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Darkness Visible

The Sculptor's Cave, Covesea, from the Bronze Age to the Picts

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Chapter 5
THE FINDS

5.1 Introduction

Both the Benton and Shepherd excavation campaigns at the Sculptor's Cave produced large finds assemblages, together totalling 1076 objects (see table 5.31). The overwhelming majority of these date from the Late Bronze Age to Roman Iron Age, though some residual earlier material (mainly lithics) and a small quantity of intrusive modern material (mainly iron) is also present.

The material from the Shepherds' excavations (*c* 350 objects) is generally well-stratified and much of it was recorded spatially. In sum, this material accounts for around one third of the assemblage. The Benton material (*c* 700 objects) is, however, much more problematic. Benton's working methods involved the removal by spade of material within each grid square, which was then sieved at the cave entrance to retrieve artefacts (see section 2.1.6). Examination of her spoil heap in 2014 appears to confirm that little artefactual material was missed (box section 2). Nonetheless, although most of her finds thus have some spatial information (ie to grid square), more detailed contextual information of the Benton material is limited to the attribution of objects to either her Layer 1 or Layer 2. As we have seen (section 2.1.6), there are significant problems with the integrity of these layers. Layer 1 was thought to date to the Roman Iron Age, but discrepancies between field and published drawings suggest that there may have been changes of mind at certain points about how exactly it was defined. Layer 2 encompasses deposits now known to date from at least the Middle Bronze Age to the Middle Iron Age and is thus of little use as a chronological indicator. While we have indicated Benton's layer attributions in the finds catalogues below, all finds from her excavations have to be treated as effectively 'unphased'. Nonetheless, some of this material is typologically distinct and can be dated with varying degrees of precision. Benton's assemblage thus makes a hugely significant contribution to our overall understanding of human activity within the cave.

Table 5.1
Summary of the Sculptor's Cave pottery assemblages

Sherd type	Benton	Shepherd	Büster/Armit	Total
Rim	70	57	–	**127**
Base	23	28	–	**51**
Body	224	224	2	**450**
Total sherd no.	**317**	**309**	**2**	**628**
Total sherd weight (g)	4638	3697.7	–	**8335.7**
Fragment weight (g)	–	787.3	2	**789.3**

5.2 Pottery

5.2.1 Later prehistoric pottery

Gemma Cruickshanks and Alison Sheridan

Introduction

Excavations at the Sculptor's Cave have produced 628 sherds of prehistoric pottery, weighing 8335.7g, along with a further 789.3g of pottery fragments (measuring less than 10mm × 10mm) (table 5.1). A minimum of 20 vessels is represented in the assemblage (table 5.2), dominated by plain, thick-walled bucket-shaped vessels with varying forms of flat rim which are found in all phases of the site. A smaller number of finer vase-shaped vessels with short everted rims are also present in the assemblage. Analysis of context and wear suggests some vessels may have been deposited intact, particularly in the East Passage.

Methods

Each sherd was weighed, measured and assigned a fabric type based on macroscopic and selected microscopic examination in accordance with the *Prehistoric Ceramics Research Group's* recommended methods (PCRG 2011). Sherds were grouped into six fabric types and assigned vessel numbers based on differences in form, surface treatments and dimensions (table 5.2; although each 'vessel' could contain sherds from more than one very similar pot). Sherds were matched across the whole assemblage rather than for each context; given the lack of contextual information for Benton's material, this allowed for a more realistic minimum number of vessels to be estimated. Degree of wear was also recorded, along with the location and extent of adhering residues or sooting. The assemblage is summarised by vessel number, each of

Table 5.2
Summary of vessel characteristics

Fabric	Vessel	Form	Rim	Est. rim diameter (mm)	Base	Wall thickness (mm)	Decoration	Total no. of sherds
A	1/2	Large bowl?	Rounded	*c* 280	–	15	–	**82**
B	3	Bucket/barrel	Internal bevel	*c* 150	Flat	8–12	–	**113**
	4	Bucket/barrel	Internal bevel with external lip	*c* 200	Flat	8–10	–	**102**
	5	Bucket/barrel	Internal bevel with external lip	170	Flat	9	–	**1**
C	6	Bucket/barrel	Internal bevel	–	Flat	12–14	–	**38**
D	7	Unknown	Rounded	*c* 240	–	12–15	–	**3**
	8	Bucket/barrel	Flat with external lip	*c* 200	–	10	–	**62**
	9	Bucket/barrel	Internal bevel	*c* 200	–	8–10	–	**2**
	10	Bucket/barrel	Internal bevel	*c* 160	–	8–10	–	**5**
E	11	Bucket/barrel	Internal bevel	*c* 140	Flat	8–10	–	**50**
	12	Bucket/barrel	Internal bevel	*c* 120	–	8	–	**2**
	13	Bucket/barrel	Internal bevel	*c* 120	–	6–8	–	**5**
	14	Bucket/barrel	Tapering, flat	*c* 200	Flat	8	–	**28**
	15	Bucket/barrel	Internal bevel	*c* 250	–	10	–	**2**
F	16	Unknown	–	–	–	11–12	Incised design	**11**
	17	Vase	Everted	*c* 110	–	5–7	Vertical wiping?	**16**
	18	Vase	Everted	*c* 190	–	9–10	–	**38**
	19	Vase?	Slightly everted	*c* 110	Flat	10–15	Fingernail impressions on rim	**18**
	20	Unknown	Tapered	*c* 160	–	10	–	**2**

Table 5.3
Petrographic fabric classifications

Fabric	Short description	Matrix texture	Large inclusions	Matrix colour	Thin sections
A	Shell tempered	Fine	Shells	Brown	1A, 1B, 2, 3
B	Fine sandy with few large rock fragments	Fine sandy	Metamorphic	Dark brown	4, 5
C	Coarse fabric	Silty	Metamorphic	Brown/dark brown	6, 7, 10
D	Coarse fabric	Fine	Igneous	Brown/dark brown	8, 9
E	Sandy/gritty	Sandy	Igneous	Brown/reddish brown	11, 12
F	Sandy	Sandy	Sandstone	Light brown/yellow	13, 14

which is illustrated by a selection of diagnostic sherds (illus 5.1–5.6). A full catalogue detailing each sherd is held in the site archive.

Assemblage characteristics

Form

The assemblage is dominated by flat-based, bucket- or barrel-shaped vessels with flat or internally bevelled rims: a form often referred to as 'flat-rimmed ware' (table 5.2). Unusual shell-tempered, thick-walled vessels with upright, rounded rims (V1 and V2) are also present, along with medium-walled, everted-rimmed vessels with rounded shoulders and narrow, flat bases.

Fabric

The following fabric types were identified by macroscopic and petrographic analysis (see section 5.2.2; table 5.3):

A. A very distinct soft, fine, orangey-pink clay with *c* 10% shell fragments (1–7mm in maximum extent).
B. Fine sandy clay with 5% fine rounded/sub-angular quartz and plagioclase feldspar inclusions (and less commonly other rock fragments, probably gneiss), 2mm in maximum extent. Fairly distinct but could include subtly different fabrics. Orangey-brown margins with grey core.
C. A very distinct fine clay with 20% large micaceous rock inclusions, 6mm maximum extent. Orange margins with grey core.
D. (i) Fine/slightly sandy clay with *c* 30% dark grey/black igneous rock inclusions, 12mm in maximum extent, and distinct hackly fracture. (ii) Very similar, but less sandy with additional small quartz inclusions.
E. A sandy homogenous clay with occasional fine quartz and feldspar inclusions. The uniformity of distribution of the sand, along with the angular nature of the mineral fragments, suggests both were deliberately added as temper.
F. Very fine sandy clay with a few small quartz and feldspar inclusions, probably deliberately added, based on their regularity. Not a particularly distinct fabric and could comprise several subtly different fabrics and many different vessels.

Fabric group summaries

Fabric A (V1 and V2)

Fabric A is represented by at least two thick-walled vessels with upright rounded rims of a very distinct shell-tempered fabric (V1 and V2). Two of the rim sherds are thinner, suggesting a minimum of two vessels are represented in this group, but most sherds could be from either. There is only one possible base sherd, identifiable by being flatter and thicker, but it is not clear if V1 and V2 had flat or rounded bases.

A further 18 bags of ceramic fragments (400.6g) were recovered by the Shepherds from Phase 1 Blocks 1.2 (Ia20, Ia20a, Ia22a, Ib23) and 2.2 (IIc23) and from Phase 2 Blocks 1.3 (Ia15a/17, Ia15a, Ia15e, Ia17, Ia17/17a, Ia17a), 1.4 (Ib15s, Ia16b), 1.5 (Ib7r) and 2.5 (IIc13). These were similar to Fabric A but also contained charcoal inclusions and patches of sandy soil. Most of these fragments comprise only one face or are amorphous lumps with no visible structure. It seems most likely they represent fragments of V1 and V2 (or vessels of similar fabric) collected along with part of their surrounding context, perhaps having been trampled into a charcoal-rich spread (Ia17/17a; section 2.4.3).

Fabric B (V3, V4 and V5)

At least three vessels (from Blocks 1.2, 2.2) were manufactured from Fabric B, all of which have internally bevelled rims. Two have an external lip (V4 and V5). The vessels were flat-based bucket-shaped forms and a large proportion of all three is probably represented, with over 100 sherds from V3 and V4 and a substantially reconstructed portion of V5.

Fabric C (V6)

Thirty-eight sherds (from Blocks 1.2, 1.3, 2.2, 2.3) represent a thick-walled, bucket-shaped vessel with an internally bevelled rim. No base sherds are present, leaving its form unclear. The fabric is very distinct due to having large micaceous inclusions and a bright orange exterior.

Fabric D (V7, V8, V9 and V10)

These four vessels have a distinctive dark brown/black colour and hackly fracture. V7 is only represented by three sherds from a thick-walled (12–15mm), round-rimmed vessel. V8–V10 are thinner-walled (8–10mm) vessels with flat (V8) or internally-bevelled (V9 and V10) rims. No base sherds, nor substantial portions of any of these vessels, survive, but it seems likely that V8, V9 and V10 were bucket- or barrel-shaped, based on the forms of other vessels with similar rims. The form of V7 is unclear.

Fabric E (V11, V12, V13, V14 and V15)

This group comprises at least five vessels with medium thickness walls (6–10mm) in a homogenous sandy fabric with no obvious temper. Four vessels have internally bevelled rims (V11, V12, V13 and V15) with varying diameters (100–300mm), while V14 has an unusual tapering flat rim and a flat base. No base sherds survive from V11, V12, V13 or V15.

Fabric F (V16, V17, V18, V19 and V20)

The five vessels in this group are all formed from similar fine, inclusion-free clay but display differing forms and methods of construction. V16 is only represented by ten body sherds in a distinct reddish-orange fabric, two of which display incised decoration. V17, V18 and V19 have varying forms of everted rims, one of which (V19) is decorated with a row of fingernail impressions, while V20 is tapered. V19 and V20 are the only vessels in the assemblage which were constructed using the tongue and groove technique. V19 has a flat base, but the form of the other bases is unclear.

Technology, surface treatments and decoration

Colour varies widely, even across single sherds, indicating open bonfire-type firing conditions where temperature and airflow were relatively uncontrolled as opposed to an enclosed kiln. Red

tones or grey tones indicate oxidising or reducing firing conditions respectively (Henderson 2000: 131). Most of the sherds show either an oxidised exterior and reduced interior (47%) or oxidised margins with a reduced core (40%).

All of the pottery was hand-made and, where discernible, all but V19 and V20 were constructed using diagonally joined coiled straps added to a moulded base. V19 and V20 were made using the tongue and groove technique.

The most common surface finishes are wiping (42%) and wet-smoothing (42%), achieved with a cloth or wet hand while the clay was still damp, either to achieve a smoother finish for aesthetic reasons or to improve waterproofing by sealing any small gaps. Both techniques most commonly occur over both the interior and exterior surfaces, with only a few examples of surface finishing on one surface only. One vessel (V17) shows burnishing on the exterior and also rough, vertical wiping. The V1 and V2 rim sherds appear to have had a slip applied over the rim section only, perhaps to strengthen it.

Only three vessels display possible decoration. V16 is represented by only a few very abraded body sherds, but two of these sherds display incoherent but deliberate incised geometric decoration on the exterior. V17 has distinct vertical rough wiping marks on the exterior, which could be decorative, and V19 has a row of fingernail impression along the top of the rim. All of the decorated pots are of Fabric F and were recovered, where stratified, from Phases 2 (Block 2.6) and 2/3 (Block 2.7) (see section 2.4.2), suggesting decorated pots were only present during the later phases of the site.

Function

All but one of the vessels have adhering burnt residues or sooting on the interior surfaces, indicating they had been used for cooking. Only V16 shows no sooting or residues but only a small number of sherds survive from this vessel and most are lacking one face. The lack of charring on the exteriors of the pots is unusual, as cooking over an open fire often creates a blackened appearance on the outside. This suggests the pots may have been used for slow cooking on the edge of a hearth rather than being placed directly on the fire.

Benton described finding a 'mutton bone' (1931: 190) inside one of the vessels (V4) which could have been the remains of a meal but which also raises the possibility of deliberate deposition. Similar deposits of animal bone and other artefacts were recovered in pots at the Iron Age wheelhouse site at Sollas (Campbell 1991: 144), while 29 burials in the Rudston-Burton Fleming cemetery, East Yorkshire, were accompanied by plain

Table 5.4
Abundance of pottery fabric per stratigraphic block (by sherd count). Lightest to darkest shades: 1–5, 6–10, 11–40, >40. Blue shading denotes Phase 1 blocks; green, Phase 2 blocks; purple, Phase 2/3; and orange, Phase 3. C: pottery crumbs.

Passage	Block	No. of sherds								
		A	B	C	D	E	F	Unknown	Total by block	Total by passage
W	1.1	–	–	–	–	–	–	C	**C**	**226+C**
	1.2	1+C	76+C	6	7+C	34+C	1+C	30+C	**155+C**	
	1.3	60+C	–	1	2	–	–	7+C	**70+C**	
	1.4	C	–	–	–	–	–	C	**C**	
	1.5	C	–	–	–	–	–	1+C	**1+C**	
	1.6	–	–	–	–	–	–	C	**C**	
	1.7	–	–	–	–	–	–	–	**–**	
E	2.1	–	–	–	–	–	–	–	**–**	**39+C**
	2.2	3+C	2+C	1	2	2	–	2+C	**12+C**	
	2.3	–	–	1	16+C	–	–	C	**17+C**	
	2.4	–	–	–	–	–	–	C	**–**	
	2.5	C	–	–	–	–	–	–	**C**	
	2.6	–	–	–	–	–	1	C	**1+C**	
	2.7	–	–	–	C	–	9+C	C	**9+C**	
	2.8	–	–	–	–	–	–	**–**	**–**	
Total by fabric		**64+C**	**78+C**	**9**	**27+C**	**36+C**	**11+C**	**40+C**	**–**	**265+C**

bucket-shaped vessels, each containing a bone from the front left leg of a sheep (Rigby 1991: 94).

Wear

The degree of wear on each sherd was recorded on a scale of 1–4, with one being freshly broken and four very abraded. These data were used to analyse how much the pottery may have moved around since deposition, thus potentially identifying residual sherds from primary deposits. The most abraded sherds are from V1, V2 and V16 but, as they are the softest fabrics and many of the sherds were found in the same area, this does not mean they were necessarily residual. Most of the sherds are remarkably fresh and show little abrasion to the edges (especially V3, V4, V5, V6, V8, V15, V18 and V19), indicating that they are unlikely to have moved far since their deposition and may even have broken during excavation.

Distribution

Though we do not have detailed contextual information for most of the pottery recovered by Benton, some can be located to her site grid (1931: 189, fig 2; illus 2.2), which can be used to examine spatial distribution along with contextual information from the Shepherds' excavation. Though the distribution of plotted sherds from Benton's excavation suggests a clustering of pottery in the East Passage, the vast majority of the pot sherds were not plotted; meanwhile, pottery from the Shepherd excavations (tables 2.1, 2.2, 5.4, 5.5) shows an overwhelming concentration (of all fabrics, except Fabrics D and F) in the West Passage.

While some vessels are represented by many sherds and may indicate deposition of whole pots, some (V7, V9, V10, V12, V13, V15 and V20) are represented by very few sherds (five or less). It therefore seems that both whole pots and fragments were deposited.

As the Shepherds' excavations concentrated on the entrance passages and we only know the grid location of a small fraction of Benton's pottery, the pattern of deposition we now see may not be representative of the pottery's original depositional context.

Recovery bias

Most vessels are represented in both Benton's and the Shepherds' assemblages, with a few notable exceptions. V17–20 were only recovered by Benton, but V12, V13 and V16 were all recovered by Shepherd. As Benton removed almost all of the upper layers during her excavation, it is not surprising that the Shepherds did not recover sherds from Iron Age-style V17–20.

The ratio of rim or base sherds to undiagnostic wall sherds is surprisingly similar between the two assemblages, though there

Table 5.5
Abundance of pottery fabric per stratigraphic block (by weight). Lightest to darkest shades: 0–50, 51–100, 101–500, 501–1000, >1000g. Blue shading denotes Phase 1 blocks; green, Phase 2 blocks; purple, Phase 2/3; and orange, Phase 3.

Passage	Block	Fabric by weight (g)								
		A	B	C	D	E	F	Unknown	Total by block (g)	Total by passage (g)
W	1.1	–	–	–	–	–	–	0.7	**0.7**	**3649.3**
	1.2	44	863.9	303.9	96.4	276.3	2.1	156.7	**1743.3**	
	1.3	1715.5	–	49.5	61.7	–	–	9.2	**1835.9**	
	1.4	30.8	–	–	–	–	–	0.5	**31.3**	
	1.5	0.8	–	–	–	–	–	2.5	**3.3**	
	1.6	–	–	–	–	–	–	34.6	**34.6**	
	1.7	–	–	–	–	–	–	0.2	**0.2**	
E	2.1	–	–	–	–	–	–	–	**–**	**506.6**
	2.2	99.7	13.6	48.1	75.1	16.9	–	63	**316.4**	
	2.3	–	–	15.6	104.8	–	–	3.3	**123.7**	
	2.4	–	–	–	–	–	–	–	**–**	
	2.5	21.3	–	–	–	–	–	–	**21.3**	
	2.6	–	–	–	–	–	4.2	3.7	**7.9**	
	2.7	–	–	–	2.8	–	34.2	0.3	**37.3**	
	2.8	–	–	–	–	–	–	–	**–**	
Total by fabric (g)		**1912.1**	**877.5**	**417.1**	**340.8**	**293.2**	**40.5**	**274.7**	**–**	**4155.9**

are far more fragments from the Shepherds' excavations (see table 5.1). This suggests Benton did not discriminate against featureless sherds, as some early excavators did, but recovered everything she encountered. The lack of pottery encountered in recent excavations of Benton's spoil heap (only one sherd and one fragment: SF793, SF794; Büster and Armit 2014) reinforces this.

Parallels, chronology and discussion

Previous studies and 'flat-rimmed ware'

The pottery from Benton's excavations has frequently been referred to in publications (eg Childe 1935: 173; Coles and Taylor 1970: 97; Cowie 1982: 529; Halliday 1988: 108), usually as 'flat-rimmed ware' or, sometimes, 'Covesea ware' (eg Longworth 1967: 90).

'Flat-rimmed ware', and its funerary equivalent the 'bucket urn', are ubiquitous across north-east Scotland and have previously been dated to anywhere between the third and first millennia BC (Coles and Taylor 1970: 97–8), though the re-dating of material from stone circles has reduced this range and a date between the mid-second millennium BC and around 800 BC is now most likely (Bradley and Sheridan 2005: 227–8; Sheridan 2015).

Early studies of the Sculptor's Cave pottery and 'flat-rimmed ware' tended to focus on whether the pottery provided evidence of Late Bronze Age and Iron Age migrants. For example, Benton (1931: 203) was quite convinced that there had been a 'landing of foreigners' on the Moray Firth, despite scepticism from her peers. In particular, she observed the similarities between the coarse bucket-shaped vessels from the Late Bronze Age layers at the Sculptor's Cave and similar vessels in Zurich Museum and proposed that, while the Covesea pots were made using local clay, they were ultimately Swiss in form (ibid). She did, however, also mention the similarity in rim form between the Sculptor's Cave pots and native funerary bucket urns (ibid: 189). Childe also discussed the Sculptor's Cave pottery as evidence for a 'Hallstatt invasion', stating it was 'clear that flat-rimmed pottery here is not a direct evolution of the native Bronze Age fabrics but an intrusive group due to fresh settlers' (1935: 173). Piggott, however, described 'flat-rimmed ware' as simply the 'lowest common denominator of bad pottery' (1955: 57), thus highlighting the inherent problem of grouping such a long-lived, geographically diverse range of relatively plain vessels. It is now widely accepted that the term does not describe a coherent group and is likely to mask subtle chronological and local variations (Halliday 1988: 108; Sheridan 2003: 211; Bradley and Sheridan 2005: 275).

Taking the Sculptor's Cave assemblage alone, a Late Bronze Age date seems certain for many of the flat-rimmed forms due to their association with Late Bronze Age metalwork and recently acquired AMS dates (see sections 5.7.1 and chapter 4). However, due to the upper layers being so mixed, it is uncertain whether flat-rimmed pots are entirely residual in the later levels or whether the tradition continued into the Iron Age. A lack of securely dated Early Iron Age pottery assemblages from the area means we have little idea of what pottery of this period looks like; it is entirely possible that 'flat-rimmed ware' could extend into this period.

Shell-tempered fabric

The shell-tempered fabric (A) is distinct and unusual. The only parallel is from a site around 17km to the west of the Sculptor's Cave, at Culbin Sands (Coles and Taylor 1970: 96, figs 4, 5 and 6), where shell-tempered sherds from an estimated eight vessels were recovered from an eroding midden. These vary in form, from large flat-rimmed, straight-sided vessels to small bowl-shaped pots and medium-sized jars. 'Can-shaped', 'flint-gritted' vessels with flat rims were found in association with the shell-tempered vessels. The assemblage was attributed to the Late Bronze Age based on a radiocarbon date of 1259±75 BC (Q-990) from a charcoal-rich layer in the midden (ibid: 90). The stratified Sculptor's Cave material, however, is overwhelmingly concentrated in Block 1.3, dating to the Early Iron Age.

Iron Age pottery

The Fabric F vessels, with everted rims and rounded shoulders tapering to a narrow base (V16–20), have secure Roman Iron Age dates from other sites, eg at Birnie, Moray, where a similar vessel contained a hoard of late second-century AD Roman *denarii* (Holmes 2006: 3, fig 2). Several examples have been recovered from Angus souterrains, eg several vessels which date to the first few centuries AD from Redcastle (McGill 2005: 79, illus 18) and sherds from Hurly Hawkin which can be tentatively dated to the same period (Henshall 1982: 236, fig 10, 191).

In discussing the pottery assemblage from Tarradale, Easter Ross, Catherine McGill proposed a broad chronological shift from fabrics with large igneous or metamorphic inclusions in the pre-Roman period to sandy fabrics with little or no inclusions from the Roman Iron Age onwards (2001: 257–8). This would place Fabrics B–D at the Sculptor's Cave in the pre-Roman period and date Fabrics E and F to the Roman Iron Age or later, which is broadly consistent with Fabrics B–D being predominantly 'flat-rimmed ware' and Fabric F pots being Iron Age in form. Fabric E pots float somewhere between the two as they include similar forms to B–D but in a finer, sandy fabric. The stratified Fabric E sherds, however, are all from secure Late Bronze Age layers (Blocks 1.2, 2.2) dating to the ninth century BC (see sections 2.3.2, 2.3.3), indicating they are indeed from the earlier phase of the site and that fabric alone is not necessarily a reliable chronological indicator in this area.

Conclusions

While Benton thought the Sculptor's Cave pottery provided evidence of exotic new people arriving on the Moray coast, there is no reason now to suggest a non-local origin for the assemblage.

Analysis of wear and spatial distribution has allowed us to move beyond a purely typological and chronological approach to examine the nature of the pots' deposition. The high sherd-to-vessel ratio and hints of spatial concentrations suggest that some vessels were probably deposited intact. Though burnt residues on the vessel interiors indicate they were used for cooking, this did not necessarily take place here; they may have been used elsewhere and then brought to the site to leave as offerings or to play a role in ritualised events taking place in the cave. The pot containing the sheep bone has parallels in such offerings.

Catalogue by vessel

The catalogue entries below offer a description based on all sherds from each vessel, while the accompanying illustrations are based on a selection of diagnostic sherds. Detailed descriptions of all

individual sherds are contained within the site archive. Numbers in brackets refer to 'wear level', described above.

V1 (illus 5.1) A thick-walled, round-rimmed vessel of shell-tempered orangey-pink fabric (A). The soft clay is fairly abraded (3) and no surface treatments or soot/residues are visible. Wall thickness: 15mm. Phase: 1, Block: 1.2, Context: Ia20, Ib23, Ib23c; Block: 2.2, Context: IIc23; Phase: 2, Block: 1.3, Context: Ia17, Ia17a, Ia17/17a; Unphased, Context: Benton Layer 1. **The majority of sherds from V1/2 are not distinguishable from one another.*

V2 (illus 5.1) A thick-walled, round-rimmed vessel with soft, orangey-pink, shell-tempered fabric (A). Both sides were smoothed and possibly had a slip applied prior to firing, while the interior is sooted and has patches of residues adhering. Slight abrasion (2). Estimated rim diameter: 280mm; wall thickness: 15mm. Phase: 1, Block: 1.2, Context: Ia20, Ib23, Ib23c; Block: 2.2, Context: IIc23; Phase: 2, Block: 1.3, Context: Ia17, Ia17a, Ia17/17a; Unphased, Context: Benton Layer 1. **The majority of sherds from V1/2 are not distinguishable from one another.*

V3 (illus 5.2) A barrel-shaped vessel with flat, slightly internally bevelled rim. Fabric B with pale orange exterior, grey core and interior. Both the interior and exterior were wiped and there are slight patches of soot on both sides. Slight abrasion on broken edges (2). Estimated rim diameter: 150mm; estimated base diameter: 120mm; wall thickness: 12mm; estimated vessel height: 220mm. Phase: 1, Block: 1.2, Context: Ia22, Ia23, Ib20t, Ib23, Ib23b, Ib23c, Ib23f, Ib23/47, Ib47; Block: 2.2, Context: IIc23, IIc24; Unphased, Context: Benton Layer 1, grid square B5, B6, C8 (and others unknown); Benton Layer 2, grid square A0, B0.

V4 (illus 5.2) Barrel- or bucket-shaped vessel, curving in slightly at the top with an internally bevelled convex rim and external lip. Fabric B with pale brown margins and grey core. Both the exterior and interior surfaces were smoothed and show patches of sooting. Slight abrasion on broken edges (2). Estimated rim diameter: 200mm; wall thickness: 8–10mm. Phase: 1, Block: 1.2, Context: Ib20t, Ib23c, Ib50; Unphased, Context: Benton Layer 1, grid square A0, B3; Benton Layer 2, grid square –A0, A0, –B0, B1, B3, C2.

V5 (illus 5.2) Around half of a reconstructed straight-sided bucket-shaped vessel with internally bevelled rim with external lip and flat base. Fabric B with pale orangey brown exterior and dark grey interior. Surface treatments are obscured by the reconstruction process but there are still patches of soot on the interior. Edges now obscured by filler, but presumably there was very little abrasion in order to refit (1). Rim diameter: 170mm; base diameter: 140mm; wall thickness: 9mm; vessel height: 150mm. Unphased, Context: Benton Layer 1.

V6 (illus 5.3) A probable bucket-shaped vessel with internally bevelled rim in Fabric C with orange exterior and grey interior. The surfaces were smoothed prior to firing and there is slight sooting on the interior. Slight abrasion around edges (2). Estimated rim diameter: unknown; wall thickness: 12–14mm. Phase: 1, Block: 2.2, Context: IIc24; Block: 2.3, Context: IIc22; Phase 2: Block 1.3, Context: Ia17; Unphased, Context: Benton Layer 1; Benton Layer 2, grid square D1, D2, D3.

V7 (illus 5.4) Chunky, round-rimmed vessel with a profile beginning to expand outwards again around the break, but the exact form of this vessel remains unclear. Fabric D with pale brown exterior, black core and interior. Both the exterior and interior surfaces were wiped but sooting is restricted to the interior. Only slightly abraded (2). Estimated rim diameter: 240mm; wall thickness: 12–15mm. Phase: 2, Block: 1.3, Context: Ia17; Unphased, Context: Benton Layer 1.

V8 (illus 5.4) Flat rim with slight internal bevel and external lip. Fabric D with pale brown exterior, grey core and interior. The interior surface is coated in thick, encrusted burnt residues and the exterior surface shows fine striations from wiping. Slightly abraded (2). Estimated rim diameter: 200mm; wall thickness: 10mm. Phase: 1, Block: 1.1/1.2, Context: Ia23/27; Block: 1.2, Context: Ia23h, Ib23, Ib23c; Block: 2.2, Context: IIc24; Block: 2.3, Context: IIb16, IIc22; Phase: 2/3, Block: 2.7, Context: IIb10; Unphased, Context: Benton Layer 1, grid square A1 (and others unknown).

V9 (illus 5.4) Rim with steep internal bevel; two refitting sherds. Fabric D with pale brown exterior, black core and interior. Both

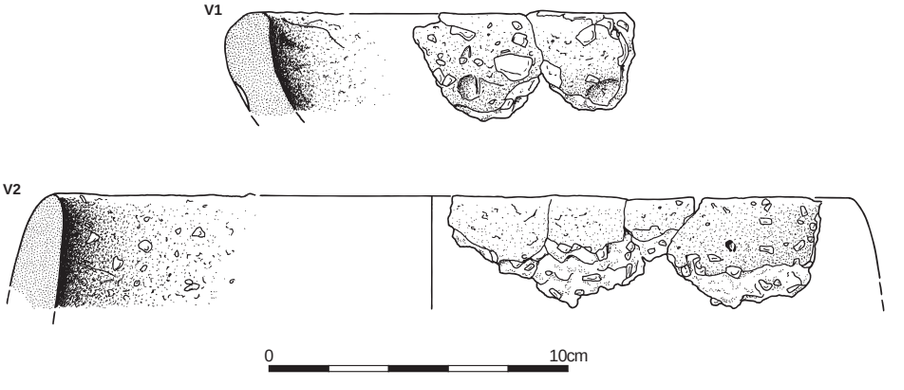

Illustration 5.1
Vessels comprising Fabric A

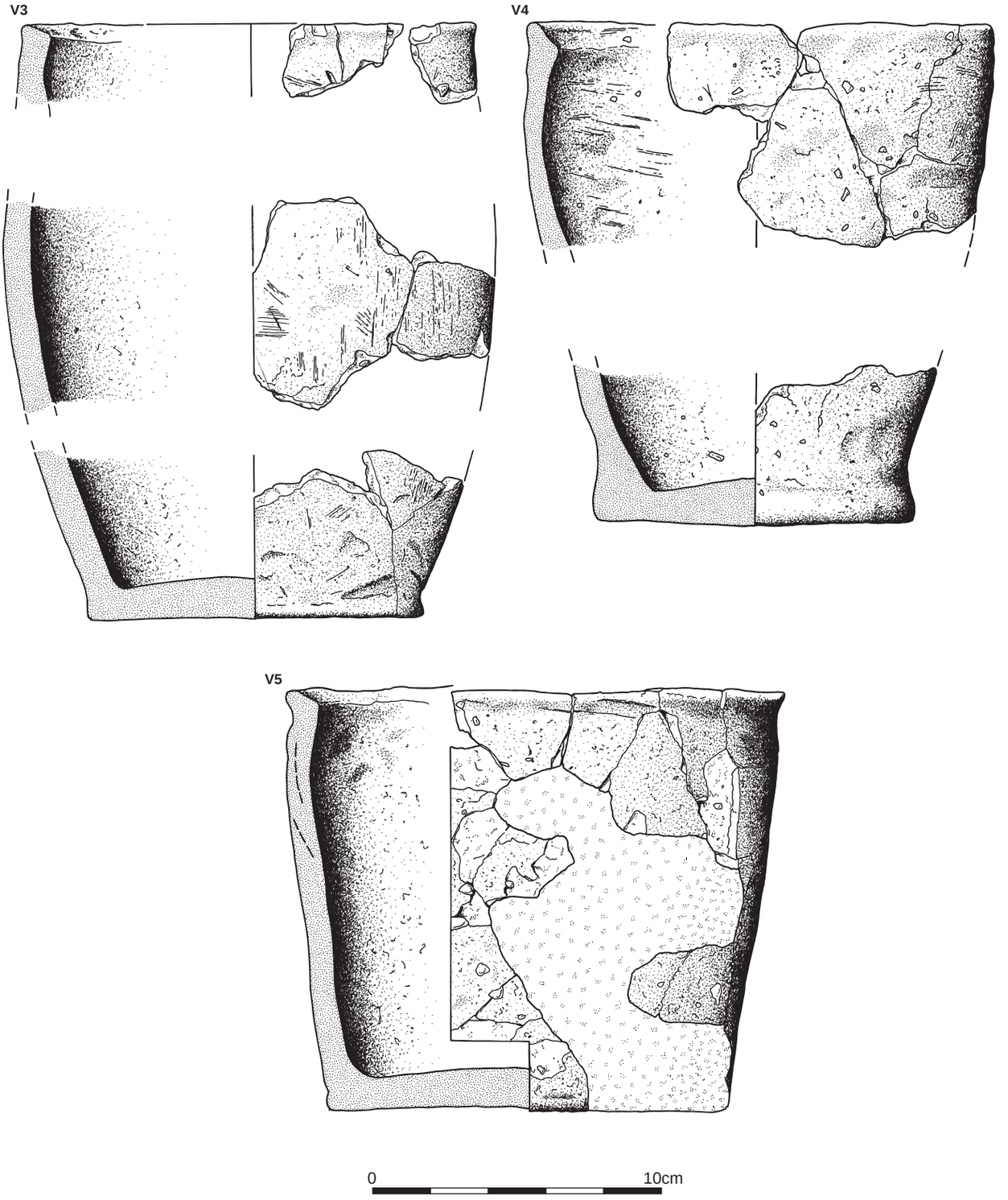

Illustration 5.2
Vessels comprising Fabric B

Illustration 5.3
Vessel comprising Fabric C

sherds were found in the West Passage. The surfaces were wiped and thick burnt residues adhere to the interior. Slightly abraded (2). Estimated rim diameter: 200mm; wall thickness: 8–10mm. Phase: 1, Block: 1.2, Context: Ia23c.

V10 (illus 5.4) Refitting rim sherds with steep internal bevel, probably from a small bucket-shaped vessel. Fabric type D with dark grey exterior and black interior. All five sherds from this vessel were found in the East Passage. Some smoothing on all surfaces and thick encrusted burnt residues on the interior. Slight abrasion on broken edges (2). Estimated rim diameter: 160mm; wall thickness: 8–10mm. Phase: 1, Block: 2.3, Context: IIb16; Unphased, Context: Benton Layer 1.

V11 (illus 5.5) Internally bevelled rim from vessel with incurving walls. Orangey-brown sandy fabric (E) with no obvious surface finish and residues adhering to the interior. Slightly abraded (2). Estimated rim diameter: 140mm; wall thickness: 8–10mm. Phase: 1, Block: 1.1/1.2, Context: Ia23/27; Block: 1.2, Context: Ia23c, Ia23h, Ib20t, Ib23, Ib23c; Block: 2.2, Context: IIc23; Unphased, Context: Benton Layer 1, grid square A1, A2, B1, B6.

V12 (illus 5.5) Small vessel with straight walls and internally bevelled rim represented by two refitting sherds. Grey exterior with orange interior and core (Fabric E). Both sherds were found in the West Passage. Surfaces were smoothed and residues adhere to the interior. Slightly abraded (2). Estimated rim diameter: 120mm; wall thickness: 8mm. Phase: 1, Block: 1.2, Context: Ib23c.

V13 (illus 5.5) Small vessel with incurving walls and internally bevelled rim. Grey sandy fabric (E). All five sherds were found in the West Passage. No obvious surface treatments and no sooting or residues. Slightly abraded (2). Estimated rim diameter: 120mm; wall thickness: 6–8mm. Phase: 1, Block: 1.2, Context: Ib23c.

V14 (illus 5.5) Flat-rimmed vessel with walls tapering in towards rim. Pale brown with grey core and interior (Fabric E). The 28 sherds were found in the cave interior. The surfaces were wiped and there are adhering residues on the interior. Slightly abraded (2). Estimated rim diameter: 200mm; wall thickness: 8mm. Unphased, Context: Benton Layer 1, grid square B4.

V15 (illus 5.5) Two refitting rim sherds from a vessel with finely shaped internally bevelled rim and slight shoulder. Fabric E with orange exterior, grey core and interior. Only the interior wiped

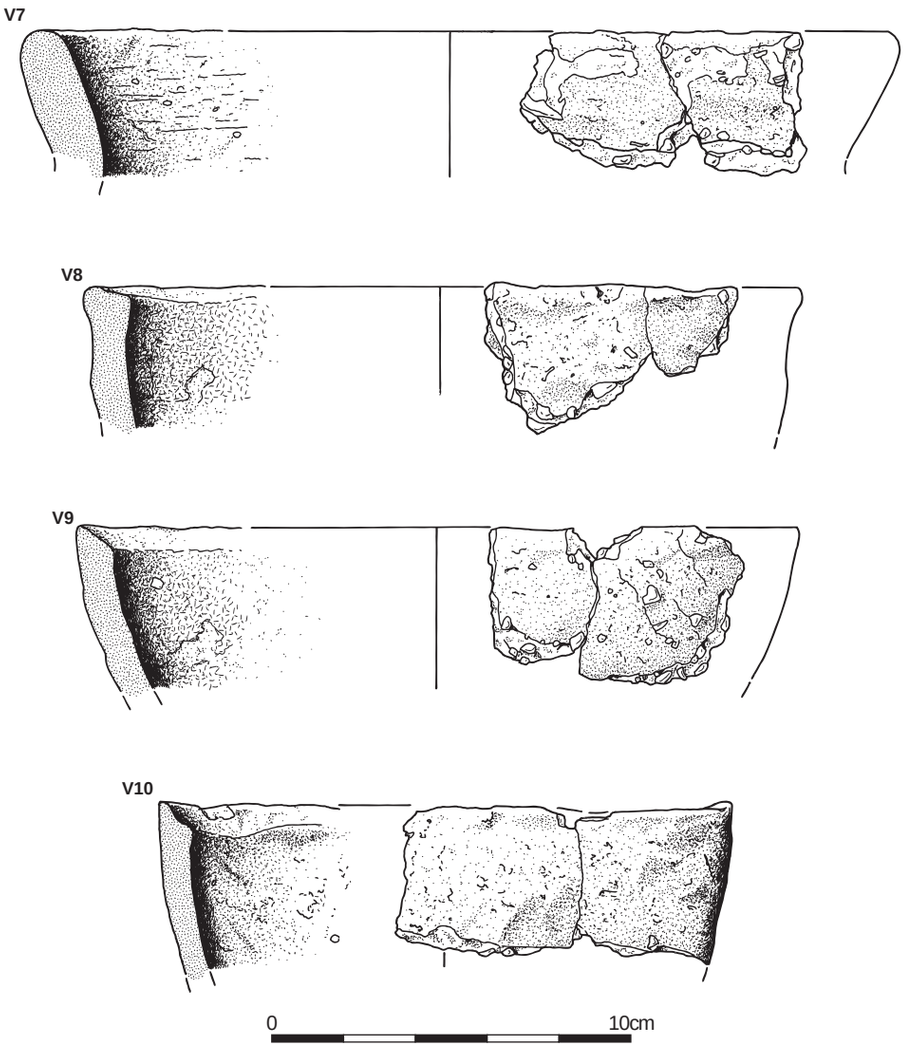

Illustration 5.4
Vessels comprising Fabric D

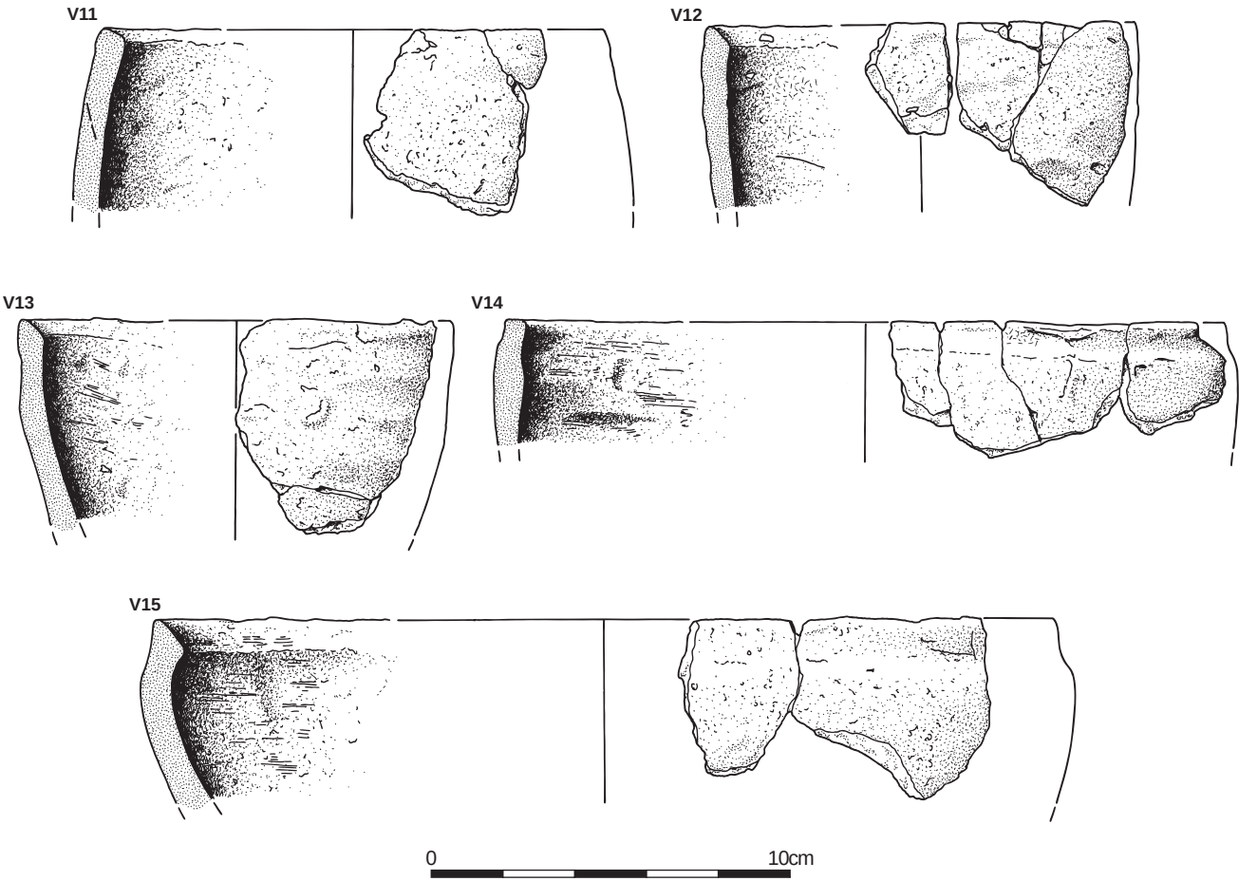

Illustration 5.5
Vessels comprising Fabric E

and shows sooting. Fresh breaks; very little abrasion (1). Estimated rim diameter: 250mm; wall thickness: 10mm. Unphased, Context: Benton Layer 2, grid square D2.

V16 (illus 5.6) Two body sherds show incised decoration. Soft orangey-red fine clay (Fabric F) with smoothed surface. Very abraded (4). Dimensions of illustrated sherds: 54mm × 38mm; 37mm × 31mm; wall thickness: 11–12mm. Phase: 2, Block: 2.6, Context: IIb9; Phase: 2/3, Block: 2.7, Context: IIb2, IIb2b, IIb2c.

V17 (illus 5.6) Finely shaped vessel with short everted rim and shouldered profile, tapering to narrow, flat base. Dark grey-black exterior and core with a thin buff zone on the interior (Fabric F). The upper portion has fine horizontal wiping marks, while the lower half has deeper, diagonal/almost vertical rough wiping marks. Parts of the exterior have a black sheen which may be due to burnishing. Very slight abrasion (1/2). Estimated rim diameter: 110mm; wall thickness: 5–7mm. Unphased, Context: Benton Layer 1, grid square B6 (and others unknown).

V18 (illus 5.6) A vessel with everted rim and rounded shoulder, tapering to narrow base. Fine buff clay with a dark grey core (Fabric F). Twenty-eight sherds from this vessel were found across the cave interior. The surfaces were wiped (more roughly on the interior) and there are patches of soot and burnt residues on both the exterior and interior. Sherds are only slightly abraded (2). Estimated rim diameter: 190mm; wall thickness: 9–10mm; vessel height: at least 180mm. Unphased, Context: Benton Layer 1, grid square A4, A5, B6, B7, C0 (and others unknown).

V19 (illus 5.6) Small globular or vase-shaped vessel with slightly everted/internally bevelled rim decorated with row of fingernail impressions along the top. Tongue and groove construction visible in broken edges. Dark grey exterior and pale brown interior in Fabric F. Exterior and interior are both smoothed and there are patches of soot and residues on both sides. No abrasion (1). Estimated rim diameter: 110mm; wall thickness: 10–15mm. Unphased, Context: Benton Layer 1, grid square A5, A6, B5, B6, C5 (and others unknown).

V20 (not illustrated) A small, tapering rim sherd and conjoining body sherd in fine, light brown sandy clay with no temper (Fabric F). Both sherds were recorded in the west part of the cave interior. Both surfaces display sooting and the broken edges suggest the vessel was constructed using the tongue and groove method. Very abraded (3). External rim diameter: *c* 160mm; wall thickness: 10mm. Unphased, Context: Benton Layer 1, grid square B5.

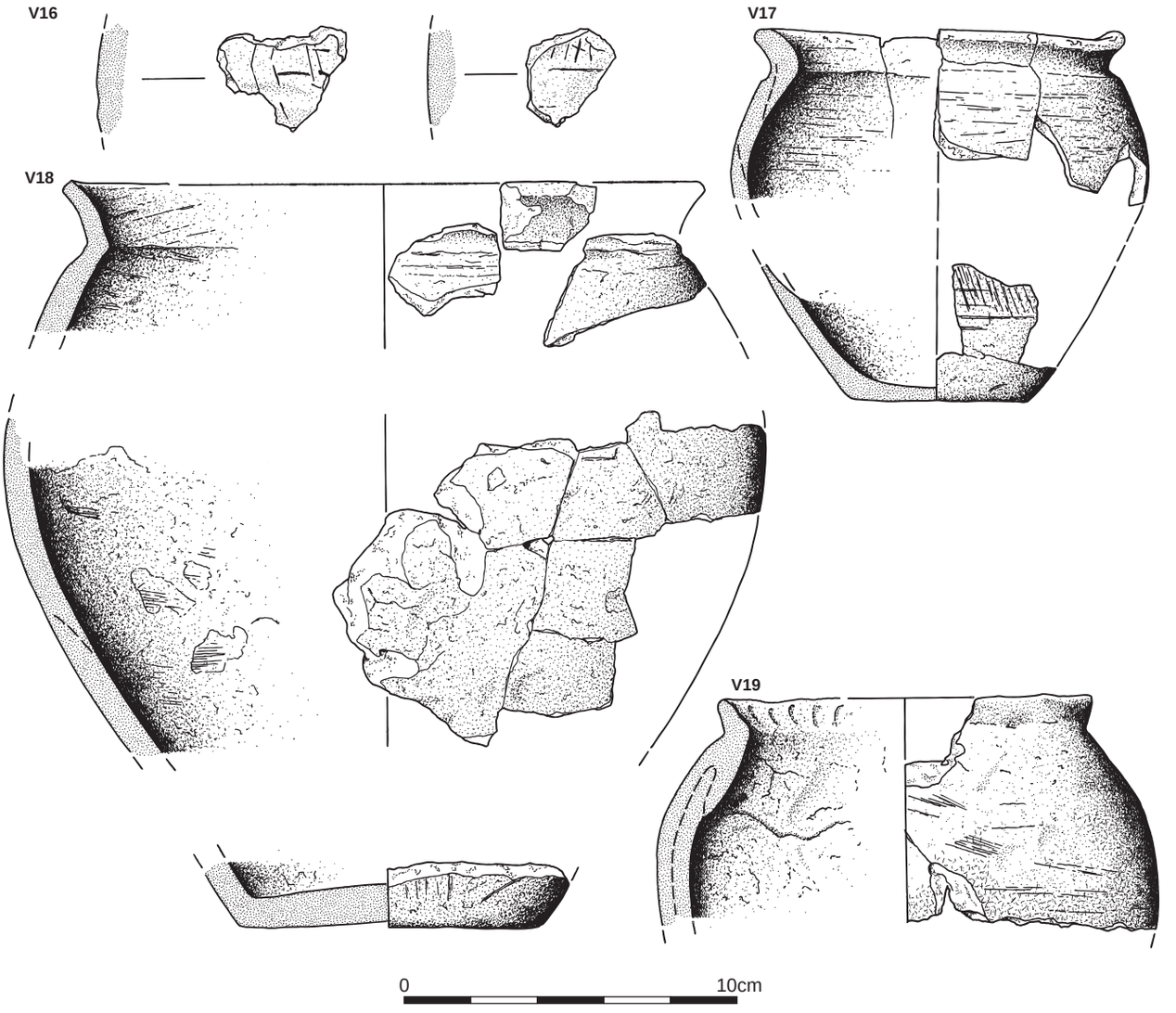

Illustration 5.6
Vessels comprising Fabric F

5.2.2 Petrographic analysis

Daniel Sahlén

Petrographic analysis was undertaken on 14 thin sections of pottery from the Sculptor's Cave (tables 5.3, 5.6; thin sections prepared by Suzie Stevenson of NMS Natural Sciences). The pottery has been made from local fine to fine sandy sedimentary clay. Although all of the pottery has been made from similar clay, it is possible that the potters have used two types: one fine (Fabric A and possibly Fabric D) and one fine sandy clay. However, these differences are vaguely defined and possibly due to variability within the material sampled, particularly in the case of Fabric D. The pottery is of relatively high technological quality. It is well fired to a moderate temperature, not much higher than 800°C, and there is clear evidence of the use of different recipes in the preparation of the clay. Three main classes of pottery can be seen: shell temper, Fabric A, which might possibly be divided into different sub-fabrics; sandy/silty clay, Fabrics B–D, which do not form a uniform material and for which the division of different fabrics is not certain; and sand-tempered Fabrics E–F. The clear difference between fabrics at the Sculptor's Cave is unusual for mainland Scotland (Sahlén 2011) and it would be interesting to compare these results with other contemporary assemblages. A full report on the petrographic analysis is contained in the site archive.

