

Tom Tivey's Hole Rock Shelter, Near Leighton, Somerset

By

J. H. BARRETT

(N.G.R. ST 705445; O.S. 6 in. to 1 mile, ST 74 S.W.)

HISTORY AND ACKNOWLEDGMENTS

Mr. and Mrs. G. Todd found a reference to Tom Tivey's Hole in *The Caves of Mendip* (Barrington, 1957, p. 66), which describes a small shelter at the foot of a cliff known as Heale Ladder. The name originated from its occupation by Tom Tivey of Chantry while hiding from the Bow Street Runners and the Leighton Boys in the 19th century. The site is in Asham Wood in the parish of Wanstrow on land farmed by Mr. Crees of Leighton Farm.

There was no evidence of any previous archaeological excavation, but there had been some activity by cavers looking for further passages. The excavation was started by Mr. and Mrs. Todd in October, 1958, but who had to retire in July, 1960, because of other commitments. I was asked to complete the dig which was finished in September, 1961.

I would like to thank the following who have contributed specialist reports: Mr. L. Biek, Dr. E. T. Hall and Mr. J. S. Forbes for the analysis of the gold object; Dr. I. F. Smith for her report on the Western Neolithic pottery vessel; Mr. L. F. Curtis who has written on the geography of the area and on the soils; Mr. C. P. Castell has dealt with the Mollusca and Mr. E. T. Davies and Mr. H. C. Wilson with the vertebrate fauna; Dr. W. K. Metcalf has written on the human bones and to this account have been added some further details on the human lower jaw by Dr. E. K. Tratman. Only summaries of these reports appear in this account and the detailed reports have been deposited in the Bristol City Museum where the material from the site has also been placed. The following have given general advice and help: Messrs. A. M. ApSimon, K. J. Barton, J. Durnell, L. V. Grinsell, J. E. Hancock, R. James, E. J. Mason, A. O. Oldham, P. A. Rahtz, H. de S. Short, A. Warhurst, B. Arthur, Misses J. W. Lillico and B. J. Smith.

The co-operation of Mr. Crees and also of the Frome and District United Motor-cycle and Light Car Club was greatly appreciated.

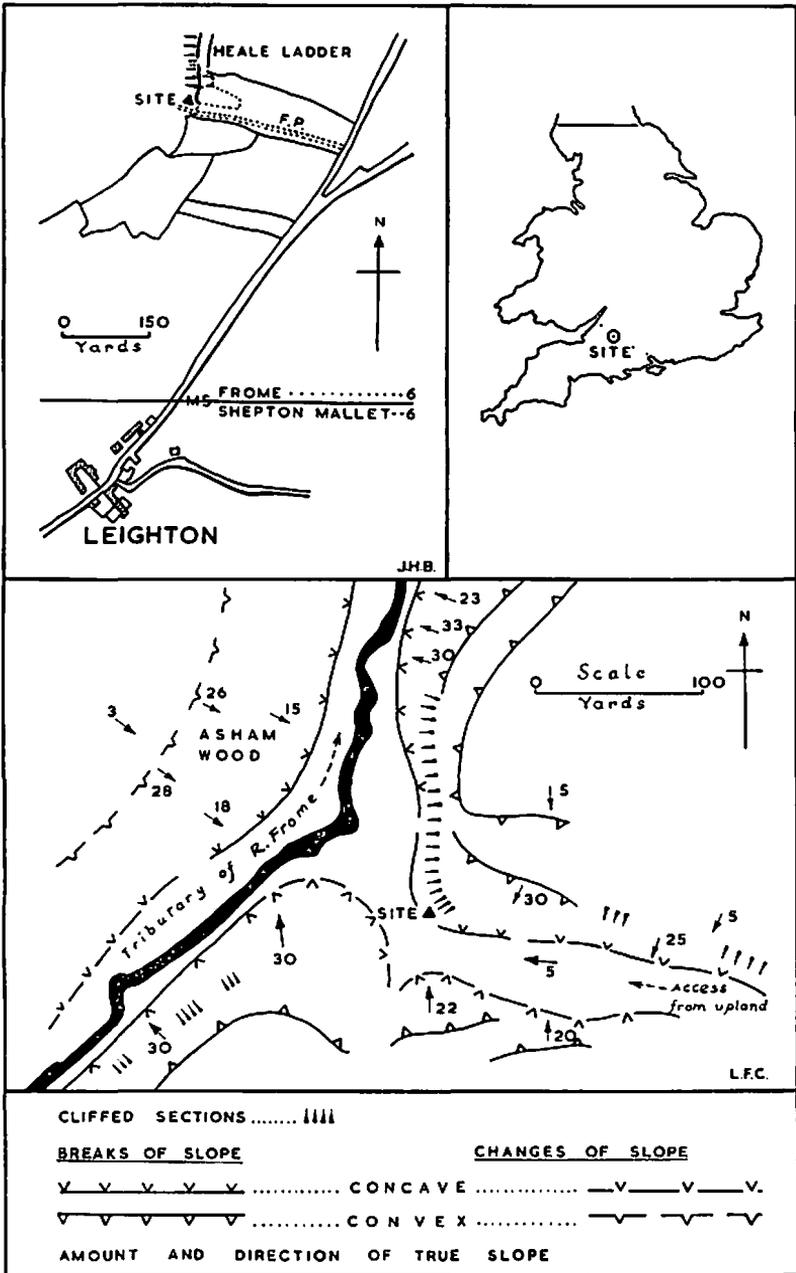


Fig. 1. Maps showing location of the site, and geographical map of immediate area.

