

EXCAVATIONS AT A ROCK SHELTER AT WHALEY, DERBYSHIRE

By J. RADLEY

Part I

THE EXCAVATIONS BY A. L. ARMSTRONG AT WHALEY, 1937-48

AFTER his successful excavations at Creswell, the late Leslie Armstrong investigated several caves and rock shelters on the magnesian limestone of north-east Derbyshire in search of more palaeolithic remains. He excavated from time to time at Whaley, over a period of more than ten years. This present paper examines the Whaley finds and publishes most of them for the first time, partly as a tribute to Armstrong's energy and partly as a re-evaluation of some of the views expressed by him on the nature of the Whaley rock shelter.

Unfortunately, the Armstrong collection of papers and excavated materials is very inadequate. The Whaley finds are boxed and bagged with only cursory labels; the main written comments survive as a few notes and plans; and of the pottery, bones and flints recovered, only some of the flints and one sherd are individually labelled.

Whaley is noted for its palaeolithic skull of a female and for its Creswellian associations.¹ Armstrong clearly interpreted all his stratigraphy and finds in the light of his excavations at Creswell. The horizons are referred to as Mousterian, Aurignacian, and Creswellian, and individual implements are recorded as a "laurel leaf blade of Solutrean technique", others of "late palaeolithic" technique, and some limestone "palaeos" showing "typical Acheulean technique". The only advance on this interpretation has been with regard to the skull; Brothwell² doubted its palaeolithic attributes, and Manby³ has suggested that it is mesolithic. An analysis of all the finds in detail reveals more information concerning the rock shelter's history than has been formerly gathered from cursory examination.

The writer is indebted to Professor S. Piggott, B. R. Hartley and I. Longworth for help in identifying and dating some of the pottery, and

¹ Linton, D. L. ed., *Sheffield and its region*, 1956, 95.

² Brothwell, D., *Man*, LXI (1961), 113-6.

³ Manby, T. G., *D.A.J.*, LXXXIII (1963), 18.

to G. D. Lewis, Director of Sheffield City Museum, for permission to examine the Armstrong collection of notes and finds.

The excavation of Whaley 1

In May and June 1937, two days were devoted to what proved to be a shallow rock shelter, which overlooks the village, 20 ft. across, 7 ft. high and receding 10 ft. (fig. 1). Only 2 ft. of detritus covered this site. A dark humus layer covered a yellow sandy layer and a red sandy layer. At the east end four human teeth and a phalanx were found. In the centre there was a small cremated deposit, 3-4 in. thick, at a depth of 16-20 in., in a hole 14 in. across.

The red earth yielded several split quartzite pebbles and the following flints:

<i>Waste:</i>	Cores	3	<i>Tools:</i>	Battered-back blades	3
	Core trimmings	4		Obliquely blunted point	1
	Debris	97		Burin	1
				End scraper	1
				Worked pieces	4
				Microlith	1

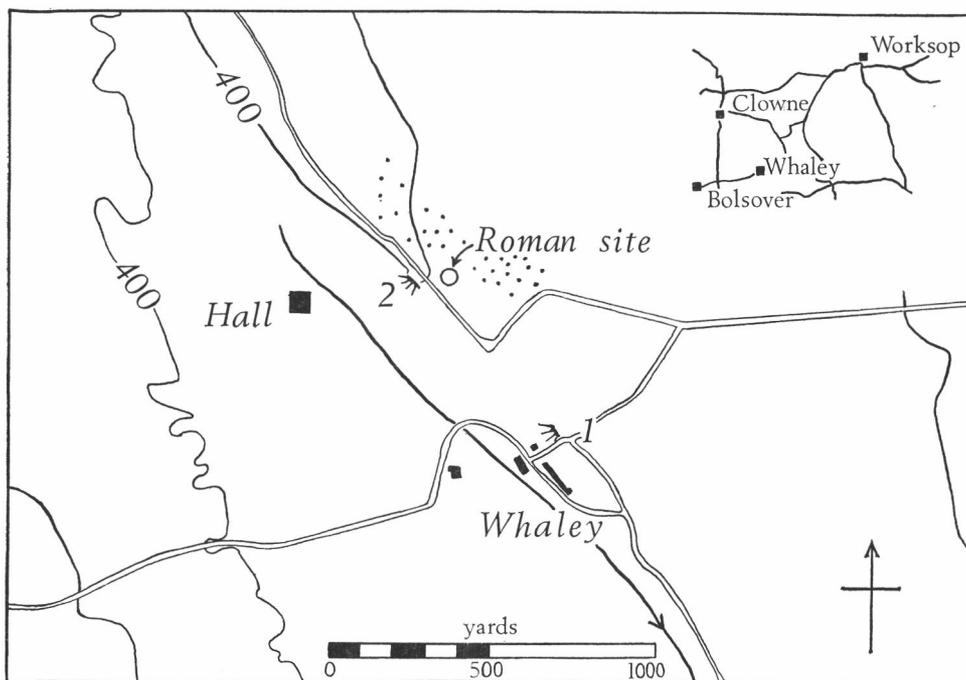


FIG. 1. Location map.

The flints are patinated blue-white or white. Five pieces are burnt. There are a few cores and blades, and the variety of points suggests that more than one industry is represented.

A rim sherd of a soft dark ware, 8-9 mm. thick, and free from grit, and a rim of a sandy grey jar or bowl are the only pottery finds. They and a single oyster shell can be attributed to the Romano-British period.

The excavation of Whaley 2

The Creswellian points or battered-back blades from Whaley 1 were the probable stimulus to seek a better site, which led to the excavation of Whaley 2. The site is in a small plantation at the head of a slope at 400 ft., which dips westwards to a stream and Whaley Hall (fig. 2). The upper part of this slope is a detrital mantle which masks a small rock face. This cliff line was traced for 40 ft. (sections A, B and C) and a recess ("the Parlour") 13 ft. long, 10 ft. high and 6 ft. wide was discovered. The site was stripped section by section, in spits of 6-12 in. to a depth of 12 ft. and up to 15 ft. away from the rock face.