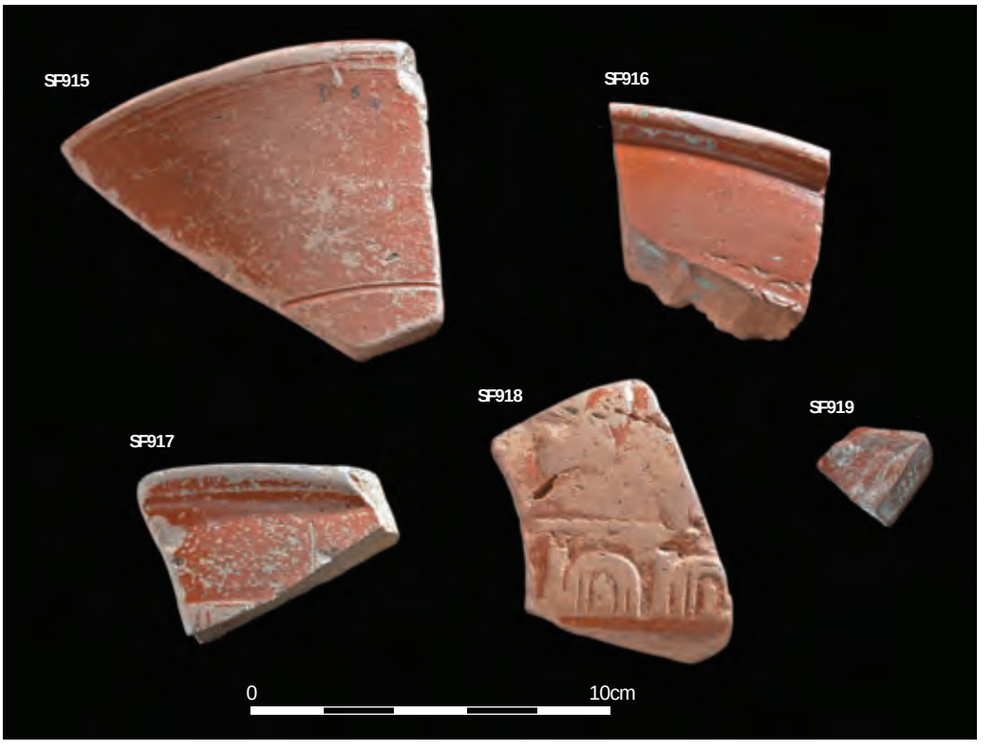

Illustration 5.7
Samian fragments

Table 5.6
Summary of grain size analysis

Fabric	Sample	Mean	Max.	STD	Prop.
A	TS1 (n20)	0.12	0.36	0.7	0.7
	TS2 (n19)	0.17	0.35	0.10	1.3
	TS3 (n11)	0.09	0.13	0.02	0.2
B	TS4 (n169)	0.14	0.47	0.07	7.9
	TS5 (n169)	0.13	0.47	0.06	6.8
C	TS6 (n43)	0.13	0.36	0.06	1.7
	TS7 (n66)	0.12	0.42	0.07	2.3
D	TS8 (n14)	0.15	0.27	0.7	0.7
	TS9 (n70)	0.14	0.37	0.07	3.3
E	TS11 (n132)	0.17	0.42	0.07	9
	TS12 (n191)	0.15	0.47	0.07	10
F	TS13 (n160)	0.14	0.42	0.05	7.5
	TS14 (n173)	0.15	0.43	0.05	9.2

5.2.3 Samian pottery

Colin Wallace

General

The Roman pottery from the Sculptor's Cave consists of fragments from four or five vessels, all imported from Roman Gaul. Based on general decorative scheme (SF918) and form (SF915), they represent an early–mid Antonine collection of vessels, although one (SF916) may be rather earlier. While the vessels may well have arrived in the region during the second century AD, the condition and associations of the excavated fragments suggest that most of them had an extended life, leading to deposition – as discarded fragments, some perhaps utilised for making pigment – during the Late Roman Iron Age.

Method

The Roman pottery has been recorded to the Ceramic Archive Level set out in the *Study Group for Roman Pottery* guidelines (Darling 1994). Wares have been linked as far as possible to the published descriptions of the *National Roman Fabric Reference Collection* (Tomber and Dore 1998). The full report is included in the site archive.

Catalogue

Minimum number of vessels: four (SF917 and SF919 could be from the same vessel).

SF915 (illus 5.7) Plain samian, f33 cup rim and body sherd; internal rim-groove, mid-body groove on outside. Length: max. 54mm; width: 40mm; thickness: 7mm; weight: 18.9g. Unphased, Context: Benton Layer 1.

SF916 (illus 5.7) Decorated samian, small f37 bowl, broken off at the start of the decoration; where the ovolo ought to have been, there is instead a band of small circles in relief, smudged through their centres. Rim rubbed smooth in places. Length: 33mm; width: 32mm; thickness: 5.5mm; weight: 8.2g. Unphased, Context: Benton Layer 1.

SF917 (illus 5.7) Decorated samian, f37 bowl, flattened and worn bead rim, fire-hardened as SF919; broken off at the worn-away ovolo. Length: 35mm; width: 25mm; thickness: 7mm; weight: 7.2g. Unphased, Context: Benton Layer 1.

SF918 (illus 5.7) Decorated samian, f37 bowl, worn body sherd; the figure decoration worn down and too much detail of the ovolo lost the same way, but it looks like that of the potter Cinnamus. Length: 41mm; width: 27mm; thickness: 7mm; weight: 10.1g. Unphased, Context: Benton Layer 1.

SF919 (illus 5.7) Decorated samian, f37 chip, fire-hardened (ie surfaces still red, not black, as they would be if burnt); traces of figure decoration (body-side and arm?) can be made out. Length: 13mm; width: 12mm; thickness: 8mm; weight: 1.3g. Unphased, Context: Benton Layer 1.

Discussion

Aside from a relatively large, unaltered, plain samian body sherd (SF915), the decorated samian sherds were either fire-hardened (SF919), definitely reworked (SF916, SF918) or both (SF917). Some may have been prepared as a source of red pigment, perhaps for parchment or stone.

The original pottery vessels could have arrived in the region in the second century, as they compare broadly with finds of central Gaulish plain samian from Birnie, Brackla, Deskford and Tillydrone and with decorated samian from further south, in the souterrains of Angus and Perthshire (unpublished work by author). This background, including the possible original use of samian forms 37 and 33 as drinking bowls and cups, is discussed elsewhere (Wallace in prep).

The original vessel from which SF916 derived may have been earlier than the rest, and/or a 'second'. Peter Webster (pers comm) suggests that the potter may have removed the top of the decoration in subsequently finishing the rim, obliterating the ovolo (the characteristic 'egg and tongue' pattern) completely so that what remained was a row of circles. On the other hand, both Peter Webster and Joanna Bird (pers comm) point out that in the work of one central Gaulish samian potter we can find plain circles used as an ovolo-alternative: Potter X-13 (called Donnaucus in older literature) of Les Martres-de-Veyre regularly used such a row of small rings in just this way, as, for example, on Stanfield and Simpson (1958: plate 45: 521, 522, 524, 525, 527; or even his 'DD' ovolo on plate 43: 491, 494–96, 498 if the centre has been smoothed away). Potter X-13's bowls are sometimes found in a fine Lezoux fabric (Joanna Bird pers comm), as here, so he may have moved there or sold his moulds (as did other LMdV potters); his work is dated *c* AD 100–25.

5.3 Worked bone, antler, teeth and shell

Gemma Cruickshanks and Fraser Hunter

5.3.1 Introduction

Sixty-five worked bone, antler, teeth and shell artefacts were recovered from excavations in the Sculptor's Cave (table 5.7). Tools, especially a range of points, dominate the assemblage along with a smaller number of personal items such as decorative pins, two beads and a fragment of decorated comb. There is a small amount of evidence for manufacturing, with four unfinished objects. The few firmly stratified artefacts are all from Phase 1 (Late Bronze Age), though a few others, eg the decorated pins and comb, are typologically from the later part of the Iron Age (last centuries BC/early AD).

5.3.2 Raw materials

Two objects are manufactured from red deer antler (SF820, SF847), one of boar tusk (SF849), one from a canine tooth (SF70) and the others from bone, though it is not always possible to more precisely identify heavily modified objects. There are also eight shell discs, their flat shape suggesting they were made from a large bivalve shell, now too modified to identify to species. Of the two antler objects, SF820 has the burr still attached: its rounded form indicating that it was gathered as a shed antler rather than butchered.

Where determinable, all the bone artefacts have utilised mammal or occasionally bird long bones, apart from the perforated plate (SF824), which is made from a scapula. Where identifiable, red deer, pig and sheep/goat dominate. Such bones would have been readily available as a butchery by-product, and a few bones bear fine lateral cut marks from this process (SF247, SF835, SF836). Pig bones are exclusively fibulae, which were used to manufacture pins and fine points, while red deer and sheep/goat lower limb bones, particularly metapodials, were favoured for points. The size of the single bird long bone is consistent with a large goose or swan (SF823). All the raw materials used could have been sourced locally.

5.3.3 Manufacturing

Tool marks (table 5.8) provide clues as to how items were made. The most common type of working trace is irregular striations created by abrading with pumice or sandstone, often used to blunt the sharp edges of split shaft points but also present on finer items such as pins. Blade-trimmed facets are visible on seven artefacts, all personal items apart from a shaft point (SF843), which had its point reworked by blade-trimming. Two items show the use of saws: the faces of the pendant roughout were sawn (SF820) and the decoration on the comb was formed using a fine saw (SF822). Neither blade nor saw marks are present on items certainly from Phase 1 (Late Bronze Age), which were exclusively abraded to shape. This is likely to correspond with the increase in iron tools throughout the Iron Age, which would have greatly benefited crafts like bone- and antler- working. No drilled perforations are present; all are biconical, having been worked from both sides to meet in the middle.

Table 5.7
Summary of the Sculptor's Cave worked bone, antler and shell assemblage

Group	Type	Excavator		Total	Phase	
		Benton	Shepherd		1	Unphased
Tool	Point	17	10	**27**	9	18
	Hide-rubber	2	1	**3**	1	2
	Weaving baton	2	–	**2**	–	2
	Needle	1	–	**1**	–	1
	Double-pointed needle	2	–	**2**	–	2
	Double-ended	–	1	**1**	1	–
Personal	Pin	7	–	**7**	–	7
	Bead	1	1	**2**	–	2
	Comb	1	–	**1**	–	1
	Pin case	1	–	**1**	–	1
Fitting	Cylinder	–	1	**1**	1	–
Unfinished	Pin	3	–	**3**	–	3
	Pendant	1	–	**1**	–	1
	Peg	–	1	**1**	–	1
Miscellaneous	Perforated plate	1	–	**1**	–	1
	Worked tusk	1	–	**1**	–	1
	Worked antler	1	–	**1**	–	1
	Polished	–	1	**1**	1	–
	Shell disc	8	–	**8**	–	8
Total		**49**	**16**	**65**	**13**	**52**

Table 5.8
Summary of tool marks

Manufacturing traces	Phase 1	Unphased	Total
Abrasion	9	35	**44**
Blade-trimmed facets	–	7	**7**
Saw marks	–	2	**2**
No traces	4	9	**13**
Total	**13**	**53**	**66**

5.3.4 Chronology

Thirteen of the sixty-four items can be attributed stratigraphically to Phase 1 (table 5.7). Most of the assemblage is not chronologically distinct, especially the tools, with the exception of the most decorative pins (SF807–9), which find parallels in the later first millennium AD and the comb fragment (SF822), which could date to the last few centuries BC or early into the first millennium AD. All four are from Benton's mixed layer (Layer 1).

5.3.5 Recovery/preservation bias

Most of the artefacts were recovered from Benton's more extensive excavations. The few typologically later items, such as the comb and some of the pins, were also all discovered by Benton; relatively little of the post-Bronze Age levels remained by the time the Shepherds undertook their excavation. The Shepherds' bone/antler assemblage is notably less well preserved than Benton's. This

could be due to their trench locations being primarily at the front of the cave and therefore more at risk from moisture/weather.

5.3.6 Discussion

Benton highlighted the similarities between her worked bone and antler assemblage with objects found in Switzerland as evidence of her theory that Swiss migrants had landed on the Moray coast (1931: 184–8). She divided the items into 'Scottish or Swiss', 'Swiss' or 'indeterminate' and stated that 'out of the twenty-six objects, twelve are certainly foreign and a good many more may be foreign' (ibid: 188). Re-examination of the assemblage finds many parallels with other Scottish sites and there is no reason to believe any of the artefacts need not be local.

Several objects show evidence of extended use-lives prior to deposition, such as the kite-shaped needle (SF815) and point (SF841), which have broken tips overlain by polish, indicating they had continued in use after breaking. Shaft point SF843 had been repaired by knife-trimming the tip. This evidence of extended use and repair suggests they were valued objects. Forty-seven of the objects are intact, while a further seven have recent breaks, suggesting they were probably intact when deposited. That 84% of the artefacts were intact, and therefore still usable, at the time of deposition strongly suggests that they were deliberately deposited rather than casually discarded.

This assemblage would not be out of place on a domestic site, but the overtly ritual practices undertaken in the cave support the argument that they were not casually lost or discarded but rather were deliberately deposited. There is further supporting evidence for the later material, which includes mostly intact personal items, some of which are decorated. Decoration is relatively rare in most Iron Age assemblages and any items which do display ornamentation are likely to have been special. The decorated pins were also all intact and still usable at the time of deposition, strongly suggesting they were deliberately left in the cave. This deposition of decorative personal items is mirrored in the later metalwork assemblage (see section 5.7.2).

Though this assemblage can now be compared to others from Scotland to show that there is no need to seek exotic parallels, there are no comparable worked bone/antler assemblages from the north-east. The closest well-dated sites with comparable material are in the Northern and Western Isles, or at Broxmouth in East Lothian (Armit and McKenzie 2013). This is due to issues of preservation, as the acid soils of the Moray Firth and much of lowland Scotland rarely preserve bone. For example, almost no worked bone/antler artefacts were recovered from the recently excavated settlements at Birnie, Moray (Hunter 2010b) or Culduthel, Inverness (Hunter forthcoming a), which otherwise produced rich assemblages. This makes the Sculptor's Cave assemblage stand out, with the lack of local comparanda creating a false exoticism. The assemblage therefore provides a valuable glimpse of artefacts which are likely to have been commonplace but rarely survive in this area outwith the special environment of caves.

5.3.7 Catalogue

The artefact groups are discussed in turn, followed by catalogue entries.

Tools

Points

Points are the most common bone artefact in the assemblage, with 27 examples present. They have been grouped according to the scheme used by Hunter et al's analysis of the large assemblage from Broxmouth (2013: 279–83) (summarised in table 5.9). The points are divided into groups based upon how they were made, ie retaining the form of the bone shaft ('shaft points'), either intact ('whole') or longitudinally split, or using a splinter of bone ('splinter points'), and whether the tips are fine/sharp or blunt, in an effort to identify different functional groups within this ubiquitous category.

Table 5.9
Summary of point forms by phase. Under tip form: S represents sharp or fine, B blunt and M missing. Broken points are missing their head

Form	Tip	Phase 1	Unphased	Total
Shaft point: whole	S	2	3	**5**
	B	1	2	**3**
Shaft point: split	S	2	1	**3**
	B	2	4	**6**
Splinter point	S	1	–	**1**
	B	–	2	**2**
	M	–	1	**1**
Broken	S	–	2	**2**
	B	1	3	**4**
Total		**9**	**18**	**27**

Shaft points are more common than splinter points here, with similar numbers of split versus whole shaft points. Over half have robust blunt points which could have been used for a wide variety of tasks. The 11 sharp-/fine-pointed examples are more likely to be piercing tools and could be categorised as awls, probably for hide-working. More of the whole shaft points have sharp points compared to the split types. Most of the points were roughly abraded down the edges and sometimes around the head, probably with pumice or coarse-grained sandstone. This is likely to be from initial shaping, probably to blunt sharp edges, making the tool more comfortable to use.

Nine of the twenty-seven points are from Phase 1 (Late Bronze Age), while the others are all from mixed/unstratified layers. Such points are basic tools with a long history of use from early prehistory onwards. Where identifiable, the points have been manufactured from sheep/goat and red deer long bones, predominantly metapodials but also one ulna and a radius.

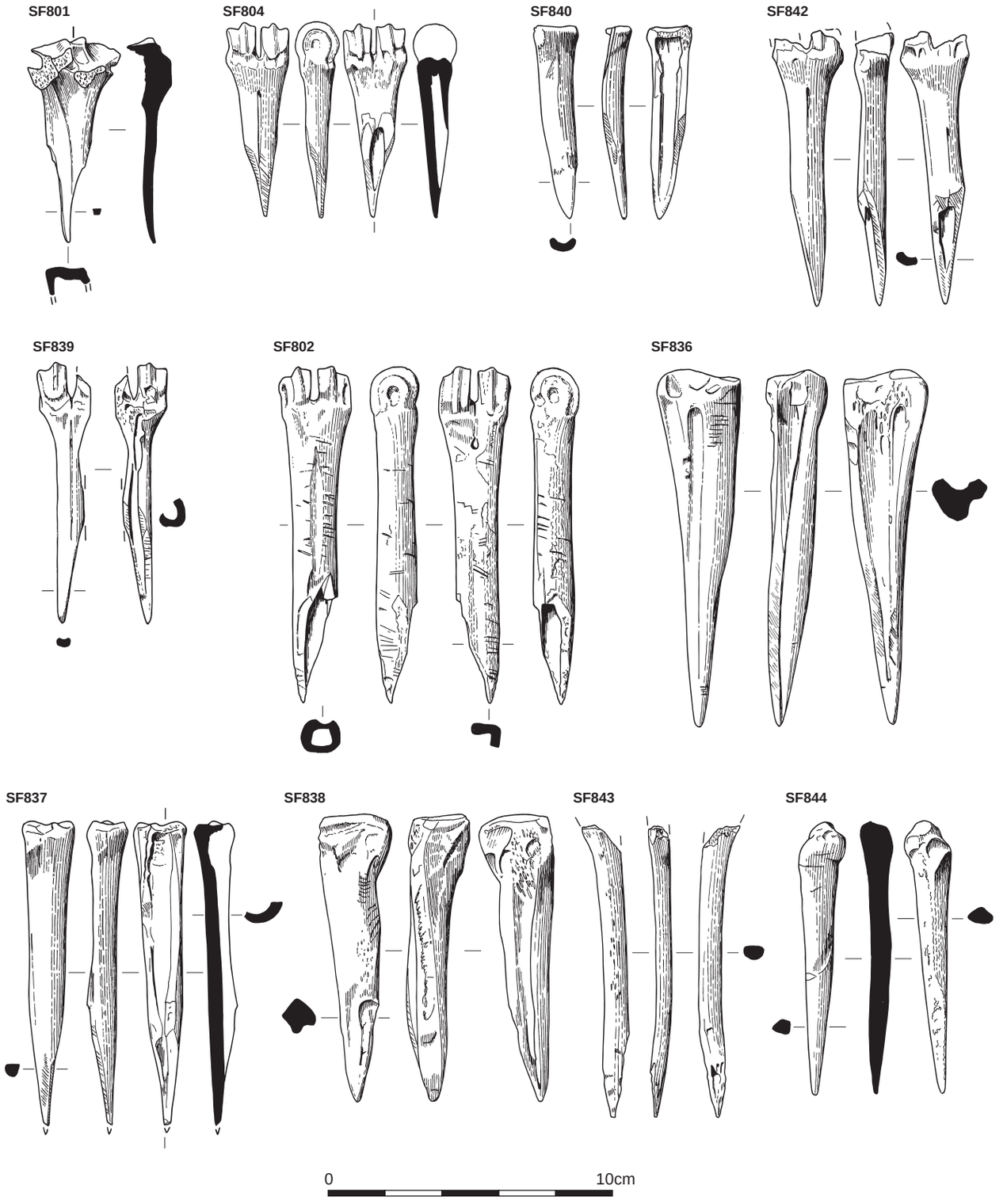

Illustration 5.8
Worked bone shaft points

Shaft points (whole): sharp tip

SF242 (not illustrated) Long bone splinter tapering suddenly to a fine point at one end, broken at the other. The split edge is stepped on one side, suggesting it may have broken in use then been reworked. There is slight abrasion and polish but much of the exterior surface has weathered. Length: 54mm; max. width: 10mm; thickness: 4mm. Phase: 1, Block: 2.2, Context: IIc23.

SF802 (illus 5.8) Sheep/goat metacarpal with intact articular end, shaft broken diagonally to create a fine, sharp point. Surface is very degraded and there are many lateral V-sectioned cuts around the surface, suggesting it may also have been used as a cutting surface. Length: 118mm; width: 25mm; thickness: 17mm. Phase: 1, Block: 1.2, Context: Ia23c.

SF804 (illus 5.8) Sheep/goat metacarpal shaft point with intact articular end forming the head and diagonally split shaft with abraded edges, tapering to sharp point which was chipped in use. Length: 67mm; width: 22mm; thickness: 14mm. Unphased, Context: Benton Layer 1.

SF843 (illus 5.8) Red deer ulna, trimmed down one side to create a plano-convex-sectioned rod, though most of the working is polished away. One end expands before a recent break while the other tapers to a roughly trimmed angled point. This is at odds with the finely polished shaft, suggesting it may have been expediently repaired. The slightly blunted tip suggests it saw slight use after this. Length: 103mm; width: 10mm; thickness: 6mm. Unphased, Context: Benton Layer 1, grid square C1.

SF844 (illus 5.8) Point formed from a horse metacarpal with articular end forming the head, then tapering to a sharp point. There are traces of longitudinal abrasion from shaping and some polish around the tip. Length: 96mm; head: 17mm × 11mm. Unphased, Context: Benton Layer 2, grid square D2.

Shaft points (whole): blunt tip

SF223 (not illustrated) Long bone with damaged articular end forming the head. The damaged nature of the head suggests it may have split during use and was whole to begin with. The shaft has abraded edges and tapers to tip, which had broken in use. Slight polish before the break. Length: 78mm; width: 15mm; thickness: 10mm. Phase: 1, Block: 2.3, Context: IIb16.

SF839 (illus 5.8) Point formed from a sheep/goat metacarpal/metatarsal, with articular end forming head then tapering to a robust tip. Longitudinally split, but the irregular edges suggest this happened accidentally through use rather than starting out as a split shaft point. The edges have been roughly abraded and the tip displays use-polish. Length: 91mm; head: 20mm × 15mm. Unphased, Context: Benton Layer 1, grid square C0.

SF842 (illus 5.8) Shaft point formed from a sheep/goat metacarpal with intact articular end forming the head and shaft; split at an angle to create a robust point. The edges were roughly abraded and the tip is slightly polished from use. Recently broken head and signs of rodent gnawing. Length: 96mm; head: 24mm × 13mm. Unphased, Context: Benton Layer 1.

Shaft point (split): sharp tip

SF382 (not illustrated) Long bone longitudinally split through the articular end, which forms the head. The shaft tapers to a sharp point with traces of abrasion on the exterior surface. The edges are rounded from weathering and abrasion/shaping marks are not clear. Length: 89mm; head: 16mm × 9mm. Phase: 1, Block: 1.2, Context: Ic11.

Illustration 5.9
Group of worked bone tools, from left to right: SF818, SF817, SF836, SF835, SF833, SF834, SF841, SF816

SF801 (illus 5.8) Radius split longitudinally through the articular end with shaft tapering suddenly to a fine point. Perhaps slightly abraded down one edge but not much used. Quite short compared to other examples of this type. Length: 71mm; head width: 34mm, thickness: 18mm. Phase: 1, Block: 2.2, Context: IIa12.

SF837 (illus 5.8) Longitudinally split sheep/goat metapodial with articular end forming the head and tapering to a fine point, now fractured. The irregularity of the split edges suggests it was split accidentally during use and that it originally utilised the full shaft. The edges of the bottom third around the tip show facetted abrasion from shaping and very slight use-polish. Not much used. Length: 107mm; head: 20mm × 13mm. Unphased, Context: Benton Layer 1, grid square C7.

Shaft point (split): blunt tip

SF247 (not illustrated) Long bone split longitudinally through the articular end, which forms the head, then tapering to a robust, blunt point missing its tip. Lateral fine cuts across the exterior surface could be butchery marks. The edges were roughly abraded and there is slight use-/handling polish on the exterior. Length:

155mm; head: 28mm × 12mm. Phase: 1, Block: 2.2, Context: IIc23.

SF381 (not illustrated) Point formed from longitudinally splitting a long bone through the articular end, which forms the head, then tapering to a robust, blunt tip. Some use-/handling polish survives around the head; all the edges and the exterior surface display lateral striations from abrading to shape. Length: 165mm; head width: 31mm, thickness: 9mm. Phase: 1, Block: 1.2, Context: Ic11.

SF836 (illus 5.8, 5.9) Shaft point formed from a longitudinally split red deer metacarpal with split articular end forming head, tapering to a robust tip. The end was flattened for ease of use, while the edges were roughly abraded and the whole tool has handling polish. Length: 124mm; max. width: 30mm; max. thickness: 22mm. Unphased, Context: Benton Layer 2, grid square B4.

SF838 (illus 5.8) Longitudinally split red deer metacarpal (proximal end) with split articular end forming head, tapering to a robust tip. The edges were roughly abraded and the bottom third displays fine striations and slight use-polish. Length: 101mm; max. width: 26mm; max. thickness: 20mm. Unphased, Context: Benton Layer 2, grid square B1.

SF840 (illus 5.8) Point formed from a longitudinally split sheep/goat metacarpal with split articular end forming head then tapering to a robust tip. The edges were roughly abraded and the tip is polished through use. Length: 68mm; head: 17mm × 9mm. Unphased, Context: Benton Layer 2, grid square –B0.

SF848 (illus 5.10) Longitudinally split long bone fragment which has been fashioned into a tapering, robust point with broken tip at one end (old break). The other end has been shaped by abraded facets into a tapering and asymmetric curved head which is vaguely decorative. It may have been refashioned or broken during perforation. There is a series of fine lateral cuts across the object from use as a cutting surface. This is an unusual item and its function is not clear (see section 5.5). Benton (1931: 186) noted that it 'has a freakish resemblance to a human face', though not apparent to the current writers. Length: 121mm; width: 19mm; thickness: 8.5mm. Unphased, Context: Benton Layer 1, grid square C9.

Splinter point: sharp tip

SF118 (illus 5.11) Long bone splinter, tapering from broken head to highly polished tip with lateral indents suggesting circumferential wear. The edges are abraded but this is overlain by the polish around the fine tip, indicating the abrasion was from initial shaping rather than use. Length: 70mm; width: 12mm; thickness: 7mm. Phase: 1, Block: 2.3, Context: IIb16.

Splinter point: blunt tip

SF825 (illus 5.11) Point formed from a longitudinally split bone splinter. The edges were roughly abraded, as was the head, which is now mostly broken. The splinter tapers from head to a slightly polished point, which has seen only limited use. Length: 86mm; head: 18mm × 6mm. Unphased, Context: Benton Layer 2, grid square –B1.

SF845 (illus 5.11) Longitudinally split long bone tapering from the very irregular head, which retains part of the epiphysis, down abraded edges to a polished, blunt point. Quite short. Length: 63mm; head: 12mm × 10mm. Unphased, Context: Benton Layer 2, grid square B3.

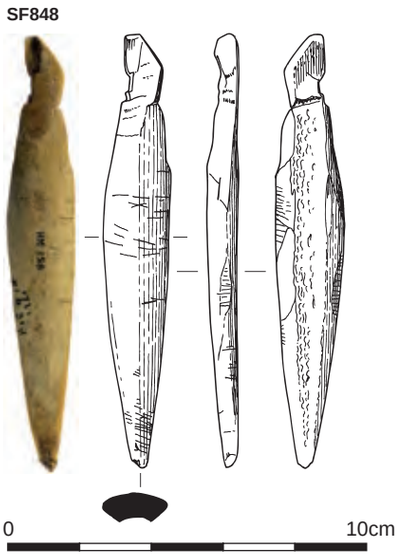

Illustration 5.10
Shaft point

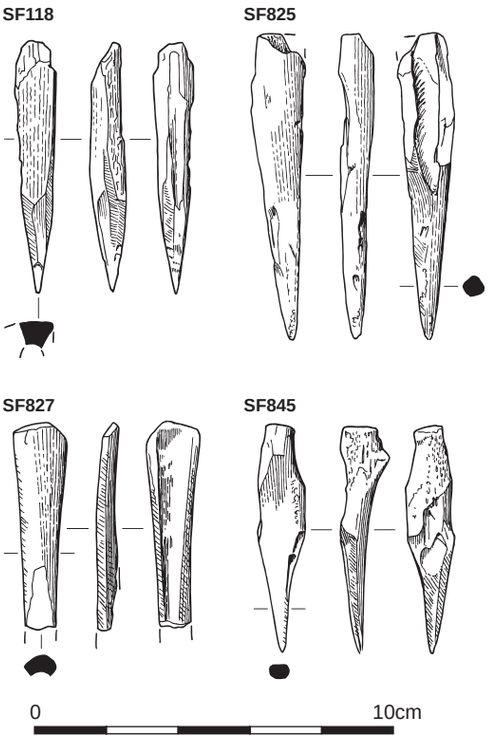

Illustration 5.11
Worked bone splinter points

Splinter point: missing tip

SF827 (illus 5.11) Fragment of longitudinally split long bone, tapering from roughly rounded head to a broken shaft, forming the head of a splinter point. There are abraded facets around the head and edges. Quite finely shaped for a splinter point. Length: 57mm; width: 16mm; thickness: 5mm. Unphased, Context: Benton Layer 2, grid square C2/3.

Broken point: sharp

SF813 (not illustrated) Finely shaped point tip with broken shaft. Polished around the tip but rougher with fine abrasion marks further up. Length: 64mm; diameter: 6mm. Unphased, Context: Benton Layer 1, grid square D4.

SF846 (not illustrated) Long bone splinter with broken head, tapering to a slightly polished, heavy, sharp point. The edges were roughly abraded. Length: 56mm; head: 10mm × 7mm. Unphased, Benton Layer 2, grid square B3.

Broken point: blunt

SF228 (not illustrated) Tapering tip of a bone point with broken shaft and polish around the slightly rounded tip. Length: 40mm; width: 6mm; thickness: 3.5mm. Phase: 1, Block: 2.3, Context: IIb16.

SF800 (not illustrated) Recently broken point tip in two refitting fragments. The robust, blunt tip is polished and there are abrasion marks down the edges, suggesting it is from a point, not a pin or needle, which tend to be finely finished. Length: 64mm; max. dimensions: 11mm × 8mm. Unphased, Unstratified (Area III).

SF826 (not illustrated) Sturdy point tip, slightly wedge-shaped, with recent break on shaft. The edges were abraded and there is some polish on the surface, but it has not been much used. Length: 72.5mm; width: 10mm × 8mm. Unphased, Context: Benton Layer 2, grid square C3.

SF829 (not illustrated) Long bone splinter with broken head and abraded edges, tapering to a polished point. Length: 72mm; head: 13mm × 6mm. Unphased, Context: Benton Layer 1, grid square C1.

Hide-rubbers

Three tools have blunt tips displaying glossy polish consistent with use during hide-processing. The blunt ends suggest they were more likely to have been used for softening rather than defleshing hides (Christidou and Legrand 2005: 386). All three are manufactured from long bones: two are split longitudinally through the articular end (SF240, SF835) while the other utilises the whole articular end and is then diagonally split to form the working end (SF841). The tip forms vary, suggesting they could have different functions within the hide-working process. Hide-rubbers are tools which commonly appear throughout prehistory in Scotland and hide-processing was probably undertaken on most sites (Hunter 2015a: 228).

SF240 (not illustrated) Robust bone point formed from longitudinally split long bone, broken before head. There is some abrasion down the edges and use-polish around the blunt tip. Either a very blunt point or a narrow rubber. Length: 87.5mm; width: 13mm; thickness: 7mm. Phase: 1, Block: 2.2, Context: IIc23.

SF835 (illus 5.9, 5.12) Longitudinally split red deer metapodial with articular end forming the head, tapering to a rounded tip. The edges show transverse striations from shaping, though the whole tool is now very polished from use, especially on the front and around the tip. Speckled dark discolouration. Length: 122mm; head: 25mm × 14mm. Unphased, Context: Benton Layer 2, grid square –B0.

SF841 (illus 5.9, 5.12) Tool formed from a red deer metapodial with intact articular end forming the head and shaft split at an angle to create a robust wedge tip. The broken edges were roughly abraded and the tip is chipped, probably through use, but polish indicates it continued to be used. The head has been flattened and partially hollowed but the function of this is unclear. Length: 88mm; head: 20mm × 14mm; socket depth: 8.5mm, diameter: 9mm. Unphased, Context: Benton Layer 1, grid square C6.

Weaving batons?

SF833 and SF834 are longitudinally split, carefully shaped strips of long bone with rounded edges and ends. Benton referred to them

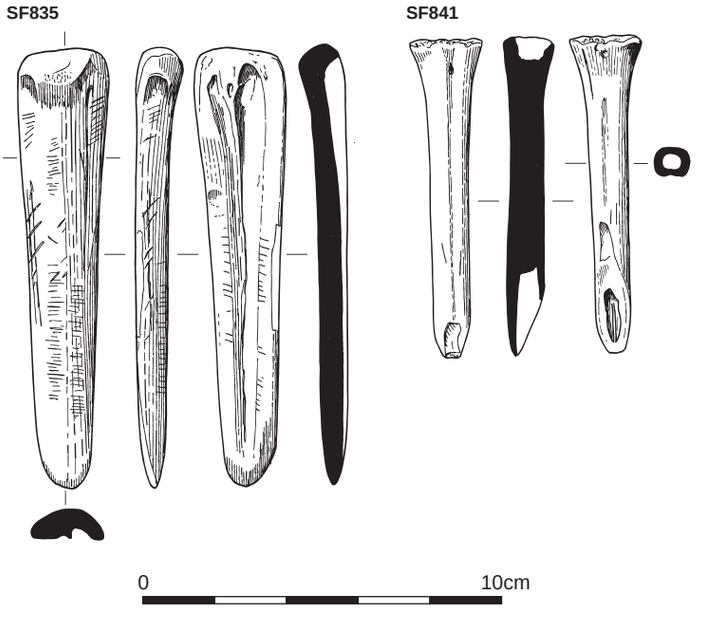

Illustration 5.12
Worked bone hide-rubbers

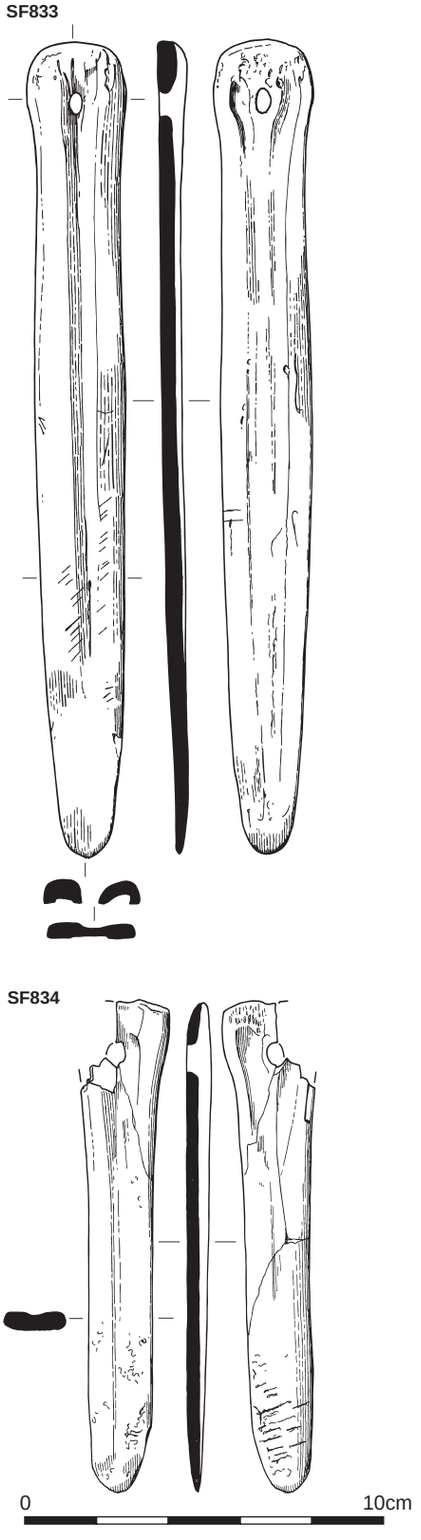

Illustration 5.13
Worked bone weaving batons

as netting needles (1931: 184), though, since they are only slightly polished and the perforations are natural nerve holes, a sewing function seems unlikely. Similar but unperforated items termed spatulae, dating to the Late Bronze Age, were excavated from Heathery Burn Cave, Co. Durham, where they were interpreted as weaving batons for beating down the weft threads on a loom (Britton and Longworth 1968: 10(9), 146–51). For Late Bronze Age bone spatulae found at Runnymede Bridge, Berkshire, a pottery burnishing function was favoured (Needham and Serjeantson 1996: 192, fig 101, B19–20). Similar bone 'spoons' were also recovered from the Iron Age settlement at Jarlshof, Shetland (Hamilton 1956: 52, fig 29, 11–12), suggesting that this artefact type is not restricted to the Bronze Age. The objects seem a little flimsy to have been burnishers and so a weaving tool seems most likely.

SF833 (illus 5.9, 5.13) Longitudinally split, finely shaped red deer metatarsal tapering gradually in thickness and width to a rounded tip. There is a natural conical oval perforation in the head. A shallow groove has been abraded into one side and the edges were abraded but are now rounded from use. There is some diagonal abrasion around the middle of the shaft. Length: 224mm; max. width: 27mm; thickness: 7mm; perforation: 6mm × 4mm; groove width: 7mm, depth: 1mm. Unphased, Context: Benton Layer 1, grid square D7.

SF834 (illus 5.9, 5.13) Tool with rounded tip formed from a longitudinally split red deer metatarsal. The articular end is present at the head, which is broken through the natural oval conical perforation. The tip is rounded with use-polish extending around two-thirds up the tool's length. There are longitudinal and lateral striations all over. End gnawed. Length: 137mm; width: 19mm; thickness: 6mm; perforation diameter: 6mm. Unphased, Context: Benton Layer 2, grid square C3.

Needle

The kite-shaped perforated tool SF815 is probably a needle and is a form with a wide distribution across Britain, including many broch and wheelhouse assemblages in north-western Scotland (Hallén 1994: 213).

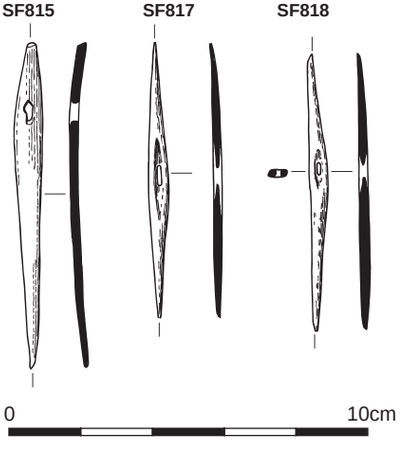

Illustration 5.14
Worked bone needles

SF815 (illus 5.14) Kite-shaped strip of bone, possibly a rib, with an irregular oval, pecked perforation at one end. It tapers from the perforation to an asymmetric polished tip at one end, which was slightly broken, then continued in use. The head also tapers and has a slight break on the end. There are faint facets down the edges and slight polish. A roughly made but highly polished/used item. Length: 89.5mm; width: 7mm × 3mm; perforation: 4mm × 2mm. Unphased, Context: Benton Layer 1, grid square C7.

Double-pointed needles

Two slender double-pointed needles with central perforations were excavated (SF817, SF818). Such tools have been interpreted as both fish gorges (eg Ballin Smith 1994: 171) and bodkins (eg Hedges 1987: 98, fig 2.24, 79–82) in the past. The double point would make them hard to use as bodkins. The fish gorge interpretation is based on anthropological parallels, but they could also be needles. Objects of this form are common across Scotland from at least the Neolithic period (Pollard 1994: 143–5). Both tools are highly polished all over, most likely through use, which supports a textile-related function rather than fishing.

SF817 (illus 5.9, 5.14) Fine, sharp, symmetrical double point, swelling in the middle around an elongated oval perforation set into an abraded biconical lentoid groove. The whole object is highly polished, apart from within the lentoid grooves. Length: 76mm; max. diameter: 5mm × 2mm; perforation: 6mm × 1mm. Unphased, Context: Benton Layer 2, grid square D3.

SF818 (illus 5.9, 5.14) Fine, sharp double point with one point shorter than the other and slightly curved, swelling in the middle around an oval perforation set into an abraded biconical lentoid groove. The whole tool is polished and discoloured (dark). Length: 76mm; max. diameter: 4.5mm × 2mm; perforation: 4mm × 2mm. Unphased, Context: Benton Layer 1, grid square C9.

Double-ended tool

SF229 is shaped to a sturdy point at one end and a spatula at the other. Points and spatulas can both have a wide range of functions. Double-ended bone tools are relatively rare, suggesting a specialist function, such as a clay modelling tool.

SF229 (not illustrated) Very worn, rounded long bone fragment, tapering to a sturdy point at one end and spatulate at the other, creating a double-ended tool. No shaping or use marks visible due to abrasion. Length: 105mm; width: 8mm; thickness: 4mm. Phase: 1, Block: 2.3, Context: IIb16.

Personal items

Pins

Seven finished pins in a range of forms were recovered along with three unfinished pins (discussed later). All are intact aside from minor fractures to tips, apart from SF806, which is only the tip of a pin. All are from Benton's excavations, leaving their age uncertain, though dated parallels from other sites can shed some light on more distinctive types (discussed below).

Pig fibula pins are represented by one finished example (SF814) and one unfinished (SF805) and are a typical long-lived pin type with examples known from sites across most of Scotland (Hunter et al 2013: 268). The unfinished spatula-headed pin (SF810) is similar in shape but has been modified by knife-trimming around the head. SF811 and SF812 are relatively simple forms but are finely finished and polished. SF811 has a slightly rounded head decorated with fine, incised lateral lines, while SF812 has a carefully formed club-shaped head with flat top. These types could all be Late Bronze Age or Iron Age.

In contrast, the barrel-, X- and ring-headed pins are heavily modified decorative items. The barrel-headed pin (SF808) is very finely shaped and polished. The form is similar, though with a larger head, to pins from Buiston Crannog, Ayrshire, which has Roman Iron Age and early medieval phases (Crone 2000: 145, fig 119, 209, 212) and from Norse occupation at Buckquoy, Orkney (Ritchie 1979: 193, fig 4, 21).

The most elaborately modified pin is the perforated X-headed form (SF807), which is also decorated down the front of the shank with a finely incised row of diamonds filled with dots. Broadly similar pins are known from Orkney, eg a perforated 'winged' pin from the middle Norse layers at Brough of Birsay (Curle 1982: 73, illus 48.101), an unperforated 'eared' pin from an unknown context at the Broch of Burrian (MacGregor 1974: 74, fig 7.74) and an unpublished stray find in NMS collections known only to come from Orkney (NMS X.GA 21).

It is likely that the ring-headed pin (SF809) had been modified, perhaps after breaking, due to the relatively crude knife-trimmed facets around the head and tip and its short length (60mm). A similarly short pin of this form was recovered at Pool, Sanday from phase 6.7 (fifth to ninth centuries AD) along with another longer example from the Iron Age/Norse transition phase (Smith 2007: 482, illus 8.8.11, plates 2388, 1967). The perforated head on this pin (SF809) and that on the unfinished perforated pin (SF816) were probably functional, to take a securing cord running from head to tip (eg Wilson 1983: 347 and fig 146). These decorated pins thus seem to represent deposits in the late first millennium AD.

SF806 (not illustrated) Circular-sectioned shank tapering to sharp tip, with longitudinal abrasion from shaping still visible under polish. Most polished at tip, which also displays slight circumferential abrasion. Old break on shaft. Length: 43mm; diameter: 3.5mm. Unphased, Context: Benton Layer 1, grid square A5.

SF807 (illus 5.15) X-headed pin, the head knife-trimmed with faceted edges and central biconical circular perforation. The shank curves outwards slightly, is oval at the top, turns in a circular fashion towards the sharp tip and is decorated down the front with a vertical line of linked Xs and irregularly distributed dots. The decoration was once probably continuous intercutting zigzags, creating a line of diamonds, but parts are now worn smooth. The whole pin is finely polished though knife-trimmed facets are still visible from shaping, particularly around the head. Length: 97.5mm; head height: 11mm, width: 13mm, thickness: 7mm; shank max. diameter: 5mm × 4mm; perforation diameter: 3mm. Unphased, Context: Benton Layer 1, grid square A6.

SF808 (illus 5.15) Barrel-headed pin. Fine oval-sectioned head with circular collared ends. The circular-sectioned shank swells slightly then tapers to a sharp point with slight, old fracture. The whole pin is very finely finished and polished, with only hints of

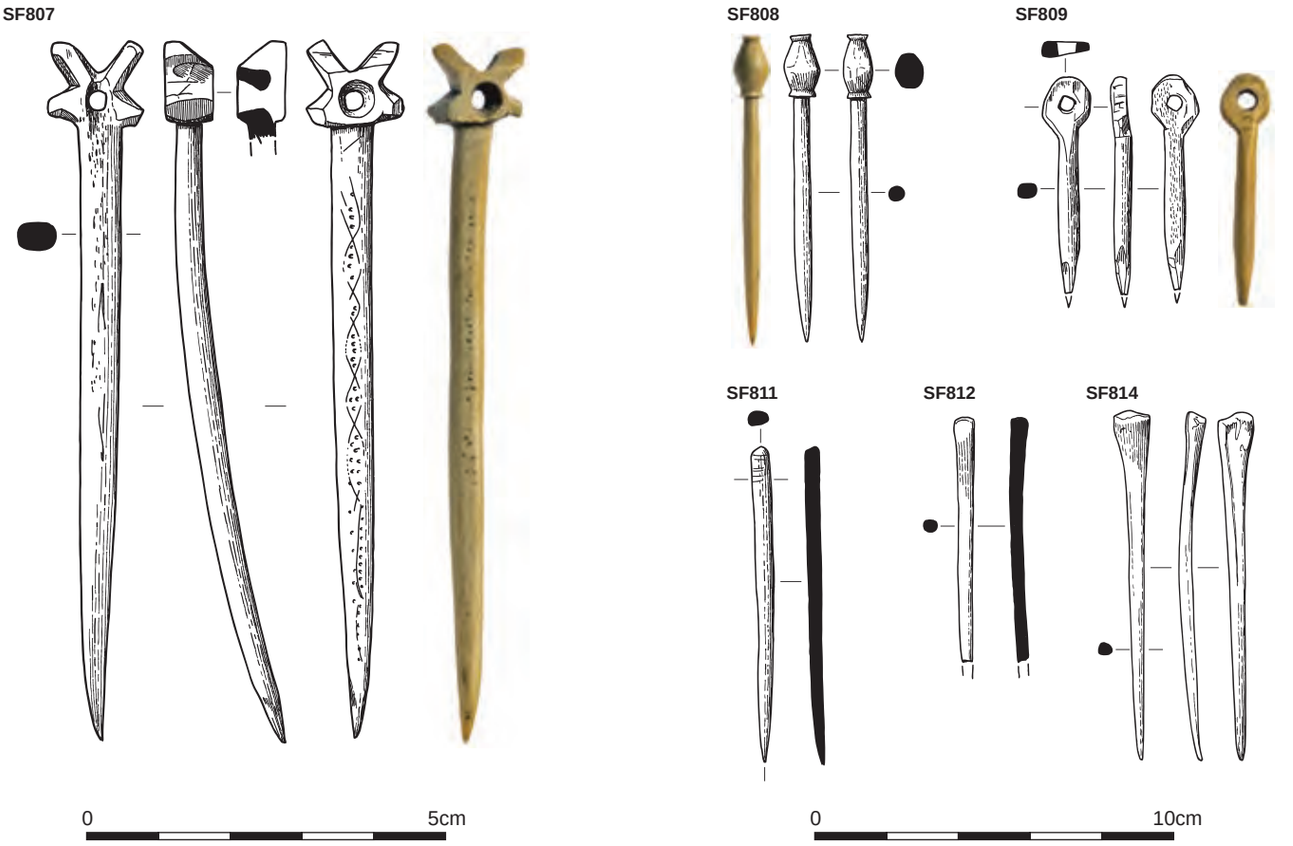

Illustration 5.15
Worked bone pins

knife-trimming remaining. Length: 86mm; head height: 17mm, max. diameter: 10mm × 8mm; shank max. diameter: 4.5mm. Unphased, Context: Benton Layer 1, grid square A6.

SF809 (illus 5.15) Ring-headed pin. Roughly knife-trimmed flat ring head with central circular slightly biconical perforation. The circular-sectioned shank tapers to the tip, which has an old fracture. The whole pin is polished but knife-trimmed facets from shaping the tip are clear, suggesting (along with the short length) that it was reshaped. The fairly rough shape of the head suggests it may also have been modified. Length: 60mm; head diameter: 13mm; thickness: 4mm; perforation diameter: 5mm; shank diameter: 5mm. Unphased, Context: Benton Layer 1, grid square C6.

SF811 (illus 5.15) Pin with decorated head, slightly curved, with rounded head, tapering to a sharp tip. Five fine incised lines around the head, less coherent on one side, are probably decorative. Traces of abrasion from shaping are visible beneath the polish, suggesting it was not used much. Length: 86mm; max. diameter: 4mm. Unphased, Context: Benton Layer 1, grid square B7.

SF812 (illus 5.15) Club-headed pin, finely finished, comprising a bone rod tapering from sub-square, flat-topped head to broken tip. Traces of fine striations are visible under the polish. Length: 68.5mm; max. diameter: 5mm. Unphased, Context: Benton Layer 2, grid square B3.

SF814 (illus 5.15) Pig fibula pin with sub-oval-sectioned shank, tapering to a fine point at one end and a flattened/splayed head at the other. The head utilises the articular end and is unshaped apart from a small abraded facet. Traces of abrasion from shaping can be seen through the polish around the shank. Length: 98mm; head: 10mm × 5mm. Unphased, Context: Benton Layer 2, grid square B4.

Beads

A finely finished barrel-shaped bead (SF821) is worn and smoothed through use, with polish on the ends from being strung alongside other beads. SF910 is a burnt fragment of an unusual decorated bead, but too little survives for further comment.

SF821 (illus 5.16) Barrel-shaped bead with cylindrical perforation and rounded ends. Manufacturing traces all polished away. External diameter: 15mm; perforation diameter: 8mm; height: 13mm. Unphased, Context: Benton Layer 1, grid square C5.

SF910 (illus 5.16) Decorated globular bead fragment; D-sectioned. Diameter: *c* 15mm; around a third survives. Cylindrical perforation (3–4mm in diameter). External U-shaped equatorial decorative groove. Charred black. Length: 11.5mm; height: 9mm; wall thickness: 4–4.5mm. Unphased, Unstratified.

