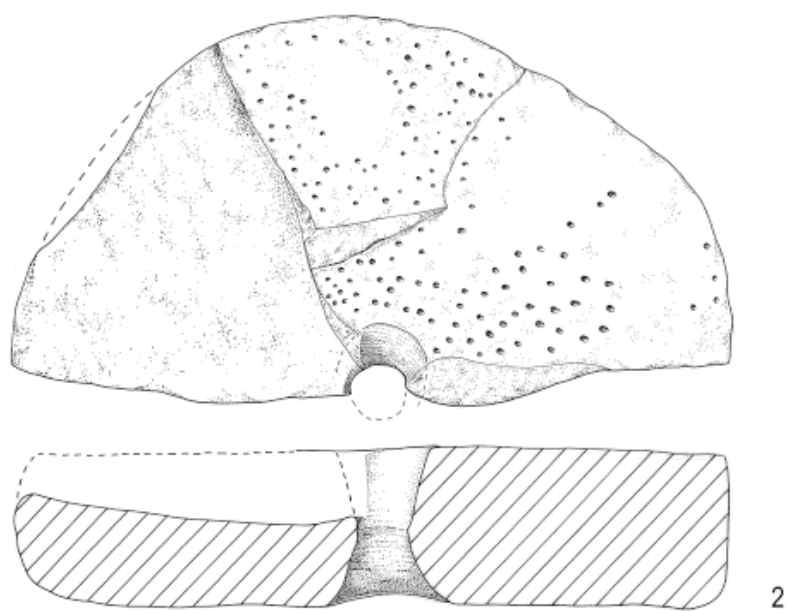
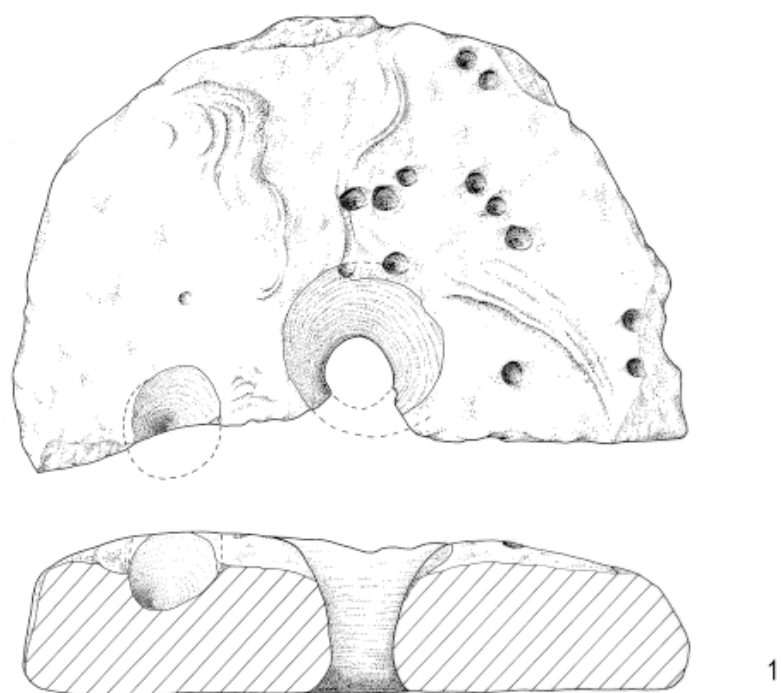




0 10 cm

Illus 8.1 *Period I quern stones.*

8 The finds

8.1 Introduction

The finds assemblages have been divided into the three periods used on the site; Period I includes the Early Christian and early medieval period up to the 12th century; Period II equates to the period from the 12th to the 16th century and Period III to the post-Reformation and modern period. See the archive for the full Specialists' Reports. Although no prehistoric features were found during these excavations there was evidence of prehistoric activity on the site in the form of pottery, flint and quern stones found within later deposits. A fragment of Roman roof tile was also found and is reported below.

8.2 Prehistoric assemblage

8.2.1 The rotary querns

Euan W MacKie

Two broken Iron Age rotary querns were found within later deposits (Illus 8.1). No 1 was found upside down embedded in the rough cobbled roadway (context 883) which is thought to date to between the fifth and the 12th century. The fragments of quern no 2 were found within a layer of post-medieval debris (context 280) in the W range. They were found close together as if they had broken *in situ*.

It is tempting to assume that the upper and the lower stone described here belonged to one adjustable mill; they were the only such stones found on the site, are made of similar yellowish sandstones, are similar in size and fit reasonably well together. The lower stone is slightly larger than the upper, but that is not unusual. One major difference is the absence of picking on the grinding surface of the upper stone, but that cannot be said to rule out the possibility of the stones belonging to one mill.

Only fairly recently have the middle Iron Age disc querns in the Atlantic province of Scotland (mainly found in brochs and wheel houses) been recognised to have been from adjustable mills (MacKie 1990, 10ff; 1998, 26ff), like some of those in use until quite recently in the Outer Hebrides (Curwen 1937, pl III and Figure 39). In these mills the rind or bridge at the base of the feed pipe in the upper stone rests on a long spindle (of iron or wood) which passes right through the perforation in the lower stone (presumably being held firmly upright by a perforated wooden bush jammed into the hole in the stone), through a hole in the table underneath and rests on a hinged plank a short distance below the table. A cord attached to the end of the plank and at the outer edge of the table (where the quern operator stands) can

be tightened or loosened by twisting, thus fractionally raising or lowering the spindle and so the position of the upper stone in relation to the lower. Various grades of coarse or fine flour can thus be produced (Mitchell 1880, 33ff).

The way the upper stone was turned evidently varied. The photograph of the Outer Hebridean example (Curwen 1937, pl III; MacKie 1990, pl 3) shows that a short, fixed upright handle was used; this must have turned in the operator's hand and eventually acquired an oily gloss. However, the Isle of May upper stone cannot have been turned in this manner since the handle socket is too shallow and wide for a fixed handle.

The second way to turn a recent disc quern was by fixing a long pole loosely in the socket and passing the upper end through some kind of fixed loop about 1.2m or 1.5m above the centre of the stone; two (usually female) operators could then sit on opposite sides of the mill when it was on the floor, grasp the long handle and turn the stone. Pennant shows a disc quern being used in this way in Skye in the later part of the 18th century (Pennant 1774, pl XXIV; MacKie 1990, pl 1). Disc querns resting on the ground or on a floor in this way could not of course have been adjustable.

The socket of the upper stone from Isle of May has the characteristic smooth, rounded, shallow profile which indicates that a loose handle fitted into it; the way the whole socket is tilted slightly towards the centre of the stone confirms that this handle was a long one which was pivoted somewhere above the centre of the mill. Surprisingly, however, there are no signs of circular abrasions in the socket and this may mean that the stone was not much used before being broken. Alternatively the socket may have been recut shortly before the stone was abandoned.

Although presumably older than the sixth/12th-century context in which they were found, it is not certain how much older they are, though many very similar stones have been found in brochs and contemporary sites (MacKie 1972, Figures 1–3). The only clue comes from the picking on one grinding surface, but the vast majority of Iron Age querns do not have this feature. One site which is an exception is the Roman camp at Elginhaugh, only a few miles SW of the Isle of May (Hanson 1990), where several of the native querns did have picked grinding surfaces; these stones mostly seem to date to shortly before the camp was established in the early 80s, but the picked surfaces must be imitations of the same feature on the Roman lava querns which were common on the site. Thus it is possible that the quern on the Isle of May was influenced in the same way and dates to the second century AD, or even to the late first century.

8.2.2 The prehistoric lithics

Mike Donnelly

Introduction

The archaeological excavations have brought to light a considerable assemblage (501) of lithic material. Represented within this assemblage are a number of differing raw materials including several varieties of flint, chert, chalcedony, quartz and jasper/carnelian. In form and style the assemblage appears to consist of a limited deposition of lithic material from early prehistoric times through to the post-medieval period.

Excluding the 157 lithics recorded in detail in the full catalogue, a large number of other lithics were recovered. These appeared for the most part to represent ballast pebbles, fortuitous fragments from ballast pebbles, or entirely undiagnostic flakes and waste products. In total 600 lithics were placed into these categories. Thus the total assemblage from the island amounted to 757 lithics. As no prehistoric features have been identified on this site the prehistoric flints are residual. The numbers referred to here are those used in the Lithic Catalogue (see Table 8.1 and Archive).

Assemblage composition

Cores

There are 14 cores or likely cores within the assemblage. It is difficult to be unequivocal concerning certain cores

due to post-depositional damage or surface alterations. Many pieces within the assemblage as a whole appeared to have suffered in this way. With the cores, this often takes the form of the blurring and obscuring of platform edges or removal scars. Other pieces possibly represent fragmentary cores.

Of the 14 retrieved, eight appear to be genuine and these could easily be assigned to a prehistoric date, with one core probably of medieval date because of the presence of a rich chalk cortex, overall shape, dark grey-black colour and relative crudity of workmanship. Of these, cores 79 and 141 (see Illus 8.2) have early prehistoric characteristics. Core 79 is a very fine example of a semi-conical bladelet core of flint/carnelian and core 141 is an opposed platform core of flint dominated by bladelet and blade-like flake removal scars. Several flake industry cores are present also. Core 86 is a multi-platform regular flake core and there are a number of single platform flake cores such as 81. Although such cores are also present within an early prehistoric assemblage, their presence here in relation to the rest of the assemblage is suggestive of the later prehistoric period.

Flake removals

The flake removals from the island fall into two main broad categories. One group consists of carefully prepared regular flakes, mostly opaque and from cream through red to various light–mid-grey in colour. Many of these exhibit signs of platform edge preparation or platform faceting and they are often modified by retouch. The bulbs exhibit the control of manufacture often associated with prehistoric knapping technologies.

The second main group consists mostly of larger irregular flakes, showing signs of much damage, with traces of chalk cortex. These are predominantly dark-grey. Many appear to have been fractured either naturally or unintentionally, although a few may have been intentionally struck and in many cases this is shown by the direction of the previous removals being parallel with the piece in question. Bulbs tend to either be massive and well defined or completely flat. Some of these flakes appear to exhibit evidence of damage concentrated along their most functionally useful edges and others appear to have been retouched, although in some places only crudely.

The working of the more regular flakes into tools appears to have been quite common although the likelihood is that the specialised tool forms may have been brought to the island ready-made. Furthermore, the presence of three double ventral 'biface blanks' (flints 45, 53 and 74) may represent attempts at the creation of highly specialised projectile points. In this case, all three are perhaps too small for such a purpose and may relate to failed attempts to create suitable biface blanks.

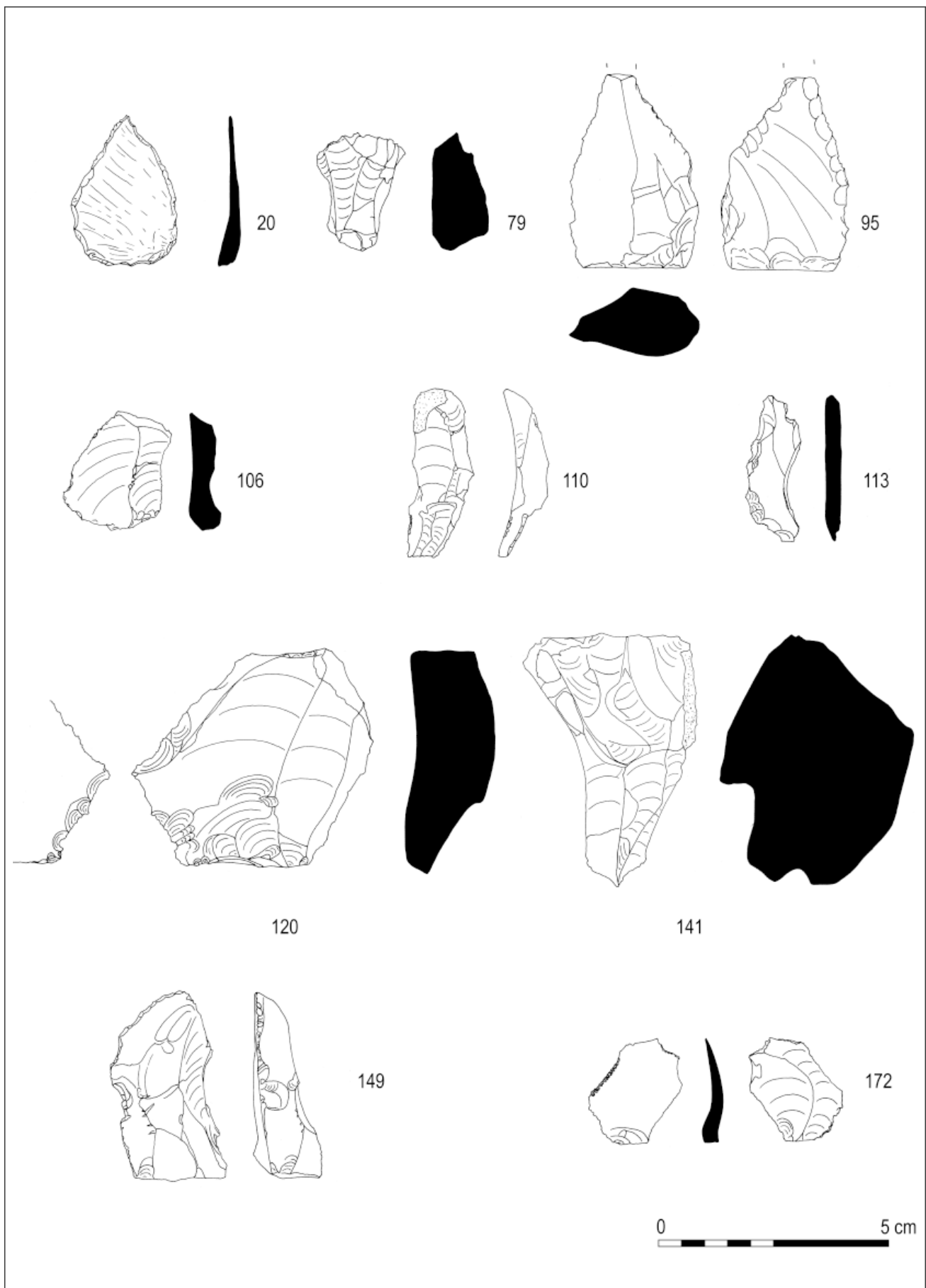
Secondary working

Much of the retouch is miscellaneous or irregular, although some finer examples do occur. In many examples the retouch has been applied to the ventral face. Such is the case with the heavy regular retouch at

Table 8.1 *Prehistoric flints referred to in text.*

* see Illus 8.2

catalogue number	context
03	Trench A 01
13	Trench D 28
16	Trench F 5
20*	Trench I 01
44	536
45	536
53	u/s
54	cloister
74	257
76	257
79*	280
81	288
86	301
95*	347
97	357
103	932
106*	938
110*	129
113*	809
115	131
116	238
118	966
120*	800
121	807
141*	u/s
149*	490
160	1102
167	1104
172*	1125

Illus 8.2 *Flints.*

the ventral distal end of flake 44 or with the very fine regular retouch on the ventral right side of the regular chalcedony flake 172 (*see* Illus 8.2). In other cases, the retouch has been applied to the dorsal distal end such as on flake 16 which has heavy regular retouch in much the same fashion as 44.

Two examples of the very fine quality dark grey-black flint whose colour (not quality) is more commonly associated with the ballast assemblage, also have fine secondary working. These pieces are in overall form and manufacturing technology more reminiscent of flakes associated with prehistoric assemblages. Both pieces exhibit extremely fine retouch; flake 149 has regular retouch along its left edge (Illus 8.2) and 160 has less regular serrations along its right edge.

Three further flakes, 97, 120 (Illus 8.2) and 121, may also fall into this category. Of these, 121 is an unretouched secondary flake with slightly chalky cortex and 97 is again a secondary flake with slightly chalky cortex which has possible irregular medium edge serrations along its ventral right edge and irregular heavy steep retouch along the proximal half of its dorsal left edge. Flake 120 is a large regular secondary flake of similar flint with regular heavy retouch along its ventral upper left edge, the upper half of its dorsal surface appears to have been modified by invasive pressure flaking and the piece exhibits signs of earlier regular removals from the same platform. The presence of these pieces within the assemblage may relate to a number of possibilities which will be discussed later.

Blade removals

There is also a limited presence of a blade assemblage within the collection. Some of these appear fortuitous, spall-like with little or no platform preparation, and are possibly unintentional removals from the large ballast pebbles encountered so frequently around the island. The raw materials present within this small assemblage are extremely varied, including a range of differing colours of flint as well as quartz, chert, chalcedony and jasper/carnelian. This mirrors strongly the findings from Morton farm (Coles 1971). This small assemblage includes: three snapped blade segments, 115, 118, and 116; a partially backed flint bladelet, snapped distally, 167; a retouched blade of jasper/carnelian, 110 (Illus 8.2); a large blade-like flake with three notched and retouched areas along its lower left edge, 54, and a large blade-like flake of coarse light grey flint with irregular medium retouch at its lower left and upper right edges, 103. These finds coupled with the above mentioned cores form tentative evidence of an early prehistoric presence on the Isle of May.

Specialised pieces

There are within the assemblage a number of particularly interesting examples, none more so than flint 20 (Trench I), which is a flake of a polished green stone implement the curvature of which is suggestive of an axe (K. Taylor pers comm, *see* Illus 8.2). The surface striations are clearly visible running mostly from lower right to upper left, with a small area in the lower left where the striations run directly across the flake. The edge of the object has been modified along its entire circumference through regular medium retouch, becoming finer towards the tip. The ventral surface of this object displays surface alteration at the proximal thick end of the object and also at the upper right edge. Overall, in shape the piece resembles a leaf-shaped point and the surface alteration at the point where the arrowhead would have been hafted perhaps confirms this. However, the other area of surface alteration is not suggestive of typical damage sustained through the use of such points as missiles. There is also another potential arrowhead within the assemblage, 13, which resembles a chisel type transverse arrowhead (Green 1980, 36–9) although its cutting edge possesses irregular fine retouch and on this point it differs from most chisel arrowheads. This piece is made from opaque mid-grey flint, typical of the later prehistoric assemblage.

Another flake recovered during the excavation, this time of flint (76) also has a polished surface. This time, however, the flake is unmodified. Interestingly, both these items represent the only fragments recovered from their respective parent objects. The recovery of fragments of polished implements is not uncommon from prehistoric sites from central Scotland and will be featured in the discussion. This piece originated from a redeposited midden horizon.

An awl or point of grey flint was also recovered, 113. This piece appears to have snapped during manufacture (Illus 8.2). A large triangular flake of creamy opaque chert/mudstone, 95, is also broken; this time the tip is missing (Illus 8.2). The piece has very regular heavy retouch along both its ventral edges, coming together towards where the tip of the piece would have been. Also present is a large regular flake of light opaque grey flint (106) with irregular heavy steep retouch in notches along its left edge and regular heavy retouch around its distal tip (Illus 8.2).

Finally, a small lenticular nodule of pale opaque grey flint (03) was also recovered in the topsoil. This piece has on one concave area of its exterior a series of careful parallel removal scars suggestive of some form of concave scraper or spokeshave. This piece poses problems as it represents a form of tool type and form unusual for Scotland, the vast majority of Scottish flint coming in

Table 8.2 *Quantities of lithics.*

	massive pebbles	massive chunks	massive flakes	pebbles	chunks	decortical flakes	irregular flakes	debris	debitage
total	16	83	18	26	95	40	66	76	81

the form of small rounded pebbles (Wickham-Jones and Collins 1978). This piece will be discussed in detail below.

Other flints

These were catalogued only by type. Table 8.2 gives a complete breakdown of quantities recovered in each category.

Discussion

Overall

There is a genuine lack of decortical material on the island. The vast majority of the decortical pieces are large irregular flakes struck from the large ballast pebbles found on the island. Of these, a large number would have appeared to have fractured naturally. As regards the prehistoric assemblage, this suggests that lithic material was either brought to the island as finished tools or brought in as pre-prepared cores. In all likelihood a combination of finished tools and prepared cores were brought in.

The appearance of high quality English dark grey-black flint in the assemblage is interesting. The majority of this flint has suffered greatly with much incipient damage and would appear to represent ballast.

The minority of these pieces are, however, of very high-quality flint showing little signs of damage. Many of these pieces originate from prepared cores and some have been carefully retouched. It would seem likely that the methods of transport of these pieces to the island was more careful. The means by which this material has arrived is more problematic. Overall, these pieces have a distinct later prehistoric appearance. Contacts between Angus, Fife and the Lothians on one hand and Yorkshire and/or Wessex on the other have long been suggested, particularly in relation to beakers and food vessels and other associated finds of the late Neolithic to the early Bronze Age (Donnelly 1991). High-quality flint from England could also conceivably have featured in these trade/exchange networks.

Early prehistory

Evidence for an early prehistoric presence on the island is strong but not unequivocal. Objects such as the bladelet core, partially backed bladelet and snapped blade segments are all suggestive of the late Mesolithic. The wide range of raw materials within this small group of material and the complete lack of the quality dark grey black flint from this portion of the assemblage also leads to the suggestion of an early date. Such a wide range of raw materials is mirrored at Morton near Tayport in Fife (Coles 1971). However, similar rich variety has also been recorded at later prehistoric sites such as Balfarg (Wickham-Jones and Reed 1993). Blade technologies persist into the early Neolithic and on such an isolated spot as the Isle of May it is not too difficult to imagine that available lithic resources, all exotic, would have been used to exhaustion. Still it is tempting to see the island as being attractive to late

hunter-gatherers, particularly considering the diverse range of wildlife known to have visited the island at least from medieval times.

Late prehistory

The practice of reusing or reinventing earlier symbols of status or authority is not uncommon within the later prehistoric period. This may often take the form of reusing socially powerful objects such as polished axes. Within Fife such activity is known from Balfarg Henge (Mercer 1981), Balfarg Riding School (Barclay and Russell-White 1993) and Kirkton, Cupar (MacGregor 1998). In all these cases, the number of polished flakes is small (usually only one per polished item), although the two polished flakes from Balfarg Riding School may originate from the same object. It has been argued that the reuse of these objects relates to the exotic value of flint (Wickham-Jones and Reed 1993, 159), however, the occurrence of very few flakes from larger objects, particularly bearing in mind the large scale excavations from which these assemblages were recovered suggests a more complex reason for the breaking up and potential scattering of these highly specialised artefacts.

The presence of high-quality flint, imported from England, suggests that this island, set between the Lothians and Fife, may have enjoyed this position in regards to trade or exchange of materials during the late Neolithic/early Bronze Age. Fife had during this period an impressive ceremonial landscape, centred around Balbirnie and Balfarg. Material either imported directly or heavily influenced by Yorkshire styles is frequently discovered in association with later prehistoric funerary monuments and exotic materials such as pitchstone are found in these regions during this period so it is perhaps of no surprise if quality flint also has arrived. Possibly this material arrived in the form of prestige items such as axes, but, like the greenstone axe, eventually ended life as a kind of nodule or core for the production of smaller flakes and tools.

Conclusion

The large assemblage of lithics recovered from the Isle of May is of interest for a number of reasons. Most importantly, much of this material highlights the island's prehistoric past, even though it is likely that the occupation areas associated with them may have been obliterated by the construction of the medieval or later sites on the island's most sheltered settlement locations.

This prehistoric presence takes two forms. There is an early prehistoric component highlighted by a wide range of raw materials being utilised for the production of blades and bladelets. This small disturbed assemblage augments the relatively sparse distribution of material from this period known from eastern Scotland. Secondly, we have the occurrence on the island of a sizeable later prehistoric assemblage, consisting mostly of finished artefact forms and other highly specialised or prestigious items. This suggests that the island may have been an important locality during later prehistoric times.

8.2.3 The prehistoric pottery (Illus 8.3)

Robert Squair

Introduction

Nineteen sherds of prehistoric pottery were recovered from various contexts during the excavations on the island. Most of the prehistoric pottery was found within contexts belonging to the post-12th century. The notable exception was an unstratified sherd (vessel 9) from a puffin burrow on the North Plateau. There is therefore nothing to suggest that the prehistoric assemblage contains anything other than residual material.

The majority of sherds, with the exception of vessels 4, 8, 9 and 12, are abraded across the sherd edges, indicating some degree of post-depositional disturbance. That the prehistoric ceramics are exclusively orphan sherds, with each sherd representing a separate vessel, further augments the interpretation of these prehistoric sherds as residual finds. An evaluation of the vessels represented in the assemblage is inevitably restricted by the fact that each is only represented by a single sherd.

The archaeological significance of the assemblage

The geographical location of the Isle of May, situated in the entrance to the Forth estuary, leads to the expectation of an eclectic assemblage characterised by a diversity of styles. This is indeed the case for the assemblage of medieval and post-medieval pottery from the island (Will 1997, 33–6). That the assemblage of prehistoric pottery exudes a similar variety is more a consequence of the chronological longevity intimated by these various styles than an indication of the cosmopolitan cultural connections enjoyed by the not necessarily transient inhabitants of the Isle of May at various stages in prehistory.

The search for comparable ceramic styles, hampered by the incomplete nature of the vessels represented, is confined to E central Scotland and Fife. A considerable corpus of prehistoric pottery, particularly Bronze Age styles, primarily from mortuary contexts, is known from this area. Indeed, the number of inurned burials interred within undecorated urns, collared urns, cordoned urns, food vessel urns and food vessels and similarly the number of short-cist burials accompanied by undecorated vessels, food vessels, beakers or other ceramic types, is profuse. Unfortunately, any similarities these ceramic types bear to some of the vessels represented in the assemblage from the Isle of May are controversial and inconclusive.

However, it is possible to ascribe the various vessels represented in the assemblage to broad ceramic traditions, and to elucidate comparable material from elsewhere within the region. The irrelevance of context, in chronological terms anyway, demands an exclusive reliance on the innate stylistic properties of the pottery, which given the undiagnostic characteristics of many of the representative sherds, makes the identification of comparable styles all the more precarious. Essentially, it

Table 8.3 *List of vessel numbers and contexts.*

*see Illus 8.5

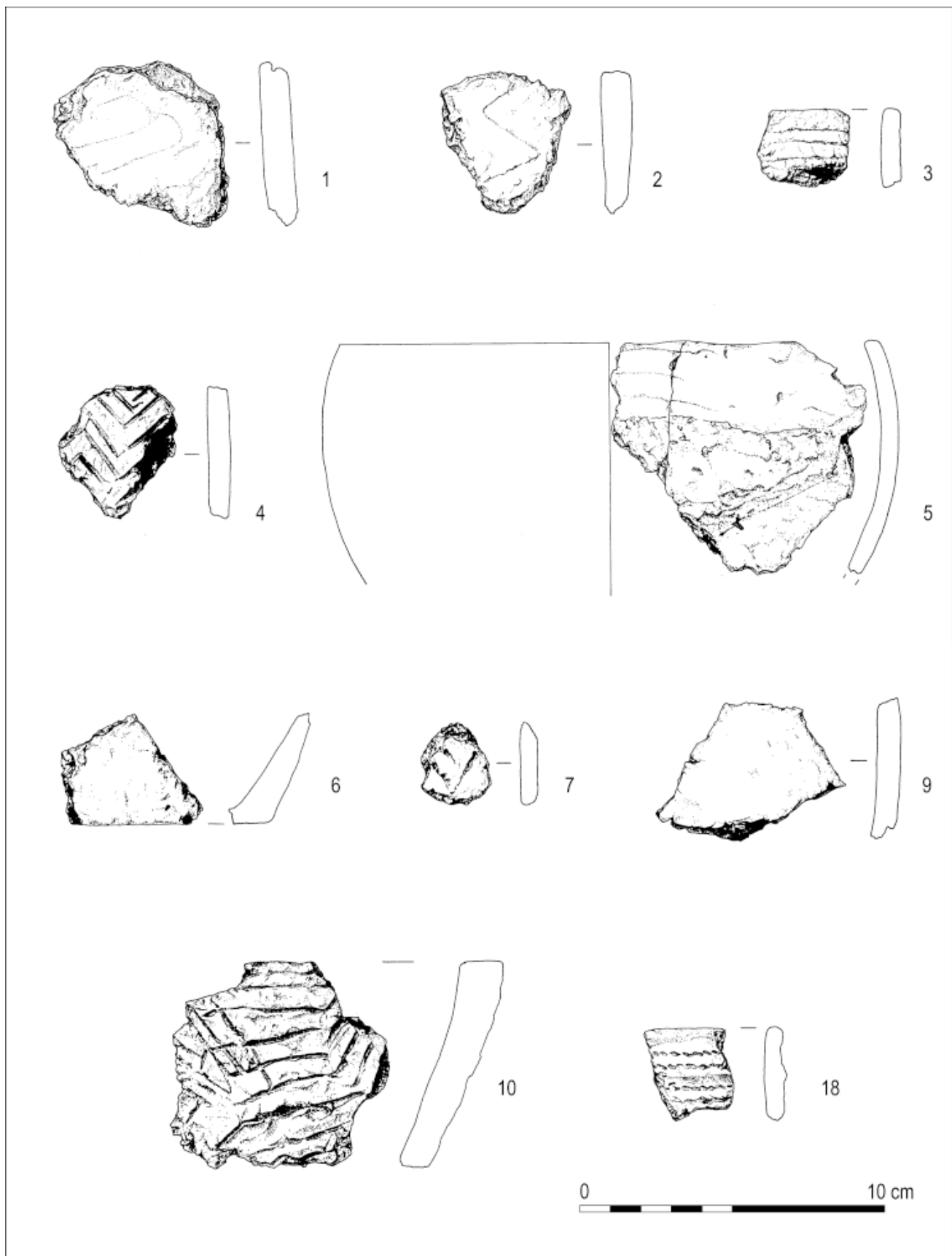
vessel number	context
1*	Trench F 5
2*	184
3*	851
4*	280
5*	Trench I 01
6*	950
7*	Trench N 1001
8*	1118
9*	Puffin burrow
10*	Trench U 1011
11*	Trench X 1010
12*	436
13*	1043
14*	500
15*	1112
16*	1112
17*	1211
18*	1112
19*	950

is impossible to make a definitive statement on the stylistic affinities of many of the vessels represented. Some of the decorated sherds, representing vessels 2, 4, and 11, are to my knowledge unparalleled elsewhere. It is possible to offer plausible stylistic connections, and corresponding chronology, for only a few of the vessels recognisable in the assemblage.

