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IRON AGE AND ROMANO-BRITISH SETTLEMENTS ON KENNEL HALL KNOWE, NORTH TYNEDALE, NORTHUMBERLAND (1976)

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INTRODUCTION

THE RECTANGULAR shaped earthwork on Kennel Hall Knowe is the third site of this form to have been excavated in advance of the new Kielder reservoir in North Tynedale. Reports on similar Romano-British sites at Tower Knowe and Belling Law, situated respectively some 4 km and 2·5 km to the south-east have already appeared in previous volumes of these Transactions.¹ The major point of structural interest to emerge from these two earlier excavations was the presence on both sites of entirely timber-built precursors to the extant embanked or stone-walled Romano-British settlements. The enclosure on Kennel Hall Knowe presented a further opportunity to test the persistency of such a structural sequence in the area and, at the same time, to check the possible contexts of the earlier timber-built phases.

Financial support towards the cost of the excavations was provided by the Department of the Environment, the University of Newcastle upon Tyne and the Northumbrian Water Authority. As on previous occasions the work was carried out by students from the University of Newcastle upon Tyne and by a group of experienced volunteers from this Society, to all of whom one is indebted for their most helpful co-operation. Dr. G. Davies, Mr. J. D. Rackham, Miss L. Thoms and Dr. J. Weyman have kindly submitted specialist reports.

THE SITE (fig. 1)

Kennel Hall Knowe is a low rounded knoll lying some 450 m to the south of the site of Plashetts station on the abandoned North Tyne railway (NY 667898). The name Kennel appears in documentary sources from at least as early as the mid-seventeenth century and was applied to a farm or holding which by the early nineteenth century had been incorporated into the larger Belling estate.² The site of the farm-building is probably marked by the low remains of a small stone-building which is still visible close to the line of the abandoned railway and directly to the north of the knowe itself (fig. 1 inset, no. 5). This is much the same location as the

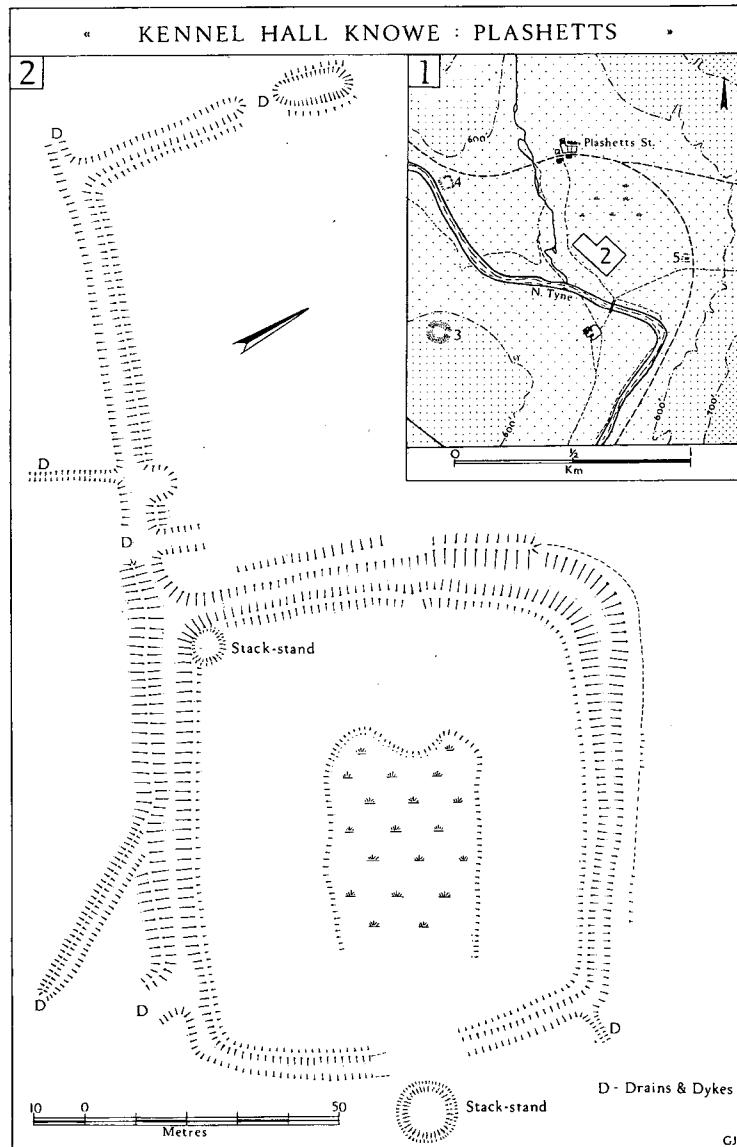


Fig. 1.

Kennell shown on Armstrong's map of 1769 and in 1867 Henry MacLauchlan noted that this building was still known locally as the *Kennel*.³ The addition of *Hall* in the name attributed to the knowe on which the earthwork lies could well be no more than a confusion with *How* or *Haw*, Haw Hill being an alternative name given by MacLauchlan.

The earthwork was visited and described by MacLauchlan in his survey of 1867. It was re-surveyed by Mr. W. Dodds and the present writer in 1957 and later included in the published list of Romano-British settlements in the southern part of the county, although at the time the poor state of preservation of the remains allowed no more than a tentative attribution of context.⁴ Whereas the whole area had undoubtedly reverted to pasture before the date of MacLauchlan's visit, it was evident that the slopes of the knowe and the site itself had been well ploughed over at some time before this and also prior to the construction of two stack-stands, the remains of which MacLauchlan noted with his usual efficiency but without any clear idea as to their function.

The ditch of the enclosure is traceable around most of the perimeter except for a break in the centre of the south-east side which could be attributed to the entrance and some later interference. Low remains of internal and counterscarp banks are best preserved on the north-west, uphill side. The almost square interior measures c. 90 by 80 m and is featureless apart from the slight reed-filled depression or hollowed yard indicated on the plan (fig. 1). It was the presence of the latter, in conjunction with the shape and the situation of the enclosure on the forward slope, which suggested the possibility of a Romano-British context in 1957. The ditch along the south-west side of the enclosure has been recut in more recent times, possibly on more than one occasion, so as to act as an open drain. This drain continues in a north-westerly direction down the reverse slope towards the Plashetts Burn, and beyond the point of entry of a second, unfinished drainage ditch from the north. In plan this later system of drainage ditches and dykes gives the impression of an abortive attempt to add an annexe on to the original enclosure, but this is no more than illusory.

The enclosure is not defensively sited, lying on the gentle south-east slope and making little use of the natural contours, except perhaps for drainage. Although the knowe is bounded by the North Tyne on the south, the Plashetts Burn on the west, and an area of marshy ground on the north and east, these hindrances are too far removed from the site itself to have provided any immediate natural defence.

A second rectilinear enclosure, similar to but smaller than that on Kennel Hall Knowe, lies some 700 m to the west-south-west on the opposite side of the river. This earthwork, known as Wellhaugh Camp, is situated slightly above the proposed high-water mark of the reservoir and will be safe from future inundation (fig. 1 inset, no. 3). Some 600 m distant to the north-west of Wellhaugh Camp another rectangular enclosure, known as Halfpenny Rigg Camp, was also noted by MacLauchlan but for many years has been lost amongst the thick blanket of afforestation. A fourth earthwork, currently being investigated, occupies a small promontory above the left bank of the river about 600 m to the north-west of Kennel Hall Knowe

(fig. 1 inset, no. 4). Although it is situated some distance from the Gowan Burn itself this is undoubtedly the site referred to by MacLauchlan as Gowanburn River Camp.⁵

THE EXCAVATIONS

Working on the assumption that at some stage the enclosure was likely to have been a Romano-British settlement of standard local form, the main effort was concentrated on the uphill portion of the interior where the dwellings are normally to be found, facing onto a frontal yard. All areas indicated in fig. 2 were eventually trowelled down to the light boulder-clay which formed the subsoil over the whole of the site. So far as is possible the remains which were uncovered are described in chronological order, commencing with the earliest, and discussion is reserved for the conclusion (p. 24, below).

A. EARLY PITS AND PRE-ENCLOSURE OCCUPATION

A number of pits were found in the boulder-clay underlying the old plough-soil. Whereas some of these were now extremely shallow and no certain context or function could be attributed to them, at least two of them qualify for consideration in a pre-enclosure context (fig. 2, A and B, Area A). Pit A was oval in shape, measuring c. 0·7 m by 0·55 m at the clay surface and shelving to a rounded bottom at 0·3 m. A small number of abraded sherds of comb-impressed Beaker and a flint-core were incorporated in the fill. This consisted of brown earth flecked with carbon and a number of randomly placed stones, two of which were reddened by heat. Pit B, lying about 3 m to the south, was almost square in shape in its lower reaches but had suffered from some later disturbance near to the top. Its sides were almost 1 m in length and the almost flat bottom occurred at 0·7 m below the clay surface. The fill was similar to that of Pit A, consisting of earth flecked with smears of carbon and an indiscriminate mixture of stones. A few flakes of flint were found amongst this material but none of them were fashioned implements.