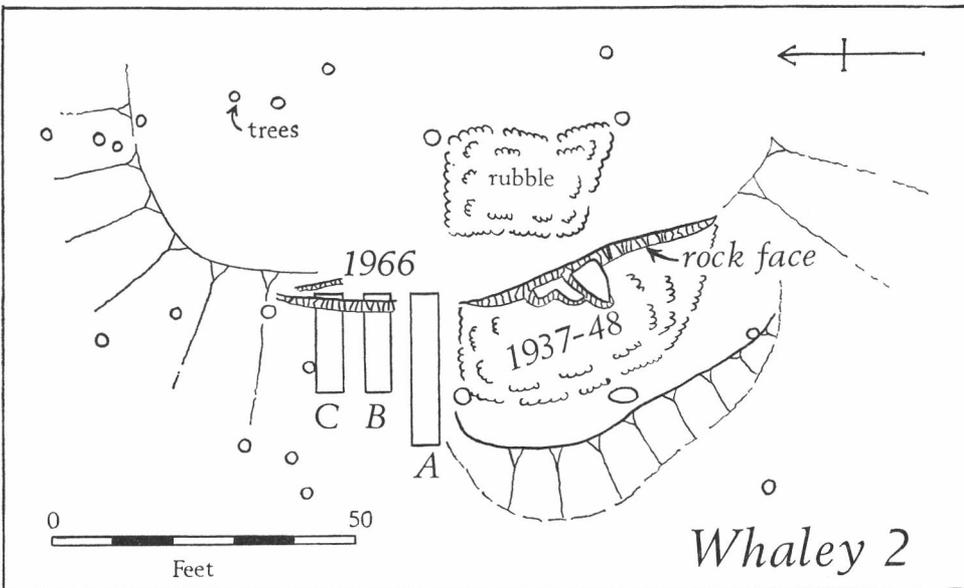


FIG. 2. Site plan showing the 1937-48 and 1966 excavations.

In 1938, section A yielded a dark Roman horizon, a yellow neolithic layer and a red cave earth or pleistocene layer. At 6 ft. was a dark sterile palaeolithic hearth and living level. "The Parlour" was excavated from 1945-48 after miners had blasted away a dangerous overhang. The skull, a human pelvis, other bones, pottery and flints were found before laminated clays were reached at 12 ft. 6 in., but their relationship to "the Parlour" is not recorded.

All the measurements were taken from a fixed datum, but while the sections sketched by Armstrong show dimensions, it is not possible to tell whether the deposits were inclined against the cliff or whether they were flat or lensed. The recording, however, was complicated by the numerous blocks of rubble and fallen cliff material and the presence of trees on the site.

Stone tools from Whaley 2

Flint, chert and quartzite were imported to the site, but only half of the 400 flint and chert artifacts have a detailed provenance. There are 22 pieces of chert, and about 380 patinated flints, of which at least 12 are burnt.

The 185 labelled artifacts in fig. 3 group into two horizons. In a zone at 1-2½ ft. and concentrated in section C there are 48 artifacts, called here the neolithic level. A distinct break of over 2 ft. of barren earth isolates the main zone at 6-8½ ft. and concentrated in section A and "the Parlour", which is called here the mesolithic level.

The neolithic horizon yielded the following:

<i>Waste:</i> Cores	4	<i>Tools:</i> Scrapers	4
Core trimmings	3	Truncated blade	1
Debris	28	Worked flakes, etc.	6
		Knife	1
		Leaf arrowhead	1

The leaf arrowhead (fig. 4, 1; Armstrong's "Solutrean"-like point), scrapers (fig. 4, 2-4) and numerous flakes suggest a neolithic date but the varied pottery (see below), the unprovenanced heavily worked knife (fig. 4, 5), and an unusual unpolished axe (fig. 5, 14) may suggest a late date, even in the Early Bronze Age. The axe is made from a green quartzite pebble, with signs of heavy rubbing on its blade; but morphologically it can be classed within the axe category.

The famous skull⁴ was found in this zone at 21 in., and only inches from the axe. There are few blades, no microlithic tools, and nothing to suggest that this horizon has any affinities with the palaeolithic.

The mesolithic horizon at 6-8½ ft. had 156 labelled artifacts which can be summarized as follows:

<i>Waste:</i> Cores	2	<i>Tools:</i> Microliths	15
Core trimmings	4	Burins	2
Blades	22	Scrapers	2
Debris	98	Knives	2
		Battered-back blades	4
		Worked flakes, etc.	5

Nearly all the chert comes from this zone which is characterized by tiny waste flakes and broken blades. This zone yielded 4 battered-back blades, which Armstrong called Creswellian. Only 3 are good tools (fig. 4, 21-23)

⁴ *Sheffield and its region*, pl. Ib.