Vessels 5 and 9 are, with regard to the intrinsic quality of manufacture, and morphology, tentatively datable to the early Neolithic. Vessel 5 is a moderately sized fine bowl; vessel 9, similarly interpreted as a bowl, probably had a more neutral than open profile. However, the flattened simple rim form of vessel 5, and the fabric of both vessels 5 and 9, are unknown on other early Neolithic bowls from the region. A vague parallel for vessel 5, in terms of both rim design and overall vessel profile, is a vessel in the diverse assemblage from Wellbrae in Strathclyde (T Cowie pers comm).

Vessels 3, 7 and 18 are readily interpreted as beakers. Vessels 3 and 18, decorated by impressed cord on the exterior immediately below the rim with horizontal parallel linear lines, are all-over-corded (AOC) beakers. The beakers are categorised according to the classification of Clarke (1970). This typology is employed as a descriptive, rather than interpretative facility. The cultural and chronological implications of this classification scheme are no longer considered valid (*see* Kinnes et al 1991). Vessel 7, decorated by impressed comb on the exterior with opposing diagonal lines, can be comfortably interpreted as a northern beaker.

There are several AOC beakers known from the locality, including examples from Brackmont Mill (Clarke 1970, 577, no 1656, Figure 36b:284, no 1658) and Tentsmuir Sands in Fife (Clarke 1970, 577, no 1659, it



Illus 8.3 Prehistoric pottery

Figure 9: 281, nos 1660, 1661, 1662, 1663, Figure 6: 281); from Archerfield at Gullane (Clarke 1970, 516, no 1617, Figure 48b: 286) and Tusculum (Site 1) at North Berwick in East Lothian (Clarke 1970, 517, no 1641); and finally from Bathgate in West Lothian (Clarke 1970, 522, no 1788, Figure 2, 281, no 1789, Figure 1: 281). However, in marked contrast to the AOC beakers from the May, these vessels invariably have a splayed profile, and are frequently decorated on the interior immediately below the rim. The presence of a cordon immediately below the rim on the exterior of a vessel, an occasional embellishment on AOC beakers (Clarke 1970, 52), and manifest on vessel 18, is little known in the locality. Such cordons occur on some AOC beakers from Tusculum (Site 2) at North Berwick in East Lothian (Cree 1908, nos. 1, 2, 6, Figure 14: 280; Gibson 1982, 213, eg. no 27, Figure TNB1, 526). Some AOC beakers from further afield, including examples from Inverurie (Clarke 1970, 511, no 1445, Figure 15: 282), Forglen (Clarke 1970, 515, no 1582, Figure 16: 282), and even Sizergh in Westmoreland (Clarke 1970, 500, no 1023, Figure 23: 283), embody a cordon below the rim.

Vessel 7 exhibits decoration roughly paralleled in the northern beaker tradition (*see* Clarke 1970, 38–41). The decorative motif, truncated by the sherd edges, is only partially represented. However, similar motifs, also comb impressed, are found on northern beakers from, for example, Borthwick in Midlothian (Clarke 1970, 519, no 1707, Figure 595: 352), from Archerfield at Gullane in East Lothian (Gibson 1982, 98–100, no 20, Figure ARC 1: 344), and finally, from Tusculum at North Berwick, also in East Lothian (Gibson 1982, part ii, 526, Figure TNB 1).

Vessels 2 and 4, decorated by incision on the exterior with a vertically aligned zigzag motif and opposing diagonal lines, respectively, running down the side of the vessel, are moderately sized vessels ascribed a Bronze Age date on the basis of the decoration. The decoration, but not the fabric, of vessel 4 is vaguely reminiscent of the food vessel tradition.

Vessel 6, a flat-based, moderately sized, neutral-shaped vessel, is provisionally ascribed to the late Bronze or early Iron Age. Vessels 14, 15 and 19 are likewise afforded such a speculative date.

Vessel 11, from a substantial open or bucket-shaped vessel with a simple, internally bevelled or flattened rim, decorated by incision on the exterior with intersecting and overlapping bundles of parallel lines, is tentatively assigned to the late Neolithic or early Bronze Age on the basis of this decoration. However, neither the decoration, fabric nor morphology intimate any immediate or persuasive stylistic parallels.

Vessels 1, 8, 10, 12, 16, and 17, with fabrics similar to cremation urns from the locality (T Cowie *pers comm*), are tentatively datable to the Bronze Age.

Conclusion

The implications of the fabric series and the stylistic comparisons intimated above confirm that the Isle of

May probably enjoyed a previously unsuspected significance during various phases of prehistory. That the assemblage is entirely residual, with no sherds relating to any contemporary feature or structure, is more a consequence of post-depositional disturbance than a confirmation of an absence of prehistoric settlement on the Isle of May. Indeed, that some of pottery, specifically vessels 1, 5, 6, 11, 13, 14, and 19, displays evidence of use presumably indicates that some vessels were actively used on the Isle of May. At the very least, the presence of prehistoric pottery attests to the reality of then contemporary activity on the island. Only thin section analysis of selected sherds chosen with reference to the macroscopic fabric series, and excavation of the area surrounding the puffin burrow on the North Plateau, from which vessel 9 was extracted, will elucidate further the significance of the assemblage.

8.3 Period I: early medieval assemblage

The Period I deposits consist of the raised beach and long-cist cemetery, patchy layers of burning and the three early churches. Three coins were found, the earliest dating to the mid-ninth century. There are several copper alloy objects, some lead casting waste, clench bolts and nails, along with evidence for metalworking in the form of bloomery debris. More domestic artefacts include three spindle whorls, a bone needle and a fragment of carbonised textile. Two residual rotary querns thought to belong to this period were found in later deposits.

8.3.1 The coins

Donal Bateson

We are extremely fortunate to have found three coins belonging to this period (Table 8.4). The penny of Burgred (852–74) is the earliest coin (Illus 8.4). Mr Hugh Pagan has kindly noted (*pers comm*) that it is a die duplicate of a specimen in the British Museum (BMC 317) from the 1838 Gravesend Hoard, deposited 871–2, and that both coins may be dated to the very end of the 860s. It is more difficult to assign a date of loss to the coin, but, in view of its being only slightly worn, a deposition in the decade of the 870s seems likely. Whether its owner was priest or pilgrim, merchant or marauder is impossible to say. However, it is a rare find from Scotland, only two other sites having yielded Burgred pennies. Four similar coins, of lunette type a, were found, along with fragments of a denier of Louis the Pious, two Abbasid dirhams and six Northumbrian stycas, in the probable metalworker's hoard from Talnotrie, Kirkcudbrightshire, thought to have been deposited around 875 (Graham-Campbell 1995, 4). Like the other silver coins in the hoard, the Burgred pennies are all fragmentary, and one is pierced and even repaired (Stevenson 1966, xxiii and Pl II, nos 60–3). The second find of a Burgred penny, from Saevar Howe, Birsay, Orkney, is also a pierced specimen, indicating

Table 8.4 *Catalogue of Period I coins.*

coin	description	context	location	Period
1	Anglo-Saxon, Mercia, Burgred (852–74) silver penny, slightly worn, 1.32g [20.4gr], 180° moneyer, Heawulf; mint, London obverse BVRGREDREX reverse: moneyer's name in three lines, in and between two broken lunettes MON / HEAVVL / ETA Burgred lunette type a	960	shell sand in cemetery	I
2	Continental, Frankish, ?? Quentovic, late tenth-century silver denier, fairly worn, fragmentary, 0.26g [4.0gr]	420	patch of burning beneath church	I
3	England, William I, type 5 two stars (1074–77) silver penny, fairly worn, corroded, bent and buckled, 1.59g [24.6gr], 0° mint, London; moneyer, Godwig obverse +PILL[EMR]EXIII reverse +GOD[PIONLII]NDEI	357	foundations of the square chancel of the third church	I

that its primary function no longer played a part in a non-coin-using society (Graham-Campbell 1995, 86).

A century elapsed before the next coin was lost on the site (2). Unfortunately, only about a quarter of the coin survives, but it is a Continental issue, probably Frankish and from the mint of Quentovic in Normandy. Similar deniers were found in the Tarbat hoard buried about 975 and Continental issues occur in a number of other Scottish finds from the second half of the tenth century (Stevenson 1966, xxiii and Pl XXIX, nos 736–40; Bateson 1997, 38).

Again it was a century later before the third, and perhaps most important, loss took place. This is a penny of William the Conqueror, the first coin of that monarch and the earliest Anglo-Norman find to have been recorded from Scotland. Indeed, the only other Anglo-Norman coins to have been noted as coming from N of the Border are the three pennies of Stephen and one of Earl Henry found with 23 pennies of David I in the much later Bute hoard of the 1150s (Metcalf 1977, 24, no 3). The William penny from the Isle of May belongs to the two stars type struck between 1074 and 1077 at a time when triennial recoinage was the practice in England. It displays a fair amount of wear and in England would probably have been lost during its term of striking, but beyond the English realm it may have been in circulation a little longer, though hardly after 1080.

By this time the Viking age coin finds from Scotland had petered out. The only hoard later than the 1030s is a rather vague find from Dunrossness dated about 1065 and two single finds of Harald Hardrada of Norway probably from the same decade and a third of Olav Kyrre, about 1080, from Orkney (Bateson 1997, 38). Thus the William penny represents the subsequent phase of contact with the Anglo-Normans, here a result

Illus 8.4 *Burgred coin.*

perhaps of trade or an offering. It is a unique find, for apart from the strange recovery of a Marrakesh gold dinar of 1097 from Monymusk churchyard (Metcalf 1977, 24, no 1), there are no further recorded coin finds from Scotland until the 1140s when a few pennies of the newly instituted Scottish coinage of David I begin to appear.

8.3.2 The metalwork, bone and stone artefacts

Adrian Cox

Copper alloy objects

Recovered from beneath the priory church foundations, No 33 may represent a handle, possibly from a vessel. One finished end survives, while the other terminal becomes very thin and is roughly broken. No evidence now survives of how it might have been attached to another object. No 34 is a circular fitting with a central aperture, which is of unknown function. It possibly served as a boss. No 35, from the church, is a small,

Table 8.5 *Copper alloy objects.*

* see Illus 8.5

find number	description	context	location	Period
33*	handle or strap	327	Beneath N Range	I
34*	circular fitting	190	Foundations of third stone church	I
35*	terminal	420	Patch of burning beneath church	I

Table 8.6 *Lead object.*

find number	description	context	location	Period
47	?waste	1043	fill of grave 1042	I

Table 8.7 *Iron objects.*

* see Illus 8.5

find number	description	context	location	Period
49*	clench bolt.	857	fill of burial 831	I
50	?clench bolt	857	fill of burial 831	I
59	fragment	104	fill of burial 1042	I

Table 8.8 *Bone objects.*

* see Illus 8.5

find number	description	context	location	Period
73*	?needle	879	burnt layer in Trench L	I
95*	spindle whorl	327	layer beneath church	I
96*	spindle whorl	u/s	south range	
97*	spindle whorl or weight	826	layer of shell sand sealing cists	I

curved fragment terminating in three lobes. This object appears to have been gilded and to have been part of an ornamental device, possibly a brooch.

Lead

Found in the fill of a grave, radiocarbon dated to 1015–1169, No 47 appears to represent the residue of a casting which has solidified upon a concave surface, possibly within a mould.

Iron objects

Two clench bolts (Nos 49 and 50) were found in the fill of a grave, radiocarbon dated to 968–1020. Clench bolts were used to secure a double thickness of timber and consist of a nail, which would be driven through the timbers, and a rectangular or diamond-shaped plate called a rove, which would be placed over the tip of the nail. The tip of the nail would then be clenched to secure it in position. Given their context, these two small clench bolts, both with traces of mineralised wood adhering to them, may possibly represent components of wooden grave furniture. (For other nails not kept as small finds *see* Cullen, Archive). An angled fragment (No 59) of iron also came from a grave fill.

Bone objects

No 73, with its broad, spherical head, either functioned as a needle for making netting or coarse, woollen fabrics or as a substantial dress pin. It came from a burnt deposit overlying the cairn in Trench L.

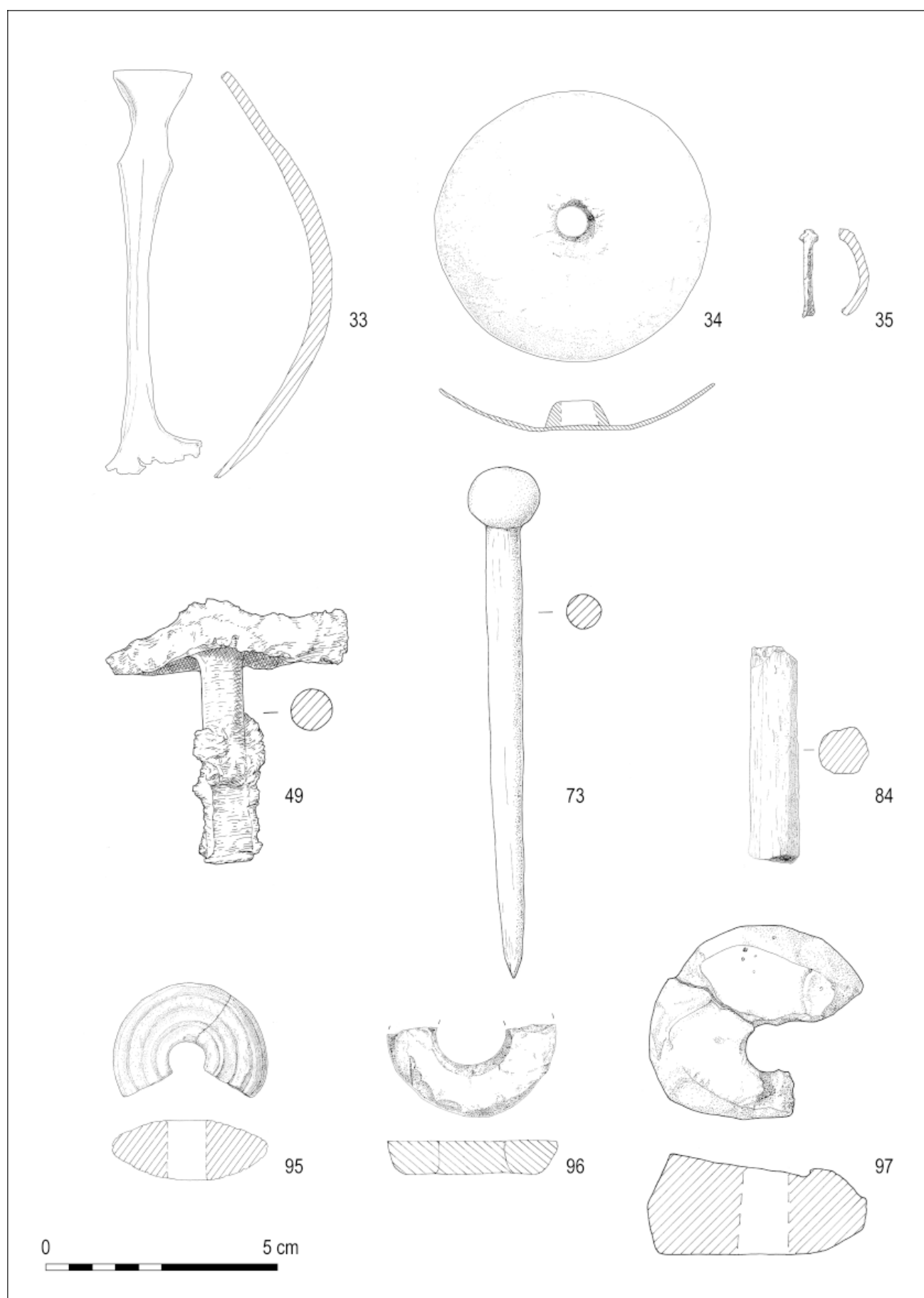
Spindle whorls

Found beneath the foundations of the priory church, No 95 is a carefully made medieval whorl of biconical form, with its faces decorated by narrow grooves, probably made using a lathe. No 96 has a shallow form with slightly convex edges, a common form occurring in both medieval and earlier contexts. A slightly larger whorl of similar form was found in a prehistoric context at Edinburgh Castle (Clarke 1997, 126, Figure 115, No 10). No 97 may have functioned as a spindle whorl or as a weight. It is only crudely circular in outline and the hole is positioned off-centre, therefore if employed as a spindle whorl, it may have been poorly balanced.

8.3.3 The textile

Thea Gabra-Sanders

Two small and three very small carbonised textile fragments were retrieved from a deposit of voided rounded stones forming the top of the burial platform beneath the chapter house (context 418). The largest fragments, measuring 20 x 11 →7mm, 18 x 10 →6mm, are of the same material. The fragments, which were altered by charring are black in colour and very fragile. Some of the yarns have broken away. They show a simple diagonal 2/2 twill weave; the weft passes alternately over two and under two warp threads. The fragments are too small to establish whether there was a variation in the pattern such as a herringbone twill or a diamond twill. Both yarns are S-spun. The weave is only visible on one side of the fragment. The reverse side is crumpled and the weave undetectable. The textile is of medium



Illus 8.5 Period I artefacts.

weight with a thread count of 8 x 6/10mm. The fragments were from the vicinity of a burial and so it is perhaps possible that they are from clothing.

Catalogue

The direction of the spin of the yarn is indicated by the letter S (for anticlockwise, if a yarn is held vertically, the twisted fibres slope in the same direction as the centre portion of the letter S). The number of threads per mm has been recorded: one value for the warp and the other for the weft. Where warp and weft cannot be identified, the terms System 1 and System 2 are used.

SF 57 Two fragments, same material, medium weight, ? fibre, carbonised, black 2/2 twill weave, 20 x 1-> 7mm, 18 x 10-> 6mm. System 1, S-spun, 8 threads/10mm. System 2, S-spun, 6 threads/10mm. Three smaller fragments, same material as above, 5 x 5mm, 4 x 3mm, 5 x 3mm.

These fabrics have been tentatively identified as wool.

8.3.4 The Roman tile fragment (Illus 8.6)

Dr Fraser Hunter

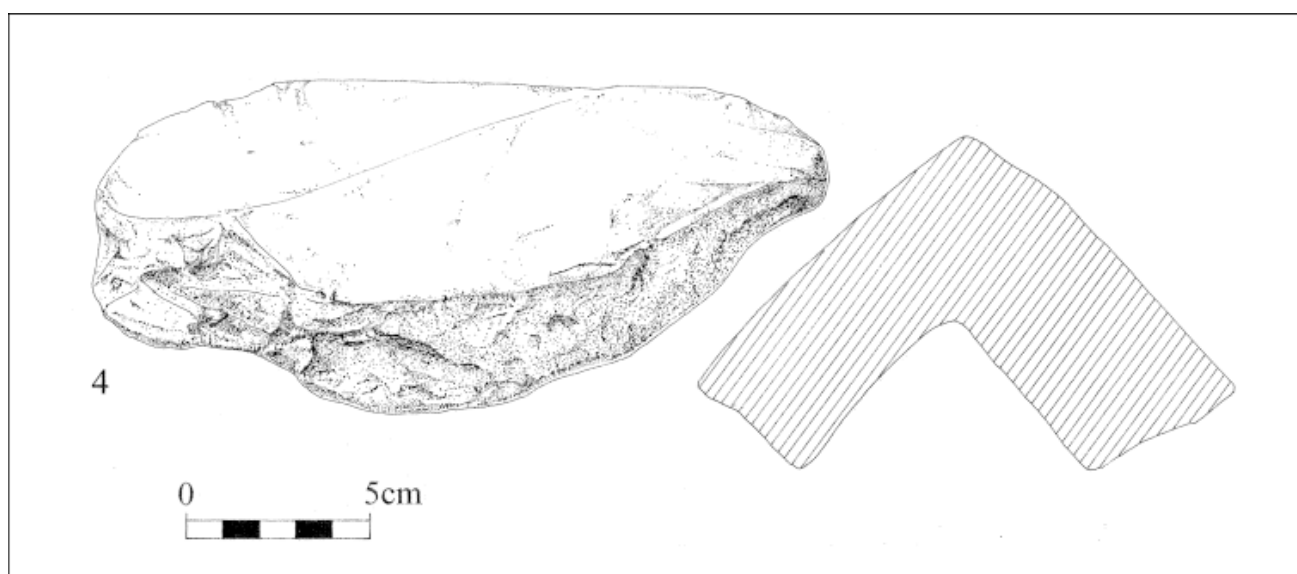
A fragment of a *tegula*, a Roman flanged roof tile, was found in context 420 (ash patches under the first drystone church), along with later finds (a 10th-century coin and medieval pottery). The fragment comprises part of the body and flange, with no original end preserved, the breaks old and worn; its dimensions are 104 x 54 x 33mm, with a body thickness of 25mm and flange 21mm. The outer angle has been blunted with a facet, while working traces and fingerprints from manufacture survive on the surface. Peter Warry of Reading University (who examined it as part of his research on Roman tiles) confirms that there is nothing intrinsically distinctive about the piece to assist its closer dating.

In an attempt to clarify its origins, Fiona McGibbon analysed it in petrographic thin section in the hope of locating inclusions which could confirm its provenance as local or exotic. Sadly, this proved fruitless; the main inclusion was undiagnostic quartz grains up to 0.25mm, with no other distinctive inclusions, although there did appear to be terracotta grog.

This is an unexpected and enigmatic find and a range of possibilities may be considered to explain it. The first is that the tile derives from a Roman-period structure on the island, most plausibly a temple or shrine, but perhaps a victory monument, mausoleum or navigational structure such as a lighthouse: all can occur in striking and highly visible locations. The Isle of May's location in the seaways in front of the Antonine frontier is not unreasonable for such a structure. However, caution is required: a building with a tile roof would typically be stone-built, and there is no Roman stonework yet recognised from the island to sustain this interpretation. It remains a speculative interpretation, and other options must be considered.

Colin Martin (pers comm) has suggested that the object could derive from a Roman shipwreck, an interpretation he has suggested for other Fife finds (Martin 1992, 22–3). This too suffers from a lack of supporting evidence, and, while worth bearing in mind, remains equally hypothetical at present.

A more plausible option is that the fragment was brought in from elsewhere in the post-Roman period. It could have been a deliberate introduction to the island, as some token of *romanitas* or perhaps a religious souvenir; or it could have been an accidental inclusion in imported bulk material (as with the Roman pottery and glass found among the ballast of an early 17th-century wreck on Bermuda; Noël Hume 1982, 300–2). Tile is a frequent find on Roman sites, and any of the major Roman forts from the southern shore of the



Illus 8.6 Roman tile fragment.

Forth (such as Inveresk or Cramond, about 50km distant) would be likely sources.

The May *tegula* must remain a mystery in our present state of knowledge. The discussion above has argued that the tile is unlikely to derive from any hypothetical Roman Iron Age site on the island. It is tempting to suggest some Roman-period structure there, such as a temple, but a single worn tile fragment is a weak basis for such conjecture. Had a shipload arrived to roof an early stone church, then more than one would have survived. There is no obvious mechanism for its accidental arrival on the island; it may have been deliberately imported in the post-Roman period for a purpose unknown.

8.4 Period II: medieval assemblage

The medieval assemblage contained evidence for ecclesiastical, domestic and industrial activity which took place during the construction and occupation of the priory, the medieval structures and deposits within the cemetery and the abandonment of the priory in the 14th century. The finds included a parchment pricker, a book clasp and possible parchment clip or tweezers. Objects associated with the domestic side of monastic life included a whalebone chopping board, bone needles, a quern fragment, flint strike-a-lights. There was also evidence for metalworking in the medieval period. The pottery was predominantly Scottish White Gritty Ware (SWGW), but there were some interesting imports which show that there was contact abroad. Three coins from this period were found: two Edward I silver pennies and a late 13th-century imitation. Remnants of the priory fabric were found in the form of sandstone architectural fragments, window glass, roof tile, a single lead pipe fragment and a lump of decorated white plaster. No floor tile was identified among the debris.

8.4.1 The coins

Donal Bateson

Up to 1200, coin finds are few from Scotland and it is only in the first half of the 13th century that there was a great expansion in coin use, indicated by the many finds of short cross coins up to 1250 and long cross coins between 1250 and 1280. It is noteworthy that none of these has been found on the Isle of May. The subsequent

Edwardian penny and its Scottish equivalent, principally of Alexander III, flooded Scotland and are the most common medieval coins recorded here in hoards and as site finds. It is therefore not unexpected that two of these Edwardian sterlings, both of the first decade of the 14th century, were recovered during the excavations. They are both worn and could have circulated for some time, but loss is probable before 1350, though such issues did remain a part of the Scottish currency pool as late as the 1370s.

The Edwardian sterling was frequently copied on the Continent in large numbers in the late 13th and early 14th centuries, and such imitations occur as a small portion of many 14th-century Scottish hoards though they are rare as site finds. Thus the inclusion of a late 13th-century Continental imitation sterling, probably originating in Flanders, among the excavation finds is most interesting. It has been suggested that some may have been brought northwards when such pieces were declared illegal in England in 1300 (Metcalf 1977, 13) and while this specimen may have been lost early in the 14th century, equally it may have remained in circulation with the legitimate issues until much later.

There then follows a clear hiatus in the site's coin record for the next 200 years. In the second half of the 14th century, gold and larger silver coins came into use, though, being more valuable, they occur less often as site finds. However, as the 15th century progressed, low content silver, or billon, coins became increasingly popular in Scotland and large numbers of the small billon pennies issued by all five Jameses are very frequent site finds. None of these has turned up on the Isle of May.

8.4.2 The metalwork, bone and stone artefacts

Adrian Cox

A selection of the medieval artefacts are illustrated in Illus 8.7, 8.8, 8.9 and 8.10.

Copper alloy objects

Lace tag

Of the three lace tags from the site, one (No 18), found among debris and architectural fragments in the E range, is the most complete example and appears to have an edge to edge seam. These are usually thought to date to the late medieval period (*see below*).

Table 8.9 *Catalogue of medieval coins (not illustrated).*

coin	description	context	location	Period
4	England, Edward I, silver penny, London, probably 10cf [1305–10] worn, slightly clipped, 1.02g [15.8grs], 240°	865	shell layer in cemetery	II
5	England, Edward I, silver penny, Canterbury, 10cf (3) [1307–9] worn, bent, 1.21g [18.7grs], 270°	814	disturbed shell sand in cemetery	II
6	Continental imitation sterling, perhaps Flanders, late 13th-century, corroded, worn, off-centre both sides, 1.37g [21.2grs], na°	229	demolition debris in east range	II

Mount

Recovered from the cemetery, No 21 is a small, eight-lobed, rectangular or lozenge-shaped sheet metal mount which would have functioned as a decorative device on clothing, for example on a leather belt or strap. Numbers of these small mounts were grouped together for decorative effect. The large collection of medieval mounts from excavations in London offers no precise parallel to this example, although three lead-tin mounts of similar form, with radiating grooves, were found attached to two lengths of leather strap by single rivets through their central apertures (Egan and Pritchard 1991, 198, Fig 125, No 1064).