While the context of Pit B must remain uncertain it seems reasonable to accept a Beaker context for Pit A. Their function, either individually or jointly, remains a matter of conjecture. Although Beaker burials are known to occur in the area in both shallow graves and pits in addition to the more frequent stone-built cists, no skeletal material, even in comminuted form, was found in either pit and there was no indication of there having been a covering mound or cairn at any time. A portable cup-marked stone, such as in other circumstances could have had a funerary context, was in this instance found in an area well removed from the pits themselves. Consequently, some form of domestic occupation is possible, though no associated structure was found. There was an appreciable scatter of flint and chert waste on this part of the site and the recovery of some mesolithic implements, a neolithic

KENNEL HALL KNOWE
Interior

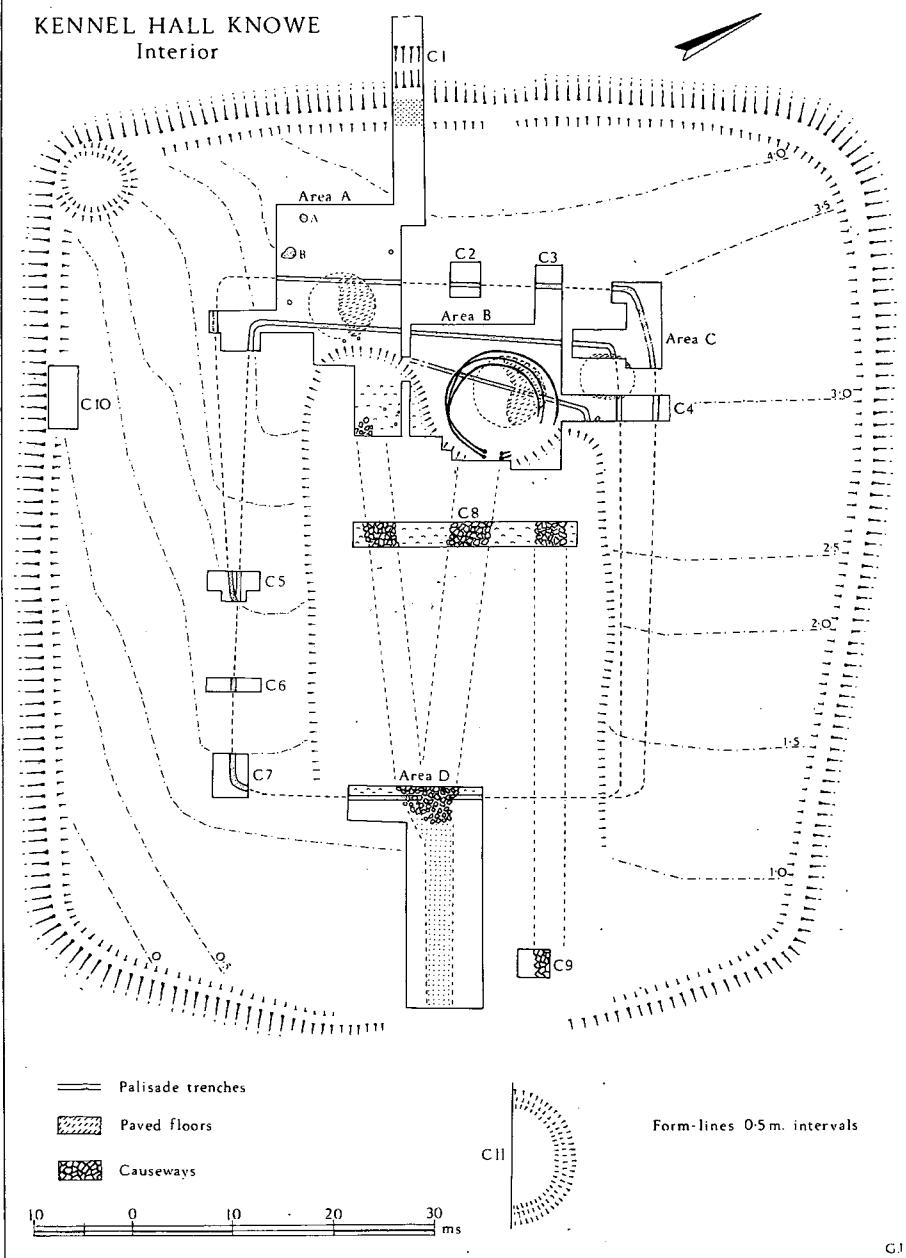


Fig. 2.

leaf-shaped arrowhead and a polished stone axehead from elsewhere in the excavated area indicates at least some transitory occupation of even earlier date than the Beaker-sherds themselves (*v.* small finds).

B. THE ENCLOSED SETTLEMENTS

Four, superimposed, rectangular-shaped enclosures had been established on the site, the first three being entirely timber-built and the fourth consisting of the visible ditched and embanked enclosure already described.

1. *Phase I Palisaded Enclosure* (figs. 2 and 4; plate Ia)

Only one corner and a 16 m stretch of the north side of this enclosure were found in excavation. The construction-trench, intended for contiguous timber uprights, was 0·4 m wide and had been cut into the subsoil to a depth of 0·45 m. Many of the original packing stones remained *in situ* on both sides of the trench and indicated the use of vertical timbers of c. 150 mm in diameter. The trench had been deliberately back-filled with stone rubble, presumably at the time of or shortly after its disuse, since this material rested directly on the bottom of the trench in which there was no intervening accumulation of earth or silt.

The width of this enclosure could not be determined with any accuracy as the south-westerly course of the trench had been erased by the lowering of the surface during later occupation of the site and the development of the frontal yard. It may be assumed, however, that this had not exceeded 25 m or so, otherwise the line of the trench would have continued beyond the area of the later hollowed yard. By much the same token, the whole length of the enclosure must have lain within the area of this later hollowed yard, and, as a consequence, could not have exceeded some 40 m. It seemed unlikely that any internal structures associated with this phase would have survived the later developments and no attempt was made to explore the interior except in Cutting 8 (fig. 2). Even so, the comparatively small size of the enclosure would suggest that there had not been more than one associated round house at any stage during its occupation.

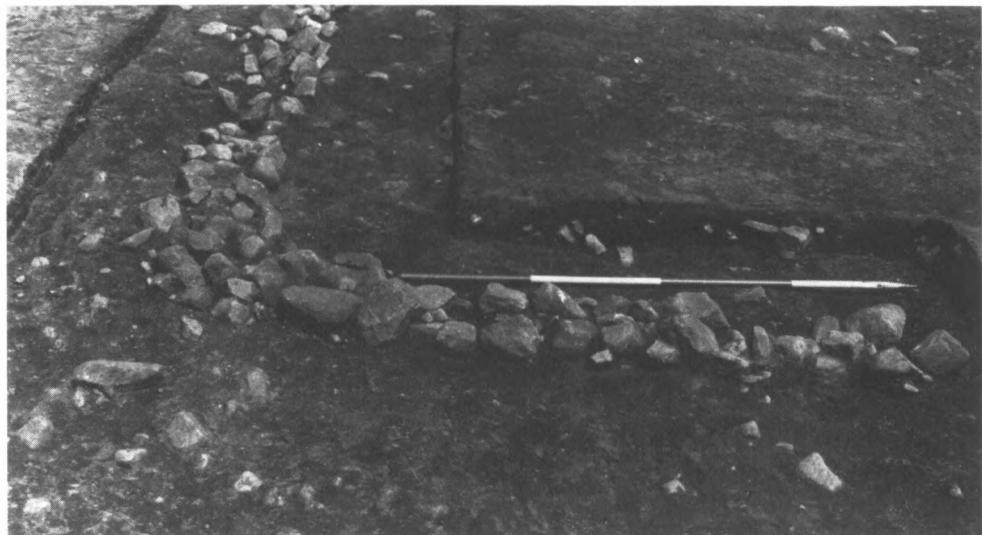
This enclosure was demonstrably earlier in context than a group of superimposed, timber-built houses in Area B (fig. 4), material from the earliest of which yielded a radiocarbon date of 100 ± 90 b.c. (HAR 1943; 2050 ± 90 b.p.). It may then be seen both as the smallest and the earliest enclosure on the site.

2. *Phase II Palisaded Enclosure* (figs. 2 and 4; plates Ia and b, IIa)

The average width of the perimeter-trench was 0·5 m and it was of the same depth from the clay surface except at the south-east facing entrance in Area D (plate IIb). Packing stones had been placed on both sides of the trench in order to secure the contiguous timber uprights and once again the construction-trench had been



a. Super-imposed timber-built houses, phase I and phase II palisade-trenches



b. Phase II palisade-trench with stone packing.

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a. Entrance through phases II and III palisades, phase IV paving partly removed.



b. Phases II and III palisade-trenches,
entrance.



c. Phase III palisade-trench.

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deliberately filled with additional stone packing at the end of its use. The enclosure itself measured 37 by 46 m and the gateway in Area D was 1·8 m wide.

In Areas A and B and in Cutting 4 the infilled palisade-trench was overlaid by the remains of circular paved floors, to all of which a Roman context has been attributed (*v. below*). More significant in the determination of a relative sequence, however, was the situation encountered in Cutting 5, where the phase II perimeter-trench merged with that of a third timber-built enclosure, close to an awkward outcrop of rock. At this point the phase II trench was demonstrably the earlier and from here onwards, at least on the south-west and south-east sides, the phase II construction-trench had been reused in phase III. On both sides of the common entrance in Area D the depth of the trench increased gradually to 0·9 m, but it proved impossible to determine whether this was due to secondary use or simply an original provision to accommodate more massive timbers so as to give additional support to the gate itself. Certainly there were no further structural provisions for a gateway of any sophistication and no more than a pathway of small cobblestones ran between the terminals of the palisade-trenches. A stone-flagged causeway which overlay the cobbles was without doubt later in context than both the phase II and phase III enclosures in that it overrode the terminals of the common support-trench.

