Chapter 3: the Finds

It should be noted that the scarcity of finds of all categories from the upper levels of the henge ditch reflects the extent to which these layers were removed by machine (Table 2).

Details of the 23 finds of historic period metalwork, 2 fragments of postmedieval glass, and one clay pipe stem fragment are to be found in the archive.

STRUCK FLINT

by A G Brown

Struck flint was recovered from four different types of context, which are summarised below. For clarity, artefacts from the henge ditch have been divided into redeposited (layers A–E) and apparently undisturbed (layers F–K) groups.

Unstratified	38
Ditch A–E	23
Ditch F–K	194
Interior features	2
	257

Material from the ditch is summarised in Table 8, that from other contexts in Table 9. Because of the limitations of the recovery techniques employed, notably the extent of machine excavation (Table 2), the chief potential contributions of the struck flint relate to dating and depositional circumstances.

Typological indicators of relevance to dating amongst the collection are few. They include one poorly executed ripple-flaked arrowhead from layer E in the henge ditch (Fig. 30, 1), a distal fragment of a fabricator from layer G (Fig. 30, 2), a triangular arrowhead from layer H (Fig. 30, 3), and a broken partially polished implement, presumed to have been an axe but rendered unidentifiable by its reuse as a hammerstone (unstratified). These items could all be assigned satisfactorily to later Neolithic/earlier Bronze Age flintworking traditions. Nothing was recovered which, on the grounds of typology, would suggest a significant degree of admixture from earlier lithic traditions, although one elongated end scraper fashioned from a narrow-blade core fragment belonged more rightly in a Mesolithic context. It may be noted that a significant Mesolithic presence is recorded nearby at Gravelly Guy (Holgate 1988, 211, 221).

Technological indicators, however, suggest that the largest single group, from layer G in the N terminal of the W entrance, is likely to date from the main period of Beaker usage, rather later than the Peterborough/Grooved Ware-associated later Neolithic. The technological characteristics on which this assertion is made (Brown 1991, 121–5) are that the platform/flaking face angle is shallow, measuring approximately 110°, the flakes have broad butts (c. 5–9 mm) with no platform preparation, there is no evidence of rejuvenation techniques being used, the resulting broad and thick flakes seldom have more than two flake scars forming one main arrête per flake, and there is no evidence for reduction using contiguous flaking faces (which would have left facetted butts).

Examination of the remainder of the collection in terms of these indicators led to the conclusion that the bulk of the material recovered during the excavation, such as it is, is broadly contemporary with this group. Moreover, the triangular arrowhead from layer H (Fig. 30, 3), similar in form and size to that from the Beaker-associated burial at Irthlingborough (J Humble pers. comm.), was in good condition, as was the albeit broken fabricator from layer G. Neither the ripple-flaked arrowhead nor the partially polished implement can be used as dating evidence since they were not securely stratified.

The flint contributes to an understanding of the depositional processes on the site in a number of ways. Some contexts, notably layer F in all the ditch cuttings, but also layer G in cutting I, were characterised by variety: variety of raw materials, of flaking products and of cortication. In these layers a mixture of technologies was represented, and a random accumulation of material from the contemporary surface is suggested.

Most of the context groups thus probably reflect a range of depositional processes and events. In one case, however, deposition could be shown to have been a single event. The largest single context group was that mentioned above from layer G in the N terminal of the W entrance. A refitting sequence of 12 flakes confirms the inference made from the high proportion of cortical flakes compared with non-cortical ones that this was a deposit resulting from the removal of cortex from nodules as a preliminary to core preparation. The flints were found in a distinct pile suggestive of placement within a perishable container: the absence of several flakes

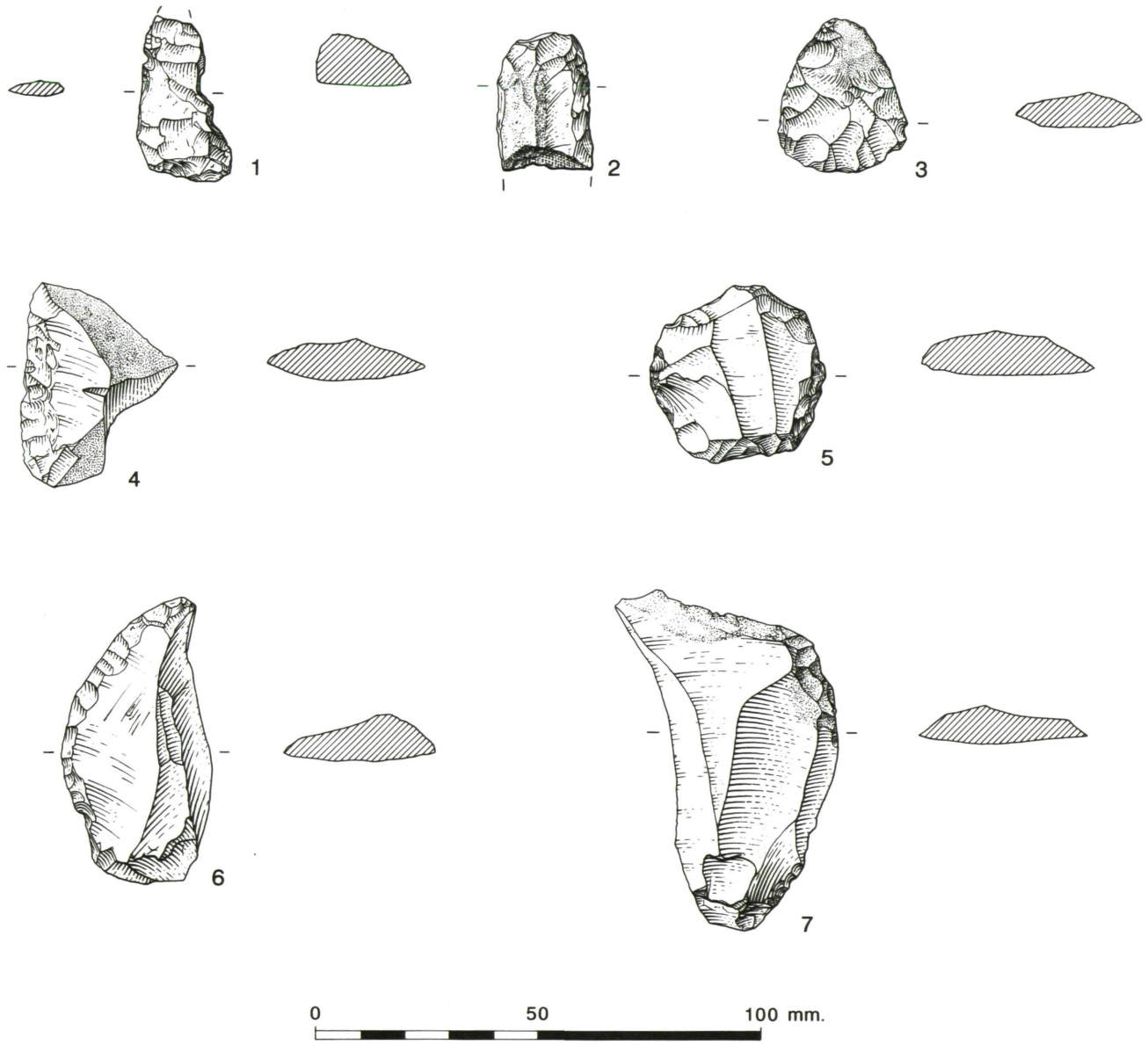

Figure 30 Struck flint from the henge ditch

from within the refitting sequence discounts the possibility of direct flaking over the open ditch.

A degree of spatial patterning in deposition has been noted in some hengiform monuments such as Durrington Walls (Richards and Thomas 1984). Because of the selective excavation and overall dearth of artefacts at the Devil's Quoits spatial analysis was not possible. The placement of a large group of flakes from an unusual source of flint (ie large nodules) in the ditch beside one entrance, and the contrast between this deposit and the scarcity of flint elsewhere in the ditch provide a hint of non-casual deposition.

Conclusions

The evidence of lithic artefacts sheds no light on the digging and early use of the ditch because there was so little material from the earliest layers.