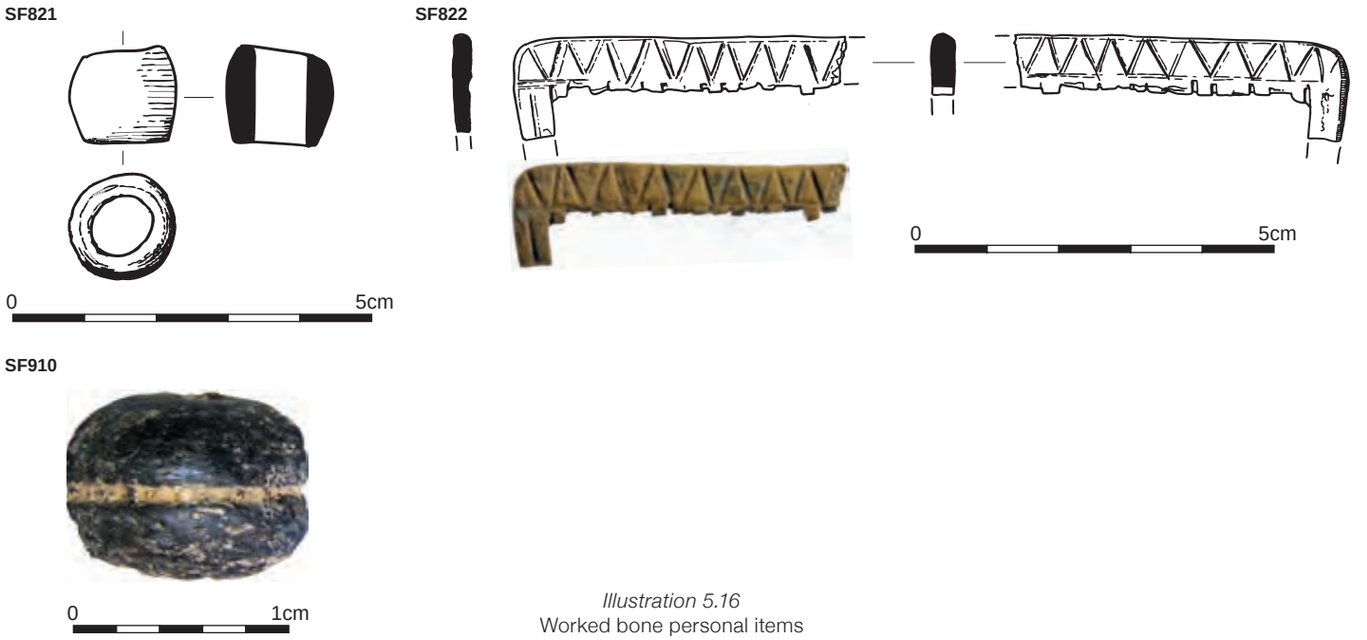

Illustration 5.16
Worked bone personal items

Comb

The comb fragment (SF822) is from a single-sided type with decoration created by fine saw marks on both sides. Single-sided combs are an Iron Age type with a cluster from broch sites in Caithness and the Northern Isles and a smaller group of humpbacked forms found on a variety of site types in southern Scotland, the Isle of Man and Ireland (Hunter et al 2013: 269–70). Securely dated examples from Broxmouth, East Lothian and Howe, Orkney date to the third to first centuries BC and first to fourth centuries AD respectively (ibid), indicating a lengthy period of use and earlier beginnings compared to later, composite/double-sided combs. Decoration is relatively rare within the worked bone and antler assemblage, marking this personal item out as special.

SF822 (illus 5.16) Single-sided comb back fragment decorated on both sides with a sawn zigzag along the back and vertical line down the end. The teeth, one end and part of the other end are all missing. The outer edge of the back is very polished, suggesting extensive use. Length: 46mm; thickness: 3.5mm; back height: 6mm; 4.5 teeth per 10mm. Unphased, Context: Benton Layer 1, grid square D4.

Pin case?

Aside from some handling polish, the pin case (SF823) shows no signs of having been modified, simply utilising a naturally hollow bird long bone. A copper alloy zoomorphic pin (SF741; see section 5.7.2) was apparently discovered within it (Benton 1931: 196). Bird bone needle cases are known from the Viking period, eg five from Jarlshof, Shetland (Hamilton 1956: 123, 146); three each from Brough of Birsay, Orkney and Pool, Sanday (Curle 1982: 61; Smith 2007: 502–3); and one with a female burial at Cnip, Lewis (Welander et al 1987: 170). However, these differ from the Sculptor's Cave example in that they often contain one or more small iron needles, have cut or shaped ends and usually have two opposed perforations in the middle, possibly for attaching to a belt. The Sculptor's Cave example is an altogether more expedient object and may have been selected solely for depositing the pin as, unlike needles, there seems little reason to carry a pin around in a case.

SF823 (not illustrated) A long, naturally hollow bird long bone with both ends broken. Unworked but showing slight handling polish. Length: 128mm; diameter: 10mm. Unphased, Context: Benton Layer 1, grid square C8.

Fitting

A finely shaped bone cylinder (SF241) shows no use-wear to aid understanding its function, but was probably some sort of fitting, such as a handle component or toggle.

SF241 (illus 5.17) Neatly shaped cylinder of hollowed bone, possibly a pig phalanx, with externally bevelled abraded facets to shape the ends. The bone is naturally narrower in the middle and there is no use-polish or differential wear. Length: 51mm; external diameter: 18mm; internal diameter: 12mm. Phase: 1, Block: 2.2, Context: IIc23.

Unfinished

There are five unfinished objects: a peg (SF70), three pins (SF805, SF810, SF816) and a pendant (SF820). All are at an advanced stage of shaping and lack only the final smoothing and polishing of rough tool marks. With so little manufacturing evidence here (there are no offcuts or less advanced roughouts), it is difficult to know whether they were made at the cave or brought there in this state.

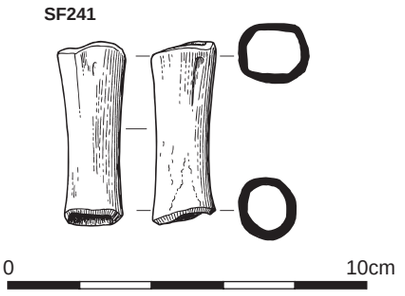

Illustration 5.17
Worked bone fitting

SF70 (illus 5.18) Unfinished canine tooth peg. A short fragment which tapers towards both ends with the thickest section around two-thirds of the way along. The entire shape is modified by long abraded facets. Length: 29mm; max. diameter: 5mm. Unphased, Unstratified (Area III).

SF805 (illus 5.18) Unfinished pig fibula pin. Long bone with articular end forming head, tapering to chipped point. Knife-trimmed facets down the edges from shaping and no polish, suggesting it is unfinished. Length: 91mm; head: 13mm × 5mm. Unphased, Context: Benton Layer 1, grid square C7.

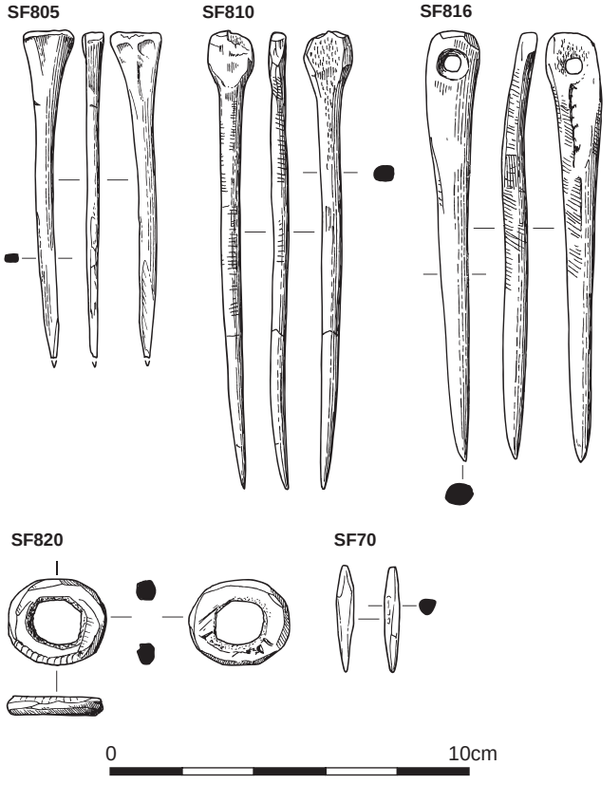

Illustration 5.18
Unfinished worked bone artefacts

SF810 (illus 5.18) Unfinished pig fibula spatula-headed bone pin in two refitting fragments with uneven knife-trimmed facets around the edge of the head, tapering to an oval-sectioned shank with round-sectioned sharp tip. The shank shows longitudinal abrasion from shaping, lateral abrasion and only slight polish around the tip. Length: 126mm; head length: 12mm, width: 13mm, thickness: 4mm; shank diameter: 5mm × 4mm. Unphased, Context: Benton Layer 1, grid square A5/B6.

SF816 (illus 5.9, 5.18) Perforated pin formed from long bone, tapering from rounded head to sharp-pointed tip. The perforation is biconical with circumferential striations around the edges. Abraded facets around the head and edges, suggesting it was not finished. An area up to two-thirds of the length from the tip is slightly polished, probably from handling while working. Length: 119mm; max. width: 14mm; thickness: 5mm; perforation diameter: 4.5mm. Unphased, Context: Benton Layer 2, grid square D2.

SF820 (illus 5.18) Unfinished pendant. An oval ring formed from a section of red deer antler. The edges were possibly sawn and the corners removed by knife-trimming. The visible tool marks suggest this is a roughout. External diameter: 27mm × 24mm; thickness: 5mm; perforation diameter: 14.5mm × 13mm. Unphased, Context: Benton Layer 1, grid square C6.

Miscellaneous

Several boar tusks were excavated but only one has been modified by an abraded groove around the wide end; possibly an attempt to create a pendant (SF849). Fragments of split and notched boar tusks from Early Bronze Age contexts at Tofts Ness, Sanday were interpreted as possible ornaments (Davies 2007: 337), as were two notched boar tusks from Bayanne, Shetland (Smith 2014: 185, fig 3.66 4 and 5).

The red deer antler (SF847) with a series of oval hollows worked into the side of the beam is an unusual artefact which is not readily paralleled. Benton recorded that this artefact was from very low down in the sequence of deposits, some two feet (*c* 0.6m) below the non-anthropogenic clay that started to form in the Middle Bronze Age (section 2.2.3), and highlighted certain similarities with Mousterian chopping blocks, though noted that they are quite different in form and material (1931: 188). The low stratigraphic position of this artefact is intriguing and it may relate to pre-Middle Bronze Age use of the cave, as evidenced by the lithics (see section 5.6). It may have functioned as some sort of tool rest.

The sub-rectangular perforated plate (SF824) could have had a variety of functions, including use as a weight or spacer, though fine striations around the perforation suggest it may have been used in conjunction with a point, perhaps during textile-working of some sort.

SF119 (not illustrated) Polished red deer ulna fragment, broken at both ends. There are no working traces, but it has handling polish on the shaft. Length: 111mm; width: 11mm; thickness: 7mm. Phase: 1, Block: 2.3, Context: IIb16 – northernmost end.

SF824 (illus 5.19) Perforated sub-rectangular plate with rounded corners, made from a scapula. The central perforation is biconical and has a faint incised outline, possibly from marking out its

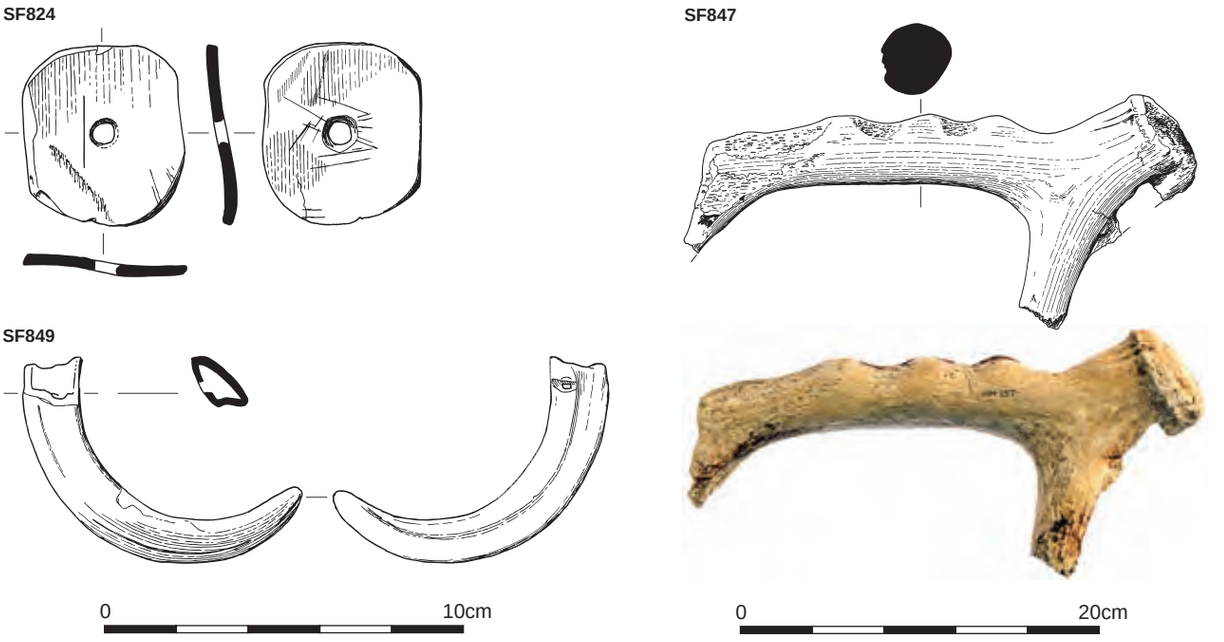

Illustration 5.19
Miscellaneous worked bone, tooth and antler artefacts

position prior to perforating. Striations radiating out from the perforation across the plate on both sides are probably from use along with a pointed implement. The edges were abraded to shape and there is slight polish around the perforation. Its function is unclear but could be related to weaving. Length: 50mm; width: 43mm; thickness: 3mm; perforation diameter: 6mm. Unphased, Context: Benton Layer 1, grid square D7.

SF847 (illus 5.19) Worked shed red deer antler with brow and bez tines broken off, and broken at the top of the beam before the junction. The edge of the beam has four evenly spaced oval indents. The surface is eroded, making it difficult to see how the indents were formed. The top and bottom indents are larger, possibly due to post-depositional degradation. Total length: 280mm; beam max. diameter: 40mm; indents (from burr to top): 41mm × 22mm, 21mm × 24mm, 26mm × 22mm, 27mm × 38mm. Unphased, Context: Benton natural deposits, 'two feet below' Layer 2, grid square A0.

SF849 (illus 5.19) Boar tusk with groove abraded into the wide end before breaking. Otherwise unworked. Length: 85mm; width: 18.5mm; thickness: 9mm; perforation diameter: at least 5mm. Unphased, Context: Benton Layer 1, grid square B5.

Shell discs

Eight worked shell discs (SF930–7) were discovered during Benton's excavation, six of which are so similar in size (15mm in diameter and *c* 3mm thick) it seems likely they were a set; there is also one larger and one smaller disc (19mm and 9.5mm in diameter respectively). Most are quite abraded but three still preserve flattened, abraded edges. The natural growth lines in the shell have created quite a decorative striped effect. Small stone discs are usually interpreted as gaming counters (eg Wilson 1998: 180) and a similar function is possible for these (also see four stone discs in sections 5.4.3 and 5.5). Worked shell is relatively rare, but this could be due to preservation and recognition issues as it would have been a readily available resource to any community near the coast and a fairly easy material to work.

SF930 (illus 5.20, 5.25) Small, thin and sub-oval. Diameter: 9.5mm × 11mm; thickness: 1mm. Unphased, Context: Benton Layer 1.

SF931 (illus 5.20, 5.25) Smooth, worn, slightly irregular. Diameter: 15mm; thickness: 3mm. Unphased, Context: Benton Layer 1.

SF932 (illus 5.20, 5.25) Finely shaped with flattened edge. Diameter: 15mm; thickness: 3.5mm. Unphased, Context: Benton Layer 1.

SF933 (illus 5.20, 5.25) Worn, irregular, rounded edges. Diameter: 15mm; thickness: 3.5mm. Unphased, Context: Benton Layer 1.

SF934 (illus 5.20, 5.25) Finely shaped and slightly abraded with flattened edge. Diameter: 15mm; thickness: 3.5mm. Unphased, Context: Benton Layer 1, grid square A3.

SF935 (illus 5.25) Very worn. Diameter: 15mm; thickness: 3mm. Unphased, Context: Benton Layer 1, grid square C8.

SF936 (illus 5.25) Very worn. Diameter: 15mm; thickness: 3mm. Unphased, Context: Benton Layer 1.

SF937 (illus 5.25) Very worn with flattened edge. Diameter: 19mm; thickness: 4.5mm. Unphased, Context: Benton Layer 1.

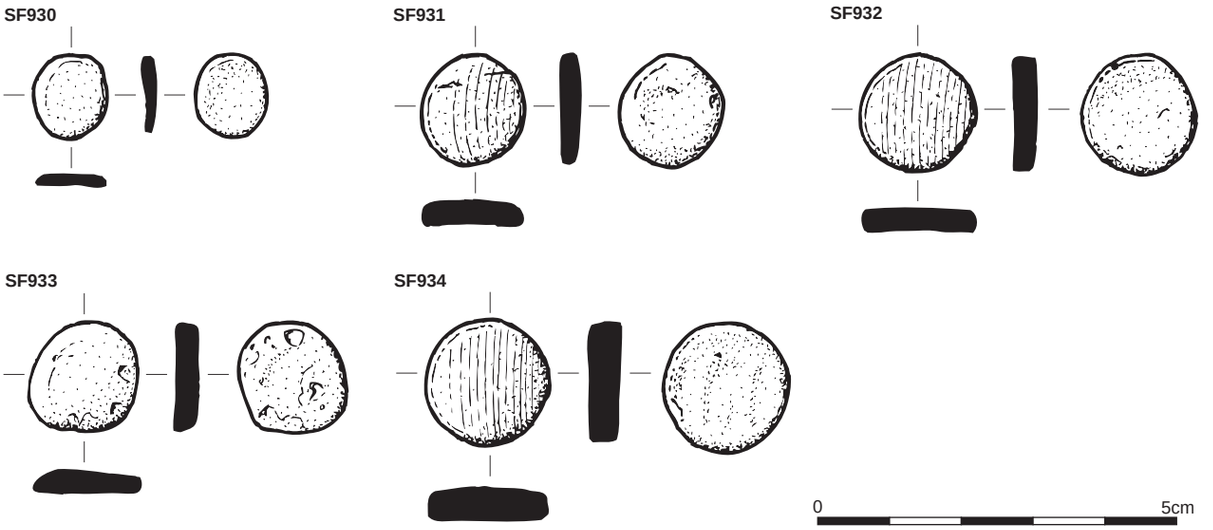

Illustration 5.20
Worked shell discs

5.4 Coarse stone

Gemma Cruickshanks

5.4.1 Summary

Fifteen coarse stone artefacts were recovered: nine by Benton and six by the Shepherds (summarised in table 5.10). A range of cobble tools with different types of wear is present, along with four finely shaped whetstones/burnishers for sharpening blades or sheet metalworking. Four discs may have been gaming counters. Few of the objects can be related to specific phases: a pounder/hammer, hammer and grinder were recovered from Phase 2 (Iron Age), while a grinder/hammer comes from Phase 1 (Late Bronze Age) deposits.

5.4.2 Discussion

The five cobble tools were all recovered by the Shepherds and are categorised according to the nature of their wear (as in Ballin Smith 1994: 196). The grinder (SF944) displays a bevelled ground facet on one end from use at around a 45° angle. Two multi-functional cobble tools also show grinding wear (SF941, SF942) as well as flake scars from use as hammerstones. A third multi-functional tool (SF940) was similarly used as a hammerstone but also has a band of peckmarks on one end from use as a pounder. SF943 is a single-function hammerstone with extensive bifacial flaking on one end. Grinders, pounders and hammers would have had a wide range of functions, from food preparation to dressing stone, and they are found throughout prehistory on most sites. All are made from locally available water-worn cobbles and have been modified only through use.

In contrast, the four stone tools related to metalworking are all heavily modified in shape, though all are still made from locally available stone types. Whetstones were used during the initial shaping and subsequent maintenance/sharpening of metal blades and provide a useful proxy here since no metal blades were recovered. SF945 has finely shaped convex edges

Table 5.10
Summary and phase distribution of coarse stone assemblage

Group	Type	Phase 1	Phase 2	Unphased	Total
Cobble tool	Grinder	–	1	–	**1**
	Hammer	–	1	–	**1**
	Grinder and hammer	1	–	1	**2**
	Pounder and hammer	–	1	–	**1**
Metalworking	Whetstone	–	–	2	**2**
	Burnisher	–	–	1	**1**
	Cushion stone	–	–	1	**1**
Miscellaneous	Disc (gaming counter?)	–	–	4	**4**
	Perforated stones	–	–	2	**2**
Total		**1**	**3**	**11**	**15**

and faces, suggesting it may have been a burnisher or touchstone rather than a whetstone, which usually has concave use-wear. However, it may also simply be a whetstone which saw little to no use. Cushion stones (SF10) are distinctively shaped sub-rectangular or trapezoidal tools with finely faceted edges and corners and were used as a work surface/anvil for fine metalworking, though they may also have had hammering, sharpening and polishing functions (Needham 2011: 114). Such stones tend to be associated with Early Bronze Age contexts, often graves, but similar tools are likely to have been used in the later prehistoric period too. A great deal of time and effort would have been expended in shaping these specialist tools and it seems unlikely they were casually discarded here. The presence of a cushion stone and possible burnisher is particularly interesting since there is no other evidence of metalworking from within the cave.

The four stone discs vary in stone type and dimensions but were all finely shaped and, in one case, also highly polished (SF952). Their edges were carefully abraded flat, though in two cases (SF949, SF951) one face is now spalled. Small discs are often interpreted as gaming counters (eg Batey 1989: 191; A Clarke 2007: 369; Wilson 1998: 180), though other interpretations are possible, such as counters for tallying (see also eight shell discs; sections 5.3, 5.5). Gaming counters are rare in Scotland until the Roman Iron Age (Hall and Forsyth 2011), which would place these objects in the later phase of the site's use, though all four were unstratified.

The perforated red sandstone fragment (SF948) has a smooth, slightly biconical perforation and a smooth concave notch on one face. Its outer edge has degraded, hindering further identification, though the smoothed notch suggests it may have been used to abrade a curved object. SF950 is a crude sandstone disc with a very irregular hole near one edge and may be entirely natural.

Spatial analysis of the nine artefacts with surviving contextual information shows that they were recovered throughout the cave. There are no clusters which would suggest activity areas or caches (see illus 5.68B).

Though the assemblage is small, it comprises an interesting but restricted range of artefacts. One might expect a higher number of cobble tools if this was a normal domestic site, though, since all were recovered by the Shepherds, it is possible they were not recognised by Benton and her team. Certain typical later prehistoric coarse stone artefacts are notable by their absence, especially querns, quern rubbers, spindle whorls and hide-rubbers (though the subtle staining on the latter may not have been recognised during excavation). Heavily modified/finely shaped stone artefacts are unusually abundant in this assemblage (9 of 15), reinforcing the idea that this is not a normal domestic site but one where specially selected objects were deliberately deposited.

5.4.3 Catalogue

Cobble tools

SF940 (not illustrated) Pounder and hammer. Oval, fine-grained siltstone cobble with one end extensively flaked from use as a hammer. The other end has a band of pecking extending down the edges from use as a pounder. Length: 62mm; width: 63mm; thickness: 45mm; pecked band width: 24mm. Phase: 2, Block: 1.3, Context: Ib15.

SF941 (illus 5.21) Grinder and hammer. Flat oval cobble with flake scars around one side of both ends from hammering. The edge of long ground facets can be seen on the edges of the flaking, indicating that it was used as a grinder before it was used for hammering. Length: 129mm; width: 97mm; thickness: 32mm. Phase: 1, Block: 1.1, Context: Ia27.

SF942 (illus 5.21) Grinder and hammer. A long, flat oval cobble with bifacial ground facet on the wider end and a single large flake scar on the other. The ground facet is quite smooth and has vertical striations, suggesting a back-and-forth grinding motion. Length: 134mm; width: 57mm; thickness: 21mm; facet length: 42mm, thickness: 6mm and 9mm. Unphased, Unstratified.

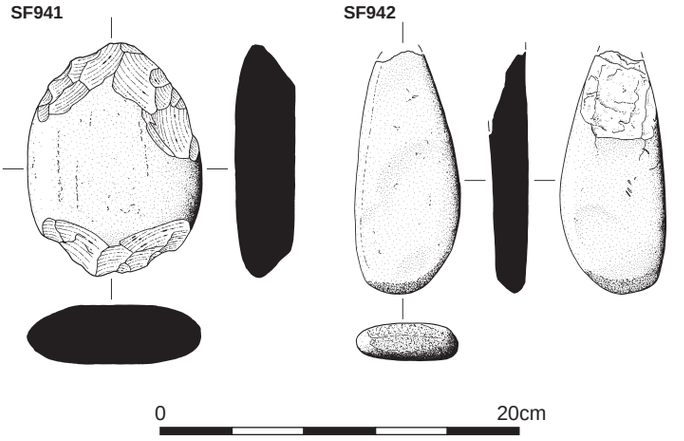

Illustration 5.21
Worked stone cobble tools

SF943 (not illustrated) Hammer. Large oval cobble with bifacial flaking at one end from hammering. Length: 160mm; width: 88mm; thickness: 67mm. Phase: 2, Block: 1.3, Context: Ib15f.

SF944 (not illustrated) Grinder. A flat, ovoid, water-worn quartz-rich cobble with a bevelled ground facet along the middle of the narrower end. The facet could be bifacial but is predominantly worked on one side. Length: 100mm; width: 75mm; thickness: 16.5mm. Phase: 2, Block: 2.6, Context: IIc11.

Whetstones/burnisher and cushion stone

SF10 (illus 5.22) Cushion stone or anvil. Entirely modified to an irregular sub-diamond shape. The edges are all highly polished and laterally convex apart from one edge which has a natural flaw. The longest edge is slightly concave longitudinally. The faces are also smoothed and convex but not as polished. One face has a group of V-sectioned cut marks and a cluster of fine peckmarks, suggesting use as an anvil/work surface. This tool is highly modified and used and was probably a non-ferrous metalworking tool. Length: 44mm; width: 37mm; thickness: 22mm. Unphased, Unstratified (Trench I).

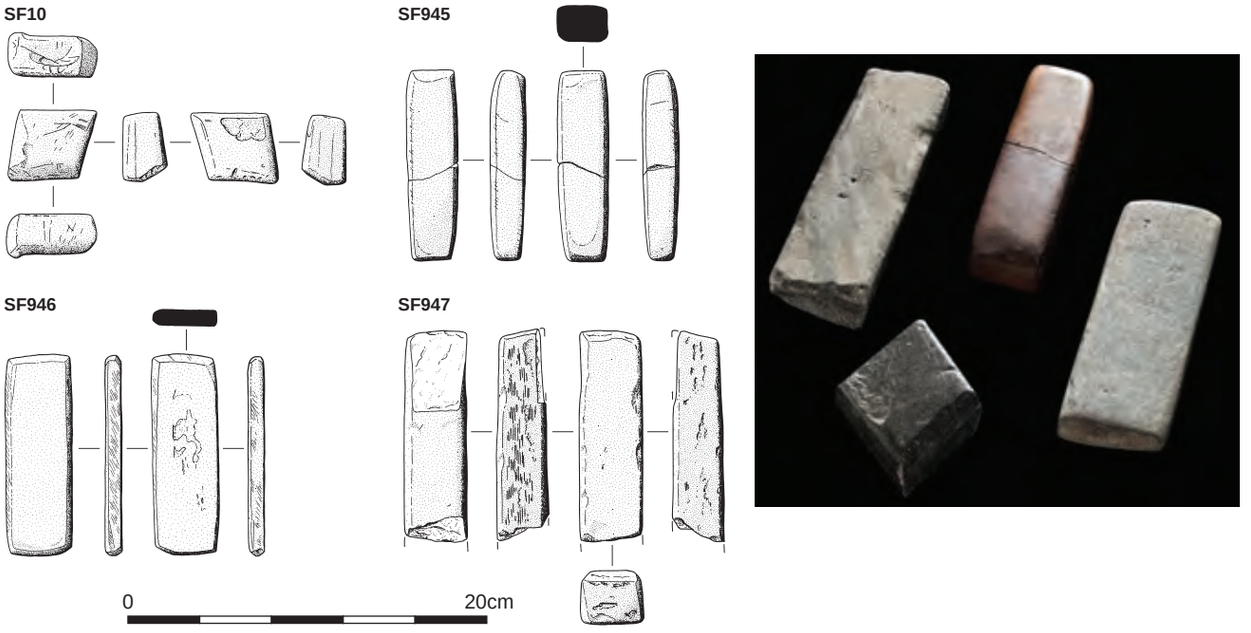

Illustration 5.22
Whetstones and cushion stone. Photograph clockwise from top left: SF947, SF945, SF946, SF10

SF945 (illus 5.22) Whetstone or burnisher. Finely shaped, long, rectangular, fine-grained siltstone bar. The faces, edges and ends are all convex and smoothed, suggesting it was either a burnisher or a whetstone which has not seen much use. In two refitting fragments, one of which is stained dark (found in separate grid squares). Length: 106mm; width: 28mm; thickness: 20mm. Unphased, Context: Benton Layer 1.

SF946 (illus 5.22) Whetstone (or palette). Finely shaped, flat, rectangular, fine-grained micaceous siltstone bar with slightly concave faces and convex edges and ends. Very thin for a whetstone and could also be a palette. There are fine striations around the edges from shaping but the faces are very smooth. Length: 101mm; width: 37mm; thickness: 9mm. Unphased, Context: Benton Layer 1, grid square D4.

SF947 (illus 5.22) Whetstone. Long, rectangular, fine-grained siltstone bar with smoothed faces and edges, one end convex and smoothed, the other end broken. Part of one face has spalled. The edges are slightly concave in places, suggesting use as a whetstone. The natural bar shape of the stone has been augmented by smoothing the end and edges, rather than being an entirely modified type. Length: 117mm; width: 35mm; thickness: 28mm. Unphased, Context: Benton Layer 1, grid square B4.

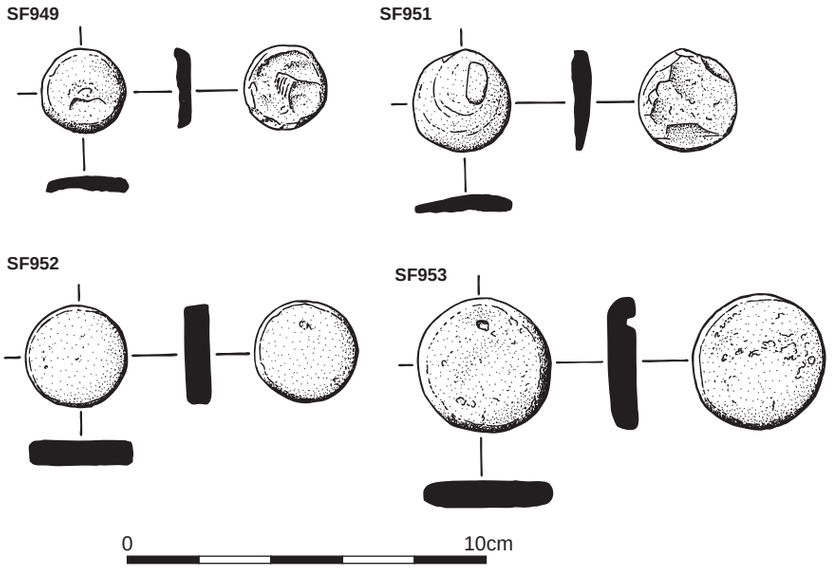

Illustration 5.23
Worked stone discs

Discs

SF949 (illus 5.23, 5.25) Finely shaped mudstone disc with smooth edges. One face spalled. Diameter: 23mm; thickness: 5mm. Unphased, Unstratified.

SF951 (illus 5.23, 5.25) Slate disc with one face spalled. Striations around the edge from abrading to shape. The intact face is convex and looks unmodified. Diameter: 27mm; thickness: 5mm. Unphased, Unstratified.

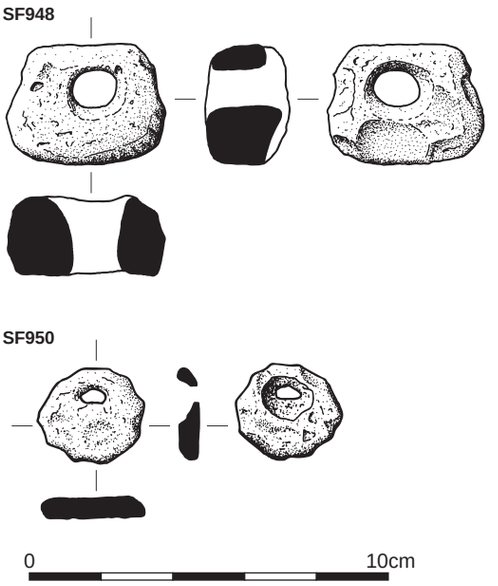

Illustration 5.24
Perforated stones

SF952 (illus 5.23, 5.25) A carefully shaped and smoothed stone disc with highly polished, flat faces and a slightly facetted edge. The polish and dark grey patina obscure the stone type. Diameter: 28mm; thickness: 7mm. Unphased, Unstratified.

SF953 (illus 5.23, 5.25) Pale brown sandstone disc with a slightly faceted edge and smooth faces, one of which is flat, the other slightly convex. Diameter: 37mm; thickness: 8mm. Unphased, Unstratified.

Perforated Stones

SF948 (illus 5.24) Sub-rectangular red sandstone nodule with cylindrical/slightly biconical perforation close to edge. There is a smoothed, concave depression beside the perforation on one side. Length: 44mm; width: 32mm; thickness: 22mm; perforation diameter: 10mm; depression: 13mm × 19mm. Unphased, Context: Benton Layer 2, grid square C3.

SF950 (illus 5.24, 5.25) Irregular sandstone disc with rough semi-circular perforation near edge. The shape is very uneven and could be natural. Diameter: 27mm; thickness: 6mm; perforation diameter: 4mm × 7mm. Unphased, Unstratified.

5.5 Comment on the gaming pieces

Mark A Hall

The identification of eight shell (SF930–7) and four stone (SF949, SF951–3) discs as gaming pieces at the Sculptor's Cave (see section 5.3, illus 5.20; and section 5.4, illus 5.23) is robust and the use of shell as a material should occasion no surprise since no material seems to have been off-limits for use as gaming pieces. Indeed, Benton (1931: 201) also mentions the presence of clay discs at the Sculptor's Cave, although these do not survive in the site archive (Gemma Cruickshanks has suggested the clay appellation may have been a misidentification of some of the shell pieces; pers comm). The two groups, in shell and stone (illus 5.25), strengthens their identification as gaming pieces, since contrasting materials form a suitable distinction for opposing pieces on a gaming board, although the distinction can be made through decoration and colour if the same material is used for both sets of pieces (Hall 2014; 2016a). With such simple pieces as those from the Sculptor's Cave and bearing in mind the circumstances of Benton's work, it is possible that further examples were missed during excavation. Their disc or counter forms suggest that they would have been most suitable for some variant of merels/morris/mill or ludus latrunculorum (adapted on the fringes of the Roman Empire into a series of tafl-type games; Hall and Forsyth 2011). Although unstratified, a likely Roman Iron Age date permits comparison with a broad range of counters most recently discussed in relation to the burial at Waulkmill, Tarland, Aberdeenshire (Hall 2016b).

Less certainly, there are two further stone discs and a bone piece that may be gaming related. Both stone discs (SF948, SF950; illus 5.24, 5.25) have perforations. Occasionally gaming pieces are pierced to serve as amulets but there is no sign of wear in the perforations and the catalogue entry for SF950 (section 5.4.3) notes the perforation may be natural. There is no obvious reason why a perforation, natural or otherwise, would prevent use as a gaming piece (and it would distinguish a piece from others if necessary), but it is unusual for such small and ephemeral pieces. SF848, a bone point with a fashioned head (illus 5.10), has an unclear function. Its crude anthropomorphism may suggest its use in magical practice or that it is unfinished. Its form could be compatible with a pegged gaming function.

Illustration 5.25
Gaming pieces

The unstratified nature of the Sculptor's Cave gaming pieces makes it impossible to know under what conditions they were deposited. There is, however, no direct indication of any funerary

association and no obvious association with any hearth, which could have implied a social and sociable passing of the time.

Essentially there are three main mechanisms by which the gaming pieces might have come to be deposited in the cave: as burial goods; votives; or as playthings of the living, discarded/abandoned or lost in the cave. A small number of geographically widespread Scottish caves with evidence for the presence of gaming pieces can potentially provide support for each of these possibilities.

Excavations at Borness Cave, Dumfries and Galloway, in the 1870s produced juvenile human remains (Clarke 1875: 307; 1878: 675) now known to be of Late Bronze Age date (Sheridan et al 2015: 197). A range of mainly Late Iron Age material culture was also reported, including a hemispherical gaming piece of bone (Corrie et al 1874: 497, no. 114 and plate XXII) typical of the second and third quarters of the first millennium AD and used in a tafl-type board game. Also reported was a group of small bone pegs (ibid: 493 and plate XVIII) which could have been readily used on a peg-hole gaming board. Contexts of deposition are hard to deduce from the excavation report but the material was presumably deposited as a consequence of folk playing games in the cave.

Further afield, finds from recent excavations at the Church Hole cave (part of the Palaeolithic cave complex of Creswell Crags in Derbyshire and Nottinghamshire, England) included objects that testified to reoccupation in the medieval period (particularly the twelfth and the fifteenth/sixteenth centuries), including a block of limestone incised with a double merels board (Hall and Pettitt 2008; for a wider discussion of bandit's lairs see Dowd 2015: 190–4). The indeterminate stratigraphy meant that the board could not be assigned with certainty to the earlier or later episodes: a later medieval context might suggest shepherds penning stock in the cave and playing board games, while the earlier context might suggest the cave as the abode of brigands who indulged in gambling and games-play (Hall and Pettitt 2008: 140).

The evidence from Irish caves confirms this general picture and also extends it with the addition of Viking Age activity. The caves of Barntick (Co. Clare) and Kilgreany (Co. Waterford) have a long history of use, with Neolithic and Bronze Age burials, and the deposition of a Bronze Age hoard at Kilgreany. Dowd (2015: 169–71) suggests that this votive and ritual background may have given the caves an ancestral sacrality, lending support to the interpretation that the single antler parallelepiped die from each cave may themselves represent votive deposits. The closest parallels for these dice, as Dowd observes, come from the double burial of two 30-year-old males at Knowth (which also included stone and bone gaming pieces; Eogan 1974: 73–80; 2012: 23–6; Johnson and Riddler 2012: 419–22; Hall and Forsyth 2011: 1328–30). Cloghermore Cave is of particular interest because of its gaming pieces (Connolly and Coyne 2000; Connolly et al 2005; Dowd 2015: 201–7). One of these, a pegged bone piece (no. 135), was part of a select group of grave goods associated with the burial of the incomplete remains of an adult and three children, deliberately sealed in a pit in the tenth century (Connolly et al 2005: 58). Viking burial rites valued the burial of gaming kit with the deceased, including in elaborate ship-burials (Hall 2016c). The Cloghermore gaming piece is a typical barrel-shaped, pegged variety for use with hnefatafl or the Irish variant fidcheall. A second example was also recovered from the cave, along with a hemispherical piece (with a peg socket), also commonly used for tafl games (Connolly et al 2005: 101–3) though scarcer in Ireland than in other parts of the Viking world (for the only Irish burial example, from Kilmainham, see Harrison and O'Floinn 2014: 201–2). Neither of these latter examples, nor the five stone discs recovered from across the cave (ibid: 123), which could also be gaming pieces, has any clear association with funerary rites.

Returning to the Sculptor's Cave, we see both votive deposition and mortuary activity in the Roman Iron Age. Parallels from other caves in Scotland, England and Ireland (the evidence from Continental Europe remains to be explored) supports both funerary and votive deposition and also short-term 'domestic' occupation in the context of gaming equipment. However, given the mortuary role of the Sculptor's Cave at this time, the strongest weight for these gaming pieces inclines towards deposition in a funerary/votive context, possibly attendant on the ritual use of board games during the Iron Age.

5.6 Lithics

Torben Bjarke Ballin

5.6.1 Introduction

The assemblage from the Sculptor's Cave comprises 33 pieces including flint (11 pieces), silcrete (7), flint or silcrete (5), quartz and rock crystal (9) and agate (1) (table 5.11). In contrast to many other lithic assemblages from Moray, these finds are generally not abraded by aeolian activity. The two most diagnostic objects are also the only two recovered (or at least retained) by Benton. One is a bifacial knife (SF880; illus 5.26) with invasive retouch, which is definitely post-Mesolithic in date (Butler 2005) but equally definitely pre-dates the Middle Bronze Age (Clark 1936: 47). A scale-flaked knife (SF881; illus 5.26) is dated to the same broad chronological framework (Butler 2005). The composition of the assemblage indicates that some primary production took place at the site and probably the use of manufactured implements. It is not possible, on the basis of the small number of lithics, to define any site activities in greater detail. A full catalogue of the lithic material and further discussion is contained in the site archive.

5.6.2 Catalogue

SF880 (illus 5.26) Tip fragment of bifacial knife; tertiary piece; fine-grained, small-dotted, orange flint. Too slender to be the fragment of a leaf-shaped point. Full bifacial retouch. One lateral side has steep blunting retouch, whereas the other side (the cutting edge) has more acute bifacial scale-flaking. Length: 35mm; width: 29mm; thickness: 5mm. Unphased, Context: Benton Layer 1.

SF881 (illus 5.26) Tertiary medial–distal fragment of scale-flaked knife on elongated flake or blade; fine-grained, yellow, mottled flint. The left lateral edge has relatively acute retouch (scale-flaking), whereas the retouch of the opposed lateral side is steep

Table 5.11
Lithics assemblage

	Flint	Silcrete	Flint/silcrete	Quartz/ rock crystal	Agate	Total
Chips	5	1	3	7	1	**17**
Hard percussion flakes	–	–	1	–	–	**1**
Indeterminate flakes	2	1	1	2	–	**6**
Indeterminate pieces	–	5	–	–	–	**5**
Bifacial knives	1	–	–	–	–	**1**
Scale-flaked knives	1	–	–	–	–	**1**
Notched pieces	1	–	–	–	–	**1**
Bipolar cores with lateral retouch	1	–	–	–	–	**1**
Total	**11**	**7**	**5**	**9**	**1**	**33**

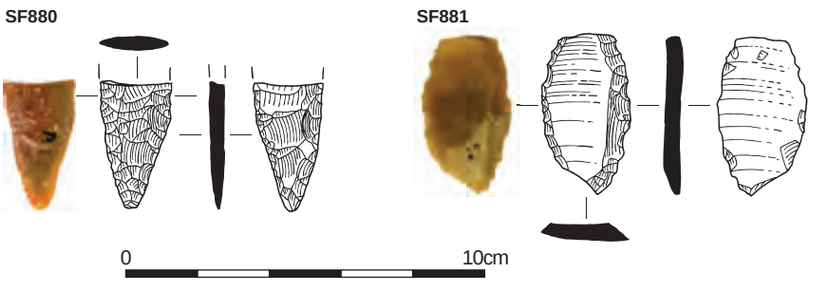

Illustration 5.26
Lithics

and blunt. The former edge (the cutting edge) has some use-wear, such as flat spin-offs on the ventral face and denticulation (damage) towards the distal end. Length: 43mm; width: 25mm; thickness: 5mm. Unphased, Context: Benton Layer 1, grid square C3.

5.7 Non-ferrous objects

5.7.1 Late Bronze Age objects

Katharina Becker, Trevor Cowie, Lore Troalen and Jim Tate

Introduction

From the time of Sylvia Benton's original excavation, the Late Bronze Age metalwork from the Sculptor's Cave has been recognised as a key assemblage of the Scottish Late Bronze Age. The range of objects recovered by Benton included penannular bronze bracelets and a number of small penannular rings of bronze with gold foil cover, which have been termed 'ring money' or 'hair rings'. The number and range of types expanded with the recovery of further material during the 1979 excavations.

The original group of bronzes, particularly the bracelets, was formerly seen as consisting of types directly inspired by continental forms, if not actually direct imports reflecting colonisation from the Continent (Benton 1931: 184, 203). Indeed, a range of metalwork from north-east Scotland – especially ornaments – appeared to impart a distinctive character to the region, justifying the identification of what Coles termed the 'Covesea Phase' as a separate facies of the Late Bronze Age in Scotland (Coles 1960: 39–41, 54–5). Among the artefact types which characterised this phase were penannular bracelets (especially those with outwardly projecting terminals) and exotic neck rings, as seen in the hoard from Braes of Gight, Aberdeenshire (Muirhead 1891). Few absolute dates were available to Benton and Coles for either the Scottish or southern British Late Bronze Age and rather distant continental comparanda provided both chronological and cultural context for the material they were working on. In the light of later research, the grounds for such direct connections with the Continent became less sustainable and the appearance of these types is now better understood as a regional manifestation of widespread fashions in personal ornament. Nevertheless, even if the connections are more diffuse than was once thought, they still show that communities in north-east Scotland were involved in a widespread network of contacts (O'Connor 1980; Cowie 2010).

The Sculptor's Cave assemblage consists of at least five (possibly six) penannular bronze bracelets (three of them complete, the remainder represented by fragments); fragments of two bronze pins; and, lastly, ten small penannular rings mostly of copper, some or all of which may originally have been covered in gold foil. This represents one of the few associated finds of these small penannular rings from Scotland – where they are in any case by no means common – or indeed within Britain and Ireland as a whole, and makes the assemblage of unusual interest.

A number of small corroded bronze fragments, recovered by the Shepherds, are too small to be identified to type. The marked absence of objects types, such as axe-heads and small tools, that would tend to characterise a settlement assemblage is nonetheless striking.

The few available radiocarbon determinations for Scottish metalwork indicate reasonably close alignment with the wider British sequence, and the need for radical revision of most aspects of Coles' original Late Bronze Age scheme has long been recognised (ScARF 2012: section 1.2.5 and table 2). Conventionally, the Sculptor's Cave assemblage (and the eponymous Covesea

Phase as defined by Coles) would equate with the Ewart Park Phase in England (cf Burgess 1968; Needham et al 1997; Rohl and Needham 1998). However, in the light of the Bayesian analysis of the radiocarbon dates now available from the site, which suggests a sequence of use beginning probably *1050–975 cal BC* (chapter 4), there is now scope for reassessment of the dating of the Late Bronze Age metalwork.

The penannular bracelets

Three complete penannular bracelets and a number of separate fragments of bracelets (representing at least three more) were found (illus 5.33, 5.62). Although elsewhere described as armlets (eg Coles 1960), the term bracelet better reflects their size, in keeping with the accepted definition of a bracelet as an ornament designed to be worn on the wrist or lower arm and reserving the term armlet for ornaments of sufficient size to be worn on the upper arm.

Morphology

Three complete bracelets (SF728, SF729, SF731/SF796) are of squat oval outline when viewed in plan and have a D-shaped cross-section (that is, with a flat inner surface against the skin as worn and a curved outside face) but distinctly flattened sides. Towards the terminals, the body reduces in thickness slightly before expanding to form irregularly expanded terminals, with the expansion restricted to the outside. Although Benton thought the expanded terminals of the bracelets had been hammered ('beaten up from the inside'), in our view the grooves on SF728 and SF729 certainly appear to have been cast, and there seems no reason why the terminals too should not have been cast. The degree of expansion is variable: pronounced in the case of SF728 and SF729, both with transverse ribbing on the outer part of the bracelet near the ends, and of SF731/SF796, but much less so in the case of the bracelets represented by SF730 and SF732, which are undecorated (illus 5.33). Bracelet SF730 differs from the rest in having no notable expansion or swelling of the terminals, no decoration and a D-shaped cross-section. The two fragments, SF795 and SF391, which may be part of the same object, represent bracelets that are thinner than the other examples and oval in cross-section.

Neither of these forms, distinguishable by their terminals, are datable by their association at the Sculptor's Cave, beyond a likely affiliation with the Late Bronze Age horizon beginning probably *1050–975 cal BC* (see chapter 4).

Discussion

At a time when dating was almost entirely dependent on comparative typology, Benton sought parallels among continental Late Bronze Age cultures, comparing the bracelets with more outward projecting terminals with continental bracelet forms, particularly those from the Swiss Lake settlements (1931: 182). The direct correlation of these bracelets with intrusive population groups has, however, been demonstrated to be problematic (eg O'Connor 1980: 212–13), and it can be argued that the Scottish bracelets may be better seen as local interpretations of international forms. This tends to be supported by the compositional profile of the copper alloys (Cowie et al 1998) and reflects similar changes in perception over the supposed continental origin of pottery forms from the cave (see section 5.2.1).

The presence of fragments of clay moulds for bracelets among the Late Bronze Age metallurgical debris found during excavations at Birnie, near Elgin, demonstrates that such ornaments were being manufactured in the environs of the Sculptor's Cave (Hunter 2006c; 2007c), and the broad sweep of territory from Fife to the inner Moray Firth is the core region for a distinctive series of hoards in which ornaments predominate or form a significant component. Associated finds, other than those from the Sculptor's Cave, include important hoards from Braes of Gight, Aberdeenshire; Balmashanner, Angus; Auchtertyre, Morayshire; Wester Ord, Ross-shire (for references to these see Coles 1960: 94–5, 98–9, 120–1); Glentanar, Aberdeenshire (Pearce 1971; 1977; an 1843 reference to the *Aberdeen Journal* cited in Canmore ID 33967 indicates about 30–40 bracelets were found here); Clockmaden, Perthshire (Cowie and Reid 1986) and St Andrews, Fife (Cowie et al 1991; 1998). These are broadly datable to the Ewart Park/St Andrews Phase and, in several cases, the associated finds indicate a date at least as early as Ewart Park 1 and thus late tenth/early ninth century BC (cf Burgess 2012). Radiocarbon dated finds remain at a premium, however, and a penannular bracelet with rather irregularly expanded terminals, found in association with an amber bead at Croig Cave, Mull (Cowie and O'Connor 2012: 80) is anchored within a radiocarbon-dated sequence giving a date between 1130–790 and 1030–840 cal BC (Mithen and Wicks 2012: 76).

Across this area, penannular bracelets show considerable variation in details of their shape and the form of their terminals, ranging from those with outwardly projecting terminals to those whose ends expand evenly all the way round. It is beyond the scope of this discussion to explore these differences here, which could reflect local or regional variations in manufacturing technique, patterns of distribution and circulation and potentially subtle chronological differences. 'Covesea type' bracelets with outwardly projecting terminals occur across north-east Scotland from Fife to Easter Ross; however, apart from the Sculptor's Cave itself, the only hoards containing examples of the distinctive bracelets with transverse ribbing remain Braes of Gight, Aberdeenshire (Muirhead 1891) and Auchtertyre, Moray (ibid: 120–1; see also Schmidt and Burgess 1981: plate 144, no. 9).

To the south and west of this region, bronze ornaments such as penannular bracelets form a much less significant part of the inventory of metalwork (Coles 1960; Cowie and O'Connor 2012), with a hoard from near Berwick-upon-Tweed in Northumberland representing an outlier of the Scottish ornament hoards (Needham et al 2007). Whatever the mechanisms, the north-east of Scotland seems to retain a special character in terms of its Late Bronze Age metalwork. North Sea contacts and a pivotal role in connections between Ireland and the Continent appear to lie at the heart of this, but these can no longer be viewed in such direct terms as colonisation.

Pins

Two pins are represented in the assemblage; unfortunately both are incomplete, leaving their original forms in doubt (illus 5.34, 5.62). The straight shank of a pin (SF230) was found in Block 2.2/2.3. It has a neck curving through a 90° angle, but the head is unfortunately missing. It may be part of a disc-headed pin but there are other possible interpretations. A second pin (SF754) is

represented by two fragments of a straight stem with a circular section. Bronze pins are relatively common in Scottish Late Bronze Age contexts.

Small penannular rings (hair rings)

The Sculptor's Cave has produced ten small penannular rings of bronze and gold, of the type variously termed 'ring money' or 'hair rings' (illus 5.35, 5.36, 5.62); the largest assemblage of such pieces from Scotland. Hair rings, as defined here, are small penannular rings that can be made either of solid gold or a copper alloy core with gold sheet cover. Their ends either taper towards their terminals or retain consistent thickness. They can be differentiated from the thick penannular rings found, for example, in the Rathtinaun or Tooradoo hoards (Eogan 1983: nos 132, 104) by the fact that the latter are all-over decorated with impressed decoration, have greater thickness, frequently employ use of lead cores and, most importantly, have a flatter body, producing a thin oval cross-section with a flattish interior (the rings under discussion here have a near-round cross-section).

