a century after it was built (see History and Period III).

The last point to consider is the use of the hall. Firstly, since evidence is scanty this must be purely speculative. No hearth was excavated, which may be explained by the existence of an upper storey, perhaps the ' solar ', entered through the external doorway and staircase. The upper storey may have only occupied part of the hall and ' overshot ' its northern half, either forcing the hearth to the south or eliminating it altogether, in which case braziers would have been used if heating was needed.[5] This configuration, with the upper storey opposite the cross-passage is the normal solar-hall-service pattern, appearing here rather early, but, of course, if the roof was low, the upper floor may have been just an attic. From this it seems probable that the hall was lived in, but positive evidence is lacking. None of this can really answer the historian's legitimate economic or social questions and the documentary evidence considered below answers them more convincingly. One rent-roll, in particular, shows that the house continued for some way to the south and east (proved by the separate trench to the south) and clues as to the use of different parts of the house may be found there.

Considering the house as a whole, along with the unexcavated area, gives an idea of the social status of the owner. The hall house, although small in this case, is usually associated with manors, farms, parsonages and the like, and the status of town examples must be similar.

[1] K. Barton, ' Sussex medieval pottery to the fifteenth century,' unpublished M.Phil. thesis, University of Southampton, (1972), 93.

[2] J. T. Smith, ' Medieval aisled halls and their derivatives,' *Arch. J.* 112 (1955), 87.

[3] R. T. Mason (1964), op. cit., 24-5.

[4] S. E. Rigold (1969), op. cit., 199.

[5] A local example of such an ' overshoot ' is the rectory at Portland Cottages, Burwash. See D. Martin, ' Portland cottages, Burwash,' *S.A.C.* 110 (1972), 17.

Coupled with the lack of finds from inside the building, often indicating a tidy and rich household, it may be concluded that the occupants were people of some means, and, compared with many of the tenements excavated in the older towns such as Norwich or Winchester, lived in expansive and comfortable surroundings.

The Finds from Period II

Building materials by David Martin and Anthony King

Very little additional comment can be made on the provenance of the building material to that under Period I. Kentish rag again predominates and was the only new stone to be brought to the site. All the other stones are reused from Period I, in particular the brown slabs of Wadhurst sandstone and the Caen stone for details. The bricks are local, the Hastings beds producing good brickearth in this region.[1] The bricks were plain, 21 x 10 cm., but were too worn and crumbly for a sample to be taken or thickness measured.

Slates were common in the destruction layer (at the bottom of 5 in Fig. 3) and some were built into the service wall. All were bluey/grey and probably from the South Hams region of Devon. Their use is very common locally, being found at Hastings Priory (c. 1180-1412), Bodiam Moated Homestead (late thirteenth century), Bivelham Moated Site, Mayfield (fourteenth century) and Bodiam Castle (1383). The latest local finds are under the timber frame of Strawberry Hole Farm, Northiam (late fifteenth-early sixteenth century) although they have been reused, and at Camber Castle (1539-43). Four Winchelsea slates were complete enough for measurement, two being 15.2cm. from hole to tail and 8.3-9.5cm. wide and two 18.4-19.0 by 11.4cm. These variations in length suggest that they were laid in diminishing courses. The roughly cut holes were rectangular rather than circular and were punched out. One slate had a round iron stain near its tail suggesting that the fixings were nails.[2] One slate (Fig. 5, no. 1) had been shouldered at the head, a feature not found on the others. Only one fragment had mortar on it, probably from being bedded in a wall, suggesting that the roofing slates were not bedded when laid.

Tiles were not common and contained in some cases a single, neatly formed, nib, set centrally at the top of the tile. Where sizes can be ascertained, the tiles are of relatively standard dimensions, 17.1-17.8cm. wide by c. 1.4cm. thick, no lengths being available. Two examples had their edges roughly trimmed with a knife at an angle while they were still green. All were soft, of sandy texture and light orange. Nib tiles are common on medieval sites, the latest known local examples being from Burwash Rectory and Warbleton Priory (both early fifteenth century). Earlier examples tend not to have fixing holes (e.g. Bodiam Moated Homstead, late thirteenth century), but later examples commonly had one or two circular holes in addition to the nibs. Nibbed Winchelsea tiles appear to be devoid of holes, although a few had a single one. Two nibbed tiles were found bedded into the service wall along with the slates mentioned above, thus dating to the beginning of this period. A more common type of tile had fixing holes but no nibs. They are smaller and thinner than their nibbed counterparts, 15.6-15.9cm. wide by c. 1.1cm. thick and the fabric is less sandy and fired much harder. In colour they are a deep pinkish red, their external surfaces being lightened by a fine surface slip to a buff colour. The fixing holes, of which each tile has two, were formed by a tapered square sectioned tool and are generally

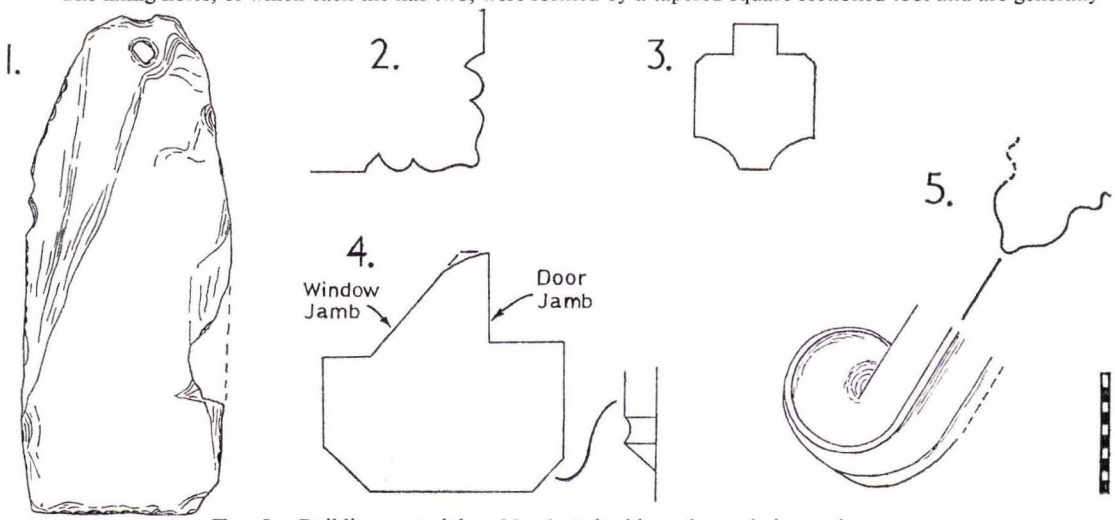


FIG. 5. Building materials. No. 1 at double scale; scale in centimetres.

1 E.g., at Ore. See H. J. White, *The Geology of the country near Hastings and Dungeness* (1928), 92.

2 As at Hastings Priory. See D. Martin, 'Excavations at Hastings' Augustinian Priory,' *Hastings Area Archaeology Papers*, 2 (1973), 38.

set diagonally to the edge. On other local sites, this type tends to be of the fifteenth or sixteenth centuries. The earliest examples, from Bodiam Castle (1383) have large circular holes and are thick and sandy textured as in the nibbed tiles. This suggests that the Bodiam tiles are in a change-over period during the late fourteenth century when tiles in the area were losing their nibs and sometime later production started at another kiln. The majority of Winchelsea tiles are of the later type, consistent with a re-roofing of part of the house in the fifteenth century. However, some earlier tiles were left in place. It is not known how much of the house was tiled rather than in slates, perhaps the main wing was in the more prestigious slate with the rear wings in tiles.

Only one fragment of ridge tile was recovered, in the same fabric as the peg tiles and with a similar surface slip.

Thus, the roofing history of the house can be summarised. The Period I house was roofed in green slates, its successor in grey/blue slates with possibly the rear roofs in tile. In the fifteenth century, part or all of the house was redone in buff nibless tiles with similar ridge tiles.

Two small fragments of dark green glazed encaustic floor tiles were found in Period III layers but they are presumably attributable to this period. Both were thick, 2.5-2.9cm., and had the usual splay cut edge. No sizes could be recovered.

Besides the red brick of the doorways mentioned in the main text, some yellow ones were found, roughly formed and variable in thickness (4.1-5.0cm.). Insufficient remains to give other dimensions. Two examples have accidental surface vitrification and none have mould marks suggesting a rather crude manufacture. The earliest such bricks in East Sussex are from Glottenham Moated Site, Mountfield (early fourteenth century) but these have pronounced mould marks. Camber Castle provides the latest examples (1539-43). It has been suggested that the early examples are Flemish imports.[1]

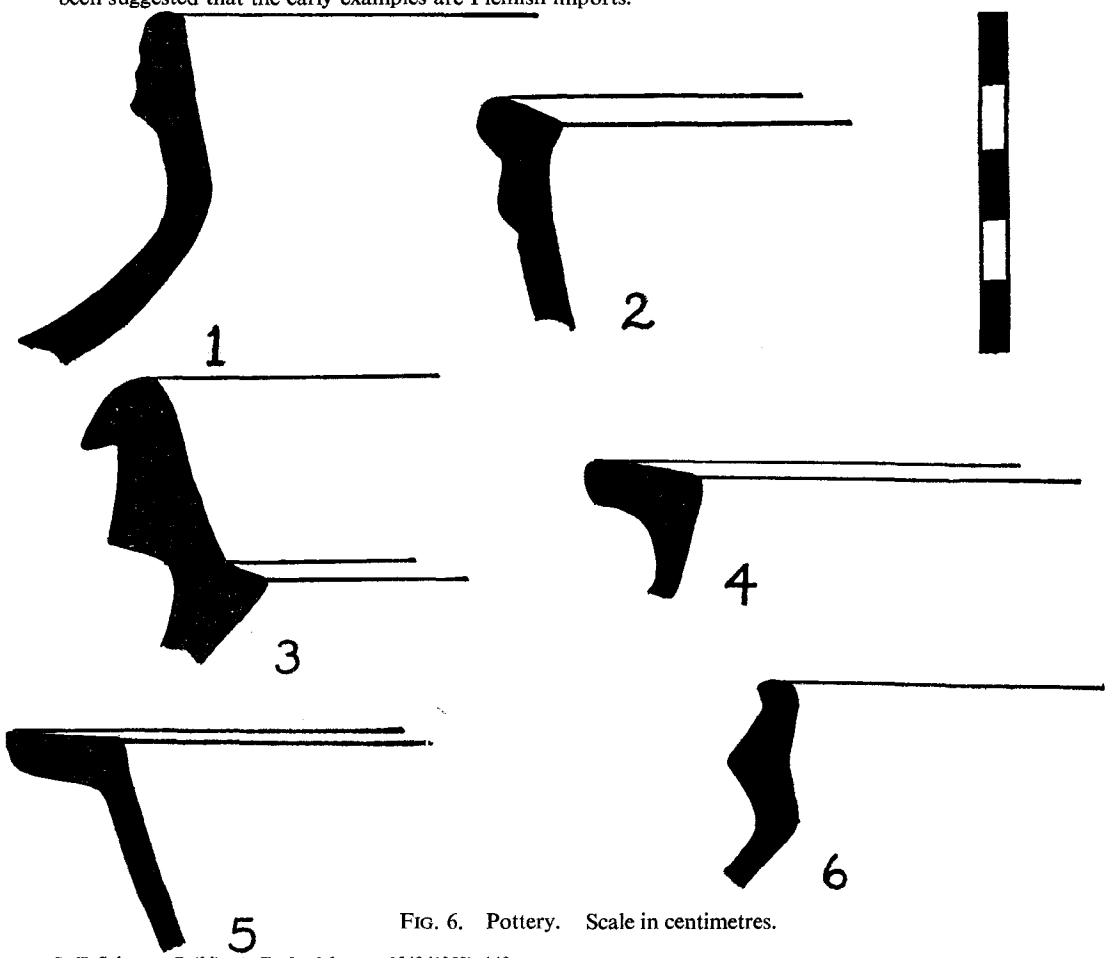


FIG. 6. Pottery. Scale in centimetres.

1 L. F. Salzman, *Building in England down to 1540* (1952), 140.

Several moulded stones were found in Period III layers but are included here because they presumably related to the site. Some had been found by the contractors before the beginning of the excavation. Others were reused in the Period III field wall (see below). The Caen stone examples were probably reused in Period II from earlier buildings.

(a) Corner moulding on a sawn and chiselled Caen stone block. The moulding consists of two opposing cymers forming a filleted roll with a small roll and hollow chamfer on either side. (Fig. 5, 2).
(b) Small window mullion in Caen stone with hollow chamfer to the front and rebated at the rear, possibly for shutters. The window was probably unglazed. (Fig. 5, 3).
(c) Twirl stop to a hood mould having a filleted roll formed out of two opposing cymers. The material is Wadhurst sandstone and is of fourteenth century design. Similar stops are over a doorway and a piscina in the north and south transepts respectively of St. Thomas, Winchelsea (late thirteenth/early fourteenth centuries). (Fig. 5, 5).
(d) Similar to (c), but plainer in design with a less tightly curled twirl stop. In this instance, the moulding is of scroll type and the hollow chamfer to part of the window survives.

Pottery by Val Turnbull and Anthony King

Much of the pottery described in this section is from Period III contexts, but is Period II in origin. Very little was found, especially from Period I, which has, as a consequence, been included here. About thirty sherds only came from secure Periods I and II contexts. This paucity of material is perhaps due to the wealth of the inhabitants, their desire to keep the house clean and their ability to have a house built which was easy to clean. Perhaps it is evidence for a wooden floor, and it is certainly evidence for a thorough clean out when the occupants finally departed. No pits or dumps were located in the excavation, which may be due to municipal sanitary measures. Decrees of 1427 and *temp.* Henry VI indicate the town's scrupulous desire to keep the streets, harbours and walls clean.[1] This may have extended as far as providing rubbish tips.[2]

(a) Fragment from the rim of a large jar. A hard fabric, light orange in colour throughout; and including fairly fine sand grains. Period II. (Fig. 6, 1).
(b) Rim sherd probably from a small jar. Hard, light orange fabric throughout, with traces of burning on the outside. Period II. (Fig. 6, 2).
(c) Rim sherd from large jar or bowl. The fabric is, again, hard and rather sandy, but pinkish in colour. Period III. (Fig. 6, 3).
(d) Flat rim-sherd. The fabric is hard and grey, and burned to a sooty black on the outside. Period III. (Fig. 6, 4).
(e) Flat rim-sherd from a large bowl. The colour is pink, and large grains of sand are present in the paste. Under the rim on the inside is a small drop of clear orange-yellow glaze. Probably sixteenth or seventeenth century. Period III. (Fig. 6, 5).
(f) Rim sherd from a jar. The paste is orange and fairly soft, with traces of a black coating on the outside, although this may be burned. The inside has a dark-green glaze. Period II. (Fig. 6, 6).
(g) Pink sandy ware, paler at core than at surface. This appears to be a fitting from the lower body of a pot, allowing for the insertion of a tap. A large pitcher with such a fitting was found at Bodiam Castle.[3] dating from 1386 onwards (Rye bunghole jars date from c. 1375-1450), and it seems likely that this sherd came from a similar vessel. Contractor's find, perhaps Period II. (Fig. 7, 1).
(h) Extremely coarse fabric, grey at the core but pink inside and out. The surviving part, which is very fragmentary, is irregular in shape and has small patches of dark green glaze. It is difficult to reconstruct the original shape, but this could well have been the sort of spike-like base found on Roman amphorae and on post-Medieval "Spanish oil jars." There is at least a superficial similarity to a piece from Bodiam.[4] Contractor's find, perhaps Period II (Fig. 7, 2).

What little medieval pottery there is would suggest a date in the fifteenth century with some dating to the second half of the previous century. Sherds from Period I offer no intrinsic date but a fine tempered jar base in grey ware with a black exterior would suggest Winchelsea ware or a precursor. Sherds of purer Winchelsea ware, shell gritted and dark black, occur in Period II along with oxidised pieces, probably of the same origin. This type of pottery was first defined by Barton[5] who gives it a period of production similar to that of the Rye kilns, that is, with a floruit in the later fourteenth century. The excavations shed no further light on this relationship since no Rye ware was found, with the uncertain exception of two pieces of light buff fabric, grass-green glazed ware with small nipple-like protuberances. Winchelsea museum has only one piece of Rye ware from Winchelsea itself, and this together with the excavation evidence would seem to suggest a deliberate rejection of Rye ware by Winchelsea, the two towns being rivals in other respects. Certainly, it seems that Winchelsea ware was developed at the same time and in local competition with Rye ware. However, the poor excavation evidence, partly due to the end of Period II being after the main Rye kilns had closed down, should not be used as a certain indicator of this, and more Rye ware may be found in future excavations in the town.

1 W. D. Cooper, 'Notices of Winchelsea in and after the fifteenth century,' *S.A.C.* 8 (1856), 204-6.
2 A map of King's Lynn of 1568-79 shows the medieval plots with an area set aside as 'common ground to lay filth on.' V. Parker, *The Making of King's Lynn* (1971), Fig. 7.
3 J. N. L. Myres, 'The medieval pottery at Bodiam Castle,' *S.A.C.* 76 (1935), Fig. 1, 1 and 226.
4 J. N. L. Myres, op. cit., Fig. 1, 21 and 229. Or could it be the base of a candlestick or lamp? See K. Barton, op. cit., 55 who has an example in a different fabric from Lewes.
5 K. Barton, op. cit., 93.

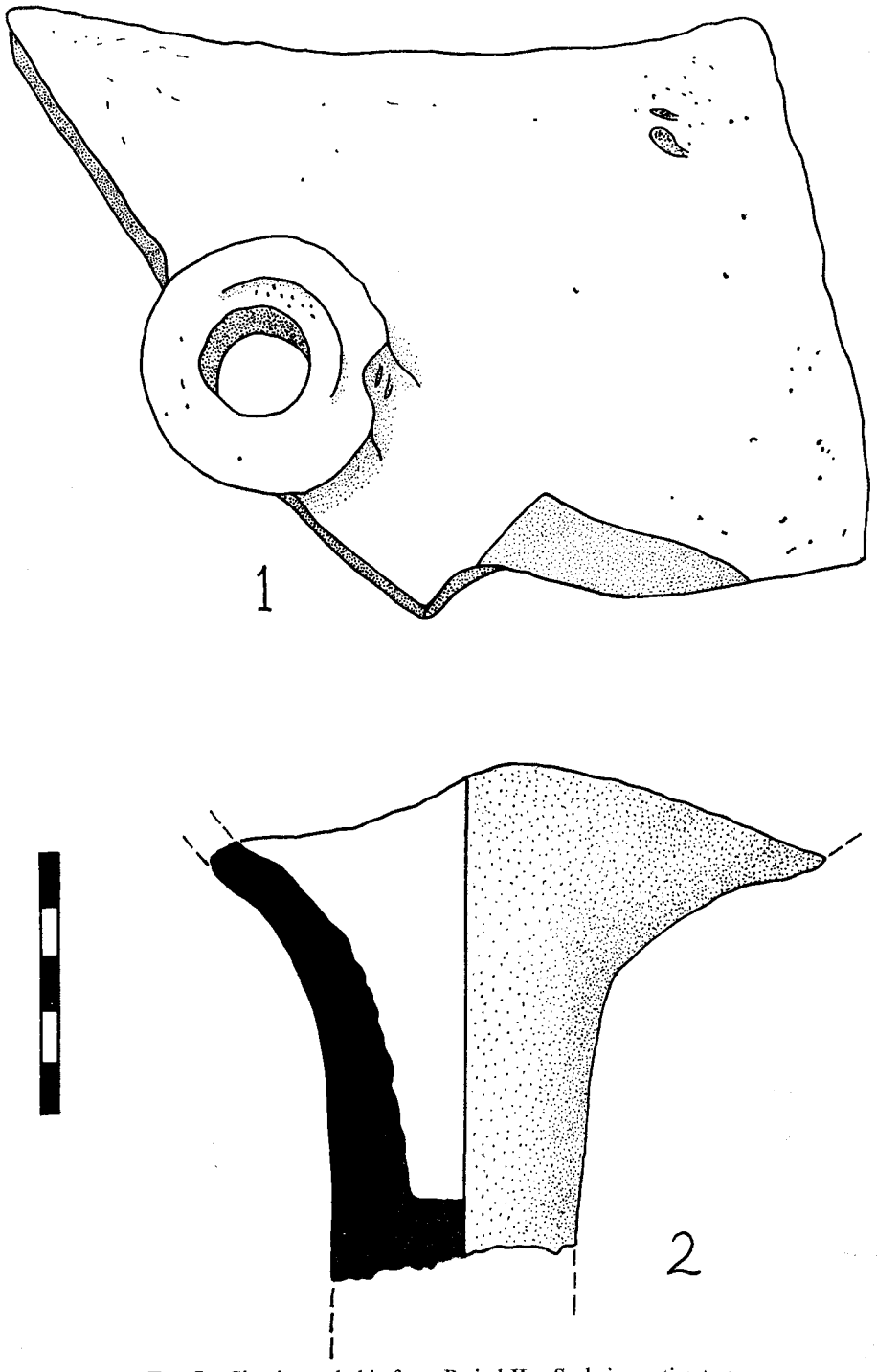


FIG. 7. Sherds, probably from Period II. Scale in centimetres.

Metal Finds by Anthony King

None from Period I.

Period II

(a) Bronze strap end, 3 x 1.5cm. with a small knob, almost consumed by bronze disease, of double plate and rivet construction without any trace of a fork. Most similar to an effigy example dating to c. 1350.[1] This type is simple, running through the fourteenth and fifteenth centuries. Most chapes have two plates with a fork soldered between them to create a sleeve for the textile or leather strap.[2] However, this example has either two plates with the knob on one or if of one piece construction, it cannot be seen which. In either case there were two rivets for the material. Obviously this is a cheaper version of the more complicated type.

(b) Two large iron nails, 7-8cm. long, squarish heads 2-3cm., shaft c. 1cm. found together near front wall.

(c) Nail, 4cm., turned over head.
Nail, 4cm., twisted, square section, 0.5cm., square head 1.7cm.
Nail, 5cm., twisted, square section, 0.5cm., no head.
Nail, 7cm., twisted, square section, 0.7cm., rounded head, c. 1.5cm.
Nail, 3.5cm., twisted, square section, 0.5cm., broken point, square head, 2cm.
Nail, 5.5cm., straight, square section, 0.5cm., oval head, 2 x 1.5 cm.

(d) Iron spike, suitable as a window latch or wall spike (Fig. 8, 4).

(e) Half a horseshoe, 10 x 4cm. at largest width, with traces of two nails near the outside edge. The surviving nail head was square, c. 1.0cm.

(f) Iron military-style arrow-head, with triangular armour piercing point. This type became common with the development of plate armour because it lodged itself in the cracks better than the barbed variety. Similar to Ward-Perkins, no. 9 (but without a squarepoint), which was current from the mid-thirteenth to the fifteenth century or later.[3] There is a split in the side of the shaft, possibly an indication that it had been used, or else that it was a reject. Found behind the hall wall near the buttress. (Fig. 8, 2).

The same reason can be advanced for the lack of finds as for the pottery above.

The presence of twisted nails would suggest discards after they had been pulled. The smaller ones were probably for tiles or slates.

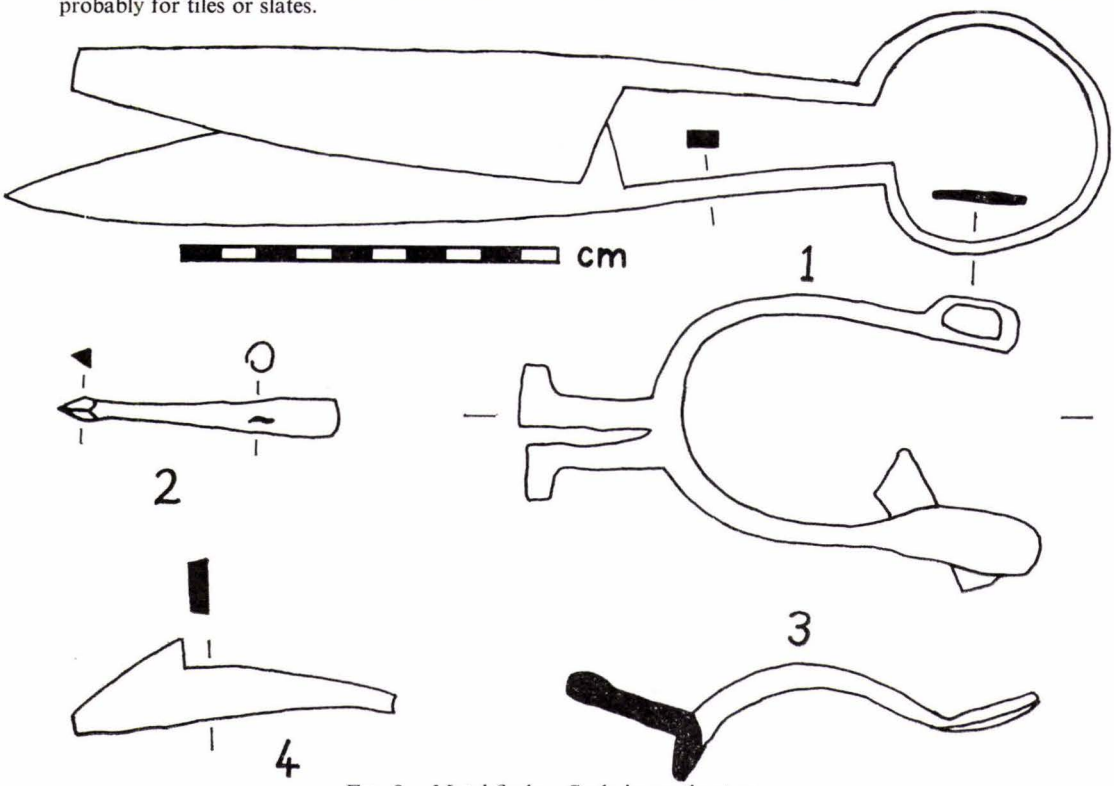


FIG. 8. Metal finds. Scale in centimetres.

1 J. B. Ward-Perkins, *London Museum: Medieval Catalogue* (1940), Fig. 84, no. 11.

2 J. G. Hurst, 'The kitchen area of Northolt manor, Middlesex,' *Med. Arch.* 5 (1961), 291.

3 J. B. Ward-Perkins, op. cit., Fig. 16, No. 9.

Bones by Anthony King

Period I

Bos taurus: proximal epiphysis of femur
left acetabulum
right rib head
split right proximal end of metatarsal
Ovis aries: left and right rib hands, rib fragment
left distal end of tibia, width 21mm., max. depth facets 15mm.
Gallus (domesticus): left metatarsus with spur
ulna (modern in size)
Ostrea edulis: a few valves of the curved variety

Period II

Bos taurus: left acetabulum
part of cranium
left ascending ramus
left maxillary second molar, just in wear
side spine lumbar vertebra
thoracic vertebra
left and right ribs
carpal
right proximal end of metacarpal
two distal epiphyses of metacarpals
side of a cervical vertebra
right metatarsal proximal, width 47mm., depth 45mm.
second phalange, length 49mm., prox. width 31mm.
right femur, proximal end, diameter of head, medial plane, 48mm.
Ovis aries: right radius, proximal end
second phalange, loose proximal epiphysis
two ribs
first phalange, length 36mm., proximal width 13mm.
Sus scrofa: first phalange, loose proximale epiphysis
side of a lumbar vertebra
three ribs
Thirteen bones unidentified, all large and probably *Bos.* Most were split long bones used in stews, etc.
Ostera edulis: several valves, all curved, largest 96mm. width by 103mm. length.
Fish operculum
Claw of a small bird—a pigeon?

All these bones are probably food bones. No wild animals were represented. The selection is typical of discarded food bones mixed with waste bones such as phalanges unsuitable for anything but stews. No minimum numbers were calculated due to lack of material, but obviously, beef is favoured most, followed in order by mutton and lamb, pork and chicken. Who ate all the meat is a different problem for some must surely be attributed to workmen engaged in building the second house as the Period I finds came, in the main, from the clay make-up. (Fig. 3, layer 6). Other remains are as certainly from the occupants of the house, such as the fish gill-cover from the service floor area.

PERIOD III

The last phase of the site encompasses the period from the destruction of the house until the present. For most of this period the site was open land. It is not easy to relate the site to deeds, most of which refer loosely to the land in the nineteenth quarter rather than to specific locations. However, it is known that in 1586 Elizabeth granted a messuage, garden, orchard and one acre in the vicinity of the site from Richard Whiblye, her tenant, to the Mayor and jurists and another messuage and garden was exchanged between the same parties.[1] In 1595 the 'site and house of Le Grey Fryers and tenements in Winchelsea and Icklesham' were quitclaimed to Anthony Honeywood.[2] The tenements may include the area around the

[1] W. D. Cooper, *The history of Winchelsea* (1850), 108.

[2] E. H. Dunkin (ed.), Feet of Fines, Sussex, Henry VIII-William IV, *Sussex Record Society*, vol. 20 (1915), 495.

Greyfriars, in which case this site could have been included. Eighteenth century references to the area indicate tenancy in 1716 by Sam Newman of land which was not built on and included ' Butchery orchard ';[1] the Butcheries was the Medieval name for the street leading off to the east at the point where the southerly part of the Period II west wall ends.[2] A map of 1763 shows the area under the ownership or tenancy of Mr. Cruttenden.[3] In 1850 Thomas Lloyd owned Butchery Orchard and a large part of quarter nineteen, other parts being owned by William Leere.[4] At the present time it is parkland attached to Greyfriars house.

That, then is the rather incomplete history of the post-medieval period of the site. The archaeological evidence can add little to this by way of dating, except that most of the recent pottery is from the late eighteenth or nineteenth centuries, represented mainly by brown glazed ware with combed decoration and blue and white ' willow-pattern ' ware. Period III features are the top layer, which is associated with the levelling of the site due to ploughing and settling, a drystone wall which ran along the top of the west wall (not in section) and was probably a field boundary when the field was used for grazing, a field drain running from near the relieving arch to the road, and a Victorian robbing trench which had cut away the south side of the Period I doorway and also about 2m. length of the lower foundation of the west wall. The space had been filled with clay, presumably to provide a footing for the field wall, which postdates it. The wall was of flat-stoned, closely bonded construction, similar to the still existing field boundary running along the other side of the road. This wall had been removed and at some stage replaced by an iron fence. A robbing trench in the north wall of Period II was probably dug at this time, although there are no finds to indicate a precise date. This lack of finds may suggest a sixteenth or seventeenth century date, but the robbing may easily have taken place soon after the abandonment of the house.

As well as an orchard, the site had been used as arable land, because the large block of stone which terminates the south end of the Period II west wall was striated east-west by a plough. Its present use is for grazing sheep, which has gone on for some time to judge by the predominance of sheep bones in the upper layers.

Finds from Period III

Most of the finds in the upper layers were disturbed medieval material from Period II and have been dealt with above.

Some pottery may date from Tudor times, such as Fig. 6, 5, but most is combed ware of the late eighteenth to nineteenth centuries and willow-pattern. Other finds ranged from Medieval nails to Dinky toys and thus were not very useful! There were two finds of interest, a pair of sheep shears (Fig. 8, 1) which may be medieval but judging from their still springy condition, are more recent,[5] and a spur of rowel type but not of medieval or Tudor pattern (Fig. 8, 3). Presumably it fitted on the left foot, from the angle of the rowel arms. The corroded mass on the inside arm seems to contain a piece of iron associated with the leather fixing strap, perhaps eighteenth century date.

The bones were mixed due to contamination from earlier periods, but higher sheep proportions perhaps indicate grazing there.

[1] W. D. Cooper (1850), op. cit., 227.

[2] W. M. Homan, ' The founding of New Winchelsea,' *S.A.C.* 88 (1949), 40 and plan.

[3] G. E. Chambers, ' The French bastides and the town plan of Winchelsea ' *Arch. J.* 94 (1937), 199; Cooper (1850), op. cit., Pl. 1 and W. Page and M. B. Walters, *Winchelsea* in Victoria Country History, *Sussex*, 9 (1937), 62-75.

[4] W. D. Cooper (1850), 227.

[5] J. B. Ward-Perkins, op. cit., Fig. 47, 16 (dating from the twelfth century until recent times).

Table 2
Tenants in Quarter 19, from P.R.O. SCII/673

Plot No.	*Area in Virgates*	*Rent in Pence*	*Rent per acre at 160 virgates/acre*
S. side[1]			
The 'Butcheries' in the market			
1. Henry de Strode	7½	3	64
2. William de Apettre, sutor	7½	3	64
3. Hamo, sutor de Rya	7½	3	64
4. Henry de Moningeham	7½	3	64
5. John his brother	7½	3	64
6. John de Sandwice	7½	3	64
7. Gervaise, cordwainer	7½	3	64
8. William Barbour	7½	3	64
9. Richard Scot, cotiler	7½	3	64
10. William Aurifaber	7½	3	64
11. Stephen Aurifaber	15¼	5¾	60.32
E. and W. sides			
12. Henry Bron	77¼	19	39.35
13. Walter Scappe	77¼	19	39.35
14. Reginald Alard junior	77¼	19	39.35
15. Paul de Horne	77¼	19	39.35
16. Thomas Godefrey	77¼	19	39.35
N. side opposite St. Thomas			
17. John Andren	46¼	6½	22.49
18. John Dore	15	3½	37.33
19. Richard Godefrey	30	7½	40

HISTORY AND DISCUSSION

The only document to consider the town in detail during Periods I and II is the original survey and rent roll.[2] This dates to 1292 and its format enabled Homan[3] to locate the plots in the survey on the ground. The building excavated is in plot 11 whose size is 15¼ virgates (375.8 sq. m.), probably dividing into 5 x 3 virgas (24.8 x 14.9 m.) with ½ x ½ virga (2.5 x 2.5m.) added somewhere around the main plot.

The excavation gave an opportunity to test Homan's measurements by reference to the medieval town plan rather than the modern palimpsest. The distance from the north of the Period I house to the south of the Period II house is 28.7m. and the width from the west wall to the corner of a building found in a contractor's trench during the excavation, possibly in Plot No. 10 (see Fig. 1) is 13.5m. These measurements approximate to the estimated size and may be modified to approach them more closely. If only Period II remains are measured, the maximum length is 25.5m. and the width can be extended by adding the Period II secondary west wall to 14.6m. This seems in fairly close agreement with Homan's figures. However two things must be borne in mind. Firstly, the walls of the house need not be the boundaries of the plot, although the lack of walls or ditches lends itself to this possibility, and also that the length is inaccurate when the Period I features are included, the ones presumably fitting more closely the original plot. Measurements were also taken from the north end of the

[1] Attribution of plots to sides after W. M. Homan (1949), op. cit., plan.

