The archaeology of early settlement in upper Teesdale, co. Durham

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THE ARCHAEOLOGY OF EARLY SETTLEMENT IN UPPER TEESDALE COUNTY DURHAM.

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1984

"The archaeology of early settlement in Upper Teesdale, Co. Durham"

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Submitted for the degree of Master of Arts, University of Durham, Department of Archaeology, 1984.

Acknowledgements

Without the help and encouragement given by many people this thesis could never have been written.

Dr. A. Raistrick suggested the idea and Dr. R.P. Hastings persuaded me to begin it. My supervisors, first Professor D. Harding and later Professor R. Cramp have born with my dilatory nature and have seen to it that the work was completed. Mr. K.J. Fairless, co-director of the excavations described here has given me the benefit of his wide experience in the form of advice and encouragement. The Staff of the Archaeology Department of Durham University have taken a keen interest in the project and I am particularly grateful to Mrs. A. Donaldson who has gone to endless trouble on my behalf. Miss L.J. Gidney has given invaluable help with fieldwork as well as acting as conscience and critic. The Earl of Strathmore, the Lord Barnard, their agents, tenants and keepers have kindly allowed me free access to their moors and farms. Mrs. M. Eggleston and Mrs. E.A. Maine have wrestled with my writing to produce a typescript.

Finally I must thank my family for their patience and forbearance during the years I have been engaged with this work.

Despite the help which I have received there are sure to be errors of omission, commission and interpretation, all of which are the sole responsibility of the author.

I, Denis Coggins, declare that no part of this material has previously been submitted for a degree to any university.

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The archaeology of early settlement in Upper Teesdale, Co. Durham.

This thesis considers the archaeological evidence for early settlement in Upper Teesdale from its beginnings in the early mesolithic up to the Norman conquest. The area is defined as the valley of the river Tees and its tributaries from watershed to watershed between Cross Fell in the west and Middleton in Teesdale to the east.

A preliminary chapter presents background information including the geology and climate of the area which affected early settlement. The archaeological material is dealt with chronologically, a separate chapter being devoted to each period. Each chapter considers the available evidence for settlement derived from strayfinds, pollen analysis, excavation and field survey. Mining of lead and iron is given a separate chapter as also is farming practice. The thesis is concluded by a chapter summarising the results of the study. There are gazetteers of strayfinds, archaeological sites and industrial sites.

There is evidence for early mesolithic presence in Upper Teesdale and also for later mesolithic woodland clearance. Pollen analysis and finds of axes show that this process continued during the neolithic and though no site has so far been identified these probably exist beneath blanket peat. Clearance was intensified in the early bronze age and extensive field systems occupy much of the south bank of the valley between 305m. and 457m. During the later prehistoric settlement appears to have moved downhill and Roman-British sites are usually at or below 305m. The post-Roman forest regeneration found in the north-east does not seem to have occurred in Teesdale and there seems to be little change in the settlement pattern until after the Norman conquest. Interestingly almost all the evidence for early settlement is derived from the south side of the valley while mediaeval and modern settlements occupy the north bank.

INTRODUCTION

For over two hundred years Upper Teesdale has been visited by generations of professional and amateur botanists who have studied its unique relict flora. Apart from the Backhouse family who excavated the Teesdale Cave in the 1880's few of these seem to have been interested in the evidence for the presence of early man in the dale despite the importance of human activities as major factors affecting the development of plant communities.

A few local inhabitants were interested enough to look for artefacts, especially flints, and to record finds. Among these were my father, then the village schoolmaster at Newbiggin, and Mr. W. Lee also of Newbiggin, a retired lead miner whose collection of notes and finds was unfortunately destroyed on his death in the early 1940's.

Recent botanical work, particularly pollen studies has demonstrated that from very early times some vegetational changes in Teesdale are to be ascribed to human interference with the environment. Direct archaeological evidence in the form of fields, settlements and monuments has however been lacking and the present study attempts to remedy this by summarising the results of fieldwork and excavation in the area.

The fieldwork has occupied much of my very limited spare time for many years though only recently has it been carried out systematically. The excavations were originally conceived by myself and my colleague K.J. Fairless when we were both on the staff of the history department of Middleton St. George College of Education. The demise of the college in 1978 brought the proposed ten year research programme to an untimely end.

The study does not pretend to be complete: discoveries made after 1982 are not included and a great deal of fieldwork remains to be done. In particular accurate surveys of field systems are needed.

As the work has progressed I have become increasingly aware that it is not possible to produce a satisfactory study which deals only with archaeological features and only with a small geographical area. If the totality of man's influence is to be understood then information derived from many branches of

knowledge - botany, folk-life, geology, place-names, zoology and many others - must be incorporated into a single readable text.

What happened in Upper Teesdale did not happen in isolation. Events there depended upon and influenced events in the lower dale, in Weardale and in the valley of the Eden and elsewhere. Despite the failings and limitations however it is hoped that this thesis will make a small contribution to our understanding of the early settlement of Upper Teesdale.

CHAPTER I
Geology, Topography, Climate, Natural Vegetation

The exact geographical limits of Upper Teesdale are arguable. For some writers it includes the upper dale west of Barnard Castle but for the purposes of this study the area is that defined by Johnson (1976,3) "Upper Teesdale is a somewhat inaccessible region stretching from the source of the Tees on the eastern flank of Cross Fell, down the valley to Middleton in Teesdale" (Fig. 1).

Cross Fell, the highest point of the Pennines at just under three thousand feet, is part of the summit ridge watershed which divides the Eden Valley area to the west from the Tees valley to the east. The rocks of the west face of the watershed are faulted and form a steep escarpment but to the east dip much more gently towards the coast. Thus while Appleby in the Eden valley lies at about 122m/400ft only eight miles from Cross Fell, Middleton in Teesdale at 299m/750ft is some twenty miles from the summit. The transition from the fertile fields of the Eden Valley to the barren uplands is rapid and well defined but in Teesdale it is slow and diffuse.

The geology of Upper Teesdale has been described by several writers beginning with Forster (1809). A comprehensive summary is given by Johnson & Pigott (1978).

The underlying bedrock of most of Upper Teesdale is the Middle Limestone group of the Carboniferous series consisting of sequences of limestone, sandstone, shale and thin coal seams. These form the characteristic 'benches' which run parallel to the river at various altitudes along the sides of the valley and which seem to have played an important role in its settlement.

The Basement, Lower, Great and Upper Limestones are also present and visible at various points in the valley. The eastward dip of the strata means that the older and lower rocks appear at the western end of the dale. The most conspicuous geological feature however is the Great Whin Sill, (Fig. 2), an intrusion of quartz dolerite into both Lower and Middle limestones which forms the columnar

cliffs so characteristic of the dale, as well as the waterfalls of Cauldron Snout and High Force. This intrusion in late Caboniferous times was also responsible for the 'baking' of the adjacent limestones which metamorphosed into the coarsely crystalline 'sugar limestone' which weathers easily into characteristic red brown soils supporting the famous Teesdale relict late glacial flora.

At about the time of the intrusion of the Whin Sill there began also the long process of mineralization. Lead, zinc, fluorspar and barytes were deposited in vertical fissures in the limestone. Mining of these in historical times has caused many of the striking topographical features of the dale.

The geological picture is complicated by the deep cutting of the river and by two major disturbances: the Teesdale Fault and the Burtreeford Disturbance (Fig. 2). The former runs more or less parallel with and on the south side of the river from Cronkley Bridge to Middleton. The steep dip which it imparts to the strata can be seen clearly in the river bed near Winch Bridge. As a result of this fault the Whin Sill outcrops chiefly on the south side of the river and thus the north facing and south facing slopes of the valley are entirely different in physical character, a difference which seems to have had a marked effect on early settlement. The Burtreeford Disturbance is a strong monoclinal fold which crosses the valley in a N-S direction near Widdybank Farm. On the western flank of this a small inlier of Ordovician rocks belonging to the Skiddaw Slate and Borrowdale Volcanic Series is exposed in the river bed.

Upper Teesdale was heavily glaciated and it seems that even the highest ground in the region was covered at the time of the maximum advance of the Quaternary ice sheets. Boulder clay, which is derived wholly from local rocks covers much of the valley below 610m/2000ft, above this height erosion has stripped the drift which has been redeposited as gravel and alluvium in the valley bottom.

The most recent geological process has been the rapid accumulation and slower erosion of blanket peat over much of the land above the 305m/1000ft contour.

The topography of Upper Teesdale reflects these geological factors (Fig. 3). The upper reaches of the river and of its two main tributaries Harwood Beck and Maize Beck drain huge areas of high desolate moorland, treeless, almost completely without habitation and largely covered by blanket bog dominated by heather and cottongrass. In many places the peat is dissected by gullies and is eroding. In even the most remote parts of the area the lead miner has left traces of his presence: hushes, spoilheaps, drifts, bell pits and waterleats. Evidence of more recent activities are provided by the Nature Conservancy Field Centre at Moor House and the clay and concrete dam of the Cow Green reservoir. At Cauldron Snout the river falls in a cataract of 45m/150ft over a cliff formed by the Whin Sill and is then joined by the Maize Beck which rises less than a mile from High Cup Nick, a huge amphitheatre of whin cliffs overlooking the Eden Valley. The present day Pennine Way footpath between Middleton in Teesdale and Dufton follows the "Green Trod" route which presents one of the shortest and easiest ways across the Pennines and must surely have been in use since prehistoric times. Below Cauldron Snout the river passes the whin cliffs of Falcon Clints, Cronkley Scar and Dineholm before plunging over another at High Force. The whinstone cliffs are on alternate banks and opposite them the valley floor is covered by drumlins and moraine. Between Cronkley and Dineholm the Harwood Beck joins the Tees and the valley takes a more settled appearance with farmland extending from the river high up the fell side on the north bank though the south remains largely moorland. Below High Force the river passes through a narrow wooded gorge and then over a series of small falls near Winch Bridge after which it takes on a more mature form with many meanders. Here the valley becomes broader and more shallow with extensive meadow and pasture on both banks.

The river Tees in this first part of its course is swift flowing and liable to sudden flooding. Even in summer it is not easily fordable and after heavy rain or melting snow it becomes a formidable barrier. All the existing bridges are modern. The sites of some earlier

fords can be identified by the place name element 'wath' (Fig. 3).

The climate of the North Pennines has had a profound effect on vegetation and settlement history. It has been the subject of studies by Manley (1936, 1942, 1952) and by Pigott (1978). Writing of the western and highest part of Upper Teesdale Manley says " ... we therefore form a conception of an excessively windy and pervasively wet autumn, a very variable and stormy winter with long spells of snow cover, high humidity and extremely bitter wind alternating with brief periods of rain and thaw. April has a mean temperature little above freezing point and sunny days in May are offset by cold polar air; while the short and cloudy summer is not quite warm enough for the growth of trees. Throughout the year indeed the summits are frequently covered in cloud". (Manley 1942, 151.)

Perhaps the most important climatic factor to be considered as affecting settlement in Upper Teesdale is the very slow rise of the mean temperature in spring. Since the growth of grasses begins only when the mean temperature exceeds 42^{o}F and since mean temperature falls about 1^{o}F for every 80m/270ft of altitude the length of the growing season decreases very rapidly with relatively small increases in height above sea level. " ... no recollection is more vivid in the writer's mind than that of a well known Swiss professor of geology, who, confronted at 571m/1700ft the level of Berne - with a wide stretch of the Pennines between Teesdale and Weardale surprisingly declared 'this is the tundra' ... " (Manley 1952, 222)

In fact a change of level of only about 549m/1800ft halves the growing season. The higher fells therefore can only be used for summer grazing.

Though in many ways the natural vegetation assemblage of much of Upper Teesdale is fairly typical of that of the North Pennines generally it also contains many species of flowering plants, ferns, mosses, liverworts and lichens which are rare or absent elsewhere. The remarkable nature of the "Teesdale Assemblage" of plants has been known since the early discoveries of John Ray in 1718. During the

nineteenth century more and more rare species were added to the list and during the early twentieth century there was much speculation about the origin and history of this flora. From about the middle of this century it has become increasingly clear that many of the characteristic Teesdale plants were widespread in the rest of the British Isles and Europe during late glacial times. In many cases the Teesdale representatives are slightly different from their European counterparts, sometimes warranting re-classification as distinct sub-species, showing that they have been isolated for a long period. It is remarkable that the Teesdale Assemblage contains representatives of various different geographical locations: arctic-alpine, sub-arctic, alpine, northern montaine and southern montaine. The reasons for their survival here are not yet fully understood but may be significant when considering early settlement.

Bellamy, et al. (1969) suggest two hypotheses to account for the restricted range of these plants and their survival in Upper Teesdale. The first of these is concerned with the lack of competition from other species because of the severity of the climate. The second, supported by Jones (1973) shows that the Teesdale rarities tend to occur " ... in an area of contact between associations of two orders of vegetation, developed in a climatically marginal situation ...". The authors suggest that human influence is and has been significant in the delimitation of these zones. Godwin (1949), Pigott (1956) and Bradshaw (1976) all agree that one of the most important factors in the survival of the Teesdale rarities was the existence and maintenance of open areas " ... they survived in this predominantly wooded and peat-covered landscape because there were always a few open habitats ...". Pigott (1956) warns against " ... a too facile acceptance .. that the Teesdale habitats are naturally open ...". (p578)

(Bellamy et al op.cit, 5)

Bradshaw 1976, 45

The evidence from pollen analysis of peat from various sites in Teesdale which will be discussed later certainly suggest that human activity has been an important factor from immediate post glacial times onward in establishing and maintaining these open areas.

CHAPTER II
Mesolithic

Evidence for the activities of mesolithic man in Upper Teesdale is of two kinds: direct, in the form of artefacts, especially flint, and indirect, provided largely by inferences about vegetational changes derived from information obtained from pollen diagrams (Figs. 7 & 8).

Finds of mesolithic artefacts from Upper Teesdale are fewer than from neighbouring Weardale but there are sufficient to enable them to be used to yield information about early occupation. A distinction should be made between assemblages of flints which probably indicate a living site and stray finds of one or two items. The former are included in the site distribution map (Fig. 5) and the latter on the stray finds distribution map (Fig. 6).

The site which has so far yielded the largest number of flints is Staple Crag (Fig. 5:1). On the south side of the river, east of Winch Bridge an outcrop of whinstone the size of a small cottage projects into the river. In the lee of this is a small alluvial flat between the river and Stony Beck. At the western end of this river erosion and rabbit burrowing have produced a small scar some 13m long and with a maximum height of 1.5m. Between this and the river is a small area where the soil has been removed by floods to reveal an underlying stratum of sand, pebbles and rock fragments (Fig.11). Until the building of the Cow Green reservoir this area was regularly scoured by floods but these now occur only rarely. From this layer flints have been recovered by the writer since they were first noticed in c. 1970.

If the number of flints found is to be a criterion then the next most important site is again by the side of the Tees and on the south bank at Merrygill Holm (Fig. 5:2) at the foot of Cronkley Fell. Again the finds were made on the sand and gravel surface of a small inlet eroded by the river. Flakes and a hammerstone were found by the writer at various dates from 1967 on.

Near Birkdale (Fig. 5:3) at just over 457m/1500ft

several worked flints have been recovered from the eroding soil of an outcrop of limestone on the east side of Cock-lake Sike immediately north of the ford across it. These were found at various dates from c. 1952 onwards and unfortunately some of the earlier finds have been lost.

The only other site which has yielded more than a few flints is at the top of the dale in the Moor House Nature Reserve. This is on Hard Hill (Fig. 5:85) between Trout Beck and the Tees, at 686m/2250ft, where several flint flakes were found in association with two horns on a peat surface about one metre above mineral soil. The site has been fully described by Johnson and Dunham (1963, 156-157) and is of particular interest because of the association of flints with horns of cattle and because it has been possible to associate the flint horizon with a specific pollen-zone. Most of the other sites are simply chance finds of single flints. Two exceptions are Upper Moss Flats (Fig. 6:11) where five flakes of banded chert were found on an eroded peat surface at 640m/2100ft, and Teeshead (Fig. 6:6) where three flints were found at 770m/2540ft in eroding peat 0.68m above the mineral soil and in association with fragmentary remains of 'Bos' horns (Johnson & Dunham 1963, 157) One other find of flints in association with horns of Bos has been reported from the watershed between Teesdale and Weardale on Fendrith Hill (Fig. 6:4) (Stevens 1970). Cattle horns have also been found at other localities (Johnson & Dunham 1963, 158-161) and one unpublished find deserves special mention. This was the discovery made c. 1960 by a beater on Middle End Moor (Fig. 6:7) of a horn which had been charred and bore traces of cutting. The horn was sent to Durham University and from there to Sunderland Museum. It cannot now be found.

Pollen diagrams have been constructed for several sites in Upper Teesdale. In only one case - Hard Hill (Fig. 6:1) does the diagram refer directly to a flint horizon. Here, flints and horns were found at a depth of 136cms in cotton-grass peat, a level considered to belong to a time near the end of pollen zone VIIIa. At this horizon there is an increase in alder and especially hazel together with a relative decline in

oak, pine and elm (Johnson & Dunham 1963). Unfortunately no radio-carbon date is available for this site. Other sites in the Moor House Nature Reserve have been radio-carbon dated however. One of these is Valley Bog (Fig. 7) where in the local pollen zone Oc, which is likely to represent the latter part of Godwins zone VIIa in Upper Teesdale, a temporary but significant increase in hazel is accompanied by a relative decline in oak and elm together with an increase in bracken and several herbs. Two radio-carbon dates of $5950^{\pm}60$ bp (S.R.R. 92) + $5945^{\pm}50$ bp (S.R.R.93) have been obtained for this clearance phase. These disturbances at Valley Bog and Hard Hill are likely to be contemporary and together with the finds of flints from the latter site must be considered as being due to clearances made by Mesolithic man. A few miles to the west, Weelhead Moss (Fig. 7) was also studied by Chambers. Here, near the top of zone O, just below a horizon radio-carbon dated (Oak 2915) to $5770^{\pm}110$ bp_{Λ} a similar small increase in hazel accompanies a temporary but distinct decline in oak, elm and pine. Fox Earth Gill (Fig. 7) on Cronkley Fell is only half a mile from the flint site of Merrygill Holme and has been studied by Squires (1970). Though of course no direct correlation is possible between the two sites it is perhaps significant (Squires, per. comm) that a radio-carbon date of 5404 bp_{Λ} immediately postdates a temporary increase of hazel at the expense of oak, elm and pine at the former site. At Dufton Moss (Fig. 7) also studied by Squires, a radio-carbon dated horizon of (Squires, pers. comm) 5697 bp_{Λ} is just above yet another similarly composed pollen assemblage: increased hazel accompanied by a decrease of most other trees, especially oak and an increase in several herbs.

Peat samples from six sites around - and now beneath - Cow Green reservoir have been intensively studied by Turner et.al. (1973). Writing of post-glacial period 4 dated from 5770 - 5000 bp they find that it is difficult to be certain of the vegetation because in the reservoir basin area little peat formed. The explanation for this is probably climatic and similar features have been recorded in the south Pennines. They suggest that peat was unable

to form because exceptionally high rainfall and high temperatures caused the erosion of peat surfaces. Higher on the fell peat did form and it seems that this was the period of forest maximum in the area. Even so the forest was open, with herb pollen accounting for some 30% - 40% of the total compared with only 5% for lowland Co. Durham (Turner 1970,401-2) Such open forest would be an ideal habitat for game and so for Mesolithic man, while the altitudinal extension of the forest because of relatively high temperatures would account for the finds of flints at over 610m/2000ft.

A comparison of the information available for Upper Teesdale with that from similar areas may be instructive. Tinsley has studied various sites on the Nidderdale Moors (Tinsley 1975). At Fountains Earth at a depth of 3.4m. the lower part of local zone N-B which has been estimated to date from c. 5000bp shows an increase in hazel with a slight decline in other trees and a marked increase in grasses, sedges and melampyrum (cow-wheat). Charcoal was found at this level. At Stump Cross near Grassington flint flakes were found stratified in mud belonging to the early part of pollen zone VIIa (Walker 1956). Charcoal associated with these flints was radio-carbon dated to 6450±310 b.p (Q141)

The material finds from the Moor House N.N.R. have been fully described by Johnson & Dunham (1963) The total assemblage consists of thirteen pieces of struck flint and five of banded chert. The flint is mostly buff-grey with white mottling of the type found in the Cretaceous chalk deposits of S.E. Yorkshire, and commonly used in the S. Pennine microlithic industries. One fragmentary microlith was of blue-grey opaline flint. The banded chert may have been found in the Four-fathom limestone exposed at Swindale Beck Head below Knock Fell on the western escarpment of the Pennines. Two of the flints are microliths, one an obliquely blunted point and the other a scalene triangle. Johnson & Dunham consider that "... the assemblage has the appearance of belonging to a homogenous microlithic assemblage, but is not sufficient in quantity to determine the exact type of culture present". They also suggest that the absence of flint workshop sites in the area indicates that all the

struck flakes should be regarded as 'lost or discarded tools ... valued implements carried and used by hunting parties ...'. (Johnson + Dunham, 1963, 155-156)

Of the five flints from Birkdale two small blades are covered by a white patina, two other flakes are of mottled grey flint and the fifth is a small delicate blade in translucent brown flint. None shows any certain sign of secondary working and while their appearance is consistent with a mesolithic assemblage, none is diagnostic (Fig.14:1-5). The site at Merrygill Holm has produced twelve flints, three pieces of banded chert and a small hammerstone (Fig. 13). The latter is roughly egg-shaped and sized, one end shows intensive battering and there are smooth areas which probably result from much handling. One flake of mottled grey flint (no. 4) has a fine oblique retouch on one concave edge and may have been used as a spokeshave. There are two knives, one (no. 2) is again of mottled grey flint and has a single edge much worn, while the other (no. 7) a curved blade of amber flint 70mm long shows wear on two edges for about half its length. Of the remaining flints four struck flakes and two indeterminate pieces are also of mottled grey material, there is a brown translucent flake, a broken core of black coarse flint, and a second larger broken core of yellow-brown opaque flint. The chert consists of three struck flakes, one of which may be regarded as a small knife. Once again the assemblage is too small for such conclusions to be drawn but it would not be out of place in a Mesolithic context.

The largest number of flints has been found at Staple Crag which has produced many fragments of flint and chert. Most of the flints are of mottled grey type characteristic of S.E. Yorkshire and several are covered with a white patina. Among the struck flakes are three small blades and four blade fragments; two blades and one fragment are of translucent brown flint and the others of mottled grey. The tools found at the site are shown in Fig. 12 No. 5 is a rather large triangle of red/amber flint with a steep retouch on one side, and no. 7 a similar though slightly

smaller one of dark grey flint. A small red/amber fragment is probably part of another triangle. No. 2 is a scraper of dark grey mottled flint, both the concave and convex edges show fine oblique retouch. No. 11 is a small cream-coloured notched blade and no. 10 a 'thumbnail' scraper of similar material. No. 19 is a burin of the same grey mottled flint as no. 2, while no. 20 is a curved flake of white patinated flint one edge of which is very finely toothed. There can be no doubt of the mesolithic origin of this assemblage.

None of the stray finds of the area can be considered as being certainly mesolithic, though several are likely to be so (Fig.14.6-19). Among these are a broken blade of yellowish flint from the upper reaches of the Tees (Fig. 6:12) and an endscraper of dark grey mottled flint from Ettersgill (Fig. 6:17). From Barney Byre (Fig. 6:25) comes a core of bluish opaline flint which is likely also to be mesolithic and recalls the microlith of similar material from Moor House.

It will be seen that there is no uniformity of material in the finds though many are of the grey mottled flint which appears characteristic of the Yorkshire wolds. The source of the banded chert may well be that suggested by Johnson & Dunham - Knock Fell - though other outcrops of the same material are possible. The black flint of the core from Staple Crag resembles some of the material from Hartlepool and the red/amber that from Crimdon Dene (D. Spratt pers. comm.). The sources of the other yellow, brown and dark grey flint are likely to be the Durham and/or Cumbrian coasts.

Jacobi (1976) has proposed the division of the European Mesolithic into three periods - Early, Later and Latest - the third phase of which seems to be completely absent from Britain. It has usually been assumed that the Mesolithic in Upper Teesdale belongs to the "Later" period, the earliest date in Britain for which is provided by the (Q1474) County Durham coastal site of Filpoke Beacon (6810 + 140 bc). Jacobi, Tallis & Mellar (1976) writing of the South Pennines show that " ... radio carbon datings ... indicate a regular

and possibly increasing exploitation of the moors from c. 7600 to c. 3400 bc ...". (p.310)

If it is assumed that Godwin's pollen zone VII is likely to represent a more or less synchronous vegetation period throughout Upper Teesdale then the flints from Hard Hill found at the horizon in the later part of that zone and associated with an increase in hazel, may be regarded as contemporary with a similar increase in hazel in zone Oc at Valley Bog. It is true that the pollen assemblages of Godwin's zone VII do not exactly correspond with the local Teesdale assemblages (Chambers 1978) but nonetheless where comparison has been possible as it has been at Valley Bog where Johnson and Dunham's undated diagram of 1963 can be compared with Chambers radio-carbon dated diagram of 1976 a correlation can be made. Unfortunately no other flint finds can be dated even by such association though if the temporary changes in vegetation found associated with the flints at Hard Hill and radio-carbon dated to 5950 + 60 bp (SRR 92) at Valley Bog are regarded as being produced by human manipulation of the environment then the activity of mesolithic man can be inferred at most if not all of the pollen sample sites. In each case the date is relatively late suggesting that the Mesolithic in Upper Teesdale indeed was quite late though still well within the time bracket suggested by Jacobi et al. (1976). Whether or not it persisted into later times cannot at present be decided but it is interesting to note that the artefacts from the North York Moors site of Peat Moss show both Mesolithic and Bronze Age characteristics (Clarke 1973).

The exception to this is the site of Staple Crag, a study of which is in progress (R. Young & D. Coggins, in preparation). R. Young considers that the forms of several of the flints from this site (Fig. 12) are more characteristic of the early mesolithic and that the whole assemblage probably dates from this period. This cannot be confirmed until the whole assemblage has been studied and, if possible, material for a radio-carbon determination obtained from the site.

A prolific flint site in lower Teesdale has recently

(1982) been discovered by Mr. T. Lawrie who has kindly allowed it to be mentioned here. There can be no doubt of the early mesolithic character of the flint assemblage from this site and thus the probability of an early date for Staple Crag is greatly increased.

The importance of the forest edge zone to prehistoric man and the latter's capability to alter this environment by means of fire have been stressed by many authors in recent years Evans (1975), Mellars (1975), Simmons (1975). In their survey of prehistoric activities on the North York Moors Spratt and Simmons (1976) say "... forest edge .. becomes an important area for subsistence because of the presumed abundance of shrubs such as hazel which ... provided browse for herbivorous animals and nuts for the human population ...". A hunting population might "... selectively camp near the tree line and near water ... and in general might try to increase the shrub content of the vegetation by the use of fire ...". (pp 197-8)

The existence of a vast area of forest edge habitat in Upper Teesdale has already been noted. Evans (op. cit.) discusses in detail the possible relationship between mesolithic man and Bos primigenius. She suggests that the characteristic Palaeolithic "herd association" continued through the Mesolithic and that Bos. should be regarded as an open-country migratory species spending winters on the coastal flats. Coastal grassland such as that of the Solway plain or the Tees estuary would provide an excess of sodium in the diet, an imbalance which could be corrected by phosphorus-rich grazing. "... the simplest way of achieving this would be by symbiosis with that redoubtable fire raiser, Mesolithic man ..." (ibid, 46) The finds of Bos horn in Upper Teesdale provide some measure of confirmation for this theory. The existence of open country, the increase of hazel at certain points in the pollen diagrams and the evidence for burning shown at one site at least, all support the idea that Mesolithic man was a summer visitor to Upper Teesdale living in some form of special association with the wild cattle. The winter quarters of both man and cattle would most probably be the coastal plains of the

Solway and Tees estuaries. If the Mesolithic in Upper Teesdale was late then this is likely to be because the spread of forest into the area was also late. Chambers (1976) has shown that in Teesdale the time at which maximum tree cover occurred also became progressively later at greater altitude i.e. from c. 9000 bp in lower Teesdale to 6000 bp in the Upper dale. Man and cattle followed the advancing forest edge.

In the light of the evidence for probably early mesolithic activity provided by the sites at Staple Crag and Lartington it seems that this view will need to be revised, though until dates are available little progress can be made with such revision.

Spratt and Simmons (op. cit.) provide a distribution map of mesolithic sites on the North York moors. These, they suggest, may be divided into two distinct types - the "exploitation camp" occupied by a family group the upland examples of which are usually situated near spring heads at above 396m/1300ft, and the "base camp" of an extended group of perhaps 25 people situated at a lower altitude. "Base camps" characterised by a flint industry with approximately equal numbers of microliths to scrapers, while "exploitation camps" have a high ratio of microliths to other tools. Such a model would fit the admittedly rather small number of finds from Upper Teesdale. The site at Staple Crag may be regarded as a base camp to which hunting parties could return after their trips to the higher grazing grounds of wild cattle, while sites such as Merrygill Holm, Birkdale and Hard Hill will represent the temporary camping sites of such hunting parties.

One problem which must be faced when discussing the Mesolithic period in Upper Teesdale is that which has already been mentioned, of the relatively small number of finds compared with those of the neighbouring valley of Weardale. The authors of Archaeology in the North point out that " ... in only one valley - Weardale - is there a significant amount of mesolithic material ... ". They add however " ... present distribution reflects perhaps not so much the activities of mesolithic man as of modern field-

workers ... ". (Clack and Gosling 1976, 16.) It is not possible to be sure whether the great disparity in numbers of finds between the two dales is real or apparent. Not only must the activities of fieldworkers be considered but also the various processes which may have affected both survival of evidence and the chances of its discovery. The amount of peat cover and rate of its erosion, the quantity of recent ploughing and the extent of quarrying are only some of these factors which must be taken into account before a meaningful comparison can be made.

CHAPTER III
The Neolithic

No neolithic site has yet been excavated in Upper Teesdale nor indeed has any indisputably neolithic site been identified though one at Strands Gill (Fig. 5:4, Fig.15) may well belong to this period. This site lies on the west bank of the Blackmea Crag Sike at the top of the precipitous cliffs of Holwick Scars. It consists of a small field about 30m x 20m flanked by two even smaller irregular plots. These are enclosed by low clearance banks of stones over 2.0m broad in places. Many of the stones are quite small and would only have been removed from the plots if these were to have been used for arable. It is probable that the site extends further to the south but here the ground is covered by peat bog and the enclosure walls are visible for only a short distance. At the south end of the larger field is a modern sheepfold which overlies an earlier - though possibly still relatively modern - triangular structure. The latter is shown in Fig. 15 which was drawn before the sheepfold was built. Also attached to the southern wall is a subrectangular foundation about 4.0m x 2.5m. The eastern plot contains a cairn about 4.0m in diameter with a kerb on its western side. At the north-eastern extremity of the site is a subcircular foundation possibly a house of some 3.0m internal diameter. A trial excavation of one quadrant of the cairn was commenced by the writer in 1955 but was abandoned at a very early stage because of the activities of 'treasure-hunters'. It was not possible therefore to determine whether the cairn was sepulchral or merely the result of field clearance. Only one find was made: the butt of a polished stone axe, (Fig. 16:1), which is now in The Bowes Museum. Polished stone and flint axes may still be regarded as the typologically distinct tools of the neolithic and eight specimens in all have been found in Upper Teesdale. All except two mentioned above were chance finds and six are in The Bowes Museum.

The axe found at Strands Gill is 85mm long, 45mm

broad at the break, 20mm thick and oval in section. It is made of a creamy-yellow fine grained rock which was identified at the Geology Department of Durham University by Professor Kingsley Dunham. He reported the material to be " ... a sericitised feltzite ... of igneous origin ... though tough it would hardly be possible to produce a sharp edge on it ... possibly derived from local glacial moraine but similar to that exposed at Drygill north-west of Carrock Fell ...". (pers.comm.)

One other axe or rather part of an axe has been produced by excavation. This was discovered in 1979 beneath the foundations of an eighth century AD building at Simy Folds (Fig. 5:34). This was again the butt end of a polished stone axe probably of Langdale (Group VI) material. It had apparently also been used as a core from which flakes had been struck. The axe is now in The Bowes Museum.

The other three axes in the Museum comprise one of flint and two of stone. The flint axe (Fig. 16:3) was found at Bowes Close, Harwood (Fig. 6:35) during the 1950's by Raby Estates workmen who were digging out the floor of a house before concreting it. The axe is of pale grey flint, 95mm long, 45mm maximum breadth and 22mm thick. Only the cutting edge has been ground and polished, the body of the axe being quite roughly flaked. The two stone axes differ markedly from each other. The example shown at Fig. 16:2 was found in August 1956 by Mr. J. Hutchinson, a Raby Estates forester, among the roots of an overblown tree in Bowlees planting (Fig. 6:51). It is of the 'Bridlington' type, round in section with a pointed butt. It is 150mm long and 45mm broad at the edge. Rather unexpectedly it has proved to be of Group 1 material deriving from Cornwall.

The remaining specimen from the Museum collection is in contrast a fine example of the 'Scandinavian' type being almost rectangular in section with flat edges and slightly convex faces (Fig. 16:5). One face is slightly broader than the other and the cutting edge is asymetrical. It is 127mm long, 54mm broad at the edge, 22mm broad at the butt, 28mm thick and weighs 365gm. The axe is made of whinstone, highly polished and apart from some damage -

including recent file marks - to the butt, is in excellent condition. It was found by Mr. F. Nevison of Barnard Castle while fishing in the Tees near Middleton in 1960. Unfortunately its exact findspot is not recorded (Fig. 6:38).

Three further axes have been found in Upper Teesdale, one of flint and two of stone. The flint axe is in the possession of Mr. H.L. Beadle a former resident of Forest-in-Teesdale, who now lives in Richmond. He has kindly given the following details " ... the axe was dug up in 1919 by John Winter Tallentire when he, with others, was engaged in digging holes from the overhead ropeway which ran between Cowrake and Langdon Beck. He stated that this was found two to three feet below the surface at the foundation about Peghorn Lodge ... (Fig. 6:34) ... the axe is of flint and measures three inches long by one and a half inches wide ...". It is in fact similar in size and material to the example from Bowes Close described above. Dr. G.A.L. Johnson of the Geology Department of Durham University has one of the stone axes which was given to him by the finder, Mr. J. Newrick, who at that time (about 1960) was Agricultural Advisory Officer for Teesdale and Weardale. It was found near Sair Hill Farm (Fig. 6:36). The axe is of coarse granular iron-stained whinstone, blunt edged, oval in section and with a rounded butt. It is 100mm long, 55mm broad at the blade edge and 35mm thick, (Fig. 16:4).

The last axe to be considered is in many ways the most interesting. It was published shortly after its discovery (Wooler 19/2) " ... a polished stone axe was found in the river Tees on the Durham side about 200 yards above where the falls start out of the Weel at Cauldron Snout on 9th May 1910 (Fig. 6:33). It was found embedded in dark coloured clay between five and six feet below the surface. The thick end was in the clay and the pointed end was projecting out of it about three inches at the side of the river. The axe has been polished and measured 6½ inches long by $2^{2}/8$ inches broad at one end tapering to the other. Its thickness in the middle is $1^{3}/8$ inches, sharp at the edges all round and weighs 12½ ozs. The axe is made of jadeite ...". The axe was presented to the Whitby Museum in 1926.

One further find deserves mention though it is not an axe. This is a thin flake of stone about 5 cms. x 3.5 cms. One surface is smooth and slightly convex and faint striations caused by polishing can be seen. The material is a grey/green fine grained stone which appears to be igneous. Probably the flake has been detached from a polished stone axe of Langdale origin. It was found in July 1977 by the side of the "Green Trod" on Birk Rigg (Fig. 6:39).

No other artefacts or monuments can be certainly attributed to the Neolithic so that evidence from pollen diagrams is once more very important. While it has long been realised that major changes in vegetation cover began to take place throughout Europe during the centuries around 5000 bp the exact causes of the changes are not certain. Smith (1970) considers that " ... at the Atlantic/Subboreal transition we are dealing with a complex of effects and in different areas different factors or combinations of factors may have been critical for the vegetation ...". One remarkably consistent feature of the vegetational change at this period is the sudden and often permanent decline in elm pollen. This decline often coincides approximately with the appearance of cereal pollen and an increase in such "weeds" as dock and narrow-leaved plantain. It has become usual to consider the "elm decline" apparent in pollen diagrams as an indicator of the beginning of Neolithic agriculture and to assume a possible cause to be the selective cropping of elm leaves and shoots for use as cattle fodder.

For north-west England Pennington (1975) has shown that in the few centuries before 5000 bp the effect of man on both upland and lowland landscape increased dramatically in that the elm decline is accompanied by wide-spread desturction of forest and quite large scale clearance for cereal cultivation. In lower Teesdale the pollen diagram from Neasham Fen (Bartley et al 1976, 438-441.) shows a marked elm decline dated to 5468 + (SRR 102) 80 bp which is rather earlier than most such dates. There is no direct evidence here for anthropogenic activity - cereals, plantain and docks appearing only later - but from Hartlepool, only 18 miles away, human remains and charcoal appear at the horizon of the elm decline in a similar

profile (Bartley et. al. 1976). The elm decline is also observable on diagrams from Upper Teesdale. At Dufton Moss it is dated to 4561 bp (Squires, pers.comm.) and is accompanied by an increase in hazel, heather and several herbs together with the first appearance of narrow-leaved plantain. The first cereal pollen however is at a much higher level. At Fox Earth Gill elm pollen almost disappears at 4776 bp (Squires pers.comm.). This decline marks the beginning of the phase leading to the domination of the area by heather. Again cereal pollen is not present at this level though plantain shows a marked increase. On both these diagrams the elm decline is seen to be a temporary phenomenon which is repeated at least twice in the upper horizons of the diagram. At both sites too it seems to be associated with a decrease in pine though not of other trees, at Fox Earth Gill indeed pine disappears altogether and does not reappear. The retardation in peat deposition in the area of Cow Green reservoir during the period covered by Godwin's pollen zone VII has already been noted. This means that a very thin layer of peat represents a long span of time and hence it is impossible to give a precise date for the elm decline: at Weelhead Moss it seems to lie between $5770^{+}_{-}110$ bp_{Λ} and $5220^{+}_{-}120$ bp_{Λ} and probably nearer to the latter (Chambers 1974). (Gak 2916) (Gak 2915) This diagram resembles the other two in that pine declines at the same time as elm but differs from them in that there seems to be a slight reduction in total tree cover which is accompanied by an increase in grasses and herbs and only slightly later does heather show a marked rise. More important is the presence of cereal pollen at this horizon. Chambers considers that these vegetational changes "can only be considered in the light of possible human activity in the area". For Valley Bog on the Moor House reserve two diagrams are available (Johnson and Dunham 1963, Chambers 1978) and as has been noted, these can be correlated. The elm decline here, at a height of 549m. is about 4596 + 60 bp (SRR 90) and it is not associated with a similar decrease in pine. Grasses increase as do several herbs, including docks while plantain and cereal pollen are found at a horizon immediately above the radio-carbon dated one. Chambers

suggests that this cereal pollen was not derived from the immediate locality but again points out that these vegetational changes are typical of those brought about by anthropogenic activity

The most recent pollen diagram to have been constructed is for the site of Simy Folds (A. Donaldson in D. Coggins et. al. forthcoming). The lower levels are dominated by pine but between 1.0m. and 0.9m. this declines rapidly while alder, hazel, grasses and herbs show a corresponding increase. Elm, never plentiful, also declines. This change is not radio-carbon dated but occurs just above a level (1.02m.) which is dated to 5920±100 bp. (HAR4076)

These several diagrams from the area show that from about 5000 bp open woodland was giving way to blanket peat where the soil was waterlogged and to grassland where it was better drained. In the wetter areas such as the Cow Green basin this change was irreversible but at Simy Folds it was only a temporary feature and permanent change did not take place until much later.

Turner et. al. (1973) remark that the Upper Teesdale pollen diagrams show the final fall in the frequency of pine pollen occurring at the same level as the elm decline and call this "a somewhat unusual feature in British pollen diagrams". Pennington (op. cit.) confirms the same feature in diagrams from the Lake District. Since pine and elm are most unlikely to have shared the same habitat, their disappearance at the same time seems to point to selective disturbance by Neolithic man.

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There can be little doubt that neolithic clearances were widespread in Upper Teesdale and that they were more or less synchronous. Nor is there a significant difference in time between these clearances and those in the lowlands represented by the Neasham Fen diagram. Radio-carbon dates from pollen sites on the west side of the Pennines show a similar pattern (Pennington (ibid.)). Smith (op. cit.) has argued that the mesolithic/neolithic transition is likely to be due to indigenous development of food producing specializations and that immigration of people probably played a minor part "... communities discovered means

whereby they could manipulate the productivity of their environment to their own advantage ...".

It has been shown that even at the forest maximum the tree canopy in Upper Teesdale was never completely closed and that there were always areas of open grassland. The importance of such zones to mesolithic man has been argued in the previous chapter where it was suggested that man was a summer visitor living in some kind of symbiotic relationship with herds of wild cattle. It is thus possible to see the neolithic as simply an intensification of this relationship leading to the domestication of cattle and permanent residence in the area. Unfortunately almost all the evidence for neolithic disturbances is from those areas where blanket peat effectively hides any trace of agricultural activity.

The distribution of stone axes in Upper Teesdale agrees on the whole with the pollen evidence, suggesting that neolithic settlement was probably in the high forest edge zone. All but one of the axes were recovered from sites lying between 305m. and 457m., the exception being found in the river itself and therefore possibly out of context. Two are actually from known settlement sites. Only two of the axes are made from an indigenous material - whinstone - and the rest must have been imported. If neolithic settlement is considered as a direct development from mesolithic transhumance then the import of exotic materials is easily explicable. All save one, of the axes, can be considered functional tools; the exception being the 'jadeite' axe discovered near Cauldron Snout. Jadeite axes have been discussed by Coles (1974) in the context of a discovery in the Somerset marshes. The distribution of these axes and the apparently unused condition of the majority suggests that they were not utilitarian objects. The presence of one at Cauldron Snout suggests its loss along a trade route or possibly its votive deposition rather than its use in that particular area. Such a trade route can hardly have been other than an east-west one. A similar conclusion may be drawn from the presence of a flake from a Langdale axe at Birk Rigg on the present Pennine Way. The two flint axes must represent imports though the source of their material

is uncertain, while the group I axe from Bowlees is evidence for long distance trade connections of some kind.

The problems of the neolithic stone axe trade in Britain and its relationship with communications generally have been discussed by Cummins (1974, 1980).

Unfortunately much of the petrological material needed to extend the scope of these studies to the north and west of England has not yet been published so that no accurate conclusions can be drawn from the Teesdale material.

There is no certain example in Upper Teesdale of a Neolithic funerary or ritual monument though there are one or two sites which may well belong to this period.

The first of these is Carr Crags (Fig. 5:5) an outcrop of millstone grit extending for about 1 km. along the 533m. /2000ft. contour. It has been extensively worked during the nineteenth century and probably much earlier, for gateposts, troughs and millstones. At least twenty examples of the latter in various stages of completion can be found along the outcrop and others have obviously been removed. The transport of these, each weighing c. 1.0 tons must have been a difficult task. This working extends along the full length of the outcrop. At the extreme northern end however is a group of rocks which, unlike the rest, are decorated with hemispherical basin-like depressions, most of which have a diameter of between 150mm. and 200mm. While many of those on the horizontal surfaces are much eroded the ones found on vertical and sloping surfaces are generally sharp and clear, as too are examples revealed by removing turf and peat. It is clear that these hollows which occur only at one place in the outcrop and which are found in both vertical and horizontal surfaces must be artificial. They do not belong to any recent industrial process and are best regarded as prehistoric. The rocks on which these basins are engraved are on a fairly steep peat-covered slope facing west. At first sight these rocks appear to be in no particular arrangement but a more careful inspection shows that they have a very definite grouping. The principal feature is a huge tabular block some 7m. x 5m. x 1.5m., the upper surface of which is almost completely covered by

basins, most of them much eroded. This stands just below the false crest of the slope. A group of large recumbent slabs forms a semicircle some 27m. in diameter behind this block. Each slab is engraved with a number of basins. Other similar slabs continue the curve but probably because of later quarrying it is not clear whether they originally formed a horseshoe or a complete circle. Further down the slope a double row of slabs engraved on their inward facing surfaces forms an approach from the west. Two small groups of outliers occur on the crest of the slope at distances of about 50m. and 200m. south of the main group. Each consists of only a few 'basins'. Some slabs are partially covered by peat and turf while it is possible that others are completely covered and so are not visible. Since the outcrop has been quarried some rocks have certainly been damaged and some may have been removed altogether. It is also difficult to be sure whether all the rocks were originally erect or whether they have always been recumbent. All of them are large and some so enormous that it seems unlikely that they could have been moved at all (Fig. 17).

Burl (1976) states that " ... very few (stone) circles in the British Isles are cupmarked, only just over 1% for the 750+ circles outside north-east Scotland ...". (p 163) In the latter area the proportion rises to 21% but even there it is usual for only one or two of the stones to be cupmarked. Burl's gazeteer of sites does not give a single example of a circle consisting of cupmarked stones.

Morris (1977, 1979) does not cite a single example of rocks carved with large 'basins' from Argyll, the Isle of Man or Galloway. In short the writer has been able to find only one reference to any similar site in this country. Beckensall (1974) does however describe two rocks on Old Bewick Hill, Northumberland which have similar markings. One has a line of basins running along a vertical face while the surface of the second is covered with intersecting cups and rings. There is evidence that a stone circle formerly existed here.

It is interesting too to note that while cup and ring marked stones are relatively common in lower Teesdale they

seem to be completely absent from the upper dale. Of the 20 rocks at Carr Crags decorated with over 390 'basins' there is only one example of any other carving and this is simply the joining of two basins by a groove.

It is clear that the site needs much more investigation before its significance can be fully appreciated.

Two other sites deserve mention though neither can be confidently assigned to the neolithic. One, a multi-phase monument occupying a limestone outcrop at Middle Hurth (Fig. 5:8) will be discussed in more detail later. The earliest phase of this site consists of an irregular mound over 50m. long up to 6.0m. wide and only 0.5m. high. Excavation produced a number of flints including microliths, an assemblage which has not yet been fully studied, but no evidence for the function of the mound. Running along the spine of the mound in the centre section was a row of flat stone slabs. It is perhaps justifiable to interpret the mound as a funerary monument possibly a vestigial long barrow and it is interesting to note that an intrusive iron age cremation was discovered near one end. The second site is near Barney Byre (Fig. 5:88) where immediately to the south of the fell wall is a large oval mound. This has not been excavated but it may well be a barrow though whether late neolithic or early bronze age cannot be determined.

CHAPTER IV
The Early Bronze Age

At the time of writing little evidence for the occupation of Upper Teesdale during the early bronze age has been identified. It is odd that no example of a polished shafthole axe has so far been found in the upper dale though several are known from Lower Teesdale. According to Evans et. al. (1962) Dunham considered that Upper Teesdale was very possibly the source of the material used for group XVIII (whinstone) axes which have a wide distribution in Britain. Search among the screes of Holwick, Dineholme and Cronkley Scar for possible working sites has been unsuccessful. Whinstone is a difficult rock to work by chipping and grinding rough-outs would also be a laborious process. A casual inspection of river-bed cobbles shows that examples which, with a minimum of working, could be made into axes, are comparatively common. If this process was in fact followed then the search for chipping floors will be a vain one. Whin boulders and cobbles derived from glacial drift are widely distributed in N.E. England so that while the material of some group XVIII axes may derive from Upper Teesdale their manufacture need not have been connected with that area.

There is however some evidence for early bronze age presence. A single small sherd of red/black pottery was found by the writer on the ground surface among the foundations of a group of large sub-rectangular buildings at White Earth (Fig. 6:41). Though the sherd is worn the marks of a cord impressed lozenge can be seen. It seems probable that the sherd is from a beaker though of which type cannot be decided. (Fig. 19.1).

Much more definitive are the two jet beads in the British Museum, (Nos. 1879: 1720 and 1721) which are described in the catalogue as being "found with many others forming a necklace in a barrow near Holwick in Teesdale in 1867". They have not previously been published. No. 1720 is a flat trapeze shaped spacer bead 37mm. long, 23mm. wide at one end. 15mm. at the other end and 6mm. thick. All

edges and corners are rounded and the surfaces were originally polished though now marred by scratches. It is pierced by three transverse holes each c. 2mm. in diameter though expanded slightly at the mouth. One plane surface is decorated with a lozenge pattern of tiny drilled holes. The bead has been broken at the centre perforation and repaired probably recently. One corner has also been broken. No. 1721 is a broken and slightly larger example of the same type. The remaining piece is 26mm. long, 39mm. wide and 7mm. thick. Again, one surface is decorated with a lozenge pattern of tiny holes though these are more roughly executed. The reverse of this bead is in poor condition with some cracking and flaking (Fig. 18). Spacer-plate necklaces of jet have a largely northern distribution (Ashbee 1960) and have been more often found in Scotland than England though there are examples from Wessex and a recent find from a round barrow in Suffolk (F. de M. & H.L. Vatcher 1976). In N. Yorkshire they are particularly associated with beakers and Yorkshire vase food vessels (Elgee 1930, Megaw & Simpson 1979). There are several examples from Northumberland including an especially fine one from Kyloe (Brewis 1928). Craw (1929) suggested that these jet beads formed the model for Wessex amber spacer-beads and in turn for the motifs on Irish Lunulae. Megaw & Simpson (ibid) suggest that the reverse of this process is more likely and that the decorated jet spacer beads are derivative. In either case they are found at an early stage of the bronze age. The B.M. catalogue entry is not very specific and it has so far not been possible to identify the find spot of these beads. The barrow is reported to have been excavated in 1867 while the beads have a 1871 accession number. A search through the files of local newspapers for 1867-71 has revealed no mention of any excavation though there was some interest in archaeology in Teesdale at this period for in December 1866 The Teesdale Mercury gives an account of a lecture by Canon Greenwell on his barrow digging over a period of eight years. This provoked some desultory correspondence including a letter from Mr. W.R. Bell, vicar of Laithkirk, a keen antiquary whose parish magazines contain a fund of interesting information.

He mentions the finding in the same year, 1867, of 'a fine celt or flint arrowhead on Park End Farm in a field (Fig. 6:24) adjoining the Tees', but has nothing to say about jet beads or a barrow. It may be presumed that he did not know about them and that the barrow was not deliberately excavated but was destroyed in the course of some operation connected with farming or perhaps grouse-shooting - a sport which was fast becoming big business at this time. Whatever the facts it seems unlikely that it will be possible to make a positive identification of the site of the barrow.

The arrowhead mentioned above is in The Bowes Museum 'Mus. No. 1958.1803) with a label in Mr. Bell's hand giving the additional information that it was found by a potato picker. It is quite large, 32mm. long and 30mm. broad, rather roughly made of mottled grey flint with tang and barbs of equal length. Five other barbed and tanged arrowheads are known from Upper Teesdale (Fig. 20), three are in The Bowes Museum (Nos. 1958.1810, 1811, 1812) one in the possession of Mr. J.C. Marsland of Brighouse and the fifth with Mr. K.J. Fairless of Cotherstone. No. 1810 was found in 1877 in a molehill on Harter Fell (Fig. 6:21) and was later given to the museum by Mr. Tarn of Step Ends Farm. It is very large, 51mm. long and 38mm. wide with a broad tang projecting beyond the barbs. The material which is pale grey in colour with a little iron staining on one surface is not flint but may be a kind of chert, though it may possibly be of Lake District stone. No. 1811 is in contrast very small, 20mm. long and 19mm broad, made of a rather bulbous flake of grey-brown flint with traces of cortex remaining. It is broad in proportion to its length, the angle at the point being about 70^{o} rather than the usual 45^{o} - 50^{o} and the tang projects beyond the barbs. The arrowhead was found in 1923 at the foot of Cronkley Scar (Fig. 6:14) by Mr. Nevison of Barnard Castle, who presented it to the museum. The third arrowhead in the museum collection, no. 1872 is the best specimen. It is 27mm. long and 17mm. broad, finely made of semi-translucent grey-brown flint. Again the tang projects slightly beyond the barbs. It was found on Mickle Fell (Fig. 6:20) and given to the

museum by the Strathmore Estates. Closely resembling no. 1811 is the specimen found in August 1978 by Mr. Marsland on Thistle Green (Fig. 6:16) and still in his possession. It was small and broad, 17mm. long and 16mm. wide, made of flint with a dense white patina. The tang projected beyond the barbs but the tops of both tang and barbs seem to have been broken off. The fifth arrowhead was found by Mr. K.J. Fairless on Harter Fell (Fig. 6:43) immediately within a banked and ditched enclosure which occupies the top of a small hill. It is 25mm. long and 20mm. broad of white flint with dark markings. It may well be that it has been made from the cortex of a nodule though possibly the arrowhead has been burnt. The tang projects beyond the barbs and the top of the point is broken off. The association of this arrowhead will be discussed later.

Clark (1963) has pointed out that though barbed and tanged arrowheads are to be found as early as the Solutrean in France they are nevertheless characteristic of the early bronze age in N.W. Europe. Though the number from Upper Teesdale is small - only six - all were found on the south side of the valley and all except one at heights of around 457m./1500ft. or above. With the exception of the unidentified barrow mentioned above no funerary monument or settlement site from the upper dale has been identified as being undoubtedly early bronze age. There is however a site which very probably was of that period, though it no longer exists. The visitor to Upper Teesdale approaching Middleton from the east is immediately aware of a clump of trees making a very prominent knoll overlooking the village and on the south side of the valley. This is known as Kirk Arran, Kirk Cary, Circarrion or some variant of this (Fig. 5:7). The clump of trees is relatively recent and the knoll was formerly the site of a large cairn. Once again the best source of information is the vicar of Laithkirk, Rev. W.R. Bell, whose letter to The Teesdale Mercury of December 26th 1867 in reply to a query from a correspondent, deserves to be quoted at length:-

> " ... alas, the tumulus is no more. It was carted away for fencing the allotments at the division of

> the Commons. ... I have sifted the evidence of eyewitnesses of the 'find' of whom at least three are still living, viz. Mr. William Rainė of Kirk-house, Mr. Thos. Foster of Bowbank and Mr. Charles Raine of Holwick. According to them the 'find' took place about sixty years ago and the facts are these:- in the centre of the inner heap of stones was found a kist-vaen formed of four stones set on edge and covered by a fifth. Inside was an urn of baked clay in which was some carbonaceous matter and fragments of bones. The urn was taken to Lord Strathmore's bailiff and forwarded to Streatlam Castle. Mr. Dent of Streatlam Castle has lately very obligingly sought for the urn but I am sorry to say without finding it. It is however not altogether improbable that it still exists somewhere for it would seem that Lord Strathmore took a very great interest in it at the time and it is likely that he would take care it should be preserved in his own private collection or in some public museum...".

