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Anatomy of an Iron Age Roundhouse

The Cnip Wheelhouse Excavations, Lewis

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Chapter 3

Material Culture

3.1 INTRODUCTION

3.1.1 GENERAL

The following sections describe and discuss the various categories of finds recovered from the excavations, organized by raw material. Before looking at the finds in detail, however, it is worth considering the range of materials that were and were not recovered, either because of the conditions of preservation in the machair environment, or because of genuine absence.

The generally alkaline conditions of the machair environment have led to the excellent survival of bone and antler, added to a large pottery assemblage typical of virtually all Hebridean Iron Age sites. The collection of coarse stone artefacts is modest, perhaps due to the relatively small areas of external activity and midden which were excavated, and the chipped stone assemblage is also minimal. Iron survived in a fragmentary and heavily oxidized condition, although it is not clear whether the few pieces recovered depended on particular soil conditions within individual contexts. Copper alloy artefacts did survive, although they were extremely rare, while metal-working debris was also preserved.

A bronze ferrule from the wall-packing of Wheelhouse 1 (SF31, Ill 3.26a, see Section 3.9) may have come from a wooden artefact, while one or two of the bone and antler pieces may have been handles or fittings on wooden furniture or containers. Wooden artefacts and structural elements were preserved only where fortuitously charred (one unidentifiable piece in the infill of the Wheelhouse 2 entrance), or where oxidized (the haft of the spade-shoe (SF23, see Section 3.10). While structural wood was probably a scarce resource, it is nonetheless likely that smaller pieces were available for use as artefacts or elements of artefacts. The carved wooden red deer head from Dun Bharabhat (Harding & Dixon 2000, see Ill 7.10) gives a flavour of what we might be missing in this medium. Other wooden artefacts from the waterlogged midden deposits at the nearby Dun Bharabhat included spoons, scoops and probable loom fragments (ibid). There are enough hints to suggest that wooden objects would have been relatively common, and that wooden fixtures and furnishings should be added to our mental picture of the interior of the wheelhouse and other buildings, along with similarly perishable plant materials such as heather or straw rope, basketry, flooring, and bedding. Also absent are textiles, leather, hides, and other animal products which would presumably have been readily available and utilized on the basis of the range of animals exploited (see Section 4.2), although certain of the artefacts discussed below hint at spinning and weaving being practised within the settlement.

The recoverable finds assemblage is thus no more than a fragment of the range of material which would have been in use on the site. Some absences, however, are more likely to reflect the original situation. For example, there was a complete absence of glass, despite the ease with which small items like stray beads might have been expected to become incorporated into the floor make-up of the structures. Similarly, there were no objects of Roman influence or manufacture, such as coins or samian pottery.

3.1.2 RANGE OF ACTIVITIES REPRESENTED

The finds assemblage represents a wide range of activities, some of which cross-cut the material-based groups described below.

The cooking and serving of food is represented by the large ceramic assemblage and appears to have been, not unexpectedly, a major activity within the houses. The pottery vessels (see Section 3.2) were presumably also used for storage, although it is difficult to identify pots designated exclusively for this purpose. The small assemblage of rotary quern fragments (see Section 3.6.2) also represents the processing of grain for food, but the re-deposited contexts in which these objects were found makes it difficult to assess whether or not this crop processing was carried out within the buildings.

For textile-working we have a range of objects, notably spindle whorls (usually made from broken pot sherds, see Section 3.3), bone needles, and a beater (SF172, Ill 3.21b, see Section 3.5.3.3) and

comb (SF204, Ill 3.21c, see Section 3.5.3.3). Hide-processing items may include an awl (SF40, Ill 3.20b), a polisher (SF124) and a flensing knife (SF297, Ill 3.20c) (see Section 3.5.3.2). Both activities seem to have been carried out indoors, within the buildings.

Antler-working is represented quite widely, mostly by off-cuts of cast antler or partially worked items (see Section 3.5.2.1). It appears to have been practised within the buildings, as was the working of whale bone. By contrast, debris relating to the working of land mammal bone is found only in a re-deposited context in the small, pit-like Structure 5, and was presumably not carried out within the buildings on the settlement (see Section 3.5.2.2).

A few tools relate to heavier work which would have been carried out on or around the settlement, most likely agriculture and/or construction. The most obvious are an iron-bladed spade (SF23, see Section 3.10) and a whale bone wedge or mattock (SF72, Ill 3.20a, see Section 3.5.3.1), both from exterior contexts.

The limited evidence for metal-working suggests that it was carried out off-site, as might be expected, although slag and other residues did find their way into principally structural contexts such as wall-packing (see Section 3.11). The lack of metal-working evidence within the buildings lends further support to their interpretation as continuously inhabited buildings, as episodes of metal-working within structures is most likely to signal permanent or temporary abandonment of dwelling places (eg Armit, Campbell & Dunwell forthcoming).

Aside from activities relating to subsistence practices and craft-working, certain items are suggestive of leisure pursuits, in particular the tuning peg from a lyre (SF50, Ill 3.24a, see Section 3.5.5) and gaming piece (SF145, Ill 3.24b, see Section 3.5.5). A series of bone and bronze pins (Ill 3.23, see Section 3.5.4.1) probably derive from clothing and the latter suggest some concern with the marking of status through personal appearance. Other enigmatic objects, such as an iron mount possibly with copper alloy fittings

TABLE 3.1
Number of sherds and vessels by block: all phased contexts.

		No sherds	**No vessels**	**Sherds/Vessels**	
Phase 1	***Block 5A1***	106	65	1.6	
	Block 6	139	88	1.5	
	Block 11	171	78	2.2	
	Block 12	20	10	2	
	Block 15	519	182	2.9	
	Block 16	5	2	2.5	
Phase 2	***Block 5***	1909	806	2.4	
	Block 8	1681	688	2.4	
	Block 9	129	70	1.8	
	Block 13	182	123	1.5	
	Block 14	16	13	1.2	
	Block 19	112	68	1.6	
	Block 21	5	4	1.3	
	Block 22	63	27	2.3	
Phase 3	***Block 1***	300	144	2.1	
	Block 2	179	85	2.1	
	Block 3	40	31	1.3	
	Block 4	99	46	2.2	
	Block 18	598	277	2.2	
	Block 20	97	75	1.3	
					Ratio of undecorated to decorated vessels
Phase 1		960	425	2.3	**Undec/dec**: 7.1
Phase 2		4097	1799	2.3	**Undec/dec**: 9
Phase 3		1313	658	2	**Undec/dec**: 10.8

TABLE 3.2
Number of sherds and vessels by block: key sequence.

		No sherds	No vessels	Sherds/Vessels	
Phase 1	***Block 5A1***	106	65	1.6	
	Block 15	519	182	2.9	
	Block 16	5	2	2.5	
Phase 2	***Block 5***	1909	806	2.4	
	Block 8	1681	688	2.4	
Phase 3	***Block 1***	300	144	2.1	
					Ratio of undecorated to decorated vessels
Phase 1		630	249	2.5	**Undec/dec:** 6
Phase 2		3590	1494	2.4	**Undec/dec:** 8.3
Phase 3		300	144	2.1	**Undec/dec:** 9

TABLE 3.3
Surface finish: all phased contexts.

		None	Smoothed	Burnished	Slipped	Wiped	Combed	Slipped/ wiped	Scraped	Polished
Phase 1	***Block 5A1***	12	34	0	0	19	0	0	0	0
	Block 6	21	54	1	2	8	1	1	0	0
	Block 11	1	41	1	0	27	0	8	0	0
	Block 12	0	8	0	0	2	0	0	0	0
	Block 15	26	103	0	5	44	0	4	0	0
	Block 16	2	0	0	0	1	0	0	0	0
Phase 2	***Block 5***	143	491	32	4	111	5	20	0	0
	Block 8	68	457	6	6	113	7	30	0	0
	Block 9	6	53	0	0	8	2	1	0	0
	Block 13	8	79	0	1	32	0	2	0	1
	Block 14	1	7	0	1	4	0	0	0	0
	Block 19	5	35	0	0	28	0	0	0	0
	Block 21	3	0	0	0	1	0	0	0	0
	Block 22	4	19	0	0	4	0	0	0	0
Phase 3	***Block 1***	30	83	0	12	16	1	2	0	0
	Block 2	17	54	0	0	13	0	0	1	0
	Block 3	6	22	0	0	2	0	1	0	0
	Block 4	10	31	0	0	4	0	1	0	0
	Block 18	33	169	1	0	73	0	1	0	0
	Block 20	12	52	1	0	10	0	0	0	0
Phase 1		62 (14.6%)	240 (56.3%)	2 (0.5%)	7 (1.6%)	101 (23.7%)	1 (0.2%)	13 (3.1%)	0 (0)	0 (0)
Phase 2		238 (13.2%)	1141 (63.5%)	38 (2.1%)	12 (0.7%)	301 (16.7%)	14 (0.8%)	53 (2.9%)	0 (0)	1 (0.1%)
Phase 3		108 (16.4%)	411 (62.5%)	2 (0.3%)	12 (1.8%)	118 (17.9%)	1 (0.2%)	5 (0.8%)	1 (0.2%)	0 (0)

(SF54, Ill 3.26b, see Section 3.10), and a toy or votive model sword (SF20, Ill 3.24d, see Section 3.5.7), also suggest activities unrelated to basic subsistence.

3.2 POTTERY

Ann MacSween

3.2.1 INTRODUCTION

The assemblage from Cnip comprises 6370 sherds from phased contexts, representing 2882 vessels. The number of sherds recovered from each block and phase are summarized in Table 3.1. Many of the sherds are of a similar colour and fabric, and as colour and thickness could vary considerably over a vessel, sherds were only matched with others from the same block. The vessel number does not strictly, therefore, represent the minimum number of vessels originally present.

The assemblage has been analysed on two levels. Initially, data for the pottery from all the blocks which could be phased was analysed. Following this, pottery from the 'key sequence', that is, blocks for which there was minimum risk of contamination (Phase 1: Blocks 5ai, 15 and 16; Phase 2: Blocks 5 and 8; Phase 3: Block 1) was analysed to see if any differences between phases could be determined by removing the 'background' of blocks for which there was a greater risk of contamination (Table 3.2). Although Blocks 15 and 16 may contain a small proportion of earlier pottery (Sections 2.3, 2.3.2.1, 2.4.2.1) they are most unlikely to be contaminated with any later material, and thus reflect, strictly speaking, Phase 1 and possibly earlier.

3.2.2 TECHNOLOGY

The technology was very similar in all phases. The vessels were handthrown, by the coil construction method, using diagonal (N-shaped) junctions. Overall, the relative proportions of surface finish are consistent for each phase with nothing to suggest a change in techniques during the life of the site. The vessels were often finished by smoothing (*c* 60 per cent) or wiping (*c* 20 per cent). Other finishes – burnishing, slipping, combing, scraping, and polishing – were used less frequently (Table 3.3). Analysis of the key sequence (Table 3.4) indicates that burnishing may have been characteristic of Phase 2 and that the use of wiping declined through the sequence.

Three different 'grades' of clay were used, categorized as 1 (sandy), 2 (fine micaceous clay) and 3 (very fine clay). Sometimes these clays were used on their own without any added temper, but more often temper seems to have been added. Table 3.5 summarizes the use of the various fabrics for each phase. 'A' signifies 10–50 per cent of rock fragments, and 'B' signifies more than 50 per cent of rock fragments. The summary shows that the more plastic the clay, the less likely it was to be used without the addition of temper. Clay 3, the finest clay, was seldom used on its own (1–3 per cent), while

TABLE 3.4
Surface finish: key sequence.

		None	Smoothed	Burnished	Slipped	Wiped	Combed	Slipped/ wiped	Scraped	Polished
Phase 1	***Block 5A1***	12	34	0	0	19	0	0	0	0
	Block 15	26	103	0	5	44	0	4	0	0
	Block 16	2	0	0	0	1	0	0	0	0
Phase 2	***Block 5***	143	491	32	4	111	5	20	0	0
	Block 8	68	457	6	6	113	7	30	0	0
Phase 3	***Block 1***	30	83	0	12	16	1	2	0	0
Phase 1		40	137	0	5	64	0	4	0	0
		(16%)	(54.8%)	(0)	(2%)	(25.6%)	(0)	(1.6%)	(0)	(0)
Phase 2		211	948	38	10	224	12	50	0	1
		(14.1%)	(63.5%)	(2.4%)	(0.7%)	(15%)	(0.8%)	(3.5%)	(0)	(0.1%)
Phase 3		30	83	0	12	16	1	2	1	0
		(20.8%)	(57.6%)	(0)	(8.3%)	(11.1%)	(0.8%)	(1.4%)	(0.2%)	(0)

TABLE 3.5

Fabric by block: all phased contexts, (1) sandy clay; (1A) with up to 50% rock inclusions; (1B) with over 50% rock inclusions; (2) fine sandy clay; (2A) with up to 50% rock inclusions; (2B) with over 50% rock inclusions; (3) fine clay; (3A) with up to 50% rock inclusions; (3B) with over 50% rock inclusions.

		1	1A	1B	2	2A	2B	3	3A	3B	3C
Phase 1	***Block 5A1***	0	5	0	4	31	0	2	23	0	0
	Block 6	16	13	0	6	29	0	7	17	0	0
	Block 11	17	10	0	7	36	0	1	7	0	0
	Block 12	3	1	0	1	5	0	0	0	0	0
	Block 15	43	25	0	20	80	0	3	11	0	0
	Block 16	1	0	0	1	1	0	0	0	0	0
Phase 2	***Block 5***	69	224	0	47	277	2	27	159	1	0
	Block 8	82	93	0	19	372	1	9	111	0	0
	Block 9	8	10	0	4	27	0	1	20	0	0
	Block 13	15	2	1	12	64	0	3	26	0	0
	Block 14	1	1	0	0	8	0	0	3	0	0
	Block 19	22	15	0	8	22	0	0	1	0	0
	Block 21	1	0	0	3	0	0	0	0	0	0
	Block 22	11	4	0	0	10	0	2	0	0	0
Phase 3	***Block 1***	29	30	0	12	65	0	1	7	0	0
	Block 2	11	19	0	6	33	0	2	14	0	0
	Block 3	3	7	0	2	10	0	0	9	0	0
	Block 4	17	8	0	9	10	0	0	2	0	0
	Block 18	73	30	0	25	101	0	2	45	0	1
	Block 20	32	1	0	13	24	0	0	5	0	0
Phase 1		80 (18.8%)	54 (12.7%)	0	39 (9.1%)	182 (42.7%)	0 (0)	13 (3.1%)	58 (13.6%)	0 (0)	0 (0)
Phase 2		209 (11.6%)	349 (19.4%)	1 (0.1%)	93 (5.2%)	780 (43.3%)	3 (0.2%)	42 (2.3%)	320 (17.8%)	1 (0.1%)	0 (0)
Phase 3		165 (25.1%)	95 (14.4%)	0 (0)	67 (10.2%)	243 (36.8%)	0 (0)	5 (0.8%)	82 (12.5%)	0 (0)	1 (0.2%)

the sand naturally present in Clay 1 seems to have been enough to allow the clay to fire successfully without the addition of temper. Analysis of the fabric data shows very little difference in the general composition of the assemblages from each phase in either the overall summary or the key sequence (Tables 3.5 and 3.6). Again with firing, the assemblages from each phase are very similar, with the majority being either red or brown, or grey with a red or brown margin (Table 3.7 and 3.8), the colour patterning being indicative of fairly short, bonfire firing.

3.2.3 MORPHOLOGY

Although many of the sherds in the assemblage are small or undiagnostic, several profiles allow the whole or partial reconstruction of vessel forms. The predominant form seems to have been a shouldered vessel with an everted rim, tapering below the shoulder to a flat base (eg V1366 (Ill 3.5a), Phase 1 and V1367 (Ill 3.12a), Phase 2). The shoulder of the vessel was usually rounded rather than angled. A lesser number of vessels had flat or inverted rims and were probably barrel-shaped (eg V2148 (Ill 3.2f) and V2513 (Ill 3.3e), Phase 1). A few vessels were probably globular in profile (V1342 (Ill 3.1h), Phase 1; V2045 (Ill 3.10i) and V2346 (Ill 3.13f), Phase 2).

The number of rims of each type are summarized by block and phase in Tables 3.9 and 3.10. Everted rims (eg V39 (Ill 3.6b), Phase 2) are the most common rim form in each phase. Plain rims and necked vessels may be slightly more common in

TABLE 3.6

Fabric by block: key sequence. See Table 3.7 for key.

		1	1A	1B	2	2A	2B	3	3A	3B	3C
Phase 1	***Block 5A1***	0	5	0	4	31	0	2	23	0	0
	Block 15	43	25	0	20	80	0	3	11	0	0
	Block 16	1	0	0	1	1	0	0	0	0	0
Phase 2	***Block 5***	69	224	0	47	277	2	27	159	1	0
	Block 8	82	93	0	19	372	1	9	111	0	0
Phase 3	***Block 1***	29	30	0	12	65	0	1	7	0	0
Phase 1		44 (17.6%)	30 (12%)	0 (0)	25 (10%)	112 (44.8%)	0 (0)	5 (2%)	34 (13.6%)	0 (0)	0 (0)
Phase 2		151 (10.1%)	317 (21.2%)	0 (0)	66 (4.4%)	649 (43.5%)	3 (0.2%)	36 (2.4%)	270 (18.1%)	1 (0.1%)	0 (0)
Phase 3		29 (20.1%)	30 (20.8%)	0 (0)	12 (8.3%)	65 (45.1%)	0 (0)	1 (0.8%)	7 (4.9%)	0 (0)	0 (0)

TABLE 3.7

Sherd colour by block: all phased contexts. (1) oxidized; (2) reduced; (3) part oxidized; (4) part reduced; (5) oxidized with reduced margin; (6) reduced with oxidized margin.

		1	2	3	4	5	**6**
Phase 1	***Block 5A1***	41	7	5	0	1	11
	Block 6	47	7	6	0	0	28
	Block 11	19	6	9	0	3	41
	Block 12	6	0	0	0	0	4
	Block 15	55	14	16	2	2	93
	Block 16	1	0	0	0	0	2
Phase 2	***Block 5***	419	57	62	7	6	255
	Block 8	352	61	22	0	8	242
	Block 9	34	10	4	0	0	22
	Block 13	81	11	4	1	0	26
	Block 14	4	3	1	0	0	5
	Block 19	36	3	6	0	0	23
	Block 21	0	1	0	0	0	3
	Block 22	16	2	1	0	0	8
Phase 3	***Block 1***	45	8	17	1	0	73
	Block 2	36	7	6	0	1	35
	Block 3	15	3	2	0	0	11
	Block 4	27	3	4	1	0	11
	Block 18	129	18	11	1	1	117
	Block 20	50	4	2	0	0	19
Phase 1		169 (39.7%)	34 (8%)	36 (8.5%)	2 (0.5%)	6 (1.4%)	179 (42.0%)
Phase 2		942 (52.5%)	148 (8.2%)	100 (5.6%)	8 (0.4%)	14 (0.8%)	584 (32.5%)
Phase 3		302 (45.9%)	43 (6.5%)	42 (6.4%)	3 (0.5%)	2 (0.3%)	266 (40.4%)

TABLE 3.8
Sherd colour by block: key sequence. (1) oxidized; (2) reduced; (3) part oxidized; (4) part reduced; (5) oxidized with reduced margin; (6) reduced with oxidized margin.

		1	2	3	4	5	6
Phase 1	***Block 5A1***	41	7	5	0	1	11
	Block 15	55	14	16	2	2	93
	Block 16	1	0	0	0	0	2
Phase 2	***Block 5***	419	57	62	7	6	255
	Block 8	352	61	22	0	8	242
Phase 3	***Block 1***	45	8	17	1	0	73
Phase 1		97 (38.7%)	21 (8.3%)	21 (8.3%)	2 (0.8%)	3 (1.2%)	106 (42.7%)
Phase 2		771 (51.7%)	118 (7.9%)	84 (5.6%)	7 (0.5%)	14 (0.9%)	497 (33.4%)
Phase 3		45 (31.3%)	8 (5.6%)	17 (11.8%)	1 (0.7%)	0 (0)	73 (50.6%)

Phase 3 and inverted rims are most common in Phase 1, although the numbers from which the overall percentages have been calculated are small, especially for Phase 1. There are a few examples of more elaborate rim forms. A couple of the everted rims (V601 (Ill 3.5e) and V1752 (Ill 3.9i), Phase 2) are

TABLE 3.9
Rim types by block: all phased contexts.

		Plain	Flat	Everted	Int bevel	Inverted	Necked	T-shaped	Rounded
Phase 1	***Block 5A1***	0	1	1	0	0	0	0	0
	Block 6	0	1	5	0	0	0	1	0
	Block 11	1	1	1	0	4	0	0	0
	Block 12	0	0	0	0	0	0	0	0
	Block 15	0	7	7	0	4	0	1	0
	Block 16	0	0	1	0	0	0	0	0
Phase 2	***Block 5***	6	7	49	1	3	1	0	0
	Block 8	3	3	50	0	1	1	0	0
	Block 9	2	2	3	0	0	0	0	0
	Block 13	1	0	5	0	0	0	1	0
	Block 14	0	0	1	0	1	0	0	0
	Block 19	0	1	1	0	0	0	0	0
	Block 21	0	0	0	0	0	0	0	0
	Block 22	0	0	1	0	0	0	0	0
Phase 3	***Block 1***	0	0	8	0	1	0	0	0
	Block 2	1	1	5	0	0	1	0	0
	Block 3	0	0	1	0	0	0	0	0
	Block 4	0	0	2	0	0	0	0	0
	Block 18	3	7	8	0	1	4	0	1
	Block 20	5	1	1	0	0	0	0	0
Phase 1		1 (2.8%)	10 (27.8%)	15 (41.7%)	0 (0)	8 (22.2%)	0 (0)	2 (5.6%)	0 (0)
Phase 2		12 (8.3%)	13 (9%)	110 (76.4%)	1 (0.7%)	5 (3.5%)	2 (1.4%)	1 (0.7%)	0 (0)
Phase 3		9 (17.6%)	9 (17.6%)	25 (49%)	0 (0)	2 (3.9%)	5 (9.9%)	0 (0)	1 (2%)

TABLE 3.10
Rim types by block: key sequence.

		Plain	Flat	Everted	Int bevel	Inverted	Necked	T-shaped	Rounded
Phase 1	***Block 5A1***	0	1	1	0	0	0	0	0
	Block 15	0	7	7	0	4	0	1	0
	Block 16	9	9	26	0	2	5	0	0
Phase 2	***Block 5***	6	7	49	1	3	1	0	0
	Block 8	3	3	50	0	1	1	0	0
Phase 3	***Block 1***	0	0	8	0	1	0	0	0
Phase 1		0 (0)	8 (34.8%)	9 (39.1%)	0 (0)	4 (17.4%)	1 (4.5%)	1 (4.3%)	0 (0)
Phase 2		9 (7.2%)	10 (8%)	99 (79.2%)	1 (0.8%)	4 (3.25%)	2 (1.6%)	0 (0)	0 (0)
Phase 3		0 (0)	0 (0)	8 (88.9%)	0 (0)	1 (11.1%)	0 (0)	0 (0)	0 (0)

faceted on the interior of the neck and several others have finger impressed ridges (V195 (Ill 3.7h), V1383 (Ill 3.12i) and V2235 (Ill 3.13a), Phase 2). Ridging was also noted on the exterior of an inverted rim of a globular vessel, just below the lip (V2346 (Ill 3.13f), Phase 2).

TABLE 3.11
Sherd thickness by block: all phased contexts.

		0–5	6–10	11–15	16–20	21–25
Phase 1	***Block 5A1***	4	49	11	1	0
	Block 6	4	68	15	0	0
	Block 11	6	56	16	0	0
	Block 12	0	9	1	0	0
	Block 15	17	139	27	1	0
	Block 16	1	1	1	0	0
Phase 2	***Block 5***	46	634	126	0	0
	Block 8	32	549	103	1	0
	Block 9	5	53	12	0	0
	Block 13	10	102	10	0	0
	Block 14	2	10	1	0	0
	Block 19	4	52	12	0	0
	Block 21	0	1	3	0	0
	Block 22	1	23	3	0	0
Phase 3	***Block 1***	3	91	49	1	0
	Block 2	6	66	11	0	0
	Block 3	0	29	2	0	0
	Block 4	3	33	9	0	1
	Block 18	15	206	48	0	0
	Block 20	0	68	7	0	0
Phase 1		32 (7.5%)	322 (75.4%)	71 (16.6%)	2 (0.5%)	0 (0)
Phase 2		100 (5.6%)	1424 (79.3%)	270 (15%)	1 (0.1%)	0 (0)
Phase 3		27 (4.2%)	493 (76%)	126 (19.4%)	1 (0.2%)	1 (0.2%)

(NB: Abraded sherds not included)

TABLE 3.12
Sherd thickness by block: key sequence.

		0–5	6–10	11–15	16–20	21–25
Phase 1	***Block 5A1***	4	49	11	1	0
	Block 15	17	139	27	1	0
	Block 16	1	1	1	0	0
Phase 2	***Block 5***	46	634	126	0	0
	Block 8	32	549	103	1	0
Phase 3	***Block 1***	3	91	49	1	0
Phase 1		22 (8.7%)	189 (75%)	39 (15.5%)	2 (0.8%)	0 (0)
Phase 2		78 (4.9%)	1274 (80.5%)	229 (14.5%)	1 (0.1%)	0 (0)
Phase 3		3 (2.1%)	91 (63.2%)	49 (34%)	1 (0.7%)	0 (0)

Vessel thickness is summarized in Tables 3.11 and 3.12. Overall most vessels (*c* 77 per cent) have wall thicknesses between 6–10mm, with a smaller number (*c* 5 per cent) of thin walled vessels (less than 5mm thick) and *c* 17 per cent of thick walled vessels (11–15 mm). Again this does not vary markedly between phases (Table 3.11), although the key sequence shows a higher percentage of thicker-walled vessels in Phase 3 (Table 3.12).

3.2.4 DECORATION

The overall impression of the decoration on the Cnip assemblage is of a few 'standard' designs, such as an applied straight or zigzag cordon around the shoulder or the neck of a vessel, and outwith this a fairly wide range of motifs combined and arranged within 'accepted' limits. Where the position of decoration on a vessel could be determined, for example, it seems to be restricted to the upper part of the vessel, above the shoulder, or around the neck. Where decoration is, rarely, found on the lower part of the vessel, this is usually in the interior, either by combing on the wall surface or finger impressing the base.

A number of decorative techniques were used – incising, applying, impressing, wiping, combing, and one example of painting. The general sequence (Table 3.13) indicates that in all phases the most common type of decoration was applied (40–60 per cent), followed by incised decoration (*c* 20 per cent). The key sequence, however, indicates a marked increase in the amount of applied decoration through the sequence, with a corresponding decrease in incised decoration (Table 3.14). However, it should be noted that some of the blocks in the key sequence produced a relatively small number of sherds. The range of motifs is summarized in Table 3.15 (general sequence) and Table 3.16 (key sequence). By far the most common motif is a zigzag cordon. The greatest variety of motifs is in Phase 2 although this might in part be the product of it having by far the largest assemblage.

3.2.4.1 Applied decoration

The most usual form of applied decoration throughout the assemblage is the zigzag cordon, usually a single cordon around the shoulder of the vessel (eg V63 (Ill 3.6af) and V523 (Ill 3.8g), Phase 2). Some vessels have the zigzag cordon at the neck (eg V913 (Ill 3.1d), Phase 1; V48 (Ill 3.6ac) Phase 2; V993 (Ill 3.14c), Phase 3). While usually found in combination with everted rims, zigzag decoration is also found occasionally with other rim forms eg V1315 (Ill 3.1f) (Phase 1), where it occurs below the lip of an inverted rim. The numbers of occurrences of individual decorative elements are too low to allow a detailed analysis by phase.

Although a single zigzag cordon was most often used, there are examples of double zigzags (eg V1113 (not illustrated) and V1134 (Ill 3.15f), Phase 3) and occasional examples of its use in combination with another type of cordon (eg V928 (Ill 3.1b), Phase 1) where it is used with an obliquely incised cordon. Often the zigzag is the only decoration on a vessel although occasionally it appears to have served as the lower border for incised decoration in the area between the neck and the shoulder (eg V2385 (Ill 3.4b), Phase 1; V1387 (not illustrated), V1473 (Ill 3.11a) and V2335 (not illustrated), Phase 2); for wiped

TABLE 3.13
Decorative techniques: all phased contexts.

		Incised	Applied	Impressed	Wiped	Combed	Combination	Painted
Phase 1	***Block 5A1***	4	4	2	2	0	0	0
	Block 6	3	14	3	0	0	1	0
	Block 11	3	3	1	1	0	1	0
	Block 12	0	2	0	0	0	0	0
	Block 15	8	8	10	0	0	3	1
	Block 16	0	0	0	0	0	2	0
Phase 2	***Block 5***	17	51	3	6	3	0	0
	Block 8	16	71	3	8	0	2	0
	Block 9	1	0	0	0	0	0	0
	Block 13	5	5	0	0	0	0	0
	Block 14	0	0	0	0	0	1	0
	Block 19	1	2	0	0	0	0	0
	Block 21	0	0	0	0	0	0	0
	Block 22	0	3	0	0	0	0	0
Phase 3	***Block 1***	2	13	0	0	0	1	0
	Block 2	1	2	1	0	0	0	0
	Block 3	0	0	0	0	0	0	0
	Block 4	0	5	0	0	1	0	0
	Block 18	6	15	8	0	1	3	0
	Block 20	1	1	0	0	0	0	0
Phase 1		17 (24.3%)	28 (40%)	15 (21.4%)	2 (2.9%)	0 (0)	5 (10%)	1 (1.4%)
Phase 2		40 (20.2%)	132 (66.7%)	6 (3%)	14 (7.1%)	3 (1.5%)	4 (1.5%)	0 (0)
Phase 3		10 (16.4%)	36 (59%)	9 (14.8%)	0 (0)	2 (3.3%)	4 (6.5%)	0 (0)

decoration in the same area (V1633 (Ill 3.11d), Phase 2), or separating the two types of decoration (V2385 (Ill 3.4b), Phase 1). The only example of an incised zigzag cordon (V2724 (Ill 3.17f), Phase 3) also borders incised decoration. A variation on zigzag cordons is V2184 (Ill 3.2g) (Phase 1) which has been squared off to produce a geometric effect.

Of the other types of cordons found in the assemblage, all are decorated apart from two: a plain straight cordon, positioned at the neck of the vessel (V1691 (Ill 3.11g), Phase 2); and a flattened, 'ribbon' cordon (V1345 (Ill 3.1j), Phase 1). Decoration of the cordons was by incision, either straight (eg V1278 (Ill 3.15j) and V1337 (Ill 3.2b), Phase 1; V1580 (Ill 3.11e), Phase 2) or oblique (eg V1280 (Ill 3.15l), Phase 1; V301 (Ill 3.5g) and V1381 (Ill 3.12g), Phase 2), or by pinching (eg V1282 (Ill 3.15m), Phase 1; V1751 (Ill 3.9h), Phase 2). There is also one example of a cordon decorated on its upper side with impressed Vs (V1366 (Ill 3.5a), Phase 1) and one decorated with round impressions (V177 (Ill 3.8i), uncertain phase). More elaborate forms are rope effect cordons, formed from short oblique lengths of clay (eg V1369 (not illustrated), Phase 2), and chain effect cordons formed from adjoining small rings of variable size (V1153 (Ill 3.15b), Phase 3). There is also an example of an incised cordon incorporating an applied ring (V2531 (Ill 3.4e), Phase 1). The straight decorated cordons occupy similar positions on the vessels to the zigzag cordons, either round the neck (eg V865 (Ill 3.9a), Phase 2; V1006 (Ill 3.14f), Phase 3), or shoulder of a vessel (eg V521 (Ill 3.8f) and V1368 (Ill 3.12b), Phase 2; V2720 (not illustrated), Phase 3). Again, like zigzag cordons, decorated straight cordons are usually found on everted rim vessels although they do occur on other types, eg V304 (Ill 3.5i) (Phase 2) which has an obliquely incised cordon below an inverted rim. Usually decorated cordons form the only element of decoration on a vessel but there are a few examples where they border incised decoration (eg V1991 (Ill

TABLE 3.14
Decorative techniques: key sequence.

		Incised	Applied	Impressed	Wiped	Combed	Combination	Painted
Phase 1	***Block 5A1***	4	4	2	2	0	0	0
	Block 15	8	8	10	0	0	3	1
	Block 16	0	0	0	0	0	2	0
Phase 2	***Block 5***	17	51	3	6	3	0	0
	Block 8	16	71	3	8	0	2	0
Phase 3	***Block 1***	2	13	0	0	0	1	0
Phase 1		12 (27.9%)	12 (27.9%)	12 (27.9%)	2 (4.7%)	0 (0)	5 (9.3%)	1 (2.3%)
Phase 2		33 (18.3%)	122 (67.8%)	6 (3.3%)	14 (7.8%)	3 (1.7%)	2 (1.1%)	0 (0)
Phase 3		2 (12.5%)	13 (81.3%)	0 (0)	0 (0)	0 (0)	1 (6.2%)	0 (0)

3.10g), Phase 2) and one which is in combination with zigzag decoration (V928 (Ill 3.1b), Phase 1).

As well as cordons there are several other forms of applied decoration: one example each of an impressed boss (V2577 (Ill 3.16c), Phase 3); curved applied decoration (V684 (Ill 3.7a), Phase 2); applied geometric (V1373 (Ill 3.12d), Phase 2); horse-shoe decoration (V368 (Ill 3.7c), Phase 2); and several examples of applied rings (eg V87 (Ill 3.6ba), Phase 2), sometimes in rows (eg V1343 (Ill 3.1i), Phase 1; V1753 (Ill 3.9j), Phase 2).

3.2.4.2 Incised decoration

The incised decoration in the Cnip assemblage was mostly formed by fine incision although there are some examples of thicker grooving (eg V1312 (Ill 3.1e), Phase 1, geometric 'ridged' decoration; V1989 (Ill 3.10f), Phase 2, parallel grooves), sometimes in combination with finer decoration (eg V2336 (Ill 3.13e), Phase 2). The most simple form of incised decoration is parallel horizontal, vertical or oblique lines (eg V1398 (Ill 3.12j), Phase 2; V1250 (Ill 3.17h), uncertain phase) or combined with curved decoration (eg V570 (Ill 3.5c), Phase 2). Lines were sometimes formed from short incisions, eg V1474 (Ill 3.11b), Phase 2, a double row of short oblique incisions, and V575 (Ill 3.7i), Phase 2, a single row of short oblique incisions. Often these rows of short incisions are found around the neck of a vessel (eg V793 (Ill 3.5k), Phase 2, a row of vertical lines below a flat rim; or V611 (Ill 3.5f), Phase 2, short oblique incisions at the neck of an everted rim). Other forms of incised decoration in the assemblage are crossing lines forming lozenge decoration (eg V2137 (Ill 3.2d) and V2182 (Ill 3.2j), Phase 1), and single or multiple chevrons (V832 (not illustrated) and V2181 (Ill 3.2i), Phase 1; V1378 (Ill 3.12f) and V2385 (Ill 3.4b), Phase 1). Sometimes the decoration is apparently random, for example, V2147 (Ill 3.2e) (Phase 1) has a horizontal line around the neck with random short lines crossing it, and an apparently random incised pattern below. This contrasts with the examples of very structured, infilled geometric decoration (eg V302 (Ill 3.5h), V519 (Ill 3.8d) and V2301 (Ill 3.13b), Phase 2; V2576 (Ill 3.16b), Phase 3), the oblique incised lines placed in various directions, forming a basket weave pattern, the example of 'feather' decoration (V516 (Ill 3.8c), Phase 2), and the herringbone decoration on the exterior of an inverted rim (V774 (Ill 3.9f), Phase 2).