GEOGRAPHICAL INTRODUCTION

By

L. F. CURTIS, B.Sc.

The site is situated in Asham Wood, about $\frac{1}{2}$ mile north of Leighton in Wanstrow Parish, on the west facing side of a deeply incised valley. The valley has been cut into the Carboniferous Limestone rocks and is occupied by a headstream of the River Frome known as Fordbury Water. The valley is asymmetrical. Slopes of $30-35^\circ$ occur on the eastern side, whereas on the western side they range between 26° and 15° . The eastern face of the valley is cliffed for a distance of about 130 yd. in the vicinity of the site. Several smaller cliffs are present at points north and south of the cliff face in which the rock shelter occurs.

The eastern side of the valley is breached by a minor tributary valley (*Fig. 1*) and the cave is located at the southern end of the cliff face at a point where the breach allows access to the valley from the plateau. The side-valley, Heale Ladder, leads down to an alluvial plane, 50 yd. wide, which is overlooked by the shelter.

Skeletal soils based upon limestone scree occur on the steep slopes of the valley side. These soils often show characteristics of the Rendzina soils and consist of shallow, highly organic clay loams overlying weathered limestone scree at a depth of 6 in. In some localities tufaceous deposits were encountered on the face of the stones occurring at a depth of 2.5 ft.

The alluvial soils bordering the stream bed consist of deep clay loams of imperfect drainage. A profile showed a sandy horizon occurring at a depth of 30 in., which marked an alluvial layer laid down at an earlier stage of the evolution of the stream.

The vegetation of the area is characterized by coppiced ash wood on skeletal shallow soils of the steep slopes, with oak wood on deeper, imperfectly drained alluvial soils in the valley bottom. Where the alluvial plain widens, the tree cover becomes less dense and a rich herb and shrub layer is present.

EXCAVATION, STRATIFICATION AND FINDS

By

J. H. BARRETT

Excavation to bedrock was undertaken within the area marked by a thick line on the plan (*Fig. 2*), the remaining grids outside the overhang were excavated to layer 4. The slope to the valley floor was not excavated as this was outside the general area of the rock shelter. The grids were filled in to the original level as far as possible, on the completion of the site. The Neolithic and Bronze Age finds were given to the Bristol City Museum; the post-medieval gold stud to Blaise Castle House Folk Museum.

In all, five layers were distinguishable (*Fig. 3*). They are described in sequence together with, in each case, Mr. L. F. Curtis's description of the soil samples submitted to him.

Layer 1

This is a very dark grey (Munsell 5 YR/2.5/1), humose, gritty loam containing small angular fragments of limestone. It is friable with a crumb-like structure and contains many dead roots. It is highly calcareous and has

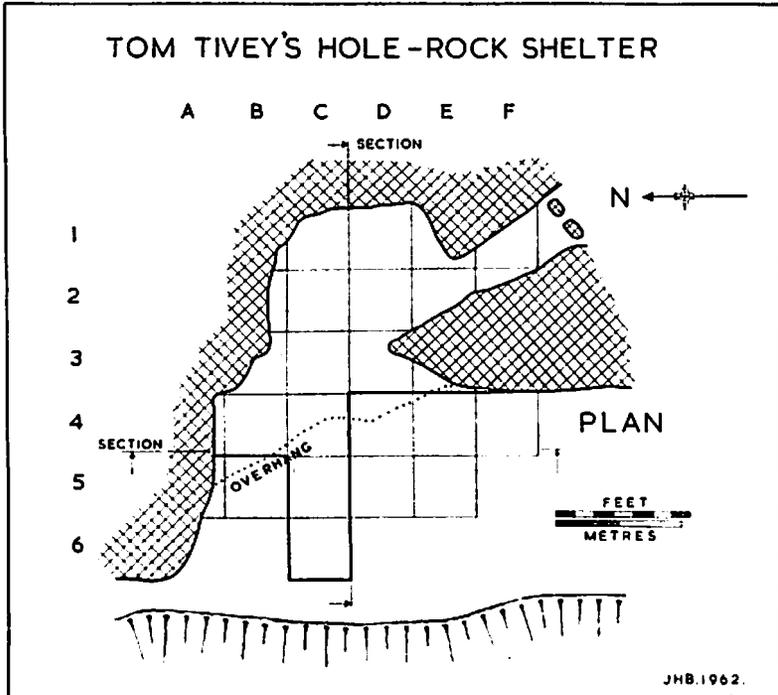


Fig. 2. Plan of Tom Tivey's Hole.

an alkaline reaction, pH 7.5. This humic soil contained shot-gun cases, broken glass bottles and other rubbish in the first 10 cm. Below this modern debris a gold stud and pottery sherds of 17th-century date were found. This pottery was well scattered with a concentration near a large amount of charcoal in the rift, which formed an area where many fires had been. There were many fragments of sheep bones and lesser numbers of rabbit and pig. The only ungulate remains present consisted of a tooth and a few bones from a small species of ox, probably all from one individual, and one molar of horse. The dog bones found were rather scattered but were all in layer 1 and could well have belonged to one individual. In grids C₄ and C₅ of layer 1 there

was a slight change in texture at 16 cm. depth; below this the soil appeared to be similar in texture to that above, but contained earlier finds of 12th-14th-century pottery.