No 22, from a mortar deposit in the S range, is probably part of a decorative ring or button. The surviving components include a glass or mineral disc, held within a copper alloy mounting.

Tweezers or parchment clip

The simplest forms of tweezers were made from plain, folded strips of copper alloy, as illustrated by a pair from Goltho (Goodall 1975, 93, No 35). Many archaeological examples were probably used as toilet equipment. No 23, however, appears to fall into a different functional category of tweezers which may have been used to hold open the pages of a book, to hold parchment, or, as suggested by Rahtz (1960, 27) in handling gold leaf. These tweezers have expanded, approximately rectangular terminals and incorporate a sliding loop which could be used to lock the arms into position. A smaller pair of tweezers of similar form to No 23 was excavated at Perth's Carmelite friary (Stones 1989a, 157, Figure 96, No 418) and a more elaborately decorated example was found at Meal Vennel, Perth (Cox 1996b, 770, Figure 20, No 201). Outside Scotland, examples are also known from London, Northampton and Old Sarum (Alexander and Binski 1987, 384; Oakley and Webster 1979, 256; Goodall 1981, 67).

Pin

A shaft fragment (No 26) was found within a layer of ash sealing the burials in the cemetery.

Needle

The single needle recovered (No 28) is a fragmentary example with a circular eye. It was found among demolition debris within the chapter house.

Possible book clasp

Book clasps were used, usually in pairs, to close and also to decorate books. Many religious books, in particular, were fitted with clasps. No 29 has an expanded, lobate terminal with a narrow, central projection. A book clasp with a more open form of expanded terminal was found at the Carmelite friary in Linlithgow (Stones 1989b, 154, Figure 96, No 192).

Sheets and strip

A number of small sheet fragments and a strip (Nos 36–42) were recovered, some of which may represent fragments of larger sheet alloy artefacts. There is no evidence of copper alloy offcuts, the presence of which would have indicated cold sheet metal working activity, among this group. No 36, a sheet of roughly rectangular outline perforated by rivets, could possibly represent part of a buckle plate.

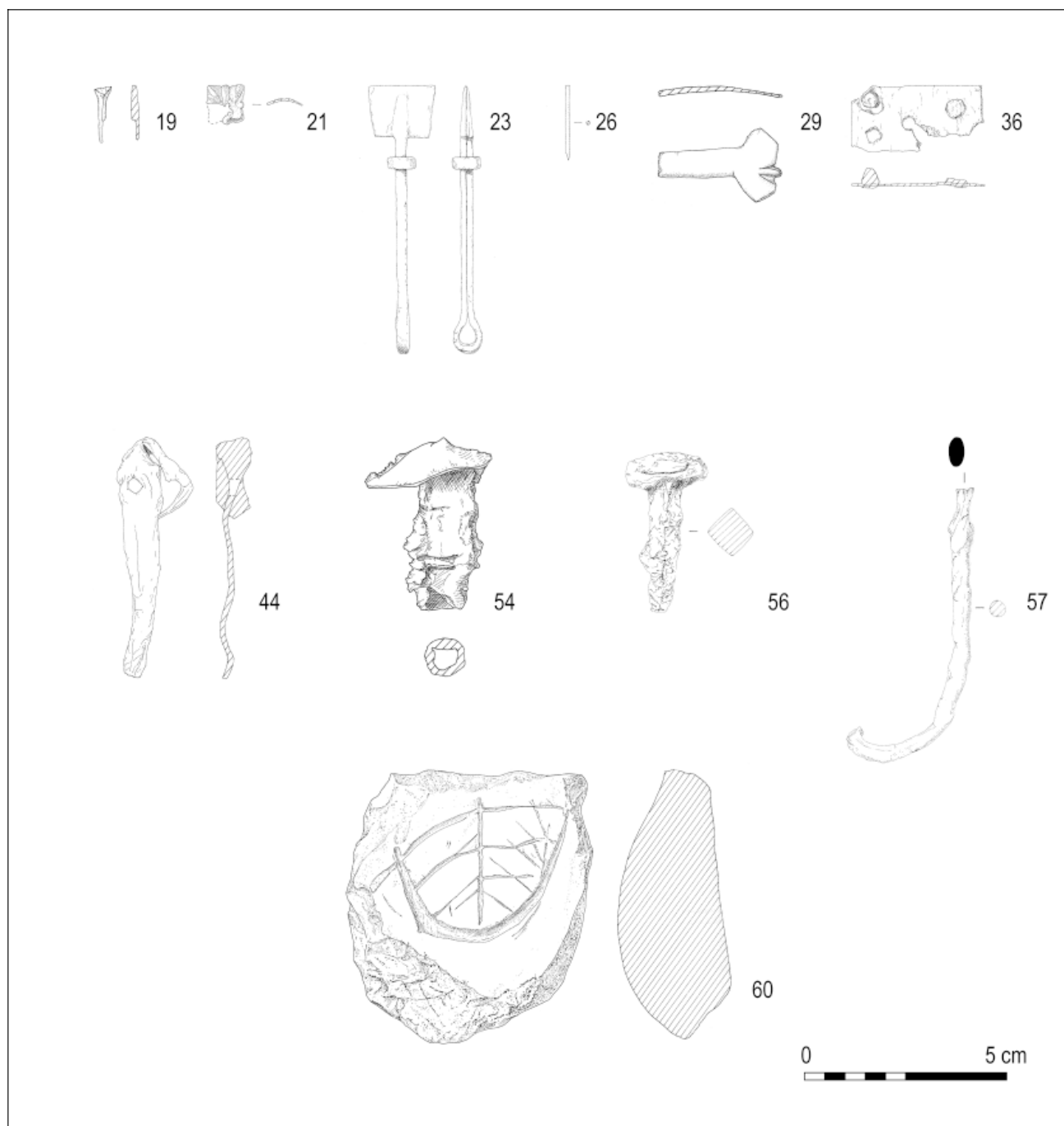
Lace tags

Fabricated from tightly rolled copper alloy sheet, lace tags were used to terminate laces or thongs, protecting their ends and facilitating threading them through corresponding eyelets in clothing. They were used on a wide variety of clothing throughout the late medieval period and into the 17th century. The number of tags used on an individual doublet and hose, for example, varied from two to twelve pairs (Cunnington and Cunnington 1969, 108). Examples have been recovered

Table 8.10 *Copper alloy objects.*

* see Illus 8.7

find number	description	context	location	Period
18	lace tag	219	debris in east range	II
19*	lace tag fragment	402	layer in church	II
21*	mount	950	cemetery	II
22	?costume fitting	560	south range	III
23*	tweezers or parchment clip	491	latrine	II
26*	pin shaft	819	cemetery	II
28	needle	224	demolition debris in east range	II
29*	?book clasp	B19	mortar surface in church	II
36*	riveted sheet	407	?floor layer in church	II
37	sheet	403	levelling material in church	II
38	sheet fragment	402	layer in church	II
40	sheet fragment	1013	midden in Trench X	II
41	sheet fragments	403	levelling material in church	II
42	strip	224	demolition debris in east range	II



Illus 8.7 *Medieval artefacts: copper alloy, lead and plaster.*

from numerous medieval and post-medieval contexts in Scotland (Cox 1996a, 56).

The three lace tag fragments from the site (Nos 18–20) are all fragmentary examples. No 18 is from a Period II context, 219 (*see*–p XX). No 19, from the church is a small fragment with little detail surviving.

Lead

No 44 may also represent a came fragment, although comes are not normally perforated. An alternative interpretation is that this object may represent a

fragment of a mounting, perhaps from a box or wooden furnishing within the church.

Part of a pipe (No 45), now crushed and distorted, was found among demolition debris in the E range. This object may have been deliberately broken and folded, possibly being intended for recycling.

Iron objects

Nails

Three nails were recovered as small finds from layers of this period; two of these came from grave fills (Nos 53

Table 8.11 *Lead objects.*

* see illus 8.7

find number	description	context	location	Period
44*	?came	401	floor in church	II
45	pipe	229	demolition debris in east range	II

Table 8.12 *Iron objects.*

* see illus 8.7

find number	description	context	location	Period
53	nail or tack	871	fill of burial 872	II
56*	nail	1137	burial 1137 in Trench V	II
54*	nail	873	layer in cemetery	II
57*	curved rod	446	layer in latrine	II
58	rod	446	layer in latrine	II

Table 8.13 *Plaster object.*

* see illus 8.7

find number	description	context	location	Period
60*	decorated fragment	492	layer in cloister	II

and 56). No 53 has an unusually short shaft, and may have served a decorative rather than purely functional purpose. No 54 is from the cemetery and may represent part of a clench bolt. (For other nails *see* Cullen, Archive).

Miscellaneous

Two rods (Nos 57 and 58) came from the basal fill of a toilet chute in Period II. No 57 possibly represents a hook, but is rather slender relative to its length and includes no visible means of attachment. No 58, a fragment broken at both ends, may be part of a clenched nail shaft.

Plaster

A fragment of white plaster with an incised design on one face (No 60) was found in a post-13th-century deposit in the cloister area.

Other metal artefacts

I Cullen

Between the latrine block and the E range a shallow hollow in the bedrock was filled with a sandy silt (426) which contained an iron vessel fragment. The cist grave 1033, dated to the 12/13th century, contained a piece of lead casting bottom (fill context 1043). A small fragment of copper alloy was present within the cloister walk surface (context 256).

Bone and antler objects

Comb fragments

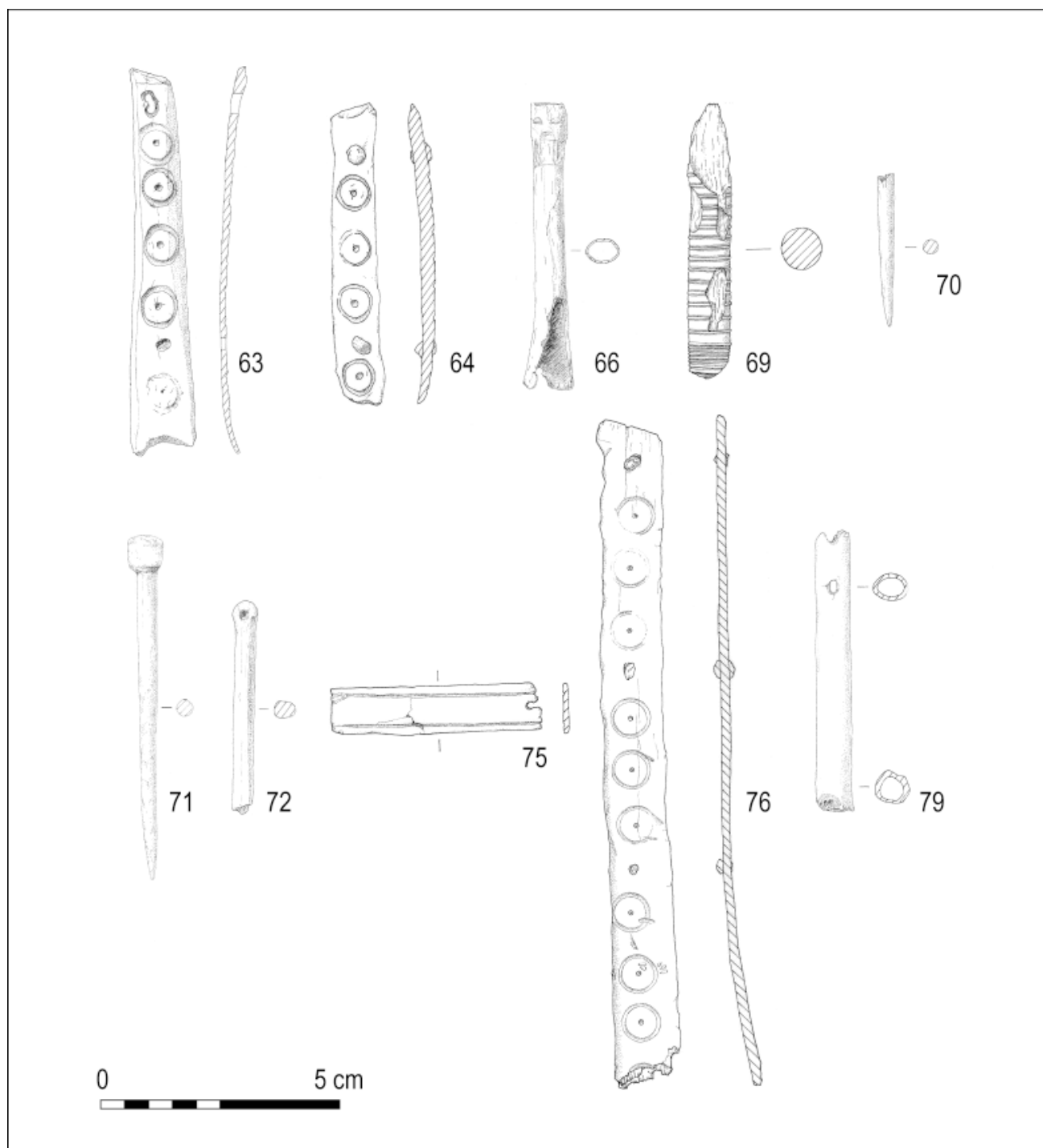
Of medieval date, No 63 is a side plate from a single-sided, composite comb, decorated by unevenly spaced ring and dot motifs. Similarly decorated, No 64 may also represent a side plate from a composite comb, as both short edges are slanted and bevelled in the manner of some side plates. Its heavily worn condition makes more precise identification difficult.

Handle

Derived from a sheep tibia, No 66 may represent a handle or possibly a pendant. Either interpretation might account for the presence of a broken, transverse perforation near one end. The other end has been carefully carved into the form of an animal head. This object came from a Period II deposit within the church.

Parchment pricker or stylus

A cylindrical fragment decorated by incised, circumferential grooves (No 69) may represent part of the shaft of a parchment pricker or a stylus. Parchment prickers, discussed in detail by MacGregor (1985, 122–6), were used by medieval scribes to facilitate the laying out of manuscript pages. Turned on a lathe, they appear to have been commonly ornamented with one or more bands of multiple incised lines and they were tipped with inset metallic points. As both ends of No 69 are



Illus 8.8 Medieval artefacts: bone.

missing, its identification is difficult to confirm, although the highly polished condition of its surviving surface, possibly a result of repeated handling, lends support to this interpretation.

Bone objects

Two pins (Nos 70 and 71) and a possibly unfinished example (No 72) were found. No 70 is a highly polished shaft fragment, which could be from a pin or a needle. No 71, which is of medieval or earlier date, is a complete pin with a roughly oval cross-sectioned head and a tapering shaft.

Mounts

No 75, from demolition debris in the E range, and No 76, from the cemetery, were probably both derived from ribs, and both were possibly used on wooden boxes or caskets. No 76 is decorated by ring and dot motifs.

Whistle or flute

No 79 is part of a whistle or flute, fashioned from a cormorant ulna. Two parallel rows of quill knobs (the attachments for the flight feathers) are present on this fragment, two oval perforations, serving as finger holes, having been drilled between them.

Whale bone artefact

A rectangular section cut from the vertebra of a whale (No 78) was found in a Period II deposit within the church. This object may be interpreted as a chopping block. Its upper surface, which represents the epiphyseal surface of the vertebral centrum, is scarred by numerous intersecting hack marks. The vertebra from which it was derived had a projected diameter of at least 250mm, hence it came from a large whale. Chopping blocks made from whalebone are also known from late Iron Age Howe, Orkney, and other northern sites of Iron Age date, for example Clickhimin Broch (Ballin-Smith 1994, 181–3).

No 83, from the infill of a structure in the corner of the cemetery, is a fragment of a tubular object possibly used with a rope or netting. From the chapter house, No 84, derived from whalebone or antler, may represent an offcut.

Shale objects

Shale bangles had a long currency, first appearing in Early Bronze Age contexts (e.g. Terry 1993, 58–9) and becoming more numerous in Iron Age and early medieval contexts. No 88 is from a bangle with an external diameter of c80–90mm.

Two composite, discoid beads (Nos 89 and 90), both found in the church, may be parts of a decorative necklace or bracelet. Each has a disc of shale at its centre, with bone discs of equivalent size and form attached to each face. Of the two, No 89 is the more complete example.

Stone objects

No 92 is a large hone, and would have been used in a workshop or in the home rather than being carried about the person. One face of No 92 is particularly smooth, possibly through repeated use for sharpening tools. A curving indentation in the opposite face may be a natural feature of this particular stone rather than a consequence of use. Found within a cisted grave of a young female (935) in the cemetery trench (Group 4) dated to the 12th–14th century.

No 102, found in the fill of an apse in the church, is probably a quern fragment dating from the early part of the medieval period, although very little diagnostic form survives. The form of No 106 resembles that of a small hone, but it has been fashioned from soft-grained stone and it is unlikely that it possesses effective honing qualities. It is also rather too small for the purpose.

Table 8.14 *Bone objects.*

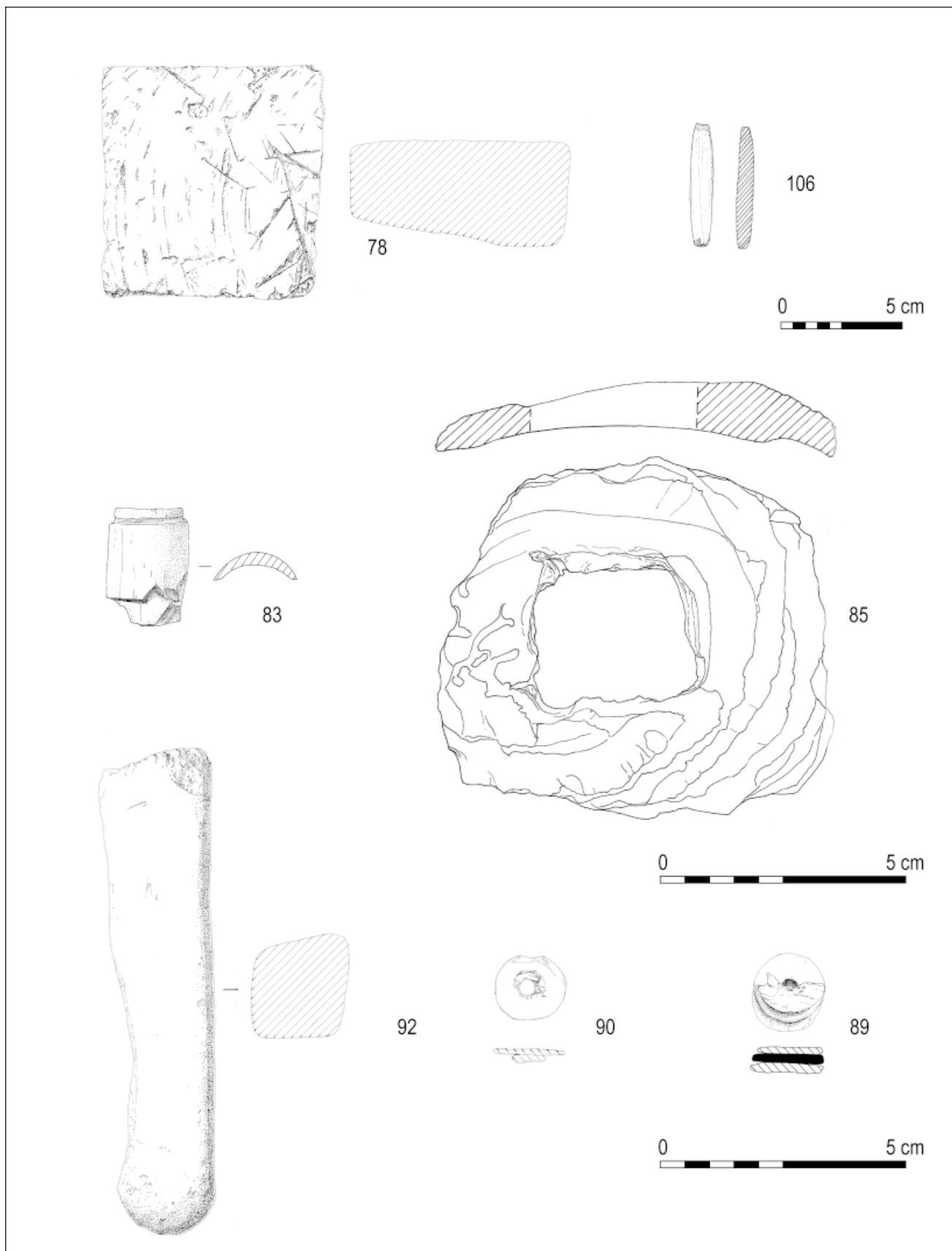
* see Illus 8.8 and 8.9

find number	description	context	location	Period
63*	comb side plate	1118	layer in Trench V	II
64*	side plate or scale	402	layer in church	II
66*	handle?	401	layer in church	II
69*	?parchment pricker	u/s		
70*	pin (or needle)	402	layer in church	II
71*	pin	u/s		
72*	unfinished pin?	288	floor layer in church	II
75*	mount	229	demolition debris in east range	II
76*	mount or side plate	873	layer in cemetery	II
78*	chopping block	402	layer in church	II
79*	whistle or flute	288	floor layer in church	II
83*	fragment	938	debris within medieval structure 936	II
84	worked fragment	409	layer in chapter house	II
88	bangle fragment	462	mortar layer south range	II
89*	bead	402	layer in church	II
90*	bead	402	layer in church	II

Table 8.15 *Stone objects.*

* see Illus 8.9

find number	description	context	location	Period
92*	?hone	935	cist burial in cemetery	II
102	quern fragment	357	foundations of the square chancel of the third church	II
106*	worked stone	382	levelling up in west range	II



Illus 8.9 Medieval artefacts: bone, stone and shell.

Table 8.16 *Perforated shell.*

* see Illus 8.9

find number	description	context	location	Period
85*	perforated shell	580	debris in south range (residual)	III

Table 8.17 *Medieval flints mentioned in the text.*

* see Illus 8.10

find number	description	context	location	Period
72	core	257	redeposited midden in cloister	III
105*	snapped or reworked flake	938	infill of structure in cemetery	III
107*	retouched flake 107	947	beneath paving in cemetery	III
158	snapped or reworked flake	1101	topsoil in Trench V	III

Perforated shell

A perforated shell of the European or common oyster (*Ostrea edulis*) was found among debris in the E range and is likely to be of medieval date. The evidence of wear on this object does not confirm conclusively that it had been suspended by a cord (and worn around the neck, for example), although two corners of the perforation are slightly worn.

8.4.3 The medieval flints

Mike Donnelly

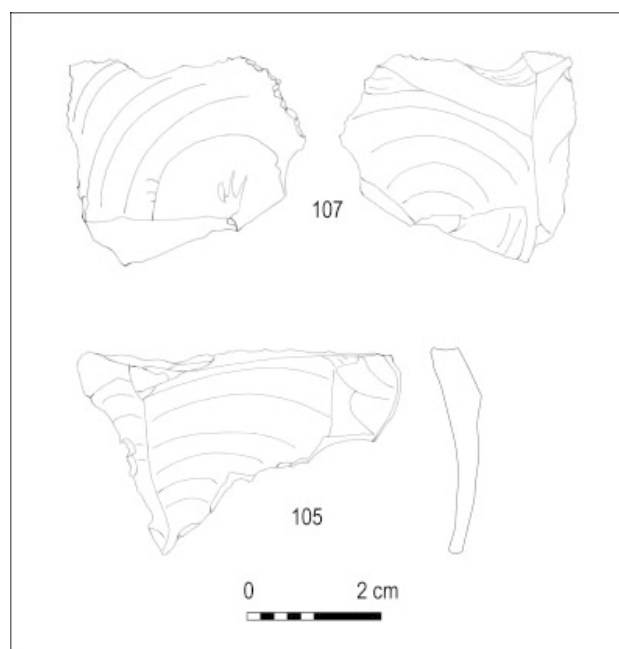
Of the considerable assemblage of lithic material from the site, four examples from post-medieval contexts were identified as being possibly medieval in date, and residual in Period III contexts.

Apart from the core, these items would appear particularly suitable for working with materials such as canvas or leather suitable for the working of canvas or the processing of fish and this author would argue that these are medieval in date and are residual finds. The items have been worked from flint possibly introduced to the island as ships ballast.

8.4.4 The architectural fragments

Heather James

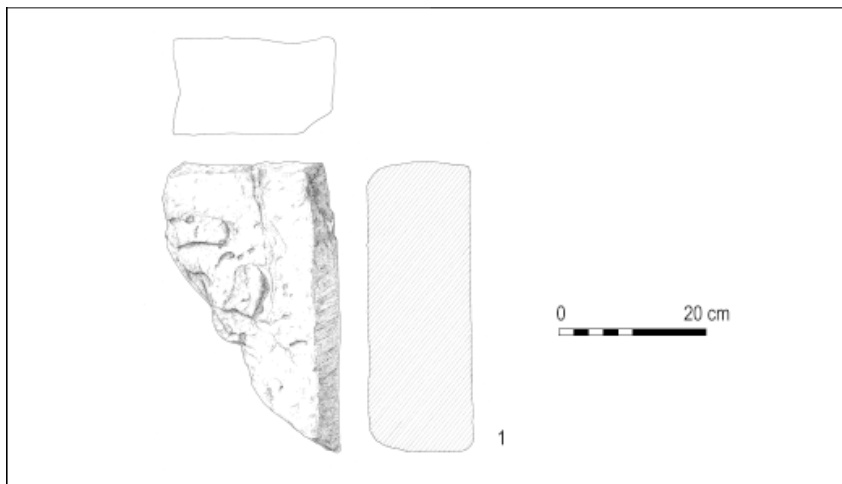
Several architectural fragments were retrieved from around the site (presumably collected by previous visitors) and from topsoil as the trenches were excavated. These have been included in the unstratified material. The majority of the architectural fragments were found among the demolition debris in the E range (224). These included the *in situ* column bases (see Illus 8.14) and seven half drums. Other fragments not illustrated include three mullion fragments; two were from context 198 (topsoil in the N range), and one from context 219.

Illus 8.10 *Medieval flints.***8.4.5 The roof tile**

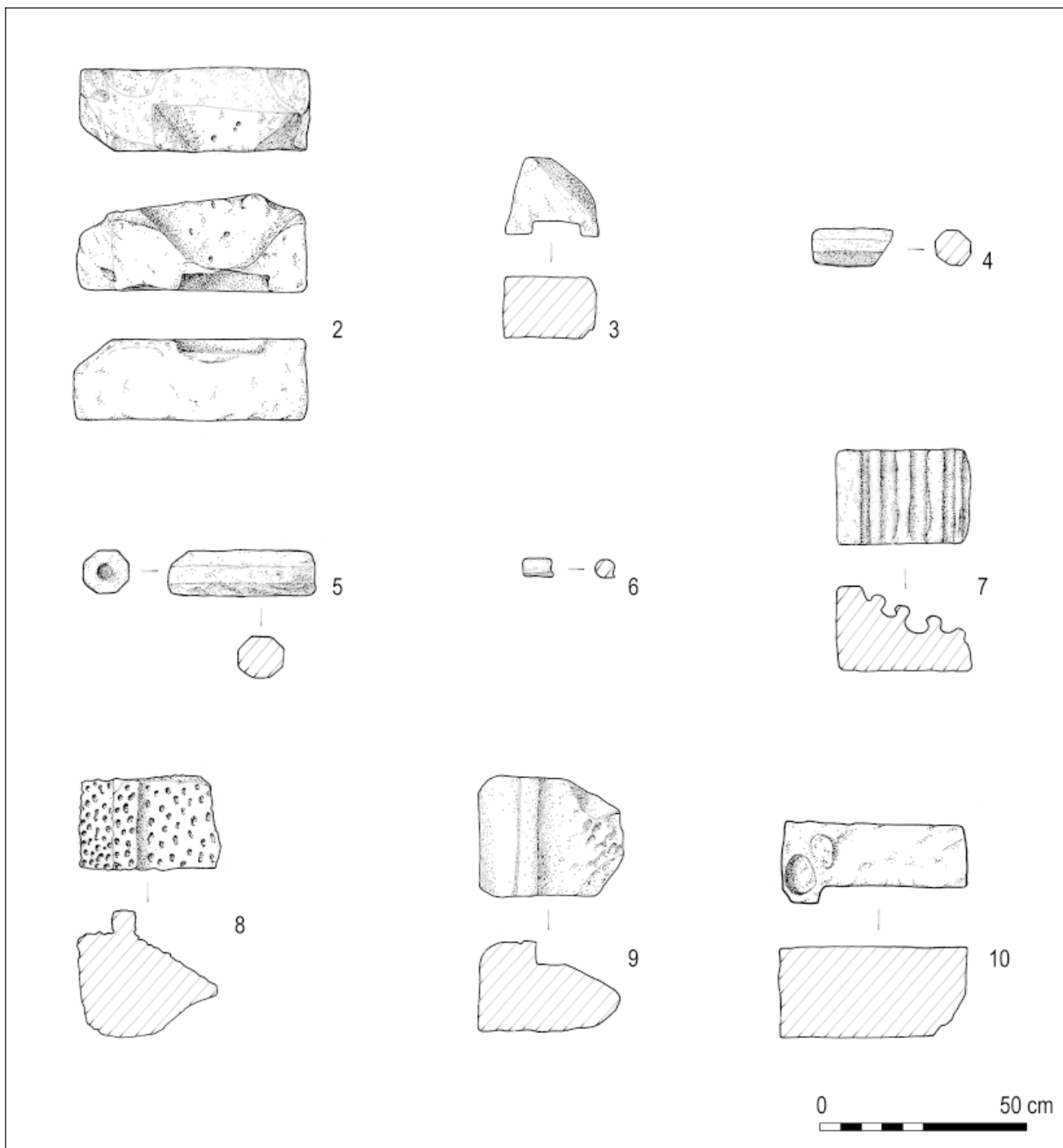
Bob Will

Over 3000 fragments of ceramic roof tile, along with two complete roofing slates and several slate fragments, have been retained, making the assemblage one of the largest collections of ceramic roof tiles excavated from Scotland. Tile was so prevalent on the site that only a representative sample of the fragments from each context were retained. The size of this sample was not consistent.