By the time the ditch had become filled by perhaps 0.4–0.5 m of eroded soil, however, lithic material of Beaker period character was being deposited in the ditch, in one instance as a bagful or basketful of outer flakes from large chalk nodules (ie non-local flint). Some material of earlier and later Neolithic date was incorporated into the relatively stabilized, partially infilled ditch alongside further

Table 8. Struck flint from the henge ditch (total 217)

Cutting	Layer	Totals	Notes	Illustrations (Fig. 30)
I	B	2		
	C	4 (+1 unstruck)	3 residual heavily corticated	
	E	3	Ripple-flaked arrowhead	1
	F	2	1 residual, ?Mesolithic	
	G	12	Distal frag. fabricator, scraper, flake with slight backing	2, 5, 7
	H	2	Triangular arrowhead	3
IIIa	G	163	Core preparation deposit	
	G	6	Separate bag	
IIIb	E	1		
	F	2	Varied cortication	
	G	2	2 knives, retouched left side	4, 6
	H	1	Residual ?Neolithic	
VI	B	3 (+1 unstruck)		
	C	1	Residual core/scraper	
VIII	A	3	1 inversely retouched	
X	A	6	1 Mesolithic core/scraper, 2 late cores	
XI	G	3		
XIb	K	1		

Table 9. Struck flint from other contexts (total 40)

Context	Totals	Notes
F283/2	1	
1988 SF266	1	?Broken scraper
between cuttings III & IX	5	??Earlier Neolithic
over F80	1	Broken scraper
1988 SF207	1	
W entrance (L)	10	Some late pieces
W entrance (P)	3	
TT1	3	
U/S	1	Hammerstone on part of polished axe
U/S (o)	1	
U/S (k)	1	?Scraper fragment
U/S (j)	10	
U/S (F1.3)	2	Broken scraper, reworked knife

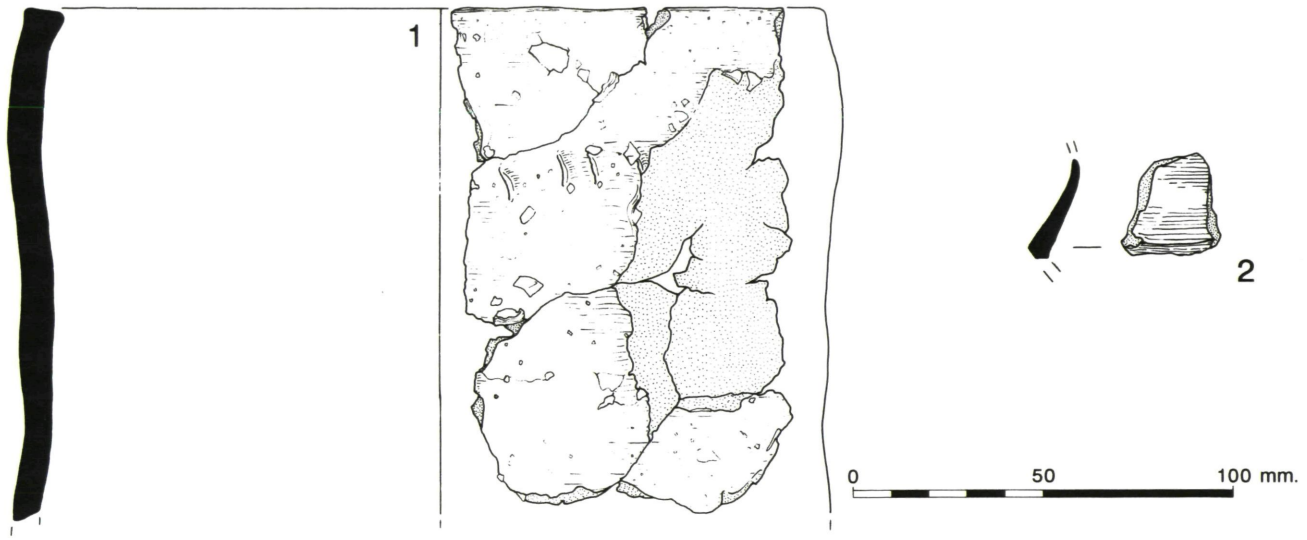

Figure 31 Middle Bronze Age and early Iron Age pottery

flint artefacts of Beaker period character, this presumably reflecting disturbance of the contemporary surface as well as new deposition. Only a very few flakes suggestive of activity later than the early Bronze Age were recovered from the heavily mixed upper fills of the ditch. Perhaps the most striking feature of the lithic material is the small quantity recovered.

POTTERY

by Alison Gledhill and Alistair Barclay

Introduction

The assemblage is small, containing very little prehistoric pottery but rather more Romano-British material, virtually all from the ploughsoils deposited in the henge ditch. Two sherds are recorded from medieval plough furrows and one sherd was found in a possible stone quarry. No features in the henge interior contained prehistoric sherds. The study aimed to date the ploughsoils and the destruction sequence of the monument through later agricultural practice.

Pottery from the henge ditch (Table 10)

The primary ditch deposits (J, L & K) produced no ceramic material. From layer G in the N terminal of the W entrance came two sherds of Beaker fabric:

Original find no 90. Two joining plain body sherds (1 g), 4 mm thick. Fabric: crushed shell up to 1 mm (leached) and rare grog. Colour: exterior reddish-brown, core dark brown-black interior burnished orange-brown. The sherds are in a fine, burnished fabric.

From the same layer in cutting VI came sherds of a middle Bronze Age Bucket Urn (Fig. 31, 1):

Original find no. 58. Twelve conjoining sherds from the rim and body of a bucket-shaped vessel. The rim is flat, expanded in places and slightly incurving. Rim diameter *c.* 260 mm. Wall thickness 10 mm. The vessel is slightly bipartite, decorated at the shoulder with vertical finger-nail impressions. The surfaces have been smoothed, but show signs of ware and abrasion. Both old and new breaks were recorded.

The vessel is ring-built, with later breakage defining the joins. The clay is tempered with crushed fossil shell which ranges from coarse to very fine. The pot was open-fired, probably at a low temperature and in an inverted position, and the outer surface is oxidised to an even colour. The fabric is laminated because of the abundant use of shell platelets, with the result that the outer surface has become detached in places.

Fabric: calcitic shell platelets (20%) finely crushed but also massive up to 14 mm. Colour: exterior very pale brown (10YR 7/4) to greyish-brown, core dark grey, interior very dark grey-black.

The vessel form and fabric are typical of Deverel-Rimbury pottery in the Upper Thames Valley. The pot can be compared with cremation urns from ring-ditch XV, 4 in Stanton Harcourt (Ch. 5; Thomas 1963, 29), from Standlake Downs (Riley 1946–7, 42) and from Shorncote, Gloucestershire (Barclay and Glass in prep.).

Layers F and Fa contained three late Bronze Age/early Iron Age sherds, all from cutting I. One (original find no. 47) is in an oxidised reddish-brown shelly fabric and is very abraded. The appearance and fabric are typical of local Deverel-Rimbury and late Bronze/early Iron Age plain wares and its condition suggests redeposition in the ditch. The other two (original find nos. 38 and 57) are in fine, sandy fabrics and come from fineware angular vessels. They include Fig. 31, 2.