Sometimes the incised decoration is arranged in a band of panels below the neck of the vessel. These panels appear to have taken a number of forms, and do not appear to have conformed to any 'rules'. V584 (Ill 3.7j) (Phase 2), for example, has stabs forming panels with incised infilling. V1342 (Ill 3.1h) (Phase 1) has four remaining panels below a T-shaped rim – one panel with two sets of triple zigzags; a smaller panel of herringbone; a badly abraded panel which seems to include raised horizontal decoration; and a further panel with herringbone decoration. The panels are bordered beneath by two horizontal lines infilled with oblique lines. V2173 (Ill 3.2h) (Phase 1) has possible panels formed of vertical row of Vs and of short horizontal incisions in combination with apparently random incising. V2282 (Ill 3.13d) (Phase 2) has possible panelled decoration incorporating horizontal

TABLE 3.15
Decorative motifs: all phased contexts.

		Phase 1	Phase 2	Phase 3
Incised	***vertical***	1	1	2
	horizontal	0	1	1
	oblique	1	3	0
	short incisions	6	8	2
	single chevron	1	3	0
	lozenge	2	1	0
	random	3	0	1
	chevron (nested)	3	2	0
	infilled geometric	0	4	2
	herringbone	1	3	0
	feather	0	1	0
	basket weave	0	1	0
	incised panels	2	3	1
	grooved geometric	2	1	0
	grooved lines	0	5	0
Applied	***zig-zag***	14	83	17
	double zig-zag	0	1	2
	branching zig-zag	0	1	0
	incised zig-zag	0	0	1
	plain cordon	0	1	0
	ribbon cordon	1	1	0
	incised cordon	9	12	2
	pinched cordon	3	2	3
	impressed cordon	0	2	0
	geometric cordon	1	0	0
	incised cordon + ring	1	0	0
	rope effect cordon	0	5	0
	chain cordon	0	1	0
	applied geometric	0	1	1
	rings – various sizes	0	0	1
	adjoining rings	3	2	0
	horseshoe	0	1	0
	finger impressed boss	0	0	1
Impressed	***V-impressed***	3	0	1
	birdbone	1	0	0
	fingernail	0	1	1
	finger impressed base	3	0	1
	crescents/triangles	4	0	0
	lentoid	0	1	1
	circles (double or single) 2	1	2	
	finger impressed	1	1	1
	single short row imp	0	0	3
	double row short imp	4	0	0
Wiped	***linear***	1	1	1
	arcs	0	8	0
Stab and drag	***stab & drag***	1	1	1
Painted	***painted***	1	0	0

TABLE 3.16
Decorative motifs: key sequence.

		Phase 1	Phase 2	Phase 3
Incised	***vertical***	0	1	1
	horizontal	0	1	0
	oblique	1	2	0
	short incisions	2	7	0
	single chevron	1	3	0
	lozenge	0	1	0
	random	1	0	0
	chevron (nested)	1	2	0
	infilled geometric	0	3	0
	herringbone	0	2	0
	feather	0	1	0
	basket weave	0	1	0
	incised panels	0	2	0
	grooved geometric	1	1	0
	grooved lines	0	4	0
Applied	***zig-zag***	10	77	7
	double zig-zag	0	1	0
	plain cordon	0	1	0
	ribbon cordon	0	1	0
	incised cordon	5	11	0
	pinched cordon	2	2	1
	impressed cordon	0	2	0
	geometric cordon	0	0	0
	incised cordon + ring	1	0	0
	rope effect cordon	0	4	0
	chain cordon	0	1	0
	applied geometric	0	1	0
	adjoining rings	1	2	0
	horseshoe	0	1	0
Impressed	***V-impressed***	2	0	0
	fingernail	0	1	1
	finger impressed base	2	0	0
	crescents/triangles	2	0	0
	lentoid	0	1	0
	circles (double or single)	2	1	0
	finger impressed	0	1	0
	single short row imp	0	0	1
	double row short imp	1	0	0
Wiped	***linear***	0	1	1
	arcs	0	8	0
Stab and drag	***stab & drag***	1	1	1
Painted	***painted***	1	0	0

TABLE 3.17
Incidence of sooting: all phased contexts.

		None	ES	IS	Both
Phase 1	***Block 5A1***	5	16	6	38
	Block 6	14	32	12	30
	Block 11	30	19	9	20
	Block 12	2	3	0	5
	Block 15	52	42	34	54
	Block 16	1	0	1	1
Phase 2	***Block 5***	116	243	78	369
	Block 8	144	251	74	218
	Block 9	25	15	10	20
	Block 13	46	32	17	28
	Block 14	2	3	1	7
	Block 19	16	17	10	25
	Block 21	2	0	0	2
	Block 22	8	8	2	9
Phase 3	***Block 1***	35	49	11	49
	Block 2	20	22	10	33
	Block 3	13	6	2	10
	Block 4	11	9	5	21
	Block 18	61	85	42	89
	Block 20	28	26	5	16
Phase 1		104 (24.4%)	112 (26.3%)	62 (14.6%)	148 (34.7%)
Phase 2		359 (18.3%)	569 (29%)	355 (18.1%)	678 (34.6%)
Phase 3		168 (25.5%)	197 (29.9%)	75 (11.4%)	218 (33.2%)

and vertical rows of short incisions and herringbone decoration. V2721 (Ill 3.17d) (Phase 3) has two rows of short oblique incised lines possibly divided into panels by a vertical line of short horizontal lines – there is no decoration within the panels. The triangular panels of V38 (Ill 3.6aa) (Phase 2) are formed of impressed dots and infilled with incised lines.

Occasionally incised decoration is found in combination with applied decoration, eg V2667 (Ill 3.16g) (Phase 3) where oblique incisions are bordered by an incised applied cordon; V2724 (Ill 3.17f) (Phase 3) which has apparently random incisions above an applied zigzag; V1473 (Ill 3.11a) (Phase 2) which has a triple incised chevron above an applied zigzag; and V2387 (Ill 3.4c) (Phase 1) which has oblique incisions above a zigzag. Just as in these cases the cordon is used as the border for the incised decoration, in other cases a row of short incisions is used, eg V1581 (Ill 3.11f) (Phase 2) which has a row of short vertical incisions bordering incised lozenge decoration. Again the numbers of occurrences of individual motifs are too low to allow a phase by phase analysis.

3.2.4.3 Impressed decoration

Apart from a number of examples of fingertip impressed bases (eg V1303 (not illustrated), Phase 1; V2559 (not illustrated), Phase 3), impressed decoration is found on the exterior, usually as single or double rows comprising one type of impression, and usually, where position can be determined, below the rim. Various types of impression are represented – birdbone (V1302 (Ill 3.2a), Phase 1); > shaped (V325 (Ill 3.5j), Phase 2); Vs (V1281 (Ill 3.15k), Phase 1); inverted Vs (V2660 (Ill 3.16e), Phase 3; V1261 (Ill 3.17g), uncertain phase); fingertip (V2383 (Ill 3.3g), Phase 1); fingernail (V1142 (Ill 3.15g), Phase 3); lentoid (V1891 (Ill 3.10c), Phase 2; V2663 (Ill 3.16f), Phase 3; V281 (Ill 3.9c), uncertain phase); crescentic (V2382 (Ill 3.3f), Phase 1); and various less well defined impressions – a double row of short, deep impressions (V1328 (Ill 3.2c), Phase

TABLE 3.18
Incidence of sooting: key sequence.

		None	ES	IS	Both
Phase 1	***Block 5A1***	5	16	6	38
	Block 15	52	42	34	54
	Block 16	1	0	1	1
Phase 2	***Block 5***	116	243	78	369
	Block 8	144	251	74	218
Phase 3	***Block 1***	35	49	11	49
Phase 1		58 (23.2%)	58 (23.2%)	41 (16.4%)	93 (37.2%)
Phase 2		260 (17.4%)	494 (33.1%)	152 (10.2%)	587 (39.3%)
Phase 3		35 (24.4%)	49 (34%)	11 (7.6%)	49 (34%)

1); a single row of oblique stabs (V912 (Ill 3.1c), Phase 1); a double row of oblique stabs (V2376 (Ill 3.3e), Phase 1); and a row of oblong impressions (V2573 (Ill 3.16a), Phase 3).

Occasionally impressed decoration is found in combination with other forms of decoration, for example, on V1377 (Ill 3.12e) (Phase 2) a band of lentoid impressions was used as a border for incised

TABLE 3.19
Incidence of sooting on decorated vessels: all phased contexts.

		None	ES	IS	Both
Phase 1	***Block 5***	1	2	0	7
	Block 6	1	7	2	10
	Block 11	1	2	0	6
	Block 12	0	1	0	1
	Block 15	8	9	3	11
	Block 16	0	0	1	1
Phase 2	***Block 5***	14	34	1	31
	Block 8	11	50	5	33
	Block 9	0	1	0	0
	Block 13	3	4	0	3
	Block 14	0	1	0	1
	Block 19	0	0	1	1
	Block 21	0	0	0	0
	Block 22	0	1	0	2
Phase 3	***Block 1***	5	6	0	2
	Block 2	1	3	0	0
	Block 3	0	0	0	0
	Block 4	0	1	0	5
	Block 18	9	7	4	13
	Block 20	1	1	0	0
Phase 1		11 (14.9%)	21 (28.4%)	6 (8.1%)	36 (48.6%)
Phase 2		28 (14.2%)	91 (46.2%)	7 (3.6%)	71 (36%)
Phase 3		16 (26.3%)	18 (29.5%)	4 (6.5%)	23 (37.7%)

TABLE 3.20
Incidence of sooting on decorated vessels: key sequence.

		None	ES	IS	Both
Phase 1	***Block 5A1***	1	2	0	7
	Block 15	8	9	3	11
	Block 16	0	0	1	1
Phase 2	***Block 5***	14	34	1	31
	Block 8	11	50	5	33
Phase 3	***Block 1***	5	6	0	2
	Phase 1	9 (20.9%)	11 (25.6%)	4 (9.3%)	19 (44.2%)
	Phase 2	25 (13.9%)	84 (46.9%)	6 (3.4%)	64 (35.8%)
	Phase 3	5 (38.5%)	6 (46.2%)	0 (0)	2 (15.3%)

decoration. On V2659 (Ill 3.16d) (Phase 3) there is a row of short, stabbed impressions below the lip with horizontal wiping below it. Impressed dots formed the triangular panels of V38 (Ill 3.6aa) (Phase 2) which were then infilled with incised lines.

3.2.4.4 Other forms of decoration

Wiping, as well as being used as a surface finishing technique, also appears to have been used as a decorative technique, at least in Phases 1 and 2. Although wiping was used as a surface finishing technique in Phase 3 it does not seem to have been used decoratively. V2148 (Ill 3.2f) (Phase 1) has horizontal wiping below an inverted rim with vertical wiping below that. There are also various examples of wiping to form arcs, for example below an everted rim on V1892 (Ill 3.10d) (Phase 2) and V1535 (Ill 3.11c) (Phase 2). The decoration is shown to repeat on V89 (Ill 3.6bb) (Phase 2) and V831 (Ill 3.1a) (Phase 1).

Combing was most often used on the interior of a vessel (eg V2184 (Ill 3.2g), Phase 1, which has a geometric cordon on the exterior) but was also used occasionally on the exterior of a vessel, for example on V1097 (Ill 3.15h) (Phase 3) where it forms a possible chevron pattern.

There are a couple of examples of stab and drag decoration in the assemblage – V1922 (Ill 3.10e) (Phase 2) which has oblique stab and drag motifs in a row, and V2513 (Ill 3.3c) (Phase 1) which has long vertical stab and drag below a flat rim.

One example of painted decoration is included in the assemblage, V2411 (Ill 3.4d) (Phase 1), a body sherd painted on the exterior with black horizontal and oblique lines.

3.2.5 CHRONOLOGICAL CHANGE AND COMPARATIVE MATERIAL

As has been outlined in the preceding description of the Cnip assemblage, the variations in the pottery through the period represented on the site are subtle but appreciable. While many comparable assemblages in the Western Isles are from multi-period sites and useful in determining general trends over a longer period, the recovery of a chronologically restricted assemblage allows a more detailed look at one element in the sequence for the area.

A number of chronological trends are apparent in the tabulated ceramic data relating to the key sequence of deposits, although it should be remembered that the absolute numbers of vessels for Phases 1 and 3 are small. Vessels become generally thicker over time (Table 3.12), with a marked increase in applied decoration from Phases 1–3 (28 per cent → 67 per cent → 81 per cent, Table 3.14), and a corresponding decrease in incised decoration (28 per cent → 18 per cent → 12.5 per cent). From Phases 1–3 impressed decoration disappears (28 per cent → 3 per cent → 0 per cent), as does decorative wiping (5 per cent → 8 per cent → 0 per cent), although the latter was never a major feature of the assemblage.

Flat rims also decrease and disappear from Phases 1–3 (35 per cent → 8 per cent → 0 per cent, Table 3.10), while everted rims rise dramatically (39 per cent → 79 per cent → 89 per cent). Flaring rim vessels are

present only in a late floor of Structure 8 in Phase 3; one of the latest deposits from the site. In relation to the volume of excavated sediment there also appears to be substantially less pottery present on site in Phase 3 than in Phases 1 and 2.

Even allowing for the smaller number of vessels available for study in Phase 3, it appears that pottery gradually declines both in quality and quantity, with less variety of form and motif and thicker, less accomplished vessels. The near total dominance of applied decoration in Phase 3 seems to result largely from the loss of variety in decorative techniques, rather than any innovation or the adoption of new motifs. Such changes are apparently gradual, however, and can be detected only by proportional changes in the assemblage from phase to phase.

The study of later prehistoric pottery from the Western Isles has been summarized in a number of papers, most recently by Patrick Topping (1985). Several sites with long sequences – the broch of Dun Mor Vaul, Tiree (MacKie 1974); the wheelhouses at Sollas, North Uist (Campbell 1991); the complex Atlantic roundhouse at Dun Vulan, South Uist (Parker Pearson & Sharples 1999); the burnt mound complex at Ceann nan Clachan, North Uist (Armit & Braby 2002); and the Early Iron Age settlement at Eilean Olabhat, North Uist (Armit, Campbell & Dunwell in press) – have been used to construct an overall sequence for the region. The generally accepted relative sequence is:

1. undecorated pottery with flat, rounded, or slightly inverted rims (MacKie's Dunagoil Ware).
2. the addition of pottery with slightly everted rims and decoration, mainly impressed and incised.
3. an increase in the variety of decoration with the addition of applied decoration and channelled decoration and sharply everted rims.
4. a decrease in the range of decorative motifs with applied cordons being most common, and a lengthening of the neck.

Ascribing dates to this general sequence is more difficult. MacKie suggested a date of 500 BC for the early part of the sequence at Dun Mor Vaul. The date of the earliest everted rim pottery is as yet unresolved. MacKie (1974, 159) saw it as the pottery of the broch builders and argued for a date of first century BC for its introduction. Campbell (1991), however, stressed that with the introduction of sharply everted rims in the Sollas sequence there was a marked change in vessel form which he put down to Roman influence, and argued for a date in the first or second century AD for this change. There were no radiocarbon dates for this phase at Sollas and the dating relies on a piece of Egyptian blue from the preceding phase being of Roman date, so the possibility of an earlier date should not be discounted. Parker Pearson (1999) in his summary of the sequence from Dun Vulan, raised the possibility of a second or third century AD date for the appearance of everted rims on that site. The evidence from Cnip, however, favours a rather earlier date for the inception of everted rims than is suggested from Sollas.

If everted rims were adopted as a result of Roman influence, however indirect, then they should not be present in the assemblage until around AD 80 at the earliest. The key sequence, however, appears to demonstrate that everted rims were present on the site in some quantity during Phase 1 (42 per cent, Table 3.9), although they do become even more dominant thereafter. Phase 1 almost certainly ends during the first century BC, and it seems extremely improbable that it extends as late as AD 80 (see Section 6.3.2). Thus the evidence from Cnip would appear to preclude a Roman inspiration for the sharply everted rim vessels of the Hebrides.

For the earlier flat rims, however, Cnip seems to confirm their place in the earlier part of the Iron Age sequence, but with their use extending as late as the first century BC, and possibly even into the first century AD, although the type seems to be out of use by the second century AD. They form 28 per cent of the Phase 1 assemblage, dropping to 9 per cent in Phase 2.

At the later end of the sequence, an AD 200 and later date is suggested by MacKie (1974) for the cordon-decorated, necked vessels with flaring rims, such as those from Dun Cuier (Young 1956). Similar pottery recovered from Dun Carloway was associated with the secondary use of the broch tower (Tabraham 1977). The occurrence at Cnip of two flaring rim vessels (V991 and V993), one with cordoned decoration (V993) is particularly helpful here. These vessels both derive from Context 083, a late floor in Structure 8 (Phase 3), and one of the latest deposits on the site. This floor level produced two radiocarbon dates, GU-2744 and GU-2745, with ranges of AD 200–330 and AD 170–245 respectively, at one sigma (adjusted). The overall dating of the site, as presented in Chapter 6,

would suggest that their most likely date lies within this range, between around AD 200–250. The absence of such vessels elsewhere on the site suggests that their appearance in late Phase 3 is a genuine reflection of the period at which they were adopted, at least in this part of Lewis. This dating concurs with MacKie's proposed date of AD 200 for the emergence of this type of pottery elsewhere in the Hebrides (MacKie 1974).

Within the Western Isles, the radiocarbon dates for Cnip indicate contemporaneity with Sollas Phases B1 and B2 (Campbell 1991, 139–41) and Dun Vulan Phases 1b to 3 (Parker Pearson 1999 9.1). The pottery from these three sites has much in common. The decoration tends to be arranged on the vessel either as a cordon around the neck (least common), a cordon around the shoulder, or as incised decoration above the latter. A variety of decorated cordons such as incised, chain-link and zigzag cordons is found at all sites. Many of the incised motifs are also found at all sites, for example incised chevrons and herringbone.

However, looking at the assemblages in more detail, there is less similarity. Within the Dun Vulan and Sollas assemblages, for example, much of the decoration is based on the feather motif and parallel lines with incised dots while at Cnip incised dots were seldom used and there is only one example of feather decoration. In the Cnip assemblage there are a number of motifs such as applied circles, applied horseshoe and wiped arcs which were not noted at Dun Vulan and Sollas. The sequence of decoration noted at Sollas (Campbell 1991, 149, Ill 14) was not paralleled at Cnip, and many of the patterns attributed by Campbell to different periods occur within a single context at Dun Vulan (Parker Pearson & Sharples 1999, 239). At Dun Vulan (ibid, Ill 14) the incised designs seem to change through time – from a dominant use of infilled triangle and multiple zigzag in Period B1 to increased use of feather, infilled triangle and wavy lines in B2. At Cnip, there did not appear to be any strong differentiation in use of the various motifs through the life of the site.

Many of the decorative elements noted at Cnip can be paralleled on sites throughout the Atlantic zone – the incised linear decoration in the wheelhouse assemblage of A' Cheardach Bheag, South Uist (Fairhurst 1971, fig 8); the incised zigzag cordon in the assemblage from Sithean a Phiobaire wheelhouse, South Uist (Lethbridge 1952, fig 6); the finger-impressed boss with a sherd from Dun Flodigarry broch, Skye (Martlew 1985, fig 8.1); the long stab and drag on a vessel in the wheelhouse assemblage from Tigh Talamhanta, Barra (Young 1953, fig 8.78); the chain link cordons with examples from Tungadale souterrain, Isle of Skye (Roger Miket, pers comm); the zigzag cordon around the shoulder of the vessel in the assemblage from Baleshare midden, North Uist (MacSween 2003); the grass-wiped arc on a sherd from the fort of Dun Cul Bhuirg, Iona (Ritchie & Lane 1980, cat no 74); and the finger-impressed bases with examples from A Cheardach Mhor wheelhouse, South Uist. Endless comparisons are possible but study of the assemblages is not yet at the point where such comparisons will get us very far in terms either of chronology or of furthering our understanding of the societies which made and used the pottery.

It is perhaps more useful to draw attention to a couple of general observations which could be considered in the future study of other assemblages from the area. Firstly, where analysis of sooting patterns on assemblages has been carried out, there does not appear to be any correlation between sooting and decorative form, and it seems likely that at least some of the decorated vessels were used as cooking vessels. As well as being observed within the Cnip assemblage (Tables 3.17–3.20) this has also been remarked on in the discussions of other assemblages, for example, that from Dun Vulan, where LaTrobe-Bateman (1999) noted that there was no correlation between pot forms or decoration and sooting. Again, at Sollas, a study of the sooting on the exterior and the carbon and lime-scale residues on the interior showed that all types of vessel, including very finely decorated examples, had been used as cooking pots (Campbell 1991, 150). In most assemblages, however, one or two vessels stand out because of the complexity of the decoration, or some other trait such as elaboration of the rim form, or the general level of care taken in their production. At Cnip V1342 (Phase 1, Ill 3.1h) would be an example of this with its thin walls, finely incised panelled decoration and elaborate, and seemingly impractical rim form. It is possible that some of these vessels, even if being used as cooking or serving vessels, were perhaps only used on special occasions. It is unlikely that such vessels would survive long in everyday service.

A second general point is that although the detailed changes outlined for the assemblages from Dun Vulan and Sollas cannot be replicated on other sites, it is possible that as more assemblages are analysed some aspects of these sequences may hold, although possibly on a very local level. Overall, the assemblage which is closest to that at Cnip in terms of decorative motifs is

that from the earliest excavated phases of the nearby site of Loch na Beirgh which includes such relatively unusual motifs such as long stab and drag, applied circles and applied horseshoes (Melanie Johnson pers comm). Even where general similarities in decoration exist between assemblages there is a lot of variation in detail. The use of wiping as the method of creating arched decoration on the Cnip pottery is one example. Such decoration is usually formed by channelling using a blunt point. While this type of decorative technique was used at Cnip for other forms of decoration, it was not chosen for forming the arched motifs. Wiping was noted on many of the vessels at Cnip but is only mentioned as a characteristic of a few other assemblages such as Eilean Olabhat, North Uist where the exterior surfaces of some vessels seem to have been wiped or scraped with a pad of coarse organic material, with the marks of the direction of scoring being randomly oriented (Armit, Campbell & Dunwell forthcoming). Choice of surface finish and technique in producing a certain motif may in some cases reflect the preference of the potter and may be the cause of some differences between generally similar assemblages such as Cnip and Loch na Beirgh.

To summarize, then, while chronology may be a significant factor in the variations noted within the assemblages comparable to Cnip, more sequences with detailed, well-dated stratigraphy will be needed before this can be proven. It is possible that hidden within the assemblages are finer chronological changes in fashion than can be picked up with the available sequences – some of the less common motifs such as applied circles could, for example, have been introduced and gone out of favour in a relatively short time. From the information which is currently available it appears that in the first two centuries AD there was a general pool of motifs being used in different combinations, on different vessel types and possibly at different times, throughout the area. On a local level there may have been more similarities between contemporary assemblages, but even with geographically close assemblages it is probable, and would be expected, that the artistic ability and creativity of the potter will have led to subtle differences in the composition of the overall assemblage.

3.2.6 CATALOGUE OF ILLUSTRATED SHERDS

The following summary catalogue describes the sherds selected for illustration. A full catalogue of all rims, bases and decorated sherds is included in the site archive along with a spreadsheet detailing all sherds recovered.

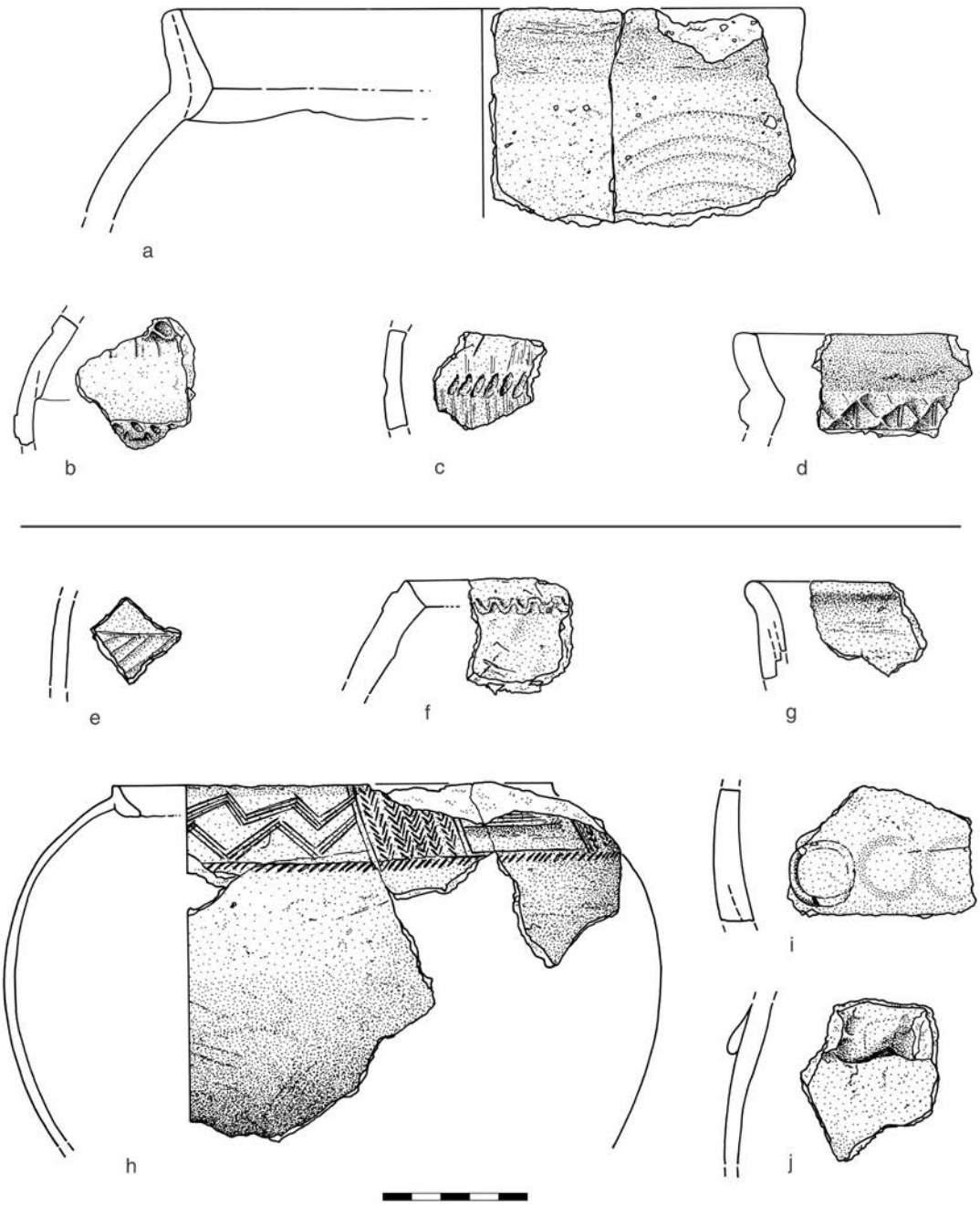

ILLUSTRATION 3.1
Phase 1, Block 5AI, (a) V831, (b) V928, (c) V912, (d) V913; Block 6, (e) V1312, (f) V1315, (g) V1316, (h) V1342, (i) V1343, (j) V1345.

PHASE 1

BLOCK 5A1

Context 290

V831 (Ill 3.1a)

Everted rim. Exterior wiped, forming a curving decoration. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 8mm long which has fired hard and is buff. Both surfaces sooted.

V832 (not illustrated)

Body sherd decorated with incised zigzag lines. Exterior smoothed. The fabric is fine sandy clay which has fired hard and is oxidized (brown). Residue in interior.

Context 293

V928 (Ill 3.1b)

Body sherd with an applied zigzag and a band decorated with oblique incisions. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is brown. Both surfaces sooted.

Context 297

V912 (Ill 3.1c)

Body sherd decorated with a line of oblique impressions, perhaps made by the tip of a spatula. Exterior wiped. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is red.

V913 (Ill 3.1d)

Everted rim. At the point of inflection of the neck and the body is a band of applied zigzag decoration. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 6mm long which has fired hard and is red. Both surfaces sooted.

BLOCK 6

Context 022

V1312 (Ill 3.1e)

Body sherd with geometric decoration formed from thick shallow grooving. Exterior smoothed. Coil constructed – N-shaped junction on an undecorated sherd from the same vessel. The fabric is fine clay which has fired hard and is red. Both surfaces sooted.

V1315 (Ill 3.1f)

Inverted rim with an interior bevel. Decorated with an applied zigzag below the lip. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 10mm long which has fired hard and is grey with a red interior margin. Exterior sooted.

V1316 (Ill 3.1g)

Slightly everted rim. Both surfaces smoothed. Coil constructed – N-shaped junction. The fabric is fine clay which has fired hard and is brown. Exterior surface and interior of rim sooted.

Context 069

V1342 (Ill 3.1h)

Sherds from a finely made, probably globular, vessel with a splayed rim which has an exaggerated T-shaped profile. Below the rim is a band of incised decoration formed of a number of panels. Those represented on the remaining sherds are a panel of two sets of triple-incised zigzags; a smaller band of incised herringbone (bounded at each side by two vertical incised lines); a badly abraded panel which includes a raised horizontal band with horizontal incisions along its length; and possibly a further band of herringbone decoration. Below these panels is an incised line with a row of closely set oblique incisions directly beneath it. Exterior surface smoothed. The fabric is fine clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is red. Light sooting on both surfaces.

V1343 (Ill 3.1i)

Body sherds with applied circle decoration. Only part of one remains, but from the sooting patterns, there has probably been a row of circles. Exterior smoothed. Coil constructed. The fabric is sandy clay which has fired hard and is red with a grey core. Both surfaces lightly sooted.

V1345 (Ill 3.1j)

Body sherd decorated with a thick, wavy, band. Exterior smoothed. The fabric is fine sandy clay which has fired hard and is grey. Light sooting on both surfaces.

Context 108

V1302 (Ill 3.2a)

Flat rim decorated with a row of impressions, possibly made with a small bone. Exterior smoothed. The

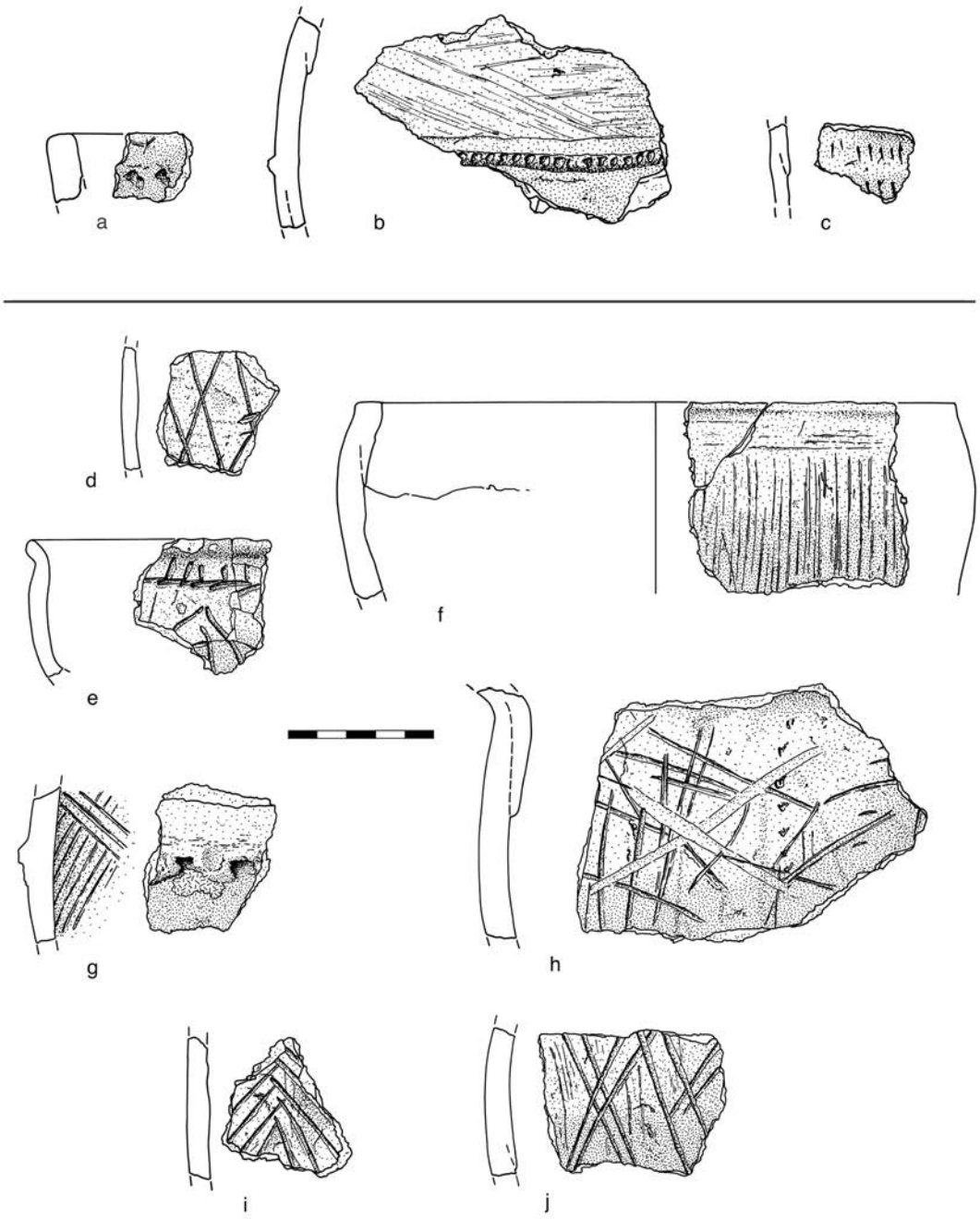

ILLUSTRATION 3.2
Phase 1, Block 6 continued, (a) V1302, (b) V1337, (c) V1328; Block 11, (d) V2137, (e) V2147, (f) V2148, (g) V2184, (h) V2173, (i) V2181, (j) V2182.

fabric is sandy clay which has fired hard and is red. Exterior sooted.

V1303 (not illustrated)
Flat part of base decorated with fingertip impressions. The fabric is fine sandy clay with *c* 10 per cent of rounded rock fragments up to 4mm long which has fired hard and is grey with buff margins. Exterior sooted.