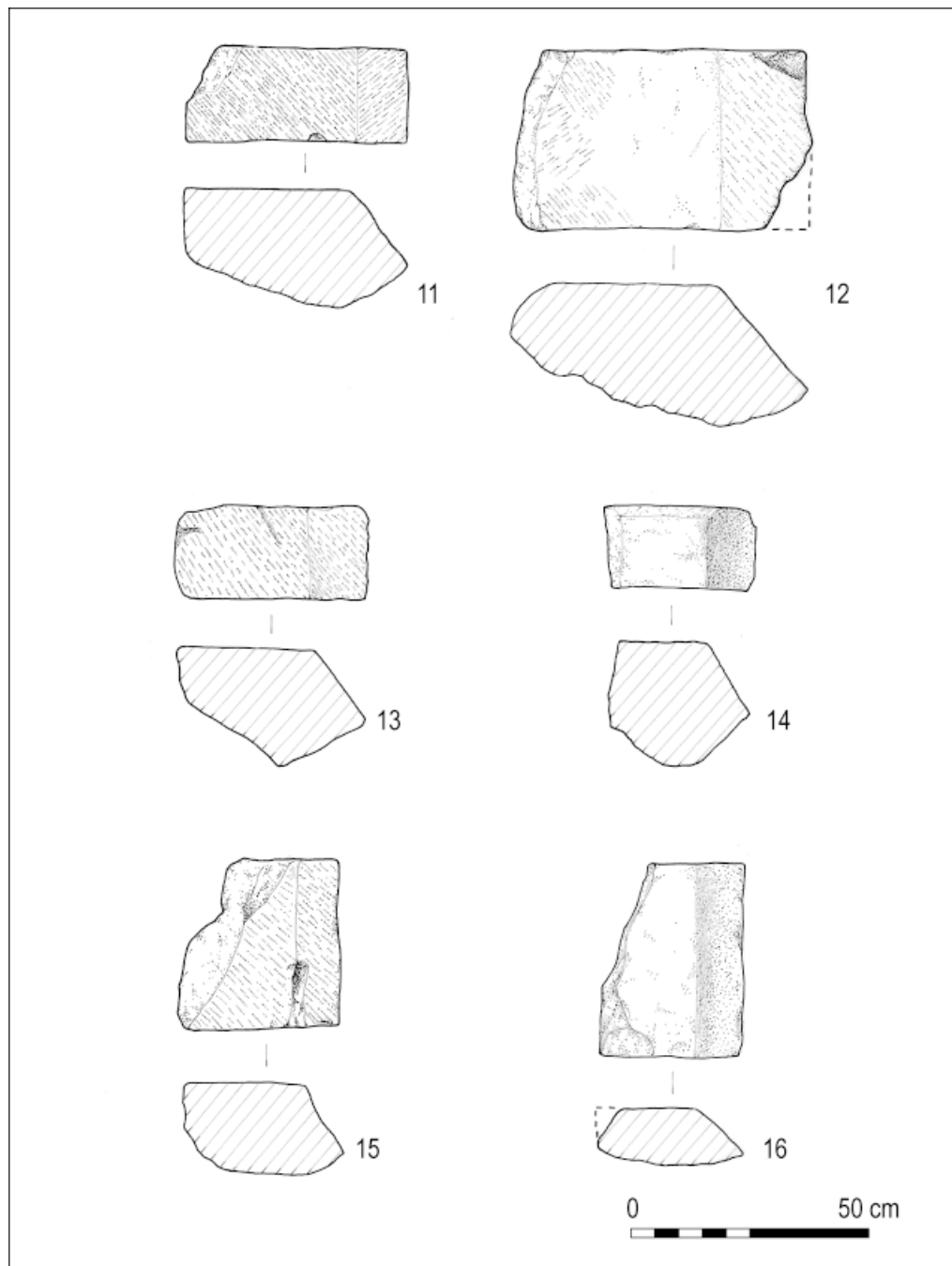
The fabric of the tiles was broadly the same, a coarse white to buff fabric, of similar appearance to the unstratified ceramic roof tiles previously retrieved from the kitchen midden (di Falco 1981).



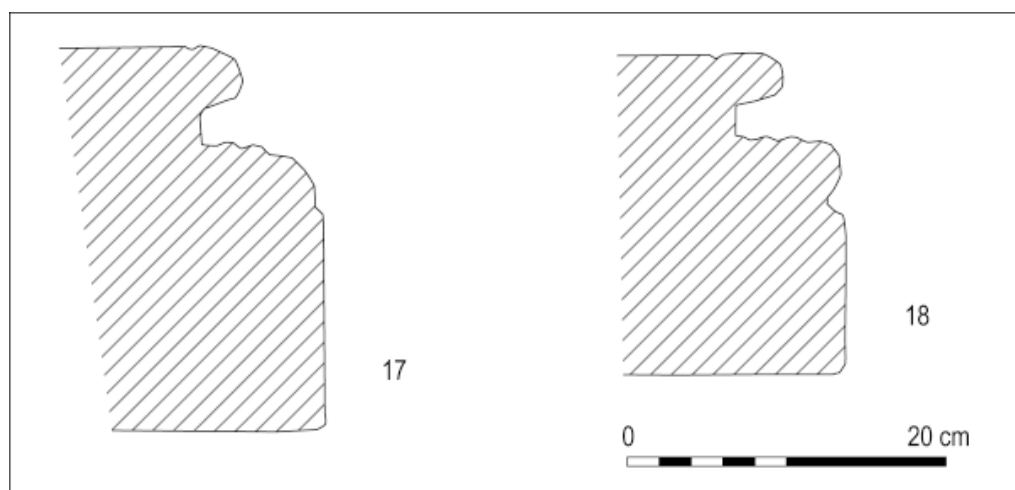
Illus 8.11 Carved stone slab.



Illus 8.12 Architectural fragments.



Illus 8.13 Architectural fragments.



Illus 8.14 Architectural fragments.

Table 8.18 *Stone catalogue*

* see Illus 8.11, 8.12, 8.13 and 8.14

catalogue number	description	context	location	Period
1*	corner of damaged grave slab with chamfered sides and low relief carving	u/s		
2*	cill or lintel	u/s		
3*	cill or lintel	u/s		
4*	octagonal shaft for detached column (mullion)	224	demolition debris in east range	II
5*	octagonal shaft for detached column (mullion)	224	demolition debris in east range	II
6*	small circular shaft with fillet	u/s		
7*	ornate voussoir with three rolls	117	reused in post-medieval wall in N range	III
8*	door or window jamb	u/s		
9*	door or window jamb	u/s		
10*	door or window jamb	u/s		
11*	chamfered stone	224	demolition debris in east range	II
12*	chamfered stone	224	demolition debris in east range	II
13*	chamfered stone	224	demolition debris in east range	II
14*	chamfered stone	224	demolition debris in east range	II
15*	chamfered stone	224	demolition debris in east range	II
16*	chamfered stone	u/s		
17*	column base constructed of two halves, upper rim and two rolls	223	chapter house	II
18*	column base constructed of two halves, upper rim and two rolls	232	chapter house	II

Flat roofing tiles

It was possible to reconstruct five complete tiles from the demolition rubble in the E range (contexts 224 and 229). These measured 0.3m by 0.2m by 0.15m, and were made from a coarse white to buff, quartz-rich clay with large red sandstone inclusions, often with a partly reduced core and an orange/brown heat skin on the surface. Many of the tiles were glazed on the lower half of the tile body with a light to dark green /brown glaze. The upper part of the tile was unglazed as this part would have been covered by the overlap from the next tile. The complete peg hole tile was glazed, while three of the four complete nib tiles were unglazed.

The tiles have been made in a mould (Eames 1992) with the characteristic features of flattened irregular edges and finger and trailing (context 1102) and/or smoothing marks on the surface (context 229), where the clay has been pressed into the mould and then the excess clay trimmed. It is thought that sand was used at the base of the mould or frame to stop the clay sticking. Some of the tiles are slightly warped, possibly the result of the tiles not being supported while drying prior to firing. The thickness of the tiles varies from a minimum of 12mm to a maximum of 20mm, the difference was probably due to the pressing and rolling the clay in the mould. It seems likely that the Isle of May tiles were made locally either in Fife or in East Lothian. Both areas are easily accessible to the Isle of May and are known to have supported pottery industries in the

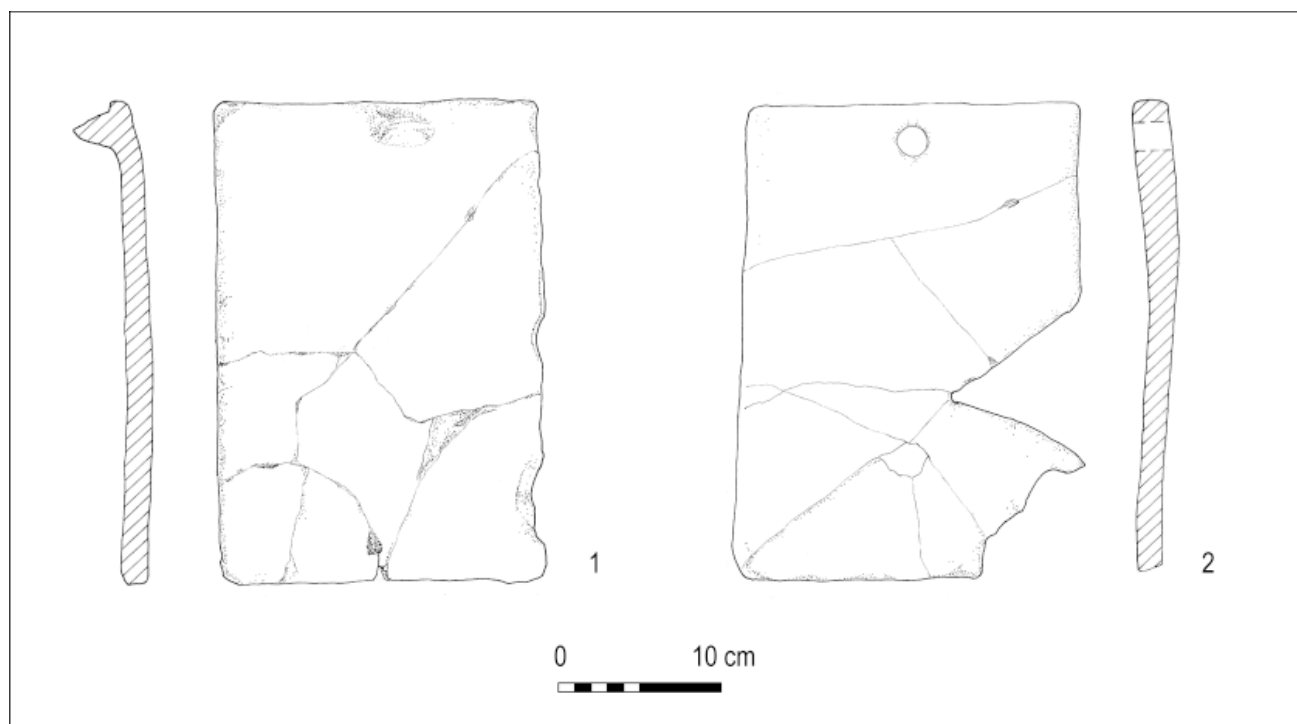
medieval period. The only known medieval tile kiln is at North Berwick in East Lothian (Richardson 1929), while it has been suggested that a historical reference to an *ustrinis* (kiln or malt kiln) within the precinct of St Andrews Cathedral may refer to a tile kiln, but as yet there is no evidence to confirm this interpretation (MacRoberts 1976).

The complete tiles represent two different types of roof tile, nibbed tiles (Illus 8.15, No 1, contexts 224 and 229) and peg hole tiles (Illus 8.15, No 2, context 229). By far the largest group was the nibbed tiles (228 fragments). Each tile had one central nib in contrast to similar tiles from the Auction Hall, St Andrews, that appear to have had two nibs, one on each of the upper corners (Maxwell 1997). The nibs have a rectangular base (40mm by 160mm) with a rounded to triangular profile, the inner face being vertical for hanging the tiles onto horizontal batons on the roof.

The peg hole tiles (11 fragments) were the same size as the nibbed tiles, with the peg hole located in the middle of the tile, 0.01m below the upper edge. The peg holes were 0.014m in diameter.

Hip and ridge tiles

One fragment with a nib had been cut off at an angle, clipping the nib (context 807), and this may represent a hip tile. Six fragments were clearly curved and may represent ridge tiles. Three additional fragments of ridge tiles displayed features relating to the central crest



Illus 8.15 Medieval roof tiles.

of the tile. The most complete was glazed and the crest where it survived was sloping at 45 degrees. Unfortunately, the fragment was too small to determine the extent of the decoration (context 932, Illus 8.12, No 3). On another fragment (not illustrated, context 100) there were finger indentations where a crest or other decorative feature had been formed.

Only three tile fragments in a different fabric were recovered (context 172, 448, 807, all Period III). This fabric was a more orange/red sandy fabric with few inclusions. One fragment (context 172) was covered in a white slip but was otherwise undecorated.

Discussion

Little is known about the use and extent of tiles as a roofing material in Scotland as so few large assemblages have been excavated. From the limited published Scottish material and excavation reports from England, the use of roof tiles seems to begin in the later 12th or early 13th century (Eames 1992). Initially, nibbed tiles were used. These were then replaced by peg hole tiles in the later 13th or early 14th century. Peg tiles recovered from excavations in Perth begin to appear in deposits dating to the later 13th century (MacAskill 1987). Although both types are present on the Isle of May, by far the largest group is of nibbed tiles (228 nibs and only 11 peg holes were recovered).

The only known tile kiln in Scotland was partly excavated in the 1920s at North Berwick (Richardson 1929). Although the main products of this kiln were floor tiles, thought to date to the 13th century, fragments of roof tiles were recovered as pinning stones built into the fabric of the kiln structure. The presence of these

roof tile fragments may suggest a much larger tile production workshop with several kilns producing different products or the possibility of an earlier phase that produced roof tiles.

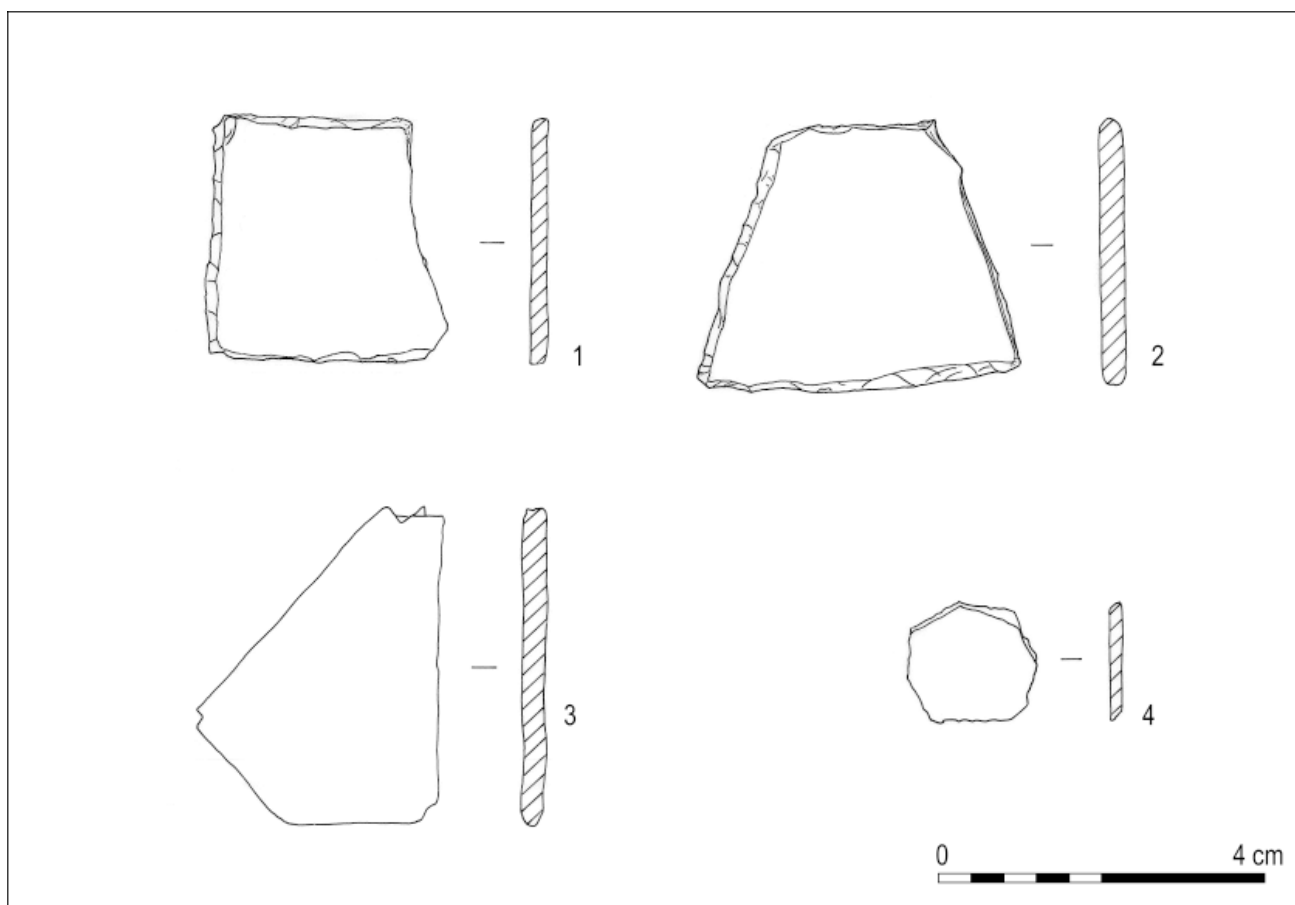
8.4.6 The window glass (Illus 8.16)

Susan Bain

Sherds of medieval window glass were found within demolition debris in the E range (context 229) and beneath the cloister walkway between the N range and the W range (context 461). The location of these contexts suggests that the glass was used in the chapter house and possibly in the church.

The excavations produced a sizeable collection of window glass, a large number of pieces of which were modern and are not discussed in this report. One hundred and seven fragments were recovered from medieval and post-medieval contexts. All the glass is fragmentary and the majority is in poor condition, exhibiting many problems of corrosion and physical break-up. Most fragments have lost all transparency, and two fragments have completely corroded and have no preserved inner core. The remainder are either covered in a thick dark-brown surface patina or by a fine iridescence. All the fragments, except perhaps one, appeared to be of clear or clear green-tinted glass. The lack of coloured glass fragments or decorated pieces has meant that it was difficult to date the window glass on stylistic grounds.

The glass was recovered from 26 different contexts and over a wide area of the site. The glass varied in thickness and quality as well as colour and condition and is obviously from a variety of sources. A number of



Illus 8.16 *Window glass*

fragments were recovered from topsoil and redeposited layers (e.g. contexts 001, 102, 280, 401, 801, 1001, 1101) and as they are undiagnostic are not discussed further. All the fragments found within the N range or church are from post-medieval contexts and apparently relate to the use of this area as workshops. The use of glass in the windows of a workshop of this date (16th century) is unusual, but plain glass was beginning to be used in domestic settings by this period.

Three fragments (from contexts 257 and 801 (*see* Illus 8.16, no 1) have a rounded edge, characteristic of the muff or cylinder production process. Two fragments (from contexts 001 and 133) are characteristic of the crown production method. Both these production methods were in use throughout the medieval period. Many fragments exhibited some evidence of grozed edges, where the glass has been trimmed to a desired shape with a grozing iron. However, only seven quarry shapes were identified: a lozenge (or trapezoid) from context 229 (Illus 8.16, no 3), two diamond quarries (context 461 and unstratified), three rectangles (contexts 229, No 2 and 461), and one possible circle (No 4). A circular quarry is unusual, but another possible circle of blue glass was noted from Battle Abbey (Kerr 1985, 132).

Twenty-four fragments of possibly earlier glass were recovered from debris sealed under 16th-century paving (context 461) between the church and the W range. All the fragments were covered in a heavy dark brown patina but appeared to be of clear/clear green glass. Two

rectangular and one diamond quarry were identified from the fragments. Unpainted windows from the 12th to early 13th century are extant in Salisbury and in Kent, where the leadwork forms a geometric design (Kerr 1985, 132). Nine fragments of window glass were recovered from demolition debris (context 229) within the chapter house. One fragment of a rectangular quarry has a clearly visible lead shadow, where the presence of a lead came has resulted in a differential corrosion pattern on the surface. A lead shadow is also visible on one side of a trapezoidal quarry from the same context. Also from 229 is the only fragment of possibly painted glass. Faint lines forming a shape similar to a capital A were noted on one surface. These may be painted lines, but are so faint and corroded that they may just be an affect of weathering or staining.

A complete diamond-shaped quarry of window glass was found unstratified in the cemetery. It had a deliberately truncated end and was clear with pale green tinge and very heavy dark brown to black patina (potash glass). Its original thickness was up to 4.5mm, but all of the patina had detached from one side. The remaining heart glass varies in thickness from one end of the quarry to the other indicating crown glass, not later than 1600 and perhaps considerably earlier.

While it is disappointing that no stained or painted glass was recovered from the excavations on the May, it is not entirely surprising and does not necessarily mean that it never existed. It is not unreasonable to assume

that some of the windows in the church would have been glazed with stained or decorated pieces. However, both glass, and particularly lead, were precious commodities throughout the medieval period and windows are both fragile and easily recycled. The English raids during the Wars of Independence in the early 14th century may have resulted in the destruction of the windows for the lead with the glass reused for cullet. The fragments of glass recovered from the excavation were all smashed before deposition and further damage has occurred since. All the fragments recovered appear to be of plain greenish glass and those from the demolition layers may be from the 13th-century windows. These could represent a plain geometric window, surviving examples of which date from the 12th to the 13th century (Kerr 1985, 132), or the plain panels from a decorated grisaille style window from a similar date.

As yet there is no evidence for glass production in Scotland in the medieval period and it is assumed that all the glass was imported from England or the Continent. The Exchequer Rolls for Scotland reveal a trade in window glass from the Low Countries and France arriving in Scottish ports throughout the 14th century and it may be assumed that this trade occurred in the 12th and 13th centuries also (Graves 1994, 125). Stained and painted glass from the 12th and 13th centuries has been recorded at a number of religious sites in Scotland, including St Andrews, Dunfermline and Holyrood. However, no stained or painted medieval glass remains *in situ* in Scotland. The only complete examples of pre-Reformation glass are four medallions set in the windows of the Magdalen Chapel in Edinburgh, dating from c1550.

8.5 The medieval and later pottery

(Illus 8.17, 8.18, 8.19 and 8.20)

Bob Will and George Haggarty

8.5.1 Introduction

Over 6000 sherds (96kg) of pottery dating from the medieval, post-medieval and modern periods were recovered. About 54 per cent by sherd count (33kg by weight), of this material belonged to the medieval period. This report and the Archive catalogue also includes material recovered during fieldwalking carried out by Bradford University, along with material picked up over the years by visitors to the island.

Due to its geographical position the May was easily reached by ships trading along the E coast of Britain, and from the Forth ports across the North Sea. As one might expect, the vast majority of the medieval ceramic assemblage recovered consists of fabrics and forms which are commonly found on archaeological excavations carried out in the major ports along the E of Scotland, including Leith, St Andrews, Perth and Aberdeen. The collection includes locally produced wares as well as a range of imported ceramic material from England, mainland Europe and China.

8.5.2 Local medieval and post-medieval wares

Scottish White Gritty Wares (SWGW)

These wares represent the largest pottery grouping found on site: 2677 sherds, 77 per cent by sherd count, 82 per cent by weight of the medieval assemblage. Scottish White Gritty Wares (SWGW) is a term used to cover a wide range of somewhat visually similar ceramic fabrics found throughout Scotland. The forms produced are limited mainly to a range of jugs and cooking pots and these have recently been classified in (Jones et al 2003, 48–58).

To date only one site producing SWGW has been researched and excavated, Colstoun, near Haddington in East Lothian (Brooks 1980, 364–403; Hall 2004, 34–73), although two new kiln sites have, almost certainly, been recently discovered in Fife. The first is at Ceres (Jones et al 2003, 48) and the second, found during an assessment carried out by the AOC Archaeology Group, is at Coal-town of Wemyss. In the past, two other Fife SWGW kiln sites have been postulated: Tentsmuir, near Leuchars (Laing 1967, 143) and less likely Balchrystie Farm by Earlsferry (Wedderburn 1973, 26). Interestingly, the recently recovered Ceres jars/cooking pots sherds would seem to be mainly from examples with everted, bifid rims and frilling; this is thought to be a local Fife variant and was first identified by Laing (1972, 15–16 figs 18 and 19).

Its main period of production would seem to have been the 13th and 14th centuries; but archaeological evidence from Leith and Inverkeithing suggests that some large crude whiteware jugs and possibly other forms were still being manufactured somewhere in the Forth littoral into the 15th century (MacAskill 1983, 535–42; 1985, 416). Recently, an evaluation of the pottery from the Tron Kirk in Edinburgh suggests that this late phase may still have dragged on into 16th century (Haggarty and Lawson forthcoming). White Gritty fabrics regularly account for as much as 95 per cent of the medieval pottery recovered from excavations within St Andrews (Hall 1997a) and these wares represent an industry capable of producing a range of vessels, mainly jugs and cooking pots, of some technical sophistication. The decorative schemes used on jugs of this period were generally copied from imported wares, particularly Yorkshire, and it is possible to argue that, as in St Andrews itself, the competence of the local potters may account for the relatively low numbers of imported vessels within the May assemblage.