Streatlam Castle itself no longer exists and though the urn may just possibly be one of the many 'unprovenanced' examples in some collection it is unlikely that it will be possible to trace it. The tumulus must have been very large or it would not have been worthwhile to demolish it for building material. Unfortunately I have not been able to find any early illustration which shows it and indeed none may exist. The site was not included by Young (1980) in his list of barrows in Co. Durham because though it is in the modern county it was before the re-organisation of local government in Yorkshire, North Riding. The evidence shows that at Kirk Arran there was a cremation burial within an urn, the latter being placed in a cist and the whole covered by a large cairn. No secondary burial is mentioned. This combination can be paralleled in burial sites from many parts of Britain and is characteristic of the later part of the early bronze age (Ashbee op.cit.). Since the form of the 'urn' from Kirk Arran is not known

it is not possible to be more specific. The nearest comparable site is that at Crawley Edge, Stanhope, in Weardale, where a slab-lined pit beneath a stone cairn contained an urn (Young and Welfare 1978).

From the middle bronze age we have two finds of metal-work from the upper dale: both flanged axes. These are in The Bowes Museum and have been described by Jones (1977). One of the two axes had been previously published (Cowen 1936). This is a flanged axe 175mm. long 63mm. wide across the cutting edge and 39mm. across the lozenge-shaped flanges which rise to a maximum height of 15mm. above the septum which has a rudimentary stop-ridge. The blade expands in a gentle curve to a broad crescentic edge which appears to have been sharpened. The axe is in good condition, retaining its original bronze colour. It was found in 1927 in the Hüdeshope Beck - which joins the Tees at Middleton - by George Surtees, son of the then agent to the Raby Estates. Unfortunately the exact find spot is not recorded. The axe was deposited in The Bowes Museum by Lord Barnard (Mus. No. 1958.1838). The second axe is also of the flanged type but is much smaller: 142mm. long, 49mm. across the edge and 30mm. across the flanges which are less angular than those of the previous example. It has parallel sides which splay out to a crescentic cutting edge. The axe was broken in two pieces when found and was later repaired. It is somewhat corroded with a pale green patina but its general condition is quite good. The axe was found in the peat overburden at Dineholm Quarry (Fig. 6:45) by Mr. T. Nixon of Middleton who kept it for some years before donating it to The Bowes Museum (Mus. No. 1958.1839). The problems of the dating of flanged axes have been considered by Burgess & Miket (1974). Typologically both of the Upper Teesdale examples would fall into their category of short-flanged axes, both characteristic of northern England and Scotland and dating perhaps from the 13th - 11th centuries B.C. It is suggested that in general narrow axes with parallel sides are likely to be later in this span of time than those with splayed sides. In this case axe No. 1958.1839 would possibly date from around the

11th century B.C. while No. 1958.1838 would be slightly earlier. Since both were stray finds with no associations these dates cannot be confirmed.

From the evidence of stray finds it would be expected that the influence of man on the landscape of Upper Teesdale during the bronze age was minimal. There is however other evidence which tells a different story. Previous mention has been made of the pollen analysis carried out on material from several sites. The most westerly of these is Valley Bog. Here " ... after the elm decline there began a period of woodland clearance which is indicated by high Graminae and Plantago Lanceolata levels. Although this has not been dated, a level below (4596 ± 60 bp)$_A$ and another above (2175 ± 45 bp)$_A$ have been dated. Thus assuming a uniform rate of deposition the opening of the tree canopy began some 3,300 years ago ..." (Chambers 1978, 279.)

(SRR 90) (SRR 89)

At Weelhead Moss and other sites now inundated by the Cow Green reservoir a similar picture emerged (Turner et. al. 1973). At Weelhead Moss a level dated by radio-carbon to 3150 ± 100 bp$_A$ marked the beginning of a rise in the proportion of herb pollen, especially grasses, sedges and heather and a corresponding decline in the proportion of tree pollen.

(Gale 2913)

Further down the dale at Dufton Moss an unpublished diagram by R. Squires (1970) shows a secondary elm decline slightly later than 3684 bp$_A$ accompanied by an increase in grasses, heather, sedge and bracken. All three sites seem to provide evidence of quite extensive forest clearance at about the same time - between 3100 and 3500 bp at a period which archaeologically would be the middle bronze age. At all three sites also traces of cereal pollen occur for the first time. Writing of Valley Bog, Chambers suggests that bronze age people used the clearing which they created for the grazing of domestic animals and that the few cereal grains recorded were blown in from more lowland areas. While that explanation would perhaps be sufficient to account for the presence of cereal pollen at a single site it is less convincing when the same feature is found at several sites. Though the quantity of cereal pollen from each site

(Squires, pers. comm.)

is admittedly small it still seems that its presence ought to be regarded as an indicator of actual cultivation. Hicks (1972) has pointed out that both wheat and barley are self-pollinated and release very little pollen into the atmosphere and thus small amounts in pollen diagrams are likely to be significant. It is interesting to note that all three sites are relatively high, Valley Bog at 500m./1750ft., Weelhead Moss 457m./1500ft., and Dufton Moss 386m./1100ft.

Pigott (1978) has pointed out that in Upper Teesdale and the North Pennines generally small changes in altitude have marked effects on the length of the growing season. At 450m. - the height of Weelhead Moss - the length of the growing season is April 18 - October 23. This is barely sufficient for a crop of corn to be grown. An increase in mean temperature of only 0.67^{o} would however add two weeks to the length of the growing season. Since there is some evidence of slightly higher temperatures during the bronze age it would be possible for corn to be grown on a small scale. An important factor in determining temperature is shelter or the lack of it. The present upper limit of woodland in Teesdale in the absence of man and his domestic animals would be 600m. though at this altitude the trees would be little more than low compact bushes. At 450m. it is likely that there would be relatively open woodland which would provide an ideal habitat for grazing animals as well as shelter for small cereal plots. There is unfortunately, no direct evidence for pastoralism: no animal bone has survived, or at any rate none has so far been discovered. It can however be inferred from other evidence.

The most significant evidence for the occupation of Upper Teesdale during the early and middle bronze age has been provided by the excavation in 1977 of the settlement site at Bracken Rigg (Fig. 5:9) (Coggins and Fairless, (1983). Bracken Rigg is a morainic ridge on the south bank of the Tees about 1 km. downstream from Cronkley Bridge. The crest of the ridge which reaches a height of 381m./1250ft. is occupied by an irregular L-shaped enclosure of about 0.7 hectares within which stands the foundation of

a single large circular house (Fig. 21). The low, wide wall of the enclosure which is not a continuous curve but a series of short straight sections, is made of whinstone boulders and was probably topped by a hedge or palisade. The house has an interior diameter of 8 - 9 metres while the walling of whin boulders was some 2.0m. thick, standing about 0.5m. high. The narrow entrance faced south. The roof had been supported by large posts set in the shape of an irregular hexagon about midway between the centre and the wall (Fig. 22). It is suggested that the rafters rested on the ground surface outside the walling and that most of the weight of the roof, which was probably of heather, was supported on a ring-beam joining the hexagon of posts. Three superimposed hearths were found near the centre. Finds from the site included sherds from at least five vessels of similar fabric but different types. Unfortunately there was sufficient material from only one of these to allow any kind of reconstruction. This was a bucket urn of a very coarse, heavily gritted fabric for which a date in the mid/late second millennium B.C. would be appropriate though the simplicity of the form makes dating difficult. The excavation produced 109 flints which have been studied by R. Young. The proportion of tools and used flakes was quite high reflecting perhaps the difficulty of obtaining flint so far from a source. Raw flint was being brought to the site however, probably from the N.E. coast. Interestingly there was no evidence that chert was being used as a substitute for flint though chert is readily available in the valley of the river Greta, less than twenty miles away. The flint assemblage also contained elements which would appear typologically to be Mesolithic and while these may be residual it is also possible that the technique of microlithic flint working persisted into the bronze age (Clark 1975). No quern stones were found and the samples of soil taken from the occupation layer within the house showed that it was unfortunately not suitable for the preservation of organic remains. There is thus no direct evidence for either pastoral or arable farming. The nearest sites for which pollen diagrams are

available show, as noted above, evidence of cereal growing c. 3500 - 3100 bp and it would seem reasonable to assume that this was also going on at Bracken Rigg. The large enclosure would not have been suitable for ploughing because of the number of whinstone boulders but small 'garden plots' would have been quite practicable. Only a short distance to the south of the site is an area with clearance cairns which may have been used for cereal growing though there is no direct evidence to connect it with Bracken Rigg. The enclosure would however have been suitable for the many operations involved in livestock farming where it is necessary to confine animals for short or long periods - calving, weaning, milking, castration, culling, etc. It seems on balance that Bracken Rigg was inhabited throughout the year, and that the economy of its inhabitants was based on a combination of stock-rearing, hunting and arable farming. How long the site remained in occupation is difficult to determine but since there are three hearths it must have been several years, though, since there is no sure evidence for the replacement of timbers, it was possibly no more than one or two generations.

Charcoal from a posthole of the site gave a radio-carbon date of 3180 ± 60 bp (HAR 2414). Bracken Rigg is up to the present the only certain bronze age site known in Upper Teesdale and one of the few from the north of England. It also provides one of the very few flint and pottery assemblages from this period dated by radio-carbon and is therefore of some importance in bronze age studies. It is worth considering whether the site and the finds from it possess any characteristics which may help to identify other sites as being of the same period. Morphological characteristics are not always helpful here particularly as it is unwise to transfer them from one area to another. The size of the single circular house is an important feature: it has sometimes been assumed that circular houses with large diameters are likely to be iron age rather than earlier. Though the evidence from Bracken Rigg shows that this is not always true, the converse cannot be maintained. The method of constructing the house walling by a simple dump of stones

without any regular coursing may well be diagnostic of a bronze age date but since this feature only becomes apparent after excavation it does not help with the assignation of sites by field survey only. The method of constructing the boundary wall of the enclosure in short lengths joining each other at an angle and often with a node or rudimentary cairn at the joints offers more possibility for field identification. This feature appears at sites of similar date in the Cheviots (Burgess pers. comm.). Height above sea-level is likely to be a significant factor also; Bracken Rigg lies at 387m./1250ft., and if similar sites shared the same type of economy then one would expect to find them in a similar situation. It is then possible that an irregular curvilinear enclosure containing one or perhaps more circular houses of large diameter and lying at a height of about 387m. will date from the final phase of the early bronze age. The most likely candidates are shown on map (Fig. 5) and details of individual sites are given in the gazeteer. They are Lingy Holm (5:10), Holmwath (5:11), Bleabeck Washfold (5:12), Wool Ingles (5:13), Keld Smithy (5:14), Stone Houses (5:15), Crossthwaite Common Sheepfold (5:16) and Buck Riggs (5:17).

All these sites lie at heights of between 335m./1100ft. and 457m./1500ft. If the identification of these is correct then it can be seen that they lie at intervals of 1.5 - 2.0 km. from each other and that all are on the south side of the Teesdale Fault. It is difficult to avoid the conclusion that by the end of the early bronze age the land to the south of the Teesdale Fault was organized into a series of large farming units. Additional evidence for this is provided by the fact that several of the sites are in association with long contouring field boundaries possibly used for the regulation of grazing rights. Since none of the sites mentioned has been excavated and none has produced stray finds no comparison with Bracken Rigg is possible. As noted above, the flint assemblage from Bracken Rigg contained elements which appear typologically mesolithic. Their association with a radio-carbon date in the mid second millennium suggests that similar undated assemblages

may also belong to the same period, though of course it cannot confirm that they do so. No example of pottery similar to that from Bracken Rigg has been found in the upper dale. There is however an interesting and important parallel with a find from just outside the area. In 1967 Mr. Raine, the postmaster at Egglestone, discovered after a flood a bucket urn in the north bank of the river Tees between Middleton and Egglestone. This was excavated by Mr. M. Wheeler, the Schools Museums Officer for Co. Durham and deposited in The Bowes Museum (Museum No. 1975.17). The urn which had contained a cremation burial is almost identical in fabric and shape to that represented by the main group of sherds from Bracken Rigg. The urn has been described by A. Gibson who considered that it probably belonged to a late bronze age tradition (Gibson 1978, 1980). The radio-carbon date from Bracken Rigg shows that it may be considerably earlier although it is not necessarily so. Such simple bucket urns form a link between the earlier and the late bronze age.

A further link between the two may be connected with the barbed and tanged arrowhead found by Mr. Fairless on Harter Fell. This was lying on soil from a rabbit burrow which had been made in the bank of a ditched and banked sub-rectangular enclosure some 50m. x 40m. occupying the top of a small knoll at a height of about 381m./1250ft. and only a few hundred metres west of the site of Kirk Arran discussed above (Fig. 5:19). The situation is certainly a defensive one and it seems at least possible that here is a tiny hill fort associated with the funerary cairn of Kirk Arran and perhaps with the undefended farming settlements of Crossthwaite Common. The banked and ditched enclosure is overlain by a much larger palisaded enclosure characteristic of the late bronze age and iron age.

CHAPTER V
The Late Prehistoric

It seems appropriate at this point to modify the conventional three-age system used in previous chapters and to follow Challis and Harding (1975) in considering the late bronze and pre-Roman iron age together. It is clear that many of the features once thought to be characteristic of the iron-age: hillforts, palisades, 'Celtic' fields for example - are to be found also in the late bronze age. Megaw and Simpson (1979) writing of the south of England suggest that "... there are several settlement sites to which the term 'later prehistoric' would seem applicable, eschewing the old Three Ages system entirely ...". (p.271) This is even more true of the north.

The material remains of the late prehistoric settlement in Upper Teesdale are even scarcer than for earlier periods. There is for example only one example of late bronze age metalwork, the spearhead published by Jones (1977) (but given an incorrect provenance). It is of the plain socketed pegged type with a narrow leaf-shaped blade and tubular mid rib. 300mm. long, 50mm. wide at its broadest point and weighing 275gms. The spearhead is in good condition with a dusty green patina and only one or two patches of corrosion and adhesions. The bronze peg is still in place and part of the wooden shaft remains in the socket. A sample of the wood has been sent to the Oxford Research Laboratory for radio-carbon dating but a result is not yet available. The spearhead is of a type common in the latest stage of the bronze age and comparable examples occur in the well known assemblage from Heathery Burn cave in Weardale (Greenwell 1894) and the recently discovered hoard from Gilmonby near Bowes (Burgess and Coggins 1981). It was equated by Jones with an example found in the churchyard at Middleton in Teesdale and presented to The Bowes Museum in 1936. This identification was however incorrect. The spearhead was found in 1968 in Jack Scar Cave (NY 948 275) near Middleton and is now on loan to The Bowes Museum (Museum no. 2/2).

Jack Scar Cave is in the east bank of the Hudeshope Beck which at this point runs through a narrow limestone gorge. The present entrance to the cave is some 3.0m. above the level of the beck where a hole less than 1.0m. high gives access to a long narrow passage leading to a small cave system which has been thoroughly explored by generations of cavers. No other finds have been reported. The quantity of fallen rock in the bed of the beck suggests that in former times there was a platform with rock overhang and that the present cave mouth was at the rear of this. That the spearhead was found on the floor of a frequently visited cave suggests it may have become dislodged from a hiding-place in a crevice. One other bronze find from the Hudeshope Beck area, an axe, has been described in Chapter IV. Unfortunately its exact findspot is not known but since it is typologically earlier than the spearhead it is probably not from the same source.

There is only one other stray find which can be attributed to the later prehistoric. This is the upper stone of a bun quern which is at present in the garden of 'Fairy Dell View' at Newbiggin. It is almost hemispherical with a diameter of 340mm. and height of 115mm. It has a hopper with a diameter of 130mm. and two side holes for handles at right-angles to each other. One near the base is 25mm. in diameter and 40mm. deep while the other halfway up the stone is 30mm. in diameter and 45mm. deep. The quern is made of a coarse sandstone and is in good condition. It was found by a former resident of the house, Mr. W. Lee, probably during the 1930's. Unfortunately the records of the many discoveries made by Mr. Lee, who took a keen interest in antiquarian matters, were destroyed on his death c. 1943 and so it is not possible to give a provenance for the quern.

The reasons for the paucity of stray finds for this period are not easy to establish but it is unlikely that they reflect absence of settlement. It has often been pointed out that the absence of metal objects does not mean that they were not being used, on the contrary it is probably an indication of their value and in the case of

bronzes, of the fact that they were being re-cycled when worn out. The apparent absence of pottery, may however be real. The excavation of the site of Forcegarth Pasture North (described in Chapter VI) produced very little pottery, in contrast to the relative profusion from similar lowland sites. From a waterlogged part of the site however a large quantity of birch bark fragments was recovered. Some of these were perforated as if for sewing together and probably represented the remains of one or more large vessels. Artefacts of bark, wood, leather and other organic materials must have played a major part in pre-historic economy especially in the uplands and since they rarely survive are now grossly under-represented in the archaeological record.

An interesting find of two fragments of turned shale which may well belong to the period was made near Simy Folds in 1981. An area immediately south of Simy Folds 1 is extensively disturbed by rabbit burrowing. From the surface of soil excavated from one of the burrows the writer picked up two pieces of jet or shale which after being cleaned could be seen to have been turned. The larger is a well finished fragment from a hollow object with an interior diameter of c. 700mm. while the smaller is curved in both dimensions. Since it is highly improbable that fragments from two separate shale vessels would be found at the same spot the most likely reconstruction is of a fairly large stemmed goblet. Vases, bowls and tazza of shale are known from the late pre-Roman iron age in Bedfordshire and Essex where they are characteristic of rich burials and are said to derive their forms from Belgic pottery. (Kennett 1977) Shale and jet are both extensively worked in Roman Britain (Lawson 1976) but stemmed or footed vessels seem to be rare. Newall (1927-9) listed nine examples of shale cups from Wessex but they do occur elsewhere. Newbiggin (1941) described two examples from Northumberland, one a shallow miniature cup with a pedestal and the other a fragment of a larger vessel. (A broken and unfinished example of a turned goblet was found in 1979 in Chester-le-Street and is now in The Bowes Museum. It

was unfortunately quite unstratified, being found in a garden and hence is not dated). The find from Simy Folds is then one of a very few examples from the north of England and is therefore important.

There is environmental evidence for settlement in the late prehistoric and this must be linked with the general problems of environmental change and climatic deterioration which have provoked much recent discussion. Evans (1975) suggests that " ... we must see climatic deterioration as a gradual process covering the first half of the first millennium b.c. and in terms of calendar years extending well into the second millennium ...". Whatever this may mean in terms of settlement patterns there can be little doubt that after the middle of the first millennium b.c. forest clearance almost everywhere gathered momentum and became more widespread (Turner 1970). In Teesdale this feature has been illustrated at several sites. At Red Sike Moss - now beneath Cow Green reservoir - the spread of grassland was dated to 2570±80 bp (Turner 1978) while at Valley Bog "the major phase of deforestation is seen at the start of sub zone VB IVb. Two levels dated at 2212±55 bp and 2175±45 bp clearly place this ..... in the later iron age ....." (Chambers 1978,280) The unpublished diagrams from Fox Earth Gill and Dufton Moss show evidence of forest clearance at levels which are probably equivalent to Red Sike and Valley Bog but no radio-carbon dates are available for these levels. At Simy Folds zone G shows a dramatic increase in grasses, sedges, heather and herbs, especially plantain, with a corresponding decrease in tree pollen immediately above a layer of alder wood radio carbon dated to 2440±80 bp (Donaldson forthcoming). Unfortunately this date cannot be accurately related to any particular phase of the alder woodland but it is sufficiently close to the results from other sites to make it probable that the same pattern was operating and that the increase in grassland began in the iron age. Whether this diminution of the forest can be ascribed to man and his stock or whether it was a result of deteriorating climatic conditions is not certain. Probably both were involved: wetter and cooler conditions

would make forest regeneration more difficult and clearances would tend to be more permanent. If the changes are to be ascribed even partly to human interference then we must ask where the settlement sites of the late prehistoric are to be found. None has so far been excavated and without excavation positive identification cannot be made. The dangers of attributing sites to particular periods on the basis of morphology alone are familiar. Nevertheless it is possible to find positive evidence for occupation and also to suggest sites as being probably late prehistoric.

Two excavated sites have produced unexpected evidence relating to occupation towards the end of the first millennium b.c. At Middle Hurth a long low irregular mound was overlain by a circular feature with bank and ditch. The mound produced a typically early assemblage of flints (Young pers. comm.). Towards the eastern end of this mound and partly overlaid by the circular earthen bank were the remains of a slighted stone cairn about 2.0m. in diameter. At the centre of this cairn was a deposit of dark soil containing a few fragments of calcined bone and a little charcoal. A radio-carbon determination of this material gave a date of 2210±80 bp (HAR 2918). At one of two other places on the surface of the mound similar dark deposits were noticed. One of these was surrounded by a placing of stones, probably all that was left of a dismantled cairn. It too yielded tiny fragments of calcined bone and charcoal but in insufficient quantity for radio-carbon dating. There were no finds except a tiny amount of charcoal from the other areas of dark soil but they too are likely to have been the sites of cremations. It seems that an early mound of unknown purpose was re-used for one or several late prehistoric burials. Whimster (1977) has stressed the comparative rarity of recognised iron age burials from many parts of Britain and suggested that though inhumation appears to be the dominant practice " ... it may be necessary to argue the existence of hitherto unrecognized disposal types ...". Un-urned cremation burials leave little trace, unless, as at Middle Hurth, covered by a cairn. No settlement site identifiable to this period can

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be seen in the vicinity of Middle Hurth but there is a cave site close by which may well be connected and which will be discussed later.

At Simy Folds (Coggins et.al. forthcoming) four sites together with an extensive field system occupy a limestone bench on the south side of the river. Three of the sites consist of farmsteads with two or three rectangular houses and have produced radio-carbon 'dates' in the mid eighth century a.d. The fourth site has not so far been excavated but field walking in the vicinity has produced several flints and a few body sherds of coarse pottery which would fit easily into a late prehistoric context. No pottery was found in excavations of the three early mediaeval sites but a single sherd of similar ware was recovered from beneath the foundations of the gable wall of one of them. At a second of these buildings where there were only a few centimetres of soil and therefore no real stratigraphy, charcoal from a hearth cut into the bedrock gave a radio-carbon date of 2330±100bp(HAR 4035). Simy Folds can thus perhaps be best interpreted as being a late prehistoric settlement abandoned for a thousand years and re-settled in the early mediaeval period. Unfortunately it has not so far been possible to determine which of the field boundaries are contemporary with the earlier occupation. It is interesting that the only radio-carbon date so far available from the nearby pollen site agrees with the dating of the hearth but unfortunate that it cannot be related to any specific human activity. Other unexcavated sites must now be considered to see if there exist examples which may be presumed to belong to the later prehistoric. Megaw and Simpson (op.cit.) have discussed the evidence for late bronze age occupation of caves. The best-known of these sites in the North - Heathery Burn - lies only a few miles away from Upper Teesdale in the neighbouring valley of Weardale. Jack Scar cave has already been mentioned as a possible habitation site and a brief reference made to a cave near Middle Hurth. This cave system to the north east of Langdon Beck (NY867 311-869 311) is variously known as the Teesdale Cave, Mawkins and Mocking Hurth. It seems probable

that the latter name which has only recently become current is a transcription of Mawkins which itself is a variant of 'Malkins'. 'Malkin' as a synonym for 'witch' occurs as Shakespeare's "Greymalkin" while the connection in folk-lore between caves and witches and fairies is too well-known to need further comment. The cave was explored by J. Backhouse and his father during 1878-1888 and was later reported by the former (Backhouse 1896). Most of the area of the cave which has been explored by the Backhouses was later destroyed by quarrying. In 1967-71 C. Sims re-examined the material which had been recovered and investigated a further small portion of the cave not previously explored (Sims 1971). Backhouse's report mentions the finding of "... a vast quantity of mammalian and other animal remains ..." including "... a series of charred bones of sheep ..." and a decapitated human skeleton together with " ...pieces of bone which may or may not have been intended or used as weapons ...". He concludes that "... it is useless to even guess at the period at which the Cave Dwellers lived and died here but from their positions when found this period must have been exceedingly remote and it is impossible in contemplating what is left to us of that age, to forget that the development of the world we live in must have been the gradual work of more centuries than we have any conception of ...". There can be no doubt that Backhouse was an exceptionally able botanist, zoologist and geologist and his conclusions are surprisingly modern. The material from the excavations was deposited in the Yorkshire Museum where most of it still remains. The list of animal species represented is a long one and is given in full by Simms. Game-birds, deer and rodents are the most common though domestic animals are also present. Wild pig bones point to the former presence of deciduous forest while capercaillie and long-eared owl suggest coniferous forest also. The cave is likely to have been in use by animals at least over a long period and since there is no stratigraphy it is impossible to say which species were contemporary. The small remaining section of deposit excavated by Sims produced a wolf cranium containing silt which yielded pollen. This was examined

(pp 40-41)

(pp 43-44)

by J. Turner who regarded it as a typical zone VIII assemblage. She suggested that the local environment included woodland with oak, birch, alder and hazel, together with a considerable amount of grassland with some cereal cultivation. The cereal pollen present included that of oats and for that reason a date in the iron age or later was proposed. No material from the cave has been radio-carbon dated and no other dating evidence either relative or absolute is available. The human skeleton discovered by Backhouse has not been fully examined since its discovery when it was reported on by Professor Boyd Dawkins. Backhouse says "The skull is of small build and conspicuously narrow with certain longitudinal grooves running along either side of the frontal bone towards the outer edge of the eye sockets. By Professor Dawkins it is looked upon as the skull of a Cave Dweller, probably a woman, but of the cause of the above mentioned marks the learned scientist seems to be doubtful ... this ancient worthy's head had for some unaccountable reason become separated from the trunk when found and was jammed into a narrow fissure a few feet away from the other bones ...". It is not clear whether Backhouse thought this separation to be deliberate or accidental. The importance of the cult of the head among the Celts has been dealt with by Ross (1967) who mentions particularly the regular association of the human head with springs and wells. It is perhaps significant that a spring issues from the base of the lime-stone at the present entrance to the cave but in the absence of a full report on the skeleton it would be unwise to draw any firm conclusions. The 'bone instruments' mentioned by Backhouse could not be found by Sims. Though the animal remains are not those of a single period it seems reasonable to assume that much of the material does represent a period of use at some time probably during the late prehistoric. Whether it was ever a habitation site is doubtful and since quarrying has removed the area of the former cave mouth it will probably never be possible to decide the question. The proximity of the site to Middle Hurth with the remains of a cremation dated to the

mid-third century b.c. makes it probable that the two sites were contemporary. The only environmental evidence available for Middle Hurth relates to a period some 800 years later and while it cannot be directly compared with that from the cave it is nevertheless significant that it presents a picture of an area with little woodland dominated by heather and grass (Donaldson pers.comm.). For further evidence of late prehistoric settlement we must turn to sites whose morphology alone suggest that they belong to this period. While this is an unsatisfactory procedure it is one which must be attempted. A recently discovered site on the eastern spur of Harter Fell (NY 936 237) provides the only example so far recognized in Upper Teesdale of what is probably a palisaded hill-top settlement. Challis and Harding (op.cit.) use the term 'stockaded camp' for such a site and suggest a pre-fifth century b.c. date for these. The Harter Fell site consists of an irregular oval some 200m. long and 90m. broad at its widest point. It occupies the summits of two small knolls and the saddle between them. At the northern end it overlies a much smaller banked and ditched sub-rectangular enclosure about 45m. square (Fig. 5:19, Fig. 23).

To the east it overlooks the former burial cairn of Kirk Arran. From the summits of the two knolls the ground falls steeply to the N.N.W. and S.E. and though there is higher ground to the west the site has a good defensive position. Across the saddle a broad low bank separates two hollows each with several possible house positions. The perimeter of the site is marked by a slight ditch and inward bank and though these have not been tested by excavation it seems justifiable to interpret the ditch as a palisade trench. The Harter Fell site is quite large (almost two hectares), much larger for example than Staple Howe (Brewster 1963) and much too large to be regarded as a homestead. It is in fact the type of site which may have been the precursors of hill forts and as such fits neatly into the large gap in distribution maps between the East Riding and Northumberland, (Jobey 1966).

Without, however, at least a trial excavation to

confirm its defences further speculation on its role or status is likely to be misleading. A somewhat similar site has recently been discovered only a few miles south of Harter Fell at Briar Dykes, Baldersdale (NY 947 197) where the summit of a hill is enclosed by a slight ditch with inner bank (Fairless pers. comm.). Since it lies outside the area of Upper Teesdale with which this paper is concerned a fuller discussion is not appropriate here.

Rectilinear enclosures of the type found in lowland Durham and Northumberland e.g. West Brandon (Jobey 1962) do not appear to be present in Upper Teesdale. Most of the Teesdale sites, whether enclosed or not, have the foundations of circular stone-built houses. The problems of assigning these to a particular period on the basis of field survey alone are virtually insoluble, especially since not two sites seem to present the same features. The excavations at Bracken Rigg (Cha. IV) and Forcegarth Pasture (Ch. IV) have shown that circular houses with stone foundations were being built from 1200 B.C. to 250 A.D. Techniques of construction certainly differed but since these only become apparent on excavation they cannot be used to distinguish sites before excavation. The presence or absence of enclosure walls does not at present seem to be significant so far as period is concerned. One feature which might possibly be used to differentiate late prehistoric sites is the mixture of circular and rectangular buildings on one site. Since rectangular buildings are known in late prehistoric contexts on a number of sites (Challis and Harding op.cit. 149-152, Megaw and Simpson op.cit. 381) and since they are not present on the early bronze age or Romano-British sites excavated in Upper Teesdale it is possible that this might be a diagnostic feature. Though the theory has not been tested by excavation it may be worth examining a little more closely.

At Pasture Foot (Fig. 5:20, Fig. 24) an alluvial flat on the south side of the Tees is occupied by several sites. The area is bounded by the Tees on the north, by the steep slope of Whiteholm Bank Scar on the south and on the east and west respectively by Blea Beck and Dry Beck. The most

extensive of the sites was only recently revealed by heather burning in the Spring of 1977. Recognition of structures is made difficult because the whole area is thickly strewn with whinstone boulders. Fragments of a probable curvilinear enclosure wall can be distinguished. At the western end of the site five or perhaps six circular buildings with internal diameters of about 4.0m. and one sub-rectangular one of a similar size cluster around a large circular foundation about 10.0m. in diameter. About 35m. to the east of this group is a large rectangular building 12.0m. x 3.0m. internally and immediately to the east of this another small circular foundation. All are of massive whinstone boulders. It is possible that other structures exist in the area of heather yet unburnt and also that air photography might detect patterns of yet others among the apparent confusion of boulders. No stray finds have been recorded and there is no dating evidence. There does not seem to be an associated field system though a cairnfield is to be found a short distance to the west on the west bank of Dry Beck.

Near Winch Bridge (Fig. 5:21, Fig. 25) is a rather complex settlement. Within a curvilinear enclosure are the foundations of two circular buildings 10m. and 5m. in diameter attached to the perimeter wall and a third about 8m. in diameter near the entrance. Outside the enclosure about 35m. distant is a single circular building about 8m. in diameter to which is attached a rectangular foundation about 8m. x 5m. Three long narrow fields and one square one can also be distinguished. It is interesting to note that the fields occupy the best of the available land while the settlement is among rock outcrops. Once again no dating evidence is available and while it is possible that the site is a Romano-British one it may well be earlier.

A third possible site in this category is at Carley Green but here the foundations have been badly robbed for material during the period of the building of the allotment walls in the early nineteenth century. It is difficult to be confident of the shape of the remaining structures but these appear to be several circular and a

single rectangular foundation.

The discovery of flints and sherds of probably late prehistoric pottery at Simy Folds has been mentioned above. None of the site there falls into the category being discussed but the possibility must be considered of the existence there of a settlement with timber buildings, which would leave no trace on the surface. The discovery of a single posthole beneath the early mediaeval wall helps to support the supposition.

The settlement sites described above vary considerably in size but all are larger than a single farmstead. Miles (1981) summarises a model for settlement changes during the iron age in the Thames Valley which contrasts settlements of greater than extended family size on the higher ground during the middle iron age with single enclosed farmsteads on the gravel terraces in the late iron age. The Thames valley is not the Tees valley but the contrast between relatively large settlements and individual farmsteads exists in Teesdale, though lack of dating evidence means that they cannot be differentiated in time.

An example of a single farmstead is one at the east end of Crossthwaite Common (Fig. 5:23, Fig. 48). It consists of a roughly circular embanked enclosure with an internal diameter of 20m. to which are attached the foundations of a two-roomed building with an entrance from the enclosure. This is a rather amorphous structure because of tumbled stone from its thick walling and it is partly concealed by dense bracken but the two rooms appear to be subcircular and about 5.0m. in diameter. Somewhat similar sites can be found at several places in the upper dale but the Crossthwaite Common example is interesting in that it lies close to a group of 'Celtic' fields extending over an area of at least four hectares (centred on NY 934 248) on a fairly steep north facing slope. Though it seems probable that the farmstead is directly related to the field system this is by no means certain. Also close to the site is an impressive group of large cairns and irregular enclosures on Burnt Scar (Fig. 5:88) though a direct relationship with these seems less likely.

A group of 'Celtic' fields of similar size can be found also on a north-facing slope to the north east of Forcegarth Farm (NY 879 288), a short distance from the Romano-British sites of Forcegarth Pasture North and South. Until one or more of these apparent single farmsteads has been excavated the comparison with the model suggested by Miles from the Thames valley cannot be carried further.

One significant fact does emerge from a study of the sites and finds given above: all are relatively high. Valley Bog with its pollen evidence for decreasing woodland in the late iron age is at 549m./ 2010ft. ; Red Sike Moss pollen site, the Teesdale Cave and Middle Hurth are all around the 457m./ 1500ft. contour; Harter Fell palisaded site, Simy Folds and Carley Green lie at about 380m./ 1250ft. ; Pasture Foot settlement is around 330m./ 1100ft. as is the field system on Crossthwaite Common, while Winch Bridge is the only 'lowland' site at about 274m./ 900ft.

Lamb (1981) considers that " ... in the Pennines the high-level places ... which had been occupied with forts and settlements ... were abandoned by or during the last millennium BC ..." because of " ... a sharp decline of the prevailing temperature level and increased storminess ...". The evidence from Upper Teesdale rehearsed above certainly does not seem to support this contention though of course it can not be used to prove that climatic deterioration did not take place.

It is possible that there was a change during this period and that higher sites which had previously been permanently occupied now reverted to summer use only. There is however, no archaeological evidence for this and it does not seem likely. While altitude is an important factor in determining settlement it is by no means decisive. Factors such as aspect, shelter and soil type are also important as are a variety of social and political conditions which leave no archaeological trace. Teesdale Cave, Middle Hurth, Simy Folds and Carley Green all occupy limestone outcrops which would be more fertile than the surrounding acid soils, while Pasture Foot and Winch Bridge would be quite sheltered.

There is however another possible reason for the continuance of settlement at relatively great altitudes in Upper Teesdale. The area has deposits of iron which were certainly worked in Roman times and may well have been used much earlier. In the eighteenth and nineteenth centuries AD, lead mining and farming complemented each other and led to farms being established at heights of up to 500m./ 2000ft. Perhaps iron working played a similar part in the last centuries BC.

This hypothesis will be considered more fully in a later chapter.

CHAPTER VI
The Roman Period

The historical evidence for the impact of Rome on the British needs no rehearsal, though the archaeological evidence for that impact is much more elusive.

Roberts (1978) has suggested that " ... Upper Teesdale must be seen as a relatively remote hill area, the haunt of native farmers, pastoralists and huntsmen, not free of the (pp 144-5) Roman yoke but rarely accepting it wholly ...". While it is true that the upper dale can provide no direct evidence for a Roman presence, the existence of forts at Binchester, Bowes, Greta Bridge and Piercebridge means that there must have been contacts of one sort or another between the army and the native population. What form they took and whether they can be detected in the archaeological record is a different matter. Nor is it necessary where change can be detected to ascribe this always to the influence of Rome. As with earlier periods the number of stray finds which can be assigned definitely to the first four centuries AD is small. There is for example only one group of Roman coins, found near High Force (Fig 6:48) in the nineteenth century. The first published note of the discovery is by W.R. Bell (1807) who wrote "... 1844 April 18. A great quantity of Roman copper coins of the Emperor Constantine the Great and Maximine ... and a spearhead so much corroded that it could not be removed, found in the heap of fallen earth and stones lying at the base of the crag in the wood below High Force Inn opposite a point in the north bank of the Tees about 400 paces above Holwick Head Bridge ...". Backhouse (1896) who had discussed the find with Bell repeated his account adding that " ... an article something like a horseshoe ... " was also found and that the find was (p47) "in a small quarry". A brief note on the find was later published by Taylor and Collingwood (1929).

The O.S. card No. NY 82 NE 5 refers to the find but gives a grid reference of NY 887 283 which is obviously incorrect because it does not coincide with the earlier description. It probably ought to read 'NY 888 284'

which is in fact the site of an old quarry.

The coins were presented to The Bowes Museum by Miss Susan Helmer (Mus. nos. 1958:1566-1578). Their exact number is not certain: Bell said 'a great quantity', Backhouse 'a considerable number', Taylor and Collingwood speak of twelve, while the Museum accessioned thirteen. All but one of these are of Constantine I, the exception being a coin of Maximinius II and all therefore date to the first part of the fourth century AD, though of course their date of deposition may be later than this. They have recently been re-examined by Michael Sekulla of the University of Durham.

No further details of the find are available and it is impossible to decide whether the hoard represents an actual Roman presence in Upper Teesdale. The object 'something like a horseshoe' cannot be positively identified though it may possibly have been an arm-purse. Unfortunately it has not been possible to be certain of the circumstances of the deposition of the hoard in The Bowes Museum. A group of coins was donated in 1915 by the 'sister of the late Rev. Helmer' (rector of Romaldkirk in the mid nineteenth century) and it is likely that the hoard was among these.

One other find of metalwork almost certainly dates from this period. Again it is first mentioned by Rev. Bell (op. cit.) who wrote: "... 1857 an ancient bronze boss of a shield found at White Force (Fig. 6:49). It is now preserved in the museum of the Rev. Canon Greenwell at Durham, who says that it is formed rather rudely and is apparently a home-made copy of a Roman boss to which it is similar in shape ...". This boss is now in the British Museum (Mus. no. 83.7-5.105). It consists of a single sheet of bronze about 1.5mm thick at the rim but very thin at the apex of the umbo which seems to have been originally hemi-spherical or slightly conical but is now damaged and out of shape with a section of metal missing. Its dimensions are: overall diameter 200mm, diameter of umbo 110mm, height 70mm. There are four rivet holes each c. 5mm in diameter equidistant from each other and placed centrally in the flange. There are also two small oval holes, possibly

for nails, close to the inner edge of the flange. Two small cracks are present in the rim but the surviving metal is in good condition without corrosion (Fig. 26). It is difficult to see why Greenwell regarded the boss as a copy and as being 'rather rudely' formed, for the workmanship appears good. It is similar in size and shape to the recently discovered shield boss from Binchester (Ferris and Jones forthcoming) though the latter, like most Roman bosses is of iron, but unusually has no rivet holes. Iron-age and Roman bosses have been discussed by Breeze (1976) and Buckland (1978). Breeze suggests that domed shield bosses were probably a Roman introduction and Buckland considers that examples with four equally spaced rivet holes are almost certainly Roman. Most of the examples discussed by both authors are of iron, a more practical material than the thin sheet-bronze of the White Force example which would afford minimal protection and would be decorative rather than useful. Possibly it is to be considered as an item of parade armour. The circumstances of the find at White Force are not recorded though it seems likely that this was during lead mining operations. White Force is a waterfall on a tributary flowing into the Tees below Cronkley Bridge. Just downstream from the fall on the south bank of the beck is a drift mine at NY 85 26 2808. This reference is the same as that quoted by the O.S. card for the find of the shield boss but whether there was any evidence for this attribution or whether it was an assumption is not clear. There is no other trace of Roman presence in the area and it may be that the bronze boss represents an item of loot.

No other stray finds of Roman manufacture are recorded from the upper dale though there are one or two objects which probably belong to the period of the Roman occupation. In March 1937 the then Lord Barnard presented to The Bowes Museum 'a disc quern dug up at Forcegarth close to the river at the time of opening quarries, 1934'. It was given the number 6:37. In June of the same year Lord Barnard, through his agent Mr. E.C. Surtees, deposited in the Museum 'upper and lower quernstones, disc shaped found in Upper Teesdale near quarry worked by Mr. Hodsman in 1936'.

The latter date is erased and replaced by '1932'. These were given the number 67:37. No other description or dimensions of either find was given. Probably the first of these is to be identified wiht the lower stone of a disc quern in the Museum though it bears no number. This is of quite fine sandstone, 540mm in diameter, 80mm thick in the centre and 70mm at the edge. The upper, grinding, surface is quite smooth and little worn and the stone is undamaged. The quarry referred to in the accession book will have been at Dineholm which opened in 1934 and is still in operation. (Fig. 6:54). Though the exact findspot is unknown it must be quite close to the R/B settlement of Forcegarth Pasture South. No trace of the second pair of stones can now be found in the Museum and there is no record of their disposal. Again the accession book does not give the exact findspot though the O.S. record card (NY 82 NE 2) gives a grid reference of NY 8769 2899 on the authority of Mr. T. Wake, Curator of The Bowes Museum at the time of the find. A report in the Teesdale Mercury of 23 June 1937 mentions the find and adds " ... it is unusual to find the upper and lower stones together. They were used to grind corn ... and consisted of flat stones of millstone grit and lava from Andanach on the Rhine ...". Whether the latter statement is a generalisation or whether it relates specifically to this find cannot now be determined. The quarry referred to in this case is now disused High Force Quarry and it seems that a R/B site here was largely destroyed by quarrying (Fig. 6:55).

Another quern, almost certainly Roman, was found in the same area - Forcegarth Farm - in 1946 by Mr. E.R. Beadle, tenant at that time. He was ploughing out a field preparatory to re-seeding when the plough lifted a quern-stone and 'sent it bowling down the hill like a hoop'. It seems probable that this find too was of a complete quern for two stones were uncovered. One, intact, was donated to The Bowes Museum (Mus. no. 1958:1464) while the other which was broken was given to an acquaintance of Mr. Beadle and has been lost sight of. The intact stone is the upper stone of a millstone grit disc quern, 585mm in diameter,

50mm thick at the centre and 20mm at the edge. The central hole is 125mm in diameter. On the diameter of the upper surface are two holes 270mm apart and 35mm in diameter. These have held iron handles secured by lead which remain in place in both while one retains a stump of iron. The findspot of this quern is immediately adjacent to the site of Forcegarth Pasture North (Fig. 6:56).

Environmental evidence for human activity in N.E. England during the pre-Roman and Roman periods has been discussed by Turner (1979) who concludes that " ,,, the native British populations of the two centuries before and early first century after Christ cleared woodland, maintained pasture and grew crops on a totally different scale from that of their predecessors in both the uplands and lowlands ..." (p289) and also that the land so cleared remained in use throughout the Roman period. In farming, as in so many other things, the arrival of Roman power - so important historically - did not mark a major change. There can be little doubt that the outline presented for N.E. England in general applies also to Upper Teesdale. Radio-carbon dates for pollen diagrams from the area show a marked extension of grassland in the later prehistoric (Ch. V) but since no radio-carbon determinations have so far been made for the upper layers it is not possible to say with any accuracy how long the process continued.

The best evidence for what was happening in the upper dale at this time is provided by excavations at two sites. Forcegarth Pasture North (Fairless & Coggins 1980) and Forcegarth Pasture South (Fairless & Coggins in preparation). (Fig. 5:24 and 25). The sites lie close together on the north bank of the Tees between the fall of High Force and the farm of West Forcegarth.

Forcegarth Pasture North (NY 87 5285) occupies an marshy hollow beside the Smithy dike. A D-shaped area some 40m x 35m is enclosed by a bank 2m - 4m broad and up to 1.0m high. Within this enclosure are the stone foundations of a house complex and a separate circular building. Immediately outside the enclosure to the north are the remains of two more circular buildings.

Excavations were carried out during three short seasons 1972-77, and were concentrated on the central house though the perimeter mound and entrance were also examined (Fig. 27).

The walls of the central house complex survived up to 0.5m. high and unlike the bronze age site of Bracken Rigg were built using quite regular courses of stone. There were four rooms, three of which were probably contemporary and covered by one roof while the fourth seemed to be a later addition and possibly a separate dwelling or workshop. Two hearths were found, each in an alcove near the entrance and both produced evidence for iron-working. The separate building was much larger - 7.0m in diameter as against 3m - 4m - and no hearth was found in it. (Fig. 28).

The perimeter mound has probably been surmounted by a stockade and there was a possible small guard room beside the narrow entrance. Finds from the site were very sparse: bones, spindle-whorls, one or two sherds of coarse pottery, a quantity of birch bark probably from a container of some kind, many whinstone 'pot boilers', fragments of quernstones and rubbers and a complete saddle quern of millstone grit built into the walling of the separate building. Charcoal from the later of the two hearths gave a radio-carbon date $1810^{+}_{-}70$ bp (HAR 864). Though this result suggests a probable date for the settlement near the beginning of the Roman period there was no evidence for Roman contacts and since the dated material was from a later phase the site was probably in occupation in the pre-Roman period. Unfortunately it was not possible to test this hypothesis as permission to excavate beneath the walls was refused by the D.o.E. Inspector. The presence of a perfectly good but presumably obsolete saddle quern in the walling of one building also suggests early occupation especially when it is recalled that the disc quern mentioned above was ploughed out only a few yards from the site. The presence of two additional house positions outside the enclosure may be indicative of population expansion during the Roman period (Jobey 1974). The site is surrounded by field bouldaries and clearance cairns though these cannot be said with certainty to belong to it rather than to the neighbouring site of Forcegarth Pasture South.

Forcegarth Pasture South (Fairless & Coggins in preparation) lies just over 100m away to the south east and consists of a roughly circular enclosure of about 40m internal diameter on a south facing slope. In order to produce a fairly level platform on this slope material had been removed from the rear uphill part of the enclosure to the front and on this terrace were built five almost circular houses, each about 7.0m in diameter. Their stone foundations merged to form a continuous irregular row. The entrance to the enclosure was to the north, a narrow gap in the perimeter wall which was a substantial structure 2.0m - 4.0m broad probably originally surmounted by a stockade. Outside the enclosure and attached to its western edge was a sub-rectangular feature about 15.0m x 10.0m with walls less than 0.5m broad. Abutting on to the south west walling of the enclosure was a low cairn about 3.0m in diameter surrounded by a shallow ditch. Two of the five house positions were excavated 29 and 30. In each case the rear walling of carefully laid coursed stones was standing some 0.5m high but only traces of the front wall remained. Both seemed to have had central posts and in the case of the second house there was evidence for a triple post surrounded by paving. Beneath the cobbled floor of this house was found the ring groove of an earlier, smaller timber structure. Charcoal from this feature gave (HAR 1447) a radio-carbon date of $1740^{+}_{-}90$ bp.$_{\Lambda}$ Finds from the site were more plentiful than from the North site and though including similar pot boilers, quern fragments and spindle whorls also provided evidence for Roman contacts in the shape of several potsherds including Samian ware. A preliminary study of this material shows types ranging in date from the late first century to the early third century AD (J. Evans & L.J. Gidney pers. comm.). As with Forcegarth North the hearths in both excavated houses had been used for iron-working. Since the two sites are so close it seems likely that they represent a sequence of occupation, whether continuous or not cannot be certainly determined, beginning perhaps in the early decades AD and ending in the third century. It would seem sensible to assume that though the occupation centre changed, the same field systems were in use during this period.

though the amount of land taken in may well have increased. At least one field boundary terminates at the perimeter wall of the south site.

Why was the North abandoned in favour of South? They are similar size with a similar amount of accommodation and while neither is in a particularly good defensive position each is protected by a substantial enclosure wall. Both have access to the same fields and there is no evidence for a major change in the economy. Forcegarth South is certainly a drier site and a possible explanation for the change is that woodland clearance rendered the Smithy Sike more liable to flooding making a move to higher and drier ground desirable.

The remains of field boundaries visible on Forcegarth Farm are shown in Figs. 32 and 33. Some of these no doubt belong to the mediaeval precursor of the present farm but others are rather to be associated with the two sites discussed above. It can be seen that they occupy a large area, at least 50ha., of what might be best termed 'inbye' land. As might have been expected they survive best on areas of land not affected by later 'improvement'. An area of lyncheted 'Celtic' fields has already been mentioned (Ch. V) but as well as these there are large pastures, small irregular fields and the double walls of possible cattle drifts. The map shows too the remains of other small settlements though whether these too are Romano-British cannot be decided.

Little can be said about the function of the fields except to point out that though those of small size may have been arable plots this is not necessarily the case. For some of the practices involved in livestock rearing it is desirable if not essential to have small paddocks available. Nor can one make definite deductions from the fact that much of the land occupied by these prehistoric fields is now rough pasture. When they were in use as meadow or arable they would have been much more productive. As Smith (1975) has pointed out, it is usually the abandonment of fields which leads to soil degradation rather than the reverse. Examples of this process can be seen at

several places in Upper Teesdale at present, where higher farms have been abandoned and their former meadows are reverting to rough pasture.

No other Romano-British site in the area has been excavated though, as noted above, a probable one has been almost completely destroyed at High Force quarry. This site was apparently discovered by Mr. T. Wake, then curator of The Bowes Museum, who reported his find to the Teesdale Record Society in October 1946. No description or plan of the whole site survives but one house position has escaped destruction and since the quarry is no longer worked, will probably remain safe. It is accurately described on O.S. card NY 83 NE 2, consisting of an earthen bank over 1.0m wide and 0.5m high enclosing a circular area 5.0m in diameter and surrounded by the remnants of a ditch surviving best on the north east where it appears as 2.0m broad and 1.4m deep. A few metres north east of this house position is a slight platform about 3.5m in diameter. No other evidence of settlement is apparent and no finds other than the quern mentioned above have been reported. Whatever the nature and date of this settlement it must have been quite different in character from the neighbouring Forcegarth ones and in particular does not seem to have been enclosed.

At the foot of Blea Beck (Fig. 5:27), a small stream entering the Tees from the south jsut below Dineholm Quarry, is another settlement which somewhat resembles those at Forcegarth. It consists of an irregular enclosure on a north-facing slope containing at least four and possibly seven circular foundations with internal diameters of between 4.0 and 5.0m. Enclosure walls and foundations are of whinstone boulders. Most of the site is covered by a dense growth of ling which makes recognition of features difficult. A portion of this however was burned in 1977 allowing a preliminary survey to be made (Fig. 33). There are no reported finds. The site at Winch Bridge has been mentioned in the previous chapter as being possibly pre-Roman but it may well be later than this. Its form is again different from the settlements discussed above, resembling rather the Cumbrian sites such as Ewe Locks (RCHM 1936).

An unusual site is Wool Ingles (Fig. 5:13) at a height of over 400m/1400ft. Here a circular enclosure some 40m in diameter contains at least three circular house foundations. There is an entrance on the north-east approached by a short funnel. Attached to the enclosure is another much larger subrectnagular one with sides of about 100m. The east and south walls occupy the crest of a short but steep slope and could perhaps be defensive. All walls are of coarse grey sandstone which outcrops at this point. No excavation has taken place, no finds have been reported and there are therefore no certain grounds for including this site as Romano-British rather than of any other period. The circular enclosure with the foundations of circular houses is reminiscent of both Forcegarth sites rather than the sites described in earlier chapters. It seems probable that Wool Ingles is best interpreted as a pastoral settlement occupied only during the summer and associated with lower permanent settlements such as Forcegarth or Winch Bridge.

Only one of the sites described can be securely dated to the Roman period and even here the material evidence for Roman contacts was minimal. Nor do the finds suggest that these contacts brought significant economic change to the area though the greater number of disc querns found may suggest an increase in arable farming. Manning (1975) has agreed that local supplies of grain were of great importance to the garrisons of Roman forts but Upper Teesdale seems too remote for this to have had a significant effect on farming practice. Oats might possibly have been grown for the benefit of Roman cavalry units but it is more likely that any trade would be with pastoral products such as hides. The presence of disc querns probably represents the import of new technology rather than increased corn growing.

Other evidence for Roman presence and for changes brought about by that presence are difficult to identify. It has been suggested in the previous chapter that on morphological grounds alone it is almost impossible to distinguish between late bronze age and iron age settlements. This is so too for Roman and pre-Roman types. As well as

the sites described above others with the foundations of circular stone houses are found at many places:- Lingy Holm (Fig. 5:10), Calf Holm (Fig. 5:28), Moor Rigg (Fig. 5:29), Holmwath (Fig. 5:11), Keld Smithy (Fig. 5:14), Birk Rigg (Fig. 5:20) and so on, but none can be securely dated. The discovery of a timber phase of building at Forcegarth shows that timber buildings were certainly in use during the Roman period but since the whole of Upper Teesdale is under permanent grass there is no possibility of identifying such sites from soil marks or crop marks.

Both Forcegarth sites showed that iron-working was being practised as a domestic industry but no evidence so far has been found for lead mining or smelting. It seems unlikely that the Romans would have neglected an important source of lead, especially when deposits in the neighbouring valleys of Weardale and Swaledale were being worked. The 'Visitors Guide to Raby Castle' (1857?) says that " ... the lead mines of Teesdale in the vicinity of High Force appear from the discovery of tools and relics to have been worked in Roman times ...". What these 'tools and relics' were is not stated and no other information is given. The question is a tantalizing one, and like so many other problems, cannot be definitely answered.

Roman presence on the extreme boundaries of the area is attested. On the east the Roman road from Stanhope to Egglestone follows the general course of the present road (Margary 1973). On the west is the presumed signal station on Little Dun Fell (Fig. 5:32) (Johnson & Dunham 1963). Several attempts have been made to fill the gap between these. Backhouse (1898) reported 'plain indication' of a Roman road 'here and there' especially on Langdon Head, suggesting that this was a connecting road between Binchester and the Maiden Way near Alston, providing a short cut to the western side of the Wall. De Rance (1873) referred to the existence of another probable signal station on Bell Beaver Rigg (Fig. 5:33). Unfortunately, careful search has revealed no trace of either road or site, though both may of course exist.

CHAPTER VII
Early Mediaeval

The six hundred years which separate the ending of the Roman rule from the Norman conquest have left few identifiable archaeological traces. There is not a single stray find from Upper Teesdale which can be attributed with any confidence to this period. The area is however more fortunate than many in that two sites have been excavated and have provided some information on this important but shadowy period.

Before discussing these however it may be as well to look briefly at the evidence for pollen diagrams. With one exception - Simy Folds - the sites discussed in earlier chapters can be of little help, for the upper layer of these diagrams have not been radio-carbon dated.