Context 129

V1337 (Ill 3.2b)
Body sherd decorated with an applied band which has been thickly and closely incised. Exterior smoothed. Coil constructed – unsmoothed junction in interior. The fabric is fine sandy clay with *c* 20 per cent of angular rock fragments up to 11mm long which has fired hard and is brown. Both surfaces lightly sooted. Heavier sooting around the band.

Context 203

V1328 (Ill 3.2c)
Body sherd decorated with two rows of short, deep, impressions. Exterior slipped. Coil constructed. The fabric is sandy clay with *c* 20 per cent of angular rock fragments up to 6mm long which has fired hard and is brown.

BLOCK 11

Context 086

V2137 (Ill 3.2d)
Body sherd decorated with incised crossing lines forming a lozenge pattern. Exterior smoothed. The fabric is fine sandy clay which has fired hard and is grey with a red exterior margin.

V2147 (Ill 3.2e)
Everted rim decorated below the neck on the exterior with incised decoration comprising a horizontal line with vertical lines branching upwards from it and triangular-based decoration below it. Exterior smoothed and slipped. The fabric is sandy clay which has fired hard and is grey with a red exterior margin. Exterior sooted.

V2148 (Ill 3.2f)
Slightly inverted rim with a flat lip. Exterior wiped, probably decoratively – there is horizontal wiping in a 15mm wide band below the lip and vertical wiping below. Coil constructed – unsmoothed junctions in the interior. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is grey with brown margins. Both surfaces sooted.

Context 089

V2184 (Ill 3.2g)
Body sherd decorated with applied angular zigzag decoration. Exterior smoothed. Interior combed in a criss-cross pattern. Coil constructed – N-shaped coil junctions. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey. Sooting and residue on both surfaces.

Context 090

V2173 (Ill 3.2h)
Large body sherd including part of the neck of the vessel. The exterior is decorated with incised and impressed decoration – there is a vertical line of 'bird-foot' shaped impressions with random criss-cross incisions to one side and a vertical line of short horizontal impressions to the other. Exterior smoothed. Coil constructed – unsmoothed junction in the interior. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 7mm long which has fired hard and is grey with a brown exterior surface. Exterior sooted.

Context 110

V2181 (Ill 3.2i)
Body sherds with incised decoration. On the larger sherd this decoration is apparently a multiple chevron or lozenge. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 6mm long which has fired hard and is red.

V2182 (Ill 3.2j)
Body sherd decorated with incised crossing lines forming a lozenge pattern. Exterior slipped and wiped. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 8mm long which has fired hard and is brown. Exterior sooted, light sooting on the interior.

BLOCK 12

Context 111

V2202 (Ill 3.3a)
Body sherd decorated with a prominent wavy cordon. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is red. Both surfaces sooted. Residue on the exterior.

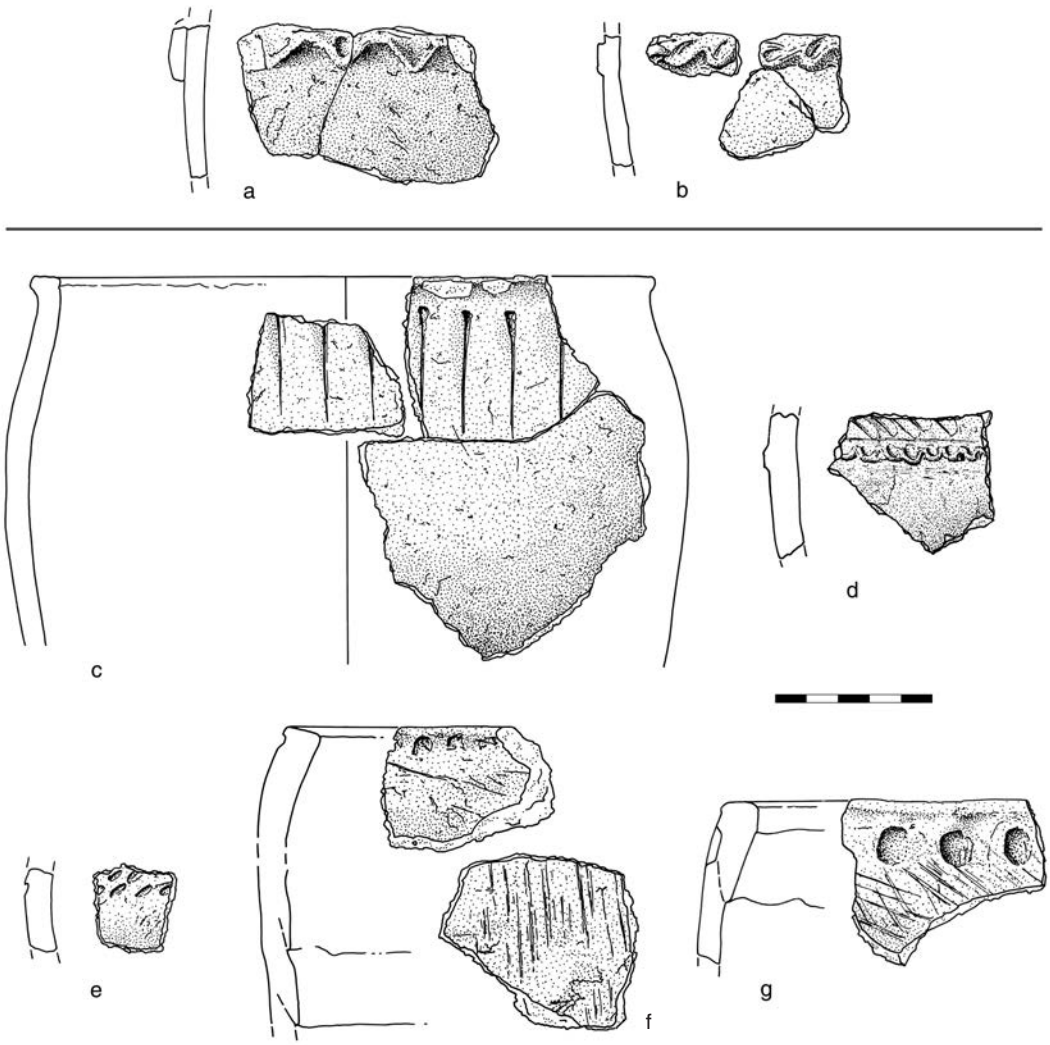

ILLUSTRATION 3.3
Phase 1 continued, Block 12, (a) V2202, (b) V2205; Block 15, (c) V2513, (d) V2454, (e) V2376, (f) V2382, (g) V2383.

V2205 (Ill 3.3b)
Body sherds decorated with obliquely zigzagging cordon. Exterior smoothed. The fabric is fine sandy clay which has fired hard and is red. Exterior sooted.

BLOCK 15

Context 031

V2513 (Ill 3.3c)
Flat-rimmed vessel decorated below the rim with a line of vertical stabs with incised 'tails'. Exterior smoothed. The fabric is sandy clay which has fired hard and is grey. Both surfaces sooted (see Section 2.3.2.2 and 2.4.2.1.)

V2454 (Ill 3.3d)
Body sherd decorated with applied zigzag, above which are traces of shallow grooved decoration. The exterior of the vessel was smoothed before decoration. The fabric is sandy clay with *c* 10 per cent angular rock fragments up to 5mm long which has fired hard and is red with a grey exterior margin. Exterior sooted (see Sections 2.3.2.2 and 2.4.2.1.)

Context 130

V2376 (Ill 3.3e)
Body sherd decorated with two rows of oblique stab marks. The fabric is sandy clay which has fired hard and is red. Light sooting on exterior.

V2382 (Ill 3.3f)

Rim sherd with a slight interior bevel. Below the lip is a line of impressed crescent design. Coil constructed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is red. Sooting on the interior of some body sherds from the same vessel.

V2383 (Ill 3.3g)

Inverted rim with a flat lip. Below the rim on the exterior is a row of deep finger-tip impressions. Exterior wiped. Coil constructed with an unsmoothed junction in the interior. The fabric is sandy clay which has fired hard and is grey with brown margins. Both surfaces sooted.

V2384 (Ill 3.4a)

Splayed rim. Exterior smoothed. The fabric is sandy clay with *c* 20 per cent of angular rock fragments up to 3mm long which has fired hard and is grey with brown surfaces. Both surfaces sooted.

V2385 (Ill 3.4b)

Upper profile of a decorated vessel. Everted rim. The top part of the vessel below the rim has been smoothed and decorated with crossing double incised lines forming a lozenge-based design. Below this is an applied wavy zigzag. The surface of the vessel below the zigzag is wiped. Coil constructed – unsmoothed junctions in the interior. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is red. Both surfaces sooted.

V2387 (Ill 3.4c)

Everted rim decorated with an applied wavy cordon with oblique incisions above. Exterior smoothed. Coil constructed – unsmoothed junctions in interior. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 6mm long which has fired hard and is grey with a red margin. Light sooting on exterior.

V2411 (Ill 3.4d)

Body sherd painted on the exterior with black stripes. Exterior slipped and wiped. The fabric is fine clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is grey, with a red exterior margin.

BLOCK 16

Context 116

V2531 (Ill 3.4e)

Body sherds with decoration comprising an applied ring set into a cordon decorated with vertical incisions and a row of impressed dots about 3cm above the cordon. Coil constructed – unsmoothed junctions in the interior. The fabric is sandy clay which has fired hard and is grey with buff surfaces. Both surfaces sooted.

V1366 (Ill 3.5a)

Complete shouldered vessel, 111mm high. Slightly everted rim. Flat base with angled walls. Around the shoulder is a cordon, the upper side of which has been decorated with closely spaced incised or impressed chevrons. The fabric is fine sandy clay which has fired hard and is grey with buff/brown oxidized surfaces. The exterior of the vessel is sooted and there is light sooting in the interior. There is a creamy coloured deposit, probably post-depositional, over much of the exterior.

PHASE 2

BLOCK 5

Context 137

V287 (Ill 3.5b)

Everted rim with a flat lip. The fabric is fine sandy clay with *c* 10 per cent of angular and rounded rock fragments up to 11mm long which has fired hard and is red. Exterior sooted.

Context 146

V570 (Ill 3.5c)

Body sherd with two slightly curved, diverging incised lines, executed with a stem of grass or a twig. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is brown. Both surfaces sooted.

Context 172

V597 (Ill 3.5d)

Plain rim. Exterior smoothed. The fabric is sandy clay which has fired hard and is grey with red margins. Both surfaces sooted.

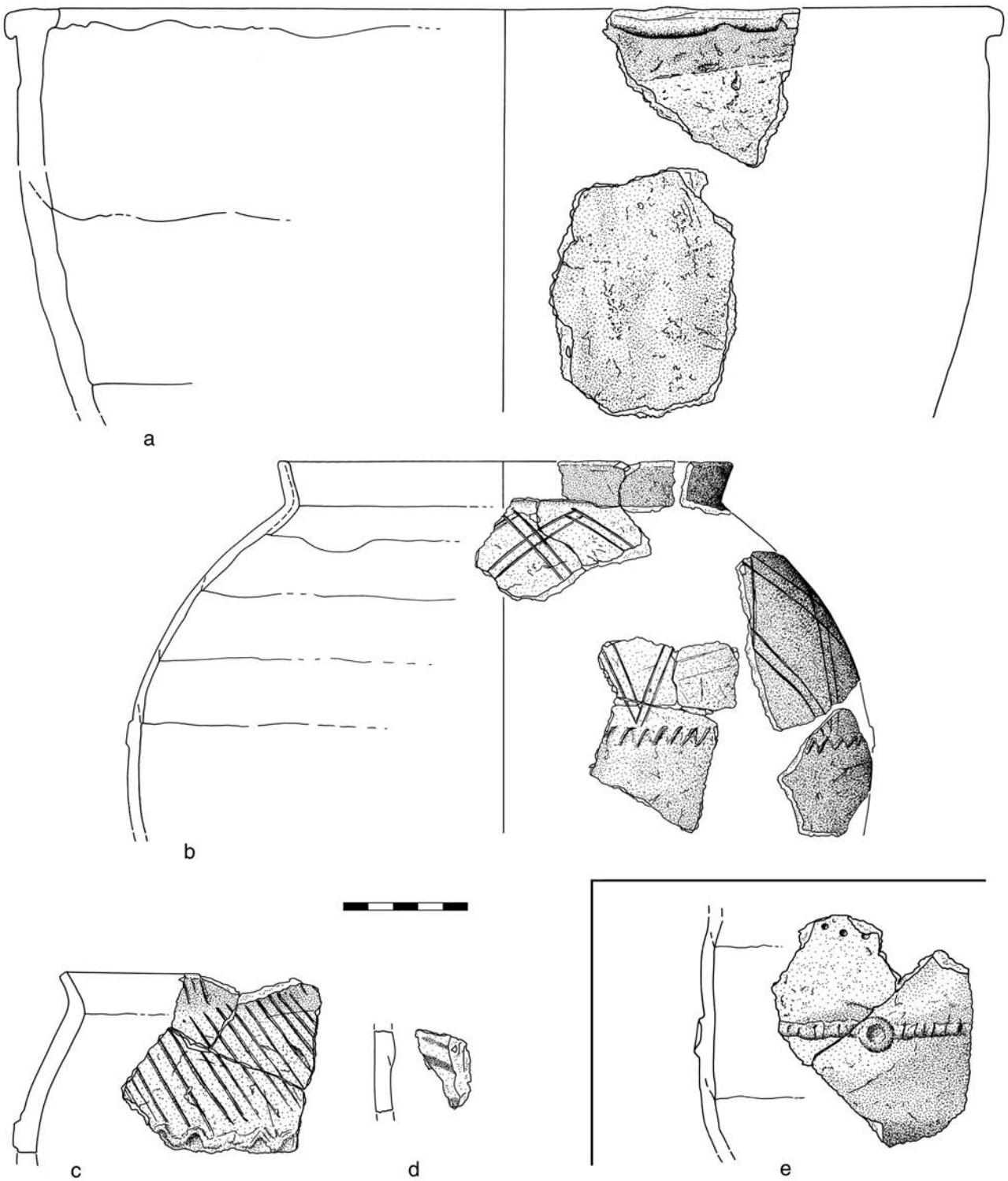

ILLUSTRATION 3.4
Phase 1, Block 15 continued, (a) V2384, (b) V2385, (c) V2387, (d) V2411; Block 16, (e) V2531.

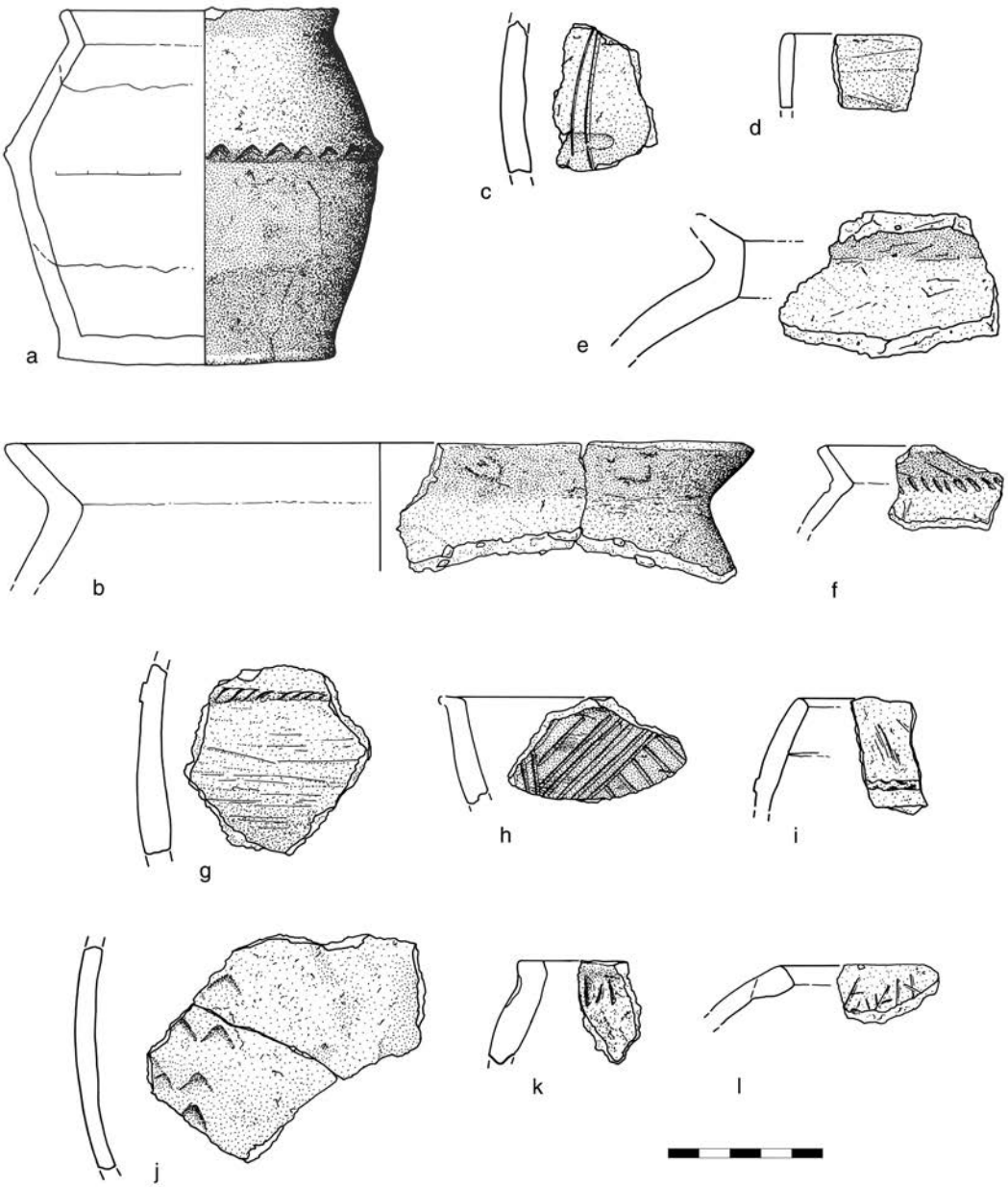

ILLUSTRATION 3.5
Phase 1, Block 16 continued, (a) V1366; Phase 2, Block 5, (b) V287, (c) V570, (d) V597, (e) V601, (f) V611, (g) V301, (h) V302, (i) V304, (j) V325, (k) V793, (l) V786.

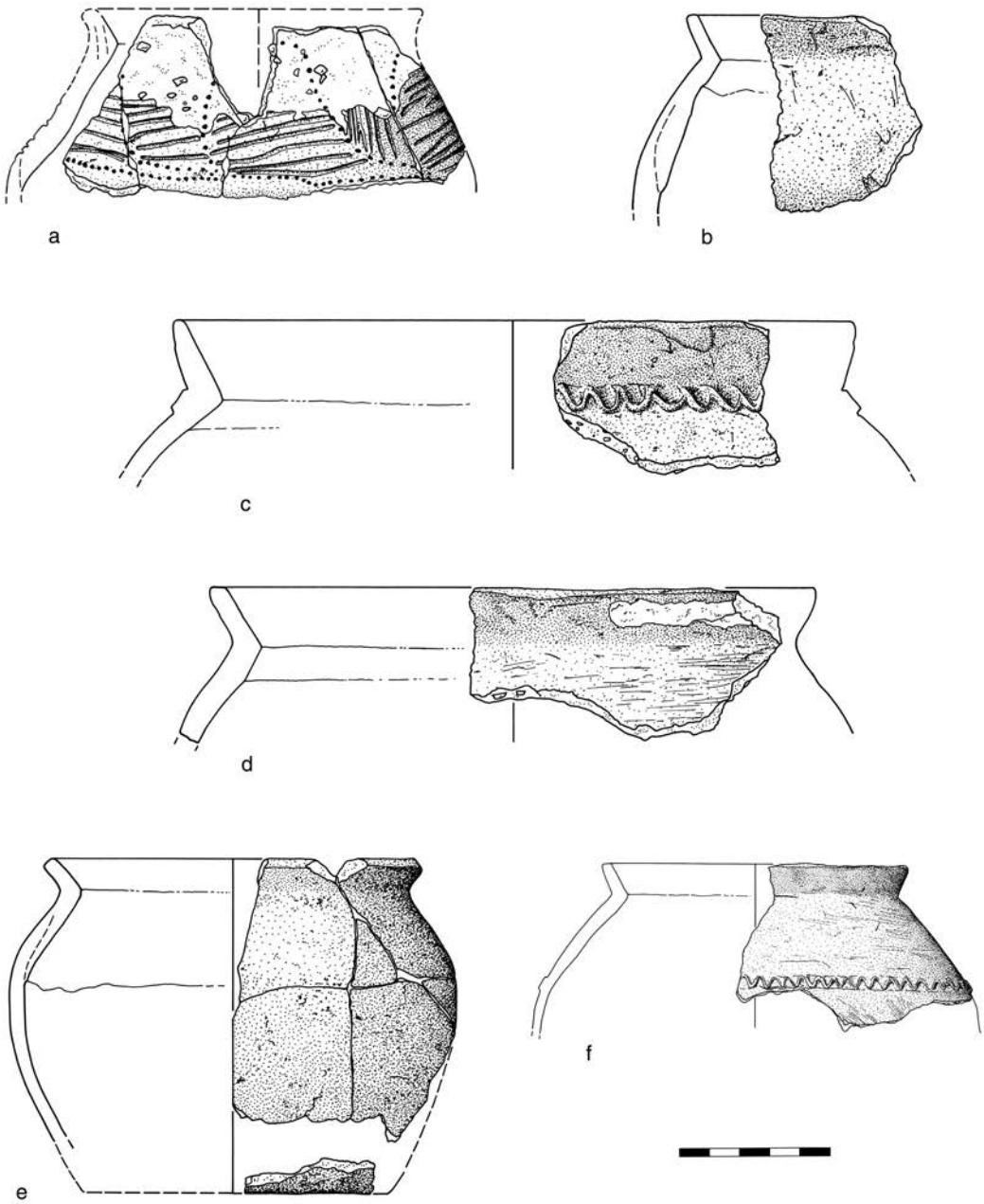

ILLUSTRATION 3.6(a)
Phase 2, Block 5 continued, (a) V38, (b) V39, (c) V48, (d) V53, (e) V62, (f) V63.

V601 (Ill 3.5e)
Sherd from the neck of a vessel with an everted rim. The neck is short and straight. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is grey with red surfaces. Exterior sooted.

V611 (Ill 3.5f)
Everted rim. Exterior smoothed. Just below the neck is a row of short, oblique incisions. The fabric is sandy which has fired hard and is red.

Context 173

V301 (Ill 3.5g)
Body sherd decorated with a fine applied cordon which has been slashed obliquely. Exterior wiped. The fabric is fine sandy clay with *c* 40 per cent of angular rock fragments up to 7mm long which has fired hard and is red. Both surfaces sooted.

V302 (Ill 3.5h)
Body sherd from the point of inflection with the neck. The exterior surface is smoothed and decorated with sets of oblique incised lines, forming a basket effect. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is oxidized (red/brown). Exterior sooted.

V304 (Ill 3.5i)
Inverted rim decorated with a fine applied cordon which has been slashed obliquely. Exterior smoothed. Coil constructed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 2mm long which has fired hard and is grey. Exterior sooted.

V325 (Ill 3.5j)
Body sherd (broken in two) decorated with a double row of impressed V-shaped motifs. Interior wiped. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and has a red exterior and grey interior. Both surfaces sooted.

Context 181

V793 (Ill 3.5k)
Flat rim with incised decoration – 7mm long perpendicular or slightly oblique incisions – on the neck. 11mm below the lip the vessel angles to the exterior. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is grey with brown surfaces. Both surfaces sooted.

Context 189

V786 (Ill 3.5l)
Inverted rim from a closed mouth vesssel. Exterior wiped (wiping striations). The vessel starts to angle to the interior 14mm from the lip (there are finger impressions on the interior at this point). The fabric is fine clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is red.

Context 196

V38 (Ill 3.6aa)
Body sherds from a decorated vessel. The sherds are from the area between the shoulder and the rim. The decoration comprises a row of closely spaced impressed dots, probably made with a point of around 1mm in diameter, just above the shoulder, with curving lines of dots above forming a triangular-based arrangement. These panels are decorated with either horizontal or vertical incised lines. The lines are fine and could also have been made with a point. The rim was probably everted. The vessel is coil constructed – unsmoothed coils are visible in the interior. Exterior smoothed. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 7mm long which has fired hard and is red with a grey core. Light sooting on exterior.

V39 (Ill 3.6ab)
Everted rim. The exterior surface and the interior of the rim just below the point of inflection have been smoothed. The vessel is coil constructed – unsmoothed coils are visible in the interior, and N-shaped junctions in the section. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 7mm long which has fired hard and is grey with a brown exterior margin. Light sooting on both surfaces.

V48 (Ill 3.6ac)
Everted rim, decorated at the point of inflection with an applied wavy zigzag. Exterior surface and rim interior smoothed. The fabric is fine clay with *c* 10 per cent angular rock fragments up to 8mm long which has fired hard and is red with grey patches. Sooting on exterior surface and rim interior.

V53 (Ill 3.6ad)
Everted rim. Exterior surface and interior of the rim well smoothed. In the interior the smoothing stops about 2cm below the point of inflection – below

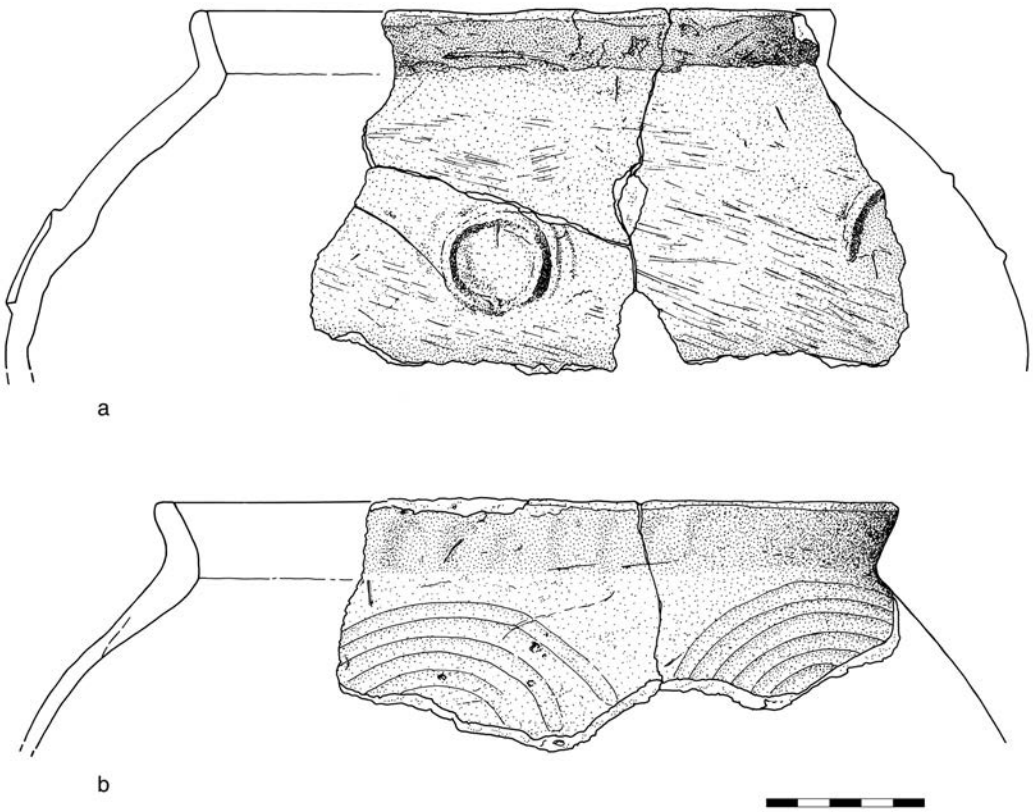

ILLUSTRATION 3.6(b)
Phase 2, Block 5 continued, (a) V87, (b) V89.

this thinning impressions are visible. The point of inflection is defined sharply in the interior – on the exterior it is more rounded. The fabric is sandy clay which has fired hard and is grey.

V62 (Ill 3.6ae)
Everted rim with a flat lip from a small vessel, probably globular, with a flat base. Exterior smoothed. The fabric is sandy clay which has fired hard and is grey with a red exterior margin. Both surfaces are sooted. White residue in interior which is flaking off.

V63 (Ill 3.6af)
Everted rim from a shouldered or globular vessel. 70mm below the rim is a fine line of applied zigzag decoration. Exterior smoothed. Coil constructed – N-shaped junctions are visible in the section and unsmoothed coils in the interior. The fabric is fine sandy clay which has fired hard and is grey with a red exterior margin. Both surfaces sooted. White residue in interior.

V87 (Ill 3.6ba)
Everted rim from a large vessel. *c* 40–50mm below the point of inflection of the rim and body the vessel is decorated with fine applied circular motifs of varying diameters. Exterior smoothed. Finger thinning marks in the interior. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 7mm long which has fired hard and is red. Both surfaces sooted.

V89 (Ill 3.6bb)
Everted rim from a large vessel with a flat base. Exterior smoothed and decorated with circular wiping. Coil constructed, unsmoothed coils and finger-thinning in the interior. The fabric is sandy clay which has fired hard and is grey with red surfaces. Both surfaces sooted.

Context 204

V684 (Ill 3.7a)
Body sherd with applied decoration, possibly in the form of zigzagging loops. Exterior smoothed. Coil

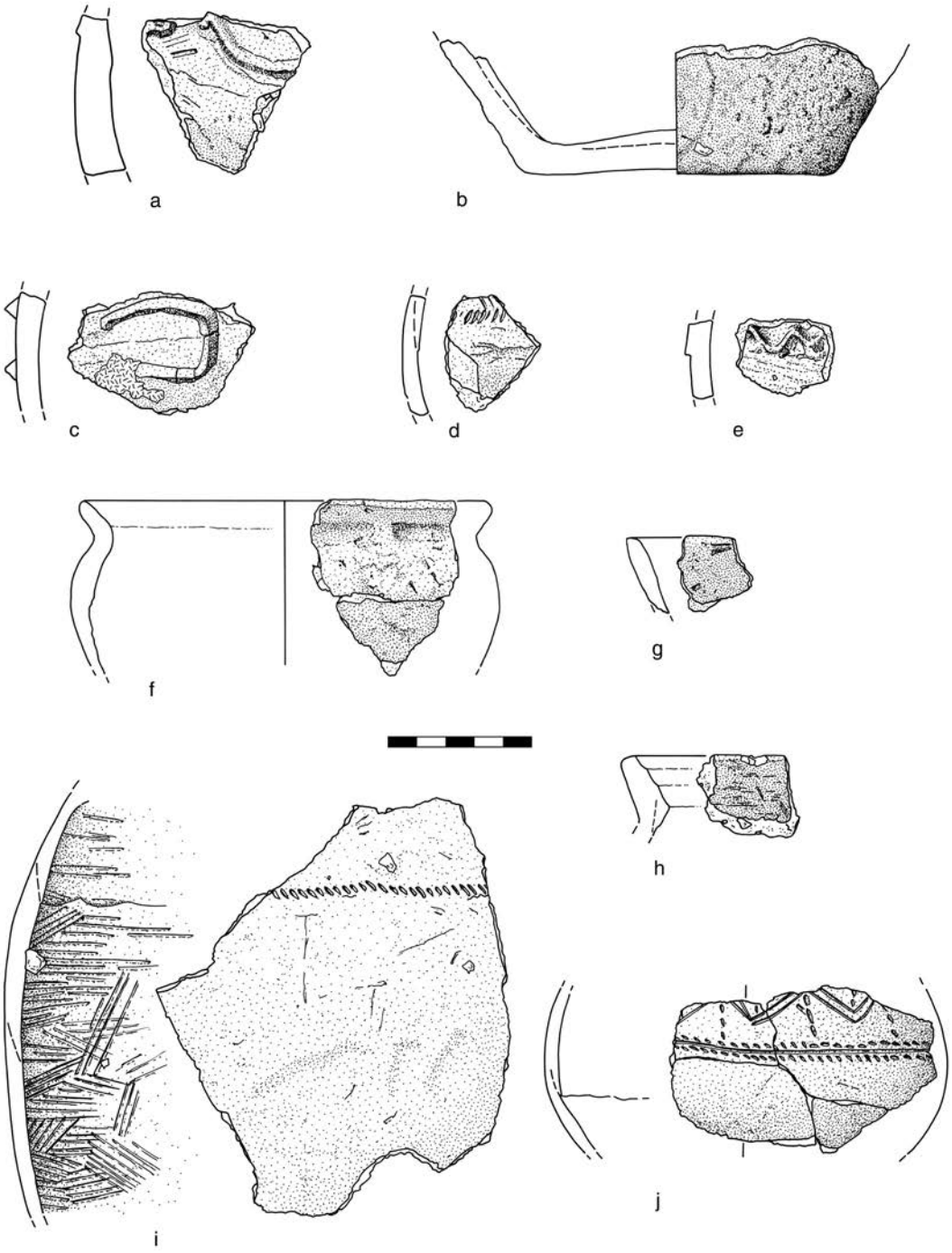

ILLUSTRATION 3.7
Phase 2, Block 5 continued, (a) V684, (b) V689, (c) V368, (d) V369, (e) V370, (f) V375, (g) V395, (h) V195, (i) V575, (j) V584.

constructed. The fabric is fine sandy clay with *c* 20 per cent of angular rock fragments up to 7mm long which has fired hard and is red. Exterior sooted.

V689 (Ill 3.7b)
Basal sherds from a flat-based vessel with angled walls. Exterior slipped and wiped. Coil constructed – N-shaped junctions. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is red. Sooting on both surfaces.

Context 232

V368 (Ill 3.7c)
Body sherd decorated with an applied horseshoe-shaped motif. The fabric is sandy clay with *c* 40 per cent of angular rock fragments up to 11mm long which has fired hard and is red. Heavy sooting on exterior, light sooting on interior.

V369 (Ill 3.7d)
Body sherd with incised decoration, possibly forming a herringbone pattern. Surface wiped prior to decoration. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 2mm long which has fired hard and is red. Exterior sooted.

V370 (Ill 3.7e)
Body sherd decorated with an applied zigzag which seems to be forming a circle at the broken edge. Exterior surface wiped. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 7mm long which has fired hard and is red. Exterior sooted.

V375 (Ill 3.7f)
Everted rim. The fabric is fine sandy clay with *c* 10 per cent angular and rounded rock fragments up to 8mm long which has fired hard and is red. Light sooting on both surfaces.

V395 (Ill 3.7g)
Plain rim. Exterior wiped. The fabric is fine clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey with red surfaces. Light sooting on both surfaces.

Context 235

V195 (Ill 3.7h)
Slightly everted rim with a flattened lip. The rim interior has a couple of ridges made by finger smoothing which might be decorative. The fabric is sandy clay with *c* 10 per cent angular rock fragments up to 5mm long which has fired hard and is red.

Context 236

V575 (Ill 3.7i)
Body sherd decorated with a row of short, oblique incisions. Exterior smoothed. Interior combed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is red. Exterior sooted.