Eight hair rings were recovered by Benton and two by the Shepherds. Six of those recovered by Benton have a gold foil cover and at least some of the others were probably also covered in gold foil judging by the occurrence of a tiny fragment of gold foil that adheres to SF372 and a separate fragment of gold foil (SF797) recovered by Benton.

In the case of the two rings (SF726, SF727) with traces of organic material between the terminals, the insertion of the organic material clearly took place when the rings were not covered with gold foil (illus 5.36). This suggests either that plain base metal versions were in circulation or that these small penannular rings started their lives with a gold covering, but that the loss of the gold did not preclude their continued use. However, the fact that they were made of leaded bronze in contrast to the foil-covered examples (which were made of unalloyed copper) further supports the impression that they were not and had never been intended to be covered with foil. It could also be speculated that their yellowish colour was intended to copy the appearance of the foil-covered examples.

Most hair rings from the Sculptor's Cave consisted originally of copper cores with a thin gold sheet cover. For this, a copper alloy bar was cast and finished to shape. The creasing of the foil on the inside of the curvature of the ring (eg illus 5.29A) suggests that it was bent into shape after it had been applied to the ring as suggested elsewhere for hair rings in general (Armbruster 2008; Meeks et al 2008). At the terminals of the rings, where surviving, the folding of the ends of the gold sheet are visible (eg illus 5.29C), in contrast to the seam along the inside length of the body, where burnishing erased all traces of manufacture; this is characteristic for rings of this type and is noted elsewhere (Meeks et al 2008: 18). The objects are strongly distorted due to the expansion (through corrosion) of the copper core but some observation about their original shape can be made. The hair rings adhere broadly to a consistent morphology, with a decreasing thickness towards the terminals but consistent width, creating terminals of near-oval cross-section. The terminals are either pointed and round, as on SF724, or have flat ends, as in the cases of SF139, SF372, SF715 and SF723. These flat surfaces are not at a right angle to the main axis of the ring, but face each other perfectly.

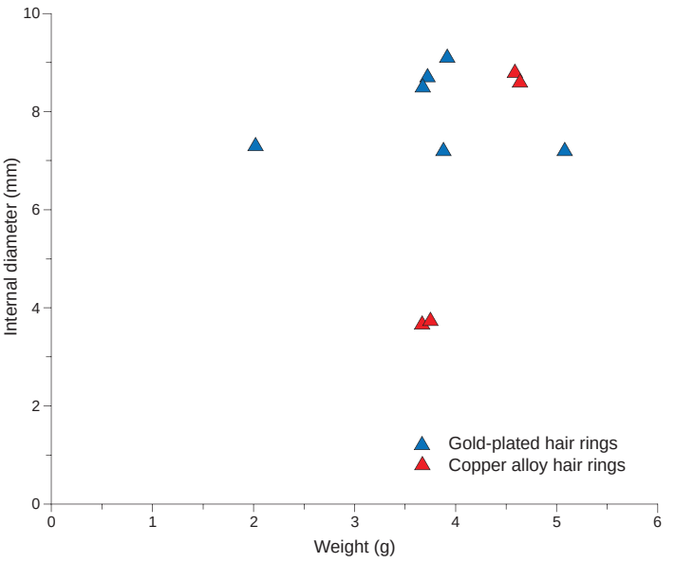

Illustration 5.27
Graph showing weight versus internal diameter of the Late Bronze Age gold-covered and copper alloy hair rings

The majority of the rings have weights around 4–5g; the outlier at 2g is the heavily corroded piece SF725. Curiously, the two rings from the Shepherds' excavation (SF139, SF372) are almost identical in size and weight, differing from the rest of the group (illus 5.27). While most (six) of Benton's rings were found in grid square C9 at the back of the cave (see illus 5.64A), SF724 and SF725 were found near the Shepherd examples, close to the entrance to the cave.

More directly than the bracelets, these hair rings tie the Sculptor's Cave into the wider, mainly Atlantic, north-west European Later Bronze Age. Hair rings ranging from those with a copper or bronze core with gold foil, such as the examples from the Sculptor's Cave, to those of solid gold, are found across Britain, Ireland, Belgium, north-western France and the Netherlands (eg O'Connor 1980: 215; Warmenbol 1999; 2017; Northover 2000; Becker 2006; Billand and Talon 2007). In recent years, based on their dating and the diverse range of contextual associations which have started to emerge, these rings appear to be quite distinct from other penannular ring ornaments of the Middle and Late Bronze Age. Hair rings had been compared in terms of their morphology to Egyptian and Palestinian wigs or earrings (eg Hawkes 1961: 453–4) but were identified as a distinct development in parts of Atlantic Europe (Eogan 1997: 310). While in Ireland and Britain they have been found mainly as single finds, on the Continent they are characteristically found in association with burials, though they also occur in caves.

Since the publication of lists by Coles (1960: 91, listed under 'ring money'), Taylor (1980: 132) and Eogan (1997: 137–42), some new finds have been added to the corpus of hair rings from Scotland (illus 5.28; table 5.12), although compared to England and Wales the numbers are small. It should be noted that Monzie, Perthshire should now be discounted as a Scottish findspot, as this forms part of a group of material likely to have been found

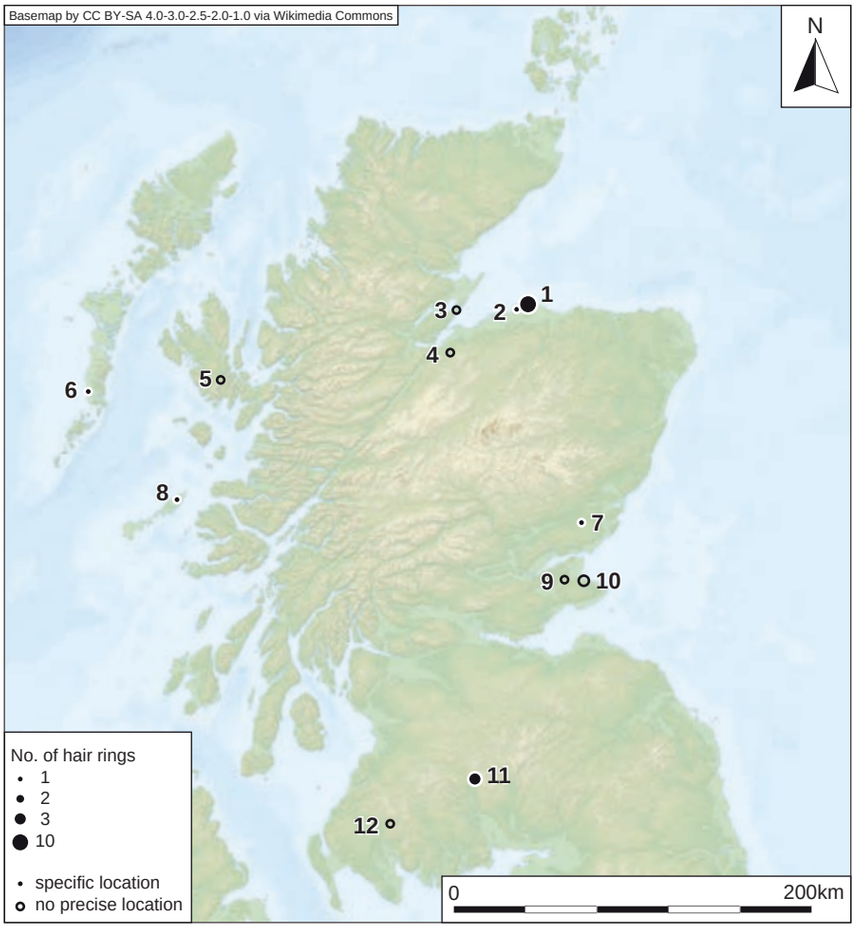

Illustration 5.28
Distribution of hair rings in Scotland (based on data compiled by Trevor Cowie and Brendan O'Connor): 1. The Sculptor's Cave; 2. Clarkly Hill, Moray; 3. 'Cromarty'; 4. Coire Na Fuaraig, Kirkmichael, Moray; 5. 'Isle of Skye'; 6. Cladh Hallan, South Uist; 7. Balmashanner, Forfar, Angus; 8. Torastan, Coll; 9. Dairsie, Fife; 10. St Andrews, Fife; 11. Ballaggan, Durisdeer, Dumfries and Galloway; 12. 'Galloway'

in Ireland and brought to Scotland in the modern era (see Wallace 1986; Ó Néill 2008). Apart from the Sculptor's Cave assemblage, the only associated find of small penannular rings of this type is the hoard from Balmashanner, Angus. Single examples have been found on settlement sites at Cladh Hallan, South Uist (Parker Pearson et al 2002) and at Clarkly Hill, near Burghead, Moray, but otherwise the corpus comprises mainly single finds lacking any information regarding circumstances of discovery (table 5.12). The Scottish examples are mostly comparable to the Sculptor's Cave examples, with base metal cores and gold sheet covering. In some cases, the gold foil is almost completely detached (Sculptor's Cave SF372) or entirely absent (Sculptor's Cave SF139, SF726, SF727), and three other base metal finds without surviving gold sheet have also been listed (St Andrews hoard, Fife, and Torostan, Coll). Only two solid gold examples have been found so far (Dairsie, Fife and Ballaggan, Dumfries and Galloway). On the second of these and on the sheet-covered example from Cladh Hallan, silver striping can be observed.

Discussion

The ring form under discussion here has been variably referred to as 'ring money' or 'hair ring' (eg Taylor 1980; Eogan 1997; cf Varndell 2001; Meek et al 2008: 13). The same terms have also been applied to other forms of penannular ornament, including thick penannular rings and lock rings. Although the term ring money has long fallen from favour as an explanation of their function, it is still used occasionally as a descriptor (eg O'Connor et al 2008).

While, morphologically, such plain small rings could have been used in a variety of ways, including as hair ornaments, their single occurrence in burial contexts suggests that they were worn singly, most likely inserted into the nose (cf Armbruster 2008) or as a septum piercing (Becker 2006). Particularly solid and heavy examples, however, may also have been worn on other parts of the body. The Sculptor's Cave assemblage is interesting in relation to the function of at least some of these rings: Benton noted that some, when found, had traces of string and specifies this for SF726. It is unclear what exactly she means by 'string', but SF726 has a bead-shaped object wedged/suspended between its terminals (illus 5.32, 5.36). SEM examination shows this to consist of textile fibre (illus 5.32B–D; see below).

The small penannular 'hair rings' were grouped with Late Bronze Age artefacts in Britain and Ireland (Eogan 1994; 1997; Taylor 1980), based mainly on the appearance of related forms of thick penannular rings from Dowris Phase hoards in Ireland and continental evidence of a Late Urnfield date (Raftery 2004: 85). Suspicions regarding this dating had been voiced in the past, with Eogan (1964: 285) pondering a Middle Bronze Age date. Subsequently, the case for revising their dating was advanced by Peter Northover, who proposed a *floruit* for insular examples of small, undecorated penannular rings in the Ewart Park/St Andrews Phase but thought their origin could be traced back possibly as early as the Penard Phase (2000: 302). In the light of the late Colin Burgess' (2012) revision of the Atlantic sequence, Penard spans the thirteenth to twelfth centuries BC. An increasing range of sites that have produced early dates for this artefact type suggest that hair rings, as defined here, pre-date the various forms of penannular ring ornament of the Ewart Park/St Andrews or equivalent Irish Dowris Phase (Becker 2006; 2013; Billand and Talon 2007; Warmenbol 2017). The hair ring from Rathgall pit burial 119 (Raftery 2004: 87), for example, can be dated by a radiocarbon date obtained on the black lining material, which is contemporary with the filling of the pit and yielded a date of

Table 5.12
Hair rings from Scotland

Find location	Region	No.	Composition	Current location	References/notes
The Sculptor's Cave	Moray	10	Base metal cores; 7 with gold sheet covering	National Museums Scotland/Elgin Museum	This volume; see also Coles 1960: 91; Taylor 1980: 92–3, M1–10, plate 33i; Eogan 1994: 141
Clarkly Hill, Duffus	Moray	1	Base metal core with gold sheet covering	Elgin Museum	Hunter 2009: 123; Treasure Trove 2010: 9 (61/08)
'Cromarty'	Highland	1	Base metal core with gold sheet covering	National Museums Scotland	Sheridan 2017; Treasure Trove 2017: 38 (199/16)
Coire Na Fuaraig, Kirkmichael	Moray	1	Base metal core with gold sheet covering	British Museum	Benton 1931: 181; Coles 1960: 91; Taylor 1980: Bf 6; Eogan 1994: 141; Murgia et al 2014
'Isle of Skye'	Highland	1	Base metal core with gold sheet covering	National Museums Scotland	Wilson 1863: 455–6; Coles 1960: 91; Taylor 1980: 92, In 4; Eogan 1994: 141
Cladh Hallan, South Uist	Western Isles	1	Base metal core with gold sheet covering (stripes on interior)	Not yet accessioned	Parker Pearson et al 2001: 104; 2002
Balmashanner hoard, Forfar	Angus	3	Base metal cores with gold sheet covering	National Museums Scotland	Anderson 1892; Coles 1960: 91, 98, nos 24–6; Taylor 1980: 89, An 1–3; Schmidt and Burgess 1981: 251–2, no. 1686, plate 152B, 37–9; Eogan 1994: 141, plate 14
Torastan, Coll	Argyll	1	Base metal core, no covering	National Museums Scotland	Anon 1922: 17; Coles 1960: 91. Perhaps found 'southwards [from Torostan] towards Gallanach . . . Near this place have recently been found . . . a penannular bronze ring . . .' (Beveridge 1903: 38)
Dairsie	Fife	1	Solid gold	St Andrews Museum	Treasure Trove 2014: 26 (134/13)
St Andrews hoard	Fife	2	Base metal core, no covering	National Museums Scotland	Cowie et al 1991
Ballaggan, Durisdeer,	Dumfries and Galloway	1	Solid gold (with stripes)	Dumfries Museum	Cowie et al 2006: 49; O'Connor et al 2008
Galloway	Dumfries and Galloway	1	Base metal core with gold sheet covering	National Museums Scotland	Anon 1892: 213; Coles 1960: 91; Taylor 1980: 92, G6; Eogan 1994: 141
No provenance	n/a	1	Base metal core with gold sheet covering	National Museums Scotland	This may be the example listed by Coles 1960: 91, Eogan 1994: 142 and Taylor 1980: 95; NLS2 with the incorrect accession number X.FE 73, which applies to a ribbon torc from Cothill Farm, Belhelvie, Aberdeenshire

Table 5.13
The elemental composition obtained by surface X-ray fluorescence and energy dispersive X-ray analysis of the gold hair rings from the Sculptor's Cave. Data were normalised to 100 wt% and are presented as the mean value of three measurements with error depicting one standard deviation of the variation in measurements. *Hair rings SF722 and SF725 present highly damaged gold plating and although care was taken for XRF analysis, it is possible that the level of copper for these two items is over-estimated due to the surrounding copper alloy

Artefact	XRF Analysis (wt%)			EDS Analysis (wt%)		
	Au (L_α)	Ag (K_α)	Cu (K_α)	Au (L_α)	Ag (L_α)	Cu (K_α)
SF715	78.8 ± 0.2	14.1 ± 0.1	7.1 ± 0.1	*not analysed*		
SF716	77.7 ± 0.8	14.0 ± 0.5	8.3 ± 0.5	*not analysed*		
SF722	76.4 ± 0.5	13.6 ± 0.2	10.0 ± 0.4	83.4 ± 2.3	10.1 ± 1.8	6.5 ± 0.6
SF723	83.5 ± 0.9	12.8 ± 0.9	3.7 ± 0.1	85.4 ± 0.9	11.3 ± 0.8	3.3 ± 0.2
SF724	77.4 ± 0.2	13.7 ± 0.5	9.0 ± 0.6	77.7 ± 0.8	14.8 ± 1.2	7.5 ± 0.4
SF725	75.9 ± 0.7	12.8 ± 0.4	11.3 ± 0.7	80.6 ± 2.9	11.0 ± 2.7	8.4 ± 1.0
SF797	78.7 ± 0.4	13.8 ± 0.5	7.4 ± 0.1	82.4 ± 1.6	11.6 ± 0.9	6.0 ± 0.8

Table 5.14
Qualitative elemental compositions of Late Bronze Age copper alloys from the Sculptor's Cave obtained by surface X-ray fluorescence analysis. *In some cases Au and Ag were also detected in minor quantities, due to the adjacent gold foil coverings

Artefact	Description	Elements detected	Interpretation
SF139	Hair ring	Cu, traces Pb	Copper, not alloyed
SF372	Hair ring	Cu, Pb	Copper, not alloyed
SF715	Hair ring	Cu, Pb, Fe, traces Sb, Ni	Copper, not alloyed
SF716	Hair ring	Ca, Ti, Co, Ni, Br, Cu, Zn, traces Sb	Probably copper, modern green paint
SF722	Hair ring	Cu*	Copper, not alloyed
SF723	Hair ring	Cu, traces Pb*	Copper, not alloyed
SF724	Hair ring	Cu, traces Pb*	Copper, not alloyed
SF725	Hair ring	Cu, Pb, traces Sb*	Copper, not alloyed
SF726	Hair ring	Cu, Sn, Pb	Leaded bronze
SF727	Hair ring	Cu, Sn, Pb	Leaded bronze
SF729	Penannular bracelet	Cu, Sn, Pb	Leaded bronze
SF728	Penannular bracelet	Cu, Sn, Pb	Leaded bronze
SF730	Penannular bracelet	Cu, Sn, Pb	Leaded bronze
SF731a–c/SF796	Penannular bracelet	Cu, Sn, Pb	Leaded bronze
SF732	Penannular bracelet	Cu, Sn, Pb	Leaded bronze
SF795	Penannular bracelet	Cu, Sn, Pb	Leaded bronze

1290–1040 cal BC. Equally early is the date of 1373–1019 cal BC for the context of a hair ring from Ballypriorbeg, Co. Antrim (Suddaby 2003: 78–9, 83), while an example found in a burnt mound at Killeens, Co. Cork, was retrieved from a context radiocarbon dated to 1500–1290 cal BC (Brindley et al 1990: 26–7). In France, a burial containing a hair ring at Les Grot Grelow produced a calibrated date of 1220–976 cal BC (Billand and Talon 2007: 349; OxCal calibration by authors) and other related assemblages from France produced similarly early dates (Billand and Talon 2007: 347–9). Their earlier date and differing associative patterns appear to set them apart from the various forms of later penannular ring. While various forms of lock rings, thick penannular rings, bullae and other ring forms are found in hoards, the fact that hair rings are rarely found in these contexts is indicative of a possible earlier date or entirely different functional context (Becker 2006). A rare exception is the Balmashanner hoard, in which a number of hair rings were associated with lock rings, bracelets and an axe socket. This find, together with the modelled dates from the Sculptor's Cave, would suggest a continuation of the type into the later part of the Bronze Age.

Analytical results

Six of the gold-plated hair rings (SF715, SF716, SF722–6), a fragment of gold plating (SF797) and four copper alloy hair rings (SF139, SF372, SF726, SF727), together with three copper alloy bracelets (SF728–30) and various bracelet fragments (SF731a–c/SF796, SF732, SF795), all from the Sculptor's Cave (Benton 1931), were investigated by optical microscopy, surface X-ray fluorescence analysis and scanning electron microscopy (tables 5.13, 5.14). The composition of the gold plating and copper alloys was investigated by X-ray fluorescence (XRF) using an Oxford ED 2000 air path instrument, without any surface cleaning or surface preparation (Troalen and Tate 2016). The copper cores were analysed qualitatively due to their high level of corrosion, while quantitative analysis of the gold plating was undertaken. Additionally, measurements on the composition of the gold plating were undertaken in the scanning electron microscope (SEM) using the energy dispersive micro-analytical system (EDS).

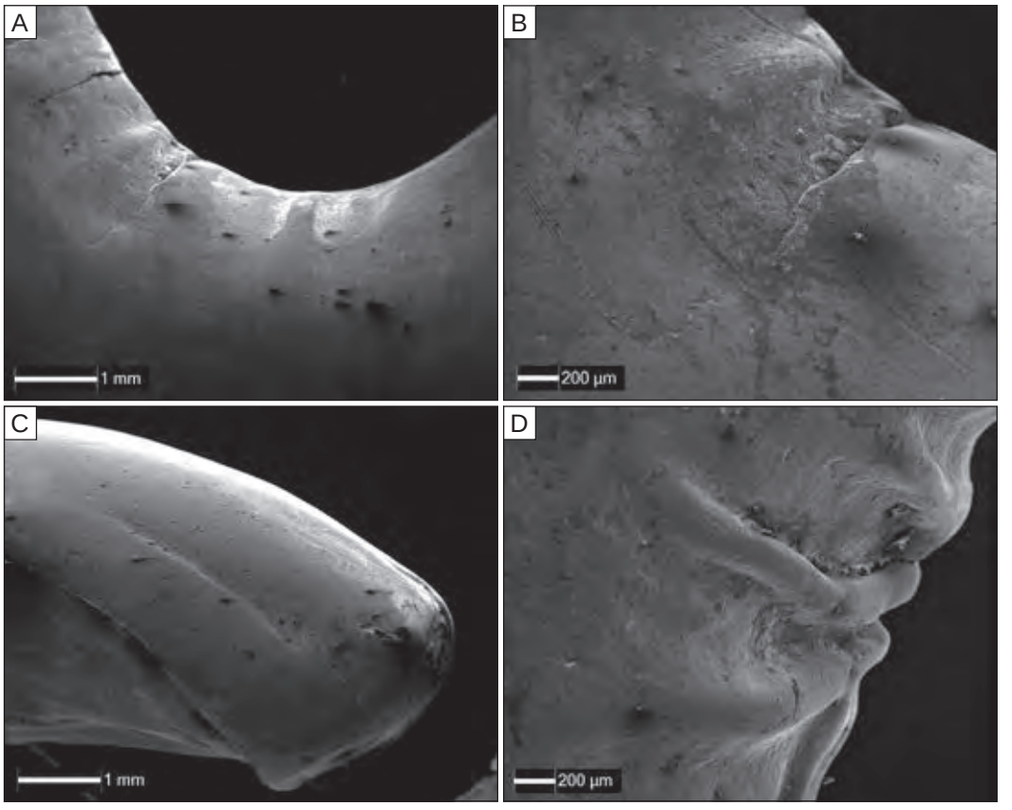

Illustration 5.29
(A, B) Scanning electron micrographs (SEM-SEI) of hair ring SF723; (C, D) scanning electron micrographs (SEM-SEI) of hair ring SF724. Both rings show joins in the gold sheet and the wrinkled folds of the gold on the inside of the ring

The main concern with regard to surface analysis of archaeological gold objects is the depletion or corrosion of the gold alloys that will affect the surface composition (Scott 1983; Rapson 1996). The information used for calculating the quantification comes from a layer whose thickness depends principally on the amount of gold (the element with the highest atomic number) in the alloy, the energy of the X-ray lines used for elemental quantification and the energy and type of the incident radiation (Troalen et al 2014). The effective depth analysed by XRF at the experimental conditions used is 13–14µm for Au(L_α), 28–32µm for Ag(K_α) and 8–9µm for Cu(K_α) for Au/Ag/Cu alloys that are close to the composition of the Sculptor's Cave hair rings (Troalen and Tate 2016). We were not able to make any polished cross-section; however, scanning electron microscopic observation of several edges of broken gold plating and the fragment of gold foil suggest that plating on the hair rings is less than 100µm. For these thicknesses, XRF analysis should therefore provide a composition very close to the bulk composition of the gold plate. It is however possible that there is some depletion of copper in the first 3µm, as observed in other studies (Hook and Needham 1989), as a result of the burial conditions. EDS analysis is more sensitive to surface changes as it analyses only the first 0.5µm, but had to be used to provide the best possible values for the more damaged items where little gold was left and the adjacent copper core exposed (SF722, SF725).

Construction of the plated hair rings

The gold hair rings are made of a copper alloy core plated with gold foil. In contrast to equivalent hair rings from Britain and Ireland, none of the rings examined here was of solid gold, nor did any have the silver and gold wasp-like stripes or incised or punched patterns (Hartmann 1970; Northover 2000; Meeks et al 2008).

It is clearly difficult to gold-plate a small-diameter ring, and the generally accepted method of fabrication is that the gold sheet was first wrapped round a cylinder of the core copper alloy, the overlapping seam bonded by hammering and burnishing, and the gilded cylinder then worked into a loop. No traces of welding or soldering were observed in the SEM on the edges of the gold sheet, suggesting that the plating was applied by burnishing only. In support of this argument, Meeks et al (2008) were able to show the overlap of a seam in a polished cross-section of a broken ring. It was not possible to make a section of any of the Sculptor's Cave rings, but in several it was possible to see traces of just such a longitudinal seam (illus 5.29B, C). Once the ring was formed, the ends of the gold foil were not fully fused or sealed but were rather roughly folded together, as can be seen in illus 5.29C. This finishing

is much rougher than the remainder of the ring, but is presumably because, once closed, the ends of the ring are hard to get at to hammer the joint together. The morphology of the gold plate inside the best preserved rings seems to confirm that the rings were plated and then bent, as the gold is folded and creased on the inside of the ring (illus 5.29A, D), where it would have been compressed as the metal was bent. It is slightly odd as this is something which the maker might have been able to flatten since it is accessible inside the ring, but presumably it was not considered necessary. The outside of the rings is in comparison remarkably smooth and uniform, with no sign of marks from hammering or working, and no traces of radial tears in the gold where it would have been stretched on the outside as the ring was formed.

Several rings now exhibit considerable damage to the gold plating, with the gold foil being pushed open by the copper corrosion products exuding from the core. This damage tends to be around the edges of the ring, as if the gold has been pushed open where there had been seams. There is no information about the condition when found and it is likely that much of the copper corrosion has been removed from the gold surface; indeed, some of the powdery corrosion which is now visible may have occurred since excavation due to poor storage conditions. Traces of green copper corrosion products were observed on the surface of the gold foil fragment, suggesting that it was also in contact with a copper core.

Gold alloy

The elemental compositions of the gold-plated hair rings obtained by XRF and EDS analysis are presented in table 5.13. The methods show relatively good correlation, suggesting that surface change was not extensive, although for all the rings some surface depletion of copper can be deduced by comparison of the XRF and EDS analyses. No alternating silver/gold stripes could be seen visually on any of the Sculptor's Cave rings, nor could any analytical traces of varying surface composition be detected by the SEM analysis. Northover (2000) concluded that many of the rings he examined initially had gold/silver stripes and that on some these have been worn away and can no longer be seen. SEM imaging is very sensitive to differences in atomic number, and if any traces of silver and gold bands remained on the Sculptor's Cave hair rings these would be expected to have shown up both in the backscattered detector images and in EDS line scans. We conclude therefore that the rings were all of the simpler plain gold appearance.

The Sculptor's Cave hair rings all exhibit a very close Ag/Au ratio but with variable copper content (4–11 wt%), suggesting that they could have been made of gold from a similar gold source to which copper was added (illus 5.30). The silver levels observed in the hair rings and the fragment of gold correspond well to what would be expected for British and Irish alluvial gold sources (Chapman et al 2006) but the level of copper is significantly higher, suggesting that this was added to the alluvial gold source. It was not possible to quantify trace levels of tin due to the detection limits of the XRF system used, but traces of tin in the range of 0.01–0.3wt% have been found in the majority of the Early Bronze Age goldwork from Ireland (Hartmann 1970; 1979; Chapman et al 2006; Standish 2012). Low levels of tin were also found in early analysis of the Sculptor's Cave hair rings (Hartmann 1970: 104–5, table 9 and 110–11, table 12; see entries Au2330, Au2331, Au2332, Au2333 and Au2290). The silver and copper content characterised by XRF analysis correlates well with Hartmann's previous analysis, although our XRF analyses found small differences in the levels of copper (4–11wt%; table 5.13) than Hartmann (6–13wt% by emission spectroscopy). These different ranges are not unexpected given the two different techniques undertaken at different times.

The hair rings from the Sculptor's Cave exhibit lower silver levels than equivalent hair rings from England and Wales

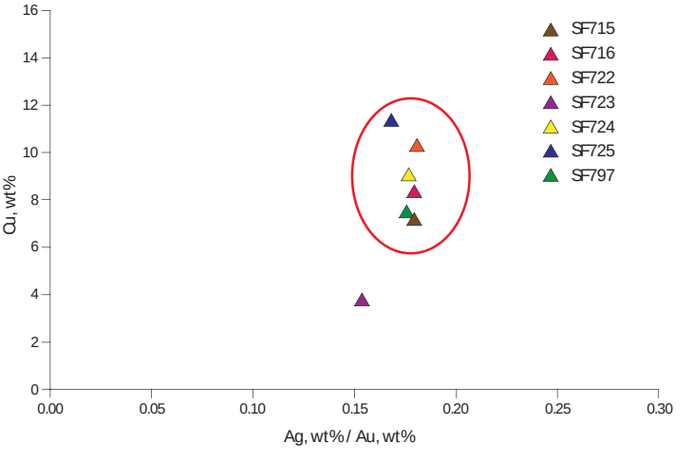

Illustration 5.30

Cu, wt% as a function of (Ag, wt%/Au, wt%) obtained by XRF analysis for the Sculptor's Cave gold hair rings. Each composition corresponds to the average of three measurements

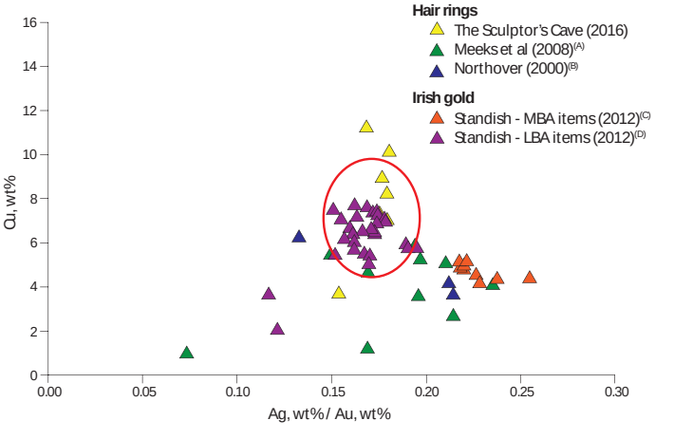

Illustration 5.31

Cu, wt% as a function of (Ag, wt%/Au, wt%) obtained by XRF analysis for the Sculptor's Cave gold hair rings, compared with compositional data of published gold hair rings: (A) Meeks et al 2008: EDS analysis on abraded surface, solid and plated hair rings without silvery stripe decoration (BM entries 1855: 11–22, 1; 1849: 3–1, 14; 1849: 3–1, 10; 1847: 11–26, 2; 1874: 3–3, 4; 1874: 3–3, 3; 1853: 12–16, 5; 1874: 3–3, 2), (B) Northover 2000: EDS analysis, gold portion, (C) Standish (2012: 360–1) EPMA analysis of Middle Bronze Age penannular earrings (MBA entries 1929.1302, 1935.879 and A210.1916), (D) Standish (2012: 361–2) EPMA analysis of Late Bronze Age penannular rings (all LBA entries)

(Northover 2000; Meeks et al 2008) and Irish penannular earrings from the Middle Bronze Age (Standish 2012: 360–1, appendix B2). Their composition however compares with Late Bronze Age gold objects from Ireland (Standish 2012: 361–2, appendix B2) (illus 5.31). The presumed addition of copper to an alluvial gold source is similarly observed in equivalent hair rings (Northover 2000; Meeks et al 2008) and other Bronze Age gold items (Standish 2012: 357–63). These analyses alone cannot determine whether the composition of the hair rings corresponds to a distinct source of gold, but the similar gold/silver ratios are consistent with the use of the same source.

Copper alloy

Qualitative analysis of the Late Bronze Age copper alloys (table 5.14) indicated that 50% were of leaded bronze. However, all the gold-plated hair rings from the Sculptor's Cave were made from an unalloyed copper core with minor levels of lead and in some cases antinomy. This is different from the rings investigated by Meeks et al (2008), which were made of bronze. In contrast, a hair ring from Port Eynon in Wales was also made from a pure copper core (Northover 2000), although the coating was a silver-gold alloy with additional silver stripes. Perhaps the softer copper made it easier to form the rings with the gold plating? Additionally, two hair rings lacking visible gold plating (SF139, SF372) were also found to be made of copper, suggesting that these could have been plated similarly.

Organic material

The two hair rings made of leaded bronze (SF726, SF727) have a different morphology and show some residue of mineralised fibres on their surface. These were found, under optical microscopic observation, to be transparent and seemingly undyed, and do not have the characteristics of human hair as suggested by Taylor (1980: 25). In the case of hair ring SF726, a plied yarn (illus 5.32A, B) had been wrapped around the joint of the ring. It is not possible without X-radiography to see whether these two items are open-ended or closed, but the green corrosion observed inside the plied yarn would suggest that there is a copper core inside, or possibly a mass of fibres which has become stained from the copper corrosion products. Scanning electron microscopic observations of the fibres of the plied yarn suggest it is made with liber fibres (hemp or linen) heavily covered with soil residues. Most of the fibres are isolated and not regrouped together, as is generally the case with liber fibres, with some flexion folds (Médard et al 2007; illus 5.32C, D). The diameter of the fibres is approximately 20µm. Further observation of a polished cross-section would be necessary to determine the type of liber fibres, as both linen and hemp have been identified in Bronze Age Scotland (Hedges 1972; Ryder 1999).

Discussion

The range of Late Bronze Age artefacts from the Sculptor's Cave exclusively comprises items of personal ornamentation and the

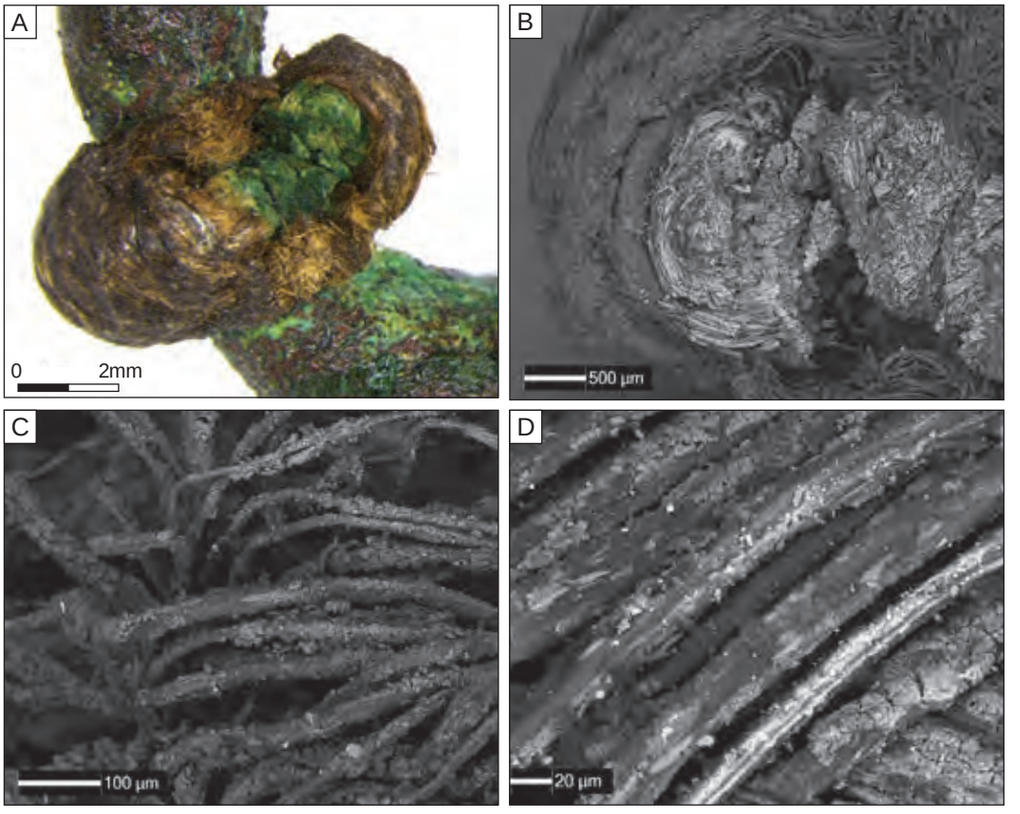

Illustration 5.32
(A) Stereo-microscopic observation of the plied yarn of SF726; (B, C, D) scanning electron micrographs (SEM-BSC) showing the morphology and diameters expected in liber (plant) fibres

hair rings would, if the current identification as septum rings is correct, represent ten individuals. While all of these personal ornament types occur elsewhere as single finds or within hoards, the particular interest of the Sculptor's Cave assemblage lies in the rare association of a range of exclusively personal ornaments with the contemporary deposition of human remains. It also constitutes one of the few associated finds of small penannular rings from Britain and Ireland. In other words, with its emphasis solely on small personal items, the metalwork is in keeping with the 'special' nature of the site and it is tempting to see the artefacts as having ended up in the cave with the people who wore them.

Two of the ten rings represent interesting variations on the theme of the hair ring. While morphologically not very different from the others, they appear never to have been covered with foil, as indicated by the fibre beads remaining in situ between their terminals as well as the fact that they, in contrast to the rest of the group, are made of bronze rather than copper. While not as yet perfectly understood, it would be possible to suggest that these beads were additional decorative elements that closed the opening of the penannular rings when worn.

While the extended date range for hair rings in general may indicate that they are earlier than the other items of metalwork from the cave, the Sculptor's Cave assemblage may simply add to the evidence for the longer use of this form in Scotland into the later part of the Late Bronze Age, as is also indicated by the Balmanshanner association.

The bracelets are still enigmatic in terms of their stylistic derivation and arguments for seeing them as direct copies of continental prototypes are weak. We would prefer to see the variations within the Scottish series as variations on a theme – ranging from undeveloped terminals to pronounced expansion – some outwardly expanded only, and others expanded all around the end. Some interaction with the design of gold types seems likely (for example, the embellishment of the hoops close to the terminals of some gold ornaments might provide a more local prototype for the transverse ribbing on 'Covesea-type' bracelets).

The Late Bronze Age metalwork from the Sculptor's Cave seems to have been essentially locally produced based on both typological and compositional arguments. Nonetheless, it clearly reflects broader cultural links with the wider contemporary Bronze Age beyond Scotland.

Catalogue

Penannular bracelets

SF728 (illus 5.33, 5.62) Complete bronze penannular bracelet; D-shaped cross-section with flattened sides; just before the terminals, the hoop constricts slightly and bears transverse ribbing on the outer part of the bracelet near the ends (in the form of two transverse grooves); the terminals themselves project outwards rather irregularly; the bracelet has been bent out of shape presumably as a result of use and the terminals are no longer in alignment. External diameter (width, height): 72.2mm × 54.3mm; internal diameter: max. 53.4mm; thickness: max. 7.3mm × 5.3mm, min. 5.7mm × 3.8mm. Unphased, Context: Benton Layer 1, grid square D4.

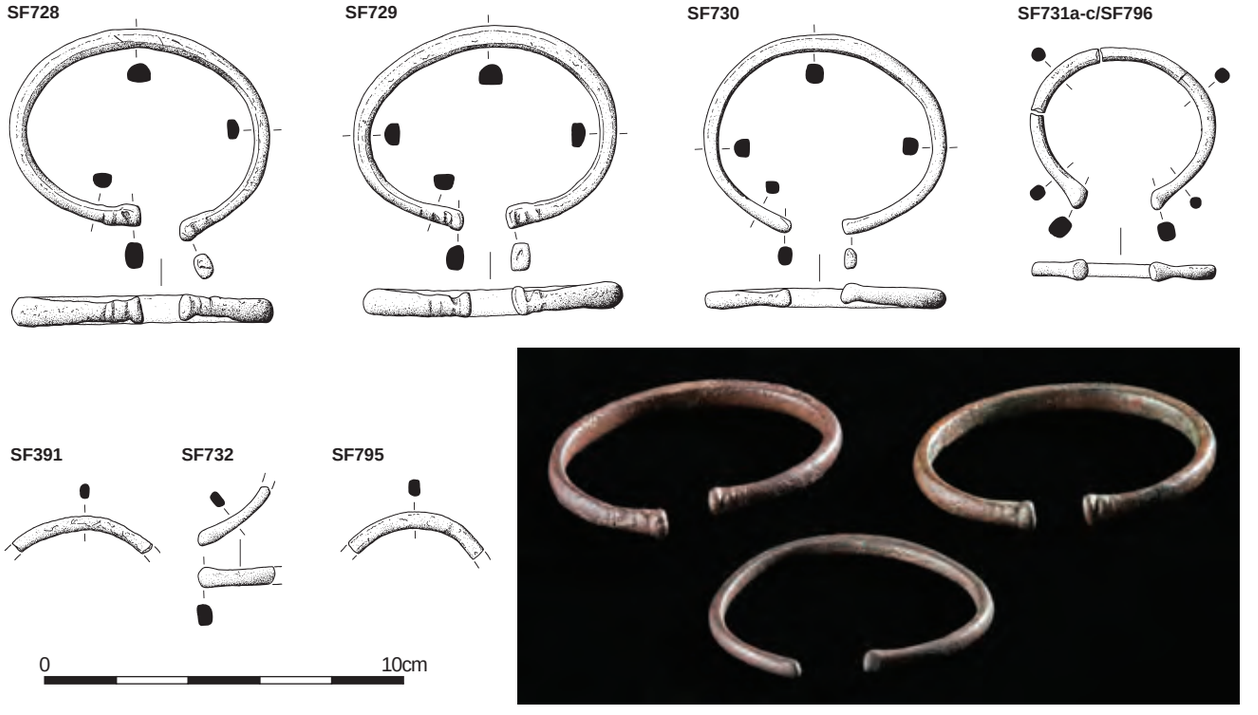

Illustration 5.33
Late Bronze Age penannular bracelets. Photograph clockwise from top left: SF728, SF729, SF730

SF729 (illus 5.33, 5.62) Complete bronze penannular bracelet; D-shaped cross-section with flattened sides; just before the terminals, the hoop constricts slightly and bears transverse ribbing on the outer part of the bracelet near the ends (in the form of two transverse grooves); the terminals themselves project outwards rather irregularly. External diameter (width, height): 72.9mm × 55.4mm; internal diameter: max. 63.5mm; thickness: max. 7.3mm × 5.7mm; thickness: min. 6.2mm × 4.2mm. Unphased, Context: Benton Layer 1, grid square D5.

SF730 (illus 5.33, 5.62) Complete penannular bracelet, D-shaped section; hoop reduces/tapers slightly in thickness towards terminals; terminals themselves show only a slight expansion. External diameter (width, height): 66.4mm × 54.2mm; internal diameter: max. 59.2 mm; thickness: max. 4.5mm × 4.8mm, min. 4.3mm × 3.2mm. Unphased, Context: Benton Layer 1, grid square D5.

SF731a–c/SF796 (illus 5.33) Fragmentary penannular bracelet (now in four pieces comprising two terminals and two hoop fragments); irregular cross-section; the terminals are expanded, with no transverse ribbing or grooves on the ends of the hoop. The extant fragments of hoop differ in appearance from those shown on the photograph published by Benton (1931: fig 6.3); however, one of the pieces in the photograph appears to have been cleaned subsequently while the other may have been physically altered in the course of metal analysis by Oliver Davies (ibid: 208). Although drawn as reconstructed by Benton, if parts of the hoop have been lost then the original outline could have been more oval and closer in shape to the other bracelets. Estimated diameter (width, height): 50mm × 45mm; thickness: max. 3.2mm × 3.8mm. Unphased, Context: Benton Layer 2, grid square C3 (SF731a–c) and A0 (SF796).

SF391 (illus 5.33) Fragment of plain bronze bracelet or ring; oval cross-section; apparently consistent in diameter; surface strongly corroded. Length: 38.2mm; thickness: max. 3.8mm × 2.9mm. Phase: 1, Block: 1.1/1.2, Context: Ia23/27.

SF732 (illus 5.33) Slightly expanded terminal of a penannular bronze bracelet. Length: 24mm; width: 6mm; thickness: 4mm. Unphased, Context: Benton Layer 2, grid square A0.

SF795 (illus 5.33) Fragment of hoop of penannular bracelet (or possibly an annular ring); oval cross-section; this piece matches the size and cross-section of SF391. Length: 36mm; width: 5mm; thickness: 3mm. Unphased, Context: Benton Layer 2, grid square A0.

Pins

SF230 (illus 5.34, 5.62) Fragment of the straight stem or shank of a bronze pin; owing to incompleteness, original form uncertain but possibly a sunflower pin, broken off before the potential transition to the head. Length: 79.6mm; thickness: max. 3.8mm. Phase: 1, Block: 2.2/2.3, Context: IIb16/17 interface (in section at 3.28m; illus 2.9).

SF754 (illus 5.34) Two fragments of the straight stem or shank of a bronze pin; owing to incompleteness, original form uncertain but tentatively allocated to Late Bronze Age metalwork assemblage on grounds of its relatively robust form and the absence of zinc in the metal composition. Length: 56.5mm; thickness: max. 3.5mm. Unphased, Unstratified.

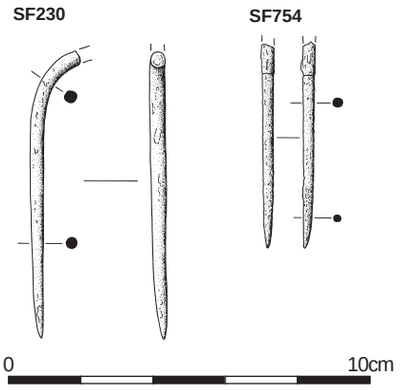

Illustration 5.34
Late Bronze Age pins

Hair rings

SF139 (illus 5.35, 5.62) Small penannular copper alloy ring; slightly tapering ends with flat terminals facing each other with a small gap; strongly corroded on one side. Diameter (width, height): 15.1mm × 17.2mm; internal diameter: max. 3.8mm; thickness (saddle, height): 4.4mm × 3.4mm. Phase: 1, Block: 1.1, Context: Ib33. **Note SF139 and SF372: it is not certain which is which of these two as the numbers were for exhibition and the original find dockets from the excavation are missing.*

SF372 (illus 5.35, 5.62) Small penannular copper alloy ring with a small, partly detached and crumpled piece of surviving gold foil adhering to the inside of the curvature of the ring; rather strongly corroded with loss of substance in some areas; the terminals taper slightly but have flat surfaces. Diameter (width, height): 17.1mm × 15.2mm; internal diameter: max. 3.7mm; thickness (saddle, height): 4.3mm × 3.2mm. Phase: 1, Block: 1.1/1.2, Context: Ia23/27. *See note on SF139 above.*

SF715 (illus 5.35, 5.62) Small penannular ring consisting of a bronze core covered with gold foil; strongly deformed as a result of corrosion and resulting expansion of the copper alloy core; slightly tapering terminals with a flat end surface; the inside of the curvature of the ring shows strong creasing towards the better preserved but incomplete terminal. External diameter (width, height extant): 18.4mm × 15mm; internal diameter: max. 7.2mm; thickness (saddle, height extant): max. 5.2mm × 4.7mm, min. 4.8mm × 3.8mm. Unphased, Context: Benton Layer 1, grid square C9.

SF716 (illus 5.35, 5.62) Small penannular ring consisting of a bronze core covered with gold foil; strongly deformed as a result of corrosion and resulting expansion of the copper alloy core; gold foil heavily creased along the inside of the curvature of the ring and its extant terminal; the shape of the terminal appears

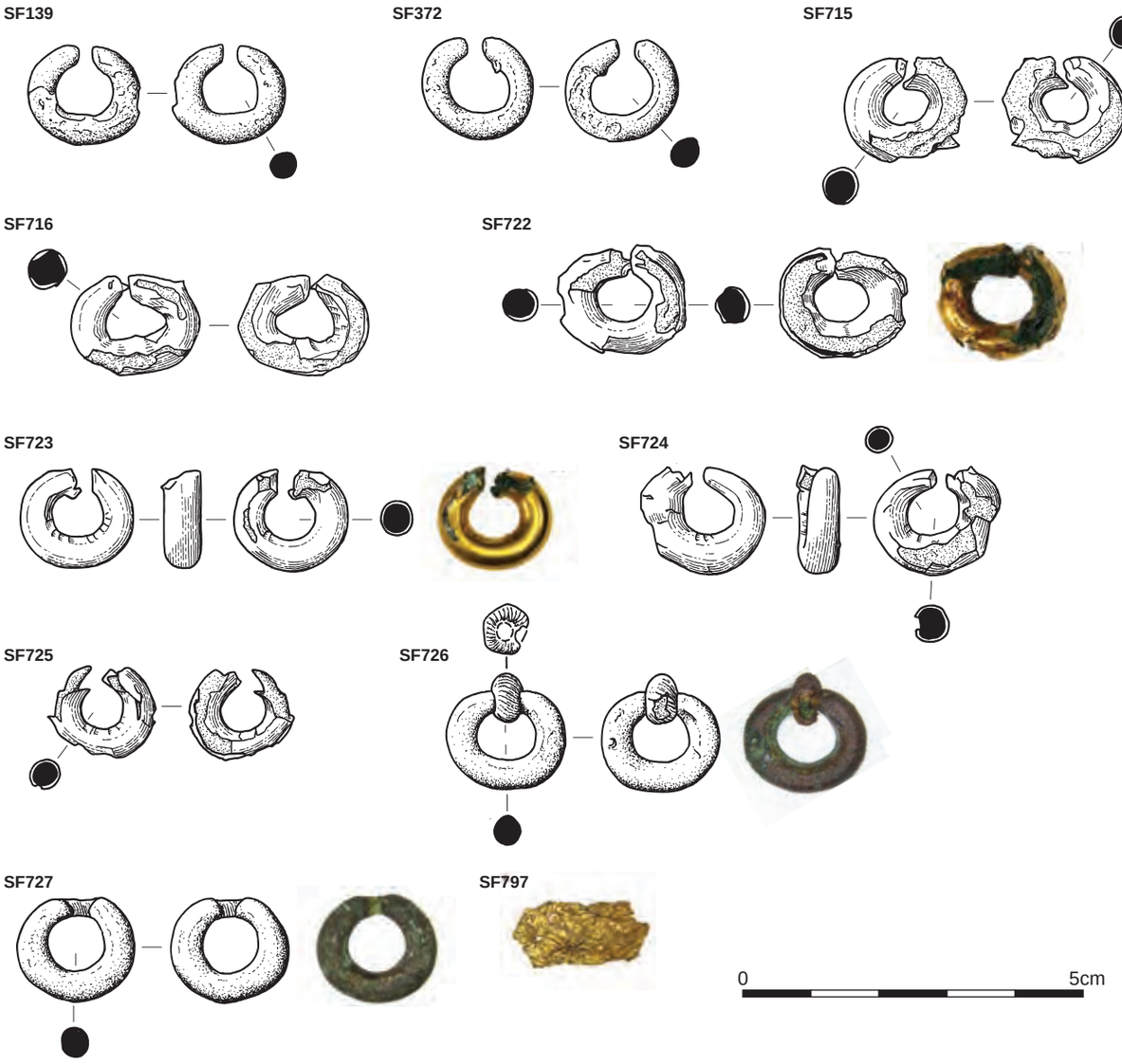

Illustration 5.35
Late Bronze Age hair rings and gold foil

to have been blunt but slightly tapered. External diameter: 19.1mm × 4.7mm; internal diameter: max. 8.7mm; thickness (saddle, height): max. 4.7mm, min. 3.9mm. Unphased, Context: Benton Layer 1, grid square C9.