There were no datable finds which could be attributed with any certainty to the occupation of the phase II enclosure and its possible context can only be assessed in more absolute terms on the basis of radiocarbon dates from material associated with the timber-built houses in the interior (*v. below*).

3. Phase III Palisaded Enclosure (fig. 2; plate IIc)

This was the largest of the three timber-built enclosures, measuring some 50 by 42 m. Except where it shared a common perimeter with the phase II enclosure the support-trench was generally 0·45 m wide and deep, although the packing slabs would not have allowed timber uprights of more than 150 mm diameter. The fill of the trench after disuse varied between a deliberately introduced packing of large stones on both sides of the gateway in Area D and mixed earth and stones in Area B.

As in the case of the phase II palisade-trench this perimeter was also overlaid by the remains of a paved circular floor in Area A, to which a Roman date has been assigned, and by the flagged causeway at the entrance in Area D. No datable finds were recovered from the long stretches of trench which were emptied, but small fragments of carbonized wood from amongst the earth filling of the trench on the north-west side of the enclosure yielded a radiocarbon date of 270 ± 80 a.d. (HAR 1938; 1680 ± 80 b.p.). In the circumstances, however, this sample most probably relates to later occupation on the site and at best provides no more than a general *terminus ante quem* for the abandonment of the phase III enclosure.

4. The Phase IV Ditched and Embanked Enclosure (figs. 2 and 3)

In the absence of any relevant stratification and the lack of physical contact

Cutting 1

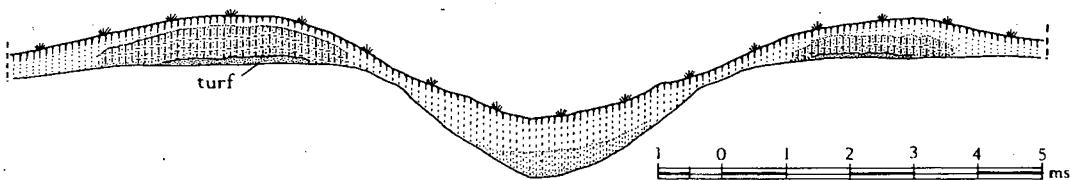


Fig. 3.

between this enclosure and the timber-built perimeters, its attribution to the final stage of development on the site must rest upon inference and the analogies provided by the settlements previously excavated on Tower Knowe and Belling Law.

By this stage the interior measured some 90 by 80 m or approximately three times the area enclosed by the phase III perimeter. The inner bank, ditch and counterscarp bank were sectioned in Cutting 1, where the remains were better preserved than elsewhere (fig. 3). The ditch had been dug through the light boulder-clay to a rounded bottom at a depth of 1.6 m below the original ground level. Unlike the final phase on the nearby site at Belling Law, no evidence was recovered for the presence of a stone revetment to the inner bank, either in the form of stones *in situ* or as tumble in the ditch. A thick band of leached turf and soil, some 2 m wide beneath the remains of the inner bank and 1.5 m wide beneath the counterscarp bank, possibly included some of the turf initially stripped from the surface on the line of the ditch. No post-holes or support-trenches for any form of timber revetment or surmounting palisade were found, either in this cutting or in the 5 m long clearance of the very low remains of the inner bank in Cutting 10. Unfortunately, the probable entrance to this enclosure was not reached in Area D before the excavations had to be terminated.

Although the sides of this enclosure were not absolutely equidistant from the construction-trenches of the phase III perimeter, it is difficult to imagine that the former had not been laid out without some regard for the existence of the latter. On the south-west side in particular the enlargement of the enclosed area had necessitated a movement of the perimeter on to the somewhat steeper slope towards the river and away from the natural crest line followed by the earlier palisades. Moreover, if the paved causeways overlying the phase III entrance are to be associated with the phase IV enclosure, as will be argued, then the care with which the phase III trench in this sector had been deliberately filled from bottom to top with an unbroken packing of large stones would again suggest continuity of occupation on the site.

No datable artefacts were recovered from the cuttings made over this perimeter and the general context of the enclosure in the Roman period must be argued from the material found in the interior, reinforced by analogous plans of known Romano-British settlements in the area.

5. *The Interior Features* (figs. 2 and 4; plates I and II)

a. *Timber-built round houses* (fig. 4)

Unequivocal remains of timber-built houses occurred in the form of circular trenches cut into the surface of the boulder-clay in Area B (fig. 4). These were not drip or drainage gullies and contained the remains of stone packing for the support of contiguous wall-timbers. Three such superimposed houses were located on a small shelf of land protruding into the uphill extremity of the hollowed yard which occupied the centre of the site as a whole. Although parts of the circumferences of the construction-trenches had been denuded by subsequent activity on the site, sufficient remained to determine a sequence, based partly on the nature of the filling of individual trenches but chiefly on the position of the packing stones at the intersections of the trenches. The houses as a group were demonstrably later than the construction-trench for the phase I timber-built enclosure and at least two of them, houses 1 and 2, were earlier in context than the remains of a circular paved floor of the Roman period.

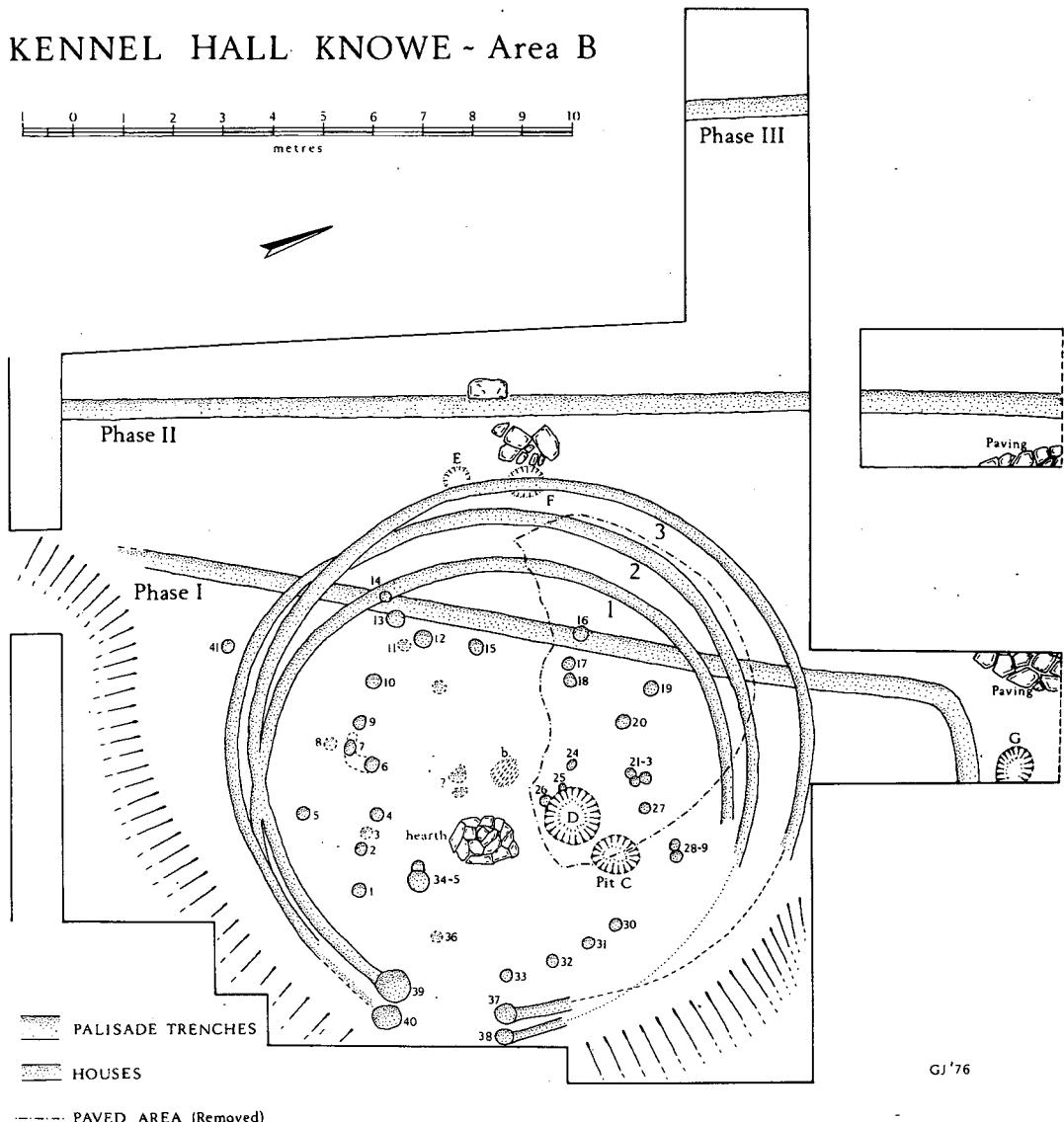
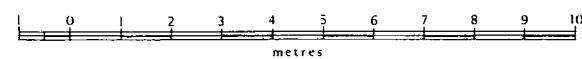
House 1. The trench was generally 0·25 m wide and deep and would have supported the timber walls of a house c. 9 m in diameter with a floor-area of c. 63 m². At the point of intersection with house 2 it was demonstrably the earlier but no sequence could be established by direct observation with house 3. There had been some reddening of the sides of the trench and an amount of carbonized alder and oak-wood in the bottom of the trench suggested that the house could have been destroyed by fire. A radiocarbon assay of this material yielded a date of 100±90 b.c. (HAR 1943; 2050±90 b.p.).