Table 10. Pottery from the henge ditch
Conjoining sherds are counted as 1

	Layer							
Period: fabric	B	C	D/E	E	F	G	Sherds	% of total
Beaker: grog and shell	-	-	-	-	-	1	1	0.5
MBA: shell	-	-	-	-	-	1	1	0.5
IA: hard sandy	-	-	-	-	2	-	2	0.9
IA: shell	-	-	-	1	-	-	1	0.5
IA: shell and calcite	-	-	-	-	1	-	1	0.5
R-B: Samian	-	-	-	2	-	-	2	0.9
R-B: Nene Valley colour coat	-	-	-	2	-	-	2	0.9
R-B: Oxford oxidised red colour coat	-	2	-	2	-	-	4	1.9
R-B: Oxford oxidised fineware	-	1	-	2	-	-	3	1.4
R-B: Oxford oxidised coarse-ware, quartz	-	-	-	2	-	-	2	0.9
R-B: Oxford oxidised coarseware grog	-	-	-	1	3	-	4	1.9
R-B: reduced fineware, hard grey ware	1	1	-	23	-	-	25	11.7
R-B: reduced fineware, sandy brown ware	4	-	-	27	-	-	31	14.5
R-B: reduced fineware: hard sandy black ware	1	-	-	30	-	-	31	14.5
R-B: reduced coarseware, hard sandy ware	-	1	-	7	-	-	8	3.8
R-B: reduced coarseware, quartz	-	3	-	25	4	-	32	15
R-B: reduced coarseware, grog and quartz	2	-	-	24	5	-	31	14.5
R-B: reduced coarseware, grog	-	3	-	17	-	-	20	9.4
R-B: reduced coarseware, soft, grog	-	-	-	3	3	-	6	2.8
R-B: calcareous	-	-	-	3	-	-	3	1.4
Med: calcareous gravel	-	-	1	-	-	-	1	0.5
Med: flint and chalk	-	-	1	1	-	-	2	0.9
Total no. of sherds	8	11	2	172	18	2	213	-
% of total	4	5	1	81	8	1	-	-

There were also 15 1st-2nd century Roman sherds, evenly divided between sandy and grog-tempered fabrics.

Layer E, a ploughsoil above these deposits, contained 80% of the sherds excavated from the ditch. This assemblage includes a sherd from a shouldered vessel of early Iron Age date. Most, however, is of 1st–2nd century Roman date, with a small number of later 3rd–4th century sherds. There were only two certain late Roman sherds, one each of Nene Valley and Oxfordshire colour-coated wares. Three small oxidised sherds were very abraded, these were probably Oxfordshire products, but not necessarily the colour coated fabric. The grog-tempered fabrics are likely to be of 1st century date, but the sandy reduced coarse wares, probably all of local origin, are not closely datable on fabric grounds alone and very few diagnostic rims occurred. Such rims were exclusively of jar or necked bowl types, a few of which are datable to the 1st–2nd centuries but some of which are likely to have belonged to forms manufactured throughout the Roman period. Sandy and

Table 11. Summary of the vertebrate remains
ULM = unidentified large mammal (cattle/horse/red deer)
UMM = unidentified medium mammal (sheep/goat/pig)

Taxon	F1 C-F	F1 G-K	Other	Totals
Cattle	11	108	4	123
Sheep/goat	-	4	8	12
Pig	-	6	-	6
Horse	2	1	2	5
Dog	-	1	-	1
Red deer	-	4	-	4
subtotals	13	124	14	151
Red deer antler	14	67	2	83
ULM	33	431	6	470
UMM	5	75	16	96
subtotals	38	506	22	566
Totals	65	697	38	800

grog-tempered fabrics constitute 65% and 28% respectively, suggesting that the earlier 1st century grog-tempered fabrics were commoner in underlying layer F while the later sandy wares were more frequent here. The most 'exotic' coarseware was the rim of a Severn Valley ware tankard of 2nd century date.

Layer E also contained a flanged rim sherd from a shallow medieval bowl in a flint- and chalk-tempered sandy fabric which has a 13th–15th century date. A plain body sherd in a calcite-tempered sandy fabric of 12th–13th century date came from layer D/E.

The remaining material, most of it unstratified, is comparable in character to that from the ditch. A further late Bronze/early Iron Age sherd in a shelly fabric came from medieval plough furrow F20. Unstratified late Roman sherds include a small fragment of an oxidised Oxfordshire mortarium (fabric C or WC (Young 1977, 123; 117)) and a possible parchment ware rim sherd from a carinated bowl of type P24 (Young 1977, 87). Possible stone quarry F126 contained a flat, slightly expanded rim from a medieval cooking pot in a fine sandy fabric, which dates to the 12–13th century. There is a total of 32 unstratified medieval and post-medieval sherds.

Discussion

The material from the henge ditch is important for dating the later cultivation and the destruction of the monument. The assemblage is dominated by 1st–2nd century sherds and may indicate intensification of local cultivation at this time with the ploughing down of the denuded henge bank. Only a small quantity of sherds was recovered from the uppermost ditch layers (D–B), mostly Roman, dated to the 1st–4th century and two medieval sherds of 13th–15th century date.

The assemblage provides more information about the decline and destruction of the monument and cultivation history than it does about its early use. It is important to note the near-absence of later Neolithic and early Bronze Age pottery from this large henge-circle in comparison with other similar sites (cf Bradley 1984, 77).

HUMAN BONE

by Angela Boyle

One fragment of human bone, 105 mm in length, was recovered from hearth F150 at the interface of layers J and K in the N terminal of the E entrance. It is almost certainly the distal third of a subadult femur. The bone surface is much degraded and weighs very little. Iron pan deposits are present on the outer surface and within the medullary cavity. Although found in association with ash and burnt stones it shows no signs of burning.

ANIMAL BONE

by Bruce Levitan

Introduction

The bones submitted for identification and analysis included unstratified material; these have been excluded from the examination. Also excluded, of necessity, are the bone and antler finds which had formed the samples for HAR-1887 and -1888 in the 1970s (Table 6). The remainder totals 801 fragments which can be separated into three major groups on temporal and spatial grounds:

F1 (henge ditch), upper layers (C–F): 65 bones (38 not identified to taxon).

F1 (henge ditch), lower layers (G–K): 697 bones (511 not identified to taxon).

Other features: 39 bones (22 not identified to taxon); plus one cattle burial.

Thus the total number of bones identified to taxon is 226, a sample that is hardly large enough to provide reliable indicators of taxon frequency let alone more detailed information. This must be borne in mind in relation to what follows: any interpretations and conclusions should be regarded as tentative and speculative.

The high proportion of unidentified bone (72%) can be attributed to the weathered, fragmented and generally comminuted state of the assemblage which has been exacerbated to some extent by poor packaging.

The bones from the upper layers of the henge ditch represent the period from the late Iron Age (layer F) to the medieval period (layer C). These bones are summarised in Table 11 but no further note will be made of them below as the sample is too small to be worthy of attention.

Similarly, no attempt will be made to comment on the bones from the non-ditch features since the indi-

vidual groups are too small to be of use and even the total sample is very small. Note should be made of the cattle burial (Fig. 28). This is of a young animal and lacks the skull (though it is suspected that it was highly fragmented *in situ* and not collected). None of the long bones are fused, nor are the pelvic elements. The vertebral elements are fused, but the fusion planes are clear so this event was not long passed. The individual was less than one year old. There are no signs of butchery and the most likely explanation is that this was the burial of a diseased or weakly individual, rather than there being any ritual interpretation. The condition of the bones, much less weathered than the majority of the others, together with the young age of the individual suggests that it is a modern burial, as does the iron ring found with it.

This leaves the lower layers from the henge ditch to consider. The most productive zone of the ditch was section I (387 bones; 89 identified), a reflection of its having been the most extensively hand-excavated (Table 2). Animal bone was also recovered from sections III (198; 71), VI (4; 4), VII (47; 2), X (19; 8) and XI (31; 8); a further eleven bones (10 identified) are from contexts where the section was not indicated.

Layer G produced the largest sample: 476 bones (186 identified). Layer H yielded 97 bones (40 identified). Layer J: 65 (14). Layer K: 59 (5).

Layer G probably accumulated through the Beaker to middle Bronze Age periods on the evidence of the pottery, the flint industry and a single radiocarbon determination (Table 6). The scarcity of redeposited Mesolithic or earlier Neolithic material among the small flint assemblage (Table 8) suggests that it is probably safe to assume that the majority of the bone assemblage is Bronze Age in date.

This report will concentrate on the bones from layer G. A summary of the bones in layers H–K can be found in Table 12. The sample is too small to permit any conclusions about animal exploitation.

Analysis of the bone from layer G in the henge ditch

The bones from layer G are summarised in Tables 13–14. Table 13 clearly shows three main points:

i) The majority of bones are unidentified;

ii) Of the identified bones, cattle are by far the most common: about 90% of the identified bones (excluding antlers).

iii) Antlers form a third important group.