Turner (1979) has shown that in many parts of north-east England the extensive agricultural clearances of the late prehistoric and Roman period had reverted to woodland by the middle of the first millennium AD. Two pollen diagrams however showed a different pattern: from Steward Shield Meadow in Upper Weardale and from Thorpe Bulmer in east Durham. At the former site the forest regeneration did not occur until about 1100 - 1200 AD while at the latter there was no regeneration though arable farming appeared to give way to pastoralism at about the same time. Bartley et.al. (1976) writing of Thorpe Bulmer suggest that " ... it is tempting to associate the end of this (arable phase) with the Norman devastation of the North ...". (p.466)

A diagram from Moss Mire near Barnard Castle, (Donaldson unpublished) shows, like the majority of those quoted by Turner, late prehistoric or Roman clearances reverting to woodland by the middle of the first millennium. The diagram from Simy Folds however resembles that from Stewart Shield with the main agricultural phase ending in the post-Conquest period (Donaldson forthcoming). It is possible to suggest that in Upper Teesdale and Upper Weardale mixed farming continued without a break after the Roman withdrawal though whether the Romano-British settlements remained in use cannot be decided. The excavation of

Forcegarth Pasture South produced a small quantity of Roman pottery which can be dated to the late second/early third centuries AD and thus agrees with the radio-carbon (HAR 1447) date for the first phase of the site ($1740^{+}_{-}90$ bp = 210ad = AD250). The absence of later pottery cannot be taken as evidence for the absence of later settlement. In fact it is more appropriate to explain the presence of Roman pottery as a temporary fashion, an aberration in a culture which was before and after this brief experiment, aceramic. It is possible then that the Romano-British sites, which occupy relatively low lying sites, remained in occupation. In chapter V it was suggested, somewhat tentatively, that the presence of curvilinear and rectangular foundations on the same site might indicate late prehistoric settlement. It is also possible of course that these may be a sign of post-Roman adaptation of exis ting settlements. The site at Pasture Foot for example with one large rectangular building and several circular ones would then represent an Anglo-Saxon re-use of a Romano-British hamlet. Without dating evidence however, such speculations must remain speculations only. There is however firm evidence for post-Roman settlement on the higher slopes even if it cannot be confirmed in the valley.

The site at Middle Hurth has been mentioned in earlier contexts as a multiphase monument of uncertain use, (Coggins and Fairless in preparation). In its latest phase it consisted of an earthen bank some 2.0m. broad enclosing a roughly circular area about 15.0m. in diameter. The material for the bank had been derived from a shallow quarry ditch. This circular feature overlay part of an earlier long low irregular mound which at two points had been cut through by the quarry ditch. Sections across the bank showed that in most places it was composed simply of earth with some stones.

On the west where the quarry ditch had cut through the earlier mound several large flat slabs of limestone lay on the exterior face of the bank. On the north west the earthen bank was replaced by a double row of small boulders about 0.2m. apart. The excavators suggested that this space

may have originally held upright slabs and that the exterior face of the circular mound may have been faced with similar slabs as in the western section. Such flat slabs make excellent 'throughs' for dry stone walling and would have been used by the builders of the modern field wall which runs only a few metres to the north. No post-holes of any sort were found in the bank itself and only a single one was revealed in the interior, close to the southern edge. The only other features were a slighted cairn partially covered by the spread of material from the bank, which proved to have contained a late prehistoric cremation. Slight traces of what may possibly have been two similar cairns were also noted in the interior.

There were very few finds, only one of which seems likely to have been directly associated with this phase of the site. This was a broken whetstone, apparently almost unused and made of fine sandstone. It is 167mm. long, 50mm. x 37mm. in section at the broken end, tapering to a blunt point at the tip and probably represents slightly less than half of the original stone. It was found on the north-east perimeter of the site lying beside the outer of the double row of small boulders. Even this cannot be regarded as definitely associated with the site and could possibly be modern.

A section across the bank where it overlay the earlier mound on the west revealed traces of the original ground surface of the latter as a thin grey/black layer containing fragments of charcoal. Two samples of this material were taken: the charcoal was removed from one and sent for radio-carbon determination while the other was sent for examination to the biological laboratory of the Archaeology Department at Durham University. Mrs. A. Donaldson has kindly reported on the latter sample as follows:-

"Middle Hurth Edge, Upper Teesdale
Pollen sample from old turf layer under mound of circle
counts as % total pollen

Betula (birch)	1
Quercus (oak)	1
Alnus (alder)	1
Corylus (hazel	6
Gramineae (grasses)	32
Cereals ? (incomplete)	2
Calluna (heather)	49
Compositae, Tub. (daisy family)	2
Plantago lanceolata (plantain)	4

The sample was from the turf layer which apparently developed in situ on the former ground surface, before the construction of the circle. There is no dating evidence from the site but it is clear from this sample that the local landscape had been extensively cleared of trees and was probably under some form of agricultural use before the construction of this phase of the site. Such high non-tree pollen levels do not normally appear in pollen diagrams from the dale until zone G, which, where C 14 dates are available, begins at times varying from about 100bc to about 740ad, depending on the locality, (Chambers, 1974, Turner et.al. 1973, Donaldson unpublished). The two diagrams nearest this site, Wheelhead Moss and Simy Folds show zone G beginning about 1100bc and after about 500bc respectively presumably demonstrating the two areas different histories of settlement.

The pollen spectrum cannot really date the site therefore but nevertheless indicates a local landscape almost denuded of natural forest and under some form of agriculture. It is also interesting that heather does not grow in the immediate locality today. As well as abundant heather pollen, carbonised shoots and leaves were also recovered, indicating burning."

The charcoal sample sent for radio-carbon determination proved to be too small for normal methods and was therefore transferred to the Harwell experimental small counter. The

result obtained was totally unexpected: 1450±100 bp. Since the excavators regarded the site as probably prehistoric the radio-carbon determination was not felt to be satisfactory. A small excavation was therefore undertaken with the object of retrieving a larger sample for a second radio-carbon date. The result for this second sample was 1360±90 b.p. = 590ad (HAR 3623). Since the results are compatible there can be little doubt that they are correct and that this 'prehistoric' monument belongs to the post-Roman period. It is difficult to suggest a function for this circular banked enclosure. The absence of postholes in the bank seems to preclude its use for agricultural purposes while the single posthole in the interior is hardly sufficient evidence for a building of any sort. To label it as 'ceremonial' or 'ritual' does not explain very much about its possible uses but it may well fall into this category. In a long and learned series of articles Allcroft traced a connection between prehistoric stone circles, 'moots' and the circular churchyards of early Christianity, (Allcroft 1928) while much of the data on which his arguments were based has been superseded and many of his conclusions can no longer be regarded as valid sufficient remains to retain the long though tenuous connection. Middle Hurth, with its appearance of being a prehistoric stone circle or ring cairn is prehistoric only in the sense that there is no documentary evidence for it or its purpose. The site was not fully excavated and it is possible that in its latest phase as in an earlier one it may have been a funerary monument. Some kind of continuity in function seems to be indicated by the decision to construct the circular banked site on top of the earlier mound when space was available to avoid this altogether. The close proximity of the Teesdale Cave with his beheaded human skeleton is also of interest. (p45 above)

The 'agricultural use' indicated by the pollen evidence and the presence of the site itself suggest that some kind of settlement should exist close by. A little to the north of Middle Hurth a fragmentary ancient field boundary runs along the edge of the limestone outcrop,

interrupted by stake holes. Attached to this boundary are the foundations of a very small D-shaped structure which might possible be a house. To the south of the site are the stone foundations of a two-roomed rectangular building. Neither of these seems to be directly associated with the circular banked enclosure or the long mound. It is possible that if a settlement existed in the vicinity of Middle Hurth that its buildings were of timber in which case they are unlikely to have left any recognisable remains.

The second site, or rather, group of sites, is at Simy Folds. Excavations were carried out here in 1976, 1979 and 1981, (Coggins et.al. (1983). Here, three farmsteads of similar size and design occupy a narrow limestone/shale terrace at a height of 381m. on Holwick Fell. Each site consists of a long narrow rectangular building aligned east-west with an adjoining smaller sub-rectangular building aligned north-south. These buildings form two sides of a small enclosed yard. Two of the sites have, in addition, a third small building at a little distance. At the third site a complex of buildings have been overlaid by a later circular stone walled enclosure to which is attached a rectangular building. Both sites 1 and 2 provided evidence for iron working but small finds were almost completely absent: a stone spindlewhorl, two fragments of a rotary quern, an iron ferrule and one or two bones. As noted in previous chapters there is evidence for neolithic, bronze age and late prehistoric activity on the site. Two radio-carbon dates are so far available from charcoal in buildings of sites 1 and 2. These are respectively 1210 ± 80 b.p. = 740 ad (HAR 4034) and 1180 ± 70 b.p. = 780 ad (HAR 1898).

Excavation suggests that existing prehistoric field systems were re-used by early mediaeval settlers. It is unfortunate that the paucity of finds means that little can be said of the economy of the settlement except that iron was being worked. The pollen diagram from a peat deposit close to site 3 shows the existence of pasture and also of arable. In type the buildings closely resemble those on a site at Ribblehead dated by coin evidence to about AD 800 (King 1978). Similar groups of buildings are

also found in Scandinavia (Kaland pers. comm.) and it seems likely that they may be representative of upland settlement in N.W. Europe generally rather than being specifically Norse or English. Two similar sites are known elsewhere in Upper Teesdale. One, about half a mile east of Simy Folds occupies a tiny cramped location in a saddle between two whin outcrops at Holwick Castles. It is much disturbed and partially covered by scree but shows the same features of two buildings partly enclosing a farmyard. The second of these is at Willy Brig Sike on Crossthwaite Common where it occupies a small glacial mound beside a stream. Neither site has been excavated but in view of their morphology it seems likely that they should be attributed to the same period.

The pollen diagram from Simy Folds shows that no major forest regeneration took place after the area had once been cleared. Above the level of 300m. however pollen of cereals and of arable weeds disappears indicating a change from mixed farming to a pastoral economy. A confirmed radio-carbon date for this cereal is not yet available but preliminary results suggest that this may have taken place in the 13th or 14th century AD. It thus resembles to some extent the diagrams from Thorpe Bulmer and Stewart Shield Meadow referred to earlier. In the case of Simy Folds the change cannot be attributed to the punitive expedition of William I but is more likely to be a consequence of the introduction of forest law and also of the general retraction of agriculture from the uplands which has been postulated by several authors (Roberts 1976). Charcoal from one of the iron slag heaps at Simy Folds has been radio-carbon dated to 820 ± 70 bp = 1130 ad = AD 1200 (HAR 4506). Since this heap overlies an enclosure wall it helps to confirm the decline of agriculture at this time.

There are many other examples of sites with rectangular buildings of various kinds. The fourth site at Simy Folds for example has two thick-walled curvilinear structures but also a long narrow three-roomed rectangular building measuring 14.0m. x 5.0m. overall. The south wall of this building forms part of a field boundary and there are two

entrances in the long north wall (Fig. 41). Perhaps the best example of a farmstead of this type is that at Yearl Hill (Fig. 5:89) which occupies a small shelf of relatively level ground beneath a whinstone outcrop. There are the foundations of a rectangular building of about 14m. x 5m. with three rooms or rather two rooms and a porch. The single entrance is in the south facing long wall and in front of the house is a small enclosed yard. A few metres away are the remains of two small irregular structures and also a cairn (Fig. 40). Less obviously rectangular are the buildings at Pasture Foot, Dry Beck and Water Race. Pasture Foot (N) on the edge of the south bank of the river is a two-roomed rectangular building with rounded corners and thick walls measuring about 20m. x 7m. overall. The entrance in the east gable is shielded by a curving porch wall. There are slight traces of a small enclosure to the south of the building (Fig. 47). On a slight knoll in a bend of Dry Beck are the remains of two rectangular buildings bounded on two sides by the beck and on the third by a bank and ditch. Both buildings have been partly eroded by the beck, only about half of the southern one remaining. Each is of one room only with the entrance in the east gable and probably measured about 15m. x 6m. overall. Corners are rounded and walls are of whin boulders (Fig. 42). On the opposite side of the beck is a large heap of iron slag and two fragments of possibly 11th - 12th century pottery were found in the beck beneath this slag heap. Buildings and slag heap may be connected but there is no evidence to prove this. Close to the water race on Crossthwaite Common is a group of three large rectangular buildings with thick walls, rounded corners and having entrances in one gable wall. A similar structure can be seen at Birk Rigg (E) but here it underlies the fell wall and has suffered from stone robbing. It measures about 20m. x 8m. overall and has an entrance in the south-west gable. A few metres to the west of this is a second building of the Yearl Hill type; two-roomed, measuring 15m. x 7m. and having its entrance in the long east wall (Fig. 43).

It seems then that two basic building traditions can

be recognised in Upper Teesdale: the first is long, narrow, two or three-roomed with squared corners and one or more entrances in a long wall; the second is less regular, usually of one room only, with rounded corners and a single entrance in one gable wall. It is also probably true to say that the walling of the first type is finer and more regularly coursed than that of the second. Two examples of type 2 have been excavated - at Simy Folds - with radio-carbon dates centred on the eighth century AD. No examples of the first type has been excavated and no finds have been made but it seems almost certain that they represent a later, probably mediaeval building phase.

Differences in form may however indicate differences in function as well as or instead of differences in date. The practice of building a new farm house and converting the old one into a byre or barn is still current. One of the most interesting groups of rectangular buildings where both types are found together is on Unthank Scar. This is a very steep, north-facing slope with outcrops of whinstone and large areas of scree. On the brow of the slope and on the terraces are eight buildings, none of which have been excavated and from which no finds have been reported (Fig. 51). The choice of such an unlikely and almost inaccessible site is difficult to understand. The hamlet is approached by a narrow hollow-way which can be seen very clearly to the east of the present Unthank Bridge and which appears to begin at the deserted village of Unthank a few hundred metres away. The relationship between the two settlements - if there is one - is far from clear.

Rectangular buildings of both types described above are to be found everywhere in the Highland Zone (e.g. Ramm 1970, Dixon 1980) and until more dating evidence is available for the Upper Teesdale examples it would perhaps be unwise to rely on their morphology alone to indicate their age. If there is no certainty about the age of these buildings neither can we be sure of their use, Ramm *et al* (*ibid.*) refers to many of the examples in the Borders as 'shielings' a convenient term which has been followed in the gazetteer of this study. Its use does however beg a most important

question. There is both documentary and place-name evidence for the custom of 'shielding' in the Borders and also in Upper Weardale but though the practice may have existed in Upper Teesdale the evidence for it does not. 'Shield' names are, for example, completely absent from the area and there seems to be no documentary record of the custom. Neither place-names nor documentary evidence enable the archaeological remains to be identified more precisely in historical terms. It seems certain that from the eighth century Upper Teesdale formed a part of the multiple estate of Gainford, which was part of the possessions of the Lindisfarne community and that probably this estate was later taken over by Scandinavians (Morris 1977). But the exact significance of the phrase 'to the mountains in the west' is debatable and we cannot know how far the upland fringes of the estate were integrated with its more lowland farms and villages. Further work on estate and parish boundaries in relation to the archaeological remains may enable progress to be made but this is perhaps outside the scope of the present paper.

CHAPTER VIII
Mining and Metal Working

From at least the sixteenth century until the early years of the twentieth century mining and smelting of lead ore was the chief industry of Upper Teesdale. For the second half of this period the 'dual economy' of farming and mining was the basis of dales life (Roberts 1978). How early this exploitation of a major mineral resource began is uncertain. Lead-mining was certainly being carried on in Upper Tynedale in the early thirteenth century (Proctor 1976) and possibly in Teesdale also. Speculations about Roman lead mining have frequently been made: "... the lead mines of Teesdale in the vicinity of High Force appear, from the discovery of tools and relics, to have been worked in Roman times ...". (Visitors Guide to Raby Castle, 1857). Unfortunately no source is given for this information while the 'tools and relics' are not described. The exploitation of British lead ores by the Romans began almost immediately after their arrival and there can be no doubt that the industry was well organised (Tylecote 1962). The evidence for Roman lead working in the North has recently been summarised by Fairless (work in progress) who concludes that while there can be no doubt that the ores of the Alston district were used there is little positive evidence from Weardale and none at all from Teesdale. In fact there is very little evidence for Roman presence or influence of any kind in Upper Teesdale.

For pre-Roman activity the possibilities are even more tenuous. Tylecote (1968) has shown that the practice of adding lead to bronze, either to improve the casting properties or as a dilutant, did not reach the north of England until very late in the bronze age, perhaps the eighth century BC. The total quantity of lead which would be needed for this purpose during the relatively brief period before bronze was replaced by iron, would be quite small. Mining, wherever it was carried on would not have been intensive and the chances of finding evidence for it are slight. Evidence of smelting is perhaps easier to

find and radio-carbon dating of charcoal from smelting sites would provide much-needed information, though it seems improbable that it would confirm Upper Teesdale as a source of lead at this period.

The remains of post-sixteenth century lead mining, in the form of hushes, drifts, shafts and water-races are to be seen everywhere in the upper dale being especially common on the north side of the valley. In addition to these a few trial drifts for iron ore are to be found: between Scorberry Bridge and Winch Bridge on the south bank of the river, near Crossthwaite Farm, at Dirt Pitt, Ettersgill and at Langdon Beck. These date from the mid-nineteenth century when for a brief period there were hopes of an iron-ore boom, similar to that in Cleveland, with proposals for the construction of a railway between Alston and Middleton. These hopes were never realised though they were briefly revived during the second world war. Recent research has shown that this nineteenth century interest in iron was not the first or only attempt to exploit a valuable resource. Fieldwork and excavation in Upper Teesdale have recovered abundant archaeological evidence for the early mining, smelting and smithing of iron. This is in contrast to the evidence for early lead working which is minimal. The mining and smelting of lead seems always to have been a well organised and commercial enterprise, possibly because the demand for lead and for silver which was refined from it has traditionally been from government and industry. In contrast iron was needed by every farmer in regular though not large quantities so that its production in early times was probably intermittent and small-scale.

The O.S. map preserves the names of some of these iron working sites (see Appendix 3.) There are two Smithy Sikes, a Smithy Green, Ore Carr and Ore Pit Holes.

Ore Carr is a boggy and relatively flat stretch of moorland on Holwick Fell where conditions would probably have been suitable for the formation by leaching under sub-artic conditions of bog-iron. "This (bog-iron) has a very high manganese content ... in Weardale it occurs under the turf at a depth of about 0.2m in a layer about 80-100m.

thick ..." (Tylecote 1970,114.) This type of ore was extensively used in early times.

Ore Pit Holes, as the name implies, is a string of roughly circular bell pits which runs for a distance of some 1.0km. along Holwick Fell to the south of Ore Carr. The pits are 5.0 - 10.0m. in diameter and at present up to 5.0m. deep. Their depth when being worked is unknown. The pits would exploit the ironstone nodules which are found in shale beds of the Carboniferous series. It seems probable that these two sites were the major sources of the ores used in Upper Teesdale though of course both bog iron and nodules would be found elsewhere in the area.

Heaps of iron slag from bloomeries are found at many places in Upper Teesdale (Fig. 10). The gazetteer lists 32 sites, some of which have several slag heaps, and it is likely that more remain to be discovered. Some former sites have been destroyed and the slag used for road making but though the number of these is not known exactly it is unlikely to be high for most sites are some distance from farms or roads. These slag-heaps are quite small, the largest at Skyer Beck (Fig. 36:13) being an oval about 7.0m. x 5.0m. and 1.5m. high. In no case has it been possible to recognize any associated structure connected with the smelting process though if simple bowl hearths or domed furnaces of the type excavated in Weardale were used (Tylecote op. cit.) there would be few surface traces. With the exception of those at Ore Pit Holes all slag-heaps so far recognized are sited beside a source of water. In some cases this is the river itself, in others a small beck or sike and in yet others simply a spring.

Only one slag-heap has been reliably dated: this is a small one over-lying the north boundary wall of the Simy Folds site. Slag from this was submitted to thermo-luminescent dating and charcoal from the same heap to radio-carbon determination (Coggins, Fairless and Batey, (1983). The result obtained from the charcoal was 820 ± 70 bp (HAR 4506). The T.L. dating of the slag suggested the probability of a central date of AD 640 (Wright, forthcoming). There is thus a large discrepancy between

the two dates and other evidence from the site suggests that the radio-carbon date is likely to be the more accurate of the two. It is highly unlikely however that all of the slagheaps shown in Fig. 36 were contemporary. Tylecote (op. cit.) considers that the demand for iron is likely to have increased greatly between the Norman Conquest and the mid-fourteenth century and that production in the north of England expanded to meet this. If this theory is correct then it would be reasonable to expect that much of the slag found in Upper Teesdale is mediaeval. As we have seen, one slag heap has been dated to this period. Two potsherds recovered from the eroding bank of Dry Beck immediately beside the slag heap resemble in fabric wares from the castle excavation at Barnard Castle and date probably to the eleventh/ twelfth century. But not all the iron smelting can be mediaeval. Evidence of iron working has been discovered at three excavation sites in Upper Teesdale.

At Simy Folds (Coggins, Fairless and Batey op. cit.) there was in addition to the slagheap mentioned above abundant evidence for both smelting and smithing associated with a farmstead It is possible, though this cannot be proved, that some of the iron working residues were connected with an earlier occupation radiocarbon dated to 2330±100 bp (HAR 4035). Both the Romano-British settlement sites of Forcegarth Pasture North (Fairless & Coggins 1980) and Forcegarth Pasture South (Fairless & Coggins in preparation) produced evidence which showed that iron smithing had taken place on a domestic scale. Since it is hardly likely that this iron was being imported some of the bloomery sites shown in Fig. 10 must, almost certainly, be pre-mediaeval.

Pre-Roman iron working in Britain is well attested. Tylecote (1962) concludes that it was in general carried out on a very small scale using small bowl hearths, and that the slag was not usually tapped out but was allowed to solidify in the furnace and form a furnace bottom. The Roman period saw the introduction of new techniques including the practice of tapping the molten slag to remove it from the furnace and operations were on a much larger scale (Tylecote

op. cit.). It seems that occasionally at least earlier slag was reworked at this period possibly because it had been made from good ores and still contained an appreciable amount - up to 50% of iron (Tylecote op. cit.).

In theory then it should be possible to date the Upper Teesdale slagheaps, if only very approximately, by examination of the slag. In practice this would necessitate sampling not only the surface of the slagheap but the interior also. Also several types of slag are to be found in one heap. The excavations at Simy Folds produced examples of six different types of iron slag including furnace bottoms, tap slag and roasted ore, from a single occupation site which yielded two radio carbon dates, one in the late iron-age and the other early mediaeval (Brown forthcoming). The position is thus rather more complex than appears from the historical summary given above. Only a programme of systematic sampling and radio-carbon dating of slagheaps is likely to make it possible to chart the progress of iron working in Upper Teesdale. The distribution map of the slagheaps shows three immediately observable characteristics: they are found over a wide area, roughly their distribution coincides fairly closely with the distribution of early settlement (Fig. 5) and they are, almost without exception found close to water.

The coincidence between early settlement sites and bloomeries is to be expected: it has already been suggested that though iron working activity was at its height in the post-Conquest period, it had long antecedents.

Slagheaps are found at distances of up to 4km. from the two sites which have been suggested as the main sources of iron ore - Ore Carr and Ore Pit Holes. It is possible that other deposits of ore, particularly of bog iron were also worked but even if this is taken into consideration it must be concluded that ore was being carried for several kilometres to be smelted.

The only obvious reason for this is that supplies of fuel were not easily available. Where transport using pack animals is concerned, bulk is more important than weight "... and since 16 lbs. of charcoal may be required to produce one pound of iron ..." (Tylecote 1962) it would

have been easier to transport the relatively small amounts of heavy ore to a place where fuel was available than to move large quantities of light but bulky charcoal and incidentally to run the risk of running short of fuel during a smelt. Thus the sites of slagheaps probably mark places where there was sufficient area of suitable timber to be turned to charcoal and used as fuel. There are two alternatives here: either all timber was becoming scarce or particular species were favoured for charcoal production so that it was worth travelling some distance to find them. "The early smelter does not seem too particular about the choice of wood for charcoal although oak seems to have been preferred, at least up to the thirteenth century. After this shortages were beginning to appear and any timber available was used" (Tylecote *1970, 118.*) Alison Donaldson has kindly identified samples of charcoal collected from slagheaps at Dry Beck. Of the 42 pieces submitted, 33 were of birch, 8 of hazel and 1 of aspen. Mrs. Donaldson comments that birch makes excellent charcoal and so was probably specifically selected for the purpose. As noted above the site at Dry Beck probably dates from the 11th or 12th century AD. Of course the samples collected need not be representative of all the charcoal in the slagheap and the slagheap itself is not likely to be representative of all the others in the area. While only a programme of charcoal identification from many sites will enable full inferences to be drawn the results from Dry Beck do seem to bear out the conclusions quoted by Tylecote. Birch is of course a characteristic species of secondary rather than primary woodland so that charcoal made from its timber is likely to belong to a later context. Even a relatively small smelt would require a great deal of charcoal and therefore a sizeable patch of timber. The intensity of early settlement in Upper Teesdale has been demonstrated in previous chapters and there can be little doubt that by the Roman period timber resources, on the south side of the valley at any rate, were much diminished.

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Though there may have been regeneration in the post-Roman period it seems likely that by the time of the

Norman Conquest timber was once again becoming scarce. The distribution of iron smelting sites may then reflect the gradual disappearance of woodland with the more distant sites being the later ones.

Waites (1964) has suggested that in N.E. Yorkshire the clearance of trees for iron working led to the use of higher land and eventually to a population shift from the valley floor to the moors. This does not seem to be an appropriate model for Upper Teesdale where in fact the reverse seems likely to have been the case.

The association of slag heaps with water may simply be the result of the association of select woodland with springs and stream banks but there may be a more direct connection. One of the difficulties of smelting iron is the need to produce a forced draught of air for several hours. While this can be done by hand or foot operated bellows, it is a laborious process. The use of bellows powered by a waterwheel would be both more efficient and save labour.

Waterwheels were certainly known in Roman times when both the 'Norse' type with a vertical axle and the undershot wheel with a horizontal axle were in fairly common use. (Derry & Williams 1960,250) The more efficient overshot wheel was a later development requiring the construction of quite elaborate dams, pits and leats. In the later middle ages such wheels were used to provide power for bellows and tilt hammers in large bloomeries (Tylecote op. cit.). There is however no evidence of such a large site anywhere in Upper Teesdale where all the sites so far found are small and would only have been used occasionally. It is quite possible that a small vertical axle or undershot wheel might have been erected temporarily for such occasional use and certainly the river and some of the becks would have provided sufficient power. There is however at present no proof of the use of such a device though excavation might provide it. Some of the smaller streams would not have a sufficient flow of water for even a small wheel so that there is very probably another reason for the association of slagheaps and water, though it is difficult to suggest what

this can be. It is probable then that iron working in Upper Teesdale began in the late prehistoric period and continued intermittently, until at least 1200 AD, and possibly much longer. It does not seem ever to have been of much more than local importance unlike the industry in Weardale which (cote 1970, 120) Boldon Book shows to have had a flourishing export trade. There seems, at any rate, to be no extant documentary evidence for iron production in Upper Teesdale.

Apart from lead and iron working there is little evidence for any other industry or extractive process. There are extensive out-crops of coarse granular sandstones on both sides of the valley and these were almost certainly quarried for making querns. There are also thin seams of rather poor coal in the Carboniferous series which were worked in the eighteenth and nineteenth centuries. The ruined building of Meldon Hall (Fig. 5.83) is the remains of a mineshop which was utilized when the coal seams were exploited during the eighteenth century and a paved pack-horse track leads from it towards the village of Knock in the Eden valley. Coal was however being used at a much earlier date: the excavations at Forcegarth Pasture North and South (Fairless and Coggins 1980) showed that coal was being used as domestic fuel during the Roman period. The exact source of this material cannot be determined but it must have been at least three kilometres away from the site. If coal was being transported over such a distance it suggests that timber was becoming a relatively scarce resource and that it was worthwhile supplementing it. Interestingly no evidence for the use of coal was noted at the much later site of Simy Folds. The exploitation of this material seems then to have been of little significance for the early inhabitants of Teesdale.

CHAPTER IX
Farming

In the previous chapter it was suggested that for long periods a 'dual economy' of mining and farming was characteristic of the economy of Upper Teesdale. There can be little doubt that except perhaps for a very brief time in the nineteenth century farming was always the dominant partner as indeed it was everywhere in Britain until the Industrial Revolution.

'Farming' in an upland region like Teesdale has always, until the arrival of the railways made corn importing easy, meant mixed farming. Though there is today no arable land west of Middleton this is only a relatively recent development. As late as 1872 for example the farm of Park End was producing wheat, oats, barley, turnips and potatoes as well as sheep and cattle (Raine 1872). There are several references in the local literature of the 17th and 18th centuries to the difficulties of ripening corn in an area where altitude and climate were extreme and it is clear that arable farming must always have taken second place to stock rearing. Probate inventories of the first half of the seventeenth century show clearly that cattle, sheep and horses were the most valuable possessions of dalesmen at that period (Roberts 1978). The earliest documentary evidence concerning farming practice is the grant in 1131 by Bernard Baliol of pasture rights for 60 mares and their foals throughout the Forest of Teesdale, to the monks of Rievaulx Abbey. The grant also mentions a house 'at the head of Kaveset next to Etheresgilebec' a site which unfortunately has not so far been identified (Roberts op.cit.148.)

For earlier times we have to depend on the evidence provided by archaeology. No macroscopic plant remains have been recovered from excavations in Upper Teesdale but the identification of pollen from a series of sites provides some information. This of course relates directly only to those parts of the dale where there are peat deposits suitable for sampling and these are not necessarily the areas which would be expected to provide most information

about early agriculture. With one exception the pollen diagrams available for Upper Teesdale were constructed for botanical rather than archaeological purposes and the levels which have been radio-carbon dated are not always those which would have been chosen to give archaeological information.

In particular few dates are available for the upper layers of the diagrams. Fig. 7 shows the sites for which pollen diagrams are available and Fig. 8 is an attempt to compare the features of these diagrams which are of archaeological interest.

Available radio-carbon dates are shown on the left of each column and peat depths on the right. Where a particular level has been dated the appropriate points are joined by a firm line. Relevant changes which appear in the diagram but are not dated are shown at their correct level and a broken line is used to show their probable place in the date column. These intercalations have been made by assuming a more or less constant course of peat deposition between two dated levels. This is of course unlikely to be absolutely correct and the dates so obtained cannot be regarded as totally reliable. Nevertheless they can be used to provide a model of early agriculture in Upper Teesdale. The phenomenon of the 'elm decline' appears on all five diagrams at about 5000 bp as it does elsewhere in Britain. Whatever the precise causes of this decline in elm pollen there can be do doubt that in Britain it coincides with the beginning of agriculture (Pennington 1975). Certainly the five diagrams from Teesdale show increases in grass and herb pollen at this period suggesting that woodland was being cleared. These were however not the first clearances. Upland and mesolithic clearances have been discussed by Simmons (1969, 1975) and Smith (1970) while Evans (1975) concludes that "... there may have been no clear distinction between the mesolithic and neolithic communities ...". (p110)

The clearances associated with the elm decline seem to have been more or less synchronous in Upper Teesdale but there is a marked diversity in the dates of the

appearance of the first cereal pollen. At Valley Bog for example cereal pollen is found at 4500 bp whilst at Simy Folds it first occurs some three thousand years later. It has already been noted that primitive cereals produce little pollen so that its absence is not necessarily an indication of the absence of cereals. The presence - even though in very small quantities - of cereal pollen at Valley Bog and Weelhead Moss is most interesting. Valley Bog lies at a height of 549m. in what is now bleak moorland where the only habitation for miles is the N.C.C. research station at Moor House. Weelhead Moss is now beneath Cow Green reservoir, again in an area of relatively barren moorland at a height of about 456m. The presence of cereals at either of these two sites must indicate a time when the climate was warmer and drier than at present.

All five diagrams show a series of usually short-lived clearance phases when the proportion of grass pollen increases. Turner (1973) writing of the Cow Green area only is "... inclined to interpret these period of human interference as more or less synchronous ... partly because the factors controlling population density are likely to have been operating throughout the Upper dale ... and partly because a similar series ... has been found on diagrams in Upper Weardale ... and there is evidence that these were synchronous ...". (p403)

One of these seems, as noted above, to coincide with the elm decline while the next major one occurs at between 3000 and 3500 bp. This evidence from bronze age farming is confirmed by the radio-carbon date of $3180 \pm 60_{\Lambda}$ (HAR 2414) from the excavation of Bracken Rigg and also by the evidence of field systems to be discussed later. At the same period there is evidence of substantial clearance on the magnesian limestones of east Durham (Bartley et.al. 1976).

The most extensive clearance phase in Upper Teesdale as elsewhere in N.E. England began in the pre-Roman period. Turner (1979) considers that in general this continued until at least the sixth century AD. Reynolds (1981) defines the Roman period as " ... one of enormous pressure on available land for arable purposes on the one hand, on the other

an extremely successful and stable agricultural economy ...". (p106)

In Upper Teesdale probable Romano-British settlement sites are abundant and in general these sites occupy the more low lying land at about 305m. which had apparently been ignored by earlier farmers. Reynolds (op.cit.) considers too that there was a change in the basic economy from arable to pastoral farming in the third and fourth centuries AD but this does not seem to be demonstrable in Upper Teesdale. Nor do the diagrams show evidence of abandonment of agricultural land and of forest regeneration in the post-Roman period. At Moss Mire, a site at about 305m. between Barnard Castle and Egglestone there is a very different picture: the extensive clearances of the Roman period are followed after about 400 AD by rapid and complete forest regeneration which appear to continue undisturbed until the fifteenth century AD (Donaldson pers.comm.). In four of the five pollen diagrams from the Upper dale, cereal pollen though never plentiful is present until about 1000 AD or a little later. At Simy Folds the level of the last cereal pollen has been radio-carbon dated to (1300 ad) (preliminary result). Only at Weelhead Moss is there a different picture and here the last cereal pollen at around 2000 bp seems to coincide with the spread of heather and blanket bog.

650 bp.

As well as the evidence from the five pollen diagrams, cereal pollen has been recovered from an old turf layer beneath an earthen bank at Middle Hurth at a height of 457m. "... the pollen spectrum indicates a local landscape almost denuded of natural forest and under some form of agriculture ..." (Donaldson pers. comm.). A radio-carbon date of 1360 ± 90 bp (HAR 3623) = AD 630 was obtained for charcoal from the layer. This contrasts sharply with the evidence from Moss Mire. It was suggested above that livestock was probably always more important than cereals in Upper Teesdale and it is therefore particularly disappointing that virtually no skeletal evidence has been recovered to provide evidence about this aspect of farming. The only site to produce animal bone has been the Teesdale Cave (Sims 1971) but the assemblage here has obviously accumulated over a very long period and it cannot therefore be used as an indicator of

farming practice at any specific time. A few horn sheaths have been found in peat deposits (Ch. II) and have usually been assigned to the mesolithic. It is possible however that these derived from domestic rather than wild cattle. Since the horns of domestic cattle exhibit a wide range of characteristics and since the specimens eroded from peat are in poor condition they cannot be attributed with certainty to any particular species. Nor can the level of peat from which the horns are derived be used with confidence for dating. The skull and horns of a cow are relatively heavy; if an animal became trapped in deep peat its horns would tend to sink and thus the level from which they are eventually retrieved may bear no relation to the level of the surface where the animal became bogged (Rackham pers. comm.).

There is thus no direct evidence whatever for the livestock which must have been the most important asset of early farmers. Excavations on Dartmoor have revealed the hoof prints of farm animals (Balaam et.al. 1982) but these have not so far been found in Teesdale.

A more indirect evidence for farming practice is to be found in the remains of field systems which are common in some parts of the dale, Figs. 9 and 32 show those early field systems which have been mapped. The method used for most of this mapping was to walk the area intensively once or preferably twice looking for field boundaries and then to walk it again using vertical air photographs and marking visible features on to these. Field boundaries which are certainly or very probably mediaeval or post-mediaeval have not been included. These are not uncommon, but have in general a different distribution, being particularly common in the Ettersgill area. These features have been discussed by Britton (1974). It has not been found possible to map the whole of the area of Upper Teesdale in this fashion though all of it has been walked. Blank spaces on the map (Fig.9) are not necessarily blank on the ground and unmapped field systems exist, for example on Cronkley Pasture and around the site of Wool Ingles. Other areas which are covered by blanket peat have no

remaining visible features to map though there can be little doubt that such features still exist beneath the peat. In Ireland large areas of prehistoric landscape have been discovered beneath blanket peat (Herity 1971) and this must be a situation common to much of the Highland Zone.

Fig. 9 shows a concentration of early field systems on the south side of the valley between the 305m. and 457m. contours, with a few outliers above and below these levels. Several distinct elements are distinguishable. First are the long contouring field boundaries which can be traced for several kilometres along Holwick Fell and Harter Fell. In places these may be little more than an intermittent row of stones; in other they are quite massive heaps of boulders up to 2.0m. thick. There are three main boundaries with a fourth fragmentary one visible in short stretches near the 457m. contour. The lowest of these has been much disturbed by the construction of modern water races. Another group of similar contouring boundaries can be seen further to the west at Simy Folds and may well form part of the same system. Attached to these 'reaves' are curvilinear and subrectangular enclosures ranging in size from about 0.2 hectares to 3.0 hectares in diameter. On the lower slopes close to the 305m./(1000ft) contour are groups of small rectangular and subrectangular fields, some of the lyncheted. Areas of clearance cairns are found, sometimes associated with fields and sometimes where there are not distinguishable enclosures.

The foundations of circular and rectangular buildings occur both enclosed and unenclosed. In contrast to the number of contouring 'reaves' only two run for any appreciable distance across the slope. One of these, which may not be prehistoric, is at the east end of the area while the other runs south from Simy Folds towards Wool Ingles. Since the latter is interrupted by the bell pits of Ore Pit Holes it is likely to be early. Whatever the precise history of these field systems on Holwick and Harter Fell there can be no doubt that they represent the remains of a highly organised system of land division. In recent years much attention has been focussed on remnant upland field systems

and on the agricultural practices for which they are the surviving evidence so that the literature of the subject is extensive (Bowen & Fowler 1978 , Fowler 1981). The most detailed study was carried out on Dartmoor. (Fleming 1978, Wainwright et al. 1979, 1980, Smith et al. 1981, Balaam et al. 1982). Most of the elements found in the Shaugh Moor area and dated to the bronze age appear also on Holwick Fell but there are notable exceptions. There seem to be no examples in Upper Teesdale of the 'stone rows' or stone circles or of the long distance cross-contour reaves.

The original function or functions of these bronze age fields, enclosures and boundaries is difficult to interpret and it is unlikely that it will ever be possible to determine these with any accuracy. In a most illuminating paper, Fowler (1981) has compared the construction of the bronze age enclosures with the historical Parliamentary Enclosures of the late eighteenth and early nineteenth centuries. He points out how difficult it is for us to understand the complex processes by which the latter were carried out as recently as two hundred years ago and how much more difficult it is to discern the important facts behind a series of events three thousand years earlier. Despite the uncertainty inherent in the problem, the questions must be faced: Why and by whom were these field systems established and how were they used? A complicating factor is that we are seeing the remnants of a system which presumably took many years to complete and which has been frequently modified and changed since its inception. That the remains of prehistoric field systems on the Westmorland fells could not be taken at their face value as fossils of the agricultural system of the bronze age was realised at least as long ago as 1912: "... for the ancient British inhabitants dwelling in small communities built their village homesteads on high and open sites which would give a commanding view of the surrounding country and yet be sheltered from violent winds. The shepherds of later times finding, on the borders of the mountain pastures, enclosures ready made or easily modified to suit their requirements and accessible from the lowlands, would of course

take advantage of them ..." (Hughes 1912, 398-9.)

Excavations at Simy Folds (Coggins et.al. (1983.) have demonstrated the truth of this. Here farmsteads of the late eighth century AD have made use of and modified pre-existing field boundaries and have themselves been incorporated into a later settlement pattern. It is interesting to note also that the modern sheepfolds on Holwick Fell are almost all sited among the remains of prehistoric settlement. The Shaugh Moor project has demonstrated that settlement in that area was developed soon after the middle of the second millennium bc (Balaam et.al. op.cit.).

Though the field systems on Holwick Fell have not yet been dated it seems justifiable to assume that they too belong to the bronze age. If we can be reasonably confident of the date of these enclosures we can not be sure of the uses to which they were put. Fowler (op.cit.34) writing of the rectangular fields of Parliamentary Enclosure, points out that "... we would be on the wrong track in trying to infer uniformity of function from similarity of form ....". An enclosure or building on a modern farm may be used for a multiplicity of purposes quite unconnected with the function for which it was originally built. Enclosures have normally one or more basic functions which may be simplified as: (a) to keep animals out (b) to keep animals in (c) to define property. While the animals to be kept inside an enclosure are likely to have been domesticated ones those which needed to be excluded might be either wild or domestic. It would have been essential to keep out deer, cattle, sheep, horses and pigs from fields where corn was being grown from at least April to October and from meadow land between May and September. It would have been equally important to exclude them from places where grain, straw and hay were stored during the winter months. Seed corn would need special protection. King (1978b, 112.) has suggested that the small 'garden' plots close to houses were probably used for growing corn and thus would be under the closest supervision.

As they exist today the field boundaries on Holwick Fell would be quite useful as stock barriers. In some

cases they are sufficiently massive to suggest that if the tumbled stone were replaced the original wall may have stood a little over 1m high. There is no evidence however that coursed dry stone walls were known in the bronze age and it is much more likely that none of these boundaries was ever more than a heap of dumped stone derived from field clearance. If this is the case then to be effective they must have been surmounted by some kind of superstructure. This could have been either a living hedge, a permanent wooden fence or a temporary arrangement of hurdles, and its size and construction would depend on the kind of animal it was designed for. Present day cattle and horses are relatively easy to control and a barrier only about 4 feet high may well have been sufficient even for their bronze age equivalents. It would have needed to be strong but not particularly closely set. Sheep, pigs and deer are much more difficult. Modern Soay sheep, a breed which closely resembles bronze age animals, will easily climb a wall six feet high while deer fences are usually about eight feet in height. Pigs, if unrung, will uproot hedges and push their way through any small gap. The most effective permanent form of barrier for all these animals would have been a stone reinforced bank surmounted by a tall close set hedge. For temporary use hurdles would probably be adequate. In any case the barriers surrounding corn and hay fields would need to be constantly watched - a job which presumably fell to the children. Fortunately the feeding territories of the animals considered above do not coincide though they do overlap. Thus in summer it is probable that sheep would be grazing the higher and more distant pastures while in autumn pigs would be in the denser woodland and so at any one season the threat to growing crops would be reduced.

The containing of the farm stock presents similar physical problems to those presented by their exclusion and the two can be complementary; cattle which are securely enclosed by a field wall are of course excluded from the cornfields and meadows. However the farming practices which make enclosure of stock necessary rather than merely useful are quite different. Archaeologists often speak or write glibly

about 'pounds' or 'stock enclosures' without explaining or thinking about what these imply. In a pastoral farming regime stock would need to be enclosed for short periods only at intervals throughout the year and for the rest they would probably be on free-range. Two major round-ups would be required in the year though it may have been desirable to have more. In late spring lambs and calves would need to be collected and marked and surplus males castrated. The most important round-up however would be the late autumn one for counting, selection of breeding stock and culling of surplus animals. These round-ups would require a strongly fenced enclosure but their duration would be brief and for the rest of the year the enclosure would be available for other farming needs; weaning of lambs, milking ewes or possibly cows, segregating bulls and rams and so on, none of which uses is likely to have left any archaeological trace.

It seems unlikely that farm animals would be in-wintered though equally unlikely that they would survive without some additional winter feed. Nowadays fell sheep need hay only when prolonged snow cover renders heather and grass inaccessible. Outwintered cattle in Upper Teesdale today require some 20 pounds of hay per day but if they have access to scrub woodland they can survive on much less. "It is quite clear that for a long period woodland grazing was of critical importance to stock rearing in Britain". (Spray 1981,98.) There is no evidence for haymaking in the pre-Roman period but it is difficult to believe that it did not take place. Other plants were probably also collected for winter fodder. Ivy has been used in historical times and there is strong evidence for its use in the bronze age (Simmons and Dimbleby, 1974). Holly and even gorse have also been used in historical times (Spray 1981), a practice which may well date from the prehistoric also. The large stand of juniper on Holwick Fell is today particularly valued by sheep farmers for the browse and shelter which it provides. The place name Holwick may in fact be derived from the former presence of holly trees which could be used for winter fodder (Ekwall 1960).

All in all Upper Teesdale would have been an attractive

area for early farmers. The geology of Holwick Fell in particular with its succession of bands of limestones and sandstones was particularly favoured probably because it gave within a small area access to different soil types suitable for different purposes. The importance of the forest edge zone to early settlers has been stressed in previous chapters and it is interesting to note that Barker and Webley (1978) have proposed a similar pattern for the neolithic exploitation of southern central England.

The general sequence of early farming activity in Upper Teesdale as deduced from pollen diagrams, fieldwork and excavation is fairly clear. Though wooded the landscape was never a closed forest and from about 5000 bp onwards existing clearances were expanded by neolithic farmers and a little cereal was grown. None of these clearances attested by the pollen record can be confidently identified archaeologically though possibly Strands Gill may be such a site. Here irregular enclosures totalling about 6.2 ha. are bounded by clearance banks. There are the foundations of a circular building, a subrectangular one and also a cairn from which was recovered a broken polished axe. Some of the stones in the clearance banks are quite small and the enclosure itself gives the impression of being a large garden rather than an arable field. During the bronze age larger and more organised field systems appear but the farming pattern remains on the whole a pastoral one. It is difficult to estimate the size of the farms at any period because though individual enclosures can be measured the extent of grazing land, whether privately or communally owned, cannot be quantified. Nor can more than a very rough estimate of the number of farms occupying a particular area be made, for though the number of probable house foundations can be counted there is no way of telling whether or not these were in contemporary occupation or whether indeed they were houses. A modern comparison may have little validity but it is perhaps better than nothing. The area on the north bank of the river corresponding to Holwick Fell on the south bank has at present about 20 farms: there were many more in the nineteenth century when lead-mining brought

an increase of population and of small-holding but 20 seems a reasonable assessment for the carrying capacity of the land. Perhaps then it is not unrealistic to suggest a farming population in the bronze age not dissimilar to that of today. There can be little doubt that the neolithic population was much smaller and that the increase was a gradual one. It is possible that the intensification of farming activity can be traced on the ground: such an intensification would make the regulation of grazing very important and this could have been carried out by the construction of the long contouring reaves. If this interpretation is correct some of the enclosures will pre-date the reaves, some will be contemporary with them and others may post-date them, while the reave system itself may well be of more than one period. Just as a close examination of documents connected with the historical Parliamentary Enclosures show these to be the result of a long and complex process so a thorough archaeological examination of the bronze age enclosure may show a similar complexity. It is interesting that Bracken Rigg settlement for instance does not appear to be connected to any reave system: one possible explanation out of many is that population pressure did not develop in that area sufficiently to make the regulation of pasture a necessity. Spratt (1981) has suggested that in the N. York Moors a number of separate territories can be recognized, each using tributary streams as boundaries, containing lowland settlement as well as upland and with its upper boundary defined by water shed cairns. There is no evidence for this in Teesdale: the tributary becks - on the south bank at any rate - are in general too small to make good boundaries while the moor-land which separates the dale from its neighbours is perhaps too extensive to make an upper boundary necessary.

By the Romano-British period arable farming seems to have become more evident and settlement had moved downhill. Excavations at the two neighbouring sites of Forcegarth Pasture North and South dated by radio-carbon to the end of the second century and middle of the third century ad respectively, revealed many fragments of querns including

a complete saddle quern. These sites lie at just over 305m. (1000ft.) and other probably Romano-British sites are at a similar level with one, Winch Bridge, being considerably lower. The field systems of the Forcegarth Pasture sites are shown in Fig. 32 and though the pattern is complicated by later mediaeval boundaries lyncheted subrectangular 'Celtic' fields can be distinguished. Others can be found on Crossthwaite Common, again at or below the 305m. contour, of a type familiar elsewhere in the Pennines especially in the Grassington area. At Winch Bridge there are also examples of long very narrow fields, dated on Smearsett, Yorkshire, to the fourth century AD (King 1978).

In the North York Moors it has been demonstrated that in some places at least prehistoric field boundaries can be traced down hill to the valley bottom where they form the foundations of mediaeval and later boundaries (Spratt pers. comm.). This observation probably applies also to Upper Teesdale but further work is required before this can be proved.

In the foregoing it has been assumed that early farming production in Upper Teesdale was primarily for home consumption and while this is likely to be true for most of the prehistoric period it is probable that the Roman conquest led to demand for cereals, animal products and horses (Manning 1975). Upper Teesdale is some fifteen miles from nearest Roman forts at Greta Bridge and Bowes but even if there was little direct contact the effect of Roman purchasing power must have made itself felt over a wide area. Recent excavations at Stanwick have produced quantities of Roman pottery dating from the first half of the first century AD, earlier than the conquest of the north (Turnbull pers. comm.). The excavator suggests that at this period Stanwick was an '<u>oppidum</u>' of the Brigantes controlling north-south and east-west trade. There is no sign of a money economy in the first century so that the imports of exotic Roman pottery must have been paid for in kind: corn, wool, leather, horses and perhaps slaves, precisely the sort of goods which the dales, including Teesdale could produce in quantity. Perhaps the twelfth century monks of

Rievaulx pasturing their horses in Upper Teesdale were following a much earlier precedent.

The farms of the immediate post-Roman period have not so far been identified. It has already been noted that there is no evidence in the Upper dale for the abandonment of farms and for the forest regeneration which is found elsewhere in the north-east. The eighth century farmers at Simy Folds seem to be continuing in much the same way as their predecessors of the previous two thousand years.

The pollen evidence suggests that the major change from mixed farming to a purely pastoral economy took place in the two hundred years after 1066, but this must be an oversimplification. It is more likely that the farms in the areas for which pollen diagrams are available did revert to pasture and that in some cases there was a change from permanent occupation to summer shieling. The buildings at Simy Folds site 4 and at Yearl Hill for example resemble those of mediaeval shielings in Northumberland and Cumbria (Ramm, McDowall and Meer 1970, Dixon 1980). It is probably at this period that the present day settlement pattern concentrated on the north bank of the river became established. This is a problem which calls for more research and lies outside the scope of this study.

In his comparison of the Parliamentary Enclosures with the enclosures of the bronze age Fowler (op.cit.) asks " ... were they really all peasants ... if not, where is the landed gentry of Enclosure in prehistoric Britain? ..." (p46) Upper Teesdale provides no real evidence to answer this question. But would it be possible to deduce on archaeological grounds alone that 99% of the land of the dale today is owned by two estates, one of which is centred on Staindrop and the other administered from Glamis, Angus?

The houses excavated at sites in Upper Teesdale are those of substantial farmers but they are not in any sense 'great' houses. If there was a prehistoric landed gentry, their seats must be sought elsewhere. It is possible to make some tentative suggestions about 'gentry' though concrete evidence to support these is more difficult to supply. Many of the landed gentry of the Enclosure movement

had acquired their wealth in the East-India Company - an example of the 'prestige goods/external exchange' model for the structure of society. This wealth was then used for the acquisition of land, an acquisition which conferred on its new owners both power and status. Later in the nineteenth century it was the coal and factory owners who used their newfound wealth to the same ends. Rowlands (1980) has presented for the bronze age a very similar hypothesis for a society based on kinship and exchange relationships, in this case largely bronze tools and weapons. It has been suggested above that Stanwick acted as an exchange centre in the early Roman period where prestige goods like Roman pottery could be obtained in return for pastoral products. Political power then is likely to have been centred in prehistoric times as in Anglo-Saxon and Norman times, in lower Teesdale. It is possible however that this is to misinterpret the evidence. Power and status do not necessarily show themselves by the display of ostentatious wealth: Genghis Khan for instance prided himself upon dressing, eating and living exactly like the rest of his subjects. The early inhabitants of Upper Teesdale had one important bargaining counter in their dealings with those who lived in the lower dale - they controlled the route to the West via Miaze Beck and High Cup Nick - and this may well have given them greater status than appears in the archaeological record.

CHAPTER X
Conclusion

In his summary of the history of man in Upper Teesdale, Roberts (1976) asked whether the place name evidence did not suggest that " ... man's hand has always rested relatively lightly on the Upper dale ...". (p141) The previous chapters of this study have demonstrated that in fact the Upper dale was intensively used by early man so that some explanation of the apparent contradiction is called for.

The study of place names is of course a highly specialised field of knowledge but one which has always attracted speculation. The places names of Upper Teesdale have been considered by Embleton (1887), Hull (1920) and Stokoe (1929) and some are also mentioned in the studies of the placenames of Durham County by Mawer (1920) and Watts (1970). This article is not the place for a reconsideration of this material, and the present writer is well aware of his own lack of specialist knowledge in this field. As Reaney (1960,1) points out quite bluntly " ... more nonsense has been written on the subject of placenames than on any other ...". It is however essential to make a few observations on the subject and hope that these are not 'nonsense'.

A study of the six-inch O.S. maps shows that Roberts (op.cit.) was correct in his statement that the majority of Teesdale place names are topographical rather than settlement or personal names. Many of these topographical names include elements of Norse origin as indeed does the general vocabulary of Upper Teesdale. "Gill", "holm", "Carr", "beck", "flat" and others are very common. Hull (op.cit.89) considered that the place names of Upper Teesdale contained sufficient Celtic and Norse elements to show that " ... it was evidently part of the eastern boundary of Strathclyde, held by the Britons till they came under the sway of the Norsemen from the Isle of Man ...". Whatever may be the truth of this theory the absence of habitation and personal names does nothing to confirm it while Watts (op.cit.) makes it clear that "... many of these (gill) names probably belong to the Middle English period when 'gill' like a number of Old Norse topo-

(p261) graphical terms was naturalised into the English dialects...". One place name unconsidered by any of the above authors may possibly have a bearing on the postulated connection between the Upper dale and Cumbria. The isolated settlement of Birkdale (NY 804279) now consisting of one farm only is close to the Maize Beck between Teesdale and the Eden valley. No early spelling of the name appears to be extant and it is usually treated as having a straightforward derivation and signifying 'birch valley'. Whilst this is very probably correct it is difficult to explain why birches should have been so prominent a feature as to be commemorated by a place name. The present local pronunciation of the name is 'Birtle' with the vowel 'i' scarcely sounded. Reaney (1960) when considering the Celtic element in English place names points to the importance of those which contain the Old Norse 'Breta' - 'of the Britons' used chiefly of the Britons of the north-west and Strathclyde. He cites the examples of Birkby 'the village of the Britons' and Briscoe 'the wood of the Britons'. Is it perhaps possible that Birkdale in Upper Teesdale represents a place name of this type? Its situation halfway between the upper Tees and the upper Eden is one where British or Cumbrian influence might well have existed and it is on the direct route probably taken by Norse settlers pushing inland from the west in the tenth century. Without an early spelling of the name no definite conclusions can be reached but the suggestion given above deserves consideration.

In striking contrast with the neighbouring valley of Weardale, Upper Teesdale has no examples of the Middle English 'shield' names denoting the presence of former shielings. The one possible name of this type - if we discount the lost 'Kaveset' (Chapter IX) is Doras Seat (NY 886330) which may incorporate the Norse 'saetr' - a summer pasture. The absence of this type of name may well indicate the absence of the practice to which it refers and, if this is the case, an explanation for this absence is required. Two other features of the settlement pattern also require explanation, the most striking of which is the apparent dichotomy between early and modern settlements. The most important environmental factors affecting settlement are those of climate and geology

which have been discussed in Chapter I. Aspect is also an important consideration: south-facing slopes are usually preferred to north-facing ones because especially in higher latitudes they receive more sunshine. One would expect to find most settlement in Upper Teesdale on the north bank of the river where soils and aspect are more favourable, with a concentration at lower altitudes and a probable upper limit of around 457m. (1500ft.) which is roughly the present treeline. The pattern of existing and recent settlement shown in Fig. 4 is very much as predicted though there are perhaps more farms near and above the 457m. contour than might have been expected. Most of these are to be connected with the growth of lead mining in the eighteenth and nineteenth centuries. When one looks at the distribution of prehistoric and pre-Conquest sites however a different pattern emerges. The 457m. contour still marks the effective upper limit of settlement but despite the disadvantages of a northerly aspect, poorer soil and the physical barrier presented by the outcrop of the whinsill, the remains of early settlement are concentrated to the south-east of the Teesdale Fault.

