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THE SETTLEMENT AT DOUBSTEAD AND ROMANO-BRITISH SETTLEMENT ON THE COASTAL PLAIN BETWEEN TYNE AND FORTH

George Jobey

Introduction

SMALL RECTILINEAR enclosures, bounded by a single ditch and having east to south facing entrances, are manifold on the coastal plain between Tyne and Forth. Some are still visible as well denuded remains in former arable but the majority show only as crop-marks on air-photographs (fig. 8). A number of the latter have undoubtedly contained round houses and, even if no more than tentatively, may be seen as Iron Age or Romano-British in general context. Others, though now featureless in the interior, appear to be similar in shape, size and general orientation to extant Romano-British settlements of rectilinear form in North Tynedale, Redesdale, and the more southerly parts of Northumberland. Limited excavations on a small number of comparable rectilinear sites on the coastal plain in the south-east have already demonstrated that at least some in this area were occupied during the Roman period (e.g. Jobey, 1970, 1973), but none had been examined on the coastal plain further to the north.

The rectilinear enclosure formerly known as Doubstead was situated coastwise almost midway between the rivers Tyne and Forth, and, as it lay on the line of the proposed A1 by-pass of Berwick upon Tweed, seemed worthy of some investigation before its final destruction. Excavations were limited to a period of eighteen days during September 1980, at a time of mists rather than mellow fruitfulness, and were funded by the Department of the Environment under the auspices of the Archaeological Unit for North-East England. Permission to excavate was readily granted by the Greenwich Hospital Estates and by Mr. W. Carmichael of Scremerston Hill Farm whose co-operation in general was greatly appreciated. Gratitude is also extended to the small group of volunteer workers who assisted in the excavation and to Mrs. A. Donaldson and Mr. J. Rackham who have provided specialist reports. The site was not scheduled as an ancient monument and its impending destruction was first noted by Mr. T. Gates, Field Officer for Northumberland.

The Site (NU 007 487)

The enclosure was situated about 90 m to the west of the old line of the A1 road and 180 m to the south of the southern limits of Scremerston village (fig. 1.1), where varying depths of boulder clay overlies the Scremerston shales and coal

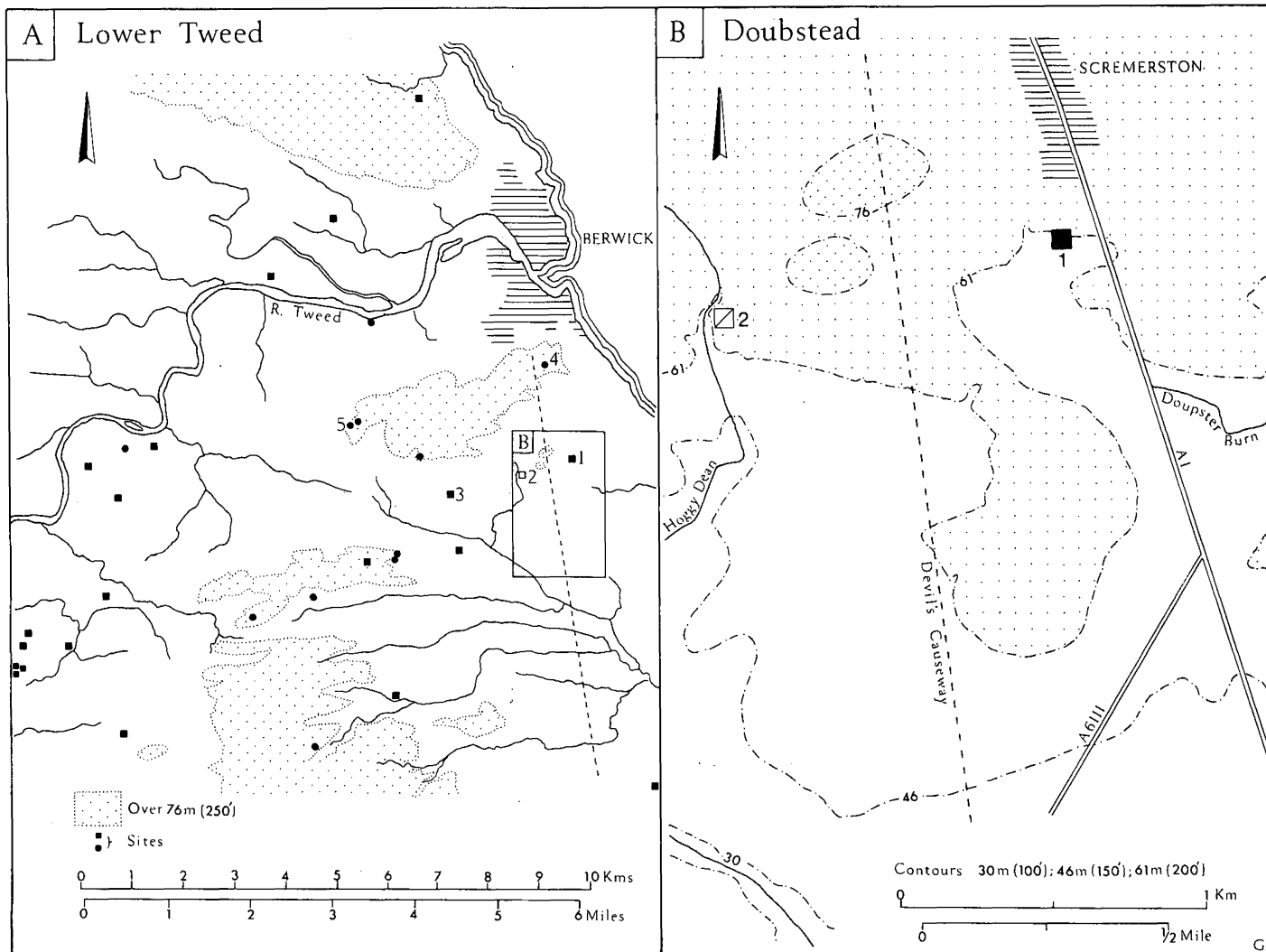


Fig. 1. Doubstead, Northumberland: location.

measures. Henry MacLauchlan first noted the site in 1864 during his survey of the Roman road, now known as the Devil's Causeway, which follows somewhat higher ground 0.5 km to the west. Although the enclosure was even then "barely perceptible . . . in a field called Doubstead", MacLauchlan was most unusually at fault in describing it as circular. In 1980 faint traces of a ditch were still discernible in the pasture, either as slight surface depressions or by differences in the herbage, enclosing an area almost 50 m square with rounded corners. A break near the centre of the east side marked the probable position of the entrance (fig. 2). In this area the field was almost flat at an altitude of only 60 m, and clearly the builders had taken no advantage of what could have been better drained and more tactically protective locations on gently rising ground to the north, east, and west. On the other hand, it is almost certain that the original source of what is now known as the Doupster Burn must have been immediately to the south of the enclosure, whence its course would have followed the dry channel on the south east towards Doupster Bridge on the A1 road.

Doubstead is only one of a number of enclosures of similar form known in the area of the lower Tweed valley, most though not all surviving as crop-marks on air-photographs. The nearest at Quarry Whins (fig. 1.2), on the east side of the Hoggy Dean Burn, was completely ploughed down by MacLauchlan's time and the site is now entirely obscured by trees. Another rectangular enclosure mentioned by MacLauchlan on Unthank Moor (3) was surveyed by the present writer some twenty years ago, but it has since been encroached upon by ploughing and is further covered by the rubble from a row of demolished cottages that formerly stood on its west front. Amongst a number of more defensively located, curvilinear sites, possessing one or more lines of defence, two merit passing reference at this juncture. That on Murton Crag (5), currently being excavated, has produced evidence for Romano-British settlement at a later stage in its development (info. I. Jobey), and a sequence of Iron Age fort overlaid by a Romano-British settlement can perhaps be envisaged at Sunnyside (4), where the crop-marks are now no longer regarded as being those of the ditches of a Roman military work and Roman sherds have been recovered in the past.