Many of the SWGW sherds recovered are from jars/cooking pots (Illus 8.17, 1–14), identified by characteristic sooting and fuming marks around the exterior bases and walls. Although no complete examples were recovered, the larger fragments suggest a variety of shapes including straight-sided (Illus 8.6, 4 and 15) and rounded or barrel shaped (Illus 8.17, 4 and 15). This may reflect different sources for the vessels, as diverse vessel shapes were found in the same phases ruling out possible chronological differences. The 12th-century jars/cooking

Table 8.19 *Illustrated Scottish White Gritty Wares (Illus 8.17).*

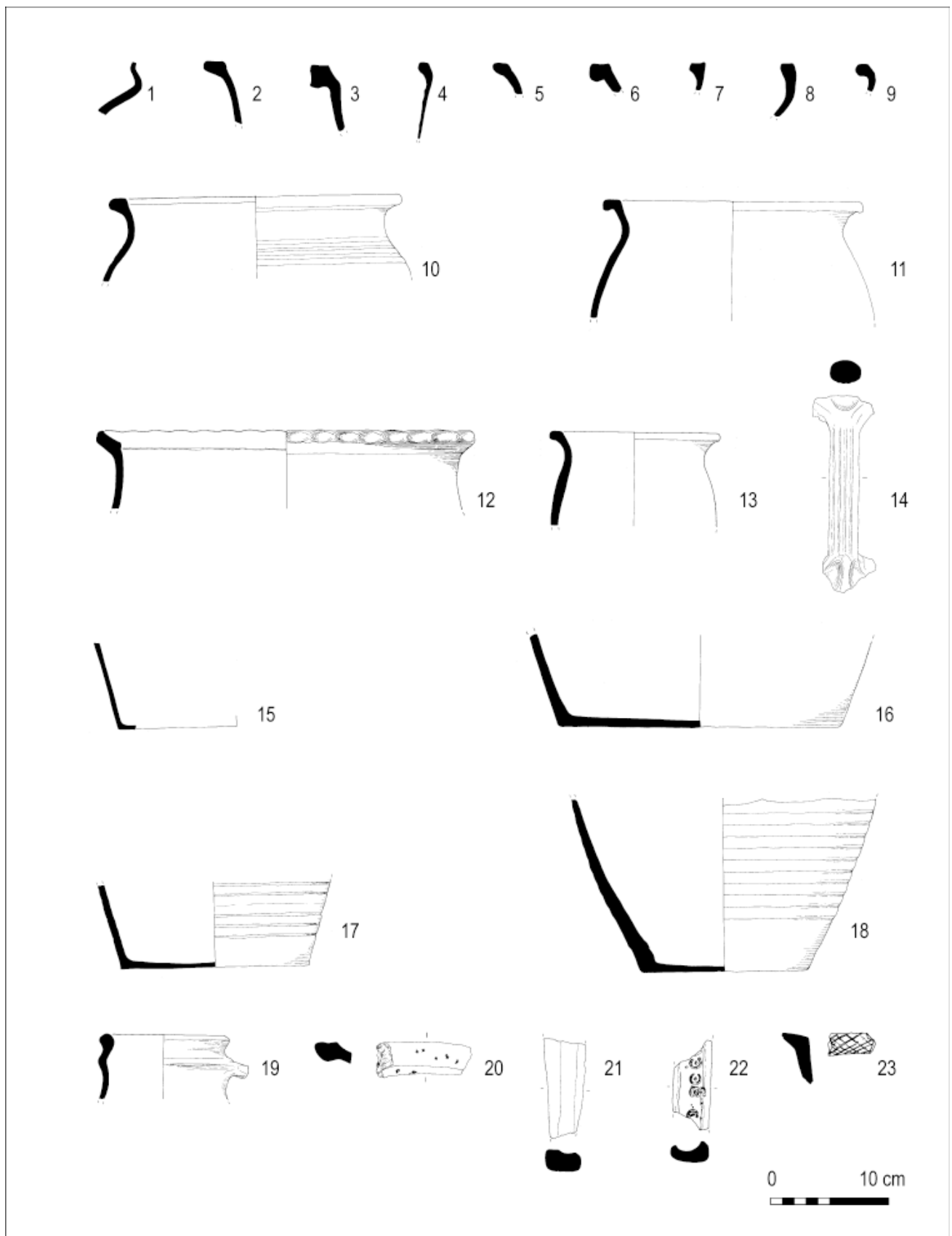
vessel	description	context	location	Period
1	cooking pot rim, rounded	224	debris within chapter house	II
2	cooking pot rim, straight-sided	203	foundation for chapter house benches	II
3	cooking pot rim	253	cobbles in cloister	III
4	cooking pot rim, straight-sided	1216	layer in latrine	II
5	cooking pot rim	u/s		
6	cooking pot rim, possible bowl	160	layer of clay silt in church	II
7	cooking pot rim	809	post-medieval layer in cemetery	III
8	cooking pot rim, rounded	461	layer in cloister	III
9	cooking pot rim	156	layer of clay loam in church	II
10	cooking pot rim, rounded	1118	medieval layer in Trench V	II
11	cooking pot rim, rounded	303	layer in church	II
12	cooking pot rim, straight-sided, piecrust rim	156	layer of clayloam in church	II
13	cooking pot rim, straight-sided	474	post-medieval landscaping in south range	III
14	cooking pot, flat base	149	layer within church	
15	jug, ribbed rod handle	469		II
16	jug, flat-based	303	layer within church	II
17	jug, flat-based	149	layer within church	
18	jug, flat-based	199	post-medieval infill	III
19	jug, rim with grooved strap handle	u/s		
20	bowl rim, with stabbing on the upper surface	382	levelling up in west range	II
21	skillet handle with slashing	224	Debris within chapter house	II
22	strap handle with dot and circle decoration	210	Shallow pit in east range	III
23	cooking pot rim, cross-hatching on the upper surface	1112	Medieval layer in Trench V	II
24	jug, wavy decoration	807	Post-medieval layer in cemetery	III
25	jug, panel decoration with herringbone style	229	demolition debris in east range	II
26	White Gritty face mask, similar to one recovered from Edinburgh High Street	u/s		
27	White Gritty face mask lug handle	219	debris in east range	II

pots recovered from excavations at Kelso Abbey, Leith and Haddington are straight-sided (Jones et al 2003, 48–54), while those recovered from the probable 13th/14th-century kiln site at Colstoun were predominantly rounded with only a small number of straight-sided examples (Brooks 1980, 364–403; Hall 2004, 34–73). Both 13th- and 14th-century Leith and Colstoun examples have a distinctive cordon around their shoulders; a feature which was not identified on any of the May sherds. The majority of 13th- and 14th-century vessels recovered from the excavations at St Andrews Castle are also rounded (Haggarty and Will 1996, 648–69), although straight-sided vessels do occur; these may reflect traded material.

The SWGW jugs are predisposed to have single grooved strap handles and flat or sagging bases with thumbled decoration and pulled spouts. The vessels are usually partially glazed with a yellow/green lead glaze and various forms of decoration; including, dot and eye motifs, applied strips, rosettes and combed decoration (Illus 8.17 and 8.19, 22 and 24–6). The handles are generally attached below the rim, often with stabbed decoration or slashes running vertically up and down the handle. Three rod handles, two with ribbing, were also recovered, one illustrated (Illus 8.17, 14). The style and decoration on the May jugs tends to copy that of

the Yorkshire potteries of the late 13th to early 14th centuries. A fragment of a tubular bridge spout (not illustrated) and two face masks in White Gritty fabrics (Illus 8.19, 26 and 27) and a dark-green/brown glazed body sherd (Illus 8.19, 25) with panels of herringbone decoration and dotted borders also reflect this Yorkshire influence. One of the face masks (Illus 8.19, 26) is very similar to published examples from the kiln site at Colstoun (Brooks 1980, fig 5, no 65) and excavations on Edinburgh's High Street (Thoms 1976, 198, no 70), suggesting a possible Lothian source for the May example. Two straight skillet handles, one illustrated, (Illus 8.17, 21), were recovered with similar slash marks to the jug handles.

Other SWGW vessels recovered included shallow bowls with internal thumbled and pie crust decoration and stabbed decoration on the upper surface of the rim (Illus 8.17, 12 and 23); similar vessels were recovered from the kiln site at Colstoun (Brooks 1980). Another rim sherd from a large storage jar or bowl was recovered, (context 1112, Illus 8.17, 23), with cross-hatched decoration on the rim itself. This type of decoration is quite unusual, although similarly decorated sherds in different fabrics have been recovered from both Jedburgh Abbey (Haggarty and Will 1995, 101, Illus 82, no 25) and Kelso Abbey (Tabraham 1984, 389, Illus 21, no 51).



Illus 8.17 *Medieval pottery.*

Coarse Redwares

There is a small group of sherds, none illustrated, largely from cooking pots or storage jars, in a gritty redware fabric (contexts 288, 807, 822, 844, 873 and 876). Unfortunately, these sherds were too small to determine the shape or size of the vessels. Recently, a number of redware pottery groups from the Borders, thought to pre-date the introduction of the SWGW industry in the second quarter of the 12th century, have been analysed using Inductively-Coupled Plasma-Mass Spectroscopy (ICP-MS). These groups from Jedburgh Abbey (Haggarty and Will 1995), Kelso Abbey (Cox 1984) and Hayknowes Farm, Annan (D Hall pers comm) have been shown to be unrelated, suggesting that a number of potteries were in production. Without recourse to petrographic or chemical analysis it is impossible to suggest an origin for the May material, but visually it looks like a red variant of 12th-century White Gritty Ware. A coarse redware cooking pot has fairly recently been published from Market Street, St Andrews (Hall 1997a).

Scottish Medieval Redwares (SMR)

Scottish Medieval Redwares (SMR) is the term used to describe a range of oxidised, red or orange coloured iron-rich fabrics, often with high sand content, that have been found on excavations throughout Scotland, but in the earlier production period may have been concentrated in the burghs on or N of the River Tay and in the SW of Scotland. Excavations in Elgin, Perth, Aberdeen and a number of other NE burghs have identified 'local' redware fabrics and this has led to the use of the term 'East Coast Redwares' (Hall 1996a, 88). Generally these industries are thought to date from the 13th century through to the late 15th century, although in some of the more important burghs they may have started somewhat earlier. Fragments of kiln furniture have been recovered from a number of excavations in Perth (D Hall pers comm), and a quantity of complete examples have been published from the deserted medieval burgh of Rattray in Aberdeenshire (Brooks and Haggarty 1977, 379–82; Murray 1993, 109–218), where a series of small redware kilns have been excavated. Archaeological evidence suggests that these kilns date to the 13th and 14th centuries and it has been subsequently suggested that they represent small scale production for use in the local area rather than for 'export' to a wider market (Hall 1996b, 127).

Jugs are the predominant vessels recovered in Scottish Medieval Redware assemblages and these generally have pulled spouts, flat or sagging bases and strap handles attached below the rim. The lead glaze is often patchy or is in the form of a bib. A fair number of Redware vessels have been found covered with a white slip, presumably in a bid to imitate White Gritty vessels. There is a Redware sherd from the May with a white slip, the base of a jug with thumbled decoration (Illus 8.18, 30), a jug with a bridge spout (Illus 8.18, 28) and

a body sherd with unusual applied pellet decoration (Illus 8.18, 29). Redware sherds have been recovered from Anstruther on the Fife coast (Hall 1997b, 119–42) and it is possible that this is the source of the May material.

Scottish Post-medieval Oxidised and Reduced Wares (SPMOW) and (SPMRW)

This is the largest pottery group recovered from the May and contains 1840 sherds. Typically, in the late 15th and early 16th centuries in Scotland both white and red gritty fabrics began to disappear and the potters, for reasons not yet fully understood, began to produce pottery which was much smoother to the touch. Under oxidising conditions these clays fire red, Scottish Post-Medieval Oxidised Ware (SPMOW), and under reduction fire to a dark-grey, Scottish Post Medieval Reduced Ware (SPMRW). Fully reduced sherds recovered from excavations would seem to be almost exclusively from large jugs, which by the 17th century nearly always had multiple wavy grooving on the shoulder just below the neck and are covered with a thick dark-olive-green lead glaze. Oxidised sherds are normally from a range of much smaller jugs, skillets, flanged bowls, drug pots, etc (Haggarty 1980a, 40–4; 1980b 45–61; Caldwell and Dean 1992, 1–22).

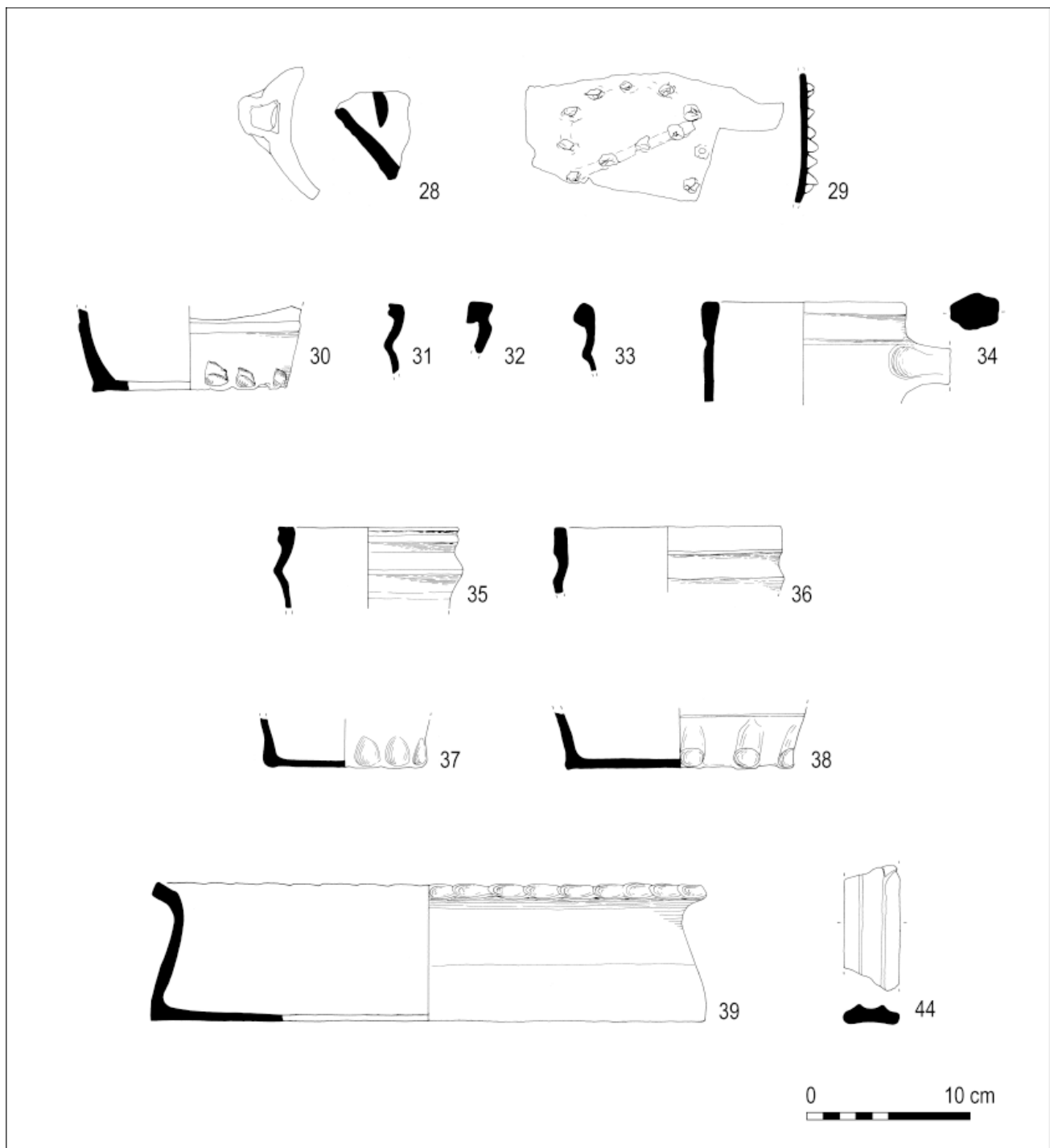
Both SPMOW and SPMRW have a ubiquitous distribution throughout Scotland, and a long date range. The evidence would suggest that this industry started in the late 15th century and continued into the 18th century (Haggarty and Alexander 1998). Production centres for this type of pottery have been identified in Glasgow (Quail 1982, 1–3), and near Stirling Castle (Haggarty 1980a, 37). A large and important 17th- and early 18th-century production site for this type of pottery has been found at Throsk, a few miles E of Stirling (Caldwell and Dean 1992, 2–7).

From the excavations of the later levels on the May there are substantial amounts of both SPMOW and SPMRW, some of which were recovered in association with sherds of White Salt Glazed Stoneware (SWGS) and other fabrics dating from as late as the third quarter of the 18th century. This confirms the evidence for the end of this industry first identified at Western Dalmeny (Haggarty forthcoming (b)). As most of the forms encountered are well-known, the examples illustrated have been limited to one very thick bowl, what is probably a late 15th-century jug, one decorated sherd and a base copying German stoneware (Illus 8.20, 1–4).

8.5.3 English imports

Yorkshire Type Wares

Yorkshire Type Wares are often the most common imported pottery fabric found on Scottish sites, particularly in the E coast burghs. The Yorkshire sherds within the May assemblage represent the largest group of imported wares (327 sherds). A large number of production centres are now known to have been operating



Illus 8.18 *Medieval pottery.*

Table 8.20 *Illustrated Scottish Medieval Redwares (Illus 8.18).*

vessel	description	context	location	Period
28	bridge spout from a jug	224	debris within chapter house	II
29	body sherd from a jug with pellet decoration	229	demolition debris in east range	II
30	jug base with thumbbed decoration	1104	midden layer in Trench V	III

within the Yorkshire area in the period from the late 12th century through to the middle of the 14th century. Of the material which was produced, by far the most travelled would appear to be the highly decorated jugs which are thought to be from the Scarborough kilns (Rutter 1961; Farmer 1979). Most other Yorkshire fabrics found in Scotland are normally from decorated jugs which display a variety of decorative styles including face masks (Illus 8.19, 40), decorative seals and rosettes (Illus 8.19, nos 42 and 43), stamped 'dot and eye' motifs (Illus 8.19, 41), ribbed, pellet, combed and applied decoration. The glazes on these vessels are varied, but are usually a lustrous light green, yellow or light-brown. The jugs normally have square rims and often a pronounced carination on the neck (Illus 8.18, 31–3).

A large Scarborough Type rim fragment was recovered with part of a rod handle (Illus 8.18, 34) and with pronounced thumb impressions where the handle was attached. Thumbed decoration was also often used around the base, either as continuous decoration (Illus 8.18, 37) or at intervals (Illus 8.18, 38). There are also a few sherds from cooking pots which are almost certainly Yorkshire products (context 1112).

Developed Stamford Ware

Seven sherds of Developed Stamford Ware type B dating from 1150–1250 (Kilmurry 1980, 322) were recovered from post-medieval contexts (including 550 and 940). These sherds have a very fine, hard, white to cream-coloured fabric and bright copper green glaze. Sherds have also been recovered from St Andrews (Haggarty and Will 1996, 653; Hall 1997a), and from the earlier phases at 42 St Paul Street, Aberdeen (Murray 1982, 124), and continue to be recovered from sites in Perth (D Hall pers comm). This type of sherd is amongst the earliest pottery recovered from excavations at Ronaldson's Wharf Leith (A Vince pers comm).

Humber Type Ware

Three sherds of possible Humber Ware were recovered (contexts 228, 369, 496). This orange fabric, often with a clear or light-brown glaze, was made around the Humber region from the late 13th century through to the 14th century. It is very similar to Beverley Ware (Watkins 1987). This material is quite rare in Scotland, but sherds have been identified from St Andrews (Haggarty and Will 1996, 650).

London Red Sandy Ware

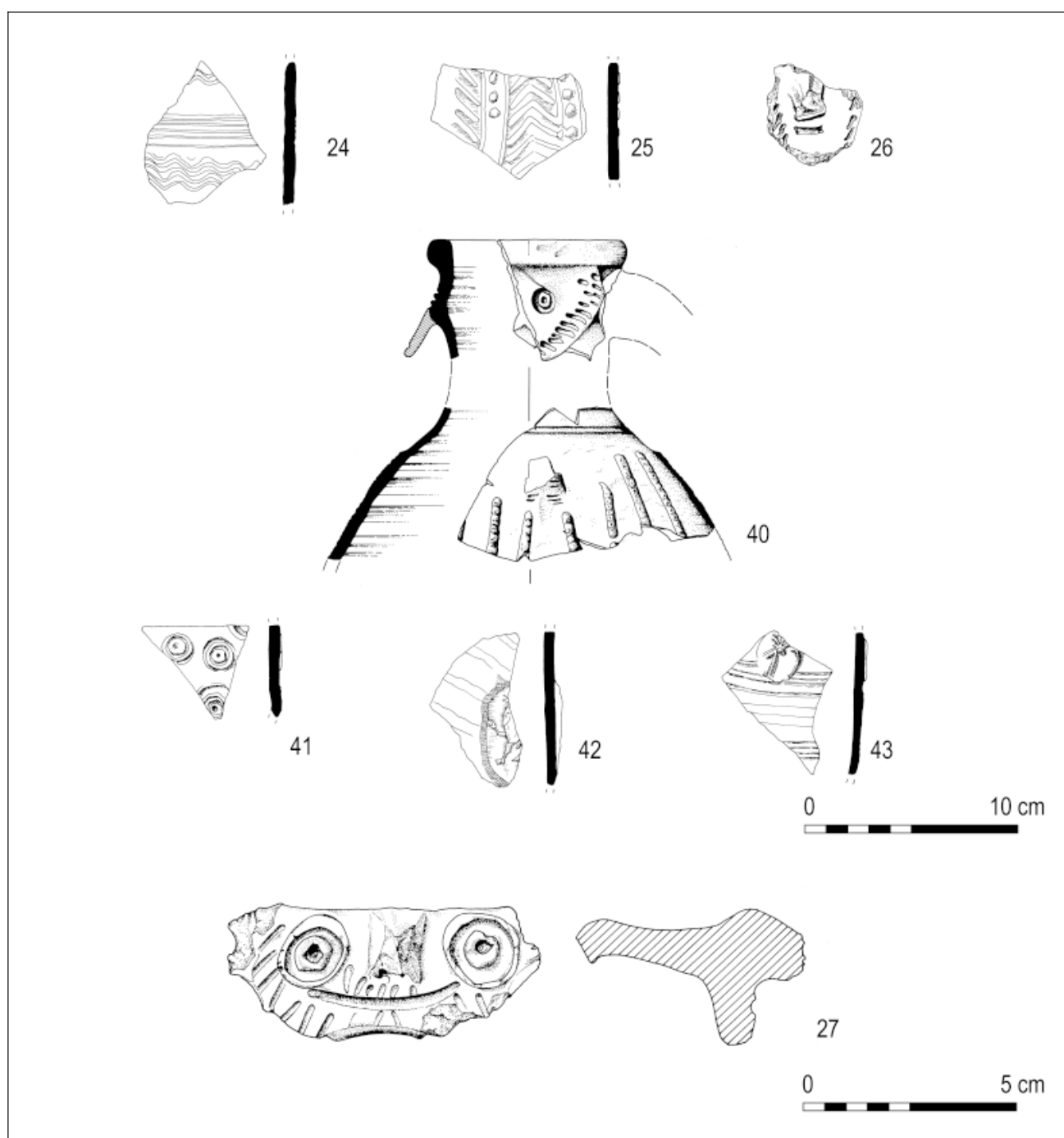
Four green-glazed body sherds of London Red Sandy Ware were recovered from post-medieval layers (including contexts 807 and 1230). These vessels, mainly jugs, were produced in the London area from 1150 to 1350 (A Vince pers comm).

Hand-made vessel (Illus 8.18, 39)

This vessel, from context 256, has a flat base, a distinctive S-shaped profile and thumbed decoration round the rim and appears to be hand-made and possibly finished on a slow wheel rather than thrown on a fast wheel (Hayfield 1980). This shape of vessel form has become associated with the West Country, where they are dated to the 12th century (Jope 1952), although a large number have also been recovered from Wales, particularly Glamorgan (Sell 1984). It has also been suggested that similar types of vessels have been recovered from excavations at Tynemouth Abbey, Northumberland (Edwards 1967), and Upper Heaton in West Yorkshire (Manby 1965). As the fabric of the May example does not appear to be similar to those from the West Country (A Vince pers comm), it may be wiser to look for a production site closer to home.

Table 8.21 *Illustrated Yorkshire Wares (Illus 8.18 and 8.19).*

vessel	description	context	location	Period
31	jug rim	875	topsoil in cemetery	III
32	jug rim	288	floor layer in church	II
33	jug rim	101	lower topsoil in north range	III
34	jug rim with rod handle	1310	layer in south range	III
35	jug rim	500	topsoil in south range	III
36	jug rim	448	Post-medieval layer in south range	III
37	jug base, thumbed decoration	497	floor in east range	II
38	jug base, continuous thumbed decoration	875	topsoil in cemetery	III
39	West country type cooking pot with inturned thumbed rim	256	medieval cloister walk	II
40	Yorkshire face mask jug	u/s		
41	Yorkshire jug, part of a seal	469	layer in cloister	II
42	Yorkshire, jug, rosette decoration	149	layer within N range	
43	Yorkshire, jug, dot and circle decoration	402	floor layer in church	II
44	Loire, grooved strap handle	257	redeposited midden in cloister	III



Illus 8.19 Medieval pottery.

8.5.4 Continental imports

Shelly Wares

Five body sherds tempered with various amounts of shell were recovered from contexts 420, 460, 492, 550 and 873. One sherd came from context 420, a patch of burning beneath the first stone church, along with a fairly worn and fragmentary Frankish(?) Quentovic (Normandy) late 10th-century silver denier. This sherd could either be London Late Saxon Shelly Ware, or more likely Flanders Shelly Ware from an industry believed to start in the 10th century. Little more can

be said about these sherds as at the time of writing the sources and dates of these Shelly Wares are uncertain. The authors are extremely grateful to Alan Vince for his comments on this sherd.

Rhenish: blue/grey ladle (Paffrath)

Contexts D2 (from the 1992 season) and 239 produced a rim and body sherd from a blue/grey ladle. A number of these ladles have now been published from Scottish sites, where they have been dated to the 13th century (Murray 1989). These examples, however, must be residual as elsewhere in Europe and Scandinavia they

occur from the 10th to the 12th century, and unpublished examples seen by the authors from excavations at Leith and Perth would seem to fit comfortably into the latter end of the accepted chronology.

Andenne Type Ware

Five sherds of this distinctive ware with its white fabric and yellow glaze were recovered from post-medieval layers, as well as from the revetment within the burial cairn (context 328), Trench V medieval layer (1118), the latrine (context 1216), context (288) and unstratified. A number of similar sherds/vessels have been published from other sites in Scotland, such as St Andrews (Haggarty and Will 1996, 649). Andenne Type Wares, which were produced in the Meuse Valley, had their main phase of production between the 11th and the mid-15th century.

North French White Wares

The fabric groups with the generic name 'Northern French White Wares' are difficult to categorise. They include a range of late 12th- and 13th-century well-made, wheel-thrown vessels in white fabric. From the evidence of diagnostic sherds, jugs can be small or large. They can also be with or without eared handles and spouts, but generally have ribbed necks and cordoned bases. Sherds are sometimes covered with an almost clear lead glaze but may have copper added to the glaze, making them vary from light to darkish green; this is often referred to as N French. Sherds can also have decorative motifs similar to those found on Rouen Type Wares. The six N French sherds from the May are from jugs with a mottled green glaze and come from contexts 147, 405, 875, 876, 1102 and 1118. These wares appear to arrive in Scandinavia in the 12th century and probably continue into the middle of the 13th (Blackmore and Vince 1994, 37).

Rouen Type Wares

Sherds of the later highly decorated flat-based jugs with eared handles, ribbed neck and cordoned bases, known as Rouen Type Wares, have been recognised in some quantity from excavations at several E coast ports in Scotland, including Perth and Leith. It has been suggested that this pottery may not have originated in Rouen, and a source in the Seine valley has been touted (Barton 1966, 73; Boivin et al 1996, 6–83). Subsequent chemical analysis of Rouen Type pottery shows that it falls into two very distinct groups; one, they identify as a Rouen product, while the other may be a Seine valley product (Dufournier, Deroeux and Herteig 1994, 162–208). The decoration on this fine, off-white to occasional buff-coloured pottery consists mostly of panels covered with a slip of red clay which contrasts with the green, pale yellow, or orange of the glazed pot. The panels are delineated with applied rouletted white strips, often studded with applied pellets. Five body sherds were

recovered in total, from post medieval contexts (131 [in the north range] and 1013 [a midden layer Trench X]).

Saintonge Mottled Green Glaze

Five body sherds from Saintonge Mottled Green Glaze jugs were recovered from post-medieval contexts, Group 2 cist (940) and a medieval layer in Trench V, context (1127). The extremely important, medieval and later, Saintonge pottery production sites were located on a limestone plateau which dominates the Charente River, a few kilometres to the E and NE of Saintes. At least 50 kiln sites are known from research and fieldwork in the area and it is generally accepted that its location close to the large wine-producing area of Bordeaux was instrumental in the creation of the large Saintonge ceramics industry. From the 12th century onwards, fleets of ships involved in the wine trade, especially Flemish vessels, navigated the River Charente as far as Saintes; and this probably helped facilitate the distribution of Saintonge pottery around the shores of NW Europe. It is also generally agreed that the disproportionately large numbers of Saintonge jugs recovered from English and Irish sites are, almost certainly, a by-product of the large increase in the 13th-century wine traffic between Gascony and England following the acquisition of Aquitaine by the English, in 1152.

Archaeological evidence suggests that the pre-dominant pottery imported into Scotland (as in the rest of Britain) in the 13th and 14th centuries came from the Saintonge area of SW France and was, in the main, manufactured in what is now termed the Saintonge Standard Fabric (Brown 2002, 26). John Allan, using material from Southampton, Exeter, and other towns along the S coast of England (1984, 199), ventures a date of c1240–50 for the introduction of the mottled green-glazed material. This hypothesis has subsequently been backed up by dates of the late 1270s and 1286–92 from pits in Dublin (Wallace 1984, 228). The evidence from London suggests that both these types are absent from deposits dated to c1330. All these dates are in keeping with the limited Scottish archaeological evidence, of which Inverlochy Castle is probably the best example (Haggarty 2007).