Layer 2

A dark, greyish brown (Munsell 10 YR/4/2), gritty silt-loam, containing fragments of limestone and gastropods. It is friable and porous and has a

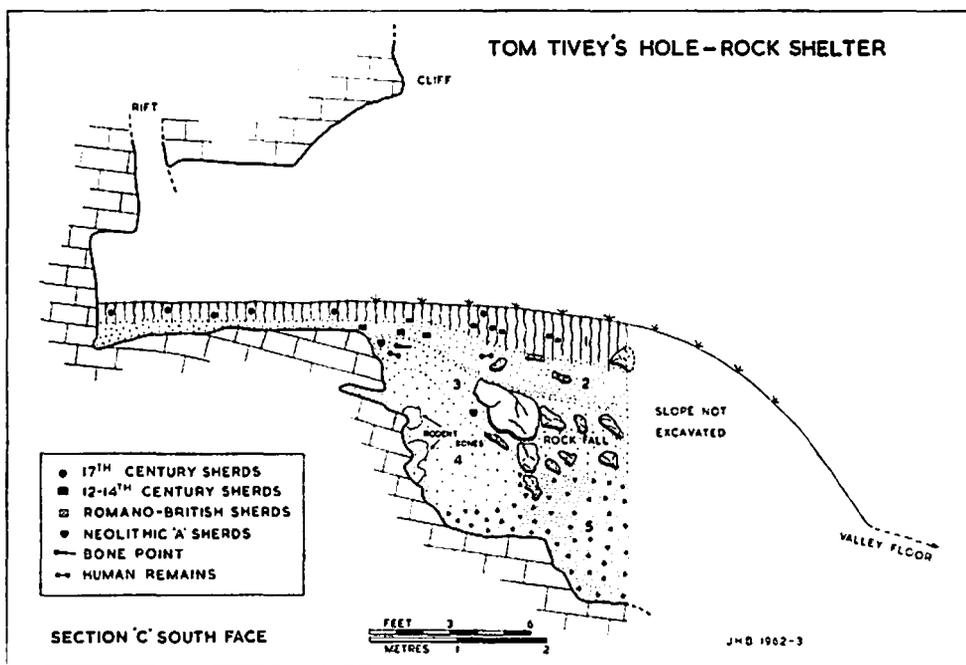


Fig. 3. Diagrammatic section "C".

fine subangular blocky structure. It contains traces of carbonaceous material and is highly calcareous with alkaline reaction, pH 7.5.

This material was much firmer than layer 1 and did not appear to have been disturbed. It contained human bones, some of which were in a friable condition due to pressure from limestone fragments and the wet conditions in the layer. A sherd of probably Iron Age "C" pottery (*Fig. 5.2*), several sherds of Romano-British pottery and small amounts of charcoal were found in the layer, but not hearths. A gold band (*Fig. 7.5*) came from this layer. The latest objects from this layer are of Roman date, but the gold band was at the same horizontal level as a barbed and tanged flint arrowhead found in the top of layer 3. This arrowhead is presumably of Bronze Age date.

Layer 3

This layer showed disturbance. It was very mixed, containing dark grey-brown fragments from the layer above. The matrix is yellowish-brown, gritty, silty loam and is highly calcareous containing fragments of limestone together with calcareous concretions. This layer contained more clay than

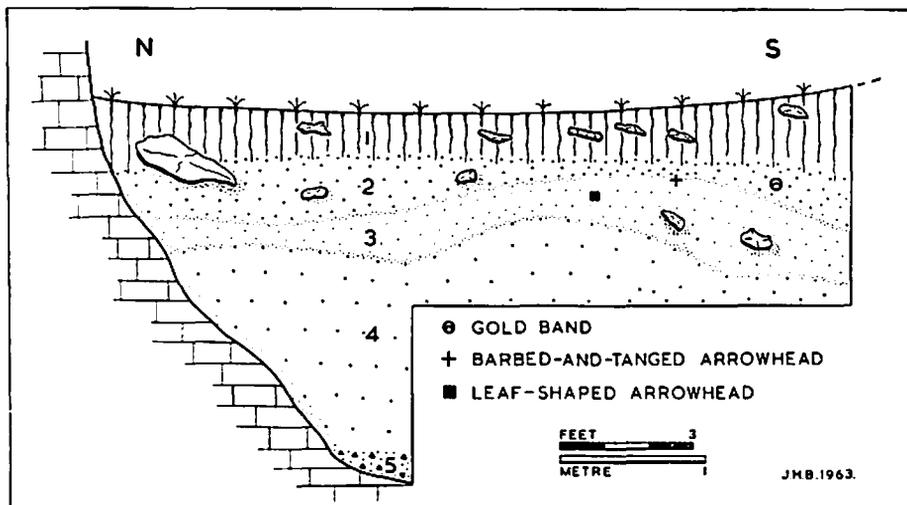


Fig. 4. Diagrammatic section through A.4-F.4. West face.

the layers above and there is a textural break between layer 2 and this layer. It contained scattered Western Neolithic sherds, some of which had been crushed by stones. About half the human bones came from this layer. A bone point, in two pieces 30 cm. apart, was found. A broken leaf-shaped arrowhead and the tip of another bone point also came from this layer. A few flints, patinated white, were found along with several sheep bones, but no evidence of occupation such as hearths or a large amount of animal bones. The change, between layers 2 and 3, from a calcareous earth to an even more calcareous material may perhaps be compared with the conditions in the Bridged Pot, Ebbor (McBurney, 1959), and at Sun Hole, Cheddar (Tratman, 1960). The latter has suggested that at these sites the change marked the period from Neolithic/Beaker times back to the end of the Pleistocene whereas here it clearly did not. In layer 4 Late Pleistocene rodent bones were found, but at the base of layer 3 were small numbers of rodent bones not coated with a white calcareous layer, as were those in layer 4, and were less friable and had a more modern appearance than those from layer 4. This subdivision represents all that accumulated at this site between the end of the Pleistocene and Early Neolithic times.