V584 (Ill 3.7j)
Fine sherds (adjoining) with complex incised and stabbed decoration. A horizontal incised line is bounded by small oblique stabs. Vertical rows of stabs lead up from this line, presumably dividing the decoration into panels. Within these boxes is incised possibly triangle/chevron-based decoration. Exterior smoothed. Coil constructed – N-shaped junctions. The fabric is sandy clay which has fired hard and is grey. Both surfaces sooted.

Context 241

V158 (not illustrated)
Everted rim. Exterior smoothed. Coil constructed – N-shaped junctions. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is red. Sooting on the exterior and light sooting on the interior of the rim.

Context 242

V514 (Ill 3.8a)
Slightly everted rim with a flattened lip. Coil constructed – N-shaped junctions. The fabric is fine sandy clay with *c* 20 per cent of angular rock fragments up to 5mm long which has fired hard and is grey with brown margins. Light sooting on exterior.

V515 (Ill 3.8b)
Everted rim from a globular or shouldered vessel. The fabric is sandy clay with *c* 50 per cent of angular rock fragments up to 5mm long which has fired hard and is grey with red margins. Exterior sooted.

V516 (Ill 3.8c)
Two body sherds with incised 'feather-type' decoration above a horizontal line. Exterior smoothed. The fabric is fine sandy clay with *c* 20 per cent of angular rock fragments up to 4mm long which has fired hard and is red. Exterior sooted.

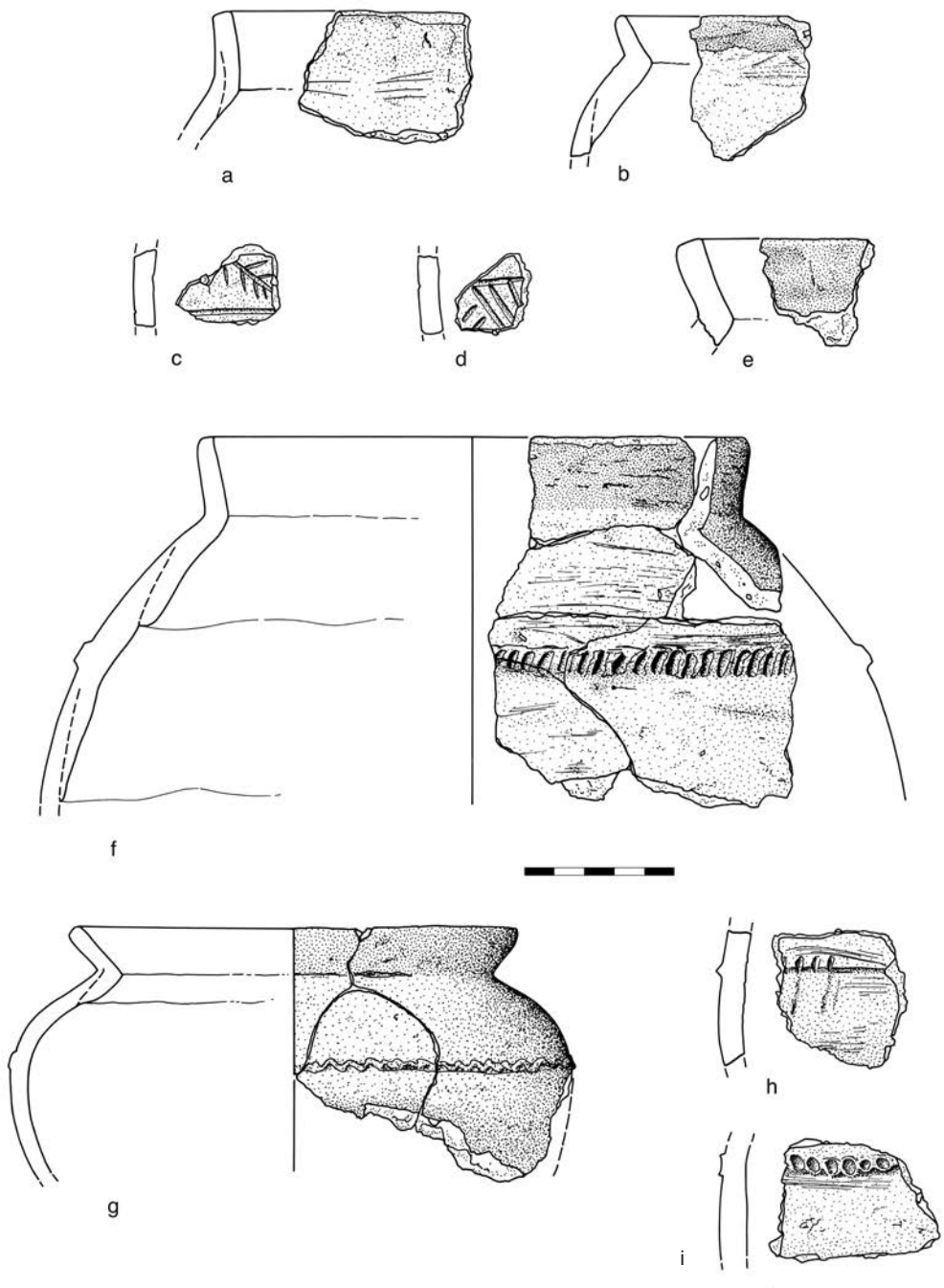

ILLUSTRATION 3.8
Phase 2, Block 5 continued, (a) V514, (b) V515, (c) V516, (d) V519, (e) V520, (f) V521, (g) V523, (h) V176, (i) V177.

V519 (Ill 3.8d)
Body sherd with incised decoration, possibly forming a basket-weave effect. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is red.

V520 (Ill 3.8e)
Everted rim with a flat lip. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is brown. Exterior sooted.

V521 (Ill 3.8f)
Sherds reconstructed to form part of the upper portion of a vessel with a slightly everted rim, from either a shouldered or globular vessel. Exterior smoothed. Unsmoothed coils in interior. Approximately 55mm below the neck of the vessel is an applied cordon, slashed obliquely. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 7mm long which has fired hard and is grey with brown margins.

V523 (Ill 3.8g)
Everted rim from a shouldered or globular vessel. Decorated 30mm below the neck with an applied, thin, neatly executed zigzag cordon. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is red.

Context 245

V176 (Ill 3.8h)
Body sherd decorated with an applied, pinched up cordon, a section of which has been incised across its width at regular intervals. Exterior smoothed. The fabric is sandy clay with *c* 20 per cent angular rock fragments up to 5mm long which has fired hard and is brown. Both surfaces sooted.

V177 (Ill 3.8i)
Body sherd decorated with an applied cordon which has been incised/impressed to give a 'chain' effect. Exterior smoothed. The fabric is fine sandy clay with *c* 20 per cent of angular rock fragments up to 6 mm long which has fired hard and is grey with red margins. Both surfaces sooted.

Context 256

V865 (Ill 3.9a)
Everted rim. At the point of inflection with the body is an applied pinched band. Interior smoothed. The fabric is fine clay with *c* 20 per cent of angular rock fragments up to 7mm long which has fired hard and is grey with a red core. Exterior sooted.

V866 (Ill 3.9b)
Flat rim. The fabric is fine sandy clay which has fired hard and is buff.

Context 260

V281 (Ill 3.9c)
Inverted rim with an interior bevel. 7mm below the lip on the exterior is a line of oblique lentoid incisions. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular and rounded rock fragments up to 3mm long which has fired hard and is buff. Both surfaces sooted.

Context 265

V250 (Ill 3.9d)
Body sherd decorated with an incised infilled pattern. Exterior smoothed. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is grey with brown surfaces.

Context 272

V773 (Ill 3.9e)
Rim sherd with an internal bevel from an open vessel. Slight indentation below the rim on the exterior. Exterior smoothed and scored vertically *c* 20mm below the lip, possibly to give a decorative texture. Coil constructed – unsmoothed coil junction on the interior below the bevel. The fabric is sandy clay with *c* 20 per cent of angular rock fragments up to 7mm long which has fired hard and is red.

V774 (Ill 3.9f)
Inverted rim decorated with incised herringbone decoration which reaches up to the lip of the vessel. Exterior smoothed. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is red.

BLOCK 8

Context 067

V1743 (Ill 3.9g)
Body sherd decorated with an applied cordon which has been pinched to form a wavy line. Exterior smoothed. Coil constructed. The fabric is fine sandy

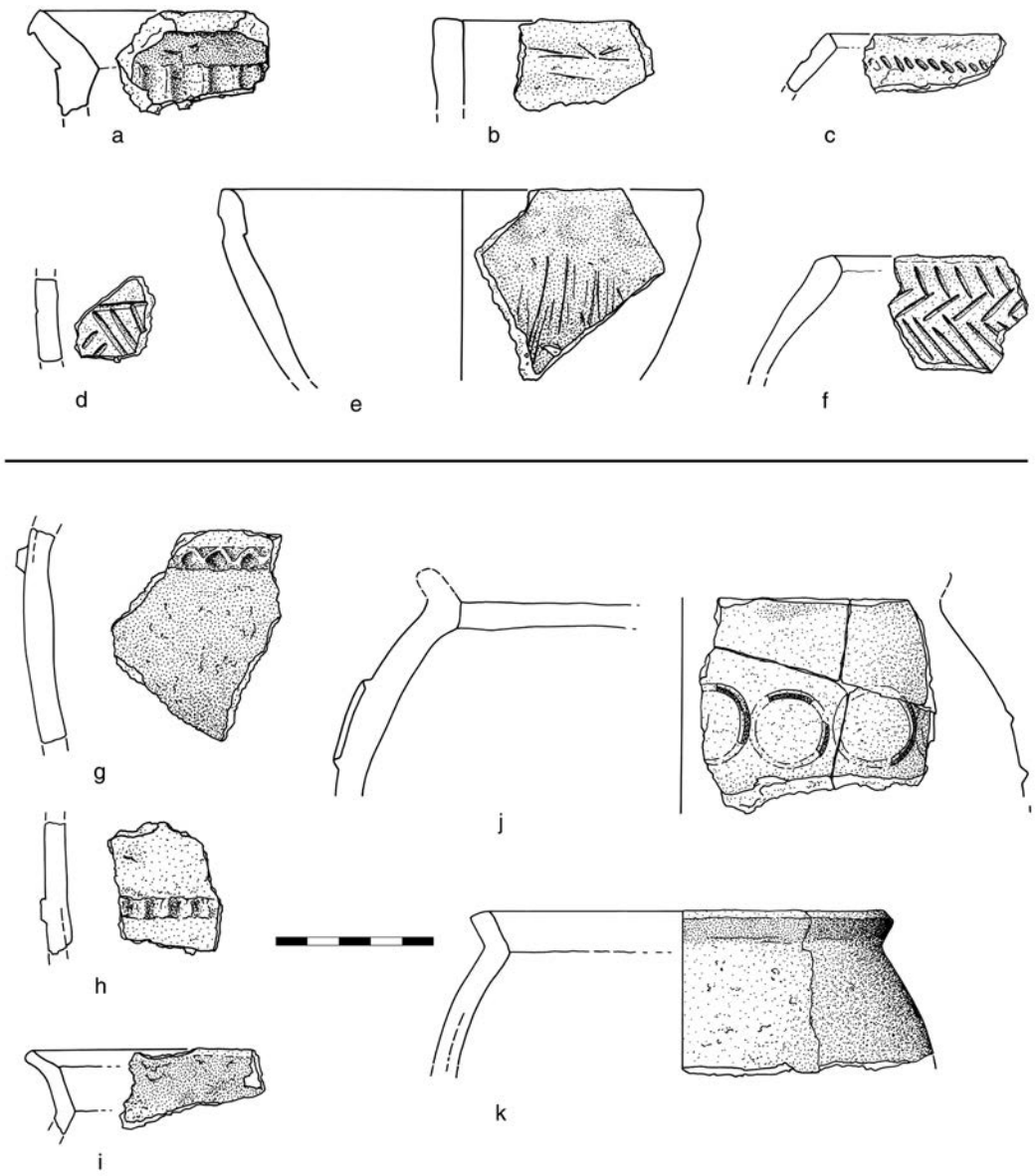

ILLUSTRATION 3.9
Phase 2, Block 5 continued, (a) V865, (b) V866, (c) V281, (d) V250, (e) V773; (f) V774 Block 8, (g) V1743, (h) V1751, (i) V1752, (j) V1753, (k) V1809.

clay with *c* 20 per cent of angular rock fragments up to 8mm long which has fired hard and is red. Exterior sooted.

V1751 (Ill 3.9h)
Body sherd decorated with a pinched applied band. Exterior smoothed. Coil constructed – N-shaped junctions. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey. Sooting on both surfaces.

V1752 (Ill 3.9i)
Everted rim with the neck faceted on the interior. Exterior slipped and smoothed. The fabric is fine sandy clay which has fired hard and is red with a grey core. Exterior sooted.

V1753 (Ill 3.9j)
Body sherds from below the neck, decorated around the shoulder with finely executed applied circles *c* 2mm in diameter. The circles have detached on some sherds leaving an unsooted impression. Exterior surface smoothed. Some sherds are from the neck of the vessel. Coil constructed – unsmoothed coil just below the neck in the interior. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is red/brown. Some of the sherds are grey with a buff/red margin. Both surfaces sooted.

V1809 (Ill 3.9k)
Everted rim with a flat lip. Exterior smoothed. Coil constructed – N-shaped junction. The fabric is fine clay with *c* 10 per cent of angular rock fragments up to 2mm long which has fired hard and is grey with a buff interior margin. Exterior sooted.

Context 082

V1871 (Ill 3.10a)
Everted rim. Exterior smoothed. Coil constructed – unsmoothed junctions in the interior. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is red with a grey core. Both surfaces sooted.

V1884 (Ill 3.10b)
Body sherd with applied zigzag/'rope effect' decoration. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey with a red interior margin. Exterior sooted. Light sooting on the interior.

V1891 (Ill 3.10c)
Everted rim with a flat lip. Broken at the neck. Just below the neck is a row of lentoid impressions, probably made by impressing a fingernail. Exterior smoothed. The fabric is sandy clay which has fired hard and is grey with brown surfaces. Both surfaces sooted.

V1892 (Ill 3.10d)
Everted rim with a flat lip. On the interior the junction between the rim and body is pinched, probably to form a rest for a pot-lid. Exterior wiped – the wiping may have formed a circular pattern. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is brown. Light sooting on the exterior.

Context 103

V1922 (Ill 3.10e)
Body sherd decorated with two parallel, oblique, incised, tapering incisions. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 6mm long which has fired hard and is red.

V1989 (Ill 3.10f)
Body sherd decorated with thick parallel lines on the exterior. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 10mm long which has fired hard and is red/buff. Exterior sooted.

V1991 (Ill 3.10g)
Body sherd decorated with an applied cordon cut with oblique incisions ?above which are incised lines. The fabric is fine sandy clay which has fired hard and is red. Exterior sooted. Interior lightly sooted.

Context 170

V2044 (Ill 3.10h)
Everted rim with possible incised decoration on the exterior and a flat base with angled sides. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is red.

V2045 (Ill 3.10i)
Vessel with a short neck and a flat lip. 'Shelf' to the interior of the neck. The fabric is sandy clay which has fired hard and is grey with brown surfaces. Exterior sooted.

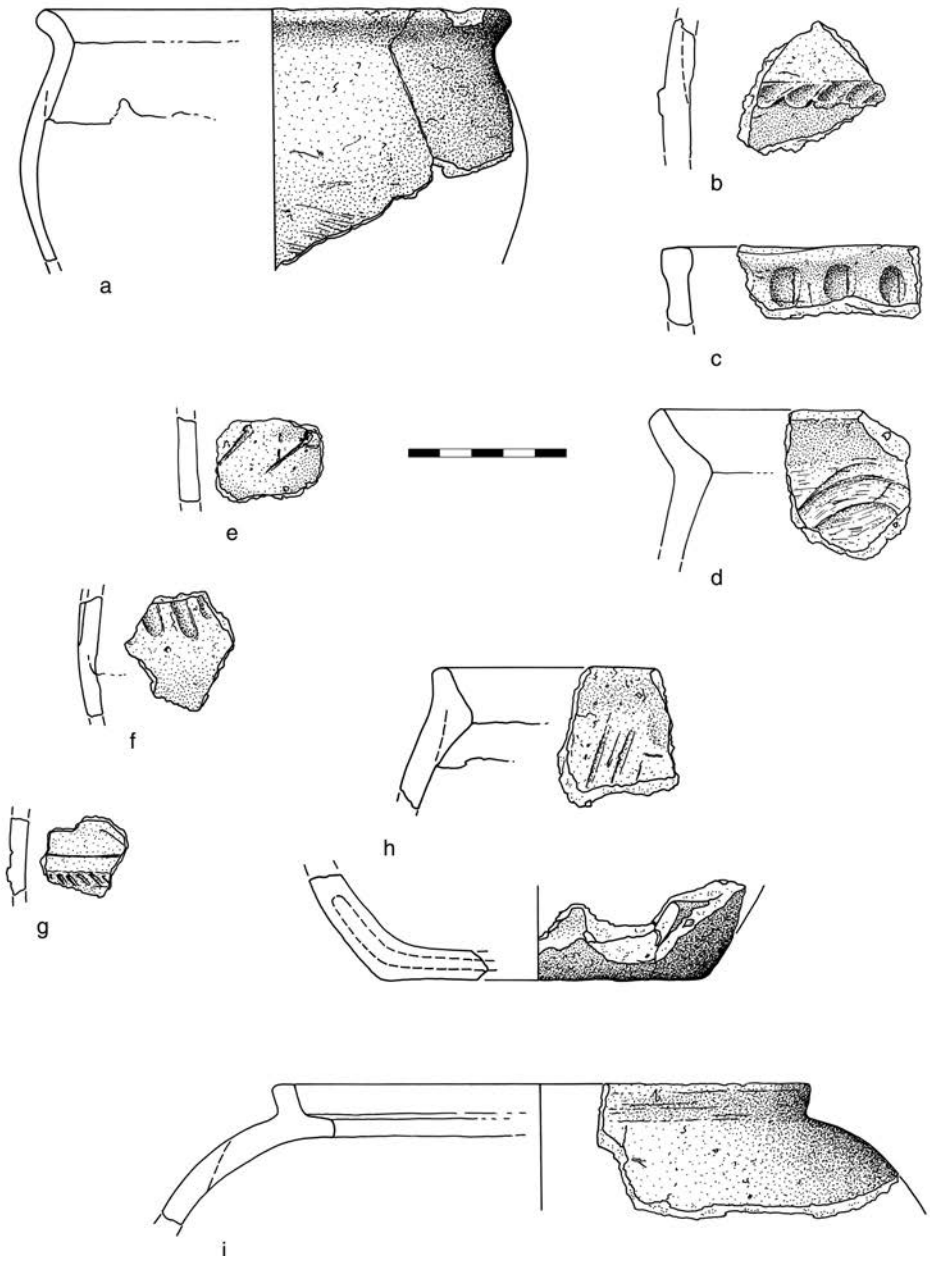

ILLUSTRATION 3.10
Phase 2, Block 8 continued, (a) V1871, (b) V1884, (c) V1891, (d) V1892, (e) V1922, (f) V1989, (g) V1991, (h) V2044, (i) V2045.

Context 223

V1473 (Ill 3.11a)
Everted rim. The vessel is decorated with an applied zigzag band *c* 45mm below the neck. Between the neck and the band are thick but shallow incisions forming a triple-lined zigzag. Exterior wiped. Interior scraped. The fabric is fine sandy clay with *c* 20 per cent of angular rock fragments up to 6mm long which has fired hard and is brown. Both surfaces sooted.

V1474 (Ill 3.11b)
Body sherds decorated with a line of four short oblique incisions. On one sherd is a double row – this could be the overlap at the end of the circuit. Exterior smoothed. Interior combed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is buff. Exterior sooted.

V1535 (Ill 3.11c)
Everted rim decorated with wiped curving decoration. Exterior smoothed. Interior scraped. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is grey with red margins.

Context 244

V1633 (Ill 3.11d)
Body sherd decorated with an applied cordon. Below the cordon the surface is smoothed and above it the surface is textured, possibly to form a basket weave effect. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey with red margins. Both surfaces sooted.

Context 251

V1580 (Ill 3.11e)
Body sherd decorated with an applied cordon which has been incised vertically. Exterior smoothed. The fabric is fine clay with *c* 10 per cent of angular rock fragments up to 7mm long which has fired hard and is red. Light sooting on the exterior.

V1581 (Ill 3.11f)
Body sherd decorated with a row of short vertical incisions below which are incised lines possibly forming a lozenge-based design. The fabric is sandy clay which has fired hard and is grey. Both surfaces sooted.

Context 253

V1691 (Ill 3.11g)
Everted rim decorated with a plain applied cordon around the neck. Exterior smoothed. The fabric is sandy clay which has fired hard and is red. Light sooting on the exterior.

Context 266

V1367 (Ill 3.12a)
Upper profile of a shouldered vessel with an everted rim. Exterior burnished. Interior surface scraped. Coil constructed. The fabric is sandy clay which has fired hard and is grey with red/brown margins. Exterior sooted. Patches of a creamy-coloured deposit on the exterior, probably post-depositional.

V1368 (Ill 3.12b)
Everted rim from a shouldered vessel. Around the shoulder is a pinched cordon. Exterior burnished. Coil constructed – unsmoothed coils in the interior. The fabric is sandy clay which has fired hard and is grey. Both surfaces sooted.

V1369 (not illustrated)
Sherd from the shoulder of a vessel. Around the shoulder is an applied cordon which has been incised obliquely forming a 'rope effect'. Coil constructed – unsmoothed junction in interior. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is red. Exterior sooted.

V1371 (Ill 3.12c)
Body sherd decorated with an applied wavy cordon. Exterior smoothed. The fabric is sandy clay which has fired hard and is red. Exterior sooted.

V1373 (Ill 3.12d)
Body sherd with part of what is probably an applied zigzag or triangle. Exterior smoothed. The fabric is sandy clay which has fired hard and is red. Exterior sooted.

V1377 (Ill 3.12e)
Body sherd decorated with incised chevron and lentoid-shaped impressions. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey with red/brown surfaces. Patchy sooting on the exterior.

V1378 (Ill 3.12f)
Body sherd decorated with nested chevrons formed of three chevrons. There are traces of a line of possible

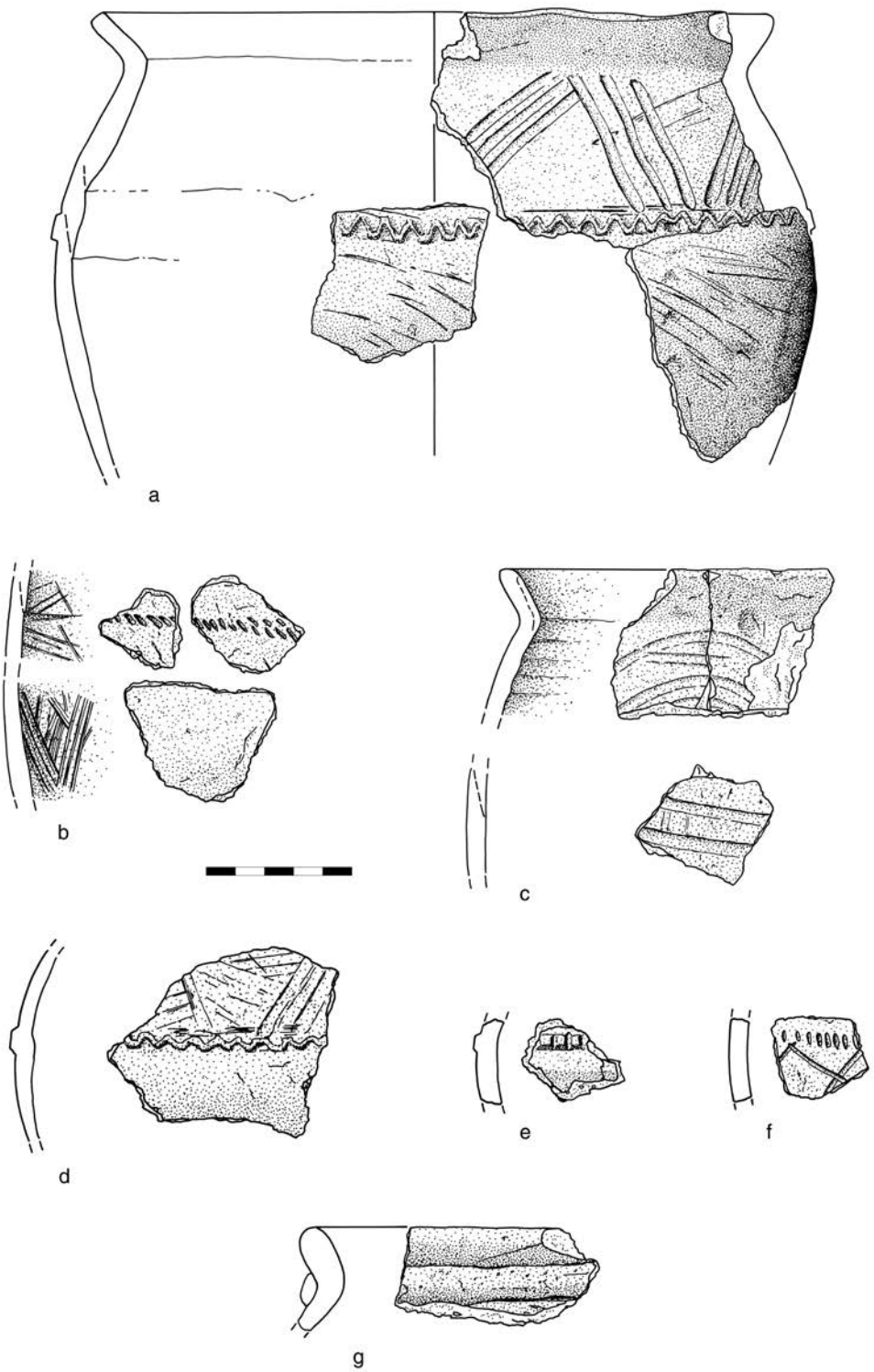

ILLUSTRATION 3.11
Phase 2, Block 8 continued, (a) V1473, (b) V1474, (c) V1535, (d) V1633, (e) V1580, (f) V1581, (g) V1691.

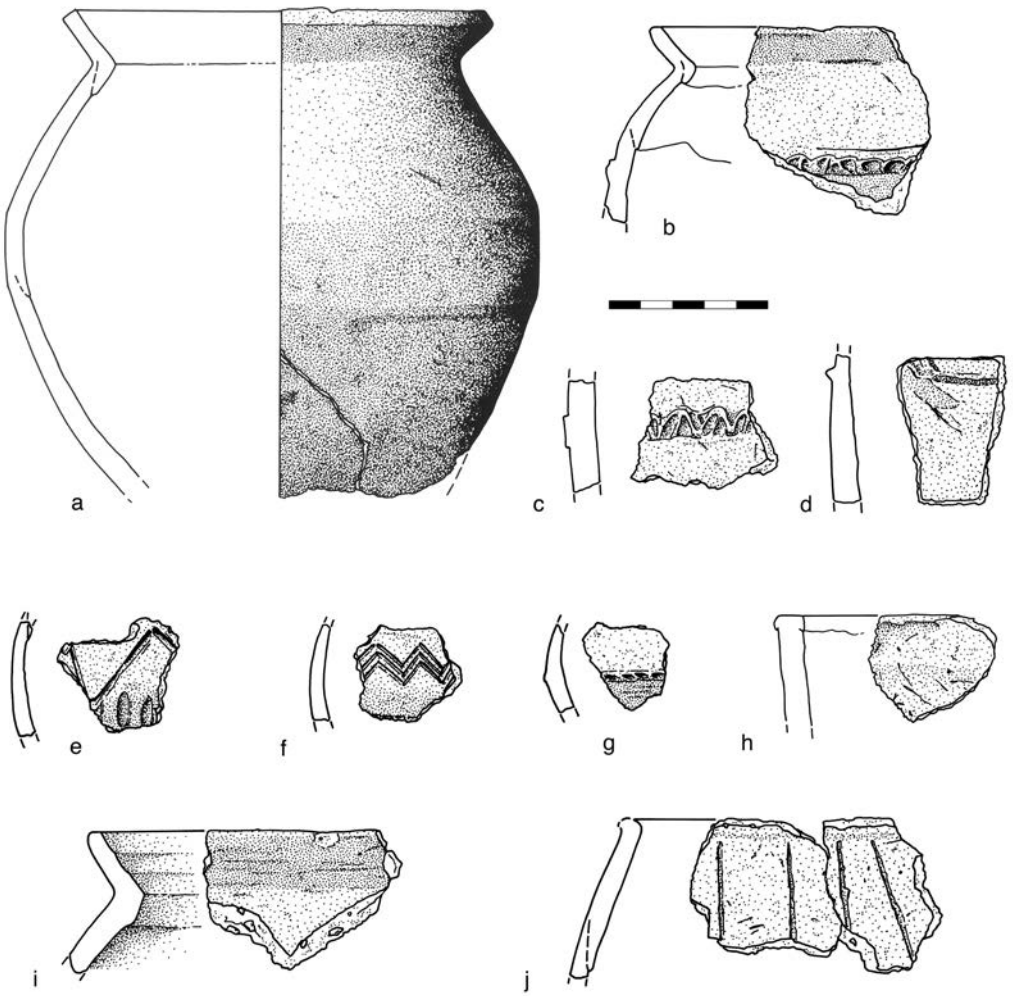

ILLUSTRATION 3.12
Phase 2, Block 8 continued, (a) V1367, (b) V1368, (c) V1371, (d) V1373, (e) V1377, (f) V1378, (g) V1381, (h) V1382, (i) V1383, (j) V1398.

oblique incisions below. Exterior smoothed. The fabric is sandy clay which has fired hard and is brown. Exterior sooted.

V1381 (Ill 3.12g)

Body sherd decorated with a slight cordon which has been incised obliquely. The fabric is fine clay which has fired hard and is red. Exterior sooted.

V1382 (Ill 3.12h)

Rim with flat lip. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular and rounded rock fragments up to 5mm long which has fired hard and is brown. Exterior sooted.

V1383 (Ill 3.12i)

Everted rim. The interior of the lip is decorated with ridges formed by finger impressing. Exterior smoothed. The fabric is fine sandy clay with *c* 60 per cent of angular rock fragments up to 9mm long which has fired hard and is grey with brown margins. Exterior sooted.

V1398 (Ill 3.12j)

Sherds from the neck of a vessel. Just below the neck the vessel is decorated with vertical incised lines, unevenly spaced. Exterior smoothed. Coil constructed, unsmoothed coil junction in the interior. The fabric

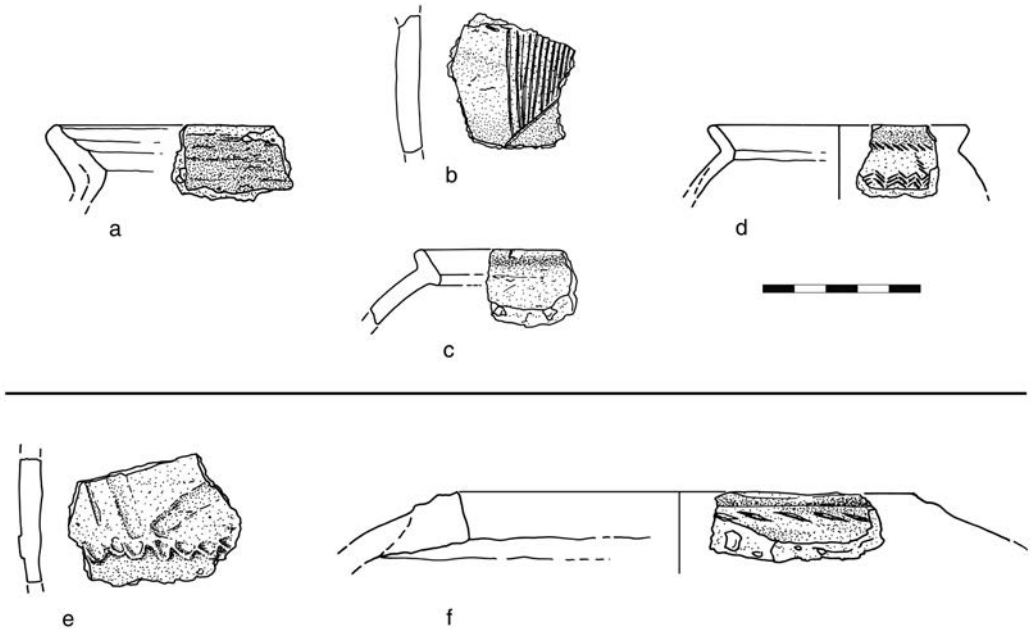

ILLUSTRATION 3.13
Phase 2 continued, Block 13, (a) V2235, (b) V2301, (c) V2302, (d) V2282; Block 14, (e) V2336, (f) V2346.

is fine sandy clay with *c* 10 per cent of angular rock fragments up to 9mm long which has fired hard and is red. Exterior sooted.

BLOCK 13

Context 143

V2235 (Ill 3.13a)
Everted rim with three finger-wide grooves in the interior. The fabric is fine clay with *c* 20 per cent of angular rock fragments up to 5mm long which has fired hard and is grey. Exterior sooted.

Context 144

V2301 (Ill 3.13b)
Body sherd decorated with an incised infilled triangle. Exterior slipped. The fabric is sandy clay with *c* 70 per cent of angular rock fragments up to 4mm long which has fired hard and is brown. Light sooting on exterior.

V2302 (Ill 3.13c)
Everted rim with an interior bevel. Exterior polished from just below the rim. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is buff.

Context 149

V2282 (Ill 3.13d)
Everted rim decorated with a horizontal row of short oblique incisions at the point of inflection. *c* 10 mm below this is a horizontal line of triple nested zigzags. Between the two is a vertical line of short oblique incisions. Exterior smoothed. The fabric is fine clay which has fired hard and is red. Hard fired.

BLOCK 14

Context 133

V2336 (Ill 3.13e)
Body sherd decorated with an applied wavy cordon above which are traces of incised lines and fingertip grooves. Exterior slipped. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey with a red exterior margin. Exterior sooted. Patches of sooting on interior.

Context 154

V2346 (Ill 3.13f)
Heavily inverted rim. There are two ridges to the exterior of the lip below which is a row of oblique incised lines. The fabric is sandy clay with *c* 20 per cent

of angular rock fragments up to 4mm long which has fired hard and is grey. Exterior sooted.

PHASE 3

BLOCK 1

Context 043

V979 (Ill 3.14a)
Flared rim. Exterior smoothed. Coil constructed. The fabric is sandy clay which has fired hard and is grey with brown surfaces. Sooting on exterior and lower part of interior.

Context 083

V991 (Ill 3.14b)
Flared rim with incised lines just below the lip. The fabric is sandy clay with *c* 20 per cent of angular rock fragments up to 7mm long which has fired hard and is grey with brown margins (see Section 2.5.1.2).

V993 (Ill 3.14c)
Flared rim decorated with an applied zigzag at the point of inflection of the rim and body. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 15mm long which has fired hard and is red with a grey core (see Section 2.5.1.2.)

Context 084

V1046 (Ill 3.14d)
Body sherd with applied zigzag decoration. Coil constructed, N-shaped junctions. The fabric is fine sandy clay with *c* 20 per cent of angular rock fragments up to 6mm long which has fired hard and is grey. Both surfaces sooted.