The large proportion of unidentified bone, most of it also from large mammals, has been discussed above. The predominance of cattle to the degree indicated here would be most unusual in a domestic context — the numbers of sheep/goat, pig and horse bones are so small as to be negligible. The relevance of this for the Devil's Quoits is important because the nature of the site might indicate that ritual activity is implicated. This point is taken up in the discussion.

The antlers form a separate group because it is unlikely that they are the waste from hunting activities (note the extremely small number of deer bones other than antler). It seems much more likely that they were collected as shed pieces, and indeed all of the antlers with base intact were shed (six antlers). Two of these had evidence of battering on the coronet, and one was a classic antler pick with brow and bez tines removed leaving the trez tine with the beam cut above this, ie an L-shaped tool in the

Table 12. Summary of animal bone from layers H-K of the henge ditch
ULM = unidentified large mammal, UMM = unidentified medium mammal

	H		J			K			
Taxon	I	III	XI	III	XI	III	VII	XI	Totals
Cattle	8	3	3	2	1	-	2	1	20
Sheep/goat	2	-	-	-	-	-	-	-	2
Pig	-	-	-	-	-	1	-	-	1
Dog	1	-	-	-	-	-	-	-	1
subtotals	11	3	3	2	1	1	-	-	24
Red deer antler	1	22	-	11	-	1	-	-	35
ULM	29	9	1	51	-	-	30	8	128
UMM	14	4	-	-	-	-	15	1	34
subtotals	43	13	1	51	-	-	45	9	162
Totals	55	38	4	64	1	2	47	10	221

Table 13. Summary of animal bone from layer G of the henge ditch
Totals column includes 11 bones not assigned to cutting, ULM = unidentified large mammal, UMM = unidentified medium mammal

	Cutting I		Cutting III		Cutting VI		Cutting X		Cutting XI		Totals	
Taxon	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Cattle	56	89	26	90	2	100	3	60	1	100	89	88
Sheep/goat	1	2	1	3	-	-	-	-	-	-	2	2
Pig	4	6	1	3	-	-	-	-	-	-	5	5
Horse	-	-	1	3	-	-	-	-	-	-	1	1
Red deer	2	3	-	-	-	-	2	40	-	-	4	4
subtotals	63	19	29	31	2	50	5	26	1	6	101	21
Red deer antler	14	4	2	2	2	50	3	16	2	13	32	7
ULM	221	87	55	87	-	-	11	100	13	100	301	88
UMM	34	13	8	13	-	-	-	-	-	-	42	12
subtotals	255	77	63	67	-	-	11	58	13	81	343	72
Total	332	70	94	20	4	1	19	4	16	3	476	

Grimes Graves, Norfolk mould (Legge 1981). Most of the antlers were not of this form, however, since tine removal had generally not occurred (thus more similar to the pattern found at Hazleton, Gloucestershire; Levitan 1990).

The cattle bones. Table 14 provides details for the 89 cattle bones from layer G. Most elements of the skeleton are represented. The skull is apparently absent, however several upper teeth are present and fragments of skull were recovered but are not definitely identifiable as cattle. This is true also of the vertebrae with the exception of the more easily identifiable axis and atlas. Other 'missing' elements are smaller bones such as tarsals and phalanges. Whilst these are not so small that they can easily be missed, it is possible that this is why they are absent and that no special selection was made during deposition of the bones. With so small a sample it is pointless to carry out any analysis of the relative frequency of the different elements; suffice it to note that the better represented elements are the more robust bones which have better survival rates than the less well represented elements.

One important point to note is that six of the specimens are very large for Bronze Age domestic cattle and thus have been noted as possible aurochs (*Bos primigenius*).

Turning to the ageing evidence it is obvious that there are few young individuals represented (all early/middle fusing bones are fused with the exception of one distal metapodial, and the majority of the teeth are permanent teeth). The four mandibles with teeth tell a different story, however, as three have deciduous dentition present and the fourth, with the third molar at wear state a, is in the same age bracket, ie older juvenile/young adult. This apparent conflict is hard to resolve, but is not uncommon (see Maltby 1982 for a discussion of this kind of ageing evidence conflict).

A few of the bones bear evidence of canid chewing, so although dog bones are not actually represented in the assemblage from layer G, it is evident that dogs were present. The weathering condition of the bones makes it difficult to discern both chewing and butchery so the apparent lack of the latter and scarcity of the former need not be representative. The only bone that definitely appears to have been butchered is an ulna, but the general state of fragmentation is typical of butchered refuse from sites of this period.

Discussion

The possibility that the bone assemblage relates to ritual activity has already been raised. Its character is unfortunately ambiguous. On one side the extraordinary predominance of cattle bones and the relatively large collection of antlers is decidedly non-domestic in character, but conversely the composition of the cattle assemblage itself appears to be typically domestic.

The antler assemblage can best be compared with that from Hazleton because at that site antlers were similar in terms of working and modification. It was suggested that, since the quarrying activities there were relatively short-lived (compared with Grimes Graves, for example), there was no need to spend a lot of time fashioning 'antler picks' and that whole or only slightly modified antlers were employed

Table 14. Cattle bone from layer G of the henge ditch (1)

AB = AB (animal bone) number

Symmetry: L = left; R = right; A = axial; blank = unknown

Size: 1 = <25% complete; 2 = 25-49% complete; 3 = 50-74% complete; 4 = 75-99% complete; 5 = complete; P = proximal end; M = mid-shaft/middle section; D =distal end; 0 = fresh breakage

Zone: Most bones have six zones (123456), 1 and 6 being the proximal and distal epiphyses respectively and 2-5 running from the proximal end of the shaft to the distal end. Bones with fewer zones follow the same principle, ie 1 is the proximal or anterior end and the highest number the distal/posterior end.

Age: F = fused; N = not fused; U = not fused (epiphysis present). Teeth wear state according to method of Grant (1982)

AB	Cutting	Element	No.	Symmetry	Size	Zone						Age	Comments
19	I	atlas	1	A	3						8		?aurochs
42	I		1	A	1M						8		
44	I		1	A	1						8		
		total	3										
42	I	axis	1	A	1M						8		
47	I	teeth	6	LR									R: Ldp4(j); LPm3; UM2; L: LM1(g); LM2(e); UM frag.
58	I		3	L	5						9		UPm4-UM1-UM2
	I		2										1 UM; R: LM1 (k)
73	III		1										dLp4 (j)
99	III		2	L									UM & LM1 (k)
106	III		2										LM2/3 (j/b)
109	III		1	R									LM2 (f)
59	X		2										L: UM2; UM
		total	19										
3	I	mandible	1	L	1M	-	-	3	4	-	-	(j)f--	
17	I		1	R	2M	-	-	3	4	-	-	(k)gea	
18	I		1	R	1M	-	-	-	4	5	-	- --a	
22	I		1	L	3M	1	2	3	-	-	-	(k)---	
39	I		1	L	1M	-	-	3	4	-	-		
45	I		1	L	1P	-	-	-	-	5	-		
73	III		1		1M	-	-	-	4	-	-		
54	VI		1		1P	-	-	-	-	-	6		
		total	8										

Table 14. Cattle bone from layer G of the henge ditch (2)

AB = AB (animal bone) number

Symmetry: L = left; R = right; A = axial; blank = unknown

Size: 1 = <25% complete; 2 = 25-49% complete; 3 = 50-74% complete; 4 = 75-99% complete; 5 = complete; P = proximal end; M = mid-shaft/middle section; D =distal end; 0 = fresh breakage

Zone: Most bones have six zones (123456), 1 and 6 being the proximal and distal epiphyses respectively and 2-5 running from the proximal end of the shaft to the distal end. Bones with fewer zones follow the same principle, ie 1 is the proximal or anterior end and the highest number the distal/posterior end.