[2] Public Record Office (hereafter P.R.O.) SCII/673, 674. Most of the historical discussion on the founding of the town is concerned with this document. Cf. W. M. Homan, *Winchelsea: the founding of a thirteenth century town* (unpubl.) and W. M. Homan (1949), op. cit., 22-41; G. E. Chambers, op. cit., 177-206 and M. Beresford, op. cit. W. D. Cooper (1850), op. cit., and F. A. Inderwick, *The story of King Edward and New Winchelsea* (1892), have fairly complete transcripts.

[3] W. M. Homan (1949), op. cit., 30ff.

Period I house to another original building in the town, the Town Hall (now the museum), whose south-west corner was 261m. to the north. This corresponds to Homan's estimate that the plot boundaries would be 259.5m. apart[1] and also suggests that the Period II house does not conform to the original plot, having migrated 3m. to the south. The area to the south was taken up by a wide street used as a market and it may be that the owner of the house felt at liberty to encroach on the space or, perhaps more likely, that he built a permanent stall. It is known from Winchester that some streets had market stalls which later became permanent appurtenances to the houses behind;[2] 3m. is an attractive measurement for such a stall, especially considering the generous width of Winchelsea's streets. However, only further excavation will shed more light on this. In conclusion, Homan's work has withstood the excavated evidence well and also suggests that by Period II the plot boundaries were becoming more flexible and that encroachment on the streets was allowed.

In the report so far, only the building found in the central and south parts of the site has been considered. A T-shaped trench was laid out to the north (see Fig. 1) which revealed nothing save a reddened clay patch near the south end of the north-south trench, which may be due to something as simple as a bonfire on the ground above. The trench was not in the same plot as the rest of the excavation, and the size of this plot (No. 12 on Table 2) and its shape on Homan's plans, together with the negative archaeological evidence, lends itself to the notion that these large plots were mainly gardens or orchards. If so, this would suggest a more open town than many of the older-established ones.

As Table 2 shows, the rent roll lists the tenants. For the excavated site, the building is held by Stephen Aurifaber and the area to the north by Henry Bron. Since Aurifaber's plot faced on to the market his rent was high.[3] It may be that this represents indirect taxation on the goods sold in the market since merchants and fishermen in the rest of the town could be taxed directly by anchorage and landing dues.[4] A plot was owned by Stephen Aurifaber on the harbour,[5] and other land held by the family was on the market, next door to Stephen, by William; in Plot 24 of Quarter XXIX, by Simon; and on the harbour, thirteen plots upstream from Stephen, by Henry, son of John. It seems from this and the substantial Period I house that they were a fairly prosperous trading or fishing family, using the local market as an outlet rather than shipping goods to London. Whether they were goldsmiths as the name implies is another matter. Obviously, Winchelsea could not support four goldsmiths, but the most likely candidates, if they carried on their forefathers' profession, would be Henry or Stephen, living, as they did, on the market next to a cutler.

No further history of the tenants of the site is known. The Aurifaber family is not mentioned in the Cinque Ports list of 1341[6] or in the Spedland marsh petition of 1300.[7] However, such negative evidence is not proof that they had moved away. The house was not burnt in 1363[8] in the French raids but all the harbour plots were. If this caused the end of the Aurifaber tenancy of Plot 11, then it may give a date for the end of Period I, which has

[1] Ground measurements from an enlarged copy of the O.S. 6in. map. Homan's measurements from ' Map No. 1 ' a 1:250 plan of medieval Winchelsea in possession of Battle R.D.C.; also in Homan (unpubl.). Up to 1m. must be allowed for the thickness of the lines. W. D. Homan (1949) op. cit., 29.

[2] Information to present author from Derek Keene.

[3] Rents in the rest of the town averaged 40d., by the harbour 50d., in Bishopstone 12d., and in Heathfield 3d. (R. T. Mason (1964), op. cit., 11).

[4] W. Page and M. B. Walters, op. cit., 68.

[5] A small affair, of three virgates, furthest downstream, rented at 55d. per acre.

[6] P.R.O. Non. Inq. 15 Edw. III (in Cooper(1850)).

[7] P.R.O. C 145/59, No. 12.

[8] W. M. Homan (1949), op. cit., plan.

already been estimated to about this date. Certainly the change from Period I to Period II was quite considerable, implying a change of tenancy or, perhaps, a subdivision of the plot amongst heirs, a common process in the filling up of medieval towns.

None of the history of Period II is known, which is a pity considering the better preserved remains. The end of this period is a mystery from the archaeological evidence and probably the best approach is to consider the house as typical of the town and date the end of Period II to the end of the prosperity of the town as a seaport. Winchelsea depended on a harbour situated behind the shingle spit on which Camber now stands,[1] which gradually silted up, due to longshore drift, and eventually a new channel was forced to the sea in its present position. This may have occurred at the end of the fifteenth century since in 1486 three men at Rye were paid 1s. for salvaging the jetty from the 'great water'.[2] Rye fared better in this experience since it relied on fishing more than trading[3] and Winchelsea declined thereafter[4] perhaps due to losing its anchorage fees with the change in channel,[5] or the purely natural agencies mentioned above but also due to the loss of the wine trade with Gascony with the decline of English influence there.[6] At all events, by 1575 the town was smaller than it is now[7] and the abandonment of the Period II house must date somewhere between the mid fifteenth and mid sixteenth centuries, on archaeological as well as historical grounds.

In conclusion, it can be seen that the archaeological history of the site mirrors the documentary evidence to a certain degree. The town was most prosperous in the fourteenth century but a variety of factors led to its decline by the end of the next century. The evidence from the site seems to reinforce this impression, since both houses were built in the period of prosperity but decay had set in with the passing of the Middle Ages.

ACKNOWLEDGEMENTS

The archaeological work was carried out under the auspices of the Sussex Field Unit of the Institute of Archaeology, London and the Department of the Environment. Val Turnbull and the author worked full-time with extensive help from David Martin, both of his equipment and his time, and from volunteers of the Robertsbridge and District Archaeological Society and the Hastings Area Archaeological Research Group. Our thanks also go to Captain and Mrs. Lovegrove and to Mrs. Densem for their hospitality, to Mr. Devenish of Hastings Museum for accepting the finds, to Battle R.D.C. for the loan of a mechanical excavator and to Julian Munby for help with the documentary evidence. A previous interim report has appeared[8] which this supersedes. The finds are available in Hastings Museum and detailed plans and notebooks remain with the excavator.

The Society is much indebted to the Department of the Environment for a generous grant towards the cost of publishing this paper.

[1] W. M. Homan 'The marshes between Hythe and Pett,' *S.A.C.* 79, 200, 205-6; R. D. Green's 'Soils of Romney Marsh,' *Soil Survey G. B. Bull.*, 4 (1968), 31, Figs. 9 and 16; H. Lovegrove, 'Old shorelines near Camber Castle,' *Geographical Journal* 119 (1953), 200-7.

[2] L. A. Vidler, *A new history of Rye* (1934), 44. H. Lovegrove, op. cit., 203 and A. J. Dulley, 'The early history of the Rye fishing industry,' *S.A.C.* 107 (1969), 39 disagree with this date, equating change in the Rother's mouth with the storms of 1287-8 which caused the abandonment of Old Winchelsea.

[3] L. A. Vidler, op. cit., 35; A. J. Dulley, op. cit.

[4] W. D. Cooper (1850), op. cit., 98ff.

[5] W. M. Homan (unpubl.), op. cit., 53.

[6] G. E. Chambers, op. cit.

[7] W. D. Cooper (1850), op. cit., 107.

[8] A. C. King, op. cit.

AN ABANDONED MEDIEVAL INDUSTRIAL SITE AT PARROCK, HARTFIELD

By C. F. Tebbutt, F.S.A.

Part of the west end of Hartfield parish, nearly two miles from Hartfield village centre and church, is known as Upper and Lower Parrock. At present this contains much woodland and a scatter of mainly modern houses, but there is evidence that the area was once the scene of industrial activity. This was influenced by the isolated capping of Wadhurst clay which covers the highest ground in the area (Fig. 1).[1] More than half of the Clay cap is now occupied by woods with the picturesque names of Paternoster Wood, Paradise Wood, Ave Maria Wood, Graddocks Pit Wood and Ashenplat Shaw. This woodland is honeycombed with ancient pits of all shapes and sizes, from large open-cast quarries to the small round, so-called " bell pits ", considered to be one of the most ancient and primitive forms of mining.

It is well known that the Wadhurst clay contains iron ore and marl, and it is evident that here the opportunities for mining were exploited to the full. Iron mining here was probably mainly for the needs of the nearby Newbridge and Parrock blast furnaces, also in Hartfield parish, in the fifteenth and sixteenth centuries, as well as in more ancient times. In this paper, however, I am concerned with the medieval mining and bloomery iron smelting in Parrock, the time when it flourished, eventually declined and ceased, and when the area was abandoned by the workers engaged in it.

It was only in 1973 that definite evidence same to light of medieval dwelling sites of probably some, at least, of the ironworkers when the field at TQ 446344 was ploughed. Here, when the fallow dried out after winter ploughing, definite soil marks could be seen. They consisted of several long alternating bands of dark and light soil running close and parallel to the E. side of the farm road leading S. from Lines Farm (TQ 445347); starting about 100 yards from the farm and extending to the junction of the farm road with the public road at its south end. It is difficult to explain these marks as unfortunately the field was not examined before ploughing, but the ploughman told me that at this spot the slope had been so steep that soil from above was moved down to make it less so. In view of the finds made here I think it likely that a level terrace had been made, along the east side of the farm road, on which houses had been built. A lynchet had then formed along the fenced east boundary of the terrace and it was this that had, in recent ploughing, been moved downhill to fill the terrace and make a gentler slope.

During 1973 and 1974 the field was walked over a number of times. At times when it was fallow bloomery slag was found scattered all over it. In the area of the soil marks other finds were more numerous. This was particularly so within an area about 100 yards long immediately east of, and alongside, the farm road, and about 30 yards wide. Here over 250 sherds of pottery were found, besides many nails and lumps of clay daub. The farm road formed the boundary of these finds and none were found on its west side. A row of about a dozen houses, of the

[1] The area outlined on Fig. 1 as Wadhurst Clay is based on that shown on *The Geological Survey of Great Britain*, Tunbridge Wells. sheet, 303, one inch scale.

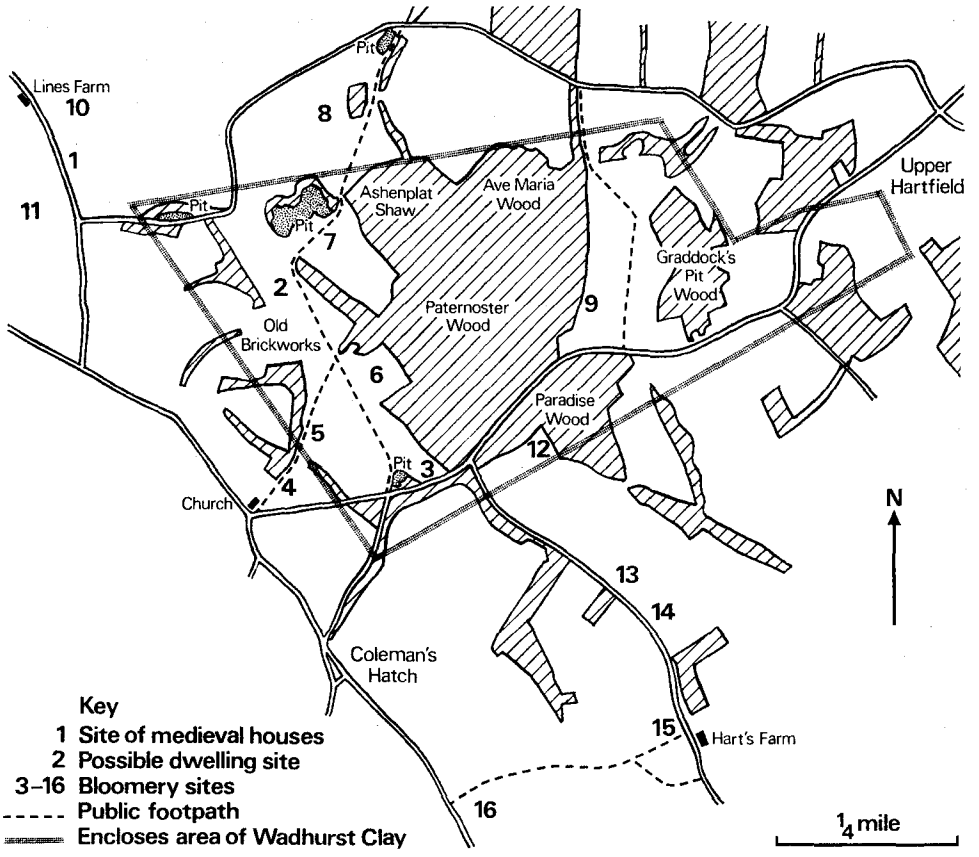


FIG. 1. Abandoned medieval industrial sites near Parrock, Hartfield.

Hangleton type[1] could have been built here. The houses were obviously based on the present farm road, and it is interesting to see, looking at the Ordnance Survey map, that the present road from Forest Row to Colemans Hatch, at TQ 443347, turns sharply south, whereas what appears to be its original line continues to Lines Farm and then turns south to become the road past the site. Furthermore a strong spring was discovered at the north end of the site during the recent ploughing.

To assess the extent of the medieval iron industry in Parrock the author has walked over all the ploughed land, and much of the grass as well, on and around the perimeter of the Wadhurst clay cap. In the course of this it was found that, except on part of the north side, nearly all the fields where subsoil was exposed contained a scatter of medieval bloomery slag in varying degrees of concentration.[2] Fields and sites where bloomery slag was found were at the following

[1] E. W. Holden, "Excavations at the Deserted Medieval Village of Hangleton", Part 1, *Sussex Archaeological Collections* (*hereafter S.A.C.*), vol. 101 (1963), 56-181.

[2] I feel confident that *locally* one can distinguish medieval from Roman tap slag, partly by the greater density of the Roman, after comparing material from sites associated with the appropriate pottery. Furthermore on a number of the sites recorded above small numbers of medieval sherds were picked up, and on none was any Roman found.

TQ grid references:—452344, 452347, 447348, 447346, 446348, 446345, 449346, 459337 (" Cinder Field "), 459336, 457339, 459333, 455331, 458343, 451339, 454339, 452341, 453341 (Fig. 1).

Of the above sites perhaps the most interesting is at site TQ 452341, one of a group in fields just west of Paternoster Wood, all of which are well served by present-day footpaths. To reach the site a footpath leads from the main road along the east side of Coleman's Hatch church into the south end of a curiously-shaped field, and then diagonally across it. Up to the field-gate the path is along an ancient trackway that has, under the mud, metalling eight feet wide. At the field-gate it separates from the path and passes down the shaw on the east side of the field, crossing the stream at its north-west corner. From here a section was destroyed by a brickworks clay pit, but beyond the pit it continues to join the public road at TQ 449345, where there is a large mine pit. The present footpath, however, enters the field to cross it diagonally. Just inside the gate slag can at once be found in a dense concentration round the perimeter of two slight hollow areas at the edge of the shaw. These must have been mine pits, and smelting would no doubt have taken place as near as possible to where iron ore was mined. Slag is also scattered more thinly over most of the field, but particularly along its west and north boundaries. Among the slag were found raw and roasted iron ore, and pottery sherds dating from the fourteenth to the early sixteenth centuries (Raeren ware).

The path crosses the stream at the north-east corner of the field and continues diagonally across the field on the far side. On this field, particularly on its level north-west end, are faint irregularities that could represent the site of former dwellings. Two more bloomery sites and three more pits occur near this path before it reaches the public road at TQ 454349. This illustrates how well this group of bloomeries was served by tracks and footpaths.

THE POTTERY

I am greatly indebted to Mr. J. G. Hurst, who has classified the pottery from the Lines Farm site (TQ 445347) as below. On Fig. 2 are illustrated rims, handles, and bases typical of the collection. It should perhaps be said that the very acid soil is particularly destructive of medieval glazes; on some sherds all has gone, and on others only specks remain.

Pre-Thirteenth century. A very few rough gritty sherds, some of which could be twelfth century or earlier (Fig. 2, 1).

Thirteenth century. A great many sherds from coarse sandy vessels in red and grey wares, including cooking pots, bowls, and jugs with strap handles. There is one pipkin handle and the leg of a legged pot (Fig. 2, 2-15).

Thirteenth/Fourteenth century. Many sherds in red sandy ware with both green and brown glaze, and one with combed decoration. Jugs have both strap and round handles.

Fourteenth century. A few sherds of Surrey Ware with a body of white or pale pink overlaid by green or brown glaze. One sherd had a smooth body (Fig. 2, 16-18).

Fourteenth/Fifteenth century. Red, grey and black, smooth hard wares. Some had brown, or thin pale green, glaze on bowls and jugs, with round or strap handles (Fig. 2, 19-24).

Fifteenth/Sixteenth century. A mixture of wares including hard grey unglazed, and soft red with a dark grey slip. One of the latter sherds had a brown vertical glazed strip. Another type was of harder sandy red fabric with a grey slip and paler horizontal banding (Fig. 2, 25-26).

Sixteenth century. The first half of the century was represented by a few Raeren sherds, and the second by a few from Frechen, far fewer sherds than in the previous centuries.

[1] P.R.O. *Feudal Aids*, vol. 5, 1908.

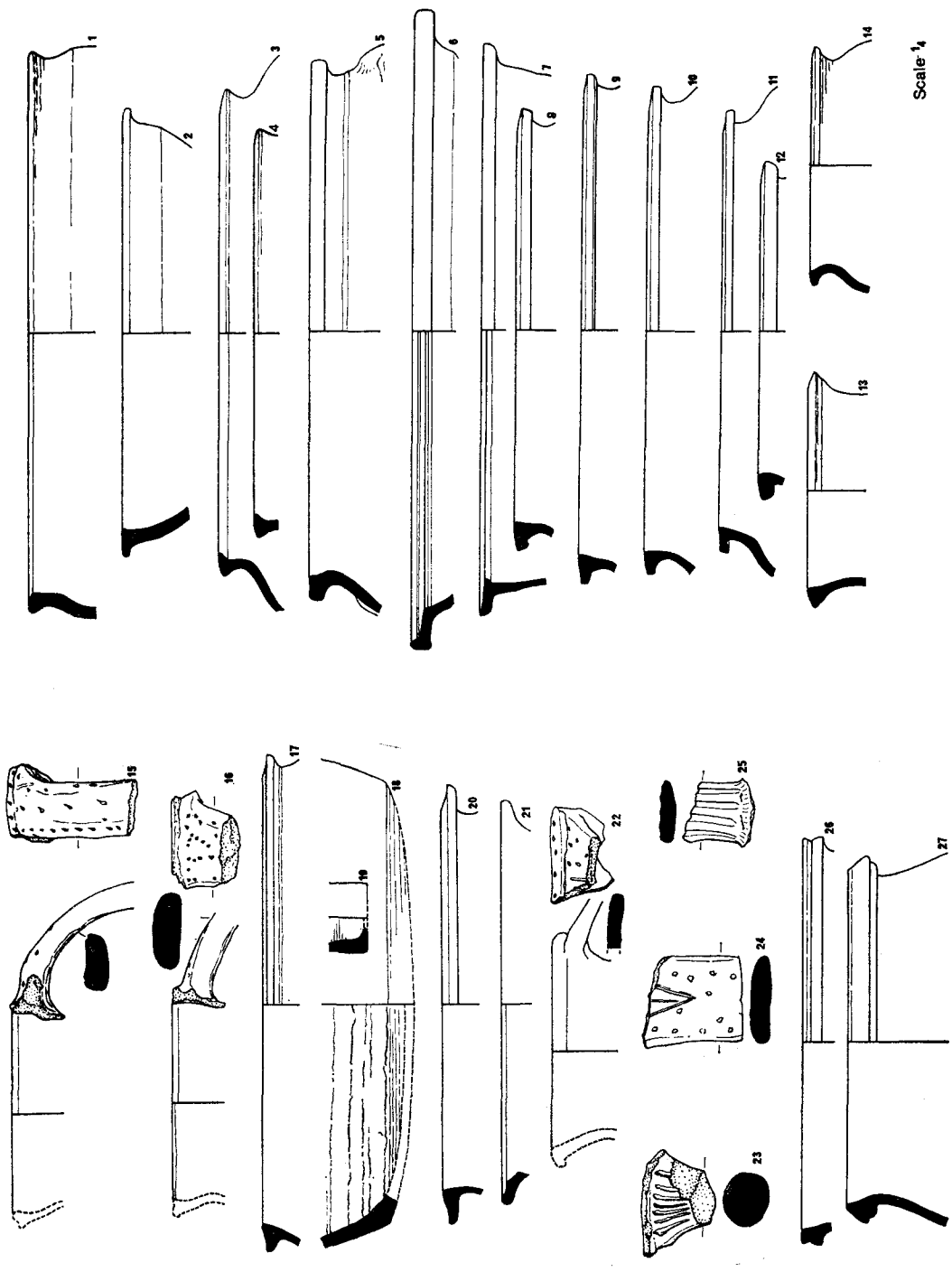


FIG. 2. The pottery finds.

DOCUMENTARY REFERENCES

A. Mawer and F. M. Stenton (eds.) *The Place Names of Sussex* (1930), Part 2, 368) gives references to Parrock in AD. 1066, 1262, 1263, 1271 and 1295, when there was, perhaps significantly, a " Parrockrowe ".

In answer to an enquiry, Mr. G. R. Burleigh has kindly sent me the following information:

> " There is, of course, the Domesday entry for ' APEDROC ' which consisted only of a half-hide worked by two villeins—hardly a village! Much more important is the mention of the ' villa de Parock ' under the Hundred of Hertefelde in the *Nonarum Villarum* of 1316.[1] Beresford accepts the naming of a vill in 1316 as very significant in the search for lost villages. Also of great importance are the entries for the vill of Parrock in the Lay Subsidies of the late thirteenth and early fourteenth centuries. In 1296 thirteen (householders) paid £2-9-5¾; in 1327 26 paid £2-0-11; in 1332 35 paid £2-14-0½; and in 1334 the total for the vill was £3-8-0½[1] Allowing for tax evasions,[2] etc., we therefore have a population for Parrock, in 1296, of perhaps 50-100 persons, rising, by 1332 to perhaps 150-200. Of course the population may not have been nucleated in a village centre—here the Subsidies are no help. It is possible that there was a nucleated settlement . . . . . and a certain amount of dispersed smallholdings."

CONCLUSIONS

From the evidence given above it seems probable that the district of Parrock, remotely detached from the centre of Hartfield, was, early in the medieval period, settled by a community of ironworkers and miners, exploiting the local iron ore deposits of the Wadhurst clay. The documentary evidence suggests an increase in population in the fourteenth century, which may reflect an expansion of the industry. From the one certain living site found the pottery evidence points to a probable beginning in the twelfth century, or even earlier, and expansion from the thirteenth to the fifteenth centuries. Finds of the sixteenth century are few, and end the series.

Close by, at Newbridge, the first known water-powered blast furnace in the country was set up in, or just before, 1496, and another at Parrock a few years later. Both these sites also had powered forges.[3] The theory that medieval water powered forges may have existed at these sites to serve the Parrock bloomeries is probable but cannot be tested until they are excavated.

The installation of the powered blast furnaces in the Weald undoubtedly killed the primitive bloomery industry eventually, but it is uncertain whether the effect was immediate or gradual. From the pottery evidence given above it would seem that people went on living at the Parrock site into the early sixteenth century, and in smaller numbers until the end of that century. This could point to a continuation of the bloomery industry, on a small scale, well into the sixteenth century. On the other hand it may indicate employment for traditional ironworkers in the new blast furnaces, or on supplying what must have been an increased demand for iron ore.

The abandonment of the Newbridge and Parrock blast furnaces, about the end of the sixteenth century, or soon after,[4] neatly coincides with the end of the dwelling site. Should the above conclusions be correct they would seem to provide a new cause, in this case an industrial one, for the desertion of a medieval dispersed settlement, if not a village.[5]

[1] *Sussex Record Society* vol. 10 for the 1296, 1332, and 1337 subsidies, and *S.A.C.*, vol. 50 (1907) 153 ff., for the 1327 subsidy.

[2] L. F. Salzman, " Early Taxation in Sussex ", Part 1, *S.A.C.*, vol. 98 (1960), 29-43, and idem, " Early Taxation in Sussex ", Part 2, ibid. vol. 99 (1961), 1-19.

[3] E. Straker, *Wealden Iron* (1931), 241-244, 248-250.

[4] H. R. Schubert, *History of the British Iron and Steel Industry*, 1st. ed. (1957) 382-383.

[5] G. R. Burleigh, " An introduction to the Deserted Medieval Villages in East Sussex ", *S.A.C.* 111 (1973), 78.

DISPOSAL OF FINDS

All finds will be placed in the Barbican House Museum, Lewes.

ACKNOWLEDGEMENTS

Besides those whose help I have acknowledged in the text I should like to thank Mr. C. Clark and Mr. J. Hale for allowing me to walk freely over their land, Miss F. Marsden for drawing the pottery and Mr. R. Cottingham for sketching the map.

A SOCIETY ANTHOLOGY 2

" Lewes has a famous antiquary—the great authority on surnames—Mr. Mark Antony Lower. He is a gentleman with more poetry in him than most of the Dryasdust school: witness his picturesque presentment of the Sussex villages—' clusters of lowly habitations, some thatched, some tiled, some abutting the street, some standing angularly towards it, all built of flint or boulders. A barn, a stable, a circular pigeon-house, centuries old . . . and an antique gable or two, peer out among the tall elms '. We fancied we met Mr. Lower close to Lewes Castle. I sketched on the margin of my Murray the ample forehead of the unknown, beneath an archaic hat, the keen observant eyes behind archaic spectacles, and shall leave it by will to the Sussex Archaeological Society."

Temple Bar, vol. 16 (1866), p. 265.

As the Society's library does not include the interesting copy of *Murray* in question it must be presumed that the author's imaginative intention was not carried out.

" Valuable material, though presented with much tediousness of detail and pomposity, is to be found in the *Collections* of the Archaeogical Society, published every year since 1848".

G. and R. Thurston Hopkins, *Literary Originals of Sussex* (1936), pp. 10-11.

(*Ed. S.A.C.*)

SOME NOTES ON THE FAMILY OF GEORGE GERVASE OF BOSHAM, MARTYR

by Timothy J. McCann

George Gervase was one of the nine Benedictine priests beatified by Pope Pius XI in St. Peter's at Rome on the 15 December 1929. He entered the English College at Douai in 1599, was ordained priest at Cambrai in 1603, and was sent on the mission to England in the following year. He worked in Northumberland until he was captured at Haggerston in 1606. From there he was sent to Durham, and after examination was imprisoned in London, until he was exiled together with many other priests at the end of July that year. However, having been clothed as a Benedictine monk, he returned to England, and was captured at Smithfield within three months. He was imprisoned in the Gatehouse, tried on the 8 April 1608, and condemned to death for refusing to take the Oath of Supremacy.

Bishop Challoner in his account of the life of George Gervase,[1] says that he came from a noted Sussex family in Bosham, and that he was left an orphan at the age of twelve. The Rev. L. E. Whatmore,[2] suggested that the Bosham parish registers would perhaps reveal information about his brothers. Dom Bede Camm,[3] apart from revealing that his mother's maiden name was Shelley, and correcting Challoner's dating of Gervase's voyage to Puerto Rico with Sir Francis Drake, tells us little about his family and early life. However, the records of the Diocese of Chichester and of the Manor of Bosham, both deposited in the West Sussex Record Office at Chichester, make it possible to paint a fuller picture of Gervase's family background.

John Gervase, the father of George, was the head of a prosperous, large and well-connected family at Bosham in Sussex. In 1587, he held two hundred acres of demesne land of the manor of Bosham, near the sea shore, worth sixty-one pounds a year, and a house, which a contemporary surveyor described as " meat fore a meane jentylman ". He was married to Frances Shelley, a member of the well-known family from Clapham and Warminghurst in Sussex, which, in 1588, was to produce a martyr for the Catholic faith; while Thomas, the eldest of his five sons, was to marry into the wealthy Catholic family of Gounter, who had succeeded the Poles as squires of Racton, and were later to achieve fame for harbouring King Charles II in his flight after the Battle of Worcester.

The Bosham parish register,[4] although excluding Thomas the eldest son, records the baptism of six other children of John Gervase. Henry, the second son, who later lived in Flanders, was baptised on the 9 October 1560; Humphrey was baptised on the 17 June 1563, but did not survive infancy, and was buried at Bosham on the 6 December 1563; Mary, the only daughter, was baptised on the 13 January 1564/5; George, the future martyr, on the 12 August 1569; John, who seems to have spent at least his early manhood in Chichester, on the 18 February 1571/2; and William, who later fought with the army of Archduke Albert, Governor of the Low Countries, and was often visited by George, on the 23 December 1573.

[1] Richard Challoner, *Memoirs of Missionary Priests* (1924), 294-296.

[2] Rev. L. E. Whatmore, "A Note on Blessed George Gervase, Martyr ", *The Downside Review*, vol. 86 (1969), 111, 112.

[3] Dom Bede Camm, " The Ven. George Gervase." *The Downside Review*, vol. 44 (1926), 19-35, 253-270; vol. 45 (1927), 1-14, 98-114 and 219-229.

[4] The first Bosham Register is in the custody of the Vicar of Bosham.

Among the records of the manor of Bosham are several late sixteenth century surveys of the manor. Three of these, in greater or lesser detail, give an inventory of the lands held by John Gervase. The 1578 survey is reproduced, because it contains the most detailed account of his holding.

A SURVEY OF THE DEMESNES OF THE MANOR OF BOSHAM, SEPTEMBER 1578[1]

Mr. Jarvis

A parcelle of the demesnes ther in thoccupinge of John Jervis for iij lyves yet indurying at mycelmas. 1578.

1.	Furst he hath a dwellyng hous on yt meat fore a meane jentylman wt barne and other necessary houses. and the ground on wch the houses stand on conteyne one acre on rode 29 p(er)ch. Worth yerly viijs an acre so for yt p(er) annum —		xis	ijd
2.	The culver clos arable in lenghte 24 p(er)che in bredthe xi p(er)ch conteynth one acre one rode xxiiij p(er)ch worth vs the acre yerly so for that clos (per) annum—		vis	xjd
3.	Thir ys a fayer medow ground lattely stokked lying by the hous contenyng xiij acres one rode and xxv p(er)ch every acre yerly worth xs so for yt p(er) annum —	vjli	xiiijs	viijd
4.	A clos called busshy clos joynyng to the medow contenyng iiij acres iij rodes xj perch one acre yerly worth vjs viijd so for yt p(er) annum —		xxxijs	jd
5.	Item one clos called Cavers close v a(cre) j rod 4 p(er)ch vjs an a(cre) p(er) annum—		xxxvs	ijd
6.	The west clos joynyng to bushi clos in lenght xxiiij p(er)ch in bredthe also xxiiij perch conteynth iij acres ij roodes and xvj p(er)ch at vjs an ac(re) yerly so for yt p(er) annum —		xxs	vijd
7.	Another clos called also west clos joyneth to the other aforsaid toward trymlites. being in lenght xxxij perch in bredthe xxvj p(er)ch conteyng v acres xxxij p(er)ch worth vjs an ac(re)		xxxjs	ijd
8.	ye ley clos joyning to the west clos ye lenght of yt ys xx perch the bredth xvj p(er)ch co(n)tenying ij acres worth yerly vjs viijd an acre. so p(er) annum —		xiijs	iiijd
9.	The home clos in lenght xlix p(er)ch the bredthe xxxj perch contenyth ix acres one rode xxxix perch at vjs an acre yerly so p(er) annum —		lvis	xjd
10.	The ponde clos in lengte xlij perch in bredth xxv perch contenyth vj acres ij rodes & x perch every acre yerly worth vjs viijd so for yt p(er) annum —		xliijs	ixd
11.	One clos called Myddle Lannde contenyth vij acres and vj perch yerly worth vjs an acre so for yt p(er) annum —		xlijs	ijd
12.	Prymmer Lannd joynyng to myddle lannd conteynyth x acres ij rodes xiij perch at vjs an acre yerly so for yt p(er) annum —		lxiijs	vijd
13.	New Lannd joynyng to the sowth endes of prymmer lannd and myddle lannd ys in lengthe lxj perch in bredthe xxvij perch contenyng ix acres j rode xxxij p(er)ch at vjs an acre. so for yt p(er) annum —		lvjs	viijd
14.	One clos called busshopes clos havinge no regular length nor bredth but contenyth vj acres xxix perch at vis viijd an acre yerly. so for yt p(er) annum — (this clos ys holden by lease xij yers to cum and the rent for yt ys xs vjd)		xljs	ijd
15.	Ther ys one great pastur joynyng to the sea called Thorpes helf. yt ys divided in ij partes by a wall both the partes conteyen lviij acres one rode and xix perch and ther ys joynyng to them ij other closes called also Thorpes helf. one of them ys in lenght xlij perch and his bredth ys xxxij p(er)che. thother clos ys in lenght xlvij perch and his bredth is xxxij perch both thos closis conteyn xvij acres iij rodes and viij perch one acre. both of the great pastures and thes be yerly worth vjs and so all the iiij closis be yearly worth —	xxijli	xvijs	
16.	The sowth feld lyng under the old p(ar)ke conteynth xix acres at vjs an acre yerly so yt ys worth p(er) annum — (his rent ys xxiiijs viijd for yt)	vli	xiiijs	
	Summe of acres to this farme is 199a 2r 27p Worth yerly after this rate — he hath by leac the pasturage or herbage of the great wood called the old p(ar)ke and of a wood called Bradley and of a wood called Openfeld and payth for them alle yerly xvijs rent wch wyll caus alle wood so let and rented to be distroyed. or elles the yong spryng being bytten by cattell to be much hindered so that the wood at xviij or xx yeres groth when yt should be sold to the Lordes usse wyllbe mche wors therfor let no wodes be let to farm and compound wth him for this leace. he sensh not to car for yt and lettyth yt to farm agen to other men wch ys styll wors and wors for the wood. —	lxjli vijd	xvijs	
	Summa totales — (as well of the demenes followyng as thes before wryttyen. According to the rate only for the demeanes besyd ye customari rentes).	—cccxixli	iiijs	

[1] West Sussex Record Office (hereafter W.S.R.O.), ADD. MS. 2275, ff. 86, 87.