Context 100

V1077 (Ill 3.14e)
Body sherd decorated with a row of oblique incisions. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is red. Interior sooted.

Context 141/136/100

V1006 (Ill 3.14f)
Everted rim with a pinched applied band at the point of inflection of the rim and body and an applied zigzag at the shoulder. Exterior smoothed. Coil constructed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 6mm long which has fired hard and is red. Exterior sooted.

BLOCK 2

Context 028

V1151 (Ill 3.15a)
Slightly everted rim with a flat lip. Exterior smoothed. The fabric is sandy clay with *c* 30 per cent of angular rock fragments up to 6mm long which has fired hard and is grey. Both surfaces sooted.

V1153 (Ill 3.15b)
Body sherd with applied decoration forming a 'chain' – one large circle with a row of small circles adjoining. Exterior smoothed. The fabric is sandy clay with *c* 30 per cent of angular rock fragments up to 5mm long which has fired hard and is grey. Exterior sooted.

V1154 (Ill 3.15c)
Body sherd decorated with incised lines, including a curved line. Exterior smoothed. Interior surface missing. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is red with a grey core. Exterior sooted.

Context 033

V1206 (Ill 3.15d)
Flat base with angled walls. The fabric is sandy clay which has fired hard and is grey with brown surfaces. Both surfaces sooted.

Context 034

V1213 (Ill 3.15e)
Flat rim. The fabric is sandy clay which has fired hard and is grey. Both surfaces sooted.

Context 104

V1134 (Ill 3.15f)
Body sherd decorated with two parallel lines of applied zigzag decoration. Exterior smoothed. Coil constructed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is brown. Exterior sooted.

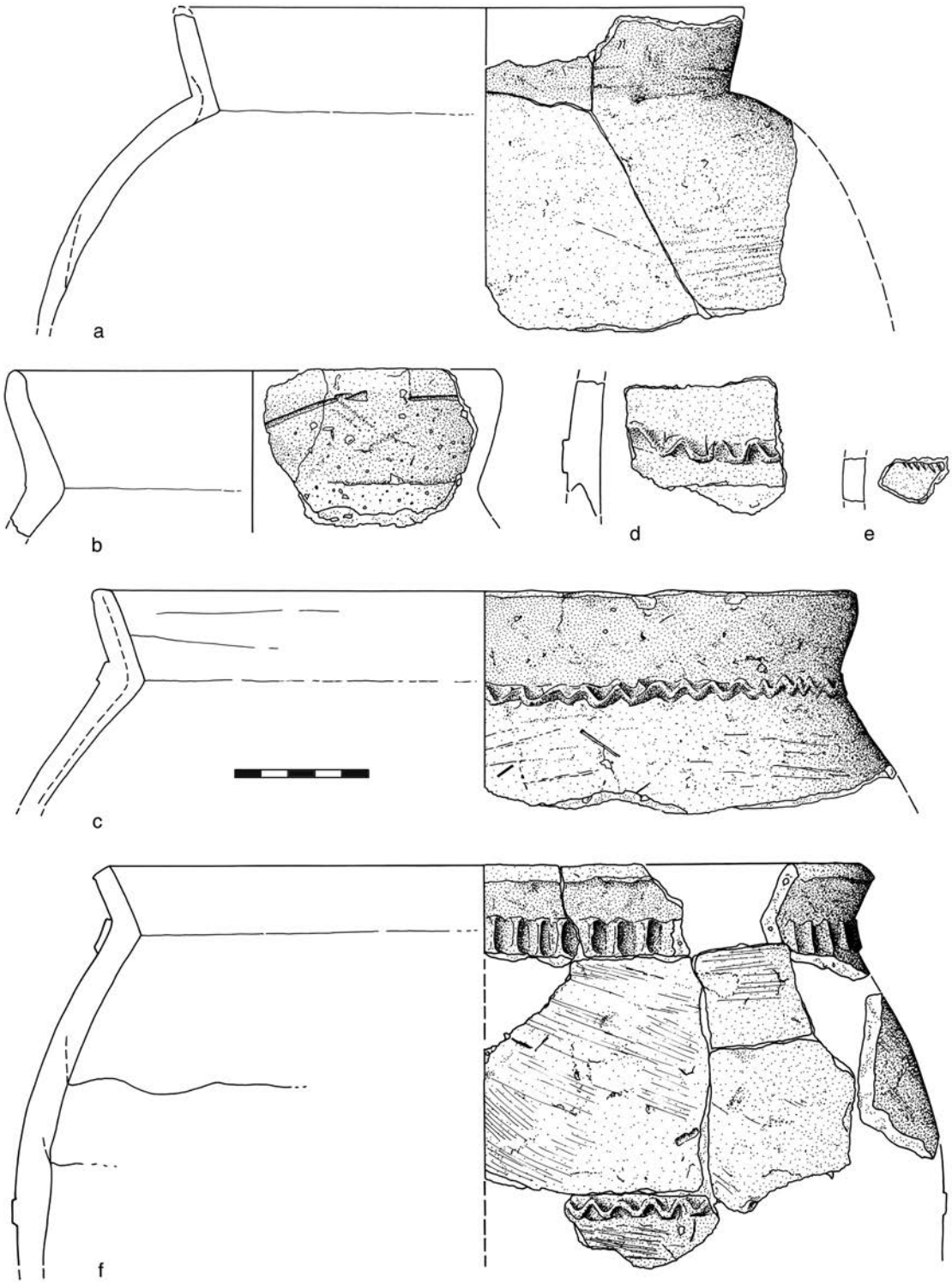

ILLUSTRATION 3.14
Phase 3, Block 1, (a) V979, (b) V991, (c) V993, (d) V1046, (e) V1077, (f) V1006.

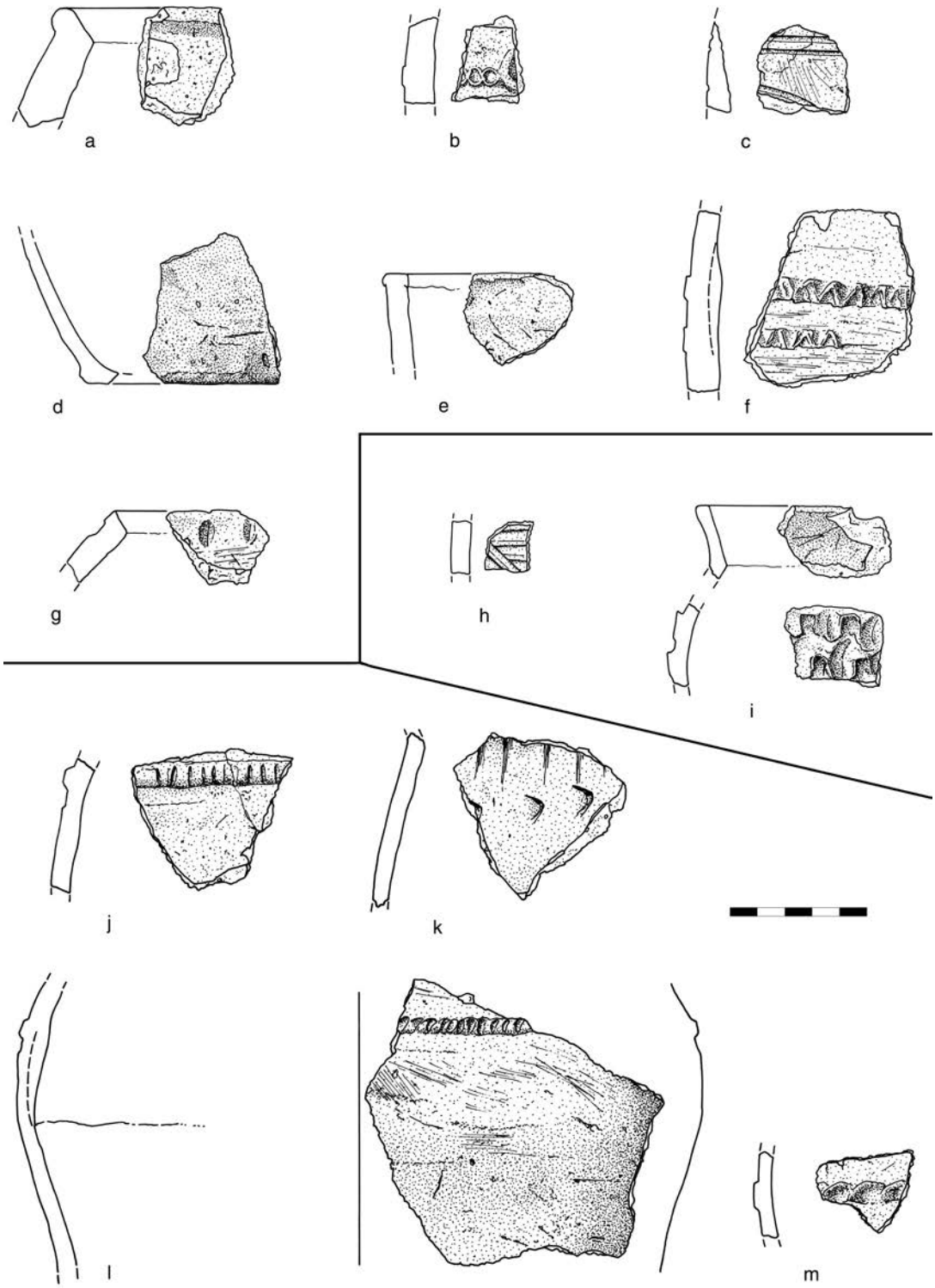

ILLUSTRATION 3.15
Phase 3 continued, Block 2, (a) V1151, (b) V1153, (c) V1154, (d) V1206, (e) V1213, (f) V1134, (g) V1142; Block 4, (h) V1097, (i) V1113; Block 6, (j) V1278, (k) V1281, (l) V1280, (m) V1282.

Context 147

V1142 (3.15g)
Bevelled rim with a line of finger-nail impressions below the lip. Exterior smoothed. The fabric is sandy clay which has fired hard and is red.

BLOCK 4

Context 094

V1097 (Ill 3.15h)
Body sherd with combed decoration, possibly forming chevron-style decoration. The fabric is sandy clay which has fired hard and is red.

V1113 (Ill 3.15i)
Everted rim. Body sherd with two rows of applied, squared-off, zigzag decoration. The fabric is fine sandy clay which has fired hard and is grey with red margins. Light sooting on both surfaces.

BLOCK 6

Context 123

V1278 (Ill 3.15j)
Body sherd decorated with an applied cordon cut vertically by incisions. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 2mm long which has fired hard and is black with a brown exterior surface. Both surfaces sooted.

V1281 (Ill 3.15k)
Body sherd decorated with a line of V-shaped impressions. Exterior smoothed. The fabric is sandy clay which has fired hard and is grey with a red exterior margin. Interior sooted.

V1280 (Ill 3.15l)
Body sherd decorated with an applied cordon cut by closely spaced oblique incisions. Shouldered vessel. The fabric is fine sandy clay with *c* 20 per cent of angular and rounded rock fragments up to 7mm long which has fired hard and is red. Both surfaces sooted.

V1282 (Ill 3.15m)
Body sherd decorated with a cordon which has been obliquely pinched. Exterior smoothed. The fabric is sandy clay which has fired hard and is grey with a buff exterior margin. Light sooting in the interior.

BLOCK 18

Context 018

V2559 (not illustrated)
Flat part of a base decorated with deep finger impressions. The fabric is sandy clay which has fired hard and is grey with a red interior margin. Exterior sooted.

V2573 (Ill 3.16a)
Flat rim. Exterior wiped. Decorated with a row of oblong impressions just below the lip. The fabric is sandy clay with *c* 10 per cent of angular rock fragments which has fired hard and is brown with a grey core. Both surfaces sooted.

V2576 (Ill 3.16b)
Flat rim decorated with thick incised decoration, possibly infilled triangles. Exterior smoothed. The fabric is sandy clay which has fired hard and is grey with a red exterior and a brown interior.

V2577 (Ill 3.16c)
Body sherd decorated with an applied dimpled boss. Exterior smoothed. The fabric is sandy clay which has fired hard and red. Exterior sooted.

V2659 (Ill 3.16d)
Inverted rim with a flat lip. Below the lip is a row of short stabbed impressions. Horizontal wiping below the decoration. The fabric is fine clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey with red margins.

V2660 (Ill 3.16e)
Slightly everted rim with a row of inverted V impressed decoration at the point of inflection of the rim with the body. Applied zigzag around the shoulder. Exterior wiped below zigzag. The fabric is sandy clay which has fired hard and is grey with buff margins. Sooting on both surfaces.

V2663 (Ill 3.16f)
Everted rim with lentoid impressions at the neck. Exterior smoothed. The fabric is fine clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is brown. Both surfaces sooted.

V2667 (Ill 3.16g)
Body sherds decorated with an applied cordon which is incised vertically. Above the cordon are oblique incised lines. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey with red surfaces. Both surfaces sooted.

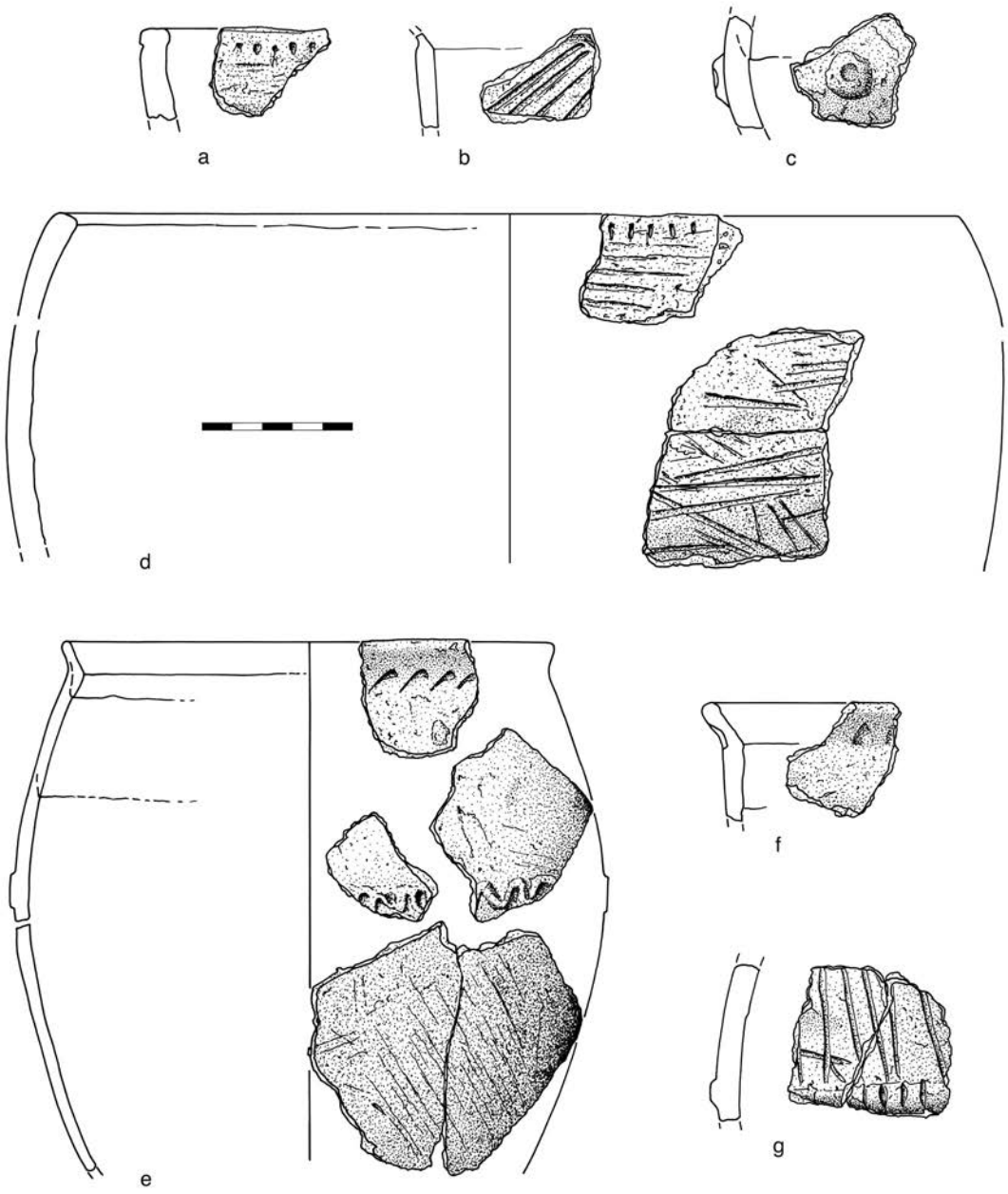

ILLUSTRATION 3.16
Phase 3 continued, Block 18, (a) V2573, (b) V2576, (c) V2577, (d) V2659, (e) V2660, (f) V2663, (g) V2667.

Context 038

V2761 (Ill 3.17a)
Body sherd decorated with an applied band decorated with closely spaced thick vertical incisions. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 3mm long which has fired hard and is brown. Both surfaces sooted.

Context 048

V2778 (Ill 3.17b)
Body sherd decorated with thick wavy cordon. Vertical wiping below. Coil constructed – N-shaped junction. The fabric is sandy clay which has fired hard and is grey with a red exterior margin. Interior sooted.

V2779 (Ill 3.17c)
Sherds from a flat-based, necked vessel with barrel-shaped sides. Cordon wih finger indentation (probably from applying the cordon) above shoulder. The rim has a flat lip. Exterior smoothed. Coil constructed – unsmoothed junctions in the interior. The fabric is sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey with brown surfaces. Exterior sooted. Interior has light sooting and a creamy-coloured residue.

Context 068

V2720 (not illustrated)
Everted rim decorated with an applied pinched band 6cm below the neck of the vessel. Exterior smoothed. Interior wiped. Coil constructed – junctions visible in section. The fabric is sandy clay with *c* 20 per cent of angular rock fragments up to 8mm long which has fired hard and is oxidized and is brown. Both surfaces sooted.

V2721 (Ill 3.17d)
Body sherd decorated with rows made up of short incised lines – a horizontal line below the neck, one 4cm below, and a vertical one between. The fabric is sandy clay which has fired hard and is grey with brown surfaces. Both surfaces sooted.

V2723 (Ill 3.17e)
Body sherd decorated with a very thick applied zigzag. Exterior wiped. The fabric is sandy clay which has fired hard and is grey with a red exterior. Internal residue.

V2724 (Ill 3.17f)
Sherds from a decorated vessel with an everted rim. The decoration comprises an applied zigzag decorated with incised lines above which is deeply incised decoration, probably triangle-based. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 5mm long which has fired hard and is grey with brown surfaces. Both surfaces sooted.

PHASE UNCERTAIN

BLOCK 7

Context 010

V1261 (Ill 3.17g)
Body sherd decorated with V-shaped impressions. Exterior wiped. Interior combed. The fabric is fine clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and is grey with a buff interior surface. Exterior sooted. Interior lightly sooted.

Context 209

V1250 (Ill 3.17h)
Body sherds decorated with incised lines. Exterior smoothed. The fabric is fine sandy clay with *c* 10 per cent of angular rock fragments up to 4mm long which has fired hard and has a buff, grey exterior and a red interior.

3.3 CERAMIC ARTEFACTS

Fraser Hunter and Ann MacSween

A single purpose-made spindle whorl (SF284, Ill 3.18e) was found; the remainder were reworked from broken potsherds while an unfinished example (SF256, Ill 3.18b) illustrated the production process. The only other ceramic artefact was a lump of fired clay with fingerprints, perhaps a small portion of potter's raw material which was accidentally fired (SF285, not illustrated). Three of the sherd whorls come from Bays 1 and 2 of Wheelhouse 1 during its Phase 2 occupation (SF98 (Ill 3.18a), SF280 (Ill 3.18d) and SF281 (not illustrated)), while another had been jammed into the wall of Bay 2, during either Phase 1 or 2 (SF256, Ill 3.18b). The others appear to be from re-deposited contexts, most likely from Phase 2 occupation of Wheelhouse 1.

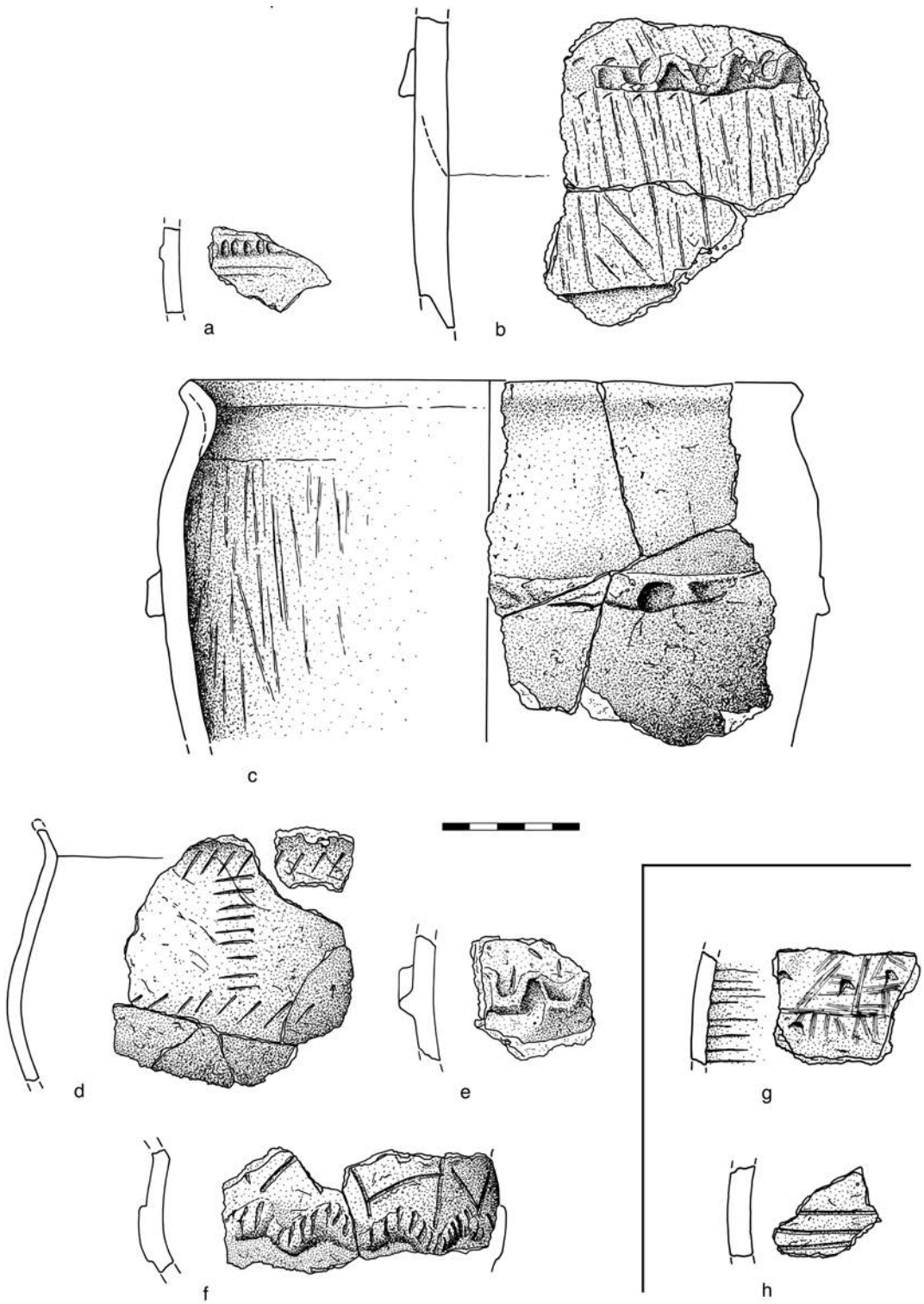

ILLUSTRATION 3.17
Phase 3, Block 18 continued, (a) V2761, (b) V2778, (c) V2779, (d) V2721, (e) V2723, (f) V2724; Phase uncertain, Block 7, (g) V1261, (h) V1250.

SF98 (Ill 3.18a)
Spindle whorl made from a potsherd worked into a sub-circular form with an approximately central, slightly waisted perforation. Surface wiped on the exterior. Sandy clay fabric, fired hard, grey with red surfaces. Exterior surface is sooted; sooting and residue on exterior. D 6.5mm, L 60mm, W 55mm, T 7–8.5mm, m 35.9g. Context 173, Block 5b, Phase 2 (Bay 2 of Wheelhouse 1).

SF256 (Ill 3.18b)
Unfinished spindle whorl. Potsherd with edges broken to form a crude circle, probably unfinished; perhaps abandoned because the central perforation was crude and non-central. Sandy clay fabric, fired hard, grey with red surfaces; sooting on both surfaces. L 56mm, W 55mm, T 7.5 – 9 mm, central perforation 8.5 × 5mm, worked bifacially but somewhat offset, m 32.4g. Context 080, Block 6 (within Wheelhouse 1 structural masonry, Bay 2).

SF278 (Ill 3.18c)
Spindle whorl (half surviving) with central slightly waisted perforation. Sandy clay fabric with *c* 20 per cent of angular rock fragments up to 4mm long, fired hard, red; exterior surface sooted. D 36mm, T 9mm, Central perforation D 5mm, m 8.3g. Context 067, Block 8, Phase 2 (midden material formed over Structure 4).

SF279 (not illustrated)
Spindle whorl fragment. Sandy clay fabric with *c* 20 per cent of angular rock fragments up to 4mm long, fired hard, grey with red exterior surface, both surfaces sooted. Original diameter *c* 65mm. L 28mm, W 19mm, T 10mm. Context 147, Block 2, Phase 3 (wall of Structure 8).

SF280 (Ill 3.18d)
Spindle whorl. Potsherd worked into an irregular circle, edges well-finished but broken in places. Sandy clay fabric, fired hard, grey with brown surfaces; both surfaces sooted. Approximately central tapering perforation, D 7mm. L 56mm, W 51mm, T 6–8.5mm, m 29.2g. Context 196, Block 5b, Phase 2 (Bay 1 of Wheelhouse 1).

SF281 (not illustrated)
Spindle whorl fragment. Potsherd worked into a circle, original diameter *c* 60mm, with traces of an off-centre perforation preserved in the fracture surface. Sandy clay fabric, fired hard, red exterior, buff interior. Exterior surface burnished and sooted. L 50mm, W 24mm, T 10mm. Context 265, Block 5a, Phase 2 (Bay 2 of Wheelhouse 1) (see Section 2.4.1.5).

SF282 (not illustrated)
Spindle whorl, *c* 50 mm D, with a perforation *c* 9mm D. Fine sandy clay fabric with *c* 20 per cent of angular rock fragments up to 3mm long; fired hard, oxidized (red/buff). T 7–9mm. Context 140, Block 13, Phase 2 (dumped fill within Structure 5).

SF283 (not illustrated)
Spindle whorl or counter fragment, *c* 80mm D. Sandy clay fabric, fired hard, oxidized (red). L 41mm, W 22mm, T 9mm. Context 266, Block 8, Phase 2 (secondary floor deposits in Structure 4) (see Section 2.4.3).

SF284 (Ill 3.18e)
Biconical spindle whorl with a rounded profile. Around 40 per cent survives, with the remains of a cylindrical perforation (D 4.5mm). D 42mm, H 28mm. Unstratified.

SF285 (not illustrated)
Fired clay lump; irregular squashed ovoid grey lump with a deep finger mark on one edge, possibly others, and scattered organic impressions, perhaps straw. The inclusion of grits suggests this may be a lump of gathered and tempered clay which was accidentally fired. 116 × 100 × 57mm. Context 018, Block 18, Phase 3 (midden deposit formed over Structure 4 during Phase 3).

3.4 HUMAN BONE

Kath McSweeney

The four pieces of human bone recovered from Cnip comprise three skull fragments and a tibia fragment. The skull fragments belong to two adults, probably middle-aged, and one young adult. The only one for which sex is indicated (HB01) is male. Two of the skull fragments have clearly been modified, one after death (Context 171) and one possibly before (Context 071), while the third was found in a clearly votive context (Context 031). This suggests that the bias towards skull frag-ments reflects some deliberate selection on the part of the wheelhouse inhabitants. Modified human skull fragments are difficult to parallel in the Atlantic Iron Age. Although a chopped piece of human skull was recovered at Dun Mor Vaul (MacKie 1974, 214: plate XIV.B) it was found with a re-deposited burial

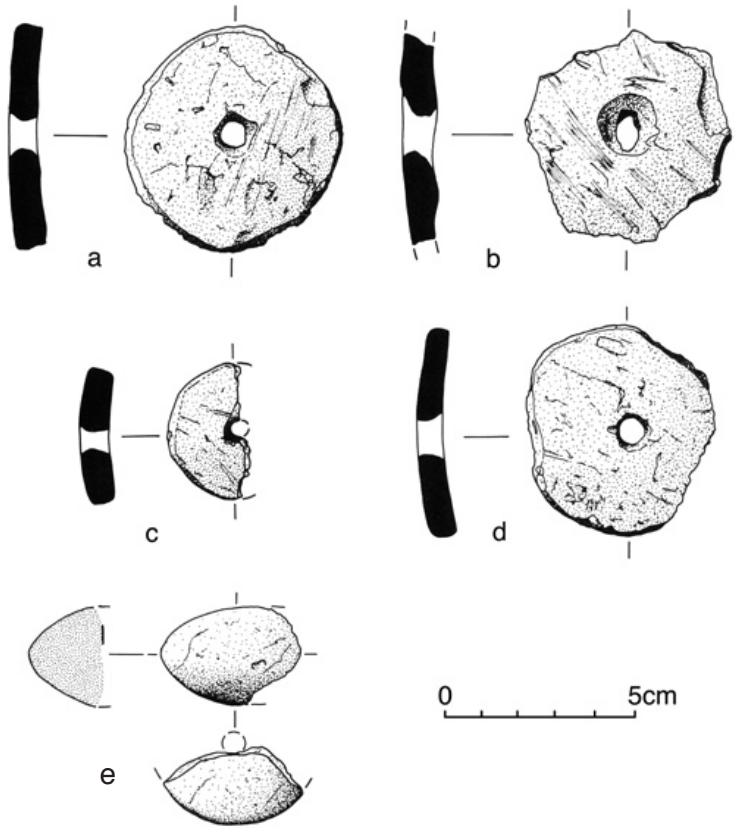

ILLUSTRATION 3.18
Ceramic artefacts, (a) SF98, (b) SF256, (c) SF278, (d) SF280, (e) SF284.

and may simply indicate that the individual had died violently. The possible significance of the curation and re-working of human remains is discussed further in Chapter 7.

HB01 (not illustrated)
Partial skull. This partial human skull consisted of an almost complete frontal bone with upper orbits and the upper part of the nasal bone, the anterior third of the left parietal and a small part of the right parietal. The coronal suture (the joint between the frontal bone and the parietals) had fused, being obliterated internally, although still visible externally. The degree of fusion suggests that this belonged to an adult, probably of middle age, although as the rate of cranial suture fusion varies greatly between individuals, the assessment of age must be considered as tenuous. The brow ridges on this individual were well pronounced and the forehead sloping suggesting that this was a male. No pathological lesions were noted.

Another fragment of cranium could not be joined to the remainder of the skull and was of a slightly different colour and texture. It is similar to part of a human temporal bone but may in fact be animal. If it is human it is unlikely to be part of this skull. Gnaw marks are visible on the external surface of the fragment. Context 031, Block 15, Phase 1/2 (hollow scooped into fill of Wheelhouse 2 prior to building of Structure 3) (see Section 2.3.2.2 and 2.4.2.1).

HB02 (not illustrated)
Cranial fragment. Triangular fragment of cranium, 65mm × 60mm × 55mm. The presence and position of furrows for the parietal branch of the middle meningeal vessels on the internal surface indicate that this is part of a left parietal bone, most likely from the superior anterior part of the bone, close to the sagittal suture. Cranial wall thickness is approximately 7.5mm. It is known that the cranium thickens with age, although the rate varies amongst

individuals and it is not possible to directly correlate age with thickness. However, it is likely that this fragment came from an adult. If so, the presence of open coronal sutures, which gradually fuse and eventually obliterate with age, albeit at a variable rate, would suggest that this was a young adult. There is no indication of sex. Fine pits over the external surface of the fragment indicate increased porosity of the vault and may be an indication of iron deficiency anaemia (Roberts & Manchester 1995, 167–9).

The longest edge of the fragment appears to have broken naturally, while the shortest edge has separated at the open coronal suture (the suture which joins the parietal bone with the frontal bone). The third edge is slightly curved and has been bevelled, possibly by a knife, along the length of the edge of the fragment, both on the internal and external surfaces, to form a shallow V-shape. Apart from the remodelling on the underside of the altered edge, no other modifications to the internal surface are visible. On the external surface, close to and parallel to the cut edge, an area approximately 10mm wide along the length of the fragment surface has been shaved. The shaving takes the form of five shallow scoops. This deliberate remodelling continues right up to the adjoining broken and sutural edges, indicating that it may originally have extended over a greater area.

Several cut marks, peripheral to the shaved area, are also visible. The longest is approximately 17mm long and *c* 1mm deep. Another shallower cut is *c* 8mm long. At least eight other fine cuts on the bone surface can be seen with the aid of a magnifying glass. The purpose of this alteration is not entirely clear. There is no indication of healing of the bone surface as would have occurred had this operation been carried out during life and the individual had survived, and so the changes must either been inflicted just prior to the time of death or at some subsequent point. Equally, the appearance of the changes suggest that they are not recent, and probably occurred in antiquity while the bone was still 'fresh'. One, although unlikely, possibility is that the marks were caused by scalping. Scalping involves the removal of the scalp using a sharp implement 'leaving short, straight or slightly curved cut marks on the frontal and parietal bones of the skull' (Olsen & Simpson 1994, as quoted by Roberts & Manchester 1995, 85). The shaving and cut marks on the outer surface of this fragment could be interpreted as evidence for scalping, although the internal and external bevelling of the cut edge would rule this hypothesis out.

Another possible explanation for the modifications is that they were the result of trepanation. This has been practised by various cultures throughout the world, including Britain, since very early times (although no other Scottish cases are known to the author). The operation involved the removal of an area of the skull, although the precise methods used and the extent of bone removed varied. The most common method was 'the careful scraping of the bone with a sharp implement to the desired depth' (Ortner & Putschar 1981, 97). Roberts and Manchester (1995, 93), in discussing the various methods of trepanation, describe the scraping method as involving the removal of the bone surface and the bevelling of the edges of the wound. Operations were mostly performed on the left side of the frontal or parietal bone. Ortner and Putschar (1981, 97), in reporting the findings of research carried out by TD Stewart, state that the incision into the overlying skin 'may produce scratches on the underlying bone and can occasionally be seen peripherally to the trephine'.

The evidence for the scraping of the bone surface, the cut marks, the positioning of the lesion at the left parietal, and the bevelled edge in the Cnip fragment do point to trepanation as a strong possibility. The fact that the bevelling appears to have been carried from both an internal and external direction would at first seem to dismiss the possibility of trepanation. However, McKinley's description of a possible case from Hertfordshire refers to both inner and outer bevelling of the edges of the wound (McKinley 1992).