Layer 4

This is a pale, yellow-brown soil consisting mainly of fragments of limestone with calcareous concretions. This is shown conventionally by dots in *Fig. 4*. There are occasional plant remains (roots) in this layer, which sloped steeply down towards the west and contained the Late Pleistocene bones. Several flint flakes, patinated white, were found at the junction of layers 3 and 4. The large rock fall shown in *Fig. 3* probably broke away from the shelter overhang towards the end of the period marked by layer 4. Some of the larger blocks came to rest standing above the top of layer 4 and thus formed a sort of wall behind which much of layer 3 accumulated. G. Todd (in his MS. notes) recorded several layers of sinter grit at 167-175 cm. and below these several bands of small angular limestone fragments; this suggests several climatic changes during the Late Pleistocene period. No artifacts were recorded from layer 4.

Layer 5

This consisted principally of angular limestone fragments with patches of clay. It was very moist, sterile and rested on bed rock.

DISCUSSION

The small site of Tom Tivey's Hole has yielded a variety of remains. It was unfortunate that considerable disturbance had occurred in the upper levels, so that the provenance of all the items found could not be absolutely determined and their typology had to be used to place them in their probable true sequence. Though layer 2 did not appear to have been disturbed, it must actually have been so as the soil report records bits of this layer in layer 3 below and this layer had obviously been disturbed. The limits of this disturbance could not be detected, but in addition to the soil data the scatter and loss of human bones, the scatter of the sherds of a single pot both attest disturbance. It is not clear when this disturbance took place nor whether it was during a single period or at relatively long intervals at different periods. Both would fit the evidence.

In layer 1 there was a small scatter of 17th-century potsherds, which have affinities with a large group from the St. Nicholas's Almshouses site in Bristol and the present group probably dates between 1630 and 1660. Most of these items came from within the shelter while the group of 12th-14th-century potsherds came mainly from beyond the limits of the roof overhang.

Layer 2 contained Romano-British pottery but some of the sherds may be really of 12th-century date or even later according to P. A. Rahtz. None of this group of sherds was found inside the shelter. Some of the few human bones occurred in this layer beyond the cover of the roof. The layer, like layer 1, thickened towards the valley slope. From layer 2 came the rolled-up

gold band with its single perforation (*Fig. 7.5*). It appears from an analysis to have been made from a naturally occurring alloy, electrum, and it could be of foreign origin. Such alloys have a high silver : copper ratio, which in this case is 10.5 : 0.9 per cent, the balance being gold. Similar objects are datable to the Bronze Age. In the top of layer 3 and horizontally placed in relation to the gold band was a broken barbed and tanged arrowhead (*Fig. 7.2*) and this is presumably of Bronze Age date.

It is layer 3 which yielded the more important remains from the site. Here occurred the main scatter of human bones just beyond the roof overhang and below the level of the rock floor of the part of the shelter under the roof, that is they were essentially outside the shelter. A bone point and the tip of another (*Figs. 7.3* and *7.4*) were also found. The complete, though broken specimen, had been made from the distal end of a metapodial of sheep or goat.

The most important items of all were parts of a cup of Neolithic (Windmill Hill) ware (*Fig. 5.1*). This is described by Dr. Isobel Smith in detail in Appendix 1. The only decoration is on the rim and consists of paired incisions. The cup stood about 83 mm. high with a diameter at the rim of 110 mm. The vessel had been built up in rings. It is almost identical with one from the Neolithic enclosure on Windmill Hill, near Avebury, Wilts.

The human bones have been examined by Dr. Metcalf and Dr. Tratman (University of Bristol). The bones were very few and generally very fragmentary. The only complete bone was a left tibia, which appears to be from a female and if so the individual was approximately 5 ft. 2.5 in. high. If the tibia belonged to a male, which is very unlikely, then the height would be about 5 ft. 4 in. There is an absence of osteoarthritis and osteoporosis in the tibia. The body of the third lumbar vertebra does show a little arthritic lipping and this is more marked on the manubrio-sternal joint. The vertebra was stout but not incompatible with the tibia.

The mandible is tolerably complete. It is slender and of female type. Changes have been produced by the ravages of parodontal disease with the loss of all teeth except the left second molar. The teeth on the right side posteriorly were lost before those on the left and there had been some compensatory muscular hypertrophy on the left resulting in the development of a fair degree of asymmetry. The coronoid processes are everted. There is unexpectedly an unerupted third molar buried in the jaw on the left side.

To sum up: the bones are those of a female, rather stocky in build and 5 ft. 2.5 in. tall and with a fairly broad face. The age at time of death was around 40-45 but probably nearer 40.

The very paucity of the human bones and their very fragmentary nature are indications of disturbance. No signs of a pit for burial nor of a mound heaped up over one were noticed in the excavation.

On the other hand, there was no evidence for an actual occupation. So the remains probably represent a single Neolithic burial made, perhaps, by just depositing the body on the ground with a few grave goods. In this case the primary disturbance might have been solely by scavenging beasts and not by man. Few animal bones occurred in layer 3 but towards the base there were some rodent bones which had no calcareous coating as had those in layer 4.

No similar burials in caves or rock shelters of Windmill Hill age are known locally. There may have been such at Chelm's Combe, Cheddar (Balch, 1927), but unfortunately this site was dug in horizontal levels across the naturally sloping stratigraphical disposition of the material and true correlations are impossible to make.

Layer 4, the last to yield any remains, marks the closing stages of the Final Pleistocene. There were a number of rodent's remains almost certainly derived from owl pellets or from animals eaten by other birds of prey. All were uniformly coated with a layer of calcareous material and were friable. They include two extinct species (*Dicrostonyx gulielmi* and *Microtus anglicus*) as well as others locally extinct such as lemming (*Lemmus*) and cave pika (*Lagomys pusillus*).