House 2. The dimensions of the wall-trench were similar to those of house 1 but the diameter of the house was greater at c. 10 m, giving a floor-area of c. 78 m². Some small sherds of hand-built pottery were lodged in the terminal post-hole on the north side of the doorway but these are not capable of providing a close date (*v. small finds*).

House 3. This was the largest house, having a diameter of 10·8 m and a floor-area of c. 90 m². The wall-trench was up to 0·35 m in depth and the terminal post-holes at the doorway were 0·5 m deep. Packing stones associated with this trench had been inserted across the trench of house 2 at the point of intersection, demonstrating the priority of house 2 and thereby the sequence for the three houses, *i.e.* 1–2–3. Charcoal sealed in the bottom of the trench yielded a radiocarbon date of 30±110 a.d. (HAR 1941; 1920±110 b.p.).

Thirty-six certain or probable post-holes occurred in the area covered by the three superimposed houses, their individual depths as found ranging from 50 to 500 mm. Apart from noting a general circularity in their disposition and the probability that most if not all had been intended to hold uprights serving as roof-supports, it proved impossible to assign them to specific phases in the sequence of known houses. There seemed no reason to regard any of them as supports for a wall or walls of additional

KENNEL HALL KNOWE - Area B



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Fig. 4.

houses of individual post-hole type of construction. The only contained find was part of a rotary quernstone which had been reused as a packing stone in post-hole 17.

An area of thin heat-crazed paving slabs, set into the boulder-clay, had undoubtedly served as a hearth at some stage in the occupation of the three houses, whilst the possible site of a second hearth lay about a metre distant where the surface of the clay had been reddened and baked hard by the heat, (fig 4b).

Two adjacent pits, lying within the common floor-areas, were both earlier than the partly destroyed paving which also overlay the wall-trenches of houses 1 and 2. Pit C measured 1·0 by 0·75 m at the surface and shelled to a rounded bottom at a depth of 0·4 m. Its fill consisted of tipped occupation-earth, flecked with charcoal and comminuted bone, and two more substantial lenses of mixed charcoal and burnt animal bone (*v. small finds*). A radiocarbon date of 20 ± 70 b.c. (HAR 1937; 1970 ± 70 b.p.) was obtained from a sample of the charcoal and the association of the pit with the occupation of one or other of the timber-built houses is reasonably assured. Pit D was just over 1·0 m in diameter and shelled to a rounded bottom at 0·5 m. Post-holes 25 and 26 had been partly sunk into its filling which consisted of dark brown earth flecked with occasional smears of charcoal and bone. A stone pounder and a stone rubber recovered from the fill are not capable of providing even a general context, so that in this instance the association of the pit with the houses can be no more than a tentative assumption.

No further timber-built houses were found in excavation, but it could be argued from the plan (fig. 2) that the location of the three superimposed houses in relationship to the perimeters of the phase II and III palisaded enclosures would allow space for a second house, or even a group of superimposed houses, immediately to the south. In the event, this possibility proved to be incapable of solution because of the encroachment of the hollowed yard, and no more than the stub-ends of four uncertain post-holes were found in this area.

All told, the attribution of the surviving timber-built houses to the later pre-Roman or even the early Roman period in the north is dependent upon the three radiocarbon dates obtained for the earliest and latest houses and for Pit C, a fragment of rotary quernstone from post-hole 17, and the Roman context assignable to the overlying pavement (below). Apart from the fact that the superimposed houses were all undoubtedly later than the phase I enclosure, the specific attribution of individual houses to one or other of the remaining palisaded enclosures, or even to the early life of the phase IV enclosure, is a matter of conjecture. Whilst the whole group lay within the rear line of the phase II palisade, house 1, the earliest, was more comfortably situated at a slightly greater distance from the palisade itself to allow a tentative association between the two. Perhaps on this basis the later houses, 2 and 3, might be assigned to the occupation of the phase III palisaded enclosure, or in the case of house 3, possibly to an early stage in phase IV. The radiocarbon date of 100 ± 90 b.c. for house 1, with all its recognized limitations, might then be related to the occupation of the phase II enclosure, and that of 30 ± 110 a.d. for house 3 to the phase III enclosure or to an initial stage in the phase IV enclosure.

b. *Stone-built round houses, yard and paved causeways* (figs. 2 and 4)

Attention has already been drawn to the fact that from surface observation the extant phase IV enclosure possessed some of the diagnostic traits of a local Romano-British settlement. On better preserved sites these would also have included the remains of stone-built round houses, located towards the rear of the site and approached by one or more flagged pathways over a slightly hollowed frontal yard.

Despite the denuded nature of the remains on Kennel Hall Knowe, three sites of possible stone-built houses merit serious consideration. The first of these was represented by the partial remains of a circular area of paving in Area A. This overlay both the phase II and III palisade-trenches and, by inference, could be assigned to the occupation of the phase IV enclosure. Two post-holes, both 0·4 m deep and with packing stones still in position, lay on the south-eastern perimeter of the paving where they could well have served as supports for doorposts. Although no stone walls remained *in situ* their former presence could be inferred from a scatter of stone in the surrounding area and a considerable spread of tumbled stone down the slight slope into the area of the hollowed yard on the east side. Such a house would have had a floor-diameter of c. 6 m.

A similar area of robbed paving, to which some prominence has already been given, overlay the phase I palisade-trench and the perimeters of two of the timber-built houses in Area B. Once again, although there were no stone walls remaining, a notable scatter of stone occurred in the top soil in the immediate vicinity of the paving.

The full extent of a third circular area of paving could not be uncovered in the time available for excavation. This was encountered in Cutting 4, where it overlay the filled palisade-trench of phase II, and was also present in the edge of Area C (fig. 2). Whereas a number of large paving slabs appeared elsewhere in the excavated areas on this uphill part of the site, most of these had been dislodged during the course of later ploughing or robbing and they made little sense in their isolation.

The context of these putative stone-built houses with paved floors can be gauged only in general terms. That in Area B post-dated Pit C with contents dated to 20 ± 70 b.c. and also, presumably, the latest of the timber-built houses with its radiocarbon date of 30 ± 110 a.d. Unfortunately, only two wall-sherds of Roman coarse pottery were recovered from the excavations, both datable to the second century A.D. or later, but significantly both of these came from the interstices between paving slabs of the two floors in Areas A and B. The radiocarbon date of 270 ± 80 a.d., obtained from the small fragments of charcoal which had entered the fill of the phase III palisade trench, would also be in keeping with this occupation of the phase IV enclosure.

The case for the former presence of at least three stone-built houses is further enhanced by other developments associated with the phase IV enclosure. Three causeways of heavy paving slabs, all some 3 m wide, were uncovered in Cutting 8 across the cobbled yard. They were structurally secondary to the lightly cobbled surface of the yard which ran beneath them. Whilst the westerly course of the northernmost of these causeways can be no more than a matter of surmise, the centre causeway

was certainly aligned on the site of the putative stone-built house in Area B. Likewise, the line of the southernmost causeway continued into an area of partly dislodged paving and may be assumed to have proceeded originally as far as the doorway of the proposed stone-built house in Area A. To the east of Cutting 8, both projection and probing demonstrated that the southernmost and centre causeways had merged into one somewhat wider pathway on the edge of Area D. As already indicated, this broader feature overlay both the filled palisade-trench common to phases II and III and the original cobbled surface through the entrance to these enclosures. A few metres beyond this point the paving had been robbed and only a scatter of loose stone marked the continuation of the line towards the entrance to the phase IV enclosure. Probing indicated that the northernmost causeway had pursued an individual course towards the perimeter of the phase IV enclosure, partly confirmed in Cutting 9. Although it is not known if there was a second entrance to this enclosure there are ready parallels for such an arrangement on other Romano-British settlements in the area.

Whereas these causeways were undoubtedly part of the interior arrangements of the phase IV enclosure, the development of the slightly hollowed and cobbled yard could well have started during the life-span of the phase II and phase III enclosures. Support for this would be found in the apparently limited extent of the hollowed area as a whole, confined within the palisaded perimeters. Whatever the case may have been, the final plan envisaged for the phase IV enclosure would conform to that of a standard, local type of native settlement in the Roman period, frequently encountered to the north of the Hadrianic frontier.⁶

c. *Later activity on the site*

A few sherds of fourteenth- and eighteenth-century pottery were recovered, mainly from the top soil, but these cannot be related to any structures. The eighteenth-century sherds could well have been introduced during the manuring of arable land associated with the occupation of the Kennel, but those of fourteenth century date are more difficult to account for in the absence of documentary evidence for medieval settlement of a more permanent form than transhumance in the immediate area.