SF722 (illus 5.35, 5.36, 5.62) Small penannular ring consisting of a bronze core covered with gold foil; strongly deformed as a result of corrosion and resulting expansion of the copper alloy core; terminals appear to have been only slightly tapered; the terminals touch but are slightly offset, with one pushed in towards the interior of the ring; small amounts of fibre (hair?) adhere to some of the gold surfaces, which have pronounced red and brown corrosion product deposits. External diameter (width, height): 16.6mm × 18.6mm; internal diameter: max. 9.1mm; thickness: 4.2mm. Unphased, Context: Benton Layer 1, grid square C9.

SF723 (illus 5.35, 5.36, 5.62) Small penannular ring consisting of a bronze core covered with gold foil; strongly deformed as a result of corrosion and the resulting expansion of the copper alloy core, with one terminal virtually destroyed; the highly polished gold covering survives intact in most places, including the cover of the one largely intact terminal which slightly tapers towards a flat end; creasing of the gold foil is present on the inside of the ring, but no seam is visible. External diameter (width, height): 16.6mm × 14.9mm; internal diameter: max. 7.2mm; thickness (saddle, height): 5.2mm × 4.7mm, min. 5.5mm × 3.8mm. Unphased, Context: Benton Layer 1, grid square C9.

SF724 (illus 5.35, 5.62) Small penannular ring consisting of a bronze core covered with gold foil; one half severely damaged as a result of corrosion and the resulting expansion of the copper alloy core, but the other is largely intact, including the terminal;

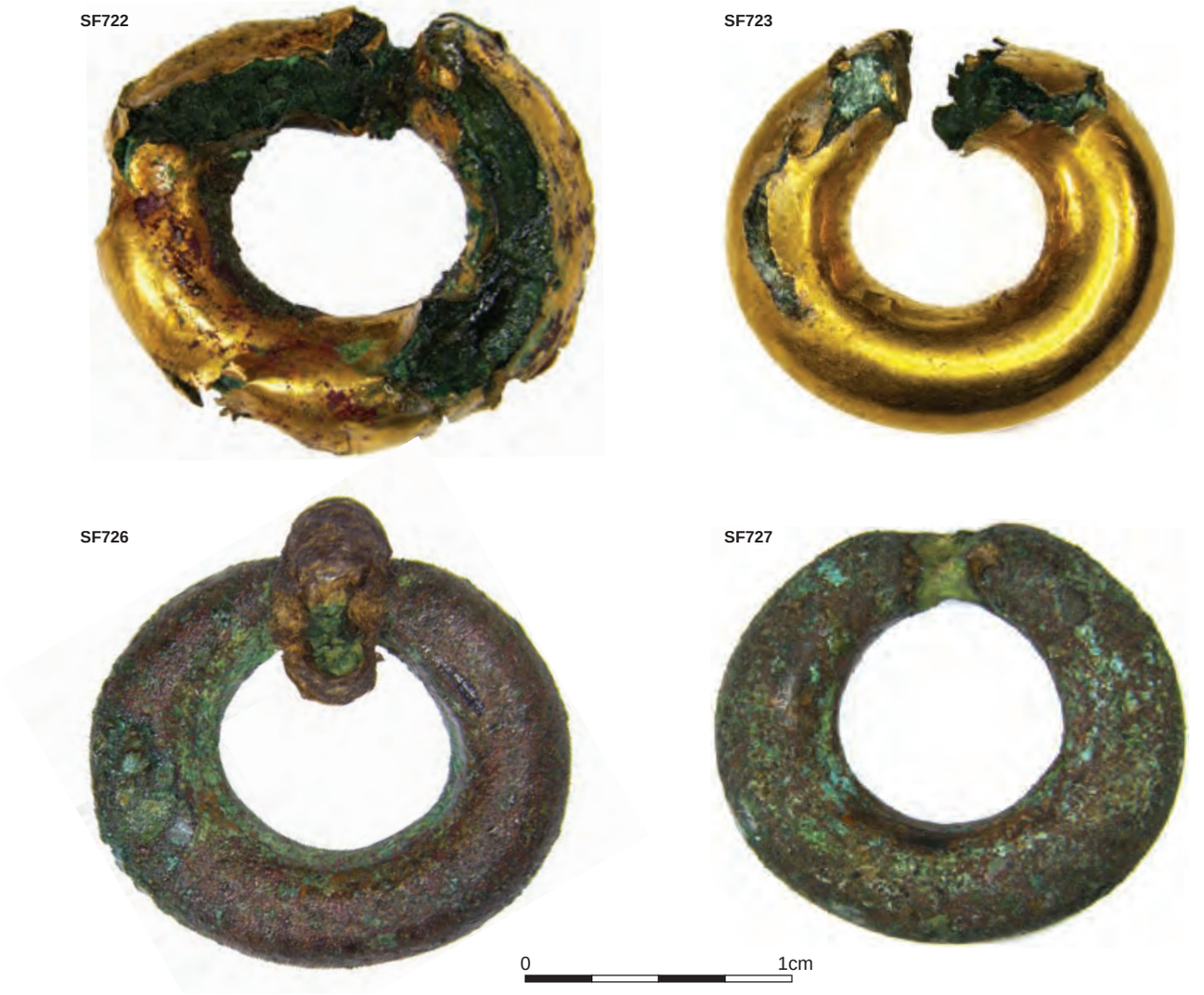

Illustration 5.36
Stereo-microscopic images of the Late Bronze Age hair rings, showing gold coverings (top) and mineralised textile residues (bottom)

gold foil strongly creased on the inside of the ring and towards the terminal (on the inside of the ring and on its side); the folding of the gold foil is clearly visible; no seam is visible further towards the centre of the curvature; the surviving terminal appears to be pointed. Estimated external diameter (width, height): 18mm × 15.5mm; internal diameter: max. 8.5mm; estimated thickness (saddle, height): max. 5mm × 4.5mm, min. 4.3mm × 3.2mm. Unphased, Context: Benton Layer 2, grid square D2.

SF725 (illus 5.35, 5.62) Small penannular ring consisting of a bronze core covered with gold foil; strongly deformed as a result of corrosion and resulting expansion of the copper alloy core; this appears to have caused a great degree of change in the appearance of the object since Benton's photograph was taken: the terminals have almost completely disintegrated. Some creasing of the gold foil is visible on the inside. Extant external diameter (width, height): 15.9mm × 13.8mm; internal diameter: max. 7.3mm; extant thickness (saddle, height): max. 4.5mm × 4.3mm. Unphased, Context: Benton Layer 2, grid square B4.

SF726 (illus 5.33, 5.35, 5.36, 5.62) Small penannular copper alloy/bronze ring in very good condition; a bead of organic material (identified as textile fibres) is suspended between the rather substantial blunt terminals; the body of the ring shows distinct faceting along the interior of the curve, representing the hammering of the bar (?) or the shaping of the mould (?). The similarity to SF727 raises the possibility that they have both been cast in the same mould. The bead of organic material is damaged on one side, exposing a greenish interior, suggesting that the organic fibres have been wrapped around a copper or a copper alloy core (now strongly oxidised) or else that the bundle of fibres has become strongly affected by the corrosion products. The damaged area also reveals the bead itself in section to be composed of dense compacted organic fibres. External diameter (width,

height): 18.2mm × 14.5mm; internal diameter: max. 8.8mm; thickness (saddle, height): max. 4.3mm × 4.3mm, min. 3.7mm × 3.7mm. Unphased, Context: Benton Layer 1, grid square C9.

SF727 (illus 5.35, 5.36, 5.62) Small penannular copper alloy/bronze ring, in good condition, covered by a thin green patina; traces of mineralised organic material connecting the terminals suggest that a bead of organic material was formerly suspended between them, as in the case of SF726; the terminals taper slightly; the body of the ring shows some faint facets around the interior of the curve. External diameter (width, height): 18mm × 15.9mm; internal diameter: max. 8.6mm; thickness (saddle, height): max. 4.4mm × 4.4mm, min. 4.1mm × 3.6mm. Unphased, Context: Benton Layer 1, grid square C9.

SF797 (illus 5.35) Small sub-rectangular fragment of gold foil with jagged irregular edges; strongly crinkled, possibly the result of having been found crinkled up and unfolded post-recovery; soil residues on either side possibly suggest that it had been detached from its former core before deposition; minute deposit of copper oxide on one side and general form suggest that this was formerly part of the foil cover of a penannular hair ring (though not necessarily one of the above). Dimensions: 19mm × 8mm. Unphased, Context: Benton Layer 2, grid square B3.

5.7.2 Iron Age and Roman silver, copper alloy and lead objects

Fraser Hunter

The 72 post-Bronze Age non-ferrous finds from the Sculptor's Cave present an intriguing variety of material. Some are well known, such as the series of projecting-headed pins, but many have remained enigmatic or understudied, and their significance has been greatly underappreciated. To understand the assemblage, they need to be categorised by a combination of function, cultural affiliations and alloy.

Functionally, the assemblage is overwhelmingly dominated by ornamental and personal objects, mostly jewellery and toilet instruments, as well as a range of fittings which are likely to come from clothing, belts and so forth. Most of the large number of fasteners were once components of these ornamental or personal items, including penannular links or rings which once formed suspension rings for tweezers or perforated coins. However, these can no longer be linked to specific items. There is only a small amount of other domestic material, including a Roman spoon fragment; the few tools are all related to textile-working (two whorls and two needles), and there is a single weapon component: a simple hilt guard.

The cultural classification is the most debatable in detail (table 5.15). Four categories are used here: indigenous, Roman, Roman-inspired and a catch-all of 'uncertain'. A group of distinctively Roman material, mostly of ornamental or personal objects, can be clearly separated out: three typical Late Roman bracelets, a finger ring, necklace and belt components, a spoon and some toilet instruments (a nail cleaner and objects interpreted as nail picks and a file). To this should be added the type D1 proto-zoomorphic penannular brooch (SF742), a Romano-British type very rare beyond the frontier. There is also a group of material which represents either Roman imports or Roman-inspired objects which became popular in societies beyond the frontier: tweezers and components of a padlock. The most distinctive indigenous material comprises various forms of projecting ring-headed pins, but there is also a spiral finger ring. Both these categories are types with a pre-Roman pedigree which continued and developed during and beyond the Roman period. The other jewellery is less clear-cut. The zoomorphic pin

Table 5.15
Non-ferrous metalwork divided by function and cultural connection

Category	Indigenous	Roman	Roman-inspired	Undiagnostic/uncertain
Domestic (3)	–	Spoon	Padlock	–
			Key	
Fastener (15)	–	Looped hook	–	Hook
				Links × 10 (from tweezers, pins etc)
				Penannular ring × 2
				Chain of 3 linked rings
Ornament (31)	Projecting-headed pins × 10 Pin shanks × 2 Spiral finger ring	Bracelet × 3	–	Finger ring Zoomorphic pin Other pin
		Belt fittings (2 studs, 1 rivet cover)		
		Necklace components (3 pendants, 3 wire beads, 1 fastener)		
		Finger ring		
		Penannular brooch		
Personal (11)	–	Nail cleaner Nail file Picks × 2	Tweezers × 7 (1 unfinished)	–
Tool (4)	–	–	–	Whorl × 2
				Needle × 2
Weapon (1)	–	–	–	Hilt guard
Uncertain (6)	–	–	–	Fragments × 6

is a distinctively British type, shared across and beyond the province, and became a key element of dress culture in the immediately post-Roman period, while the final pin is hard to parallel, as discussed below.

Characterisation of the objects was assisted by analysis of their alloys. This was carried out using surface X-ray fluorescence analysis by Gemma Cruickshanks, with the results interpreted by the writer. Surface analysis is always problematic because of differential corrosion and uneven surfaces, so the results are qualitative and indicative, but they give a characterisation of alloys. In this case, they proved most useful indeed. One would expect copper alloys in Roman Iron Age Scotland to be rather mixed owing to the recycling of Roman metal, with gunmetals and leaded gunmetals being typical (Dungworth 1997). This is to a degree true of the Sculptor's Cave assemblage: leaded bronze and leaded gunmetal are the most common alloys (table 5.16) but, when categorised by both major and minor elements, quaternary alloys (copper, zinc, lead and tin) are by far the dominant type (table 5.17). However, there are further patterns. The small number of impure brasses are likely to be Roman imports as there is no evidence of production of brass in Scotland in the Roman Iron Age: thus, the zoomorphic pin is unlikely to be a local product. There is a group of 11 items with no trace of zinc in them. One of these, a bracelet, is typologically Roman, but it is plausible that the remainder have been made using indigenous alloys uncontaminated with Roman material. Some may be residual Bronze Age items which are not typologically distinctive (eg pin shank SF754), but it is interesting that one pair of tweezers, one projecting-headed pin and the penannular brooch are all zinc-free alloys. Of course, 'clean' alloys were still being produced in the Roman world at this time, but these may be a hint of traditional indigenous alloys persisting in use, even in the later Roman Iron Age.

The other striking feature is the presence of silver. Two items (a pair of tweezers and a projecting-headed pin) are silver with minor amounts of copper and other elements; in a further 13 items, silver is a significant component in a mixed alloy, always with copper, and then with varying amounts of zinc, tin and lead. It is possible that in some cases the silver was a coating, but no sign of this was noted visually; corrosion obscured many surfaces, but the few pieces which were X-rayed give no hint of silver coating. Thus, it is more likely these reflect debased silver alloys. Without quantitative analysis one cannot be more specific, but it is likely that two different processes are represented: the manufacture of items in a reasonably high-quality silver and the use of a debased silver. The former items seem to be local prestige goods (a pin and

Table 5.16
Non-ferrous metalwork divided by broad alloy type and cultural connection. Not all fragments were analysed

Alloy	Indigenous	Roman	Roman-inspired	Undiagnostic/uncertain
Silver (2)	Projecting-headed pin	–	Tweezers	–
Silver-copper alloys (13)	Pin	Belt fitting 7 necklace elements (pendants, beads, fastener) Spoon	2 picks	Link
Bronze (3)	Spiral finger ring	–	Tweezers	Sheet fragment
Brass (6)	Zoomorphic pin	Nail cleaner	–	Hook Chain 2 rings
Gunmetal (2)	–	–	Tweezers	Link
Leaded bronze (12)	4 projecting pins or shanks	Bracelet Nail file	2 tweezers Key	Finger ring Hilt guard Penannular brooch
Leaded brass (3)	–	Finger ring Rivet cover	–	Link
Leaded gunmetal (17)	6 projecting pins or shanks	2 bracelets Hook fastener	Padlock barb Tweezers	2 needles 3 links Ring
Leaded copper (3)	–	–	–	3 fragments

Table 5.17
The Sculptor's Cave alloys categorised by both major and minor elements

Alloy	No. of artefacts
Cu/Zn	0
Cu/Pb	4
Cu/Sn	1
Cu/Zn/Pb	4
Cu/Sn/Pb	8
Cu/Zn/Sn	1
Cu/Zn/Sn/Pb	31
Ag-containing	15

a pair of tweezers). The latter comprise both Roman material (necklace and belt fittings, a spoon and some pin-like toilet instruments) and an unusual pin which is likely to be non-Roman. The silver content of these items is not visually obvious in their current condition, which raises the question of whether similar debased silver items lurk unnoticed in other collections.

Further consideration of this requires a brief assessment of chronology. The diagnostically datable finds from the Sculptor's Cave are overwhelmingly Late Bronze Age or Roman Iron Age, and the latter are consistently fourth century where they can be dated. The only securely earlier Roman finds – the samian – had been extensively reused and may well have been deposited in the fourth century (see section 5.2.3). While radiocarbon dates indicate the use of the cave was extended, artefactual evidence suggests more restricted phases of intense deposition, perhaps even single events (see below). Use of silver at this date fits a broader pattern. The fourth and fifth centuries AD were the time when silver came into use for indigenous material, notably certain types of projecting-headed pins but also other pin forms and, more rarely, brooches (Youngs 2005; 2013). The raw material source was re-melted Roman silver, which indicates access to this on the Moray Firth coast (assuming the pin was a local product, as seems likely; see below). The issue of such Roman contacts is discussed later. The Sculptor's Cave corrugated-type pin is exceptional: otherwise only proto-handpins and handpins were made in silver (Youngs 2005). The tweezers are likewise exceptional and are best seen as Iron Age prestige goods; they too are discussed further below.

Jewellery and personal items

Roman jewellery

Many of the small individual items (illus 5.40, 5.61) derive from Late Roman composite necklaces, which typically contain tens of individual elements. They are more likely to represent one or more necklaces (given their scattered distribution; illus 5.69) than to have been deposited as individual elements. The objects comprise the Late Roman glass beads (section 5.13), wire beads SF783–5 and probably pendants SF787–9, while S-hook SF764 may have been a fastener or one of a pair which held a central pendant. Not all these can be directly paralleled, but all find analogies in Late Roman material. S-hook fasteners can be seen, for instance, at Krefeld-Gellep/D (Pirling and Siepen 2000: graves 4566, 4608), though the closest parallels come from pairs used to hold pendants (eg Bregenz/A; Bliesbrück/F; Martin-Kilcher et al 2008: abb 3.15.1 and 5). An omega-shaped fastener from Traprain Law, a site which has also produced rich Late Roman finds, seems to be related (Cree 1924: fig 20.5). Wire-wound beads, in this case with loops for pendants, are known from a Late Roman burial at Nijmegen/NL (Steures nd: 110–12, 334, 651–2, B465), and a slightly curved cylindrical example in silver wire is known from an early–mid fourth century context at Caerleon (Lloyd-Morgan 2000: 342, fig 80, no. 65). They could be skeuomorphs, or at least related to segmented or wound beads in jet and glass (cf Keller 1971: fig 27, and Taf 15: 17, 19). No precise parallels have yet been found for the iron rod-pendants with H-shaped (or hilt-shaped) copper alloy fittings, but amuletic pendants are well known on necklaces (eg Krefeld-Gellep/D grave 4452; Nijmegen/NL graves B154.1 and B238; Pirling and Grodde 1997: taf 118, grave 4452, no. 17; Steures nd: 68, 637, B154.1, B238). Their form suggests they may have been miniature sword amulets: there are examples of both model swords and shields perforated for suspension, for use as amulets or, as Kiernan (2009: 84–6) suggested, as a decorative component in toilet sets.

Were the perforated coins part of a necklace rather than elements of the coin hoard (see illus 5.53, 5.61)? Their cylindrical perforations were made by punching, and one has suspension rings still in situ. One shows a failed perforation (which indicates it was not part of this necklace) and one shows three attempts at perforation. The phenomenon is discussed further by Moorhead (section 5.7.3), who notes a significance to the location of some perforations in relation to the coin's imagery. The pierced coins had been transformed into jewellery but it is not certain that they were worn on the composite necklace identified here. Both original coins and copies had been pierced but, numismatically, there is nothing to differentiate between these coins and others in the hoard (Sam Moorhead pers comm). While some of the coins could come from the necklace, the connection cannot be demonstrated; besides, the distribution of the pierced coins correlates with that of the bulk of the hoard (see illus 5.65).

Necklaces are a consistently female type in Late Roman cemeteries and so too are bracelets, which are represented by two, probably three, examples here (illus 5.39): SF763, a classic three-cable type; SF774–6, with transverse grooves; and probably SF757, with notched decoration. Multiple bracelets were often worn by one woman (Booth et al 2010: 297). SF763 is a distorted and broken three-strand bracelet with over-wrapping at one surviving end to secure the fastening hook (cf examples from Colchester (Crummy 1983: 38–9, no. 1628) and South Shields (Allason-Jones and Miket 1984: no. 3.267)). Hilary Cool (in Booth et al 2010: 297) classed this as her Group 1, the most common type in Roman Britain, with three strands being the commonest number. They are recorded from the early second century, but their floruit is the fourth century. The decoration on

SF774–6 is obscured by corrosion, but an X-ray revealed transverse grooves decorating the surface and dividing it into rectangular blocks. It seems to fall into Cool's group 19 (ibid) and has a hook and eye fastening. SF757 is not certainly a bangle, but this nonetheless seems the best explanation. The edge-notching is a common feature of Late Roman bangles in Britain (Swift's type a1; 2000: fig 156, fig 168), but this is a poorly-made example as it lacks notching on both edges.

Many of the other smaller items are also likely to be Late Roman personal gear. SF790 and SF799 (illus 5.38) are related to a well known type of Late Roman military belt fitting (eg Linz/A, 'Yugoslavia', Bonn/D; Ruprechtsberger 1999: abb 13, 78.9–10, 101.8; Nagy 2005: abb 28.3; Gottschalk 2014), but are not themselves from a military belt; these have a characteristic, stereotypical form where the boss supports a loop to hold a ring in the same plane, whereas here the small suspension ring (much weaker than those on military belts) is perpendicular to the boss. However, the analogy is close enough to indicate Late Roman origins. So too is decorative domed boss SF791 (illus 5.38), which finds close parallels in decorative rivet covers from Late Roman belts in silver and copper alloy, which would have been clamped or soldered to the plainer (probably iron) rivet (eg Ruprechtsberger 1999: a. 67.8 (Linz/A; but perforated); Sommer 1984: taf 35.16 (Champdolent/F), taf 57.10–12 (Basel/CH), taf 62.6 (Furfooz/B; better image in Böhme 1974: taf 88.6); Pirling 1966: taf 67, grave 764.24–6 (Krefeld-Gellep/D); Bullinger 1969: taf XLVIII–IL (Maxglan/A)).

Other items are most likely Roman, either from good Roman parallels or from the lack of local evidence. One must be cautious with the latter argument, as there are very few Scottish assemblages spanning the fourth century AD; Traprain Law (East Lothian), which is heavily Roman-influenced, is the main source (Burley 1956), while some of the better-excavated, long-lived Atlantic sites, such as Howe and Skaill (Orkney) offer useful comparative assemblages (Ballin Smith 1994; Buteux 1997). The finger ring (SF759; see illus 5.45) with slipknot fastening is a long-lived type but one well attested in the Roman period (eg Riha 1990: 42, taf 12.217–21), yet lacking in the local Iron Age on current evidence. The finger ring with notched decoration at the terminals (SF761; illus 5.45) is rather too simple a form on which to place much typological weight, but again lacks local parallels (though note a plain penannular finger ring from Fairy Knowe, Stirling; Hunter 1998a: illus 18, no. 136), while it does find Roman ones (see an example from Catterick; Lentowicz 2002: fig 246, no. 75). So too does the hook (SF773; illus 5.52) of twisted wire; this is almost certainly a clothes fastener, stitched into the clothing, with Roman parallels in plain wire, for instance from Beadlam (East Yorkshire) and Baldock (Herts) (Neal 1996: fig 31.7; Stead 1986: fig 58, no. 357).

Projecting ring-headed pins

The Sculptor's Cave produced ten intact projecting-headed pins (illus 5.41–3) which have long been central to discussions of this much debated series. There is a classic evolutionary view of the development of such pins (Smith 1925: 97–8, figs 103–12; Stevenson 1955), which are characterised by having a ring head

Table 5.18
A revised classification of projecting-headed pins

Type	Sub-type	Detail
A: Plain	1: Wire	1.1: Iron
		1.2: Copper alloy
	2: Cast	2.1: Plain
		2.2: Plain with boss (with decorative boss at shank division)
		2.3: Keeling on margins
B: One repeated motif	1: Beads, pellets or ribs	1.1: Large beads (= rosette; 6 beads)
		1.2: Small beads (= beaded)
	2: Four elements	2.1: Ring and boss (the four bosses equally spaced)
		2.2: Wheel
		2.3: Rays
	3: Three elements	–
	4: Disc	–
C: Bipartite decoration	1: Large beads (conjoined or with fillets between them)	1.1: Ribbed upper (= beaded and corrugated)
		1.2: Plain upper
	2: Large beads, spaced (= ibex-headed)	2.1: Ribbed upper
		2.2: Plain upper
	3: Plate and pellets (= proto-handpin)	3.1: Decorated plate
		3.2: Plain plate
	4: Plate, plain upper	–
	5: Plate and fingers (= handpin)	–
	6: Openwork	–
D: Variants	–	–

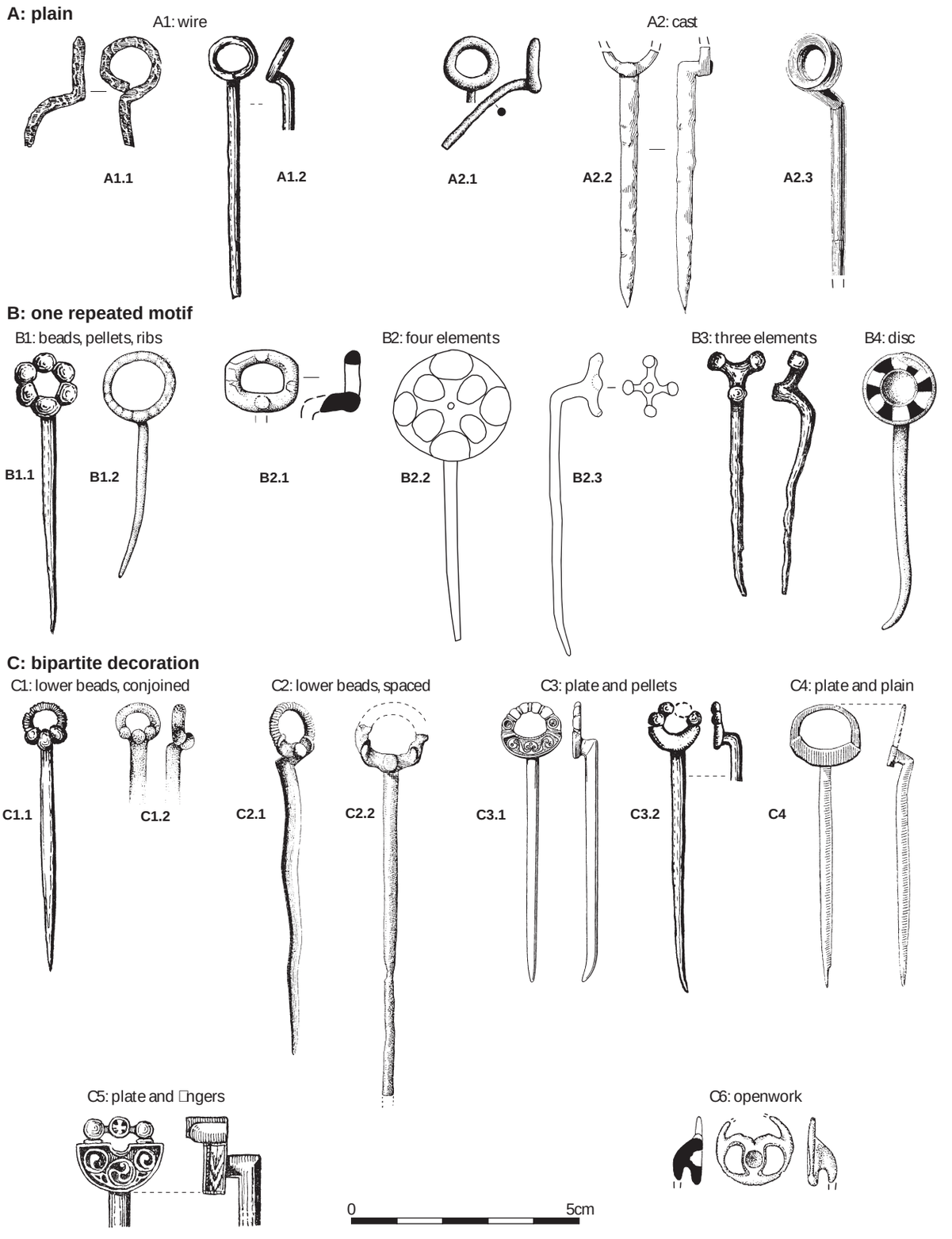

Illustration 5.37
Revised classification of projecting-headed pins

Table 5.19
Projecting ring-headed pins by type (see table 5.18) and area; tallies in the columns of each pin type are number of findspots, not number of finds. Handpins (C5) and Irish-style disc-headed pins (Gavin 2013) are excluded

Area	No. of sites	No. of findspots with each pin type														Range of pins	No. of finds
		A	B1.1	B1.2	B2	B3	B4	C1.1	C1.2	C2	C3	C4	C6	D	?		
		Plain	Rosette	Beaded	4 elements	3 elements	Disc	Beaded and corrugated	Beaded and plain	Ibex	Proto-handpin	Plate and plain	Openwork	Variants	Unclassifiable		
Atlantic Scotland	47	39	1	4	–	2	2	2	3	–	3	–	1	–	5	9	84
North-east Scotland	16	11	1	2	4	1	1	1	1	1	1	–	1	1	–	12	41
Tyne-Forth	8	7	1	1	–	–	–	1	–	–	1	–	–	–	1	5	36
Solway-Clyde	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	0
North-east England	10	2	–	2	–	–	1	–	–	2	1	1	–	1	–	7	12
North-west England	2	–	–	–	–	–	–	–	–	–	1	–	–	–	1	1	2
South-east England	7	–	–	–	–	–	–	–	–	5	2	–	–	1	–	3	8
South-west England	13	4	1	–	–	–	–	3	–	2	4	2	–	–	1	6	17
Wales	3	1	–	–	–	–	–	–	–	1	–	–	–	–	1	2	3
Ireland/Man	9	–	–	–	–	–	–	2	–	4	4	–	–	–	1	3	15
Unknown	0	2	–	–	1	–	–	–	–	–	1	–	–	–	1	3	5
Total	**115**	**66**	**4**	**9**	**5**	**3**	**4**	**9**	**4**	**15**	**18**	**3**	**2**	**3**	**11**	**–**	**223**

Illustration 5.37
Image sources: A1.1 South Shields, Tyne and Wear (Croom 2001: illus 41.2; © Royal Archaeological Institute, reprinted by permission of Taylor and Francis Ltd), A1.2 Traprain Law, East Lothian (Stevenson 1955: fig B2; © Prehistoric Society, reprinted by permission of Cambridge University Press), A2.1 Inveresk, East Lothian (Bishop 2004: fig 100.8; © Scottish Trust for Archaeological Research, reprinted by permission of AOC Archaeology Group), A2.2 Ilchester, Somerset (Leach 1982: fig 122, no. 126; © Western Archaeological Trust), A2.3 Dunadd, Argyll (Christison 1905: fig 49), B1.1 The Sculptor's Cave, Covesea (Stevenson 1955: fig B4; © Prehistoric Society, reprinted by permission of Cambridge University Press), B1.2 Howe, Orkney (Ballin Smith 1994: illus 133, no. 7097, drawn by Frank Moran; © Beverley Ballin Smith, reprinted with permission), B2.1 Urquhart, Moray (drawn by Alan Braby), B2.2 Moray (Elgin Museum; sketch by author), B2.3 West of Scotland (Glasgow Museums; sketch by author), B3 Bruthach a'Tuath, Benbecula (Stevenson 1955: fig B13; © Prehistoric Society, reprinted by permission of Cambridge University Press), B4 Strageath, Perthshire (Hunter 2006b: illus 2.1; © Marion O'Neil, reprinted by permission of the illustrator), C1.1 The Sculptor's Cave, Covesea (Stevenson 1955: fig B6; © Prehistoric Society, reprinted by permission of Cambridge University Press), C1.2 Gurness, Orkney (Hedges 1987: fig 2.84, no. 816; reproduced with permission of BAR Publishing, www.barpublishing. com), C2.1 Woodperry, Oxfordshire (Anon 1846: fig 10); C2.2 Leicester (Kenyon 1948: fig 89.15; reprinted by kind permission of the Society of Antiquaries of London), C3.1 Oldcroft, Gloucs (Youngs 2005: fig 1; drawing: James Farrant;), C3.2 The Sculptor's Cave, Covesea (Stevenson 1955: fig B5; © Prehistoric Society, reprinted by permission of Cambridge University Press), C4 Lydney, Gloucs (Johns 1974: fig 7; reprinted by kind permission of the Society of Antiquaries of London), C5 Norrie's Law (Stevenson 1955: fig B14; © Prehistoric Society, reprinted by permission of Cambridge University Press), C6 North Uist (Close-Brooks and Maxwell 1974: fig 2, no. 985)

projecting from the line of the shank and set at right angles to it. The normal typology sees them developing from earlier Iron Age ring-headed pins (where the head lies in line with the shank or bent forward from it), and then proceeding from plain forms in iron or copper alloy (the latter forged or cast) to a range of more decorative types exemplified by the Sculptor's Cave material. One of these, the 'proto-handpin' with curved plate below and curved beaded arc above, was ancestral to the handpin (where the beads become a line of projecting 'fingers') which became characteristic of the early medieval period.

Both ends of this sequence have seen recent synthesis, with Becker (2008) considering aspects of ring-headed pins and several authors considering handpins and proto-handpins (eg Heald 2001; Youngs 2005). However, the intermediate phases have seen no sustained study since David Clarke's (1971) paper for the plain types and Robert Stevenson's (1955: 288–92) work on the later ones. The present author has been collating data on this for some time; what is presented here makes no pretence at completeness, but it draws on a greater dataset than previous work, with recent finds showing that the existing typology is insufficient. Terminology can be bewildering for non-specialist and specialist alike, with rosette, beaded, beaded and corrugated, and ibex-headed pins, and it is internally inconsistent: the term 'beads' is used both for large beads found on rosette-headed pins and small beads on beaded pins, the latter very similar to the corrugations found on beaded and corrugated pins. The details of what follows will be laid out elsewhere, but table 5.18 and illus 5.37 offer a revised classification, and table 5.19 a summary of the evidence by region and type (with handpins excluded).

This is an interim statement on a complex topic, but it provides a broad picture which shows some intriguing patterns. The plain projecting-headed pins (Group A) are essentially a Scottish type, most common north of the Forth; the abundance in the Atlantic zone is a little misleading, as this includes sites with pot sherds decorated with ring-stamps, which are not found elsewhere. The earliest datable examples are now known to be of the fourth to early second century BC (Croom 2001: 141–3). They were in use in the first to second centuries AD, but the few plain examples from later contexts (such as Scalloway, Shetland; Sharples 1998: 185–6) are likely to be residual as they are at marked variance with other dating.

The decorative types (Groups B and C) probably developed from the plain forms during the Roman Iron Age. Two unusual recent finds are strays from near Roman forts (Hunter 2006b: 81, illus 2.1; Hall and Hunter 2007: 151–2), suggesting but not proving that the later first to second centuries AD were a time of innovation, as was the case more generally with northern decorative metalwork (Hunter 2007a). They have a very wide distribution across Britain and Ireland which has occasioned regular comment and puzzlement (Laing and Laing 1986; Heald 2001; Hunter 2010a), but table 5.19 allows us to break this down a little. Numbers of sites are a better measure than absolute numbers, since rich sites (such as the Sculptor's Cave or Traprain Law) would bias the patterns. The three areas with the largest number and greatest variety of pins are Atlantic Scotland, north-east Scotland and south-west England. There are small numbers but a diverse range from northern England, mostly from military sites, which probably reflects the cosmopolitan nature of the military community; this may be a critical area in our story, as we shall see. They are rare in southern Scotland, being unknown in the south-west, while in the Tyne-Forth region only Traprain and North Berwick show anything other than simple types.

Between these broad geographical clusters there are interesting differences by type; numbers are small in particular sub-groups, but there are consistent patterns of certain types being widely shared and others being regionally specific. Rosette (B1.1), beaded and corrugated (C1.1), and proto-handpins (C3) have a wide distribution, the latter two also occurring in Ireland. Some types are essentially northern: beaded (B1.2), those with three or four elements or disc heads (B2–4), beaded and plain (C1.2) and openwork (C6). Others are predominantly southern: C4, a rare variant found in south-west England, and ibex-headed pins (C2) which are widespread in southern Britain but rare in Scotland (one from the Sculptor's Cave, SF739, is a variant of the type). The original inspiration is likely to have been from north to south, given the type's origins, but it was clearly taken up in some areas of southern Britain and Ireland in the Late Roman period. The possible mechanisms behind this complicated picture are a topic requiring further work, but it is worth noting the military zone as a key area of diversity. Finds from the frontier are few but varied: seven are known from six sites, representing five different types, both northern (eg plain projecting, beaded) and southern (plate and plain). In this diversity and mixing of types and people lies a possible mechanism for ideas, objects and styles to move around the country.

If, as seems likely, the Sculptor's Cave pins can be treated as deposits made over a relatively short period of time (a point discussed further below), then they illustrate the contemporary variety within the tradition. They are made from a similar series of alloys and can be seen as variations on a theme, which warns against too tight a typological noose being placed over them. There are subtle variations, for instance in the pin tips curving forward or not, in the presence or absence of fillets between beads, and in whether shanks are cylindrical or centrally swollen, but this is best seen as inherent variation in an inventive series, and one should be hesitant in seeking evolutionary change as earlier scholarship attempted.

In north-east Scotland, the projecting-headed pin series provides one of the few strands of continuity between the earlier and later Roman Iron Age, a period which is otherwise characterised by massive changes in settlement patterns and material culture (Hunter 2007b). There are similar hints in other rare finds, such as a vessel handle from Culbin Sands which bridges the tankard handles of the earlier Roman Iron Age and the zoomorphic styles of later periods (Hunter 2014b: 335–6). Thus, while the Sculptor's Cave pins went into the cave as offerings, for us they serve to cast fresh light on the development of distinctive styles of material culture in the opaque period of the third and fourth centuries AD.

Other pins

SF741 (illus 5.44) is a proto-zoomorphic pin, a type studied most recently by Youngs (2010), who pointed out the problems with the terminology, as the 'proto' pins are not necessarily older than the more clearly zoomorphic ones. This one is typical of the former category, with its rounded head and moulding forming a

beak. The distribution is broad, from southern England through Ireland to Orkney (Fowler 1963: 121–2; Youngs 2010); dating is also broad, from second to sixth century AD, though Youngs (ibid) doubted the earlier end and suggested a bracket focused on AD 400 is where the bulk of evidence sits. This is consistent with the fourth-century evidence from other finds at the Sculptor's Cave. The material of this example, a clean brass with a trace of lead, is unusual for local metalwork, suggesting that it was an import.

SF750 (illus 5.44) is not a standard Roman hair pin type (Cool 1990), and has defied close parallel so far, but it may be related to the zoomorphic series as it has a double-moulding which hints at two simple Janus-like heads; it has an attachment ring for use in a set or to assist with fastening. It is a mixed silver-copper alloy. The absence of good Roman parallels and indication of links to Scottish and Irish traditions suggests it should be seen as a local type, reflecting the use of silver for prestige jewellery.

Other jewellery

The spiral finger ring SF765 (illus 5.45) is a well known and long-lived Iron Age type across Scotland and beyond (Clarke 1971). This one is crushed, making it difficult to decipher details. The penannular brooch (SF742; illus 5.45) falls into Fowler's Type D1, with the terminals turned back and slight notches to create a hint of eyes and nostrils (Fowler 1960: 176). A recent survey of such brooches emphasised these were a Romano-British type particularly common in south-west England, and are notably rare beyond the frontier (Booth 2014: 147–59, especially fig 4.21). This heavily worn example is thus best seen as a Roman import.

Toilet instruments

Metal instruments for personal grooming, such as razors, tweezers and nail cleaners (illus 5.46, 5.47), are recorded at various points throughout European prehistory from the Bronze Age onwards. In Britain such items are rare after the Bronze Age until they reappear in numbers in the later Iron Age, when the increasing adoption of toilet instruments suggests changing perceptions of the human body and its social role (Hill 1997), with much more attention paid to the creation of particular self-images. This started before the Roman period, but was much more common in Roman Britain as a result of Roman views on personal appearance (Eckardt and Crummy 2008). In Scotland there are indications of pre-Roman developments, but the phenomenon is largely linked to Roman contact.

Nail cleaner SF748 is a Roman form, with its twisted shaft and baluster moulding (the twisted shaft is rare; compare Eckardt and Crummy 2008: 132). These are rare finds in Scotland outwith Roman forts (Coleman and Hunter 2002: table 3; Eckardt and Crummy 2008: fig 23). While in Ireland they saw local development in the early medieval period (Bateson 1973: 80–2), there is less evidence of this in Scotland (one from Whithorn is seen as potentially Late Roman rather than local; Nicholson 1997: 377). The likely nail file (SF755) is also a Roman implement, rare in Britain but more common on the Continent (Eckardt and Crummy 2008: 161–2).

Such nail files are often found with single-pointed picks, and two items from the site seem to fall into this category (SF749, SF751). Both were originally considered as simple pins with perforated disc heads but proved surprisingly hard to parallel. An example from Piercebridge, Co. Durham, was clearly considered an anomaly by the specialist (Allason-Jones 2008: 11–23, no. 152; fig D11.16, no. 163). There is an example from Clickhimin, Shetland, of a very plain cylindrical pin with a perforated disc head (Hamilton 1968: fig 40.5), though there are otherwise few parallels among Scottish Iron Age pin types. An example may also be noted from Ireland, from Carraig Aille II, Lough Gur, Co. Limerick (Ó Ríordáin 1950: fig 9, no. 270), with the slightly expanded rounded head perforated with a suspension ring. However, just as good if not better parallels come from a category of toilet instrument which Eckardt and Crummy (2008: 161) classify as single picks: their fig 104, no. 1284 is particularly close. They are notably rare in Britain. Both the Sculptor's Cave examples are made from a debased silver; Eckardt and Crummy (ibid) had no parallels for silver toilet instruments, but (as noted earlier) these examples are not visually distinctive in their current state, and other examples could have been overlooked.

Tweezers were widespread in the Roman period but also had some Late Iron Age currency and continued into the early medieval period (for instance at Whithorn, Dumfries and Galloway; Nicholson 1997: 377; more widely, see Eckardt and Crummy 2008). Scottish finds from Iron Age contexts have been reviewed elsewhere (Coleman and Hunter 2002: 93–4), with further finds from Culduthel (Inverness), High Pasture Cave (Skye), Dun Ardtreck (Skye) and Broxmouth (East Lothian; Hunter forthcoming a; b; MacKie 2000: illus 24.43; Armit and McKenzie 2013: 373, illus 10.55, SF533). In the case of the Sculptor's Cave, unfinished pair SF778 clearly shows local manufacture, while the use of silver for SF745 is unparalleled in Roman Britain and suggests manufacture beyond the frontier in a new prestigious material. Stylistically the group shows some variety: some are plain with straight arms, some with flaring arms, a number have subtle decoration on the spring loop in the form of grooving, and one has a decorative saltire, a feature found widely on Romano-British tweezers (Eckardt and Crummy 2008: 152–3) which suggests that this pair at least is an import. The loop of the silver pair echoes the barrel-formed heads of some type F penannular brooches (eg Fowler 1963: fig 3).

Domestic items and tools

Some of the other material can be confidently seen as Roman. The inscribed item, SF781 (illus 5.50), has long defied identification but is in fact part of a spoon: the junction between bowl and offset handle, with a hint of zoomorphic form (eg Riha and Stern 1982: taf 30, nos 273–5 for types where the upper end of the junction protrudes; compare the openwork junction (though this is circular) on an example from Lankhills, Winchester (Clarke 1979: fig 103, no. 629), the projecting offset on spoons from Wroxeter (Mould 2000: fig 4.22, no. 230; Bushe-Fox 1916: plate XVII, no. 19) and Cirencester (Viner 1986: fig 79.29–32) and a close parallel from Catterick, North Yorkshire (Lentowicz 2002: fig 249, no. 128)). From parallels with other inscribed spoons, and given its casual rather than display quality, text in this location is likely to be the owner's name or a good luck inscription (cf Collingwood and Wright 1991a: 2420.7, .27, .32, .38, .50), although it cannot be reconstructed (see Collingwood and Wright 1991b: 2433.17, and further discussion in catalogue entry).

The bolt from barb-spring padlock SF780 and accompanying key SF779 (illus 5.50) are likely to be Roman, but are not certainly so. Manning (1985: 95–7, fig 25.10–12) discussed the type, whose origins lie in the Iron Age. Such padlocks were common in the Roman world, though bronze keys appear to be rare. A similar bronze key is known from early medieval levels at Howe (Orkney; Ballin Smith 1994: 225, illus 136, no. 603), while a barb-spring bolt from Traprain Law (East Lothian) is likely to be a Roman import (Cree 1923: 221–2, fig 28). Could the Sculptor's Cave finds be local versions of a Roman lock? Analogies come from Ireland, where rare Roman Iron Age padlocks and keys are generally interpreted as imports (Raftery 1994: 212–13; Donaghy 2008), but the type then saw local development, with early medieval examples including bronze keys like this one (eg Collins 1955: 59, fig 9.24; summary in Ballin Smith 1994: 225). Thus the Sculptor's Cave finds could either be Roman imports or precocious local copies, but the former seems more likely at this date, given the quantity of other Roman material in the cave and the evidence of repair on the bolt, which suggests a craft-worker with some familiarity with the technology. The presence of both lock and key, both unusual finds, strongly suggests that they came to the site together, perhaps for locking valuables which were then deposited in the cave.

Copper alloy needles (illus 5.48) are a widespread and non-distinctive habit, with a number of Scottish parallels (eg Howe, Gurness, Clickhimin, Broxmouth and Traprain Law; Ballin Smith 1994: 225, fig 136, no. 4414; Hedges 1987: fig 2.39, no. 233; Hamilton 1968: fig 50.5; Armit and McKenzie 2013: 374–7, illus 10.55, nos 516, 519; Burley 1956: no. 259). Along with these we may group the two lead whorls (SF782, SF792; illus 5.49) as associated with textile manufacture. Lead is rare in the Iron Age, and is primarily a phenomenon of Roman contact (Hunter 1998b: 355–6). It is much more common in later periods, but there is no specific reason to discount these as later intrusions. Lead isotope analysis (by Valerie Olive of SUERC) produced results consistent with a Scottish source, although more remote sources cannot be excluded (the weighted mean of two replicate analyses for SF792 and SF782 respectively was: $^{207}Pb/^{206}Pb$ 0.8437, 0.8387; $^{208}Pb/^{206}Pb$ 2.0872, 2.0866; $^{208}Pb/^{207}Pb$ 2.4798, 2.4912; a report on the lead isotopes is included in the site archive).

Weapons

Only one weapon component was found. The simple form of hilt guard SF777 (illus 5.51) can be paralleled at Traprain Law (Cree and Curle 1922: fig 13, no. 1). It seems narrow for a Roman hilt (Mike Bishop pers comm), suggesting it is a local weapon; narrow blades are a notable feature of swords in northern Britain (Stead 2006: fig 2), and this find indicates that the habit persisted through the Roman Iron Age.

Miscellaneous

The fasteners are dominated by small penannular links, typically 8–12mm in diameter (illus 5.52). Exactly such links are found in situ on one perforated coin, as suspension rings on the nail cleaners, picks and tweezers, and as attachment points for chains on one pin. These small links have become detached from such items. The links with butting terminals are most likely to be suspension rings from tweezers which have fallen off; the two 'sprung' links, SF760 and SF798, are more likely suspension rings for perforated coins which have been forced loose, as most of the coins lack rings. We may speculate that the larger rings such as SF758 or SF762 may once have been suspension rings for toilet sets, with several instruments on the one loop. Other links may have formed chains, as with the three conjoined links (SF767).

Deposition habits

The Sculptor's Cave material represents three distinctively different depositional practices. One is a habit of depositing multiple intact examples of single items, with 12 pins (10 local projecting-headed variants, the others perhaps exotic) and 11 toilet instruments. Their distribution shows both clusters and singletons, suggesting both individual items and either group deposits or recurring deposits in the same spot. Such clusters of pin deposits are unusual in Scotland, but there are good parallels from ritual sites in southern Britain for the deposition of multiple toilet instruments and personal items such as brooches (Eckardt and Crummy 2008: 102–3). Some of the Sculptor's Cave toilet instruments may once have made up sets.

A significant component of the material has the character of a Roman ornament set: the necklace(s) (in multiple components), the three Late Roman bracelets, the belt fittings and finger ring(s). Necklaces and bangles have clear female associations in the Roman world, and this could all represent one individual's costume. With this material one could group the Roman coins, as exotic and potentially personal material, and perhaps the padlock elements as linked to the protection of personal wealth.

Most of the material was deposited intact, with any damage apparently sustained later, probably upon excavation. This makes the exceptions noteworthy; these make up the third depositional habit. Pick SF749 was bent through 90° and two pin shank fragments show ancient breaks, though most pins were deposited intact; indeed, the zoomorphic pin was protected inside a bone cylinder. The needles may have been broken deliberately across their heads to render them useless and one of the tweezers (SF747) may have been deliberately broken (the other tweezers appear to have been damaged during excavation). The spiral finger ring had been squashed and a number of the penannular links had sprung open, probably from dismantling sets of toilet instruments or removing mounted coins from the necklace. Violence was also meted out to the Roman material. The spoon was broken into pieces (with apparently only one piece deposited), the handle of the key was distorted, two of the bracelets were broken open and the necklace strands were scattered.

The female character of the Roman necklace and bangles opens the question of whether these were gender-specific deposits in terms of participants or material deemed appropriate for deposition. The danger here lies in resorting to modern gender stereotypes. There is only one element of weaponry and a noticeable number of textile-working tools. Does this – need this – represent gendered deposits? We know too little of gender roles in this period and place to be sure and have few similar finds in the local area for comparison. The tweezers and other toilet instruments cannot safely be gendered, as analogy to other times and places finds both males and females using such items; indeed, in Roman Britain they are found in both male and female burials (Eckardt and Crummy 2008: 90, table 6). Likewise, the associations of the

dress pins are not clear. Plain examples are known from five burials: three male, one ?female, one uncertain (Hunter 2015b); decorated examples are known from only two burials, both southern English finds (so arguably of little relevance) and in neither case with clear sex data (silver handpins from Long Sutton, Somerset and St Albans, Hertfordshire; Youngs 2016). The question can be posed but not yet answered, though we can say with confidence that the Roman Iron Age phase within the Sculptor's Cave represents a distinctive depositional practice linked especially to personal appearance. There are parallels for different practices at different ritual sites, probably connected to different social groups (compare the natural arch of the Heidentor, Baden-Württemberg, with an assemblage of Late Hallstatt and Early La Tène brooches, pins, rings and beads; Wieland 2012: 279).

In terms of use-lives, there is a mixture of material showing no sign of wear (notably the projecting-headed pins) and a few items with evidence of extensive use, notably the penannular brooch with very worn decoration, the chain (SF767) with wear on the links and the repaired padlock. There is also one unfinished item: the tweezers. Thus, while the Roman Iron Age material shows a focus on the personal, there are different histories, processes and stages of use-life represented. Some implications of the assemblage will be considered in the wider discussion section.

Catalogue

Alloy coding (from surface X-ray fluorescence analysis); Ae: bronze, B: brass, G: gunmetal, Pb: lead or leaded, Ag: silver, Sn: tin, Zn: zinc, Cu: copper. As corrosion deposits adhere to the surfaces of many objects, details may be obscured.

Ornaments

Roman belt fittings

SF790 (illus 5.38) Cast bossed stud with attachment ring. Domed boss, hollowed underneath, with a central depression which is probably a perforation for attachment (though it is obscured by corrosion). Rounded, slightly angled flange and integral pelta loop perforated to take a penannular suspension ring with butted terminals. Alloy: Ag-Sn. Length: 13mm (excluding ring); boss diameter: 10.5mm; height: 3mm; ring diameter: 5.5mm; wire diameter: 1mm; weight: 0.57g. Unphased, Context: Benton Layer 1, grid square A4.