The molluscan remains were too scanty from all the layers to make any deductions as to climatic changes possible. They do indicate damp conditions in limestone scrub vegetation.

Tom Tivey's Hole is not quite such an isolated site as it may so far have appeared. About $\frac{1}{4}$ mile east of Heale Ladder there are several fields, which, when ploughed, yield numerous flint chippings, rough implements as well as finer ones and burnt and cracked flints. Several possible pot boilers came from ST 712448. No flint occurs naturally locally. All has been brought to the site. Large nodules have been found as well as cores so this seems to be a manufacturing and living site. The types of implements would not be out of place in a Neolithic or Bronze Age context. On the motor-cycle scramble track pieces of flint nodules and rough implements can often be picked up after a meeting. This track is very close to the shelter.

In the following appendices the catalogue reference number is given. The number is divided up as follows: Name of shelter, TT, grid number and layer, e.g. C4.3, and then the object number. Thus the Neolithic cup is TT.C4.3/38.

APPENDIX 1
THE POTTERY
(Figs. 5 and 6, Nos. 1-18)

Layer 3

1. Rim and body sherds of Western Neolithic vessel. (Reconstructed vessel in Bristol City Museum, F3832. Replica in U.B.S.S. Museum. (TT.C4.3/38.)

Dr. Isobel F. Smith has reported on this vessel:

"The sherds represent about one-third of a cup with an original diameter at the rim of 110 mm. and height of about 83 mm. The rim has been reinforced by the addition of an extra strip, irregularly moulded so as to produce in part a slight internal projection and in part a slight external swelling with shallow concavity below. Traces of other joints indicate that the vessel had been ring built. The clay contains a moderate amount of fossil shell (with a few particles up to 5 mm. in diameter) and a few oolites. The colour is predominantly black, with patches of warm brown on the exterior. The surfaces have been smoothed, but not burnished. Decoration is confined to widely spaced radial notches on the rim, each notch consisting of two short parallel incisions made by a forked implement."

"The cup belongs to a series well represented amongst the pottery from the ditches of the Neolithic enclosure on Windmill Hill, near Avebury, Wiltshire. This site has yielded some three dozen vessels with incised decoration confined to the rims and ranging in size from cups to large pots. The paired incisions or notches occur once at Windmill Hill on a cup that is almost the duplicate of this one from Tom Tivey's Hole. The technique seems to be a variant of the more general practice of ornamenting the rim with single closely spaced radial or oblique incisions (Keiller, 1925-39 (Smith, 1965)). About one-third of the pottery from Windmill Hill contains fossil shell and oolites, which Dr. F. S. Wallis has identified as deriving from the oolitic limestone of the Bath district, a source which seems likely for this cup from Eastern Mendip. Direct connexions between Eastern Mendip and Windmill Hill are attested by fragments of Old Red Sandstone imported to the latter site, some even during the occupation prior to the construction of the camp."

Layer 2

2. Rim and handle possibly of a two-handled bowl or mug. Light grey paste, red surface both sides with dark coating. Blending marks on handle to body sherd, and a groove on side and top of handle. (TT.D5.2/31.) Sherds of similar fabric (native ware) were found at Ilchester (Lindinis), which was founded in 1st century A.D. These are in Taunton Castle Museum. Similar material has come from East Grimstead (Heywood Sumner, 1924, Pl. IX, 7).

This rather squat bowl could be native ware of Early Iron Age "C" of the south-western type but probably made in the 1st century A.D. under Roman influence.

3. Base sherd of oil bottle. Buff body with dark brown colour-coat. Possibly from New Forest, late 3rd or early 4th century. (TT.D4.2/32.) The origin might be the Ashley Rails kilns. A similar one is described by Heywood Sumner (1927, p. 34) under Oil Flagons, No. 1.

4. Rim of ? bowl. Light grey gritty paste with dark coat on rim. Probably Romano-British, later than 1st century. See also No. 6. (TT.C5.2/33.)

5. Fragment of Samian. Groove on exterior. (TT.E5.2/34.) Mr. B. R. Hartley (Leeds University) examined this and reported: "This sherd is from a dish, form 79, of East Gaulish fabric. The rather red glaze is more typical of Rheinzabern and other German centres than of Central Gaul. This piece is later than about A.D. 160 and could be as late as the early 3rd century A.D."

6. Rim sherd. Dark grey paste, buff surface, contains finely divided calcite. Wheel made, probably Romano-British. Mr. P. A. Rahtz considers that neither No. 4 nor No. 6 is closely datable; they are not obviously similar to the common types of Romano-British pottery found in the west of Somerset, e.g. the large series from Chew Valley Lake (H.M.S.O. publication forthcoming); more pottery is wanted from the Frome area before more can be said about this ware. The sherds are likely to be Romano-British, but No. 6 is just possibly of 12th-century date or even later.