THE EXCAVATIONS (fig. 2)

Three areas were selected for excavation, based on the assumption that if the enclosure was to follow the standard plan of Romano-British settlements further to the south then the entrance and one of the frontal yards, together with the rearward range of the house-sites, would all be disclosed to some extent. Failing this, the three areas combined would provide a good traverse of the site from east to west. Except for a few centimetres at the bottom of the old plough-soil, the turf and top soil were removed mainly by mechanical means. During the course of excavation it soon became evident that the boulder clay surface had been deeply scored by more recent ploughing and that at least two field-drainage systems had been laid down,

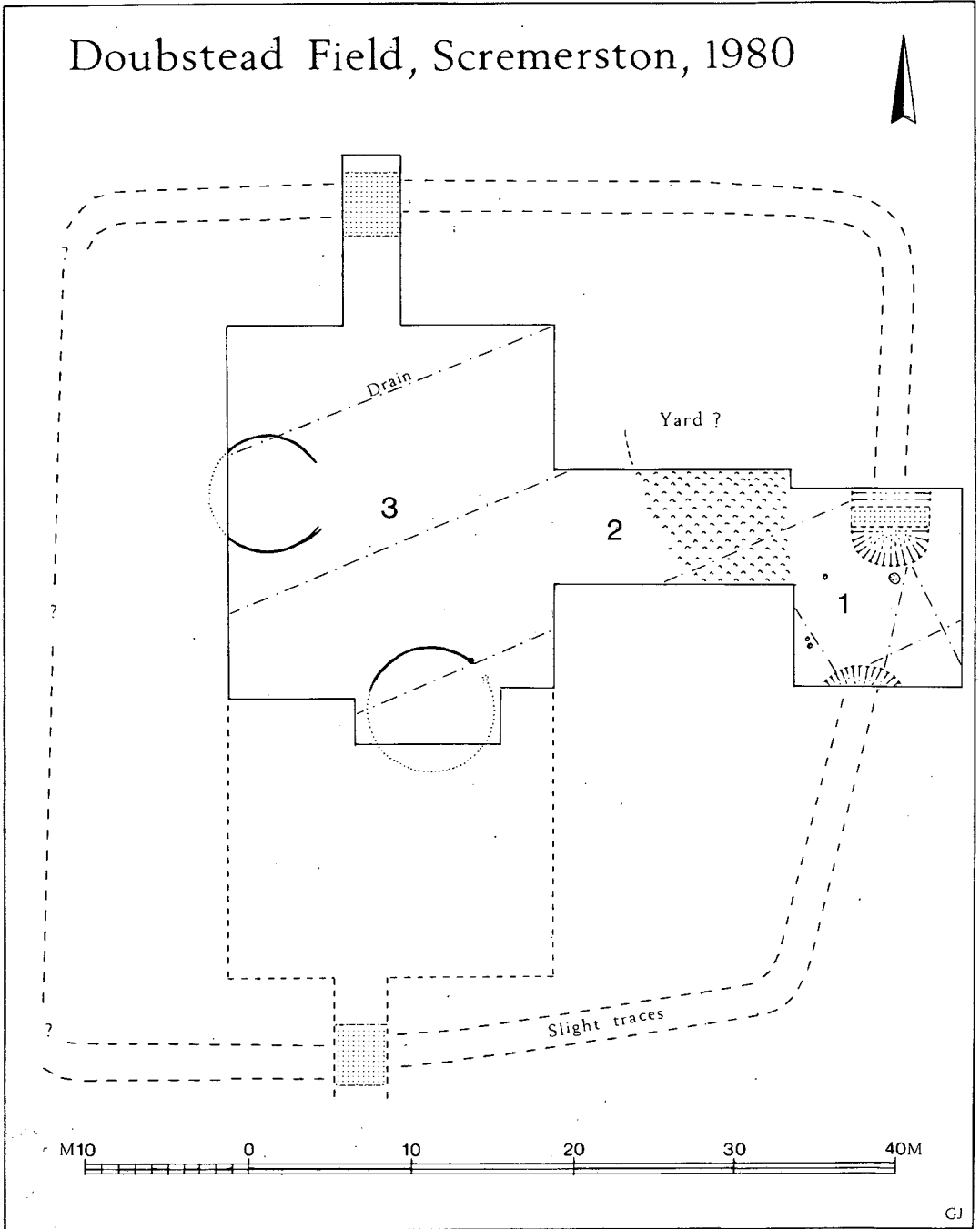


Fig. 2. Doubstead: the excavations 1980.

the earlier being narrow 'stane-drains', running north west to south east in Area 1, and the later being tile-drains, running north east to south west in all areas.

Ditch Terminals and Entrance, Area 1 (figs. 2 & 3)

The boulder clay surface in this area was sandy in texture and, by comparison with elsewhere, notably free from stone. Both ditch-terminals were completely emptied except for a baulk across the longer stretch of ditch exposed on the north side. Their lower reaches had been dug through brash and more solid but tractable rock to a maximum depth of 1.42 m below the present turf-line. As there was little if any variation in the sections, only that on the north edge of the area has been illustrated (fig. 3). Although the ditch was now almost 5 m wide at this point the friable subsoil in the region of the original lips would soon have been eroded, and the change in inclination of the lower sides would suggest that the original surface width could have been as much as 1.5 to 2 m less than this. Nor was the width of the ditch necessarily constant around the whole perimeter, its surface measurement being no more than 4 m across in the two cleared but unemptied cuttings in Area 3. The only more recent intrusion in the section illustrated was a trench for a modern field-drain (d), cut through the uppermost fill of undifferentiated clayey earth and small stones (1) and penetrating into the outer slope of the ditch. Otherwise, the uniform bluish-grey and silty clay (5) which had accumulated as the primary fill in the bottom of the ditch was undisturbed. This was overlaid by bands of dark brown clay (4), a

Cutting A, north face

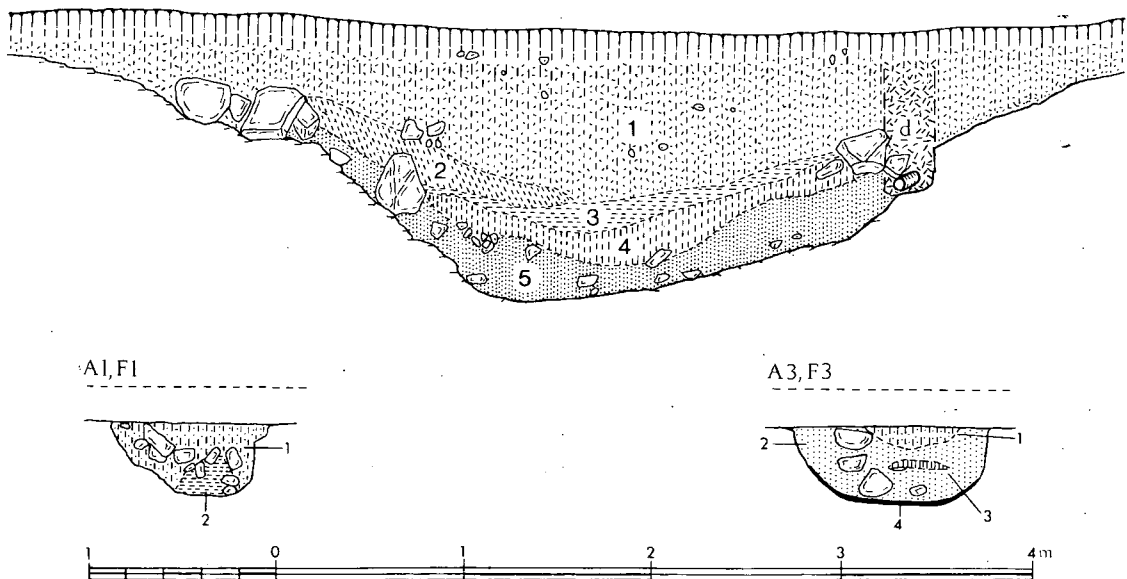


Fig. 3. Doubstead: sections ditch and pits F1 and 3.

yellow-brown clay with lenses of iron-pan (3), and finally by a band of mixed clay and earth (2) which could have been cast or ploughed in from the remains of an upcast bank beyond the inner lip. No traces of such a feature survived, but in both ditch-terminals a number of larger stones and boulders were encountered, lying mainly on the inside slope of the ditch or embedded in the surface of the primary fill, as if derived from a retaining kerb or facing to an interior mound. The well defined eastern edge to the stone filling of the 'yard', subsequently uncovered in Area 2, would suggest that such a mound or wall had not been wider than some 3 m and could well have been less (fig. 2). At this juncture it should also be noted that no earlier perimeter was found, either at the entrance or in the two extensions over the ditch in Area 3.