The simplest explanation for this difference is that mediaeval and modern settlements on the north bank have destroyed all traces of their predecessors which formerly occupied the same sites while that those whose remains survive on the unimproved land of the south bank were always marginal and are best regarded as failed settlements. This in an attractive hypothesis particularly because it cannot be either proved or disproved at present. In the writer's opinion however it is mistaken and if adopted without more evidence than is yet available would present a barrier to our understanding of the true nature of settlement in the Upper dale.

The evidence for early settlement has been discussed in earlier chapters. The material remains from excavated habitation sites are very similar and it would probably be true to say that the lifestyle of the people who lived in them changed very little from the neolithic onwards: they were primarily pastoralists who grew a little corn and from

the late prehistoric onwards worked the local iron ore deposits. No doubt the balance between pasture and arable fluctuated somewhat with the latter being perhaps of more importance during the Roman period but these changes would be of emphasis only, rather than being fundamental. This is of course only to be expected: the conditions imposed by climate and geology on Upper Teesdale have always left few options open to farmers at any period, especially to farmers dependent on their own resources. It must have been essential for them to exploit every possible resource and in order to do this the preferred location for a farm would be at a point where several different environments met. In practical terms this meant that early settlements are likely to have been made at the woodland edge, wherever that happened to be at any particular time. Here access would have been available to both forest and open ground while small arable fields could be created without much difficulty. The clearance of these plots would provide stone for boundary walls and for house foundations while from the forest came that most essential raw material - timber. Pigs could be kept in the denser woodland, cattle browse on the shrubs and bushes at its edge and sheep graze on the open fells. Donkin (1962) writing of Cistercian farming concluded that even at that comparatively late date " ... the cow appears ... to be mainly associated with forest and upland ranges ...". (p42) As woodland was cleared for building materials fences and firing, settlement would follow its retreating edge downhill. Though the habitation sites would have moved the fields themselves would not be abandoned and the amount of open grassland would steadily increase. At times when arable assumed greater importance or when for one reason or another population pressure decreased there would be some forest regeneration. Indeed it is quite possible that when circumstances allowed it such regeneration was actively encouraged. This simplified account, is as we have seen, broadly supported by the pollen evidence.

The sheer quantity of the remains of early settlement on the south side of the river, or rather the south of the Teesdale Fault is important. It seems hardly likely that if field systems as extensive as those on Crossthwaite

Common had existed on the opposite bank they would all have been destroyed by later farming practice. None of the land in Upper Teesdale has been intensively cultivated so that wholesale destruction of sites by the plough is unlikely to have occurred. The fact that several sites do survive on the north bank shows that such destruction has not taken place and it must be concluded that the south bank was the preferred location for early settlement. There are several possible reasons for this. In the first place it has already been suggested that early farmers needed to make use of the variety of resources which were available at the forest edge. The factors of geology and aspect which now give the land on the north side of the fault its desirable characteristics would mean that in prehistoric times its forest cover would be dense and the tree line would be higher. There would probably be little forest-edge zone below 457m. a height above which the growing season become perilously short. It is perhaps significant that the few sites which have been discovered are at altitudes of about 457m. Though dense forest would present many problems and few advantages to prospective settlers it was nevertheless a vital resource.

Previous chapters have shown that at least from the bronze age onwards the available agricultural land was distributed in a highly organised manner. The idea that early farming was a haphazard affair with individuals settling where they pleased and moving on when they pleased is obviously false. A society which was capable of arranging land distribution on the kind of scale apparent in Upper Teesdale (and elsewhere in the Highland Zone) would obviously not overlook the essential resources provided by the forest of the valley floor and north bank and would regulate its exploitation. Whatever socio-political systems were current at different times land use must always have been closely controlled either by agreement or by imposition. For example the establishment of hunting forest by the Normans is documented and though evidence of this kind can never be available for the prehistoric period the new Norman landlords may well have been merely re-defining for their own benefit a system which had been current for millennia. Settlement

in a high resource area like diminishing forest must in particular have always called for strict regulation though the methods by which this was accomplished must have varied.

If the suggestions made above are correct then it should be possible to find similar examples elsewhere. There is in fact one only a few miles to the east. Cockfield Fell (centred on NZ 120250), is an unprepossessing area of common land with many visible remains of early settlement. (Roberts 1975). It is high, exposed and has relatively poor soil. Almost immediately adjacent to it on the south a similar area of good quality farmland has recently been exploited by open-cast coal mining. Both before and during the stripping of topsoil the site was carefully fieldwalked. No evidence whatever for occupation prior to the late mediaeval period was found. The parallel with Upper Teesdale is quite close: early and modern farming settlements have different distributions and it is suggested that probably the Buckhead opencast site was forested until the late mediaeval.

At some time then the settlement pattern in Upper Teesdale changed relatively abruptly: the higher settlements primarily on the south bank were deserted while settlement on the north bank intensified. When and why did this occur? There are only two villages in the Upper dale west of Middleton, Newbiggin and Holwick, and the majority of settlement is dispersed. While dates can be given for the earliest documentary evidence for villages, isolated farms are more difficult. According to Ekwall (1960) 'Holwick' first appears in 1235 and Newbiggin in 1316, though of course both villages may have been in existence for many years before these dates. 'Newbiggin' - the new buildings - however is a fairly common place name and according to Cameron (1961) is post-Conquest in date so that the village itself is likely to have been begun in the thirteenth century expansion of agriculture. The dating clues offered by pollen analysis have already been discussed: apparently cereals ceased to be grown at several upland sites in the post-Conquest period and probably the farmstead themselves

were abandoned. History can provide possible contexts for these occurrences.

After the Christman of 1069 William I having devastated Yorkshire led an army across the Tees northward to the Tyne, west as far as Hexham and returned possibly along the Roman road of Dere Street. Immediately following this Malcolm Canmore, King of Scotland, invaded Durham and Yorkshire by way of Stainmore or Teesdale and was eventually checked at the battle of Hundredskelde which may perhaps be identified with Hunderthwaite near Cotherstone. At some date around 1069 also Count Alan of Britanny was given the vast honour of Richmond which probably included Upper Teesdale south of the Tees. In 1093 Guy Baliol was given the forest of Tees-Dale and Marwood while some twenty years later his son began the building of 'Bernard's Castle'.

These events must have had a traumatic effect on the inhabitants of Upper Teesdale though no documentary evidence is forthcoming. Kapelle (1979) states that in his opinion " ... in Yorkshire (and Durham) the Norman Conquest did not represent the simple substitution of one group of landowners for another ..." and suggests that the Normans were responsible for far-reaching social and economic changes. Bishop (1948) believed that one result of the devastation of the North by William I was a movement of population from the upland dales which was not spontaneous but was initiated and controlled by the new Norman landlords. The creation of hunting forests by the same landlords would provide both constraints and opportunities for the rural population - or what was left of it. So far as landlords were concerned it would have been in their interests to concentrate their tenants and labourers instead of having them widely scattered over the countryside.

That the forests were still in existence and that they were valuable assets is shown by recent finds from the excavation of the castle at Barnard Castle. Here the bones of red deer form the most important part of the bone assemblage and it seems that venison and antler were probably exported from the site. Moreover the bones are from animals of exceptional size indicating that they were from

a forest environment rather than a moorland one (Boland pers. comm.). The precise effects of the Norman Conquest on the inhabitants of Upper Teesdale cannot be determined but the suggestions outlined above seem to offer at least a partial explanation for the observed archaeological facts. They also shed light on the central problem raised by place name studies. If the Norman programme of resettlement led to the abandonment of many upland settlement sites then this in turn may well have led to the disappearance of the very names of the sites leaving only the topographical names of streams, hills, woods and marshes still extant.

The second interesting feature of settlement distribution which is observable on the map (Fig. 5) is the apparent concentration in the region of High Force. The map of stray finds (Fig. 6) shows a similar concentration.

Are these true distributions or do they merely appear to be so? The evidence in favour of the latter point of view is quite straightforward: the writer lived for many years at High Force Hotel and much of the fieldwork on which this study is based was carried out on Sunday afternoons. Thus the distribution of sites can be regarded in terms of site catchment analysis from a base camp with the area within one hours walking distance being the most fully exploited. There is of course some truth in this way of looking at the problem for it has long been recognised that most distribution maps record the distribution of field-workers as well as the objects of their researches. As an explanation however it does not fully satisfy the observed facts: there can be no doubt that there is a concentration of sites within a radius of about 2km. of High Force. These are to be found on both sides of the river but since the fault line at this area runs to the north of the river most sites are still south of the fault line. There are fords across the Tees both upstream and downstream of the falls but these are not sufficiently important to explain the settlements. Proctor (1976)has pointed out that the falls of High Force form an impassable barrier for migratory fish such as salmon and that these fish would form an important source of food. This does not however seem an adequate

reason for the presence of permanent settlements. Is it possible that there was a religious element in the choice of sites? The waterfall of High Force is one of the most impressive in Britain, especially when the river is in flood. The association of water, especially springs and pools, with the numinous is too well documented to need further comment (Ross 1967). Even as late as the middle of the twentieth century the water-goddess or water-sprite of the Tees - Peg Powler - was still remembered. Her name is likely to be connected with the Old English 'pol', Welsh (pwl' - 'deep place in a river', an element which was the source of the form 'pow' found in Scottish and Cumbrian place names and meaning a slow moving stream (Ekwall op.cit.). While there is no evidence that Peg Powler was connected only with the deep pool below High Force it seems possible that originally this was the case. Lynch (1975) has stressed the importance of aesthetic factors in the choice of sites for prehistoric monuments and suggested that in some cases the visual impact of mountains may have been the source of their magical reputation. This may well have been the case with High Force. How important such considerations were in the siting of settlements is impossible to ascertain but the evidence from Upper Teesdale suggests that they played a not inconsiderable part.

One more factor requires comment. Though prehistoric settlements in Upper Teesdale must have been largely self-sufficient they could never have been completely so and one important raw material - flint - was completely absent from the area. Though the source of the flint supply cannot be determined with certainty and may well have changed from time to time it seems likely that it was imported from either the North Yorkshire/South Durham coast or the West Cumbria coast. If the latter was used then the Eden-Maize Beck-Tees route would have been the obvious one for its transport and settlement would be expected to have clustered along this route as indeed it does. If flint was imported rather from the Yorkshire coast then the easist route through Teesdale is along the line of the whin escarpment on the south bank where there are no major tributaries to

form barriers. As flint was replaced by metals the importance of this route would no doubt decline though it never disappeared and remains in use today.

APPENDIX 1

Gazetteer of sites (see Fig. 5)

Name	Archer Rigg Sike	No. 68
NGR	NY 872302	
S & M No.	-	
Height	427m. 1400ft	
Period	-	
C14 date	-	
Type	probably stackstands	
Finds	surface find of single worked flint (no. 22)	
Excavation	-	
Publication	-	
APs	-	
Description	On the north bank of the sike are two structures, one circular and the other sub-rectangular and both raised slightly above the field surface. While they are probably stackstands their position and appearance suggest possible earlier origins.	

Name	Barney Byre	No. 87
NGR	NY 89052805	
S & M No	-	
Height	305m. 1000ft	
Period	uncertain	
C14 date	-	
Type	barrow?	
Finds	-	
Excavation	-	
Publication	-	
APs	Durham University 1769/221A, 222A, 925/026, 027	
Description	Immediately south of the fell wall, west of Barney Byre and at the foot of a steep slope is a large oval hillock measuring some 10m. x 7m. and about 2m. high. While this may be natural it is not easy to account for its presence at this point. Nor is it a situation where one might expect a barrow to have been built, though it appears to be artificial.	

Name	Bellbeaver Rigg	No. 33
NGR	NY 863357	
S & M No.	-	
Height	620m. 2035ft	
Period	Roman?	
C14 date	-	
Type	?	
Finds	-	
Excavation	-	
Publication	de Rance 1873. "On the surface geology of the neighbourhood of Cross Fell in Cumber land". Geological Magazine CX. August '73, 339	
APs	-	
Description	" ... the top of the hill is said once to have been a Roman camp ..." Field inspection of the area shows no evidence for this though it is just possible that air photography might do so.	

Name	Birkdale	No. 3
NGR	NY 804279	Fig. 14:1-5
S & M No.	-	
Height	457m. 1500ft	
Period	Mesolithic?	
C14 date	-	
Type	Flint site, possible camp site	
Finds	Flints	
Excavation	-	
Publication	-	
APs	Bowes Museum AP. 6	
Description	On the east side of Cocklake Sike immediately north of the ford which crosses the sike adjacent to Birkdale farm is a limestone outcrop. On this among the shallow eroding soil several flints including microliths have been found 1953-72.	

Name	Birk Rigg (E)	No. 30
NGR	NY 865279	Fig.43
S & M No.	NY 82 NE 22	
Height	366m. 1200ft	
Period	Prehistoric	
C14 date	-	
Type	Settlement	
Finds	Fragment of stone axe (No. 44)	
Excavation	-	
Publication	-	
APs	-	
Description	A complex of circular and subrectangular foundations between the Green Trod, Fell Dyke and Fell Dyke Syke. Dense bracken makes recognition difficult. Close to the fell dyke is a rectangular foundation c 12m. x 4m. internally aligned N-S consisting of one large and one small room. Underlying the dyke to the east of this is another, c.17m. x 4m. which is much less clearly defined.	

Name	Birk Rigg (W)	No. 31
NGR	Ny 859281	
S & M No.	-	
Height	381m. 1250ft	
Period	Prehistoric	
C14 date	-	
Type	Hut circle?/cairn?	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	A single circular foundation of c3m. interior diameter on the north side of the Green Trod. The south wall overlies the path by about 1.0m. There is no apparent entrance.	

Name	Black Hill (1)	No. 40
NGR	NY 817284	
S & M No.	-	
Height	427m. 1400ft	
Period	Prehistoric	
C14 date	-	
Type	Settlement/camp site	
Finds	-	
Excavation	-	
Publication	-	
APS	-	
Description	On the south side of the Tees along the edge of the bluff lying east of the junction of Maize Beck and the river are three circular foundations, diameters of 4.0m. 4.0m. and 3.0m. with one oval one 8.0m x 6.0m. in a line only a few metres from the river. The walls of these circles are single lines of stones. There are traces of an irregular and ill defined enclosure including these foundations.	

Name	Black Hill (2)	No. 78
NGR	NY 818282	
S & M No.	-	
Height	427m. 1400ft	
Period	-	
C14 date	-	
Type	Shieling?	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	On the edge of a bluff on the west bank of the Tees is a small rectangular foundation enclosed by a fragmentary boundary wall both ends of which meet the river.	

Name	Black Hill Sheepfold	No. 79
NGR	NY 818279	
S & M No.	-	
Height	427m. 1400ft	
Period	-	
C14 date	-	
Type	Shieling?	
Finds	Flints etc. (see finds gazetteer)	
Excavation	-	
Publication	-	
APs	Bowes Museum AP1, 2, 3	
Description	The modern sheepfold partly overlies earlier rectangular structures	

Name	Bleabeck Foot	No. 27
NGR	NY 875280	Fig. 33
S & M No.	NY 82 NE 29	
Height	312m. 1075ft	
Peri od	R.B.?	
C14 date	-	
Type	Enclosed settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	Bowes Museum AP64, 65, 66	
Description	On the east bank of Bleabeck just south of its confluence with the Tees is an enclosure some 30.0m in diameter with 3-6 circular foundations each 4.0 0 5.0m in diameter. All walls are 1.5 - 2.0m thick of large whin boulders. Most of the site is covered by tall heather though this was partially burned in 1977 allowing a rough survey to be made. A trackway from the river bank appears to give access to the site and continues up the hill.	

Name	Bleabeck Washfold	No. 12
NGR	NY 873274	
S & M No.	NY 82 NE 24	
Height	411m. 1350ft	
Period	Post mediaeval and also probably bronze age	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	Adjoining the still extant washfold on the west bank of Bleabeck and north of the access road is a complex of rather faint foundations including one large circular structure c 9.0m. in diameter.	

Name	Bracken Rigg	No. 9
NGR	NY 866282	Figs. 21 & 22
S & M No.	NY 82 NE 23	
Height	381m. 1250ft	
Period	Early/middle bronze age	
C14 date	3180±60bp (HAR 2414)	
Type	Farmstead	
Finds	Flints especially scrapers and including 1 leaf-shaped arrowhead, sherds of coarse pottery from 3 - 6 vessels including one bucket urn	
Excavation	1977 D. Coggins & K.J. Fairless	
Publication	D.U. Arch. Reports (summary) (1978) Full publication pending Durham Arch. J., I (1984) 5-21	
APS	Durham University 925/045-048 1769/230-235	
Description	A large irregular enclosure (0.7ha) occupying the crest and south slope of a morainic ridge on the south side of the river Tees about 1.5km. downstream from Cronkley Bridge. The enclosure walls are of whin boulders. There is a single large circular house foundation (c8.5m. diameter) on the summit of the ridge.	

Name	Bridge House	No. 52
NGR	NY 892285	
S & M No.	-	
Height	290m. 950ft	
Period	Uncertain, possibly mediaeval	
C14 date	-	
Type	Shieling?	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	In the field, immediately south of Bridge House and only some 50m. from it is a single small rectangular foundation of two rooms.	

Name	Buck Riggs	No. 17
NGR	NY 921235 - 916247	
S & M No.	NY 92 SW 5	
Height	411m. 1350ft	
Period	Prehistoric/bronze age?	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	Bowes Museum AP47, 48	
Description	An outcrop of sandstone forms a short steep scree along the 1350 contour for some 300m. At the foot of this (north) is a terrace which is occupied by sub-rectangular and curvilinear enclosures with the foundations of large circular buildings.	

Name	Burnt Scar Sheepfold	No. 88
NGR	NY 932249	
S & M No.	-	
Height		
Period	Prehistoric	
C14 date	-	
Type	Settlement/funerary	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	To the south and west of the sheepfold is a relatively level area with at least eight turf covered cairns, three of which are quite large. To the north are a variety of enclosures occupying the crest and slopes of the hillside. Bracken and scree make recognition difficult. This recently noticed site is likely to be an important one requiring detailed survey and excavation.	

Name	Carley Green	No. 22
NGR	NY 927247	
S & M No.	-	
Height	366m. 1200ft	
Period	Prehistoric	
C14 date		
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	Immediately to the west of the modern allotment wall is a complex of foundations, some curvilinear and some possibly rectangular. They have been much robbed for wall building and are consequently fragmentary and indistinct. The settlement is apparently attached to a reave system.	

Name	Calf Holm	No. 28
NGR	NY 865284	
S & M No.	NY 82 NE 1	
Height	351m. 1150ft	
Period	Prehistoric and post mediaeval	
C14 date	-	
Type	Farmstead(s)	
Finds	-	
Excavation	-	
Publication	-	
APs	Durham University 925/043, 044	
Description	D-shaped enclosure projecting from the foot of a precipitous whinstone cliff on the north bank of the Tees opposite Bracken Rigg and containing at least one circular house foundation. The whole of the 'holm' in the bend of the river is thickly covered by juniper and bracken which hide other enclosures curvilinear and rectangular. H.L. Beadle (pers. comm. 1977) says that his mother told him that as a child she remembers one 'Goat Jimmy' living in Calf Holm (perhaps c. 1890?)	

Name	Carley Green (West	No. 57
NGR	NY 924248	
S & M No.	-	
Height	358m. 1175ft	
Period	Uncertain/prehistoric	
C14 date	-	
Type	Shieling and hut circle	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	Apparently inserted into an offset opening in a long contouring field boundary is a rectangular structure measuring c.10m. x 3m. internally with an entrance in the end gable. A short distance to the west is a single circular foundation c8.0m. in diameter attached to the same field boundary.	

Name	Carr Crags	No. 5
NGR	NY 919319	Fig. 17
S & M No.	-	
Height	610m. 2000ft	
Period	Neolithic/early bronze age?	
C14 date	-	
Type	Ceremonial	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	An outcrop of millstone grit running approximately along from NY 919319 - 924312, the 2000' contour on Newbiggin Common. This has been extensively worked during the 18th/19th century for millstones. At the extreme north west end of this outcrop is a group of rocks bearing large hemispherical basins. These form a key-hole shape around a huge recumbent block. There are two groups of outlying rocks also with basins. In the main group which measured c 80m. x 30m. there are 21 rocks with a total of over 300 basins.	

Name	Cetry Bank (opposite	No. 81
NGR	NY 843298	
S & M No.	-	
Height	381m. 1250ft	
Period	-	
C14 date	-	
Type	Shieling?	
Finds	One flint flake (no. 32)	
Excavation	-	
Publication	-	
APs	-	
Description	Opposite Cetry Bank on the south side of the Tees is a large flat 'holm'. On the edge of the river is a subrectangular building with a small yard.	

Name	Chester Sike West	No. 66
NGR	NY 874309	
S & M No.	-	
Height	457m. 1500ft	
Period	Uncertain	
F14 date	-	
Type	Uncertain	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	In the allotment to the north of the sike are two contiguous circular banked structures c 10m. in diameter which are marked on the OS map as 'Old shafts'. They are not shafts though they may be stackstands or possibly ring cairns.	

Name	Chester Sike East	No. 67
NGR	NY 882302	
S & M No.	-	
Height	381m. 1250ft	
Period	Possibly prehistoric	
C14 date	-	
Type	Hut circle?	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	On a level area to the north of the sike and close to the Ettersgill road is a slight circular earthen bank about 9.0m. in diameter which is reminiscent of those at Bracken Rigg before excavation.	

Name	Cronkley Green	No. 48
NGR	NY 860295	
S & M No.	-	
Height	366m. 1200ft	
Period	Uncertain	
C14 date	-	
Type	Uncertain	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	At the western end of the 'island' of Cronkley Green is an area of small irregular disturbances including the stone foundations of a very small building only about 3.0m. square. There is a local tradition that Cronkley Green was an early burial site (Mr. W. Allinson, Birk Rigg) and it is just possible that the site is an early Christian one.	

Name	Crooks o' Green Fell	No. 56
NGR	NY 903247	
S & M No.		
Height	488m. 1600ft	
Period	-	
C14 date	-	
Type	Enclosure	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	On a fairly steep slope on the side of a gully are the fragmentary walls of a circular enclosure. Apparently associated with this are a short stretch of field boundary and several clearance cairns.	

Name	Crossthwaite Common SE	No. 23
NGR	NY 934247	Fig. 44
S & M No.	NY 92 SW 6	
Height	320m. 1100ft	
Period	Late prehistoric?	
C14 date	-	
Type	Farmstead	
Finds	-	
Excavation	-	
Publication	-	
APs	Bowes Museum AP45, 46	
Description	A roughly circular embanked enclosure c20m. in diameter containing the foundations of a building with two subcircular rooms. There are clearance cairns, field boundaries and lynchets in the immediate vicinity.	

Name	Crossthwaite Common Sheepfold	No. 16
NGR	NY 923251	
S & M No.	-	
Height	320m. 1100ft	
Period	Prehistoric, probably early bronze age	
C14 date	-	
Type	Farmstead	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	Running almost parallel with the water race and slightly south of it are the remains of a field boundary. Appended to the north side of this and taking in a small knoll and the sheepfold is a subrectangular enclosure c100m. square within which lie the foundations of a circular building c9.0m. internal diameter.	

Name	Dineholm Scar	No. 47
NGR	NY 868283	
S & M No.	-	
Height	381m. 1250ft	
Period	Uncertain	
C14 date	-	
Type	Shieling?	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	In a narrow gully at the top of Dineholm Scar is a small penannular structure c4.0m. internal diameter backing onto a whin sill outcrop	

Name	Dry Beck	No. 42
NGR	NY 867278	Fig. 42
S & M No.	-	
Height	360m. 1175ft	
Period	Uncertain/possibly early mediaeval	
C14 date	-	
Type	Farmstead/shieling?	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	On the east bank of Dry Beck and partly eroded by it are two subrectangular foundations within the remains of an enclosure bank and ditch which cut off a bend in the beck. Interior dimensions of the more complete one are c8.0m. x 3.0m. The other was probably slightly larger.	

Name	Easter Beck	No. 59
NGR	NY 904255	
S & M No.	-	
Height	411m. 1350ft	
Period	Prehistoric	
C14 date	-	
Type	Farmstead	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	A large curvilinear enclosure occupies the space between the south bank of Easter Beck and a rock outcrop. Within this and attached to the south wall is a smaller enclosure c 30m. square and within this again a probable circular house foundation. Some 200m. north of the enclosure are two circular found ations c 10m. in diameter.	

Name	Eelbeck Rigg Sheepfold	No. 45
NGR	NY 854265	
S & M No.	-	
Height	442m. 1450ft	
Period	Uncertain	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	To the south of the sheepfold is a complex of rectangular foundations. These are at the eastern end of a field system which extends of Wool Ingles	

Name	Elphatory Allotment	No. 61
NGR	NY 950291	
S & M No.	-	
Height	366m. 1200ft	
Period	Uncertain	
C14 date	-	
Type	Shielding?	
Finds	-	
Excavation	-	
Publication	-	
Description	Near the north-east corner of the allotment, close to the boundary wall and south of the road is a rectangular foundation among thick bracken. There are also traces of enclosure wall.	

Name	Fairy Dell	No. 64
NGR	NY 912262	
S & M No.	-	
Height	328m. 1075ft	
Period	Probably prehistoric	
C14 date	-	
Type	Hut circle	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	To the west of Mill Beck on a small plateau about halfway up the steep slope of the scar is a circular foundation about 6.0m. in diameter.	

Name	Fell Dyke Sike	No. 50
NGR	NY 856283 (centred on)	
S & M No.	-	
Height	396m. 1300ft	
Period	Uncertain	
C14 date	-	
Type	Uncertain	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	A complex of modern and early enclosures and foundations near the spring at the head of the sike (see also metalworking gazeteer). There are also two cairns which may be associated and which seem unlikely to be simply clearance cairns.	

Name	Forcegarth Pasture (North)	No. 24
NGR	NY 875284	Fig. 27 & 28
S & M No.	NY 82 NE 26	
Height	320m. 1100ft	
Period	Romano-British with possibly earlier origins	
C14 date	$1810^{+}_{-}70$bp (HAR 864)	
Type	Enclosed farmstead/settlement	
Finds	Spindle whorl, quern fragments (saddle and rotary), flints, evidence of iron smithing	
Excavation	1972-74 K.J. Fairless & D. Coggins	
Publication	K.J. Fairless & D. Coggins 1980	
APS	Durham University Arch. Dept. 925/031-035 Bowes Museum AP12 - 19	
Description	A D-shaped enclosure on the north bank of the Smithy Sike with walls of whin boulders; the entrance to the east is obscured by a modern field wall. Within the enclosure is a house complex with three circular components, a single circular foundation attached to this and an independent circular building. Outside the enclosure to the N and obscured by later stone tipping are two further circular foundations. There is an extensive field system.	

Name	Forcegarth Pasture (South)	No. 25
NGR	NY 876283	Fig. 29 & 30
S & M No.	NY 83 NE 27	
Height	320m. 1100ft	
Period	Romano-British	
C14 date	1740±90bp (HAR 1447) (earlier phase)	
Type	Enclosed settlement	
Finds	Spindle whorls, querns (saddle & rotary) flints evidence of iron smithing, pottery (inc. Roman)	
Excavation	1974-5 K.J. Fairless & D. Coggins	
Publication	In preparation	
APs	Durham University 925/031-035 Bowes Museum APll, 12, 13, 14, 15 B. Roberts, Geography Department, Durham University	
Description	A Circular Enclosure c40m. diameter set into a south-east facing slope and containing 5 - 7 house positions. It is only c.150m. from the site of Forcegarth Pasture North and is to be considered as a probable successor to this site. The houses, two of which were excavated are slightly ovoid c7m. in diameter and set in an irregular terrace. In one case at least the stone foundations had replaced an earlier ring-groove structure from which the radio-carbon date was derived.	

Name	Grain beck (opposite)	No. 76
NGR	NY 803275	
S & M No.	-	
Height	457m. 1500ft	
Period	Uncertain	
C14 date	-	
Type	Shieling	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	On the south bank of the Tees opposite the point where Grain Beck enters the river are the foundations of a small rectangular building.	

Name	Grain Beck 2	No. 77
NGR	NY 800277	
S & M No.	-	
Height	488m. 1600ft	
Period	Uncertain	
C14 date	-	
Type	Shieling?	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	A short length of walling can be seen on both sides of the beck at a small waterfall. At each end the walling appears to run under peat. In a sheltered cave below the fall is a small subcircular foundation.	

Name	Green Hill	No. 82
NGR	NY 846294	
S & M No.	-	
Height	396m. 1350ft	
Period	Uncertain	
C14 date	-	
Type	Uncertain	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	The modern sheepfold appears to overlie earlier curvilinear structures.	

Name	Grey Folds	No. 69
NGR	NY 893326	
S & M No.	-	
Height	549m. 1800ft	
Period	Uncertain	
C14 date	-	
Type	Uncertain	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	The modern sheepfold at Grey Folds seems possibly to overlie an earlier structure of a different type. The name of the hill to the north-west is Doras Seat which may indicate the former presence of a seater or shieling.	

Name	Hard Hill	No. 85
NGR	NY 727331	
S & M No.	-	
Height	762m. 2500ft	
Period	Mesolithic	
C14 date	-	
Type	Hunting camp	
Finds	Two cattle horn sheaths and 7 flints. The horns are of the narrowly tapering shartply pointed type with circular cross section and are possibly 'bos primigenial'. The flints comprise 2 monoliths and 5 flakes	
Excavation	-	
Publication	G.A.L. Johnson & K.C. Dunham "The Geology of Moor House 1963" 155-7	
APs	-	
Description	Finds made on bare surface of eroded peat.	

Name	Harter Fell (East)	No. 19
NGR	NY 936237	Fig. 23
S & M No.	-	
Height	396m. 1300ft	
Period	Early/late prehistoric	
C14 date	-	
Finds	Barbed and tanged arrowhead (no. 22)	
Excavation	-	
Publication	-	
APs	-	
Description	An irregular oval some 200m. x 90m. occupying the summits of two small knolls and the saddle between them. It appears on the ground as a continuous slight depression with a very low inner bank. At the northern end it overlies a much smaller banked and ditched enclosure about 45m. square. In the saddle between the knolls there are probable house positions.	

Name	Harwood Beck	No. 73
NGR	NY 855301	
S & M No.	-	
Height	381m. 1250ft	
Period	Uncertain	
C14 date	-	
Type	Farmstead?	
Excavation	-	
Publication	-	
APs	-	
Description	The narrow foundations of a rectangular structure with an enclosing yard are visible on an island in the beck.	

Name	High Force Quarry	No. 26
NGR	NY 880290	
S & M No.	NY 82 NE 32	
Height	366m. 1200ft	
Period	Romano-British	
C14 date	-	
Type	Settlement (single house only surviving)	
Finds	Disc quern (no. 56)	
Excavation	-	
Publication	-	
APs	-	
Description	A single circular house foundation c5.0m. internal diameter enclosed by the remnants of a bank and ditch. It occupies a site on a south-west facing slope immediately adjacent to the east face of the now derelict quarry. A few metres north-west is a small (3.5m. diameter) roughly circular platform. There is no trace of field systems. Other buildings in the settlement were destroyed by quarrying in the 1930's.	

Name	High Hag	No. 62
NGR	NY 884289	
S & M No.	-	
Height	335m. 1180ft	
Period	Uncertain, possibly prehistoric	
C14 date	-	
Type	Possible farmstead	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	At the east end of the High Hag pasture are the fragmentary remains of enclosure walls and subrectangular buildings.	

Name	Hind Gate	No. 44
NGR	NY 902269	
S & M No.	-	
Height	351m. 1150ft	
Period	Prehistoric	
C14 date	-	
Type	Hut circle	
Excavation	-	
Publication	-	
APS	-	
Description	In a corrie at the top of a precipitous track up Holwick Scar is a foundation of a single circular building c8.0m. in diameter.	

Name	Holwath	No. 11
NGR	NY 833291	
S & M No.	-	
Height	427m. 1400ft	
Period	Prehistoric	
C14 date	-	
Type	Farmstead/settlement	
Finds	One unworked flint flake from molehill	
Excavation	-	
Publication	-	
APs	-	
Description	About 100m. south (upstream) of Widdybank old sheepfolds is a small morainic mound parallel to the river and overlooking the flat ground of Holmwath. On top of this mound are the stone foundations of two circular buildings of c6.0m. interior diameter. There are also irregular enclosures. Widdybank old fold overlies other irregular enclosures which may well be connected with this site.	

Name	Holwick Castles	No. 38
NGR	NY 899271	Fig. 39
S & M No.	-	
Height	320m. 1100ft	
Period	Early mediaeval	
C14 date	-	
Type	Farmstead	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	The site occupies a tiny saddle between two whin outcrops known as 'the Castles' and immediately south of the Pennine Way footpath. It consists of two subrectangular buildings at right angles to each other and enclosing a small yard (cf. Simy Folds). It is much covered by scree and difficult to decipher. Space is very limited: the ground falls away very steeply to the south and on the north and west are whinstone cliffs.	

Name	Holwick Head	No. 43
NGR	NY 891282	Fig. 46
S & M No.	-	
Height	290m. 950ft	
Period	Uncertain	
C14 date	-	
Type	Farmstead/shieling	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	In a meadow to the east of Holwick Head Bridge and some 100m. from the river is a small D-shaped building within an irregular enclosure and occupying a raised bank (possibly an earlier river bank). Its internal dimensions are c7.0m. x 4.0m.	

Name	Keld Smithy No. 14
NGR	NY 889268 (see Industrial Gazetteer also)
S & M No.	-
Height	411m. 1350 ft
Period	Prehistoric
C14 date	-
Type	Farmstead/settlement
Finds	-
Excavation	-
Publication	-
APs	Durham University 1769/227
Description	A complex of fragmentary enclosure walls, clearance cairns and at least two circular foundations on the east bank of Scar Beck. Since the site occupies a sandstone outcrop it is not easy to differentiate natural features from archaeological ones.

Name	Kirk Arran No. 7
N.G.R.	NY 939238
S & M No.	NY 92 SW 8
Height	381m. 1250ft
Period	Bronze age/iron age
C14 date	-
Type	Funerary
Finds	Urn (now lost)
Excavation	-
Publication	-
APS	-
Description	A clump of conifers on a prominent knoll at the eastern end of Harter Fell marks the site of a large tumulus destroyed in 1804 for stone to build enclosure walls. Inside the cairn was a cist containing an urn with probably a cremation burial. The urn was taken to Streatlam Castle but has been lost for over a century. There is no contemporary account of the destruction but W.R. Bell spoke to eyewitnesses and wrote a letter to The Teesdale Mercury in 1867 on the subject. A slightly different account appears in Whitaker's 'Richmondshire'. (1.142)

Name	Lingy Holm	No. 10
NGR	NY 820281	
S & M No.	-	
Height	427m 1400ft	
Period	Prehistoric (bronze age?)	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	Bowes Museum AP2, 3, 7 (shows area only)	
Description	On the north bank of the Tees below Cauldron Snout, in the narrow holm between the river and Falcon Clints are the boulder foundations of three circular structures with a diameter of c7.0m. They are poorly defined and difficult to recognise among the heather and boulders. Between the foundations and the river the bank seems to have been artificially raised to provide one side of an enclosure.	

Name	Little Dun Fell	No. 32
NGR	NY 704332	
S & M No.	-	
Height	838m. 2750ft	
Period	Roman?	
C14 date	-	
Type	Signal station (probable)	
Finds	-	
Excavation	-	
Publication	G.A.L. Johnson & K.C. Dunham	
	"The Geology of Moor House" 1963, 161	
APS	-	
Description	An A.P. cropmark site. A playing card shaped enclosure at the north end of the crest of Little Dun Fell. The site commands a very extensive view (in clear weather) of the Eden valley to the S & W and north to the wall.	

Name	Meldon Hall	No. 83
NGR	NY 777289	
S & M No.	-	
Height	732m. 2400ft	
Period	Uncertain	
C14 date	-	
Type	Hut circle?	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	Close to the remains of Meldon Hall (an 18th century mine shop) is a circular foundation which while it may be connected with coal mining may possibly be prehistoric.	

Name	Merrygill Holm	No. 2
NGR	NY 831284	
S & M No.	NY 82 NW 2	
Height	400m. 1320ft	
Period	Mesolithic	
C14 date	-	
Type	Flint site, probably camp site	
Finds	Flint and chert flakes and hammerstone (fig. 13)	
Excavation	-	
Publication	-	
APs	-	
Description	On the south bank of the Tees a small inlet c. 5.0m. x 1.5m. had been eroded from an alluvial flat revealing a sandy sub-soil. Artefacts were found in this at various dates in the late 1960's. None has been found since the construction of Cow Green reservoir which has largely prevented flood erosion.	

Name	Methodist Chapel	No. 51
NGR	NY 871295	
S & M No.	NY 82 NE 34	
Height	366m. 1200ft	
Period	Uncertain, possibly prehistoric	
C14 date	-	
Type	Uncertain	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	In the field immediately west of the chapel are two circular features, one on either side of the track. Though they may be stackstands they may be hut circles or cairns.	

Name	Middle Hurth	No. 8
NGR	NY 867308	Fig. 34
S & M No.	NY 83 SE 13	
Height	457m. 1500ft	
Period	Multiperiod	
C14 date	2210±80 bp (HAR 2918) (cremation burial) 1450±110bp (HAR 4456) (turf below bank) 1360±90 bp (HAR 3623) (turf below bank)	
Type	Ceremonial/funerary	
Finds	Flints including microliths, broken perforated stone pebble hammer, broken whetstone	
Excavation	1978, 1979 D. Coggins & K.J. Fairless	
Publication	Durham University Arch. Reports (1978, 2-3) (1979, 2) Full publication in preparation	
APs	-	
Description	The site occupies a level area of limestone just below the Teesdale Court (No. 18). It consists of a long (60m. x 8m.) low irregular mound overlain by a subcircular bank c. 15m. interior diameter. The bank is c.2m. broad and while much of it is of earth in parts there is a double row of stones. It seems probable that there was originally a stone circle surmounting the bank. At one point the bank overlies a slighted cairn which yielded a few remnants of a cremation burial. Flints (c.200) from the long mound are being studied by R. Young. An old turf line beneath the bank gave sufficient plant remains for the C14 dates above.	

Name	Middle Hurth (east)	No. 65
NGR	NY 868308	Fig. 45
S & M No.	-	
Height	457m. 1500ft	
Period	Uncertain	
C14 date	-	
Type	Hut circle/shieling	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	Running east-west across pasture immediately north of the site of Middle Hurth (No. 8) and to the south of a line of shake holes is a field boundary. An irregular subrectangular foundation some 10m. square is attached to this.	

Name	Mill Beck	No. 63
NGR	NY 912263	
S & M No.	-	
Height	305m. 1000ft	
Period	Probably mediaeval	
C14 date	-	
Type	Farmstead	
Finds	Half of the lower stone of a rotary quern was found on top of a modern field wall by L.J. Gidney, 1982.	
Excavation	-	
Publication	-	
APs	Durham University 925/009, 012, 013	
Description	A small group of rectangular buildings associated with field clearance boundaries lies in the south corner of a pasture between the fell dyke and the beck.	

Name	Moor Riggs	No. 29
NGR	Centred on NY 878295	
S & M No.	NY 82 NE 10	
Height	396m. 1300ft	
Period	Prehistoric	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	In the field immediately north of Middle Moor Riggs is a complex of field boundaries and probable circular foundations. These are all much eroded and rather indistinct.	

Name	Mount Pleasant	No. 72
NGR	NY 856303	
S & M No.	-	
Height	381m. 1250ft	
Period	Uncertain	
C14 date	-	
Type	Uncertain	
Finds	-	
Excavation	-	
Publication	-	
APs	Durham University 925/039, 040	
Description	Two subrectangular features which are possibly stackstands.	

Name	New House	No. 74
NGR	NY 859305	
S & M No.	-	
Height	381m. 1250ft	
Period	Uncertain	
C14 date	-	
Type	Cropmarks	
Finds	-	
Excavation	-	
Publication	-	
APs	Durham University	
Description	In rough pasture between New House and the Youth Hostel a large sub-rectangular cropmark appears on the AP. This field is very wet and the marks may be a natural feature but may also represent ditched or moated site.	

Name	Park End	No. 86
NGR	NY 927255	
S & M No.	-	
Height	267m. 875ft	
Period	Uncertain	
C14 date	-	
Type	Farmstead	
Finds	-	
Excavation	-	
Publication	-	
APs	Durham University 925/001 - 004	
Description	In the field to the east of Park End Farm and close to the Holwick road a small knoll of whinstone outcrop is occupied by a complex of subrectangular enclosures.	

Name	Pasture Foot	No. 20
NGR	NY 872280	Fig. 24
S & M No.	-	
Height	313m. 1075ft	
Period	Late prehistoric?	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	Bowes Museum AP 64, 65, 68	
Description	On the south side of the Tees opposite Dineholm quarry is a 'holm' of flat heather covered ground extending from Bleabeck to Dry Beck and bounded on the south by Whileholm Bank Scar. A small sike traverses this area and to the north of this is a complex of large and small circular foundations, fragmentary enclosure wall and one large rectangular building. The site extends for over 100m. and because it is thickly strewn with whinstone boulders is difficult to interpret.	

Name	Pasture Foot (north)	No. 39
NGR	NY 870281	Fig. 47
S & M No.	NY 82 NE 25	
Height	312m. 1075ft	
Period	Uncertain	
C14 date	-	
Type	Shieling?	
Finds	-	
Excavation	-	
Publication	-	
APs	Bowes Museum AP 68	
Description	The site, marked 'old fold' on the 6" map is a rectangular foundation on the south bank of the Tees opposite Dineholm quarry and only c. 10m. from the river. A cross partition divides it into two rooms; the western (6.0m. x 4.5m. interior) is better built with walls of whin boulders c. 1.0m. thick. The eastern room (7.0m. x 4.5m.) is less well defined. There is an entrance in the east gable protected	

by a doorway on the north side. Corners, internal and external seem to be rounded. There seems to be no associated field system but some evidence for clearance.

Name	Pinshot Currack	No. 46
NGR	NY 879265	
S & M No.	-	
Height	450m. 1475ft	
Period	Uncertain	
C14 date	-	
Type	Shieling?	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	A single very small rectangular foundation close to the water race.	

Name	Rough Riggs	No. 58
NGR	NY 911250 (centred on)	
S & M No.	-	
Height	396m. 1300ft	
Period	Prehistoric	
C14 date	-	
Type	Enclosure and possibly farmstead	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	A large enclosure c. 100m. square. In the interior attached to the south boundary wall are two large circular foundations.	

Name	Rough Rigg (west	No. 53
NGR	NY 913254	
S & M No.	-	
Height	366m. 1200ft	
Period	Uncertain, possibly early mediaeval	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	A group of four large rectangular foundations lies close to a spring. The walls of the buildings are very thick. The settlement is unenclosed but lies within a field system with clearance cairns.	

Name	Sand Sike	No. 76
NGR	c. NY 830308	
S & M No.	-	
Height	457m. 1500ft	
Period	Uncertain	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	Several small rectangular foundations on the north bank of the sike.	

Name	Sill Riggs	No. 71
NGR	NY 859307	
S & M No.	-	
Height	381m. 1250ft	
Period	Uncertain	
C14 date	-	
Type	Uncertain	

Finds	-
Excavation	-
Publication	-
APs	Durham University 925/038, 041
Description	A small circular foundation at the north west end of the field.

Name	Simy Folds 1	No. 34
NGR	NY 889276	Figs. 35 & 38
S & M No.	NY 82 NE 32	
Height	366m. 1200ft	
Period	Early mediaeval overlying prehistoric (probably bronze age)	
C14 date	1210±80 bp (HAR 4034) 2330± bp (HAR 4034)	
Type	Farmstead/smithy	
Finds	Iron, smithing debris, prehistoric pottery	
Excavation	1979 and 1981. D. Coggins, K.J. Fairless and C. Batey	
Publication	D. Coggins, K.J. Fairless & C. Batey, 1983. Durham University Arch. Reports 1979, 20-21; 1981, 38-42.	
APs	Durham University 925/025, 028, 029, 030, 049 - 056 Bowes Museum	
Description	Most easterly of four sites occupying a limestone/shale terrace in the area of Holwick Fell known as 'The Bands'. Space severely limited by steep slopes to N, E. & S. One rectangular and one subrectangular building at right angles to each other and forming two sides of a small yard. Smithing hearth in rectangular building.	

Name	Simy Folds 2	No. 35
NGR	NY 888277	Figs. 35 & 36
S & M No.	NY 82 NE 32	
Height	366m. 1200ft	
Period	Early mediaeval	
C14 date	1170±70 (HAR 1898)	

Type	Farmstead
Finds	Spindle whorl, iron spear ferrule
Excavation	1976, 1981
Publication	Forthcoming
APs	As Simy Folds 1, also Bowes Museum AP 23, 24, 61, 62
Description	One narrow rectangular building with a second smaller subrectangular building at right angles to it, forming two sides of a yard. A third smaller building lies parallel to the second a few metres away.

Name	Simy Folds 3	No. 36
NGR	NY 887277	Figs. 35 & 37
S & M No.	NY 82 NE 32	
Height	366m. 1200ft	
Period	Early mediaeval/mediaeval?	
C14 date	-	
Type	Farmstead	
Finds	-	
Excavation	1981 (south annexe only)	
Publication	Forthcoming	
APs	As Simy Folds 1 & 2 and Bowes Museum 20, 21, 22, 25	
Description	The largest of the four sites and the one given the name Simy Folds on the OS map. Like site 2 it consists of three buildings and a yard but here arranged more spaciously. It is overlaid by tumbled stone walls possibly of a later sheepfold. To the south and north of this enclosure are annexes which appear on the surface as circular. Excavation of the southern one showed it to be rectangular with massive walls.	

Name	Simy Folds 4	No. 37
NGR	NY 884278	Figs. 35 & 41
S & M No.	NY 82 NE 32	
Height	366m. 1200ft	
Period	Prehistoric/mediaeval?	
C14 date	-	
Type	Farmstead/shieling	

Finds	Late prehistoric pottery and flints from fieldwalking
Excavation	-
Publication	-
APs	-
Description	The most westerly of the four sites, revealed only after heather burning 1976. Consists of a section of massive field boundary, one subrectangular foundation c. 10m. x 5m. and one possible circular one. There is also a long narrow rectangular building c. 13m. x 4m. subdivided into three rooms.

Name	Skue Trods	No. 80
NGR	NY 84902905	
S & M No.	-	
Height	411m. 1350ft	
Period	Uncertain	
C14 date	-	
Type	Farmstead	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	A curvilinear enclosure and hut circle on the east side of Skue Trods sike.	

Name	Skyer Beck	No. 84
NGR	NY 867291	Fig. 45
S & M No.	-	
Height	335m. 1100ft	
Period	Prehistoric	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	Between Skyer Beck, the Tees and the	

east end of Bracken Rigg is a complex of field boundaries, clearance cairns and circular foundations. Juniper scrub makes recognition difficult.
One feature is an almost circular structure of whin boulders 7m. x 6m. with an internal diameter of 3.0m. and walling standing 1.0m. high. There is no apparent entrance. Attached to this is a slighter subrectangular structure c. 10m. x 6m. with a porch at the opposite end.

Name	Staple Crag	No. 1
NGR	NY 903278	Fig. 11
S & M No.	NY 92 NW 16	
Height	259m. 850ft	
Period	Mesolithic (early and late)	
C14 date	-	
Type	Flint site, probably settlement	
Finds	c. 200+ flint and chert flakes (worked and unworked cores etc.	
Excavation	-	
Publication	In preparation (D. Coggins & R. Young)	
APs	-	
Description	On the south side of the river Tees about 200m. downstream from Wynch Bridge an outcrop of whin projects into the river. Immediately downstream of this the bank has been eroded by floods, rabbit burrows and by picnickers forming an edge c. 14m. long and 1.5m. high (maximum). The section reveals alluvium overlying stone and gravel. Beneath this is a layer of sand with flecks of charcoal. The area between this bank and the river has produced many flints including microliths. It is not clear from which layer these are derived but it is likely that they are from the gravel.	

Name	Stone Houses Sheepfold	No. 15
NGR	centred on NY 908252	
S & M No.	-	
Height	411m. 1350ft	
Period	Prehistoric?	

C14 date	-
Type	Settlement
Finds	-
Excavation	-
Publication	-
APs	Bowes Museum AP 52
Description	The modern sheepfold is the focal point of a complex of curvilinear enclosures with D-shaped, subrectangular and circular foundations extending over an area of some 300 x 200m.

Name	Strands Gill	No. 4
NGR	NY 902267	Fig. 15
S & M No.	NY 92 NW 25 (find no.)	
Height	358m. 1175 ft	
Period	Neolithic?	
C14 date	-	
Type	Farmstead	
Finds	Broken stone axe	
Excavation	Partial excavation 1955 by D. Coggins discontinued because of interference	
Publication	Forthcoming (axe only) S. Clews	
APs	University of Durham Arch. Dept. 4/3, 4, 7	
Description	A complex site on top of Holwick Scars beside Blackmea Crag Sike. It consists of one large (about 85m. x 40m.) field and two very small ones enclosed by clearance banks. The principal features are a large cairn with a partial kerb, about 8.0m. in diameter, a subrectangular foundation about 8.0m. x 4.0m. and a subcircular foundation 7.0m. x 5.0m. A modern sheepfold covers another probably early feature. The site was planned in 1955 but is now seen to be much more extensive continuing for some distance to the south	

Name	Tarn Rigg Fold	No. 49
NGR	NY 851290	
S & M No.	-	
Height	411m. 1350ft	

Period	Probably prehistoric
C14 date	-
Type	Farmstead
Finds	-
Excavation	-
Publication	-
APs	-
Description	Close to the sheepfold on top of Tarn Rigg are several indistinct foundations including one large circle.

Name	Teesdale Cave (Malkins Cave) No. 18
NGR	NY 867311-869311
S & M No.	NY 83 SE 11
Height	488m. 1600ft
Period	Prehistoric (poss. iron age) - modern
C14 date	-
Type	Cave site
Finds	Animal bones and one human skeleton (in Yorkshire Museum)
Excavation	1878-85, 1967-71
Publication	J. Backhouse 1898. C. Sims 1971
APs	-
Description	An extensive cave system in the Great Limestone, the entrance parts of which have been destroyed by quarrying. Finds from the earlier excavation were re-examined by Sims who gives a complete list of species. These probably accumulated over a long period but includ wild pig, wolf, bear, deer, game birds and domestic species. A wolf cranium excavated by Sims contained silt which yielded pollen which was examined by Dr. Turner who reported it as 'a typical Zone VIII assemblage' and therefore probably post 1200BC. Because of the presence of oats she considered it was probably later than this.

Name	Unthank Scars	No. 41
NGR	centred on NY 919259	Fig. 51
S & M No.	-	

Height	290m. 1000ft
Period	Uncertain
C14 date	-
Type	Settlement?
Finds	-
Excavation	-
Publication	-
APs	-
Description	About 200m. southwest from Unthank bridge n the crest and slope of a very steep scree-covered hillside is a group of long narrow rectangular foundations and one oval one. A track giving access to them is very prominent immediately south of the bridge.

Name	Water Race	No. 60
NGR	NY 911258 (centred on)	
S & M No.	-	
Height	351m. 1150ft	
Period	Prehistoric?	
C14 date	-	
Type	Enclosure	
Excavation	-	
Publication	-	
APs	-	
Description	A very large enclosure c. 0.6km. x 0.4km. subdivided into several fields. The northern boundary wall has probably been destroyed by the water race. It has clearance cairns, rectangular buildings (no. 53) and small enclosure with circular foundations.	

Name	White Earth	No. 6
NGR	NY 906263 - 909260	Fig. 44
S & M No.	-	
Height	360m. 1175ft	
Period	Uncertain	
C14 date	-	
Type	Settlement	
Finds	One sherd of probably beaker pottery	

	(see finds No. 41)
Excavation	One small rectangular hut excavated D. Coggins c. 1960
Publication	-
APs	Durham University 925/057, 058
Description	A complex of large and small subrectangular foundations contouring field boundaries, and clearance cairns extending along a bench between Eel Beck and Rowton Beck with one foundation to the west of the latter.

Name	Willy Brig Sike	No. 54
NGR	NY 916254	Fig. 49
S & M No.	-	
Height	351m. 1150ft	
Period	Probably early mediaeval	
C14 date	-	
Type	Farmstead	
Finds	-	
Excavation	-	
Publication	-	
APs	-	
Description	On a knoll at the junction of two sikes is a small farmstead of the Simy Folds type i.e. with two rectangular buildings at right angles to each other and enclosing a small yard.	

Name	Willy Brig Sike (south)	No. 55
NGR	NY 916254	
S & M No.	-	
Height	351m. 1150ft	
Period	Uncertain	
C14 date	-	
Type	Shieling	
Finds	-	
Excavation	-	
Publication	-	
APs	-	

Description	Close to the previous site (no. 54) but on the south side of the sike is a single rectangular foundation.

Name	Winch Bridge	No. 21
NGR	NY 901279	Fig. 25
S & M No.	-	
Height	266m. 875ft	
Period	Late prehsitoric/Romano British	
C14 date	-	
Type	Enclosed settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	University of Durham 925/017, 024; 4/1, 2; 1769/218, 219, 223A	
Description	On the south bank of the Tees about 0.4km. west of Winch Bridge is a complex site consisting of one rectangular and several long narrow irregular ones and a large curvilinear enclosure containing at least three circular buildings attached to the walls. There is also one independent circular foundation with a rectangular annexe. The area round the site contains several field clearance cairns. The site occupies a large rough pasture with many whin outcrops, some of which are incorporated into the enclosure walls. It also extends eastward into meadowland.	

Name	Wool Ingles	No. 13
NGR	NY 882271	
S & M No.	NY 82 NE 30	
Height	427m. 1400ft	
Period	Prehistoric? (possibly Romano-British)	
C14 date	-	
Type	Settlement	
Finds	-	
Excavation	-	
Publication	-	
APs	Durham University 4/5, 6, 8	

1769/225; 171/23, 31-33

Description — A large site with collapsed walls of grey sandstone. It consists of a circular enclosure c. 40m. in diameter attached to a large subrectangular one with sides of c. 100m. Inside the circular enclosure are the foundations of at least three circular buildings. There is an entrance to the NE approached by a short funnel. The east and south walls of the sub-rectangular enclosure are on the crest of a short but very steep slope and could conceivably be defensive. Recognition of features is made difficult by the outcropping sandstone.

Name	Woolpitts Hill	No. 70
NGR	NY 875306	
S & M No.	-	
Height	456m. 1500ft	
Period	Uncertain	
C14 date	-	
Type	Uncertain	
Finds	-	
Excavation	-	
Publication	-	
APs	-	

Description — In the field to the west of the farmhouse is the foundation of a circular structure c. 10m. in diameter which though it may be a post-mediaeval stackstand is possibly much earlier.
(see Archer Rigg Sike and Chester Sike east).