Layer 1

7. Rim and body sherd of a ? dish. Dark grey, coarse soapy paste, red surface both sides, contains calcite grits also broken shell. (TT.B5.1/24.) Mr. Rahtz has noted

that the fabric is not unlike the 11th-century sherds from Cheddar (Fabric CC, H.M.S.O. publication forthcoming) and dated there by coins to late 10-11th century. Other comparable material comes from the excavations conducted by the City Museum,

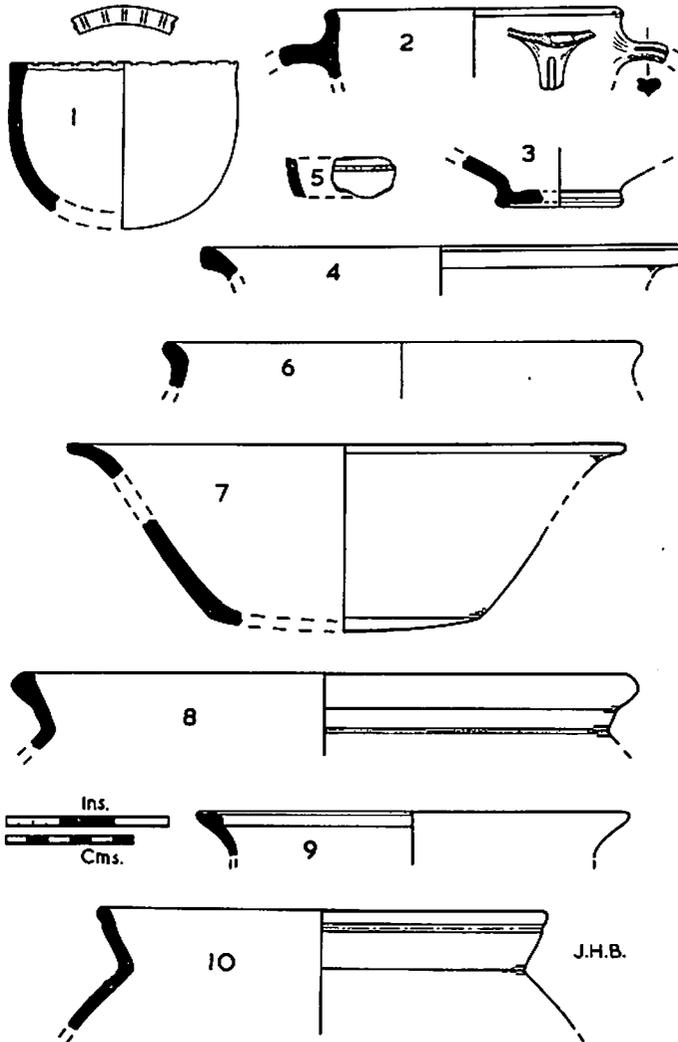


Fig. 5. Pottery items 1-10.

Bristol, 1962-63, which material might be 11th century. The form is unusual and might be 12th century.

8. Rim and shoulder form of large cooking pot. Coarse grey paste, contains calcite grits, cream-coloured exterior. (TT.D4.1/26.) Probably 12-13th century (Rahtz).

9. Rim sherd of vessel. Light grey, fine micaceous paste. Rim blackened by fire. This sherd may be a lid. (TT.C3.1/27.) Twelfth century or later (Rahtz). It is similar to fabric J at Cheddar, 12th-14th century.

10. Rim and shoulder form of cooking pot. Coarse grey paste, cream-coloured surface both sides, contains grits, broken shell, etc. groove on exterior rim. Ham Green shape but not from there. (TT.C5.1/29.) It is similar in fabric to 13th-century pottery from several North Somerset sites, including Butcombe, Somerset (Rahtz, 1958), but not common at Cheddar or Bristol (Rahtz).

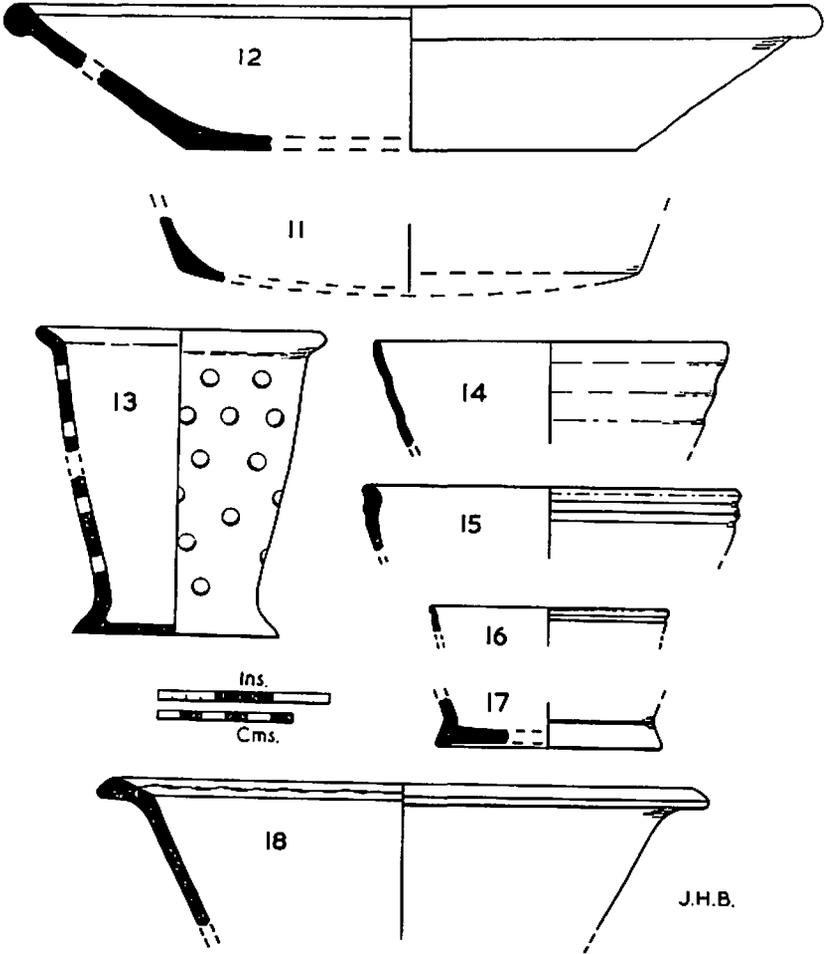


Fig. 6. Pottery items 11-18.