Age: F = fused; N = not fused; U = not fused (epiphysis present). Teeth wear state according to method of Grant (1982)

AB	Cutting	Element	No.	Symmetry	Size	Zone						Age	Comments
32	I	scapula	1	R	1PO	1	2	-				PF	
36	I		1	R	2MO	-	2	3					
		total	2										
11	I	humerus	1	L	4M	-	2	3	4	5	-		
33	I		1	L	1M	-	-	-	-	5	-		?aurochs
34	I		1	L	1M	-	-	-	-	5	-		
41	I		2	L	3M	-	-	3	4	5	-		
41	I		1	L	2D	-	-	-	4	5	6	DF	?aurochs — distal chewed
51	I		1		1D	-	-	-	-	5	6	DF	distal chewed
99	III		1	L	1M	-	-	-	-	5	-		
107	III		1	L	1M	-	-	-	4	5	-		
		total	9										
30	I	radius	1		1M	-	-	3	4	5	-		
32	I		1	R	IPO	1	2	3	-	-	-	PF	?aurochs
41	I		1	R	3P	1	2	3	4	-	-	PF	?aurochs
44	I		1	L	1P	1	2	-	-	-	-	PF	
45	I		1		1M	-	2	3	-	-	-		
72	III		1	L	1D	-	-	-	-	-	6	DU	
		total	6										
14	I	ulna	1	R	4M	-	2	3	4	-			
37	I		1	R	2M	-	-	3	4	-			
45	I		1		2M	-	-	3	4	-			
93	III		1	L	3M	-	2	3	4	-			proximal smashed; ^{14}C sample
		total	4										

Table 14. Cattle bone from layer G of the henge ditch (3)

AB = AB (animal bone) number

Symmetry: L = left; R = right; A = axial; blank = unknown

Size: 1 = <25% complete; 2 = 25-49% complete; 3 = 50-74% complete; 4 = 75-99% complete; 5 = complete; P = proximal end; M = mid-shaft/middle section; D =distal end; 0 = fresh breakage

Zone: Most bones have six zones (123456), 1 and 6 being the proximal and distal epiphyses respectively and 2-5 running from the proximal end of the shaft to the distal end. Bones with fewer zones follow the same principle, ie 1 is the proximal or anterior end and the highest number the distal/posterior end.

Age: F = fused; N = not fused; U = not fused (epiphysis present). Teeth wear state according to method of Grant (1982)

AB	Cutting	Element	No.	Symmetry	Size	Zone						Age	Comments
51	I	carpal	1		4						8		
73	III		1		4						8		
		total	2										
23	I	metacarpal	1	L	3P	1	2	3	4	-	-		
40	I		1	L	4P	1	2	3	4	5	-		
40	I		1		1MO	-	-	-	-	5	-		
45	I		1		1D	-	-	-	-	5	6	DF	
73	III		1	R	2M	-	2	3	-	-	-		
108	III		1	R	4M	-	2	3	4	5	-		
			1	L	3PO	1	2	3	4	5	-		?aurochs
		total	7										
9	I	pelvis	1	R	4M	-	2	3	-	5		F	
85	III		1	R	2P	1	2	-	-	-			
96	XI		1	L	1M	-	2	3	-	5		F	
		total	3										
46	I	femur	1		1MO	-	-	-	4	5	-		
108	III		1		1M	-	-	-	4	-	-		
94	III		1		2M	-	-	3	4	-	-		
		total	3										
32	I	tibia	1		1D	-	-	-	-	5	6	DF	
34	I		1	R	1D	-	-	-	-	5	6	DF	
36	I		1		2D	-	-	3	4	5	-	DN	
39	I		1	R	1D	-	-	-	-	5	6	DF	
73	III		1	R	1M	-	2	3	-	-	-		
73	III		1	L	2MO	-	-	-	4	5	-		

Table 14. Cattle bone from layer G of the henge ditch (4)

AB = AB (animal bone) number

Symmetry: L = left; R = right; A = axial; blank = unknown

Size: 1 = <25% complete; 2 = 25-49% complete; 3 = 50-74% complete; 4 = 75-99% complete; 5 = complete; P = proximal end; M = mid-shaft/middle section; D =distal end; 0 = fresh breakage

Zone: Most bones have six zones (123456), 1 and 6 being the proximal and distal epiphyses respectively and 2-5 running from the proximal end of the shaft to the distal end. Bones with fewer zones follow the same principle, ie 1 is the proximal or anterior end and the highest number the distal/posterior end.

Age: F = fused; N = not fused; U = not fused (epiphysis present). Teeth wear state according to method of Grant (1982)

AB	Cutting	Element	No.	Symmetry	Size	Zone						Age	Comments
80	III	tibia (ctd)	1	R	1P	1	2	-	-	-	-	PF	
94	III		1	R	1M	-	2	3	-	-	-		
54	VI		1	L	1D	-	-	-	-	5	6	DF	
		total	9										
37	I	metatarsal	1		1P	1	2	-	-	-	-		
39	I		1	R	3P	1	2	3	4	-	-		
44	I		1	L	3D	-	-	3	4	5	6	DF	distal chewed
	I		1		1D	-	-	-	-	5	6	DF	
73	III		1	L	2M	-	-	-	4	5	-		
80	III		1	R	1M	-	-	-	4	5	-		
		total	6										
99	III	metapodial	1		1D	-	-	-	-	5	6	DF	
73	III		2		1D	-	-	-	-	-	6		distal epiphyses
53	X		1		1D	-	-	-	-	5	-	DN	
		total	4										
33	I	calcaneum	1	R	4M						8		
42	I		1	R	3M						8		
		total	2										
34		1st phalanx	1		3						8	PF	
Cattle total			89										

(Levitan 1990). A similar scenario can be envisaged here, with the antlers being used for quarrying activities at the site. The recovery of some from layer G indicates that they were not deposited in the ditch until some time after it was cut. They may have been used for recutting or cleaning out the ditch, or for the excavation of features in the interior of the monument.

Turning to the cattle bones, a comparison with the assemblages surveyed by Grigson (1981) shows that this site fits into the extraordinary range of taxon frequencies encountered during the Bronze Age. Many of the sites surveyed by Grigson were candidates for ritual, but this does not prove that the layer G assemblages can be interpreted in these terms. If the assemblage is compared with those from Bronze Age sites such as Brean Down, Somerset (definitely domestic; Levitan 1990) and Charterhouse Warren Farm Swallet, Avon (definitely ritual; Levitan *et al* 1988; Levitan and Smart 1991) the result is closer to Brean Down than to Charterhouse Warren in terms of the *nature* of the cattle assemblage, but the reverse is the case in terms of the taxon frequencies.

Therefore, it does not seem possible to arrive at any positive conclusion regarding the nature of the Devil's Quoits assemblage. Perhaps the simplest interpretation is that, if ritual activities were taking place on site, their effect on the animals was in terms of selection of species rather than treatment of the carcasses; ie cattle were specifically selected because of the ritual involved (eg feasting), but the treatment of the carcasses was entirely in keeping with common domestic practice.

THE MOLLUSCA FROM THE HENGE DITCH

by Mary Evans

Sampling and analysis

A column sample (column 1) was taken through the sequence of ditch deposits in cutting X, spanning a depth of 2.3 m at its base to within 0.7 m of the present day surface (Fig. 11, section 12). The column of samples for molluscan analysis is not completely continuous however, there being breaks where obvious stratigraphic boundaries occur. Two further spot samples were extracted from the lower layers of this cutting and are included in the results for column 1.

A second far less complete column (column 2) was taken from ditch cutting I, section 1, spanning a depth of 2.6 m to 2.2 m. Only the two stratigraphic layers succeeding the secondary fill of the ditch, H and G, were included in this column.

The standard dry weight for each sample was 1 kg. The methods used for analysis were those described by Evans (1972). Results for column 1 are presented as a histogram of absolute abundance (Fig. 33), those for column 2 in percentage terms (Fig. 34). The absolute numbers of shells from both columns are also presented in tabular form (Tables 16 and 17). Results from both columns were combined in order to present molluscan ecological group percentages for each stratigraphic layer through the ditch sequence (Fig. 32).

Separating *Cochlicopa lubrica* from *Cochlicopa lubricella* was felt to be unnecessary for the purpose of this report, as both fall into the same broad ecological grouping of 'catholic' species. The former, however, was noted to comprise the majority of adults. A very few *Vertigo* shells were not well enough preserved to define into sub-species and have consequently been grouped with *Vertigo pygmaea* in Figure 32.