Unfortunately, this is only one small fragment and without having the whole skull, it is not possible to state with any degree of certainty that this is a definite case of trepanation. One would also expect, if this were a case of trepanning, that the bevelled edge would be curved inwards and not outwards as in the Cnip fragment. However, trepanning was often carried out secondary to a skull fracture and this could be the case here. If this is indeed evidence for trepanation, the absence of bone healing suggests that the person died during or soon after the operation. It is also possible that this bone was modified after death, although for what purpose is very difficult to imagine. Context 074, Block 2, Phase 3 (wall-packing behind north wall of Structure 8) (see Sections 2.5.3.2 and 2.5.1.1).

HB03 (not illustrated)

Cranial fragment. This piece of cranium, sub-triangular in shape and measuring approximately

95mm × 60mm × 60mm, consists of the posterior part of the right parietal bone with a small part of the adjoining occipital bone. The section of lambdoidal suture (which joins the parietals and occipital bone) is almost completely obliterated internally but still clearly visible externally. The edges all appear to have been broken naturally, that is, they had not been cut. The degree of sutural fusion suggests that this bone was from an adult, probably of middle age. There is no indication of sex. A traumatic lesion in the form of a cut mark is visible on the external surface of the parietal part of the fragment. The cut, about 12mm long, was superficial, only penetrating the uppermost part of the outer surface of the bone. Some bone repair of this minor injury can be seen, confirming that it occurred during life. A series of striations along one edge on the external surface may be gnaw marks, but the lack of corresponding tooth marks on the underside of the fragment suggests that, if so, they were inflicted before the bone was fragmented.

Evidence of drilling can be seen on the longest edge, forming an 'hourglass-shaped' perforation. This appears to have been formed by drilling both from the external surface and at the same point from an internal direction, to approximately half-way through the thickness of the bone until both perforations met. The drill hole on the external surface is wider and deeper than that on the internal side. Another attempt at drilling can be seen on the internal surface very close to the first. It is quite possible that the fragment split upon drilling, either on the first or second attempt.

The purpose of the drill holes is not clear. One method of trepanation was to drill similar small holes in the skull and cut through the narrow connecting bars between them (Brothwell 1981, 123). However, the drilling on this fragment was partly carried out from the internal surface, ruling out trepanation as a possible cause. For whatever purpose, the bone must have been modified some time after death. Context 171, Block 8b, Phase 2 (deposits formed within entrance area to Structure 4) (see Section 2.4.3.4).

HB04 (not illustrated)

Tibia fragment. Section of distal half of right tibia, broken at each end. The distal end has fractured just above the distal articulation and, at the proximal end, about midshaft. Both breaks appear recent, possibly resulting from machine damage during the initial clearance of the site (as the context from which the fragment derives was the uppermost archaeological horizon in this part of the site). The external surface of the bone is somewhat eroded, in keeping with deposition in a midden but there is no evidence of gnawing. Size suggests that this belongs to an adult, although it could also be from an adolescent. There is no indication of sex, or evidence of trauma or disease. Context 018, Block 18, Phase 3 (midden accumulated over the abandoned Structure 4).

3.5 BONE AND ANTLER

Fraser Hunter
(with species identifications by Andrew Kitchener)

3.5.1 GENERAL

The great value of the Cnip assemblage is its close contextual dating. This gives it considerable importance in the wider study of bone and antler artefacts: so much of the wealth of bone from the Western and Northern Isles comes from early excavations where the stratification is unreliable, and the dating of individual types and working techniques is resultingly vague. While some types are undeniably long-lived, with others we may expect more chronological change, and the Cnip material will be of value for future studies in providing some fixed points. Many of the types represented here are common on wheelhouse sites, and frequent reference will be made to the important survey by Hallén (1994) of the large assemblages from the long-lived wheelhouse sites at Foshigarry and Bac Mhic Connain, North Uist, as her work summarizes much of the available literature. Only with more unusual items are wider parallels sought.

In total there are 81 bone and antler finds (55 objects or roughouts and 26 fragments of working debris). The catalogue attempts to classify the finds in functional terms using the following categories: manufacturing evidence; tools; ornaments; leisure; fittings; and uncertain (Table 3.21). This has the advantage of interpreting the data in more human terms, but there are some problems. In particular, it risks creating a certainty over use which is often lacking. Interpretation is hindered by a modern unfamiliarity with the uses of bone tools, and for many artefact types the suggested functions are little more than guesses or span a range of possibilities. This greatly inhibits any reconstructions of lifestyle, and is an area which deserves more thorough appraisal: Clarke (1971, 33–8) has highlighted the value of ethnographic analogy, but this has been little pursued.

The utilized whale bone suffers from particular difficulties. While it was clearly extensively used as

TABLE 3.21
Composition of the bone and antler assemblage; there appear to be no significant differences between phases.

Category	Phase 1	Phase 2	Phase 3	Later / uncertain	Total
Antler-working debris	2	10	10	1	23
Bone-working debris		3			3
Roughouts	2	6	3		11
Tools	4	10	8	1	23
Ornaments	2	5	1		8
Leisure		1	1		2
Fittings	1				1
Miniatures			1		1
Unidentified	1	4	1		6
Missing		3			3
Total	12	42	25	2	81

a resource, the surviving fragments are often insufficient to identify with certainty, and even with relatively intact pieces functions can be quite obscure (MacGregor 1974, 86). Some categories of whale bone artefact are well-defined and widespread (ibid, 86, 106), but many smack of expediency in the use of an occasional resource (cf Hallén 1994, 199). The species exploited at Cnip comprise sperm whale and baleen whales, including a definite minke whale. In most cases vertebrae, ribs and parts of the skull were used. All of these species commonly strand, offering resources of meat, blubber and bone.

The finds give us a number of insights into life at Cnip. Antler, land mammal and cetacean bone were all being worked on the site. The surviving products are everyday rather than specialist, and are dominated by a wide range of tools (see Section 3.5.3), with evidence of agriculture (see Section 3.5.3.1) and the working of hides (see Section 3.5.3.2), textiles (see Section 3.5.3.3), and either pottery manufacture or bronze casting (see Section 3.5.3.4). Two different forms of composite tools are also present (SF101, SF181, SF299, Ill 3.21h–j, see Section 3.5.3.6), where a bone or antler sleeve acted as a holder for an inserted tool tip. This has rarely been noted before, but a survey of NMS collections revealed similar examples to SF181 from Midhowe, Orkney; A' Cheardach Mhor, South Uist; and Bellochban, North Uist (Callander & Grant 1934, 493, fig 36:1–2; Young & Richardson 1960, 163, fig 7:15; Beveridge 1911, 230–1). Ornaments (see Section 3.5.4) are represented by simple pins (see Section 3.5.4.1), while a range of domestic fixtures and fittings were also being produced.

All the above are what would be expected in a wheelhouse. The most interesting aspect of the assemblage is a small number of unusual finds. Their identification is not straightforward, with detailed arguments rehearsed below. Two of the finds give some insight into leisure activities at the site. The gaming piece (SF145, Ill 3.24b, see Section 3.5.5) is an unusual find, although there is other evidence for board games at this time both in the Western Isles and elsewhere in Scotland. Its relatively elaborate shape suggests it may have been the equivalent of a king piece in a game of strategy. Burial evidence from

TABLE 3.22
Raw material by phase. wd = working debris.

Phase	Antler + wd	Bone + wd	Cetacean	Uncertain
1	5 + 2		2	3
2	8 + 10	2 + 3	16	4
3	1 + 10	4	5	4
Later / uncertain	0 + 1			1
Total	14 + 23	6 + 3	23	12

elsewhere suggests board games were a pursuit of the wealthy, and this may be relevant to the occupiers of Cnip, although a wider study of games in the Scottish Iron Age is required. The ?lyre tuning peg (SF50, Ill 3.24a, see Section 3.5.5) is another unusual find which hints at occupants of some status. The putative sword model (SF20, Ill 3.24d, see Section 3.5.7), while more tentative, is another unusual but not unparalleled find, most likely to represent a votive miniature.

The osteological identifications are the work of Dr Andrew Kitchener (NMS, Natural Sciences Dept). His full report is in the site archive; Table 3.22 summarizes the results. It is notoriously hard to identify finely worked pieces, especially items such as pins where the original surfaces and features have been worked away, but it is likely that many of these are of bone: the natural form of bones such as ulnae and fibulae is well-suited to pin manufacture, while such ornaments do not require the structural strength of antler and cetacean bone. With this marked caveat, the assemblage is dominated by antler and cetacean bone, both noted for their structural properties (MacGregor 1985, 23–29). They are thus good choices for the tools which dominate the assemblage. There are patterns within this: anvils and working surfaces are all of cetacean bone, as these combine resilience with large bones offering flat surfaces; while all the identifiable handles are of antler, which again combines a convenient shape with good physical properties of strength and toughness. There are no clear patterns of raw material use by phase, although it is noteworthy that cetacean bone was available throughout the site's use.

3.5.2 MANUFACTURING EVIDENCE

3.5.2.1 Antler-working debris

The antler-working debris illustrates a typical production sequence, with removal of the base, tines and terminal points to create segments of beam for working into artefacts (Hallén 1994, 196). The surviving bases are all (bar one) from cast antlers, and all appear to be from young animals or deer with poorly developed antlers, typical of free-ranging Scottish red deer today. Some tines were subsequently used for artefacts such as handles (SF250, Ill 3.21g, see Section 3.5.3.5), but most were discarded. The main technique used in dismembering the antler was by circumferential sawing through the cortex and then snapping, a typical approach (Hallén, op cit; MacGregor 1985, fig 32), but circumferential knife-cutting is also represented (SF66, SF143), as is chopping by knife (for small tines eg SF202) and axe (SF52). In one instance there are crush-marks from (ineffective) use of a small hammer (SF292). There is no chronological patterning to the different techniques.

Some of the offcuts saw expedient use. There are examples used as working surfaces (SF170, Ill 3.22c, see Section 3.5.3.7 and SF69f), while on SF288 the fracture surface was hollowed, suggesting use as a convenient support or temporary handle.

Only pieces of antler with working evidence were studied; unworked antlers or fragmentary pieces with no surviving tool traces were not considered. The working debris is found throughout Phases 1–3.

BASES (N=7)

SF66 (not illustrated)
Proximal end of cast antler, broken at both ends. Bez tine removed by knife-cutting and snapping. Other working traces destroyed. L 160mm. Context 113, Block 1, Phase 3 (occupation deposits within Structure 8) (see Section 2.5.1.2).

SF69B (not illustrated)
Shed base and brow tine, detached by sawing and snapping. L 205mm. Context 113, Block 1, Phase 3 (occupation deposits within Structure 8) (see Section 2.5.1.2).

SF69F (not illustrated)
Shed base, detached above bez tine by sawing and snapping; tines removed by chopping. Scattered knife cuts over one surface suggest expedient use as working surface. 85 × 72 × 45mm. Context 113, Block 1, Phase 3 (occupation deposits within Structure 8) (see Section 2.5.1.2).

SF143 (not illustrated)
Cast antler base, detached from rest of antler by circumferential knife-cutting and snapping. 42 × 36 × 35mm. Context 196, Block 5b, Phase 2 (Bay 1 of Wheelhouse 1).

SF286 (not illustrated)
Shed base and lower beam, the brow tine cut off, bez tine intact. Punch marks at beam-brow tine junction from expedient use as a working surface. Worn. L *c* 85mm. Context 204, Block 5b, Phase 2 (central area of Wheelhouse 1).

SF287 (not illustrated)
Shed antler base, broken, detached above the bez tine by chopping and snapping; the tines were left intact. 86×114mm. Context 109, Block 1, Phase 3 (Structure 8 walling).

SF288 (not illustrated)
Discarded base of a butchered antler, chopped and snapped below the tines. The fracture surface was partly hollowed out, perhaps to serve as an expedient handle or support. L 87mm, W 53mm, T 40mm. Context 048, Block 7, Later Activity (upper fill over Structure 2 entrance extension) (see Section 2.4.5.3).

BEAM SEGMENTS (N=3)

SF132 (not illustrated)
Beam segment, unused, with chopmarks at one end from detachment; other end broken. L 113mm, W 29mm, T 26mm. Context 204, Block 5b, Phase 2 (central area of Wheelhouse 1).

SF202 (not illustrated)
Beam segment, worn. Ends damaged; possible saw-cut at one end. Trez tine removed by knife-cutting. L 83mm. Context 204, Block 5b, Phase 2 (central area of Wheelhouse 1).

SF289 (not illustrated)
Beam portion, ends broken, trez tine removed by knife-cutting. Differentiated from the other find from *c* 204 on the grounds of its less worn condition. L 180mm. Context 204, Block 5b, Phase 2 (central area of Wheelhouse 1).

DETACHED TINES (N=7)

SF37 (not illustrated)
Brow tine, detached by circumferential sawing and snapping. L 180mm. Context 106, Block 6, Phase 1 (wall packing in Wheelhouse 1) (see Section 2.3.1.1).

SF114 (not illustrated)
Tine, detached by circumferential sawing and snapping. L 55mm. Context 201, Block 5b, Phase 2 (central area of Wheelhouse 1).

SF138 (not illustrated)
Tine, broken. Faint knife-cut near base, otherwise working traces destroyed. L 65mm. Context 045, Block 4, Phase 3 (entrance area walling of Structure 3).

SF219 (not illustrated)
Brow tine, detached by circumferential sawing and snapping. L 100mm. Context 235, Block 5a, Phase 2 (central area of Wheelhouse 1) (see Section 2.4.1.5).

SF221 (not illustrated)
Terminal portion of tine, detached by circumferential sawing and snapping. L 105mm. Context 256, Block 5a, Phase 2 (Bay 2 of Wheelhouse 1) (see Section 2.4.1.5).

SF290 (not illustrated)
Tine detached by sawing and snapping. L 105mm. Context 123, Block 6, Phase 1 (Wheelhouse 1 wall-packing) (see Section 2.3.1.1).

SF291 (not illustrated)
Tine fragment, detached by sawing and snapping, some knife cuts on surface. L 62mm. Block 1, Phase 3 (Structure 8).

TERMINALS (N=4)

SF52 (not illustrated)
Terminal portion of antler, removed by angled chops with an axe. Tips of tines broken. L 165mm. Context 113, Block 1, Phase 3 (occupation deposits within Structure 8) (see Section 2.5.1.2).

SF69C (not illustrated)
Terminal, detached by sawing and snapping, with traces of incipient sawing round one of the branched tines. 59×56×25mm. Context 113, Block 1, Phase 3 (occupation deposits within Structure 8) (see Section 2.5.1.2).

SF69D (not illustrated)
Terminal with three points removed by sawing and snapping. 134×88mm. Context 113, Block 1, Phase 3 (occupation deposits within Structure 8) (see Section 2.5.1.2).

SF111 (not illustrated)
Terminal portion of antler, removed by circumferential sawing and snapping. L 120mm. Context 195, Block 5b, Phase 2 (Bay 1 of Wheelhouse 1).

OTHER (N=2)

SF69A (not illustrated)
Shed antler, unmodified apart from some working of all the tine tips, for uncertain purposes, and removal of the terminal tines. The bow tine has a notch cut into it;

the bez tine has the tip removed in a concave facet; the trez tine has the tip removed, a deeper concave facet, and a shallow marginal groove incised on one side. The end of the beam is slightly hollowed. The purpose of this working is unclear. L 320 mm. Context 113, Block 1, Phase 3 (occupation deposits within Structure 8) (see Section 2.5.1.2).

SF292 (not illustrated)
Partly worked, poorly developed shed antler, the brow tine partly cut off and part of the crown removed in an angled cut. Upper end broken, but there were attempts to remove the trez tine with chop marks and, unusually, crush marks around its base. L 270 mm, crown D 43 mm. Context 287, Block 5a, Phase 2a (deposits in Bay 7, Wheelhouse 1) (see Section 2.4.1.5).

3.5.2.2 Bone-working debris
Animal bone-working debris is sparse and non-diagnostic, but enough to indicate on-site utilization of bone for tools. The few fragments are associated with Structure 5 (Phase 2) and Wheelhouse 1 (Phase 2).

SF83 (not illustrated)
Split longbone fragment, notch cut at one end, other worn. L 64mm, W 25mm, T 16mm. Context 134, Block 13, Phase 2 (fill of Structure 5) (see Section 2.4.5.3).

SF84 (not illustrated)
Split longbone fragment. L 67mm, W 15mm, T 5mm. Context 140, Block 13, Phase 2 (fill of Structure 5).

SF293 (not illustrated)
Proximal end of longbone shaft, with extensive knife-cuts where the rest of the bone was detached. This portion was then discarded, although a series of fine punch-marks at the articular end indicate it saw expedient use as a working surface. Slight charring at articular end. L 149mm, W 56.5mm, T 40mm. Context 173, Block 5b, Phase 2 (Bay 2 of Wheelhouse 1).

3.5.2.3 Roughouts

SF25 (Ill 3.19a)
Whale bone roughout or stopper. Approximately cylindrical block, covered in knife-trimming toolmarks. Could be either a blank for an uncertain object or a stopper for an organic container. L 54 mm, D 30×27mm. Context 074, Block 2, Phase 3 (wall packing of Structure 8).

SF27 (Ill 3.19b)
Whale bone roughout, the plano-convex section suggesting it was a rib. Surfaces trimmed by knife or gouge; one end roughly angled by a gouge (with blade 14mm W); the other sawn and sapped. Knife-trimming at this end after sawing indicates this was a roughout rather than an offcut. 52×35×20.5mm. Context 084 area D, Block 1, Phase 3 (occupation deposits within Structure 8).

SF71A (Ill 3.19c)
Unfinished handle? Antler beam segment, detached by circumferential sawing and snapping at each end; broken tine still attached; cancellous tissue crudely hollowed in beam and tine, suggesting use as handle. L 95mm. Joins SF71b. Context 031, Block 15, Phase 1 (fill of Wheelhouse 2) (see Section 2.3.3.3).

SF71B (Ill 3.19c)
Handle roughout. Antler beam segment, detached by circumferential sawing and snapping at each end. Cancellous tissue part-hollowed at one end to take tang, but abandoned before completion. L 100mm. Joins SF 71a. Context 031, Block 15, Phase 1 (fill of Wheelhouse 2) (see Section 2.3.3.3).

SF110 (not illustrated)
Unfinished worked whale bone fragment, with one face and both ends broken. Two perpendicular faces and one angled one bear knife-trimming facets. Broken off an unidentified artefact, perhaps unfinished. L 100mm, W 20mm, T 15mm. Context 173, Block 5b, Phase 2 (Bay 2 of Wheelhouse 1).

SF162 (not illustrated)
Worked length of whale bone, split from larger bone. Wear obscures working traces, and it is unclear if the splitting was deliberate or accidental. Ends worn and probably not original. One face is flat, with extensive knife-trimming facets; the curved cortical face is knife-trimmed flat at one end and bears three single chopmarks 45mm apart along the edge where it meets the cut face. Probably broken off an unidentified larger object, the chopmarks perhaps marking out the blank. L 250mm, W 37mm, T 25mm. Context 195, Block 5b, Phase 2 (Bay 1 of Wheelhouse 1).

SF218 (Ill 3.19d)
Unfinished whale bone vessel. Fragment, probably of a vertebra, with the epiphyseal surface at one end; the other end is cut at an angle with a heavy bladed tool,

with the centre being hollowed by heavy angular cuts when the object broke. H 133mm, surviving chord length 73mm, surviving radial width 58mm. Context 242, Block 5a, Phase 2 (Bay 2 of Wheelhouse 1) (see Section 2.4.1.5).

SF294 (Ill 3.19e)
Antler tine roughout. The end is now broken but shows slight hollowing of the cancellous tissue. There has been an unfinished attempt to cut the tine 17mm from the broken end by saw-cut circumferential grooving, snapped off in one area only. Some 10 mm above this groove are some shallow knife-cut notches, one quite large. It is unclear what the intended product was. L 82.5mm, D 16mm. Context 085, Block 8, Phase 2 (midden accumulation over Structure 4).

SF295 (not illustrated)
Sub-cylindrical faceted length of cetacean cancellous tissue, broken at one end, flat at the other. Perhaps a peg in course of manufacture. L 56mm, D 14.5mm. Context unknown, Block 15, Phase 2.

SF296 (Ill 3.19f)
Broken sub-oval cetacean bone object with natural cortex on one side, the other split through the cancellous tissue. The edge is bevelled by broad knife-cuts on two edges, and more crudely cut and snapped on the others; one corner is missing, apparently accidentally detached by an over-vigorous chop. No evidence of use; this is a roughout broken in course of manufacture. L 123mm, W 103.5mm, T 21mm. (Found with an amorphous lump of cortical tissue, apparently unworked, 120 × 81 × 40mm). Context 201, Block 5b, Phase 2 (central area of Wheelhouse 1).

3.5.3 TOOLS

3.5.3.1 Agriculture/construction

SF72 (Ill 3.20a)
Mattock or similar tool. Wedge of cetacean bone, broken and worn at the butt end with a curved blade edge at the other, asymmetrical through wear. A band of wear polish is visible along the edge on both faces, more developed on the cancellous face. The strength and resilience of whale bone made it appropriate for heavy-duty tools such as ard points (Rees 1979, 40), spades (Crawford 1967, 88–9), mattocks and hoes (Ballin Smith 1994, 181–2). Damage inhibits identification, but the morphology and wear are consistent with use in a chopping motion, suggesting it was a mattock for agricultural or construction purposes. L 150mm, W 60mm, T 28mm. Context 029, Block 18, Phase 3 (midden deposit formed in hollow next to wall, Structure 10).

3.5.3.2 Hide working

SF40 (Ill 3.20b)
Awl, created by making an angled cut across the shaft of a tibia and abrading the resulting point to shape: the abrasion scars are still clearly visible, although the tip itself shows some wear. A common Iron Age type (Hallén 1994, 205). L 110mm, W 24mm, T 17mm. Unstratified (section collapse above Structure 8, so most likely Phase 3).

SF297 (Ill 3.20c)
Flensing knife? Elongated thin blade made from split metatarsus. The naturally hollow proximal end, now broken, acted as a handle or handle socket. The blade is highly polished all over from use. Morphologically this is close to dagger beaters, used when weaving on an upright loom to beat the weft into place (MacGregor 1985, 188–9); the high degree of polish is consistent with this. However, this interpretation is unlikely as the sharpness of the edges would have damaged the threads (cf SF172, Section 3.5.3.3). It is better interpreted as a specialized knife, perhaps for flensing as it would have less risk of damaging the hide than an iron blade. There are comparable finds from Dun Mor Vaul (MacKie 1974, 145) and A'Cheardach Mhor (Young & Richardson 1960, 163 and fig 8, 18; the suggested function for scooping out shellfish seems unlikely). L 155mm, W 22mm, T 15mm. Context 100, Block 1, Phase 3 (deposit within Structure 8).

SF124 (not illustrated)
Tip of polisher of cetacean bone. Broken rounded tip of an implement, lentoid in section; use-polish on the cortical tissue suggests it functioned as a polisher, perhaps in hide-working (cf Hallén 1994, Ill 7, 1). L 48 mm, W 32 mm, T 11 mm. Context 204, Block 5a, Phase 2 (central area of Wheelhouse 1) (see Section 2.4.1.5).

3.5.3.3 Textile working

SF42 (Ill 3.21a)
Needle with broken tip. The shaft is ovoid in section, flattening at the squared head; biconical perforation D

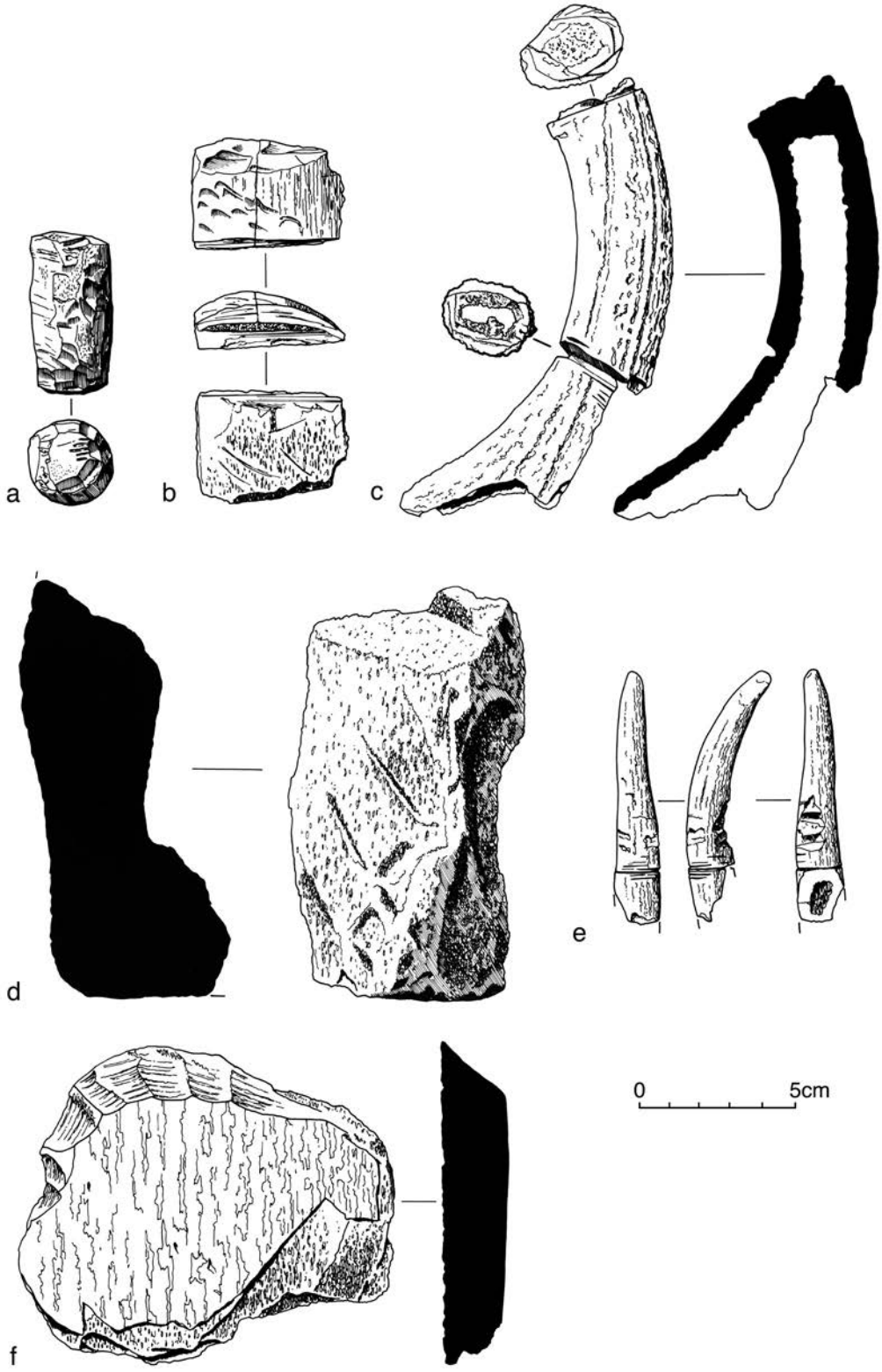

ILLUSTRATION 3.19
Roughouts, (a) SF25, (b) SF27, (c) SF71a and SF71b, (d) SF218, (e) SF294, (f) SF296.

2×2.5mm, with no traces of wear. L 55.5mm, head 2×4.5mm, shaft 3×3.5mm. Context 109, Block 1, Phase 3 (Structure 8 walling).

SF172 (Ill 3.21b)
Beater tip. Flat rectangular-sectioned shaft tapering to a flat point, highly polished all over and tip rounded. Although its fragmentary nature inhibits interpretation, the polish and lack of sharp edges suggest this was a beater used in weaving (MacGregor 1985, 188–9). L 40mm, shaft 6.5×3mm. Context 220, Block 19, Phase 3 (threshold deposit for Structure 3).

SF204 (Ill 3.21c)
Long-handled comb of cetacean bone, undecorated, with an expanded 'fish-tail' butt end. The toothed end is expanded and originally bore probably 11 teeth, with the outer one on either side now broken and two more lacking their tips. The surviving teeth lie in the same plane and are an almost constant length. They are rectangular in section, the tips being rounded from use and bearing wear-polish; one also has faint transverse grooves on one face.

There has been an extended and as-yet unresolved debate over the function(s) of long-handled combs, with the main options being hair-combs or a range of possible uses in textile manufacture (Hodder & Hedges 1977; Sellwood 1984, 371–8; Coles 1987, 105–6). No consensus has been reached, and indeed the range of shapes, sizes and wear patterns must imply a range of uses. The type is common in Atlantic Scotland (Hodder & Hedges 1977, 25–6; Hallén 1994, 222–4). L 133mm, W 40mm, T 15mm. Context 242, Block 5a, Phase 2 (Bay 2 of Wheelhouse 1) (see Section 2.4.1.5).

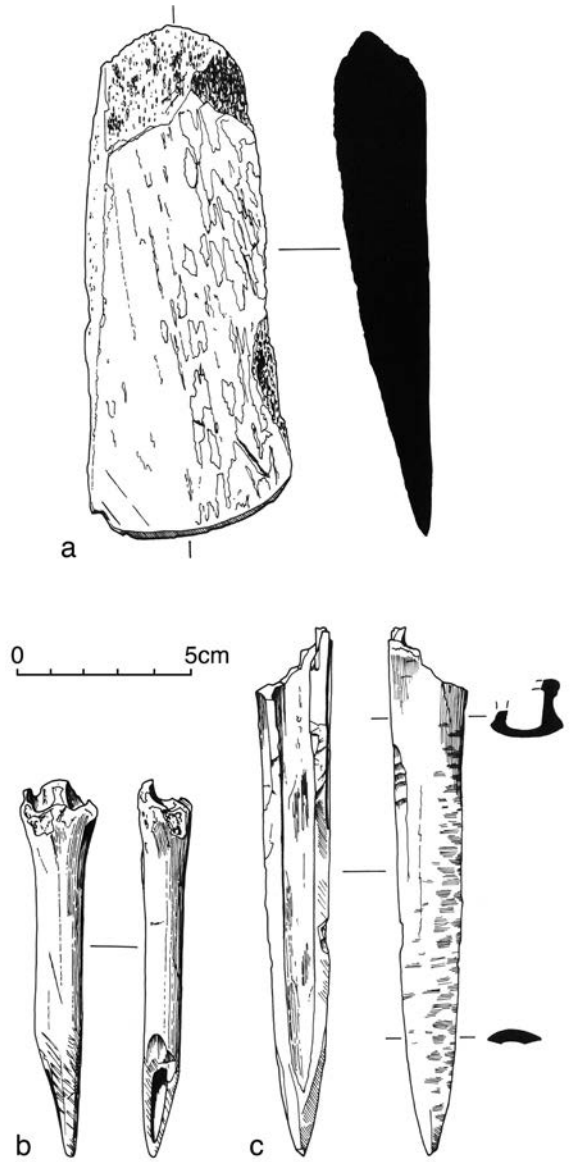

ILLUSTRATION 3.20
Tools, (a) SF72, (b) SF40, (c) SF297.

3.5.3.4 Pottery manufacture or bronze casting

SF10 (Ill 3.21d)
Modelling tool. Bone, highly polished, with one spatulate flattened end, the other terminating in a blunt point. It seems too fine for hide-working, and was probably used in forming wax models for lost-wax bronze casting or shaping and decorating pottery (Hallén 1994, 207). L 115mm, W 10mm, T 5mm. Context 025, Block 18, Phase 3 (within wall, Structure 10).

SF91 (not illustrated)
Modelling tool. Broken, with a thin sub-rectangular shaft expanding into a flat spatulate end. The working edge has slight use-polish and abrasion scars from repair or reworking. Toolmarks of knives and abrasives used in shaping the tool are visible. L 78mm, shaft 8.5×4mm, end W 11.5mm. Context 107, Block 6, Phase 1 (wall packing of Wheelhouse 1) (see Section 2.3.1.1).

3.5.3.5 Unattributed – handles

SF22 (Ill 3.21e)
Decorated handle, with a longitudinal perforation where the cancellous tissue has been hollowed out.

One end is well-finished and rounded off; the thinner end is more uneven, with saw cuts and ridges from cutting to shape, suggesting it was covered by the capping of the tang when in use. Decoration comprises three diagonal grooves near the thinner end, their shallow round section indicating use of an engraving tool such as a scorper (Maryon 1971, 64, 153). L 81mm, D 21 × 19mm, perforation D 9–9.5mm. Context 010, Block 10, post-abandonment (sand overburden).

SF250 (not illustrated)
Handle. Curved antler tine with tapering hollow for tang at curved end, 26mm deep and up to 6.5mm D. Cracks radiate from this hollow from stress during use. A slight surface depression at the far end may represent an abandoned hollowing attempt. Pronounced knife-cutting marks on two areas are presumably secondary. L 66mm, D 17mm. Context 069, Block 6, Phase 1 (jammed into pier on north side of entrance in Wheelhouse 1) (see Section 2.3.1.1).

SF298 (not illustrated)
Handle fragment? Antler beam fragment, sawn square at one end, with the interior hollowed; original form and length unclear. 41 × 18 × 8mm. Context 116, Block 16, Phase 1 (main enclosing wall of Structure 2).

3.5.3.6 Unattributed – composite tool heads

SF101 (Ill 3.21f)
Small pick with hollowed tip. Cast antler base and lower beam, chopped off from rest of antler. Bez tine removed by cutting and snapping. Tip of brow tine removed and a small socket hollowed, perhaps to take a (?metal) tip for use as a fine pick, perhaps for use as a punch. L 200mm. Context 172, Block 5b, Phase 2 (Bay 1 of Wheelhouse 1).

SF181 (Ill 3.21g)
Socketed tool head? Cylindrical antler beam segment, split longitudinally. It is roughly finished, with knife facets unsmoothed apart from some limited filing, but the ends have been smoothed to remove the rough edges from cutting it to size. There is a sub-circular central transverse perforation (D 14mm) and a somewhat irregular longitudinal perforation, varying from 8–10mm D. The ends show slight edge-flaking and burring consistent with a striking function, and (although the round hole is unusual for this) it seems plausible that a handle was inserted in the transverse hole with tool points being fitted into the longitudinal hollows. L 65mm, W 29mm, T 21mm. Found in fragments in two different contexts, 219 and 224, both in Bay 7 of Wheelhouse 1 (Block 5b, Phase 2).

SF299 (Ill 3.21h)
Small pick with hollowed tip. Lower portion of a shed antler with a small hollow (D 5mm, depth 3.5mm) in the tip of the brow tine, perhaps to function as a delicate punch or to hold a fine tool tip, as with SF101. An angled cut across the shaft exposed the cancellous tissue; this was hollowed out to create space for a lentoid-sectioned handle (*c* 10 × 20mm in section). It apparently saw little use; surviving cancellous tissue in the interior is undamaged, and a hole below the tine suggests the handle split the socket here. Shaft L 125mm, tine L 132mm. Context 272, Block 5A Phase 2a (brown sand deposit across Bay 1, Wheelhouse 1) (see Section 2.4.1.5).