The stack-stands shown on the plan (fig. 2) are only two of a number now known in the vicinity of Plashetts and are common enough elsewhere in the northern area. A single cutting was made across the stand lying adjacent to the entrance through the phase IV enclosure. This revealed an embanked platform of earth 8·5 m in diameter, resting upon earlier tilth and surrounded by a shallow ditch measuring 1·0 m across and 0·5 m deep. There were no remains of any brushwood or more substantial flooring on the platform itself and only a single pipe-stem was recovered from the bottom of the silted ditch.⁷

SMALL FINDS

A. STONE

1. Fig. 5, 1. Portable cup-marked stone, found partly embedded in clay surface to south of house-complex, Area B. There is one peck-marked cup on one face and five on the other, ranging in depth from 10 to 20 mm. Similar portable cup or cup-and-ring marked stones sometimes occur in Bronze Age cists or cairns, as locally as Chatton Sandyford,⁸ but from recent evidence at Dalladies long barrow simple cup-marked stones can also have an earlier context.⁹
2. Fig. 5, 2. Heavily patinated neolithic polished stone axe-head, found on the clay surface to the north of the house-complex, Area B. It bears no evidence of reuse for other purposes. This implement could be of Langdale stone but the result of a petrological analysis is not yet available.
3. Fig. 5, 3. Stone pounder from the fill of Pit D, Area B. The large water-smoothed cobble fits conveniently into the hand and bears heavy scars from pounding on one end and smaller percussion-marks on the other.
4. Fig. 6, 4. Stone pounder of sandstone found on the surface of the cobbles, hollowed yard, Area B. Both ends of the stone bear percussion-marks and fractures from pounding. Two peck-marked depressions on one face would serve as convenient finger-grips. Similar pounders with single finger and thumb-grips on opposed faces have been found e.g. on the Iron Age homestead at West Brandon,¹⁰ Co. Durham and the Iron Age/Romano-British settlement at Boonies,¹¹ Dumfriesshire, but such a basic idea is not contextually significant.
5. Fig. 6, 5. Rotary quernstone of Cheviot lava found loose on the surface of the yard in Cutting 7. Approximately half of the top stone survives, bearing a decorative groove below the hopper and a socket-hole for the handle. Simple grooved ornament on top stones is not uncommon both locally and elsewhere. Probably late pre-Roman or Roman Iron Age in the north.
6. Fig. 6, 6. Rotary quernstone of coarse-grained sandstone reused as a packing stone in post-hole 17, house-complex, Area B. Only a fragment of the bun-shaped stone survives.
7. Fig. 6, 7. Rotary quernstone of coarse-grained sandstone incorporated into the paving of the phase IV pathway, Cutting 9. This fragment of a bottom stone retains part of the socket for the spindle.
8. Fig. 6, 8. Half of a spherical spindle-whorl which is grooved on the surface, rather than a large bead. Found in the bottom of the top soil, Area A.
9. Not illustrated. A hand rubbing stone of Cheviot stone from the fill of Pit D, Area B. The flat rubbing face of this circular shaped stone is c. 80 mm in diameter and the stone is c. 45 mm thick. There are also two small facets at different points on the side, as if from rubbing.
10. Not illustrated. Two fragments from hones of different fine-grained sandstone found on the clay surface in Area A. Both are almost square in section with sides of c. 30 mm and appear to have had two working faces.
11. Not illustrated. A number of spherical fragments from fire-crazed and reddened sandstone pot-boilers or cooking stones were found on the clay surface beneath the paving overlying the timber houses in Area B. They are possibly to be associated with the nearby hearth.

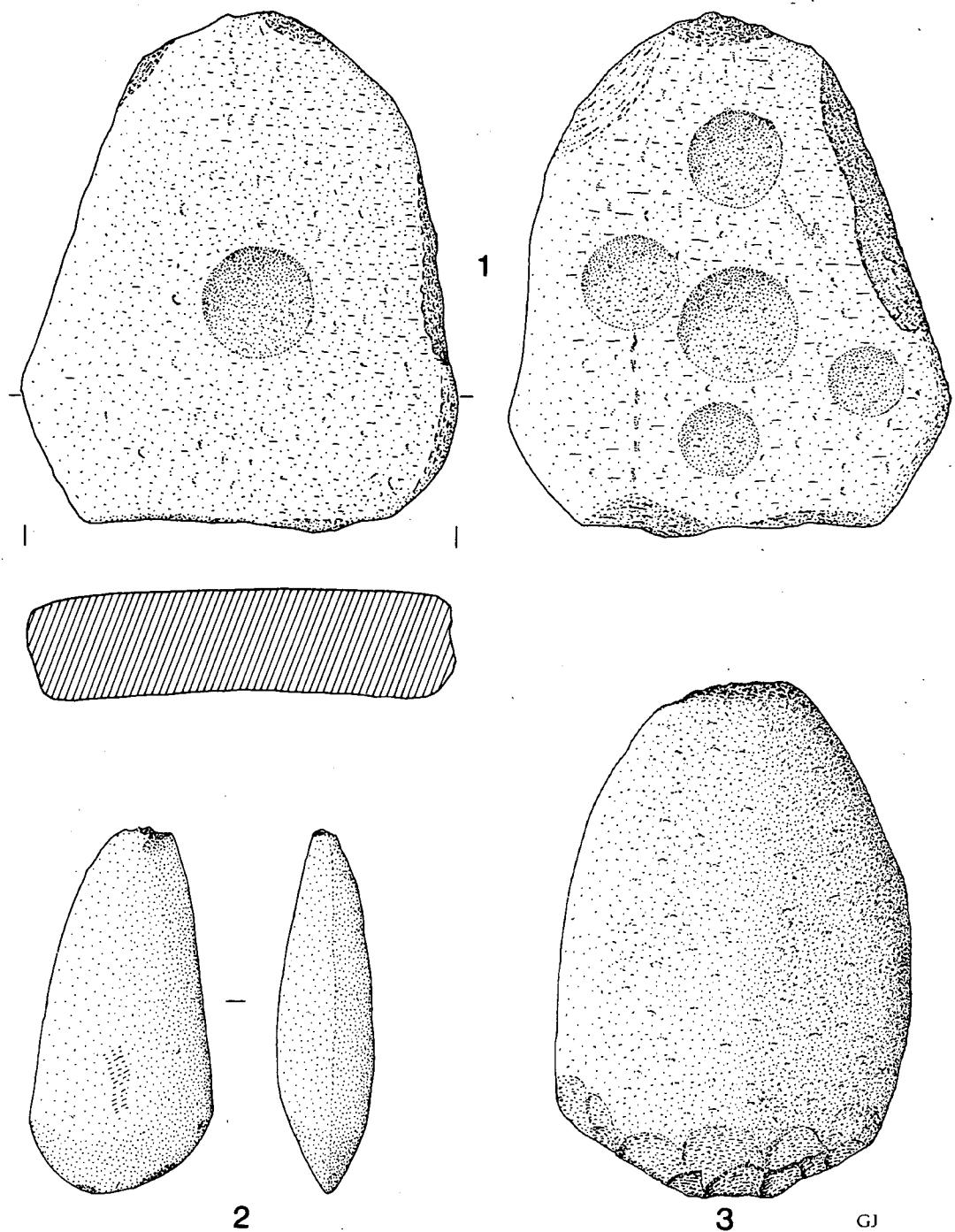
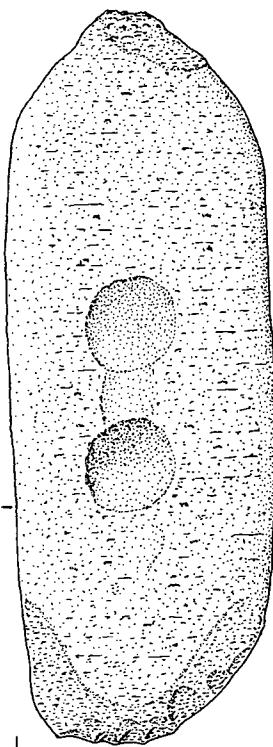
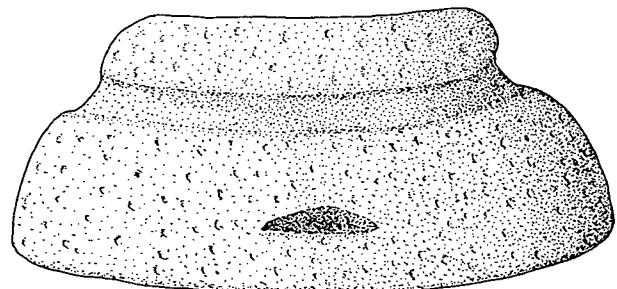


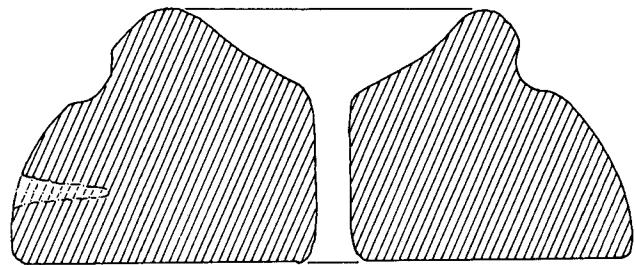
Fig. 5. Cup-marked stone ($\frac{1}{4}$); stone axehead and pounder ($\frac{1}{2}$).