A later survey of the manor taken in 1589,[1] is identical with the 1578 survey apart from the following two entries:—

14. This is granted by ye selfe in a lease for a terme of xxj yeres to end at michelmas 1591.
15. This field called the Southfield was demised by John Jarvyes, Francis his wieffe and Thomas Shelley gent for their three lyves, which Shellye is only livenge and hath granted his interest to George Garvis. There is also granted in this lease the herbage of theolde Parke Woode Oxenfold and Bradle Copps under the rent of xvij^{s} yeirlye wth a Covenant there shalbe no Cattell put into the Springes that shalbe hurtfull to them.

The names of several of the fields leased by John Gervase, as recorded in these manorial surveys, continued in use at least until the date of the tithe map of Bosham.[2] The location of Home Close, Pond Close, Bushey Close and Bishops Close, show that Gervase's estate was in the eastern half of the central part of the parish, about one mile south of the village of Old Fishbourne, and roughly mid-way between Old Fishbourne and Old Park Wood. The centre of the estate was at N.G.R.: SU 828035. Park Farm, previously known as Old Park Farm, is the only habitable building situated in the area once leased by Gervase, and there is no evidence from earlier maps of any other dwelling in the area, so that it is possible that this farmhouse was the site of the house of the Gervase family. Park Farm is situated at N.G.R.: SU 824033.

There are sufficient records of the presentment for recusancy of various members of the family, to show that George Gervase was brought up in a catholic environment. The Register of Presentments for Bishop Curteys's Visitation of the Archdeaconry of Chichester in 1578,[3] records that the churchwardens of Bosham reported that " Mrs. Shelley and Mrs. Gervys have not received the communion with us ", and Mr. Wiseman, the curate, added, " shifters from place I knowe none except Mrs. Gervis who never came at church nor received sins I came ". The Detection Book for the Archdeaconry[4] records the presentment of Mrs. Jervis for not receiving communion on the 12 October 1579. John Gervase, who seems to have been converted by his wife, was himself several times presented for recusancy, but after his wife's death, he conformed to the established church in 1580, after being harassed by the active drive against recusancy carried out in Sussex in that year by the Court of High Commission.

In July 1580, the Court of High Commission directed Bishop Curteys of Chichester personally to secure more conformity in his diocese. Curteys drew up a certificate of those who refused to come to church within the Archdeaconry of Chichester,[5] and among those certified was John Gervase. The certificate reads:

> "John Jervys gent of the p(ar)ish of Bosam in reversyon a lease of 200 acres of lande for t(er)me of his lyfe being of 60 yeres and after the death of one John Dygens and his wyfe and one John Shelley 20^{li} in effects in goodes 300^{li} hath forborne to come to y^{e} church by space of one yere past beinge thereto persuaded by his wiefe late deceasyd. for y^{t} they y^{t} come to y^{e} church to heare y^{e} divine servys nowe, used to seperat themselves from y^{e} Catholyck church. he also allegyeth authoryty of y^{e} romish religyon by y^{e} space of xv yeres. He ys bounden tapere before the hygh Comysyoners at London & to give hys resolute answere there whether he wyll conforme hymselfe or goe to pryson. Upon conference with mee in conclusyon semed that he would conforme hymselfe. He abideth commonly at his hous in ye parysh of Bosam."

1 W.S.R.O., ADD. MS. 2276, ff. 141, 142.
2 W.S.R.O., TD/W 17. The map is dated 1839.
3 W.S.R.O., Ep. I/23/5, f. 16.
4 W.S.R.O., Ep. I/17/5, f. 81.
5 W.S.R.O., Ep. I/37/1, No. 2.

Gervase had been presented on 21 June, because he " hathe not ben at common prayer this viij weekes nor receaved the communion the hole yere ",[1] but he must have appeared before the High Commission in London soon afterwards, because on 17 August, a writ of supersedeas was issued on his behalf. The writ,[2] was addressed to " all Justices of peace Maioers Sheriffes bayliffes constables purcyvantes and all other her Ma^{tes} officers and subiectes as well in places exempt as not exempt to whome theis presentes shall or maie appertayne ". The writ stated that " Whereas one John Jervis of Bossham in the countye of Sussex gent concented before us of her Ma^{tes} ecclesiasticall Commission resiant at London for his disobedience in matters of relligyon standeth bounden to her ma^{tes} use in one hundreth poundes by o^{ur} order for his forthcominge from time to time and personall apperaunce to be made before us when he shalbe called for and that he shalbe of good behavyour in all causes ecclesiasticall, theis are therefore to advertise you thereof and wth all to requiere you in her ma^{tes} name by vertue of her hygnes Commissyon for causes ecclesiasticall to us and others dyrected uppon sight hereof to staie and surcease thexecution of all warreantes and processes dyrected from us or other of o^{ur} colleagues against the said Jarvis. And theis presentes shalbe your sufficient warrant in that behalf. Yevyn at London the xvijth of August 1580 ".

Bishop Curteys summoned about sixty recusants to appear before him in his episcopal palace at Aldingbourne. He sent out letters to the local constables and parish clergy summoning the recusants for an informal conference where a warning would be given. John Gervase's summons has survived.[3] It was addressed to " the minister of the parish of bosam and to the Constable tythingmen or hedborough of the same parish ", and reads,

> " Whereas I have receyved lres from theLL of her ma^{tes} most honorable privie counsell for the convention of suche persons wth in this shire as refuse to come to churche and conforme not themselves in matters of religion accordinge to the lawes. Theis are by vertue of the same lres to requier and chardge you to bringe before mee John Gerveys gent of the parishe of Bosham at Aldingbourne the (*blank*) days of (*blank*) 1580."

Despite Bishop Curteys's promise that all the sixty recusants would go away free, very few of them seemed to have appeared. John Gervase, however, did appear, and the record of his appearance and his recantation have survived by chance, inscribed on a spare leaf of the third surviving probate diary of the Archdeaconry of Chichester.[4] The memorandum reads,

> " The vijth day of October anno domini 1581 anno regne Regine Elizabethe etc xxiij in the mannor of Aldingbourne in the Countye of Sussex. M^{d} that I John Jervys gent do here the day yere and place above-said before you the Reverend father in God Richard by godes sufferance bishop of Chichester humbly submit myself and promys to conforme myself to the queenes mat^{s} lawes, and to repayre and come to church according to the same. In testimony and witnes whereof I have hereto subscribed wth myne owne hand the daie and yeres above said. by me John Garvys."

John Gervase does not seem to have troubled the ecclesiastical authorities again, after his recantation at Aldingbourne in 1581, and a list of recusants compiled in 1582,[5] records that " John Jervis gent and Thomas Jervis his son both indyted and sithence they have conformed themselves and doe come to church ". Two years later he died. He made his will on the 13 October 1584, and it was proved at Chichester on the 6 November in the same year, valued at £428. 1. 10.[6] The will reads as follows:—[7]

[1] W.S.R.O., Ep. I/17/5, f. 81.
[2] W.S.R.O., Ep. I/37/1, No. 40.
[3] W.S.R.O., Ep. I/37/1, No. 26.
[4] W.S.R.O., STC III/C.
[5] Hatfield House, Cecil Papers, 238/1. Printed in *Catholic Record Society*, vol. 53 (1961), 6.
[6] W.S.R.O., STC III/C, f. 99.
[7] W.S.R.O., STC I/13, f. 134.

In the name of god Amen the xiijth. daye of October in the yeare of our Lorde god 1584 John Jarvis of the p(ar)ishe of Boseham in the County of Sussex gent. being sicke in body but of p(er)fecte mynde and memory thanks be given to almighty god did this his last will and testamente Nuncupative in mannor and forme following. Inprimis he gave and bequeathed his soule into the mercifull hands of almighty god heavenly father and his Sonne Jessus Christe and trusted by the meritts of his passion have of eternal life. And his body to be buryed in the church yarde of Boseham neare unto the buryall of his late wife. Item he willed to the mother Churche of Chichester xij^{d}. Item he willed to the poore mans box of his saide p(ar)ishe ij^{s}. Item he willed to the poore people w^{ch} weare at his buryall 1^{s}. Item he willed and bequeathed to ev(er)y one of his foure sonnes vizt. Henry George John and William Garvis cxx^{li} a peece w^{ch} sev(er)all somes of money he willed to be ymployed in severall Stocks for theire better p(re)fermente in bringing upp of his saide Children at schoole w^{ch} saide severall somes of monye wth thincrease of theire sayde severall stocks the Charges of bringing upp of them being deducted to be paid to them and either of them when they or either of them shall accomplishe the age of xxi yeares. Item he willed and bequeathed alsoe to three of John Maunser his Children vizt. John Alis and Elizabeth vj^{li} xiij^{s} iiij^{d} a peece And yf any of the saide John Maunsers Children happen to die before they or any of them receave theire porcons That then the saide porcons to remayne to the survivor or survivors of any of them. Item he willed that (in consideracon of the paym(en)t of the saide xx^{li} his sonne Thomas shoulde have the Cropped Corne nowe growing in Sowthfeelde for this yeere onlye. The resydue of all his goodes and Cattells both mooveable & unmooveable (his legacies debts and fun(er)alls firste paide and performed) he willed to Thomas his eldest sonne whome he made and constituted his soule executoure of this his laste will and testemante Nuncupatyve. This being written. Theis being witnesses to his saide laste will and testamente nuncupative Richard Lane John Myll John Maunser and William Trymlett and others.

However, John Gervase's death did not signal the end of catholicism in his family. Dom Bede Camm gives us some glimpses of the religious lives of his sons Henry and William,[1] and the subsequent career of George Gervase is well known and well documented.[2] But Thomas Gervase and John Gervase junior continued to be presented for recusancy in the Diocese of Chichester. A letter, dated 25 February 1585, from the Privy Council to Lord Buckhurst and other Commissioners appointed for the disarming of Sussex recusants, includes among those to be disarmed the name of Thomas Gervis of Bosham.[3] A list of recusants in the county of Sussex remaining at large, dated 1592, includes John Jervis of Bossham gent.[4] And a certificate of excommunicate recusants dated 21 January 1600/1,[5] also includes John Gervase. After that date, the Gervase family disappear from the records at Chichester, but a few months later, in August 1600, George Gervase received the tonsure at Douai college,[6] and started a career which was to end with a martyr's crown at Tyburn Tree on 11 April 1608.

[1] Dom Bede Camm, op. cit., 255, 266 and passim.

[2] Additional biographical information concerning George Gervase, apart from the works cited in the first three footnotes, is in Dom Bede Camm, *Nine Martyr Monks* (1931), 44-106; see also Rev. J. H. Pollen, " Mr. George Gervase, Benedictine Priest ", in *Acts of the English Martyrs* (1891), 292-296; also, Dom Norbert Birt, " Our Martyrs and Early Missioners; New Sidelights ", *The Downside Review*, vol. 27 (1908), 153-164; and N. F. Hardy, " Treasure Trove", *The Ampleforth Journal*, vol. 27 (1922), 168-173.

[3] British Museum. Harleian Ms. 703, f. 21.

[4] Historical Manuscripts Commission, *Hatfield Manuscripts*, vol. 10 (1904), 263.

[5] Henry Huntington Library, California, U.S.A., Ellesmere Ms. EL2164, printed in *CRS* vol. 60 (1968), 118.

[6] J. H. Pollen (ed.), " Unpublished Documents Relating to the English Martyrs ", vol. I, 1584-1603, *CRS*, vol. 5 (1908), 28.

THE TURNOVER OF TENANTS ON THE ASHBURNHAM ESTATE, 1830-1850

by Brian Short, B.A., Ph.D.

A problem facing the Earl of Ashburnham in the mid-nineteenth century was the relatively rapid rate of turnover by his tenant farmers on his High Wealden estate in Sussex. An examination is made of a number of interlinked general factors such as the relatively poor physical environment, low farming standards, and conditions of tenure, all of which effectively hindered the stability of tenants. The quality of management varied greatly between farms and the importance of obtaining an experienced tenant with capital was crucial, since his improvements could then be furthered by his successors to produce a cumulative beneficial effect.

In 1830 the estate income of the Ashburnham family came from the four areas of Wales, Suffolk, Bedfordshire and Sussex. Of these, Sussex was by far the most important, contributing as much as the other three together. The Sussex estate was large—nearly 6,000 acres of upland farmland with about 1,500 acres of marshland grazing—and was worth over £5,000 per annum in rents alone. Located in the south-east High Weald, the upland had varied resources, with pasture, meadow and arable land closely linked with plentiful supplies of underwood and construction timber, together with supplies of limestone from a small inlier of Purbeck beds. Southwards were rich expanses of Pevensey marshes, an important adjunct to the larger upland farms (Fig. 1). The estate was also well endowed in human resources; in fact the underemployment of agricultural labour in the district was a causal factor in the ' Swing ' riots in the Battle area in November 1830. Emigration from the Bexhill district was a feature of this period and over one hundred persons had left Mountfield parish, for example, for America by 1851.

Bertram, the fourth Earl Ashburnham, appears to have been a relatively unremarkable landowner at this time. His predecessor was given much credit by the Rev. Arthur Young for his skilful ploughing, while Bertram appears to have been interested in the possibilities of adopting Scottish poultry in Sussex[1]. The large amount of correspondence between Bertram and his stewards testified to his interest in the estate; and he was directly involved in the choice of tenants, particularly when political or social issues were involved. Rural unrest continued in east Sussex throughout the 1830's, and the Earl was often reluctant to admit farmers to a tenancy who had sons who could work and thereby deprive local labourers of employment. Thus, Lord Ashburnham did not welcome William Sinden's application for Ellis's farm in Penhurst in 1838. Lord Ashburnham's approval was hesitant since he had heard that Sinden had two sons of working age, and their arrival from Salehurst to the very small parish of Penhurst (total population in 1841, 103) could have been disruptive. His steward, James Bellingham, accepted Sinden on the strength of a very good character[2]. Sinden, then aged 53, was to stay for some time at Ellis's and by 1851 was employing himself, his wife, his son, aged 31, and daughter, aged 17, together with three labourers, on the fifty acres of farmland. His sister, a nurse, would also have been a welcome addition to the local community[3]. Sinden had earlier farmed a smaller holding,

[1] Reverend Arthur Young, *General view of the agriculture of the county of Sussex* (1813), 66-7; and *East Sussex Record Office* (hereafter E.S.R.O.), *Ashburnham Mss.* 1300.

[2] *E.S.R.O. Ashburnham Mss. 1300.*

[3] *E.S.R.O. XA9/7.*

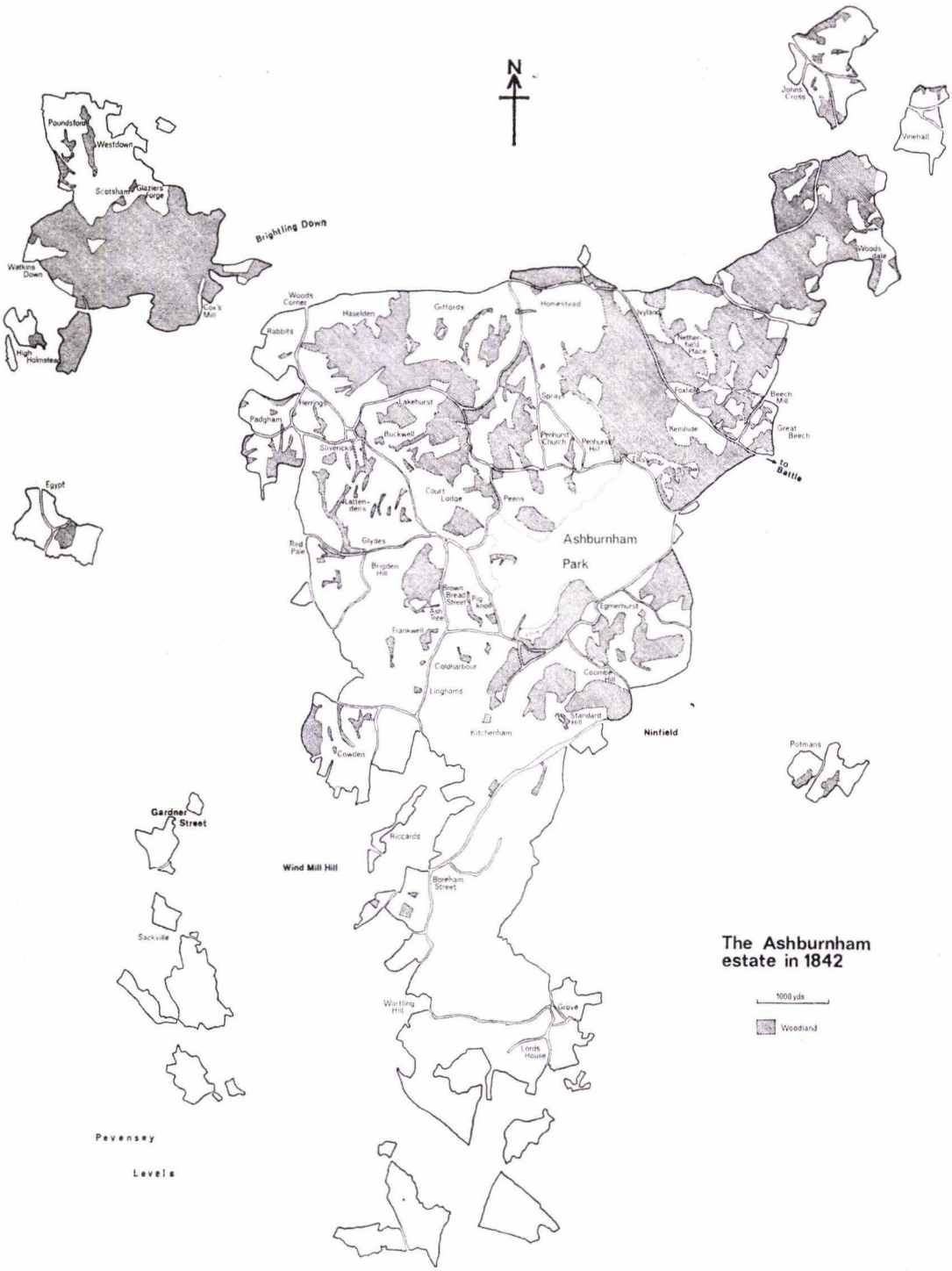


FIG. 1. The Ashburnham estate: main constituent farms in 1842 (Source: *Ashburnham Mss. 4472*).

Little Sprays, in Dallington, so fears of his impact on the local economy were probably more imagined than real. Possibly there was some doubt about Sinden's political leanings. The Earl's steward questioned closely all the tenants in these matters before being accepted on to farms on the estate, and one of the Earl's letters to his steward concerns the political leanings of William Jenner, applying for Great Beech farm in 1837. Jenner, although only 22 at this time, was admitted to the farm, partly because he offered more than the rent demanded, and partly because his father, Thomas Jenner, had been farming at Boreham Street farm since 1832. Young Jenner was anxious to farm near his father and was conscious of the advantage of farming at Great Beech, just outside the town of Battle, and thus near a plentiful supply of manure[1].

The Earl's interest in the choice of tenants was well merited, for one of the greatest estate problems was the relatively large turnover of farmers. Taking the High Weald as a whole—that area of higher land stretching between Horsham in the west and Hastings and Tenterden in the east, and to the north of Uckfield and south of Tunbridge Wells—there were two areas with higher than average rates of turnover of tenants in the mid-nineteenth century. To the west, estate land was being sold for railway development after 1840, while the new town of Haywards Heath displaced some farmers and encouraged others to sell to property developers. The second area was the Ashburnham district itself—the poor upland of the Forest Ridges, stretching between Burwash and Hastings. Taking the number of persons classified as 'farmers' or 'graziers' in the census enumeration schedules for 1841 as a starting point, these persons are traceable in subsequent census schedules to give a record of the turnover of farmers. For the High Weald the average percentage of the farmers in 1841 remaining by 1861 was 14.6%, but in the Worth area it was only 8.4%, and in Burwash 10%, Hastings 12.5%, and in Battle 13.3% (see footnote 1).

The changes in each farm can be seen from the Appendix, constructed from a variety of source materials relating to the area—the Ashburnham Mss; Tithe apportionments; electoral registers; land tax returns; and the census enumerators' schedules for 1841 and 1851. Combining these sources has proved rewarding and provides the basis for far more information as to social and economic conditions on the estate than can be analysed here.

The Appendix Table consists of the main farms of the estate. Most of the smaller holdings are omitted but 62 properties are considered, ranging from the 700 acres of Boreham Street at Wartling to the 9½ acres of Pettits at Ashburnham. Tenants are recorded by their dates of occupation, and the number of tenants at each farm is noted. This table prompts at least two questions to be dealt with here; (a) the relatively high rate of tenant turnover on the estate and (b) the variation in turnover between one farm and another on the same estate.

General factors underlying tenancy changes

1. *The environment*

The Ashburnham estate upland is located along the southern slopes of the Forest Ridge—a chain of higher land reaching to over 500ft. around Cross-In-Hand and in a wishbone-shaped formation between Burwash Down, Heathfield and Punnetts Town. The altitude is somewhat lower than in the central part of the High Weald around Ashdown Forest, but the area is highly dissected by the headwaters of the Cuckmere, and there are many ghylls drained by small streams.

[1] *E.S.R.O. Ashburnham Mss. 1301.*

With less than 30% of the surface classifiable as flat (see footnote 2), the highly dissected topography is largely responsible for a very localised occurrence of soil series. Alternating sands and clays, much faulted and folded, have resulted in an extremely varied distribution of pervious and impervious strata. The Ashdown Sands of the Forest Ridge, the Tunbridge Wells Sands and Wadhurst Clay and the small inliers of Purbeck Limestone all give rise to a patchwork of soils varying field by field from heavy clay to light sand. Thus the Rev. Arthur Young in 1793 wrote of the turnips-barley-clover-wheat rotations on the lighter soils of Ashburnham, and Horsfield also noted in 1835 the sandy summits of the Ashburnham hills, but sands in the north of the estate gave way in the south to more intractable mixtures of Wadhurst Clay and Tunbridge Wells Sand, and eventually to alluvium in Wartling, Hooe and Herstmonceux[1]. The parish of Warbleton is an example of this soil variation. According to Horsfield, there was poor black sand on Warbleton Down; loam in the south and southwest, clay in the east and southeast; and a gravel-loam mixture in the centre of the parish[2].

Although the dissected topography intensified weather hazards, the main economic impact was through the soil. About 60% of the soils were defectively drained, due to the fine grain and high compaction of the sands. These were commonly as defectively drained as the clays, since the drainage of the latter was aided by the presence of small cracks. Puddling or poaching of the surface by livestock also aggravated the problem, and compacted eroded material was washed downslope to cover springs and render the slopes as badly drained as the flatter land.

Chemical analysis of the soils show the lack of lime, phosphate and potash, of which the first has long been appreciated to be the main need. The Ashburnham estate had its own supply of lime from the Purbeck beds, and the land at Glaziers Forge had for long supplied much of the estate. The Earl, " the greatest lime burner in the kingdom ", exploited this resource such that by 1794 he was supplying a sixteen mile radius, and competing with rival Hastings concerns using imported materials[3]. Other methods of soil improvement included denshiring, marling (which continued into the 1820s despite Topley's belief to the contrary), and the use of village waste, salt, and Bethersden *Paludina*. But by the 1840s many were turning to the use of guano and the ' artificials ', the former being supplied from Lewes and Hastings to Court Lodge farm by 1843, and to Penhurst Church farm by 1849 (together with London rags, Eastbourne lime and Hastings salt). With the use of rape cake for cattle feed, the enriched rotted dung of stall-fed bullocks became a valued source of potash, formerly supplied by basic slag, and particularly important on the Wadhurst Clays. Phosphates were supplied in the form of crushed or powdered bone from the beginning of the nineteenth century, with Ore becoming a distributing centre for the region by mid-century.

Much soil improvement had to await more effective methods of drainage. Earlier techniques combined surface ridge and furrow with turf drains and hollow drains lined with stones, blackthorn twigs, or chalk. By the 1830s tile drainage was being encouraged at Ashburnham by the offer to tenants of cheap tiles but although, for example, Penhurst Church farm was drained in this manner between 1827 and 1836, progress was slow. A draining plough was used from the late 1820s in the Kentish Weald, but generally springs were inaccurately located, drainage

[1] Reverend Arthur Young, op. cit. (1793 edition), 27; and T. W. Horsfield, *History of Sussex*, I (1835), 556.

[2] Horsfield, op. cit. (I), 570.

[3] Reverend Arthur Young, A tour through Sussex, 1793, *Annals of Agriculture*, 22 (1794), 273; Arthur Young, A tour in Sussex, *Annals of Agriculture*, 11 (1789), 759; *E.S.R.O. Ashburnham Mss. 1835-44.*

costs were too high, and mole-ploughing rarely successful on the finer soils of the area. The fine sand grains tended to silt up the tiles rapidly, and much of the area had to wait for pipe drainage after the 1840s[1].

With abundant steep slopes and impeded drainage, much of the character and attraction of the district resulted from what Horsfield described as " its declivities . . . adorned with sylvan riches "[2]. But tenants adopted less prosaic terminology than immigrant gentry since woods and shaws were a continual source of annoyance—impeding evaporation, harbouring vermin, and reducing sunlight and cultivable area. Shaws occupied about 1/8th of the arable land. The field sizes were very small, many being effectively fossilized medieval assarts; the average field size at Dallington in the 1840s being only 3.2 acres, that at Ashburnham 5.7 acres[3]. In addition ' lost fallows ' resulted from the large headlands needed to turn the ox-teams, and the resulting small fields were uneconomic for arable cultivation, carting manure, draining, and small field gates. Nevertheless, shaws contained underwood and game, and were correspondingly highly valued by the Earl. By 1850 some hedges had been removed, but low wheat prices at £2 per quarter rendered the initial outlay uneconomic on soils producing but three of four quarters per acre. Moreover, many tenants feared rent and tithe increases following the conversion of tithe-free woodland to farmland, and consequently the overall effect was to stultify progress and hinder innovation.

Thus the Ashburnham tenants were faced with small, hilly fields, circumscribed by shaws, and containing variable soils, many very poorly drained. The area was also poorly served by roads, since these tended to follow the hill tops in an east-west direction, by-passing many of the valley-side or valley-bottom farms. In part the rents reflect this poor environment for farming. Ashburnham rents were stable at about 8s. per acre between 1815 and 1835, compared with the average High Wealden rent of 15s. per acre in 1815. By 1842 rents had risen generally, but that at Penhurst, for example, was only 11s. 3d.; at Ashburnham 17s. 9d.; at Dallington 17s. 2d.—compared with the High Wealden average of 21s. By 1860 there was virtually no change since the main touchstone of increased land values, the railway, came no nearer than the stations at Battle, Hailsham, Bexhill and Westham in the 1850s[4].

2. *The standard of farming*

From a reconstruction of farming at Ashburnham or other districts in the Weald using contemporary sources, a picture emerges of low farming ability, and scant chance of improvement. Leonce de Lavergne in 1855 compared the Weald with one of France's second-rate provinces, seeing it as " In nothing . . . . . beyond the average, whether in picturesque beauty or in agricultural richness ", and with farmers: " men without capital, and as ignorant as they are poor ". Caird had also previously written of the small farms; ill-drained and half-cultivated, inadequately stocked, and with too much woodland; and of the tenants—unskilful, and unheeding of innovation.[5]

[1] B. M. Short, Agriculture in the High Weald of Kent and Sussex 1850-1953. (A case study in the application of multivariate techniques in the field of historical geography), *Unpublished Ph.D. thesis, University of London* (1973), 91-97.

[2] Horsfield, op. cit. (1), 436.

[3] *E.S.R.O. TD/E68 and TD/E146.*

[4] *Br. Parliamentary Pap.* xix (1818); xxxii (1844); xxxix (1859-60); and *E.S.R.O. Ashburnham Mss. 1173.*

[5] L. de Lavergne, *The rural economy of England, Scotland and Ireland* (1855), 203; J. Caird, *English agriculture in 1850-51* (1852), 126-7.

Few farmers would have actively sought out the Ashburnham district for settlement, for the area was relatively unattractive compared with the Petworth, South Downs, Sussex coastal plain, or East and Mid-Kent districts. Of 65 farmers traceable in the 1851 census enumerators' schedules who had farmed during the period 1830-50 on the estate, 19 were farming in their parishes of birth; 14 in a parish abutting on that of their birth; 9 in the next-but-one parish away; 16 from other parts of East Sussex; and only seven from outside the county of whom three were from the Kentish Weald. It could be argued therefore, that only four of the tenants (6%) were strangers to the area, while forty-two (65%) came from within a six mile radius of their farms.

Such minimal movement goes far towards explaining the slow diffusion of innovations into and throughout the area. Sources of contact were virtually limited to markets and fairs, such as the Whit Monday fair at Battle, or those at Westham, Boreham Street and Robertsbridge during September. Some may have visited the Lewes sheep and wool fairs, but would rarely have travelled further afield. It was the landowners who attended the meetings of agricultural societies, rather than the smock frocked farmers. But such spatial restriction, it should be remembered, was combined with a tendency to move between farms in the same district with some freedom. Some actually returned as tenants to a previously held farm, as did James Overy at Netherfield Place who held the farm in 1840 and again in 1845-46.

Over much of the High Weald agricultural conservatism stemmed partly from the age and knowledge of the farmers, and assuming that the best farmers gravitated to the best soils, one might expect an area of rather older, less informed, operators in the High Weald. Unimproved techniques were inherited, together with the fear that improvement would incur higher rents, and what Siday Hawes referred to in 1858 as ' force of habit ' appears dominant[1]. Overall, the High Weald in 1861 had about 20% of its farmers aged 65 years or over—a fact conforming with known nineteenth century migration differentials, and to some extent with the modern age structure of the area. However, on the Ashburnham estate, details of 50 tenants farming in 1850 have been collected, and these reveal an average age of only 48. This is consistent with the high turnover, but there is an interesting distribution about the mean. Twenty-four of the tenants were under 45 years of age, while eighteen were over 55 years old, leaving only eight in the age range 45-54. With the exception of Humphrey Carpenter (54) at Lower Standard Hill, none of the large properties were being farmed by tenants in the latter age group, and there is a gap in early middle age where one would typically expect a forceful combination of experience and vigour.

The relationship between age and farm size is summarized in Table I. It should be noted that some farmers, like the brothers John and Samuel Blackman, farmed more than their Ashburnham land. The 1851 census records them farming in all 1,000 acres. Noel Bourner was more typical. Born in Battle in 1823, into a large and relatively prosperous local family, he was aged 27 by 1850, with a wife and three small children, working Scotsham farm with the help of his father-in-law and two labourers. At the other extreme was Thomas Burgess, aged 83, from Rabbits Farm, Dallington—a holding of just 36 acres run with the help of one labourer, and two granddaughters aged 22 and 15, and a 10-year-old grandson[2].

[1] S. Hawes, Notes on the Wealden clay of Sussex and on its cultivation, *J.R.Agric. Soc. England*, 19 (1858), 188.

[2] *E.S.R.O. XA9/21 and XA9/10.*

TABLE 1. **Ashburnham tenants' ages, farms, and family composition**

Age range	number in range	average farm size (acres)	average number of family working on farm (including wife, excluding farmer)	average number of dependents (non-working)
25-29	5	99.17	1.00	3.20
30-34	6	145.33	0.67	2.30
35-39	6	230.00	1.20	1.80
40-44	7	107.00	1.86	3.59
45-49	4	98.17	2.20	1.60
50-54	4	198.50	4.00	0.75
55-59	7	216.85	3.14	0.28
60-64	4	137.50	3.50	1.25
65-69	3	40.75	1.67	1.00
70-74	2	137.50	1.50	0.00
75-79	1	23.00	1.00	0.00
80-84	1	36.00	2.00	1.00

Source: Census numerators' schedules, 1851, and E.S.R.O., Ashburnham Mss., 1173.

The lacuna in the 45-54 year age group becomes more striking when family composition is considered. Most sons stayed on the farm, often becoming the tenant eventually, and the number of workers in the family was a strong determinant of the acreage a tenant could tackle. For young tenants the workforce was often no more than the married couple themselves (the Blackman brothers, as bachelors, were very a-typical), but the number of dependent children was high. Treyton Christmas (41) who farmed Great Beech in 1850 with his wife had eight children under fifteen years of age.[1] However, the number of dependents decreased in the 45-49 year age group, and there was a corresponding increase in the number of family workers—adult children, wives, and even grandchildren in the typical extended families of the period. Tenants of early middle age had more workers than dependents, and this highlights further their inability to command larger farms. At Ashburnham it seems that most tenants were either young farmers at the foot of the ' farming ladder ' eager to progress to larger and better farms, or too old and conservative to farm successfully in the accepted style of the period.

3. *Tenurial conditions*

About 75% of the High Wealden farmers in the mid-nineteenth century were tenants, and a majority of these held their land by annual agreement rather than by lease. The Rev. Arthur Young, in his 1793 tour through Sussex, noted that leases were not normally granted in the Battle area, and in 1828 Kennedy and Grainger stated that:-

[1] *E.S.R.O. XA9/7*

" Agriculture in this county has long been considered to be in a very backward state with regard to improvement, and until the practice of tenancy is entirely altered, no change, in this respect, for the better can be expected."[1]

In Sussex, tenants took possession of their farms at Michaelmas, and although their position was precarious since changes in ownership could result in notices to quit, or rent increases, such risks were offset in the opinion of many small farmers by the freedom to leave any holding after one year. Many took advantage of this and estates were constantly in need of tenants. This could create artificially low rents, particularly in depressed periods, to keep the farms occupied and to encourage some degree of permanence.

Many of the annual agreements were verbal, and we are therefore uncertain as to their precise nature. Often they were contingent on necessary repairs and if the landlord was slow in taking action, the tenant suffered from poor equipment and uncertainty over the future. At Lower Standard Hill in 1850 Humphrey Carpenter was charged for work undertaken by Lord Ashburnham on his behalf.[2] Maintenance was the tenant's duty and he was normally supplied with materials from within a radius of between five and twelve miles, and occasionally allowed the use of a wagon for the carriage of timber and other materials.

With yearly tenure dominant some system of compensation for improvements was necessary. In Lincolnshire, compensation for purchased crushed bones by tenants in the eighteenth century took the form of tenant-right[3], and a similar system developed also in the Weald. On quitting at Michaelmas, valuers were appointed by both landlord and tenant, with a neutral third in case of dispute. On the Ashburnham estate a fairly strict procedure took into account " seasons " (preparation undertaken for cropping or fallowing); manures and " half manures " (the value being halved after the taking of one crop, although dung, marl and mould fell to zero, and guano to one-third value). " Young seeds " were paid for according to age, and unused straw was also valued; as were hop poles, plants, materials and labour, underwood, hay at feeding price, and house repairs. Sales of hay and straw off the farm were normally prohibited, with penalties of up to £10 at Netherfield Place in 1849. Many tenants were uncertain as to compensation allowed for draining, because of help received from the landlord, but most were allowed a four-year valuation on wooden drains and ten years on tiles. On some estates the tiles were supplied free, being manufactured in the estate yards by " Hatcher's Benenden tile machine " or some local variant. Often the charge could be recovered if the tiles were not laid within six months or otherwise not to the landlord's satisfaction. At Ashburnham tiles were supplied cheaply, and occasionally a charge of 5% per annum on costs was levied, a practice common over much of England.