Beauvais lead glazed earthenware

Beauvais Earthenware was produced throughout the late 15th and 16th centuries, but principally during the first half of the 16th. The earthenware is a high-quality, smooth white fabric, with almost no visible inclusions. The one May Beauvais Earthenware sherd is from context 506, the basal angle sherd from an internally glazed yellow monochrome *albereli*, one of the less common Beauvais forms recorded by Hurst et al (1986, 106–7). To-date we have recorded only four other examples in Scotland from excavations at Leith, the Scottish Parliament site in Edinburgh, Stirling Castle and Cramond. Only the Cramond example is in monochrome, with the other examples sgraffito decorated (Haggarty 2007).

Loire Type narrow-necked jugs

The Loire Type narrow-necked jugs found in Scotland come in a variety of fabrics. Five sherds from two vessels were recovered from contexts 801, 259 and 257 (Illus 8.18, 44); of which three basal angles conjoin. The jugs also come in different sizes, but, as yet no correlation between this and the fabric types have been found. Frequently, Loire Type jugs have on their exteriors small spots of a yellow, amber or, rarely, green lead glaze, apart from which they are undecorated. The source of these vessels has yet to be confirmed, and the assumption that they come from the Loire valley should be treated with caution (Hurst et al 1986, 99). It has been suggested that the earliest Loire Type narrow-necked jugs have a globular shape and distinctive grooved strap handles, which expand round the rim. By the 17th century they had become more ovoid in shape with the strap handles becoming an extension of the rim. In the 18th century the shape stayed the same, but the handles migrated down below the rim until they evolved into the narrow-necked jugs which can be found in both earthenware and stoneware and which are still being produced today.

By far the most reliable dates in Scotland are for the sherds recovered from the 1594 deposit at Stirling Castle, the c1630–40 deposit in Pittenweem and the pre-Tron Kirk, Edinburgh demolition deposit of 1636–7. In addition, a sherd was recovered from 16th-century debris at Whithorn, while other sherds from St John Street, Ayr, Carrick Castle, Edinburgh, Perth, and a number of other sites all date from the 16th or, more often, the early 17th century (Haggarty 2007).

Martincamp-Type flasks

Two sherds from Martincamp Type I flasks were recovered from contexts 197 and 280. The village of Martincamp lies to the N of a pottery-producing area centred at Beauvais. Fragments of wheel-thrown, globular ceramic flasks, now in the British Museum, were found in one of the waster heaps in the village of Martincamp, giving rise to the accepted name for those vessels. These rounded flasks, or bottles, have long necks which were made separately and then joined to the vessel's body by luting into a hole. The distribution of Martincamp-Type flasks in Scotland, as in the rest of Britain, is predominately E coast-orientated, although excavations at high-status castles and abbey sites on the W coast also account for a number of finds.

Low Countries Highly Decorated Ware

Six sherds, all decorated, from green-glazed jugs dating to the period 1250–1350 were recovered from medieval drain context 845 and contexts 800, 807, 809 and 950. The two conjoining rim sherds from 809 (Illus 8.20, 8) have traces of 45 degree slashing under the slightly everted rim and all the body sherds have roller stamping. These twice-fired vessels with their reddish/brown fabric and green glaze over a white slip, were

produced at a number of sites around Brugge, in Belgium, and are often decorated with complex stamps and moulded decoration within panels and borders (Verhaeghe 1983).

Low Countries Greywares

Greywares were made at a large number of sites in the Low Countries and date from the 12th to the 14th century, after which time they were replaced by the Low Countries Redwares. These two groups of vessels share the same clay sources and often the same shape and style of vessel, the only difference being the firing conditions in the kiln. There are three sherds from the May, which include a pipkin leg from context 873.

From the excavations there are a number of sherds in a slightly micaceous grey fabric, (contexts 100 and 512) for which we have no Scottish parallel. There are a number of other Greyware sherds from contexts 304, 550, 807 and 1109. From contexts 219, 873 and 950 there are three rim sherds which look as if they come from an open bowl with flat piecrust rim and similar thumbing to that on no 12 in Illus 8.17. All of the above sherds are substantially different from what we think of as the typical Low Countries Greyware recovered in Scotland.

Low Countries Redware

Recent excavations in Edinburgh (Haggarty forthcoming), Leith (J Lawson pers comm) and Stirling Castle (J Franklin pers comm) have all produced large amounts of Low Countries Redware. This pottery was manufactured in many centres and it is almost impossible to suggest a kiln source. Sherds are generally hard to date as the types have a wide date range. Sherds from Holyrood Road, Edinburgh, would appear to have come mainly from contexts of early 17th-century date and this is in keeping with the sherds recovered from Calton Road, Edinburgh. Where we can identify forms, sherds are from vessels used in cooking, such as skillets or cauldrons, which is borne out by the presence of soot on the exterior surfaces. The majority of Low Countries Redware sherds came from contexts 2, 4, 100, 280, 811 and 297. Eight of the small sherds from context 280 have traces of white slip.

Saintonge Late Whiteware

It has been suggested that trade in pottery from Saintonge may have been ruined when the area was devastated during the Anglo-French wars of the late 14th and early 15th centuries and especially after the 1450s when the English lost control of the area. However disruptive this may have been, it may not have been as catastrophic as some writers suggest. Published archaeological evidence suggests that substantial quantities of Saintonge pottery were still being produced and traded into some English ports, including Hull and Plymouth, in the late 14th and 15th centuries (Watkins 1983, 249–52; Allan and Langman 2003, 48). The

evidence in Hull also suggests that although there was a marked decline in imported French wine and pottery after the middle of the 15th century, Saintonge pottery was still accounting for between 7 per cent and 16 per cent of the excavated assemblages

The archaeological evidence in England also clearly demonstrates that the trade in pottery from the Saintonge area continued, although in reduced quantities, into the 16th and 17th centuries (Watkins 1983, 31), but with what may be interpreted as renewed vigour, given the introduction of many new ceramic types and forms. Many of these later traded Saintonge ceramic types were illustrated in Hurst (1974, 221–55).

In the late medieval period imported Saintonge pottery continues to be produced in the same white fabric, but the vessels are generally thrown with a thicker body. They include tubular-spouted rounded pitchers with narrower necks and single pulled handles, which it has been suggested may have developed out of the similarly body shaped pègau. These pitchers are usually unglazed but can have tiny spots or traces of green glaze and occasionally a small bib patch on the body just below the spout, large very broad pouring spouts and three basket handles which are attached to the rims. Pègau, which are normally dated to c1575 to 1626, are not common in Scotland, although there is a group of what may be four examples, from what is thought to be a 17th-century midden in Tower Street, Leith. One sherd was found on the May from context 940.

German Weser Slipware Wavy Band Dishes

It has been postulated that in excess of 100 kilns may have been producing these slipwares in various centres between the Weser and Leine rivers and that it was exported in some quantity between 1590 and 1620 (Hurst et al 1986, 251). Weser can also have a Dutch origin. One May sherd has concentric circles inside the rim and another has traces of a zigzag pattern. Increasingly, sherds of Weser hammer-headed dishes are being recognised from early 17th-century contexts in Edinburgh (Haggarty and Lawson forthcoming; Haggarty forthcoming a). Four pinkish brown sherds from these Wavy Band Dishes were recovered from contexts 197, 506 and 280 and an unstratified context.

North German Earthenwares

Twenty sherds were recovered, all of which may come from vessels produced in N Europe and probably in sites situated in the area of the N German plain. The May sherds vary in decorative treatment and colours, and the forms include platters with rounded rims from which the white slip decoration has mostly flaked, contexts 280 and 811 (Illus 8.19, 9 and 10). Sherds also occur in contexts 564, 811, D001 and unstratified. There are also two upright pipkins with three grooves on their external faces and internal green glaze from contexts 197 and 932. This form was the most common type present

in the Scalloway assemblage with 63 sherds (Lindsay, 1983). These pottery fabrics are increasingly being identified on sites along the E coast, especially Leith and Edinburgh, where they have been recovered from late 16th and early 17th-century contexts with a *terminus post quem* of 1637 (Lawson forthcoming). We suggest that these wares may be coming in as an adjunct to the Baltic timber trade.

Merida Type Wares

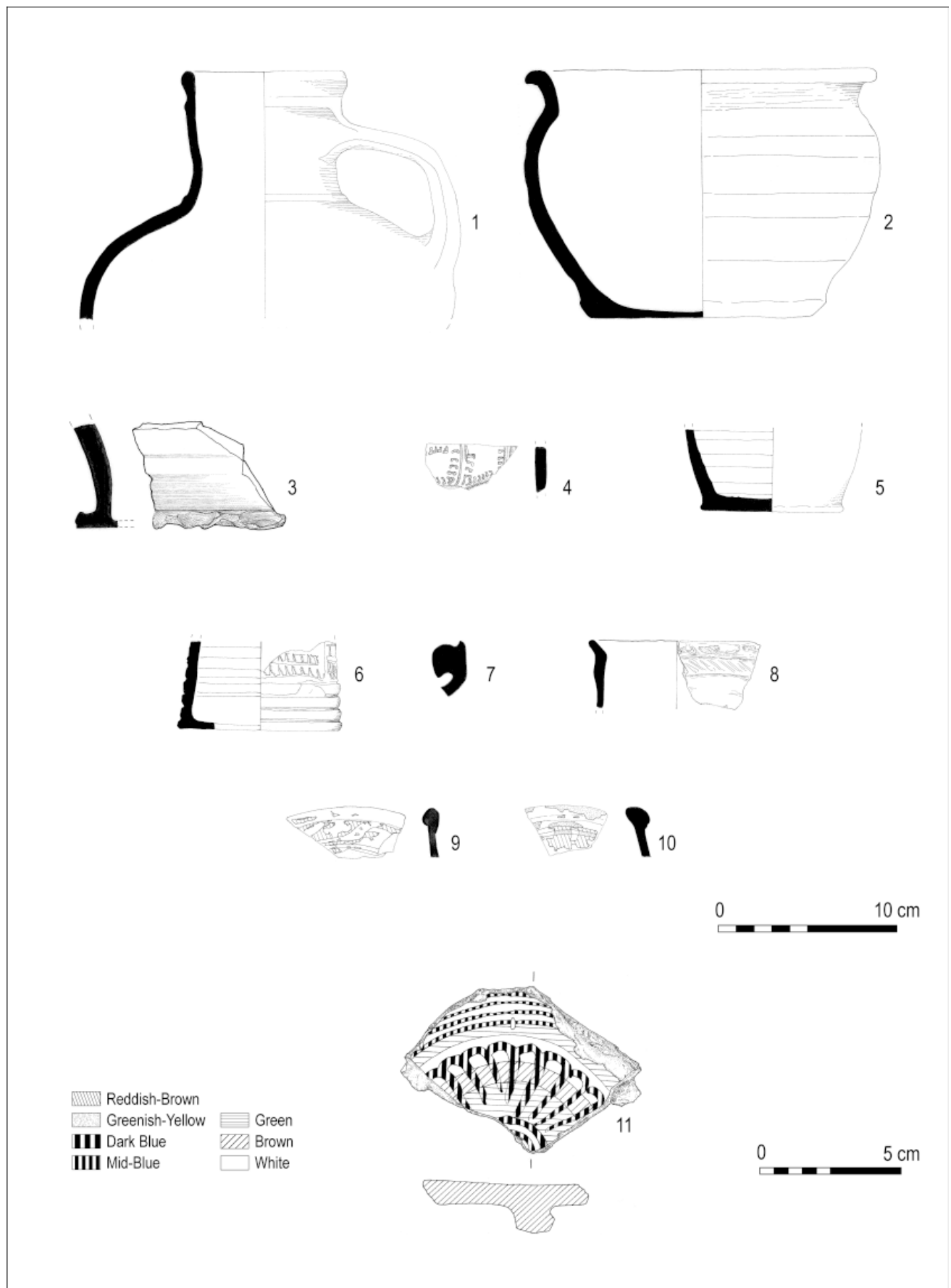
Six unglazed body sherds, from context 819, are in the typical red micaceous fabric associated with Portuguese Merida Type Wares. Analysis has identified at least six fabrics being produced over a wide area centred in medieval and later times in the Alentejo, where many forms are still produced (Hurst et al 1986, 69). The ranges of types produced include bowls, jars, wide-necked jars, costrels and olive jars. The earliest dated examples are from London, late 13th century (Vince 1985, 81). Later examples from the 16th and 17th centuries are generally recovered from shipwrecks, especially ships from the Armada, as they are not thought to have been traded but carried by sailors and other travellers (Hurst et al 1986, 69).

Seville Coarsewares

All eight sherds of Seville Coarsewares recovered from the May almost certainly come from just two olive jars. The first example, the interior of which is covered with a light-green glaze, is probably 17th-century in date (contexts 197, 809 and 1101 Illus 8.20, 7). The second example (contexts 100, 500 and 501) is unglazed and is thought to be an 18th-century type (Marken 1994, 73 and 96). Olive jars, which are thought to have been used to transport both olives and olive oil, have a wide distribution, both around Europe and in the New World. They appear to have been most common between the late 16th and 17th century, with many having been recovered from Armada wrecks. Seville Coarsewares are the most common type of Iberian pottery found in Scotland, mostly from 16th- and 17th-century contexts, although the sherds from Fast Castle may be much earlier (Haggarty and Jennings 2001, 74). With a few notable exceptions, the distribution is heavily concentrated on the Forth, being spread along both shores from Berwickshire and E Fife as far as Stirling, with a significant amount now having been recovered from Leith. Despite the recovery of a near complete vessel from Newark Castle, Port Glasgow, relatively few sherds are found on the Clyde, which may help to confirm the theory that Spanish goods arrived in Scotland via established North Sea trade routes.

Anglo-Dutch Maiolica

A number of sherds of Anglo-Dutch late 16th- or early 17th-century Maiolica or tin-glazed earthenware were



Illus 8.20 Post-medieval pottery.

recovered from contexts 197, 280, and 509. However, only one with a ring base, from context A10 (Illus 8.20, 11) was large enough to show that its polychrome geometric design can be paralleled by a late 16th-century example published from Amsterdam (Korf 1981, 122, fig 272). Although wares of these pre-1740 types were being produced at a number of locations, including London, the evidence from the Leith customs documents suggest that most of the Maiolica, or 'gallyware' as it was called, entering Scotland at that period was from the Low Countries. After 1740, tin was added to the lead used to glaze the bases of the vessels, making this the distinguishing feature between these and what are now termed Delftware.

Delftware

Sherds of Delftware, almost certainly Dutch in origin, dating from the late 17th through to the later 18th century, were recovered, mainly from contexts 197, 227, 271, 280, 1007 and D001. Few of these sherds, which are mainly painted in blue, although a couple have touches of manganese, are large enough to give much idea of their design.

Siegburg Stoneware

From context 257 (Illus 8.20, 6), there is a basal angle sherd from what, to date, is Scotland's only example of an unglazed white cylindrical Siegburg Stoneware tankard (Schnelle). It has four cordons above its base and traces of a moulded low relief panel. A number of these vessels have been published with a date of c1590 (Gaimster 1997, 181–4), but Hurst et al gives a date span of 1575–1625 (1986, 182). A salt-glazed Siegburg body sherd with a brown ash glaze, from context 580, should date to c1450–1500. There are a few other small body sherds (contexts 014, 280, 512 and 1101), and from context 257 (Illus 8.20, 5) a base possibly from a flask.

Raeren and Aachen Stonewares

A number of Raeren/Aachen Stoneware body sherds, probably from drinking mugs (two unstratified bases), come from contexts 405, 512, 1102 and 1107. During the years 1575–1626, the classic type of Raeren mug began to dominate the stoneware trade around Europe, and began to arrive in England in such numbers that they are now found on excavated archaeological sites of every social level (Gaimster 1997, 235).

Frechen Cologne Stonewares

A total of 86 (somewhat) fragmentary sherds of Frechen and Cologne Stoneware were recovered from a large number of late contexts. The majority of these sherds almost certainly come from large, thick, undecorated Frechen bottles of 17th- or 18th-century date. However, contexts 1001 and 1009 both produced sherds with fragments of face masks from the ubiquitous smaller bottles.

Westerwald Stoneware

This thick-bodied, salt-glazed stoneware is usually attributed to the Westerwald district of the Rhineland, and is often decorated with incised, stamped and sprigged designs and painted with cobalt blue and/or manganese purple. There is a rim sherd from context 903 from a salt glazed light grey stoneware mug with an exaggerated cordon, concentric rilling and underglaze cobalt painting. There are two unstratified sherds from a similar vessel and two body sherds from contexts 190 and 197. The latter has a fragment of an applied beast with scales. This is similar in execution to the lion on a pitcher illustrated by Gaimster (1997, 262, fig 117), which on analysis proved to be inconclusive in determining a Westerwald source. This pitcher also has on it the arms of Lothar von Metternich Archbishop Elector of Trier (1599–1627).

Table 8.22 *Catalogue of post-medieval pottery (Illus 8.20).*

vessel	description	context	location	Period
1	Scottish Post-Medieval Reduced Ware, jug	133	post-medieval layer in smithy	III
2	Scottish Post-Medieval Reduced Ware, chamber pot	500	topsoil in south range	III
3	Scottish Post-Medieval Reduced Ware, fluted base copying German stoneware, (intrusive?)	224	debris within chapter house	II
4	Scottish Post-Medieval Reduced Ware, body sherd with incised decoration	257	redeposited midden in cloister	III
5	Siegburg Stoneware, base	257	redeposited midden in cloister	III
6	Siegburg Stoneware decorated base	257	redeposited midden in cloister	III
7	Spanish olive jar, rim	1101	topsoil in Trench V	III
8	North European Earthenware, platter rim	809	post-medieval layer in cemetery	III
9	North European Earthenware, platter rim	811	post-medieval layer in cemetery	III
10	North European Earthenware, platter rim	280	post-medieval debris in west range	III
11	Dutch base from plate or shallow bowl	D10	redeposited midden in cloister	III

Nottingham Brown Salt-Glazed Stoneware

There are two small thinly potted body sherds from context 506 of 18th-century Nottingham Type Brown Salt-Glazed Stoneware. Both sherds, which are probably from the same vessel, are decorated with bands of fine combed decoration.

White Salt-Glazed Stoneware (WSGS)

From documentation it is known that in excess of 30 potteries were in operation in the Forth littoral between 1700 and 1900. But, so far as can be determined, only a few of these were using significant amounts of imported white firing clays prior to 1800. Analysis carried out in the USA shows that Scottish WSGS can be differentiated from its English counterparts (J Skerry pers comm). This is almost certainly due to the salt used being produced in an iron salt pan, whereas the Staffordshire and Yorkshire potteries were thought to be using mined salt from Cheshire. Moreover, the Scottish potters were using unique kiln furniture which leaves distinguishing marks (Haggarty 2007). Many of the later May contexts, including 321, 510, 528, 540 and 903, have produced sherds of WSGS. An almost complete bowl was recovered from context 194.

Chinese porcelain

Sherds from five small, early 18th-century Chinese Porcelain tea bowls were recovered. Context 1007 produced four sherds which conjoin to form a fragment with a complete profile. The bowl is painted in cobalt blue internally with a flower and on its exterior with spaced single flowers. From context A2 there are five conjoining sherds from the base of tea bowl with traces of external painting. Context 511 produced two very small rim sherds with different blue painted decoration, and from an unstratified context a basal angle sherd is painted in polychrome with two Chinese figures from the knees down.

Modern

One thousand one hundred and twenty-two sherds, 18 per cent of all the vessels recovered, date from the second half of the 18th and first half of the 19th century. Where these can be identified, the potteries at Portobello, Morison's Haven, Alloa and Kirkcaldy are represented, as one might expect. Red earthenware crocks, dishes and dairy bowls, along with white earthenware cut-sponge-decorated bowls, transfer printed wares and Rockingham glazed teapots are included in this typical range of domestic vessels. One sherd from a marked whisky flagon came from the Port Dundas pottery in Glasgow.

8.5.5 Conclusions

The medieval pottery assemblage from the May has some similarities to material recovered from excavations

carried out in burghs along the E coast of Scotland, in particular in Edinburgh and Leith. The tentative identification of Flanders as well as London Shelly Wares from the May is significant, and further study of this might add significantly to our understanding of 10th-century contacts.

Although, at present, it is difficult to see any clear relationship between the excavated ceramic assemblages from Scotland's major E coast ports, with Aberdeen, Leith and Perth all seeming to show evidence for diversity in their trading contacts, especially in the 12th and early 13th centuries, if not earlier. The medieval assemblage from the May is dominated by SWGW which were produced on both sides of the Forth, and it is not surprising that it contains examples of vessel styles and shapes thought to be associated with a number of production areas. By far the largest assemblage of imported wares is the very diverse group of Yorkshire fabrics, mainly from decorated jugs including Scarborough fabrics I and II, and York glazed ware. The development of pottery production on a large scale in Yorkshire has been linked to the establishment of the many Yorkshire monasteries in the 12th century. It has been suggested that the introduction and development of the SWGW industry may be similarly linked to the start of large-scale monasticism in Scotland, in the 12th century, (Haggarty 1984). Also of great interest is the range of what the authors think are early Greywares. Although much of the imported pottery from the May was recovered from disturbed contexts and consequently has little value in dating, it does enhance our knowledge of the distribution patterns of these wares. It has been suggested, however, that the distribution in the 13th and 14th century of Saintonge pottery in Scotland was nothing more than a minor or associative trade, for use in middling status households, mirroring the trade in fish, salt, grain, and the, as yet, only partly understood movement of other goods and people (Haggarty 2006). The same is probably true of most other medieval imports, with the possible exception of the highly decorated wares from the Scarborough kilns, which are so abundant from some archaeological contexts in Aberdeen (Murray 1982, 123).

The late and post-medieval assemblages are dominated by local wares, especially large SPMRW jugs. These jugs may have served the same purpose as the large late German stoneware examples, and the numbers of this type recovered might suggest that they were imported as bulk trade. A significant proportion of the post-medieval pottery came from midden deposits in the cloister and cemetery areas, and, apart from demonstrating the range of trade and economic contacts, are of little help in dating key events.

8.6 Period III: the post-medieval assemblage

The continued occupation of the site and the establishment of a village in the post-medieval period is reflected in the artefacts discovered in the remodelled remains of

the priory, the debris of their demolition, the village site and redeposition of the village midden during landscaping works. These artefacts include buckles, buttons, fishing hooks, glass bottles, drinking vessels, bone knife handles, stone weights, sharpening stones, hones, gunflints and clay tobacco pipes. The dismantling of the priory included use of bowl furnaces to melt down the window lead, and the smithy within the ruins of the church produced nails and tools for the village. The fabric of the post-medieval buildings would have reused much of the stone from the priory. New glass windows and large slate roof tiles were brought over from the mainland. The eleven coins found range from a 16th-century Mary Queen of Scots lionhead to an Elizabeth II florin. The pottery was varied in its source reflecting the location of the Isle of May.

8.6.1 The coins

Donal Bateson

The issue of billon increased with Mary Queen of Scots and the two little hardheads from her reign recovered provide further evidence of the trend for low content silver coins becoming increasingly popular in Scotland.

In the 1590s, billon was replaced by copper for low value coins in Scotland and throughout the 17th century millions of turners, or twopenny pieces, were issued. The turner is an ubiquitous find from Scotland and it is not surprising to see the example of the 1630s' issue among the coins from the site. Towards the end of the century, the turner was joined by the larger bawbee, or

sixpence Scots. The very worn example found probably circulated long after the Union of 1707 when it was worth a halfpenny sterling, of which two examples of George II were also recovered. Beyond this a small number of 20th-century coins were found, but these require no comment other than that they bring over a thousand years of coin loss on the Isle of May to an end.

8.6.2 The metalwork, bone and stone artefacts

Adrian Cox

A selection of post-medieval artefacts are illustrated in Illus 8.21–26. These are indicated by *.

Over 40 artefacts of copper alloy were found, representing a range of functional categories, including costume fittings, textile equipment, a book fitting, fishing equipment and items associated with recreational pursuits.

Copper alloy objects

Buckles

Thirteen buckle components were recovered, including three loop chapes (Catalogue Nos 1–3) and ten frames (Nos 4–13). The majority of these are from Period III and topsoil contexts, and are of 18th-century date. This collection of buckles could relate to activity associated with the village on the May, which existed well into the 18th century, although the cast loop chapes and curved, subrectangular frames (Nos 4–6) may well have been lost in the early 18th century when around 300 Jacobite troops took refuge on the island (Eggeling 1985, 26).

Table 8.23 *Catalogue of post-medieval coins.*

coin	description	context	location	Period
7	Scotland, Mary, billon lion or hardhead [11/2d Scots], 0° Burns 874(2) ?1558 fairly worn, corroded, 0.78g [12.1grs],	822	disturbed layer in cemetery	III
8	Scotland, Francis and Mary, billon lion or hardhead [11/2d Scots], 1559 with dolphins to left, and with heart and star countermark of 1575 on reverse worn, 1.38g [19.8grs], 330° Burns 894(7)	u/s		
9	Scotland, Charles I, copper turner [2d Scots], 1630s issue, crown uncertain, initial marks x/x, fairly worn, 0.78g [12.1gr], 290°	102	post-medieval debris in south range	III
10	? late 17th-century Scottish bawbee (6d Scots), worn smooth	C9	robber trench east of north range	III
11	?16th-century Scottish billon coin, badly corroded, no detail	461	silt in cloister walk	III

Table 8.24 *Modern coins.*

coin	description	context	location	Period
12	George II, halfpenny, ?1751	109	modern feature in north range	III
13	George II, halfpenny, uncertain date	100	topsoil, north range	III
14–15	George V, penny, 1914 and 1934		pilgrims' well	
16	Edward VII, halfpenny, 1904	187	layer in west range	III
17	Elizabeth II, two shillings (florin), 1948	271	annexe to w range	III

Most early 18th-century shoe buckles had rectangular or subrectangular frames, and they increased in size throughout the century. Loop chapes like Nos 1–3, with internal spikes and 'pitchfork' tongues, were widely used to secure the larger shoe buckles, the frames of which are represented by Nos 4–6. A lightly decorated, subrectangular buckle frame (No 4) and one of the chapes (No 3) correspond almost exactly. No 6 appears to have been broken using considerable force, the frame being distorted despite the strength of its construction.

Nos 7–10 are buckle frames of openwork design. At least two of these (Nos 7 and 10) probably represent the frames of more elaborate shoe buckles which would have been secured by chapes like Nos 1–3.

A kidney-shaped buckle frame (No 11), though smaller than the frames described above, has also been drilled to accept a spindle, which in this case appears to have corroded *in situ*. Nos 12 and 13 represent buckle frame fragments, the former from a rectangular frame with moulded decoration.

Buttons The four buttons recovered represent a variety of constructional types. No 14, from topsoil in the church area, is a domed, hollow form, decorated by incised, concentric circles. No 15, a very fragmentary and heavily corroded example from a midden deposit in the S range, may also be part of a button of domed form. Any

decoration on this object is obscured by corrosion products. From the cemetery, No 16 has a plain, circular face and its eye set within a shallow boss. No 17 represents the back of a two-piece button.

Lace tag No 20, from a midden deposit in Trench X, is a small fragment with a small, mineralised fragment of a lace or thong surviving within it.

Pins One complete pin and two pin shaft fragments were found (one from a Period II context). The complete pin (No 24) is representative of a type made from drawn wire which has its head formed by a short length of wire wound tightly around the top of its shaft. This coil of wire was commonly secured by pinching, resulting in an almost spherical head. Pins of this type have been found in medieval and post-medieval contexts across Scotland (Cox 1996a, 57). Their range of functions appears to include securing burial shrouds.