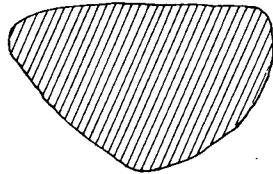
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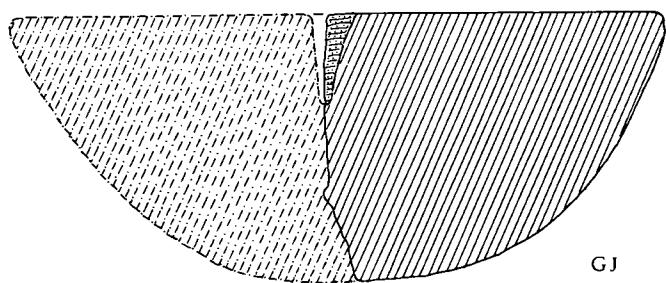
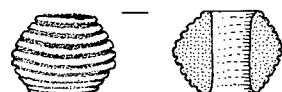


Fig. 6. Pounder ($\frac{1}{2}$); Querns ($\frac{1}{4}$); Spindle-whorl ($\frac{1}{2}$).



8

GJ

B. FLINT

Dr. J. Weyman, University of Newcastle upon Tyne

The material consists of 168 pieces of flint, chert and other usable stone, very few being of good flint. They can be classified as follows:

Possibly working waste	25
Struck flake waste	82
which includes blades or parts of blades and flint pieces	11 17
Utilized flakes	11
Worked flakes	29
Cores	12
Core rejuvenation flakes	2
Hammerstone	1

Of the 29 worked flakes, 6 had fine margin retouch only, but one had a hollow trimmed on the distal edge, and one was probably used as a knife (fig. 7a). In all there were 18 which could be labelled as scrapers (e.g. fig. 7b and c) though this distinction from knives was often arbitrary. One of those illustrated (fig. 7c) shows some wear gloss on the ripples of the reverse.

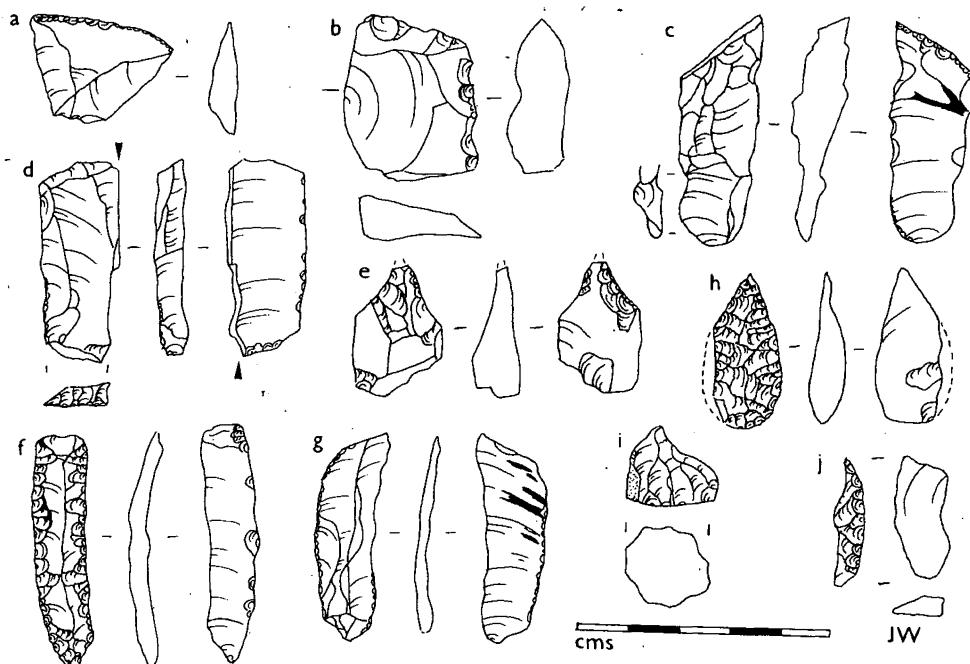


Fig. 7. Flint (3).

There were three burins present (*e.g.* fig. 7d) and one not illustrated shows scars on the 'beak' of the tool from heavy use. Two awls, or rather one awl and one borer, were present, and that illustrated (fig. 7e) was worked on both faces with invasive retouch. Knives were represented by two flakes with margin retouch only (fig. 7a), but also by two which merit special mention. One was a beautiful example of a plano-convex knife with the flaking of the dorsal surface of excellent quality and showing small areas of gloss from use (fig. 7f). The other was a blade (fig. 7g) which had very fine retouch along the left margin and very clear areas of wear gloss on the prominent ripples of the reverse. Another implement of special note was a broken leaf arrowhead (fig. 7h) which was rather thick and may not have been finished.

Of the 12 cores, only 3 were of flint (*e.g.* fig. 7i) and one of the others was a large piece of black flint nodule which had been rolled but retained chalk cortex in the depressions of the surface. It may well be from a beach. The remainder were of black amorphous stone which was far from easy to work. Two core rejuvenation flakes were present (fig. 7j).

The use of material other than flint must have been due to the scarcity of the latter and its use restricted to those tools such as knives where other material was of little value. The poorer stone would presumably be adequate for scrapers. Such a use of mixed material is well established in Scotland and Northern England¹² and particularly in the Tweed valley, not so far from this site.

The collection appears to be a mixture of mainly Mesolithic character with 3 or possibly 5 exceptions. The plano-convex knife has a long career and this one would be Neolithic or even Bronze Age. The leaf-shaped arrowhead is of workmanship far inferior to the knife, and is probably earlier. The awl is also probably of Neolithic date, and one is inclined to include the glossed knife (or finely denticulated saw) in this later group as well. One of the scrapers with some degree of invasive retouch could well belong here too. Most of the material came from the clay surface or bottom of the old tilth in Areas A and B.

C. POTTERY

a. *Beaker Sherds* (fig. 8)

Eleven small and very abraded body-sherds were recovered from the fill of Pit A, Area A. They are probably all from the same vessel which has brown/buff surfaces and a grey core. None of the sherds conjoin and six of them, measuring less than 10 mm across, are so abraded that no exterior surfaces survive. Decoration has been applied with a fine toothed stamp and appears to have consisted of triangles or chevrons between parallel groups of horizontal lines, possibly with plain zones intervening. The precise form of the vessel is uncertain.

b. *Native hand-built pottery* (not illustrated)

Only six wall-sherds and one small base-sherd were found, possibly derived from not more than three hand-built vessels. The sherds are from 7–10 mm thick, dark grey in colour with red-brown exterior surfaces, and all contain large angular grits up to 5 mm in size. The forms of the vessels are uncertain but the sherds are not inconsistent with those from simple barrel-

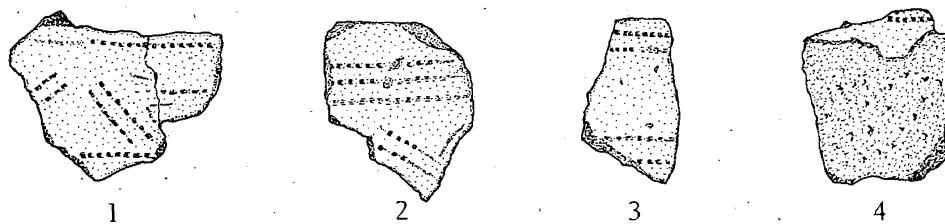


Fig. 8. Beaker sherds (?).

shaped jars which are ubiquitous in Iron Age and Roman contexts in the area. Provenances were as follows: 3 wall-scherds from the interstices between the paving stones of the circular paved floor, Area A, together with one sherd of Roman coarse pottery (below); 3 wall-scherds from the fill of the terminal post-hole at the doorway of timber-built house 2; one base-sherd from the fill of the wall-trench of timber-built house 3, Area B.

c. *Roman coarse pottery* (not illustrated)

Only two wall-scherds were found, one with the vestiges of the base showing. Both are from a Roman period jar or jars in grey fabric and of second century A.D. date or later. One was recovered from the interstices of the circular paved floor, Area A, and the other likewise in Area B.

d. *Medieval and post-medieval pottery* (not illustrated). *Miss L. Thoms, City Museum, Dundee*

None of the sherds were stratified and most came from the old plough-soil or the base of it in various parts of the site. A minimum of nine vessels are represented, five by only one sherd. The dates are tentative and based solely upon experience of other Northumberland material.

1. Rim of jug in smooth, fairly hard, orange fabric. Line of rouletted decoration on slight cordon c. 20 mm below rim. Traces of yellow glaze below the decoration. Four conjoining body-scherds, probably from the same vessel, have external surface entirely covered by yellow/green glaze and show five parallel horizontal lines of rouletted decoration. ? 14th century.
2. Two rim-scherds (one showing part of a pinched spout) and one body-sherd probably from the same jug in very smooth, hard, over-fired fabric. Traces of badly executed rouletted decoration on external outer edge of one rim-sherd and also below rim on other. The external surface of the body-sherd is covered by green glaze. ? 14th century.
3. Rim-sherd showing a pinched spout, probably from a squat, globular shaped jug in fairly hard, pale orange fabric with external yellow/green glaze. A tiny rim-sherd and three body-scherds are probably from the same vessel. ? late 14th/15th century.
4. Rim and handle sherd, plus two other rim-scherds of handled cooking pot or bowl in a smooth, soft, pale orange fabric, unglazed. ? 15th century.
5. Probably all of 18th century date. A rim-sherd in smooth grey fabric, fired to stoneware hardness, and with internal dark green glaze; a rim-sherd of combed/trailed slipware plate; a rim-sherd of combed slipware; a fragment from a pedestal base in hard, smooth orange fabric with external and internal rich brown glaze; a body-sherd in thick, pink fabric with external and internal very dark green/purple glaze.