Unless some structural timbers had been incorporated in the terminals of the interior bank, provisions for a gateway were minimal. No more than the stub-ends of three possible post-holes were found in the most likely position for a gateway, namely on the assumed line of the interior bank within the ditch-terminals and causeway. One post-hole lay on the north side and two on the south, separated by a distance of just over 2 m. None of them contained packing stones and as found they were only 0.15 m in diameter and 0.2 m deep below the surface of the boulder clay. The only feature surviving between the ditch-terminals themselves was a circular pit, 0.8 m in diameter and 0.4 m deep, lying 1 m to the south of the north terminal. No post-pipes were discernible in the mixed clay and stone filling (fig. 3, F1), and it was difficult to accept the cone of darker clay (F1, 2) as packing between two uprights. Moreover, even when allowance is made for disturbance by later field-drains, there was no trace of a corresponding feature on the north side of the southern ditch-terminal. A worked disc of shale from the fill of pit F1 provides no context for this feature and its association with the site is at best doubtful.

The primary silt in the ditch-terminals contained well sealed deposits of decayed skeletal material, some identifiable as ox and horse, together with numerous plant remains (v. below). Artefacts from the same level, and undoubtedly associated with the occupation of the settlement, consisted of hand-built pottery, a bronze hinged bracelet, a bronze spiral finger-ring, and a fragment from a rotary quern. As a whole these objects would not be inconsistent with an occupation in the first to second century A.D. (v. below).

The 'Yard', Area 2 (fig. 2)

In this area a mass of broken stone and cobbles resting in thick, charcoal-flecked silt stretched across the width of the cutting, and continued for a distance of at least 8 m into the interior of the site from the presumed line of the inner bank. Removal of the stone filling and silt revealed that the clay subsoil had been churned up or worn off to a depth of 0.2 m near to the perimeter of the feature on the south, east, and west, and up to 0.4 m towards the north side, where more solid brash and underlying rock was encountered. There was no laid surface and the filling appeared to have been material tipped in during antiquity, perhaps on more than one occasion, in order to level a well worn and muddy area, such as could have been created by

penned or tethered animals. Whilst a parallel may be envisaged in the hollowed yards found on Romano-British settlements further to the south, resources in this instance did not allow a more extensive investigation on either side. Even so, if the results from small test-holes can be taken as a reliable guide, the feature almost certainly continued for some distance to the north.

An amount of domestic refuse would also seem to have been incorporated in the filling, including fragments of animal bone, some of it calcined, from ox, horse, and sheep or goat, together with many shreds of hand-built pottery similar to that recovered from the bottom silt in the ditch-terminals. A fragment from a Nauheim derivative type brooch, a broken glass bangle of 1st/2nd century date and some pieces of iron slag were also recovered from the thick silt beneath the rubble filling (v. below).

The Houses and Pits, Area 3 (fig. 4)

Towards the rear of the enclosure an area measuring 40 by 20 m was stripped of most of its top soil, but no more than just over half of this could be investigated, partly because of the difficulty encountered in cleaning the surface of the boulder clay. In marked contrast to Area 1, the clay surface harboured a considerable scatter of well broken stone which was not a natural constituent and had been ground into the surface or dragged about by later ploughing. Although the stone scatter no longer formed any meaningful pattern, its very presence merits consideration as possibly the last vestiges of stone-founded houses, robbed and subsequently ploughed out beyond recognition.

The former existence of two timber-built houses was eventually established within the cleared area, both marked by the incomplete remains of ring-trenches for the house-walls. The trenches measured up to 0.2 m wide but survived no deeper than 0.15 m at any point and retained very few packing stones. House A had been c. 7 m in diameter within the wall-trench and clearly the full complement of interior post-holes for roof-supports was not recovered by the close of the excavation. A bifurcation of the trench at one point combined with some slight irregularities in the sides elsewhere were consistent with a possible replacement phase, but as both arcs disappeared near to the presumed east facing doorways this could not be confirmed. No more than a short arc of House B survived, terminating in the stub-end of a small post-hole marking the north side of the doorway. Beyond this a combination of deep plough-scores and a slight fall in the level of the clay surface denied the recovery of further traces. The interior diameter of this house, when complete, would have been similar to that of house A at 7 to 7.5 m and at least some of the stub-ends of interior post-holes would have served to support uprights for the roof. In the circumstances it would seem unlikely that these two structures had comprised the full complement of timber-built houses in the settlement. A similar uncertainty must also apply to the function of the scatter of post-holes detected in Area 3, none of which were deeper than 0.2 m as found and most of them much less than this. No convincing patterns had emerged by the end of the investigation and even tentative reconstructions of further structures are not feasible.

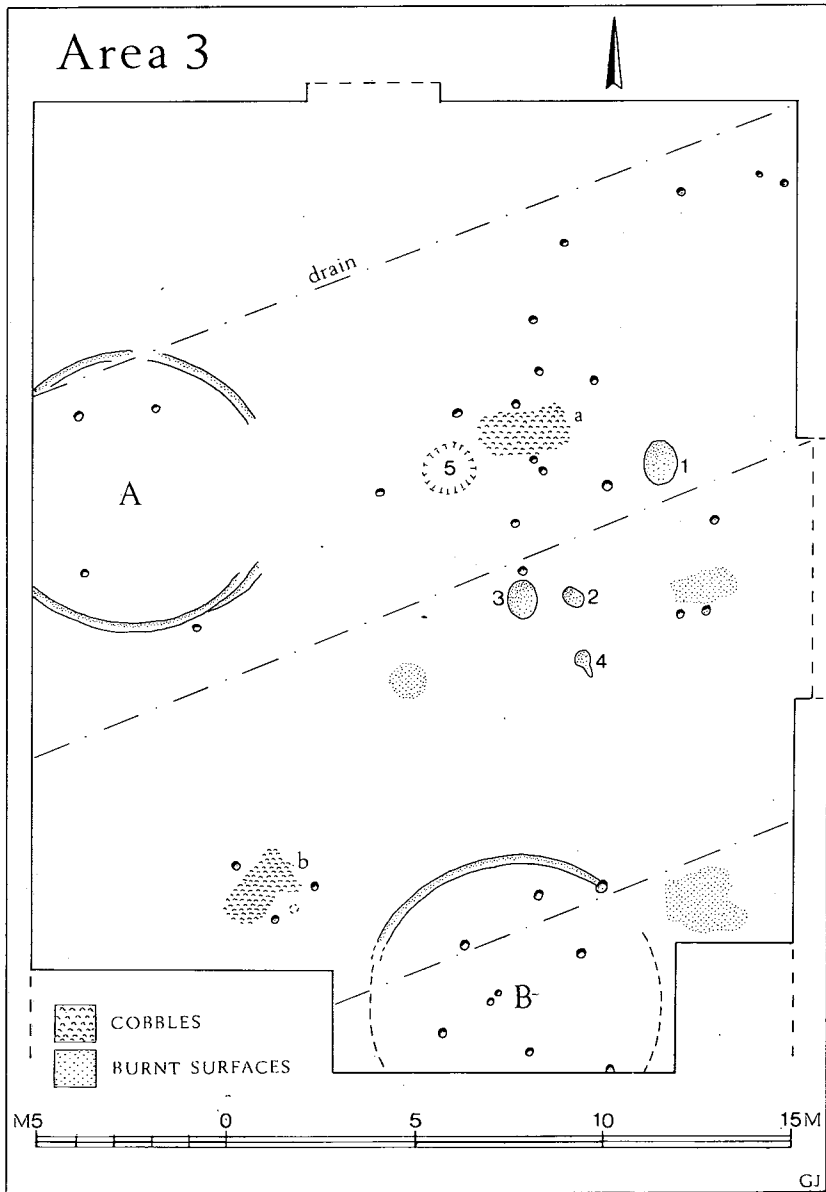


Fig. 4. Doubstead: Area 3.