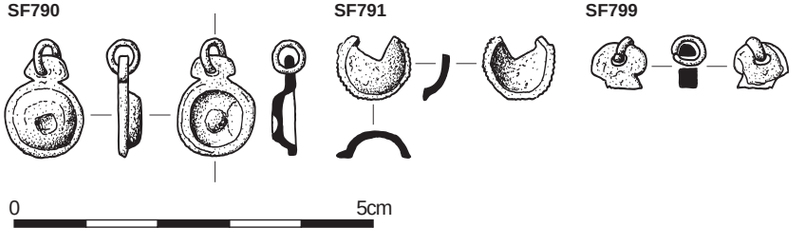

Illustration 5.38
Roman non-ferrous belt fittings

SF791 (illus 5.38) Decorative rivet cover. Domed boss (around a quarter lost) with serrated flange. Hollow underneath; unclear how it was attached. Alloy: PbB. Diameter: 10mm; height: 3.5mm; weight: 0.13g. Unphased, Context: Benton Layer 1, grid square C5.

SF799 (illus 5.38) Peltate attachment loop broken from an item similar to SF790, with suspension ring attached. Dimensions: 8mm × 6mm × 2.5mm; ring diameter: 4mm; wire diameter: 1mm; weight: 0.26g. Unphased, Context: Benton Layer 1, grid square C5.

Roman bracelets

SF757 (illus 5.39) Decorated rectangular-sectioned strip, broken square at one end, the other tapered and rounded. One edge (only) is decorated with alternating V-notches spaced *c* 6mm apart. The uneven longitudinal profile and stress cracks in places indicate it has been distorted; the restriction of decoration to one edge is unusual but parallels discussed above suggest it is a Late Roman bracelet. Alloy: PbG. Dimensions: 47.5mm × 2.5mm × 1mm. Unphased, Unstratified.

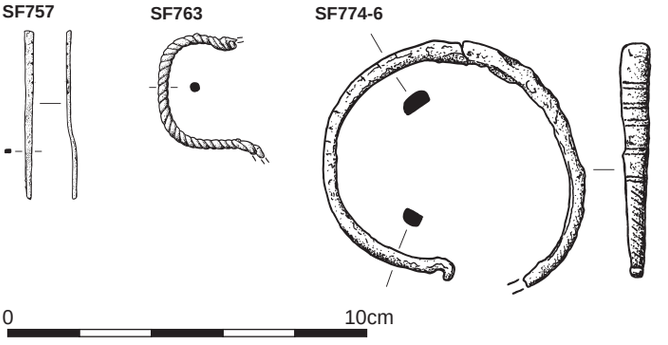

Illustration 5.39
Roman copper alloy bracelets

SF763 (illus 5.39) Late Roman cable bracelet fragment made of three circular-sectioned rods twisted together in a Z-twist. Distortion at both ends suggests it was deliberately broken; one end preserves part of the overlap where an end was wound to hold a fastening hook. Alloy: PbAe. Dimensions: 24.5mm × 31mm; hoop diameter: 2.5mm; individual rod diameters: 1mm; weight: 2.23g. Unphased, Context: Benton Layer 1, grid square B3.

SF774–6 (illus 5.39) Three joining fragments (recently broken) from a D-sectioned solid-cast Late Roman bangle with a hook and eye fastening. The bangle tapers to the ends; the eye is broken. Corrosion on the surface obscures decoration but an X-radiograph revealed pairs of transverse grooves defining rectangular fields. The bangle is slightly distorted as it survives. Alloy: PbG. Dimensions: 73mm × 58mm; section dimensions: 8mm × 4mm; weight: 10.9g. Unphased, Context: Benton Layer 1, grid square D2.

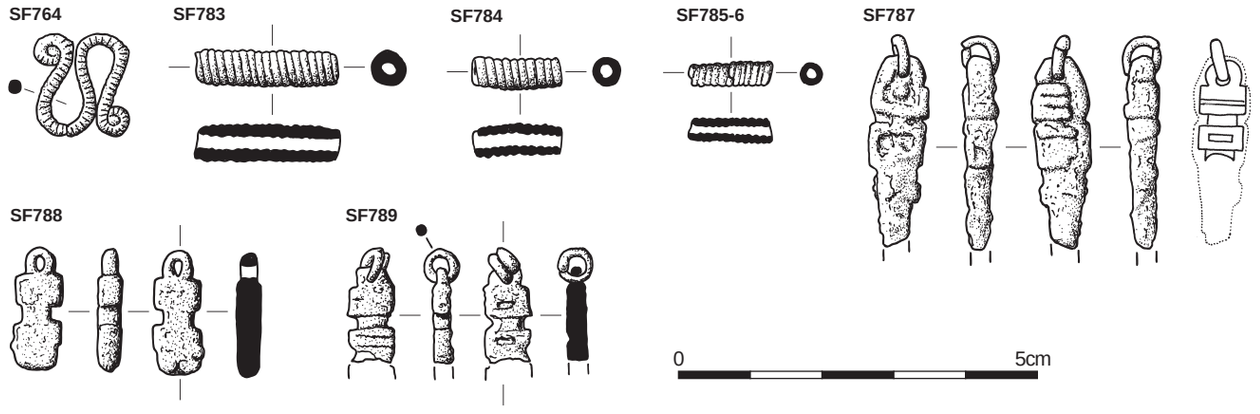

Illustration 5.40
Roman non-ferrous necklace components

Roman necklace components

SF764 (illus 5.40, 5.61) Fine circular-sectioned wire bent into an S-shaped fitting with spiral ends. Probably a fine fastener. Now broken in two. Alloy: Ag-Cu. Dimensions: 14.5mm × 14mm; rod diameter: 1.5–2mm; weight: 0.59g. Unphased, Context: Benton Layer 1, grid square B5.

SF783 (illus 5.40, 5.61) Cylindrical bead formed from Z-twist wound wire; 17 turns. Alloy: Cu-Ag-Sn. Length: 21mm; external diameter: 5.5mm; internal diameter: 2.5mm; wire diameter: 1mm; weight: 1.55g. Unphased, Context: Benton Layer 1, grid square D3.

SF784 (illus 5.40, 5.61) Cylindrical bead formed from Z-twist wound wire; 10 turns. Alloy: Cu-Ag-Sn. Length: 12.5mm; external diameter: 4.6mm; internal diameter: 2mm; wire diameter: 1mm; weight: 0.85g. Unphased, Context: Benton Layer 1, grid square D3.

SF785–6 (illus 5.40, 5.61) Cylindrical bead formed from Z-twist wound wire; 12 turns. Two joining fragments. Alloy: Cu-Ag-Sn. Length: 12mm; external diameter: 4mm; internal diameter: 2mm; wire diameter: 1mm; weight: 0.53g. Unphased, Context: Benton Layer 1, grid square D3.

SF787 (illus 5.40, 5.61) Pendant. Oval-sectioned iron object, tapering to a rounded tip, in a copper alloy setting. An X-radiograph reveals this is a hollow casting resembling a sword hilt, with two projecting bars at top and bottom, decorated with a transverse groove and a D-shaped perforated hoop on top with a slightly irregular penannular suspension ring through this. Alloy: Cu-Ag-Sn. Length: 27mm (excluding ring); width: 8mm; thickness: 5mm; visible iron length: 15mm; ring dimensions: 7mm × 5.5mm, diameter: 1mm; weight: 2.14g. Unphased, Context: Benton Layer 1, grid square D4.

SF788 (illus 5.40, 5.61) Pendant fitting. One-piece casting with a loop on top of two squares joined by a narrow waist. The lower end is broken below a transverse recessed channel. Raised border between loop and upper square; corrosion obscures any other decoration. Alloy: Cu-Ag-Sn. Dimensions: 18mm × 7.5mm × 4mm; loop width: 5mm; perforation diameter: 2.5mm; weight: 1.51g. Unphased, Context: Benton Layer 1, grid square D2.

SF789 (illus 5.40, 5.61) Pendant fitting (identical to SF788) with a ring through the loop squeezed tight such that the ends overlap (1.25 turns). The lower end of the fitting is broken but the better preserved surfaces show hints of three transverse bar mouldings on both square elements. Alloy: Cu-Ag-Sn. Dimensions: 13mm × 6mm × 3mm (without ring); ring diameter: 5mm; rod diameter: 1mm; weight: 0.91g. Unphased, Context: Benton Layer 1, grid square A4.

Pins

SF713 (illus 5.41, 5.42) Beaded and corrugated pin, the three beads separated by fillets. Rear of head plain. Angular elbow into shaft; head tilted slightly back, tip curves slightly forward. Swollen shaft. Alloy: PbG. Length: 59mm; head height: 10mm, width: 10.5mm, thickness: 2.5mm; shank length: 50.5mm, diameter: 2.4–2.8mm; weight: 2.59g. Unphased, Context: Benton Layer 1, grid square C8.

SF714 (illus 5.41, 5.42) Beaded and corrugated pin, the three beads separated by fillets. Rear of head plain. Angular elbow into shaft; head parallel to shaft, tip curves very slightly forward. Slightly swollen shaft. Alloy: PbG. Length: 51.5mm; head height: 8.5mm, width: 8.7mm, thickness: 2.5mm; shank length: 45mm, diameter: 2.5–3mm; weight: 2.19g. Unphased, Context: Benton Layer 1, grid square C4.

SF733 (illus 5.42, 5.43) Rosette-headed pin with six beads, bossed on the front and flat on the rear, where grooves define them. Tip curves slightly forward, head leans slightly back. Alloy: PbG. Length: 61.5mm; thickness: 9mm; head dimensions: 15mm × 15mm; shank length: 48.5mm, diameter: 3mm; weight: 5.26g. Unphased, Context: Benton Layer 1, grid square D5.

SF734 (illus 5.42, 5.43) Proto-handpin with plain crescentic plate below and four beads above (one now lost). Projection 'elbow' rounded rather than the sharp angle common at the site. Slightly swollen shank; head and tip project slightly forward with respect to the shank. Alloy: PbG. Length: 63mm; thickness: 7.5mm; head dimensions: 11mm × 12mm; shank length: 55.5mm, diameter: 2.5–3.2mm; weight: 2.7g. Unphased, Context: Benton Layer 1, grid square A5.

Illustration 5.41
Silver (SF735) and copper alloy beaded and corrugated pins

Illustration 5.42
Photograph of the non-ferrous projecting-headed pins.
Top row, top left–bottom right: SF733, SF734, SF735, SF736, SF737;
bottom row, top left–bottom right: SF738, SF739, SF740, SF713, SF714

SF735 (illus 5.41, 5.42) Silver corrugated pin with a flat boss at the junction which has incised corrugation lines on the top. Rear plain. Head leans slightly back; swollen shaft, rather worn, with a series of V-grooves which may simply represent later cleaning. Angled elbow. Alloy: Ag. The unusual material was noted by Stevenson (1955: 289, fig B caption) but seems to have escaped wider notice. Length: 57mm; thickness: 5.5mm; head dimensions: 9.5mm × 9.5mm; shank length: 50.5mm, diameter: 2.5–3.1mm; weight: 3.21g. Unphased, Context: Benton Layer 1, grid square C7.

SF736 (illus 5.41, 5.42) Beaded and corrugated pin with three beads; rear is plain. Shank slightly swollen in centre. Head parallel to shank, tip bent slightly forward. Alloy: PbAe. Length: 58mm; thickness: 7.5mm; head dimensions: 10.5mm × 10mm; shank length: 51mm, diameter: 2.5–3.2mm; weight: 3.4g. Unphased, Context: Benton Layer 1, grid square C8.

SF737 (illus 5.41, 5.42) Beaded and corrugated pin, the three beads with fillets between them; rear is plain and flat. Shank slightly swollen in centre. Head parallel to shank, tip straight. Alloy: PbAe. Length: 53mm; thickness: 6.5mm; head dimensions: 8.5mm × 9mm; shank length: 47mm, diameter: 2.5–2.8mm; weight: 2.32g. Unphased, Unstratified.

SF738 (illus 5.41, 5.42) Beaded and plain pin; the lower half of the ring is slightly raised with post-casting incisions to define four beads. Head parallel to shank but barely projects; the rear is aligned to the front of the shank. Slight asymmetry to tip, perhaps from wear. Shank not swollen. Alloy: PbAe. Length: 51.5mm; thickness: 5mm; head dimensions: 8.3mm × 9.3mm; shank length: 45mm, diameter: 3mm; weight: 2.41g. Unphased, Context: Benton Layer 1, grid square C6.

SF739 (illus 5.41, 5.42) Beaded and corrugated pin, the three beads widely spaced to give the impression of an ibex-headed variant; rear

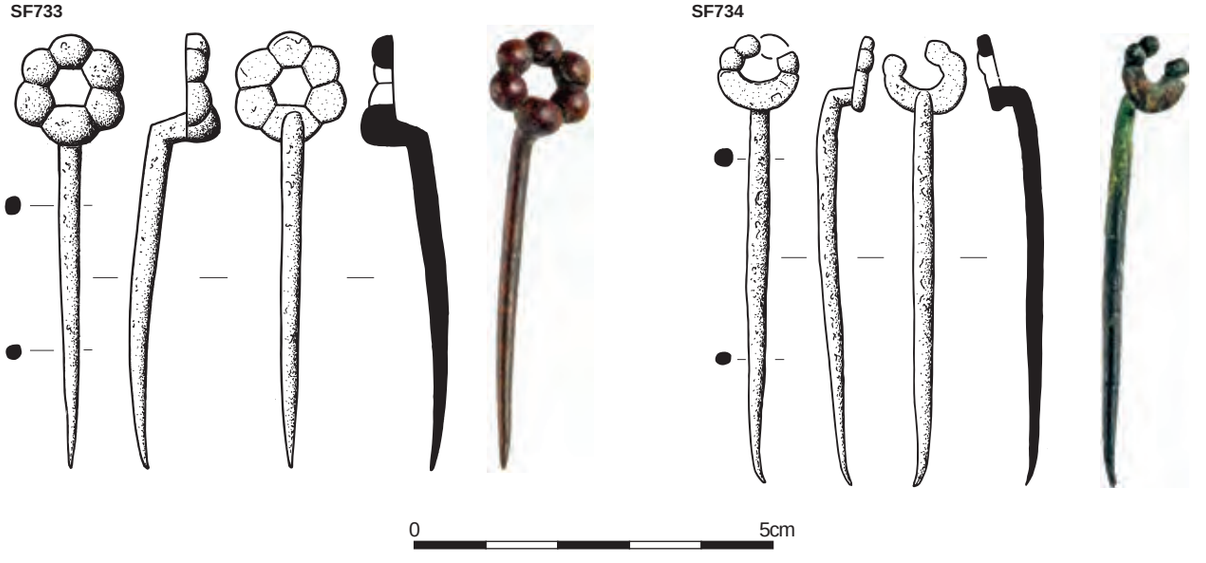

Illustration 5.43
Copper alloy rosette-headed pin and proto-handpin

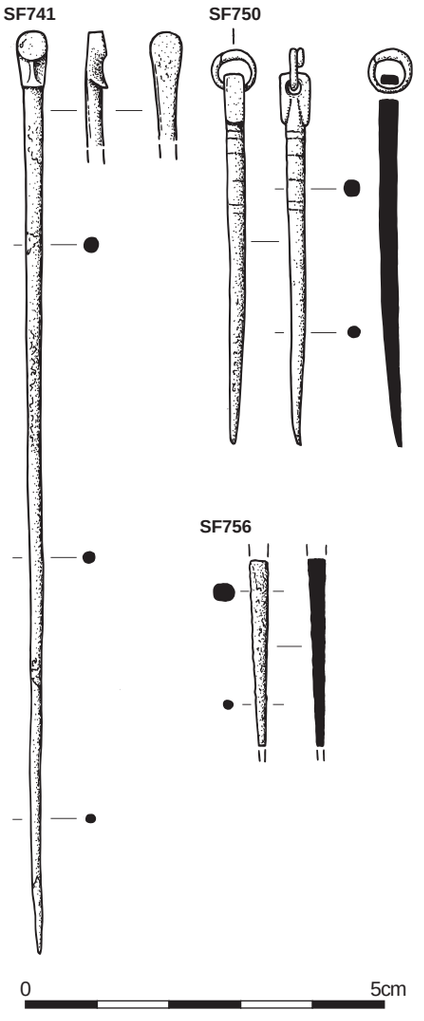

Illustration 5.44
Other non-ferrous pins

is plain. Cylindrical shank, slightly bent forward at about a third of its length from the tip. Alloy: PbAe (trace Zn). Length: 46.5mm; thickness: 6.5mm; head dimensions: 7mm × 7mm; shank length: 41.5mm, diameter: 2.5mm; weight: 1.67g. Unphased, Unstratified.

SF740 (illus 5.41, 5.42) Beaded and corrugated pin with three beads; rear is a plain bar with a couple of apparently random incisions behind the beaded portion but not correlated with it. Shank slightly swollen in centre. Head parallel to shank. Alloy: PbG. Length: 49mm; thickness: 6mm; head dimensions: 7.5mm × 8mm; shank length: 44.5mm, diameter: 2.5–3mm; weight: 2.35g. Unphased, Context: Benton Layer 1, grid square C8.

SF741 (illus 5.44) Intact pin with simple proto-zoomorphic head: a flat circular boss with 'duck-bill' moulding. The rear of the head is flat. It was deposited inside a bone cylinder (SF823; see section 5.3.7). Alloy: B. Length: 129mm; head length: 8mm, width: 4.5mm, thickness: 3.5mm; shank diameter: 3mm; weight: 3.96g. Unphased, Context: Benton Layer 1, grid square C7/8.

SF750 (illus 5.44) Pin with a rectangular head perforated to take a spiral ring of 1.25 turns. Grooving on the top and sides of the head (from shank to perforation) creates a zoomorphic appearance like two duck bills. The top of the shaft is ribbed with alternate broad and narrow bands over the first 12.5mm; there are six broad bands. The tip is slightly bent from use. Alloy: Cu-Ag-Sn. Length: 52mm; head dimensions: 7mm × 4mm × 2.2mm; shank diameter: 2.5mm; ring diameter: 6mm; rod diameter: 1mm; weight: 1.89g. Unphased, Context: Benton Layer 1, grid square D4.

SF756 (illus 5.44) Pin shank, cleanly broken in antiquity; extreme tip lacking. Alloy: PbG. Length: 26mm; diameter: 2mm; weight: 0.41g. Unphased, Unstratified.

SF114 (not illustrated) Tapered cylindrical pin shank, ends corroded. Length: 32.5mm; diameter: 3mm; weight: 1.03g. Phase: 2/3, Block: 2.7, Context: IIb5.

Other personal ornaments

SF742 (illus 5.45) Intact zoomorphic penannular brooch, lacking only the extreme pin tip. Type D1, with the rectangular terminals folded back, flattened and decorated to create beast heads by punching lateral V-notches to evoke eyes and nostrils. The hoop is a flat rectangle in section with rounded edges. Both faces were decorated, though these are much worn by heavy use. The front side has a regular series of V-notches on the inner and outer edges; it is possible they were once joined by transverse grooves to create a ribbed effect, but these have been lost to wear if it was the case. The rear shows a regular series of angled indents. The brooch was not attached when deposited as the hoop sits over the pin. The latter is a circular-sectioned wire, bowed in the centre, with the tip recently broken and the other end flattened and coiled to create a head. Alloy: PbAe (hoop and pin). Hoop dimensions: 29mm × 32mm; section dimensions: 2.5mm × 1mm; pin length: 30mm, diameter: 2mm; weight: 3.21g. Unphased, Context: Benton Layer 1, grid square B6.

SF759 (illus 5.45) Fine broken finger ring with slipknot fixing, the ends coiled (in two turns) around the fine circular rod to secure the sliding fixing. Alloy: PbB. External diameter: 20mm (distorted); rod diameter: 1mm; weight: 0.49g. Unphased, Context: Benton Layer 1, grid square B3.

SF761 (illus 5.45) Decorated finger ring. Oval-sectioned penannular hoop with tapered squared-off terminals decorated on the outer surface with two and four incised transverse grooves. Alloy: PbAe. External diameter: 21.5mm × 18mm; internal diameter: 19mm × 15.5mm; section dimensions: 2.2mm × 1mm; weight: 0.81g. Unphased, Unstratified.

SF765 (illus 5.45) Spiral finger ring made of D-sectioned rod; both ends lost in recent damage. It is rather squashed and corroded, rendering details unclear, but it appears to be a single ring with five or six turns. Alloy: Ae. External diameter: 16mm × 17mm; height: 6mm; rod height: 1.2mm, width: 0.5–1mm; weight: 1.55g. Unphased, Context: Benton Layer 1, grid square B3.

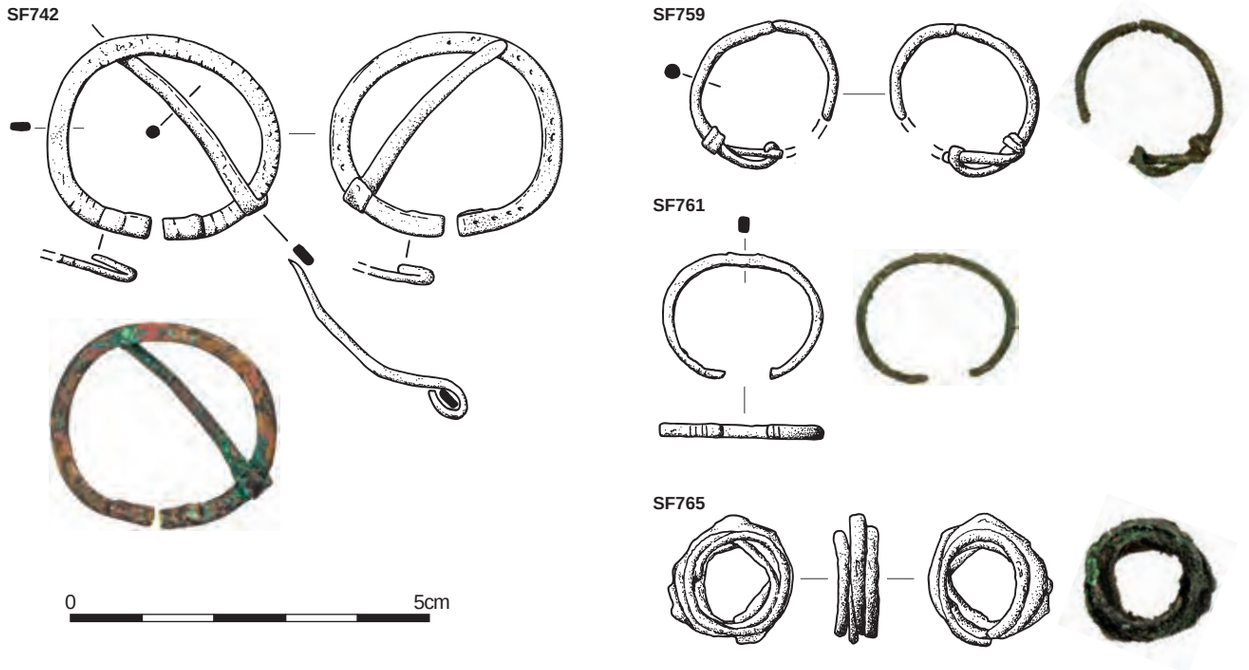

Illustration 5.45
Copper alloy personal ornaments

Toilet instruments

SF717 (illus 5.46, 5.47) Simple tweezers, the rectangular-sectioned arms expanding smoothly into the plain head and to the tips, one of which is near-straight, the other curved out and then in, creating an unusual asymmetry. Alloy: PbB. Length: 40mm; tip width: 5mm; arm section: 2.5mm × 1.5mm; head width: 4mm; weight: 2.3g. Unphased, Context: Benton Layer 1, grid square C5.

SF743 (illus 5.46, 5.47) Pair of tweezers with teardrop head slightly ribbed on exterior; otherwise plain. Arms narrow slightly from the head and swell slightly to the incurved tip. Alloy: Ae. Length: 30mm; width: 8.5mm; head width: 6.5mm, thickness: 5.5mm; strip thickness: 1mm; weight: 2.27g. Unphased, Context: Benton Layer 1, grid square C5.

SF744 (illus 5.46, 5.47) Very well-made pair of tweezers. Teardrop head made from a flat strip which narrows into rounded arms with very neatly faceted section, then expands to incurved tips with a flat section. Tiny fragment of fibrous organic material (unidentified) on inside of head. Alloy: PbAe. Length: 36mm; width: 9mm; tip width: 3mm; arm thickness: 2mm; weight: 1.81g. Unphased, Context: Benton Layer 1, grid square C5.

SF745 (illus 5.46, 5.47) Pair of silver tweezers with suspension ring; part of one arm lost in modern break. The narrow rectangular-sectioned arm broadens and splays to the inturned tip. The head is clearly differentiated by being broader and decorated with a triple rib. Spiral attachment ring (part lost). Alloy: Ag. Shank length: 42.5mm; arm section: 1.5mm × 1mm; tip width: 3mm; ring diameter: 6mm, height: 3mm; wire diameter: 1mm; weight: 1.41g. Unphased, Context: Benton Layer 1, grid square B3.

SF746 (illus 5.46, 5.47) Pair of tweezers with suspension ring; one arm lost in modern break. Plain strip with central channel over head; slightly expands and bends to incurved tip. Butted penannular suspension ring with squared terminals. Alloy: PbG. Length: 29.5mm; width: 2.5–4mm; ring diameter: 11mm; rod diameter: 2mm; weight: 1.32g. Unphased, Context: Benton Layer 1, grid square D1.

SF747 (illus 5.46, 5.47) Arm from a pair of tweezers, neatly broken below the head, perhaps deliberately. Expands gradually to inturned end, the tip chamfered. Decorated with roughly incised transverse groove below the head and a more neatly incised saltire bounded by transverse grooves in a sunken panel near the tip. Alloy: G (low Zn). Length: 35mm; width: 2.5–4mm; thickness: 1.5mm; weight: 0.88g. Unphased, Context: Benton Layer 1, grid square B1.

SF748 (illus 5.46, 5.47) Nail cleaner. Square-sectioned S-twist shank ending in a forked tip, slightly rounded. At the top of the shaft a pair of concave-sided mouldings lead into a rounded flat terminal perforated for a suspension ring, itself with a further penannular ring attached. The concave mouldings give a hint of zoomorphism. Over the top 10mm, the edges of the shaft are decoratively serrated. Alloy: B (trace Pb, Sn). Length: 44mm; head dimensions: 10mm × 4.5mm × 3mm; shank width: 2.7mm; ring diameters: 6mm; wire diameter: 1mm; weight: 1.87g. Unphased, Context: Benton Layer 1, grid square B3.

SF749 (illus 5.46) Nail pick? Pin-like object with ringed head containing a penannular circular-sectioned attachment ring with butted ends. It has been bent through almost 90° at about three-fifths of its length. The angle implies this was deliberate destruction, not a retaining bend. Cylindrical shank, tapering to the tip. The

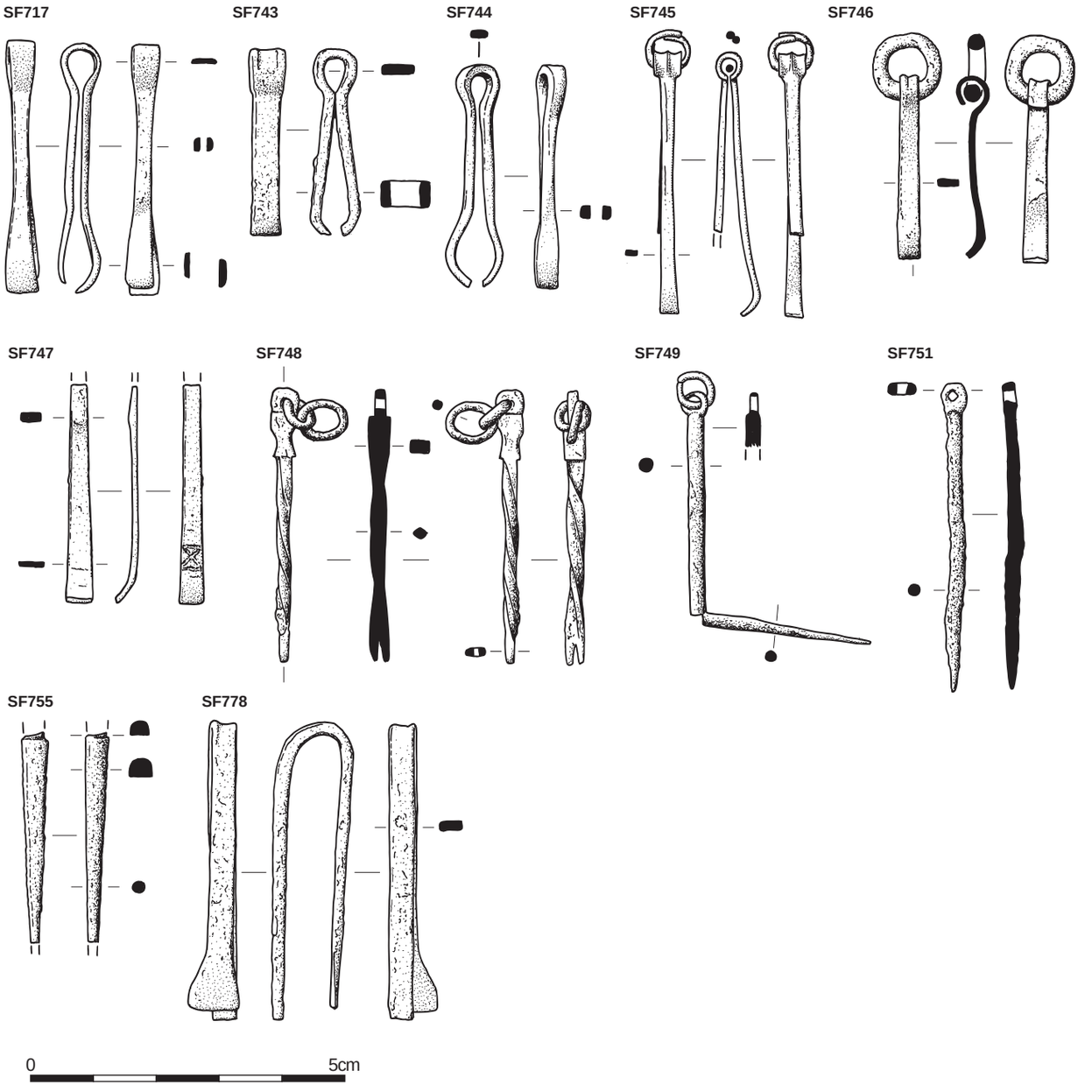

Illustration 5.46
Roman silver (SF745) and copper alloy toilet instruments

form has proved difficult to parallel among pins and the object seems more likely to be a toilet instrument. Alloy: Cu-Ag-Zn-Sn. Unbent length: 59mm; shank diameter: 2.5mm; head diameter: 4.5mm; ring diameter: 6.5mm; wire diameter: 1mm; weight: 1.97g. Unphased, Context: Benton Layer 1, grid square D4.

SF751 (illus 5.46) Nail pick with circular-sectioned shank; bar moulding at junction with pierced discoidal head. Very slight longitudinal curve. Alloy: Cu-Ag-Zn-Sn. Length: 50mm; shank diameter: 2mm; head/bar length: 5mm, diameter: 4mm; weight: 1.16g. Unphased, Context: Benton Layer 1, grid square D3.

SF755 (illus 5.46) Nail file? Square-sectioned bar with slightly rounded corners, tapering to a fine point at one end. The other end is broken (modern) at the point where the square section is stepped into a circular section. Corrosion obscures details, but one cleaned surface has transverse ribbing, suggesting identification as a fine nail file, broken at the suspension loop. Alloy: PbAe. Dimensions: 33mm × 4mm × 3mm; circular section diameter: 3mm; weight: 1.27g. Unphased, Unstratified.

SF778 (illus 5.46) Bar bent into a slightly asymmetrical U-shape with one end splayed, suggesting these represent an unfinished

Illustration 5.47
Photograph of selected Roman non-ferrous toilet instruments. Top row, bottom left–top right: SF717, SF744, SF743; bottom row, bottom left–top right: SF746, SF747, SF748, SF745

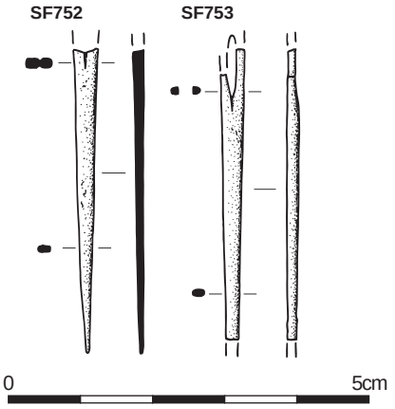

Illustration 5.48
Copper alloy needles

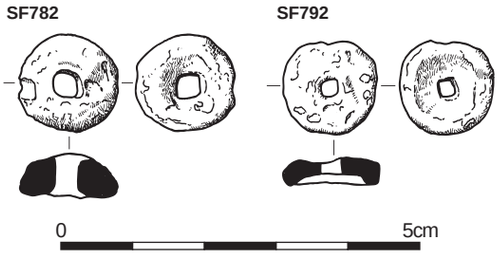

Illustration 5.49
Lead artefacts

pair of tweezers. Alloy: PbAe/PbG. Length: 48mm; width: 13mm; bar dimensions: 4.5mm × 2mm; splayed tip width: 7mm; weight: 5.1g. Unphased, Context: Benton Layer 1, grid square C6.

Tools

SF752 (illus 5.48) Needle, broken across the elongated eye, perhaps deliberately. Oval-sectioned head leading into circular-sectioned shank which has slight longitudinal bend. Alloy: PbG. Length: 43mm; head dimensions: 3mm × 1.5mm; shank diameter: 2mm; weight: 0.7g. Unphased, Context: Benton Layer 1, grid square D5.

SF753 (illus 5.48) Needle, with part of the head and tip lost in old breaks. Oval-sectioned shank, slightly expanding into elongated eye. Alloy: PbG. Length: 40.5mm; head dimensions: 3.5mm × 1mm; shank dimensions: 2mm × 1.5mm; weight: 0.67g. Unphased, Context: Benton Layer 1, grid square C5.

SF782 (illus 5.49) Plano-convex lead spindle whorl, the surface very corroded but with a slight lip around the perforation on the upper surface and slight hollow on the lower. Edges damaged. Alloy: Pb. External diameter: 27mm; height: 12mm; perforation diameter: 7mm; weight: 36.3g. Unphased, Unstratified.

SF792 (illus 5.49) Discoidal lead whorl, in form a flat cone with the underside markedly sunken apart from a raised lip. Central perforation. An unusual form. Alloy: Pb. External diameter: 26.5mm; thickness: 8mm; perforation diameter: 5mm; weight: 20.2g. Unphased, Unstratified.

Domestic

SF779 (illus 5.50) Padlock key formed from a strip, broken and distorted at narrower end, which expands along its length and steps out into a square head bent through 90°. This has a square central perforation (width: 4.5mm) which would slip over the padlock barbs to squeeze them flat and allow it to be released. The perforation is consistent with the padlock bolt (SF780). Alloy: PbAe/PbG. Length: 51mm; handle width: 4–5.5mm, thickness: 1.5mm; head dimensions: 9mm × 7mm; weight: 2.22g. Unphased, Context: Benton Layer 1, grid square D4.

SF780 (illus 5.50) Padlock leaf spring. L-shaped square-sectioned bar with a perforated loop at one end (loop diameter: 9mm; perforation diameter: 4mm), which would allow the spring to slide into the lock. The other end has two barbs fixed to it, one with a broken terminal. Their uneven outline indicates extended use, and one is a replacement with a fresh strip of copper alloy laid over the old barb and round the tip to retain it. A rectangular washer with rounded corners sits at the corner of the bar to strengthen the gap through which the barb was withdrawn. The space between barb and washer is only 3mm. Alloy: PbG. Arm dimensions: 27.5mm × 37mm × 4.5mm square; washer dimensions: 15mm × 12mm; weight: 8.37g. Unphased, Context: Benton Layer 1, grid square A5.

SF781 (illus 5.50) Offset junction from a Roman spoon. Square-sectioned bar, twisted and broken at one end, forked at the other with both arms twisted and broken. One arm preserves an elbow junction before the break, with hints of a zoomorphic design. The upper surface bears a worn impressed inscription, its reading

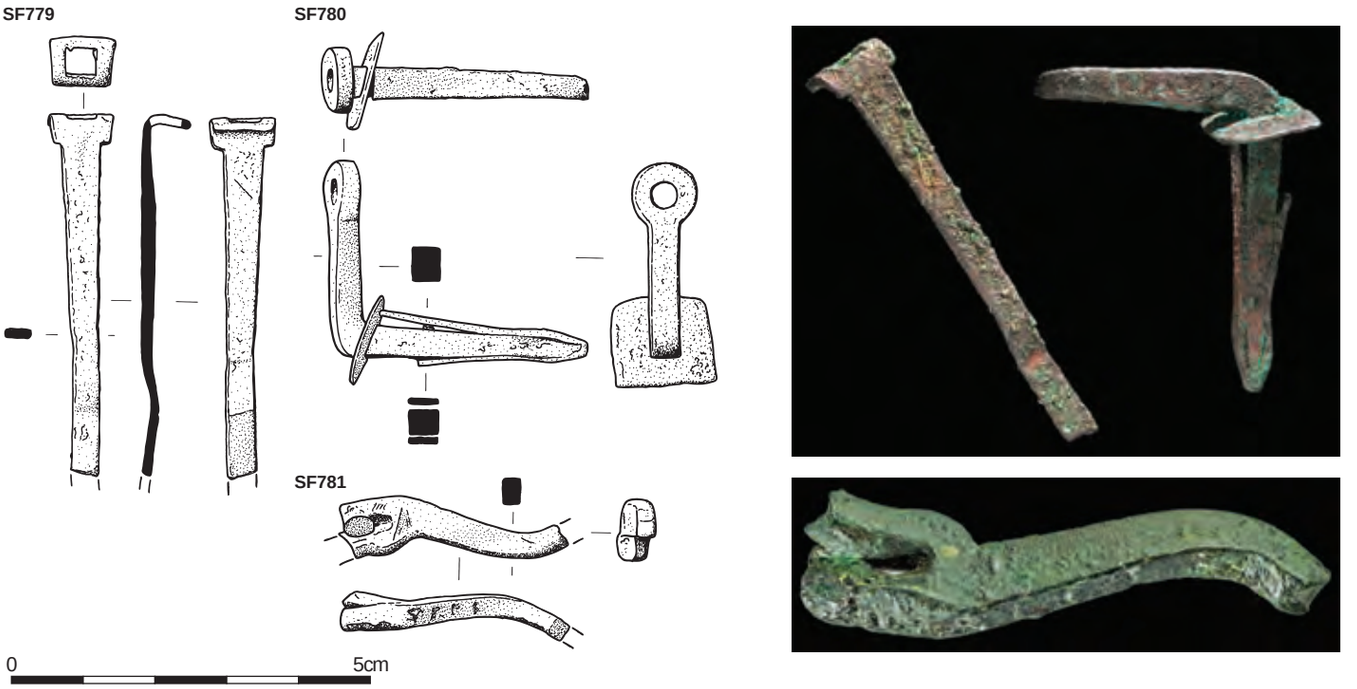

Illustration 5.50
Copper alloy domestic items

extremely uncertain. Benton (1931: 193) gave 'TRES' with hesitation, although Collingwood and Wright (1991b: 2433.17) preferred '[. . .]SPILV[. . .]' or '[. . .]VLIPS[. . .]'. Re-examination suggests that Benton's reading was closer; the Collingwood and Wright reading requires two letters to be retrograde, but a more convincing reading comes from turning it through 180°. Collingwood and Wright's V is probably an A, the L is clearly a T, the I remains an I, the retrograde P is actually an E (its lower bar on the edge of the spoon) and the S (hard to see) remains the same. This gives '[. . .]ATIES[. . .]', the first and last uncertain with corrosion, with hints of further letters lost to corrosion at the start. The meaning is no clearer and the reading is far from

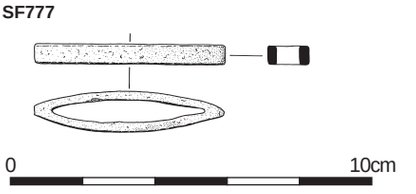

Illustration 5.51
Copper alloy sword hilt guard

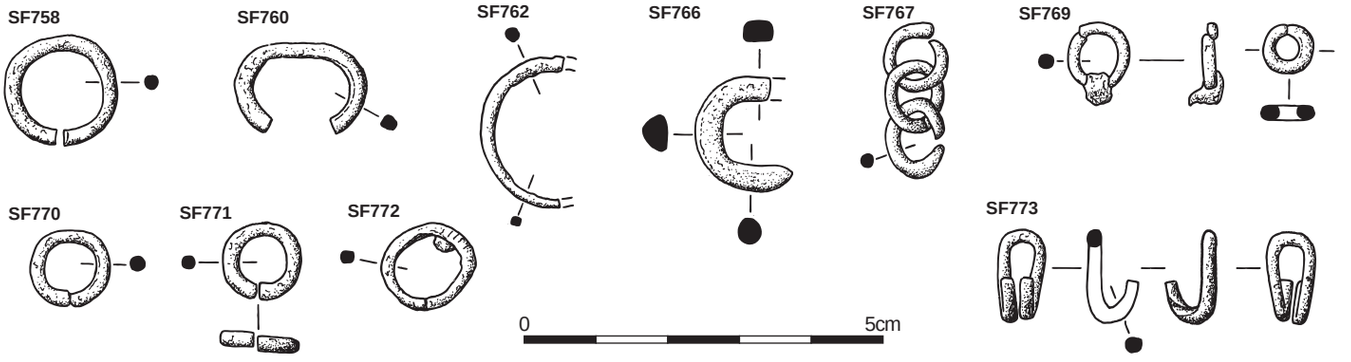

Illustration 5.52
Copper alloy fasteners

certain, but it seems likely to be a personal name. Other spoons have good luck inscriptions, VTERE FELIX in several variants, but this is harder to reconstruct from the worn and battered letters surviving here. (I am grateful to Roger Tomlin for discussion of this item.) Alloy: Cu-Ag-Sn. Length: 31.5mm; max. height: 8.5mm; bar dimensions: 4mm × 3mm; weight: 3.88g. Unphased, Context: Benton Layer 1, grid square A1.

Weapon

SF777 (illus 5.51) Plain cast hilt guard, pointed oval in plan, rectangular section. Alloy: PbAe. Length: 53mm; width: 11.5mm; height: 5.5mm; inferred blade width: 44mm; thickness: 6mm. Unphased, Context: Benton Layer 1, grid square A0.

Fasteners

SF718 (not illustrated) Small penannular ring, the ends almost butting. Catalogued and drawn in Elgin by McIntyre (1977: 76, no. 181) but currently missing. Dimensions: 11mm × 12mm × 2mm. Unphased, Context: Unknown.

SF719 (not illustrated) Small penannular ring, the ends almost butting. Catalogued and drawn in Elgin by McIntyre (1977: 76, no. 182) but currently missing. Dimensions: 11mm × 12mm × 2mm. Unphased, Context: Unknown.

SF720 (not illustrated) Small penannular ring; damaged. Catalogued and drawn in Elgin by McIntyre (1977: 76, no. 183) but currently missing. Dimensions: 9mm × 10mm × 2mm. Unphased, Context: Unknown.

SF758 (illus 5.52) Penannular ring, circular-sectioned, the squared ends almost butting; some hammermarks from forging. Alloy: PbG. Diameter: 31mm × 30mm; rod diameter: 4mm; weight: 7.62g. Unphased, Context: Benton Layer 1, grid square B7.

SF760 (illus 5.52) Circular-sectioned penannular ring with squared terminals, now slightly oval and distorted from being forced open. Alloy: B. Diameter: 19mm × 13mm; rod diameter: 2mm; weight: 0.75g. Unphased, Unstratified.

SF762 (illus 5.52) Half of a fine wire ring; recent breaks at both ends. Alloy: B. External diameter: 21.5mm; internal diameter: 18.5mm; wire diameter: 1–1.5mm; weight: 0.27g. Unphased, Unstratified.

SF766 (illus 5.52) D-sectioned bar bent into a tight curve and tapering to a point, suggesting it was a hook fitting; the other end is broken and corroded. Alloy: B. Width: 16.5mm; height: 13mm; rod dimensions: 5mm × 3mm; weight: 2.24g. Unphased, Unstratified.

SF767 (illus 5.52) Three penannular rings with rounded butting terminals (the others from the site are squared) linked in a length of chain. Their irregular form and wear facets on the interior edges indicate they saw extended use. Alloy: B. Ring diameters: 10mm × 8mm; 9mm × 9mm; 10mm × 8mm; wire diameter: 1.5–2mm; weight: 1.39g. Unphased, Context: Benton Layer 1, grid square C0.

SF768 (not illustrated) Small penannular ring, circular section, squared ends butted together. Alloy: Cu-Ag-Zn-Sn. Diameter: 7mm; rod diameter: 1.5mm; weight: 0.24g. Unphased, Unstratified.

SF769 (illus 5.52) Slightly distorted small penannular ring, circular section, squared ends butted; iron traces opposite the junction preserve a fine loop through which the ring fitted. Alloy: PbG. Diameter: 9mm × 10mm; rod diameter: 1.5mm; iron width: 3mm; weight: 0.44g. Unphased, Unstratified.

SF770 (illus 5.52) Small penannular ring, circular section, squared ends butted together. Alloy: G. Diameter: 11mm; rod diameter: 2mm; weight: 0.7g. Unphased, Unstratified.

SF771 (illus 5.52) Small penannular ring, circular section, squared ends butted together. Alloy: PbG. Diameter: 11mm × 11.5mm; rod diameter: 2mm; weight: 0.67g. Unphased, Unstratified.

SF772 (illus 5.52) Small penannular ring, slightly oval, circular section, squared ends butted together. Alloy: PbG. Diameter: 11.5mm × 12.5mm; rod diameter: 1.5mm; weight: 0.34g. Unphased, Unstratified.

SF773 (illus 5.52) Looped hook fastener. Made from an S-twisted bar bent into a loop, with the terminals bent forward to form a hook. Probably stitched to textile or leather as a fastener. Alloy: PbG. Height: 12mm; width: 6.5mm; thickness: 8mm; bar width: 1.5mm; weight: 0.56g. Unphased, Context: Benton Layer 1, grid square C8.

SF798 (not illustrated) Small penannular ring, circular in section, the ends slightly damaged and sprung apart. Alloy: PbB. Diameter: 8mm; rod diameter: 1.2mm; weight: 0.19g. Unphased, Unstratified.

Uncertain

SF25 (not illustrated) Sheet fragment, possibly with rounded corner; highly corroded. Alloy: PbCu. Dimensions: 7mm × 5mm × 0.5mm; weight: 0.09g. Unphased, Unstratified (Area III).

SF26 (not illustrated) Rounded corner from a sheet object, unidentifiable. Alloy: PbCu. Dimensions: 9.5mm × 5.5mm × 1mm; weight: 0.16g. Unphased, Unstratified (Area III).

SF29 (not illustrated) Two unidentifiable sheet fragments. Dimensions: 3mm × 1.5mm; 4mm × 2mm. Unphased, Unstratified (Area III).

SF32 (not illustrated) Unidentified fragment of a larger object, preserving an angled corner. Alloy: PbCu. Dimensions: 7.5mm × 4mm × 1.5mm; weight: 0.14g. Unphased, Unstratified (Area III).

SF100 (not illustrated) Highly fragmentary sheet object in three main fragments, no original edges, slightly curved. Alloy: Ae. Max. dimensions: 13mm × 8.5mm × 0.5mm. Phase: 3, Block: 2.8, Context: IIb3.

SF101 (not illustrated) Two tiny sheet fragments; undiagnostic. Dimensions: 2mm × 1.5mm; 2.5mm × 1.5mm; thickness: 0.5mm. Phase: 3, Block: 2.8, Context: IIb3.

SF721 (not illustrated) U-shaped piece of fine wire. Catalogued and drawn in Elgin by McIntyre (1977: 76, no. 184) but currently missing. Length: *c* 33mm; diameter: <1mm. Unphased, Context: Unknown.

5.7.3 Roman coins

Sam Moorhead (based on catalogue by Nick Holmes)

The material

Sylvia Benton recovered around 230 coins from the Sculptor's Cave, of which 9 were regular Roman issues and around 220 contemporary copies (sometimes called 'barbarous' or 'irregular') (Benton 1931: 209–16). The present discussion is based on Nicholas Holmes' (nd) catalogue of 134 of these coins (those which survive in NMS collections and are identifiable) and a further 14 from the Shepherds' excavation (Sekulla nd), making a total of 148 pieces (table 5.20). Percentages quoted here are thus based on the 148 coins listed in table 5.20, which are assumed to be broadly representative of the original assemblage.

The coins are all copper alloy *nummi*, of which 137 (92.6%) are contemporary copies. All, bar one possible coin of *c* AD 320–41 (no. 16), fall between AD 330 and 364 (table 5.21). The 15 coins of AD 330–48 comprise common GLORIA EXERCITVS, VRBS ROMA, VICTORIAE DD AVGGQ NN and Divus Constantinus issues which are found in large numbers across Roman sites in England (C1–15). The AD 348–53 pieces are common FELICITAS REI PVBLICE, GLORIA ROMANORVM and VICTORIAE DD AVG ET CAE(S) types struck for Magnentius (AD 350–3), some of which are copies which probably post-date AD 353 (C17–23). Finally, the bulk of the coins are the 64 copies of Constantius II's FEL TEMP REPARATIO 'falling horseman' issues, which can be dated between AD 353 and 364; there is only one regular piece of this issue (C24). The regular piece is 17mm in diameter and weighs 2.32g; the copies, as is normal, are much smaller and lighter, ranging from 6.5–13mm in diameter (average 11.3mm) and 0.4–1.7g in weight (average 1.02g). The residue of 60 coins are all copies dating from the broad date range AD 330–64, most of them probably being further FEL TEMP REPARATIO pieces. The prototypes for the FEL TEMP REPARATIO 'falling horseman' types were struck until AD 361, but because there was a major lacuna in base metal coin supply in Britain between AD 361 and 364, when the House of Valentinianic *nummi* started to flood the province, we can assume copying continued up to AD 364 (Moorhead 2015). The absence of the otherwise ubiquitous Valentinianic *nummi* strongly suggests that this group of coins was removed from circulation in the early to mid-360s.

Hoard, votive deposit or single finds?

In applied numismatics, coin finds are usually recognised to belong to one of three types of deposit. First, there are hoards, which are normally coins collected and deposited in a single act. Second, there are votive deposits, which are collections of coins and often other artefacts, deposited singly or in groups over time: the best examples of these from Britain for the Roman period are Bath, Coventina's Well (on Hadrian's Wall) and the River Tees at Piercebridge (Allason-Jones and McKay 1985; Walker 1988; Walton 2008; 2012: 152–66; forthcoming). Finally, there are single finds, which include individual coins discovered on excavation, through field walking and by metal detecting. Although these appear simple divisions, there can be considerable overlap. Some hoards do appear to be votive deposits, for example the Frome hoard, where excavation shows that the coins were tipped into the main container from a series of other containers in one event, the latest coins being in the middle (Moorhead et al 2010). Also, votive offerings can be single coins or a number of coins deposited as a group, the Sacred Spring at Bath almost certainly having examples of both types of practice (eg Walker 1988: 280). Finally, hoards and votive deposits can be dispersed and give the superficial appearance of single finds (eg Guest et al 1997; Moorhead 2017).

Hoards

The coins from the Sculptor's Cave fall into a very tight chronological period of AD 330–64. Coins from this period are common in Roman Britain; indeed, the period AD 330–48 (Reece 1995: Period 17) sees the highest coin loss (*c* 25% of all site finds) for any period in the province's history (Walton 2012: 233), while the period AD 348–64 also shows high coin loss (around 8.5% of all site finds). However, were these single finds from a domestic site, they would represent a very unusual profile. One would expect several earlier coins of the second or third centuries, a number of radiates of the later third century, probably a few coins of the later House of Valentinian (AD 364–78), and possibly even one or two coins of the House of Theodosius (AD 378–402); in Scotland, the best example of this broader spread comes from Traprain Law (Sekulla 1982; see also table 5.22). The coins from the Sculptor's Cave are thus most likely to represent a single coherent group or hoard.