Interpretation

The problems of interpreting molluscan assemblages from ditch deposits have been discussed elsewhere (Evans 1972; Thomas 1984). Many of the problems are largely overcome in this case by the fact that the ditch is broad and U-shaped. Whilst smaller, steeper-sided ditches are more likely to create their own micro-environments, large ditches of ritual monuments generally provide the clearest data, reflecting habitats from the region as a whole.

Molluscan sequence

Though layers A to K form a distinct ditch sequence, only four environmental phases or 'molluscan zones' are apparent from the fauna studied (Table 15, Fig. 33). These are described below, from the base of the ditch upwards:-

I 2.3–2.2 m (K and lower L). Molluscan assemblages from the primary and lower secondary fills of the ditch are characterised by the dominance of the 'freshwater slum' and 'marsh' species *Pisidium obtusale* and *Carychium minimum*, and to a lesser extent, *Lymnaea truncatula* and *Zonitoides nitidus*. These comprise between 75% and 50% of the fauna, decreasing upwards.

All the wetland species found are amphibious rather than aquatic, favouring stagnation or 'poor' water conditions. They are, however, capable of surviving fairly lengthy periods of drying out, such as seasonally, and have actually been found on meadowland not necessarily associated with standing water or swamps (Evans 1972). The *Ostracoda* present (Tables 16 and 17) though very few in number, also favour such conditions.

Terrestrial species present comprise between 25% and 50%. The highest proportion are 'open country' and 'catholic' fauna, predominantly *Vallonia excentrica* and *Trichia hispida* respectively. A steady 10% of the fauna during this phase is however 'shade-loving', *Vitrea crystallina* being most consistently found in number. Their presence may simply reflect the 'poor', loose scree conditions on the ditch sides.

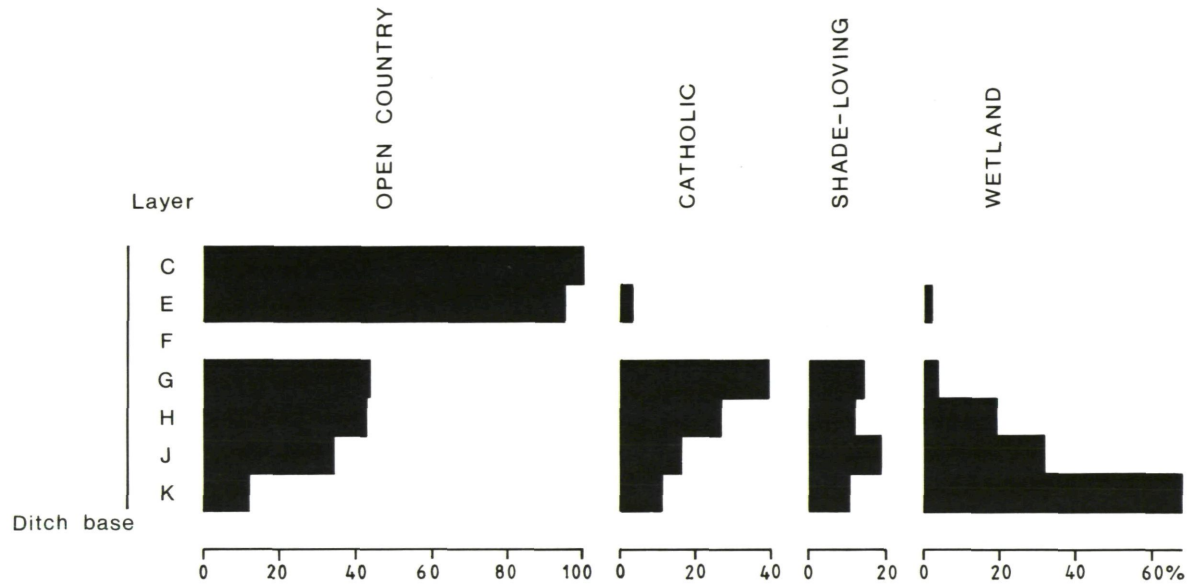

Figure 32 Devil's Quoits ditch: a synthesis of molluscan results

The assemblage from this first phase therefore generally represents open grassland with a fluctuating water table, maintaining a wet or swampy ditch bottom for part or all of the year round.

II 2.2–1.975 m (upper J and H). Within the secondary fill a sudden change is apparent as the numbers of shells decrease dramatically. This is largely due to the fall in numbers of wetland species, in particular *Pisidium obtusale* and *Carychium minimum*, which comprise only 20% to 30% of the fauna. The frequency of *Zonitoides nitidus*, however, remains stable, its numbers being similar to those of the first phase, indicating that marshy conditions still prevailed in the ditch bottom.

There is no converse rise in the number of terrestrial species, but of these, the 'open country' fauna still dominate, especially *Vallonia excentrica, Pupilla muscorum* and *Vertigo pygmaea*, reflecting drier conditions. The 'catholic' species *Trichia hispida* and *Cochlicopa* sp noticeably drop in number at this stage, while of the 'shade-loving' fauna only *Vitrea crystallina* remains consistently present.

III 1.97–1.725 m (G). At a depth of 1.975 m wetland species disappear altogether. The 'shade loving'

Table 15. Molluscan zones and sequence of ditch deposits in cutting X, section 12

Molluscan zone	Layer(s)	Depth (m)	Description
IV	A-E	0-1.4	Modern turf and topsoil under which was a series of ploughsoils. Reddish-brown stony clay loam
-	F	1.4-1.7	Aeolian deposit. Decalcified brown stone free loam
III	Fa	1.7-1.725	Transitional layer. Stone and clay content starts to reappear
III	G	1.725-1.975	Strongly intermottled dark, greyish brown coarse sandy clay
III	H	1.975-2.05	Brown, closely mottled sandy clay, coarse and stony
II			
II	J	2.05-2.275	Secondary fill. Distinctly mottled, dark brown stony coarse sandy clay, extending across the base of the ditch between the corners of the underlying fill
I			
I	K	2.275-2.3	Primary fill. Brownish-yellow, steeply angled stratified sands and gravels at the corners of the ditch base
-	-	2.3	Ditch base