Two patches of well laid cobbles had survived the later ploughing, being composed of smaller than fist-sized stones set into the clay surface (fig. 4, a & b). As both had the appearance of pathways, and occurred in areas where there was a greater amount of broken stone in the clay surface, it is tempting to regard them as having been pathways to the doorways of completely destroyed stone-built houses. But this can be no more than a suggestion, since by analogy with stone-built houses elsewhere the adjacent post-holes would be too widely spaced for doorposts.

Of the five pits in this area, numbers 1 and 5 were almost certainly later intrusions, containing no more than plough-soil and a number of buried stones. The remainder would appear to have been related to the occupation of the settlement at some stage. Pit 3 (fig. 3, F3) had a maximum diameter of 1 m and survived to a depth of 0.4 m. A well levigated clay lining (4), up to 50 mm thick, had been applied to the dished bottom and at least half way up the sides. A small lense of burnt clay (3) and a few well scattered stones were present in the otherwise fairly uniform carbonaceous fill (2). The latter also contained some calcined fragments of animal bone and one sherd of hand-built pottery similar to that from elsewhere on the site. Subsequent botanical analysis of a sample from the lowest fill revealed the presence of plant remains, including carbonized grains of 6-row barley and fat hen. The careful construction of the pit would point to its use as a storage pit, but the mixed contents of the fill suggest that it was eventually used for the disposal of domestic rubbish. Whether or not the lense of burnt clay was a fragment from an original cover, or merely part of a hearth, remains a matter of surmise. Pits 2 and 3 were considerably smaller in diameter but similar in depth. Neither were lined with clay, though the flat bottom of pit 2 was covered by two contiguous slabs of stone and both contained a similar fill of carbonaceous earth flecked with bone. The whole area was devoid of any purpose-built hearths and a number of red and hardened patches on the clay surface bore no direct relationship to the timber-built houses.

Apart from the pottery sherd in the fill of pit 3 there were no stratified finds from this area. A number of fragments of hand-built pottery, a little lithic material, and some pieces of iron slag were recovered from the clay surface, whilst a fragment of glass 'bangle' of 1st/2nd century date was embedded in the clay surface within house B (v. below).

SMALL FINDS

Pottery (fig. 5)

One hundred and thirty sherds of undecorated, hand-built pottery were found. Few sherds are conjoining and no profiles can be completely reconstructed, though most would seem to have been bucket or barrel-shaped vessels with slightly incurving and rounded rims. The nature of the fabrics and firing would suggest that as many as a score of different pots could be present. Most of the rim and upper wall-sherds have appreciable depths of carbon encrustation on the outer surfaces, such as has arisen from domestic use rather than the process of firing.

None of the vessels have been wheel-thrown, and many of the sherds display

evident signs of having been coil-built. The majority of the surfaces are buff to brick red in colour and have been oxidized to various depths, but a few are black or very dark grey throughout. Most of the fabrics are dense and contain small angular grits, none of which appear to be exotic to the general locality of the site. Although many of the rim forms are such as might occur on Iron Age and Romano-British settlements alike, the fabrics are generally free from large inclusions and are more closely comparable with those found on a number of Romano-British settlements further to the south.

No more than a representative sample of rim and base sherds are illustrated (fig. 5). From the total number of sherds recovered, 93 came from amongst the black silt and stones in the 'yard' and 10 from the primary silt in the ditch-terminals.

1. Rim-sherd and conjoining wall-sherd with red/brown surfaces and grey core, both surfaces being covered with a thick carbon deposit. Primary silt, S. terminal of ditch, Area 1.
2. Partly abraded rim-sherd from a large vessel of uncertain diameter but perhaps *c.* 240 mm. Surfaces light brown with carbon encrustation on the outer, core black with small grits. Clay surface between ditch-terminals, Area 1.
3. Rim-sherd and wall-sherd from the same vessel with putty/buff coloured surfaces oxidized to a depth of 4 mm., and with slight finger-impressions from pulling up the coils. Silt in 'yard', Area 2.
4. Rim-sherd from a large vessel possibly as much as 320 mm in diameter. Red/brown surfaces with carbon encrustation 1 mm thick on the outer surface. Provenance as 3 above.
5. Rim-sherd, broken on the coil, diameter uncertain; fabric similar but not the same as 4 above. Provenance as 3 above.
- 6, 7, & 8. Three rim-sherds from different vessels of uncertain diameter. Fabrics are similar to above. Provenance as 3 to 5 above.
- 9 & 10. Rim-sherds from two different vessels with flat rims, pinched out. There is one additional rim-sherd and four small but conjoining wall-sherds from vessel 10. The fabrics are generally similar, being very hard with small grits, and the surfaces are well oxidized with some patches of carbon encrustation. Scattered throughout the silt and stones in the 'yard', Area 2. Flat, pinched out rims, sometimes T-shaped, appear sporadically on other Romano-British settlements in the county (e.g. Jobey, 1973).
11. Base-sherd of uncertain diameter with red/brown mottled surfaces and dark grey core containing quartz grits. There are two small wall-sherds and one base-sherd from the same vessel but these are not conjoining. Provenance as 9 & 10 above, well scattered.
12. Base-sherd, probably *c.* 200 mm in diameter, and one divorced wall-sherd from the same vessel. Brown surfaces and grey core containing well dispersed grits 1-4 mm in size. Top fill of N. terminal of ditch, Area 1, but probably ploughed off the interior of the site.
13. Base-sherd with pinched out foot and two divorced wall-sherds. Red surfaces