Name	Yearl Hill	No. 89
NGR	NY 872289	Fig. 40
S & M No.	-	
Height	-	
Period	Possibly mediaeval	
C14 date	-	
Type	Farmstead	
Finds	-	
Excavation	-	
Publication	-	

APs -

Description On a small shelf sheltered by a whinstone outcrop on the northern edge of the Knotts is a small farmstead. It consists of a rectangular building about 14m. x 5m. with two rooms and a porch. The single entrance is in the south facing long wall and in front of the house is a small enclosed yard. A few metres away are the remains of two small irregular buildings and a cairn.

APPENDIX 2

Gazetteer of Stray Finds

Find spot:	Archer Rigg Sike	No. 22
NGR	NY 872302	Object: Flint flakes
Date/Finder	c. 1970 D. Coggins	Location: The Bowes Museum
Mus. No.		Fig. 14:13 and 17
Publication	-	
Further details	A flake of grey flint and a rough arrowhead found on the surface of a possible stackstand.	

Find spot:	Barney Byre	No. 25
NGR	NY 8905 2805	Object: Flints
Date/Finder	1979 D. Coggins	Location: The Bowes Museum
Mus. No.		Fig. 14:9 and 10
Publication	-	
Further details	One core of blue grey flint and one point of cream/white flint found in molehills.	

Find spot:	Birk Rigg	No. 39
NGR	NY 865279	Object: Flake from polished axe
Date/Finder	1977 D. Coggins	Location: The Bowes Museum
Museum No.		Fig.
Publication	-	
Further details	A thin flake of grey stone c. 50mm. x 35mm. found in a rabbit burrow. One surface is polished and slightly convex. It is probably from a group VI (Langdale) axe.	

Find spot:	Black Hill Sheepfold	No. 15
NGR	NY 818279	Object: Two flakes of flint
Date/Finder	c. 1975	Location: The Bowes Museum
Mus. No.		
Publication	-	
Further details	Two flakes of flint, one worked, found in the waste material from a rabbit burrow.	

Find spot:	Bowes Close	No. 35
NGR	NY 834324	Object: flint axe
Date/Finder:	c. 1950	Location: The Bowes Museum
Mus. No.	1958.1802	Fig. 16:3
Publication:	Clews (forthcoming)	
Further details:	Grey-white flint 93mm. x 45mm. Only the edge is polished. It was found by Raby Estate workers beneath the floor of the house of Bowes Close.	

Find spot:	Bowlees	No. 51
NGR	NY 9085 2893	Object: stone axe
Date/Finder:	1956	Location: The Bowes Museum
Mus. No.	1958.1890	Fig. 16:2
Publication:	Clews (forthcoming)	
Further details:	The axe was found in August 1956 by Mr. J. Hutchinson a Raby Estate forester in the roots of an overblown tree. 'Bridlington' type round in section with pointed butt. 150mm. long x 45mm. broad. Group 1 (Cornish) stone.	

Find spot:	Brockholm	No. 59
NGR	NY 848296	Object: flint nodule
Date/Finder:	26.4.59	Location: collection of finder, Dr. G.A.L. Johnson, Geology Dept. Durham University
Mus. No.		
Publication	-	
Further details:	Found in river.	

Find spot:	Cauldron Snout	No. 33
NGR	NY 8140 2875	Object: 'jadeite' axe
Date/Finder:	1910	Location: Whitby Museum
Mus. No.		
Publication	Wooler (1910)	
Further details:	Found on 9 May 1910 about 200 yards above where the falls start out of	

the Weel on N. bank embedded in dark coloured clay 5' - 6' below the surface. 'The axe has been polished and measures 6½ inches long x 2 7/8 inches broad at one end tapering to the other. Its thickness in the middle is 1 3/8 inches, sharp at the edges, all round and weighs 12½ ozs.

Find spot:	Cetry Bank (opposite)	No. 31
NGR	NY 843298	Object: flint blade
Date/Find34:	c. 1965 D. Coggins	Location: The Bowes Museum
Mus. No.		Fig. 14:11
Publication:		
Further details:	A broken blade of mottled cream flint found in the south bank of the Tees beside an enclosure.	

Find spot:	Coldberry End	No. 3
NGR	NY 829357	Object: horn
Date/Finder:		Location: Durham University
Mus. No.		
Publication:	Johnson & Dunham, 1963.	
Further details:	A single well preserved horn was found in the side of an eroding mound of peat about 4 feet below the surface. It is oval in cross-section, helically spiral, flat sided and rather bluntly pointed. Its length (outside curvature) is 500mm. The horizon in which it was found is probably pollen zone VIIb.	

Find spot:	Cow Green	No. 13
NGR	NY 813294	Object: flint flakes
Date/Finder:	c. 1969	Location: The Bowes Museum
Mus. No.		
Publication:		
Further details:	Five small fragments of white patinated flint found among peat on the north bank of the Weel. The site is now submerged by Cow Green reservoir.	

Find spot:	Cronkley Scar	No. 14
NGR	probably c. NY 840295	Object: flint arrowhead
Date/Finder:	1923 Mr. Nevison, Barnard Castle	Location: The Bowes Museum
Mus. No.	1958.1811	Fig. 17:3
Publication:		
Further details:	A barbed and tanged arrowhead of grey flint found at the foot of the scar.	

Find spot:	Dineholm Quarry	No. 45
NGR	NY 872282	Object: bronze flanged axe
Date/Finder:	c. 1945	Location: The Bowes Museum
Mus. No.	1958.1839	
Publication:	Jones (1978)	
Further details:	A flanged axe found in the overburden at Dineholm Quarry by Mr. T. Nixon. 142mm. long x 49mm. wide. Corroded and worn. Has been broken (in recent times) and repaired.	

Find spot:	Dineholm Quarry	No. 54
NGR	NY 872282	Object: disc quern
Date/Finder:	1934	Location: uncertain
Mus. No.	2.6.37	
Publication:		
Further details	Donated to The Bowes Museum by Lord Barnard in 1937. No dimensions were given and it cannot now be traced though it may be identified with an unlabelled stone in the collection. 540mm. diameter x 80mm. thick.	

Find spot:	Fairy Dell	No. 23
NGR	near NY 913262	Object: flint scraper
Date/Finder:	1932	Location: The Bowes Museum
Mus. No.	1958.1813	Fig. 14:18
Publication		
Further details:	A large discoidal 'scraper' of grey	

mottled flint was found on a mole-heap by Mr. Wm. Lee of Newbiggin who gave it to the museum. Though catalogued as a 'scraper' it is not one, most closely resumbling a small pebble tool of Lower palaeolithic type though it is more likely to be a core. It has a carefully prepared striking platform but the flakes which have been detached are irregular. There is some evidence of polish on one edge which is sharp and robust.

Find spot:	Fairy Dell	No. 50
NGR	NY 913264	Object: quernstone
Date/Finder:	July 1982	Location: The Bowes Museum
Mus. No.		
Publication:		
Further details:	Half of the bottom stone of a millstone grit rotary quern was found used as a coping stone on the fell wall at Fairy Dell by L.J. Gidney while field walking.	

Find spot:	Fendrith Hill	No. 4
NGR	NY 878338	Object: horn and flints
Date/Finder:		Location: unknown
Mus. No.		
Publication:	Stevens (1970)	
Further details:	"... bos horn and flint implements found ...." It has not so far been possible to find further information.	

Find spot:	Forcegarth Farm	No. 56
NGR	c. NY 875286	Object: quern
Date/Finder:	1946	Location: The Bowes Museum
Mus. No.	1958.1464	
Publication		
Further details:	Found by Mr. E.R. Beadle when ploughing the field immediately NW of the site of Forcegarth North. Diameter 585m. thickness 50mm. Retains the remnants of iron handles. A broken stone found at the same time was given to a friend of Mr. Beadle's and cannot now be traced.	

Find spot:	Great Dun Fell	No. 8
NGR	NY 723320	Object: flint flake
Date/Finder:		Location: Geology Department, Durham University
Mus. No.		
Publication	Johnson & Dunham (1963)	
Further details:	A single worked flake of flint, probably not in situ. It is thick and irregular in form, grey-buff mottled with traces of white patination at one end. One side of the tip shows signs of use.	

Find spot:	Hagworm Hill	No. 58
NGR	c. NY 864246	Object: quern
Date/Finder:	c. 1954	Location: unknown
Mus. No.		
Publication		
Further details:	The top stone of a bun quern was found c. 1954 by a geology student in a peat bog. It was seen by the writer at the time of discovery but no other information is known.	

Find spot:	Hard Hill	No. 1
NGR	c. NY 728332	Object: horn
Date/Finder:		Location: Durham University
Mus. No.		
Publication:	Johnson & Dunham (1963)	
Further details:	A single hornsheath was found on bore peat near the top of the north slope of Hard Hill. It is small, obtusely tapering blunt pointed, flat sided and has a sub-circular cross section.	

Find spot:	Harter Fell	No. 21
NGR	uncertain c. 9224	Object: arrowhead
Date/Finder:	1877	Location: The Bowes Museum
Mus. No.	1958.1810	Fig. 17.5
Publication;		
Further details:	A large well-made barbed and tanged	

arrowhead which was given to the Museum by Mr. Tarn of Step Ends Farm c. 1950, having been found many years previously in a mole heap. It is pinkish-grey in colour and is not flint.

Find spot:	Harter Fell	No. 43
NGR	NY 937237	Object: barbed and tanged arrowhead
Date/Finder:	1982 K.J. Fairless	Location: The Bowes Museum
Mus. No.		Fig. 17:1
Publication:		
Further details:	A small barbed and tanged arrowhead of white patinated flint was found on a mole heap within a defensive banked and ditched enclosure on Harter Fell.	

Find spot:	High Force	No. 17
NGR	NY 8840 2915	Object: flint scraper
Date/Finder:	c. 1965 D. Coggins	Location: The Bowes Museum
Mus. No.		Fig. 14:7
Publication:		
Further details:	An end scraper with very steep retouch on a thick flake of dark grey mottled flint was found when a pasture was ploughed.	

Find spot:	High Force	No. 18
NGR	uncertain	Object: flint scraper
Date/Finder:	uncertain	Location: The Bowes Museum
Mus. No.	1958.508	Fig. 14:12
Publication:		
Further details:	A blade of mottled grey flint was found 'near High Force' by Mr. Raine of Eggleston. who donated it to the Bowes Museum. Traces of cortex can be seen at one end with a bulb of percussion at the other end. The edges are sharp and there is no sign of re-touch.	

Find spot:	High Force	No. 19
NGR	NY 887287	Object: flint flakes
Date/Finder	c. 1975 and 1977 D. Coggins	Location: The Bowes Museum
Mus. No.		Fig. 14:8
Publication		
Further details	Two struck flakes, one a mottled grey blade, the other white patinated were found in moleheaps at the same location. Only the first is illustrated.	

Find spot:	High Force	No. 48
NGR	probably NY 888286	Object: bronze coins
Date/Finder:		Location: The Bowes Museum
Mus. No.	1958/1566-1578	
Publication:	Bell (1870) Backhouse (1896) Taylor & Collingwood (1929)	
Further details:	Hoard of 13 brass coins mostly Constantine I found in a small quarry below High Force. A spearhead and 'horseshoe' (since lost) were also found.	

Find spot:	High Force Quarry	No. 55
NGR	NY 879289	Object: quern stones
Date/Finder:	1932	Location: unknown
Mus. No.	67.37	
Publication:		
Further details:	A pair of quern stones - possibly of lava - was presented to The Bowes Museum in 1937 by Lord Barnard. No dimensions were given. They can not now be traced.	

Find spot:	High Tees	No. 12
NGR	NY 768338	Object: flint flake
Date/Finder:	c. 1970	Location: The Bowes Museum
Mus. No.		Fig. 14:12
Publication:		
Further details:	A single blade of buff coloured flint was found in two pieces among gravel on the north bank of the Tees.	

Find spot:	Holme Field	No. 26
NGR	NY 887284	Object: flint flakes
Date/Finder:	c. 1970	Location: The Bowes Museum
Mus. No.		Fig: 14:14,15,16
Publication:		
Further details:	Three struck flakes, two of grey flint, one of black chert, found at various times and places after ploughing.	

Find spot:	'Holwick'	No. 42
NGR	unknown	Object: jet beads
Date/Finder:	1867	Location: The British Museum
Mus. No.	1879:1720 and 1721	Fig. 18.1
Publication:		
Further details:	'found with many others forming a necklace in a barrow'. Two flat trapeze shaped jet spacer beads each pierced by three transverse holes and decorated with a lozenge pattern of perforations.	

Find spot:	'Holwick'	No. 60
NGR	probably about NY 905270	Object: stone spindle whorl
Date/Finder:	1955	Location: The Bowes Museum
Mus. No.	1958:1663	Fig. 19:2
Publication:		
Further details:	No details of the find are known. The spindle whorl is of grey slatey stone. 45mm. diameter x 4mm. thick. One side is decorated with incised radial lines and dots. It was presented to the Museum by Mr. J. Brown, agent to the Earl of Strathmore.	

Find spot:	Holwick	No. 61
NGR	c. NY 904271	Object: stone with perforations
Date/Finder:	c. 1978	
Mus. No.		
Publication:		
Further details:	Found by Mr. A. Mason when a ditch was	

being dug across a field. It is a small boulder of mollstone grit measuring 200mm. x 160mm. x 1400mm. In one face is a pecked hole 50mm. in diameter x 100 mm. deep. Its use is unknown and it does not seem to have been used as a socket for a doorpost.

Find spot:	Hudeshope Beck	No. 44
NGR	uncertain	Object: bronze flanged axe
Date/Finder:	1927 E.C. Surtees	Location: The Bowes Museum
Mus. No.	1958:1838	
Publication:	Cowan (1936) Jones (1978)	
Further details:	Flanged axe found in Hudeshope Beck. 175mm. long, 63mm. broad at cutting edge. In good condition.	

Find spot:	Jack Scar Cave	No. 46
NGR	NY 948275	Object: bronze spearhead
Date/Finder:	1968	Location: The Bowes Museum
Mus. No.	L/2/2	
Publication:	Jones (1978)	
Further details:	Plain socketed pegged L.B.A. spearhead 300mm. long, 50mm. wide. In good condition with part of wooden shaft still in place. Found by a schoolboy exploring the cave.	

Find spot:	Keedholme Scar	No. 27
NGR	c. NY 884284	Object: flint blade
Date/Finder:	1980	Location: collection of finder: Mr. S. Hodgson, Barnard Castle.
Mus. No.		
Publication:		
Further details:	A small blade of translucent brown flint found on the footpath between Holwick Head and High Force.	

Find spot:	Loppyside Mine	No. 9
NGR	NY 721323	Object: microlith
Date/Finder:		Location: Geology Department, Durham University
Mus. No.		
Publication:	Johnson & Dunham (1963)	
Further details:	A single fragmentary microlith of blue grey opaline flint was found out of place in a small water channel.	

Find spot:	Bog Hill	No. 10
NGR	NY 766328	Object: microlith
Date/Finder:		Location: Geology Department, Durham University
Mus. No.		
Publication:	Johnson & Dunham (1963)	
Further details:	A single microlith was found, not in situ It is of grey buff mottled flint without patination and broken at one end. It is a small scalene triangle of Clark's (1956) type 46 with much fine working on two sides and slight working on the third.	

Find spot:	Mickle Fell	No. 20
NGR	uncertain	Object: flint arrowhead
Date/Finder:		Location: The Bowes Museum
Mus. No.	1958:1812	Fig. 17:2
Publication:		
Further details:	A barbed and tanged arrowhead of grey flint was found at some unrecorded place on eroding peat on Mickle Fell.	

Find spot:	Middle End Moor	No. 7
NGR	possibly NY 985305 exact find spot unknown	Object: horn
Date/Finder:	c. 1960	Location: unknown
Mus. No.		
Publication:		

Further details: The base of a massive hornsheath was found in a peatbog on Middle End Moor by a beater. It bore traces of charring and cutting. It was sent for identification to Durham University and from there was deposited in Sunderland Museum. It can not now be found.

Find spot:	Middleton (no exact spot)	No. 38
NGR		Object: whinstone axe
Date/Finder:	c. 1960	Location: The Bowes Museum
Mus. No.		Fig. 16:5
Publication:	Clews (forthcoming)	

Further details: Found by Mr. F. Nevison of Barnard Castle while fishing in the Tees near Middleton. 'Scandinavian' type, rectangular in section, with flat edges and convex faces. 127mm. long x 54mm. broad x 28mm. thick. Highly polished and in excellent condition.

Find spot:	Netherhearth Flats	No. 2
NGR	NY 746314	Object: horn
Date/Finder:		Location: Durham University
Mus. No.		
Publication:	Johnson & Dunham (1963)	

Further details: "A single hornsheath washed out of deep peat and much eroded. Its narrowly tapering shape and sharply pointed tip suggest that it may be Bos Primigenius. Pollen analysis of the peat suggests that the horn belongs to the zone VI/VIIa transition".

Find spot:	uncertain, possibly Newbiggin	No. 57
NGR		Object: quern
Date/Finder:	prob. 1930's	Location: "Fairy Dell View", Newbiggin
Mus. No.		
Publication:		

Further details: Found by Mr. W. Lee but no record of find spot. Diameter 340mm., height 115mm.,

'hopper' diameter 130mm., two side holes at right angles for handles.

Find spot:	Ore Carr	No. 40
NGR	about NY 884276	Object: discoidal scraper
Date/Finder:	c. 1980	Location: Darlington Museum
Mus. No.		Fig. 14:19
Publication:		
Further details:	A large very fine discoidal scraper of mottled grey flint found by a walker beside the Pennine Way footpath.	

Find spot:	Park End	No. 24
NGR	uncertain but c. NY 930260	Object; flint arrowhead
Date/Finder:	1867	Location: The Bowes Museum
Mus. No.	1958.1803	Fig. 17:4
Publication:	Bell (1869)	
Further details:	A barbed and tanged arrowhead of white patinated flint was found "in a field by the side of the Tees by a potato gatherer".	

Find spot:	Peghorn Lodge	No. 34
NGR	NY 827313	Object: Flint axe
Date/Finder:	1919	Location: In possession of Mr. H.L. Beadle, The Avenue, Richmond, N. Yorks.
Mus. No.		
Publication		
Further details:	A small axe of white flint 3 inches long x 1½ inches broad dug up from a depth of 2' - 3' by J.W. Tallentire when making foundations for a pylon for aerial rope-way from Cow Green Mine. Information from Mr. H.L. Beadle.	

Find spot:	Pikestone Brow	No. 28
NGR	NY 945295	Object: flint scraper
Date/Finder	1977 D. Coggins	Location: The Bowes Museum

Mus. No. Fig.

Publication:

Further details: A large roughly triangular flake of white patinated iron stained flint with steep retouch on one edge was found in a mole heap.

Find spot: Pikestone Brow No. 29

NGR NY 946293 Object: flint flake

Date/Finder: 1976 D. Coggins Location: The Bowes Museum

Mus. No. Fig.

Publication

Further details: A single flake of cream/grey flint found by the writer in a mole heap.

Find spot: Sair Hill No. 36

NGR NY 856304 Object: whinstone axe

Date/Finder c. 1960? Location: Geology Department, Durham University

Mus. No. Fig. 16:4

Publication:

Further details: An axe of coarse granular iron stained whinestone was found by John Newrick (then Agricultural Advisory Officer) near Sair Hill and given to Dr. G.A.L. Johnson. It is 100mm. long, 55mm. wide at the blade and 35mm. thick. It is blunt edged and has a rounded butt.

Find spot: Simy Folds 1 No. 47

NGR NY 889276 Object: 2 fragments of shale

Date/Finder: Location: The Bowes Museum

Mus. No.

Publication: D. Coggins et. al. (forthcoming)

Further details: Two fragments of turned shale were found in soil from a rabbit burrow probably deriving from a large stemmed vessel of the late prehistoric.

Find spot:	Simy Folds	No. 32
NGR	centred on NY 888277	Object: flints
Date/Finder	1976 - 81	Location: The Bowes Museum
Mus. No.		Fig. 14:20-39
Publication:	R. Young in D. Coggins et.al. (forthcoming)	
Further details:	26 stray finds were made in the area: 2 cores, 1 scraper, 1 borer, 6 blades and 16 waste flakes. They could date from any period from mesolithic onwards.	

Find spot:	Strands Gill	No. 37
NGR	NY 9025 2670	Object: stone axe
Date/Finder	1958	Location: The Bowes Museum
Mus. No.		Fig. 16:1
Publication:	Clews (forthcoming)	
Further details:	The butt end of a broken stone axe was found by the writer in a partially excavated cairn. It was sectioned by Professor Dunham, "... a sericitised felsite of igneous origin ... though tough it would hardly be possible to produce a sharp edge on it ... possibly obtained from local glacial moraine".	

Find spot:	Teeshead	No. 5
NGR	NY 701340	Object: horn
Date/Finder:		Location: Durham University
Mus. No.		
Publication:	Johnson & Dunham (1963)	
Further details:	A single horn sheath was found in situ in peat. It was fragmentary and exfoliating but of circular cross section, helically spiral, narrowly tapering and sharply pointed. Its length along the outside curvature was at least 400mm. Pollen analysis of peat both inside and outside suggests that it belong to pollen zone VIIa.	

Find spot:	Teeshead	No. 6
NGR	NY 699340	Object: flints and horn

Date/Finder: Location: Durham University

Mus. No.

Publication: Johnson & Dunham (1963)

Further details: Three struck flakes of grey buff flint, one of which (no. 3) has "conspicuous fine flaking on both sides". They were found in association with the fragmentary remains of a hornsheath.

Find spot: Thistle Green No. 16

NGR NY 845285 Object: flint arrowhead

Date/Finder: Location: In the collection of finder; Mr. J.C. Moreland, Jubilee Mount, West Hillands, Brighouse, W. Yorks.

Mus. NO.

Publication:

Further details: A small heavily patinated barbed and tanged arrowhead found in a moleheap.

Find spot: Upper Moss Flats No. 11

NGR NY 756313 Object. worked flakes of banded chert

Date/Finder: Location: Durham University

Mus. No. Fig.

Publication: Johnson & Dunham (1963)

Further details: Five flakes of banded chert (one broken in two) were found on an eroding peat surface.

Find spot: White Earth No. 41

NGR NY 904262 Object: potsherd

Date/Finder: c. 1960 D. Coggins Location: The Bowes Museum

Mus. No. Fig. 19:1

Publication:

Further details: A small sherd of coarse pottery was found in a moleheap. The interior surface is black, the exterior pink/red with traces of impressed cord decoration forming

squares. Possibly Beaker?

Find spot:	White Force	No. 49
NGR	NY 852280	Object: bronze shield boss
Date/Finder:	1857	Location: The Bowes Museum
Mus. No.	83.7-5.105	Fig. 26
Publication:	Bell (1870) Backhouse (1898)	
Further details:	There are no details of the finding of this object. It was at one time in the collection of Canon Greenwell. Dimensions: overall diameter: 200mm., height: 70mm., diameter of umbo: 110mm. Though damaged it is in quite good condition.	

APPENDIX 3

Gazeteer of Metalworking Sites

Name:	Bink Scar Sike	No. 25
NGR	NY 881282	Height: 343m/1125ft
Description:	A small heap of slag in a clearing in juniper scrub.	

Name:	Birk Rigg (west)	No. 8
NGR	NY 858282	Height: 396m/1300ft
Description:	A large heap of iron slag on level ground between the Pennine Way footpath and Fell Dyke sike.	

Name:	Birk Rigg (east)	No. 10
NGR	NY 864280	Height: 366m/1200ft
Description:	A large heap of iron slag on level ground between the Pennine Way footpath and Fell Dyke sike.	

Name:	Bleabeck Force	No. 16
NGR	NY 875278	Height: 351m/1150ft
Description:	A heap of iron slag on a very steep slope on the east bank of Bleabeck.	

Name:	Bleabeck Ford	No. 17
NGR	NY 876275	Height: 396m/1300ft
Description:	A heap of iron slag on level ground on the east bank of Bleabeck.	

Name:	Bracken Rigg	No. 9
NGR	NY 862282	Height: 381m/1250ft
Description:	A lead smelting site on the crest of the bronze age site, much of the soil has been eroded, a few fragments of lead and slag have been recorded.	

Name: Bridge House Pasture No. 31

NGR NY 880284 Height: 305m/1000ft

Description: A heap of iron slag immediately north of the Middleton-Alston road. Approached by a trackway from the river.

Name: Causeway Sike No. 34

NGR Ny 904292 Height: 366m/1200ft

Description: Extensive remains of lead smelting on the north bank of Causeway sike.

Name: Comb Green No. 22

NGR NY 887259 Height: 472m/1550ft

Description: A small heap of iron slag near the source of Swinket Mease sike.

Name: Crooks o' Green Fell No. 23

NGR NY 898255 Height: 472m/1550ft

Description: A small heap of iron slag near the source of Easter beck.

Name: Currakk Wood Sheepfold No. 14

NGR NY 867286 Height: 335m/1100ft

Description: A heap of iron slag on level ground on the east bank of the Tees.

Name: Dry Beck No. 12

NGR NY 867278 Height: 351m/1150ft

Description: A large heap of iron slag on the northwest bank of the Dry beck.

Name: Eelbeck Dubs No. 24

NGR Ny 895263 Height: 396m/1300ft

Description: A large heap of iron slag on the south bank of Eelbeck near a bield.

Name: Fell Dyke Sike (west) No. 6

NGR NY 855283 Height: 411m/1350ft

Description: Two heaps of iron slag about 50m. apart near the springs at the source of the sike.

Name: Fell Dyke Sike (east) No. 7

NGR NY 856283 Height: 411m/1350ft

Description: A heap of iron slag on the north bank of the sike.

Name: Green Hill No. 3

NGR NY 847293 Height: 411m/1350ft

Description: Two heaps of iron slag near a sheepfold which overlies probable early foundations.

Name: Hag Sike No. 29

NGR NY 877290 Height: 343m/1125ft

Description: A small heap of iron slag on the south bank of the sike.

Name: Holme Planting No. 32

NGR NY 889284 Height: 290m/950ft

Description: A heap of iron smelting slag in the planting south of the Middleton-Alston road and close to the field wall.

Name: Holwick Head No. 33

NGR NY 890282 Height: 297m/975ft

Description: A scattered heap of iron slag on a north-south lynchet in the field to the east of the house.

Name Keld Smithing No. 19

NGR NY 990269 Height: 396m/1300ft

Description: A large heap close to a settlement site and beside the source of the Scar beck.

Name:	Low Hag	No. 30
NGR	NY 881288	Height: 335m/1100ft
Description:	Remains of at least one heap of iron slag on the north bank of the Hag sike.	

Name:	Noon Hill Spring	No. 11
NGR	NY 863277	Height: 396m/1300ft
Description:	A small heap of iron slag on a very steep slope beside a small spring.	

Name:	Ore Pit Holes	No. 18
NGR	centred on NY 878273	Height: 411m/1350ft
Description:	There are several heaps of iron slag along the edge of the line of bell pits.	

Name:	Pasture Foot	No. 15
NGR	NY 873280	Height: 330m/1075ft
Description:	A much eroded heap of iron slag immediately on the south bank of the river opposite Dineholm Quarry.	

Name:	Pencil Mill	No. 4
NGR	NY 848296	Height: 366m/1200ft
Description:	A much eroded heap of iron slag immediately on the south bank of the river just upstream of the pencil mill.	

Name:	Simy Folds West	No. 20
NGR	NY 887277	Height: 381m/1250ft
Description:	A heap of iron slag beside a spring close to the shooting butts west of site 3.	

Name:	Simy Folds North	No. 21
NGR	NY 887278	Height: 381m/1250ft
Description:	A small heap of iron slag overlying the north boundary wall of the Simy Folds settlement.	

Name: Skyer Beck No. 13

NGR NY 868281 Height: 335m/1100ft

Description: A very large heap of iron slag on the north-west bank of Skyer beck close to its junction with the river. The Pennine Way footpath crosses over the edge of this heap.

Name: Slate Quarry Sike No. 2

NGR NY 843297 Height: 381m/1250ft

Description: A heap of iron slag on the north bank of the sike about 100m. away from the river.

Name: Smithy Sike No. 28

NGR NY 876285 Height: 335m/1100ft

Description: An irregular but roughly rectangular hollow with 'walls' of iron slag on the south bank of the sike adjacent to the settlement of Forcegarth North.

Name: Sun Wood (a) No. 26

NGR NY 878284 Height: 335m/1100ft

Description: A saucer-shaped depression on the west bank of the Smithy sike just south of the access road for Dineholm Quarry, fragments of lead and lead smelting slag have been recovered from this surface.

Name: Sun Wood (b) No. 27

NGR NY 878284 Height: 335m/1100ft

Description: A large heap of iron slag immediately adjacent to 26, c. 4.0m. diameter.

Name: Whey Sike No. 5

NGR NY 857297 Height: 366m/1200ft

Description: A heap of iron slag on the bank of the sike to the east of Whey Sike house.

Name:	Widdybank (opposite)	No. 1
NGR	NY 838297	Height: 381m/1250ft
Description:	A heap of iron slag on the south bank of the river opposite Widdybank Farm.	

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Unless otherwise stated the place of publication of books and monographs is London.

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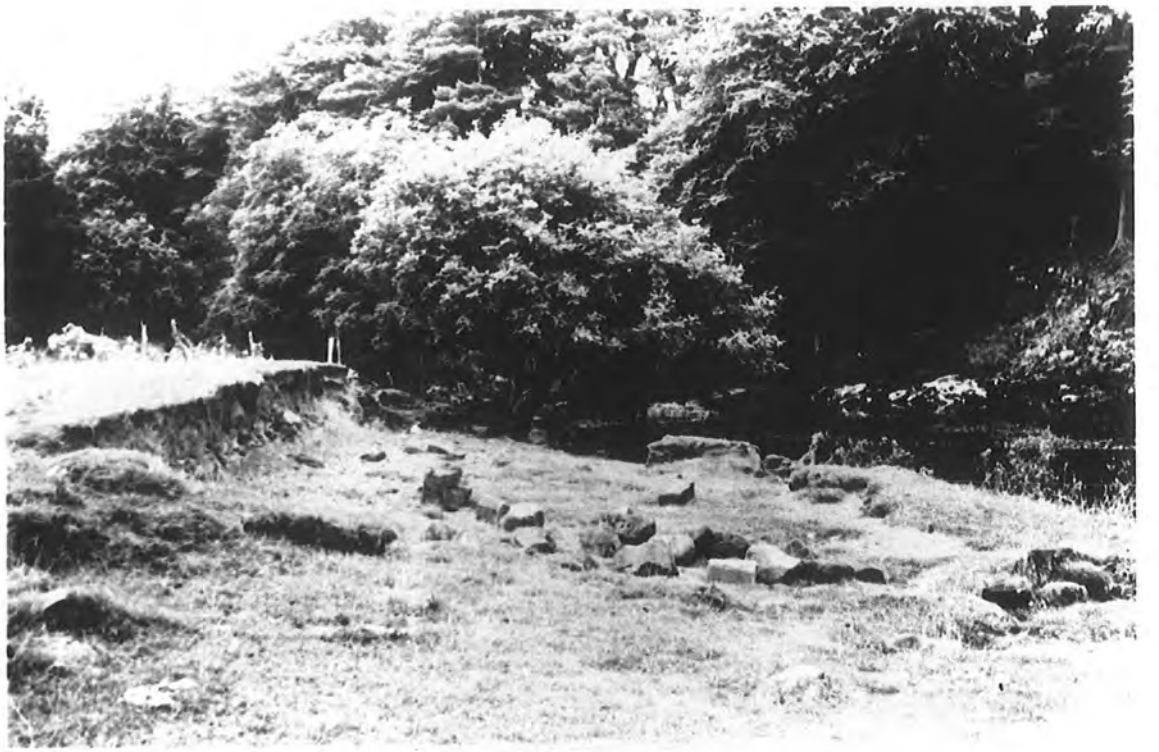
4. The Whin Sill : Dineholm Quarry

5. Newbiggin from Mill Beck
Note contrast between south and north sides of the valley

6. Ettersgill from Green Fell
Note contrast between south and north sides of the valley

7. Climate : the High Force road in winter

8. The 'Green Trod' footpath ascending Cronkley Fell



9. Staple Crag mesolithic flint site

10. Bracken Rigg from the air.
The circular house is a little left of the centre of the picture

11. Buck Riggs : large circular enclosure

12. Carr Crags : large tabular block

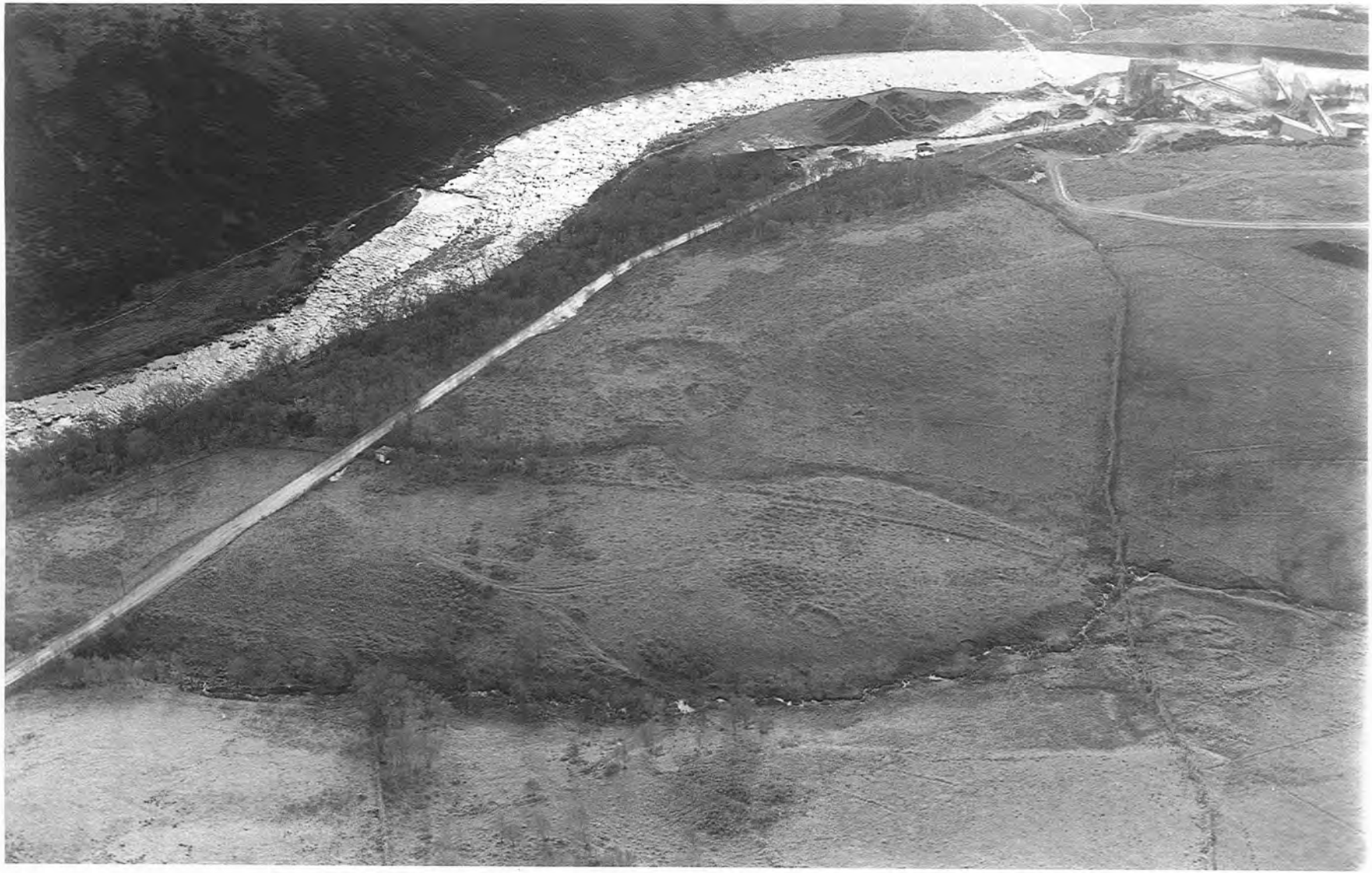
13. Carr Crags : part of the semicircle of engraved rocks
The central tabular block is at the top right.

14. Kirk Arran : ditch of earlier defensive enclosure

15. Wool Ingles from the air

16. Wool Ingles : looking north across the circular enclosure

17. Middle Hurth : cairn over late prehistoric cremation



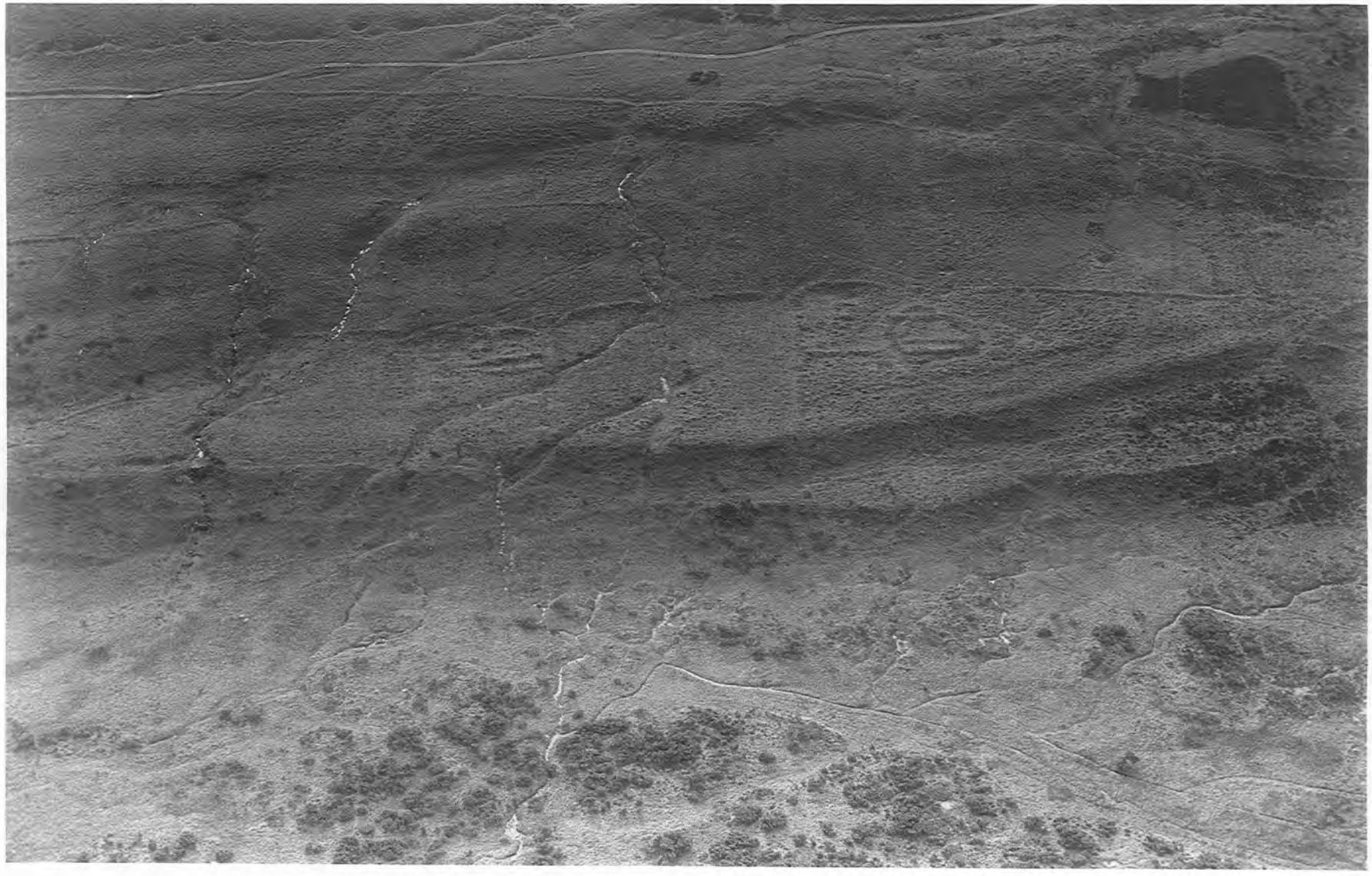
18. Forcegarth North (on the right) and South from the air

19. Forcegarth North : round house

20. Forcegarth South : round house

21. High Force Quarry
round house with bank and ditch

22. Pasture Foot from the air

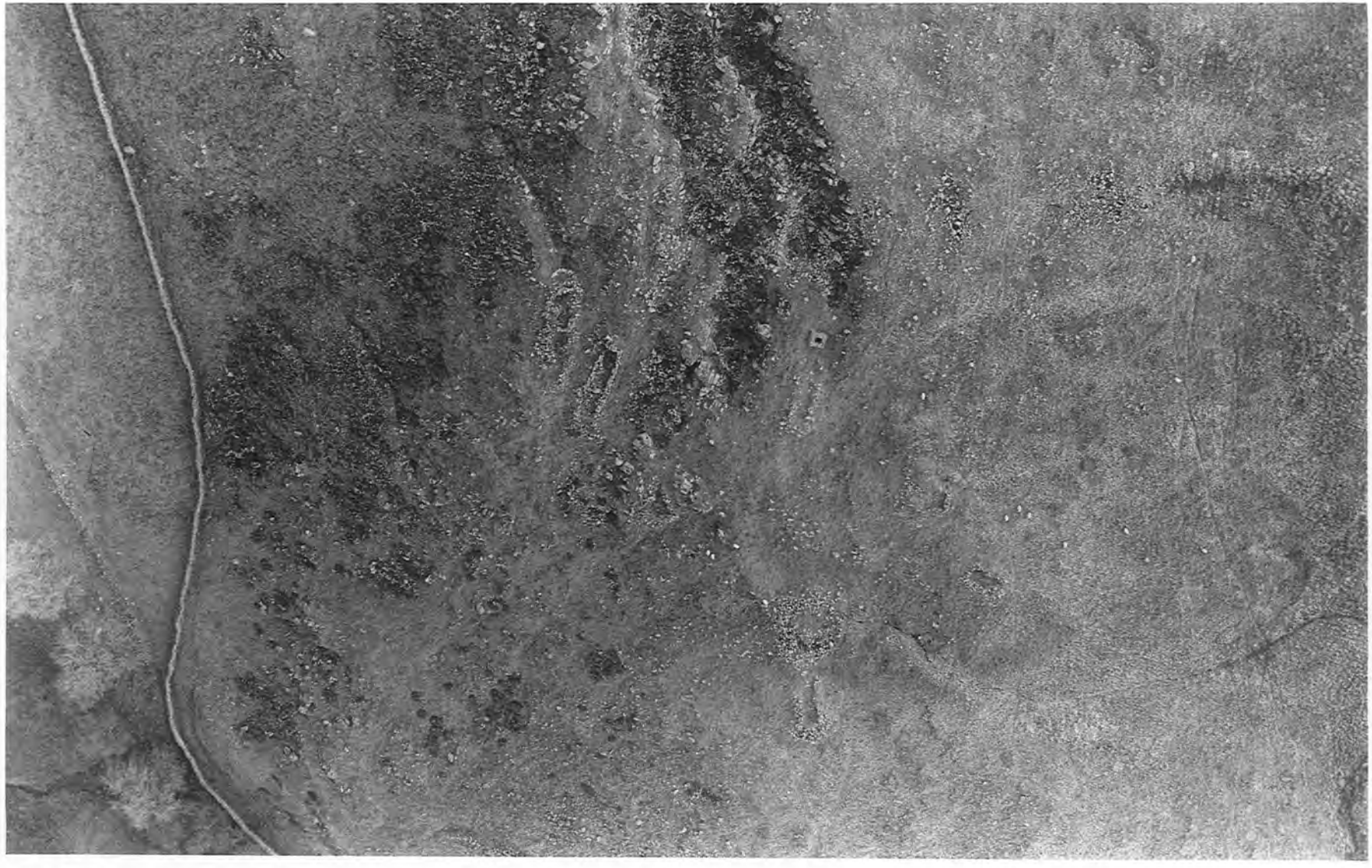


23. Simy Folds : sites 2 and 3 from the air

24. Simy Folds : site 3 from the air

25. Large rectangular house at Rough Rigg

26. Middle Hurth
section through bank showing old turf layer



27. Unthank Scars : rectangular houses from the air

28. Skyer Beck
juniper growing on heap of iron smelting slag

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52. Upper Teesdale : radio-carbon dates

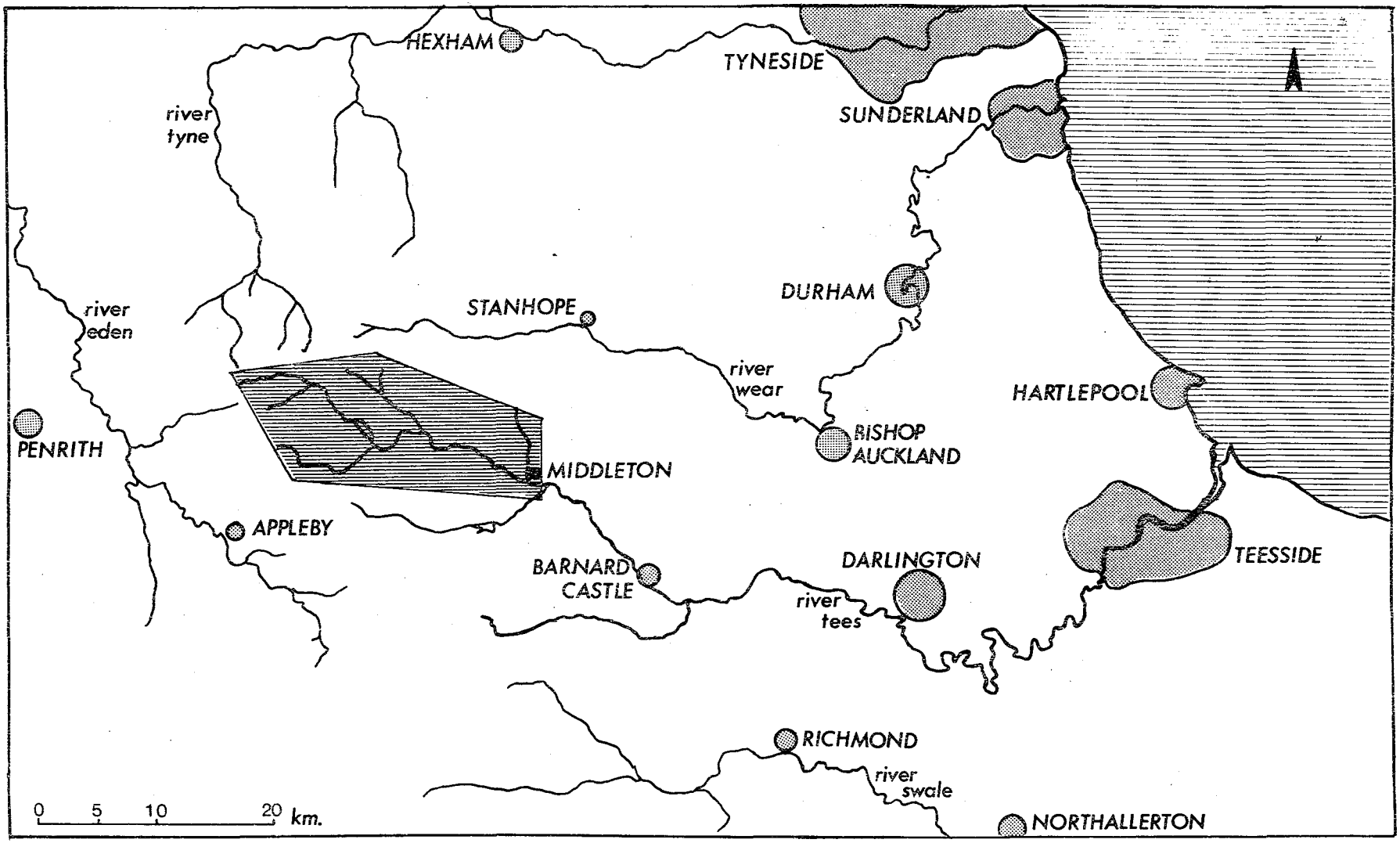


Fig. 1 Upper Teesdale : location map

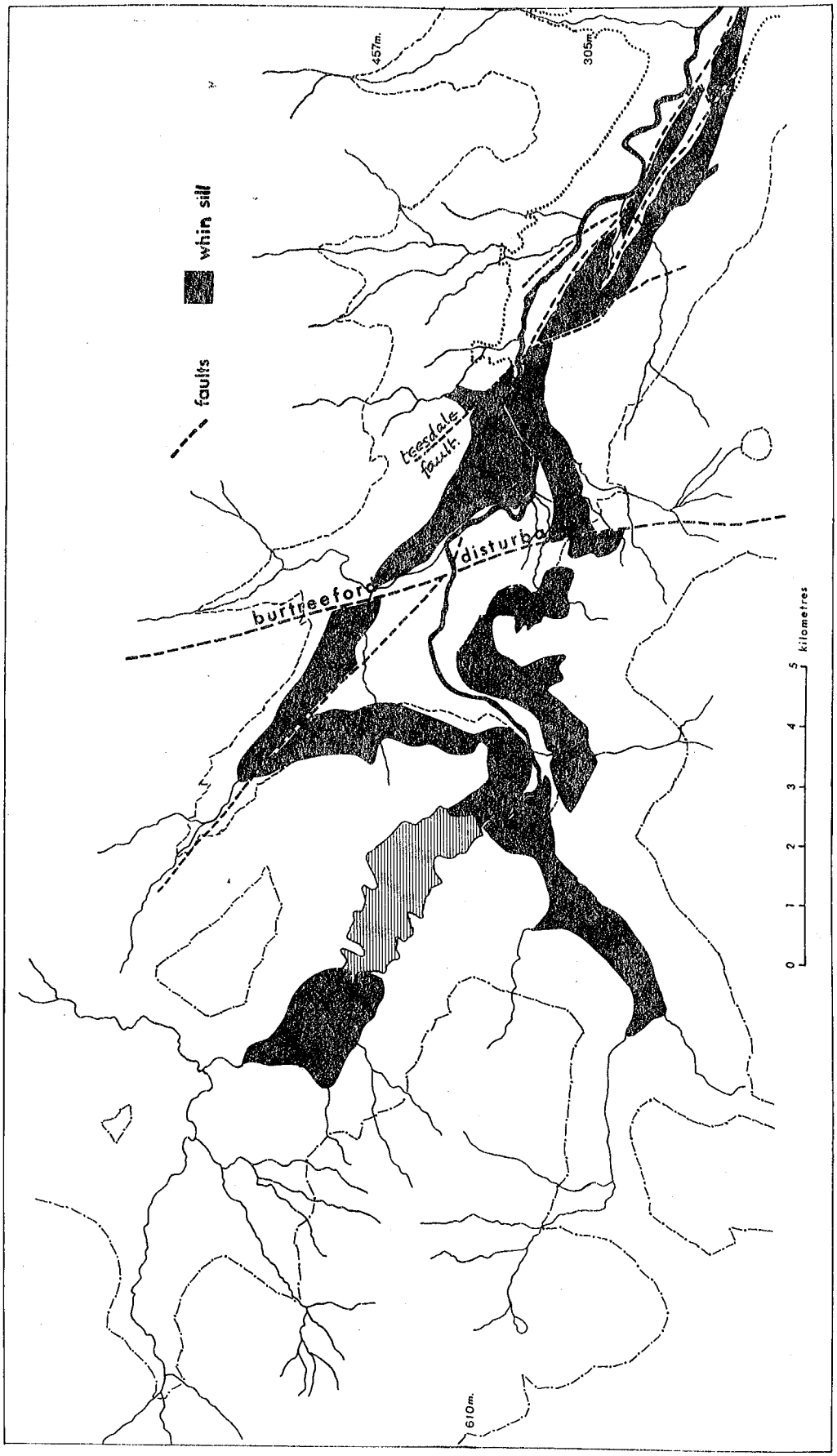


Fig. 2 Upper Teesdale : geology

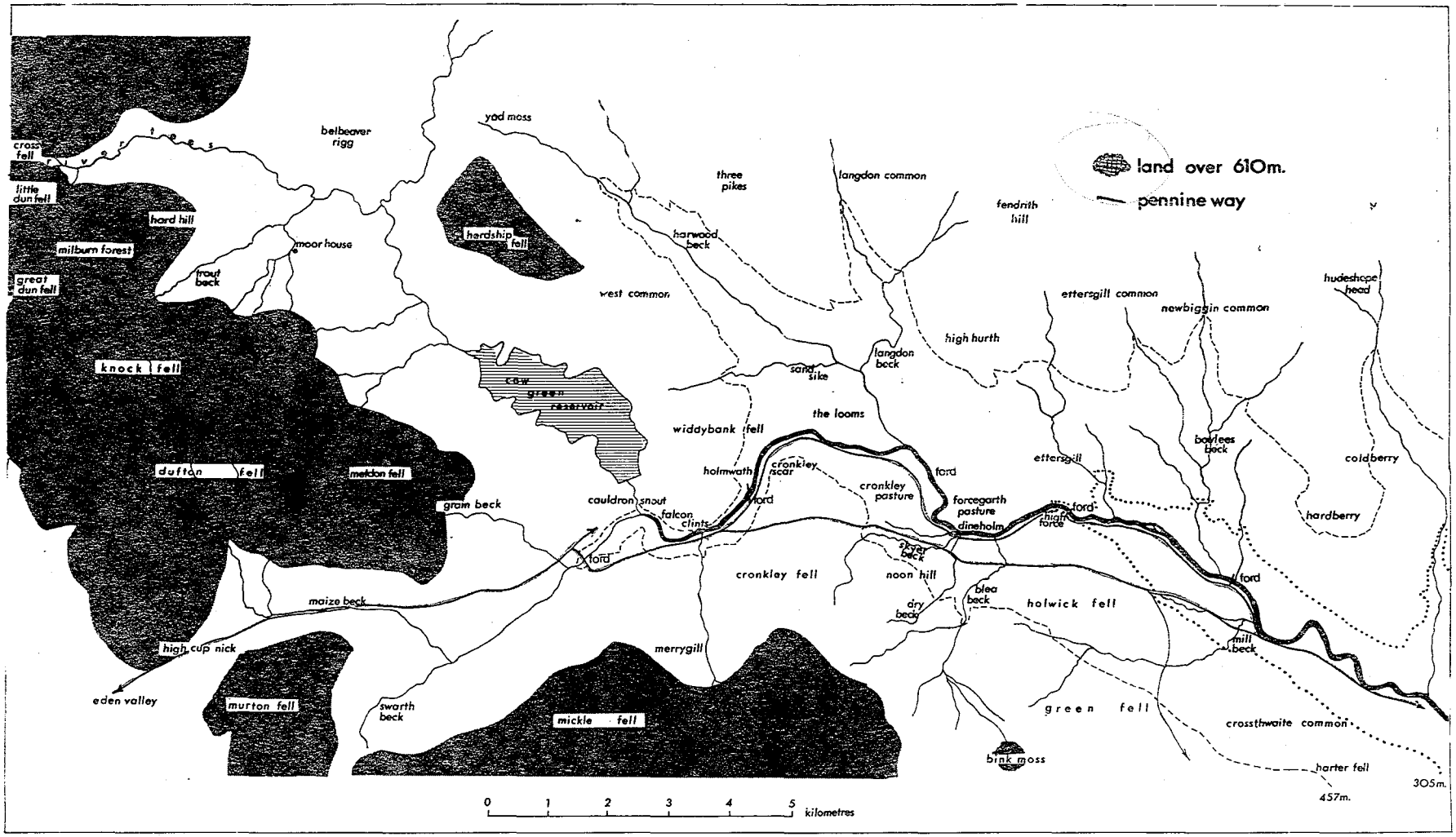


Fig. 3 Upper Teesdale : topography

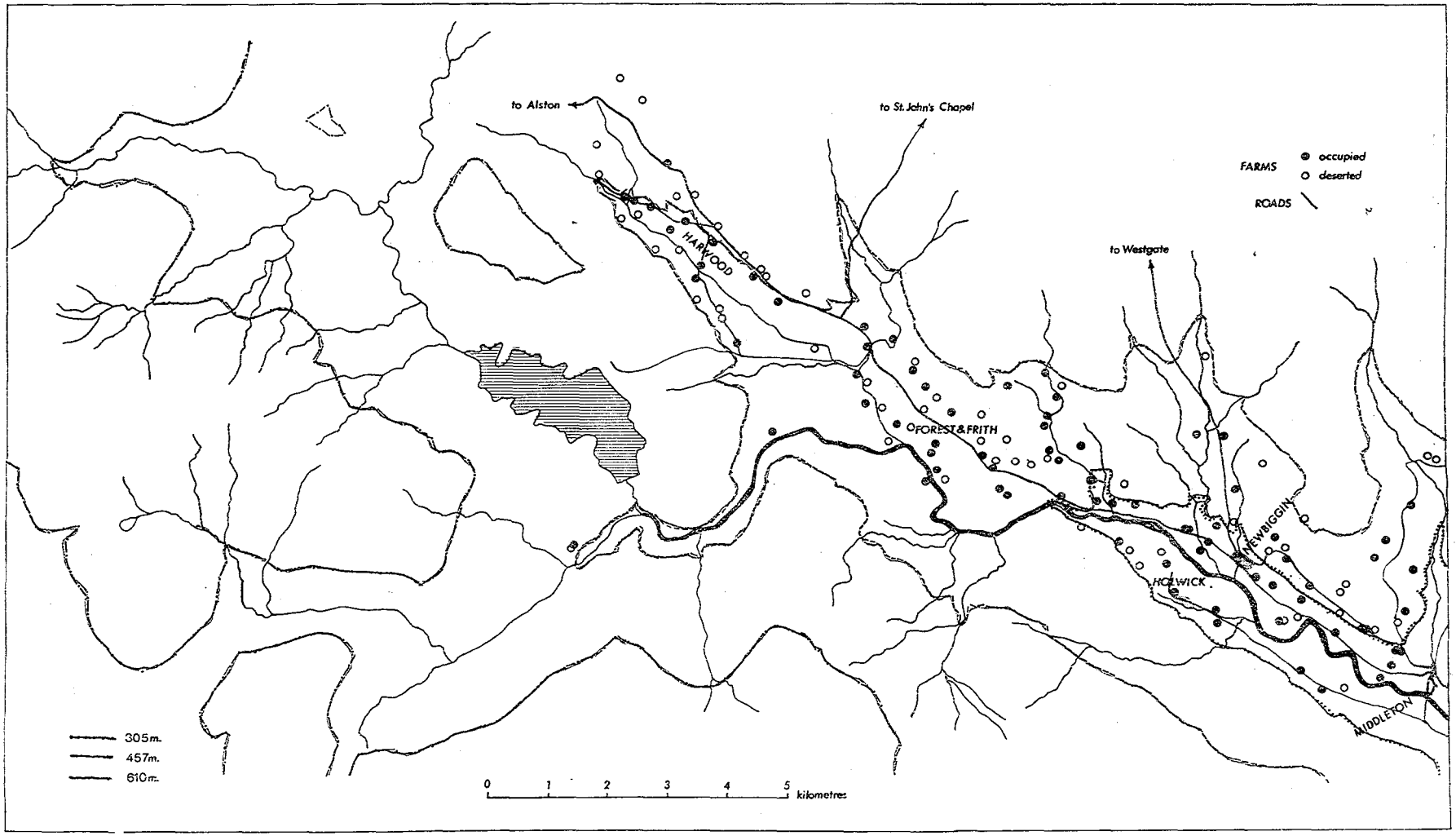


Fig. 4 Upper Teesdale : modern settlement. Note that this is largely confined to the north bank. Villages are not shown.