The actual process of change from one tenant to the next was complicated by the rights of the incomer to sow seeds among his predecessor's spring corn, and to direct preparations for a wheat season. He in turn was obliged to thresh the remaining corn, inbarn the hay, and market the produce, taking the straw and haulm as payment. Storage was shared with the outgoing tenant and considerable confusion arose, with deductions for dilapidation being bitterly contested.

The consequence of this " custom of the country " (not legally recognised until the 1883 Agricultural Holdings Act), was that Sussex had the heaviest ingoing valuations in England, saddling the tenant with a heavy debt, since few could afford to pay the valuation outright. The

[1] Reverend Arthur Young, op. cit. (1794), 258; and Kennedy and Grainger's *Customs of countries* (1828) (quoted in *The Farmers' Magazine*, 7 (1837), 35).

[2] *E.S.R.O. Ashburnham Mss. 2236.*

[3] J. Thirsk, *English peasant farming: the agrarian history of Lincolnshire from Tudor to recent times* (1957), 264-7; and D. Grigg, *The agricultural revolution in South Lincolnshire* (1966), 49, 148.

sum of £2 per acre, and more for a hop farm, limited the number of prospective applicants, although payment by instalment was usual. A note from Thomas Jenner to steward William Morrison[1] ran:-

Sir,

I hereby tender for Pagham (*sic*) farm at 10/- per acre provided I can have about 15 or 20 acres of marshland at the usual rent, and to allow the amount of valuation to remain on interest till paid off

I am sir very respectfully,
Your obedt. servant,
Thomas W. Jenner
Frant, 10 Nov., 1837.

Tenurial custom then, helps to explain the limited immigration of farmers to the estate. Once established however, farmers could " trade in " a valuation, hoping to profit by the change; and a cumulative degenerative process set in, whereby farmers aimed at profits through moving, as much as by building up a farm. The problem that could arise is illustrated by Penhurst Church farm in 1837. Tilden Smith, a banker and landowner in his own right, and the most prosperous of the Ashburnham tenants, quit Penhurst Church farm in that year, having affected considerable improvements, particularly in draining. His arrangement with Lord Ashburnham was that he could buy the tiles at half price, or claim on quitting; and he took the latter course thereby pushing up the ingoing valuation to £500. The farm was duly let in August 1837 to John Newington, who had occupied Bines farm, Burwash since 1822. Agriculture was then severly depressed but Newington had, it seems, done well in farming and in planting up hops. But he suffered badly from the valuation for Bines farm, and problems over compensation for labour, for seed wheat and tares. In consequence he was forced to sell most of his stock to meet the ingoing valuation at Penhurst Church. With a family of nine children, four of them very young, Newington had tried to take on too large a farm, and the agreement languished. To their credit, the correspondence between Morrison and Lord Ashburnham on the subject is more concerned with the welfare of Newington than with the tenancy of Penhurst Church. Eventually Newington found a 30 acre farm in Heathfield, probably with the help of Morrison[2].

James Caird was a vigorous opponent of such tenant-right:-

" In the wealds of Surrey and Sussex, where the custom is most stringent, we found the state of agriculture extremely backward, the produce much below the average of England, the tenants deeply embarrassed (sic), and the landlords receiving their low rents irregularly; in fact, no man connected with the land thriving, except the appraisers, who were in constant requisition to settle the disputed claims of outgoing and entering tenants. We found both farmers and landlords complaining that the system led to much fraud and chicanery, and that an entering tenant was compelled by it to pay as much for bad as for good farming[3]."

There may have been some parts of the Weald where the tenant-right system was put to better effect. The evidence of Benjamin Hatch to the Select Committee on Agricultural Customs emphasised the security of capital in making improvements, and of the area around Tenterden it was said that:-

[1] Short, op. cit., 114-8; and *E.S.R.O. Ashburnham Mss. 1301.*

[2] *E.S.R.O. Ashburnham Mss. 1301.*

[3] Caird, op. cit., 506.

" In consequence of that custom . . . from being one of the worst farmed districts anywhere I know, it is now getting to be one of the best; and I attribute it to this, that other people do not enjoy the same benefits that the men who are making the improvements do"[1].

Hatch was a land valuer and general agent as well as a farmer, but there were many others in the land-connected professions who saw many deficiences in the Wealden tenurial system. By 1830 it was felt more generally that there should be more restrictions on the tenants' farming practice, and that these should be rigidly enforced. A survey of the Ashburnham estate was made by Edward Driver in 1830, whose general criticism was that there had been no mode of cropping, draining or restrictions on breaking up pastures entered into with tenants[2]. Such general lack of guidance was often disastrous when combined with the very heavy entry sums necessary, which deprived tenants of working capital. Often he was " obliged to do so as he can, not as he wishes ", but much depended on his first year. If crops failed, or there was a glut, then financial embarrassment was acute. To compound the problem many relied overmuch on hops —a notoriously unreliable crop—but one which often received disproportionate attention, to the relative neglect of the rest of the farm.

There were therefore three factors combining to effect a degree of transience on the Ashburnham estate. The physical environment was poor, being particularly marginal for wheat, on which too many farmers were dependent at this time. The standard of farming was generally low, and many of the farms were tenanted by younger, less equipped men, or by farmers of an older generation, perhaps still mindful of the beneficient times during the Napoleonic wars, when corn brought profits even on Wealden soils. In addition, most were yearly tenants, part of a system allowing rapid turnover of farmers, aiming to profit through moving encouraged by the complicated tenant-right valuation. Naturally it would be wrong to suppose that all tenants and environments were of an equal quality; and so the ensuing section is devoted to a review of the inter-farm variation on the estate.

Tenancy change at the inter-farm level

Within the Ashburnham farming community the distribution of expertise was far from even. However, it is now difficult to disentangle accurately the abilities as perceived by contemporaries from the problems being faced on individual farms. Driver attributed the generally low returns to a number of factors: laziness, bad systems of cropping, too great an emphasis on hops, lack of capital, high poor rates, and a combination of bad seasons and low prices, the former sparking off sheep rot (foot rot).

Certain holdings were particularly mentioned by Driver in his 1830 survey, as being poorly farmed. Brown Bread Street, tenanted by Charles Stollery, for example, was " very badly farmed and (is) wet, foul and neglected in all respects ". Pigknoll was likewise " wet, foul and neglected and not at all well farmed ". Driver's finest invective was reserved for Sarah Bartlett's Swan Inn and land at Woods Corner—" in a most shameful foul and neglected state, and not half cultivated, and the public house is equally badly managed ". Similar comments were passed on Great Beech, Johns Cross, Potmans, and Sprays farms.

[1] Evidence of Benjamin Hatch to the Select Committee on Agricultural Customs, *Br. Parliamentary Pap.*, vii (1847-8), 219.

[2] *E.S.R.O. Ashburnham Mss. 1173.*

On the other hand some farms were singled out by Driver as being well managed. Of larger farms were Vinehall, Poundsford, Woodsdale and Netherfield Place; of smaller, Ash Tree, Beech Mill and Foxhole, both of which latter holdings could have managed more land[1]. Poundsford and Vinehall were both tenanted by members of the Simes family and remained in the same family's hands throughout the period. Although Edward Simes' arrears of rent in 1837 were complained of and he was suspected of taking lime *gratis* rather than at the normal (reduced) rate[2], it would appear that the family had built up a tradition of good farming in the Whatlington area. Both Woodsdale and Netherfield Place were in 1830 tenanted by Tilden Smith, the ablest, wealthiest and widest known of the Ashburnham tenants, who held a succession of Ashburnham properties throughout the 1830s. Owning a great deal of land himself to the north east of Ashburnham, some of the tenancies were held with Tilden Smith Sr., until the latter's death in 1834. As a hop grower of many years experience, he was called upon to give evidence to the Select Committee on Hop Duties in 1857, a year in which he was adjudged bankrupt. He was also an enthusiast for the Sussex breed of cattle, taking over the famous herd from Samuel Selmes for use at Knelle farm, Beckley, until his death in 1880, when the herd was dispersed. By 1850 he was farming about 1,200 acres, although this did not include any Ashburnham property, and employing over forty labourers[3]. Another able farming family, though perhaps on a smaller scale than Smith, was that of the Bourners. By 1850 Peter Bourner (57) was tenant at Brigden Hill and Red Pale, having sold the latter to Lord Ashburnham in 1843; Charles Bourner (43) was at Penhurst Hill; and young Noel Bourner at Scotsham. When Ellis's farm became vacant in 1838, Peter Bourner was offered the tenancy, and only when he declined, was Sinden accepted as tenant.

Where the Simes, Smiths and Bourners farmed there was relative permanency; the farms were well managed, and by about 1840 there was little poor land. Table 2 indicates those farms that did contain poorer fields, and is derived from undated remarks pertaining to farms in an 1835 survey of the estate. Brown Bread Street and Johns Cross still contained a high proportion of ' poor ' fields (fields variously described as poor, mossy, foul, rough pasture etc.), but the surprisingly large proportion of the bigger farms which was also less productive should be noted.

Much of Lower Standard Hill is stiff Wadhurst clay, and although Elizabeth Goldsmith was in arrears with her half-yearly rent of £135 by 1842, at least she had the financial resources to stay on the farm. She had also managed to turf-drain (rather old-fashioned by 1840) some of the arable, pasture and hop fields. Much of Wartling Hill farm is on the Pevensey Levels, and much of the grassland at this time was rush-infested. Pencil jottings regarding poor fields may have coincided with Philadelphia Hicks' takeover of the tenancy, since by 1842 the farm was in good shape, and the rent increased by £20 per annum. Driver had recommended that another 20-25 acres be broken up for arable here, since 69% of its area was grassland; or that grassland be dispersed among farms in need of more, such as Homestead farm, with only 27% of its area[4] pasture. At Homestead farm there were fewer poor fields by about 1840, compared with 1830 when it was very poor and wet, with some fields " very foul ", and there was a succession of tenants, with the farm in hand between 1831 and 1833 and partly farmed with Rose Fuller from 1834-40[4].

[1] *E.S.R.O. Ashburnham Mss. 1173.*
[2] *E.S.R.O. Ashburnham Mss. 1300.*
[3] E. Walford Lloyd, *Sussex Cattle* (1944), 24; and *E.S.R.O. XA9/6.*
[4] *E.S.R.O. Ashburnham Mss. 1173, 1202, 1993.*

Some farms certainly offered precious little return on invested capital. In the north of the estate steep slopes, poor soils, small fields and remoteness combined in a formidable alliance. The small, somewhat detached farm of Watkins Down had as many as nine tenants during the period. Nearly 32 of the 82 acres were merely ' down '; there was a small hop garden; two or three acres of furze, and the rest was arable—39 acres divided into twelve fields. At over 500ft. on the edge of Heathfield Down, and with land sloping north into the Dudwell valley, it was an inauspicious setting, and only William Hobden, from 1832 to 1837, managed to stay longer than three years. This was an extreme example, but there were other, larger farms, where there was patently an inability to cope with the problems. As well as Homestead farm quoted above, Egmerhurst farm (194 acres) had six tenancies; Netherfield Place (182 acres) had seven, six of them after Tilden Smith left in 1840. Similarly, after Smith quit Woodsdale in 1840 there were four further tenancies, which highlights the difficulty of farming with insufficient capital to match the size of the farm and its problems. There was, in fact, a slight tendency for the number of tenancies to increase with the size of the farm (see footnote 3) and thereby with the total rent to be paid, although not with rent per acre which fell as farm size increased and buildings accounted for less of the total area. William Hobden paid only 4/2d. per acre for Watkins Down farm, but the normal rent at that time for smaller farms was nearer 15s., whereas that for the 269 acres of Vinehall was 9/6d. per acre.

Rent was a sensitive indicator of demand for individual farms. Watkins Down was a difficult farm, but its neighbours on the Dudwell slopes also paid low rents—Poundsford at 8/4d. and Westdown at 8/10d. Some of the other outlying farms similarly were low rented—Potmans at 8/2d. and Woodsdale at 8/7d. Although distance from Ashburnham Place may have exerted some influence, it was far more likely to have been a response to soils. Gardners Street (19/8d.) and Lords House and Grove farms (£1-1-2d.) were equally distant, but on kinder soils[1]. Economic fluctuations, the seasons, and land use decisions also played their parts. If the hop crop prospered rents were forthcoming; but if not, as in 1844, rents fell heavily in arrears. Frederick Ellman, the third of the agents at this period, thought the rent arrears of £700 in 1845 very good, considering the hop blight of the preceding year. In 1846, for example, they amounted to over £1,200. During the depression of the 1820s many rents had been cut, but by the 1840s, probably at the suggestion of Driver, many were increasing. At Grove and Lords House they rose from £245 in 1841 to £295 per annum in 1842; and at Wartling Hill from £400 in 1841 to £420 in 1842. Between 1844 and 1845 some farms could bear rent increases and still attract tenants, as at Egypt farm (£95 to £100) and Herrings farm (£70 to £80); although others were dropped to encourage letting, as at Netherfield Place (£182 to £180) and Padgham (£133 to £126)[2].

On some farms there were definite signs of what Farncombe in 1850 called the " unincumbered capitalist " at work[3]. The removal of hedgerows was mentioned at Great Beech farm to form a larger six acre field. At Netherfield Place two fields were merged to form a fifteen acre enclosure; while on lighter soils at Brigden Hill two of the arable fields were ' adapted ' for working with two-horse ploughs. At Buckwell farm by 1845 steam threshing was normally used on wheat, beans, peas and oats, while tile drainage gathered momentum. But even at Penhurst Hill farm c. 1840 fields needed draining; ' mine pit ' holes at Homestead farm needed filling, and an eight acre field at Brigden Hill was " very badly cultivated ".[4]

[1] *E.S.R.O. Ashburnham Mss. 1202.*
[2] *E.S.R.O. Ashburnham Mss. 1173 and 1202.*
[3] J. Farncombe, On the farming of Sussex, *J.R. Agric. Soc. England*, 11 (1850), 84.
[4] *E.S.R.O. Ashburnham Mss. 1993.*

TABLE 2. **Farms with poor fields c.1840**

Farm	Number of ' poor ' fields noted	Acreage of ' poor ' land	Total acreage	Percentage ' poor ' land
Beech Mill	2	10-1-6	44-1-16	23.2
Boreham Street	14	78-0-24	657-1-34	11.9
Brigden Hill	3	24-1-2	221-1-22	11.0
Brown Bread Street	2	7-3-30	38-2-37	20.5
Buckwell	6	35-0-13	195-1-14	18.0
Cinder Hill	4	32-1-30	92-1-15	35.1
Cowden	2	11-3-14	271-3-35	4.4
Giffords	8	56-1-33	171-0-23	33.0
Grove	1	8-0-11	163-2-10	4.9
High Holmstead	1	4-1-12	48-1-27	9.2
Homestead	2	6-1-35	219-1-12	3.0
Johns Cross	3	22-0-36	111-3-14	19.9
Lakehurst	2	4-1-25	26-3-17	16.4
Lemons	1	6-2-13	49-1-4	13.4
Linghams	3	37-0-39	250-3-8	14.8
Lower Standard Hill	7	85-2-25	364-1-19	23.5
Mills	2	19-3-15	93-0-13	21.3
Netherfield Place	1	7-3-24	182-1-8	4.3
Peens	1	1-2-8	117-2-26	1.3
Penhurst Hill	4	26-3-18	130-0-31	20.6
Pigknoll	1	3-2-37	41-3-33	8.9
Poundsford	4	16-3-39	186-0-35	9.1
Scotsham and Glaziers Forge	1	6-0-13	108-0-16	5.6
Slivericks	1	6-0-32	82-0-8	7.6
Vinehall	1	13-3-14	268-3-33	5.2
Wartling Hill	8	62-3-2	308-1-33	20.4
Woodsdale	2	17-1-30	314-0-20	5.6

Source: E.S.R.O., Ashburnham Mss. 1993

In narrowing down the scale of enquiry to the inter-farm level, generalisations become more difficult, and less useful. However, the importance of obtaining an experienced, well equipped tenant is seen to be paramount. If his improvements were lasting, then, as at Penhurst Hill, subsequent tenants might remain and build up the farm. But much depended on the subsequent tenants, for not all were like Charles Bourner coming in to Penhurst Hill in 1837, and a farm could often suffer a series of short tenancies, with tenants taking full advantage of the annual agreement to quit before losing everything. The interrelationship between the physical environment, farming skill and the tenurial system is thus again revealed. All three affected the land use, which in turn affected profits and thereby length of stay, and thus the state of the holding for the incomer. The cumulative effect of the quality of tenant farming was the strongest differentiating force at the inter-farm level.

Concluding remarks

In 1751 Dr. Burton, emerging from "*A traveller's reveries or journey through Surrey and Sussex*" wrote of the "Sussex native":- ". . . and surely we cannot wonder if the rust, contracted in this muddy soil, should clog the energy of the mind itself". However by 1850 Farncombe was able to distinguish the newer 'improver' from the old type of farmer. The older type might cling to his three-course rotation with naked fallow, his 'keep-sheep' system, and the raising of working cattle. But newer ideas were slowly permeating the Weald, bringing a more intensive system of rotation with more emphasis on clover and seeds; draining; the use of artificial manures; more roots (when soils permitted) and green crops; better livestock management; improved mechanisation; all stimulated by increased markets at the "watering places" by 1850[1].

The signs of change have been noted at Ashburnham, as both cause and effect of tenant turnover. How far did the changes emanate from Ashburnham Place? The fourth earl was clearly interested in agriculture although slightly out of touch; in 1845 he was trying to stave off the threatened potato famine by persuading his labourers to grow rice and eat oatmeal cakes. He was not unpopular; there were not the demonstrations against him in 1830 that there were against Lord Gage at Hellingly or Lord Sheffield at Sheffield Park[2]. Nor was he unheeding of advice, and after 1830 there is a significant tightening of the tenancy agreement clauses. When Sinden came to Ellis's in 1838 there was a clause to the effect that he was:-

> "not to sow two successive crops of white strawed grain without a clear preceding fallow well and properly manured and cleaned—or with some intervening green crop (Lord Ashburnham himself stipulated beans) ploughed in according to the usual custom of good husbandry". . .

This clause was to remain standard in all agreements beyond 1850, since Driver had commented harshly on the growing of two white straw crops in succession as "bad anywhere, but ruinous on these poor soils". By 1849 James Cane's agreement for Netherfield Place also contained penalties of £20 per acre for conversion of grass to tillage; £10 per acre for meadowland mowed without adequate prior manuring; £10 per load for straw, fodder, manure etc. carried off the farm; as well as a prohibition on the growing of more than twelve acres of hops[3]. The impact on tenant turnover is not easy to assess. During the 1840s there was a smaller turnover than in the 1830s, except during the free trade panic of the period 1844-46, when many farmers sold off stock too freely. Whether this slightly greater stability is due to the firmer guidance from Ashburnham Place or is traceable to other factors has not been pursued.

By 1850 agricultural change was in the air, although the most dramatic of the nineteenth century changes, the rise of Wealden dairying and poultry farming, were still to come. Times were soon to become more prosperous, as grassland was extended to maximise the environmental potential of the district during the period of "high pressure cultivation"[4]. But in the twenty years before 1850 the Ashburnham tenants had to endure uncertain prices, and uncertain yields; labour unrest, and insecurity of tenure. Many failed to survive.

[1] *BM. Addit. Mss. 11, 571;* and Farncombe, op. cit., 87.

[2] *E.S.R.O. Ashburnham Mss. 1418;* and E. J. Hobsbawm and George Rude, *Captain Swing* (1969), 314, 322.

[3] *E.S.R.O. Ashburnham Mss. 1173, 2229.*

[4] Report from the Select Committee on Hop Duites (*Br. Parliamentary Pap.*, xiv (1857), 70).

APPENDIX

Farms and Tenants on the Ashburnham estate 1830-1850

Farm	*Location*	*Size (acres)*	*Tenants*	*Number of Tenants 1830-1850*
Ash Tree	Ashburnham	16-2-31	Hen. Richardson 1830-1850	1
Averys	Ashburnham	17-1-39	Jesse Smith 1830-32; Thos. Talbot 1832-41; Geo. Isted 1841-50	3
Beech mill	Battle	45-2-38	Jn. Shaw 1830 to 1850	1
Boreham St.	Wartling	700-0-38	Jn. & Francis Scrase 1830-32; Thos. Jenner 1832-42 Robt. Pursglove 1842-50	3
Brigden Hill	Ashburnham	221-1-6	Ed. Cooke 1830-35; Peter Bourner 1835-50	2
Brown Bread Street	Ashburnham	38-2-37	Chas. Stollery 1830-48; Anne Stollery 1848-50	2
Buckwell	Dallington & Ashburnham	195-0-28	Is. Veness 1830-36; Jos. Veness 1836-39; Jos. Veness & pt. in hand 1839-45; Jos. Bishop, Zach. Elliott, Reverend Munn 1845-50	4
Cinder Hill	Ashburnham & Dallington	87-0-24	Is. Veness 1830-36; Jos. Veness 1836-45 (Wm. Noakes pt. tenant 1840); Wm. Noakes 1845-50	3
Coldharbour	Brightling	25-0-34	Wm. Crouch 1830 to 1850	1
Comb Hill	Ninfield & Ashburnham	83-2-20	Wm. Lemmon 1830-39; Chas. Collins 1839-50	2
Court Lodge	Ashburnham & Penhurst	214-0-2	Ben. Hilder 1830-32; Jn. Veness & Sawyer 1832-5; Jn. Veness 1835-45; Robt. Partridge 1845-50	4
Cowden	Wartling	272-1-5	Nich. & David Oxley 1830-34; Eliz. Oxley 1834-44; Othniel Oxley 1844-50	3
Cox's Mill	Burwash & Dallington	30-2-18	Rich. Saunders 1830-39; Wm. Brett 1839-42; Wm. Clarke & Alb. Geering 1842-50	3
Egmerhurst	Ashburnham & Catsfield	193-3-17	In hand, 1830-31; Hen. Smith 1831-32; Tilden Smith & Son 1832-33; Hen. Smith & Wm. Pennington 1833-34; Til. Smith & Hen. Smith 1834-5; In hand 1835-50	6
Egypt (Batsford)	Warbleton & Dallington	112-1-23	Jn. Pattenden 1830-45; Levi Lade 1845-50	2
Ellis's (Little Beech)	Penhurst	49-2-14	Til. Smith 1830-38; Wm. Sinden 1838-50	2
Foxhole	Battle	36-2-6	Jn. Carter 1830-47 Sam. Hobden 1847-50	2
Gardners St. (Buckle)	Herstmonceux	52-3-35	Ed. Vine up to 1830; Widow Vine 1830-33; Jas. Everest 1833-46; Mary Everest 1846-50	4

Farm	*Location*	*Size*	*Tenants*	*Number of Tenants 1830-1850*
Giffords	Brightling & Dallington	171-1-3	Thos. Marchant 1830 to 1850	1
Glaziers Forge	Burwash & Brightling	14-0-2	Jn. Westover 1830-33; Wm. Dawes 1833-50	2
Glydes	Ashburnham	46-1-25	Geo. Isted 1836 to 1850	1
Great Beech	Battle	180-1-11	Thos. Hunt 1830-37; Wm. Jenner 1837-40; Treyton Christmas 1840-50	3
Grove	Hooe	163-2-10	Ben. Blackman 1830-39; Jn. & Sam. Blackman 1839-50	2
Haselden	Dallington & Brightling	220-1-39	Jn. Veness 1830-39; Simmons 1839-42; Jn. Smith 1842-50; In Hand 1850	4
Herrings	Dallington & Ashburnham	132-0-14	Sam. Taylor 1830-44; In hand 1844-45; Jn. Catt 1845-50	3
High Holmstead	Warbleton	48-1-27	Thos. Dann 1830-49; Stephen Pilbeam 1849-50	2
Homestead	Brightling, Battle & Dallington	219-1-17	Jn. Martin 1830-31; In hand 1831-33; Stevens 1833-34; In hand & Rose Fuller 1834-40; Wm. Dawber 1840-43; Thos. Easton 1843-50	6
Ivylands	Battle	51-0-19	Thos. Veness 1830-45; Jas. Ellis 1845-49; Jas. Honeysett 1849-50	3
Johns Cross	Mountfield	97-3-35	Rachel Simes 1830-32; Wm. Dawes 1832-33; Geo. Dawes 1833-43; Isaac Mannington 1843-50	4
Kitchenham	Ashburnham & Ninfield	331-0-36	Wm. Dray 1830-31; Hen. Smith 1831-40; Robt. Kenward 1840-41; Robt. Kenward & Geo. Jenner 1841-50	4
Lakehurst	Dallington	25-3-37	Sam. Elliott 1830-46; Zach. Elliott 1846-50	2
Lattendens	Ashburnham & Dallington	38-3-37	Thos. Noakes 1830-36; Jn. Veness 1836-38; Jos. Golden & Ed. Noakes 1838-47; Jn. Hook 1847-48; Robt. Partridge 1848-50 (Hen. Ticehurst part tenant 1849)	5
Lemons	Wartling	39-0-34	Jn. Pattenden 1830-46; Luke Lade 1846-48; Levi Lade 1848-50	3
Linghams	Ashburnham	261-0-37	Wm. Pennington 1830-37; Thos. Wickham 1837-44; Chas. Jenner 1844-50	3
Little Ponts	Ashburnham	52-0-18	Thos. Noakes 1830-38; Thos. Cook 1838-46; Jesse Oliver 1846-50	3
Lords House	Hooe	67-2-8	Ben. Blackman 1830-39; Jen. & Sam. Blackman 1839-50	2
Lower Standard Hill	Ninfield & Ashburnham	364-1-19	Francis Tapsell 1830-31; Eliz. Goldsmith 1831-50; Humph. Carpenter 1850	3

Farm	*Location*	*Size*	*Tenants*	*Number of Tenants 1830-1850*
Mills	Wartling	99-2-11	Stephen Pettit 1832-50	1
Netherfield Place	Battle	182-1-18	Til. Smith & Son 1830-40; Jas. Overy 1840; Wm. Dawber 1840-44; In hand 1844-45; Jas. Overy 1845-46; In hand 1846-49; Jas. Cane 1849-50	7
Padgham	Warbleton & Dallington	202-0-0	Jesse Smith 1837-45 (Part in hand 1838); Jn. Bishop 1845-49; In hand 1849-50	3
Peens	Penhurst	117-3-6	Jos. Sinden 1830 to 1850	1
Penhurst Church	Penhurst	224-0-5	Til. Smith 1830-37; Jas. Weston 1837-43; Wm. Neve 1843-49; Ed. Carter 1849-50	4
Penhurst Hill	Penhurst	130-1-22	Til. Smith 1830-37; Chas. Bourner 1837-50	2
Pettits	Ashburnham	9-2-16	Robt. Pettit 1830-39; Jn. Creasy 1839-50	2
Pigknoll	Ashburnham	42-0-24	Mary Isted 1830-35; Jn. Isted 1835-50	2
Potmans	Catsfield & Ninfield	109-2-31	Ann Adams 1830-41; Geo. Sargent 1841-50	2
Poundsford	Burwash	175-1-32	Thos. & Ed. Simes 1830; In hand 1830-32; Ed. Simes 1832-50	3
Rabbits	Warbleton	35-2-8	Thos. Burgess 1830-1850	1
Redlands	Ashburnham	63-0-0	Jas. Noakes 1838-45; Jesse Oliver 1845-50	2
Red Pale	Dallington, Ashburnham & Warbleton	115-1-34	Peter Bourner 1842-50	1
Riccards	Wartling	37-1-22	Wm. Holland 1830-32; Jas. Bellingham 1832-34; Jn. Collins 1834-50	3
Sackville (Old House)	Herstmonceux	194-3-15	Robt. Pursglove 1830-46; Jas. Morris 1846-49; Ed. Watson 1849-50	3
Scotsham	Burwash & Brightling	90-1-39	Jn. Westover 1830-31; Jn. Westover & Widow Clerk 1831-32; Widow Clerk & Wm. Dawes 1832-47; Wm. Dawes 1847-50; Noel Bourner 1850	5
Slivericks	Dallington	81-3-13	Is. Veness 1830-36; Jn. Veness 1836-40; Ed. Noakes & Is. Golden 1840-41; Wm. Noakes 1841-50	4
Sprays	Penhurst	288-2-37	Robt. Hembury 1830-31; Stephen Barrow 1831-35; Wm. Mitchell 1835-39; G. Lovell & Son 1839-41; G. Lovell Jnr. 1841-50	5
Vinehall	Mountfield, Whatlington & Salehurst	286-1-30	Jn. Simes 1830-46; Chas Simes 1846-50	2

Farm	*Location*	*Size*	*Tenants*	*Number of Tenants 1830-1850*
Wartling Hill (Court Lodge)	Wartling	308-3-10	Jn. & Francis Scrase 1830-32; Rich. Hicks 1832-38; Philadelphia Hicks 1838-50	3
Watkins Down	Heathfield, Warbleton & Burwash	47-2-32	Thos. Store 1830-31; Robt. Mitchell 1831-32; Wm. Hobden 1832-37; Jesse Mitten 1837-40; Wm. Webb 1840-42; Rich. Kealy 1842-43; Geo. Collins 1843-45; Nat. Piper 1845-48; Jas. Butcher 1848-50	9
Westdown	Burwash	169-2-29	Widow Hicks 1830-31; In hand 1831-33; Thos. Marchant 1833-44; Ed. Lansdell 1844-50	4
Williams Land	Wartling	34-2-17	Jn. Scrase 1830-32; Geo. Bray 1832-45; Robt. Pursglove 1845-50	3
Woods (Hoods) Corner	Dallington	44-0-33	Sarah Bartlett 1830-35; Wm. Bartlett 1835-47; Stephen Baker 1847-50	3
Woodsdale	Battle & Mountfield	261-2-32	Til. Smith 1830-40; Jas. Overy & Chas. Jenner 1840-43; Is. Mannington & Wm. Dawber 1843-46; Is. Mannington & Jas. Overy 1846-48; Is. Mannington 1848-50	5

Note 1. All measurements are in acres, roods and perches.

2. All changes in tenancy were at Michaelmas, except in the case of James Overy at Netherfield Place in 1840, who entered in May.

Source: Various (see text).

NOTES

1 The somewhat vague term 'area' is used deliberately to refer to a group of parishes, since there is a scale factor to be considered here. Many of the parishes in the Forest Ridge section of the High Weald are much smaller than those, for example around the Ashdown Forest, and the effect of one farmer leaving would therefore be exaggerated in percentage terms. To counter this one can use aggregated groups of parishes to give units of approximately the same size, thereby ruling out scale distortion. For details of the groupings used see B. M. Short, *Agriculture in the High Weald of Kent and Sussex 1850 to 1953* (A case study in the application of multivariate techniques in the field of historical geography), *University of London unpublished Ph. D. thesis*, 1973, 30-35.

2 Definitions of 'flat land' vary, but that adopted here is an average slope of 2° 50′ for each 1 km. grid square on the 1: 63360 Ordnance Survey maps. For further details see Short, op. cit., 61; and A. A. Miller, *Skin of the Earth* (1965), 46-9.

3 Statistically this was not a significant relationship, since a product-moment correlation coefficient of only +0.24 existed between the sizes of 59 farms and the number of tenancies from 1830 to 1850. The average size of farm was 137 acres, and the average number of tenancies was 3.

THE MURALS AT NEWTIMBER PLACE

By John Anthony Kiechler, Ph.D.

Introduction

The entrance hall at Newtimber Place, one of the moated manor houses in Sussex, is decorated with a remarkable series of neo-classical murals which appear to have received scant attention up to now. They are derived from the plates in " *Greek and Roman Antiquities* ", written for Sir William Hamilton by his protégé P. F. Hugues and published in folio at Naples, 1766-1767. A second edition appeared in 1801-1808 and an octavo edition at Paris in 1785. Hugues, writing under the pseudonym of D'Hancarville, makes it quite clear in his preface that the work is intended to serve not only as an illustrated catalogue of Hamilton's collection, but as a copy-book for architects and decorators.[1] He further proclaims his conviction in the suitability and application of " the antique," i.e. Greek and Roman classicism, for modern buildings.[2]

Enthusiasm aroused by the publication of such works as Robert Sayer's *Ruins of Athens and other Valuable Antiquities in Greece* (1759) and the more widely known *Antiquities of Athens* (1762) by Stuart and Revitt or Winkelmann's *Observations on the Architecture of the Ancients* followed two years later by his *History of Ancient Art* and in the same year the Adam brothers' *Ruins of Diocletian at Spalarto* explains doubtless just how a fairly minor country house came to be decorated not merely with motifs in the " Etruscan " manner, but with exact versions of Hamilton's plates; one is tempted almost to compare them and the significance attached to them, with medieval ecclesiastical wall paintings, in which, as Dr. Audrey Baker has so clearly shown,[3] each figure had its proper place and stance and implication.

The outer entrance hall at Newtimber, 39ft. long (19.05m.) by 20ft. (5.77m.) retains its original mantelpiece with male and female caryatides and ionic capitals, dated 1630, which seems to indicate that it forms part of the earlier Elizabethan building. The present structure is the result of re-modelling by Thomas Osborne about 1700. It is to his alterations that we owe the present entrance front facing east, two storeyed, of flint with brick window surrounds and a deep cornice supporting the hipped roof. The entrance hall occupies the centre four bays of this facade, with access directly from the main doorway. In 1741 the estate was purchased by Nathaniel Newnham and was sold to Charles Gordon in 1832 or thereabouts.[4]

[1] " Nous croirions ne pas avoir fait un pas de plus si les monuments que nous publions, étoient simplement pour les Artistes les objets d'une admiration stérile; mais nous penserons être allés plus loin, si c'est un art ancient que nous tirons du tombeau, si nous offrons ses premiers rudiments et le développement successif de ses maximes fondamentales, enfin s'il résulte une théorie telle, que pour passer à la Practique, il ne soit plus besoin que l'aptitude a exécuter ce que le travail et l'usage donnent à a main du moindre Artisan." P. F. Hugues (D'Hancarville), *Greek and Roman Antiquities* (Paris edition, 1785), 5.

[2] " Notre objet principal sera de suivre la marche de l'esprit humain dans la carrière des arts qui embellissent la Société et qui rendent la vie plus agréable. Op. cit. (Paris edition, 1785), 6.