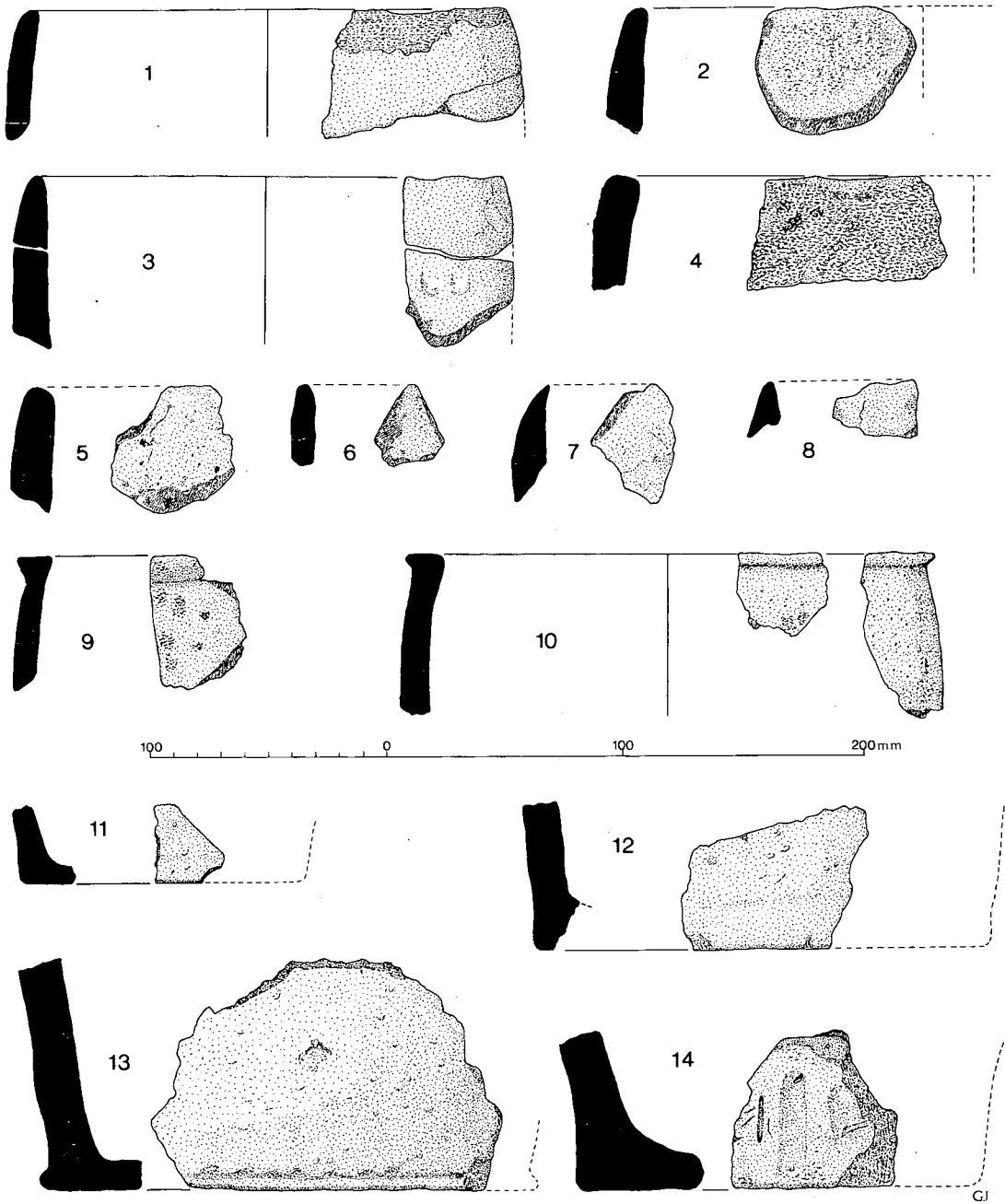


Fig. 5. Doubstead: pottery.

with some carbon patches on the outer, grey core containing a few larger than usual grits up to 5 mm in size. Provenance as 11 above.

14. Base-herd and perhaps three wall-sherds which are not conjoining, having mottled pink/red and light grey surfaces with a dark grey core which contains medium sized grits breaking the inner surface. There is vertical finger rilling on the outer surface from pulling up the clay, and some sedge-marks. Provenance as 11 above, well scattered.

Stone (fig. 6)

1. A small fragment from the top stone of a rotary quern of bun rather than beehive shape, cut from Cheviot igneous rock, most probably an erratic. Broken in antiquity and discarded in the primary silt in the N. ditch-terminal, Area 1. Although rotary querns reach the area probably well before the Roman period this stone would not be out of place in a Roman context.
2. Pounder made from a smooth water-worn stone with percussion marks on the lower edge and a pecked thumb or finger-grip on one surface. Embedded in the clay surface near to pit 1, Area 3. Similar pounders or grinders with one, or two or more pecked finger-grips have been found in a wide range of contexts in the Border counties, including an unenclosed platform settlement of the later Bronze Age at Green Knowe, Peebleshire, a palisaded site at West Brandon, Durham, and Romano-British settlements at Kennel Hall Knowe, Northumberland, and Boonies, Dumfriesshire (e.g. Jobey, 1978). The form is clearly basic and of little specific chronological value.
3. An abraded disc of shale with blade-marks on both surfaces from fashioning. From deep in the fill of pit F1, Area 1. Similarly shaped discs have sometimes been referred to as pot-lids and have been recovered from a number of early sites of different contexts. In this instance it is far too small to have served such a purpose for any of the surviving vessels from this site, nor is it necessarily an indicator of the contemporaneity of pit F1 with the settlement.
4. One of four sandstone rubbers, distinguished in this case by having three working surfaces. All came from the silt and stone filling in the 'yard' in Area 2, together with two broken hand-pounders similar to 2 above but lacking finger-grips.

Metal (fig. 7)

1. *Hinged Bracelet*

A hinged, strap bracelet of bronze which measures c. 60 by 48 mm internally, the hoop being 29 mm deep. The hinge and knobbed pin is now fused and the knobbed securing pin broken, probably in antiquity. Decoration on the hoop consists of pairs of two wavy line grooves separated by a plain band, lying between the three equidistantly placed ribs. The former presence of four rectangular plates attached to the hoop, one on each side of the hinge and the fastening, is not in doubt though they were probably already missing when the bracelet was discarded. The four arrangements of five rivet holes, in only two of which rather flat headed rivets survive,

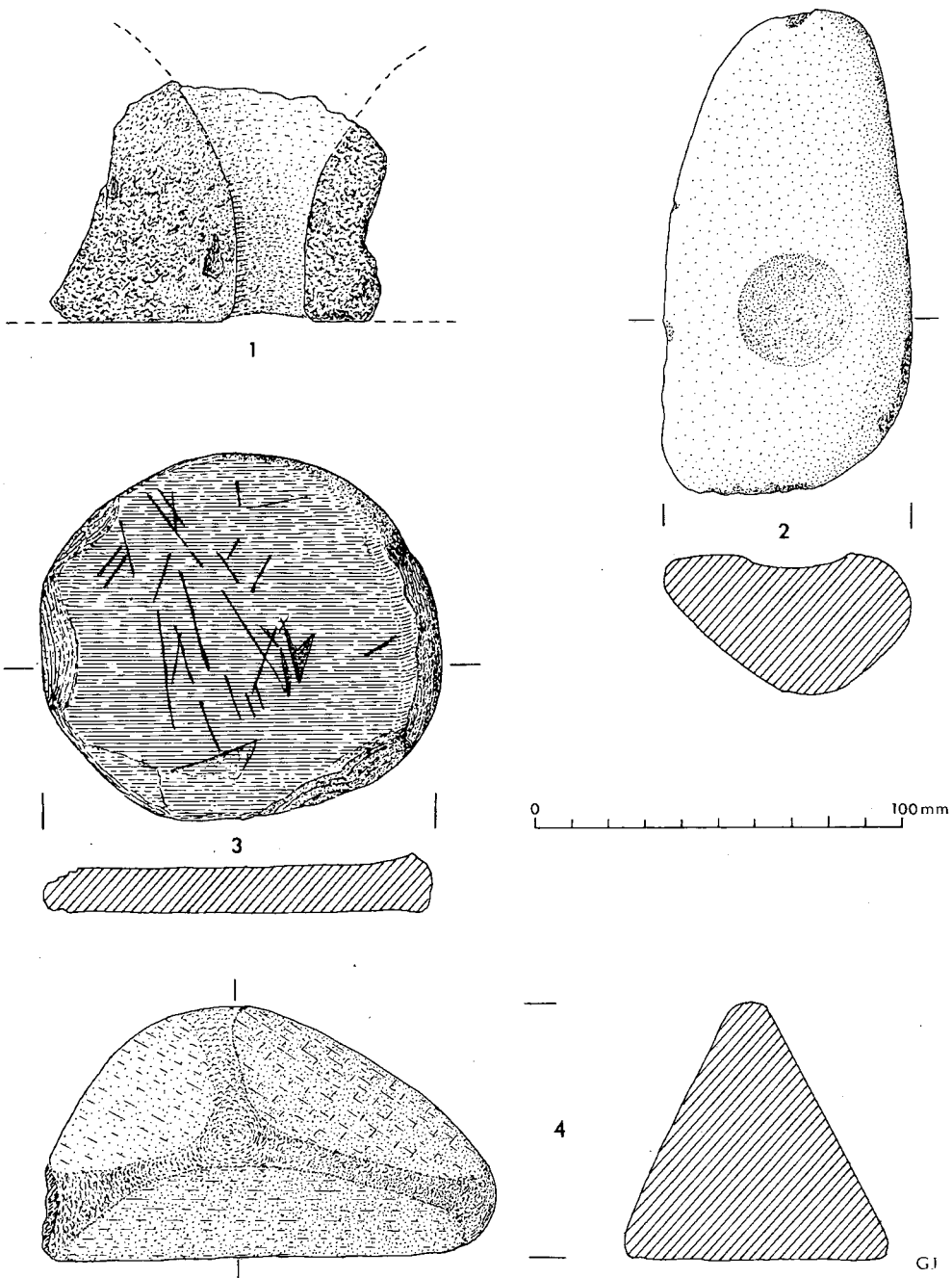
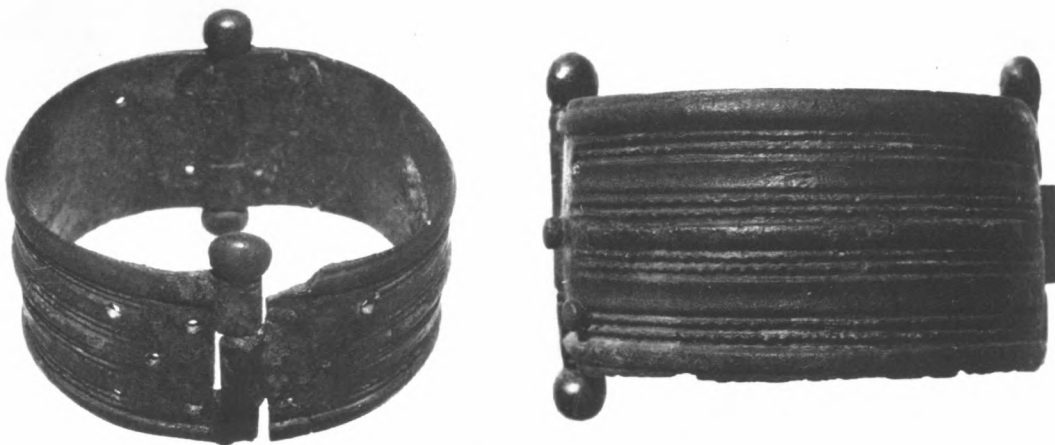