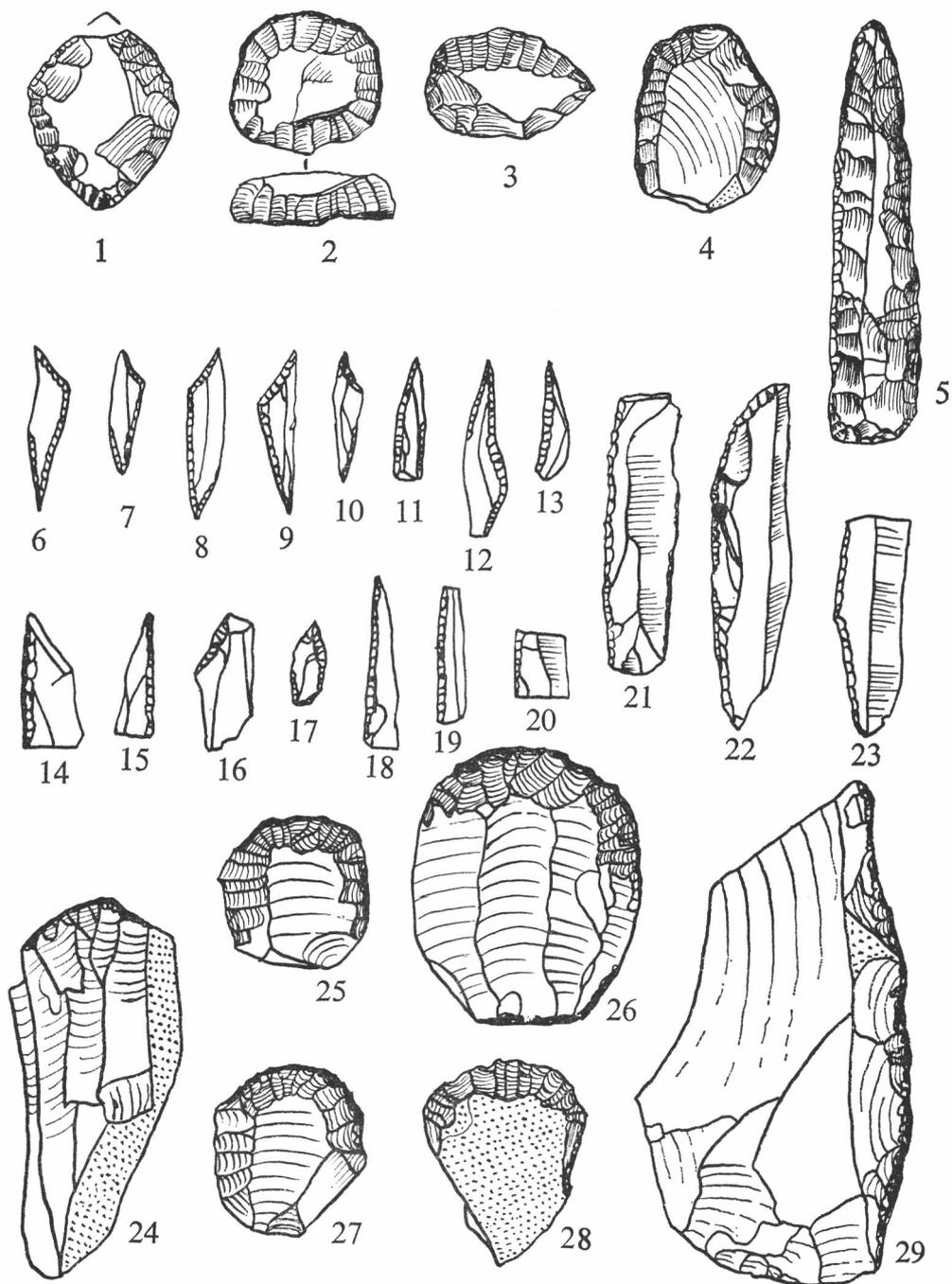


FIG. 4. Flints found by A. L. Armstrong (1/1).

and were found at 5 ft. 6 in., 6 ft. and 6 ft. 3 in., spread through the mesolithic horizon. While they are very different from the microliths they would not be out of place on many mesolithic sites. Alternatively, they could be survivals from the Creswellian or strays from a nearby site. A sketch in Armstrong's notes shows a hearth at this depth, which is recorded as a horizontal deposit.

The microliths are characterized by a common style of workmanship, and the scalene triangles and rod-like forms have many parallels in Lincolnshire and the Pennines. The fine secondary working is matched by that on the scrapers (fig. 4, 25-28), some of which retain pieces of cortex, a feature which has been observed elsewhere.⁵

Below this zone there are a dozen artifacts from section A from 9-12 ft., including a triangular microlith and two scrapers, identical to those described above, and a "racloir"-like tool (fig. 4, 29), which appear to have been displaced downwards from the mesolithic zone.

The quartzite pebbles were often given a Mousterian age by Armstrong but although few have any exact provenance this age seems unlikely. The pebbles fall into two categories. There are numerous small pebbles exhibiting no signs of use, which may have been washed in from local glacial deposits, and larger pebbles which were clearly collected. Some of the large pebbles show signs of being used as hammer stones and pot boilers; others are split and show percussion bulbs and peripheral wear, perhaps from scraping or chopping. There is no reason to believe that they are older than the flint assemblages.

Pottery from Whaley 2

Only one sherd is individually labelled, the rest being grouped in labelled tins and bags. All the Romano-British sherds were confined to the top foot of humus and debris. Some sherds which may be Iron Age but which are probably Roman were 1-2 ft. deep. In section A, 15 maggot-decorated sherds are recorded from "2 ft. down". A series of crude sherds, possibly fragments of a Bronze Age cinerary urn, were found from 2 ft. deep. Some incised neolithic sherds are labelled "Layer 3, Middle, Sec. A". The single individually labelled sherd, a Peterborough rim, was found at 6 ft. in section A. It is unfortunate that the beaker sherds and many other fragments have no accompanying data.

The pottery types are listed in appendix 1. The numbered inset examples refer to the illustrations in figs. 5 and 6.

The variety of neolithic wares, represented by perhaps 35 sherds, makes the site one of the richest in the north, and it is unfortunate that there are so few stratigraphical details. There are two sherds of thick, soft, flaky Peterborough ware with distinctive maggot decoration, but from very different vessels. One (fig. 5, 7) is the only sherd known to come from 6 ft. deep, and the others are presumed to be included in Armstrong's

⁵ Clark, J. G. D., *Star Carr*, 1954, 106.