We can test this hypothesis by comparing the assemblage with other hoards that share a similar *terminus post quem*. Table 5.23 shows 35 hoards whose latest coins are FEL TEMP REPARATIO 'falling horseman' types, dating to *c* AD 353–64. Although the quality of the records for these hoards varies enormously, their composition is remarkably consistent, with three main groups emerging (A, B and C, as noted in the final column of table 5.23):

- Group A consists of hoards which are largely made up only of FEL TEMP REPARATIO 'falling horseman' types, with few earlier pieces.
- Group B hoards have a large number of FEL TEMP REPARATIO but also tend to have a significant number of earlier coins: a few have the odd second-century coin; several have a few radiates from the period AD 260–96 and/or *nummi* of AD 296–330; most have a considerable number of coins from the period AD 330–53, including a significant number of copies.
- Group C hoards only have a small tail of FEL TEMP REPARATIO 'falling horseman' types, the vast majority of the coins being earlier issues.

The Sculptor's Cave fits neatly into Group B, having a large number of FEL TEMP REPARATIO 'falling horseman' pieces but also a significant number of earlier (AD 330–53) coins. Although Group B hoards have been found across Britain, three of the most northerly of the FEL TEMP REPARATIO hoards do belong to Group B: Wroxeter (Shropshire), Besthorpe (Nottinghamshire) and Tickhill II (South Yorkshire). However, these are still a considerable distance south of the military zone represented by the Hadrianic frontier. Tickhill II is the only one north of the River Trent. Although an outlier (by over 500km), the putative hoard from the Sculptor's Cave at least shares a composition with the most northerly hoards that share its *terminus post quem* in England.

Table 5.20
Catalogue of the Sculptor's Cave coin assemblage. RIC: Roman Imperial Coinage.

Coin	Status	Date range (AD)	Reverse	Ruler/obverse	Notes	Grid square (where known)
C1	?Copy	*c* 330–48	GLORIA EXERCITVS; two soldiers and two standards	House of Constantine; bust right	–	–
C2	Regular	*c* 330–40	Wolf and twins	VRBS ROMA; helmeted bust left	Pierced	B4
C3	?Copy	*c* 330–48	Wolf and twins	VRBS ROMA; helmeted bust left	Pierced	–
C4	Copy	*c* 330–48	Wolf and twins	VRBS ROMA; helmeted bust left	Pierced with two loops of wire	B4
C5	Copy	*c* 330–48	Wolf and twins	VRBS ROMA; diademed bust left	–	–
C6	Regular	*c* 335–41	GLORIA EXERCITVS; two soldiers and one standard	Delmatius	–	A5
C7	Regular	*c* 335–41	GLORIA EXERCITVS; two soldiers and one standard	House of Constantine; bust right	–	C3
C8–9	?Copy	*c* 335–48	GLORIA EXERCITVS; two soldiers and one standard	House of Constantine; bust right	–	C8=C5
C10–12	Copy	*c* 335–48	GLORIA EXERCITVS; two soldiers and one standard	House of Constantine; bust right	–	C10=C5
C13	Regular	337–40	Emperor in quadriga right; SMKE (Cyzicus)	Divus Constantinus	RIC VIII Cyzicus 4	D5
C14	Regular	347–8	VICTORIAE DD AVGGQ NN; two Victories; D// TRP (Trier)	House of Constantine	RIC VIII Trier 194/196	–
C15	Regular	347–8	VICTORIAE DD AVGGQ NN; two Victories; [ ]// (SARL) (Arles)	Constans	Pierced	C7
C16	Regular	*c* 320–41?	Unclear	House of Constantine?; diademed bust right	Pierced	–
C17	Regular	350–1	FELICITAS REI PVBLICE; Emperor holding Victory and standard; - A?//TRP (Trier)	Magnentius	RIC VIII Trier cf 264	B0
C18	Copy	*c* 350–64	[GLORIA ROMANORVM?]; horseman right	Probably inspired by Magnentius	For possible prototype see RIC VIII Trier 269	–
C19	Regular	351–3	VICTORIAE DD NN AVG ET CAE; two Victories holding wreath; -//AMB* (Amiens)	Magnentius	RIC VIII Amiens 14	A6
C20	Regular	351–3	VICTORIAE DD NN AVG ET CAE(S); two Victories holding wreath	Magnentius	–	–
C21–22	Copy	351–64	VICTORIAE DD NN AVG ET CAE(S); two Victories holding wreath	Magnentius and probably Magnentius	–	C21=B4
C23	Copy	351–64	VICTORIAE DD NN AVG ET CAE(S); two Victories holding wreath	Magnentius/Decentius	–	–
C24	Regular	353–60	FEL TEMP REPARATIO; soldier advancing left spearing fallen horseman; GSL[G] Lyons	Constantius II	RIC VIII Lyon 189 (given as Constantius Gallus in Benton 1931, Robertson 2000 and NMS database, but pearl-diadem only used for Constantius II). Attempt to pierce coin aborted.	C8

Table 5.20 (continued)
Catalogue of the Sculptor's Cave coin assemblage. RIC: Roman Imperial Coinage.

Coin	Status	Date range (AD)	Reverse	Ruler/obverse	Notes	Grid square (where known)
C25	Copy?	353–64	FEL TEMP REPARATIO; soldier advancing left spearing fallen horseman; ?//CSIS	Constantius II	Only 14mm, so probably contemporary copy. The mintmark probably was ESIS. For possible prototypes, see RIC VIII Siscia 210 passim	–
C26	Copy	353–64	FEL TEMP REPARATIO; soldier advancing left spearing fallen horseman; -//(GPLG?) Lyons	Constantius II	For possible prototype, RIC VIII Lyon 189; coin has jagged hole in centre	–
C27	Copy	353–64	FEL TEMP REPARATIO; soldier advancing left spearing fallen horseman; (PLG) Lyons	Unclear	For possibly prototypes, RIC VIII Lyon 186ff	B4
C28–40	Copy	353–64	FEL TEMP REPARATIO; soldier advancing left spearing fallen horseman – type often incomplete and blundered	Constantius II with parts of obverse legends visible	C36 pierced	C28=A5; C29=A6; C30=A6; C31=B5; C32=B3; C34=A6; C35=C3; C36=B5; C37=B3
C41–80	Probably all copies	353–64	FEL TEMP REPARATIO; soldier advancing left spearing fallen horseman – type often incomplete and blundered	Probably all Constantius II; no legends visible; busts/heads right	C57 and C64 pierced	C41=B3; C42=B4; C43=B4; C44=B4; C45=C3; C46=A4; C47=B4; C48=A3; C49=A3; C50=A4; C51=B3; C52=C5; C53=B4; C54=B3
C81–87	Copy	353–64	FEL TEMP REPARATIO; soldier advancing left spearing fallen horseman – type often incomplete and blundered	Obverse unclear	–	–
C88	?Copy	348–64	Unclear	Diademed bust right	Pierced	–
C89	Copy	*c* 330–64	Standing figure left?	Unclear	–	–
C90	Copy	*c* 330–64	Criss-cross pattern	Two parallel bars	–	–
C91–95	Probably all copies	*c* 330–64	Unclear	Some obverse legend and busts right	–	–
C96–119	Probably all copies	*c* 330–64	Unclear	Busts/heads right	–	–
C120–148	Probably all copies	*c* 330–64	Unclear	Unclear	–	–

Table 5.21
Chronological breakdown of the identifiable coins from the Sculptor's Cave

Date range (AD)	Regular	Copies/probable copies	Coin	Total
320–48	1	0	C16	**1**
330–48	6	9	C1–15	**15**
348–53	3	4	C17–23	**7**
353–63	1	64	C24–88	**65**
330–64	0	60	C89–148	**60**
Total	**11**	**137**	–	**148**

The only other coin hoard from Scotland with a generally comparable *terminus post quem* is the Balgreggan hoard of *c* 125 coins terminating with Decentius (AD 351–3) found near Stoneykirk in Wigtownshire in 1913 (Robertson 2000: 325, no. 1345). Other possible Scottish hoards of this general period listed by Robertson (ibid: nos 1260, 1283, 1450, 1454) are unlikely to be genuine, while three very late silver *siliquae* hoards, each with a *terminus post quem* of AD 402, from Traprain Law, East Lothian (Robertson 2000: no. 1617; Sekulla 1982: 291, nos 60–3), Norrie's Law, Fife (Bland et al 2013: 132) and Gaulcross, Aberdeenshire

Table 5.22
Major assemblages of Late Roman coins from Scotland

Site	County	No. of coins	Date range	Composition	Discovery circumstances	Notes	Reference
Dunragit	Wigtownshire	1000+	1st–4th centuries AD	Some early *aes* and one *denarius* of Severus Alexander (AD 226), but mostly official and barbarous coins of the later 3rd and 4th centuries AD	Metal detector finds along the sands of the Piltanton Burn's north bank (1998–2000)	70% of coins illegible. In Stranraer Museum.	Bateson and Holmes 2013: 248
Botel Motte, Buittle	Dumfriesshire	9 and 4	32/31 BC–AD 117 and *c* AD 337–61	9 coins from 32/31 BC–AD 117; 3 *nummi*, *c* AD 337–61; one unclear *as*	9 coins found by metal detector; 4 coins found on excavation.	Coins in Dumfries Museum	Bateson and Holmes 2003: 248
Springwood Park (Kelso)	Roxburghshire	*c* 284	32/31 BC–*c* AD 383/402	20 coins 32/31 BC–*c* AD 193; 53 coins AD 260–96; 198 coins AD 296–383/402; 13 illegible, mostly 3rd/4th centuries AD	Metal detector finds (1995–7); cf Sprouston finds (below).	Coins in the National Museum of Scotland; these coins present a very plausible group for British site finds.	Bateson and Holmes 1997: 534; 2003: 248; N Holmes, unpublished listing; Hunter 2010a: 97–8; Moorhead and Stuttard 2012: 216
Sprouston (Kelso)	Roxburghshire	17	32/31 BC–AD 375	1 Mark Antony *denarius*, 32/31 BC; 1 Nero *denarius*, AD 64/65; 4 radiates, AD 268–85; 11 *nummi*, AD 330–75	Said to have been found in fields to west of the village, between the school and the River Tweed (*c* 1970); cf Springwood finds (above).	Coins returned to owner; this group provides a very plausible group for British site finds and complements the Springwood Park finds.	Bateson and Holmes 2006: 165
Lilliesleaf	Roxburghshire	4	*c* AD 71–fourth century	2 coins, *c* AD 71–81; 1 *radiate*, *c* AD 260–70; one unclear fourth century	Found in a rectilinear native enclosure	–	Bateson and Holmes 1997: 531
Traprain Law	East Lothian	59	45 BC–*c* AD 402	24 coins, 45 BC–AD 260; 14 radiates, AD 260–96; 20 *nummi* and one *siliqua*, AD 296–402	Summary of all excavated coins	Silver hoard including 4 *siliquae*, AD 364–402; also metal-detected finds from Haddington (Bateson and Holmes 2006: 165): a *sestertius* and Constantine I *nummus* London, AD 313–7	Sekulla 1982; Robertson 2000: 402–3, no. 1617

Table 5.22 (continued)
Major assemblages of Late Roman coins from Scotland

Site	County	No. of coins	Date range	Composition	Discovery circumstances	Notes	Reference
Cramond	Midlothian	38	32/31 BC–AD 348	35 coins, 32/31 BC–early third century AD; 2 radiates, AD 260–74; one *nummus*, AD 347–8	1982, 1975–8 and 1976–7 excavations	For considering general distributions of coins in Scotland, these three groups can be combined	Robertson 1983: 407–8
Dreghorn	Ayrshire	36	AD 269–378	13 radiates, AD 269–*c* 285; 13 *nummi* AD 306–78; 10 uncertain fourth century AD	This is recorded as a potential hoard by Robertson, but Fraser Hunter has suggested the coins might be site finds	Other Roman finds are stored with the coins in the Grosvenor Museum, Chester	Robertson 2000: 354, no. 1454
Burghead	Moray	9	*c* AD 260–375	7 radiates, *c* AD 260–96; 2 *nummi*, *c* AD 351–75	Found with metal detector on the slopes of Granary Street on known Pictish fort (1968)	I assume that one of the *nummi* is a FEL TEMP REPARATIO falling horseman type	Bateson and Holmes 2013: 229
Covesea	Moray	*c* 244 (148 identifiable)	AD 330–64	1 *nummus*, *c* AD 320–48; 15 *nummi*, AD 330–48; 132 *nummi*, AD 348–64	Found in excavations in 1928–30 and 1979	–	Macdonald 1934: 29; unpublished lists by N Holmes, at NMS
Girnigoe	Caithness	33	*c* 260–378	5 radiates, *c* AD 260–85; 28 *nummi*, AD 310–78	Metal detector finds, but doubt has been cast on discovery	–	Hunter 2010a: 97; unpublished list by N Holmes at NMS
Outer Hebrides	North Uist	8	*c* 269–395	1 radiate, AD 269–71; 7 *nummi*, *c* AD 330–95	One coin from excavation; 5 chance finds; 2 metal detector finds on Baile Sear Beach are of eastern mint coins. Group should be used with caution.	–	Macdonald 1918: 249; 1924: 327; 1934: 32; Bateson and Holmes 2013: 229

(Goldberg et al 2015) are too late to be directly comparable. This further highlights the unusual nature of the Sculptor's Cave coins.

Late Roman site finds from northern England and Scotland

The general distribution of Late Roman coins in northern England and Scotland provides further context for the Sculptor's Cave material. For northern England, the large corpus of data recorded with the Portable Antiquities Scheme (PAS; finds.org.uk) enables a quick overview of the nature of Roman coinage in different parts of the province (table 5.24). Data for Scotland are problematic but have been periodically recorded in general surveys (Macdonald 1918; 1924; 1934; 1939; Robertson 1950; 1961; 1971; 1983; Bateson 1989; Bateson and Holmes 1997; 2003; 2006; 2013), covering both hoards and site finds.

Although the provenance of some hoards can be questioned (Reece 1991), finds from excavations and casual finds near to major Roman sites can generally be accepted as reliable. However, there are many stray finds from across the country which have little reliable provenance details and/or are almost certainly more recent losses. For example, in the Late Roman period, AD 260–402, coins from Scotland show a very strong bias towards mints in the eastern Mediterranean, which is strongly at odds with data from sites to the south in England; these exotic coins almost certainly came back to Scotland with servicemen returning from the two World Wars (Casey 1986: 108–11). As Hunter suggests (2010a: 96–8), however, it is possible to judiciously edit out most of the obvious modern intruders in the dataset, while metal detector finds from the last two decades do appear to present a more coherent pattern of coin finds which might be more reliable. Table 5.22 lists the larger assemblages which are most

Table 5.23

Hoards from England and Wales, terminating in FEL TEMP REPARATIO 'falling horseman' (FTR FH*) copies (*c* AD 353–64). Note that where totals exceed coins listed uncertain coins are not recorded; some of the AD 348–64 coins from Freckenham (Suffolk) are imitations; many of the coins from Great Casterton (Rutland) are not described, but it is assumed that they are from the period AD 330–64 (one *sestertius* and a copy of a *solidus* of Valentinian I are apparently associated with the hoard). The table draws on a full dataset of Iron Age and Roman coin hoards from Britain prepared by Eleanor Ghey as part of an AHRC-funded research project at the University of Leicester and the British Museum.

Name	County	No. of coins	Pre-AD 296	296–330	330–48	348–64 regular	348–53 irregular	353–64 FTR FH* irregular	Hoard grouping
Scotland									
The Sculptor's Cave	Morayshire	88	–	1?	15	3	4	65	B
South-west England/South Wales									
Whitesands Bay	Pembrokeshire	112	3	–	103	2	–	4?	C
Shipham	Somerset	860	–	6	–	593	74	187	B
Chesters Villa	Gloucestershire	6	3 radiates	–	–	1	1?	1?	(C)
Lydney (1928)	Gloucestershire	116	1 × 2nd cent AD *sest.*; 2 radiates	–	*c* 54	10	6	43	B
Lydney (1929)	Gloucestershire	1646	–	–	–	–	16?	1630	A
Oldcroft	Gloucestershire	3260	3	8	197	1430	*c* 404	1218	B
North Leigh	Oxfordshire	164	–	–	–	–	–	164	A
Cunetio (1960)	Wiltshire	28	–	–	21	–	1	6	B
South-east England									
Winchester, Victoria Road	Hampshire	52	–	–	6	1	2	43	A
Winchester (1963–4)	Hampshire	20	–	–	3	3?	1	13	B
Silchester (?Church)	Hampshire	7	1	?	3?	2	–	1	C
Silchester (Insula 1)	Hampshire	18	–	1	14	2	–	1	C
Cobham (Surrey)	Surrey	4	1 Greek	1	–	1	–	1	C
Hillingdon (London)	Middlesex	7	–	–	–	–	–	7	A
Colchester House (London)	Middlesex	107	2 radiates	–	60	7	–	38	B
Canterbury, Augustine House	Kent	80	1 radiate	3	50	11	1	14	B
East Farleigh	Kent	153	–	–	1	–	–	152	A
Chalk	Kent	119	6 radiates	–	1	4	–	108	A
Richborough (Hoard V)	Kent	246 legible of 1221	15 radiates	–	*c* 93	1	–	137	B
Colchester, Butt Road	Essex	6	–	–	–	–	3	3	A
West Bergholt or Great Horkesley	Essex	21	–	–	–	–	–	21	A

Table 5.23 (continued)

Name	County	No. of coins	Pre-AD 296	296–330	330–48	348–64 regular	348–53 irregular	353–64 FTR FH* irregular	Hoard grouping
East Anglia									
Freckenham	Suffolk	542	–	3	6	365	–	168	B
'Norfolk'	Norfolk	10	–	–	–	–	–	10	A
Hockwold II	Norfolk	815	2	1	587	1	–	224	B
Cambridge	Cambridgeshire	17	–	–	1	1	–	15	A
Great Stourton villa	Cambridgeshire	*c* 200	–	–	–	–	–	many	(A)
Midlands									
Bancroft	Milton Keynes	16	–	1	11	2	–	2?	C
Duston	Northamptonshire	12	7 radiates	–	–	–	–	5	A
Higham Ferrers	Northamptonshire	90 legible of 129	1 × 2nd cent AD *sest*; 8 radiates	–	77	*c* 3	–	1+	C
Great Casterton	Rutland	327	–	–	4	1	–	Up to 322	A
Coleshill	Warwickshire	3180	–	1	1910	1113	152	4	C
Wroxeter	Shropshire	58	–	–	14	23	4	17	B
Besthorpe	Nottinghamshire	1347	–	6	404	576	115	246	B
Wellingore	Lincolnshire	20	–	–	–	–	–	20	A
Tickhill II	South Yorkshire	45	2 × 2nd cent AD *sest.*; 1 radiate	–	3	25	1	13	B

Table 5.24
Roman coins from northern England (PAS data for coins with Reece (1995) Period recorded; extracted 14.1.2016) and southern Scotland (see table 5.22 for Scottish site finds)

Site/region	Total Roman coins	No. of coins AD 260–402	AD 330–48 (Reece Period 17)	AD 348–64 (Reece Period 18)	Period 18: FEL TEMP REPARATIO 'falling horseman'	No. of coins AD 364–402
Yorkshire and Humberside	11612	9592	2564	1065	536	2000
North-west England	1382	517	84	40	23	70
North-east England	1590	513	96	62	25	66
Springwood Park, Kelso	284	144	52 (estimate)	16	15	61
Traprain Law	63	35	1	3	–	10
Cramond	38	3	1	–	–	–

likely to be reliable, effectively ignoring the myriad of stray finds which cannot be verified (although the detailed provenance and circumstances of discovery for some of the groups in table 5.23 can still be questioned).

Table 5.22 shows that the majority of Late Roman coins are found in southern Scotland, a region where there would have been most contact with the northern frontier of the Roman province. The major assemblages are from Dunragit (Wigtownshire), Buittle (Kirkcudbrightshire) and Springwood Park and Sprouston (Kelso, Roxburghshire). There is also a potential group of site finds from Dreghorn (Ayrshire) which comprises 36 Late Roman pieces, although the exact status of these coins remains uncertain. Further north there are a significant number of Late Roman coins from the excavations at Traprain Law (East Lothian), but even at Cramond (Midlothian) the proportion of Late Roman coins plummets. Table 5.24 shows a breakdown of coins by region from northern England, alongside some major assemblages from southern Scotland. This further confirms the decline in the numbers of Late Roman coins moving northwards from Yorkshire through to southern Scotland, but does show that a significant number of coins from the period AD 330–64, which make up the Sculptor's Cave find, had reached as far north as Springwood Park in Roxburghshire. Another concentration appears to have been present at Dunragit (Wigtownshire), where the majority of >1000 coins were official and barbarous late third- and fourth-century pieces, but the short report by Bateson and Holmes (2013: 248) does not enable any quantification. These few assemblages can hardly be used to argue for any widespread form of functioning monetary economy in southern Scotland.

North of the Forth, table 5.22 shows very few coin finds. Nine coins were reported to have been found in 1968 on the site of the Pictish fort at Burghead (Moray), of which one might be a FEL TEMP REPARATIO 'falling horseman' type, similar to those found at the Sculptor's Cave (Bateson and Holmes 2013: 229). There is also a group of 33 coins, ranging from AD 260–378, reputed to have been found by a metal detectorist at Girnigoe in Caithness, although there are doubts about the authenticity of this find. Finally, one should note several coins from North Uist (Outer Hebrides), of which some appear to be ancient losses (Macdonald 1918: 249; 1924: 327; 1934: 32; Bateson and Holmes 2013: 229). These examples do show that some coins were moving north from the Roman province even deeper into Scottish territory.

This evidence suggests that it is highly unlikely that the Sculptor's Cave, Burghead or Girnigoe coins were drawn from a source north of southern Scotland. Indeed, given the small numbers of Late Roman coins north of Yorkshire, one can assume that the coins probably originated from the eastern side of Yorkshire or further south on the east coast of England, while the coastal nature of the north-east Scottish finds suggests that they arrived by sea. Whether their agents were from Scotland or the Roman province is unknown, but the dedication by the Caledonian, Lossio Veda, at Colchester reminds us that either is possible (Collingwood and Wright 1991a: no. 191). It is probably too speculative to suggest that the Sculptor's Cave coins might in some way be connected with the 'Great Barbarian Conspiracy' of AD 367, during which, Ammianus Marcellinus (26.4.5) informs us, Picts, Scots and Saxons all colluded to invade the Roman diocese. There does appear to be more to this event than meets the eye, however, with a Roman exile, Valentinus, fomenting insurrection in Britain (Moorhead and Stuttard 2012: 213–15; Hunter 2014a: 209). It is also interesting that coastal finds are not unusual in peripheral zones of Roman Britain (eg Reece 1991).

Illustration 5.53
Pierced coins. Top row, left–right: C15, C2, C3; middle row, left–right: C36, C4, C88; bottom row, left–right: C57, C64, C16

Pierced coins

Nine coins had been pierced, perhaps for use in personal adornment (illus 5.53, 5.61; table 5.25), while another has an attempted piercing (C24). One of the pieces (C4) has two loops of wire attached; one loop is inserted in the piercing, the second through the primary loop, probably to enable suspension, perhaps as a pendant: indeed, one might assume that this was the intended use of all the pierced coins. It is even possible that some or all of the coins might have hung on a necklace together (see section 5.14.3; illus 5.61).

Pierced Roman coins are commonplace across England and Wales. Some were probably pierced as part of a ritual practice, most notably at a Late Roman shrine in west Wiltshire, where over 20 pierced coins with metal nails/rivets inserted have been found within a large assemblage of votive offerings (Richard Henry and Philippa Walton pers comm). Coins deposited for ritual purposes could also be bent, cut or mutilated, as in the assemblage from the River Tees at Piercebridge (Walton 2012: 152–66; forthcoming). Pierced coins are regularly found in Saxon burials (King 1988; White 1988; Moorhead 2006), where they might have had some talismanic or even religious properties.

Two of the pierced coins, and the coin with an attempted piercing, are FEL TEMP REPARATIO 'fallen horseman' coins (C36, C46, C24), while three other pierced coins are of the VRBS ROMA type, showing the wolf and twins: one of the most potent symbols of *romanitas*. It seems highly likely that these coins were specially chosen to be pierced, suggesting that the user(s) was especially interested in their inscription and/or design. Were these coins pierced further south in the Roman diocese, or were they pierced by the agents who brought them north? Is it

Table 5.25
Details of pierced coins from the Sculptor's Cave

Coin	Piercing location (in relation to obverse)	Coin/date (summary)	Motif (obverse; reverse)	Piercing diameter (mm)	Notes
C2	12 o'clock	Follis 330–41	Helmeted bust left; wolf and twins	2.8	–
C3	3 o'clock	?Copy 330–41	Helmeted bust left; wolf and twins	2	–
C4	6 o'clock	Follis 330–41	Helmeted bust left; wolf and twins	2	Links still attached. Large penannular link, the ends overlapped through the piercing (dimensions: 11.5mm × 10.2mm; section: 1.2mm); smaller D-sectioned link attached to the larger one, the ends slightly overlapped (dimensions: 6.6mm × 5.2mm; section: 1.6mm × 0.5mm)
C15	2 o'clock	Follis 347–8	Constans; two Victories	2	–
C16	9 o'clock	Follis 320–41	House of Constantine? (diademed bust right); unclear	2	–
C36	9 o'clock	Copy 353–64	Constantius I; soldier advancing left spearing fallen horseman	1	Also two attempts at piercing, one at 12 o'clock, another at 9 o'clock; very small perforation
C57	10 o'clock	Copy 353–64	Probably Constantius II; soldier advancing left spearing fallen horseman	3	–
C64	2 o'clock	Copy 353–64	Probably Constantius II; soldier advancing left spearing fallen horseman	1	–
C88	5 o'clock	?Copy 348–64	Diademed bust right; unclear	2.5	–

possible that they were worn by visitors to or invaders of the Roman province? The presence of the coins in a cave which has a deep history of deposition might suggest a potential religious motivation.

The deposition of coins at the Sculptor's Cave

There are examples of Roman coins in caves from Somerset, through Wales to the Pennines (see table 5.26), although post-depositional processes often lead to the original contexts being heavily disturbed. Why the Roman coins were deposited in the Sculptor's Cave might not be so much of a mystery. Given that the coins were not used as currency in the area, it seems unlikely that they were merely secluded for safekeeping. Given the nature of other material in the cave, it is certainly possible that they were deposited in some form of ritual, as was apparently the case with the two earlier hoards of Roman silver coins at Birnie (Moray) (Holmes 2006).

Conclusion

The coins found in the Sculptor's Cave are not in themselves unusual, but their provenance so far north of the Roman frontier is exceptional. It is clear from other finds of Late Roman coins in Scotland that these do not represent currency that was in everyday circulation. Only two other groups of Late Roman coins are known from north-east Scotland and neither has a secure provenance. In the first instance, the Sculptor's Cave coins constitute a quite plausible hoard within the general context of Roman Britain, there being 35 hoards which share the same

Table 5.26
Roman coins from cave sites in England and Wales

Name	County	No. of coins	Date from (AD)	Date to (AD)
White Woman's Hole	Somerset	200	260	395
Hyena Den Cave, Wookey Hole	Somerset	Unspecified	?*c* 355	383
Wookey Hole (Holy Hole)	Somerset	14	260	274
Gough's Cave	Somerset	10	260	375
Cheddar	Somerset	25	337	348
Pride Evans' Hole	Somerset	47	260	285
'Isle of Wight'	Isle of Wight	8 *sest.*	98	189
Llansadurnen/Cyngadel	Carmarthen	14	275	296
Llandeilo Castle	Carmarthen	2	306	361
Cefn-Pwll-Du	Caerphilly	2 + 2 unspecified	268	275
Ogof-Yr-Esgyrn, Dan-Yr-Ogof Caves (Brecknock)	Powys	6	69	138
Ogof-Yr-Esgyrn, Dan-Yr-Ogof Caves (Brecknock)	Powys	4	330	341
Llanymynech	Powys	33	32 BC	161
Nether Haddon	Derbyshire	4	284	341
Reynard's Cave	Derbyshire	First find unspecified; later find: 26 Iron Age and 1 Republican	118 BC	*c* 30/50
Monyash	Derbyshire	6	141	340
Ashover	Derbyshire	42	1 Iron Age	193–244
Pudsey	West Yorkshire	8	260	375
Victoria Cave	North Yorkshire	Numerous	260	320s/350s

terminus post quem from England and Wales. The Sculptor's Cave material fits within a sub-group of this corpus which contains eight finds, three of them among the most northerly in England. Given the context of human activity at the Sculptor's Cave, the hoard seems likely to have been deposited for ritual reasons. The piercing of the coins, notably the VRBS ROMA/wolf and twins type, shows that the owner(s) of the coins took more than a cursory interest in the pieces and the coins apparently at some stage performed a decorative function.

Although these coins might have been drawn from southern Scotland, just to the north of the Hadrianic frontier, it is more likely that they came from further south, possibly from East Yorkshire or a neighbouring region. Who took the coins north will always remain a mystery, but it is possible that increased raiding of the Roman diocese by the Picts in the Late Roman period was responsible.

5.8 Iron

GEMMA CRUICKSHANKS

5.8.1 Introduction

Twenty-one iron artefacts were recovered from the Sculptor's Cave, mostly during the Shepherd excavations (full catalogue in archive). Many of these are modern and not catalogued here. A rod fragment (SF108) was stratified in Phase 2, suggesting it could be Iron Age. Unfortunately, it is missing both ends, leaving its identification obscure. The pin/fine tool tip (SF876) and fine wire (SF877) are undiagnostic and could either be intrusive or potentially Early Iron Age. SF876 was recovered within Phase 1, where it is presumably intrusive.

The only iron artefact from Benton's excavations was described as a 'Viking rivet' (SF878; illus 5.54) and was recovered from upper mixed Layer 1 (Benton 1931: 180). It is a clench bolt, similar to an example found by the Shepherds (SF60), but such fittings have a lengthy history and are not chronologically distinct.

The lack of distinctly Iron Age or Roman ironwork is at odds with the otherwise rich assemblage and could reflect poor preservation conditions. However, other gaps in the assemblage (eg querns, spindle whorls) suggest that certain types of object were simply not deposited here, reflecting deliberate selection.

5.8.2 Catalogue

SF60 (not illustrated) A flat, sub-square head with a circular-sectioned, slightly bent shank. The other end expands before break suggesting that there was a rove/plate rather than a tip. Probably fairly recent due to lack of corrosion. Length: 40mm; head dimensions: 24mm × 24mm × 6mm; shank thickness: 8.5mm; weight: 22g. Unphased, Unstratified (Area III).

SF108 (not illustrated) Tapering, circular-sectioned rod with both ends broken. Could be from a nail, pin or tool. Length: 23mm; diameter: 5mm; weight: 1.5g. Phase: 2, Block: 2.6, Context: IIb4.

SF876 (not illustrated) The pointed tip of a circular-sectioned rod. Possibly a pin or tool tip, or the end of a piece of wire, but too small to be diagnostic. Length: 5mm; diameter: 1mm; weight: 0.06g. Phase: 1, Block: 1.2, Context: Ia20.

SF877 (not illustrated) Very fine bent iron wire fragment. Both ends are broken. Length: 6mm; diameter: 0.5mm; weight: 0.01g. Phase: 2, Block: 2.5, Context: IIb14.

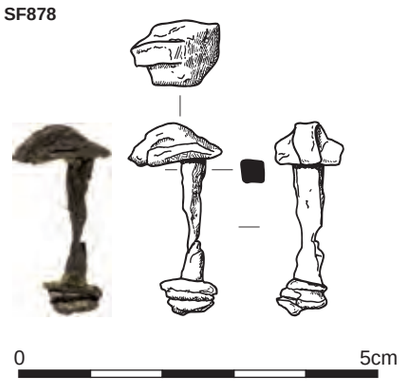

Illustration 5.54
Iron rivet

Illustration 5.55
Amber beads

Table 5.27
Regional occurrence of amber in Iron Age Scotland (from data in Hunter 1998c and Hunter et al 2009: 139, with additions)

Area	No. of sites
South-east	6
North-east	2
Atlantic North	4
Atlantic West	7
South-west	2

SF878 (illus 5.54) Clench bolt with square-sectioned shank. Fragmentary flat, sub-rectangular head at one end and part of flat head at the other, with all edges missing. Length: 52mm; shank thickness: 6mm; surviving head dimensions: 24mm × 16mm. Unphased, Context: Benton Layer 1, grid square A6.

5.9 Amber

Fraser Hunter

5.9.1 Introduction

Eight amber beads recovered from Benton's excavations (Beck and Shennan 1991: 186; illus 5.55) show considerable variation in form but are united by two factors: all show a considerable degree of wear and all bar one are intact. The distribution indicates that they are not from a single necklace, but they do form two clusters which represent discrete deposits: three beads (SF920–2) at the rear of the cave and four (SF923, SF925–7) at the inner end of the East Passage.

Amber is well known in Late Bronze Age contexts, notably from hoards (eg Adabrock, Lewis; Balmashanner, Angus; St Andrews, Fife; Anderson 1892: 186–7; 1911; Trevor Cowie pers comm), but current knowledge does not allow their separation from Iron Age examples. None of the Sculptor's Cave finds come from secure Late Bronze Age levels, and it is notable that no amber came from the Shepherds' excavations, while some finds come from the rear of the cave, where Bronze Age material was scarce. It thus seems most likely that they are Iron Age in date.

The occurrence of Iron Age amber has been reviewed elsewhere (Hunter 1998c; Hunter et al 2009: 139). Synthesis of this data (table 5.27) indicates that amber is notably rare in north-east Scotland; the only other known example comes from the later Iron Age settlement at Birnie (Hunter in prep). This rarity is rather surprising given that amber was presumably being washed ashore on the east coast or exchanged up and down the coast by communities who had access to it. It does suggest that, in a local context, these would have been particularly valued items; a value reflected by their extensive wear.

5.9.2 Catalogue

SF920 (illus 5.55) Annular amber bead; near-circular section, slightly flattened on one side, with biconical perforation. Dulled through extensive wear on faces and edge. External diameter: 17mm; height: 5.3mm; perforation diameter: 3mm. Unphased, Context: Benton Layer 1, grid square C7.

SF921 (not illustrated) Annular amber bead. External diameter: 16mm; perforation diameter: 6mm. Unphased, Context: Benton Layer 1, grid square C7.

SF922 (illus 5.55) Annular amber bead, plano-convex in overall section, with one flat face and the edges and top slightly

rounded. Cylindrical perforation made oval from wear; faces and edge dulled from wear. Small hollow (damage?) in one area. External diameter: 15.5mm × 16.5mm; height: 7mm; perforation diameter: 4mm. Unphased, Context: Benton Layer 1, grid square B6.

SF923 (illus 5.55) Barrel-shaped amber bead; slightly squashed oval section, the ends broken and misshapen from use, with surviving original portions of the ends dulled with wear. Length: 11.2mm; external diameter: 11.5mm × 9.7mm; perforation diameter: 3.2mm. Unphased, Context: Benton Layer 1, grid square D3.

SF924 (illus 5.55) Fragment (around a quarter) of a small barrel-shaped amber bead, slightly tapered to one end, with flattened faces dulled with wear. Cylindrical perforation. Less orange-red than the others. Estimated diameter: 8mm; height: 7mm. Unphased, Unstratified.

SF925 (illus 5.55) Irregular discoidal bead with plano-convex section and rounded edges, slightly tapered, with slightly off-centre drilled perforation. All-over wear. External diameter: 11mm; thickness: 4.5mm; perforation diameter: 3mm. Unphased, Context: Benton Layer 1, grid square D3.

SF926 (illus 5.55) Globular amber bead with notably tapered section, flat faces and rounded edges with faint traces of facets from manufacture. Central drilled perforation, slightly oval at one end and slightly angled, indicating it was drilled from both sides. Surfaces dulled from wear. External diameter: 14.5–15mm; thickness: 5–10mm; perforation diameter: 3mm. Unphased, Context: Benton Layer 1, grid square D3.

SF927 (illus 5.55) Irregular discoidal bead, very similar to SF925; wear around perforation including flake on the flat side, polished from continued use. Notable flattened facet around the perforation from use; edges unworn. External diameter: 14.5mm; height: 6mm; perforation diameter: 3mm. Unphased, Context: Benton Layer 1, grid square D4.

5.10 Oil shale

Fraser Hunter

5.10.1 Introduction

The excavations produced a combined tally of two beads and two bangles (illus 5.56). Their nature indicates that they are oil shale, the most local source being the Brora deposits across the Moray Firth to the north. This would make them locally exotic: oil shale and related materials are uncommon locally in later prehistory (Hunter 2015a: illus 13.4a). This also explains the degree of attention paid to extending their lives, with both the bangles showing extended use: one has been repaired and then extensively used, the other converted into blanks for beads. Of the two beads, one is well-used, the other unfinished, but it is rather large to be the product of reusing a bangle and suggests some import of raw material as well as finished products. This is rare in the area, but is attested by one bead blank from Birnie.

5.10.2 Catalogue

SF911 (illus 5.56) Broken bangle, reshaped to make beads. Oval-sectioned, the narrower end of the oval towards the interior. Well finished, but with slight tooling facets and abrasion scars on the interior and an unexplained series of regular fine dots on the inner circumference, presumably tool marks. Use-wear scratches on surface. One end was broken relatively recently; the other has two crudely cut collars creating irregular rings 5–7mm in width. The end is broken, suggesting such a ring has already been removed, most likely to form blanks for bead manufacture. The granular fracture surface suggests it is an oil shale. Length: 59.5mm; width: 13.5–14.5mm; height: 13mm; internal diameter: 80–85mm (20% survives). Phase: 1, Block: 1.2, Context: Ia23c.

SF912 (illus 5.56) Annular bead, D-sectioned with flattened faces. Biconical perforation, well polished from use. Laminar cracking and granular fracture indicate this is an oil shale. External diameter: 15mm; height: 6.5mm; perforation diameter: min. 3.2mm, max. 4.5mm. Unphased, Context: Benton Layer 1, grid square D4.

SF913 (illus 5.56) Unfinished annular bead; thick disc with flat faces and near-vertical edges with bevelled corners. Abrasion scars all over; relict facets visible on the edge. Cylindrical perforation with slightly countersunk ends. Laminar cracking and granular fracture identify it as oil shale. External diameter: 15mm; height: 6.5mm; perforation diameter: 3mm. Unphased, Context: Benton Layer 1, grid square D4.

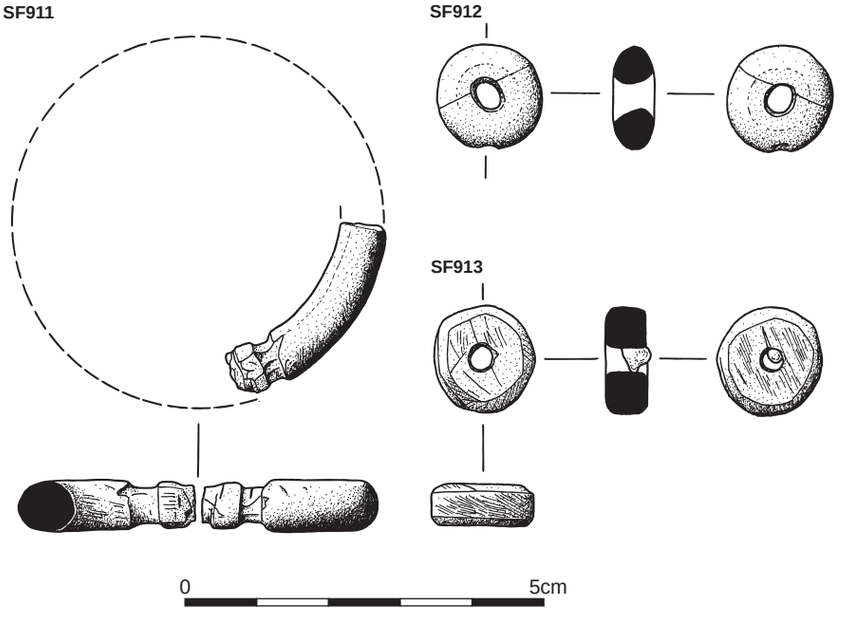

Illustration 5.56
Oil shale artefacts

SF914 (not illustrated) Fragment from a repaired bangle with a relatively narrow D-section as it survives; slightly rounded facet along the top; less than half the section is preserved. One end is very neatly squared off, with a transverse cylindrical perforation (countersunk at one end) to repair it; this has seen extended use, as it has worn into a curve towards the fracture. Broken across the repair; probably accidental damage. Very smooth, well finished surfaces; probably oil shale. Length: 19mm; width: 5mm; (incomplete) height: 6mm; internal diameter: 75–80mm (8% survives). Unphased, Context: Benton Layer 1, grid square D7.

5.11 Fossil plant stem

Fraser Hunter

A small *crinoidea* fossil fragment (SF955) is present among Benton's assemblage but is not mentioned in her publication, leaving its find location unknown. Dr Andrew Ross (Curator of Palaeobiology at NMS) noted that such fossils have a wide distribution, making it difficult to determine whether it was found locally or further afield, although, given the nature of the site, it seems likely to have been deliberately brought there and deposited.

Although the use of fossils is better known in the Early Bronze Age (eg Oakley 1965a; 1965b) and Anglo-Saxon periods (eg Meaney 1981), a few examples are known from Iron Age sites. A cache of charmstones deposited in an older burial mound at Monquhitter, Aberdeenshire, included fossil sea urchins alongside a variety of striking natural stones, a flint tool and various unusual Iron Age items (Stevenson 1967), while a flattened cylindrical whetstone made from a badly worn plant fossil was found at Braehead enclosure, Glasgow (McLaren and Hunter 2007: 222, and unpublished archive report).

Outwith Scotland, a few examples were noted from the Meare West Lake Village, including a Pleisosaurus vertebra and an ammonite reused as a spindle whorl (Bulleid and Gray 1948: 101, table x; Gray 1966: 410), while Lidbury Camp, Wiltshire, produced a fossil sea urchin in a pit (Cunnington 1917: 23). The evidence is scattered and unsynthesised but shows an interest in unusual found objects, both natural and ancient, as the flint at Monquhitter indicates. The Covesea fossil and the Monquhitter cache are both likely to represent deposition of valued or unusual objects in special places.

SF955 Fossil plant stem. Length: 16mm; width: 9mm; thickness: 8mm. Unphased, Unstratified.

5.12 Orpiment

Gemma Cruickshanks

A small yellow mineral fragment (SF954; illus 5.57) recovered during Benton's excavations has been confirmed as orpiment through X-ray diffraction (XRD) analysis by Peter Davidson at National Museums Scotland. A second fragment found by Benton in grid square B4 (1931: 201) does not survive. Orpiment was employed as a yellow pigment and is traditionally associated with illuminating early medieval manuscripts but may have been used as a colourant for various purposes. A single fragment was found at Dunadd, Argyll (Lane and Campbell 2000: 212), but it is otherwise a very rare find and was certainly imported, most likely from the Mediterranean area. How this exotic mineral arrived at the Sculptor's Cave is unknown, but it provides further evidence of exotic contacts. Its use as a pigment may be related to the samian sherds with abraded edges, which were probably ground to produce red pigment (see section 5.2.3), though there are no worked surfaces on the orpiment to confirm this.

SF954 (illus 5.57) Small yellow fragment of orpiment. Length: 14mm; width: 10mm; thickness: 3mm. Unphased, Context: Benton Layer 1, grid square B6.

Illustration 5.57
Fragment of orpiment

5.13 Glass

5.13.1 Glass objects

Fraser Hunter and Mary Davis

Introduction

The glass assemblage from the Sculptor's Cave comprises eight beads (illus 5.58, 5.61), one small block of red glass (illus 5.58) and a piece of Roman vessel glass which is reported separately (section 5.13.2; illus 5.59). All are from Benton's excavations (apart from one bead (SF860) recovered from her spoil heap in 2014) and are thus effectively unstratified. They usefully demonstrate the problems of bead identification and the need to correlate typology and scientific analysis of composition. All had been studied by Margaret Guido in her classic work on glass beads (1978) and categorised as either Iron Age (based on find circumstances) or, in two cases, Roman imports (table 5.28). Yet only four are typologically distinctive – a yellow annular bead (SF860), a blue bead with a wave trail (SF864) and two strongly coloured green Roman beads (SF867, SF868) – while a further bead (SF870) is a reused Roman glass sherd. The remainder are typologically nondescript. Scientific analysis (by energy-dispersive X-ray fluorescence in a scanning

Table 5.28
Summary of the glass beads from the Sculptor's Cave

Date	Artefact	Type (Guido 1978)
Late Bronze Age	SF866	Opaque turquoise (Group 7 iv)
Iron Age/Roman Iron Age	SF864	Blue with white wave trail (Group 5 a)
	SF860	Yellow (Class 8)
Roman	SF867	Green cuboidal
	SF868	Green pentagonal
	SF870	Reused Roman vessel base
Early medieval	SF865	Translucent blue annular (Group 6 iv a)
High medieval	SF869	Translucent pale green annular (Group 6 ii b/iii b)

electron microscope, following the sampling methodology of Bronk and Freestone 2001) indicates that one of the beads (SF866) is Late Bronze Age, one early medieval (SF865) and one high medieval (SF869) (tables 5.29, 5.30; detailed methods are contained in the site archive, with summaries of the analytical findings incorporated into the catalogue entries below). The combination of typological study and scientific analysis is thus essential to make sense of any assemblage (Blackwell and Kirk 2015).

Late Bronze Age glass beads are rare finds in Scotland, with the only other known example coming from the Adabrock hoard on Lewis (Anderson 1911:

Table 5.29
SEM EDS analysis of the glass beads from the Sculptor's Cave (nd: not detected; tr: trace)

Bead	Colour	Element																	
		Na_2O	MgO	Al_2O_3	SiO_2	P_2O_5	SO_2	Cl	K_2O	CaO	TiO_2	MnO	FeO	CoO	CuO	ZnO	SnO_2	Sb_2O_3	PbO
SF860	Yellow	18.23	0.46	2.05	63.08	tr	nd	0.97	0.45	4.52	tr	tr	0.40	tr	tr	tr	tr	0.18	9.08
SF864	Blue	17.70	0.38	2.19	70.22	tr	0.15	1.03	0.63	5.33	tr	0.77	0.76	0.20	tr	tr	nd	nd	tr
SF864	White	17.05	0.42	2.41	69.13	0.17	0.23	0.90	0.71	6.45	tr	0.34	0.35	nd	tr	tr	nd	0.78	0.62
SF865	Blue	14.94	4.90	1.79	64.56	0.29	0.31	0.53	3.15	6.18	0.13	1.22	0.94	0.10	tr	0.24	nd	nd	0.35
SF866	Light blue	16.28	0.18	0.87	68.38	tr	0.23	0.86	3.34	5.13	tr	tr	0.23	nd	4.29	tr	nd	nd	tr
SF867	Light blue	21.85	0.41	1.71	66.20	nd	0.35	1.46	0.33	5.34	tr	tr	0.40	nd	1.44	tr	nd	nd	0.36
SF868	Green	19.65	0.83	2.30	66.18	0.13	0.36	1.20	0.34	4.08	0.19	0.44	1.13	tr	1.65	tr	nd	nd	1.43
SF869	Pale green	2.48	4.73	2.87	60.82	2.89	0.11	0.31	8.86	14.10	0.48	0.95	0.79	tr	tr	tr	nd	nd	tr

Table 5.30
SEM EDS analysis of the 'base' glass composition of the beads from the Sculptor's Cave normalised to 100% (tr: trace)

Bead	Colour	Element										
		Na_2O	MgO	Al_2O_3	SiO_2	P_2O_5	SO_2	Cl	K_2O	CaO	TiO_2	MnO
SF860	Yellow	20.28	0.51	2.28	70.16	tr	0.00	1.08	0.50	5.03	tr	tr
SF864	Blue	17.96	0.39	2.22	71.24	0.08	0.15	1.05	0.64	5.41	tr	0.78
SF864	White	17.42	0.43	2.47	70.64	0.17	0.24	0.92	0.72	6.59	tr	0.34
SF865	Blue	15.24	5.00	1.83	65.88	0.29	0.32	0.54	3.21	6.30	0.13	1.25
SF866	Light blue	17.08	0.18	0.91	71.73	tr	0.24	0.90	3.51	5.38	tr	tr
SF867	Light blue	22.37	0.42	1.75	67.76	tr	0.36	1.49	0.34	5.47	tr	tr
SF868	Green	20.53	0.87	2.41	69.15	0.14	0.37	1.25	0.36	4.26	0.20	0.46
SF869	Pale green	2.51	4.80	2.91	61.70	2.93	0.11	0.31	8.98	14.30	0.48	0.96

34). They are more common in Ireland and southern Britain (Henderson 1988; 1989), and their virtual absence in Scotland probably relates to the small number of excavated settlements of this period.

The yellow annular bead (Guido's Class 8) is a typical local Iron Age product, but the blue wave-trail bead is altogether rarer in north-east Scotland, where only three other examples have been recorded (one from Alford and two provenanced only to Aberdeenshire; Guido 1978: 132; Foulds 2014: nos 17616, 17618 = Aberdeen University Museums 15532, 15533). The type is a long-lived one, from the Iron Age to the early medieval period, but compositional analysis indicates that this example is Romano-British and probably best seen as a Roman import (they are regular finds on Roman sites in Britain). Certain Roman imports are the two strongly coloured green beads and the tubular base sherd from a glass vessel reused as a bead. Interestingly, all three clearly Roman finds show heavy wear, with damage worn smooth by extended use; while all beads from the site show evidence of use, none are so pronounced as these visibly exotic Roman ones.

The Late Bronze Age and Iron Age/Roman beads fit the main periods of artefact deposition in the cave, while the early and high medieval examples suggest continued intermittent visitors.