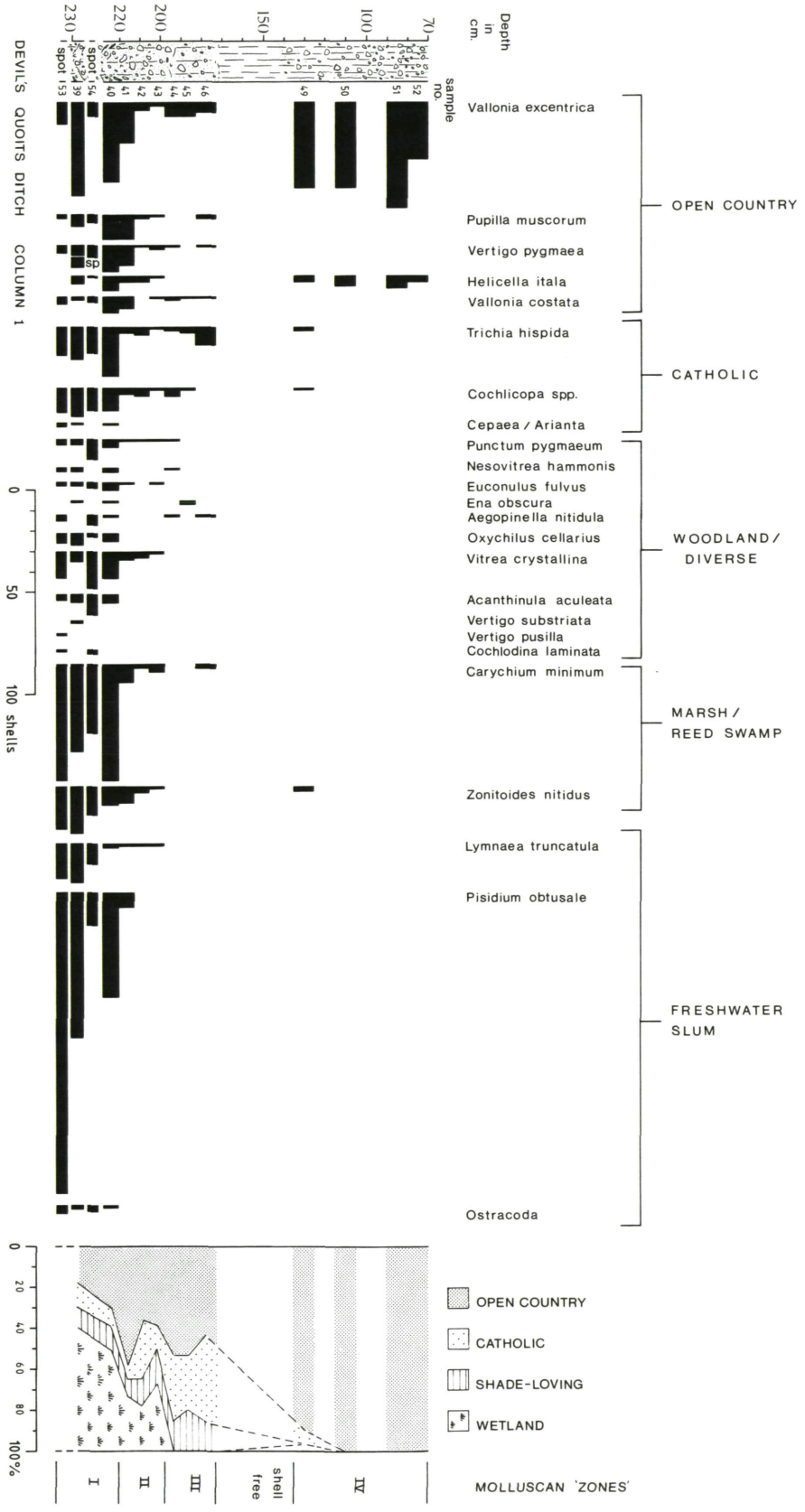

Figure 33 Devil's Quoits ditch: mollusc column 1

Table 16. Composition of mollusc samples from the henge ditch (cutting X, section 12)

Sample no.	53	39	54	40	41	42	43	44	45	46	47	48	49	50	51	52
Depth (m)	spot	2.275-2.3	spot	2.2-2.275	2.125-2.2	2.05-2.125	1.975-2.05	1.9-1.975	1.825-1.9	1.725-1.825	1.6-1.7	1.45-1.55	1.25-1.35	1.05-1.15	0.8-0.9	0.7-0.8
Vallonia excentrica	11	46	7	39	20	4	2	7	7	5	-	-	42	42	52	28
Pupilla muscorum	2	6	4	12	12	2	1	-	-	2	-	-	-	-	-	-
Vertigo pygmaea	4	5	6	13	10	1	2	1	-	1	-	-	-	-	-	-
Vertigo spp.	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Helicella itala	-	4	1	7	3	3	1	-	-	-	-	-	3	5	6	3
Vallonia costata	4	2	3	8	6	-	1	2	1	1	-	-	-	-	-	-
Trichia hispida	14	16	13	24	3	4	1	2	3	9	-	-	2	-	-	-
Cochlicopa spp.	12	14	11	11	3	4	1	4	1	-	-	-	1	-	-	-
Cepaea/Arianta	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Punctum pygmaeum	3	3	10	4	1	1	1	1	-	-	-	-	-	-	-	-
Nesovitrea hammonis	2	2	-	2	-	-	-	1	-	-	-	-	-	-	-	-
Euconulus fulvus	2	2	3	4	1	-	1	-	-	-	-	-	-	-	-	-
Ena obscura	-	1	-	1	-	-	-	-	2	-	-	-	-	-	-	-
Aegopinella nitidula	3	-	5	1	-	-	-	1	-	1	-	-	-	-	-	-
Oxychilus cellarius	5	6	2	4	-	-	-	-		-	-	-	-	-	-	-
Ostracoda																
Candona neglecta	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Candona rostrata	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Herpetocypris cf *brevicordata*	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Burrowing species																
Ceciloides acicula	-	-	-	-	-	-	-	-	-	-	22	14	3	13	21	16

Table 17. Composition of mollusc samples from henge ditch (cutting I, section 1)

Sample no	56	57	58	59
Depth (m)	2.5-2.6	2.4-2.5	2.3-2.4	2.2-2.3
Vallonia excentrica	30	34	29	22
Pupilla muscorum	9	6	8	5
Vertigo pygmaea	4	4	7	1
Vertigo spp.	-	-	-	-
Helicella itala	3	3	2	9
Vallonia costata	12	8	14	3
Trichia hispida	31	38	62	47
Cochlicopa spp.	4	11	7	8
Cepaea/Arianta	-	3	3	6
Punctum pygmaeum	1	2	1	-
Nesovitrea hammonis	3	-	2	1
Euconulus fulvus	-	-	-	-
Ena obscura	-	-	-	-
Aegopinella nitidula	-	7	8	4
Oxychilus cellarius	-	-	-	-
Vitrea crystallina	2	-	1	-
Acanthinula aculeata	-	-	2	-
Vertigo substriata	-	-	-	-
Vertigo pusilla	-	-	-	-
Cochlodina laminata	-	-	-	-
Carychium minimum	19	18	22	4
Zonitoides nitidus	-	-	-	-
Lymnaea truncatula	-	1	6	7
Pisidium obtusale	-	-	-	-
Ostracoda				
Candona neglecta	-	-	-	-
Candona rostrata	-	-	-	-
Herpetocypris cf *brevicordata*	-	-	-	-
Burrowing species				
Ceciloides acicula	-	-	-	-

fauna is minimal, with *Vitrea crystallina* completely disappearing and the group being represented only by individual shells such as *Aegopinella nitidula*. The 'open country' and 'catholic' fauna *Vallonia excentrica* and *Trichia hispida* once again dominate the assemblages, the latter increasing markedly in the upper levels. This trend is also reflected in column 2 (Fig. 34) where greater numbers of shells are generally found and where the above fauna together comprise 80% of the assemblage.

1.7–1.45 m (F). There follows a decalcified, slowly formed aeolian deposit from which no contemporary shells survive. The fresh shells of *Ceciloides*

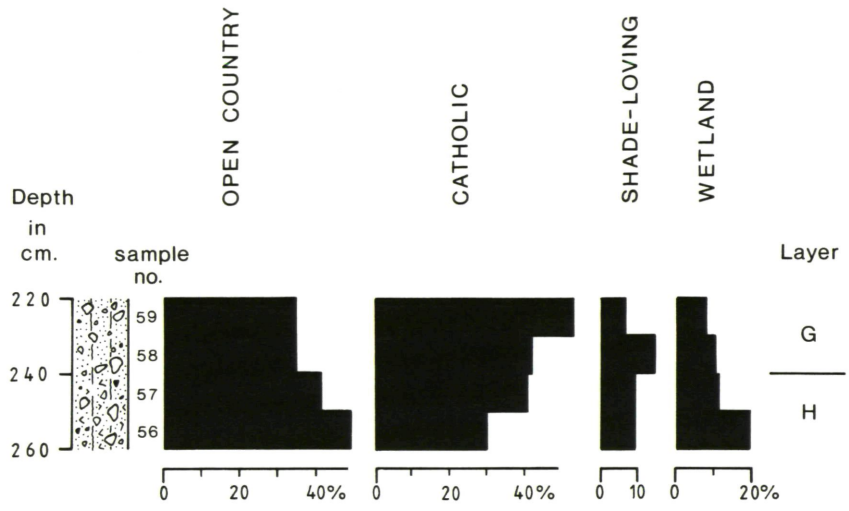

Figure 34 Devil's Quoits ditch: mollusc column 2

acicula were, however, found in abundance. This species favours broken ground and is notorious for burrowing to great depths, it is therefore likely to attest to recent or modern ploughing. For this reason it is not included in the overall results.

IV 1.45–0.7 m (E and C). The deposits succeeding layer F all contained very similar assemblages of 'open country' fauna, comprising almost exclusively *Vallonia excentrica* and *Helicella itala*, the former being more prevalent. Both species represent dry open, often closely cropped, grassland. Noticeably the 'catholic' and rather ubiquitous species *Trichia hispida* is absent altogether, implying that habitats have become very specific and possibly even restricted to some degree.