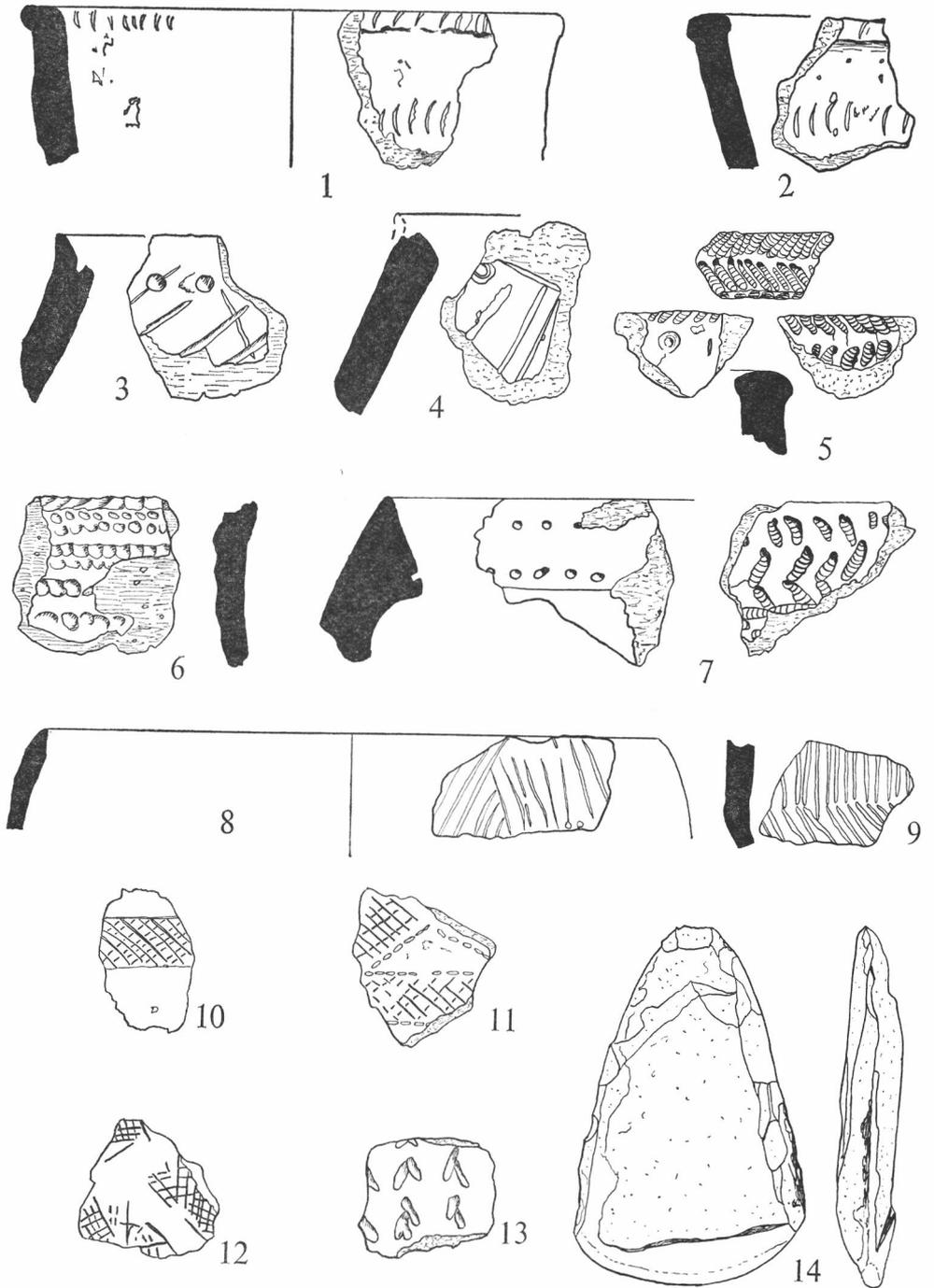


FIG. 5. Neolithic pottery found by A. L. Armstrong (1-13) and unpolished axe (14) (1/2).

generalized remark that the neolithic level was 1-2 ft. deep. This would suggest that fig. 5, 5 was considerably later and may equate with the groove-decorated sherds (fig. 5, 3, 4), the pitted sherd (fig. 5, 6), the harder thin grooved sherds (fig. 5, 8, 9), and perhaps the beaker sherds (fig. 5, 10-13).

The Roman material is associated with pot-boilers, many bones of domestic animals, and a large broken pick or mattock (fig. 6, 20), made of antler. Most of the sherds are varieties of grey ware, some of which could have come from the Cantley kilns. The local native wares are well represented and undatable at present. The small complex rims (fig. 6, 18, 19) have been found at Scratta Wood; they appear to be a local elaboration and are probably late in the Roman period. A date bracket of late 1st to late 3rd century would cover most of the pottery.

APPENDIX I

POTTERY FROM ARMSTRONG'S EXCAVATION

1. *Neolithic* (fig. 5)

About 35 sherds can definitely or probably be attributed to the later stages of the Neolithic.

- A. Two simple upright rims which are probably neolithic but could be Iron Age; dark gritted ware, 1 cm. thick, and undecorated.
- B. Two soft brown sherds, relatively thin with large gritty inclusions, and several similar sherds with simple everted rims. Probably neolithic.
 1. A rolled rim with finger-nail decoration on the inside and outside. A lower row of finger-nail decoration on the outside. "Section C. Fissure at 2 ft."
 2. A similar decorated sherd with a squashed-down rim. Labelled "level 3".
- C. Peterborough wares are well represented.
 3. A coarse brown rim sherd, 12-13 mm. thick, from layer 3, section A. The bevelled rim has a punched hole decoration, and the exterior a grooved lattice pattern similar to Ebbsfleet decoration.
 4. Similar to 3.
 5. A single rim of black flaky ware with little grit. The broad flattened rim, the interior, and exterior are all covered with closely placed maggot impressions.
 6. A sherd of a dark thin flaky ware with shell inclusions, probably from near the shoulder or rim. The exterior is decorated with rows of closely set hollows, suggesting that it is a variant of the Peterborough type. From the "top of yellow earth".
 7. A rim of dark flaky ware, 16 mm. thick, made of a smooth paste. It appears to be an early Peterborough form, although no strict parallel has been found in the literature. The rim has a double row of punched holes, and the exterior is elaborately covered with maggot decoration. This is the sherd recorded at the top of the mesolithic level and well below the rest of the neolithic remains.