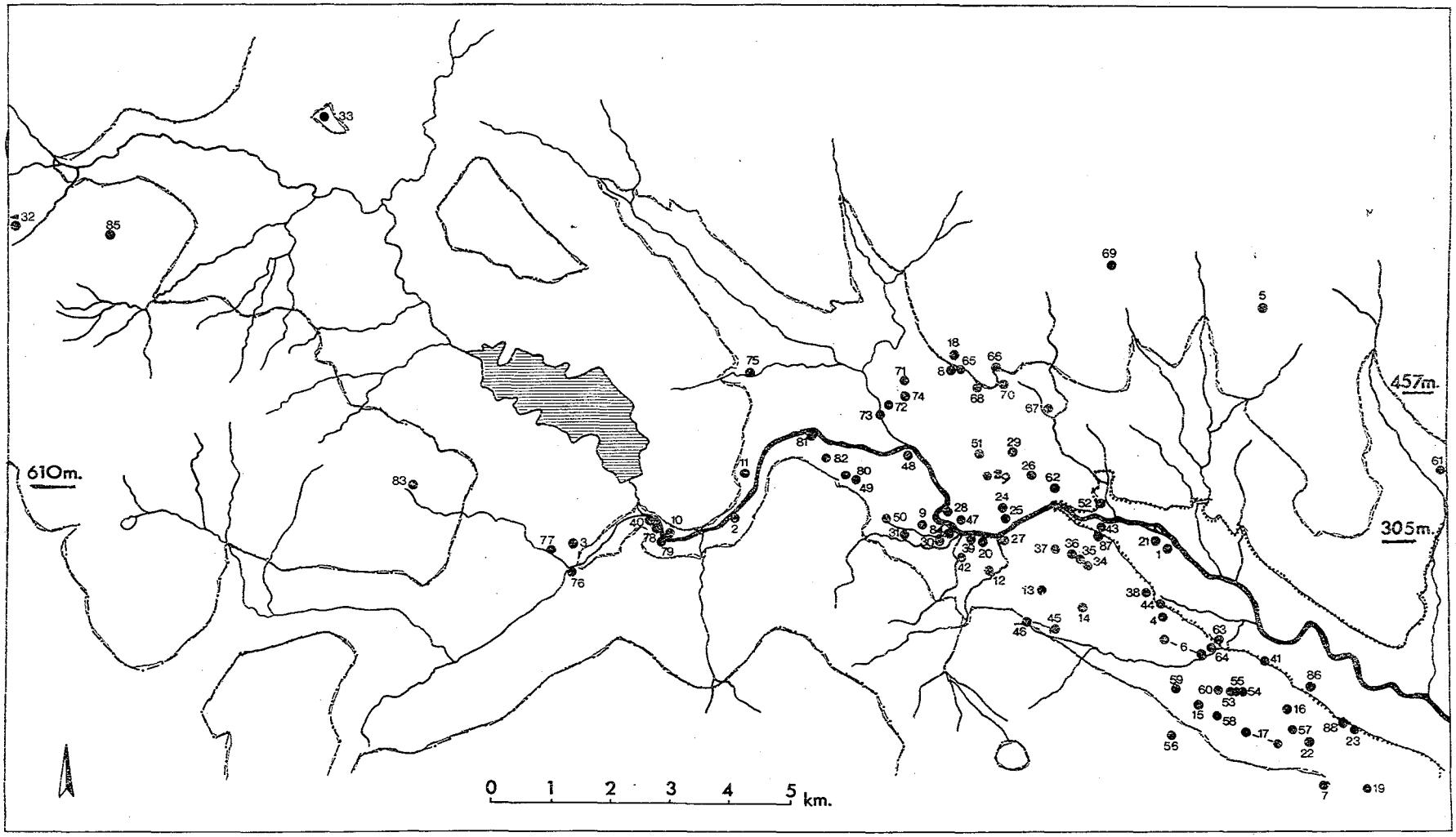


Fig. 5 Upper Teesdale : early settlement. Each number refers to a site described in the gazetteer.

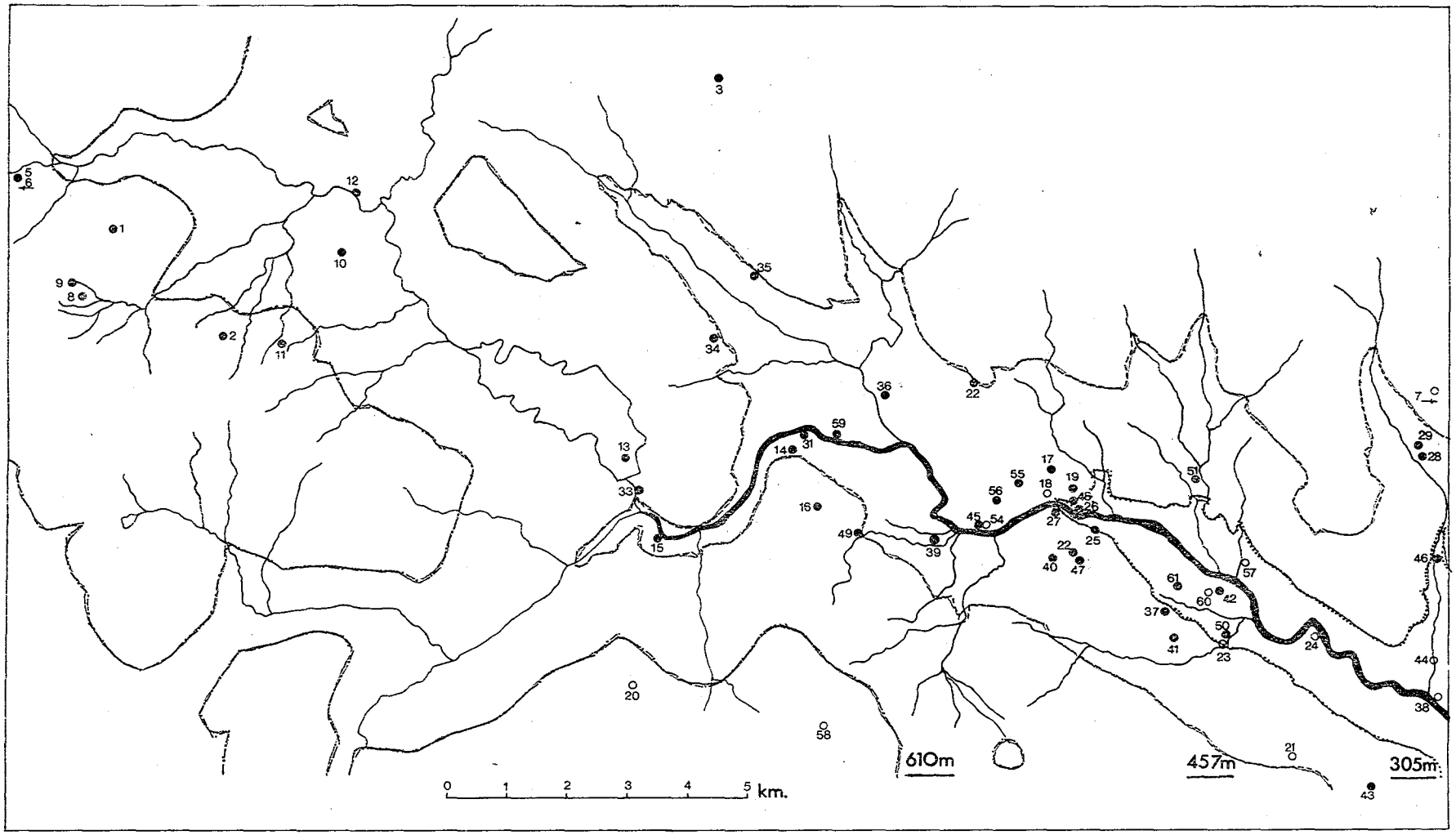


Fig. 6 Upper Teesdale : stray finds. Each number refers to a find described in the gazetteer.

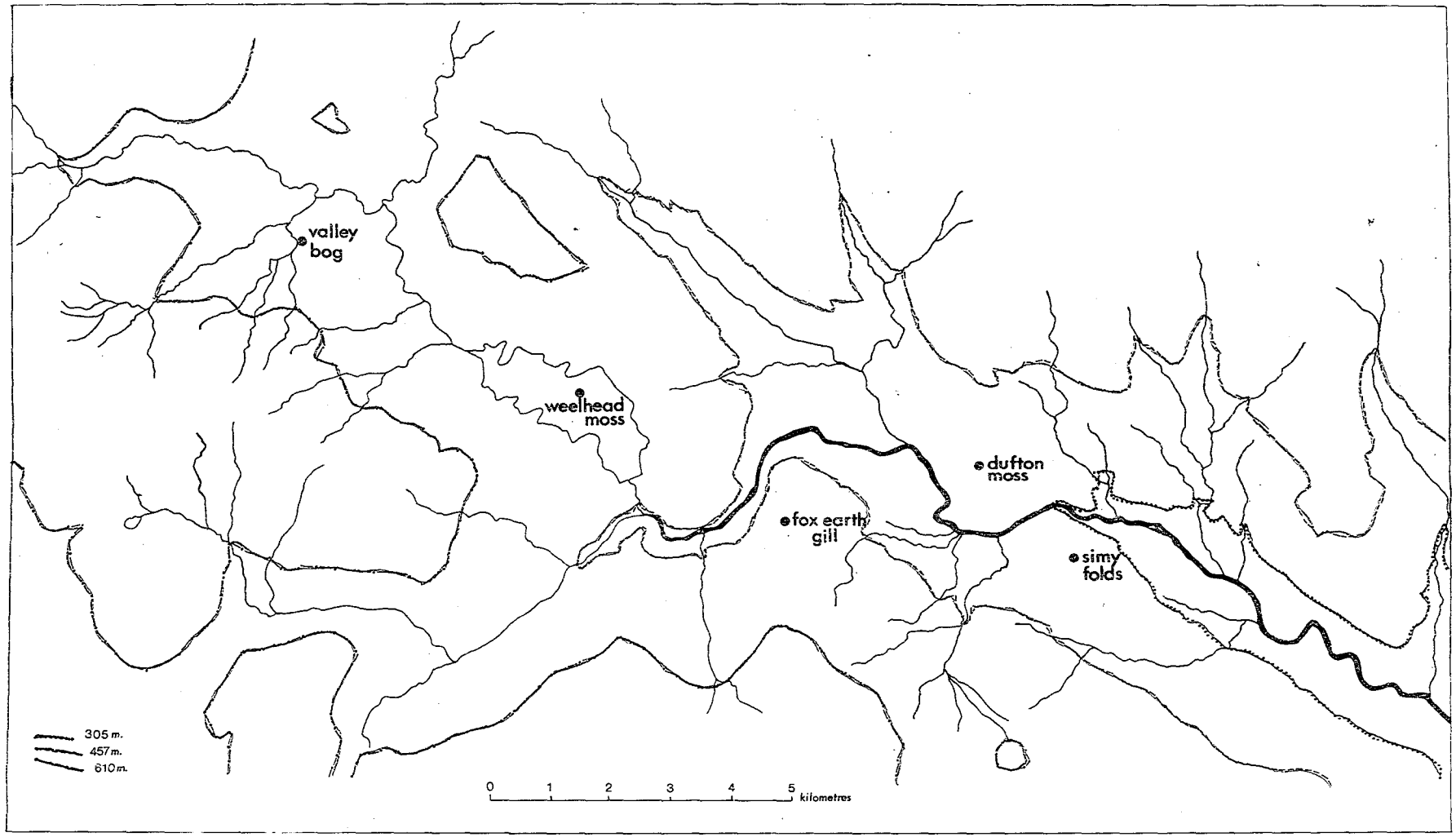


Fig. 7 Upper Teesdale : pollen sites. The five sites for which radiocarbon dated diagrams have been constructed.

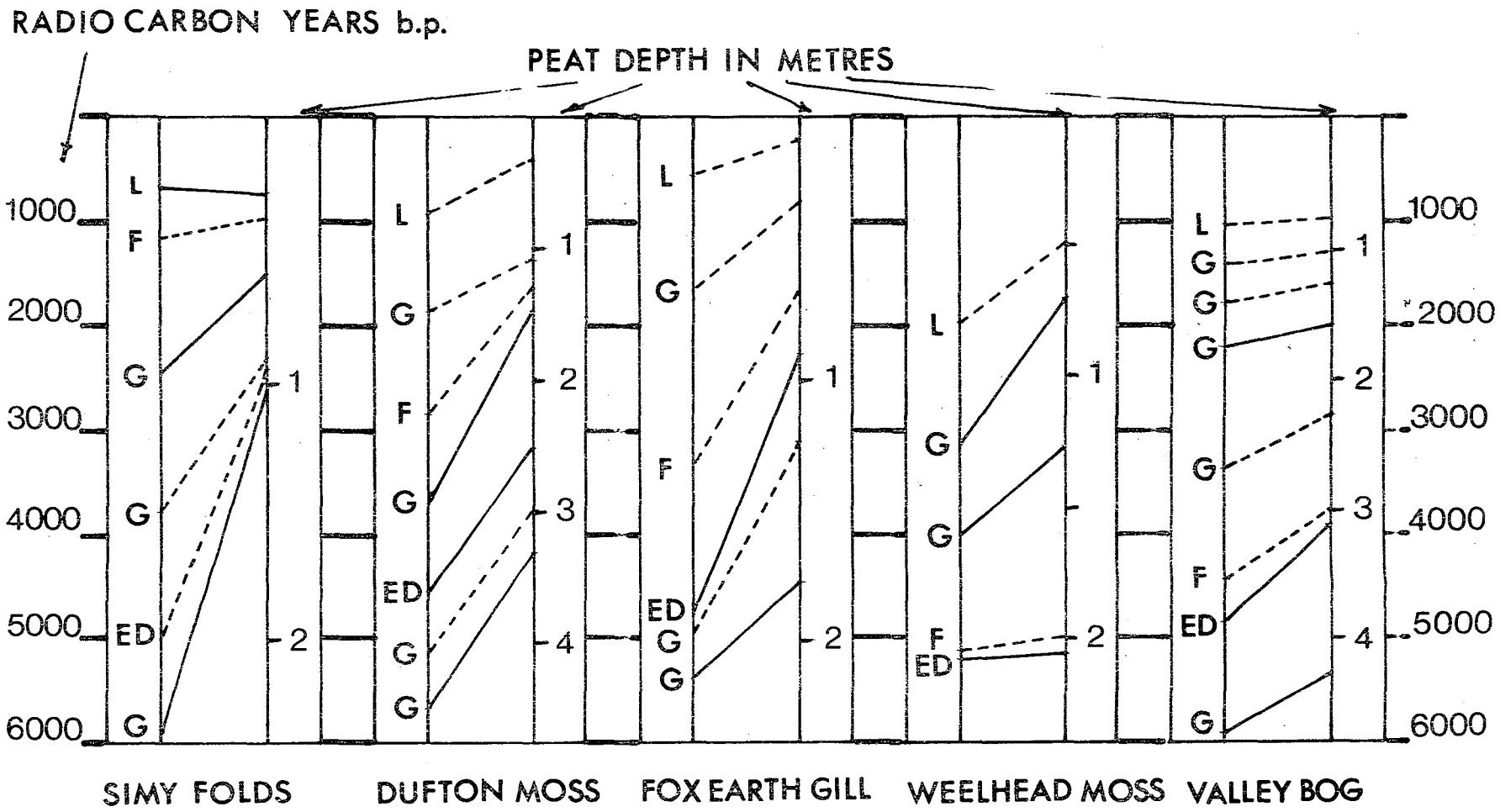


Fig. 8 Comparison of data from five pollen sites.

Landmarks ?

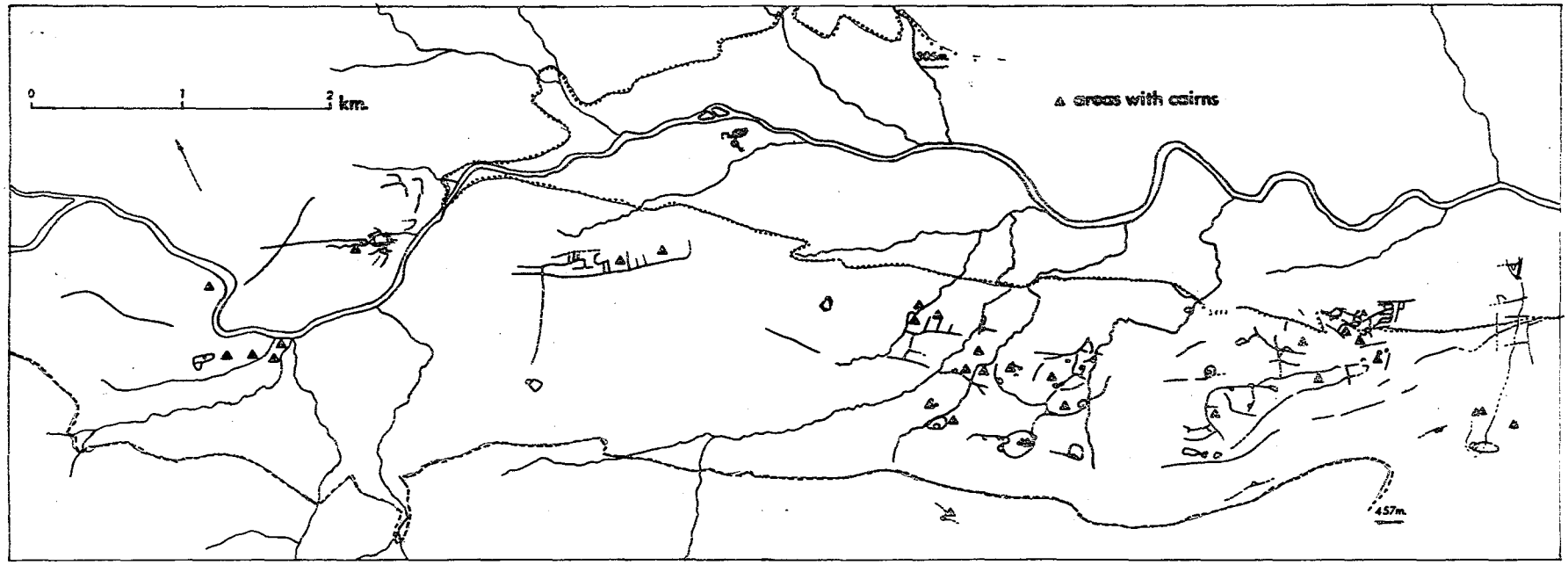


Fig. 9 Upper Teesdale : early field systems.

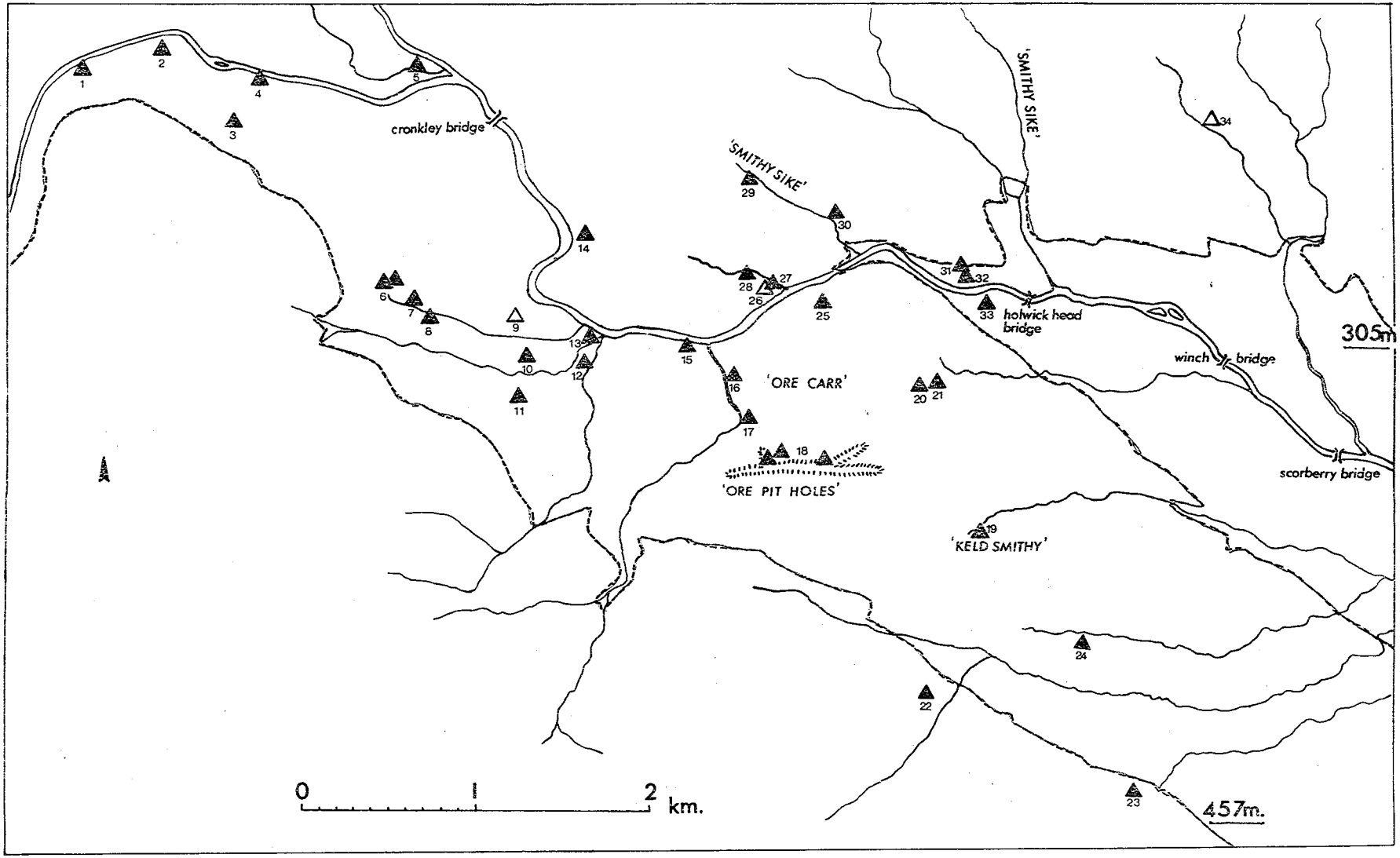


Fig. 10 Upper Teesdale : metalworking sites.

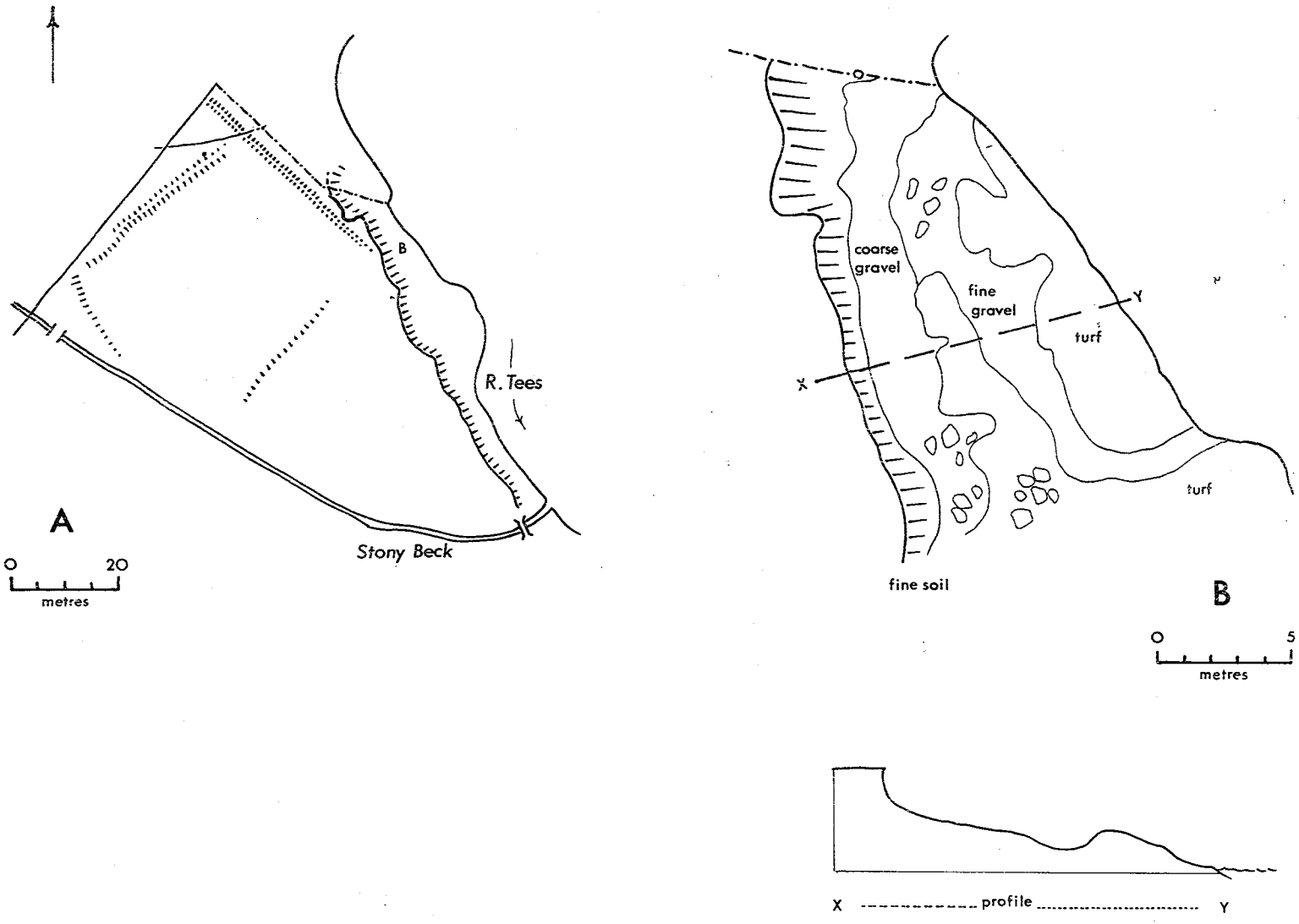


Fig. 11 Staple Crag mesolithic site.

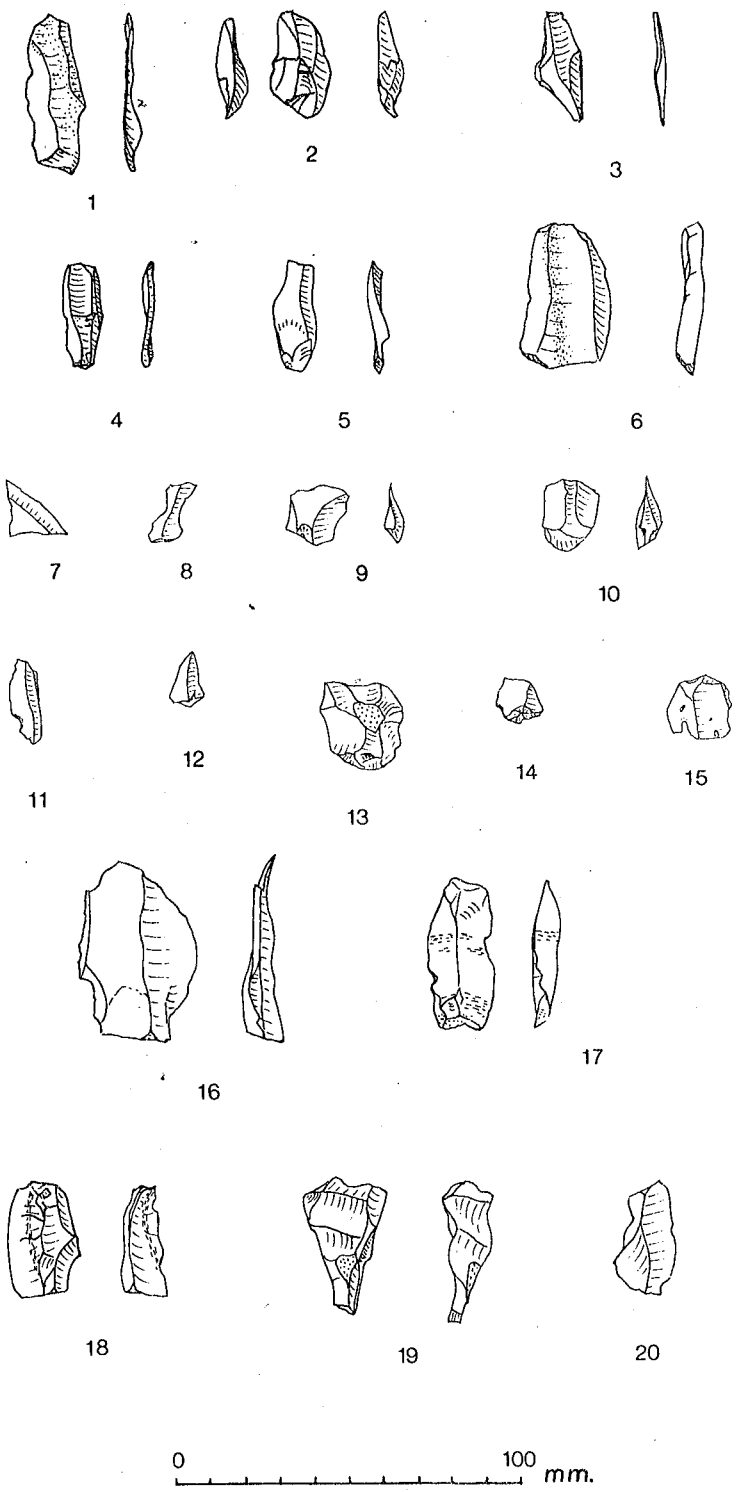


Fig. 12 Staple Crag : selection of flints

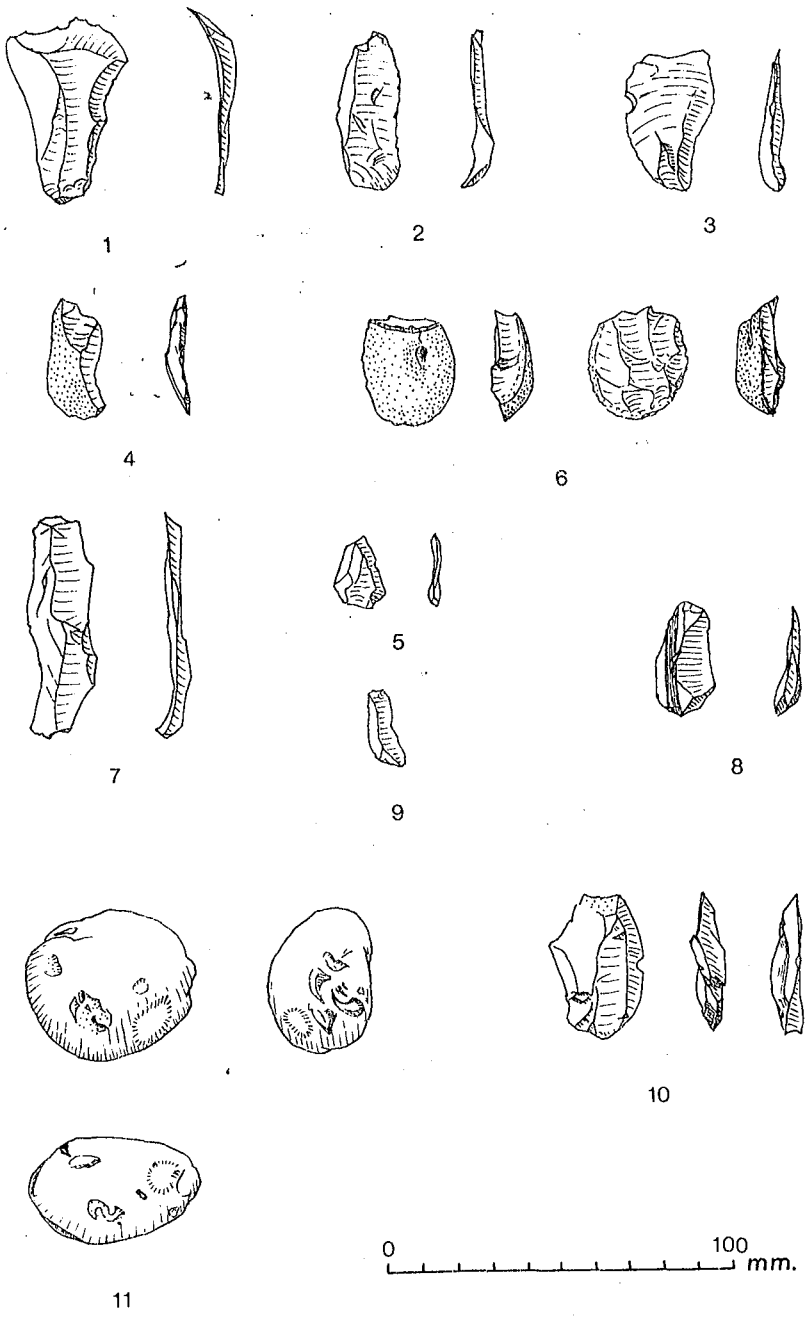


Fig. 13 Merrygill Holm flints and hammerstone.

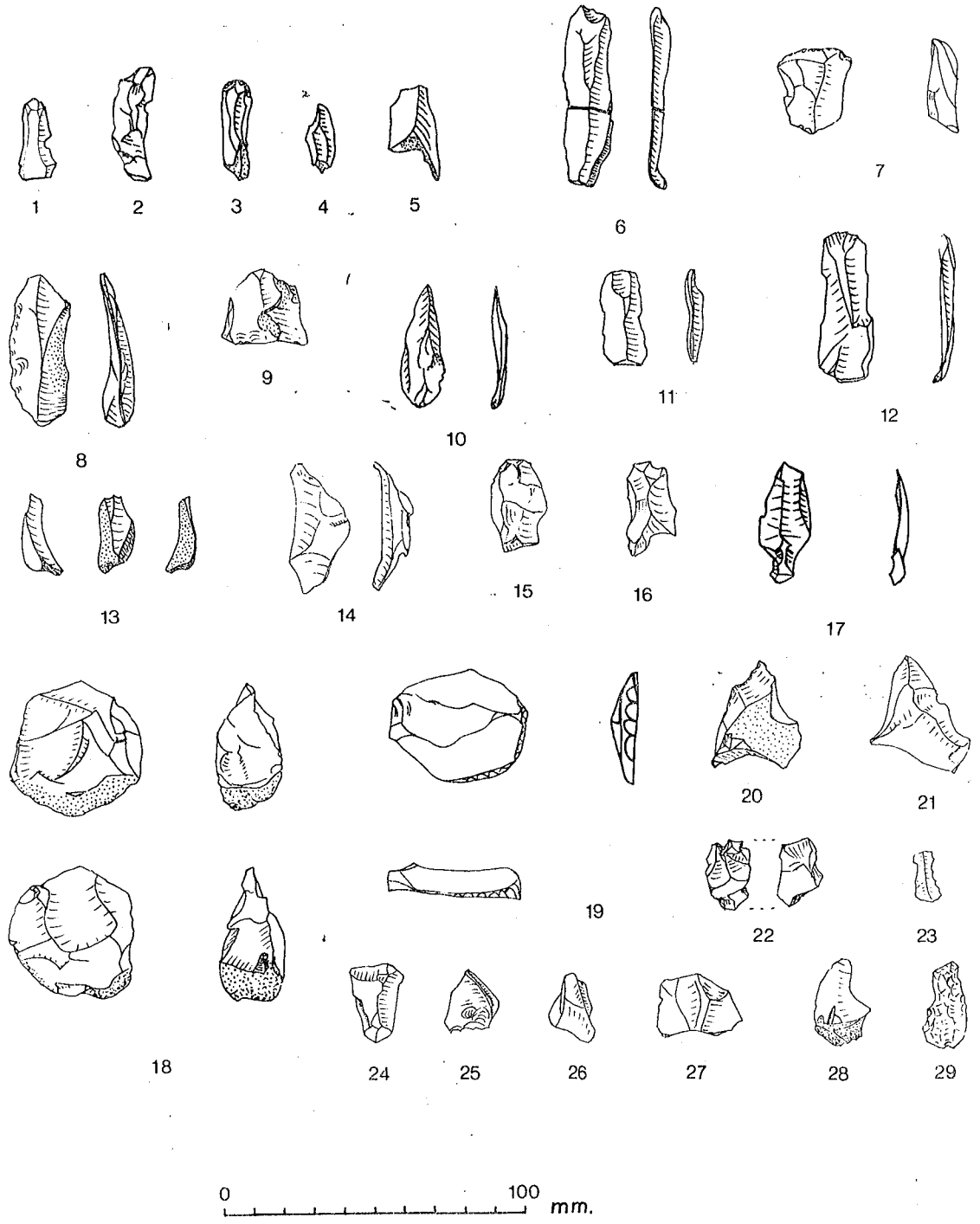


Fig. 14 Flints from other sites including 2, Birkdale (1-5) and Simy Folds (20-39)

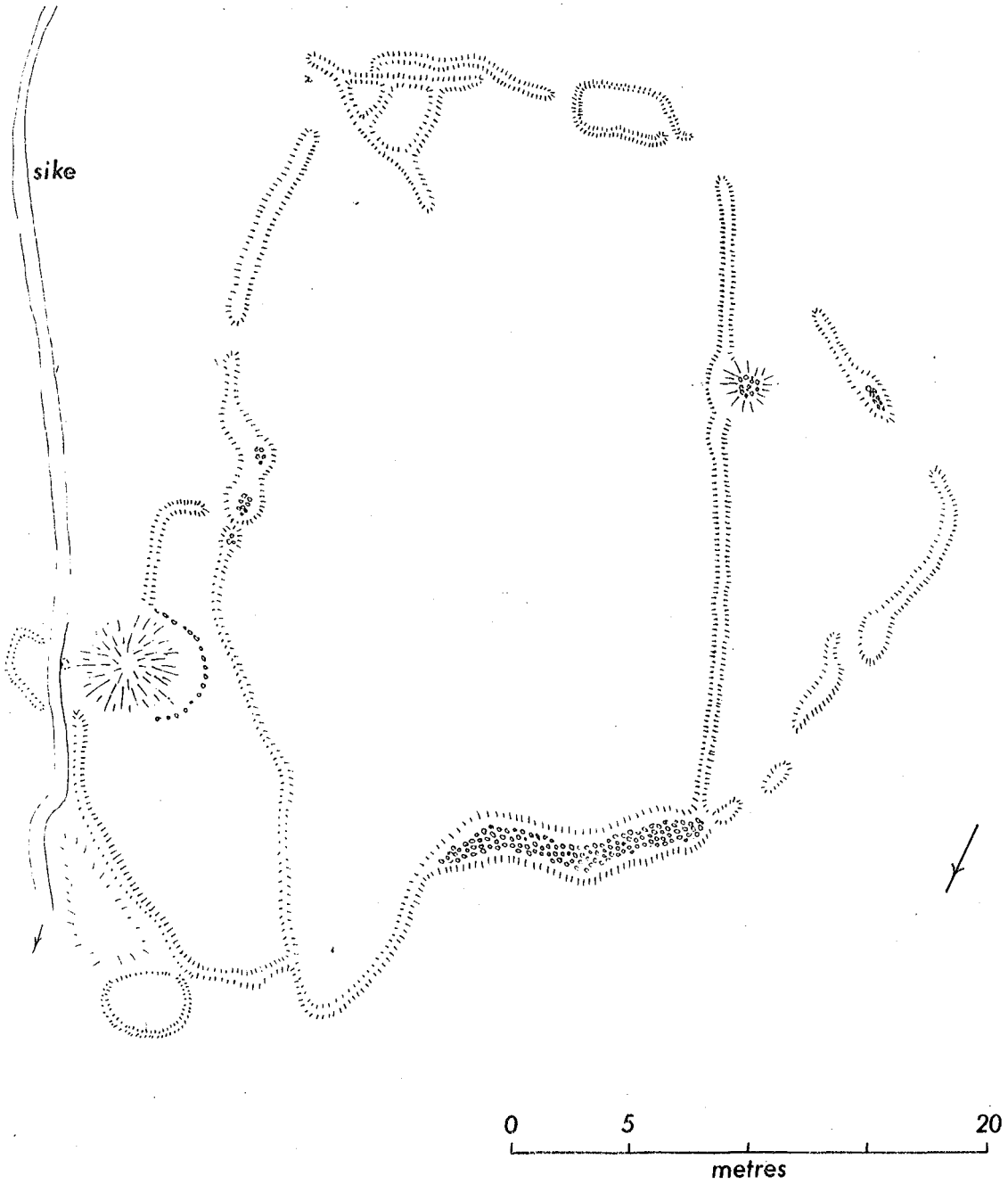


Fig. 15 Strands Gill

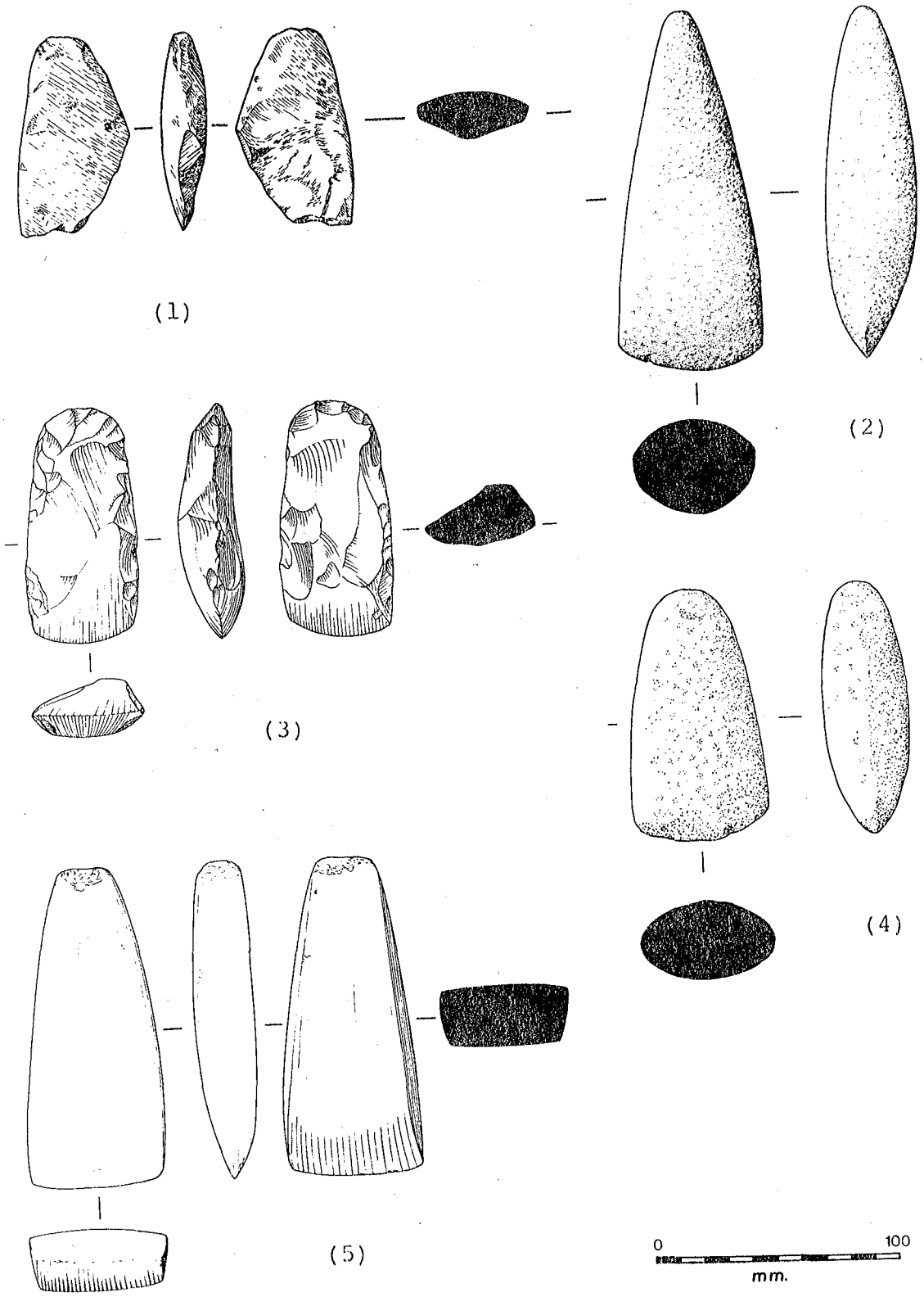


Fig. 16 Flint and stone axes.

(1) Strands Gill (2) Bowlees

(3) Bowes Close (4) Sair Hill

(5) Middleton

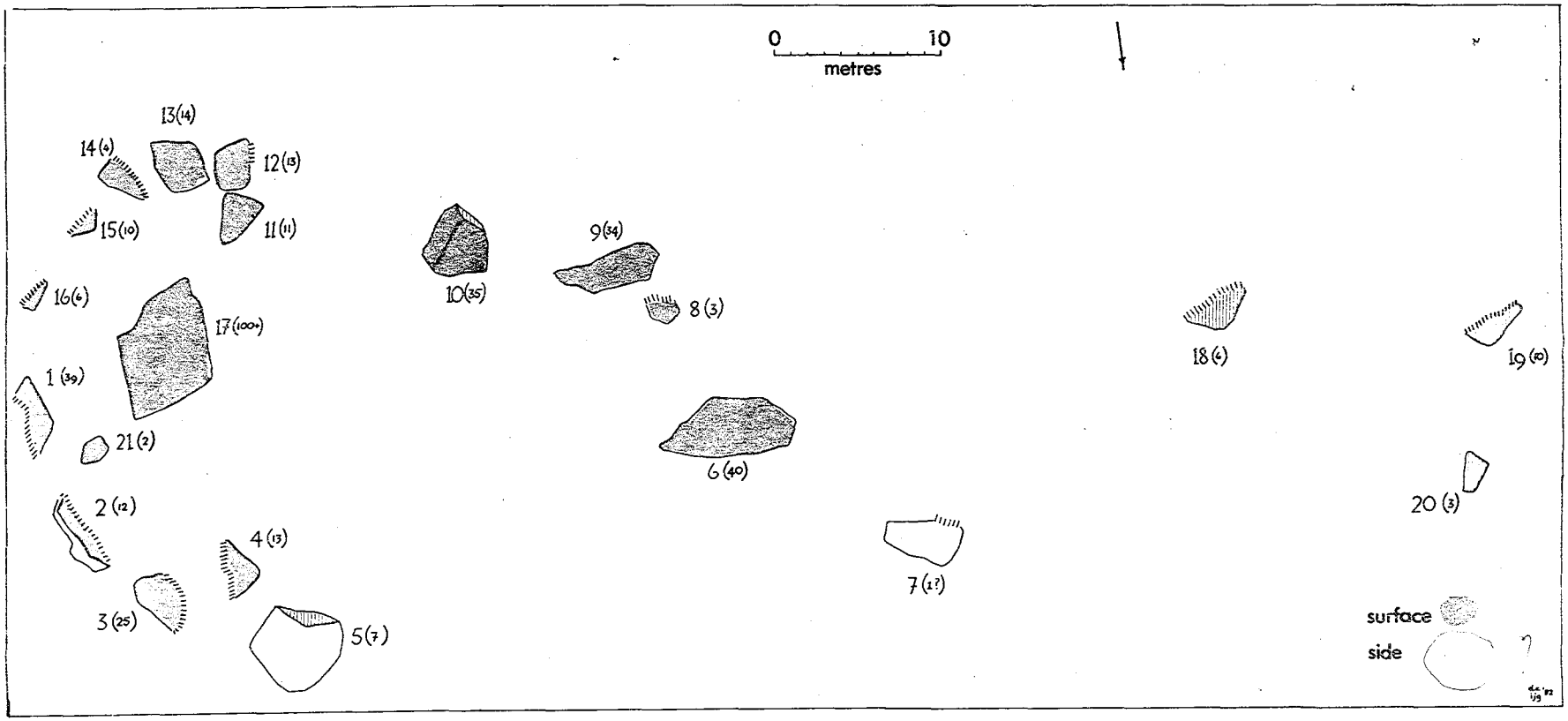


Fig. 17 Carr Crags. The numbers in brackets refer to the number of cup-marks visible on each rock.

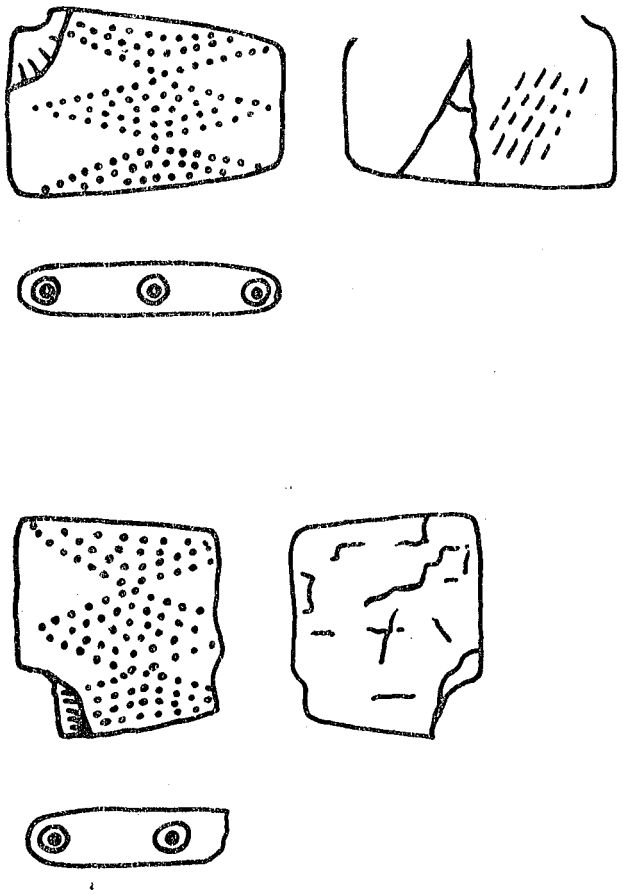
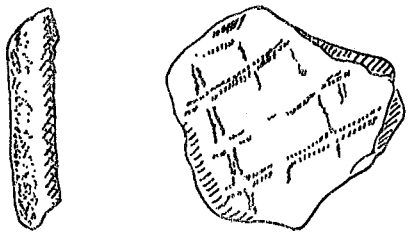
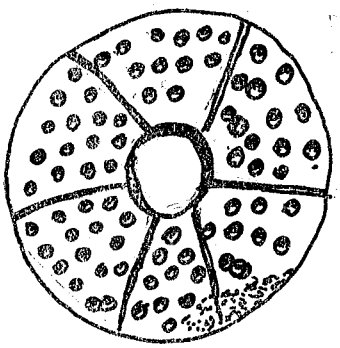


Fig. 18 Holwick : jet beads now in the British Museum. No details of the find are known.



(1)



(2)

Fig. 19 (1) White Earth : sherd of decorated pottery, possibly Beaker.
(2) Holwick : shale spindlewhorl.