Fig. 6 Doubstead: objects of stone.



a. Doubstead: entrance and "yard" during course of excavation.



b. Hinged bracelet from Doubstead, Northumberland.

and the absence of the central rib and the main design on these parts of the hoop make this certain. In this instance, however, the nature of the decoration on the plates must remain unknown.

Recorded finds of articulated bracelets with a broad hoop are not common. In the Society's collection there is the hinged silver bracelet from the Aesica hoard, to which Miss Charlesworth (1973) attributed a probable date from the mid-first to the early second century A.D. There is also the well-known gold bracelet with Celtic decoration, possessing a small front plate hinged on to the main part of the hoop, which comes from Rhayader, Radnor. (B. M., 1958) and is of possible first to second century date, and two bronze strips from Verulamium, hingeless but probably part of a similar bracelet (Frere, 1972). Belts consisting of hinged plates also existed, as recently found at Brettenham, Norfolk (Hassall, 1980), and in the past Roman models have been invoked for the hinged form and pin fastening of the boss-style decorated collar from Stichill, Roxburgh. (e.g. RCAM(S), 1956). Closer parallels exist, however, first in the form of two hinged bracelets of bronze from Braich y Ddinas, Caernarvon. (Hughes, 1937), one with simply decorated plates attached to the hoop by rivets. The present whereabouts of these bracelets is unknown but a date of c. 100 A.D. was originally attributed to them on the basis of loose associations, though the later Romano-British occupation on this hillfort site probably continues beyond this date. Two further examples in bronze have been most recently illustrated and discussed by Morna MacGregor (1976), the first from Plunton Castle, Kirkcudbright., and the second from Thist House Cave, Derbyshire. Both of them have attached plates decorated with her so-called Leeds swash-N pattern. The former is not datable, except possibly by the decorative style of the plates to the early Roman period, the latter was in possible association with coins of 154–270 A.D., samian sherds, and second century brooches. The three-ribbed decoration on the hoops of both bracelets and the wavy recessed lines on the Thist House example are in some measure comparable with the Doubstead bracelet, though the domino 5 arrangement of the rivets in this instance makes it doubtful that precisely the same decoration could have been used on the missing plates. All told, however, a date in the later first to second century would seem likely for this latest find.

The bracelet was recovered from the upper reaches of the primary silting in the N. terminal of the ditch, Area 1, together with a spiral finger-ring, native pottery and animal bone. It had most probably been deposited with domestic refuse from the occupation of the site, though the reason for discarding what might seem to be a repairable item of jewellery is unknown.

2. *Brooch*

Most of the bow, but only part of the unperforated catchplate, of this La Tene III Nauheim derivative type brooch survives. What has probably been a coiled spring rather than a hinge has broken off in antiquity and the bow itself may have been somewhat flatter than it now is. It is a type which was in common use in Britain during the first century A.D. (e.g. Jope, 1957), more frequently in the south than the north. It would not be out of place in the same general context as the bracelet

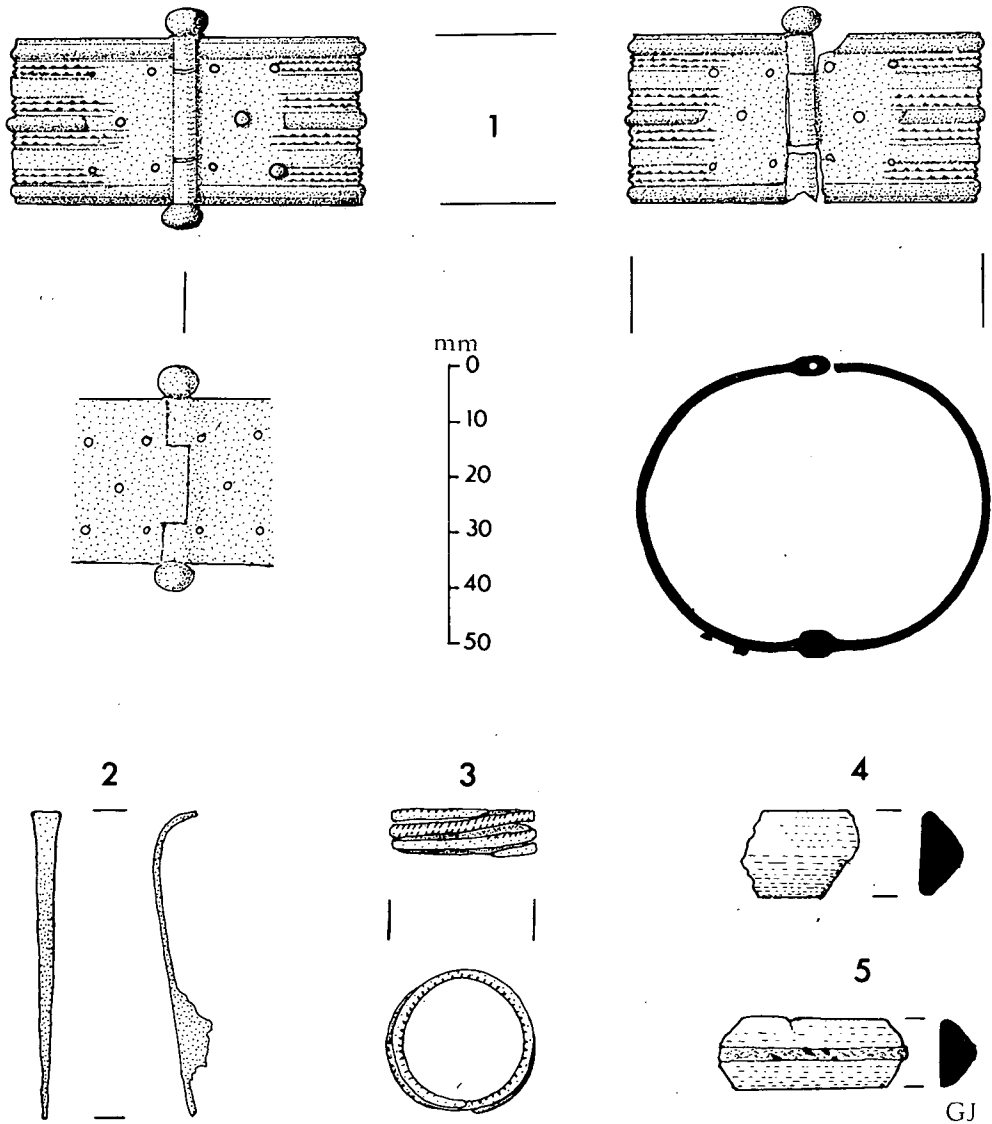


Fig. 7. Doubstead: objects of metal and glass.

above or the spiral finger-ring below, and was recovered from the thick silt and rubble filling in the 'yard', Area 2, together with a broken glass bangle.