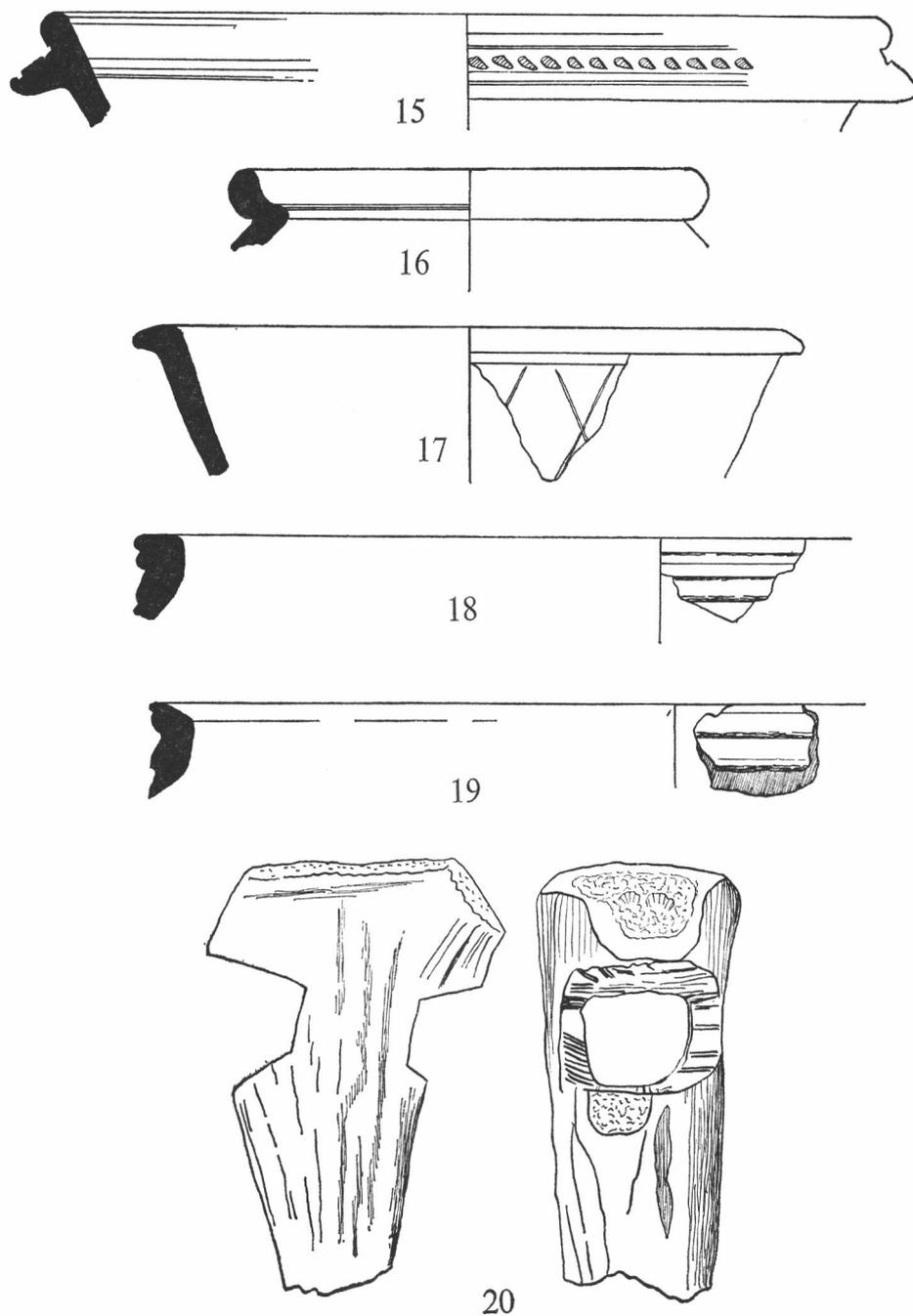


FIG. 6. Romano-British pottery found by A. L. Armstrong (15-19) and antler pick (1/2).

D. Rinyo-Clacton ware may be represented. Several sherds of a hard reddish paste with a rather crudely executed groove decoration are not beaker and probably have more affinity with the Rinyo-Clacton style.

8. A rim with grooved decoration and a strip of applied moulding. "Layer 3, top of yellow bed".
9. A sherd of a shouldered bowl with a neater groove decoration than (8). "Layer 3, middle".

E. Beaker fragments are rare but distinctive.

10. A body sherd of thin, hard, orange ware, with incised decoration.
11. A body sherd of thin, hard, dull red ware, with the decoration of a long-necked beaker.
12. A body sherd of thick brown ware, crudely decorated, and probably a long-necked beaker.
13. A body sherd of thin khaki-coloured ware, with finger-pinched decoration. Either from a rusticated beaker, or possibly in the Fengate style of Peterborough ware.

2. *Romano-British wares* (fig. 6)

At least 220 sherds from the "top level" and "talus" belong to this group.

A. Grey-black fabrics, usually hard and sandy with a good finish. Some body sherds, one very thin and soot covered. There are 110 plain sherds, 4 lattice decorated, and 31 rusticated sherds. Many of these are probably late 1st century-early 3rd century. One rim is a Gillam 226-227, mid 3rd century. Most of the sherds belong to jars, bowls and dishes.

15. Grey sandy bowl with neat rouletting on flange. 3rd-4th century.

B. Derbyshire ware is represented by 8 sherds and typically rough and gritty.

16. A type A rim, 5 in. in diameter at the mouth in rich orange fabric. Section A, talus.

C. 17. A fine black burnished rim of a type A dish, lattice decorated. Hadrianic-Antoninian.

D. Native wares. There are 72 sherds of coarser softer wares than those listed above; they are difficult to describe and date, and their kiln sites are unknown. There are 47 sherds of flaky, calcite gritted fabric with an orange exterior and dark core, probably belonging to storage jars. Eight sherds are dark and soft and very sandy, 5 dark sherds have no gritting; 12 black vessicular sherds were probably tempered with limestone and sand.