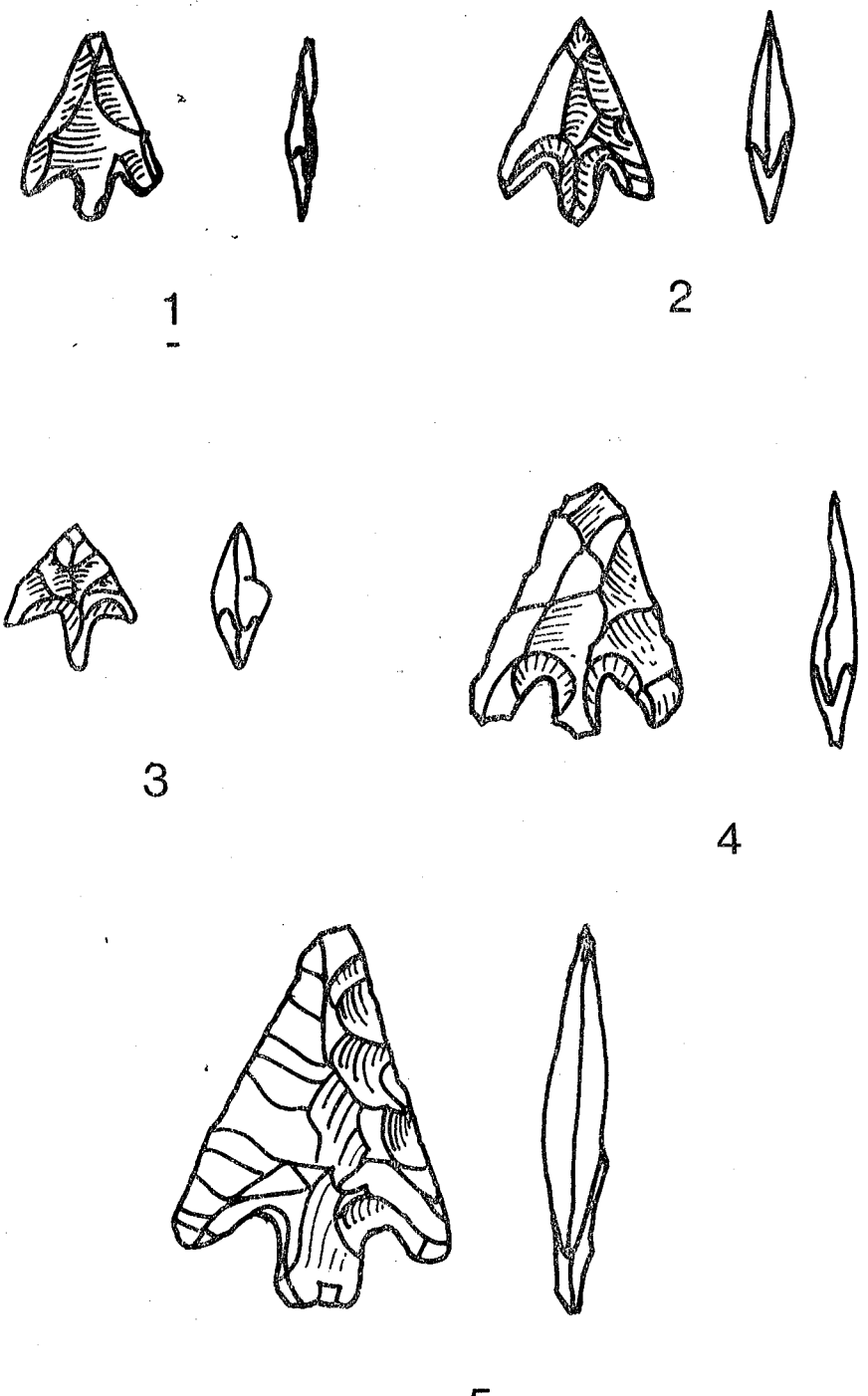


Fig. 20 Barbed and tanged arrowheads.
(1) Harter Fell (east) (2) Mickle Fell
(3) Cronkley Scar (4) Park End
(5) Harter Fell

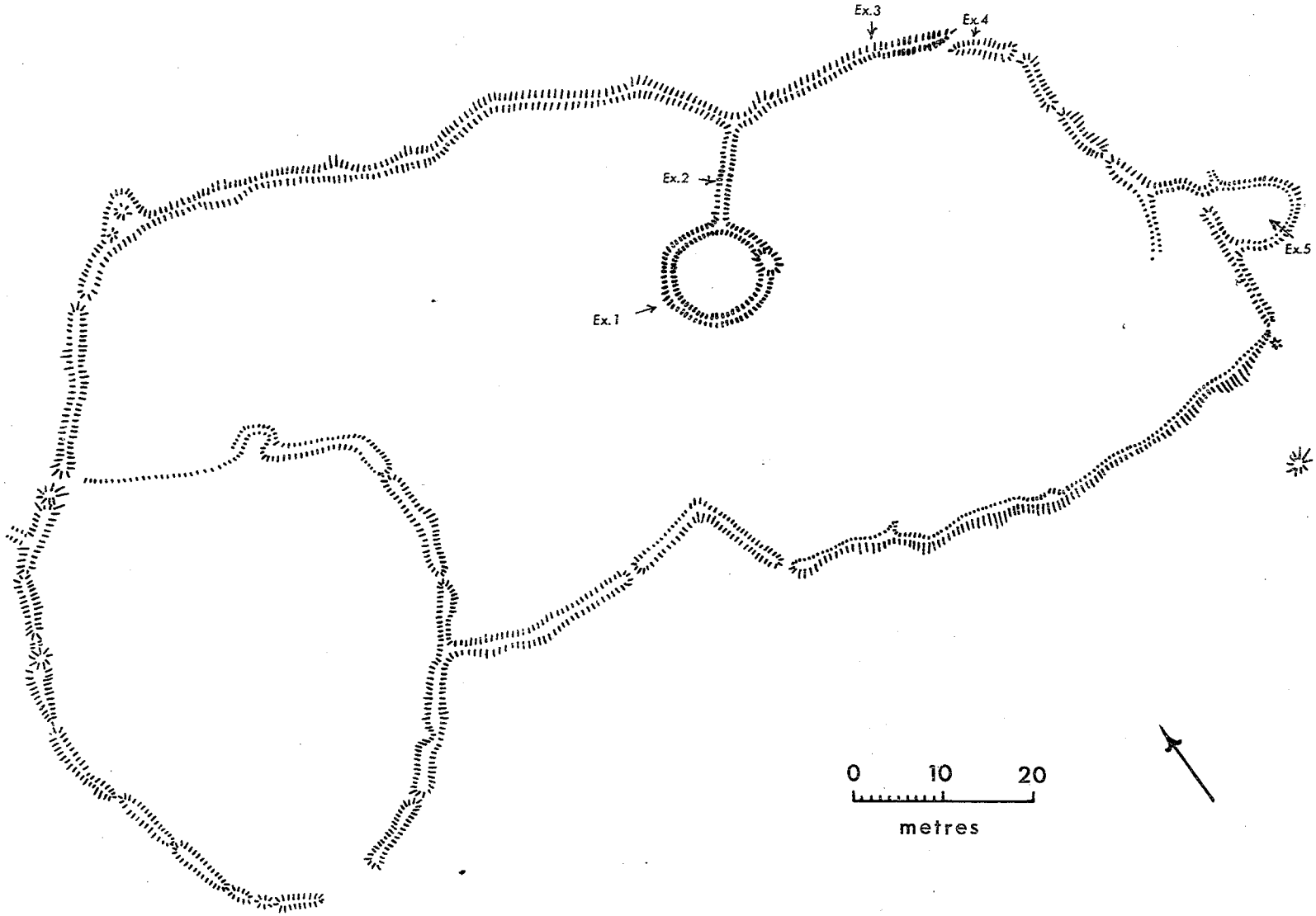


Fig. 21 Bracken Rigg : site plan.

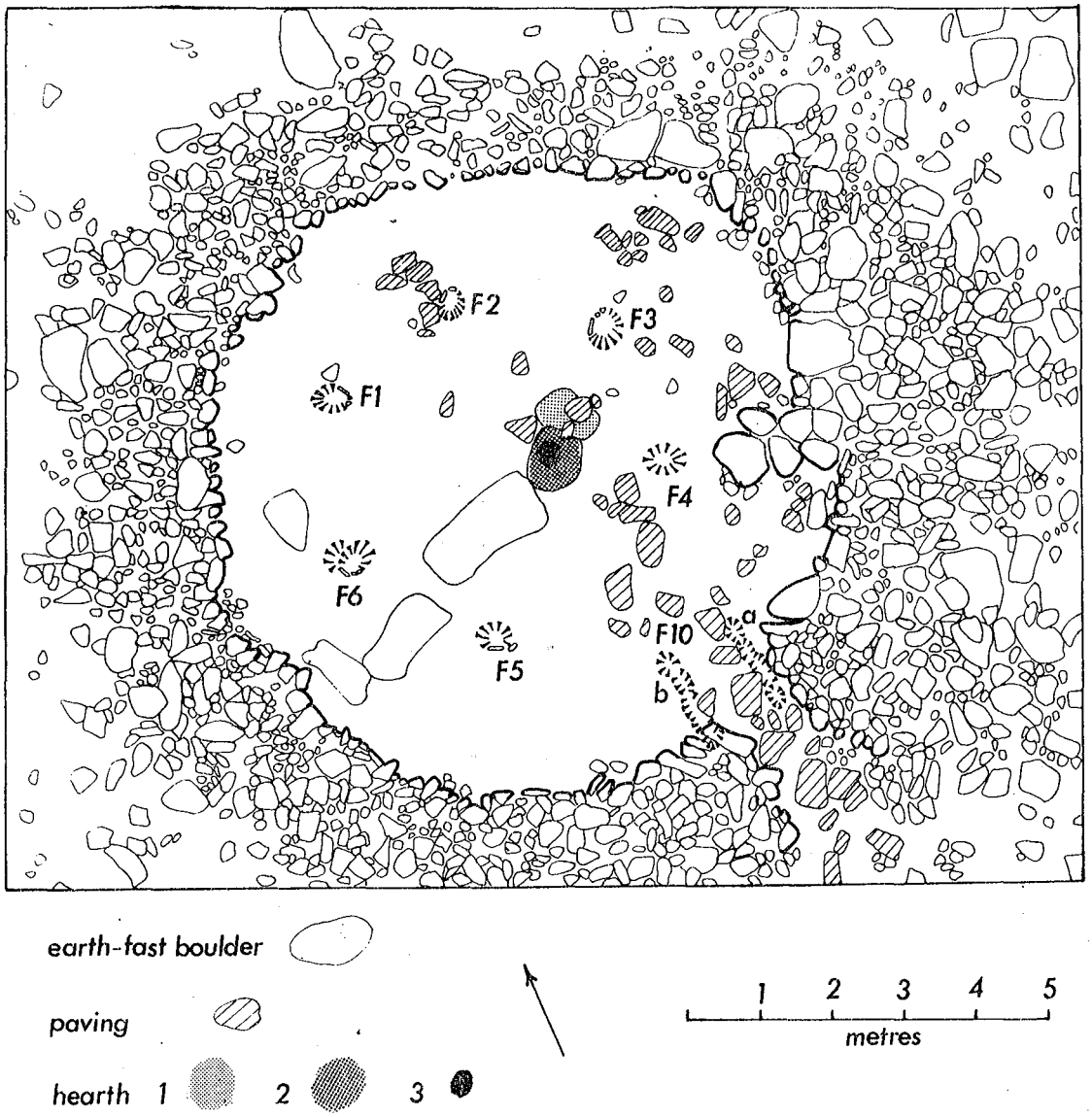
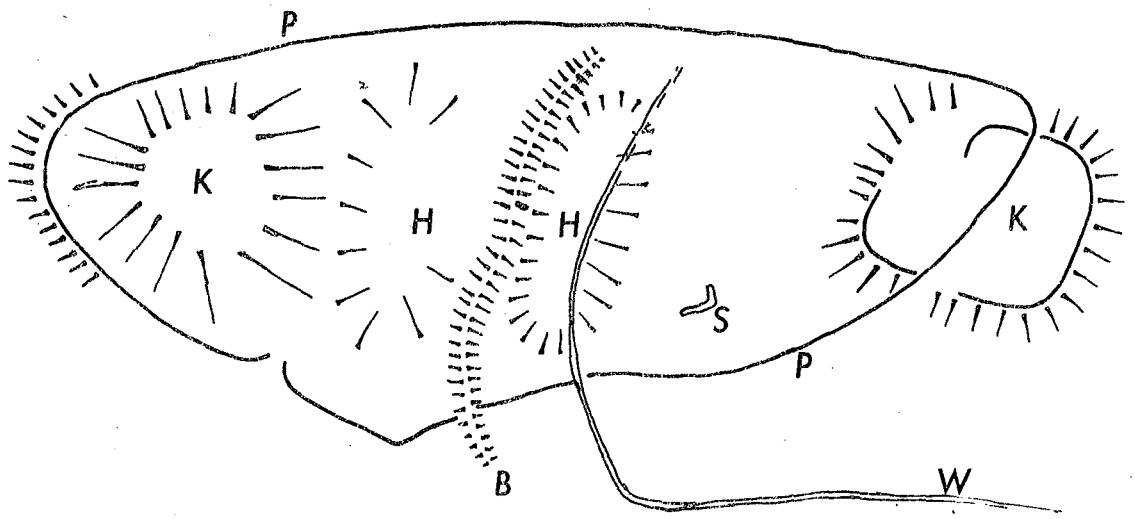


Fig. 22 Bracken Rigg : house plan.



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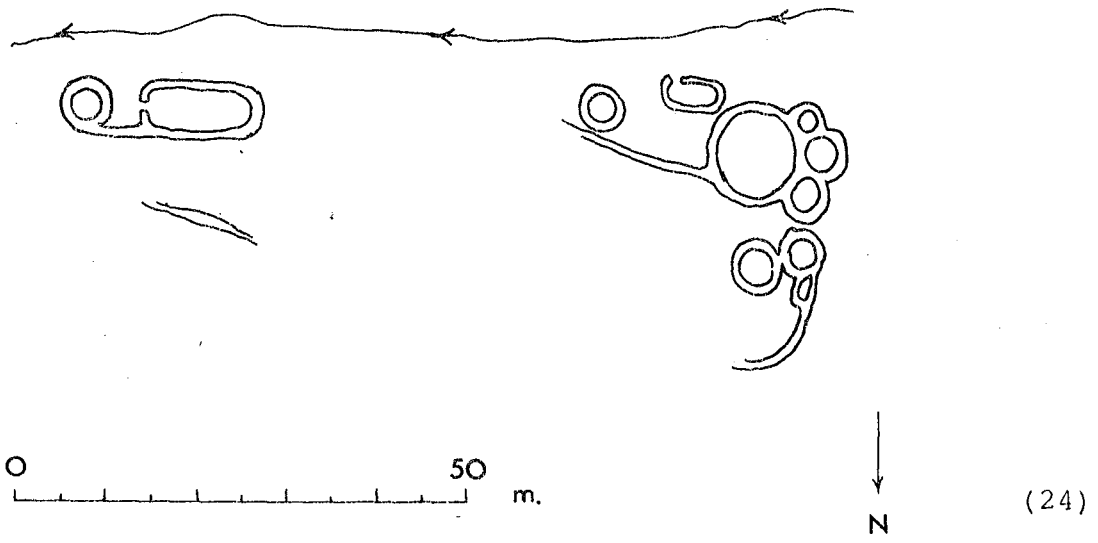


(24)

Fig. 23 Harter Fell: sketch plan of a large possibly palisaded enclosure overlying a smaller banked and ditched site.

Fig. 24 Pasture Foot: sketch plan of a group of curvilinear and rectangular buildings.

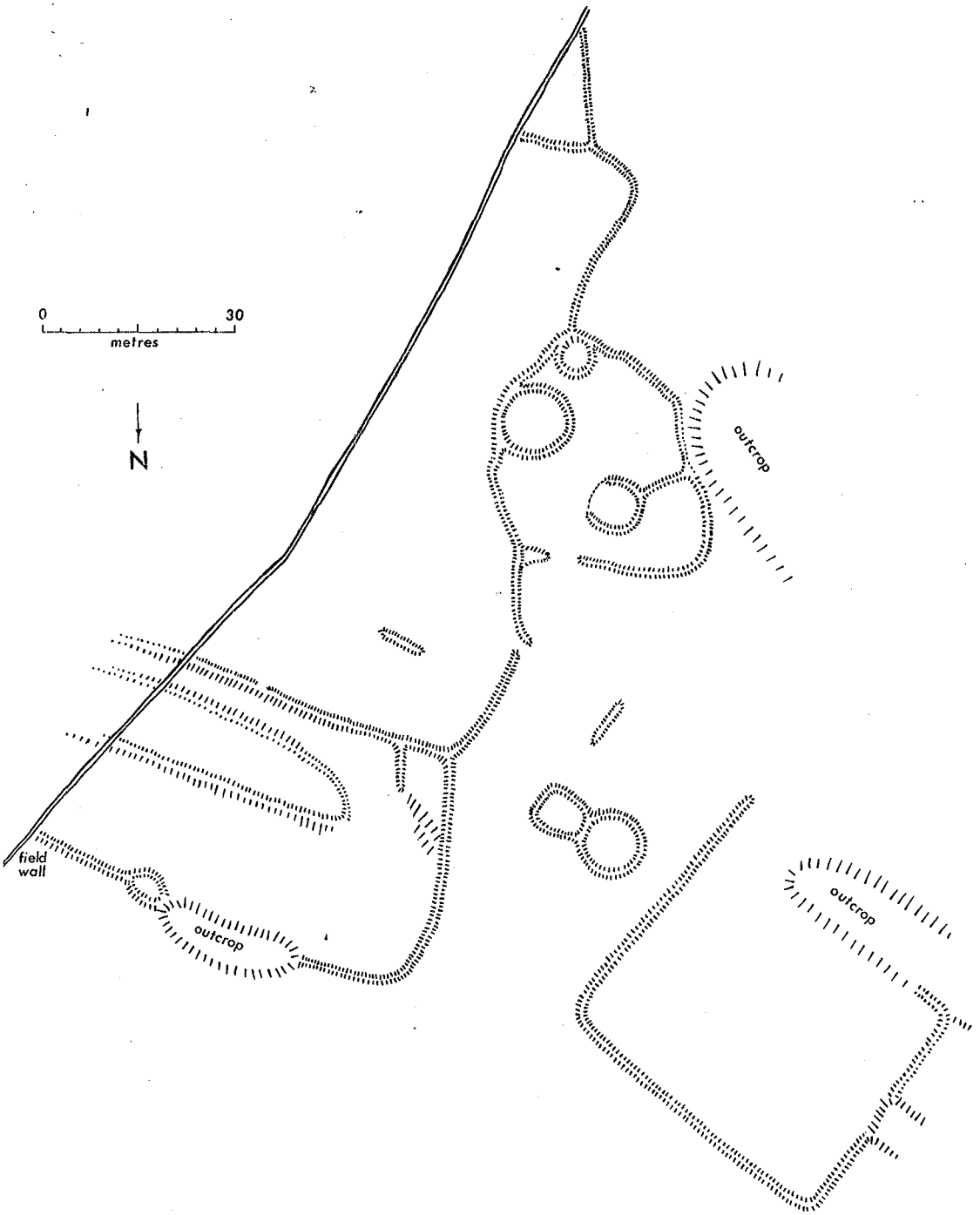


Fig. 25 Winch Bridge: a curvilinear settlement with a large square field and several long narrow ones.

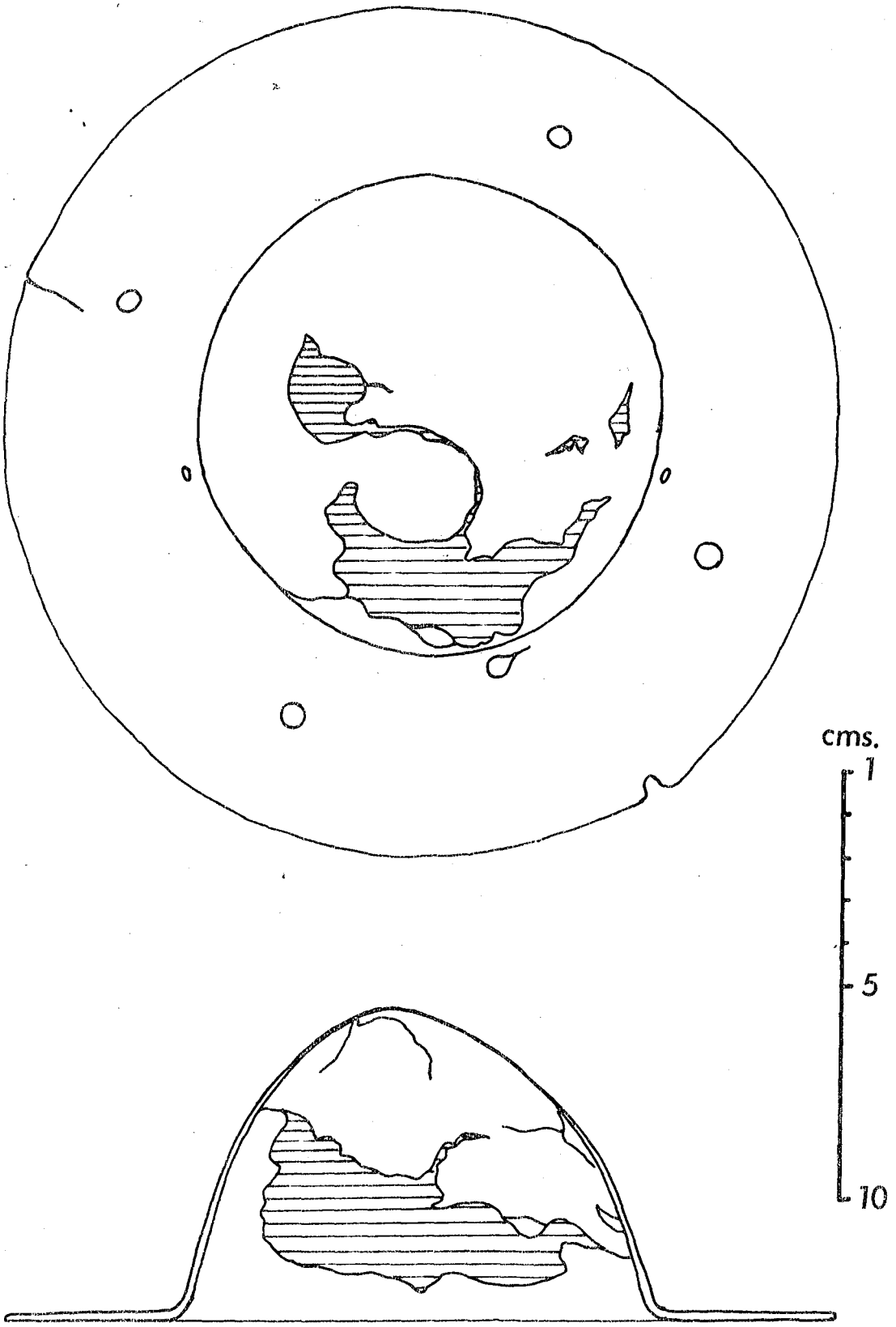


Fig. 26 White Force: bronze shield boss

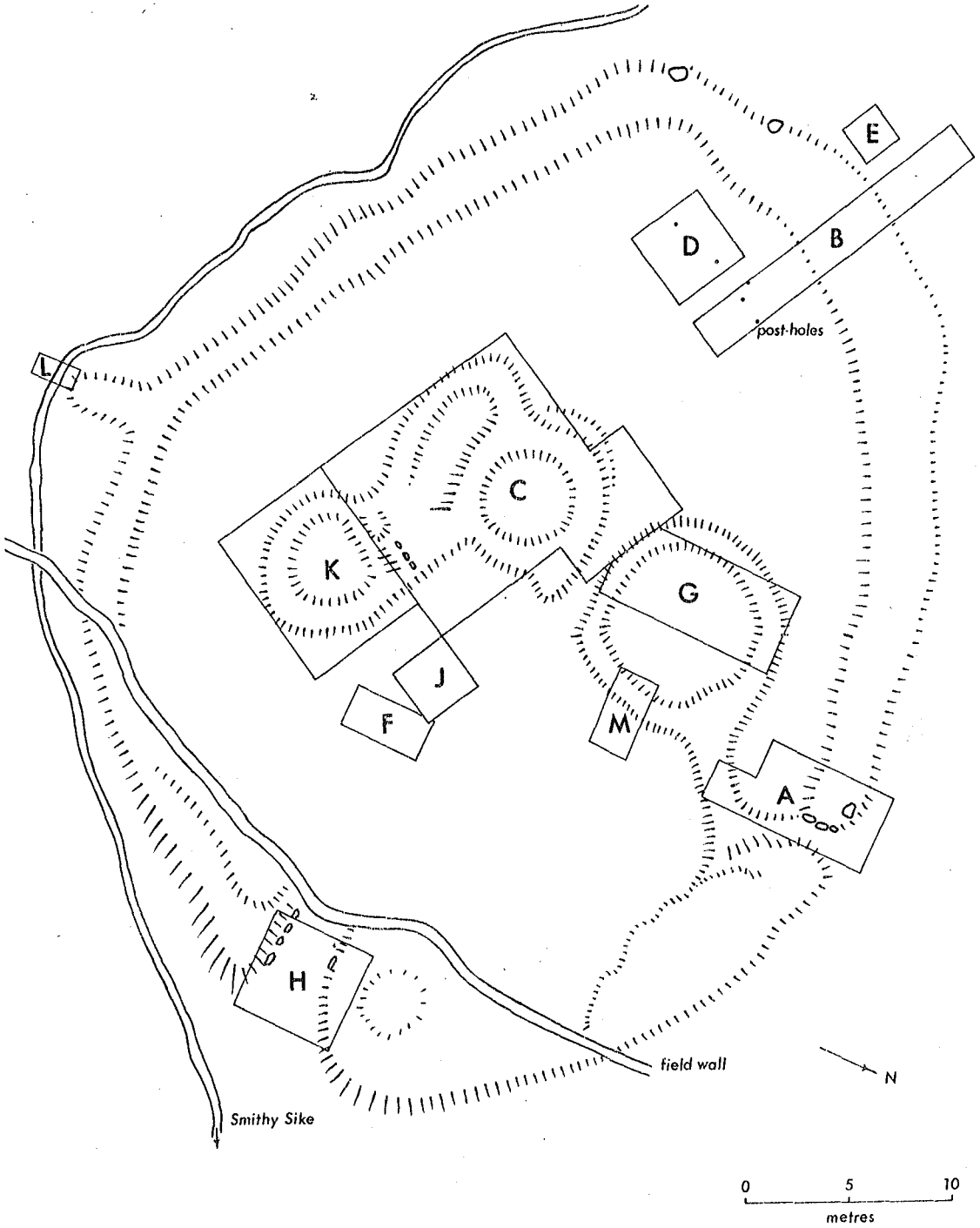


Fig. 27 Forcegarth Pasture North: site plan. The letters indicate areas excavated 1972-74.

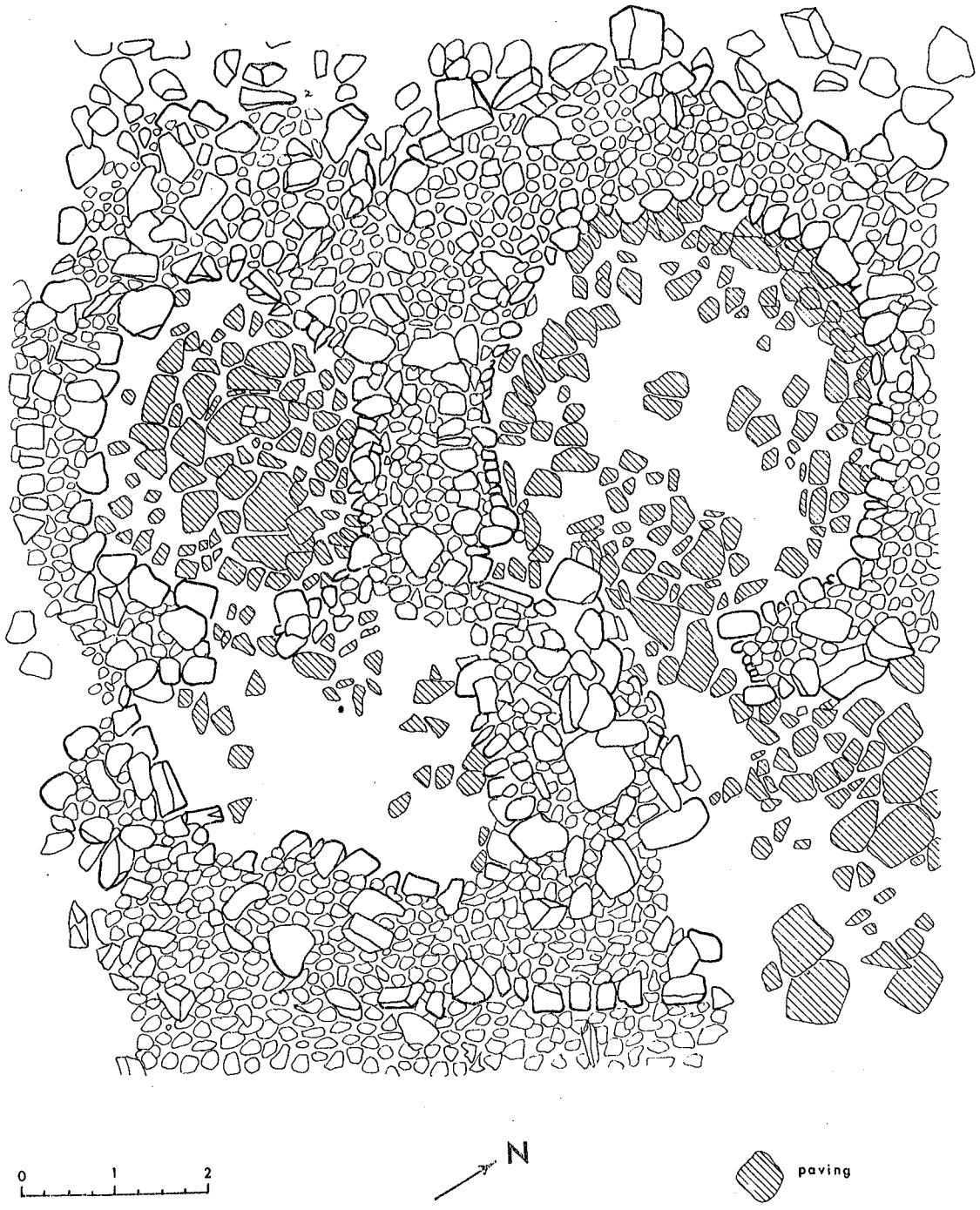


Fig.28 Forcegarth Pasture South: central house plan (area C).

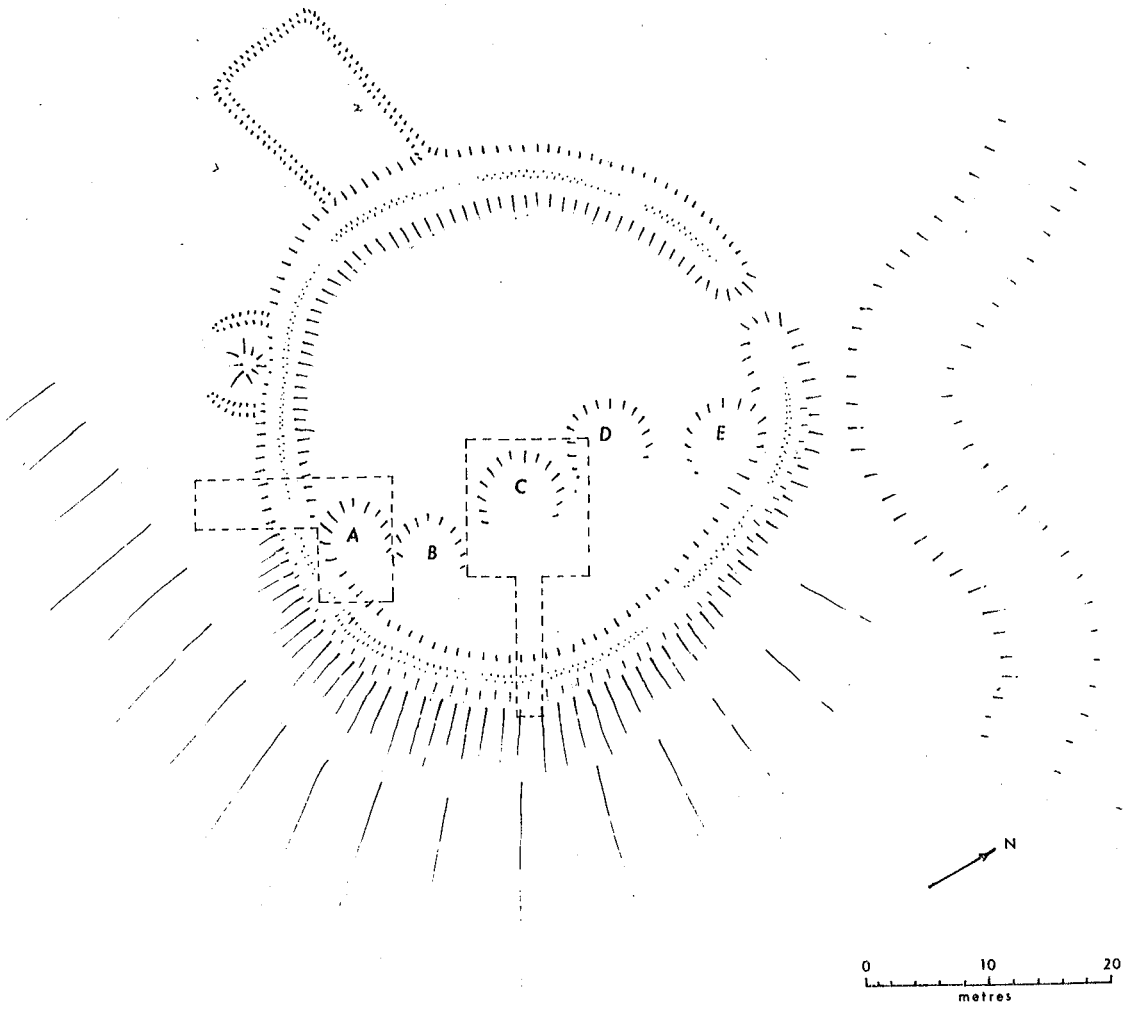


Fig. 29 Forcegarth Pasture South: site plan. The letters indicate house sites.

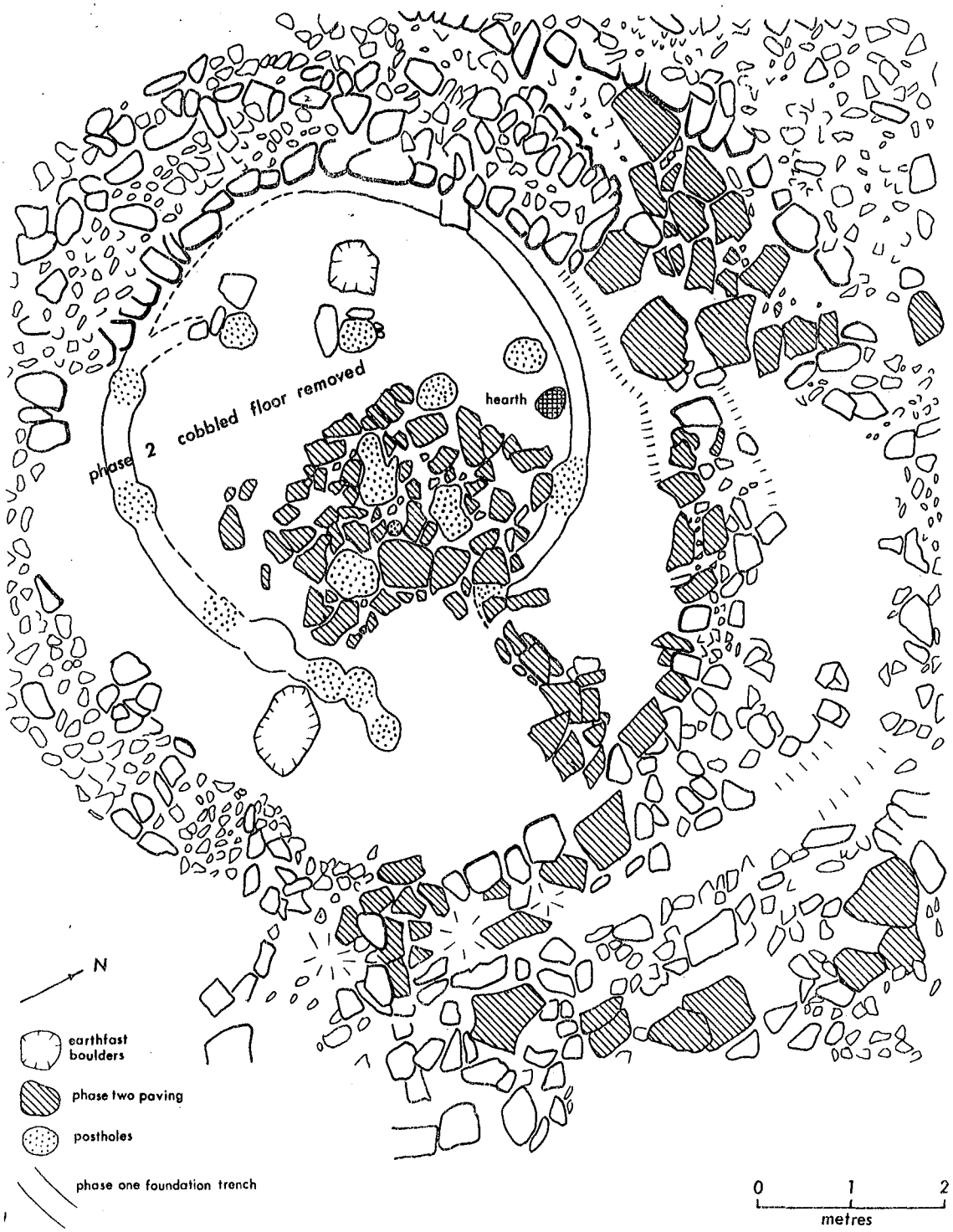


Fig. 30 Forcegarth Pasture South: plan of house C.

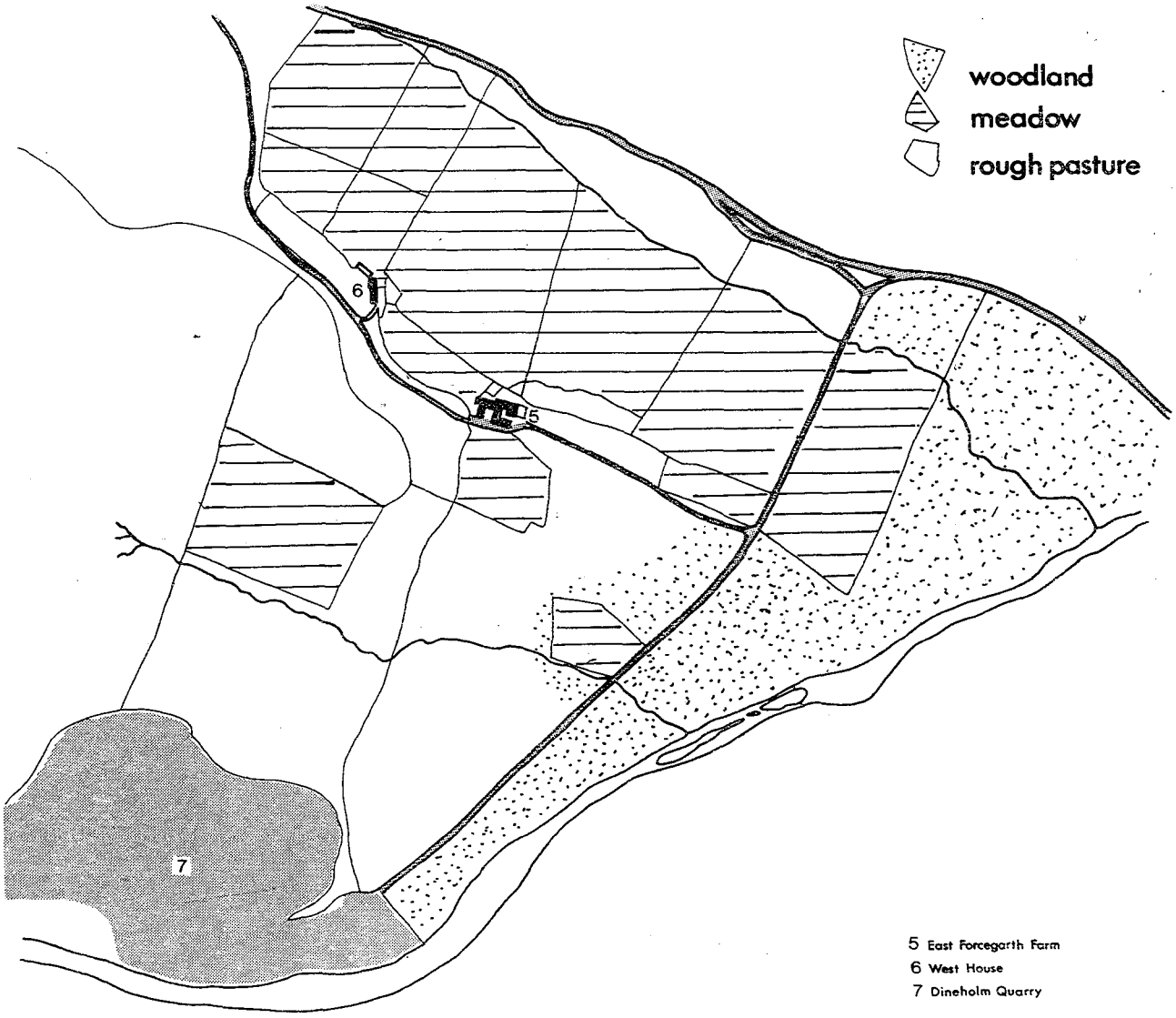


Fig. 31 Forcegarth Pasture : modern land use.

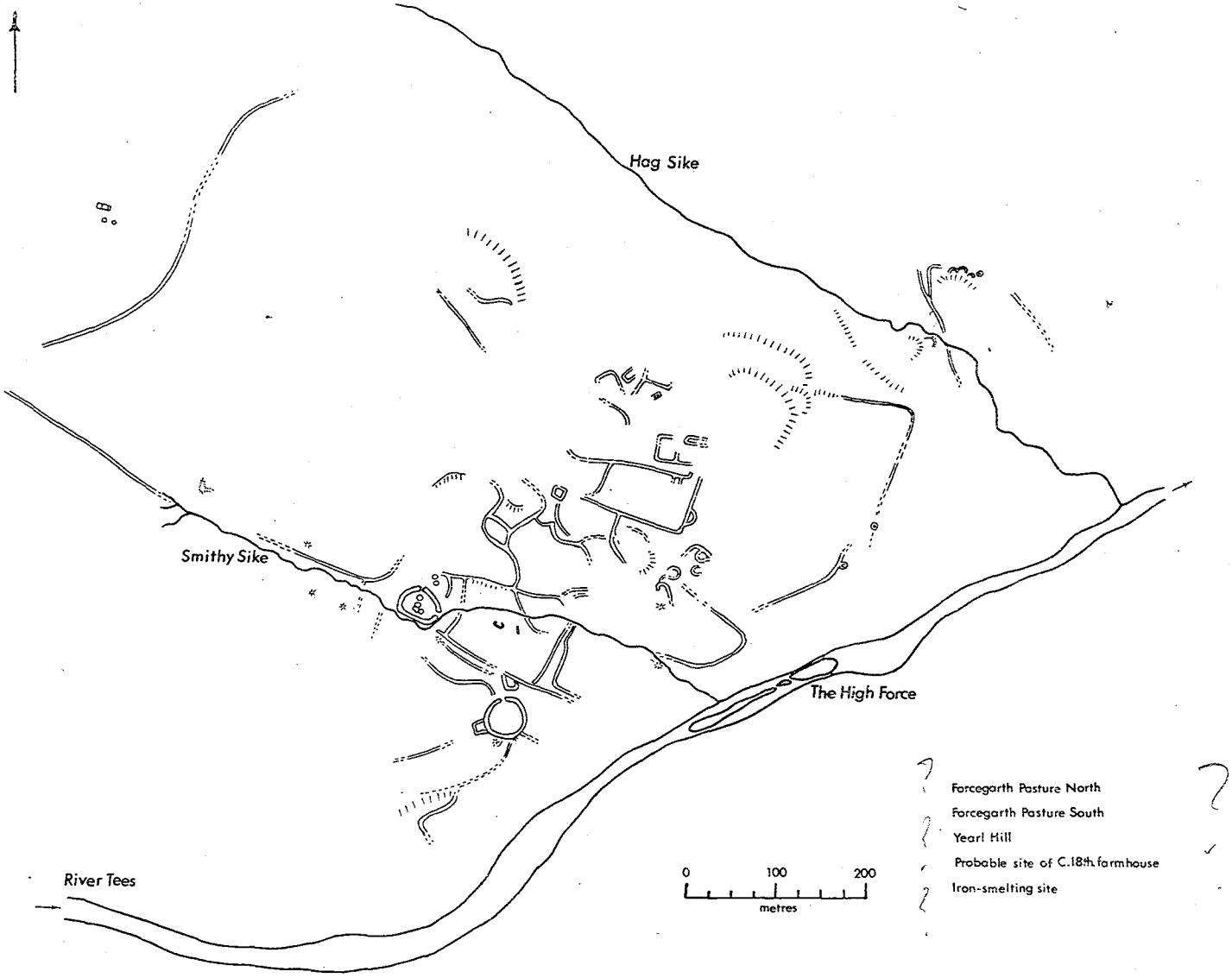


Fig. 32 Forcegarth Pasture : visible remains of early field systems.

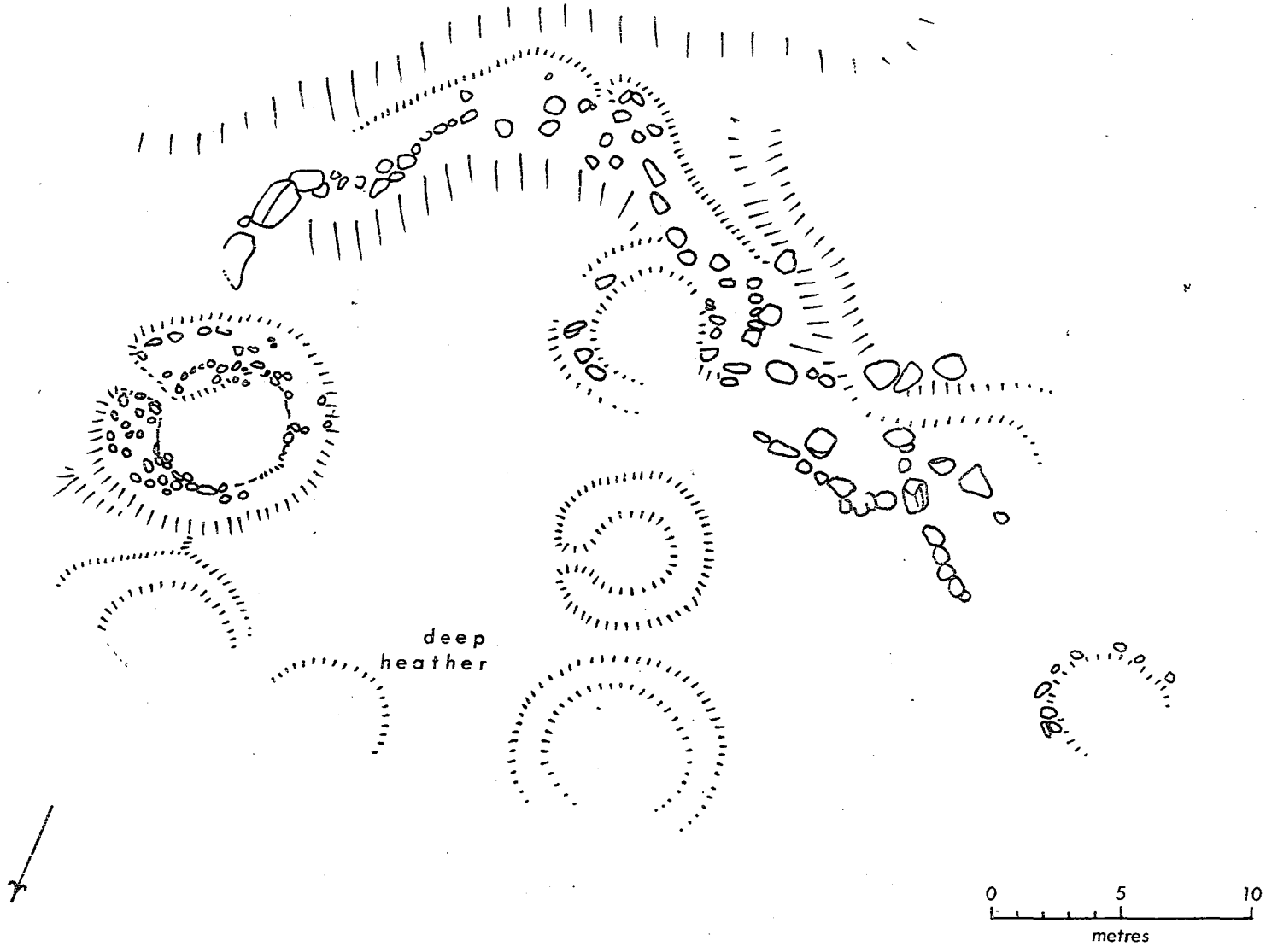


Fig. 33 Bleabeck Foot : an enclosed group of circular house foundations.

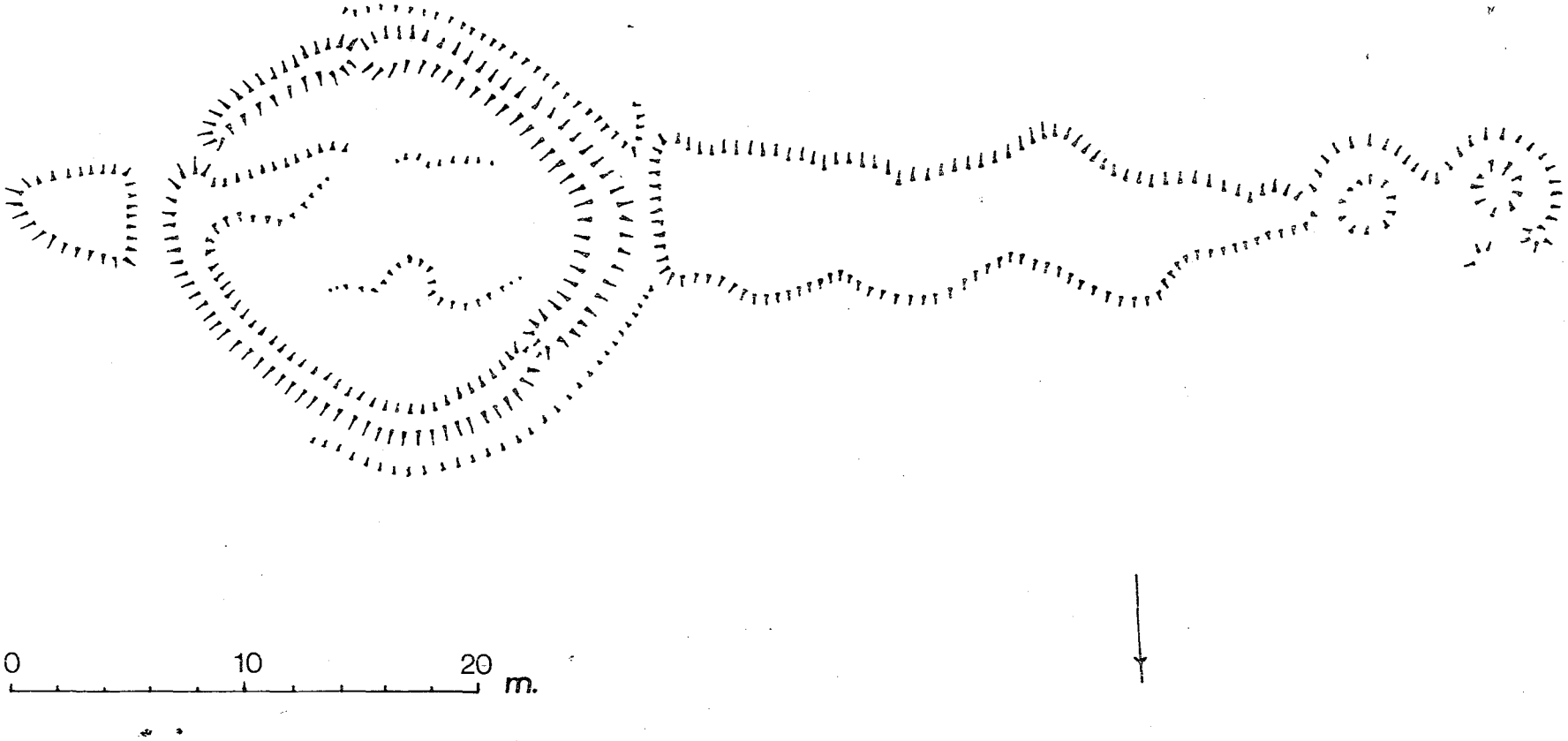


Fig. 34 Middle Hurth : sketch plan of long mound and overlying circle.

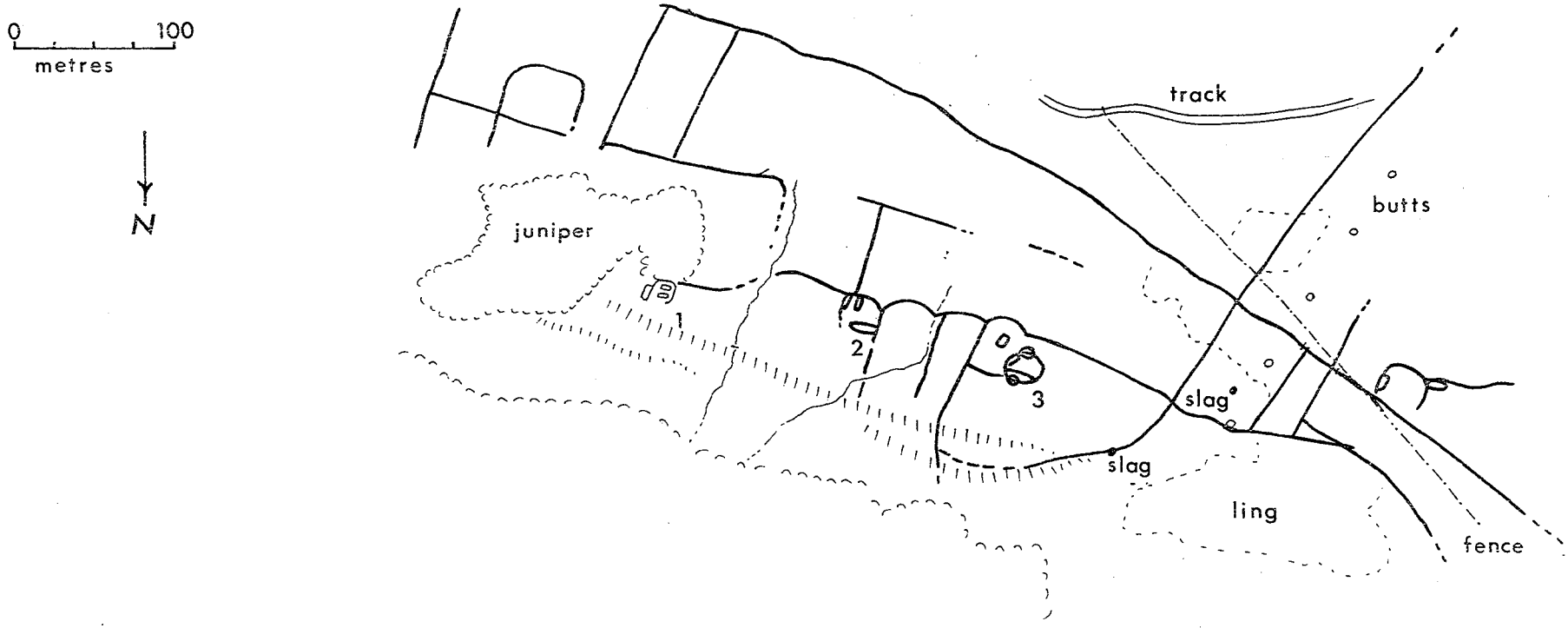


Fig. 35 Simy Folds : area plan showing field boundaries and farmsteads.