3. *Spiral Finger-Ring*

This bronze wire ring consists of three coils, the central hoop decorated with oblique notches or ribbing which may have extended further, though the outer surfaces are now worn. The inner diameter of the ring is *c.* 21 mm and the present thickness of the wire 1 to 1.5 mm. Spiral rings had a long currency from the Bronze Age onwards (Jope, 1957; Clarke, 1971), but similar specimens sometimes with notched decoration are present in first to second century A.D. contexts and later (e.g. Ritchie, 1970; Clarke, 1971). In this instance it must have been deposited in the silt in the N. terminal of the ditch at about the same time as the hinged bracelet above. Although well worn it was still complete when discarded or lost, presumably amongst domestic refuse.

Glass (fig. 7)

4. A small fragment of opaque white glass 'bangle' from the clay surface within the area of house B, Area 3. Stevenson type 3A.

5. Fragment from a translucent ice-green glass 'bangle' with the barest remains of what has been a cable moulding in relief, now largely broken off except for traces of cobalt blue glass. From beneath the silt and stone filling in the 'yard', Area 2. Stevenson type 2.

Glass bangles occur on native and Roman military sites alike and are one of the most persistent finds on the former. Most are too small in diameter to have served as bangles and show no obvious wear-marks from use as pendants; only doubtfully could they have served as tress-rings. Both of the above types would appear to be present by Flavian times in the north and could be even earlier in the south, but they have also been found in second century and later contexts. It has been suggested that perhaps types 2 and 3 could reflect the movement of a few skilled workers to the north of England in the wake of the Agricolan advance (Stevenson, 1976).

Iron Slag and Cinder

A number of pieces of iron slag or cinder, from smithing rather than smelting, were recovered from the silt in the 'yard', Area 3, and from the primary silt in the bottom of the N. terminal of the ditch, Area 1. Although no smithing hearths were found in the excavated areas these fragments are undoubtedly associated with the occupation of the settlement.

Skeletal material

The material was examined by Mr. J. Rackham of the Biological Lab., University of Durham, the full catalogue being lodged in the Museum of Antiquities, University of Newcastle upon Tyne. Unfortunately the condition of most of the remains was poor, and only some of the material allowed specific identification, beyond which no useful comments were possible. Ox and horse were identified amongst the

material from the primary silt in the ditch-terminals, whilst ox, horse and probably sheep or goat were present in that from amongst the silt in the 'yard', where some of the material from large and medium sized animals was charred or calcined. Calcined or burnt fragments from the long bone of a medium sized animal were also present in the fill of pit 3, Area 3.

Botanical Report

Alison M. Donaldson, Biological Laboratory, University of Durham

The samples from the primary silt (5) in the bottom of the N. terminal of the ditch were amalgamated to produce 2.75 kg of sample. It was washed and sieved down to 150 μm . Material over 300 μm was dry-sorted together with the inorganic fraction of the 150–300 μm component. The organic fraction was subjected to 4 paraffin flotations to concentrate identifiable material but eventually both residue and floats were sorted microscopically. Seeds, wood, mosses, insects, mites, dung beetles and water fleas were recovered. The sample from Pit 3, Area 3, was similarly treated. Seeds and other plant remains, charcoal, insects and bone fragments were recovered.

1. Primary silt in ditch-terminal

<i>Atriplex hastata/patula</i> (Orache)	4 seeds
<i>Calluna vulgaris</i> (Heather)	Carbonised shoots, flowers
<i>Carex</i> sp. (Sedge)	2 nutlets
<i>Cirsium</i> sp. (Thistle)	4 achenes
<i>Chenopodium album</i> (Fat Hen)	6 seeds
<i>Chenopodium rubrum</i> Type (Goosefoot)	6 seeds
Gramineae (Grasses)	8 caryopses (1 carbonized)
<i>Hyocyanus niger</i> (Henbane)	6 seeds
<i>Juncus articulatus</i> Type (Rushes)	++ seeds
<i>Juncus bufonius</i> (Toad rush)	++ seeds
<i>Juncus effusus</i> Type (Rushes)	++ seeds
<i>Lemna</i> sp. (Duckweed)	1 seed
<i>Montia fontana</i> ssp. <i>chondrosperma</i> (Blinks)	1 seed
<i>Polygonum aviculare</i> (Knotgrass)	4 nutlets
<i>Potamogeton natans</i> (Pondweed)	34 fruits
<i>Ranunculus acris</i> Type (Buttercup)	1 achene
<i>Ranunculus flammula</i> (Lesser Spearwort)	1 achene
<i>Ranunculus</i> subg. <i>Batrachium</i> (Water Buttercup)	240 achenes
<i>Rumex acetosella</i> (Sheep's Sorrel)	4 fruits
<i>Stellaria media</i> (Chickweed)	30 seeds
<i>Urtica dioica</i> (Nettle)	13 achenes
<i>Urtica urens</i> (Small Nettle)	46 achenes
<i>Pteridium aquilinum</i> (Bracken)	fronds
<i>Acrocladium cuspidatum</i>	shoots
<i>Hypnum cupressiforae</i>	shoots
<i>Sphagnum</i> (Bog moss)	leaf

2. Pit F3, Area 3

<i>Chenopodium album</i> (Fat Hen)	2 seeds
<i>Erica tetralix</i> (Heather)	1 carbonized seed leaf, carbonized flowers
<i>Hordeum vulgare</i> (6-row Barley, Bere)	2 carbonized grains carbonized rachis segment
<i>Juncus effusus</i> Type (Rush)	+ + seeds

Higher plant and fern identifications by Alison Donaldson. Nomenclature according to Clapham, Tutin and Warburg (1962). Moss identifications by Sandra Nye. Nomenclature according to Watson (1968).

From the number of aquatic species, both plant and animal, the ditch-terminal obviously contained open water. Lemna (duckweed) is a very small floating plant and grows only in still water. Unfortunately seeds of water buttercups cannot be identified to species level though most forms grow in still or slow flowing water. The pondweed *Potamogeton natans* grows in water generally less than a metre deep with a highly organic substrate. Several other species grow in the damp muddy conditions such as occur beside water or in wet pasture.

Abundant remains of dung beetles in the sample indicate that dung of herbivorous animals was present locally, probably actually in the water or mud. This would contribute considerably to the nutrient levels of the water.

A group of plants are open habitat species of waste and arable land. Many of these are frequently associated with human settlement. The knotgrass and chickweed, with their creeping growth form, frequently grow in trodden places. Nettles and the *Chenopodium* species like the high nutrient levels associated with domestic refuse etc. Many of these "weeds" are also edible.

There is also an element of heathland/acid bog vegetation, represented by the heathers, bracken, sheep's sorrel, some of the rushes, *Sphagnum* etc.

The sample from Pit F3, Area 3 contained the carbonized remains of barley. Two forms of 6-row barley were cultivated in the prehistoric and Roman periods, *Hordeum hexastichum* (dense-eared) and *H. vulgare* (lax-eared). By virtue of a rachis fragment 3.4 mm long this example was identified as *H. vulgare*, now known as 'bere' and cultivated only in Orkney. *H. vulgare* tended to replace *H. hexastichum* in Europe during the Iron Age (Godwin, 1975), though the latter does continue into the early Medieval period.

Thus elements of aquatic, waterside or wet pasture, heathland or acid bog, arable and waste ground vegetation are represented. Evidence of burning is provided by the carbonized grain, heather and the wood charcoal, but there is no reason to suppose that this was widespread.

SUMMARY AND DISCUSSION

There is much about the general form of the settlement at Doubstead that is comparable with the stone-built settlements occupied during the Roman period further to the south in the Tyne-Forth province. Its rectangular enclosure with east facing

entrance, the probability of at least one if not two frontal yards, and houses to the rear are all features of the normal plan of native settlements of the period in the southern dales. The same interior arrangements are also evident in the less regularly shaped or curvilinear enclosed settlements of the uplands, and differences in the shape and form of the perimeters may be due to no more than topographical location (Jobey, 1970). Although the existence of the usual stone-built houses was not established with any certainty in this instance, round timber-built houses had been present, at least one of them having been replaced on one occasion. In any event, timber-built precursors to the stone-built houses are not unknown on similar settlements elsewhere (Jobey, 1978). On the other hand, no earlier timber-built perimeter preceded the ditched enclosure at Doubstead, so that for the present this phenomenon of palisaded enclosures of rectilinear form, underlying ditched or walled enclosures of the Roman period, remains geographically confined to a handful of settlements in North Tynedale.