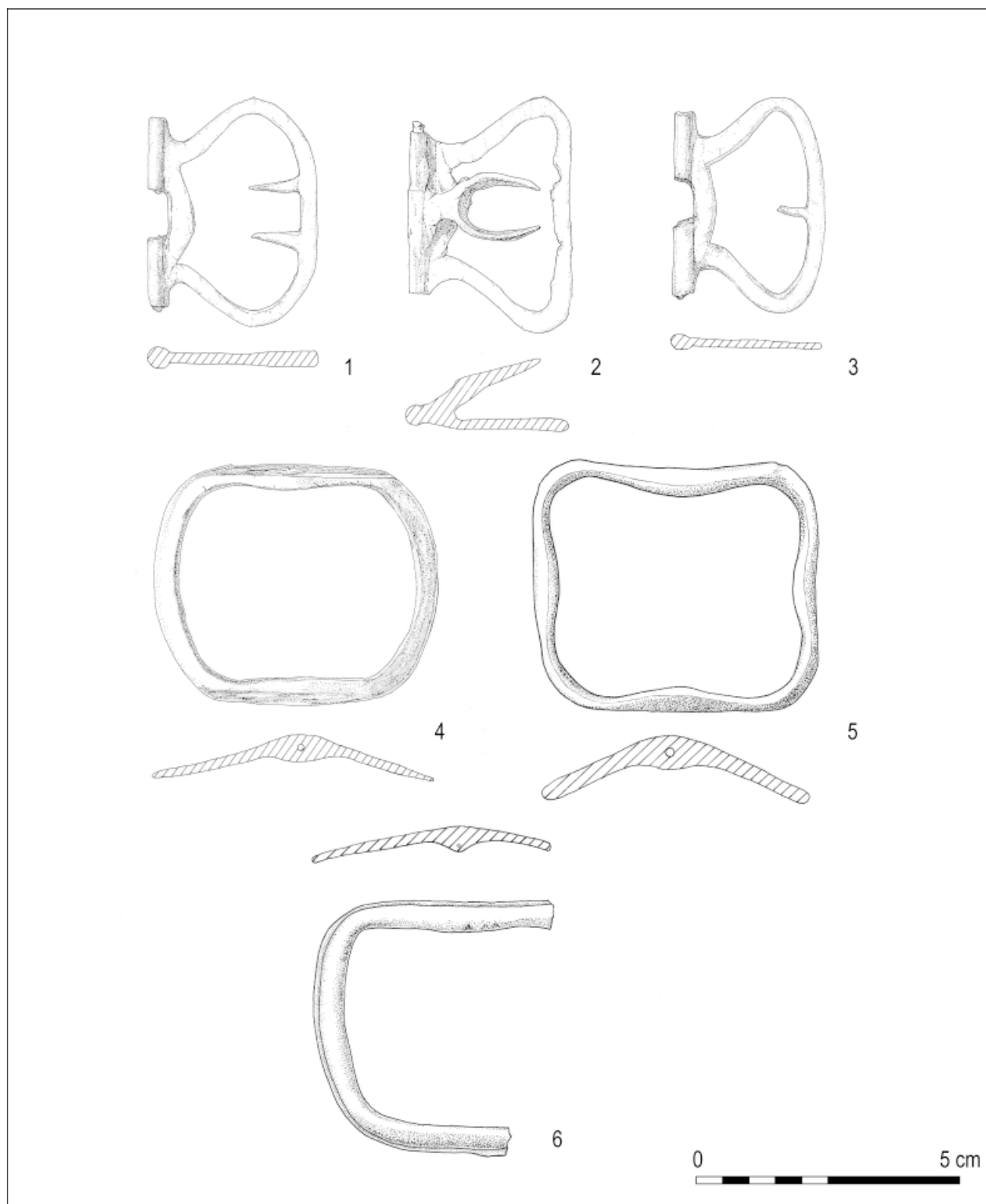
Jew's harp

No 27 is an example of a Jew's (or jaws) harp. This is a small, portable musical instrument held in the mouth. Examples are known from both medieval and post-medieval contexts. This one was found in a topsoil deposit on the village site and is of a late 17th- or 18th-century type. The central spring strip or reed

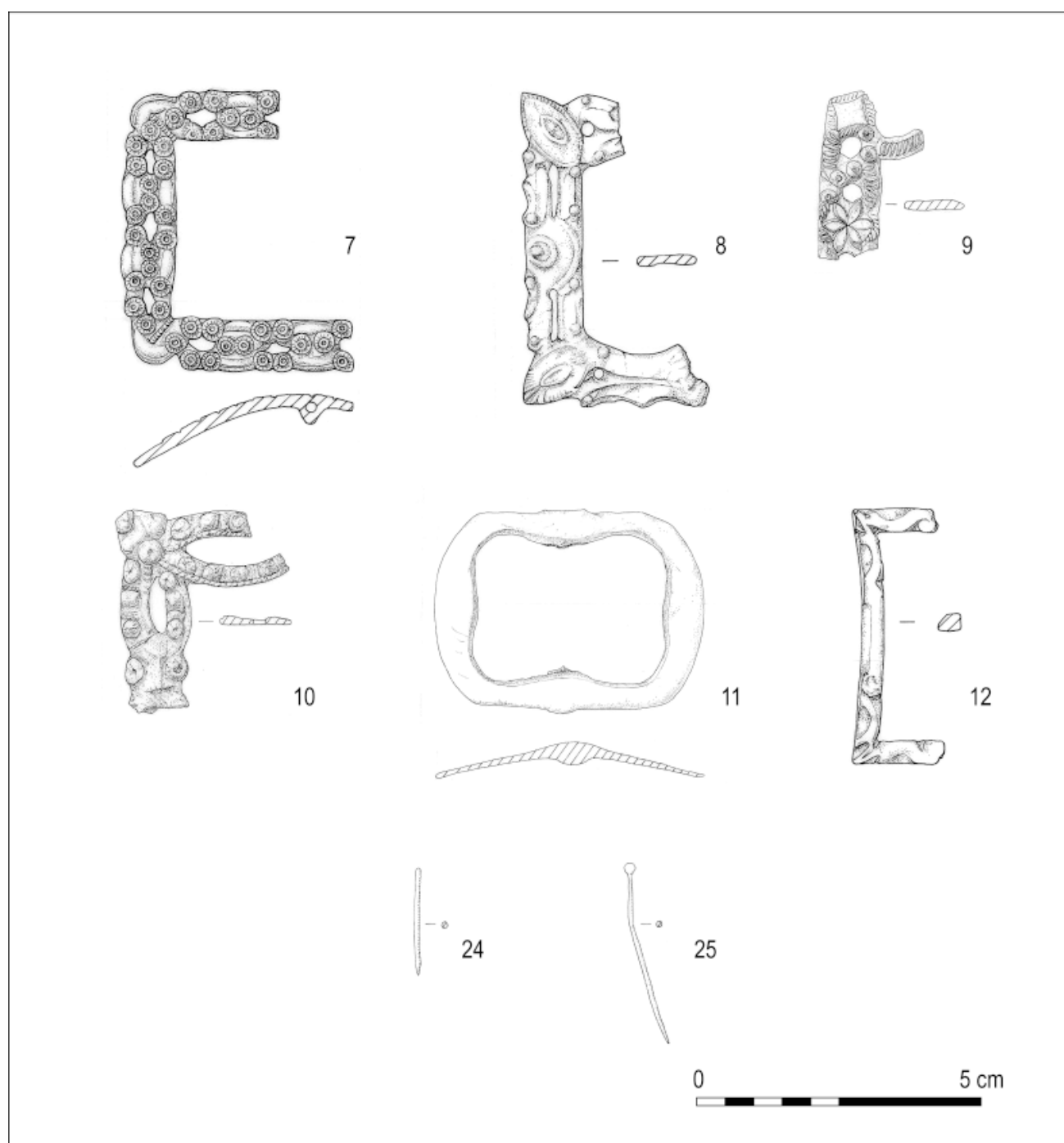
Table 8.25 *Post-medieval copper alloy objects.*

* see Illus 8.21–8.23)

find number	description	context	location	Period
1*	buckle chape	100	topsoil in north range	III
2*	buckle chape	187	layer in west range	III
3*	buckle chape	903	layer in cemetery	III
4*	buckle frame	u/s		
5*	buckle frame	F02	redeposited midden in cloister	III
6*	buckle frame	103	layer in north range	III
7*	buckle frame	509	layer in south range	III
8*	buckle frame	A01	topsoil in north range	III
9*	buckle frame	500	topsoil in south range	III
10*	buckle frame	u/s		
11*	buckle frame	1010	midden in Trench X	III
12*	buckle frame	topsoil		III
13	? buckle frame	801	post-medieval midden in cemetery	III
14	button	197	topsoil in north range	III
15	button	564	post-medieval midden in south range	III
16	button	803	post-medieval layer in cemetery	III
17	button	u/s		
20	lace tag fragment	1010	post-medieval layer in Trench X	III
24*	pin	566	post-medieval midden in south range	III
25*	pin shaft	809	post-medieval layer in cemetery	III
27*	Jew's harp	1001	topsoil in village	III
30	chain	903	layer in cemetery	III
31	fishing hook	234	fill of possible bowl furnace (209) in east range	III
32	disc	C9	post-medieval layer outside north range	III
39	sheet	827	layer in cemetery	III



Illus 8.21 *Post-medieval buckles.*



Illus 8.22 Post-medieval buckles and pins.

is normally missing on archaeological examples, as in this case, as it was made from iron and tends to corrode before the copper alloy frame.

Chain

Chains had a multiplicity of uses in the medieval and post-medieval periods. They were used not only in the household but also in conjunction with personal accessories, to hold groups of keys or suspend a seal matrix, for example. No 30, recovered from the cemetery, has 15 intersecting S-shaped links and appears to represent part of a longer chain.

Fishing hook

No 31 is one of two fishing hooks recovered from the excavation. The other example (*see* No 51, below) is a slightly larger example, made from iron. Both the eye and the hooked or barbed terminal are missing from No 31.

Miscellaneous

No 32 may perhaps be tentatively interpreted as a counter or token. There is no evidence of any legend or decoration on either face.

Lead alloy objects

Six artefacts of lead alloy (Nos 43–8), representing a variety of functions, were recovered from the excavation. Of these three were from Period III.

Cames are strips of lead used to join together and support individual pieces of glass within a window. No 43, found in a topsoil deposit, has the H-shaped cross-section characteristic of comes and a small fragment of window glass, c8mm in length, is held within it. A folded sheet fragment (No 46) came from the infill of a wall in Trench V.

No 48, a cast object of approximately triangular cross-section, probably served as a weight, possibly attached to a net. The holes at either end were formed by inserting rods through the molten lead alloy, which solidified around them. This object was found among post-medieval debris in the West range.

A fragment of lead pig was found in a small pit 569 (Cullen, Archive). Waste lead was found in contexts 239 (an open hearth in the ruins of the undercroft) and context 565 (post-medieval debris in the S range). Lead window came was recovered from contexts 103 and 124 (post-medieval debris over the smithy). The small-scale leadworking probably related to the disassembly of the lead window comes from the priory. There is no evidence of lead smelting. Complete lead artefacts found include a musket ball (in post-medieval debris in the cemetery trench, context 809) and a fishing weight from topsoil (context 100).

Iron objects

Implements

One of two fishing hooks recovered from the excavation (*see also* No 31, above), No 51 has a barbed terminal but is broken below the eye or suspension loop. No 52 is a folding knife with bone scales. The blade and other iron components are severely corroded.

In addition, a total of 861 nails were examined (*see* Cullen, Archive). Of these 739 could be identified to type and the vast majority, 449, were general carpentry nails from the post-medieval period. There were also 25 coffin nails and 62 clench nails. Other types of iron artefact recovered include blade fragments and tools. Some domestic material was also present such as a bucket handle (context 100), a small modern fork (280) and a decorative stud (1001).

Bone and antler objects

with species identifications by C Smith

Comb fragments

Fragments of two double-sided, one-piece combs (Nos 61 and 62) were recovered. Both are of slender cross-section and have a roughly equal number of finely spaced teeth on each side. Combs of this general form are known from late medieval and post-medieval contexts. One of four examples from Southampton (Harvey 1975, 274, no 1939) is of late 14th- to early 15th-century date, while the remaining three are of early 16th- to early 17th-century date. No 62 has a particularly slender cross-section, possibly making it vulnerable to breakage.

No features diagnostic of species remain on Nos 61 and 62 as the original material has been so greatly modified. The possibility that the material is antler cannot therefore be ruled out in either case.

Handles

The three handles recovered from the excavations represent a wide diversity of forms, ranging from the only slightly modified sheep metatarsal (No 67) to the zoomorphic and multifaceted forms of the remaining examples.

No 65 may represent a handle, possibly from a small toilet implement. An alternative possibility is that it represents an example of a device used to prevent lambs

Table 8.26 *Post-medieval lead alloy objects.*

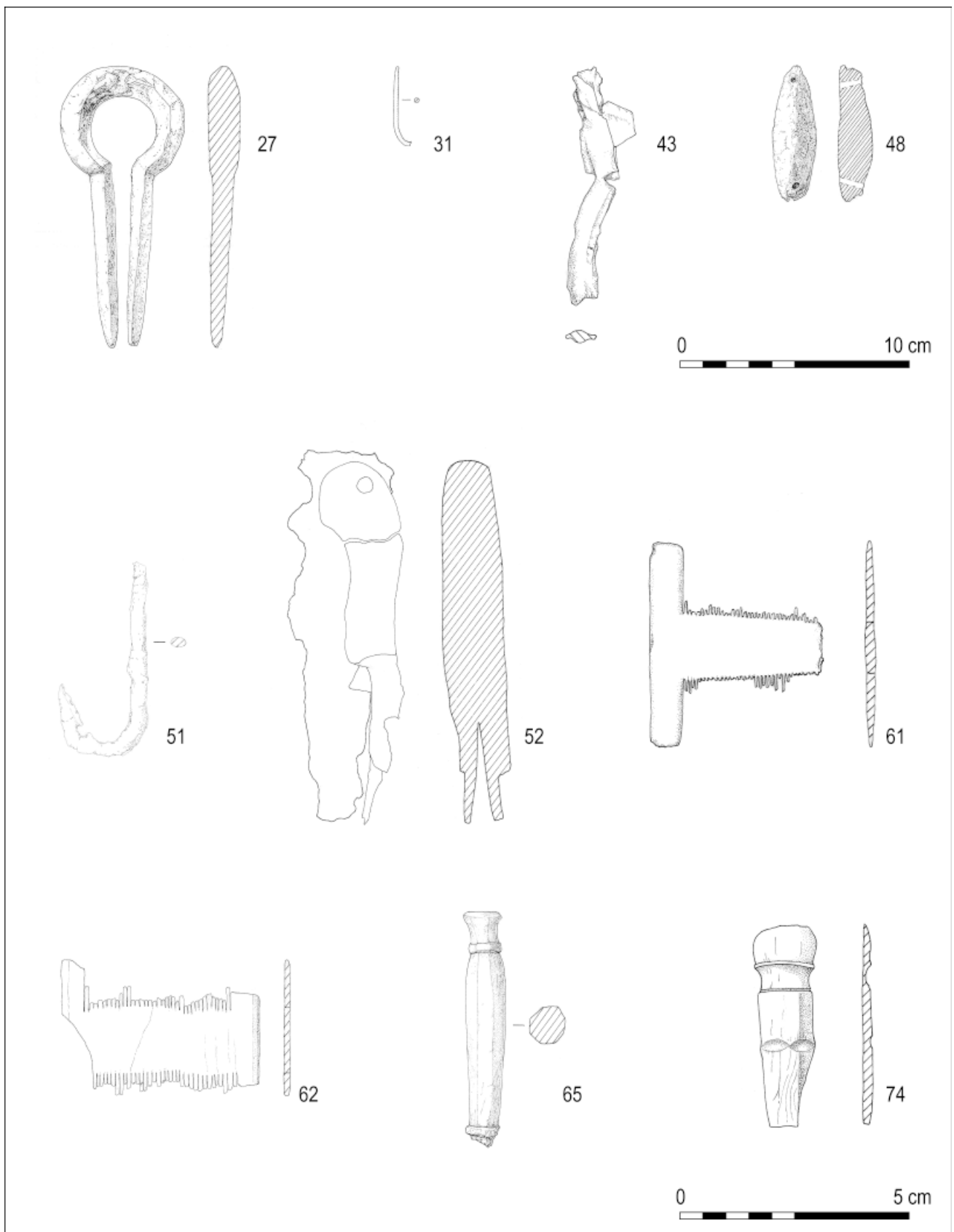
* *see* Illus 8.23

find number	description	context	location	Period
43*	came	103	layer in north range	III
46	sheet	1102	drain fill in Trench V	III
48*	weight	280	post-medieval debris in south range	III

Table 8.27 *Post-medieval iron objects.*

* *see* Illus 8.23

find number	description	context	location	Period
51*	fishing hook	145	layer in west room of smithy	III
52*	knife	827	layer in cemetery	III



Illus 8.23 Post-medieval artefacts.

from suckling. Rods of wood or bone of similar size, with expanded ends, were used until recently in Scandinavia, Ireland and northern Scotland for this purpose. The lamb would wear the device (known by the Norwegian name of *kjevla*), secured by strings tied around the expanded ends, in its mouth in the manner of a horse bit (Baldwin 1978). The faceted rather than cylindrical form of No 65 may, however, argue against this interpretation.

A faceted handle, most likely from a knife (No 68) is probably of 17th- or 18th-century date. It is from an unstratified context.

Pins

From a post-medieval context within the church, No 72 has an incomplete perforation through its slightly expanded terminal, and it is possible that it represents a pin which fractured during manufacture.

Fastening device

A fragment of a hollow, faceted artefact with a rounded terminal, derived from a mammal long bone shaft (No 74), may have functioned as a toggle on a garment, but its hollow form, utilising the natural marrow cavity, indicates a possible use with a line or netting.

Whalebone artefact

Found in the wall of the post-medieval smithy wall, No 77 is a fragment into which three notches have been cut.

Whistle or flute

No 80, is probably derived from a cormorant ulna, may also have been a flute or whistle. In contrast to No 79, the quill knobs on this example have been pared off, although traces of them remain.

The pneumatic limb bones (particularly the ulnae and tibiae) of large birds appear to have been favoured for the production of whistles and flutes, their hollow, thin-walled shafts making them ideally suitable for the purpose (MacGregor 1985, 150). Concentrations of bird-bone flutes have been noted among coastal-dwelling communities on the Continent in which birds

also had a particular importance in the diet (Brade 1975). Medieval whistles and flutes derived from bird limb bones are known from several English sites, including Canterbury, Kent (Megaw 1969), and Lydney Castle, Gloucestershire (Casey 1931). Scottish examples include two (one possibly unfinished) from Castle Park, Dunbar, possibly derived from gannet limb bones (Cox 2000).

Miscellaneous

No 81, of unknown function, has a small, circular perforation at each end. Two metatarsals incorporating perforations at either end were found in Norse contexts at Birsay (Curle 1982, 75, Figure 50, nos 280–1). No 82 is a seal tooth, the wear pattern on which represents natural occlusion.

Glass or mineral objects

No 86 is a possible inset of domed, circular form. It was possibly held within a copper alloy bezel or mounting, in the manner of the possible ring or button fragment described above (No 22).

Amber bead

From an unstratified context, No 87 is a circular bead, probably derived from amber. Pieces of amber, almost all originating in the Baltic, wash up on beaches along the E coast of Britain, and it seems a strong possibility that many of the artefacts found in British archaeological contexts were made from material collected from this source.

Stone objects

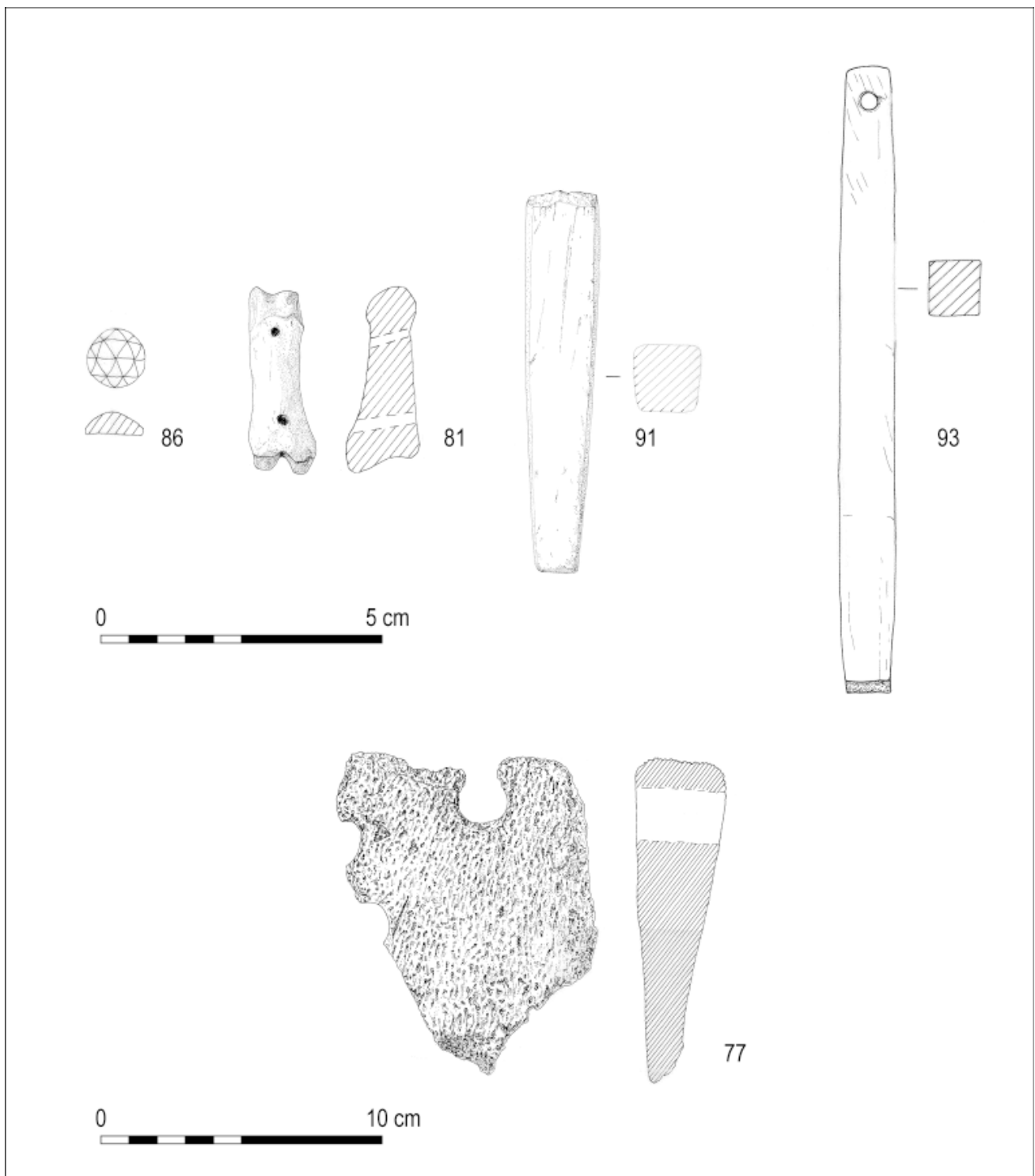
Hones

Hones (or whetstones) were used to sharpen the blades and points of metal tools. Superior honing qualities are provided by stones in which hard minerals such as garnet or quartz are set within a softer matrix. The honing action involves the hard mineral tearing tiny fragments of metal from the blade or point being sharpened (Moore and Oakley 1979, 280).

Table 8.28 *Post-medieval bone and antler objects.*

* see Illus 8.23

find number	description	context	location	Period
61*	comb	B07	post-medieval debris in north range	III
62*	comb fragment	406	post-medieval debris east of north range	III
65*	handle or <i>kjevla</i>	349	hollow in west range	III
67	handle	801	post-medieval midden in cemetery	III
68	handle	u/s		
74*	? fastening device	B08	post-medieval levelling up in north range	III
77*	notched fragment	143	east wall of smithy	III
80	? unfinished artefact	1104	midden in Trench V	III
81	perforated bone	1104	midden in Trench V	III

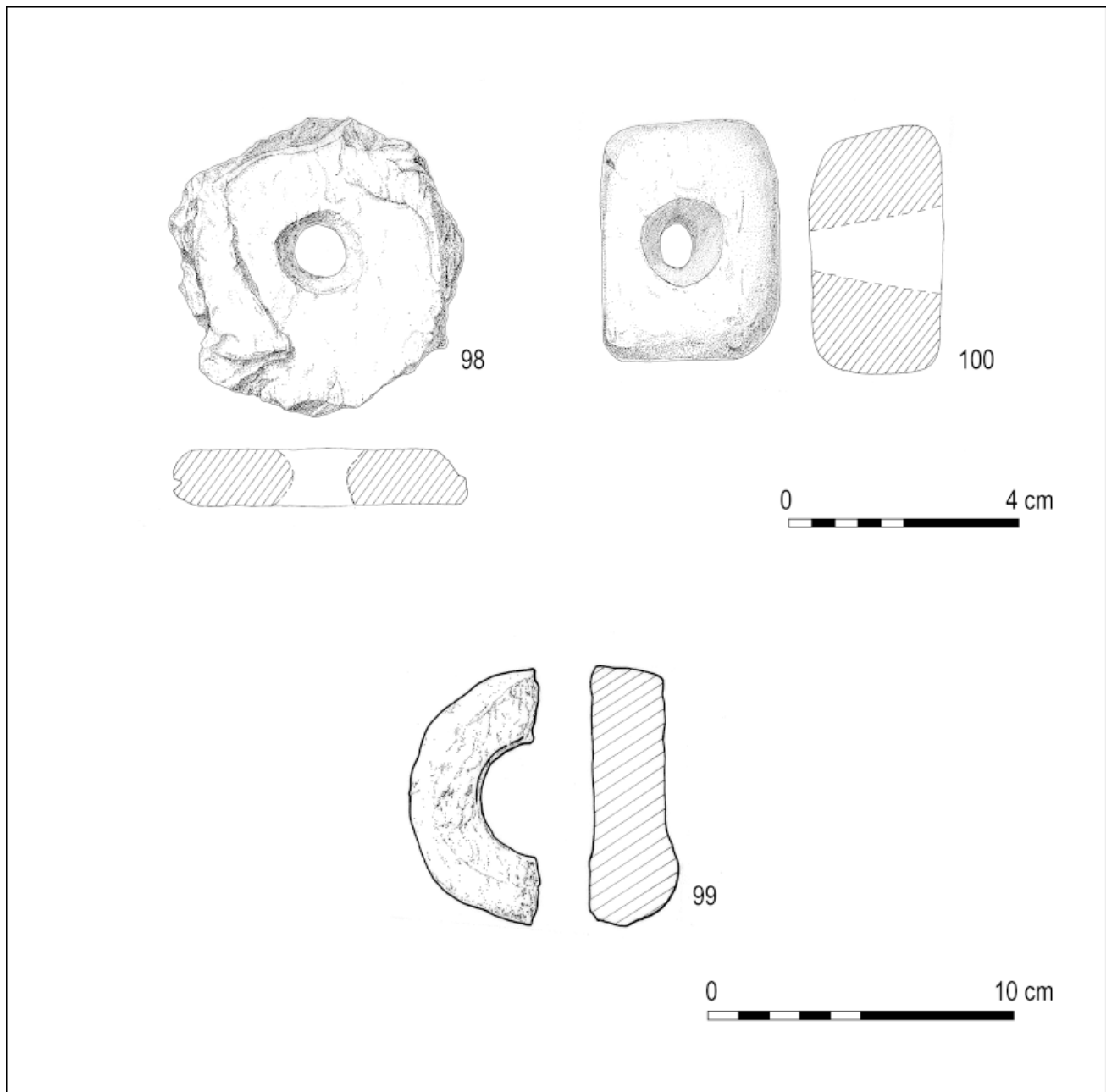


Illus 8.24 Post-medieval artefacts.

Table 8.29 Post-medieval glass and amber objects.

* see Illus 8.24

find number	description	context	location	Period
86*	glass or mineral inset	D21	post-medieval debris in south range	III
87	amber bead	u/s		



Illus 8.25 *Post-medieval artefacts.*

Three hones (Nos 91, 93, 94) were found from this period. A possible hone fragment (No 94) was possibly also used in a workshop environment. Fragments of hones can be used after breakage, as long as they are still large enough to be held.