Conclusions

During the initial stages of infilling, in the early third millennium cal BC, a fluctuating water table produced episodes of standing water, possibly a reed bed, at the base of the ditch. This would probably have dried out during the summer months. The ditch sides were of loose scree, gradually being colonized by patches of thicker vegetation, particularly near its base, where conditions were more sheltered and humid. The gravel terrace would generally have been open grassland, probably lightly or seasonally grazed, though scrub in the vicinity would account for the speedy colonization of the ditch by 'shade-loving' species.

This was succeeded by a transitional phase. The ditch bottom would still have been marshy most of the year, but possibly dried out for longer periods than during the initial infilling. Thicker vegetation started to stabilise the ditch sides, while dry, open grassland prevailed on the gravel terrace. The area may have been more intensively grazed at this point, perhaps accounting for lower numbers of 'catholic' species, indicating that habitats were becoming more specific and clear-cut.

The transition from a wet to a dry ditch base was complete by 1.975 m, in the mid-third millennium cal BC. The general area remained dry and open with the possibility of patches of worn or disturbed ground, caused either by overgrazing or ploughing in the vicinity. Such denudation may account for the big rise in 'catholic' species in the assemblages. The nature of the deposit, with little or no sorting, represented erosion of soil from the bank and ditch rather than from ploughing.

There followed a very lengthy dry period, represented by layer F, which seems to have accumulated through the later Bronze Age, Iron Age and perhaps early Roman periods. Shell has not survived the decalcification of this layer, and no conclusions can therefore be drawn from molluscan analysis. It can be concluded from the nature of the deposit, however, that the source material originated from cultivation in the vicinity. As the deposit was sorted and stone-free, however, the bank and ditch will have remained stabilized by vegetation and untouched by the plough.

The fauna from the succeeding Roman and medieval 'ploughsoils' once again represents dry, open, pasture on the gravel terrace and within what remained of the ditch. The fauna reflects fallow periods where close grazing has produced a low diversity, specific, fauna.

THE SEDIMENTS AND SOILS IN THE HENGE DITCH, CUTTING X, SECTION 12 (FIG. 11)

by Susan Limbrey (written 1972)

Description

The ditch was cut into the gravels and sands of a river terrace, of predominantly limestone material. Beneath the bottom of the ditch the deposits were current-bedded and had an overall colour of light grey, 2.5Y 7/2 moist, with some layers in which greater concentrations of iron oxides gave a stronger colour. At the side of the ditch the gravels were more weathered and formed the C horizon of a soil, colour reddish-yellow, 7.5YR 6/6 moist. At the position of the section studied there was a localised sand layer on top of the gravels, which may have been the fill of a channel.

Primary silting

Steeply-angled stratified sands and gravels filled the corners of the ditch as cut but did not extend across the bottom. The gravel at the bottom of the ditch was slightly disturbed and slightly weathered. The primary silting showed more weathering than the underlying gravels, colour brownish-yellow, 10YR 6/6 moist, becoming stronger coloured upwards, and streaks of brown soil increasing in frequency. Boundary sharp at the bottom of the ditch, slightly merging on the primary silting.

Layer J

This layer filled in the angles between the primary silting and the bottom of the ditch, extending across the bottom. The lower part in the angles and across the bottom was dark brown, 10YR 4/3 moist, 5/3 dry, with strong distinct mottles of strong brown and dark reddish-brown, 7.5YR 5/6 and 5YR 3/4 moist, 7.5YR and 5YR 5/8 dry. Texture was stony coarse sandy clay, structure porous, very fine granular. The material was highly calcareous, with films of calcium carbonate in pores and on structural planes.

The upper part of the layer in the angles became stonier and the soil structure became fine angular blocky. Calcium carbonate deposition increased. As the layer tapered out upwards towards the sides of the ditch it became a stronger brown colour. Boundary merging.

Layer H

This layer was mostly in the form of a lens overlying the thicker part of layer J, and similar to it except that it was yellower in colour, closely and distinctly mottled, brown, 10YR 5/3 to 4/3 and strong brown, 7.5YR 5/6 moist, 10YR 6/4 and 7.5YR 5/6 dry. Much deposition of calcium carbonate. Boundary sharp.

Layer G

This layer forms a thick lens in the middle of the ditch. Strongly intermottled reddish-brown to yellowish-red, 5YR 4/3 to 4/6 and dark greyish-brown, 10YR 4/2 moist, with stronger concentrations of iron oxides to dark reddish-brown and black. Dry colours 7.5YR 4/2 to 3/2 and 10YR 5/3. Texture was coarse sandy clay, less coarse than the layers below, structure platey, breaking to fine angular blocky, the platey form following directions of deposition, which were also marked by colour variation but not by any textural stratification. Calcium carbonate coated all structural plans, picking out the platey laminations. The material became greyer and sandier upwards, and carbonate deposition became less strong, but the upper boundary of the layer can be taken as a concentration of laminar carbonate infilling. Boundary merging, but can be taken as the sharp line of the carbonate concentration.

Layer Fa

A subsidiary layer marking the transition from layer G to layer F. Clay content fell and texture became sandy loam, with less stones than in layer G. Colour became less grey but remained mottled, reddish-brown to dark brown, 5YR 4/4 to 10YR 4/4 moist, overall colour 7.5YR 4/4 moist, 5/5 dry. Structure became blocky to granular. Calcium carbonate precipitation died out within the layer, the upper part being non-calcareous. Boundary merging, stones dying out and colour becoming uniform brown.

Layer F

Brown, 7.5YR 4/4 moist, 5/5 dry, non calcareous loam. Structure very porous moderate fine granular. (In other cuttings, this layer had a rather yellower colour, and the colour darkened downwards). Boundary merging.

Layer E

Reddish-brown, 5YR 4/4 moist, 4.5/6 dry, in both cases slightly verging towards 7.5YR, stony clay loam, fine angular blocky to granular. Calcareous but without visible secondary calcite in pores.

Layer E was a ploughsoil. Layers D, C and B were further ploughsoils representing successive phases of ploughing across the ditch, in the course of which it finally becomes obliterated. Layers D and C were markedly stonier than E and B, and there were slight colour differences, indicating differences in length or intensity of the periods of cultivation, but the general description of layer E applies to all.

Interpretation

The deposits in the ditch show that, following the rapid primary silting caused by collapse of the loose

gravels of the ditch sides, material accumulated which had a sufficiently high clay content to impede drainage and the ditch became waterlogged to some extent. Layers J and G were strongly gleyed, producing the marked mottling and predominance of grey colours resulting from reduction and mobility of iron. Layer H indicated a phase of perhaps dryer conditions in the ditch, during which the deposit remained more fully oxidised, at least on the sloping sides where drainage was better.

The transition from layer G to layer F, probably in the later Bronze Age, indicates a marked change in mode of deposition, though the gradualness of the transition indicates that it did not occur suddenly. The material of layers J to G contained a lot of stones and must have been derived from relatively unstable surfaces on the ditch sides and bank. J probably accumulated by continuing collapse of the soil at the edges of the ditch until a smooth slope was achieved. G may possibly have been deposited as a result of cultivation. The texture of these layers indicates bulk movement of soil, with little or no sorting. Fa was a continuously stony layer and formed a sharp boundary with layer F above. Layer F was sorted, lacking much of the clay and all of the stones of the source soils. No mass movement of soil was involved, and the surfaces over and around the site must have been stabilised by vegetation; in particular, no stones from the bank arrived in the ditch. During slow accumulation of the loam of layer F soil formation proceeded, humus accumulating and decalcification occurring. Calcium carbonate was redeposited in the underlying layers where the more clayey texture impeded percolation. Accumulation may be attributable to wind transport, but a rather high sand content implies transport over only short distances if it was by wind, and the presence of exposed soils in the vicinity when the bank and ditch themselves were fully vegetated.

Cultivation, which destroyed the upper part of layer F, probably in the Roman period, and removed any evidence of a period of non-deposition or change in conditions after layer F formed, distributed material from the surrounding soils across the ditch, forming layer E.

Layers G and Fa were untypical in this cutting, probably because here the upper part of the ditch was cut through a band of loam which would have contributed more fine material to the deposits. In other cuttings, G was coarser and less mottled and has less calcium concentrate segregation.