Datable material from the site, albeit limited to three items of metalwork and two of glass, would not be inconsistent with occupation in the later first to second century A.D. Although the native pottery exhibits some Romano-British traits, the medium is not reliable as a chronological guide, and the presence of more informative Roman fine or coarse wares is lacking in this instance—an absence to which more contextual significance might be attributed were it not for the fact that Roman sherds are seldom plentiful on these smaller native settlements even when they do occur. All told, although an *initial* foundation in post rather than pre-Agricolas times is possible, an element of uncertainty must remain.

Animal husbandry is attested by the remains of cattle, sheep or goats and horse, though it is not evident that the last formed any part of the diet except, perhaps, incidentally. This skeletal material may also be related to the possible function of the frontal yard and to the indirect evidence for the presence of the dung of herbivorous animals in the ditch-deposits. Pasture existed in the immediate vicinity, some of it perhaps wet which is hardly surprising in view of the location of the settlement. Although the direct evidence for arable is confined to a small amount of lax-eared barley or bere, this is the first site-record of cereal from a native settlement of the period in the area, and may serve to remind us of the potential source of the barley on the well known Chesterholm writing tablets. It may also be related to the ubiquitous rotary quernstones of the area and to the increasing evidence for extant field-systems associated with the stone-built, Romano-British type settlements in the uplands of Northumberland (T. Gates, forthcoming). There are good indications from pollen analyses of a period of extensive clearance and increased farming activity beginning in the late Iron Age or Roman period in several parts of north-east England (e.g. Davies and Turner, 1978), as well as widespread instances of early ploughing beneath the Hadrianic frontier works and elsewhere, though in the case of the latter the Roman works provide no more than a *terminus ante quem* for most of the examples. Whilst some of the plants represented at Doubstead are species of arable and waste land the nature of any field-system that may have existed remains unknown. A system bounded by low stone banks, such as those which occur in association with extant sites in the uplands, would soon have been erased by later land-usage, and for

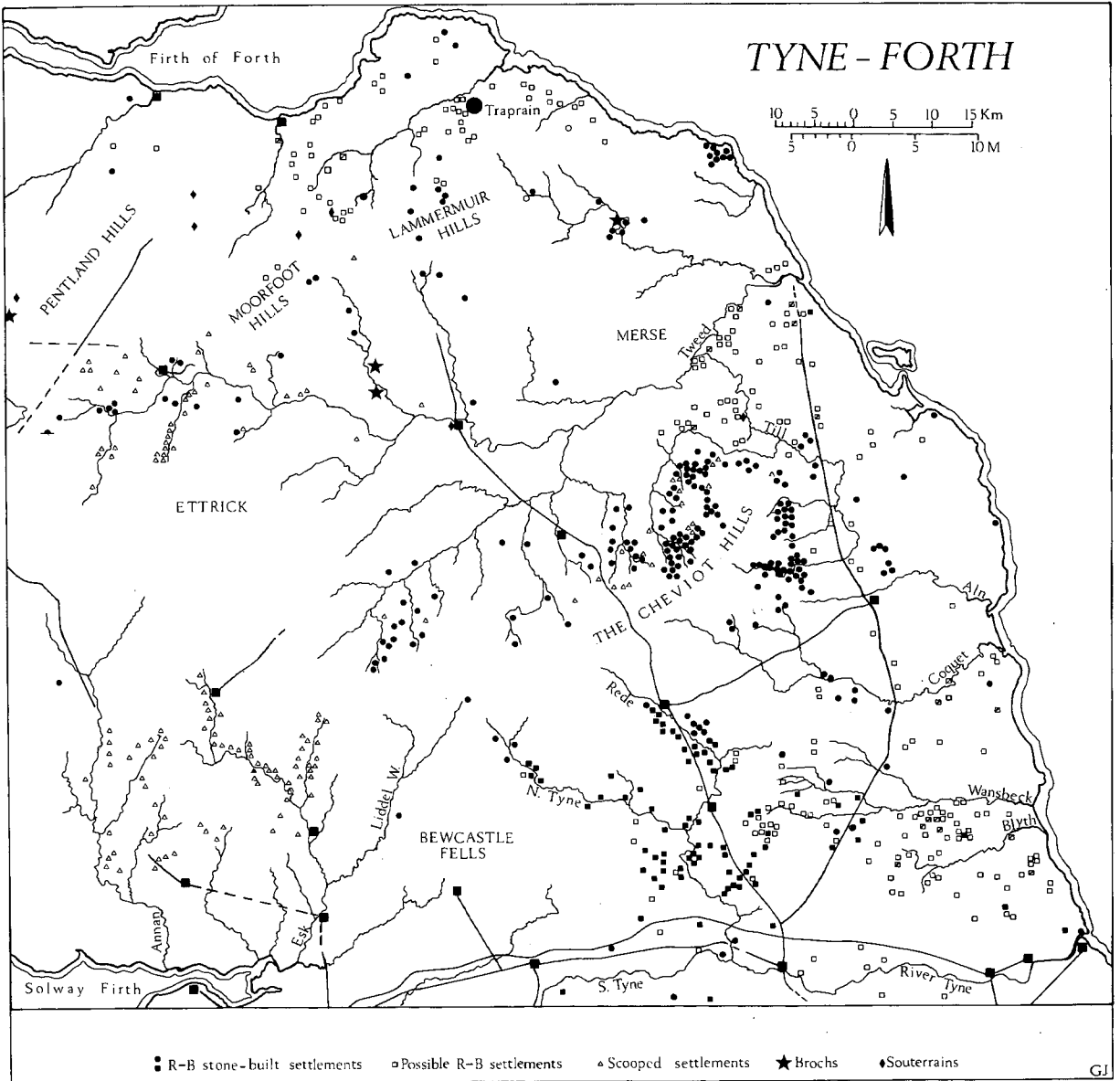


Fig. 8. Settlements in the Tyne-Forth area.

the present the function and context of linear ditches, such as sometimes appear on air-photographs in proximity to rectilinear settlements on the coastal plain, remain to be determined.

A number of the botanical species from the site, such as Fat Hen, Chickweed, or Sheeps Sorrel, could also have formed part of the diet of the inhabitants, though there is no direct evidence that this was so, except perhaps for the few seeds of nutritious Fat Hen which accompanied the barley in one of the interior pits. Even so, there is no reason to regard the presence of the latter as an indication of its cultivation as a crop-plant.

In one form or another the presence of Romano-British occupation on the coastal plain and littoral promontories is not in doubt, being attested for example at Marden, Tynemouth, or Dunstanburgh in Northumberland (Jobey, 1963, 1967, 1972), Earn's Heugh in Berwickshire (Childe, 1932), and in more recent excavations at Broxmouth in East Lothian (Hill, 1979). In any attempt to assess the density of the settlement pattern, however, Doubstead can do no more than enhance the potential of a Roman context at some stage for sites of similar rectilinear form in the same areas (fig. 8). Clearly rectangularity in form, even if accompanied by traces of interior round houses, can not serve as a close contextual determinant, and is demonstrably not a prerogative of the Roman period. In this instance the problem is best illustrated by the crop-marks of an appreciable number of rectangular shaped, multi-ditched sites on the coastal plain, which together with others have not been included on the present distribution map. As has been suggested elsewhere, these sites have at least the superficial appearance of being pre-Roman Iron Age forts, comparable with extant examples on the fringes of the uplands such as at Manside Cross or Hartburn, Northumberland (Jobey, 1973). Perhaps both the potential and the problem are epitomized in the group of single ditched, rectilinear enclosures showing as crop-marks around the so-called oppidum on Traprain Law, East Lothian. Here, as is well known, a large centre flourished not only in the Roman period but also in the pre-Roman period alike. The extent to which some areas could have been more intensively developed as a result of the *pax Romana* can only be judged in the light of clearer and more satisfactory knowledge of the pre-Roman settlement pattern and economy, such as is not immediately possible on the coastal plain.

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