11. Base sherd of cooking pot. Dark grey micaceous paste, contains grits, light grey outer surface. (TT.C5.1/30.) Likely to be 12th century or later. Like fabric J at Cheddar (Rahtz).

Rahtz writes: "Although precise datings cannot be given for Nos. 7-11, they are unlikely to derive from a single short period of occupation but rather from successive casual visits. With this reservation none need be earlier than 1050 A.D. or later than 1200."

12-18. This group, according to Mr. K. J. Barton, has affinities with a large group from the St. Nicholas's Almshouses site, Bristol; the large group is dated to 1653-56. The present group is likely to lie between 1630 and 1660.

12. Rim, body and base sherd of bowl. Brick red paste, rim and inside glazed orange-buff. (TT.C2.1/3.)
13. Rim, body and base sherds of a ? cheese strainer. Red paste, rich-brown lead glaze both sides. Rim irregularly formed. A "second" not a waster. (TT.B2.1/8.)
14. Rim and shoulder of corrugated bowl. Brick red paste, buff glaze both sides, patchy on exterior. (TT.C5.1/17.)
15. Rim sherd of ? bowl. Fine grey paste, light brown glaze. External groove near rim. (TT.C4.1/18.)
16. Rim sherd of ? cup. Light grey paste, dark brown glaze. External groove near rim. (TT.C3.1/19.)
17. Base sherd of ? jug. Light grey paste, brick red slip, patchy brown glaze on foot-ring base. (TT.D4.1/20.)
18. Rim sherd of dish. Brick red paste, transparent green glaze on interior. Incised decoration on overhanging rim. (TT.D3.1/22.)

APPENDIX 2 (Abridged)
OBJECTS OF FLINT, BONE AND GOLD
(Fig. 7)

1. This is part of a leaf-shaped flint arrowhead with a white patina, made from a thin flake bifacially worked and broken at the shaft end. (TT.E4.3/39.)
2. Flint arrowhead of the barbed and tanged type, patinated white, bifacially worked. The tip and tang are broken. (TT.E4.3/40.)
3. A bone point made from the metapodial of a sheep or goat. The proximal end has been removed exposing the marrow cavity. Tooling marks are visible. There is a dark stain near the tip. Found in two pieces in association with the Neolithic cup. (TT.D4.3/41-2.)
4. Tip of a bone point. There is a slight longitudinal hollow on one side which, according to Dr. Isobel Smith, may indicate that it belongs to the type represented by several specimens from Windmill Hill. (TT.C5.3/36.)
5. Gold band. This consists of a thin strip of gold rolled to form a coil. There is a perforation at one end. The outside edges are raised. (TT.F4.2/28.) Professor Hawkes has suggested that the band could be a form of ingot rolled up for further use.
6. Gold stud. Late 19th century. (TT.C4.1/21.)
7. Bronze buckle. Associated with 17th-18th century pottery. (TT.C2.1/23.)

APPENDIX 3 (Abridged)
THE GOLD OBJECTS

By E. T. HALL (Research Laboratory for Archaeology, Oxford),
J. S. FORBES (Assay Office, Goldsmith's Hall)
and L. BIEK (Ancient Monuments Laboratory)

The objects were examined (at Oxford) in the X-ray fluorescence spectrometer.

A.M. No.	OBJECT	PERCENTAGE COMPOSITION		
		Copper	Silver	Gold
620999	Band	0.9	10.5	Rest, 88.6 max.
621000	Stud	4.5	7.0	Rest, 88.5 max.

No other elements were obvious.

In the present state of knowledge, generally a high silver : copper ratio which, in the case of the band, is over 10, argues against a recent origin. The composition of the stud is consistent with a fairly modern date.

The band is made from an alloy similar to electrum, and the alloy was probably native though not necessarily found in this country.

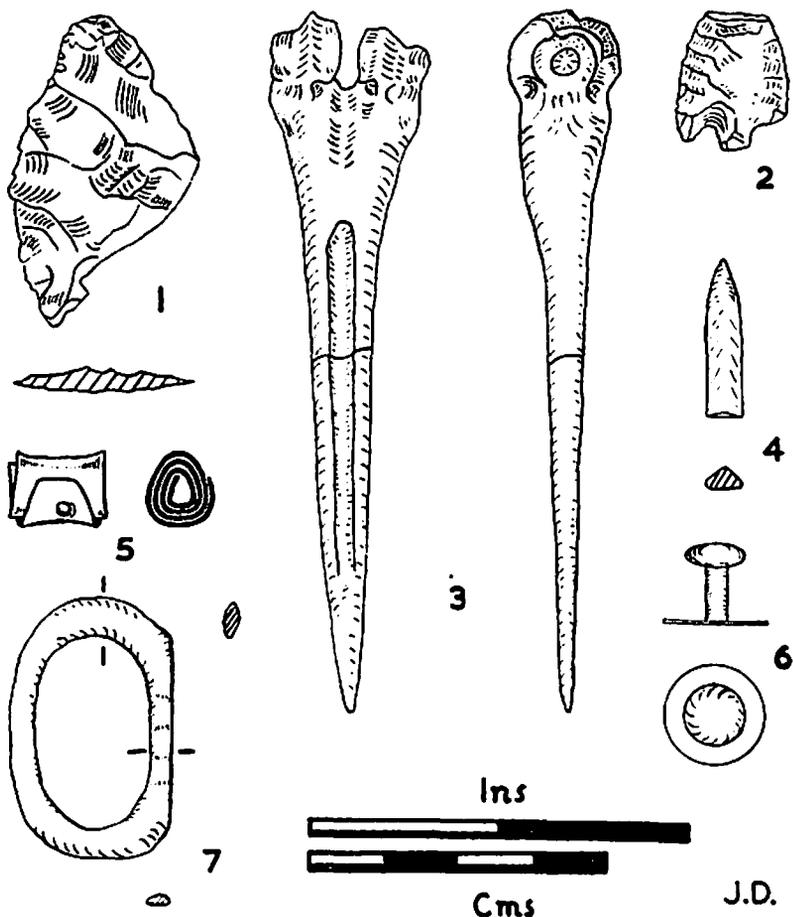


Fig. 7. Small finds from Tom Tivey's Hole.