[3] Audrey Baker, " The wall paintings of St. John's the Baptist, Clayton ", *Sussex Archaeological Collections*, Vol. 108 (1970), 65 *et seq.*

[4] T. W. Horsfield, *The History of Sussex* (1832), vol. 1, 180.

Any recorded evidence of the exact date of the hall decoration and the identity of the artist responsible seems to be lacking. But two possibilities come up for consideration, namely, Biagio Rebecca (1735-1808) and John Francis Rigeaud (1742-1810). An unlikely candidate could be Thomas Catton, who carried out work at Sheffield Park more or less contemporaneously and is mainly distinguished for his animal depictions. The respective attributive merits will be considered later, but the fact that either of these two artists come in question is closely linked with their biographical background, some circumstances of which might be relevant here. Details of Rebecca's early life are scanty. But it is known that he was born in 1735 at Osimo in the neighbourhood of Ancona. He made the acquaintanceship of George James, whom he accompanied to England, and became a student of the Royal Academy in 1769. It seems probable that he spent the early part of his studies in Italy just when *Greek and Roman Antiquities* were being prepared and published. At any rate, he was responsible for a large number of paintings in imitation of antique bas-reliefs, on staircases, ceilings and panels in England. Ceilings at the R.A. and some work at Windsor Castle was carried out by him; he also worked with Robert Adam at Kedleston, Harewood and Shardeloes and with James Wyatt at Heveningham, Heaton Hall and Goodwood. In 1786-87 he supplied mural decoration " in his best Etruscan manner " for the rotunda in Henry Holland's Royal Pavilion at Brighton.[1]

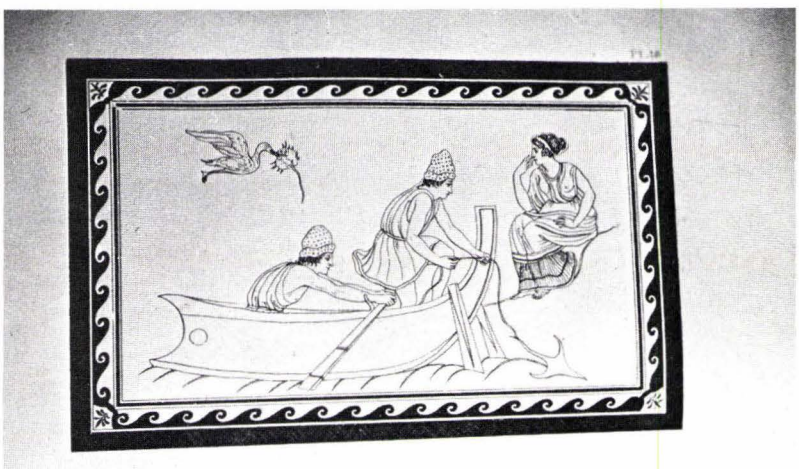
The second candidate, John Francis Rigeaud (1742-1810) was born in Turin of Franco-Swiss origin and, after a period of study, he visited Florence and Bologna where, at the age of twenty-four he was elected a member of the Accademia Clementina. He completed his studies at Rome in 1768, a year after the final volume of Hamilton's plates had appeared. During his stay in Rome he became acquainted with the group of English artists there, and their influence might have played a part in his decision to come to England. So he must have been familiar with the Hamilton plates before his arrival in England, at a time when they would still have been a topic of general interest and conversation among the cognoscenti. In this country he distinguished himself as a painter of decorative compositions " after the antique " in a number of country houses, and his activity included commissions from Lords Gower, Sefton and Aylresford, whose protégé he became and at whose house, Packington, he died. Like Rebecca, he carried out work at Windsor, assisted by his son Stephen Francis Rigeaud (1772-1862), who was admitted as a student to the Royal Academy in 1792. Excluding the possibility that the work at Newtimber was executed by a talented but, as yet, unidentified minor artist, it can be seen from the foregoing particulars that both Rigeaud's and Rebecca's careers ran on parallel lines and, being roughly contemporaneous, both must be seriously considered in the context of the Newtimber murals, even if no definite conclusion can be reached.

Iconography

For the purposes of this paper I shall confine myself mainly to the three principal panels in the hall, namely the panel on the north wall, that over the mantelpiece and the panel between the double doors on the west wall (Plates One, Two and Three).

[1] Henry Wigstead, *An Excursion to Brighthelmstone made in the year 1789 by Henry Wigstead and Thomas Rowlandson.* London, 1790. There is no numerical pagination, but the quotation appears on page H.

III. Marriage scene, depicted in woolwork on right hand near panel of canapé



IV. Version in Kirk from which the exterior end panels of canapé are derived

The mural on the north wall is an accurate version of the vase, plate 33, volume 2 in Hamilton's folio edition. Both vase and mural plate are reproduced at Newtimber. The former appears on the east chimney-breast jamb, resting on a pedestal embellished with the familiar conventionalised anthemion motif; the Hamilton plate lacks this added touch of decoration and is, further, uncoloured. In the 1785 Paris edition however, the familiar terracotta and black colouring occurs. It might be mentioned here that the west chimney-breast jamb has a vase motif likewise (Pl. 10, 12, D'Hancarville) representing Nemesis, minister of the vengeance of Gods, ordering Orestes to avenge the death of Agamemnon. With his customary fastidious and precise scholarship, D'Hancarville relates the subject to the scene in Sophocles' *Electra* where the choir chants " I see Nemesis advancing, in her hands rests the just punishment of those who committed the crime; yes, sister, she is approaching, there, my hopes did not deceive me." D'Hancarville comments: " Nothing could be more splendid, majestic and imposing than the figure of the goddess "; in contrast, " in the figure of Orestes, nothing is more remarkable than the impression of terror produced by the presence of this Goddess, who, according to Pausanius, was never more irritated than by the insolence of mortals ". She is portrayed with wings because the inhabitants of Smyrna were the first to attribute to her the activity of incessantly pursuing those guilty of offences against the Gods.[1]

The subject on the north wall is interpreted by D'Hancarville as the nuptials of Paris and Helen. The scene is Troy; Hecuba, who harboured a tender affection for Paris, is seated in the place of honour by the column; Helen, standing in front of her, is holding the crown which it was the custom to place on the heads of newly wedded couples, and which they made themselves beforehand. Behind Hecuba,[2] the standing woman is holding a cofferette containing wedding presents termed *numera sponsalitia* by Julius Pollux. Paris is seated next to Cassandra who is holding a sprite or *genius* to show that she possesses the gift of presaging the future. That this sprite is depicted touching Paris's forehead is a sinister omen, indicating the evils that are to follow upon the marriage. Paris himself is wearing the so-called *florida vestis*, a garment forbidden by the people of Syracuse as being too voluptuous and worthy to be worn only by female courtesans. D'Hancarville is of the opinion that the artist intended this as an oblique indication of the character of the person wearing it. Paris is holding a sceptre in his left hand (he is often called " king " by Homer), surmounted by a flower normally associated with Jupiter's sceptre. His head is turned, expressing surprise at the ominous presence of the sprite. The basket beneath him most probably contains the loaves of bread that Athenian custom required at the wedding ceremony. Immediately behind Cassandra, the second figure from the left stands Helenus, the soothsayer and son of Priam, who is identifiable by the staff topped with laurel leaves which he is holding. I have given here a compressed version of D'Hancarville's more detailed commentary which is supported by references to Homer, Aeschylus, Euripides and Virgil. He remarks:

> " Ce morceau est bien propre à nous faire connaître combien les Artistes anciens étoient remplis des plus sublimes idées de leurs Poëtes."

The composition is further notable for the fact that the border follows fairly closely the arrangement as it appears on the vase. The borders on all the remaining panels do not correspond to those in Hamilton. The principle that the choice of border should be left to

[1] P. F. Hugues (D'Hancarville) (Paris edition, 1785), 82-83.

[2] D'Hancarville (Paris edition) op. cit., 78.

the artist's discretion appears to have been generally accepted; this is evident from Kirk's "Introduction":[1] "The various beautiful borders which surround these designs were not so placed on the original vases, but served there merely to ornament the handles and other parts; nor the border and figures which are always upon the same vase."

Some attention should also be paid to the form the composition of the north mural takes. This goes back to the original plate in Hamilton, for it must not be forgotten that this is the immediate source of the mural and is, in turn, derived from the version that appears on the circular vase. A moment's concentrated observation results in the observer realising that Helen, the most important figure in the scene, is placed in the centre of the composition, and that centring on her, the caesura was made accordingly, with four figures to the left and right of her. Furthermore the composition as it appears is, in fact, divided into tripartite fields, by the pillar on the left and the staff in the hand of Helenus on the right (reversed right to left in the Paris edition, see plate 1). The strict adherance to a pre-determined form, in fact a geometrical sub-division on the principle of the golden mean, obviates the monotony of an uninterrupted procession of single figures. In deciding to break the vase motif where he did, the engraver was clearly following the potter's line of thought. The conception here is a combination of the Apolline or epic theory of beauty, the moment of form and expression, and the Dionysian moment of passion or emotion; this isolating of abstract moments in the concrete work helps to lead up to (what was so important for the contemporary neo-classical scholar or connoisseur), an awareness and experience of ideal beauty.[2] This striving after perfection explains the immense importance attached to pictorial decoration, as much as proportion, in classical architecture. It was indeed this frame of mind that, in its unremitting quest for the sublime as an aesthetic abstraction, led to a re-appraisal of Gothic architecture.

A curious lack of accuracy in work otherwise involving impeccable scholarship, is exemplified in the treatment of the mural over the mantelpiece. The Hamilton plate has a geometrical, interlacing border. At Newtimber (see plate 2) it has a stylised flower border, derived from Plate 55 in Hamilton, depicting a vase, the neck of which is decorated with the identical motif. The vase itself appears on the east wall between the windows south of the main entrance. The subject could not be identified in the folio volumes, but the painting faithfully reproduces the composition and colouring down to the last detail. Even the borrowed flower border, in a colour scheme of red, blue and white corresponds to the hand-colouring on the Hamilton plate. The same subject appears in outline and uncoloured in Kirk (second edition), with a border pattern corresponding to the one at Newtimber.

The most striking panel is that on the west wall between the pair of double doors, with batwing fanlights probably inserted contemporaneously with the murals. The mural is especially interesting, since in volume 2 of Hamilton the scene is depicted twice; plate 130 is given in the accustomed vase-style manner, while plate 22 (as is the case with the mantelpiece mural) gives a three dimensional version with shading, and heightened in grey-white. This latter version was obviously utilised for the Newtimber mural, and it is an almost *uncannily* accurate copy of the plate. The border, as has come to be expected, does not correspond; Hamilton has anthemium along the top, while the lower border is a broken key

[1] Kirk, *Outlines from Figures upon Greek Vases of the late Sir William Hamilton, with borders drawn and engraved by Thomas Kirk*. London, 1804 (first edition).

[2] *Cf.* E. F. Carritt, *The Theory of Beauty* (1914), 186, who refers to Pater's essays *Style and Giorgione*.

pattern. As can be seen the Newtimber panel has a geometrically interlaced border. D'Hancarville identifies the scene here as the race between Atlanta and Hippomenes.[1]

As can be seen from Plate One, each of the smaller door panels and wall spaces contains a single figure, or perhaps two, that have been isolated from one of the Hamilton plates. The subject is invariably treated with great exactitude, though the borders do not correspond to the originals. An interesting example of these smaller paintings is plate 43 in the folio (top-right-hand panel of the door, plate 20 in the Paris edition), representing a scene from a comedy. It depicts an actor, costumed as a slave, wearing a mask resembling Socrates and bearing in each hand a flaming torch. According to D'Hancarville, this is the type of mask employed by Michelangelo as the original pattern when designing his mask for Harlequin at the Commedia dell'Arte. The masks of Pantaloon, Punchinello and the Doctor also have their antecedents in the classical comedies. The stylised pineapple between the two figures indicates (*pace*, D'H.) that such theatre pieces were dedicated to Bacchus, whose festivals, according to Lucien, consisted of nothing but plays and dancing. The double flute, played by the female figure, and fashioned from bone or ivory, was invented by Minerva, according to Plutarch; Solmasius attributes it to Marsius, or his father Hyagius. D'Hancarville's commentary is typical of his sensitive, imaginative interpretation of the scene.[2]

One final interesting aspect of the interior is the group of apparently contemporary furniture, consisting of four single chairs, a settee and stool, all upholstered in woolwork, representing scenes from the Hamilton plates. Not all the scenes could be identified, but again the treatment follows the practice of fairly free improvisation. There is no strict adherence to the original borders and, to give one example that could be identified, the right hand panel on the back of the canapé appears as a roundel in the original plate.[3] According to D'Hancarville, it represents a marriage scene (Plate Four):

> The bride is seated, having been accompanied to the door of her husband to be; she is identifiable by her robe, the *peplum*, which has no girdle in contrast to her attendant, the *pronuba* who is holding the umbrella, likewise a symbolical accompaniment of the marriage ceremony. The *pronubus* or male attendant is holding the *guttus* or ewer, containing oil, which is to be poured on the bandelets or fillets in the hands *of the bride* and female attendant and which they will subsequently attach to the door posts. The male attendant is standing with one foot resting on the casket containing wedding presents.[3]

The outside end panels of the settee have an anthemium border in Hamilton missing on the woolwork panel; but there is a further interesting discrepancy: the vine branch which appears in the top right hand corner is missing in the original Hamilton plate and also in Kirk's edition. This appears to be the only occasion where an addition has been made to the orignal composition as it is given in the folio. In their present state, some of the coverings have been expertly repaired, evidently in exact reproduction of the original; but the significance of the furniture is that, stylistically, it contributes an important clue to dating the whole decorative scheme to the last decade of the eighteenth century and thus tends to confirm the date 1796 which will be discussed in the next section.

[1] P. F. Hugues (D'Hancarville), op. cit., plates 22, 130, in Hamilton.
[2] D'Hancarville op. cit. (Paris edition), 87.
[3] D'Hancarville op. cit., p. 87; plate 22, Hamilton plate 65.

Attribution

As has already been indicated, the attribution of the murals presents a problem, due to the lack of written information concerning the paintings. The first to be considered, Biagio Rebecca, was employed by the Duke of Richmond at Goodwood, where work had begun in 1790 on Wyatt's ambitious plan for an octagonal house. Rebecca's work can be seen in the library, where the ceiling has lozenge panels with paintings by Charles Reuben Riley, who died in 1798. It might well be that Rebecca was then called in to complete the lower dado panels of the bookcases. In 1791 he had designed Castle Goring, a schizophrenic essay in Gothic and Neo-classical styles, which remained unfinished for a number of years, and was never occupied by the owner, Bysshe Shelley. Chronologically speaking, this places him conveniently nearby at the time the Newtimber murals were carried out. He had previously decorated the Rotunda Room in the Etruscan style at the Royal Pavilion, so his work must have been well known amongst the Sussex gentry. Stylistically, however, his tromp l'oeil treatment of classical subjects tends towards an effect of Wedgwood reliefs; perhaps the closest parallel of the Newtimber work, with terracotta figures, in vase style is to be seen at Heveningham Hall in Suffolk, where he was working in collaboration with James Wyatt. From these circumstances it can be seen that Rebecca rates as a likely candidate.

At this point, mention should be made of a second series of paintings at Newtimber, this time on panel. They consist of a series in the dining room depicting exotic birds perched on branches amidst foliage, rather reminiscent of the " India papers " popular since the middle of the eighteenth century. There is a further panel at the head of the stairs representing a classical urn with foliage around it. This panel is dated 1796 on the back, although there is no signature. Supposing these panels were executed at the same time as the hall murals, they might well supply an important clue to dating. Rebecca would have been less involved with the work at Castle Goring and not yet working at Goodwood where, if my supposition is correct, he would have taken over in 1798. To identify the work on the evidence of style alone presents something of a problem, when dealing with Neo-classic pictures which conform so rigidly to a conventionalised style.

Turning now to the alternative attribution, John Francis Rigeaud, as we have already seen, his early life follows a similar pattern to Rebecca's studies in Italy; a sojourn in Rome just when the final volume of Hamilton's plates came out, and on friendly terms with the colony of English artists there. He arrived in England in 1772 and became a member of the Royal Academy in 1784. In the same year Dale Park at Madehurst, north of Arundel, was built, to designs by Joseph Bonomi. Whether or not Rigeaud made any contribution to the interior decoration will never be known, since the house was demolished in 1959 and documentation is again unavailable. There is no other recorded work by Rigeaud in Sussex, but he collaborated with Bonomi at Packington near Coventry, for the fourth Earl of Aylresford, and, like Rebecca, carried out some decorative work at Windsor Castle, assisted by his son, in 1806, having previously worked on murals at Trinity House.[1] Once again the dates line up conveniently, for the work at Newtimber, whether by Rebecca or Rigeaud, was most probably carried out at some time in the period between these two other works. The work at Packington is also a precise version of the Etruscan or Pompeian style, Rigeaud's interpretation of source material coming to light as a result of archaeological discovery. " None of the

[1] Marcus Binney, " Packington," *Country Life*, 23.7.1970, vol. cxlviii, 228.

subjects appear to be directly copied from the antique, but close parallels can be found in the volumes illustrating finds made in the excavations published by the Academy of Herculaneum from 1767 onwards, both for the large figures on the ceiling and the small panels, vases, bowls and urns."[1] The figures of animals include exotic birds on a black background reminiscent of those at Newtimber, but there is no suggestion of the black and red vase style, and the borders with key patterns and the foliate arabesques are on a scarlet background. And so, once more, there could be a tenuous connexion, but a dearth of positive confirmation. Nevertheless, although the attribution must remain inconclusive at this stage, it does not detract from the fact that one of the most accomplished and interesting series of neo-classical Greek vase murals in the country is to be seen at Newtimber.

ACKNOWLEDGEMENTS

My thanks are due first and foremost to Mr. John Clay of Newtimber for permitting me unhampered access to the murals and supplying such help and information as was available. Further, the staff at Brighton Reference Library, the Sussex Room at Worthing Library, the London Library and the Zentralbibliothek, Zürich; likewise Lady Aylresford who very kindly allowed me to inspect the Etruscan work at Packington, and last but not least, my colleague Mr. Peter Cole, B.A., who is responsible for the illustrations and was a source of great assistance during the work.

[1] Op. cit., 13.

SHORTER NOTICES

This section of the *Collections* is devoted to short notes on recent archaeological discoveries, reports on small finds, definitive reports on small-scale excavations, etc., and also to similar short notes on aspects of local history. Material for inclusion should be sent to Mr. Henry Cleere, F.S.A., Acres Rise, Lower Platts, Ticehurst, Wadhurst, Sussex. Those without previous experience in writing up such material for publication should not be deterred from contributing for Mr. Cleere will be happy to assist in the preparation of reports and illustrations.

A LEVALLOISIAN FLAKE FROM CATSFOLD FARM, HENFIELD—The flint artifact shown in Fig. 1 was found at Henfield during the spring of 1974 by Mark Streeter, a schoolboy, who is to be congratulated on observing it and recognizing its interest. The find-spot is at approximately TQ 1895 1609 and occurs on the land of Catsfold Farm. Here, the bed of the River Adur was being deepened by a dragline excavator, the spoil being dumped on the bank; the flint was found on the surface of the dump. Mr. P. Spear, of Henfield, kindly informed Mr. E. W. Holden of the find, and the writer is grateful to Mr. Holden for arranging for him to see the artifact and for providing the admirable drawing.

This artifact is a Levalloisian flake of medium-to-large size (by British standards), its maximum dimensions to the nearest millimetre when oriented as in Fig. 1 being as follows: length 134 mm, breadth 80 mm, thickness 22 mm. Its surface is patinated a creamy white over almost the entire area of both faces, and only a couple of tiny recent damage scars on the platform reveal the true dark-grey colour of the flint of which it is made. There is no more than the occasional spot of light iron staining. One substantial patch of cortex remains on the dorsal face (Fig. 1, *left*): its concave nature would have made it impossible to remove in the course of the primary flaking, without a drastic reduction in the size of the finished object. There are two small further patches of cortex surviving on the flake's faceted striking platform. The nature of all three cortex patches and their positions suggest that the parent core for this flake was shaped from a large nodule of chalk flint, doubtless of South Downs origin. Two features of the artifact's condition are worth noting: first, the ridges between the flake scars are not quite sharp, and secondly there is a small amount of exfoliation of the shiny surface adjacent to the largest cortex patch. Although the circumstances of finding make it highly likely that the artifact was latterly in an alluvial or fluviatile deposit of some kind, the pronounced patination without staining, the exfoliation, and the slight smoothing of the ridges taken together suggest the effects of weathering during prolonged exposure on the surface.

A Levalloisian flake is a flat flake, usually of oval or elongated shape, struck from a prepared core by a manufacturing process of several simple but important stages. First, a nodule is shaped to correspond roughly to the intended shape of the flake. Secondly, trimming flakes are removed from the core's upper face from points on the circumference until the surface is even and slightly domed. Thirdly, a striking platform is carefully prepared (unless a suitable one already exists) at one end of the shaped core. Finally a hard blow is struck at the correct angle directly on to the prepared platform to detach the flake, whose outline shape follows that of the upper surface of the core, where the careful doming is also important in that it both facilitates the removal of a large flake and also gives it regularity of shape and section.

Any typical Levalloisian flake bears clear evidence of this manufacturing process, both in the primary scars on its dorsal face, which are incomplete because their proximal ends have been left behind on the core, and usually also in the facets on its striking platform, which represent the careful primary preparation of the latter. Some of these facet scars should also be incomplete, since their distal ends will have been left behind on the core; if this is not the case, the faceting of the platform could be secondary (retouch) rather than primary (preparation). Figure 1 clearly shows that the Henfield flake does bear correctly these hallmarks of Levalloisian technique on both dorsal surface and platform.

This particular specimen also bears clear traces of retouch subsequent to manufacture round much of its circumference, including some rather unusual invasive work on the bulbar face (Fig. 1, *right*). Any large sharp flake is liable to show secondary scars along its edges, and they may be caused by damage (ancient or recent), utilization, or retouch or by some combination of these. In the present case, almost every one of the secondary scars is ancient, and they are far too substantial in most cases to have resulted from utilization. A few probably represent ancient damage, but the distribution of the rest certainly appears purposeful rather than random and we may reasonably conclude that they are retouch which was intended to blunt the edge here and thin it down or strengthen it there to adapt the flake for its intended use, whether held directly in the hand or hafted in some way. There are plenty of Levalloisian flakes from British sites which do show clear retouch, but, since the technique of manufacture was designed to produce without more ado a sharp-edged tool of predetermined shape and size, retouch was not always required and wholly unretouched examples are common.

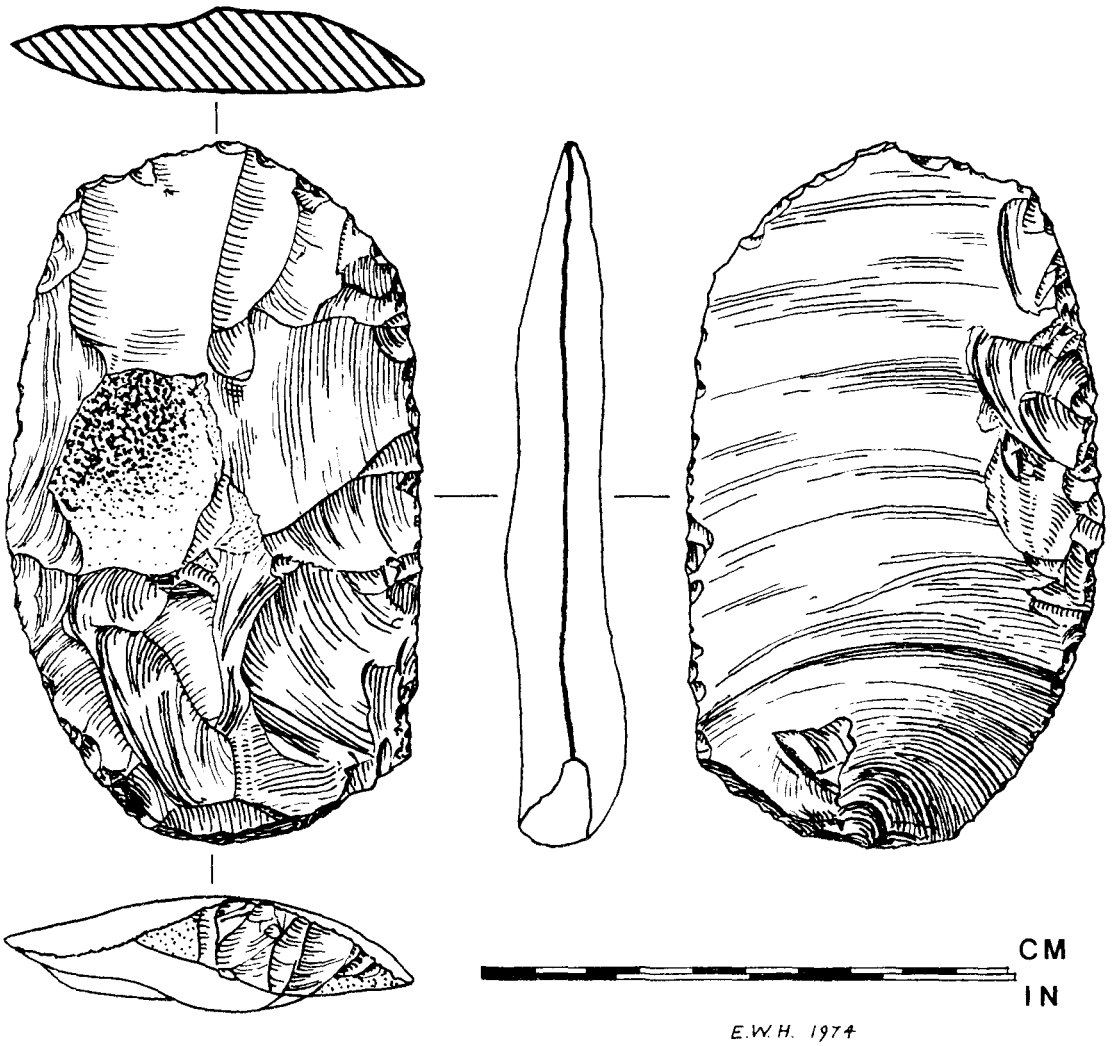


FIG. 1. LEVALLOISIAN FLAKE FROM CATSFOLD FARM, HENFIELD.

The deliberate invasive working of part of the bulbar face of the Henfield specimen is certainly an uncommon feature. It is conceivable that this represents the first stage of an attempt to turn the flake into a mainly bifacial implement of some kind, but in that case one would have expected to see fewer and larger scars, while the careful retouch elsewhere would then seem unnecessary. Whether the Henfield flake was actually used, and if so for what task, remains uncertain. Mr. L. H. Keeley examined it microscopically for wear traces, at the writer's request, but the well developed patination and the slightly worn condition together proved enough to mask any evidence there might have been in the form of striations or polish from use. An almost perfect state of preservation is in fact required for effective microwear analysis, which is always a difficult business.[1]

As regards the classification ' Levalloisian ' (after a French type-site), it must be stressed that this term should only be used to refer to a manufacturing technique, and not to a culture, although the literature of the European Lower Palaeolithic up to the 1940s and even 1950s frequently refers to a Levalloisian Culture, divisible into numbered stages. The technique is in fact widely found in time and space, and must certainly have been re-invented many times in the prehistoric period. In Britain, its earliest occurrence is in a Lower Palaeolithic context, and

1 cf. Keeley, L. H., *World Arch.* 5 (1974), 323–36.

in the well-known sequence in the Swanscombe (Kent) area of the Lower Thames valley it first appears sporadically in the Middle Gravels of Barnfield Pit[1]—i.e. in the later part of the Hoxnian Interglacial. Shortly afterwards, the technique emerges to dominate a remarkable and specialized industry of Wolstonian age at Baker's Hole, Northfleet, Kent.

It is clear from the British and Continental evidence that Levalloisian technique was well known to many later Acheulian groups, though others appear not to have used it, and that it played an important if variable part in Mousterian flint-working technology all over Europe and beyond. Only very occasionally in a few areas—e.g. in Britain at Baker's Hole and again at Creffield Road, Acton[2]—is it so dominant at a particular site that it becomes possible to call the industry there specifically Levalloisian; such occurrences do not add up to a Palaeolithic culture. In any case, the technique occurs on several occasions in Upper Palaeolithic industries and is even known in the Mesolithic;[3] there are certainly still later occurrences than this, for example at certain Neolithic flint-mining sites, including Grimes Graves. The working of some of the famous widely traded Grand Pressigny flint is also by an essentially Levalloisian technique.

We would be rash therefore to try and assign a definite age to the isolated Henfield find, even though it undoubtedly bears a superficial resemblance to some of the Baker's Hole flakes. We do not know how or when it may have become incorporated in the presumably relatively recent alluvial or fluviatile deposits from which the digger seems to have brought it to the surface from an unknown depth. The chances are, taking everything into consideration, that it *is* of Palaeolithic age, and most likely later Lower Palaeolithic or Middle Palaeolithic, but even this remains speculative. Assuming it to be correct, however, it remains only to comment that the corpus of recorded Sussex Palaeolithic artifacts continues to grow, not least at Henfield thanks to the efforts of Mr. Spear and now also of Mark Streeter. Levalloisian technique, in fact, remains sparsely represented in the county. There is a flake marked ' Ashdown ' (which presumably refers to Ashdown Forest), now in Plymouth Museum, and one from Seaford in the British Museum; there are single Levalloisian cores from Beachy Head, Friston, Litlington (a rather doubtful unstruck example), and Peacehaven, all in the Barbican House Museum at Lewes. All these artifacts are rather small by comparison with the Henfield flake. The Beachy Head core is interesting, because it was apparently previously a complete and typical handaxe and was then turned into a core of Levalloisian type. The British Museum (Natural History) has a very small core and two flakes in very fresh condition, found at Selsey by R. J. Parsons, apparently in association with remains of *Palaeoloxodon antiquus;*[4] they have been described as Levalloisian, perhaps justifiably, but they are not really examples of the technique in its classic form as described above. Grinsell[5] refers to further Levalloisian cores from Alfriston and Pig Dean, though the writer has not himself come across a convincing example from either place. Grinsell also illustrates the Peacehaven core.[6] Finally, Calkin also claimed a Levalloisian element in his finds from the famous Slindon site:[7] the present writer is unable to confirm this on the basis of what he has seen, but the whereabouts of a fair amount of Calkin's material is uncertain at present.

The Henfield Levalloisian flake remains in the finder's possession for the moment.

DEREK A. ROE.

A SECTION THROUGH THE IRON AGE PROMONTORY FORT AT BELLE TOUT—As part of a scheme to tidy-up Belle Tout (TV 557 996), the National Trust decided to bury the telegraph wires from the Coastguards' lookout down to their cottages in Birling Gap. As the earthworks on Belle Tout are all scheduled under the Ancient Monuments Acts, the Trust gave the Department of the Environment three months' notice of their intention to dig this trench. The Department then invited the Sussex Archaeological Field Unit to watch the excavations. The author, together with Mr. K. Suckling, observed the work from 6 to 10 January, 1975.

The multi-period site at Belle Tout has been studied in considerable detail by Mr. Richard Bradley. A Mesolithic site[8] was located beneath the Beaker settlement[9] excavated in 1968/69 and two sections were cut through pre-Roman Iron Age earthworks.[10]

The trench excavated in 1975 (Fig. 2) was machine-dug some 3ft. wide. Although conditions for observation were not ideal, the only artifacts found were three indeterminate flint flakes. With the exception of the section through the earthworks, no other archaeological features were recorded.

The section through the earthwork largely confirmed Bradley's observations, although no evidence could be found for the two phases located by him.[11] This may have been due to excessive erosion of the bank at this point, although the considerable variations in height of the bank would perhaps suggest that it was only reconstructed along some of its length. The bank, as it survived, consisted of a low mound of small chalk rubble with some brown, friable soil (Fig. 3, layer 2) resting on a buried land surface (Fig. 3, layer 7). The ditch was of a shallow U-shaped profile, with heavily eroded sides and a flat bottom very similar to Section A dug by Bradley.[12] The ditch fill consisted of primary silting with chalk rubble (Fig. 3, layer 6) overlain by brown, friable soil with chalk

1 Tester, P. J., *Arch. Newsletter* 4 (1952), 118–9; Wymer, J. J., *Lower Palaeolithic Archaeology in Britain as represented by the Thames Valley* (1968), 343.
2 Wymer, op. cit. (1968), 263-7, also quoting the earlier literature.
3 Wymer, J. J., personal communication.
4 For an account of coastal Interglacial deposits of the English Channel, including those at Selsey, see West, R. G., and Sparks, B. W., *Phil. Trans. Roy. Soc.* **234B** (1960), 95–133, though these flints are not mentioned.
5 Grinsell, L. V., *S.A.C.*, **70** (1929), 180–1.
6 Grinsell, *op. cit.*, 176, Fig. 9.
7 Calkin, J. B., *P.P.S.E.A.* **7** (1935), 333–47.
8 Bradley, R., *Sussex Archaeological Society*. Occ. Paper No. 2.
9 Bradley, R., *Proceedings Prehistoric Society* **36** (1970), 312–70.
10 Bradley, R., *S.A.C.* **109** (1971), 8-19.
11 *Ibid.*, 11.
12 *Ibid.*, Fig. 1.