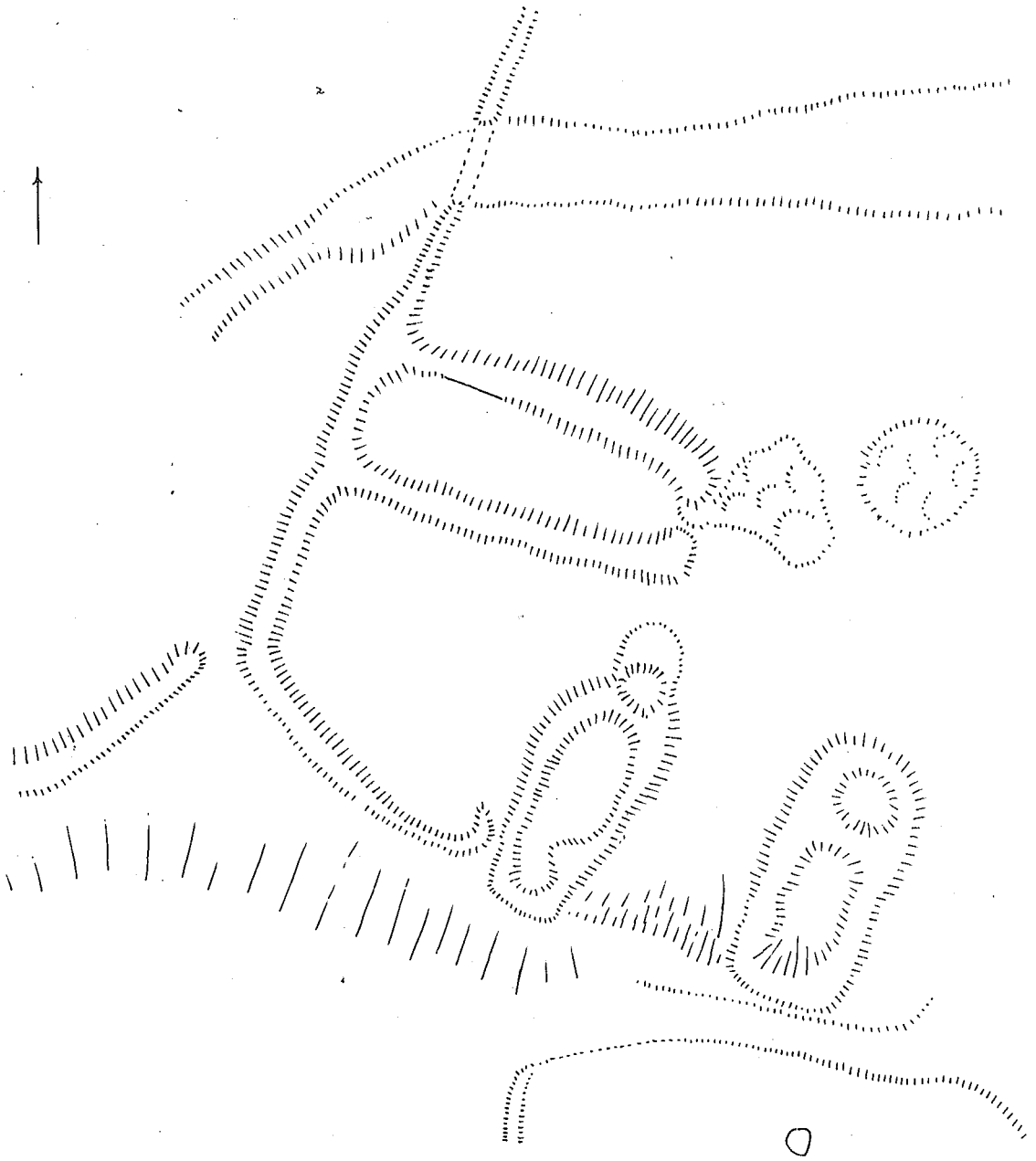


Fig. 36 Simy Folds : site 2 before excavation.

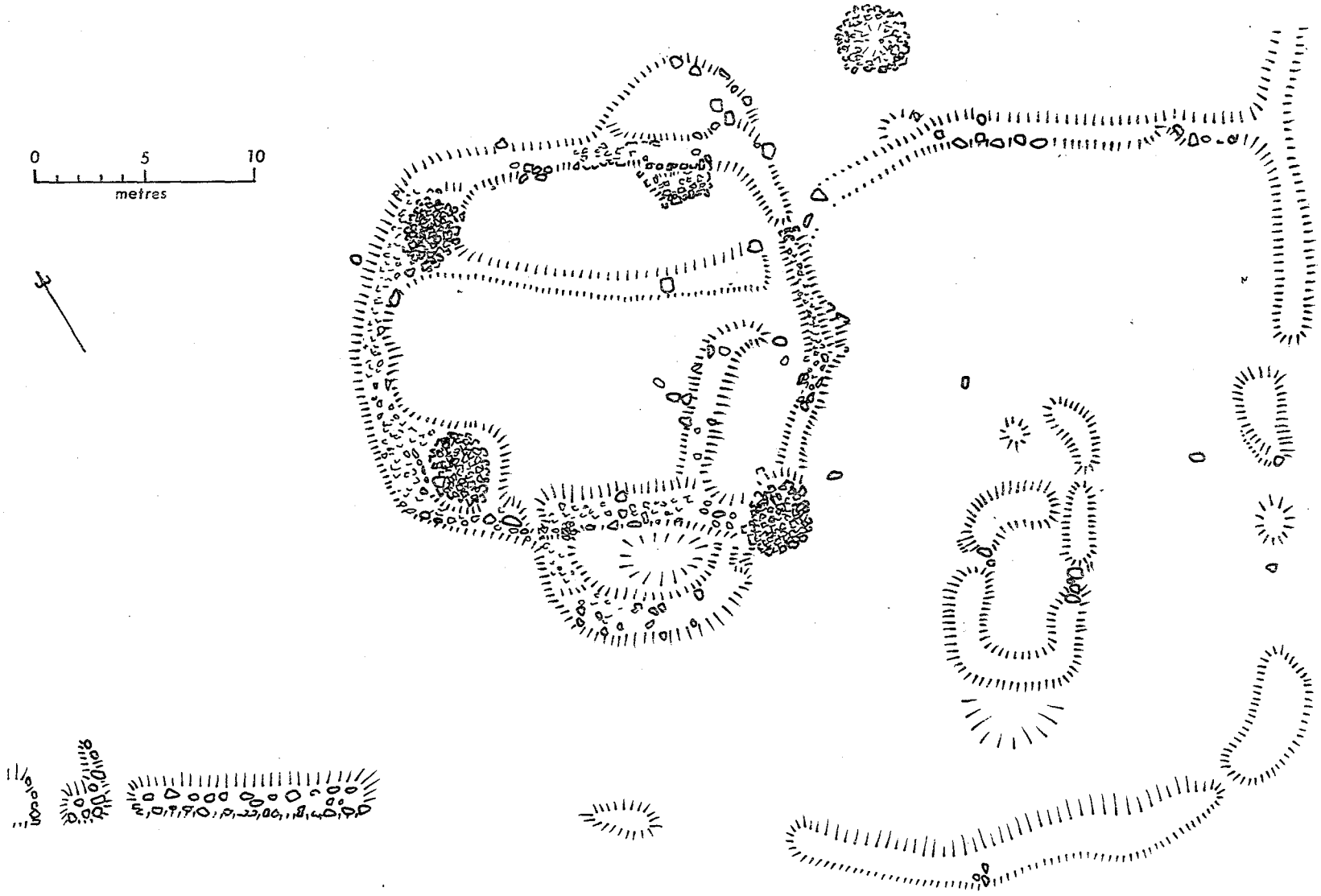


Fig. 37 Simy Folds : site 3 before excavation.

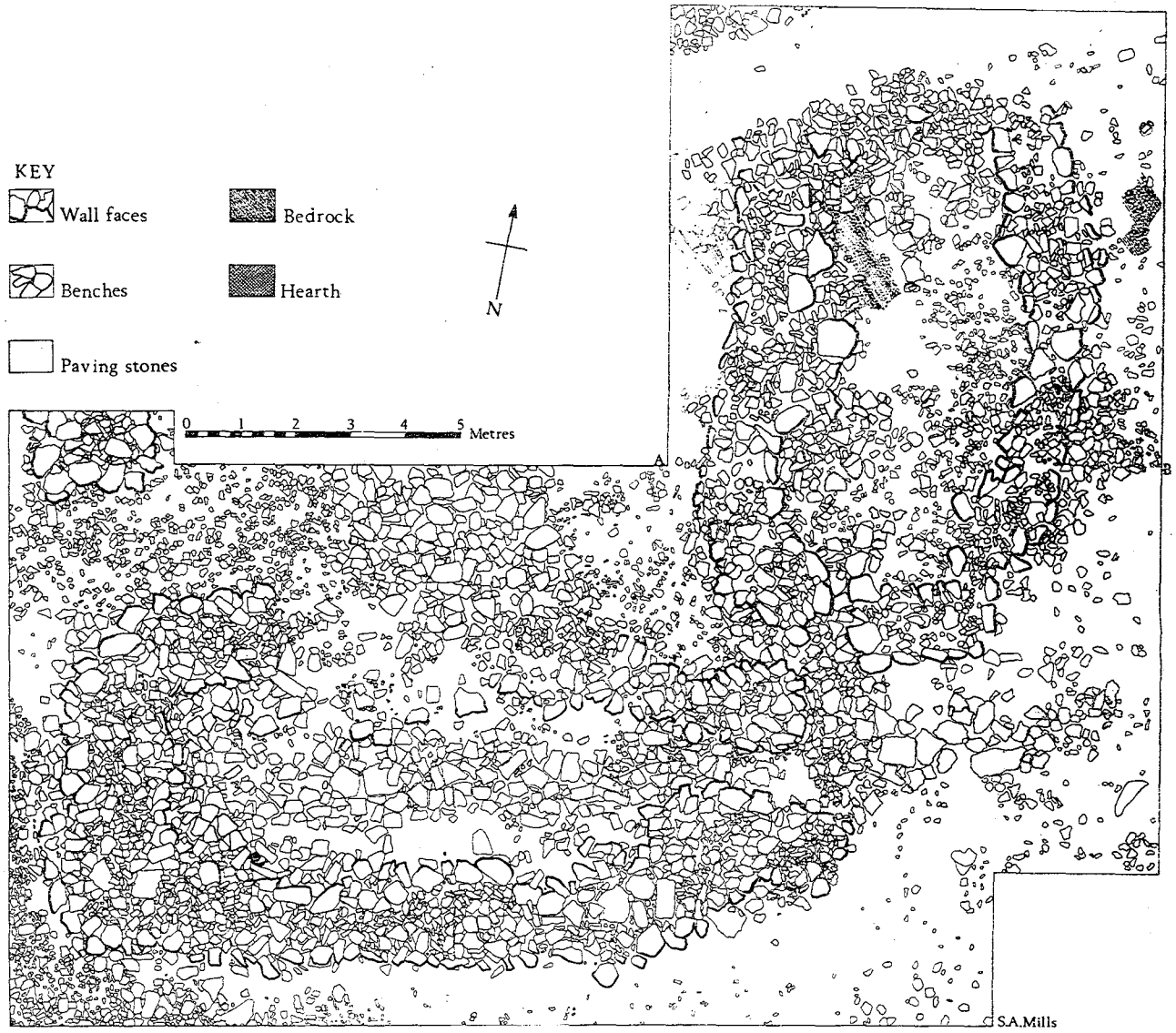


Fig. 38 Simy Folds : site 1 buildings after excavation.

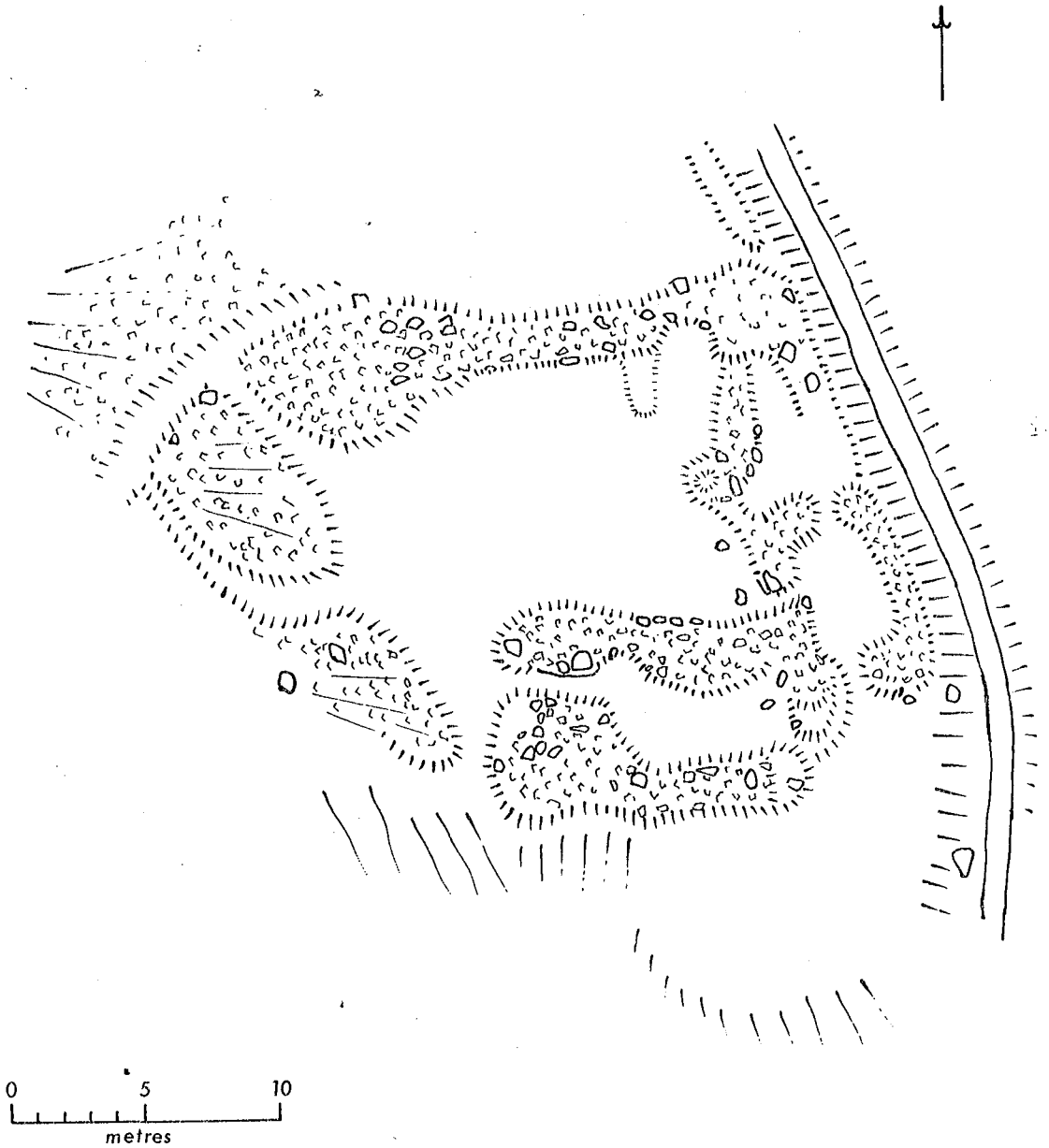


Fig. 39 Holwick Castles : a small site of the Simy Folds type.

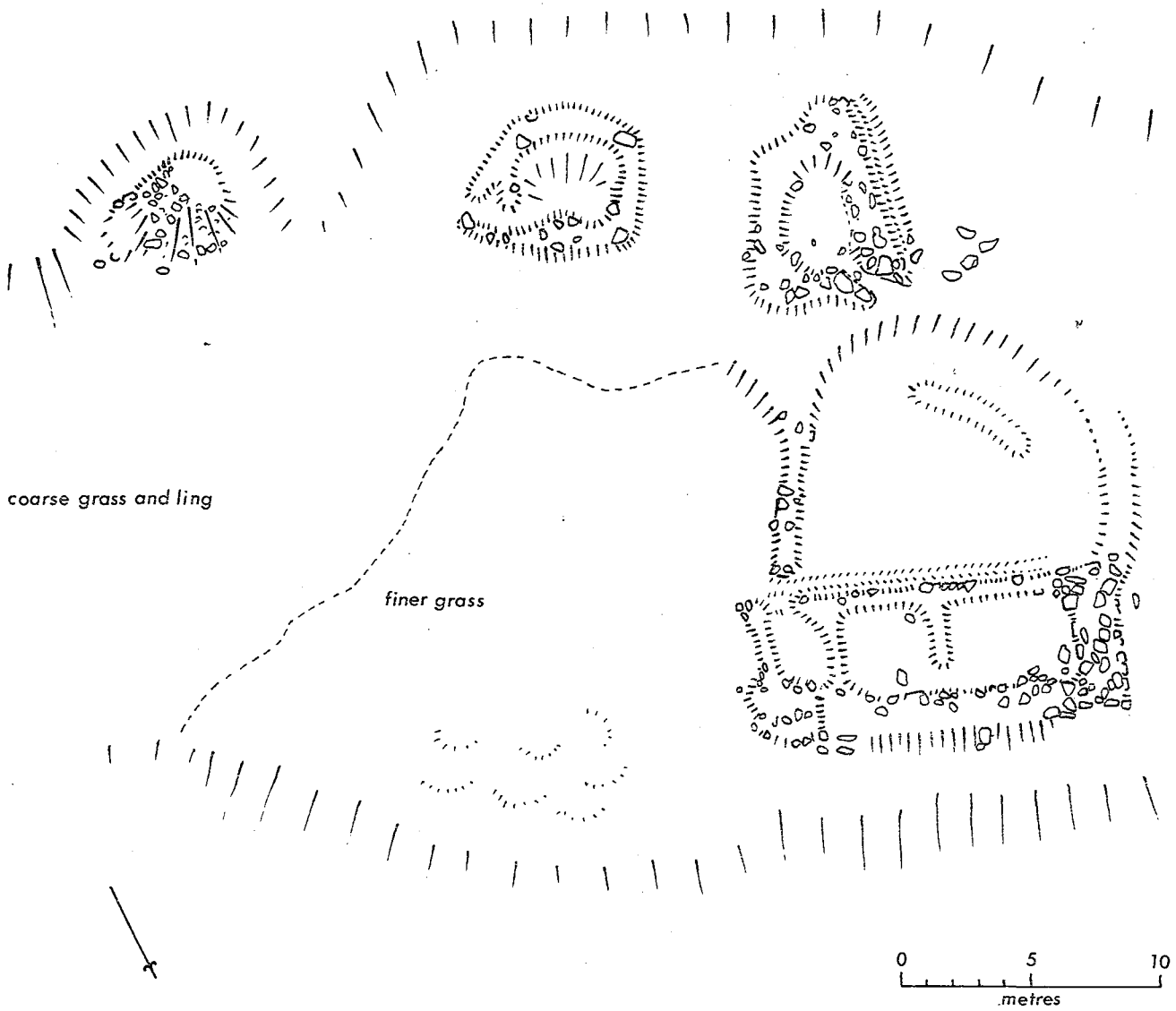


Fig. 40 Yearl Hill : a probable early mediaeval farmstead or shieling.

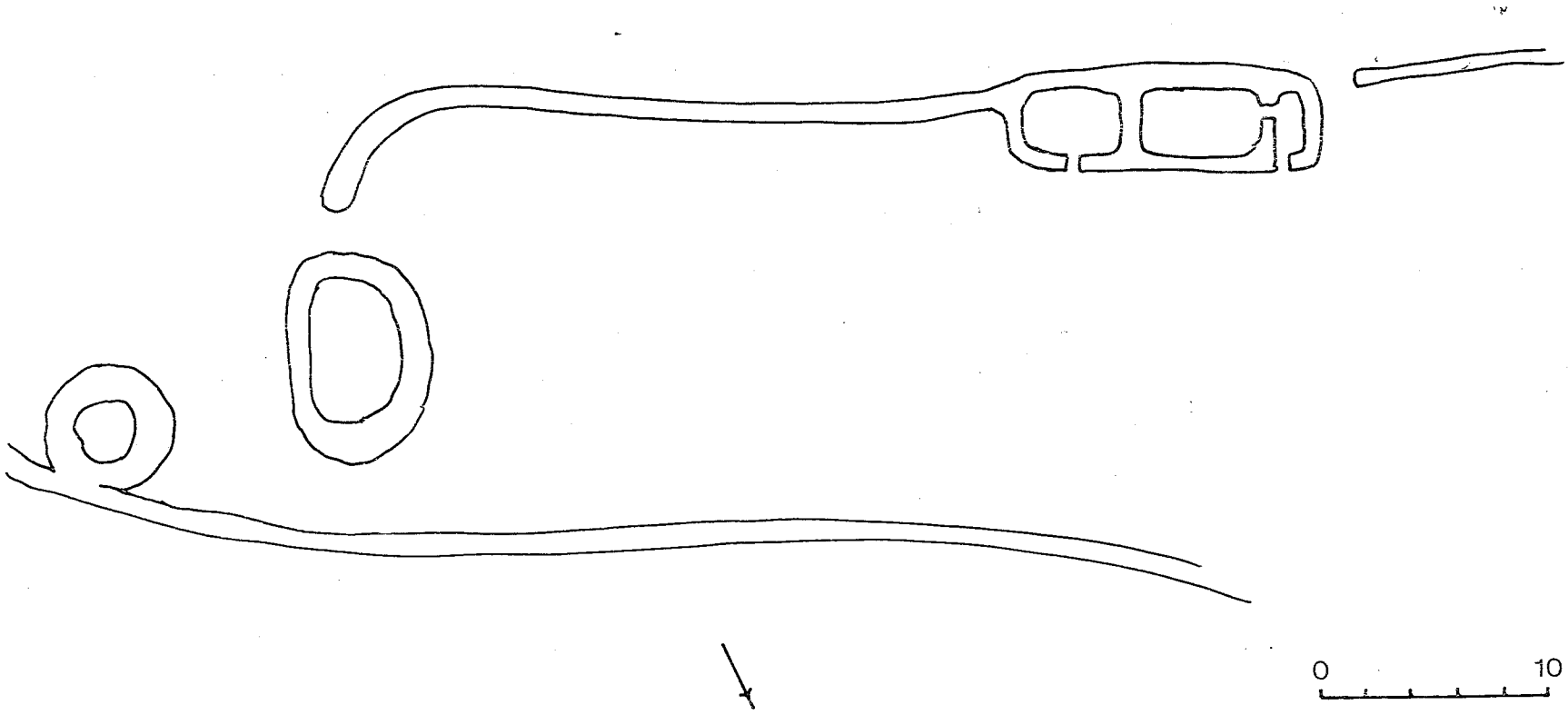


Fig. 41 Simy Folds site 4 : a possible shieling.

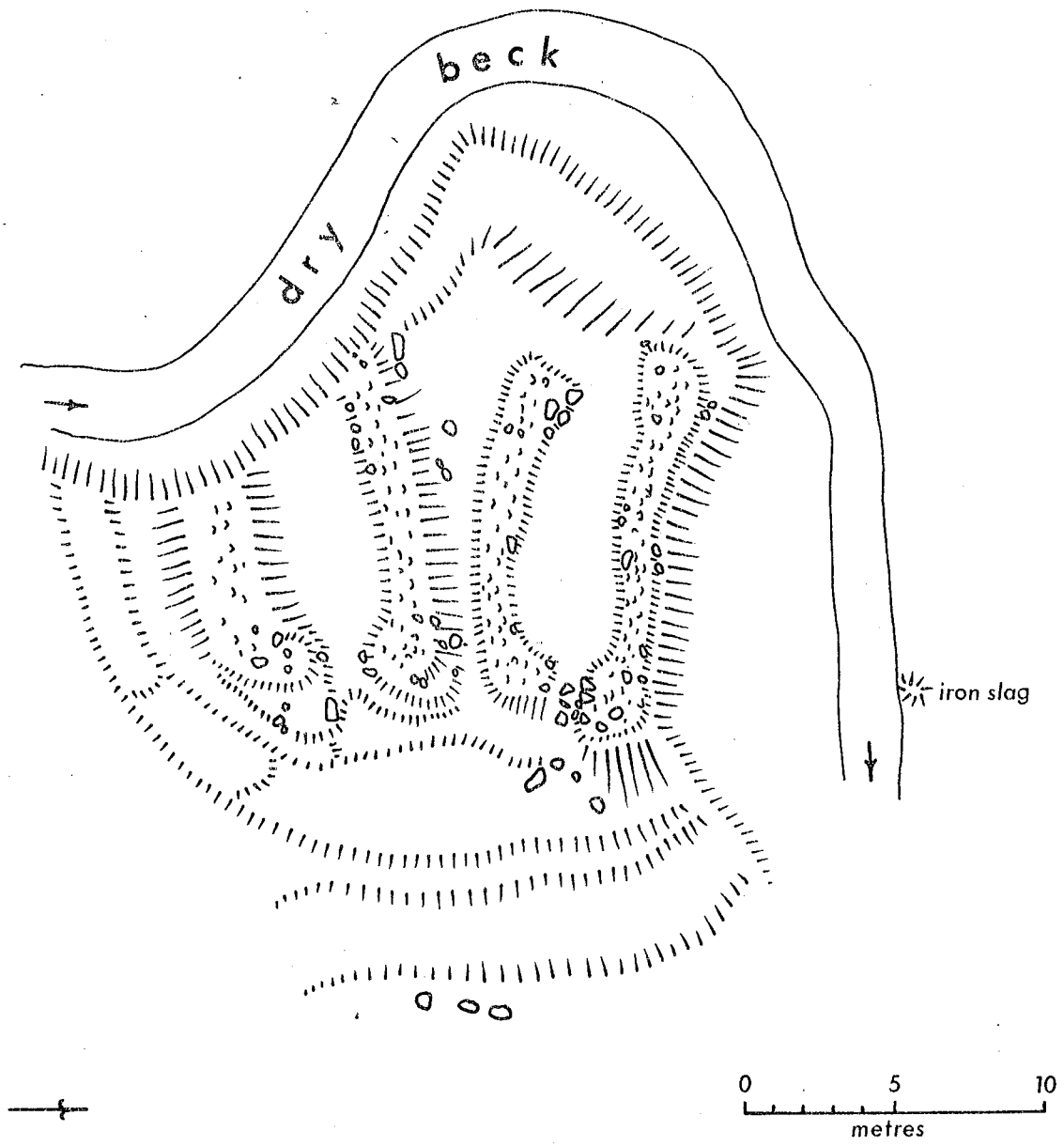


Fig. 42 Dry Beck : two enclosed subrectangular buildings.

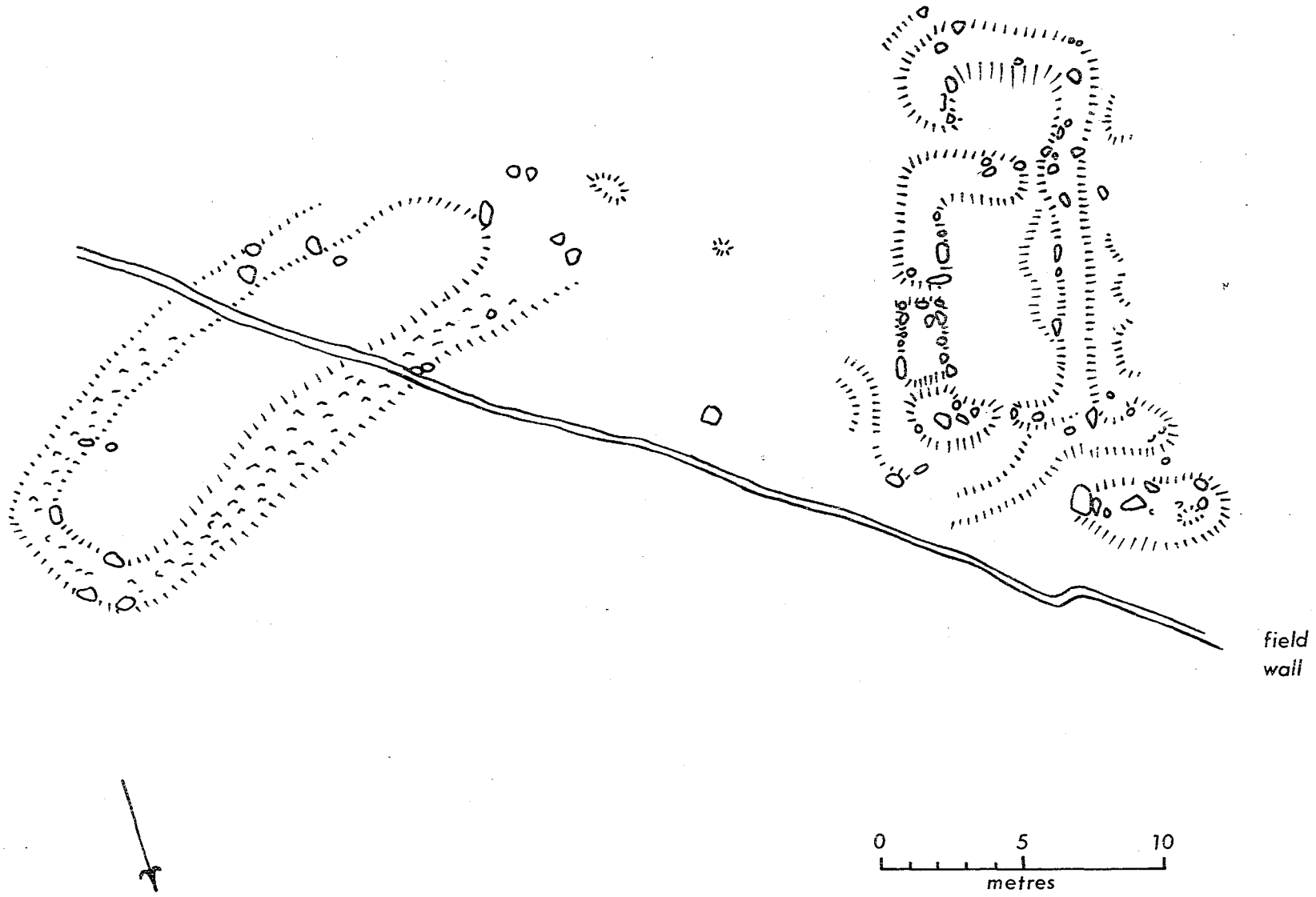
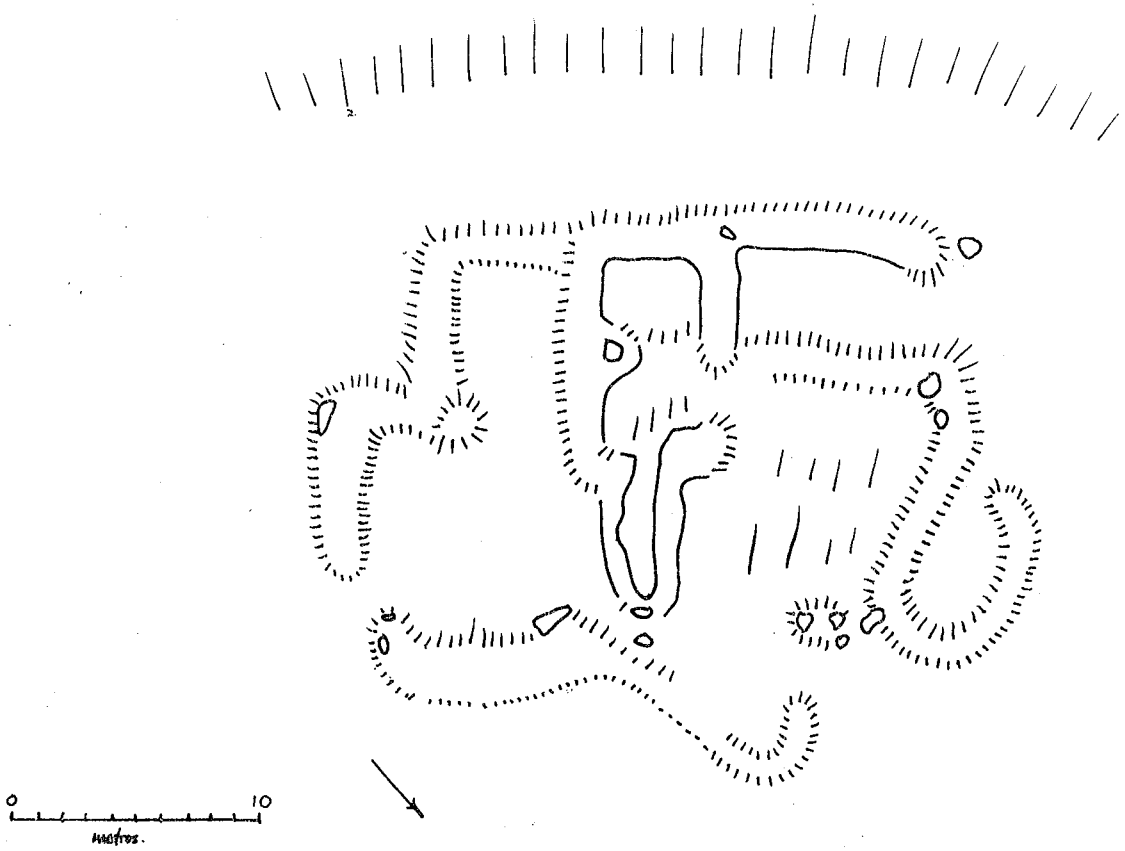


Fig. 43 Birk Rigg : two rectangular buildings.



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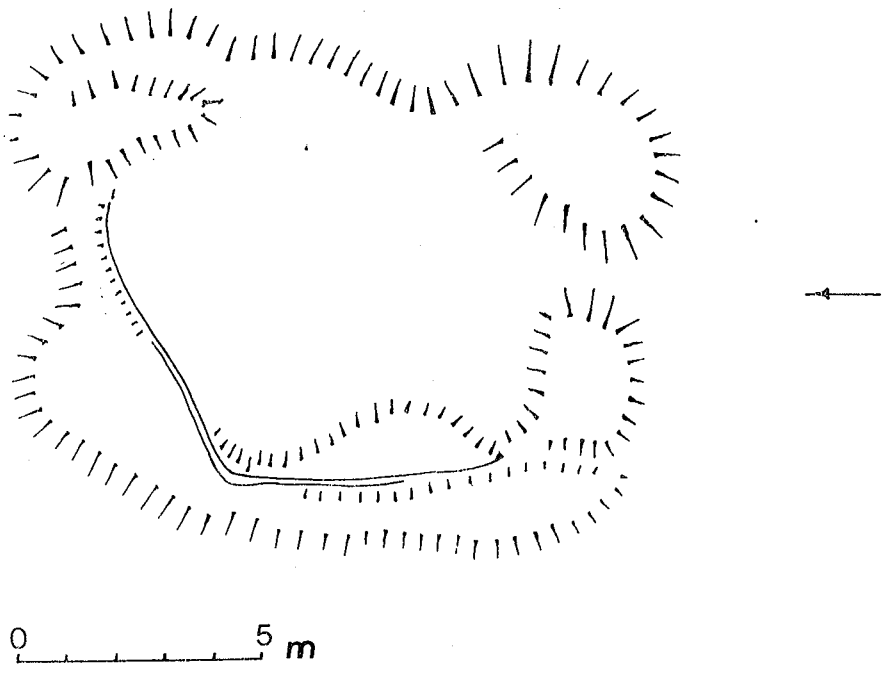


(45)

Fig. 44 White Earth: sketch plan of the most westerly of a group of amorphous sites.

Fig. 45 Middle Hurth 2: The remains of a small sub-rectangular structure N.E. of Middle Hurth.

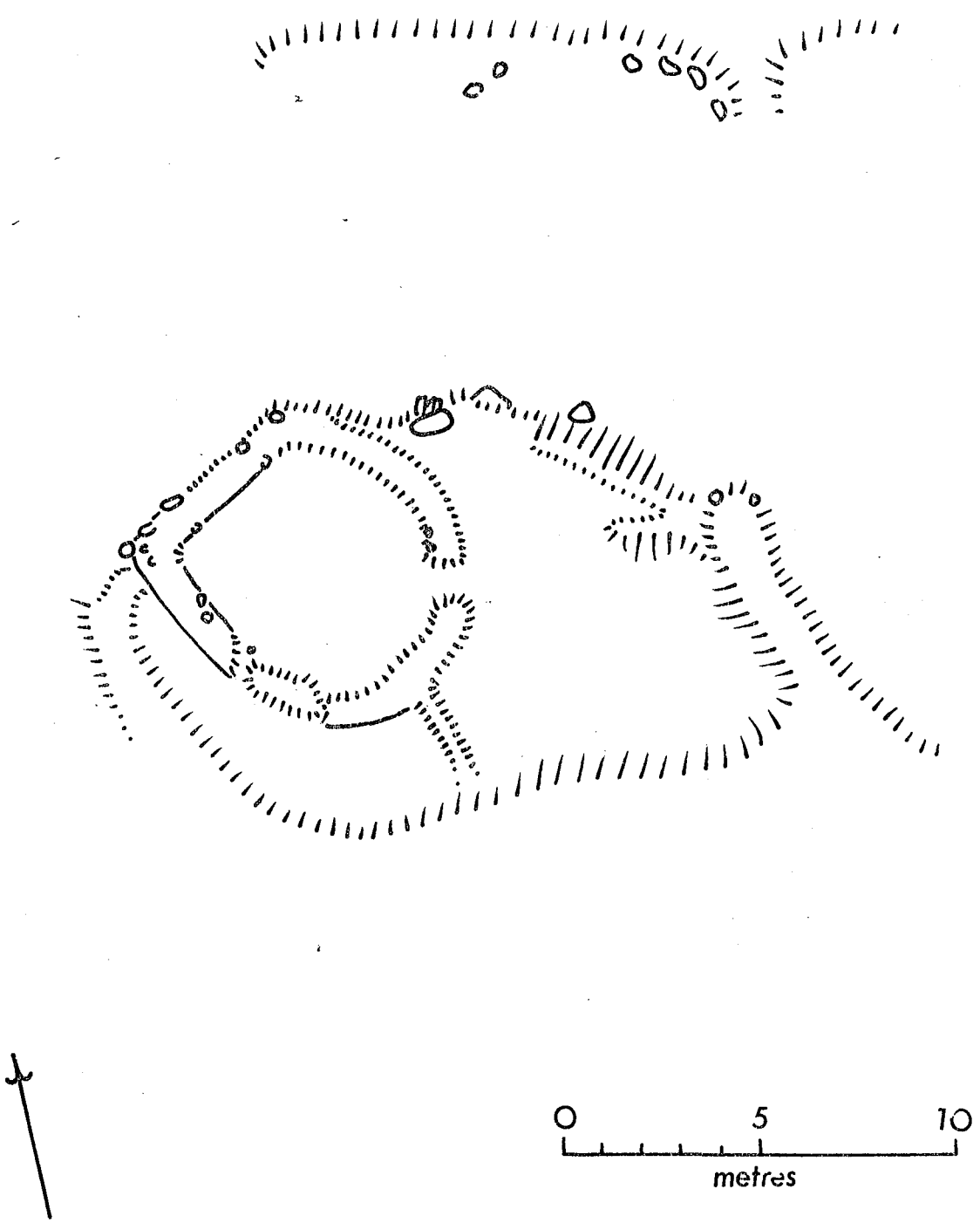
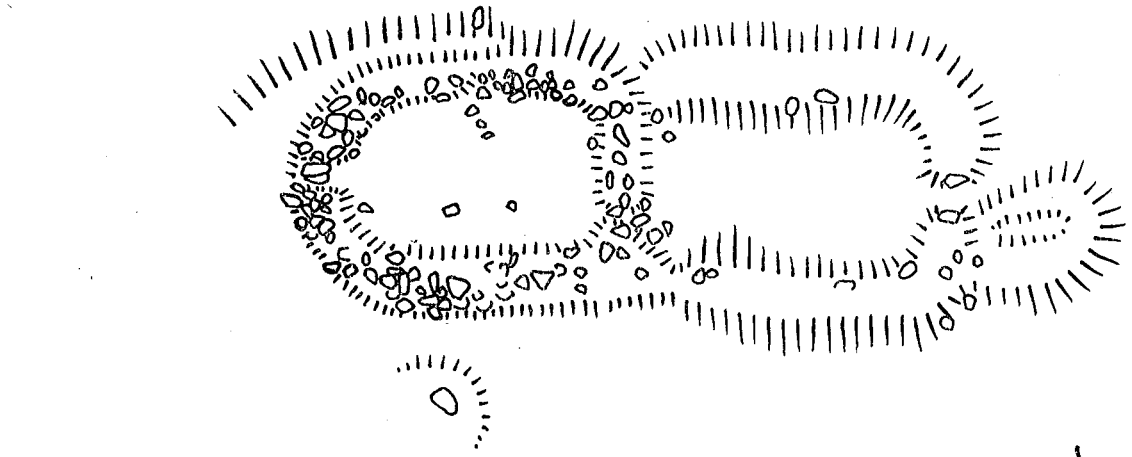
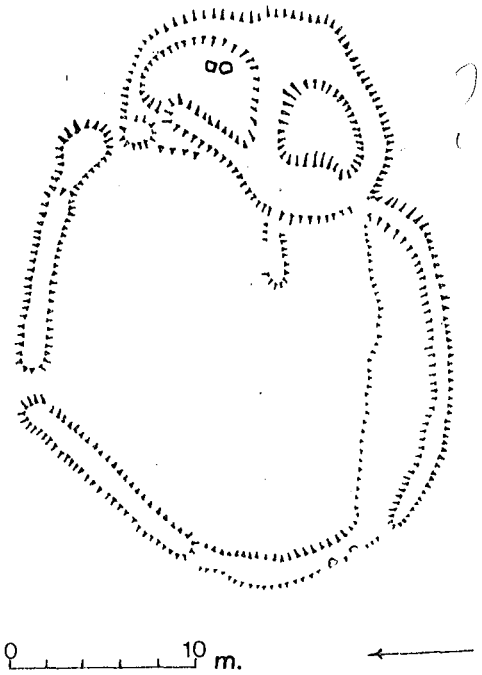


Fig. 46 Holwick Head: a small D-shaped building with enclosure.



0 5
metres

(47)

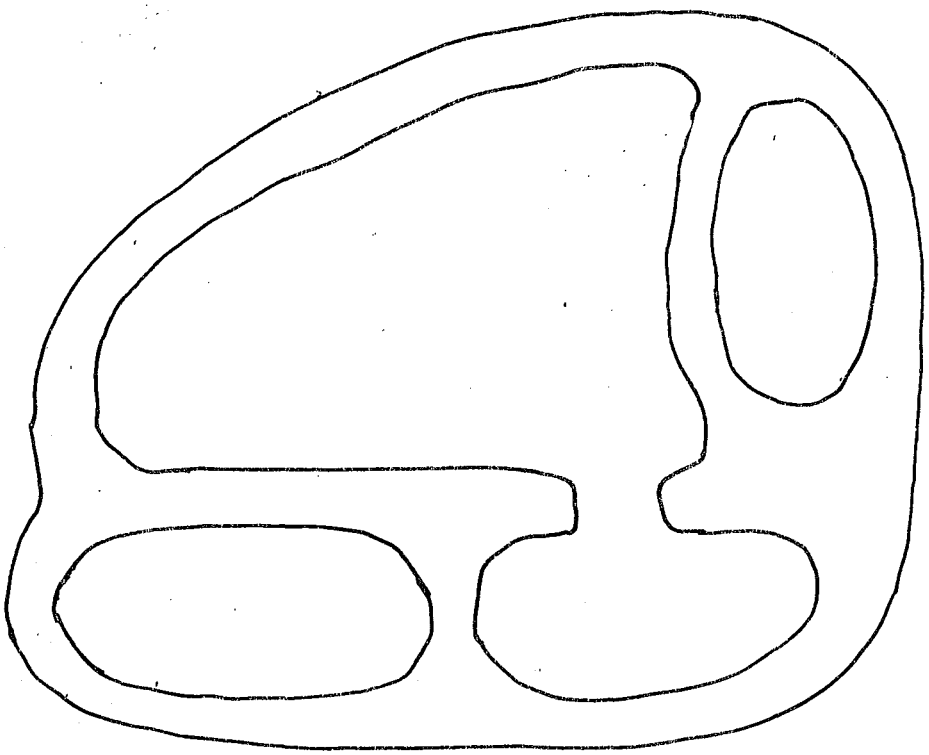


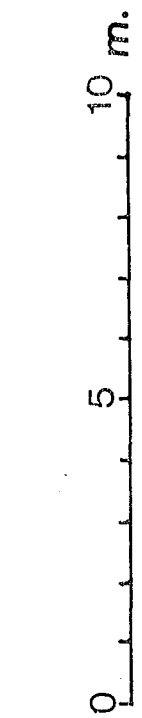
0 10 m.

(48)

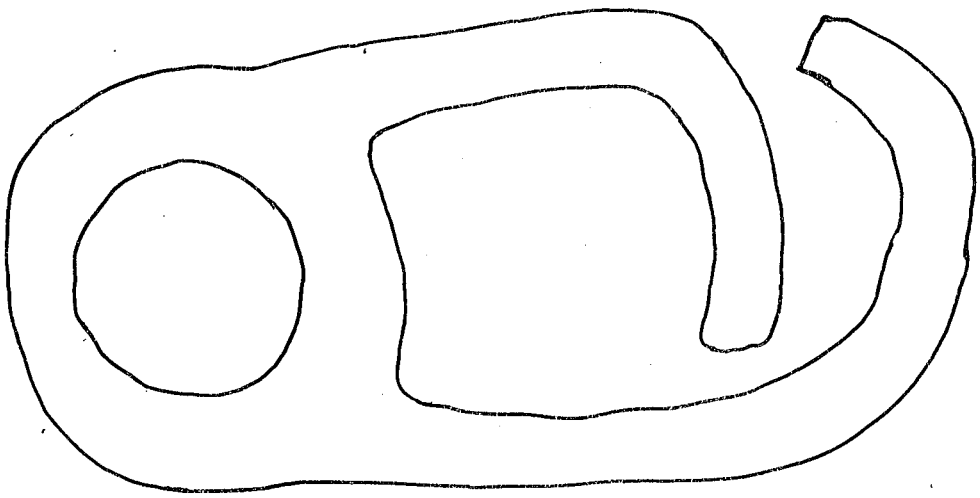
Fig. 47 Pasture Foot (North): a large rectangular building on the south bank of the river.

Fig. 48 Crossthwaite Common (S.E.). A curvilinear site with a two-roomed building and enclosure.





(49)



(50)

Fig. 49 Willy Brig Sike: sketch plan of a Simy Folds type farmstead.

Fig. 50 Skyer Beck: sketch plan of a possible ring cairn.

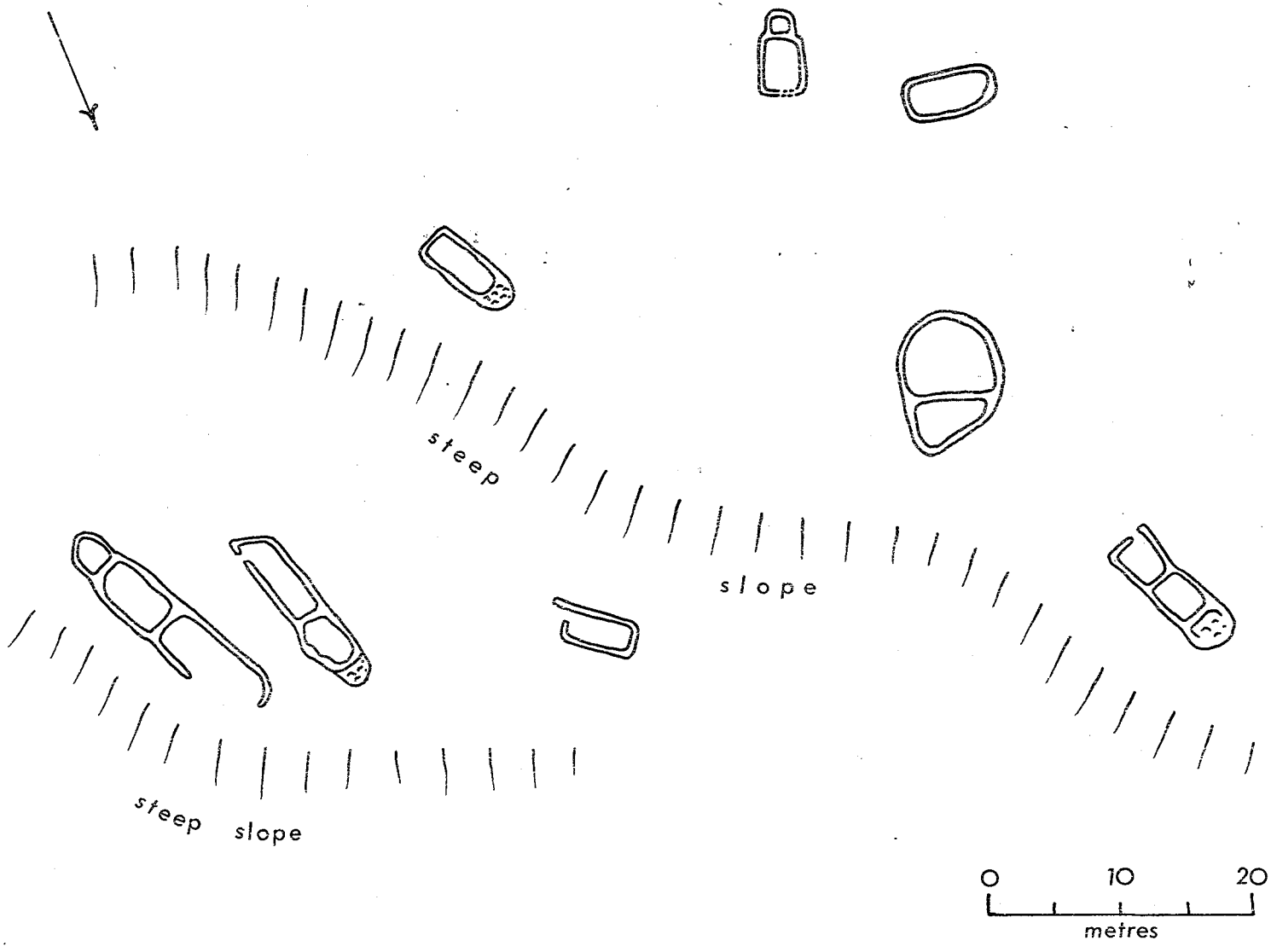


Fig. 51 Unthank Scar: a group of rectangular foundations on a very steep hillside.

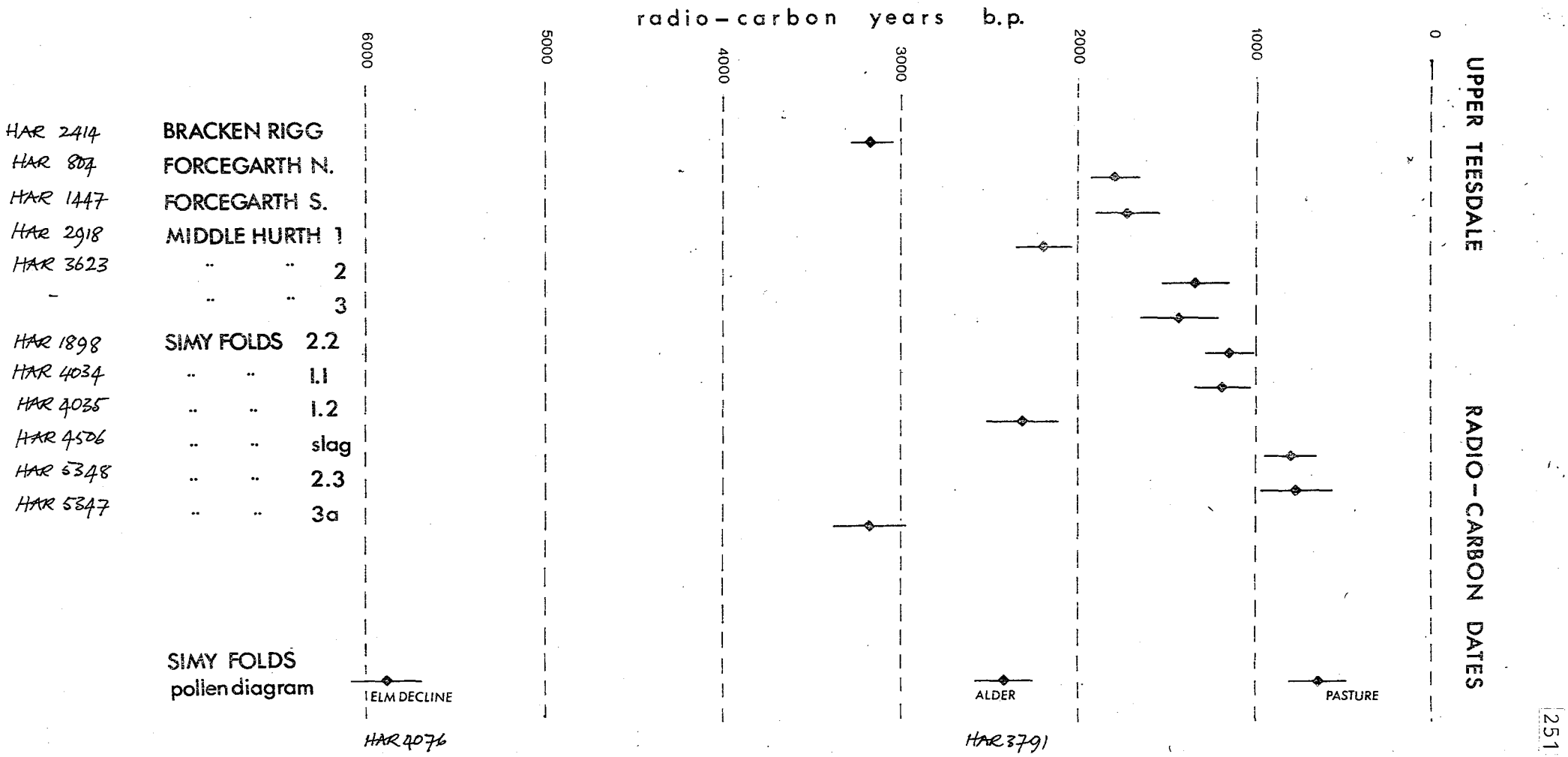


Fig. 52 Upper Teesdale : radio-carbon dates.