3.5.3.7 Unattributed – working surfaces/anvils

SF41 (Ill 3.22a)
Flat cetacean plaque. Split from skull, slightly curved and expanded towards one end where it is broken. Edges and surviving end are trimmed straight; notch cut into intact end. Area of wear at narrow end of cortical face suggests use as a working surface or support of some sort; there are some cut-marks at the opposite end. L 180mm, W 70mm, T 20mm. Context 109, Block 1, Phase 3 (occupation deposits within Structure 8).

SF149 (Ill 3.22b)
Chopping board. Cetacean left ulna, fragmented at distal end. Unmodified apart from a series of chop-marks at the distal end, typically 10–20mm long, implying use as some form of chopping board. L 380 mm. Context 103, Block 8, Phase 2 (dumped material sealing occupation within Structure 4).

SF170 (Ill 3.22c)
Support for chopping. Cetacean bone, with one end the natural epiphyseal surface and the other chopped at an angle. Surface covered in heavy chopmarks, some deep, probably from an axe. The quantity and extensive scatter indicates they are not from butchery, and suggests expedient use as a support for chopping. L 120mm, W 103mm, H 73mm. Context 204, Block 5b, Phase 2 (central area of Wheelhouse 1).

SF300 (not illustrated)
Chopping board fragment of cetacean bone. Flat slice split from a larger bone, with fine knife-marks across

the surface. The intact edge and triangular tip are knife-cut; other edges lost. The thickness tapers from the point. L 187mm, W 86mm, T 4–14mm. Context 091 Block 1, Phase 3 (layer covering western interior of Structure 8).

SF301 (Ill 3.22d)

Cetacean limb bone used as an anvil or working surface; traces of rectangular slots or broken mortices at either end imply it was firmly held in an anvil or workbench. Knife-cuts are scattered over the surfaces; one surface is damaged (probably from use), while the opposite face has crush-marks from limited but heavy-duty use. L 235mm, W 52mm, T 42mm. Context 218, Block 11, Phase 1 (Wheelhouse 2 entrance) (see Section 2.3.3.3).

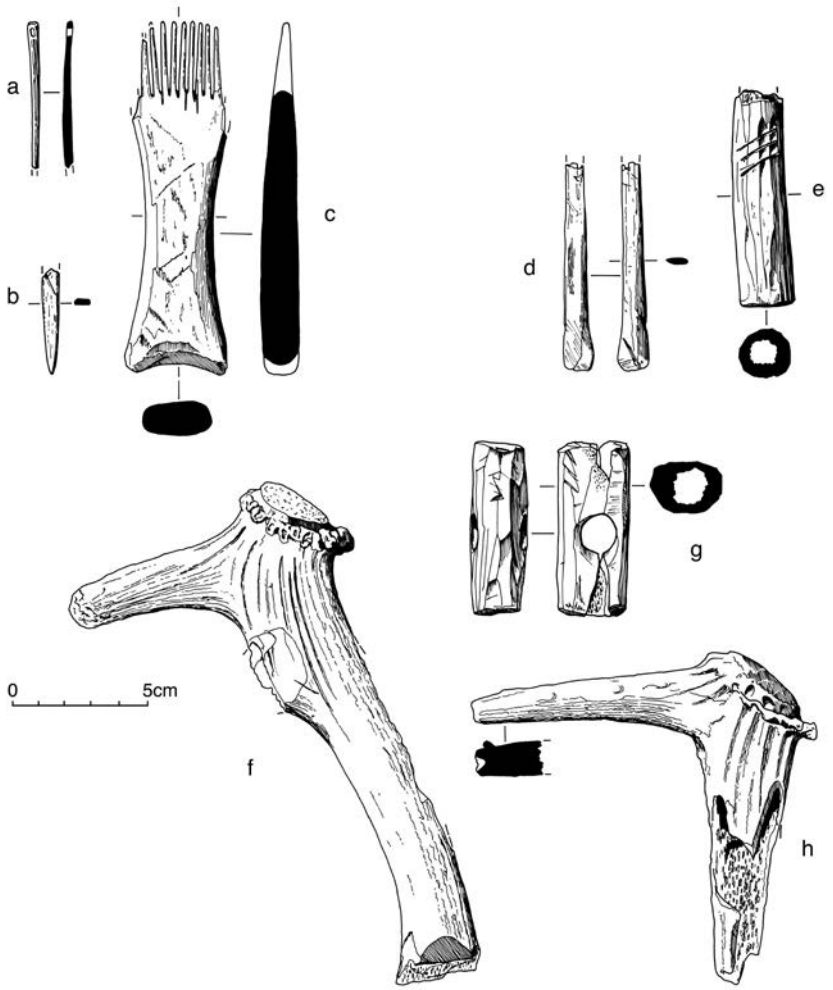

ILLUSTRATION 3.21
Tools continued, (a) SF42, (b) SF172, (c) SF204, (d) SF10, (e) SF22, (f) SF101, (g) SF181, (h) SF299.

3.5.3.8 Unattributed – miscellaneous

SF100 (Ill 3.22e)

Double-ended forked implement, lacking one prong, made from a naturally hollowed bone. The prongs are some 35mm long: those at one end bear slight use-polish. This is a well-known but enigmatic type, with a range of suggested uses from twining threads to removing hooks from fish throats (Hallén 1994, 210). The generic wear on this example offers little help in interpretation. L 115mm, W 37mm, T 18mm. Context 173, Block 5b, Phase 2 (Bay 2 of Wheelhouse 1).

SF302 (Ill 3.22f)

Peg or punch? Tine with the end squared and the surfaces knife-trimmed and smoothed, creating an irregular cylinder with a broken tip. The squared end is flattened and compacted, suggesting use as a peg or a punch. L 81mm, D 16 × 18.5mm. Context 272, Block 5a, Phase 2a (sand deposit across Bay 1, Wheelhouse 1) (see Section 2.4.1.5).

SF303 (Ill 3.22g)

Peg or point? Tine, the end squared and the surface lightly trimmed in places. The tip has been sharpened by two cut facets, suggesting use as a peg or a point; there are no visible use-traces to support the latter function. L 75mm, D 14.5 × 16m. Context 272, Block 5a, Phase 2a (sand deposit across Bay 1, Wheelhouse 1) (see Section 2.4.1.5).

See Roughouts (Section 3.5.2.3) for SF25, a possible stopper.

3.5.4 ORNAMENTS

3.5.4.1 Pins

The only ornaments in the assemblage are fasteners in the form of pins and point/pins. The latter term is used for points which are well-finished all over but lack the fine finish of pins (Foxon 1991, 194, 224; Hallén 1994, 215). The fineness of the examples below suggests they were used as pins. Typically for the Middle Iron Age,

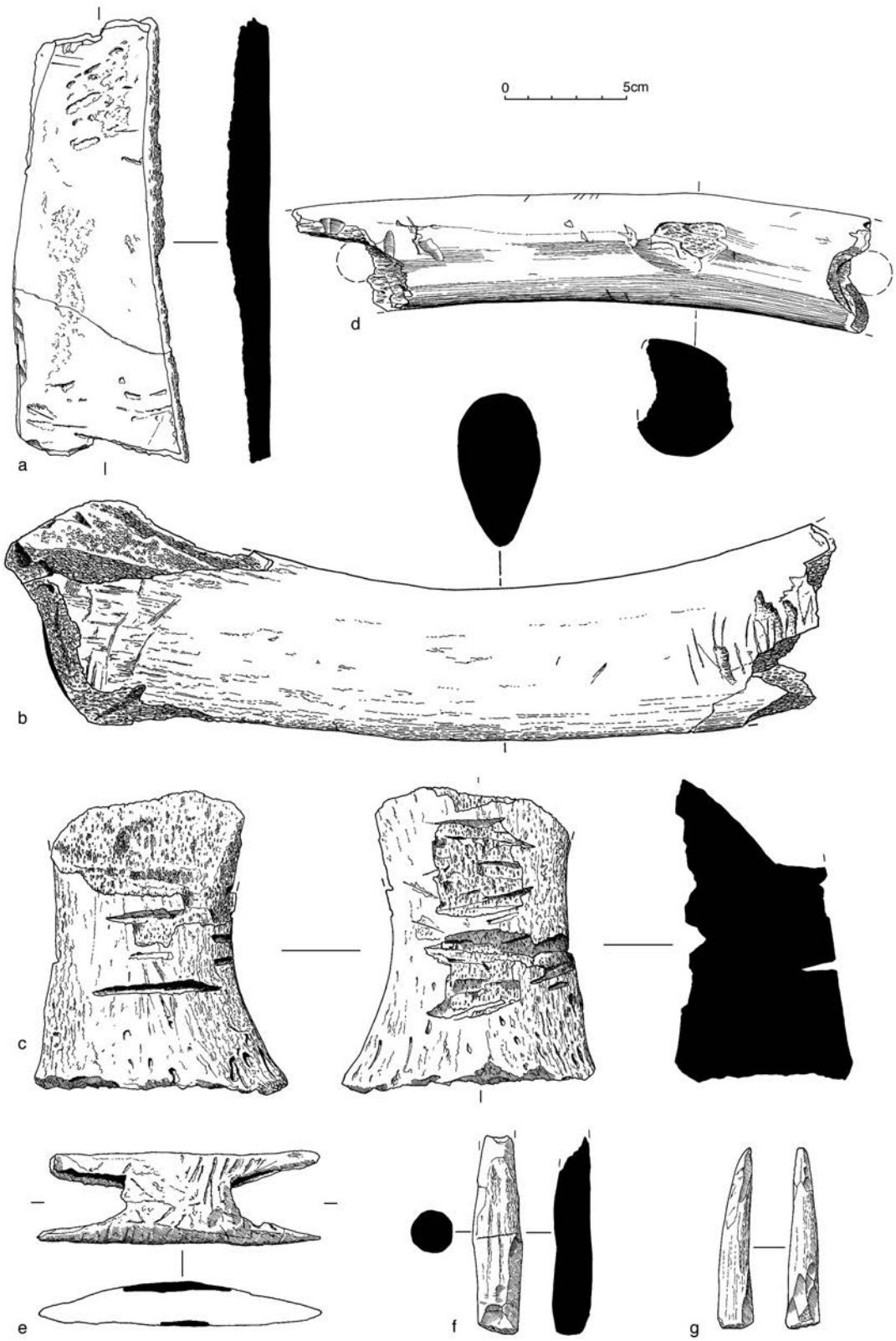

ILLUSTRATION 3.22
Tools continued, (a) SF41, (b) SF149, (c) SF170, (d) SF301, (e) SF100, (f) SF302, (g) SF303.

none of the pins are decorated. While the perforated example was undoubtedly a clothes fastener, the rest could function either in clothing or hair.

SF53 (Ill 3.23a)
Broken point/pin, lacking head. The shaft is sub-rectangular in section, tapering gradually to the tip. The finish is poor, with knife cuts and extensive abrasion scars from manufacture not polished away. However it is not unfinished, as the extreme end of the tip bears very slight use-polish, implying it was a coarse pin or point. L 72mm, shaft 6.5 × 4mm. Context 108, Block 6, Phase 1 (wall packing for Wheelhouse 1) (see Section 2.3.1.1).

SF73 (Ill 3.23b)
Pin tip, with ovoid section and slight polish all over. L 34.5mm, D 2.3 × 3.2mm. Context 131, Block 15, Phase 1 (fill of Wheelhouse 2) (see Section 2.3.3.3).

SF92 (Ill 3.23c)
Pin shank. Cylindrical rod, broken at both ends, well-finished but not polished – abrasion scars are still visible. Possibly starting to taper at one end. L 85mm, D 5mm. Context 034, Block 1, Phase 3 (wall packing for Structure 8).

SF96 (Ill 3.23d)
Pin. Fine, well polished and slightly curved; one end sharp, the other rounded. Made from an unidentified bone. L 95mm, D 4mm. Context 173, Block 5b, Phase 2 (Bay 2 of Wheelhouse 1).

SF115 (Ill 3.23e)
Tip of point/pin. Round section, more ovoid near break. Shaft faceted from knife-cutting with no attempt to smooth this off, but rounding and breakage of the tip shows it was not unfinished. L 49.5mm, shaft 4.5 × 3.5mm. Context 204, Block 5b, Phase 2 (central area of Wheelhouse 1).

SF187 (Ill 3.23f)
Pin tip. Very regular round section and polished finish. L 51mm, D 3.5mm. Context 223, Block 8, Phase 2 (occupation deposit in Structure 4) (see Section 2.4.3).

SF207 (Ill 3.23g)
Pin with perforated head. Broken across the perforation (D 3mm), where the section is flat, the shaft becoming ovoid and then circular towards the point. Well-finished; tip has slight use polish. There are two main types of such perforated points: kite-shaped ones, best seen as needles; and ones with an expanded head, interpreted as pins with the hole for a fastening cord (MacGregor 1974, 71; Hallén 1994, 213). As this example has broken across the perforation it cannot be securely identified, but the thinning of the bone suggests that the perforation was close to the end of the object and was not designed to survive the stresses involved in use as a needle. It is therefore classed as a pin. L 77mm, maximum W 9mm, shaft 6 × 4mm. Context 241, Block 5a, Phase 2 (Bay 1 in Wheelhouse 1) (see Section 2.4.1.5).

SF251 (Ill 3.23h)
Pin. The shape is slightly odd due to loss of outer cortical tissue at the point, which makes it look over-sharpened. Circular section, highly polished. The plain head is very slightly rounded at the end. L 101mm, D 4.5–5mm. Context 293, Block 5a, Phase 2 (Bay 7 in Wheelhouse 1) (see Section 2.4.1.5).

3.5.5 LEISURE

SF50 (Ill 3.24a)
Tuning peg from a lyre? Peg with round-sectioned shaft which expands into a faceted, approximately pentagonal head, tapered at the top. The shaft's tip is rounded, thinned and ribbed from circumferential abrasion for 4mm from the end, with some much slighter ribbing above this up to 11mm from the end. This implies the faceted head was designed to give a better grip when turning the peg. The obvious function is as a tuning peg for a stringed instrument. Pegs similar in size and shape are known from the Roman period onwards (Homo-Lechner & Vendries 1993, nos 77–81; Lawson 1978, 1996). The difficulty with the identification is the lack of a characteristic hole or slot at the end to take the string (Homo-Lechner 1996, 79–82). However, there seems no particular reason why the string could not simply be wrapped round or tied to the end, as the risk of it slipping off when held under tension is no greater than with a slot; the wooden pegs from the Sutton Hoo lyre, although distorted, also lack holes (Bruce-Mitford & Bruce-Mitford 1983, 636–7, 689–93; the argument that they were in damaged portions is incapable of proof). The wear marks are similar to other lyre pegs (Homo-Lechner & Vendries 1993, nos 79–81).

Assuming it derives from a stringed instrument, this is likely to have been a lyre, as the earliest evidence for harps is on ninth century AD sculptures (Ross 1998; MacGregor 1985, 146). In non-Mediterranean Europe, evidence for lyres is first found in the Hallstatt

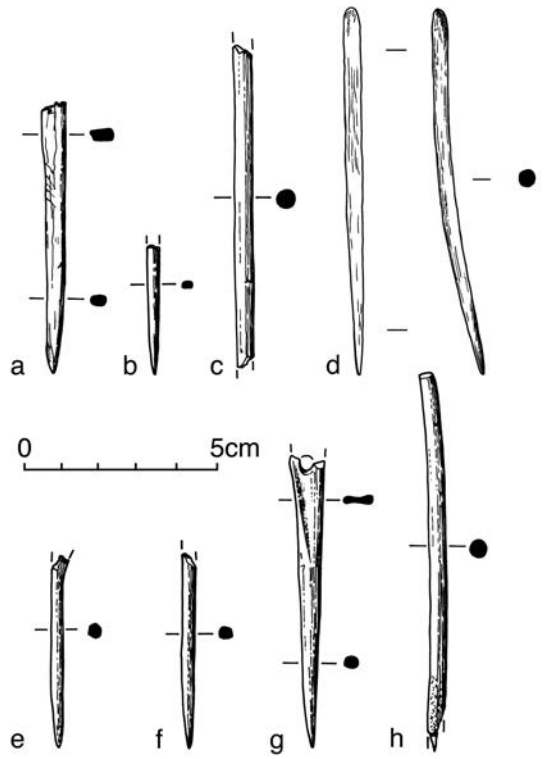

ILLUSTRATION 3.23
Pins, (a) SF53, (b) SF73, (c) SF92, (d) SF96, (e) SF115, (f) SF187, (g) SF207, (h) SF251.

C period in central Europe, and mid-late La Tène in northern Europe (Megaw 1968, 351–2; Vendries 1993, 30–1). The second-century BC statue from Paule, Brittany, provides the strongest evidence for the use of the lyre in the European later Iron Age, and tallies with the testimony of Classical authors (Vendries 1993, 30–1, 38; Ménez 1999). Surviving fragments are sparse: from Britain there is the third century BC lyre wrest plank from Dinorben (Savory 1964, 169–70) and a more dubious example from Dùn an Fheurain, Argyll (Megaw 1971), dated broadly to the first half of the first millennium AD; there is also a wrest plank of second century AD date from a Germanic settlement at Bremen-Habenhausen (Bischop 2002).

Without further clear examples of tuning pegs without string holes, the interpretation of this find must remain a little tentative: the literature is already clogged up with false flutes, whistles and other musical miscreants. However, the interpretation fits the observed morphology and wear of the object, and the parallels quoted above indicate there is contemporary evidence of such instruments. L 45.5mm, head W 6.5×5mm, shaft D 4.5–1.5mm (tip). Context 114, Block 18, Phase 3 (midden deposit sealed by Structure 10 wall).

SF145 (Ill 3.24b, colour plate 8)
Gaming piece. Antler beam segment, the base sawn flat to remove working marks. The beam has been tapered and worked into two thin prongs of cortical tissue, with the cancellous tissue hollowed between. Wear is limited and non-specific, the tips of the prongs are evenly worn and polished, but the cancellous tissue is unworn. The circumference of the base has very slight rounding and polish from wear, restricted to its very edge.

There would seem to be two main possibilities for this item's function, as a tool or a gaming piece. Two-pronged implements are well attested, and have a wide variety of possible functions (Hallén 1994, 210), but they generally have a handle or shaft. This example could be held between the fingers, but the restricted extent of the wear implies very delicate use; there is no obvious need to cut the base flat if it were hand-held. The shape is appropriate for a gaming piece, although one might expect the base to be more regular in plan. The wear restricted to the prongs could then arise from handling. This identification is proposed here.

Iron Age gaming pieces have not been well studied. From around the sixth century AD onwards relatively ornate gaming pieces are known, including anthropomorphic examples (eg Scalloway and Mail, Shetland: Sharples 1998, 172–80), phalanges with Pictish symbols (Burrian, Orkney; MacGregor 1974, nos 210–11), conical pieces (eg Dun Cuier, Barra: Young 1956, 319–20), and pieces similar to modern pawns (Gurness and Birsay, Orkney: Hedges 1987b, no 193; Curle 1982, no 275). The stone discs with Pictish symbols and other ornament (Thomas 1963, 45–7) may also be gaming pieces. Both pegged and incised gaming boards are known from Late Iron Age and Norse contexts (Curle 1982, no 274; Ritchie 1987, 60–3). However, board games are also attested earlier in the Iron Age, although the evidence awaits detailed study and many examples are poorly dated. There are counters, pegged pieces and a range of other, largely geometric, shapes. Simple circular stone and pottery counters are known from many sites (eg Dun Mor Vaul: MacKie 1974, 135, 151; Traprain Law: Cree 1923, figs 19.33–40; Howe: Ballin Smith 1994, 188–9), and there are a few rare cases of Roman glass gaming counters (see Hunter 1998; the glass counter from Dun Mor Vaul is a further example: MacKie 1974, 148). More ornate pieces are also

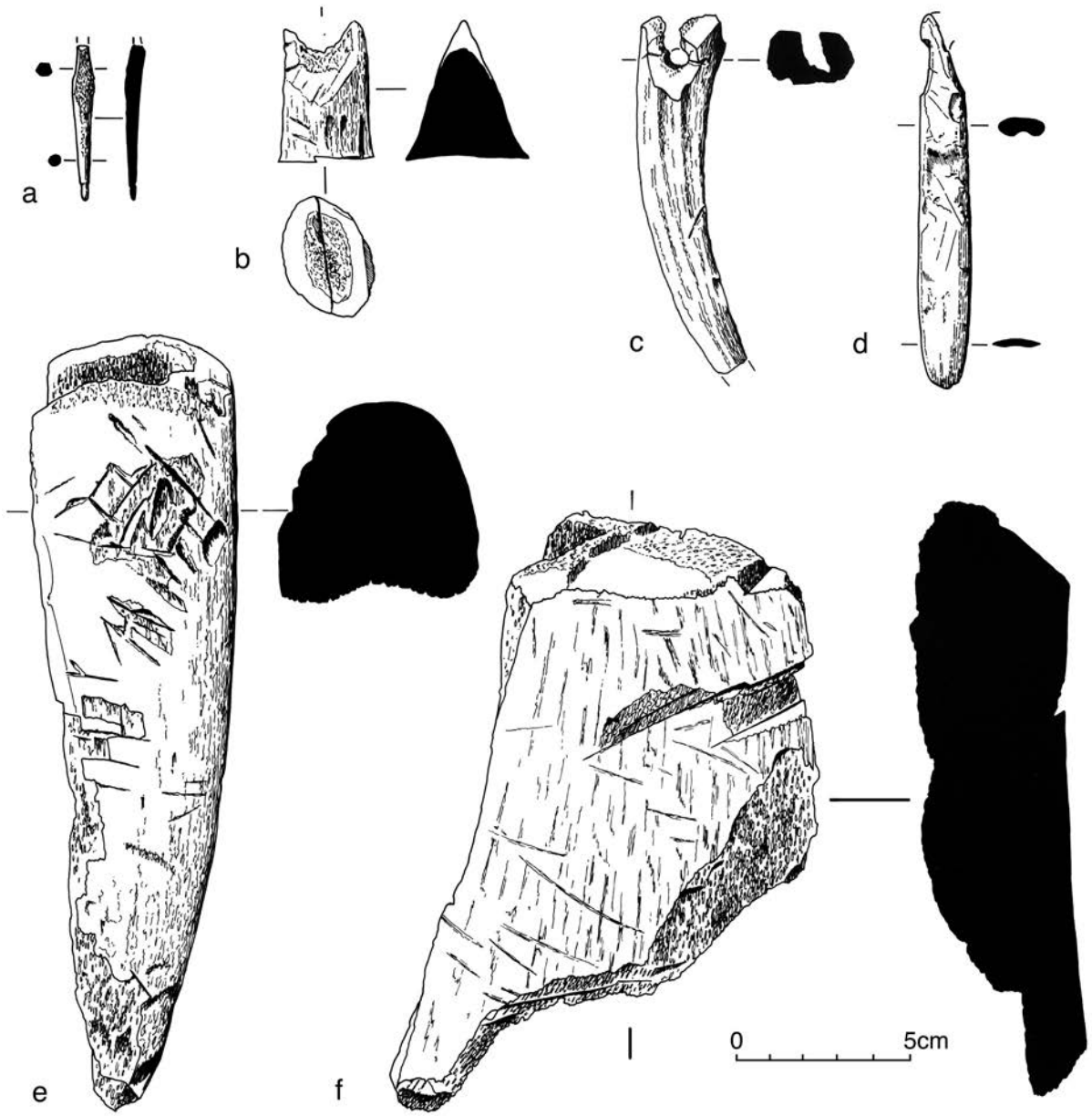

ILLUSTRATION 3.24
Various, (a) SF50, (b) SF145, (c) SF60, (d) SF20, (e) SF107, (f) SF118.

known: there is a pegged piece from Sollas, North Uist (Campbell 1991, 158, and Ill 21, 653), while Close-Brooks (1986, 166) has plausibly reinterpreted a widespread group of domed 'pin-heads' in both bone and jet-like material as gaming pieces, based on Irish sets of similar domed bone pegs (eg Knowth: Raftery 1983, 231). Other material is more diverse. Gurness has produced part of a truncated-cone gaming piece from broch levels (Hedges 1987b, no 194). Burrian has a range of pieces in addition to the Pictish decorated phalanges, although they are not well-dated (MacGregor 1974, 87–8, nos 207–9; 207 has traces of deliberate colouring). A shaped phalange from Midhowe, Orkney is another likely candidate (Callander & Grant 1934, 489); again the dating is poor, but there is no diagnostically Late Iron Age (Pictish) material from the site. From southern Scotland, certain Roman or pre-Roman Iron Age

examples (equivalent to Atlantic Middle Iron Age) are the domed bone pieces from Borness Cave, Kirkcudbrightshire and Broxmouth, East Lothian, the former with ring-and-dot ornament on the centre, the latter stained dark (Corrie et al 1874, 497, no 114; unpublished).

The detailed use of such pieces is uncertain. Clarke (1970, 226) has highlighted the possible role of counters in dice-based games, while the traces in a few instances of colour differentiation suggest a game of opposing sides; burial evidence from the pre-Roman and early Roman Iron Age in southern Britain confirms the existence of such games (eg Stead 1967, 14–19; Crummy 1997). The morphology of the Cnip piece suggests it was intended as a king-piece or similar. These rich southern graves imply that board games were perceived as a status activity, a perception which persists into later centuries (Stratford 1997, 31–8) and in a Scottish context is supported by finds such as the rich Roman Iron Age burial from Waulkmill, Aberdeenshire, with its Roman gaming set (Callander 1915). However, a more detailed study of the wider Scottish evidence for games, including both dice and stone balls, is required to tease out conclusions as to their social standing. H 41.5mm, D 36×26mm. Context 204, Block 5a, Phase 2 (central area of Wheelhouse 1) (see Section 2.4.1.5).

See also long-handled comb SF204 classified under textile working; such objects have been interpreted as hair ornaments.

3.5.6 FITTINGS

SF60 (Ill 3.24c)
Handle or attachment. Tine, broken at base and tip, with a tapering irregular perforation (minimum D 5 mm) at the broad end, thinned with knife-cut facets. Damage inhibits interpretation: it may have been tapered to mount against item of furniture to act as a handle. L 105mm, W 27mm, T 19mm. Context 069, Block 6, Phase 1 (jammed into pier on north side of entrance in Wheelhouse 1) (see Section 2.3.1.1).

3.5.7 MINIATURE OBJECTS

SF20 (Ill 3.24d, colour plate 7)
Sword model? Round-ended spatulate blade with decorative end. It is straight edged, sub-rectangular in section, rounding and tapering to an edge at one end which bears minimal use-polish. The other end is damaged but was carved ornamentally with the blade tapering into a waist and then expanding into a double-lobed end, with one lobe now lost. The channel on the reverse is the natural medullary cavity of the bone, and bears traces of a red pigment. The shape of the blade relates it to spatulate polishers. However two factors argue against this: the lack of visible wear at the end and the ornamental terminal. This latter resembles a handle, although too small to be functional, and suggests it may be a model of a sword. While unusual, this is not without parallel – the top part of a rather larger ?sword model is known from Howmae, Orkney (Trail 1890, 460, no 31; NMS GO 186). Neither the Howmae nor Cnip example closely resemble known Iron Age sword types in blade shape or handle arrangement, but our knowledge is largely based on southern parallels and we know little or nothing of Atlantic Iron Age sword forms. It may of course be depicted in its scabbard: there are parallels on later Pictish sculpture for short, relatively wide swords in round-ended scabbards (see Wilson 1973, 121). The surviving evidence for colouring suggests details could have been provided by colour.

On balance it seems plausible that this is a miniature sword, intended either as a toy or a votive model. Miniatures are generally interpreted as votive models in the Iron Age and Roman periods, and are well attested. They were probably intended as token offerings in place of real objects. It has proved much harder to identify definite toys. Weapons are primarily represented by shields (eg Stead 1991), but a few swords are known from Frilford, Berkshire (Bradford & Goodchild 1939, 13–14); Woodeaton, Oxfordshire (Smith 1998, 151); Harlow, Essex (ibid, note 23); Castor, Cambridgeshire (Green 1975, 64); Chesters, Northumberland (Green 1978, plate 125); and London (Greep 1981); all are Roman except Frilford). Cnip and Howmae are the only possible Scottish examples. Indeed Iron Age votive miniatures in general are poorly attested in Scotland: an axe from Stelloch, Wigtownshire (Maxwell 1885, fig 36; for its Iron Age attribution cf Robinson 1995, especially fig 1, nos 1–3), a cauldron from Waulkmill, Aberdeenshire (Callander 1915), a Roman strainer from Traprain Law, East Lothian (Hunter 1993, 332–3), and a Roman terracotta bale of goods from Dun an Iardhard, Skye (Curle 1932, 395–6; Green 1981, 268). (Thomas's (1963, 48) identification of a bone miniature shield from Jarlshof is unconvincing.) L 109mm, W 16mm, T 6mm. Context 018, Block 18, Phase 3 (midden deposit formed over Structure 4 during Phase 3) (see Section 2.5.3.2).

3.5.8 UNIDENTIFIED

SF107 (Ill 3.24e)
Unfinished whale bone object? Split proximal rib portion, with cancellous tissue partly hollowed and two deeper hollows *c* 30mm in diameter, one in the split face, one at one end. Series of chopmarks on one face of cortical tissue. Function uncertain – may be unfinished. L 220mm, W 55mm, T 60mm. Context 190, Block 20, Phase 3 (fill of Structure 8 sump).

SF118 (Ill 3.24f)
Shaped fragment. Worked cetacean rib fragment split to reveal the cancellous tissue, which is shaped at the angled end and broken elsewhere. One end has been chopped square, while the other is cut irregularly at an angle, terminating in a blunt point. One edge may be original, but the other is not. There are chopmarks on the cortical tissue, perhaps from abortive earlier shaping attempts or later reuse. Insufficient evidence survives to determine its original form or function, although the lack of any working edge may suggest it derives from furniture or a domestic fitting. L 180mm, W 90mm. Context 204, Block 5b, Phase 2 (central area of Wheelhouse 1).

SF128 (not illustrated)
Utilized chunk. Large chunk of whale bone and fragments. One end carries chopmarks from detachment, and the surface bears a few other, apparently random, cutting marks. Too little of the original surface survives to indicate its use. L 210mm, W 110mm, T 100mm. Context 131, Block 15, Phase 1 (fill of Wheelhouse 2) (see Section 2.3.3.3).

SF163 (not illustrated)
Cetacean bone fragment split from a large flat object. The surviving edge is knife-trimmed and the surviving end bevelled by chop-marks; the rather crude shaping suggests expedient use. One surface is the natural cortex, the other cancellous tissue which has been cut flat. No use-wear evidence. L 145mm, W 29.5mm, T 21mm. Context 204, Block 5b, Phase 204 (central area of Wheelhouse 1).

SF169 (not illustrated)
Utilized fragment, cetacean bone, with cut facet at one end. Unidentifiable. L 60mm, W 20mm, T 20mm. Context 204, Block 5b, Phase 2 (central area of Wheelhouse 1).

SF304 (not illustrated)
Three fragments (two joining) from an unidentified cetacean bone object. Plano-convex section, with the flat face trimmed and some knife-trimming at the edges. No use-wear. L 85mm, W 12.5mm, T 16.5mm. Context 137, Block 5b, Phase 2b (Bay 7, disturbed deposits below Structure 8 walls).

3.5.9 MISSING ITEMS

Three bone and antler items are currently missing from the assemblage, and are known only from the original brief finds descriptions.

SF no	Description	Context	Phase
035	Antler point	071, Block 9, Structure 4 wall packing	2
156	Cetacean vertebra	204, Block 5b, central area	2
192	Worked cetacean bone	235, Block 5b, central area	2

3.6 COARSE STONE

Ann Clarke

3.6.1 GENERAL

The coarse stone assemblage consists of two faceted hammerstones (SF206 (not illustrated) and SF188 (Ill 3.25f), a stone disc (SF087 (Ill 3.25g)), four rotary querns (SF133 (Ill 3.25a), SF116 (Ill 3.25b), SF171 (Ill 3.25c), and SF086 (Ill 3.25e)), and a probable lower grinding stone for a quern (SF189 (Ill 3.25d)). This is a typical Iron Age assemblage, perhaps rather small in size, presumably because only limited external activity areas were excavated. It is in such areas that coarse stone tools, particularly cobble tools, were most commonly used and discarded.

The coarse stone assemblage represents a limited range of functions. The difference between the smaller, bun-shaped rotary querns (SF133 (Ill 3.25a) and SF086 (Ill 3.25e)) and the larger, flatter ones (SF171 (Ill 3.25b) and SF116 (Ill 3.25c)) may point to the processing of different foodstuffs. The smaller rotary querns are of interest and are similar in form to those at Kebister (Clarke 1999). The wear on the hammerstones suggests use in the grinding or reduction of, perhaps, a harder material. The stone disc was most probably used as a lid for some form of container.

All of the querns were recovered from structural contexts: the walls of Wheelhouse 2, Structure 7

and Structure 8; and paving and pit lining from Wheelhouse 1. This may be because querns, once past their useful life, through breakage or wear, were useful building stones. However, the association of querns with structural deposits is so common on Iron Age sites, that it may have been a deliberate act invested with a deeper meaning relating to the community or landscape, perhaps similar to the inclusion of stone arable tools and grain in the walls of earlier prehistoric houses in Shetland (Clarke 1999).

3.6.2 QUERNS

SF133 (Ill 3.25a)

Rotary quern upper stone. A small rotary quern of gneiss. The piece is broken in half across the perforation and most of the original surface is lost through weathering and subsequent decay of the stone. The lower grinding face was originally quite flat and the upper face domed in section. A biconical perforation has been worked in the centre of the quern. Slight smooth platform on upper edge, possibly used as a rubbing stone prior to breakage. Diameter *c* 192mm; maximum T 67mm; diameter of central hole 21mm at narrowest and 64mm at widest on the base; weight 2190.3g, Context 073, Block 12, Phase 1 (walling of entrance cell to Wheelhouse 2) (see Section 2.3.3.3).