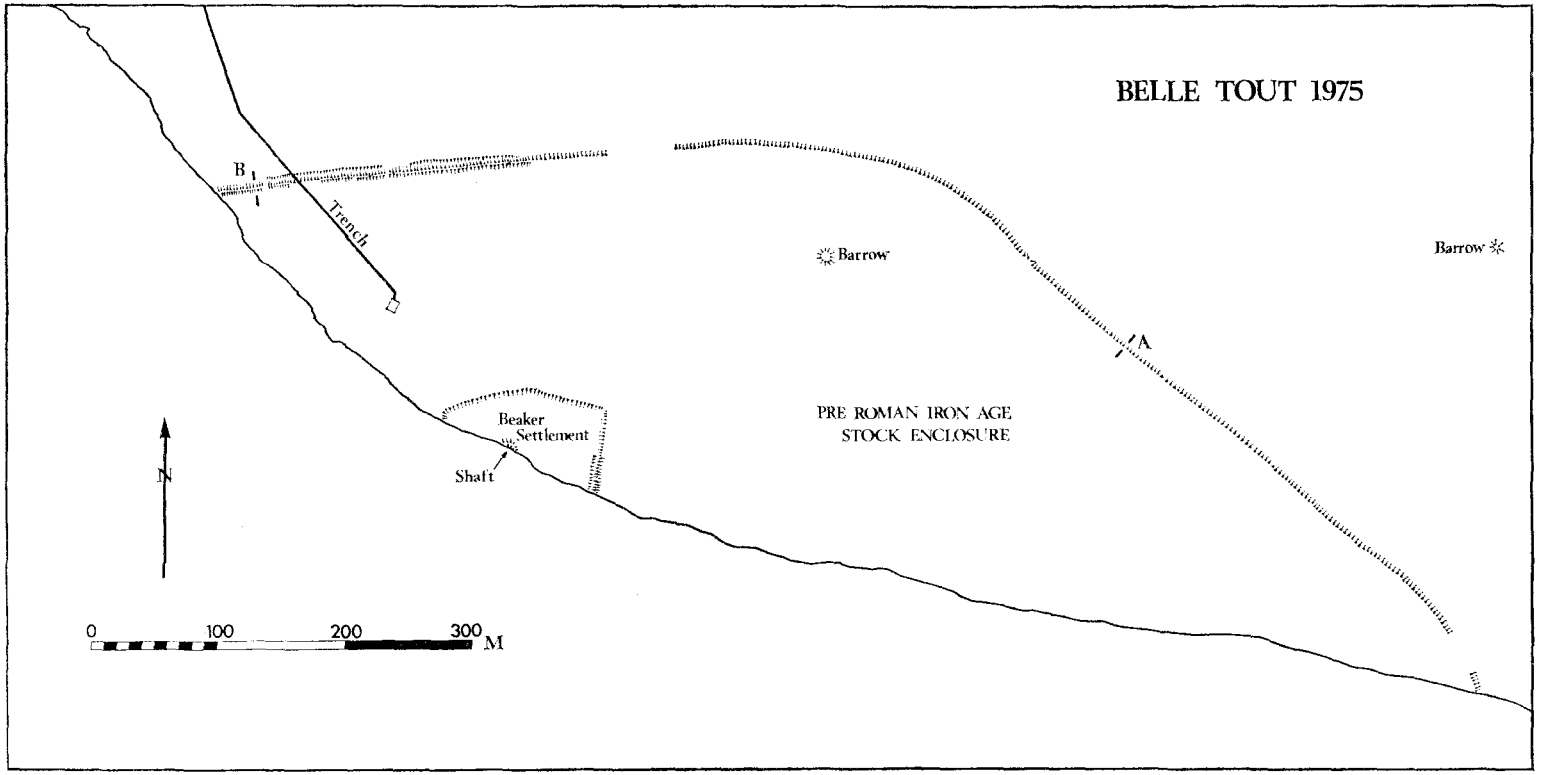


FIG. 2. BELLE TOUT 1975: Plan of pre-Roman Iron Age stock enclosure and position of trench.

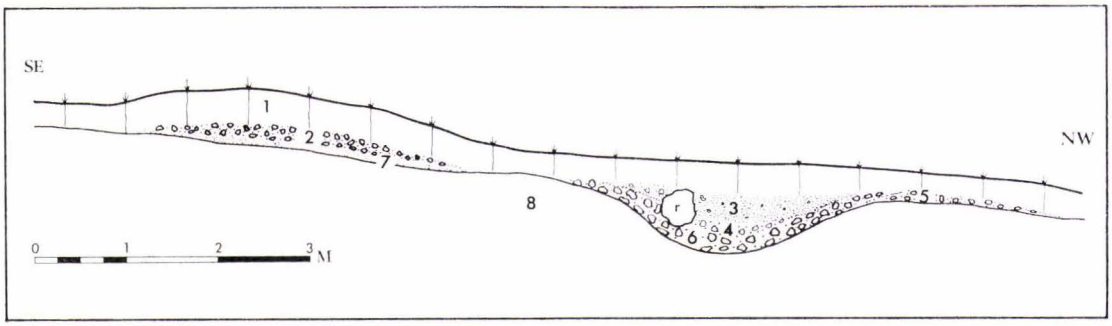


FIG. 3. BELLE TOUT 1975: Section through earthwork of pre-Roman Iron Age stock enclosure

lumps (Fig. 3, layer 4) and final silting consisting of fine brown friable soil with some chalk flecks (Fig. 3, layer 3). A slight trace of a counterscarp bank of loose fragments of weathered chalk (Fig. 3, layer 5) was found on the north-west side of the ditch.

The observations from the 1975 watching brief, therefore, offer no evidence to suggest that the earthworks at Belle Tout (like several other feeble and extensive univallate enclosures) are not the remains of a pre-Roman Iron Age stock enclosure as suggested by Bradley.[1] Indeed, the total absence of any occupation debris along the arbitrary line of this trench reinforces this suggestion.

P. L. DREWETT

SURFACE FINDS ON HOUNDEAN/ASHCOMBE FIELD (TQ 389 099)—A short introduction to this site was published in *Sussex Archaeological Collections* vol. 111 (1973), p. 111. It referred to surface collections made between January and July, 1972. However, work continued there until March, 1974, and this note is intended to bring the material up to date, since no further systematic examination of the site is deemed necessary. The finds collected during the past 20 months have naturally increased the range of material, but the original dating of the occupation of the site (based on pottery) remains unaffected, i.e. Late Bronze Age to Romano-British.

Since 1972 the plough has exposed a further quantity of human bones in the two closely related points of concentration originally thought to be a burial area and which happens to coincide with the site of the two southernmost tumuli of a group of five. The late Dr. H. B. A. Ratcliffe-Densham saw virtually all the skeletal remains and said that they represented at least eight individuals; they could be Roman or Saxon, but their condition was rather better than he normally associated with Saxon burials.

The number of sherds from the site totals over 1,840, but the main interest of this note lies in the large collection of flints. These add a new dimension to the picture and have redressed the imbalance presented by the earlier finds, amongst which flint played a negligible part. On a preliminary analysis the collection consists of over 2,130 struck flakes, 50 cores and some 240 artifacts, of which 30% are scrapers and 9% nodular hammers and choppers; there are several axes, borers and a tranchet arrowhead. The remainder consists of 'fabricators' and flints showing signs of use or secondary working. The assemblage might suggest an earlier occupation than that indicated by the pottery, but independent support from associated finds is lacking.

The potential of this site is by no means exhausted, but as the collection of finds to date gives a fair indication of its nature I do not propose any further work there apart from keeping it under review. Two small adjoining fields lie on the east and west flanks of the spur occupied by the above settlement. So far these have produced the same range of finds as the main site, but in relatively smaller quantities. One particular concentration of flints on the eastern field has yielded several fine artifacts including a beautiful burnisher/rubber with a glass-like working surface. Another small field on a lower subsidiary spur lying to the north-east (TQ 3920 1025) has produced flint and sherds within the same range. I hope to complete work on these three fields in due course.

I am again indebted to Mr. E. W. Holden and Mr. N. E. S. Norris for their help. All the material from the Houndean/Ashcombe site, along with a final report, is in Barbican House.

JOYCE T. M. BIGGAR

BOWL BARROW AT WESTDEAN, NEAR EASTBOURNE (TV 5263 9835)—Another barrow not mentioned in Grinsell's 1930 survey[2] has to be recorded. It was first noted by Mr. K. Blood of Ordnance Survey (Archaeology Division) in 1973 and visited by the writer and Mrs. Holden in 1974. It is not immediately recognizable as a barrow for it lies on a gentle northward-facing slope, with only faint traces of a ditch in places and there is a depression in the centre, showing that it has been dug into at some time in the past. It is situated on the north side of an ancient, disused grass track, a quarter of a mile east of Foxhole Cottages, in the Seven Sisters Country Park, once in the parish of Exceat (or Excete), but now Westdean. The overall diameter of the mound is about 25 paces (following Grinsell's method of measurement) and an average of 5ft. high.

E. W. HOLDEN

1 *Ibid.*, 16–18.

2 Grinsell, L. V., *S.A.C.*, 75 (1934).

ITFORD HILL FLINT ARTIFACTS—In the report of excavations at the Middle Bronze Age cemetery-barrow[1] there is reference to 'Depression C' which lay some 90m between south-west and west-south-west of the barrow. This hollow was considered to be the same age as the barrow and settlement. Of an estimated 1200 flint flakes recovered from the excavated part of the hollow, the writer selected 200 at random, and these have been measured by Mr. Richard Bradley (too late for the earlier report). The length/breadth relationship is depicted in a scatter diagram (Fig. 4). This demonstrates graphically that the flakes possess the same characteristics as flakes from the barrow, which adds weight to the inference that Depression C was in use during the life of the main settlement.
E. W. HOLDEN

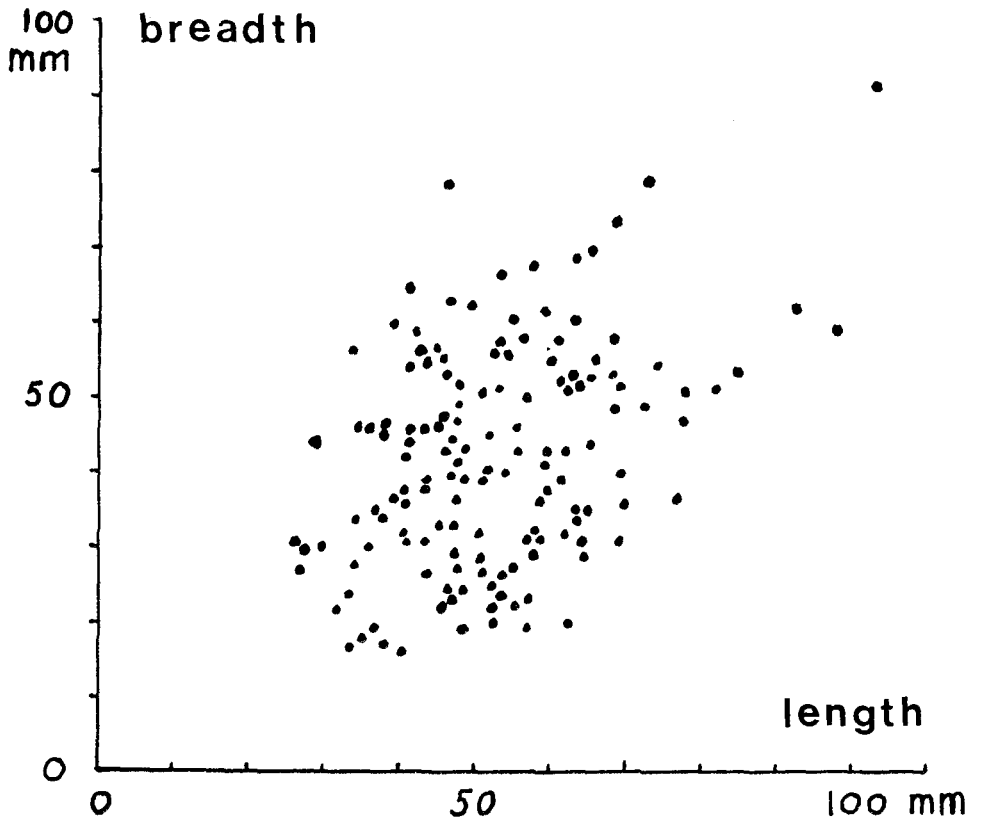


FIG. 4. ITFORD HILL: Scatter diagram of flint flakes in Depression C

SANDSTONE EXTRACTION AT EASTBOURNE—In 1973 'The Eastbourne Roman Villa'[2] by the late Thomas Sutton was reprinted through the initiative of our members Messrs. L. Stevens and R. Gilbert, who added a valuable supplement, thus helping to clear up various obscurities and presenting the entire subject in a wider setting. This supplement (p. 24) contains an extract from the *Eastbourne Gazette* of 11 September 1878, which the authors say " may or may not be relevant [to the Roman Villa] ". The news item is as follows:

Peculiar Discovery at Eastbourne

On Friday last as the workmen engaged by Messrs. Wallis in the erection of the new Mutual Improvement Society's Hall [now the Tivoli] at Eastbourne were digging the foundations in the Field House field, opposite the Devonshire Hotel, they discovered about a foot under the surface of the ground a brick arch. This was removed, and a well, 5ft. 6in. in diameter, and of considerable depth, was opened. The air proved very obnoxious, but at length a man descended, and he then ascertained that the diameter lessened to 5ft. at a depth of 12ft. from the surface, but that below this it was enlarged to a diameter of 16ft. and formed an immense tank to the depth of 36ft. The soil for nearly half the distance was loam and clay, the lower part being sand

1 *S.A.C.*, 110 (1972), 84–6.

2 Originally published in *S.A.C.*, 90 (1952), 1–12. Reprint obtainable from Crain Services, 22 New Upperton Road, Eastbourne, 60p, post free.

rock. At the bottom a quantity of bones, sufficient to fill two sacks, were found, and these, on removal, proved to belong to some large animals, two heads remaining perfect. They were taken to the residence of Col. Manby, Old Town, who pronounced them to be mules. The use to which the large cavern had been put is not certain, but it may probably have been the hiding place or storage for the smugglers, who not many years since infested the Sussex coast. On Saturday the hole was filled up.

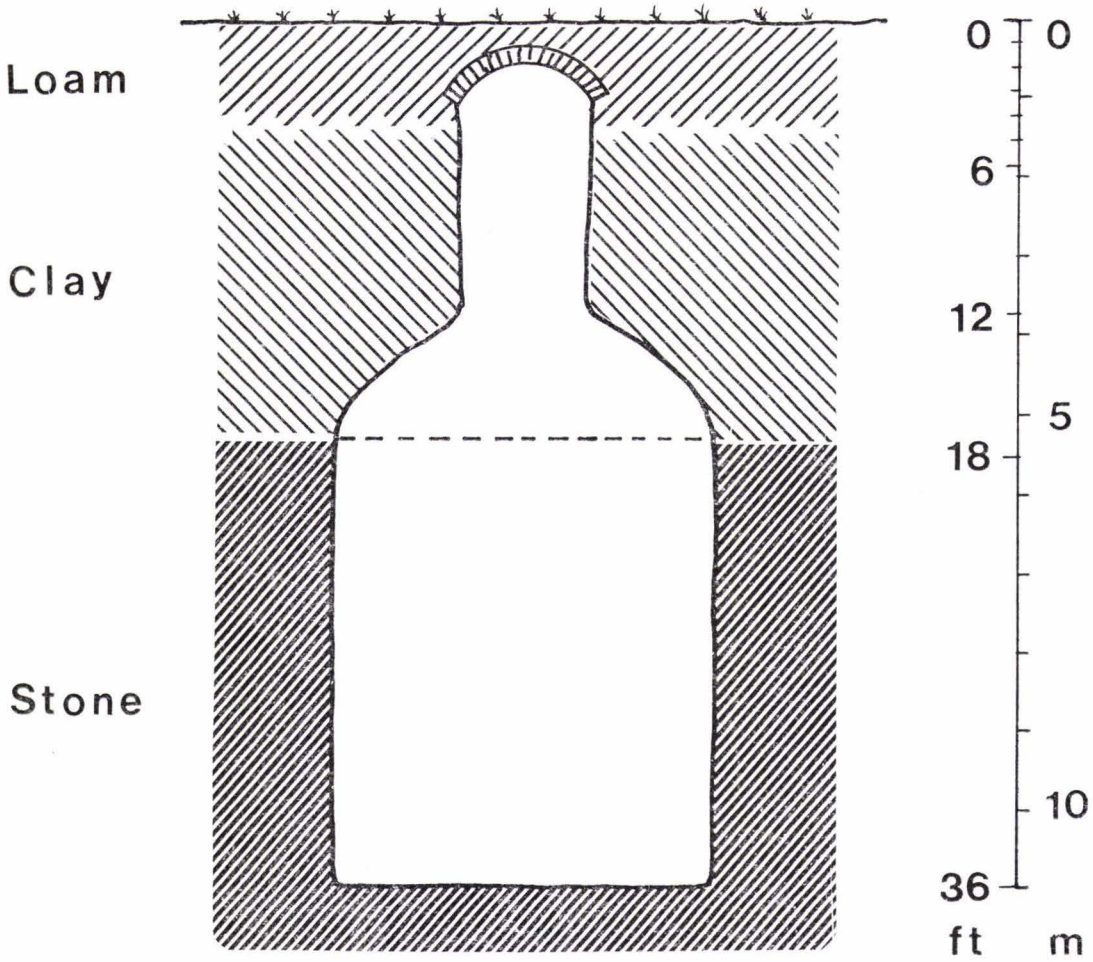


FIG. 5. EASTBOURNE: Theoretical vertical section of stone ' well '

The Roman villa lay in the same meadow as the underground chamber and shaft. A drawn section has been made from the measurements given above (Fig. 5), but it is not clear from the news report whether the depth of 36ft. should be the depth of the main chamber, or whether it should be taken from the surface. I have assumed the latter, but the principle of the underground working is not affected thereby.

I suggest that the underground chamber is a stone ' well ' made for the purpose of extracting greensand for building or other purposes, where the overlying loam and clay was of such a depth as to make opencast quarrying more costly, or where the land was not permitted to be developed into opencast workings. Such underground excavations are well known in Kent and Essex as ' deneholes ' or chalkwells for the extraction of chalk where the latter is overlain by thick deposits of sand, loam, or clay.[1] There is some, though often conflicting, evidence for their

1 See *Arch. Cant.* 74 (1960), 81–90 ' Some Early Chalkwells in NW. Kent,' by J. E. L. Caiger; also, by the same author, ' The Denehole Controversy,' *Proc. Croydon Nat. Hist. Soc.* 54 (1954), 132-44.

use in the Roman period and they are known from medieval times up to the 19th century. Less known is that at Brightling in north-east Sussex extraction of Jurassic limestone was still practised in 1898, as described by the celebrated Charles Dawson in one of his more useful papers, entitled: " Ancient and Modern Deneholes and their Makers."[1] Shafts, similar to wells, were dug through the superincumbent shales to a depth of about 40 or 50ft.; the cavity was then belled out to 15ft. or more diameter on to the upper surface of the limestone and the stone was removed to a safe depth. Four arched lateral chambers were then dug (the same as in Kent, with variants), for the extraction of yet more stone. Some Kentish pits, like that at Eastbourne, had no side chambers. As one pit was finished it would be filled with the spoil from the next pit. In this way, the land would still be available for agriculture. At Brightling, the limestone was spread over the arable fields nearby to improve the soil, as was the chalk in Kent. Dawson mentions descending two chalkwells in Brighton, but does not give their exact locations.

Drawn sections of the Kentish workings[2] are remarkably similar to the Eastbourne well (except for some lateral chambers), in one case, even to the brick arch or dome at the top of the shaft. At Gravesend a chalkwell with a 5ft. diameter shaft has a brick arch at the top which is dated to the 17th century.

Most ancient deneholes in Kent and north-east Sussex subsequently have collapsed, leaving shallow depressions, or ' bell-pits ', similar bell-pits being common also in the areas of the Weald where iron ore was extracted. The fact that the Eastbourne pit had not so collapsed suggests that the clay overburden was extremely stiff and, coupled with the brick arch (not stated to be Roman bricks) suggests that it is comparatively recent, that is to say of post-medieval date, possibly about the same time as the Gravesend pit. It may be a single pit dug for a specific purpose, for it will be noted that it had not been filled in with surplus soil from another working as was the usual practice. There is always the possibility that it might be the last one in a series of pits when there was no more filling material available.

The 1in. Geological Survey map for Eastbourne (Sheet 334) shows a narrow strip of Upper Greensand close to the foreshore running south-west from the western end of the town. Farther east, including the site of the villa and the stone pit, the greensand has been covered by later deposits. The Roman villa was said to contain local greensand, and Sutton states that there was a large greensand quarry of a surface nature a little westward of the villa, inferring that the quarry was there in Roman times, which is not improbable. Greensand was also utilized for the sea-wall at the villa site in 1848–9,[3] the stone presumably being obtained locally, but probably not from the pit discovered in 1878, as it is unlikely that local memory of the workings would have vanished completely in thirty years.

The quantity of stone taken from the Eastbourne pit is considerable, the solid mass being 16ft. diameter and at least 18ft. high, which is 3,620 cu. ft. If 20% is deducted for waste, there is left 2,896 cu. ft., which would be enough to build, say, a wall 145ft. long, 2ft. thick and 10ft. high. Even the waste could be used for hardcore. All that, with hardly a mark on the surface on completion, a far cry from modern opencast quarries, which can sterilize productive agricultural land for generations.

The publication of the 1878 news report by Messrs. Stevens and Gilbert, while not necessarily relevant to the Eastbourne Roman villa, is fortunate in that it throws light on a method of greensand extraction in Sussex not hitherto known, although similar methods were used elsewhere for gaining chalk and limestone. There may well be other stone pits below parts of modern Eastbourne and now that the purpose of such pits has been learned, local archaeologists, especially industrial archaeologists, should be watchful for others in suitable stone-bearing areas of Sussex.

E. W. HOLDEN

HOLE HOUSE, BARCOMBE: A MEDIEVAL FARM—By kind permission of Mr. A. W. Sclater I was permitted to walk over his land attached to Delves Farm (TQ 435 164) and Scufflings Farm (TQ 432 166), Barcombe, which includes the site of Hole House (TQ 439 170). This latter farmstead was completely demolished about 20 years ago and its site is now only represented by its well and a scatter of tiles and building materials on the surface of an arable field Just below the site two patches of dark soil can be seen, and on these some 50 sherds of pottery were found, dating from the thirteenth or fourteenth centuries to recent times.

The Place Names of Sussex[4] gives a late thirteenth-century date for Delves Farm and the nearby, but now derelict, Gallop Farm (TQ 438 167), but does not refer to Hole House which, in view of the above evidence, would seem to be of comparable date.

The ancient roads that led to these farms can still be seen by reference to the 6in. Ordnance Map (1911 edition). At two of their junctions are wide triangular spaces known as ' Greens ', i.e. Blunts Green (TQ 442 169), and Deans Green (TQ 441 165). The latter name also probably dates from the thirteenth century.[4]

The pottery will be placed in Barbican House Museum, Lewes.

C. F. TEBBUTT

1 *Geological Mag.*, N.S., 5 (1898), 293–302. There is a copy in the Society's Library among ' Sussex Pamphlets.'
2 Caiger, J. L., *Arch. Cant.*, 74 (1960), Fig. 1.
3 *The Eastbourne Roman Villa* (reprint 1973), 5 and 20.
4 A. Mawer and F. M. Stenton, *The Place Names of Sussex* 1930, 2, 314.

A BLOOMERY SMITHY HEARTH AT ETCHINGWOOD, BUXTED—Early in 1974, in ploughing a field at Etchingwood, Buxted (TQ 502 226), an obstruction was encountered which proved to be a large irregularly shaped lump of iron slag or cinder roughly measuring 24 x 14 x 14in. Around it similar but smaller pieces were found. The writers then cleared a square over the area down to the natural clay and soon discovered that the slag had all been contained in or over an oval pit dug into the natural (see Fig. 6). It was at once noticed that, in horizontal section, the edges of the north half of the pit were burnt red, while those of the south half were burnt dark-grey, shading to red away from the edge. The pit did not appear to have had an artificial lining. Further excavation revealed the differences between the two halves.

The south half

This half, from the grey colour of the inside walls and bottom, had at some time been subject to great heat, almost certainly induced by bellows. It was filled with scale and lumps of slag or cinder, some fused together, in roughly horizontal layering. Some slag lumps had, imbedded in them, small pieces of pure iron and also charcoal of faggot size.

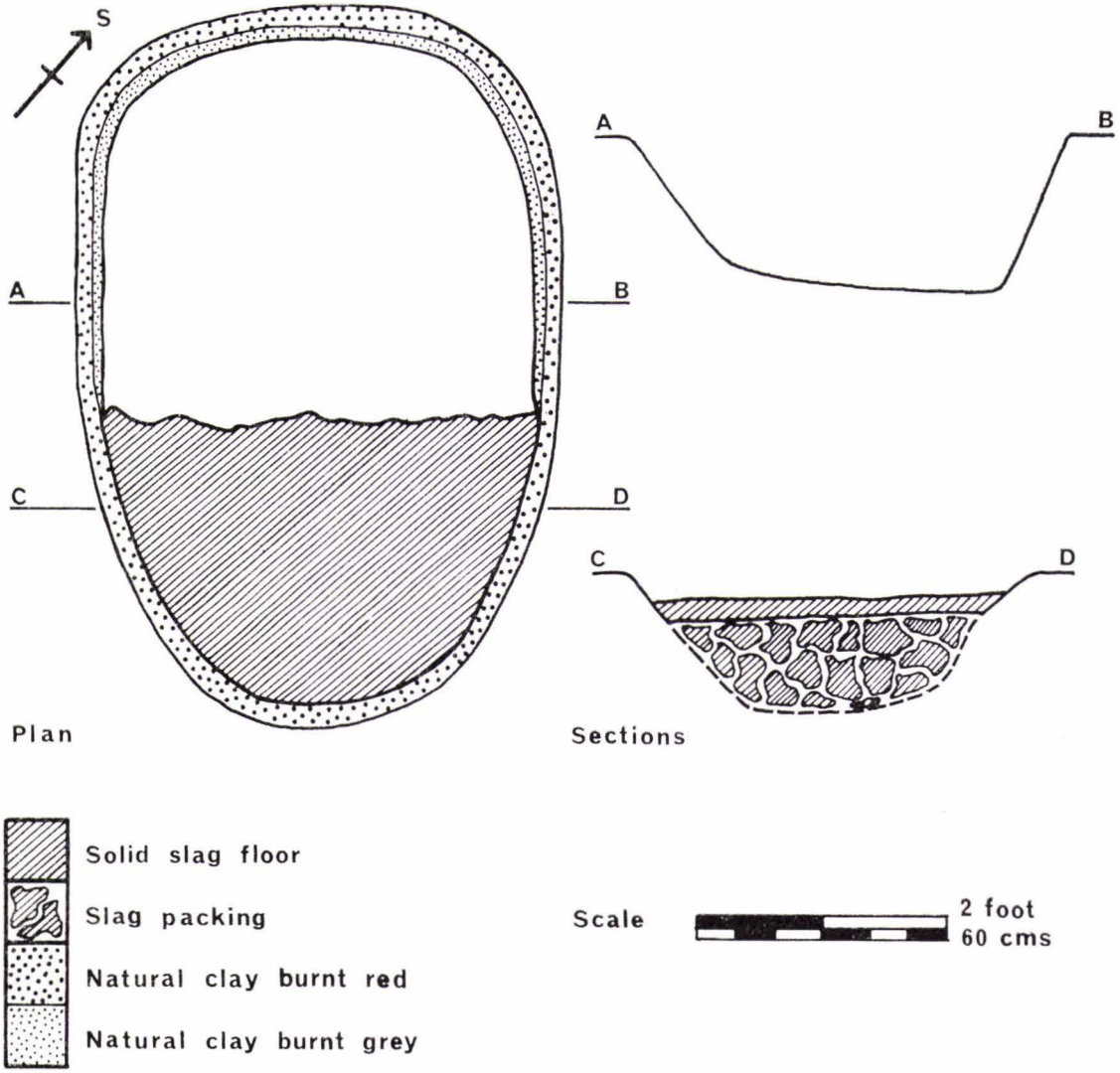


FIG. 6

The north half

In this half the heat had been less intense, only turning the walls red. On the top were lumps of slag, as on the other half, but at a depth of 4in. a perfectly flat solid floor was found, supported by lumps of slag which filled the bottom of the pit. On close examination this floor was found to have been made from molten slag which must have been smoothed level as it cooled and consolidated, *in situ*, to fill the space occupied, and shaped to the outlines of the pit.

The interpretation of the above facts is difficult, although the feature obviously belongs to the bloomery iron smelting process. It is suggested that it may have been a hearth to which raw blooms were brought from the furnace to reheat and purify. The south end would be used for reheating, perhaps in a slag bath, while an anvil stood on the level floor at the north end.

Unfortunately no evidence of date turned up, although trenches 3ft. wide and 10ft. long were dug north, west and east from the pit, neither did they show any evidence that the site had been enclosed within a building.

The site is on Wadhurst Clay and iron ore is scattered over the field. About 150 yards to the north is a small brook and just across it, at TQ 502 228, a drainage trench, dug in 1974, cut through an ore-roasting area. All along the banks and bed of the stream iron cinder and tap slag from bloomery furnaces occur, and at TQ 498 225 a mass of cinder and slag, cut through by the stream, produced pottery of the 13th century.[1]

This type of hearth does not seem to have been previously recorded in the Weald and, until a dated example is found we can only, by association, provisionally date it to the medieval period.

We would like to express our grateful thanks to Mr. H. F. Cleere and Mr. D. S. Butler for their valuable advice and help, and to Miss F. Marsden for the drawing.

P. ARCHIBALD and C. F. TEBBUTT

A POSSIBLE MOATED SITE AND MEDIEVAL SALTERNS AT BRAMBER—The writer watched sewer trenches during 1973–4 at Bramber and Upper Beeding. No archaeological remains were encountered except in Bramber, north of the A283, where a N–S trench ran close to the western edge of a possible moated site north-east of Bramber's main park at TQ 1888 1073.[2] Here the machine excavator threw up a few indeterminate sherds of medieval pottery, fragments of West Country roofing slate, pieces of clay roofing tiles, and oyster shells. One sherd from a glazed bowl may be of Tudor date. No structural remains were seen in the side of the trench, but the finds suggest that there is the possibility of a building once standing more to the east within the embanked enclosure north-east of the sewerage pumping station. This enclosure is roughly 200ft. square, with a meandering deep wet ditch on the east and a broader deep wet ditch to the south. The north and west sides possess a faint bank with a dry shallow ditch externally at a higher level than the wet ditches. The ground within the enclosure is at a slightly higher level than outside, although no signs of layering were seen in the subsoil, which is alluvium, otherwise known as ' marsh clay '. The meadow in which the enclosure lies contains six medieval-type saltern mounds.[3] This meadow, together with three isolated mounds some distance north, has recently been Scheduled as an Ancient Monument in order to protect the earthworks from destruction.

The tiny stream on the east side appears to be all that remains of the medieval mainstream of the River Adur (bearing in mind that before embanking the area was a tidal estuary), while the broader stream along the southern boundary of the meadow, which joins the other stream, runs westward, roughly parallel to the main street, to the south-east corner of the external ditch of Bramber Castle. This stream could well be the one referred to in 1267, when the Constable of the castle dug a ditch ' . . . so that, by the said ditch, when the tide of the sea comes up, boats with stone and sand, lime, and such-like, might be brought from the bridge of Bramber towards the castle, but never since the said obstruction have any waggons or carts been able to pass over in any manner, as hitherto they did, from the said borough into the marsh to the salt-pans,[4] whence all the neighbourhood thereby suffer loss and damage.'[5]

E. W. HOLDEN

ANCIENT WINDMILL SITE AT GLYNDE (TQ 447 097)—Between Glynde Holt and Speaker's Holt on the South Downs at Glynde, at a height of 489ft. O.D., there existed until recently a mound which is shown on the 1911 edition of the 6in. O.S. map 54 SE as a tumulus, but described by Grinsell[6] as a windmill site. The turf crossing the ridgeway was Rotovated in advance of cultivation during the early part of 1973, the mound being bulldozed and the soil of which it was composed dispersed round nearby. Confirmation that the site had been a mill-stead and not a barrow came from surface finds. No signs of trenches for windmill crosstrees were seen.

1 Tebbutt, C. F., *S.N.Q.* 17 (1970), 167–8.

2 For archaeological remains uncovered by the sewer trench at the medieval stone bridge of Bramber, see this issue, p. 104.

3 The extraction of salt from sand or silt in estuaries, with the resultant mounds of exhausted material, is described in *S.N.Q.*, 15 (1958–62), 304–6.

4 The late Dr. L. F. Salzman told the writer that the Latin word *salina* had no clear English translation, but could be rendered as ' salt-pan ', ' salt-pit,' ' saltern,' or ' saltwork ' (meaning a place where salt was made). The use of the term ' salt-pan ' is unfortunate, as it implies evaporation of seawater in large open ' sun-pans ', as is practised in Brittany and the Mediterranean today. Where mounds exist, the method did not use evaporation by sun-pans to produce brine, but only small lead pans or clay vessels for boiling brine, extracted from sand by straining, over a fire. Preferable terms where the sand-straining method is known to have been used are ' salterns ' or ' salt-works '.

5 *S.A.C.*, 2 (1849), 69, where the original reference is given as *Rot. Hund.* ii, 202.

6 Note 37 on the Society's copy of 6in. O.S. map 54 SE.

Finds included fragments of pottery of thirteenth to fourteenth century date (thumbed jug bases, stabbed jug handles, typical medieval rims, and body sherds), a few sherds of the fifteenth and sixteenth centuries, and only two or three glazed sherds, possibly 17th century. No pottery was found in abundance. In addition, there were some roof-tile fragments, a piece of Horsham-type roofing stone with a nail-hole in it, iron nails, an iron ride for hanging a door, and the tip of an iron knife. A strip of bronze and several oyster shells were there. These objects indicate human occupation over a long period, probably not domestic, because of the scarcity of the finds, and a windmill site (bearing in mind the opinion of Grinsell, who recorded the mound before it was damaged) seems to be confirmed.

There was an unusual find in a shapeless lump of siliceous tufa or sinter, visually the same as pieces found by the writer in a thirteenth or fourteenth century context at Hangleton.[1] Expert opinion on the Hangleton rocks said that this kind of rock was not found in Sussex but could have come from the Isle of Wight or the Hampshire Basin.

A small number of coarse gritty sherds came from the disturbed area. These probably are of Bronze Age date, it being likely that they came from a small barrow partly excavated in 1922,[2] which appears to have been of that period, and which lay some 50 paces south of the mill-stead. No trace of that barrow, which was only 6in. high, could be found. As the disturbed ground extended well beyond the limits of the original mill-stead mound, it is conjectured that the small barrow suffered the same fate as the former.

E. W. HOLDEN

A PATENT ELASTIC STEEL HORSE COLLAR—In March 1964, the late Mr. Jack Stevens of Leonard Stevens, the Saddlers, Eastbourne, acquired from Mr. W. J. F. Chapple of Elms Farm, Rickney, a galvanized metal elastic horse collar, which Mr. Stevens presented to the Society's Agricultural Museum at Wilmington Priory.