18. A small complex rim of black vessicular fabric.
19. A small complex rim of black vessicular fabric.

3. *Medieval or later*

Six glazed sherds date from the later medieval or early modern period.

Part II EXCAVATIONS AT WHALEY 2, 1966

The excavations, from May to November 1966, examined the undisturbed part of the site with a view to, firstly, producing a section across the site, as close to Armstrong's excavation as possible, and secondly, obtaining a series of artifacts which would help to elucidate Armstrong's finds.

The writer was helped by M. Plant, A. Miller, F. Hepworth, R. Carr, L. Cooper and R. Cousins. He would also like to acknowledge the help of the farmer, Mrs. Shacklock, and to thank the Trustees of the Chatsworth Estate for permission to excavate and Mr. C. Simms, Yorkshire Museum, for identifying many of the bones.

The excavation

Figure 2 shows the position of the main section and the two subsidiary trenches. The rock face was concealed by debris at nearly all points, and when exposed for 21 ft., it proved to be approximately vertical with no overhang or recess. In fact, Armstrong excavated the only good occupation recess, "the Parlour", on the site.

The mantle of debris can be divided into two parts. The original post-glacial silting and rock decay has produced two beds, the lowest of which (bed 5) is a soft well-drained, yellow-white, sandy-textured horizon and has convoluted and irregularly placed cracks filled with a stony ferruginous deposit leached down during a wetter climatic phase than the present. On this rests a uniform yellow-buff, lardy clay (bed 4). Both these beds are virtually free from stones, and only the upper part of bed 4 has human refuse in the form of many flecks of charcoal.

Beds 2 and 3 present a strong contrast to beds 4 and 5. They are very stony with numerous large slabs of rock, some of which represent a partial collapse of the rock-face. Bed 3 is a compact rich red sandy clay and has numerous occupation remains. Bed 2 has zones of loose gravel and rock fragments, and zones of grey-brown soil which has pockets of snail shells, and occupation remains. The surface soil (bed 1) is shallow and dark, and is partly overlain by rubble and red clay from Armstrong's excavation.

Bed rock was not located at the western end of the trench, but at the eastern end bed rock extended away from the rock face merging upwards into a resistant coarse white sand, apparently decayed magnesian limestone, which was traced throughout the bottom of the section.

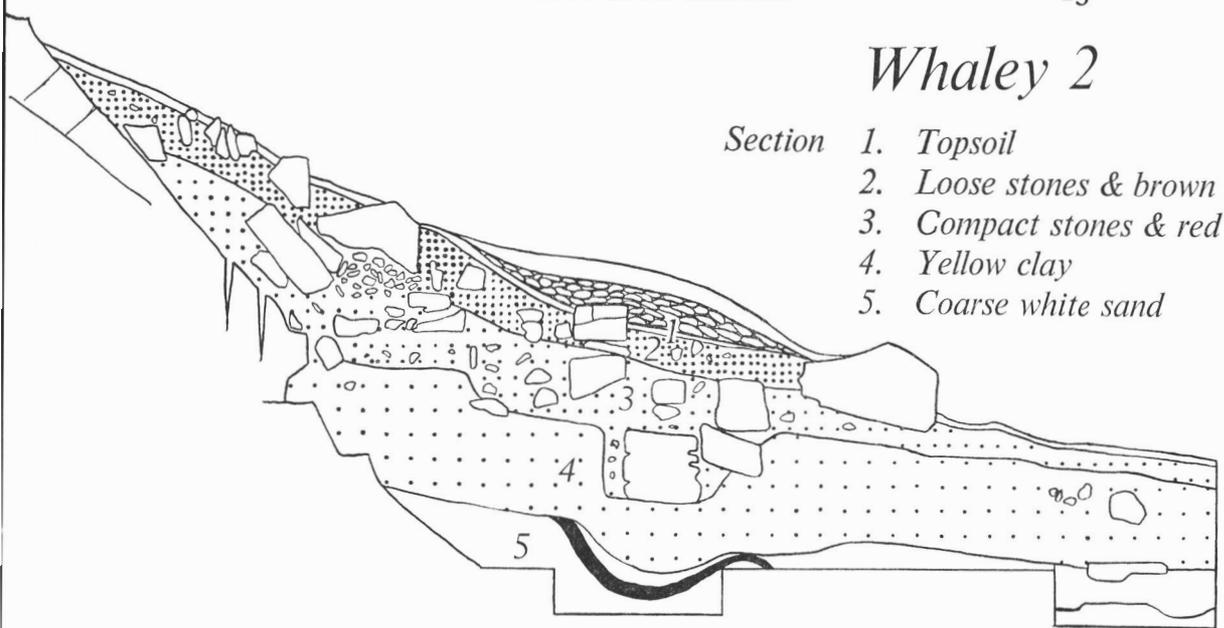
Three sections were recorded, of which fig. 7 is typical, and all finds were recorded three-dimensionally from three separate datums. All the finds are now deposited in Sheffield City Museum.