SF116 (Ill 3.25c)

Rotary quern upper stone. The piece is broken across the middle. Sub-circular in plan and flat in cross section, with the broad opening on the upper face. A deep round-based stick-hole is located on the upper face. The lower face has a shallow, circular stick-hole

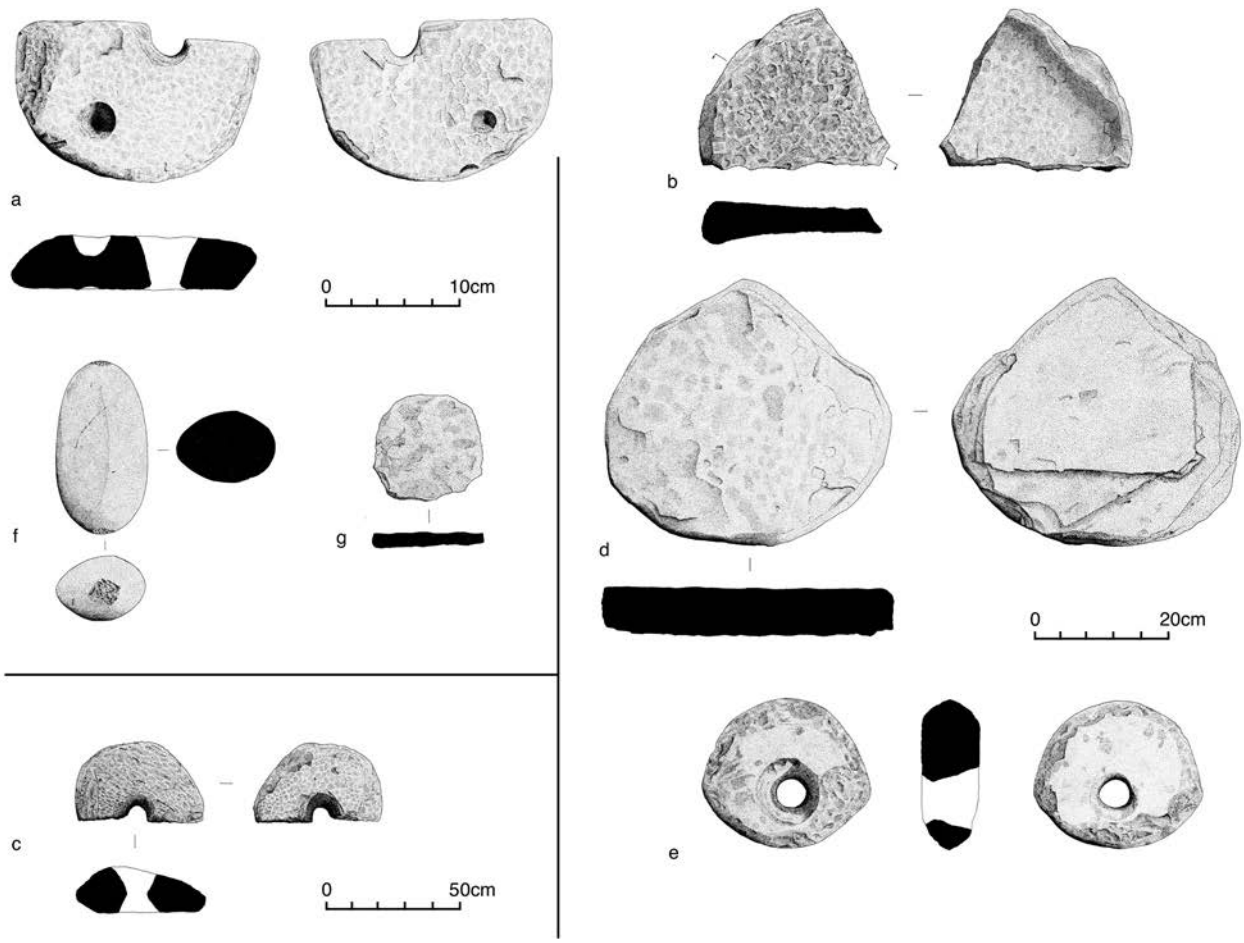

ILLUSTRATION 3.25
Coarse stone, (a) SF133, (b) SF171, (c) SF116, (d) SF189, (e) SF86, (f) SF188, (g) SF87.

worked opposite that which occurs in the upper face, which suggests that the quern may have been turned and the upper face used as a grinding surface. Radius *c* 220mm; MTh 80mm; diameter of hole 40mm at narrowest and 90mm at widest; stick-holes 56mm diameter and 30mm deep, 30mm diameter and 4mm deep (described from drawing). Context 215, Block 22, Phase 2 (walling of Structure 7).

SF171 (Ill 3.25b)
Rotary quern upper stone. A quarter fragment of a rotary quern. Flat cross-section. The central perforation has a wide funnel-shaped cross-section. The upper face is flat and the lower face slightly dished and smooth. Radius c 280mm; maximum T 60mm (described from drawing). Context 206, Block 5b, Phase 2 (lining of pit in Wheelhouse 1) (see Section 2.4.1.2).

SF189 (Ill 3.25d)
?Rotary quern lower stone. Flat slab, sub-circular in plan. Cannot determine whether the surfaces have been worn or not. Diameter *c* 430mm; MTh 70mm (described from drawing). Context 191, Block 5, Phase 2 (paving in Wheelhouse 1 entrance bay).

SF086 (Ill 3.25e)
?Rotary quern upper stone. A small rotary quern. Hole is made off-centre and slightly biconical in cross-section. Both faces appear to have been smoothed and then subsequently damaged. ML 250mm; MW 220mm; MTh 90mm; diameter of hole 58mm at narrowest and 90mm at widest (described from drawing). Context 147, Block 2, Phase 3 (north walling of Structure 8) (see Section 2.5.1.1).

3.6.3 HAMMERSTONES

SF206 (not illustrated)
Faceted hammerstone. Flattened ovoid cobble of quartz. Light facets formed by pecking and smoothing are located on either end and partially down either side. Possibly also some glossy polish residue over the central surface areas. ML 97mm; MW 50mm; MTh 31mm; W 214g. Context 230, Block 15, Phase 1 (internal deposits in Wheelhouse 2) (see Section 2.3.3.3).

SF188 (Ill 3.25f)
Faceted hammerstone. Ovoid cobble of black gneiss. Light single facets worn on either end by pecking. The narrow end has a smoother facet than the roughly pecked area on the broader end. ML 136mm; MW 74mm; MTh 51mm; W 869g. Context 191, Block 5, Phase 2 (entrance paving in Wheelhouse 1) (see Section 2.4.1.3).

3.6.4 STONE DISC

SF087 (Ill 3.25g)
Stone disc. Made on a thin slab of schist, roughly chipped around the exterior to give a sub-circular outline. ML 90mm; MW 87mm; MTh 10mm. Context 113, Block 1, Phase 3 (earliest laid floor in Structure 8) (see Section 2.5.1.2).

3.7 CHIPPED STONE

Bill Finlayson

A single broken flake of red-brown flint was recovered from the western part of the floor deposits within Structure 8, Phase 3 (Context 091, Block 1). One face shows evidence of shearing, which, combined with some edge-crushing, suggests that this is a bipolar knapping product. These are generally more typical of Late Neolithic or Early Bronze Age technologies, but were used in all periods, especially where flint sources are impoverished, as in Lewis. There is no retouch on the piece which measures 28mm long, 18mm broad and 4mm thick. It seems improbable that flint was utilized by the inhabitants at Cnip. It is probably more likely that the single flake derives from material brought into the house, perhaps peat or turf for fuel, or sand for flooring.

3.8 PUMICE

Anthony Newton

Three pieces of pumice were found at Cnip: from a secondary laid floor in Structure 4, Phase 2 (Context 266, Block 8); from midden which formed over the same structure when abandoned (Context 085, Block 8); and from midden dumped in the abandoned Structure 5 (Context 153, Block 13). Only the first of these seems likely to have been discarded in situ. All three pieces have flattened faces suggesting that they have been worked. They vary in size from 40–60mm and all are dark brown to grey in colour. Analysis showed that the pieces had erupted from the Katla Volcanic System in southern Iceland between 7000–2000 BP. They would have been collected locally from

the beaches of the area and could have been used for a variety of smoothing and polishing tasks on various materials such as bone, wood and pottery.

3.9 COPPER ALLOY

Fraser Hunter

Three copper alloy items were recovered, none particularly diagnostic. In general, copper alloy objects are not common from wheelhouses. The objects were analysed by non-destructive qualitative X-ray fluorescence. All three (and the stud in iron object SF54 (Ill 3.26b)) are bronzes with a suite of impurities. The lack of similar analyses for comparison is regrettable, as it would be valuable to see if sites in the Western Isles were in the circulation area of the much more mixed alloys which became prevalent in southern Scotland as Roman metal became available (Dungworth 1996). Although these samples show no influence from Roman metal, the ring-headed pin mould (SF 270, Ill 3.27a, see Section 3.12) was used for an alloy with appreciable quantities of zinc, implying there was access to a supply involving Roman metal.

SF31 (Ill 3.26a)
Bronze fitting. Cast collar, expanded and sub-square at one end, sub-circular at the other. Wall thickness 0.35mm, thickened to 1mm at expanded end. As the object is complete and has no sign of any attachment mechanism, it is most likely to be a fitting or finial for an organic item around which it would be hammered. It may have been the terminal of a hollow pipe or stem, either for decoration or durability. Its detailed function, however, remains elusive. L 15mm, W 14mm, T 8.5mm. Leaded bronze with trace iron, zinc, arsenic, antimony. Context 095, Block 6, Phase 1 (Wheelhouse 1 wall-packing) (see Section 2.3.1.1).

SF142 (not illustrated)
Fine ring (according to field records; the surviving fragments are too small for meaningful comment). The only substantial piece is a curving strip 5mm long, 2.5mm wide and 1mm thick; overall dimensions cannot be ascertained. Bronze with trace lead, iron, silver, antimony. Context 103, Block 8, Phase 2 (dumped material sealing occupation in Structure 4).

SF193 (not illustrated)
Pin tip. Two fragments form a broken circular sectioned rod, bent and tapering to a slightly blunt tip. L 8mm, D 2.5mm. Leaded bronze with trace zinc.

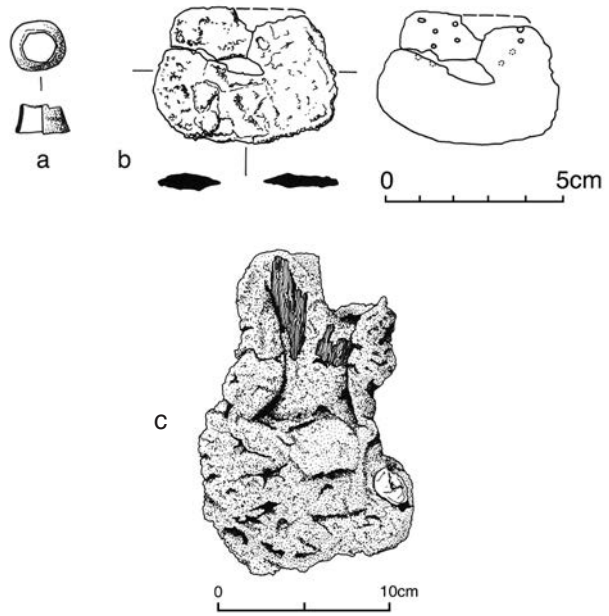

ILLUSTRATION 3.26
Copper alloy, (a) SF31, Iron, (b) SF54, (c) SF23.

Context 172, Block 5b, Phase 2 (Bay 1 of Wheelhouse 1).

3.10 IRON

Fraser Hunter

Only two iron items were found. The spade blade is a highly significant find in view of the general rarity of such once-common artefacts.

SF23 (Ill 3.26c, colour plate 5)
Spade blade, with folded socket and rounded blade (a hemispherical item of uncertain character, D 38mm, has become attached by corrosion to one edge). The socket is 65mm long, 85mm wide, and a maximum of 30mm thick. A fragment of wooden shaft survives (maximum thickness 20mm): its species cannot be identified (Theo Skinner, pers comm). The folded edges of the socket are *c* 15–20mm broad. The blade is rounded and asymmetrically worn. It is slightly but distinctly angled upwards in section in relation to the socket.

Identification of such implements is always fraught with difficulty, as the boundaries between ard, plough and spade shares are not well drawn. This example is identified with some confidence as a spade on the basis of its short shaft and blade and the shaft/blade angle.

(I am grateful to Hugh Cheape and Sandy Fenton for advice on this). Iron Age spades are few and far between. Since Fenton's study (1963), the only other Iron Age find is from Leckie broch, Stirlingshire (MacKie 1989, plate 4). The Cnip example is particularly important as it is all but identical to the 'straight spade' or *cas-dhìreach* known ethnographically in the Western Isles in the recent past (Cheape 1993a) and characterized, apart from its general form, by the 'lift' of the blade towards the user which allowed extra leverage. The spade rather than the plough was the prime cultivating implement in the Islands in the recent past (ibid, 81). The only contemporary iron cultivation tool known in the Western Isles is the badly damaged spade blade or plough share from A'Cheardach Beag, South Uist (Fairhurst 1971, 102–3; Fenton 1963), although the use of whale bone for ards and spades is well-attested (Rees 1979, 40–1; Crawford 1967).

In view of the find's importance an AMS ^{14}C date was obtained directly from the preserved wood. This gave a date of 1910 ± 45 BP (AA–29767), which calibrates to AD 4–216 (2 σ), entirely consistent with its context. L 150mm. Context 072, Block 12, Phase 2 (upper infill of Wheelhouse 2 entrance passage) (see Section 2.3.2.2).

SF54 (Ill 3.26b)

Perforated sheet. Thin plate, sub-rectangular in plan, tapering on its short axis towards one edge, the corners rounded. Now in three fragments with a small part of one edge lost. It has a slightly off-centre angled lentoid perforation (15 × 5mm). A bronze stud with trace zinc and lead (H 2mm, D 2.5mm) has been inserted at the broken edge, while X-rays suggest there are a number of perforations in the narrower half of the plate. Details are unclear, but a series of at least three perforations along the edge seems quite certain, and there are suggestions of others which do not form a discernible pattern. All once probably held copper alloy studs.

The function of this plate is enigmatic. The stud and perforations suggest it may have been a decorative mount. However the only obvious means of attachment is the lentoid perforation, whose shape would suggest an organic rather than a metal fitting. Alternatively it could have been clamped in place, leaving the perforation free for some uncertain function. No obvious parallels can be quoted. L 53mm, W 35mm, T *c* 1mm. Context 108, Block 6, Phase 1 (wall-packing of Wheelhouse 1) (see Section 2.3.1.1).

3.11 THE VITRIFIED MATERIAL

Dawn McLaren and Andrew Heald

3.11.1 OVERVIEW

A total of 3.8kg of vitrified material was recovered from Cnip (one piece of slag (SF064; Context 108) is missing from the assemblage and is not catalogued here). Visual examination allows the material to be categorized based on morphology, density, vesicularity, and colour. A range of slag morphologies are produced during iron production although only a few, for example tapped slag and hammerscale, are truly diagnostic (of smelting and smithing respectively). A significant amount of material within most slag assemblages is unclassifiable, making the allocation of individual pieces – particularly small samples – to specific types and processes difficult (Crew & Rehren 2002, 84). Further scientific analyses would be necessary to refine the classification. The slag has been described using common terminology (eg McDonnell 1994; Spearman 1997; Starley 2000).

Although different types of slag were recovered, the majority fall into two main types: those indicative of ironworking, usually smithing; and those created during a range of pyrotechnic processes, and not necessarily indicative of metalworking. All of the vitrified material was recovered from secondary contexts; there is no evidence of in situ ironworking. A full catalogue of the material is given in the archive report.

3.11.2 CLASSIFICATION

3.11.2.1 Plano-convex hearth bottoms and slag amalgams

There are two main forms of evidence for the smithing of iron on archaeological sites: bulk slags and micro-slags. Of the bulk slags only 'plano-convex hearth bottoms' (PCHB) are unlikely to be confused with the waste products of smelting and are therefore diagnostic of smithing (Starley 2000, 338). Hearth bottoms are formed in the smithing hearth, and can come in a range of sizes. They are recognizable by their characteristic plano-convex form, having a rough convex base and a smoother, vitrified, upper surface which is sometimes hollowed.

Six plano-convex hearth bottoms and a further two possible fragments were recovered weighing a total of 2868g. The dimensions and density of these pieces, ranging between 85–110mm in diameter, suggest that they are the product of iron smithing

TABLE 3.23
Vitrified material classification.

Residue type	Weight (g)
Plano-convex hearth bottom (PCHB)	1121
Slag amalgam (SA)	1747
Unclassified slag (US)	326
Hearth lining/vitrified ceramic (HL)	418
Vitrified residue (magnetic)	5
Vitified residue (non-magnetic)	63
Fe conglomerate (FeC)	201

rather than smelting (which produces characteristically larger and heavier hearth bottoms, with large charcoal inclusions). Three are slag amalgams of more than one hearth bottom with one example consisting of two or possibly three superimposed hearth bottoms.

3.11.2.2 Unclassified slags – smithing?
The remaining bulk slags (326g) are fractured and small. Such slags are a common component within an assemblage and can be produced during both iron smelting and smithing. Differentiating between the two through visual examination alone is difficult, and for this reason such slags are often referred to as undiagnostic ironworking slags. As many were recovered from contexts with other evidence of smithing (Table 3.24) this does suggest that some were created during this process.

3.11.2.3 Vitrified hearth or furnace lining
A total of 418g of material is hearth or furnace lining with vitreous residues on the interior surfaces. This material forms as a result of a high-temperature reaction between the clay lining of the hearth/furnace and the alkali fuel ashes or, in some cases, iron slag. Often the material shows a compositional gradient from unmodified fired clay on one surface to an irregular cindery material on the other (Starley 2000, 339). One fragment has a large, distinct thumb print remaining on the burnt clay.

3.11.2.4 Other vitrified material
Many items classed as 'slag' during excavation cannot be directly related to ironworking and are best viewed as vitrified material or residues. This is slag formed when material such as earth, clay, stones, or ceramics is subjected to high temperatures, for example in a hearth. During heating these materials react, melt or fuse with alkali in ash, producing glassy (vitreous) and porous materials. These can be formed during any high-temperature pyrotechnic process including domestic hearths and are not necessarily indicative of deliberate industrial activity. They can be both magnetic and non-magnetic. Both are represented at Cnip.

TABLE 3.24
Range and weight of vitrified material associated with structures.
Key: wbs: wind blown sand; SA: slag amalgam; PCHB: Plano-convex hearth bottom; US: Unclassified slag; HL: hearth lining; VR1: vitrified residue (magnetic);VR2: vitrified residue (non-magnetic); FeC: Fe conglomerate.

Structure	Activity	Weight (g)	SA	PCHB	US	HL	VR1	VR2	FeC
1	Masonry + construction	901		×	×	×		×	
1	Occupation + fill	330		×	×		×		×
2	Infill	108			×	×			
4	Masonry + construction	48			×				
4	Occupation + fill	88				×			
5	Masonry + construction	2					×		
5	Occupation + fill	117			×				
5	Infill	44							×
8	Masonry + construction	142		×	×	×		×	
8	Occupation + fill	717	×					×	×
10	Midden/wbs	146				×			
unstrat		1238	×					×	

3.11.2.5 Fe conglomerate

Three random pieces of compact conglomerate with a significant Fe chemical component were recovered.

3.11.3 DISCUSSION

As is characteristic of many slag assemblages, a large proportion of material was unstratified. Another significant group was recovered from secondary contexts, particularly middens used as wall-fills during construction of various structures, other structural material, and rubble. Furthermore, the slag from 'floor layers' cannot be taken as evidence of in situ metalworking as the slag may derive from material deliberately brought in from elsewhere to make floors. The complete absence of micro-slags (hammerscale and slag spheres) – normally indicative of in situ metalworking – reinforces the interpretation that most, if not all, of the vitrified material from Cnip is residual.

However, further contextual analysis is fruitful. First, there is a marked concentration of slag from Phases 1 (the initial phase of the site's occupation, represented by the construction of two wheelhouses) and 3 (the final major construction phase, shown by Structure 8) (Table 3.24). Second, these concentrations are confined to specific structures, in particular, Wheelhouse 1 and Structure 8 (Table 3.24).

Wheelhouse 1 has the largest stratified slag collection, with the majority deriving from midden material used as packing during the wheelhouse construction. Given that the construction of wheelhouses is dated to around the last couple of centuries BC, the ironworking evidence, although residual, does indicate that metalworking took place in and around Cnip around this time and is a welcome addition to the meagre evidence for ironworking in the Early/Middle Iron Age (see MacKie 1971). Similarly, the second largest assemblage was associated with construction material and laid midden floors of Structure 8. While this cannot be related to use of this building, the material does show that ironworking took place in and around Cnip during the first two centuries AD. This contextual analysis raises wider interpretative issues, especially with finds from earlier excavations. In the past artefacts have been interpreted as relating directly to on-site activity. What the Cnip assemblage demonstrates is that such material, although indicative of craft in the vicinity, may be completely divorced from the structure and period in which it is found.

Despite these problems, the slag demonstrates that ironworking took place in and around Cnip sometime during the Iron Age. Yet our understandings of the chronology and role of iron production in the Scottish Iron Age is still ambiguous although valuable work has been done (eg MacKie 1971; McDonnell 1994, 1998; Hingley 1997). Thus, in his review of Iron Age Scottish society Hingley could only state that 'there is at present very little comprehension of the function of the household and the community in the context of agricultural and industrial production' (1992, 41). At present we have a blanket-approach to interpretations; there is a common perception that evidence for ironworking can be expected on many, if not all, Iron Age sites (eg Mortimer 2000, 271). This perception exists within the Atlantic Scottish domain, particularly those with structural characteristics similar to Cnip (eg Armit 1996, 151).

By studying the Cnip assemblage within its wider Hebridean context three points emerge. First, although it is true that many sites have evidence for ironworking, of the wheelhouse and cellular sites noted in Armit (1992) less than 50 per cent have such evidence. As slag collections were noted in some early excavations antiquarian recovery procedures are not entirely to blame for these patterns.

Second, there appear to be differences in the quantity of ironworking material recovered from sites broadly contemporary with Cnip. For example, no diagnostic ironworking debris was recovered from Sollas (Campbell 1991) and only very small traces of slag were recovered from Dun Vulan (Dungworth 1999, 230) and Dunan Ruadh (Mortimer 2000, 270–1). These totals are far smaller than that recovered from Cnip and from Cnip 3 (see below, this section). While issues of taphonomy, chronology and preservation may be skewing interpretation the emerging picture does indicate that different structures were backdrops for differing levels of ironworking during the Iron Age. On many of these sites the slag may represent little more than everyday repair or manufacture of prosaic, functional objects. However, on other sites, they may be indicative of more specialized activity.

As McDonnell (1998, 158) has emphasized, when slag is found it is essential to distinguish between an area or building used for occasional, intermittent smithing and a full-time working forge. In a Hebridean context this is hard to detect. However, there are tantalising hints. For example, the bronze- and iron-metalworking evidence from Cnip 3 suggests

that the site was an arena for specialized industrial activities (Armit & Dunwell 1992, esp 147). Although the 'furnace-like structure' from A' Cheardach Bheag cannot be related to a specific industrial process it may be associated with ironworking (Fairhurst 1971, 90). Finally, the crucibles from the furnace at Bac Mhic Connain show that the structure was used for non-ferrous metalworking at some stage (Beveridge & Callander 1932, 43, 48, fig 2). Although the slag cannot be directly related to the furnace it too is part of a wider, probably specialized, on-site metalworking tradition. These examples suggest that different sites were home to different degrees of metalworking. Whether they relate to different parts of the ironworking cycle (smelting, primary smithing, secondary smithing) or form part of a wider network are difficult to answer at present. However, they do suggest that not all slag can be explained as object repair. If this is true of the Hebrides it is likely to be true of the rest of Iron Age Scotland.

Although the metalworking debris from Cnip is small in quantity and from secondary contexts it is a useful collection for stimulating pertinent questions regarding the scale, role and organization of ferrous metalworking in Atlantic Scotland. The ever-increasing Hebridean corpus has an important role to play in these discussions. As Armit and Dunwell (1992, 147) state, the possibility of well-preserved specialist workshops of Iron Age date surviving in their wider landscape gives these sites an importance in a far wider context than Atlantic Scotland.

3.12 NON-FERROUS METALWORKING DEBRIS

Andrew Heald and Fraser Hunter

3.12.1 MOULDS

Six objects from Cnip were associated with non-ferrous metalworking. All are valves of bipartite moulds (for the general process see Curle 1982, 35–9 and Lane & Campbell 2000, 201–3). None of the moulds are complete, nor do they preserve the full extent of the object manufactured. However, where discernible, all appear to be associated with the manufacture of pins. They are made from a fine brown oxidized clay with few inclusions, reduced to grey at the casting face. Three of the moulds are upper valves, the others lower valves. Rather than having keys to hold the halves together, the face of each upper valve is dished on either side of the object impression to act as keying for the corresponding convex area on the lower valve. Four of the moulds have surviving in-gates, where the metal was poured into the mould. These are always at the bottom of the pin shaft. All moulds have remnants of a skin of clay that was applied to the exterior to hold the two halves of the mould together. These technological aspects are used consistently by the Cnip smiths. The casting surfaces were analysed non-destructively using energy dispersive X-ray fluorescence (EDXRF) by the Conservation and Analytical Department at NMS.

SF270 (Ill 3.27a)

Ring-headed pin mould. Upper valve with ingate. Broken at the head. The shaft of the pin (width *c* 3mm) is defined by two prominent ridges. Sadly the broken area contained the crucial details for identifying the pin type. It is a projecting ring-headed pin, with the plane of the head 4.5mm in front of the shank. The face is lost, but the edge is preserved up to about half the head's original height and is plain, indicating it was not a beaded or rosette-headed pin. It could be either a plain ring-headed pin or a proto-handpin, where the crescent in the lower half is plain (Stevenson 1955, 289, fig B, nos 2, 12): it is not possible on this evidence to discriminate between them. Extrapolating the full extent of the head gives a pin of L some 75mm, with a head of W 19mm and H 20mm, and a shank of L 55mm and D 2.5–2.7mm. EDXRF analysis revealed highly enhanced values of zinc and lead, and traces of copper. L 83mm, W 33.5mm, T 20mm. Context 172, Block 5b, Phase 2b (sand deposit in Bay 1, Wheel-house 1).

SF271 (Ill 3.27b)

Pin mould. Upper valve fragment with ingate. Broken at one end. Only the shaft survives. The shaft of the pin is defined by two prominent ridges which are very irregular and bowed in places (width *c* 2–4mm). Probably associated with SF272. EDXRF analysis revealed traces of zinc and copper. L 48mm, W 27mm, T 18mm. Context 181, Block 5b, Phase 2b (sand deposit in Bay 7, Wheelhouse 1).

SF272 (Ill 3.27c)

Pin mould. Lower valve fragment with ingate. Broken at one end. Only the shaft of the pin survives (width 3mm). Probably associated with SF 271. EDXRF analysis revealed no significant metal traces. L 46mm, W 21mm, T 15mm. Context 181, Block 5b, Phase 2b (sand deposit in Bay 7, Wheelhouse 1).

SF212A (Ill 3.27d)

Pin mould. Upper valve fragment with ingate. Broken at one end. Only the irregular shaft of the pin survives (width *c* 2–3mm). Probably associated with SF212b. EDXRF analysis revealed no significant metal traces. L 44mm, W 28mm, T 18mm. Unstratified.

SF212B (Ill 3.27e)

?Pin mould. Lower valve fragment. None of the original casting surface survives. However, the object has the fabric characteristics of a mould and as it was found associated with SF212a it is likely to be part of a mould. L 27mm, W 16mm, T 17mm. Unstratified.

SF 273 (Ill 3.27f)

Pin mould. Lower valve fragment. Broken at both ends. Remnants of a pin shaft width *c* 3mm. The part of the mould with the pin head does not survive. EDXRF analysis revealed no significant metal traces. L 43mm, W 25mm, T 18mm. Context 173, Block 5b, Phase 2b (sand deposit in Bay 2, Wheelhouse 1).

3.12.1.1 Other

Four other fragments (SF274–277) from the site may also be moulds. However not enough survives to be sure of function or product. EDXRF analysis revealed no significant metal traces. L 24mm, W 22m, T 16mm. L 26mm, W 17m, T 15mm. L 21mm, W 16m, T 13mm. L 26mm, W 18m, T 10mm. Context 289, Block 5a, Phase 2a (deposit of peat ash in Bay 7, Wheelhouse 1) (see Section 2.4.1.5).

3.12.2 DISCUSSION

While only one valve (SF270 (Ill 3.27a)) has evidence for a pin-head, all of the diagnostic moulds are for the manufacture of pins. Although it is difficult to relate the upper and lower valves some appear to be part of the same two-piece mould (see Section 3.12.1). This suggests that at least four pins were made by the Cnip smiths. Only the largest surviving fragment allows a closer identification. As noted, the pin was either a projecting ring-headed pin or a proto-handpin. The former were in use throughout the Iron Age (see Stevenson 1955) and an example from Scalloway, Shetland suggests the type survived in use into the fifth century AD although not necessarily in manufacture (Sharples 1998, 185). Proto-handpins normally date to around the third-fourth century AD (Youngs 1989, 23). The context from which the mould derives suggests that the mould may be for the manufacture of a projecting ring-headed pin – it is from one of the latest deposits in Phase 2, which is dated to around AD 100 (see Section 6.3.3). Ring-headed pins are found across Scotland (Stevenson 1955, 288–92; Clarke 1971, 49–54), although manufacturing evidence is

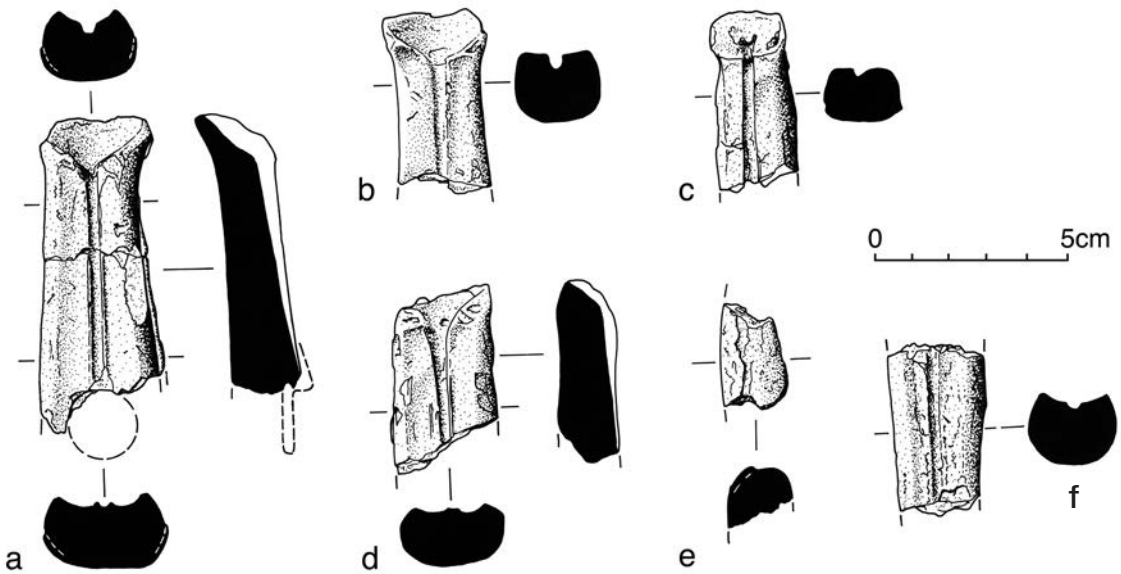

ILLUSTRATION 3.27
Moulds, (a) SF270, (b) SF271, (c) SF272, (d) SF212a, (e) SF212b, (f) SF273.

rarer. Moulds for various types are known from a variety of sites including Sollas, North Uist (Campbell 1991, 164), Gurness, Orkney (Hedges 1987b, 158–9, figs 2.84–5; Close-Brooks 1987), Lingro, Orkney (Stevenson 1955, 290), and Traprain Law, East Lothian (Burley 1956, 219–20; Stevenson 1955, 290). Given the type's wide distribution, this concentration of manufacturing debris in the Atlantic area is more to do with the survival of artefact-rich deposits than a real cultural phenomenon.

Although the interpretation of EDXRF spectra of moulds is problematic (see Barnes 1983; Dungworth 2000) the high zinc reading may be noteworthy. While the original alloy is uncertain the analysis suggests that the ultimate source of the metal was from a supply drawing on Roman sources, as zinc is unknown in any quantity in Iron Age alloys (Dungworth 1996, 403). This may also have chronological significance: the presence of zinc suggests that the mould does not predate *c* AD 80. This seems to fit well with the radiocarbon dates from Cnip (see Section 6.3.3).

All stratified mould fragments are associated with the occupation and infill of the Wheelhouse Structure 1 (Phase 1–2, Block 5). The moulds were found during the excavation of three different bays (1, 2, 7). All of these bays saw various periods of use making the recognition of in situ metalworking areas and episodes difficult. That said, the moulds do indicate that non-ferrous metalworking took place at Cnip around the turn of the first millennium and is a welcome addition to our scant knowledge of non-ferrous metalworking in the area.

As with ironworking (see Section 3.11) our understanding of the scale and organization of non-ferrous metalworking across Atlantic Scotland during the Middle Iron Age is limited. Implicit within many discussions of non-ferrous metalworking throughout the first millennium BC/AD is the association between the craft and sites of high status and/or central places. At one level this seems a perfectly reasonable argument, as the quantity of moulds and crucibles from important Early Historic sites, such as Dunadd, Argyll illustrates (Lane & Campbell 2000, 106–47). Analysis of the evidence for non-ferrous metalworking in Atlantic Scotland during the Middle Iron Age suggests that sites argued to have some wider importance within the community – for example Orcadian nucleated settlements – were foci for the craft (Heald 2005). In this light the non-ferrous metalworking evidence from Cnip could easily be viewed as part of the goods and expertise circulating during the Middle Iron Age.

At present, it is difficult to interpret the role and organization of non-ferrous metalworking in the Western Isles. Moulds and crucibles have been recovered from around 18 sites of probable Iron Age date. These include the wheelhouse complexes at Bac Mhic Connain (Beveridge & Callander 1932, 49, 61–2, fig 17); Garry Iochdrach (ibid, 42); Sollas (Campbell 1991, 163–4, Illus 22); Cnoc a' Comhdhalach (Beveridge 1911, 200–6; Campbell & Heald forthcoming); and Clettraval (Scott 1948, 67–8) (all North Uist); A' Cheardach Mhor, South Uist (Young & Richardson 1960, 155–6, fig 13); and Tigh Talhamanta (Young 1953, 100–1, fig 9); and Alt Chrisal, Barra (Gowans 2000, 189). On the one hand this appears to suggest that non-ferrous metalworking was actually a common activity. However, many of these sites were reused after the primary occupation, and the metalworking debris may be much later. This is demonstrated by the recovery of a mould for the manufacture of an eighth-century penannular brooch from Cnoc a' Comhdhalach (Campbell & Heald forthcoming).

While not disputing the social importance of the craft, research into the Later Iron Age metalworking tradition offers a word of caution. This shows that non-ferrous metalworking, often including the use of precious metals and the manufacture of ornate objects, took place on a wider range of sites than hitherto appreciated, including sites argued to be at the lower end of the social spectrum. It is, therefore, an oversimplification always to equate non-ferrous metalworking with sites of high status or central places (Heald 2005; Campbell & Heald forthcoming). The Scottish Iron Age is typified by regional variation in structures and artefacts, which presumably reflect varying social and economic trajectories in different areas at different times. Thus, we cannot automatically assume that the non-ferrous metalworking evidence from Cnip attests to high status or specialist occupants. At present the Hebridean Middle Iron Age dataset is unable to reveal whether the craft was a high-status activity, an occasional and rare activity carried out by itinerant specialists or a commonplace and habitual one carried out by the community. That said, the deliberate burial in a pit of a complete crucible containing mica plates from Sollas (Campbell 1991, 144) and the relative rarity of copper alloy ornaments compared to bone ones strongly suggests that metalworking and metal items were viewed as items of some importance in the Hebridean Middle Iron Age. Perhaps the smith was viewed in equally high regard.