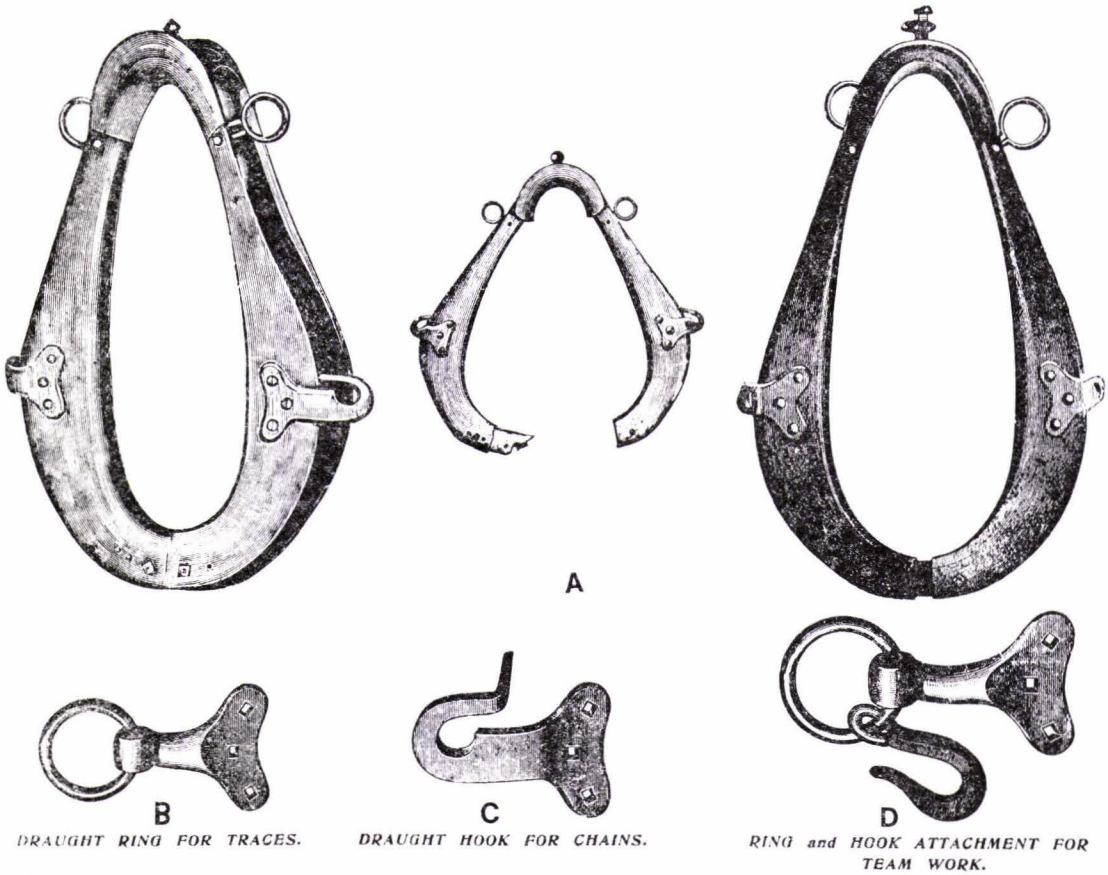


Fig. 7 A: THREE VIEWS OF THE METAL ELASTIC HORSE COLLAR; B–D: VARIOUS HOOK and RING ATTACHMENTS AS DESCRIBED IN THE TEXT (from Hampson & Scott's Equine Album No. 1825).

1 *S.A.C.*, 101 (1963), 151–2.

2 *S.A.C.*, 64 (1923), 189–90.

This patent elastic horse collar (Fig. 7A), manufactured by a Birmingham firm, was invented to prevent and assist the cure of sore shoulders. The collar did not need drying as did the conventional padded leather collar. Its elasticity was achieved by a series of bolt holes, which made it fully adjustable at the throat and the pole, i.e. bottom and top respectively. This adjustment was achieved by moveable metal gussets. At the pole, the gusset moved up or down to adjust its height on the inner surface of the sides of the collar, whilst the throat gusset was inside the shaped metal sides upon which the collar could be widened or narrowed. Thus the height and width could be altered in a matter of minutes by adjusting the bolt positions, something that could not be achieved with the conventional leather collar. Surprisingly enough, the metal collar is lighter in weight than a complete conventional leather horse collar: the latter with hames weighs approximately 25lb., whilst the former weighs 17½lb.

There were a number of hook attachments for various purposes. A wire ring could be bolted on for leather traces (Fig. 10B) and a flat metal draft hook could be fixed for use with chains (Fig. 7C), whilst a ring and hook attachment could be used for team work (Fig. 7D).

The Patent Elastic Steel Horse Collar Company of Birmingham has been traced in the Birmingham Directories from 1890–1919, during which time they had addresses in Summer Row, Great Charles Street, Lancaster Street, and Northumberland Street. The invention appears to have attracted great praise. Prizes and medals were won at the Paris Exhibition in 1889, and during the year 1890–1 prizes and medals were gained at the Staffordshire, Birkenhead, and Altrincham Agricultural Shows and at the Prague Exhibition in 1891. The collar also gained a Diploma of Merit at the Royal Military Exhibition at Chelsea in 1890.

The Company's disappearance from the directory in 1919 coincides with the post World War I decline in draft horse harness, which was brought about by the dual factors of so many horses having been lost in the war and the growing popularity of motorized transport.

LAWRENCE STEVENS

A NEOLITHIC POT FROM SELMESTON, EAST SUSSEX (TQ 5121 0688)—The sandpit at Selmeston is well known for its Mesolithic " pit-dwellings " excavated in 1933 by Professor J. G. D. Clarke (*Antiq. Journal 14*, 1934, p. 134), and for its Bronze Age features excavated by the Curwens in 1936 (*S.A.C.* **79,** p. 195). The sandpit remains in use, although it is not now worked on a commercial basis, and the greater part is now overgrown. In order to keep a check on the sand being removed, Mr. A. Holloway of Eastbourne wrote to the present owners in July 1974, for permission to check the sandfaces for Mesolithic implements, and as permission was kindly granted, he enlisted the help of a colleague, Mr. J. Bell of Hastings. They visited the sandpit on numerous occasions, and have recovered a variety of flints of Mesolithic and later periods.

On one of these visits to the sandpit, Mr. John Bell found what appeared to be a line of pottery in the sandface, about 4ft. below the present ground-level. He carefully removed the surrounding sand, and recovered eight large fragments of pottery, from which he was able to reconstruct almost half of a pot. The breakages had no doubt been due to the weight of the sand above.

Messrs. Holloway and Bell, recognizing the importance of the find, reported it to Miss Caroline Dudley of the Brighton Museum, who immediately informed the Sussex Archaeological Field Unit. Dr. Owen Bedwin of the Unit examined the site with Messrs. Holloway and Bell in April 1975, but no further finds were made. Because of the fine condition of the pot, it was assumed that it had been in a pit destroyed in a fall of sand from the top of the cliff and owing to the position in which the pot was found, it would appear that the missing half was destroyed in the earlier commercial removal of sand.

The pot is made of a sandy clay with large pieces of calcined flint filler. Irregular bonfire firing has resulted in a black and dark brown mottled outer surface. The inner surface is grey-black, possibly indicating that the pot was fired inverted. A thin section of the pot was made by Miss A. J. Woods and Miss C. R. Cartwright, Research Assistant to the Unit, who states that the sherds contain a high proportion of large angular flint fragments, a smaller number of small rounded quartz and feldspar grains and a little very fine-grained quartzite. From the evidence of microscopic examination of the flint fragments, it would appear that the pot was not fired to a very high temperature, as they have not taken on the typical altered appearance often present in flint subjected to high temperatures. The external surface and core of the pot are both dark brown to black—also tending to suggest that low firing has not removed all of the organic content, rather than in this case, the result of a reduction process. The upper surface of the outside of the pot is heavily decorated with stabbed impressions which continue on the inside of the rim. The pot may be reconstructed as a decorated round-based bowl (Fig. 8). It therefore belongs to the earlier Neolithic ceramic tradition of round-based pottery. The three nearest Neolithic sites from which parallels may be taken are those of Whitehawk, excavated by Curwen (*Antiq. J.* **14**, 99-113); Combe Hill, excavated by Musson (*S.A.C.* **89**, 105-116) and the Alfriston oval barrow excavated by the author (*P.P.S.* **41**, 119-152). The fact that two of these are communal centres (' Causeway Camps ') and one is a burial site does however mean that the pottery from these sites may not be typical but could have been made with specialized functions in mind. However, Dr. I. Smith has suggested that the ceramic evidence from Whitehawk shows influence from both of the main early Neolithic ceramic traditions, the Hembury style and the Grimston/Lyles Hill series. The carbon-14 date range for these types is c. 3,500 bc which may be calibrated to c. 4,300 bc–c. 3,000 bc (*British Prehistory*, Duckworth, 1974, p. 107). Associated with the essentially plain Hembury and Grimston/Lyles Hill types are a decorated group. The decorated group, sometimes referred to as Peterborough Ware, includes several styles of which the ' Ebbsfleet ' bowls perhaps represent some of the earliest. The rim of the Selmeston pot may be paralleled in Ebbsfleet pots from both classic Neolithic sites like Windmill Hill (*Windmill Hill and Avebury*, Oxford 1965, Fig. 31, pot 238 and at Kentish sites (*Excavations in West Kent* 1960–1970, Kent Archaeological Research Report 2, 1973, Fig. 6, No. 3) as well as locally at Combe Hill (unpublished examples in Lewes Museum). The fabric was also similar to sherds from the Alfriston oval barrow some 2 miles due south (*P.P.S.* **41**, Fig. 11, Nos. 29-31).

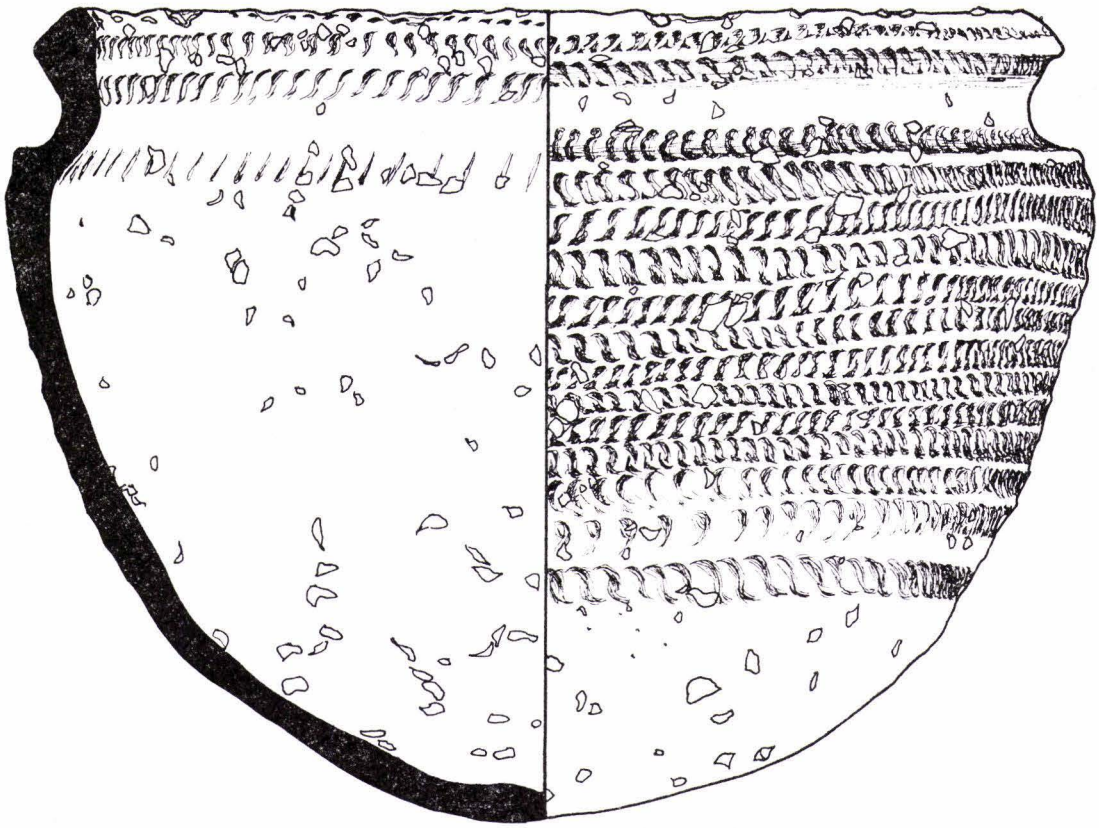


FIG. 8. Neolithic pot from Selmeston (½).

In conclusion, it therefore appears likely that this pot belongs to a decorated earlier Neolithic ceramic tradition associated with the communal (causewayed) enclosures and earthen long and oval barrows in Sussex. As such its principal significance is that it comes from, presumably, an ordinary domestic site which are very rare in this period in Sussex. Its existence on the Greensand is particularly interesting as all contemporary, at least surviving, communal works are known from the Chalk Downs. The finder has retained the pot.

P. L. DREWETT

FOREST STANDINGS—The conclusions drawn by C. F. Tebbutt in his article[1] on King's Standing, Ashdown Forest, about the origins and purposes of the putative buildings and enclosure on the Forest Ridge above Duddleswell can be reinforced by evidence from Epping Forest in Essex. It is now but a vestige of the vast Forest of Essex that was for centuries Royal Forest and subject to the onerous legal burdens of that status and the princely pleasures of the Tudor monarchs who used the standing now known as Queen Elizabeth's Hunting Lodge. This building, like the site at Ashdown Forest, is located on a forest eminence called Dannett's Hill at Chingford and was conveniently placed for the style of hunting which, as Mr. Tebbutt infers, was developed in the sixteenth century.

The earliest place-name reference to the Ashdown Forest site was, I note, to ' Kings Standing '[2] in a Parliamentary Survey of 1658 and it was ' King James's Standing '[3] in 1813. Before the sixteenth century there appear to be no references to the standings although there are records of forest lodges and the associated enclosures and game in forest archives and the muniments of the Courts of Attachment. On 4 December 23 Henry VI (1444) a warrant[4] from the Steward of the Forest of Essex (Humphrey, Duke of Gloucester) noted

> ' that there is not in the said forest any lodge for the convenience of the ministers of my lord the king of the same forest, which was very necessary and convenient for them; nor any pimfold [pound] for impounding and keeping cattle, swine, sheep, and strays, and other forfeits . . . . . we charge you that . . . . . you cause to be newly constructed and suitably raised without delay a lodge and pimfold . . . . . also one pair of stocks for the punishment of evildoers . . . . . ' (Translation).

1 *S.A.C.*, **112** (1974), pp. 30-33.
2 A. Mawer and F. M. Stenton *The Place Names of Sussex* (1969), Pt. II, p. 392.
3 Ordnance Survey, one inch map (1813) *S.N.Q.* **3** (1930-1), p. 74.
4 *Essex Naturalist*, **12** (1902), p. 145.

All this was clearly necessary for the normal usage and administration of the forest by its royal patrons and the appointed authorities.

I do not, in fact, consider that this document refers to the lodge at Chingford although it may concern another known to have been sited in the same vicinity. The following references do, and imply the change in hunting practice although the lodge continued to serve the same basic purposes for forest management.

The documentary evidence and the architectural features of the lodge at Chingford suggest that it was built by Henry VIII c. 1541–3. A warrant[1] of 12 Feb. 34 Hen. VIII (1543) issued by the king to Sir Richard Riche to arrange payment of £30 to George Maxey, a Forest Woodward, contains the clues we seek:

' towards the ffynyschinge as wall of[f] on great stondeinge ' and: perfecting such ' perookes ' [paddocks] as the king required in his new park at ' Fayremeade ' [the terrain below Dannett's Hill].

Later, on 12 June 31 Eliz. (1589), an extensive survey was ordered as the lodge was in need of repair. This document,[2] an Exchequer Special Commission, now much decayed, describes the lodge as the ' Greate Standinge ' and refers, in the preambular paragraphs, to:

' The second [storey] . . . . . for convenient standing to viewe the game. The Th[ird] serveth likewise . . . . '

It is reasonable to assume that King's Standing at Ashdown Forest was a building of the type still existing at Chingford and shown in the accompanying illustration (plate 1). The originally open character of the second and third storeys is attested by the joisting which was laid to a fall to allow rainwater to run off. There can be no doubt that Mr. Tebbutt is correct in his view that King's Standing was the site of such a building, not earlier than the sixteenth century and provided with enclosures to facilitate the management of the forest and game for the contemporary style of hunting for which the standings were used.

KENNETH NEALE

" WENBAN'S FARM," WADHURST, SUSSEX, and the family name linked with it—In *Collections* vol. 65 (1923) under Notes and Queries No. 6, page 259, there is a note by the late Col. H. F. S. Ramsden, on the above buildings and estate. This farm is marked on the current Ordnance Survey Map as " Wenban's " although formerly spelt " WENBON'S FARM ". Col. Ramsden noted that it was the last yeoman holding in the Wadhurst area, having been in the hands of the Tompsett family for over 100 years. Since 1923 the estate consisting of approximately 90 acres has changed hands several times to new owners, who requiring a desirable country residence rather than a full-time agricultural occupation, have spent considerable sums preserving as well as modernising the buildings.

Although it is over 300 years since anyone bearing the name Wenban has occupied or owned any part of it most of the Wenbans (apart from some American and Australian members of the family who emigrated) have remained in the south-east corner of England, mainly in Kent and Sussex.

Much of the history of the estate and its changing ownership is recorded in " *The Story of Wadhurst* ", a handbook on the history of the parish and its estates published in 1923 in Tunbridge Wells based on the researches of Mrs. Rhys Davids (née Foley) daughter of a former Vicar of Wadhurst, edited and revised by Mr. Alfred A. Wace. From this the information is also gleaned that part of the parish including this estate formed part of the lands of the manor of Bivelham (or Bibleham).

Origins of the site

Assize Rolls of 1271 and 1288 refer to *Wanesburn* and *Wenneburn*. The Subsidy Rolls in 1327 and 1332 give it as *WANEBOURNE*, which later developed into Wenbourne, with or without the *u* or the *e*.[3]

This is probably the personal name *Waenna* of a Saxon settler linked with the name *burna* (a stream) as the farm site lies in a valley tributary to the Rother. Thus the name Waenna's-burna was attached to the land and passed through the mutations shown in documents and became the personal name of those who lived there. The farm site is perfectly summed up by Winston Churchill's description of an Anglo-Saxon settlement.[4]

Straker's " *Wealden Iron* " lists Wenban's as the site of a " bloomery " for smelting iron, and this was succeeded by a furnace in the valley between it and the neighbouring house Scrag Oak where the stream was dammed for a hammer pond. The current 1/2500 Ordnance Survey map marks the site of the bay. The duration of the furnace operations is not known but the field names beside the stream, Upper Furnace Field, Lower Furnace Field, Furnace Plat with the names Sinden Wood and Sinden Field perpetuate their memory. These names appear on an Estate Map made for Mr. James Tompsett after he took over the property about 1759. Straker mentions also Furnace Orchard and Furnace Shaw, which appear on the later tithe assessment maps. He surmises that the furnace was already disused by 1653.

Early History

The Bivelham or Bibleham manor court rolls[5] make mention from 1388 onwards of a John and William Wenbourne. These references are to the repair of their " tenements " and their election to the office of reeve or receiver under the Lord of the Manor. They are also subjected to fines for cutting down wood without the lord's licence or not using his mill, both common misdemeanours under feudal law. As early as 1320 mention was made of two men John ate Hall and John Grigori as each holding " half a wiste in Waneburne " but it is in 1407 that

1 P.R.O. SP 1/176 fo. 36.

2 P.R.O. E 178/834.

3 *A. Mawer and F. M. Stenton, The Place-Names of Sussex* (1930), Part II, 387.

4 " His notion of an economic holding was a meadow for hay near the stream, the lower slopes under the plough and the upper slopes kept for pasture . . " (*A History of the English-speaking Peoples*), vol. 1 (1956), 49. It would be hard to find a better description of the site.

5 British Museum MSS. Additional Rolls 31080 to 31137 (Bibleham Court Rolls, 1388-1470).

the " wiste of Wenbourne " is named in the manorial rolls. In that year John Crothole surrendered " all the lands and tenements of the wiste of Wenbourne to the behoof of John Wenbourne ". This is the first mention of a " Wenbourne of Wenbourne ". John, William and Laurence are the first names to recur in successive generations until in 1470 the " bond tenement with appurt's " comes into the hands of Richard and Thomasin his wife. He seems to have been the last of the family to hold the lands bearing his name, which subsequently passed into the hands of the Whitfield family, but the Wenbournes still held other lands within the manor of Bivelham and the neighbouring manor of Mayfield.

Reference in the rolls of 1429 and 1470 to " the hall of the said messuage . . . with the chamber in the same part, as well the lower as the higher . . . (the low chamber and the high chamber) " raises the speculation as to whether the older part of the existing house in which Col. Ramsden described the hardened yellow clay wall with a scored pattern is of fifteenth century construction. It was found on the upper floor (the " high chamber " perhaps?). The later wing of the building is known to be of seventeenth-century construction for it had a stone fireplace which is dated 1612 beneath a fine stack of chimneys. This also bears the four initials A.M.E.M., the initials of Abraham and Elisabeth Manser, who were living there at the time. Before leaving the fifteenth century references in the manorial records it is interesting to note that a William Birchet " died seised of land in Wenbourne "; there is still a Birchet Wood marked on the maps of adjoining properties. The Mansers who, like the Barhams, were iron masters in the Wadhurst area held Wenbournes for not less than 70 years in the sixteenth and seventeenth centuries. The wills of both Christopher Manser (1545) and Abraham Manser (1626) mention the property and Christopher's daughter was married to Robert Wenborne. Later it was linked with the Barhams; in the eighteenth century they held the neighbouring property of Scrag Oak also.

The Department of the Environment classifies the buildings as Grade II, subject to restrictions on alterations, and describes them thus:

> " Wenbans . . . not now a farm. Of medieval origin . . . Timber-framed house altered in the sixteenth century. The west half of the house is now wholly fronted with weather-boarding. The east half is partly fronted with weather-boarding, partly with red brick, and the first floor which overhangs on the projecting ends of the floor joists and brackets is tile hung. To the S.E. of the house is a sixteenth-century barn, timbered, which has been converted to a hall or room and is now joined to the house by a corridor which was formerly a cowshed. Inside, the house has contemporary fireplaces and ceiling beams. The house was probably used for smuggling in the eighteenth century as the stone stairs leading to the cellars are worn away as with the friction of a rope lowering goods."

Apart from the wills of Christopher and Abraham Manser there are two wills of considerable interest in the Wenborne family That of John " Whenborne of the Parysshe of Whadherste " in 1547 mentions lands within the parishes of Wadhurst and Mayfield. That of George Wenborne drawn up in 1588 but not proved until 1592 refers to " my freehold house in Wadhurst ", the first known indication of residence in the actual village and also refers to a copyhold called Snape Meads and a wood of nine acres.[1]

At the turn of the fifteenth century the name Robert Wenborne occurs frequently as a witness to wills and he is at least twice mentioned as being " of Staple Inn ". This is the first real indication of a link with the City of London. His own will and that of his wife Elizabeth, are still preserved in remarkable condition at the East Sussex County Record Office. Elizabeth was a Cruttall (cf. John Crothole mentioned above) whom he married at St. George's, Southwark, indicating that he was already in residence partly in Southwark as well as Wadhurst and conducting business in the City. His will, dated 1637 suggests that " my children be also brought upp and put to prentice with the profits of the lands . . . " His third son Thomas " put himself to prentice to Nicholas Warren, Citizen and Skinner of London for nine years from Lady-Day past " which was the 3rd April 1637. He passed out of his apprenticeship in 1644, passed through all the stages required to attain the office of First Warden of the Worshipful Company of Skinners in 1683 two years before his death.[2] Elizabeth's will of 1642 names their second son William as heir, the first son Robert having died in the meanwhile. William was an emigrant to New England and appears in the records of Boston, Massachusetts, and Exeter, New Hampshire. One wonders whether he did some trade in furs with his brother the Citizen and Skinner of London resident in Southwark. A mutual friend mentioned in Thomas's will and in correspondence was a Daniel Mercer, merchant, of London.[3] Elizabeth Wenborne's brother, George Cruttall, who died a bachelor, was a Citizen and Cutler of the parish of St. Saviour, Southwark, and Wadhurst. In his will he left items to his nephews and nieces of the Wenborne family.[4]

The name Wenbourne no longer persists in the Wadhurst area but a mutation which came about in Sandhurst, Kent, shortened it to WENBAN, retaining the distinctive conjunction of N and B, but abbreviating the second syllable. In this form the name is still to be found in Sussex in Wadhurst, Rotherfield and Frant, in Kent and south-east London. Both forms of the name with variations occur in the United States of America and Australia as a result of the emigration of many Wealden agricultural workers between 1825 and 1840.

A. A. WENBAN.

1 East Sussex Record Office, Manser wills P.C.C. Alen 21; P.C.C. 55 Skynner. Wenborne wills P.C.C. Alen 47.
2 Records of the Worshipful Company of Skinners, London.
3 *New England Genealogical and Historical Society's Transactions*, vol. 47, 413 (footnote), vols. 8, 9, 25 and 27.
4 E.S.R.O., P.C.C. 31 Campbell.

THE CHAPEL OF ST. CYRIAC, CHICHESTER—The existence of the Chapel of St. Cyriac in Chichester has been known for a long time; what has been uncertain has been its location. Many of the sources for its history are in print, and the chapel has been mentioned in more than one article.[1] However, no article has as yet given an accurate account of the site. The Rev. Edward Turner gave the chapel's location as a subterranean passage beneath the city wall between Westgate and Northgate.[2] W. D. Peckham placed it as on the North Walls, near the end of Tower Street,[3] but since expressing the opinion he has seen the documents in the Diocesan Record Office at Chichester which clearly give the site of the chapel. The purpose of this note, then, is to bring together all the known facts about the chapel, and to place on record its exact location.

St. Cyriac is often associated in dedications with St. Julitta his mother. Julitta was a Roman Christian who fled to Tarsus with her child to escape the Diocletian persecutions of the late third century. She was recognised by the Governor of Tarsus, tortured and put to death, after her son, Cyriac, then three years old, had been killed before her eyes.[4] St. Cyriac is not a well-known saint in England, only nine parish churches being dedicated to him, three of these being in association with his mother. However, he enjoyed an extensive cult in France, centred round Auxerre, and his dedication to Chichester was introduced by one of the victorious Norman French.

The chapel of St. Cyriac in Chichester was probably founded by Earl Roger de Montgomery soon after he acquired the Rape of Chichester after the conquest. In view of the chapel's rapid decline, and apparent lack of endowment, it was probably founded to house a single chantry priest, to pray for the soul of Earl Roger or his ancestors. Earl Roger gave the chapel to the Abbey of St. Martin at Troarn, in France, which he had founded in c. 1050-1059, to replace the secular canons established in that place by his father. The foundation of the chapel can therefore be dated to between 1066 and 1094 when Earl Roger died.[5]

In 1155 Henry II confirmed to Troarn its property in England, including " of the gift of Earl Roger of Montgomery . . . in Chichester two messuages and the church of St. Cyriac " as they had held them " in the time of his great grandfather King William and his grandfather King Henry ".[6] The chapel did not long remain the property of the abbey, unless its value became so negligible, that it did not merit a mention among the house's property. In another confirmation of property, dated to c.1155-1158, Troarn's possessions in Chichester are described as only " ii mansuras in Cicestria ".[7]

In 1260 Troarn exchanged its property in England for the foreign possessions of the Priory of Bruton in Somerset.[8] The chapel of St. Cyriac was not mentioned in the exchange, and at some time before this date it had declined from its original foundation as a chantry, into the habitation of a recluse. Geoffrey de Glovernia, Dean of Chichester, from c. 1241-1254,[9] made his will in 1247. After several bequests to members of the Cathedral and local clergy, he ordained the following further payments to be made annually on his anniversary: " 2s. for food for the Friars Minor, 7d. for a pittance for the brethren and sisters of St. Mary's Hospital, 12d. for food for the sick there, 3d. to the lepers of St. James's Hospital, 1d. to the recluse of St. Cyriac ".[10]

The un-named recluse did not apparently receive his dole for very many years. At the beginning of August 1269 King Henry III came to Chichester, and someone drew the King's attention to the chapel. No mention is made of a recluse, and the chapel is described as being impoverished, its rents and income not being sufficient for the maintenance of a chaplain to celebrate there. Moved by reverence for St. Cyriac, Henry re-endowed the chapel and granted a stipend for the support of a chaplain. On 8 August 1269 he sealed an order to the Sheriff of Surrey to send 50 marks immediately, from the proceeds of the judicial eyre for pleas of the forest which was then in session in the county. Five marks were to be sent annually from the profits of the county, for the upkeep of the chapel and its chaplain.[11] By 13 August, the position of the chaplain had been given to Stephen de Medhurst *alias* Midhurst. Nothing is known of Stephen, except in his connection with the chapel, although his name would suggest that he had local connections. Stephen was to use the initial grant of 50 marks to buy a rent of 5 marks per annum, which, together with 5 marks sent annually by the Sheriff of Surrey, would form his stipend. In return for this, he was to celebrate daily in the chapel for the rest of his life, presumably for the spiritual benefit of Henry III and his family.[12]

Stephen's stipend was not very large, and from entries in the Liberate Rolls for the first few years following his appointment as chaplain, it would seem that it was usually in arrears. On 10 August 1270, the Sheriff of Surrey was ordered " to let Stephen the King's chaplain in St. Cyriac's chapel, Chichester, have 2½ marks arrears of his stipend without fail ".[13] By 10 December 1271, Stephen had not yet received his 5 marks for the year.[14] The money had still not been fully paid by the 28 June 1272, when an order was sent to the Sheriff of Sussex " to let Stephen the King's chaplain celebrating in St. Cyriac's chapel in Chichester have the arrears of his stipend of 5 marks yearly, without fail and 5 marks for the present year, unless already paid ".[15]

1 L. F. Salzman (ed.), *The Victoria History of the County of Sussex*, vol. 2 (1907), 46, and vol. 3 (1953), 75.
2 Rev. Edward Turner, 'Domus Anachoritae, Aldrington,' in *Sussex Archaeological Collections* (hereafter abbreviated to *S.A.C.*), vol. 12 (1860), 122, 123.
3 W. D. Peckham, 'The Parishes of the City of Chichester,' *S.A.C.*, vol. 74 (1933), 93, 94.
4 Herbert Thurston, *Butler's Lives of the Saints* (1956), vol. 2, 552.
5 G. E. C(ockayne), *The Complete Peerage*, vol. 11 (1949), 683-687.
6 J. H. Round (ed.), *Calendar of Documents Preserved in France Illustrative of the History of Great Britain and Ireland* . . . , (1899), 170, 171.
7 *Calendar of Charter Rolls*, vol. 4 (1912), 283, 284.
8 *Calendar of Charter Rolls*, vol. 4 (1912), 284, 285.
9 West Sussex Record Office, MP. 986. A List of Deans of Chichester from 1100, compiled by W. D. Peckham.
10 W.S.R.O., Ep. VI/1/6, f. 192v. Printed in W. D. Peckham (ed.), The Chartulary of the High Church of Chichester, *Sussex Record Society* (hereafter *S.R.S.*), vol. 46 (1943), 154.
11 *Calendar of Close Rolls*, 1268-1272 (1938), 75.
12 *Calendar of Liberate Rolls*, 1267-1272 (1964), 93, No. 818.
13 *Ibid*, p. 137, No. 1199.
14 *Ibid*, p. 150, No. 1324.
15 *Ibid*, p. 221, No. 1991.

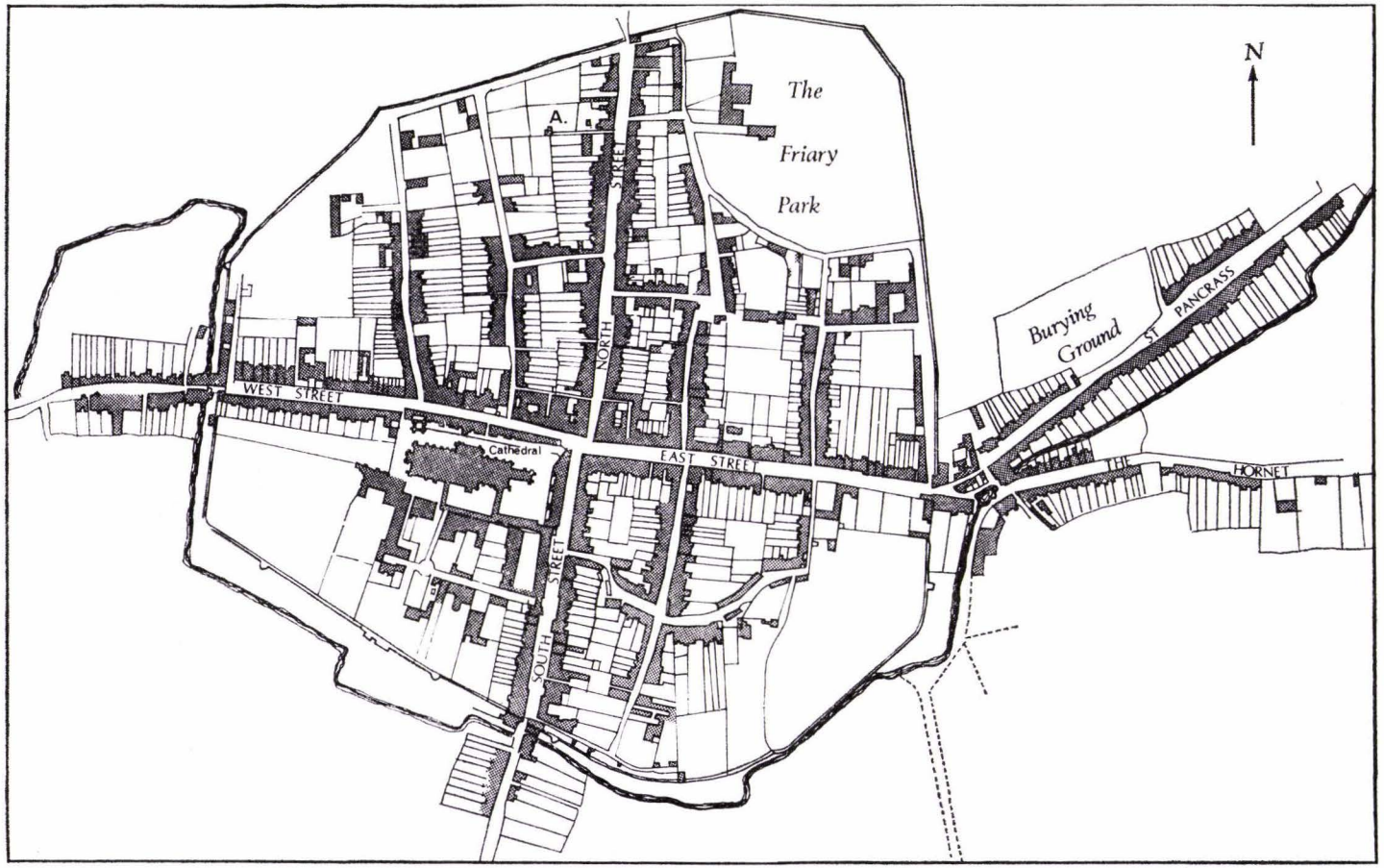


FIG. 9. Chichester, from Yeakell and Gardner's map of Sussex, 1769 (original, 26 to 1 mile). A. site of St. Cyriac's Chapel.