The pre-Roman horizons

No equivalent to Armstrong's prehistoric levels was found. The earliest

Whaley 2

- Section*
1. Topsoil
 2. Loose stones & brown soil
 3. Compact stones & red soil
 4. Yellow clay
 5. Coarse white sand



- Remains*
- + Roman sherds
 - Bones, etc.
 - Flints

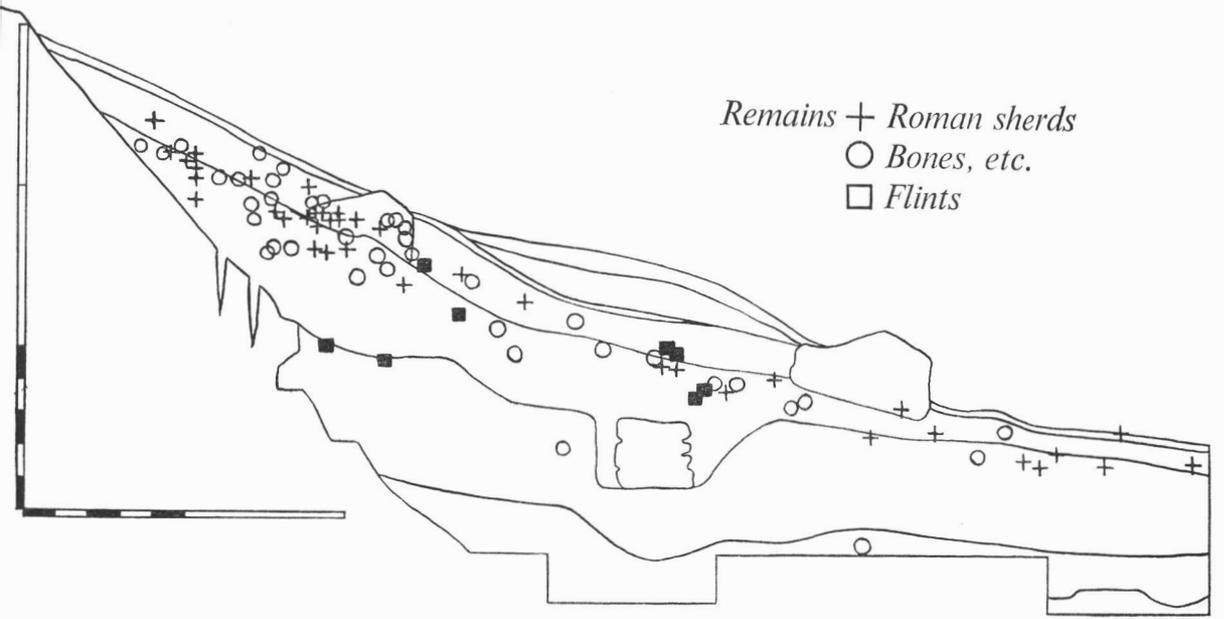


FIG. 7. Whaley 2 — 1966 section.

finds from the mesolithic level can be equated with the charcoal found in yellow lardy clay of bed 4.

No definite mesolithic flints were recovered. The 27 flints (appendix 1) excavated in 1966 occurred throughout beds 2 and 3, with a slight concentration near the bottom, and one or two finds actually extended into bed 4. The only datable flint is a *petit tranchet derivative* arrowhead which was almost in the topsoil. Most of the flints are probably neolithic and are presumably related to the pottery found by Armstrong. It is curious that no prehistoric pottery was encountered on this part of the site.

The Romano-British horizons

The Romano-British sherds, glass, pot-boilers and domestic rubbish occur sporadically through beds 2 and 3, almost in the same vertical range as the flints. There is no reason to suppose that there was any extensive use of flint on the site by the Romano-British occupants.

The remains are chiefly sherds of grey-black, hard, sandy pottery from northern kilns, which include simple rolled rims, flanged rims, lattice- and comb-decorated vessels. There was one fragment of samian, from Central Gaul, a basal sherd of a creamy-white mortarium of Hartshill type, fragments of a large pink storage jar, and a few sherds of Derbyshire ware and Dales ware.

The most interesting sherds are the native wares. These made up a large proportion of the finds. They are generally soft black or brown fabrics, sometimes heavily tempered with sand or calcite, and sometimes have little or no temper. Looking like Bronze Age fabrics, they are undoubtedly Roman, but they cannot yet be ascribed to any kiln centre. The types found parallel Armstrong's, and are listed in detail in appendix 2.

Discussion

Before the whole site can be evaluated, it is necessary to describe the result of fieldwork in the vicinity of Whaley 2. East of the rock face, on the eastern slope of a small rocky nob, a small Romano-British settlement was found. It was established in the 2nd century and pottery, bone and pot-boilers occur sporadically over an area 200 yards across, but are concentrated in an area 15 yards across. Five trial holes substantiated this, two holes, each one yard square, yielding 20 sherds at 12-16 in. and traces of walling.

The sherds parallel those in the rock shelter. The majority are a grey-black sandy fabric of which three rolled rims are undoubtedly from the Cantley kilns. Grey imitations of black burnished pie dishes, calcite-gritted brown ware, a rim of Dales ware, an Oxfordshire orange colour-coated carinated bowl, a fragment of Central Gaulish samian Drag. 31 base, and Derbyshire ware, including a copy of a black burnished bowl, are the main variants, generally ranging from the late 1st century to the late 3rd century (see appendix 2 for details).

Down slope from the Romano-British site, numerous patinated flints were found in 1966, and before by the late Mr. Shacklock of Whaley Hall. Over 100 artifacts are known, including scrapers, 2 *petit tranchet* derivative, 6 leaf-shape, and 2 barb and tang arrowheads. The most interesting tool is fig. 8, 1, which is an exceptionally fine long patinated end-scraper, broken recently, the nearest parallels being in the continental Upper Palaeolithic cultures. The bulk of the flints are late Neolithic or Early Bronze Age.

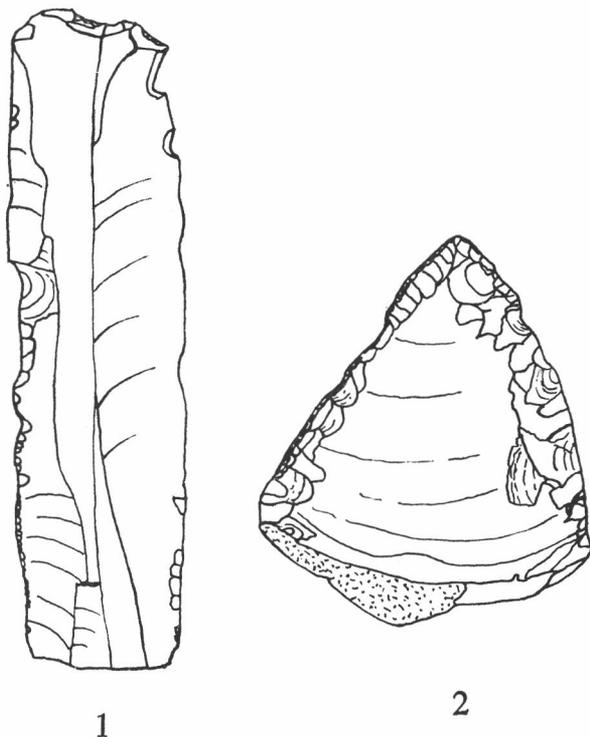


FIG. 8. Finds near Whaley 2.