APPENDIX 4
THE HUMAN BONES

These have been sufficiently described in the main part of the paper. The details and list of bones found have been deposited in the City Museum, Bristol.

APPENDIX 5
MOLLUSCA

The molluscan remains have been dealt with in a similar manner.

APPENDIX 6 (Abridged)
VERTEBRATE FAUNA

By

E. T. DAVIES, B.V.Sc., M.R.C.V.S. and H. C. WILSON

The list of species recognized is given in the table. The remains from layers 1, 2 and 3 belong to the Holocene. Those from layer 4 belong to the Pleistocene and are

recorded at depths of 110-130 cm., 150-170 cm. and 190 cm. The depth being the total depth from the surface and not from the top of the Pleistocene.

VERTEBRATE FAUNA		LAYERS 1, 2, 3 HOLOCENE Surface-110 cm.	LAYER 4 PLEISTOCENE		
			110-130 cm.	150-170 cm.	190 cm.
<i>Carnivora</i>					
<i>Canis familiaris</i>	(Dog)	×			
<i>Felis</i> sp. prob. <i>catus</i>	(Domestic cat)	×			
<i>Mustela nivalis</i>	(Weasel)	×			×
<i>Vulpes vulpes</i>	(Fox)	×			
<i>Ungulata</i>					
<i>Bos</i> sp.	(Ox)	×			
<i>Cervus</i> sp.	(Species of deer)		×		
<i>Equus caballus</i>	(Horse)	×			
<i>Ovis aries</i>	(Sheep)	×			
<i>Sus</i> sp.	(Pig)	×			
<i>Rodentia</i>					
<i>Apodemus</i> sp.	(Field mouse)	×	×		
<i>Arvicola abbotti</i>	(Abbott's water vole)		×	×	
<i>Arvicola</i> sp.	(Species of water vole)	×	×		
<i>Clethrionomys glareolus</i>	(Bank vole)	×	×	×	
<i>Arvicola amphibius</i>	(Water rat or water vole)				×
<i>Dicrostonyx gulielmi</i> *	(Banded or Arctic lemming)		×	×	×
<i>Lagomys pusillus</i> †	(Cave pika)			×	×
<i>Lemmus</i> †	(Lemming)		×		×
<i>Lepus</i> sp.	(Species of hare)				×
<i>Microtus</i> sp.			×		×
<i>M. anglicus</i> *			×		×
<i>M. agrestis</i>	(Field vole)	×	×		×
<i>M. agrestis/arvalis</i>	(Field vole)		×	×	×
<i>M. ratticeps</i>	(Northern vole)	×	×		
<i>Mus</i> sp.	(Species of mouse)				×
<i>Lagomorpha</i>					
<i>Oryctolagus cuniculus</i>	(Rabbit)	×			
<i>Insectivora</i>					
<i>Sorex araneus</i>	(Common shrew)	×			
<i>Sorex</i> sp.	(Species of shrew)		×		
<i>Aves</i>					
Sp.	(Species of bird)		×		

* Extinct species. † Locally extinct species.

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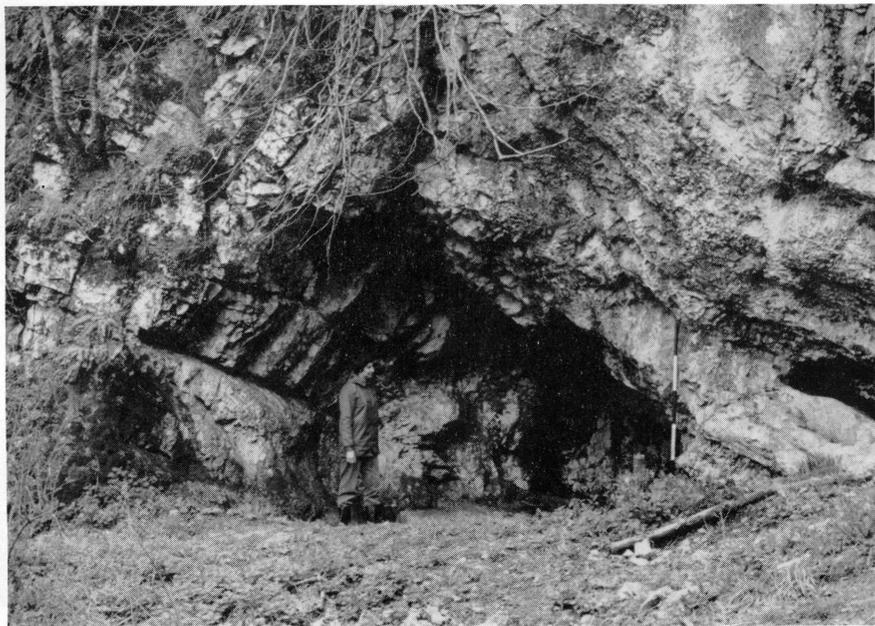


PLATE 1

(*Photograph: J. H. Barrett*)

Tom Tivey's Hole. General view looking east.



PLATE 3

(*Photograph: E. K. Tratman*)

Post-hole 1 completely excavated. Inch scale.