D. METAL (not illustrated)

1. An irregular shaped fragment of lead, measuring 40 by 30 mm and 1.5 mm thick, found in the wall-trench of house 3, Area B.
2. Iron ring, heavily corroded but originally c. 8 mm thick and 38 mm in overall diameter. Provenance as no. 1 above.
3. Fragment of an iron nail with a flat head and rectangular shaped stem, found on the surface of the paved floor, Area A.
4. Two large fragments of iron slag, one of them showing a curvature consistent with having come from a small bowl-hearth or furnace. Both were unstratified but it is worthy of note that similar material was found in a Roman context on the nearby settlement at Tower Knowe.

E. SKELETAL MATERIAL

Mr. D. J. Rackham, Biological Lab., Dept. of Archaeology, University of Durham

All of the bone recovered from Pit C, Area B, had been burnt. The bone was very fragmented and although 437 pieces were examined only 8.2% were identified and some of these are not categorically determined. The main problem in the identification of this material, besides its extensive fragmentation, is the very marked shrinkage in size of the bones and often a marked degree of distortion. This has meant that even the smaller complete bones are difficult to identify because shrinkage has often put the bone or fragment within the size range of a second and similar species, *i.e.* some of the identified cattle bones are in fact similar in size to unburnt pig bones.

<i>Species</i>	<i>Total</i>
Cattle 16+?14	30
Pig ??	2
Sheep/goat 1+?2	3
Fowl ?1	1
Ox-sized animal	136
Sheep-sized animal	156
?	109

437

The collection appears to be all animal bones, even those specimens not identified tending to be animal in character. They appear to be the only surviving indication of the animal diet in the settlement; and as far as the analysis will permit, cattle, sheep (or goat), pig and fowl were present. No estimate of the importance of each can be presented despite the obvious dominance of cattle bones among the identified remains. This species is likely to survive better and in larger more recognizable pieces and, as the list of unidentified remains indicate, ox-sized animals by no means predominate in the fragment numbers although in fact the sheep-

sized fragments are generally considerably smaller in size owing to their greater fragility.

The identified bones are the denser bones such as teeth, carpals, tarsals, sesamoids and phalanges. Metatarsal bones have also been identified because of the characteristic shape of their shafts. The remaining material although often identifiable as a long bone, vertebra or rib fragments could not be attributed to species.

The detailed catalogue is lodged in the Records Room, Museum of Antiquities, Dept. of Archaeology, University of Newcastle upon Tyne.

F. POLLEN ANALYSIS

Dr. Grant Davies, Dept. of Botany, University of Durham

The sample was taken from the turf underlying the inner bank of the phase IV enclosure. The analysis suggests that, at the time of the burial of the turf, an open scrub woodland existed in the vicinity of the settlement. The composition of tree and shrub species present is that which one would expect to find in an impoverished woodland, not in primary forest. Further, *Calluna vulgaris*, a heath and moorland peat indicative of relatively acidic soil conditions, has already become well established. The presence of small amounts of weed species (e.g. *Plantago lanceolata*) is further evidence that the forest had been cleared and the land used at some time before the burial of the turf sample. Nothing more than we would expect in view of the archaeological evidence.

<i>Species present</i>	<i>% of Total Tree Pollen</i>
<i>Trees</i>	
<i>Betula</i>	37
<i>Quercus</i>	6
<i>Alnus</i>	56
<i>Fraxinus</i>	1
<i>Shrubs</i>	
<i>Corylus</i>	176
<i>Salix</i>	3
<i>Herbs</i>	
<i>Gramineae</i>	43
<i>Cereals</i>	—
<i>Cyperaceae</i>	1
<i>Calluna vulgaris</i>	105
<i>Caryophyllaceae</i>	4
<i>Filipendula</i>	1
<i>Labiateae</i>	1
<i>Plantago lanceolata</i>	4
<i>Plantago major</i>	1
<i>Ranunculaceae</i>	5
<i>Rosaceae</i>	2
<i>Rumex acetosa/acetosella</i>	1
<i>Liliaceae</i>	1

<i>Pteridophytes</i>	
<i>Lycopodium</i>	2
<i>Polypodium</i>	66
<i>Pteridium aquilinum</i>	1
<i>Sphagnum</i>	33
Filicales	269
Percentage of Trees/Shrubs/Herbs	22/40/38

SUMMARY AND CONCLUSIONS

The presence of a small number of flint and stone artefacts from the site is indicative of some mesolithic and neolithic activity in the immediate area, however transitory in nature this may have been. The upper reaches of North Tynedale are not notable for recorded finds of this period although it is as well to recall that the neolithic long cairn known as the Devil's Lapful¹³ lies just over 4 km to the north of Kennel Hall Knowe. A second long cairn has also been recorded near to the Birks,¹⁴ some 13 km to the south-east, but in this instance the attribution would need to be determined by excavation.

Possibly during the late third or early second millennium B.C. human activity is attested by a few sherds of Beaker pottery and at least one if not two pits which could have been domestic rather than funerary in nature. The situation is not altogether dissimilar from that found beneath the nearby Romano-British settlement on Belling Law where there were at least two pits and a scatter of flint scrapers and waste.¹⁵ Recorded finds of the period are again rather scarce in the immediate area but include the Beaker burial from Smalesmouth,¹⁶ 8 km downstream to the south-east. There is also a rather fine flint dagger from Highfield Hope, about 7 km to the east, and a second from the river itself, near to Kielder.¹⁷ The context of the large round cairn known as Deadman Cairn, situated less than 4 km to the north-east, is at present unknown although it was partly opened in the nineteenth century.

No further activity is recorded on the site until the Late Iron Age and Roman period. Four superimposed structural phases have been envisaged on this enclosed settlement, the first three entirely timber-built and the fourth being a ditched enclosure containing, round, stone-built houses and paved causeways (fig. 9). On the available archaeological evidence continuity of settlement would seem to be assured, although as is sometimes the case on such settlements precise dating of the various structural phases is difficult. Radiocarbon dates obtained from material associated with the earliest and latest of three, superimposed, timber-built houses and an associated pit are, respectively, 100 ± 90 b.c. (205 B.C.-A.D. 60), 30 ± 110 a.d. (95 B.C.-A.D. 215), 20 ± 70 b.c. (95 B.C.-A.D. 130).¹⁸ All of these features post-dated the phase I palisaded enclosure and, by inference, the radiocarbon dates can probably be related to the occupation of the phase II and phase III timber-built homesteads.

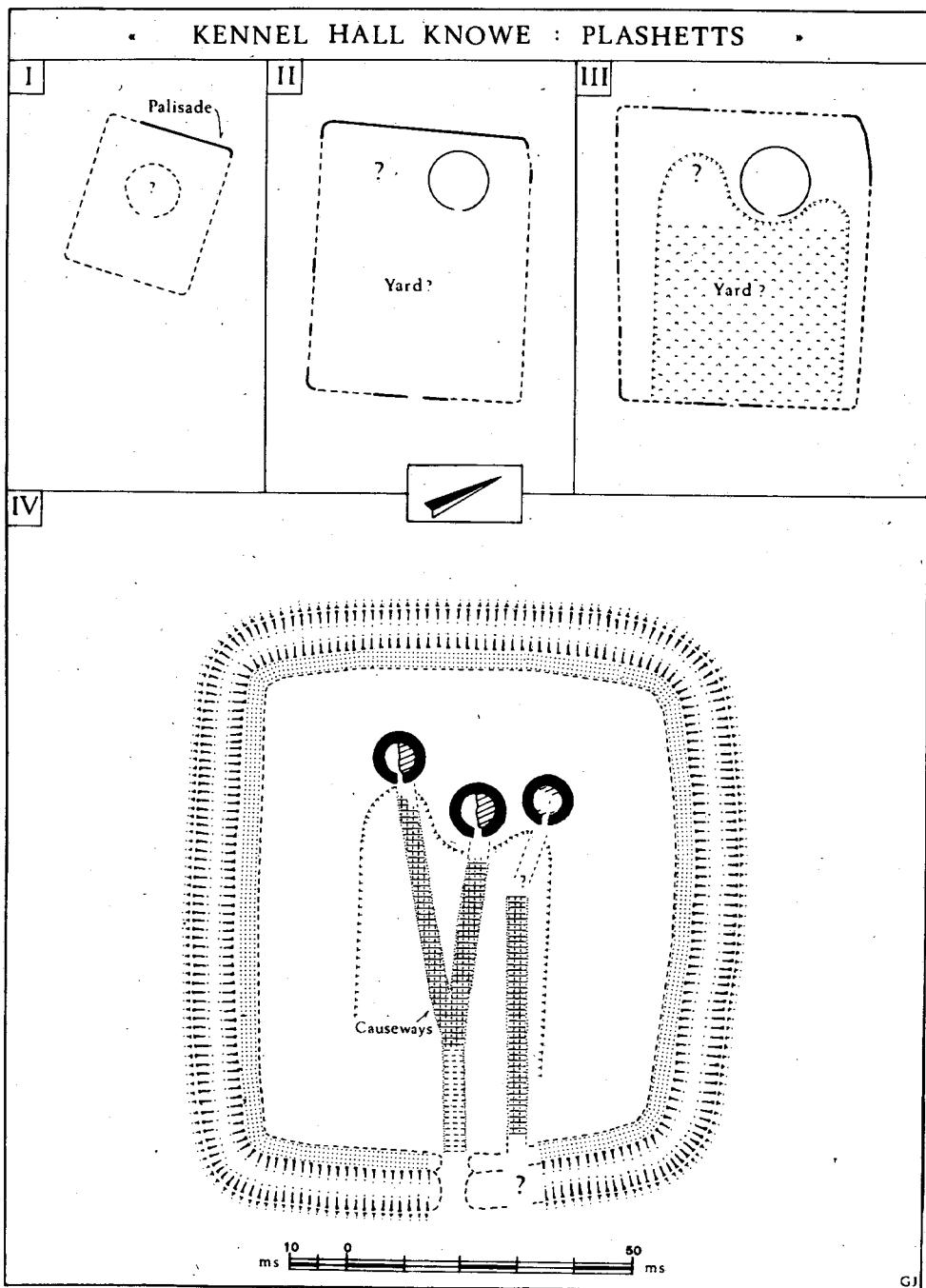


Fig. 9. The four structural phases.