There is also an intriguing small block of opaque red glass (SF871) from Benton's excavations, with flaking of the edges suggesting pieces have been removed. Its shape and composition indicate that it is a Roman tessera. Such small glass blocks were used within the empire to make up designs in floor mosaics (although rarely in Britain; Neal and Cosh 2002: 20) or other architectural decoration, such as designs on interior walls; examples are known from the frontier zone, for instance from Castlecary on the Antonine Wall (Christison et al 1903: 338). They occur on a few Scottish early medieval sites, where it is usually argued that they were imported as raw material in glass-working (summarised in Lane and Campbell 2000: 173; Campbell 2006: 102). In a Roman Iron Age context (as is likely here), it is a most unusual find. Its colour is striking and a number of other aspects of the site assemblage suggest an interest in colour, notably the orpiment and the reused samian, although, unlike these, the glass could not readily be ground up for pigment. Its likely use would be as an inlay in glass jewellery or enamel on metalwork, and it was presumably brought to the cave as a token either of the craft process or for its colour symbolism. Evidence for glass-working and enamelling is rare in Iron Age Scotland (Hunter 2015a: 235), although surviving products show that the technique was widely used. Red glass is particularly rare: there is some very limited evidence for its use

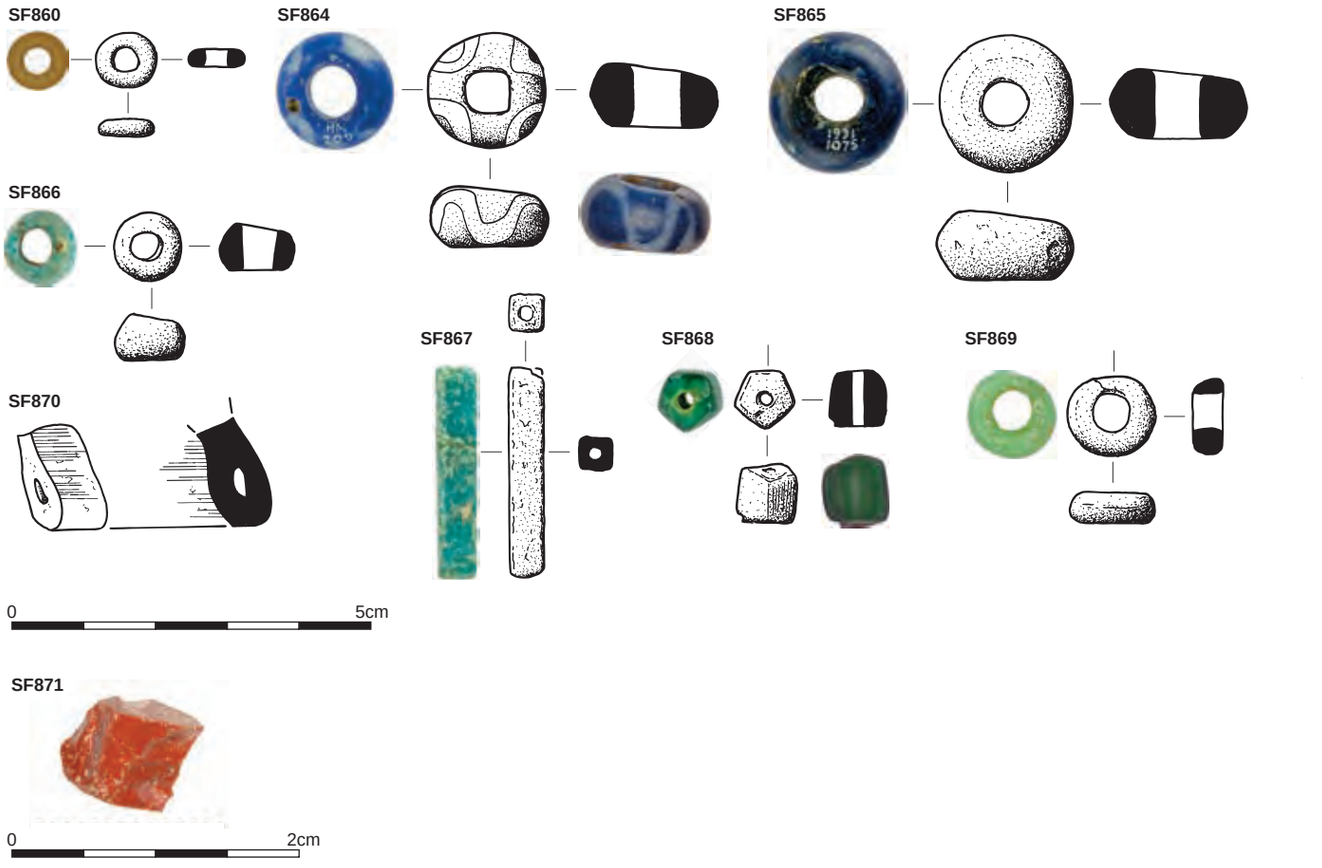

Illustration 5.58
Glass beads and tessera

in jewellery, but its more common role was for glass inlays or enamels on copper alloy. The Moray Firth coast had a strong Iron Age glass-working tradition, and excavations at Culduthel, near Inverness, recovered red glass-working debris (Hunter forthcoming c).

Catalogue

SF860 (illus 5.58) Iron Age annular opaque yellow bead with near-circular section, flattened internally at perforation; faces slightly worn from use (Guido 1978: 73–6, Class 8). The composition is particularly close to similar beads from Birnie, which probably date from the first to second centuries AD (Davis in prep). The Sculptor's Cave bead is coloured using lead antimonate, the most common yellow colourant for this period. External diameter: 8mm; height: 2.8mm; perforation diameter: 2.8mm. Unphased, Context: Benton's spoil heap.

SF864 (illus 5.58) Annular trail-decorated bead with tapered D-section; translucent mid-blue with sinuous white opaque trail. Wear on surfaces and around perforation edges, where there is also extensive use-polish. Typologically distinctive but a long-lived type, from Iron Age to early medieval (Guido 1978: 132, Group 5a). The elemental composition of both the blue and pale glass is similar to many Romano-British glass vessels dating from the first to third centuries AD. The blue colour is due to the addition of cobalt. The white decoration contains antimony and has slightly elevated calcium and lead oxide levels, indicating that this colour is produced by the inclusion of calcium antimonite (Shortland 2002). The addition of lead may have eased the decorating process by lowering the melting point of the white glass as it was applied. External diameter: 16.3mm; height: 7.6–9.3mm; perforation diameter: 6.9mm. Unphased, Context: Benton Layer 1, grid square D6.

SF865 (illus 5.58) Annular translucent mid-blue bead, D-sectioned with flattened faces. Surfaces worn, with polish and chipping from use around the perforation. Typologically long-lived (Guido 1978: 155, Group 6 iva; Guido gives the wrong number). The bead is predominantly a soda-lime silica (natron) glass but has elevated levels of magnesia, potash and phosphorus oxide, all indicative of the addition of plant ash, suggestive of a date in the sixth century AD or later (Freestone et al 2008: 40). However, if the oxides associated with plant ash glass (magnesia, potash and phosphorus oxides) are replaced with values normally associated with Romano-British soda-lime-silica glass, the values of other elements such as soda, silica and lime within the base glass match those of the other dark blue glass beads from the site. This suggests that, at some point after the mid-sixth century AD, a first- to third-century cobalt blue glass was augmented with plant ash before being formed into a bead. External diameter: 18.3–19.3mm; height: 8.5–9.2mm; perforation diameter: 6.4mm. Unphased, Context: Benton Layer 1, grid square C7.

SF866 (illus 5.58) Opaque turquoise, slightly irregular barrel-shaped bead; surface decayed but clearly well-used as the perforation is oval at one end from wear. Slightly tapered section. Typologically undiagnostic (Guido 1978: 172, Group 7 iv). The composition of this bead is distinct from the others and can be interpreted as a 'low magnesium high potassium' (LMHK) glass characteristic of the later Bronze Age in Britain (Paynter 2014) and Europe (Henderson 1988; Brill 1992). It may be locally produced, perhaps at Culbin Sands. External diameter: 9.2–9.6mm; height: 5.7–6.8mm; perforation diameter: 4.6mm. Unphased, Context: Benton Layer 1, grid square A5.

SF867 (illus 5.58, 5.61) Elongated cuboidal translucent turquoise bead; Roman in both form and analysis (Guido 1978: 214). Heavily worn, with chipping at both ends and along edges. Although similar in colour to bead SF866, its composition and shape are different. It is similar in its base glass elements to other Romano-British glass beads from the Sculptor's Cave, which form a group of soda-lime-silica glasses similar to imported British vessel glass from the first to third centuries AD. The colourant is copper, but in much smaller quantities than SF866. Dimensions: 28.4mm × 5.1mm × 4.8mm; perforation diameter: 2mm. Unphased, Context: Benton Layer 1, grid square C7.

SF868 (illus 5.58, 5.61) Pentagonal-sectioned translucent Roman jade-green bead with longitudinal surface striations and slight collar at ends from manufacture. Heavily used, with a flake at one end worn smooth by subsequent wear. Classed as Roman by both form and composition (Guido 1978: 217). Length: 8.6mm; external diameter: 8.3mm; perforation diameter: 2.6mm. Unphased, Context: Benton Layer 1, grid square D3.

SF869 (illus 5.58) Translucent pale green annular bead, slightly tapered D-sectioned with flattened faces showing abrasion from wear. Slightly irregular and off-centre perforation. Typologically undiagnostic, as is demonstrated by the fact that Guido (1978: 145, 152) mistakenly catalogues this bead twice, as Group 6 iib and Group 6 iiib. The low soda levels, plus the elevated magnesia, potash, lime and phosphorus oxide levels clearly mark this as a 'forest' glass, which typically used wood ash for the alkali and is of a composition used throughout the medieval period in northern Europe (Meek 2011). The colour is probably due to traces of iron oxide introduced as an impurity. External diameter: 11–11.8mm; height: 4–4.8mm; perforation diameter: 5mm. Unphased, Context: Benton Layer 1, grid square C6.

SF870 (illus 5.58, 5.61) Sherd from the tubular base ring of a Roman glass vessel (see section 5.13.2) reused as an irregular elongated clear glass bead (Ingemark 2014: 159, fig 3.25.1.1). Fracture surface at the bottom deliberately abraded smooth. The edges show fine flaking from fracture which has been smoothed from use. One side has flaked again in use, with subsequent wear smoothing this fracture. Dimensions: 15mm × 7.5mm; thickness: 8mm. Unphased, Context: Benton Layer 1, grid square C6.

SF871 (illus 5.58) Approximately triangular opaque red glass tessera, the parallel faces slightly matt from production, the others glossier where broken from initial shaping and subsequent removal of fragments for secondary use (notably a facet from one corner). Two sides form an original corner; it probably started life as an irregular square, broken diagonally into the desired shape. Form and analysis confirm this is a Roman tessera. Dimensions: 9mm × 6.2mm × 6.8mm. Unphased, Unstratified.

5.13.2 Roman vessel glass

Dominic Ingemark and Fraser Hunter

Two sherds of Roman glass were recovered from the Sculptor's Cave (Ingemark 2014: 47, fig 3.4.4.1; 159, fig 3.25.1.1; 249). Both derive from what were most likely drinking vessels. A reused Roman tessera is described in section 5.13.1.

A small fragment of clear snake-thread glass with an opaque blue trail (SF872; illus 5.59) belongs to a cup, beaker or flask, manufactured in the late second or early third century AD. Although there is no way of judging how long it circulated before deposition, the freshness of the fracture surfaces suggests that the transformation from vessel to sherd took place not long before deposition. The absence of other sherds, however, indicates that the vessel was not smashed in the cave, and the single sherd was presumably brought there as a token. Although snake-thread glass is rare in Roman Britain, a similar sherd has been found at Culbin Sands (Ingemark 2014).

The other fragment (SF870; worked into a bead) derives from a small tubular-rimmed deep bowl of Isings Form 44a, dating to around AD 70–160/70. A fragment of a similar vessel, also worked into a bead, was recovered from a burial at Dalmeny Park, Midlothian (Brown 1915; Ingemark 2014: 159, 258).

Catalogue

SF870 (illus 5.58, 5.61) Base ring fragment of pale green tubular-rimmed bowl, reused as a bead (see section 5.13.1 for full catalogue entry). Unphased, Context: Benton Layer 1, grid square C6.

SF872 (illus 5.59) Small body fragment of clear snake-thread glass with an opaque blue trail, from a cup, beaker or flask. Applied trail with horizontal slashes. Dimensions: 26mm × 7mm × 5.3mm. Unphased, Unstratified.

Illustration 5.59
Roman vessel glass fragment

5.14 Discussion

Gemma Cruickshanks, Fraser Hunter, Ian Armit and Lindsey Büster

5.14.1 Introduction

A rich assemblage of nearly 1100 artefacts was deposited in the Sculptor's Cave between the Late Bronze Age and Late Roman Iron Age (table 5.31). The assemblage is dominated by decorative personal items in copper alloy, bone, amber, shale and glass, and a large number of Roman coins. Prosaic, everyday artefacts, such as

Table 5.31
Summary of artefact assemblage from each excavation campaign at the Sculptor's Cave. Lithics have been excluded, as they are probably residual.

Artefact group	Benton	Shepherds	Büster/Armit	Total	Notes
Copper alloy: Late Bronze Age	16	4	–	**20**	–
Copper alloy: Iron Age/Roman Iron Age	65	7	–	**72**	Includes multiple items probably from one necklace
Iron	1	3	–	**4**	Modern material excluded
Lead	2	–	–	**2**	–
Amber	8	–	–	**8**	–
Glass	8	–	1	**9**	–
Coarse pottery	317	309	2	**628**	Min. 20 vessels
Samian	5	–	–	**5**	–
Worked bone/antler/teeth/shell	50	15	–	**65**	–
Coarse stone	9	6	–	**15**	–
Roman coins	230	14	–	**244**	148 now identifiable
Shale	3	1	–	**4**	–
Total	**714**	**359**	**3**	**1076**	–

coarse stone tools and simple bone points, make up a notably small component of the assemblage. The large number of pottery sherds represents a minimum of 20 vessels. This unusual assemblage composition raises questions regarding the nature of its deposition and the function of the site, reflecting a largely ceremonial role where artefacts were brought for ritualised deposition rather than everyday use.

Excluding coins, modern items and lithics, and counting the minimum number of vessels rather than sherds, 41% of the assemblage comprises personal ornaments, with tools forming 27% (illus 5.60). Items relating to food and drink (pottery, glass vessel sherds, a spoon), toilet/grooming objects (eg tweezers and a comb), possible gaming counters and fasteners all make up much smaller proportions, and several of the fasteners were in fact probably associated with personal ornaments. Only a single item relating to weaponry was recovered: a copper alloy hilt plate, which is notably at odds with the violence evident on some of the Roman Iron Age human remains.

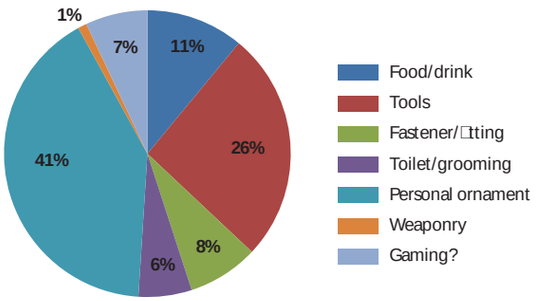

Illustration 5.60
Functional composition of the Sculptor's Cave artefact assemblage. Coins, iron (mostly modern), lithics (mostly unworked fragments) and items of unknown or obscure function omitted. Number of vessels rather than sherds represented

5.14.2 Manufacturing, repair and repurpose

The presence of tools and unfinished objects would normally be used as an indication of on-site manufacturing. Although there are a few unfinished artefacts (four bone, one antler and one copper alloy), it is notable that there is no debitage to confirm in situ production such as bone- or antler-working debris, copper alloy droplets/offcuts, slag or hammerscale. This is confirmed not only by the Shepherd excavations, but also by more recent excavation of Benton's spoil heap (box section 2). Given the ritual nature of this site, it is plausible that all the items were brought for deposition rather than indicating activities which took place at the cave. The craft-related items may therefore represent symbols of particular crafts or activities which were selected for deposition.

The cushion stone and finely shaped whetstone/burnishers attest to the shaping and sharpening of sheet metal and metal blades, while hide preparation is represented by three bone hide-rubbers. A selection of bone and copper alloy needles, possible bone weaving batons and lead whorls represent textile manufacturing. This is relatively well represented among the tools (11 items), suggesting textile crafts were particularly highly valued. While hide-working and textile manufacturing were probably undertaken on most sites, metalworking required more specialised skills and was likely to have been more restricted (Hunter 2015a: 228). The other tools are all multi-functional, such as bone points or cobble tools which may have been utilised for a range of tasks.

A few objects show evidence of repair and reuse, such as a bone shaft point (SF843) and a kite-shaped needle (SF815), which continued in use after their points were broken. Evidence of repurposing is also present: a shale bangle was portioned up into bead roughouts; two samian sherds (SF915, SF917) had their edges ground, possibly for pigment; and a Roman glass vessel rim

Illustration 5.61
A selection of possible Roman necklace components

was refashioned into a bead (SF870). Nine of the Roman coins had been pierced, one of which still retains a double link for suspension, suggesting they had been reused as personal ornaments; some may have been part of an imported Roman necklace (illus 5.61).

5.14.3 Chronological summary

The artefacts from Sculptor's Cave are dated by a combination of typological comparison, stratigraphic position, compositional analysis and radiocarbon dated contexts. Certain objects, especially Late Bronze Age and Roman metalwork, are distinct, and their production can be dated with confidence. Other, plainer artefacts, such as the flat-rimmed pottery, stone tools and simple bone tools, are long-lived types that have to be dated from their context, which is often lacking in this case.

Early prehistory

The only diagnostically early prehistoric objects at the Sculptor's Cave are two flint artefacts recovered by Benton. Both are broadly dated to between the Early Neolithic and Middle Bronze

Table 5.32
Summary of artefacts (excluding pottery) which can be assigned to the Late Bronze Age by stratigraphy, typology or composition

Material	Type	Stratigraphy	Typology	Composition
Non-ferrous metalwork	Hair ring	2	y	y
	Gold leaf fragment	–	y?	y
	Penannular bracelet	1	y	y
	Pin	1	y	y
Glass	Bead	–	–	y
Coarse stone	Cobble tool	1		n/a
Flint	Bipolar core with retouch	1	y	n/a
Iron	Fragment	1		n/a
Shale	Bangle fragment	1	–	n/a
Worked bone	Point	9	–	n/a
	Hide-rubber	1	–	n/a
	Fitting	1	–	n/a
	Other	1	–	n/a

Illustration 5.62
Late Bronze Age metalwork

Table 5.33
Summary of artefacts (excluding pottery) which can be assigned to the Iron Age phase by stratigraphy (typology and composition not diagnostic)

Material	Type	Stratigraphy
Iron	Rod	1
	Wire	1
Stone	Cobble tool	3

Age (section 5.6), making them the earliest definite evidence for human activity in the cave. Ballin points out that, contrary to lithic assemblages from terrestrial sites in Moray, the Sculptor's Cave objects are not sand-blasted, suggesting that they were deposited in the cave soon after their use in the early prehistoric period rather than having been collected elsewhere and brought to the site in later prehistory. The worked red deer antler (SF847) found two feet (*c* 0.6m) below the non-anthropogenic clay (section 2.2.3) is not typologically distinct, but can be dated stratigraphically to the Middle Bronze Age or earlier.

Late Bronze Age (Phase 1)

A range of Late Bronze Age artefacts (illus 5.62) suggest that this was the beginning of regular human activity, or at least artefact deposition, within the cave. Table 5.32 shows the finds which can be attributed to this phase by various means. Interestingly, the bead (SF866) is unlikely to have been recognised as Late Bronze Age without compositional analysis, as it was from a mixed layer and is a rare type. Beads can easily intrude earlier contexts due to their small size.

Table 5.34
Summary of artefacts (excluding coarse pottery) which can be assigned to the Roman Iron Age by stratigraphy, typology or composition. I: indigenous, R: Roman, RI: Roman-inspired, U: undiagnostic but post-Late Bronze Age. *The amber beads could potentially be Late Bronze Age

Material	Type	Stratigraphy	Typology				Composition
			I	R	RI	U	
Non-ferrous metalwork	Spoon	–	–	y	–	–	y
	Padlock and key	–	–	–	y	–	y
	Fasteners	–	–	y	–	y	y
	Pins	–	y	–	–	–	y
	Finger rings	–	y	y	–	y	y
	Penannular brooch	–	–	–	–	y	y
	Bracelet	–	–	y	–	–	y
	Necklace components	–	–	y	–	–	y
	Belt fittings	–	–	y	–	–	y
	Personal grooming	–	–	y	y	–	y
	Needle	–	–	–	–	y	y
	Lead whorl	–	–	–	–	y	y
	Hilt guard	–	–	–	–	y	y
	Uncertain	–	–	–	–	–	y
	Fragment	2	–	–	–	–	y
Glass	Beads	–	y?	y	y?	–	y
Coins	–	–	–	y	–	–	n/a
Amber*	Beads	–	y?	–	–	–	n/a
Pottery	Samian	–	–	y	–	–	n/a
Stone	Gaming counters	–	–	–	y?	–	n/a
Worked bone	Pins	–	y?	–	y?	–	n/a
	Comb	–	y?	–	y?	–	n/a

Iron Age (Phase 2)

Though radiocarbon dating has shown there to be considerable (perhaps continuous) activity in the cave between the Late Bronze Age and Roman Iron Age, the only stratified material, apart from pottery (Fabrics A, C, D and F), are three coarse stone objects and two iron objects (table 5.33). A copper alloy pin (SF114) from Phase 2/3 is not shown on the accompanying tables.

Roman Iron Age (Phase 3)

Although very few artefacts were recovered from the surviving Phase 3 deposits (which were in any case highly disturbed), finds from this period are markedly more typologically or compositionally distinct than for the Pre-Roman Iron Age, and many of the copper alloy items can be split into indigenous, Roman or Roman-inspired forms (table 5.34).

The distinctive Roman material comprises a large number of coins, samian and glass sherds, beads, jewellery and a spoon fragment. Seven of the copper alloy objects, along with the Roman beads and perhaps some perforated coins, are interpreted as deriving from a single necklace (illus 5.61), while the coins were most likely deposited as a group. As discussed in section 5.7, most of the Roman material is consistent with a fourth-century deposit. The earlier samian had been reused and may well have survived until the fourth century (section 5.2.3); only the unworn fragment of snake-thread glass, dating to the late second/early third century (section 5.13.2), provides a suggestion of earlier material.

Artefacts which are typologically indigenous are almost all jewellery items: projecting-headed pins, a spiral finger ring, glass beads, bone pins and a miniature bone comb.

Early medieval

The X-headed (SF807) and barrel-headed (SF808) pins have early medieval parallels, as does the example with a perforated circular head (SF809), while scientific analysis of the composition of one of the beads (SF865) showed that it is probably of this date (section 5.13.1). The rarity of finds reflects the apparent absence of archaeological deposits dating to this period.

Medieval and later

A pale green annular bead (SF869) has a composition consistent with medieval glass beads and may have been dropped or left by a later visitor to the site (section 5.13.1).

5.14.4 Spatial patterning and structured deposition

Although it is not possible to identify the exact findspots of the Benton material, most of her finds were identified to the ten-foot grid square. Though the lack of detailed contextual information limits in-depth analysis of deposition (eg we do not know if items within the same grid square were found together or placed in a pit), we can, therefore, still look at broad patterns and gain a sense of changing depositional trends over time. It is also possible to combine the Benton and Shepherd finds assemblages within a series of 'heat maps' based on the Benton grid to examine some issues related to the spatial patterning of the material.

Visual inspection of the overall finds distribution does not immediately reveal any clear patterning (illus 5.63; see illus 2.2 for grid square concordance). Nonetheless, clear differences are visible between the spatial patterning of the Late Bronze Age and Iron Age/Roman Iron Age metalwork. The earlier material is concentrated in the two entrance passages and, most especially, in the front half of the cave interior (illus 5.64A, B). The sole exception is the group of six of the ten Late Bronze Age hair rings, which were recovered from C9 in the middle of the back wall of the cave (Benton 1931: 181), most likely deposited as a hoard. One of the other hair rings was found 'hidden in the Bronze Age clay, beneath a shelf of the rocks' in grid square D2, against the eastern wall of the east entrance passage (ibid: 182). Given the likely intrinsic value of the metal, is it interesting that such a large proportion of the hair rings appear to have been deliberately hidden.

By contrast, Roman Iron Age/Roman material was deposited much more evenly across the cave interior (illus 5.64C). This suggests that the locus of deposition changed significantly between the two periods. This pattern would be even more marked if the Roman coins were added (illus 5.65). Although the coins have been suggested as a possible hoard (section 5.7.3), analysis of the heat maps reveals some complexities. Plotting those coins which can be attributed to grid square (illus 5.65A) reveals a dense concentration around B4 with scatter elsewhere. If, however, the genuine Roman examples and the copies are plotted separately (illus 5.65B, C), significant differences can be discerned. First, the more numerous copies form an even more distinct cluster around B4, suggestive of a single depositional event, with coins dispersed to a moderate extent through later disturbance (illus 5.65C). Genuine Roman coins show a broader distribution, only partly overlapping with the copies, and have no particular spatial concentration (illus 5.65B). It is hard to see these two groups as relating to the same depositional event. The most likely explanation is that a hoard of a few originals and a large number of copies formed a distinct coin deposit originally placed within grid square B4, while a few other genuine coins of the same broad date were scattered in separate events around the cave. Plotting the pierced coins suggests that most could relate to the putative hoard (illus 5.65D).

Worked bone, though almost certainly conflating material from different periods, is generally evenly spread across the cave interior, but with a noticeable concentration in the East Passage (illus 5.66). The shale, glass and amber show a slight bias towards the east side of the cave interior (illus 5.67), with complete avoidance of the entrance passages. The few coarse stone and iron objects show little obvious patterning (illus 5.68).

Components of the putative Roman necklace (section 5.7.2) are dispersed throughout the central area of the cave. This may indicate more than one necklace, or more likely multiple strands deposited separately; the extremely unusual nature of many of the components in a Scottish context makes it unlikely that they were individual deposits (illus 5.69A). Indeed, limiting the plot to the non-ferrous metal components suggests that parts of a single necklace may well be distributed against the east wall of the cave interior in grid squares D2–D4 (illus 5.69A).

The high number of intact items which were still usable at the time of their deposition suggests that they were not merely casually discarded. The high sherd to vessel ratio also suggests that some pots were whole when deposited, while a 'mutton bone' apparently found within one of the Late Bronze Age pots in the East Passage (Benton 1931: 190) suggests that some of the vessels may have contained offerings.

5.14.5 Wider context

Parallels for the Late Bronze Age assemblage come from Croig Cave, Mull, where recent excavations uncovered a Late Bronze Age bracelet and amber bead of similar types to those found at the Sculptor's Cave (Mithen and Wicks 2012). The Heathery Burn Cave in Co. Durham has also produced a similar Late Bronze Age assemblage, though with far more metalwork, including weapons and pins (Britton and Longworth 1968), and there are extensive parallels further afield (such as the Belgian cave sites of Trou de Han and Trou del Leuve; Warmenbol 2015: 56–7, 71–2).

For the Roman Iron Age, the closest Scottish parallel, in terms of its artefactual assemblage, is Borness Cave in Kirkcudbrightshire, south-west Scotland (Corrie et al 1874; Clarke 1875; 1878). The site was dug in the late nineteenth century and contextual information is lacking (not least due to the use of 'MacKie's patent cotton gunpowder' to dislodge the cave deposits (Clarke 1875: 306)), but the assemblage comprises a range of worked bone, pins and small decorative items similar to those from the Sculptor's Cave. Diagnostic artefacts point towards a Roman Iron Age date, but recent radiocarbon dating of one of the infant skulls from the site, by National Museums Scotland, produced a date of 1006–844 cal BC at 95.4% probability

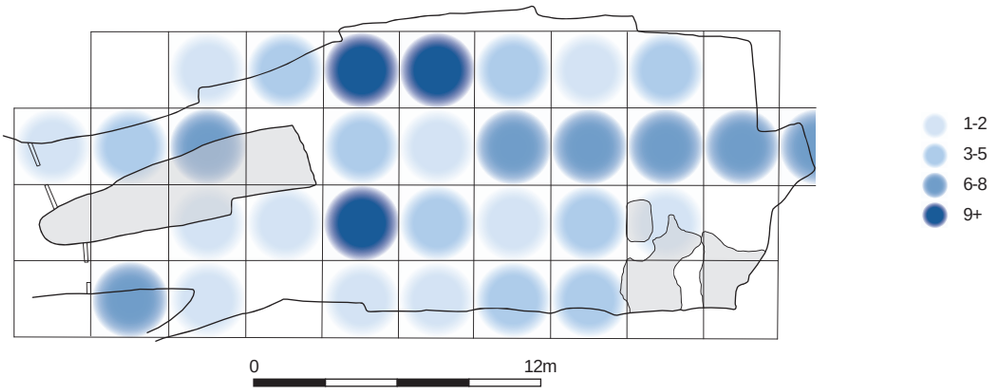

Illustration 5.63
Distribution of all artefacts (excluding pottery and coins) for which spatial information is available

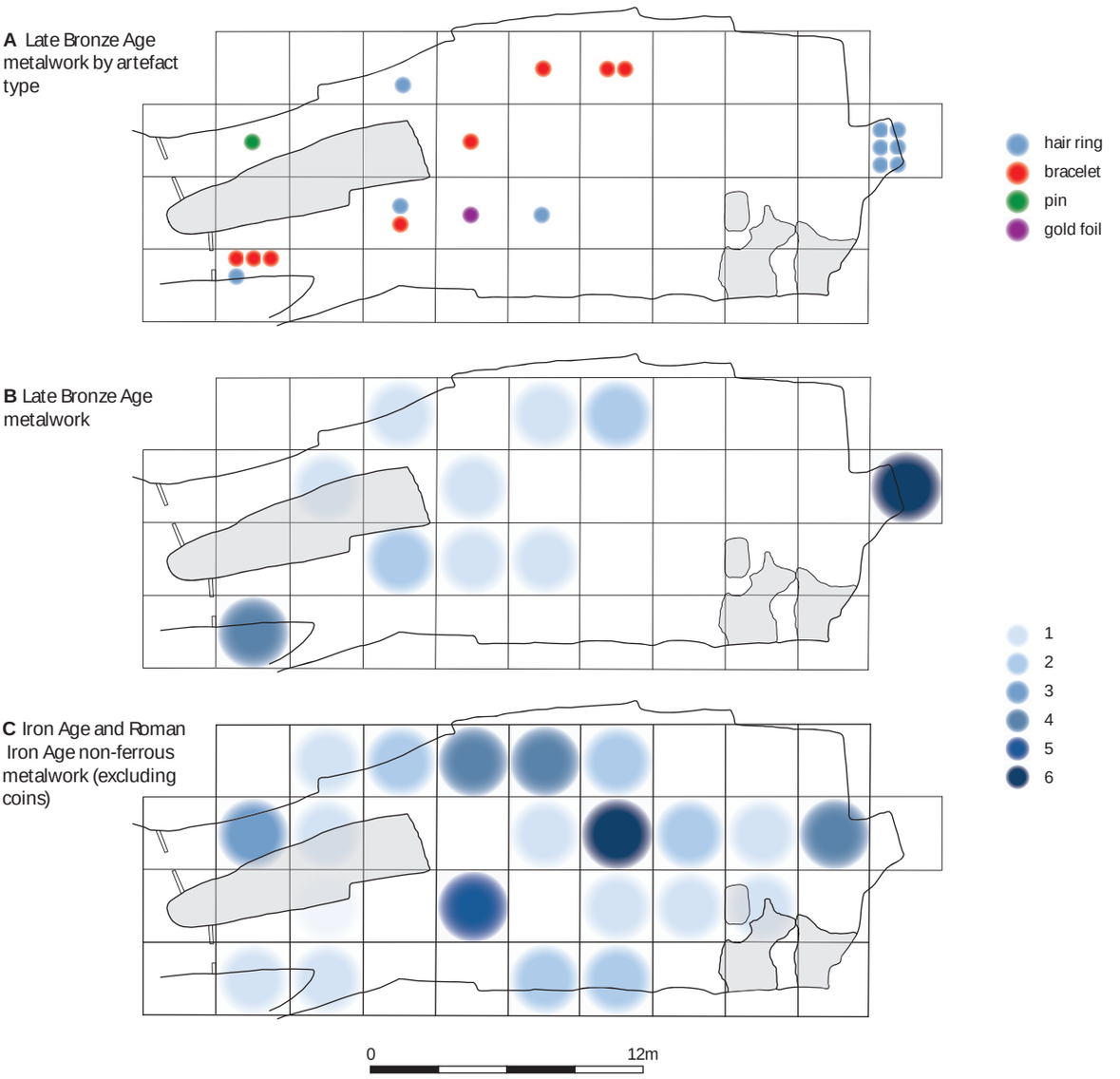

Illustration 5.64
Distribution of (A) Late Bronze Age metalwork by artefact type, (B) all Late Bronze Age metalwork, and (C) Iron Age/Roman Iron Age non-ferrous metalwork, for which spatial information is available

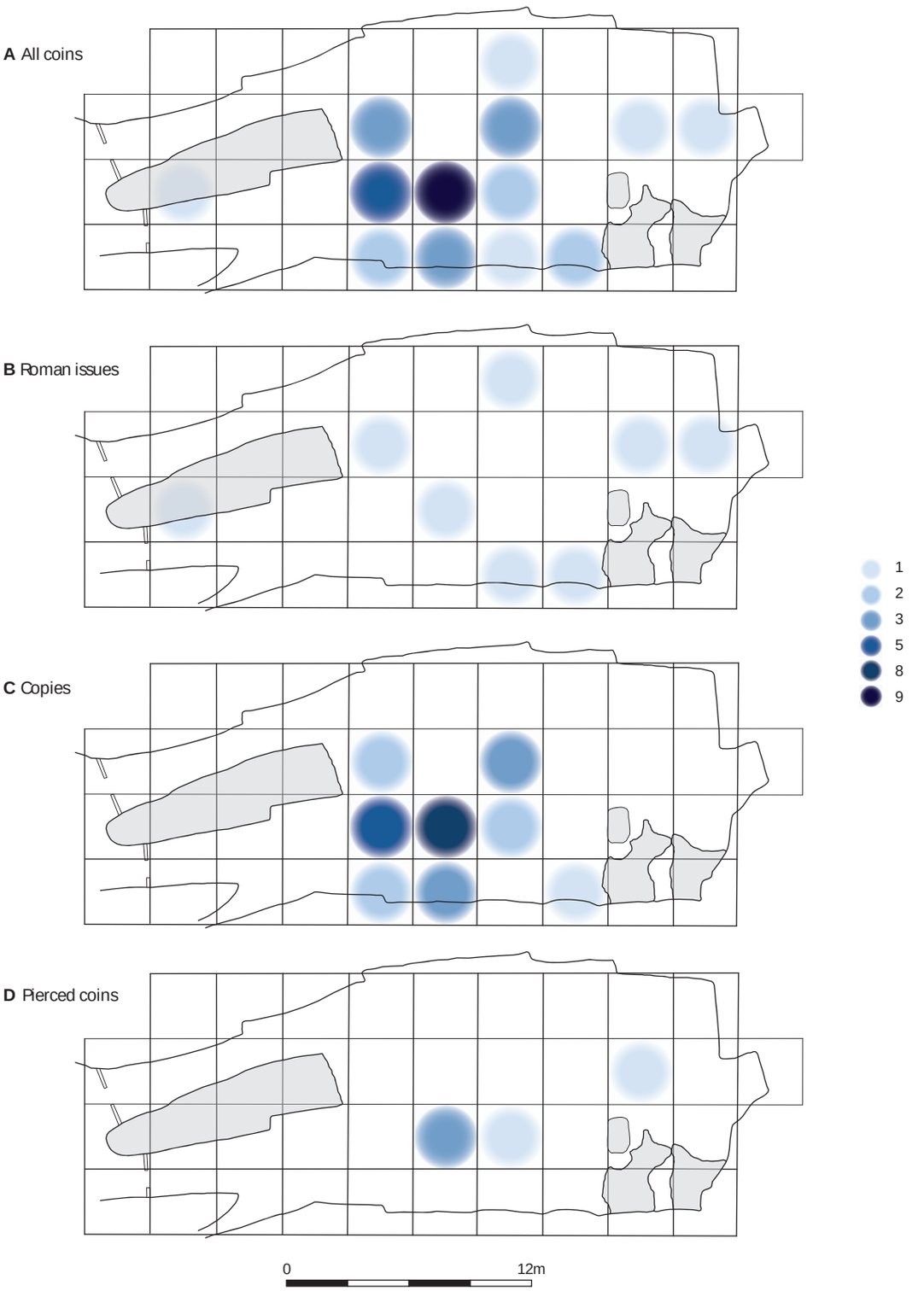

Illustration 5.65
Distribution of (A) all coins, (B) Roman issues, (C) copies and (D) pierced coins, for which spatial information is available

(SUERC-61320; Sheridan et al 2015). The combination of Late Bronze Age infant skulls and Roman Iron Age artefacts is strikingly similar to the Sculptor's Cave. Clarke pointed out that Borness is one of several caves on the same stretch of coastline in which substantial animal bone deposits are easily discovered (1878: 675), suggesting that Borness, like the Sculptor's Cave, could be part of a wider local tradition.

Elsewhere in Scotland there are hints of similar sites, though many were early excavations and details are often lacking. The series of coastal caves at Wemyss in Fife have produced Roman Iron Age artefacts (mainly pottery) and Pictish carvings; also in Fife, Constantine's Cave and Kinkell Cave have wall carvings and an unusual spectrum of Roman finds and craft activities (eg Wace and Jehu 1915; Hunter 1996: 119). A pair of caves at Archerfield, East Lothian, produced human remains along with pottery and glass bangle fragments of Roman Iron Age date (Cree 1909), while the Rhodes Links Cave, North Berwick, revealed juvenile human remains and a Roman Iron Age bronze ibex-headed pin very similar to those found at the Sculptor's Cave (Richardson 1907).

High Pasture Cave on Skye (Birch et al forthcoming) has similar evidence of structured deposition but the activity there is concentrated between the Early Iron Age and Late Pre-Roman Iron Age. The character of the assemblage is very different and comprises many more 'everyday' items, such as several hundred cobble tools, some of which were deposited in caches, along with rarer and decorative items, including iron pins and a wooden musical instrument bridge. Without more sites for comparison, it is difficult to say whether the different character of the assemblages is due to differing chronology or local ritual traditions.

5.14.6 The context of the Late Roman Iron Age material

The Late Roman material at the Sculptor's Cave is exceptional in a Scottish context. Not only is Late Roman material generally rare, but it is particularly scarce in north-east Scotland (Hunter 2014a). Hunter has argued for a major shift in relations between peoples in north-east Scotland and the Roman world between the first/second century and the later third/fourth century, with an initial period of regular small-scale contact in the late first and mid-second centuries, a phase of intensive diplomatically and politically driven contact in the later second and early third century, and then deliberate severing of relations in the later third and fourth century, either to undermine groups built up by Rome or in reaction to the emergence of the anti-Roman Picts (2007b; 2014a).

Reconsideration of the finds from the Sculptor's Cave along with recent discoveries allows a more nuanced picture to be proposed. While the overall pattern remains coherent, subtleties are becoming apparent. In 'southern Pictland', south of the Mounth, the absence of Late Roman material is striking. To the north, a glance at a distribution map shows a curl of findspots around the Moray firthlands, suggesting that the whole zone saw some Late Roman contact, while a gold crossbow brooch, a badge of official status 'from the shores of the Moray Firth', offers a tantalising hint of diplomatic or official connections (Hunter 2014a: fig 2b; Curle 1932: 392, fig 36, no. 4). Yet the distribution is notably thin on the southern shore of the Firth. From Moray, only three finds are known: the Sculptor's Cave material, a small group of Late Roman coins from Burghead which are not securely provenanced and a single Late Roman coin from Clarkly Hill, some 2km to its south-east (Bateson and Holmes 2013: 229; Nick Holmes pers comm). These are weak grounds for proposing significant Late Roman links, especially in contrast to the quantity of earlier finds from the area.

However, the presence of the silver pin and tweezers from the Sculptor's Cave suggests more material was in circulation than we are seeing, as they must be made from recycled Roman silver. The hacked silver elements of the Gaulcross hoard, some 35km along the coast, indicate connections to the circulation systems of Late Roman silver (Goldberg et al 2015; Noble et al 2016), probably in the fifth century; the Sculptor's Cave dating suggests some silver was already available in the fourth century. Rare finds of fourth-century gold and silver coins from Aberdeenshire (two *solidi* and a *siliqua*; Macdonald 1918: 247; Bland and Loriot 2010: 294–5, nos 704, 706) are further evidence of some precious metal reaching the area, though these could have had a lengthy circulation before arrival. The mechanisms behind the movement of silver beyond the frontiers in the Late Roman period are extensively debated, though a good case can be made for much being connected to

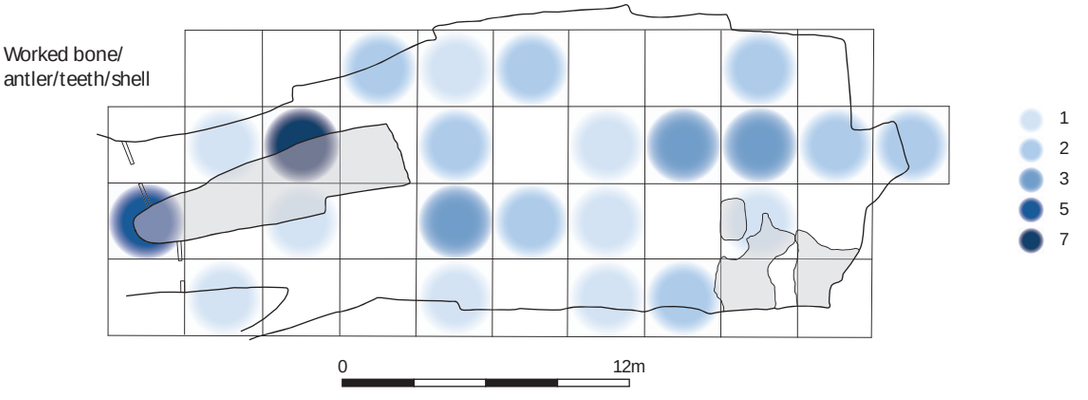

Illustration 5.66
Distribution of worked bone/antler/teeth/shell artefacts, for which spatial information is available

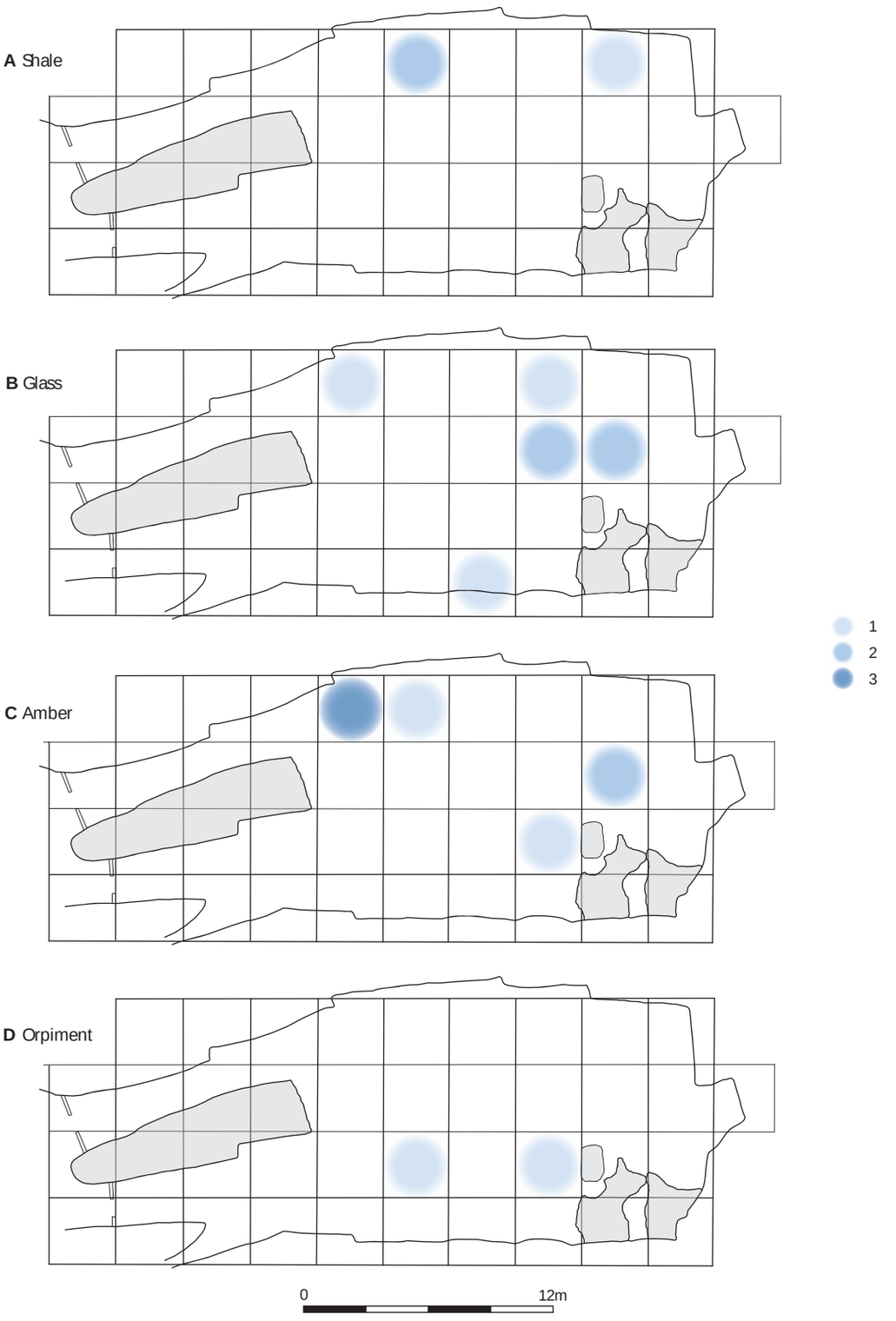

Illustration 5.67
Distribution of decorative materials: (A) shale, (B) glass, (C) amber and (D) orpiment, for which spatial information is available

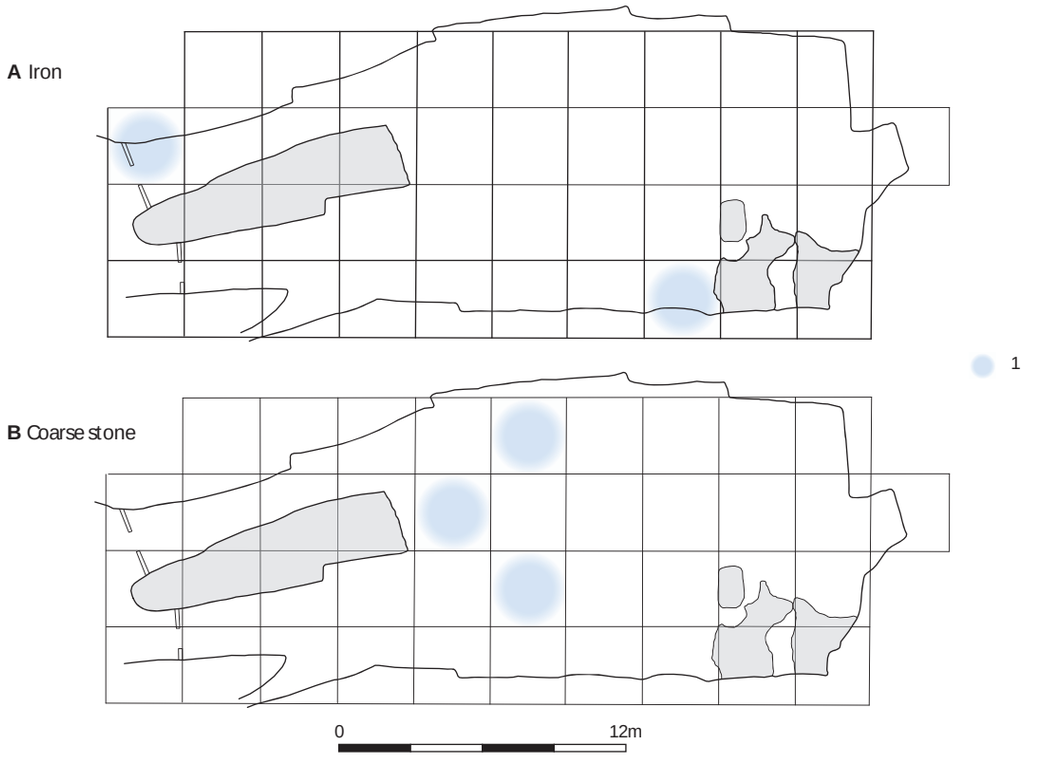

Illustration 5.68
Distribution of (A) iron and (B) coarse stone tools, for which spatial information is available

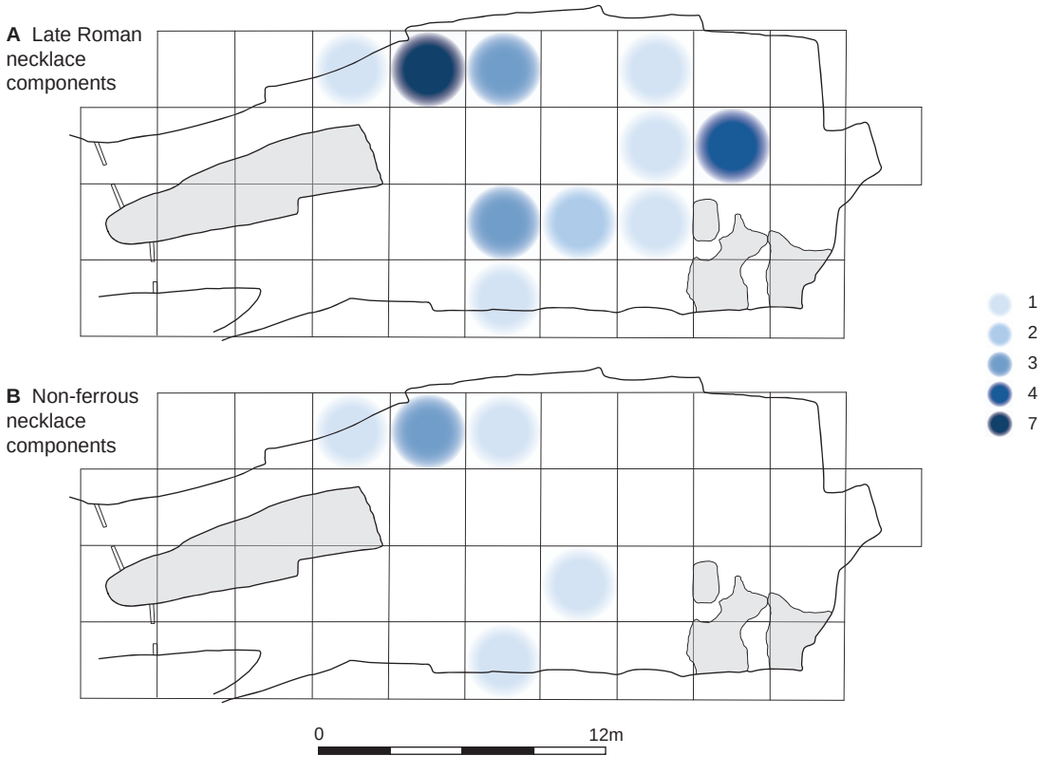

Illustration 5.69
Distribution of (A) all possible and (B) non-ferrous Late Roman necklace components, for which spatial information is available

diplomacy or the payment of war bands rather than loot (Painter 2013).

Thus the picture becomes more complex, but the general absence of Late Roman material from north-east Scotland remains striking. In this empty map, the nature and range of the Sculptor's Cave material are exceptional, and it is tempting to link it to exceptional events. Loot and plunder are often lazily invoked to explain Roman material in *barbaricum*. Such views fail to explain the very selective nature of Roman material which came north; the bulk of evidence looks much more like policies of selective adoption in the light of diplomatic and political connections with the Roman world (Hunter 2001). The Sculptor's Cave stands out as an exception to this picture in its date and unique or near-unique material. Here perhaps one *can* raise the question of loot and plunder. The 'barbarian conspiracy' of AD 367 provides a historical hook for Pictish raids far to the south, but this is better seen as an exemplar of a wider process than a one-off event (Laing and Laing 1986; Hunter 2010a: 103–4). But against this we must balance the evidence of the silver finds, suggesting wider access to Roman prestige material. These two angles – plunder and diplomacy – are not unconnected, and we may suspect that both were at play on the Moray Firth in the fourth century.

5.14.7 Conclusions

The unusual composition and spatial patterning of the Sculptor's Cave assemblage suggest that the artefacts were deposited in a structured manner relating to ritualised activity within the cave over a long period. The prevalence of personal ornaments suggests that individual identity was an important theme, perhaps related to the deposition of human remains. Though deposition appears to peak in the Late Bronze Age and Roman Iron Age, the artefacts also hint at more ephemeral earlier and later activity, revealing many millennia of visitors to this cave.