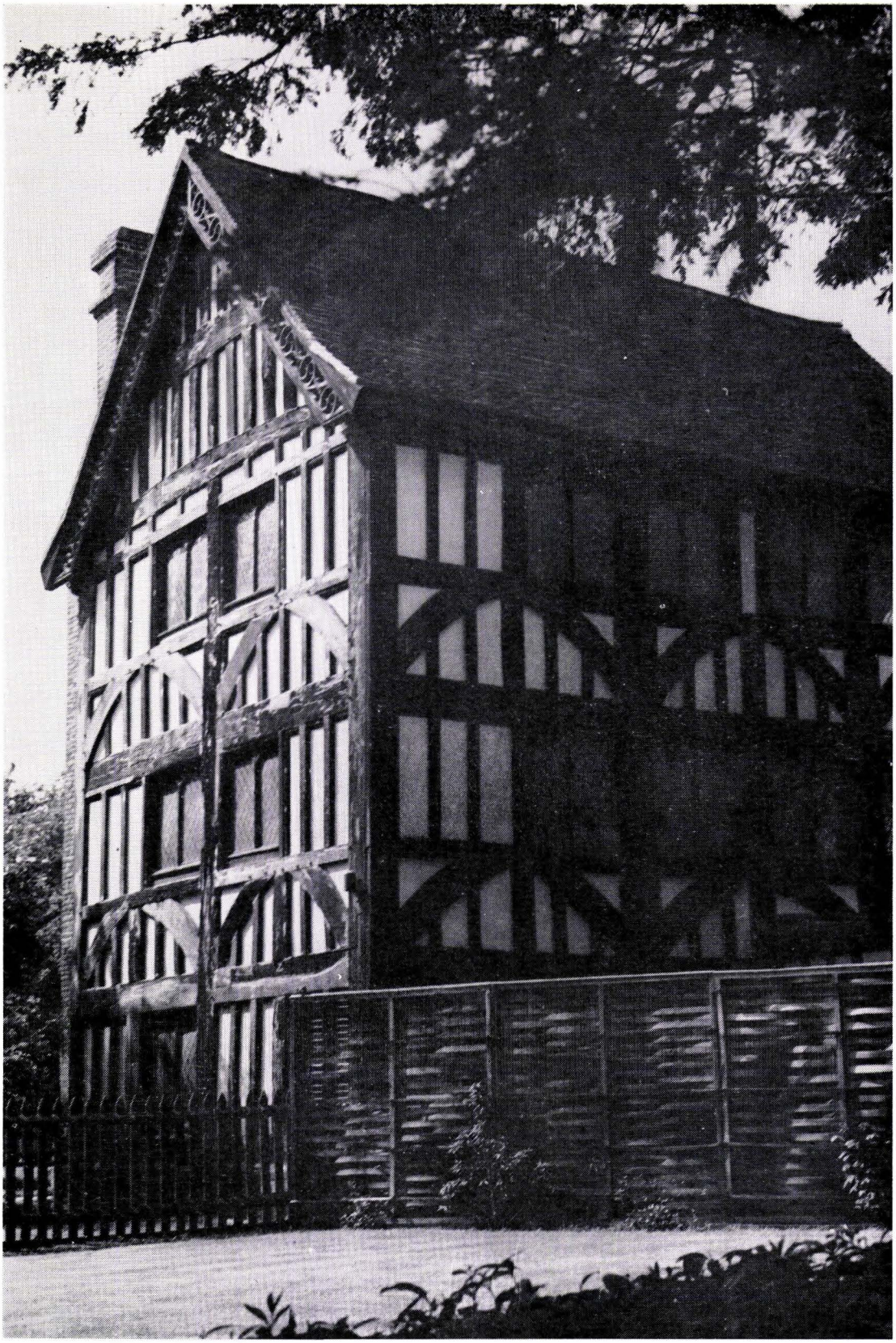


PLATE 1. Queen Elizabeth's Hunting Lodge, Chingford. See Forest Standings, p. 194. *Photo by K. P. Neale*

After 1272 the Liberate Rolls contain no more references to payment of the stipend. Either the payments were being paid regularly and promptly, or else, as seems more likely, Stephen had died, and no provision was made for a successor. There is then no mention of the chapel for over a century. By 1405 the chapel no longer housed a chantry priest. It had once more become the home of a hermit, Richard Petevine. In 1405 Robert Rede, Bishop of Chichester, granted an indulgence for the benefit of this " poor hermit ". He granted " 40 days indulgence to all Christ's worshippers through our Diocese wherever they may be, and to others whose Diocesans shall ratify and accept this our indulgence, being truly contrite and confessed of their sins who have contributed or in any way assigned any of the goods conferred on them by God as charitable supplies towards the support of Richard Petevyne, hermit of the chapel of St. Cyriac founded in the city of Chichester, and to the repairs of the same chapel ".[1]

There is only one more reference to the chapel as a religious building. On 14 February 1486, the court of the Dean of Chichester's Peculiar Jurisdiction met in the parish church of St. Peter the Great, in the Cathedral, to hear presentments brought by the parishioners. At this court there appeared Roger Taylor, William Crucher and John Gamsey, who said " quod Thomas Trybe circivit (?) per patriam et collegit monetum in honore Sancti Ciriaci ad reperendam capellam in honore Sancti Ciriaci fundatam in venella eiusdem parochie ".[2] No more information is given about the case and it is not known who Thomas Trybe was, why he was collecting money for the chapel, or indeed if he had any right to do so. What the entry in the Act Book does show is that the Chapel was still recognised as a religious building at this date.

It is not known whether the chapel was till in use at the time of the Reformation. It was included among the chantry lands,[3] and the building was certainly secularised by 1579. In that year the widow of the late tenant, John Hardham, was reported to have replaced the tile on one side of the roof with thatch.[4] The chapel and the land adjoining it eventually became the property of the Hospital of St. Mary in Chichester, and some of the leases of the property granted by the Custos and Poor of the Hospital still survive in the Diocesan Record Office.[5] The chapel itself still existed, although it was said to be in a ruinous state, in 1820.[6] At about this date, the garden and the adjoining plot called the Cherry Garden, with which it had been leased from 1762, were divided up. The smaller southern portion was added to the garden of Richard Murray's fine new house (now " Fernleigh ", No. 40 North Street). The northern portion was added to the garden of No. 43 North Street. The final disappearance of the derelict chapel probably dates from about this time.

From these title deeds it is possible to locate with some accuracy, the site of the chapel. It lay somewhere along St. Cyriac's Lane, otherwise called the Street of St. Cyriac.[7] Abuttals described in documents concerning other property adjoining the lane show that it originally ran from North Street through to Chapel Street.[8] It joined North Street immediately to the north of the property which is now No. 40 North Street. By 1769, when William Gardner produced his map of Chichester,[9] the western half of the lane had disappeared. The eastern half is shown on the map, ending in a building which is quite possibly the remains of the chapel. The lane was blocked off when the St. Cyriac's and the Cherry Gardens were divided and added to the adjoining gardens. All trace of its exact course would have been destroyed when Beness Adames, head of a drapery business in the city, and the then occupier of No. 40 North Street, had the garden laid out with formal walks, conservatories and rockeries sometime between 1854 and 1875.[10]

In 1973, an archaeological excavation was undertaken, under the supervision of Alec Down, Director of Excavations for Chichester, to try to locate the remains, if any, of the chapel. The trial trenches produced what can best be described as extremely negative results.[11] The site of the excavation, and probably also of the chapel, is now under a car park. However, the former City Council, in 1973, passed a resolution that the car park should be known as St. Cyriac's car park, so that this small aspect of the history of the city should have some memorial.[12]

ALISON M. MCCANN

BISHOPSTONE TIDEMILLS—Between Newhaven harbour[13] and Hawth Hill[14] west of Seaford, the remains of a shingle spit form an arcuate beach about 1½ miles long, which protects from the sea the remains of an old channel of the River Ouse. The channel is slowly being infilled by the landward movement of the beach, and by land reclamation at the west end for harbour development. Also disappearing beneath shingle and rubble are the ruins of Bishopstone Tidemill, which was built across the channel just over two-thirds of a mile from Newhaven harbour at NGR TQ 459002. Today, all that remains of the mill is the dam pierced by culverts for housing the mill wheels and which serves today as an access road across the channel to the beach. To the north of the dam are remains of warehouses and cottages which belonged to the mill.

1 W.S.R.O., Ep. I/1/1 f. 14. Printed in Cecil Deedes (ed.) Bishop Rede's Register, *S.R.S.*, vol. 8 (1908), 54, 55.
2 W.S.R.O. Ep. III/4/1/, f 8r.
3 John E. Ray, Sussex Chantry Records, *S.R.S.*, vol. 36 (1931), 189, 196.
4 Quoted in Peckham, *op. cit.*, p. 94, from British Museum Add. Ms. 39, 454 f. 48v.
5 W.S.R.O., Cap. IV/6/30.
6 W.S.R.O., Cap. IV/6/30/11.
7 Lindsay Fleming (ed.) The Chartulary of Boxgrove Priory, *S.R.S.*, vol. 59 (1960), 162, 163, Nos. 268, 373.
8 W.S.R.O., Ep. VI/1/3 f. 84r.
9 W.S.R.O., PM. 2.
10 See title deeds of Beness Adames, W.S.R.O. Add. Ms. 6146, 7, and the first edition Ordnance Survey map, 25in., S. 61, n. 7.
11 Chichester Civic Society Excavations Report, 1973.
12 Chichester City Council, Highways Committee Minutes, 1973.
13 TQ 452002.
14 TQ 467997.

Between 1731 and 1733 a cut was made through the spit just below Castle Hill, Newhaven, and secured by piers on either side.[1] The redundant channel was blocked at its west end by a dam which extended from the east pier, and at its east end by the continued deposition of shingle. However, the tide was still able to enter it by a subsidiary of the main river, just north of the dam. Barges used the route to run between Newhaven harbour and a warehouse beneath Hawth Hill.[2] To the north of the creek lay salt marsh which was subject to periodic inundation by the sea.[3] The creek acted as a drain for this area, and the shingle south of the creek served as a sea defence.

The creek lay within the manor of Bishopstone, owned in the mid-eighteenth century by Thomas Holles, Duke of Newcastle, was leased to three corn merchants, John Challen and Willam Woods of Chichester and John Woods of Chilgrove for 500 years from Ladyday 1761. A private Act of Parliament passed in 1761 enabled them to build the dam for the mill across the creek.[4] The act was secured to forestall opposition to closing navigation up the east end of the creek.

Tidemills were no novelty in southern England in the mid-eighteenth century. The principle of impounding tidal waters with which to drive a mill seems to have been employed since early medieval times. The promoters of Bishopstone tidemill were no doubt inspired by the mills on the tidal creeks of Hampshire and West Sussex. Indeed it is reasonable to suppose that they employed an engineer with experience of those mills as several had recently been built or extended. Slipper Mill at Emsworth was probably rebuilt about 1735. Its near neighbour, Quay Mill, was built from 1759 (when two merchants paid the lord of the manor £100 for 13 acres of mudflats and wasteland, with an annual rent of one shilling). Sidlesham Mill was built in 1755 for Woodruffe Drinkwater under the direction of Benjamin Barlow, who invented the machinery. Other tidemills were at Birdham, Fishbourne (Salt Mill) and Nutbourne.[5] None of these mills was as close to the sea as Bishopstone.

It must have been their experience in West Sussex which prompted the Woods and Challen to consider building a mill near Newhaven. Until the end of the seventeenth century, wheat from the Chichester area which was surplus to local requirements went to market as grain, and, if it was destined for London, the main market, it was normally carried by sea.[6] From around 1700 the grain was milled before being sent to market. The classic description is Defoe's:

> " some money'd men of Chichester, Emsworth and other places adjacent, have joined their stocks together, built large granaries near the Crook . . and here they buy and lay up all the corn which the country on that side can spare; and having good mills in the neighbourhood, they grind and dress the corn, and send it to London in the meal by Long sea."[7]

The erection of Bishopstone Tidemills can thus be seen as expansion of the coastwise trade in flour. London's demand for food was continuing to rise and corn-growing downland bordering the Ouse valley could not serve the city by land as the roads across the Weald were poor. However, Newhaven harbour had recently been improved and offered an alternative to road transport.[8] The nearest mill with access to navigable water was a considerable distance away at Barcombe, to the north of Lewes.

By 1768 the mill was built and presumably working when a French army officer mistook it for a barracks, well sited to defend the valley, and so, he assumed, erected during the Seven Years War.[9] It was not assessed for Land Tax until 1775 when the valuation was £75 paid by John Woods who may not have been the occupant.[10] In successive years, until 1798 the valuation was £50, well below those for the two large farms in the parish. In 1789 William Wisdom paid the tax. He may well have been the tenant or manager before 1789. (The tax returns do not distinguish between owner and tenant). When the mill was advertised for sale in *Sussex Weekly Advertiser* in 1791 Wood's address was given as Chichester.[11] He describes the site as it was until further developed by William Catt after 1801. Woods said that the mill had five pairs of stones capable of grinding 130 quarters of wheat a week. There was a dwelling, a warehouse and a coal wharf. He pointed out that vessels up to between 100 and 140 tons could reach the wharf which was on the west side of the mill and that the situation had advantages for the development of an extensive coasting and carrying trade in corn and flour.

The buildings described by Woods stood on a dam across the creek,[12] pierced by five arches which housed the wheels, above which stood the mill. To the south of the mill was a sluice in the dam through which water flowed on an incoming tide into the millpond to the east. The tidal channel west of the mill served as the source of water for storage in the ponds and as the access to the mill for shipping. The mill was operated by releasing

1 J. H. Farrant, " The Evolution of Newhaven Harbour and the Lower Ouse before 1800," in *Sussex Archaeological Collections* (abbreviated hereafter to *S.A.C.*), vol. 110 (1972), 49.

2 Sussex Archaeological Trust, A466, lease, Thomas Pelham-Holles, Duke of Newcastle, to Henry Bean of Seaford, 1741.

3 East Sussex Record Office (abbreivated hereafter to E.S.R.O.), XC16, map, Lewes and Laughton Levels, 1620, by George Randoll.

4 British Library, State Paper Room, 358b/75, draft petition for Private Act. 2 Geo. III c. 12.

5 For gazetteers, see R. Wailes, *Tidemills in England and Wales*, S.P.A.B. Wind and Watermill section publications, Nos. 2 and 3 (1956, reprint from *Trans. Newcomen Society*, vol. 19 [1938-39[); C. M. Ellis, " A gazetteer of the water, wind and tidemills of Hampshire," in *Proceedings of the Hampshire Field Club*, vol. 25 (1968). F. Brook, " The Old Industries of Emsworth," in *Portsmouth College of Technology Industrial Archaeology Society Journal*, No. 1 (1968), 17-21. [A. Hay], *The Chichester Guide* (Chichester, ? 1784), 68.

6 J. H. Andrews, " The port of Chichester and the Grain Trade, 1650-1750," in *S.A.C.*, vol. 92 (1954), pp. 100-102.

7 Daniel Defoe, *A Tour through England and Wales* (Everyman ed., 1927), vol. 1, 135.

8 Farrant, op. cit., 57.

9 Public Record Office (hereafter P.R.O.), MP 1111/15, " Plans qui accompagment la recounoissance en Angleterre aux mois de Septembre et Octobre 1768 par le S. de Beville, Lieutenant de Dragons ".

10 E.S.R.O., D587, Land tax, 1750-1779, 1780-1832.

11 *Sussex Weekly Advertiser*, 19 September 1791.

12 The base of the dam was probably an island shown on a map copied by William Woolgar in 1805 from an original of circa 1730 (whereabouts unknown), E.S.R.O., RA/C31/10.

water in the eastern millpond through the wheel arches as the tide began to ebb.[1] In this way the mill probably operated for between four and six hours during each tide. The site remained unchanged until early in the nineteenth century.

The new owner from 1792 was a Mr. Barton, who, in 1795, entered into a partnership with Edmund Catt.[2] In 1801 Barton left, being replaced by William Catt[3] whose name was associated with the development of the mill in the early nineteenth century. William Catt had run a small mill in Lamberhurst (Kent) for about two years before he moved to Tidemills.[4] Prior to that he had been a farmer, and he was still only in his early twenties in 1801. Between 1801 and 1808 he increased the number of millstones at the mill from five to sixteen, probably motivated by the considerable profits to be made from milling during those years of the Napoleonic Wars. In 1808 the partnership was dissolved when William bought out Edmund, with the financial assistance of Edmund Cooper of Norton Farm, and Thomas Farncombe, of Bishopstone Farm, both wealthy tenant farmers. William Catt and Edmund Cooper formed a partnership which lasted from 1808 to 1826.[5]

During these years Catt appears to have enlarged the mill, increased the number of storage buildings, and built cottages for his employees. He enlarged the eastern millpond and built a bigger sluice with a bridge over it to allow access to the beach which served as the sea defence. He converted the old southern channel on the east side of the mill into a millpond by embanking it. Water now entered it through a lock on the west side, from the creek at high tide.[6] This pond helped to increase the time for which the mill could operate, for, when the western pond began to empty, a sluice in the bank between the two ponds was opened and the eastern pond was used to supply extra water. Catt also leased and reclaimed the floodplain to the north of the mill as arable land.[7] By 1826, when the company became William Catt and Sons, much of the expansion of the mill had been accomplished.

The expanding mill was the major single source of employment within the parish and no doubt contributed the larger part of the increase in the parish population from 1801 to 1851.[8] In 1851 Catt claimed that he employed sixty men, though not all were resident in the parish or employed at the tidemill. The decline in local population from 1861 coincided with the decline and closure of the mill and suggests that although the cottages were still inhabitable the workforce was not absorbed within the parish and so moved.[9]

The mill's labour force was probably not all directly concerned with the running of it, for, using the mill as a basis, Catt built up a thriving business. During the Napoleonic Wars, from about 1801, the Catts contracted to supply bread, flour and meat to the Army.[10] In 1813 William Catt contracted to supply breadflour to barracks in Sussex, and from 1814 he also supplied meat. His other activities suggest that he was fully aware of the site advantages of the mill for the development of coastal and riverside trade in grains. He imported grain from France,[11] and, in partnership with William Cole, who had a wharf in Newhaven harbour, he bought and sold flour and grain locally. Catt was also a maltster with maltings in Piddinghoe and Newhaven, of which he was the sole owner. In partnership with the Vallance family he owned maltings at Kingston Buci (near Shoreham) and in Kemp Town (Brighton). Catt also owned West Street Brewery, Brighton.[12] All of the sites were either coastal or riverside.

Catt's extensions of the ponds to increase the mill's operating time resulted in the occupation of the entire parish coastline (Fig. 9). In 1836 he was involved in a dispute with the Commissioners of Sewers over whether the mill buildings were liable for water scot, for maintenance of drains on the flood plain, river banks, and the sea defences upon which the mill's safety depended.[13] Catt claimed that the scot he paid on adjoining farmland was sufficient. However when the Commissioners replaced the seawall and built groins, Catt agreed to strengthen the south bank of the mill ponds and raise the north bank. In 1876 a storm breached the seawall, flooding land and pushing large amounts of shingle into the mill ponds. The Commissioners asked an engineer to submit a report on the sea defences and he eventually recommended that they should be repaired but the mill owner should be solely responsible for his own defences and new banks built behind the mill as the line of the Commissioners' responsibility.[14] By 1878 when William's son George repaired the sea wall and attempted to sue the Commissioners for the cost, shingle had obscured much of the south side of the ponds. The Commissioners paid threequarters of the cost and the legal expenses. In return, Emily, George's widow, agreed to exonerate the Commissioners from all responsibility for the mill.[15] Thus began the encroachment of shingle.

In 1879 Emily Catt sold Tidemills to the Newhaven Harbour Company for £11,000.[16] Since the construction of the railway to Seaford in 1864, the mill had become less attractive to farmers in the southern end of the Ouse valley, from which the mill had purchased cereals. The railway facilitated transport of grain which was then milled at destination, not at source, thus reversing the pattern into which the mill had fitted. Probably local cereal production was contracting because of competition from cheaper grain, first from eastern Germany, via the Baltic, and from about 1870 from North America. The imported cereals were also milled at the point of consumption, so the mill, not being near to a large centre of population, could not undertake this. Improvements

1 Rev. F. Willett in "The Tidemill, Bishopstone," in *Sussex County Magazine*, vol. 8 (1934), pp. 367-9 seems to have incorrectly described the method of using the water.
2 E.S.R.O., D587.
3 E.S.R.O., D587.
4 M. A. Lower, *Worthies of Sussex* (1865), 217-8.
5 E.S.R.O., D587.
6 E.S.R.O., D1111, "Survey and Plan of Bishopstone and Norton Farms by T. Marchant, 1777".
7 E.S.R.O., TD/E92, Bishopstone Tithe Map.
8 *Victoria County History of Sussex*, vol. 2, p. 259.
9 E.S.R.O., AX/9/1, Census Enumerators' Returns, 1851.
10 P.R.O., WO 60/58-104, tenders for Army Contracts.
11 British Library, Add. MS. 35133, f. 402, Lord Sheffield to Arthur Young, 15 Nov. 1816.
12 E.S.R.O. TD/E113, Meeching otherwise Newhaven, tithe map, 1838-41. TD/E57, Piddinghoe Tithe Map, 1840.
13 *Post Office Directory of Sussex* (1855).
14 E.S.R.O., RA/C21/1-7.
15 E.S.R.O., RA/C21/1. Capt. J. Ardagh submitted two reports; in the second he recommended the exclusion of the tidemill. His banks would have run just south of the railway line.
16 E.S.R.O., RA/C1/6.

effected by the Newhaven Harbour Co. in the southern part of the harbour appears to have restricted tidal flow up Mill Creek and closed access by sea to the mill. Grain and flour had to be transported by cart between the mill and the harbour wharf for the short journey was uneconomic by rail.

After the mill was sold John Catt and Edgar Stoneham tried to keep it running. They leased it for 14 years from the Harbour Company. However, after four years the company revoked the lease as Banister, the company's engineer, considered that the site would be more profitably used for cement making. In May, 1883, the corn-grinding gear was offered for sale. In April, 1884, negotiations with the Portland Cement Co. for the use of the tidemills failed as they considered a location in Heighton, or somewhere similar, more practicable. The Harbour Company decided to fill in the mill ponds, from March, 1885. Chalk was sent from the site of Brighton College via Kemp Town Station, to be dumped in the ponds. Conversion of the mill building into a bonded warehouse was approved in February, 1890. The lease was terminated in 1900, when the tenants, Cafe Royale of Regent Street, intimated that they no longer wished to use it. The mill and warehouses were demolished but the cottages remained occupied until they were demolished during the Second World War.[1]

SUE FARRANT

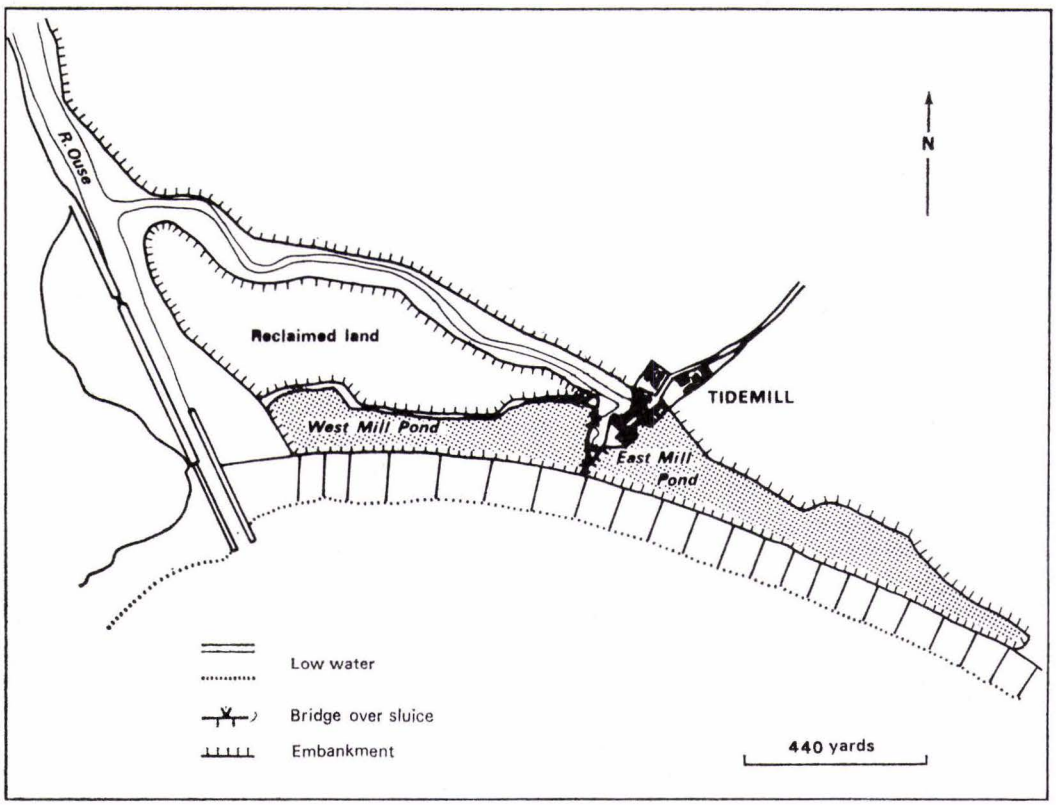


FIG. 10. Bishopstone Tidemills in 1842, based on the Bishopstone Tithe map.

1 P.R.O. British Transport Historical Records, NHR 1/1, 2, 3, Newhaven Harbour Co., directors' minutes, 1878-1914. I owe this and other P.R.O. and B.L. references to J. H. Farrant.

OBITUARIES

BERNARD, 16th DUKE OF NORFOLK, 1908-1975

His Grace Bernard Marmaduke, 16th Duke of Norfolk, died peacefully on 31st January, 1975. By his passing, England has lost one of her most dedicated sons and Sussex, in particular, lost a man whose devotion to the county of his birth and inheritance knew no bounds. Earl Marshal and Hereditary Marshal of England, Knight of the Garter, the holder of a Dukedom, three Earldoms and five Baronies, and the recipient of many high and well-deserved honours from the Crown, Duke Bernard was born to greatness on 30th May, 1908. He succeeded his father in 1917 and was trained by his uncle, Viscount FitzAlan of Derwent, to continue the heavy responsibilities which his forebears had carried. No members of the family, except, perhaps, St. Philip Howard and Duke Bernard's father, Henry, were more distinguished or more greatly endowed with kindness, wisdom and a sense of loyalty.

The Duke was every inch a Duke; his requests, always made with great courtesy, were commands and those who carried them out were always thanked. Humility is a great virtue and Duke Bernard possessed it to a degree which sometimes surprised those who were closest to him. On the other hand, he could be severe, and anyone stupid enough to question either his authority or his judgement was at the receiving end of a rebuke delivered in no uncertain terms; the rebuke, however, was usually soon forgotten and the offender forgiven.

The Sussex Archaeological Society was honoured to have the Duke as its President from 1962 to 1964. By this service, one of so many given to Sussex, the Duke was continuing a family tradition. His great-grandfather, the 13th Duke, was our first President and he held office from 1846 to 1856; the 14th Duke was President from 1856 to 1860; the 15th Duke was President from 1908 to 1917. For all these years, the Dukes of Norfolk were concerned with the promotion of archaeological studies in Sussex and they took more than a passing interest; for example, Duke Bernard gave the important collection of flints from Blackpatch to Worthing Museum where they are now available to students.

It is no exaggeration to say that Duke Bernard was a perfectionist; those who recall his superb organization of the funeral of King George V, the Coronation and funeral of King George VI, the Coronation of our present Queen, the funeral of Sir Winston Churchill, and the installation of the present Prince of Wales, agree that no ceremonies, at any time or anywhere, were ever carried out with greater precision or with greater consideration for the principal participants. But it did not have to be a great State occasion for exact timing; I remember the Duke attending a function in Chichester at 3.0 p.m. and on the first stroke of the bell in the Cathedral tower his Bentley glided to a halt. I opened the door of his car and he said, with a twinkle in his eye, " I'm not late, am I? " Whatever the appointment, it was a matter of personal concern and the Duke would have thought it discourteous if he had been even a few seconds late.

As Lord Lieutenant and *Custos Rotulorum* since 1949, the Duke was equally conscious of his position. As the owner of an immense collection of family and estate archives, a library of outstanding importance, and an accumulation of fine pictures and furniture, he appreciated the treasures he held and was always ready to share them with accredited scholars. His knowledge of his family history was remarkable as, indeed, was his memory of matters which might have been regarded as beneath his notice. When problems arose (and there were many), he sometimes used to say, " I wonder what decision my father would have reached? "; never was the conclusion wrong.

In matters of dress, no one was more particular than Duke Bernard; his tailor and hatter must have been proud of him! But on informal occasions, the dress was as informal as it was comfortable—and why not? Duke or commoner, both are human.

There were other aspects of the Duke's life which should be recorded; in his younger days he was a fearless hunter in this and other countries; he was devoted to cricket and was President of the M.C.C. in 1957-58 and manager of the M.C.C. team when it visited Australia and New Zealand in 1962-63; the match between the Duke's XI and the visiting team from overseas at Arundel was an annual event which gave such pleasure to all concerned. The Duke enjoyed his golf and his shooting, but above all he loved racing. His contribution to the Turf was outstanding; he was The Queen's Representative at Ascot from 1945 until 1972 where he earned the gratitude of his Sovereign and a great many others for his splendid management; in 1974, his horse, Ragstone, which he bred, won the Ascot Gold Cup, an achievement which was as well merited as it was a source of happiness and justifiable pride.

The most generous of hosts, the Duke's guests were always made to feel at home; whether it was a dinner or luncheon party of three or four, or thirty or forty, all were treated as equals. Such demonstrations of friendship will never be forgotten by those who were privileged to experience them; furthermore, those occasions emphasized the unity which was so evident in the day-to-day life of the Duke and Duchess and their daughters. Kindness and courtesy breed kindness and courtesy, and it is true to say that the consideration which the 16th Duke of Norfolk and his family showed to everyone with whom they came in contact attracted loyalty, respect and affection in return. The inhabitants of no town could have been more genuinely distressed than were the people of Arundel during the illness and death of Duke Bernard.

As a statesman, the Duke played a minor role, but on the rare occasions when he spoke in the House of Lords his pronouncements were listened to with great attention; in speeches, as in letters, he never wasted words—he spoke and wrote with authority, but never before he had got his facts right and never before his mind was made up. A decision, once made, was unalterable. The tributes in the House after his death bear witness to the respect in which he was held by all political parties including some members who had crossed swords with him.

The Duke, although the head of the Roman Catholic laity in England, was a humble and devout member of his Church; he recognized throughout his life that he, like all of us, had need of " an invisible means of support ", and his trust in divine direction was manifest. His 16th century ancestor, Philip, Earl of Arundel, canonized in 1970, had suffered for his faith and Duke Bernard would have done the same had circumstances so demanded. I remember talking to a Roman Catholic prelate who said that the Duke was also a Saint—what higher commendation could be accorded to a man in his lifetime? If the Duke had been asked for his record in the Book of Life, I think that he might have said, quite simply, like Abou Ben Adhem, " Write me as one that loves his fellow men ".

The Duke's funeral service in the Cathedral Church of Our Lady and St. Philip Howard at Arundel on 6th February, 1975, was an occasion of dignified ceremonial coupled with genuine sorrow, but on the other hand, there was a profound sense of thankfulness for the life and example of a great man and for the knowledge that his suffering was at an end. He now rests, with his illustrious ancestors, in the Fitzalan Chapel almost under the shadow of Arundel Castle which had been his home for so long.

F.W.S.

JOHN L. DENMAN, 1882-1975

John Leopold Denman died peacefully at his home in Hurstpierpoint on 5th June, 1975. He was born and educated in Brighton where he practised as an architect for some sixty years; his interest in, and concern for, buildings continued to stir his imagination until the end of his life. Although he was responsible for many fine buildings in various parts of the country, special mention should be made of his work at Canterbury Cathedral Library and the rebuilding of other property in or near the Cathedral precincts damaged or destroyed in the 1939-45 war.

A Fellow and former Vice-President or the Royal Institute of British Architects, John Denman's work was characterized by a deep appreciation of the need for a building to harmonize with its surroundings; he also had a great admiration for medieval architecture and his knowledge of that subject was in particular evidence where the restoration of ancient churches was concerned. On the other hand, the preservation of Regency Brighton was another passionate interest; Denman deplored any proposal to alter the town with which he was so familiar. Although he was such an eminent antiquary and architect, it was not until 1950 that he was elected a Fellow of the Society of Antiquaries of London—a distinction that was long overdue.

John Denman was modest almost to a fault; he was an artist of consummate skill even in old age, and his drawings in ink, pencil or watercolour were a delight to those who saw examples of them, but such opportunities were rare. Some of his drawings were reproduced on the covers of the Annual Reports of the Sussex Historic Churches Trust, in his monograph on the restoration of Southwick church, in his booklet on the fall and restoration of the tower and spire of Chichester Cathedral, and in his scholarly *Survey of the Structural Development of Sussex Churches* published in 1967.

For many years, Denman was an invaluable member of the Chichester Diocesan Art Council, the Central Council for the Care of Churches, the Sussex Archaeological Society (he joined in 1928 and was elected a Vice-President in 1965), the Sussex Historic Churches Trust, and President of the Regency Society of Brighton and Hove; he was also a Justice of the Peace, a Past-President of the South-Eastern Society of Architects, and a prominent Freemason. He served with the Royal Engineers in the 1914-18 war.

Of all his many qualities, gentleness and kindness were paramount; letters, written in immaculate script, were models of courtesy and full of descriptions of books read or places visited. England, the Dordogne or elsewhere in France, Italy and Dalmatia, among many other places, offered opportunities for John Denman to sketch and explore to the full; many of his earlier drawings and watercolours are valuable records of buildings which no longer exist. Another generous trait was the giving to his friends of books which he had enjoyed.

By John Denman's passing, full of years and honour, Sussex has lost a man who contributed much to the preservation of its historic buildings, but more than anything else, he set an example of humility and of living a good and useful life which endeared him to those who had the privilege of his friendship.

F.W.S.

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