This being the case it is possible, though not absolutely certain, that palisaded homesteads were already established on the site at the time of the Roman conquest of the north, if not well before this. In this connection it is well to recall the single radiocarbon date of 160 ± 80 b.c. (370 b.c.–60 b.c.) assigned to the earlier of two palisaded homesteads underlying the ditched Romano-British enclosure on Belling Law. The occupation of the phase IV enclosure on Kennel Hall Knowe, containing at least three putative stone-built houses and attendant paved causeways, can most probably be dated to the second century A.D. or later, albeit on the strength of no more than two sherds of Roman coarse pottery and a single radiocarbon date of 270 ± 80 a.d. (A.D. 225–A.D. 400). In this case, however, there are many analogous settlements of the Roman period throughout the southern dales of the Tyne/Forth Province.

Arable farming at the nearby settlements on Tower Knowe and Belling Law was attested respectively by field-clearance and plough-marks, in addition to the ubiquitous bun-shaped quern. At Kennel Hall Knowe it can only be inferred from the presence of broken rotary quernstones. A pollen analysis of a sample of turf from beneath the bank of the phase IV enclosure does little more than confirm that there had been secondary scrub and woodland and some moorland present in the area, and that the land had probably been used at some time before the burial of the turf. It is perhaps worthy of note at this juncture, however, that the construction of the phase III palisade alone would have required at least 1200 posts, assuming an average diameter of 150 mm. On the basis of the posts being at least 2·5 m long, to give a stockade rising 2 m above ground level, the total length of timber needed would have been over 3000 m.

Direct evidence for animal husbandry is confined to the dietary remains from a pit, associated with the phase II or phase III enclosure. These consisted of the bones of cattle, sheep or goat, pig and possibly fowl. Stock rearing may also be inferred, however, from the presence of the relatively large and hollowed frontal yard which may have been in use from phase II onwards.

On the two other settlements recently excavated in this area of North Tynedale the initial palisaded enclosure contained no more than a single timber-built house. At Tower Knowe this increased over time to two timber-built houses and then to three stone-built houses in the final phase sometimes after the mid-second century A.D.¹⁹ At Belling Law a single timber-built house was replaced on three occasions within the two earlier palisaded enclosures, to be followed by two stone-built houses within the enlarged, ditched enclosure, again possibly during the second century A.D. Whilst it is more difficult to establish the precise situation in this respect at Kennel Hall Knowe, there can be no doubt about the increase in the sizes of the enclosed areas in the successive structural phases. It is almost certain that the phase I palisaded enclosure could not have contained more than a single house. There is evidence for only a single house in the phase II and III enclosures, though it is always possible that a second house-site had been removed by an extension of the cobbled yard. At least three stone-built houses have been suggested in phase IV, but it is obvious that the extended interior would have allowed space for more than this, without

infringing upon the area reserved for the frontal yard. Whilst there are many limitations to accepting an apparent increase in the number of houses as evidence for an increase in the number of inhabitants, the possibility remains that such an increase was taking place over time on all three sites. As such this might strengthen the case, already tentatively advanced elsewhere,²⁰ for an increase in the number of inhabitants over time on an appreciable percentage of the stone-built Romano-British settlements in the Tyne-Forth Province. Whatever this might mean in terms of economy and total overall population, however, is yet another question fraught with even more difficulties.²¹

The most significant aspect of the present excavations on Kennel Hall Knowe is undoubtedly the discovery of the three earlier palisaded enclosures. This is now the fourth recorded occasion on which timber-built enclosures have been found to precede the stone-walled or ditched and embanked rectilinear-shaped settlements of the Roman period in this area, the other sites being at Bridge House,²² Tower Knowe and Belling Law. Moreover, at the time of writing, a fifth example appears to exist in current excavations on the nearby site known as Gowanburn River Camp.²³ The potential importance of this development has been discussed more fully elsewhere,²⁴ but perhaps merits a summary account in this report. A floruit of timber-built homesteads and settlements surrounded by free-standing palisades is already recognized in contexts generally datable to the first half of the first millennium B.C., and many more no doubt remain to be found beneath hillfort defences. On the other hand, there have been few if any timber-built sites of this order which hitherto could be seen to fall into the long interval of time between these early examples and a different breed of free-standing palisaded site of post-Roman or Anglian context, now known to exist in small numbers in the north-east. Clearly the newly discovered sites in North Tynedale are later in context than the local pre-hillfort examples. It was thought that the single-phase palisaded enclosure at Tower Knowe, immediately underlying the stone-built Romano-British settlement, need be no earlier in date than the first century A.D., and perhaps even indicative of the first movement out of the hillforts at the time of the Roman conquest of the north. This could also be argued in the case of the settlement at Bridge House, where again only one palisaded phase is known beneath the stone-built settlement. But, as we have seen, it does not have to be the solution at Belling Law or Kennel Hall Knowe. Even with all the limitations implied in the radiocarbon dates a respectable pre-Roman context is possible for some of the palisaded enclosures on both sites. Indeed, it could be that eventually a new element may have to be introduced into the northern pre-Roman landscape, which previously seemed to be dominated almost entirely by hillforts and related defensive works. At the moment, however, the evidence is still limited, not only in its nature but also in its geographical extent. The settlements in question are confined to one river valley and on the present knowledge from excavation it would seem that similar structural sequences are not necessarily present on all other Romano-British settlements throughout the area. At this stage one can do no more than indicate the potentials of the situation in a landscape noted for its numbers of extant stone-built settlements of known or suspected Romano-British context.

NOTES

- ¹ G. Jobey, *AA*⁵, I (1973), 55–7. G. Jobey *AA*⁵, V (1977), 1–38.
- ² B. Harbottle, *AA*⁵, (1973), 146 ff.
- ³ H. MacLauchlan, *Notes not included in the memoirs on Roman Roads in Northumberland (1867)*, 66–7.
- ⁴ G. Jobey, *AA*⁴, XXXVIII (1960), 1–38.
- ⁵ H. MacLauchlan, *op. cit.* 66.
- ⁶ For plans v. *AA*⁴, XXXVIII (1960), 1–38, figs. 1, 2 and 3 or *Rural Settlement in Roman Britain* (1966, ed. Thomas, C), p. 7, fig. 2B.
- ⁷ D. B. Charlton and J. C. Day, *Archaeological Survey of M.O.D. Training Areas, Otterburn* (1977), p. 87 and drawn section of Kennell Hall Knowe stack-stand, plan 21.
- ⁸ G. Jobey, *AA*⁴, XLVI (1968), 26–7.
- ⁹ S. Piggott, *PSAS*, 104 (1971–2), 23–47.
- ¹⁰ G. Jobey, *AA*⁴, XL (1962), 26 and fig. 9, 1.
- ¹¹ G. Jobey, *PSAS*, 105 (1972–4), 119–40 and fig. 7, 6.
- ¹² J. G. Callander, *PSAS*, LXI (1927), 326.
- ¹³ *PSAN*⁴, VII, 166.
- ¹⁴ *NCH*, XV, 38.
- ¹⁵ *AA*⁵, V (1977), 4–7.
- ¹⁶ J. Tait, *Beakers from Northumberland*, 21 and fig. 55.
- ¹⁷ G. Jobey, *AA*⁴, XLV (1967), 207–8.
- ¹⁸ The dates in brackets are the one-sigma confidence limits calibrated as suggested by R. M. Clark, *Antiquity*, XLIX (1975), 251–65.
- ¹⁹ *AA*⁵, I (1973), 76.
- ²⁰ G. Jobey, *AA*⁵, II (1974), 17–26.
- ²¹ v. e.g. E. Boserup, *The Conditions of Agricultural Growth* (1965).
- ²² D. B. Charlton and J. C. Day, *AA*⁵, II (1974), 33–40.
- ²³ Information from Mr. I. M. Jobey.
- ²⁴ In a *Note on some northern Palisaded Sites*, included in a volume presented to Mr. R. B. K. Stevenson (forthcoming).