It is now possible to suggest a sequence of events at Whaley 2, but first it is necessary to note that the 1966 and 1937-48 excavations have several discrepancies. It is clear that Armstrong excavated at the lowest point of the talus blanketing the rock face, at the southern end of the site. Armstrong's talus of loose stones is bed 2 in the 1966 section. His yellow neolithic horizon is absent. His red cave earth is beds 3 and 4. His basal laminated clays were probably formed in a pool at the lowest point and are not found elsewhere. He did not dig deeper. The three 1966 sections show a tilting of the deposits towards the southern end, suggesting that

there was more soil movement at this point and that the rock shelter at the southern end kept some of the detritus out.

Armstrong's thin Roman and thin neolithic levels, together only 2 ft. thick, were probably not so clearly defined but were almost certainly as mixed as beds 2 and 3 in the 1966 section. The frequent occurrence of neolithic pottery in Armstrong's section, too high up to represent a living floor utilizing the rock shelter and "Parlour", may be explained by either a limited occupation here or by less soil disturbance, since none was found in the more open 1966 excavated area, and yet only a few feet from "the Parlour".

Armstrong's mesolithic hearth is presumably the source for the charcoal in the upper parts of bed 4, and is the first archaeological occupation of the site, indeed probably the only real use of the site as a true rock shelter. The variation in depths recorded on Armstrong's artifacts may not represent a deposit of $2\frac{1}{2}$ ft. thickness but an undulating surface upon which they were deposited. A few bones from this level were mineralized and may well be older than the hearth. The culture represented belongs to the broad group of people using triangular microliths stemming from a continental origin which also produced the similar Sauveterrian culture.

The single localized neolithic rim sherd in the collection can be equated with Armstrong's note, dated 4.7.42, "Peterborough potsherds, with rim and maggot pattern at base of talus in brown layer on top of the red at 3 ft. 4 in.", which was 6 ft. below his datum. Where the other pottery occurs is not known, but if the gap in fig. 3 is real, it ought to be with the neolithic flints 1 to 3 ft. deep. Whether there is one or two neolithic occupations remains an open question.

The ensuing period creates the "talus" and beds 2 and 3, and is clearly a time of land clearance, when part of the rock face in the 1966 section collapsed. The mixed Roman and neolithic remains suggest that the activity dates to the phase of Romano-British settlement which pushed the neolithic material on the knoll over the rock face. The neolithic settlement was probably mainly on the knoll, with only a slight possibility of there being some occupation below the cliff edge. The neolithic flints from the fields east of the site could also be derived from the same settlement. The famous isolated skull was close to the surface and could have been displaced from a burial or barrow on the knoll at this time to its find spot in front of the fissure near "the Parlour"; it could conceivably have been associated with the beaker sherds. A tooth, a vertebra, and 2 phalanges have also been found, but nothing to suggest more than one body. Certainly the human remains are no older than the Neolithic, and a neolithic date is most appropriate for them.

The Romano-British settlement had a long life, commencing probably in the late 1st century or early 2nd century, and some aspects of its economy can be reconstructed. There was intermittent clearing of rocks and a levelling of the ground. No querns have been found, and the numerous teeth of pig, cattle, and sheep or goat may mean that the people

were oriented to a pastoral economy. Numerous red and roe deer teeth may suggest hunting as a supplementary occupation, but some or all of the teeth may relate to the neolithic period. Some of the wolf and fox teeth which were recovered may be of neolithic or Roman date. Wood and coal were used and pot-boilers were clearly the main method of boiling liquids, but some soot-blackened pots suggest that there was some use of pottery near the hearth. The settlement was probably poor, only a few imports being found — a fragment of glass (part of a base-ring), two fragments of samian, and an oyster shell. Much of this Roman refuse found its way over the cliff where it is better preserved than in the field.

The area has been under agriculture in historic times, and slag, two iron spikes, and some glazed pottery are the only other remains from the upper level of the 1966 section.

Clearly, certain aspects of the 1937-48 excavation remain vague or uncertain. It has not been possible to have Armstrong's bone finds identified, to test his identification of bear, reindeer and hyaena. Most disappointing is the failure to find an extension of the mesolithic horizon stratified below the probably washed-in neolithic and Roman debris.

APPENDIX 1

FLINTS FROM WHALEY 1

	<i>Excavated, 1966</i>	<i>Fields, 1966</i>	<i>Fields, pre-1966</i>
Debris: Waste	17	34	19
Cores	0	2	2
Core trimmings	1	2	2
Burnt	2	0	3
Tools: Scrapers	2	3	7
Arrowheads	1	1	9
Worked pieces	4	5	8
Burins	0	1	1
Fabricator	0	0	1
Plano-convex knife	0	0	1
Long blade	0	0	1

APPENDIX 2

ROMAN SHERDS FROM WHALEY 2

	<i>Excavated, 1966</i>	<i>Field, 1966</i>	<i>Armstrong</i>
1. Grey-black wares	135	93	145
2. Samian wares	1	1	0
3. Creamy-white wares	1	1	0
4. Derbyshire ware	8	15	8
5. Black burnished ware	1	0	1
6. Thick pink ware	2	1	0
7. Red wares	3	7	0
8. Soft dark native wares	62	20	72