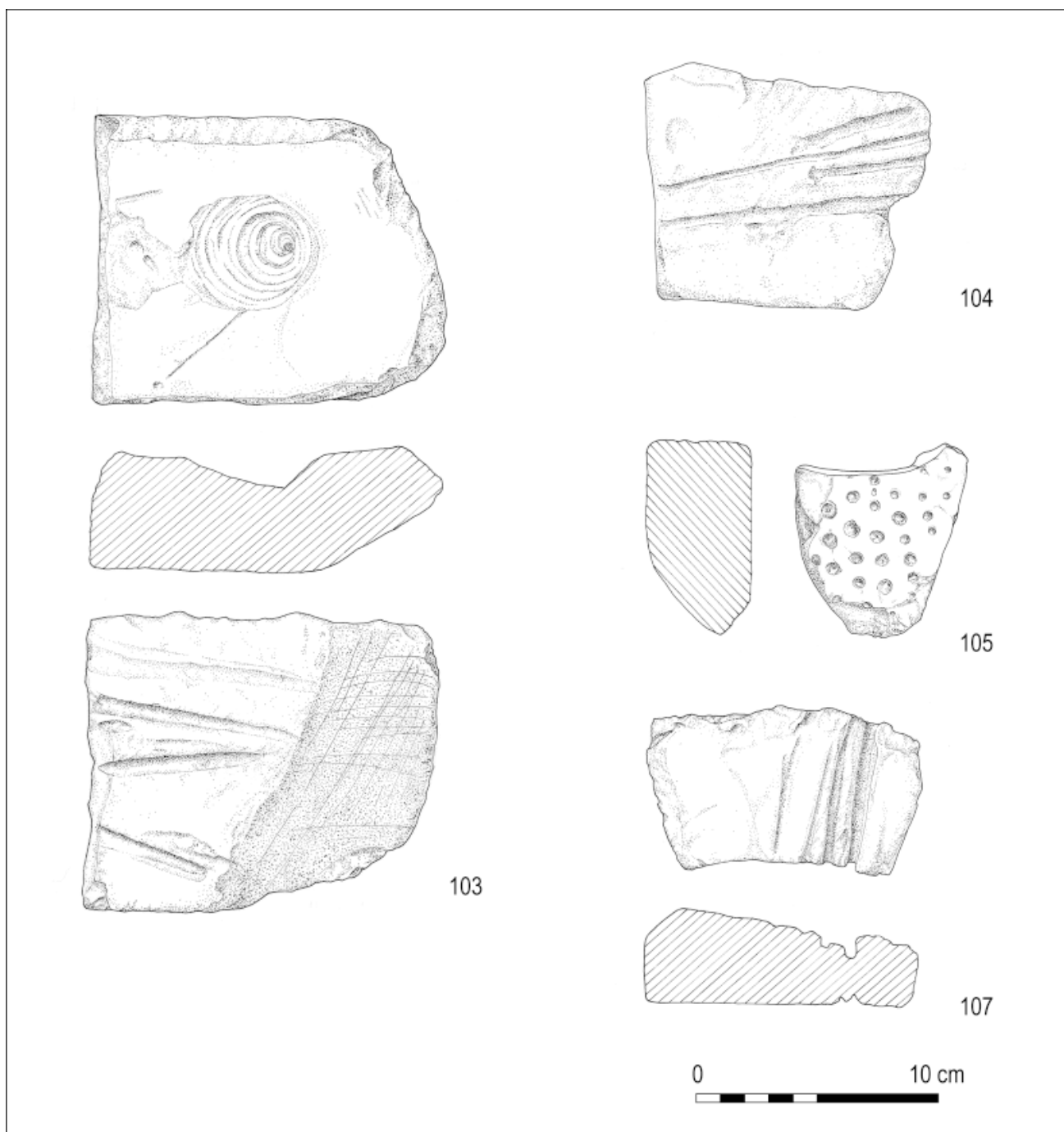
No 91, a fragment of a tapering, rectangular cross-sectioned hone, bears numerous small, linear scratches which may have resulted from the sharpening of blades and points. It was found in redeposited midden material in the priory cloister. No 93 is the only hone among this group perforated for suspension. It is of elongated form and tapering, square cross-section, and may have been carried about the person. Numerous curvilinear striations are visible on the sides of this hone. Some of these, particularly those near the terminal, may be related to its finishing. Others appear to be consistent with tool sharpening, although the hone shows little

wear at its edges. Smaller hones made from fine-grained rock were probably used for sharpening personal knives and razors.

Weights

Three stone objects probably functioned as weights (Nos 98–100). No 98, from topsoil within the church, is a crudely circular, discoid object which could possibly have functioned as a spindle whorl but its size and the off-centre positioning of the hole indicate the likelihood of it representing a loom weight or net weight. There is no evidence of excessive wear either around the hole or on its edges.

From the same context as No 98, No 99 is a fragment representing approximately half of a roughly discoid object, probably used as a weight. The diameter of the central aperture is larger than usual for a spindle whorl,



Illus 8.26 Post-medieval artefacts.

although perhaps once again this function cannot be entirely discounted. The iron oxide staining on the edge of the hole may have occurred in the object's burial environment as a result of close proximity to a corroding iron artefact. No 100 is a perforated pebble, possibly used as a net weight or a loom weight.

Miscellaneous

No 101 has been cut to a roughly discoid form. Similar objects have been interpreted as pot lids or counters. Nos 103 and 104 may represent sharpening stones. The grooves on their faces (almost parallel in the case of No 103) possibly represent scars caused by repeated sharpening of points or blades, possibly of larger types of iron tools. From an unstratified context, No 105

possibly represents a mould component, although its function remains obscure. No 107 is possibly an architectural fragment.

8.6.3 The gunflints and strike-a-lights

Mike Donnelly

A small number of gunflints and/or strike-a-lights were recovered. These items appear crude in comparison with some of the finer examples of gunflint workmanship and this may relate to the occasional and *ad hoc* utilisation of the large quantities of dumped flint ballast found on the island or may relate to their use as strike-a-lights as opposed to actual gunflints since they are suitable for use in both these functions.

Table 8.30 *Post-medieval stone objects.*

* see Illus 8.24, 8.25 and 8.26

find number	description	context	location	Period
91*	hone	257	redeposited midden in cloister	III
93*	hone	554	post-medieval midden in south range	III
94	?hone	1310	walling in south range	III
98*	weight	100	topsoil, north range	III
99*	?weight	100	topsoil, north range	III
100*	?weigh	1104	midden layer in Trench V	III
101	disc	484	topsoil	III
103*	?sharpening stone	807	post-medieval layer in cemetery	III
104*	?sharpening stone	807	post-medieval layer in cemetery	III
105*	worked stone	u/s		
107*	worked stone	101	lower topsoil in north range	III

Table 8.31 *Post-medieval flints mentioned in text.*

* see Illus 8.27

find number	description	context	location	Period
10*	gunflint	Trench A4	post-medieval layer in north range	III
02	?gunflint	Trench F5	post-medieval layer in east range	III
102	?gunflint	903	post-medieval layer in cemetery	III
114*	strike-a-light	536	post-medieval layer in south range	III
159	?strike-a-light	1102	post-medieval layer in Trench V	III

8.6.4 The stone roof slates (Illus 8.27)

Peter Yeoman

A large number of large stone slates were found in post-medieval demolition debris close to the junction of the S and W ranges. The one typical illustrated example (No 5, context 527) was 0.3m wide by 0.6m long. These were probably from a quarry at Carmylie (Angus) which were popularly used to roof tower houses (Bob Heath pers comm).

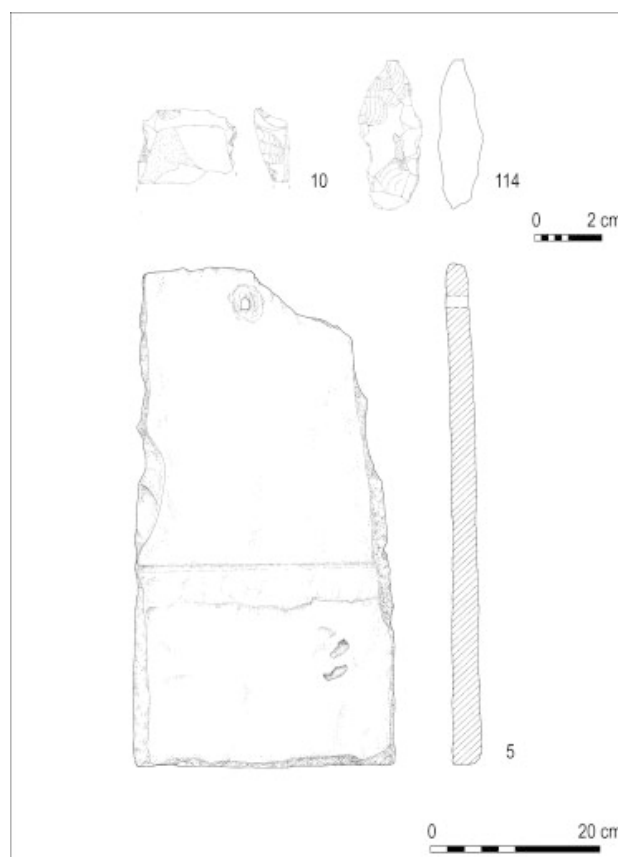
8.6.5 The clay tobacco pipes (Illus 8.28 and 8.29)

Dennis B Gallagher

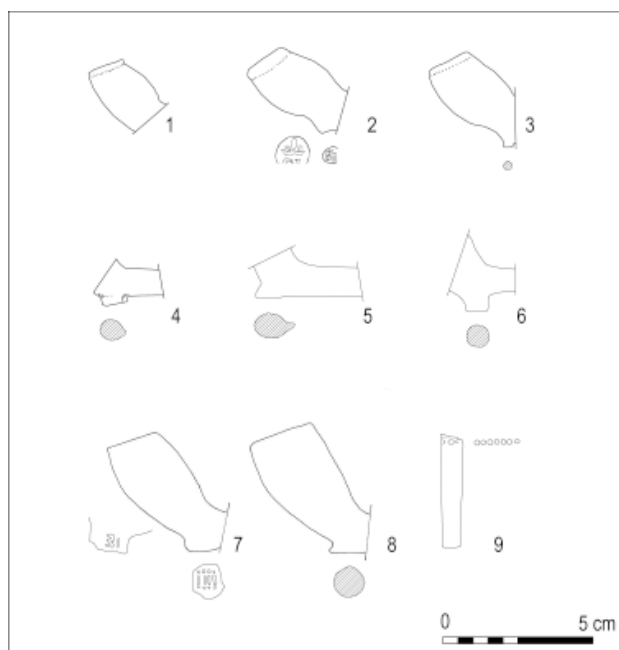
This report concerns 277 clay tobacco pipes fragments, consisting of 80 bowl fragments, 187 stem fragments and 10 recognisable mouthpieces from 85 different contexts. It consists of a discussion of the pipes in relation to their date, form and production centres, followed by a catalogue of the main diagnostic fragments.

Discussion

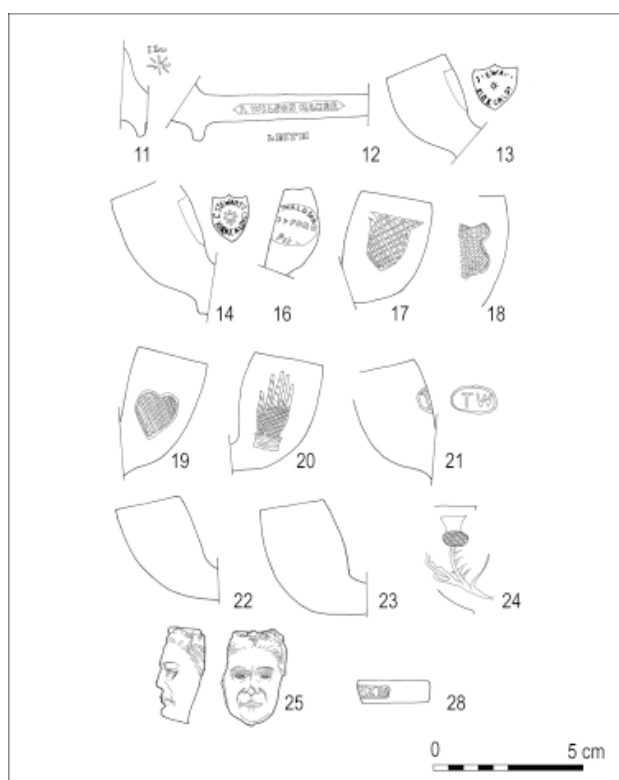
The small number of pipes of 17th-century date are a disparate group both in the variety of their production centres and in chronological span, which is likely to reflect the deposition of pipes by passing vessels rather than a consistent supply to a local population. The earliest pipe in the group (No 1, Illus 8.28), a possible



Illus 8.27 *Post-medieval gunflints/strike-a-lights and roof slate.*



Illus 8.28 Clay pipes.



Illus 8.29 Clay pipes.

Edinburgh product of c1610–40 is similar to the group from a pre-1637 context in the Tron Kirk, Edinburgh (Gallagher 1987a, 270). There are also two Scottish bowls of c1690–1730 date (Illus 8.28, Nos 7 and 8), similar in form to examples excavated from the 1690 wreck of *HMS Dartmouth* (Martin 1987a, 228), one with an Edinburgh-style portcullis basal stamp. There is one import from England (Illus 8.29 No 3), a bowl of London style 15, c1660–80 (Atkinson and Oswald 1969, 178).

Dutch pipes included a bowl of mid-17th-century date (Illus 8.28, No 2), similar in form to Leiden products (cf Meulen 1988, 118). Insufficient survives of the crowned letters of the basal stamp for its attribution to a particular maker. There is also a Dutch heel fragment (Illus 8.28, No 6) of probable 18th-century date. A stem fragment (Illus 8.27, No 9), which has a small part of roller stamp consisting of a beaded band, may also be Dutch although some Scottish makers also used this form of decoration (cf Gallagher 1987b, 32).

The pipes of 19th-century and early 20th-century date show a reliance on makers. These include three Leith makers, P Wilson, Mackenzie and Donaldson, and also C Stewart of Kirkcaldy. Glasgow products and those of William Christie of Leith, a prominent local manufacturer, are notably absent.

Peter Wilson was one of the main pipe makers in Leith and the firm is recorded in the local directories over the period 1847–1902. Thirty-seven of his moulds were acquired by William Christie of Leith and were among the contents of the latter's factory when it closed in 1962, after which they were acquired by Huntly House Museum, Edinburgh (Gallagher and Sharp 1986, 33). The marked stems of the Wilson pipes (12 and 26–7) have the place of manufacture, Leith, in serif lettering and the maker's name in sans serif; the difference in style suggests that the stamps were not ordered from a mould maker at the same time, but that the Leith stamp may have been acquired from another maker. The bowl fragment (Illus 8.29, No 16) marked DONALDSON OXFORD PIPE is likely to be a product of William Donaldson of Leith, recorded as an independent maker 1833–67, or his son James who continued the business for a further ten years. Oxford refers to the style of pipe rather than the place of manufacture. The Mackenzie fragments (Illus 8.29, No 28) represent another family of Leith pipe manufacturers; John Mackenzie is recorded 1862–93 and then John Mackenzie 1895–1915.

Pipe making seems to have been a booming trade in late 19th-century Kirkcaldy, nine different manufacturers being recorded in the local directories between 1860 and 1900 (Martin 1987c, 178). The present group has examples of bowls with two different Stewart stamps (Illus 8.29, Nos 13–14). No reference has been found for a pipe maker named Stewart in Kirkcaldy, although a manufacturer of the same name is recorded in Glasgow between 1856 and 1861, who may have moved to Kirkcaldy after that period. There is a bowl from Balgonie Castle, Fife, with a similar Stewart stamp on the rear (Martin 1987b, 265). Two of his Kirkcaldy moulds were

Table 8.32 *Clay pipe fragments of pre-1750 date (Illus 8.28).*

catalogue number	description	context	location	Period
1	Small biconical bowl, bottered and finely milled; no measurable stem bore; possibly an Edinburgh product, c1610–40	187	layer in west range	III
2	Biconical bowl, milled and polished. Part of a stampconsisting of two letters crowned, survives on the damaged heel; no measurable stem bore; Dutch, c1650–80	123	post-medieval debris in north range	III
3	Spurred biconical bowl, milled and bottered; bore 7/64"; English, London Type 15, c1660–80 (Atkinson and Oswald 1969, 179)	187	layer in wset range	III
4	Fragment of lower bowl with spur; bore 7/64"	102	post-medieval debris in soth range	III
5	Lower bowl fragment, poorly made with large inclusions and a surface cracked before firing; bore 7/64"; c1650–1700	103	layer in north range	III
6	Lower bowl fragment with elongated heel, its bottom with concave trimming; bore 7/64"; Dutch, 18th century	102	post-medieval debris in south range	III
7	Elongated bowl with a mould-imparted M or W on the right side of the foot and a portcullis basal stamp from a crudely cut die; bore 7/64"	801	post-medieval midden in cemetery	III
8	Wide-mouthed bowl; bore /64"	u/s		
9	Stem fragment, polished, with part of a roller stamp impression consisting of small and large pellets; bore /64"	S1001	topsoil, Trench S, village site	III
10	Front wall of a tall thin-walled bowl, polished, rim unbottered		topsoil	III

acquired by William Christie of Leith and are now in Huntly House Museum, Edinburgh (Gallagher and Sharp 1986, 32).

Most of the later examples in the group are representative of low-quality pipes of the second half of the 19th century. A number of the bowls are thick-walled with crude decoration of single motifs with hatched backgrounds: shields, hearts and a Hand of Ulster, as well as TW pipes (Illus 8.29, Nos 17–21). There are also bowl fragments of a higher quality with a thistle in low relief (Illus 8.28, No 24).

An exotic import (Illus 8.29, No 25) contrasts with the local pipes. This is a face from a late 19th-century pipe produced in a three-part mould, possibly depicting Emma, mother of Queen Wilhelmina of the Netherlands (cf Duco 1992, 87–90). The eyes and eyelashes are emphasised by dark paint.

8.6.6 The vessel glass

Robin Murdoch

Introduction

The use of glass in Scotland has been an intermittent affair since Roman times, when, in common with the rest of the empire, it was relatively common. From the seventh to early twelfth centuries, however, usage

appears to have been virtually nil except in a few specific sites such as Whithorn (Hill 1997) and Mote of Mark (Campbell 2006).

A sophisticated glass industry flourished in Syria until the fall of Damascus in 1400 at which time many of the skills were transferred to Venice. Our modern word crystal is derived from the Italian *cristallo*, simply meaning clear, and the development of cristallo glass around 1450 was to establish Venice as the main player in European glass manufacture for the next 200 years. The fall of Constantinople in 1453 saw the loss of Venice eastern markets and they looked westwards for replacements.

First appearing in Scotland around 1500, Venetian glass or *façon de Venise* copies remained popular until the late 17th century when George Ravenscroft perfected lead crystal, or as it sometimes known, flint glass, which quickly replaced the Venetian products as the 'in thing'.

Although it is entirely possible that glass was made in Scotland in the medieval period, no records or sites have been identified. However, there is reliable evidence of an indigenous glass industry from around 1600 onwards.

Most N European glass, including any that might have been made in Scotland in the medieval period, was potash glass. This glass, unlike the other main type, soda glass, deteriorates rapidly in the presence of

Table 8.33 *Clay pipe fragments of post-1750 date (Illus 8.29).*

catalogue number	description	context	location	Period
11	Rear fragment of a small spurred bowl with part of a stamp having ..IL.. within a frame, possibly Miller; bore 4/64"	P1001	topsoil, Trench P, village site	III
12	Lower part of a spurred bowl and adjoining stem fragment, stem marked P.WILSON MAKER/ LEITH in a frame, only LEITH having serifs; bore 4/64"	M1001	topsoil, Trench M, village site	III
13	Small spurred bowl, spur missing, rear stamped STEWART KIRKCALDY in a shield; bore 4/64"	J1	topsoil, Trench J, village site	III
14	Large spurred bowl, rear stamped with C STEWART and Co KIRKCALDY within a shield; bore 4/64"	W100	topsoil, Trench W, village site	III
15	Fragment of spurred bowl similar in form to the Stewart bowl above, possibly from the same mould	P1001	topsoil, Trench P, village site	III
16	Wall sherd of bowl with part of an oval stamp: DONALDSON OXFORD PIPE	I1	topsoil in Trench I	III
17	Thick-walled bowl with a hatched shield on the right; bore 4/64"	J1	topsoil, Trench J, village site	III
18	Wall fragment with a hatched shield on the right side of the bowl; bore 4/64".	P1001	topsoil, Trench P, village site	III
19	Bowl with damaged spur, decorated with a hatched heart on the right; bore 4/64"	Q1001	topsoil, Trench Q, village site	III
20	Bowl with a hatched hand on the right; bore 5/64"	–	tennis court field	–
21	Spurred TW bowl; 5/64"; post-1850	S1001	topsoil, Trench S, village site	III
22	Plain bowl; bore 4/64"; post-1850	197	topsoil N range	III
23	Plain bowl; bore 5/64"; post-1850	S1001	topsoil, Trench S, village site	III
24	Wall fragment of a spurred bowl decorated with a thistle in relief	P1001	topsoil, Trench P, village site	III
25	Wall fragment from the front of a bowl depicting a female face in high relief, with dark-brown paint emphasising the eyes and eyebrows, made in a three-part mould; probably Dutch, late 19th century. This fragment may depict Queen Wilhelmina of the Netherlands, cf Duco 1992, 87–90	M1001	topsoil, Trench M, village site	III
26	Stem fragment marked [WILS]ON MAKE[R]/[B]URNS CUT[TY], only the latter with serifs; bore 4/64" (not illustrated)	P1001	topsoil, Trench P, village site	III
27	Stem fragment marked ... MAKER/ BURNS C[UTTY]; bore 4/64"; (not illustrated)	280	post-medieval debris in west range	III
28	Two adjoining stem fragments marked MACKENZIE, polished; bore 4/64"	187	layer in west range	III

dampness and alkalinity. Most archaeological sites with stone-built structures have a locally alkaline soil profile from the presence of lime mortar.

It is the author's firm belief that vessel, and indeed window, glass was more widely used from the 12th to the 15th century than is given credit. Some of the glass will have simply 'disappeared', leaving only corrosion products which have not been recognised on site. A few sherds of vessel glass survive from the medieval period, but seldom from secular sites. It would be dangerous, however, to underestimate the amount of glass used at that time.

Despite its apparent isolation, the Isle of May has yielded an assemblage of glass which is very similar to

what might be expected from a mainland site occupied over the same period. Some 587 sherds were recovered which can be divided into the following categories, wine bottle (c 1670–c 1830) 218 sherds, vessel glass 24 sherds, other 49 sherds, modern 296 sherds. The category described as modern contains most of the material believed to date later than about 1860, including various types of bottles. The late 17th- to early 19th-century wine bottle fragments are mostly very recognisable, with glass colour, condition and manufacturing detail all typical.

Although there are fragments from several fine table vessels, it is interesting to note that, with one or two possible exceptions, all would appear to date from

Table 8.34 *Catalogue of illustrated vessel glass (see Illus 8.30).*

catalogue number	description	context	location	Period
A	Complete body, lip missing, from small medicine phial in mid-aqua-green with light iridescent patina. Maximum diameter 18mm, tapering to 15mm at the shoulder, sharply pointed kick with smoothed off pontil. Surviving height 42mm, capacity 3.5ml, late 17th century	100	topsoil, north range	III
B	Lower body sherd with belling, from small apothecary bottle in clear with very white patina. Diameter c32mm, capacity c12–14ml, 18th century	100	topsoil, north range	III
C	Part of stem from drinking vessel, clear with light iridescent patina. One knop, two mereses and part of base flange survive. The base flange is quite thin suggesting folded foot for strength. Multiplicity of knops and lightness of construction indicate first half of 18th century	100	topsoil, north range	III
D	Lower bowl and part stem from small drinking vessel with bucket bowl and flattened knop partway down stem. Quite chunky in clear glass with blotchy white patination, may be lead glass, probably early 18th century	271	annexe to west range	III
E	Lower bowl and part stem from drinking vessel with trumpet bowl. Clear with possible slight grey tinge, quite thick glass with moderate stable brown patina, probably late 17th century	800	topsoil in cemetery	III
F	Part stem from drinking vessel, flute or trumpet bowl. Stem tapers down to mishapen knop, clear glass with slight grey tinge and blotchy grey white patina, probably early 18th century	800	topsoil in cemetery	III
G	Part stem from drinking vessel, quite substantially made in clear with white milky patina. Part of heavy base flange still survives and stem has two adjacent, slightly flattened knops, probably late 17th century	u/s		
H	Sherd of rim of drinking vessel, clear with very white patina, flaring trumpet bowl, only c50mm diameter	1007	topsoil in Trench X	III
J	Fragment of stem from drinking vessel, probably the top, with a straight drawn stem surmounted by a slightly flattened knop, above which is the springing of the bowl. Clear glass with moderate white chalky patina, knop diameter 16.5mm, stem diameter 10mm, 18th century	554	post-medieval midden in south range	III
K	Part stem from drinking vessel in clear, slightly greyish glass with striations from drawing along its length. The form is that of a baluster with a flattened knop. However, it is unclear which way up the stem should be. Lighter in style than the classic baluster period of 1685–1715, therefore probably a balustroid glass, a less substantial derivative of the second quarter of the 18th century	B8	post-medieval levelling up in north range	III
L	Stem-like fragment, 55mm long x maximum diameter 17mm, in clear, heavy (possibly lead) glass with white chalky patina. Five to five and a half coils of spiral decoration survive, the coils further decorated with closely spaced ribbing. The diameter of the undecorated part of the piece reduces quite rapidly and the piece seems not to be from a drinking vessel. Thought more likely to be a handle	506	rubble debris in south range	III
M	Rim sherd from drinking vessel, c80mm diameter at the rim, in clear slightly greyish glass, 3mm thick. The piece is decorated with four colours of enamel, namely white, yellow, dark-blue and red-brown, 17th/18th century	564	post-medieval midden in south range	III
N	Two conjoining sherds in thick, clear, possibly slightly greyish glass with very slight iridescence. The vessel appears to have been hexagonal with a flat base and corners and raised areas show abrasion, probably from repeated use. The piece is decorated with a depiction of a rounded ewer or jug with handles and a pedestal base. The decoration is not permanent (ie not fired in) and is therefore cold colour paint. The infill is yellow and the detail picked out in black. Wall thickness is 4mm and the side length 37mm. The item is probably from a small table decanter, but not for wine, 16th/early 17th century	510	post-medieval midden in south range	III
P	Two conjoining base sherds from narrow square-section bottle in mid-green with moderate to heavy patina. Body is 48mm across the flats and has remnants of a pontil scar in the slightly indented kick. Glass colour and condition would suggest late 17th/early 18th century, possibly a case bottle	271	annexe to west range	III

Table 8.34 (*Continued*)

catalogue number	description	context	location	Period
S	Neck and lip from wine bottle in light-green with moderate 'metallic' patina. Neck height 92mm, aperture 16mm, thinnish string ring with lip partly everted above it, curving splay into smooth shoulder curve. Probable mallet-shaped bottle of c1730	1007	topsoil in Trench X	III
T	Upper neck and lip of wine bottle of unusual form, colour difficult to assess because of heavy stable patina. The neck has a very linear splay and while the string ring is not dissimilar to early 18th century forms, it is somewhat flattened. The lip extends out beyond the string ring and its upper surface has been carefully and deliberately flattened. The poor condition of the glass suggests it cannot be much later than the first quarter of the 18th century and the lack of parallels suggest it is an import, possibly Dutch	467	post-medieval layer in south range	III

c1680 to 1740. Most of these sherds, unfortunately, come from mixed contexts which contain later material, but they are interesting in themselves, indicating a quality of life better than might have been expected, given the location. It is perhaps no coincidence that much of the fine wares appear to date from the time when smuggling, in the area of the East Neuk, was in its heyday.

Bases from square-section bottles are more in evidence than would normally be expected, but, unfortunately, no necks or lips survive that would positively identify them as case bottles. These bottles were specially designed to fit into wooden cases for safe transport, particularly by sea, and it would not be surprising to find such bottles arriving at the May from the Continent, legally or otherwise! They were frequently used to transport Holland gin or brandy.

Discussion of the illustrated finds

Sherds from five bottles are shown: two wine, two apothecary and one possible case bottle. Figures A and B represent small apothecary bottles of capacity 3.5ml and c12–14ml respectively. According to (Gooder 1984, 221), the colour associated with A dates to the second half of the 17th century.

The bottle illustrated in B is made from clear glass with white patina, and appears to have approximate parallels at Aldgate, London (Thomson, Grew and Schofield 1984, 86), where the dating is given as 1750–70. However, Defoe, writing in 1727 noted that apothecary bottles were made of flint glass (lead glass and generally clear) at several works including Newcastle (Gooder 1984, 222)

Parts of several drinking vessels, mostly wine glasses, are represented. E and G, because of their relatively heavy appearance are thought to be late 17th-century whereas C, D, F, H and K are much lighter and are typical of early 18th-century forms, particularly with their knoppy stems. J may be slightly later. It is interesting to note that there are no stems with internal air or cotton twist decoration, a style which was all the rage in 'Jacobite' glasses c1740–80.

Two pieces of colour-decorated fine wares are present. M is a rim sherd from a beaker or tumbler with slightly sloping sides. Although it is decorated with enamel, including small dots much favoured by the Venetians, the glass is rather thick at 3mm and the piece is therefore more likely to be from Germany or Bohemia, where Venetian inspired enamelling techniques were developed towards the end of the 16th century (Phillips 1990, 452). Enamelled beakers were imported into the Netherlands, from Germany and Bohemia, from 1600 onwards and, given its exposure to sea trade, there is no reason to suppose similar material would not arrive at the May.

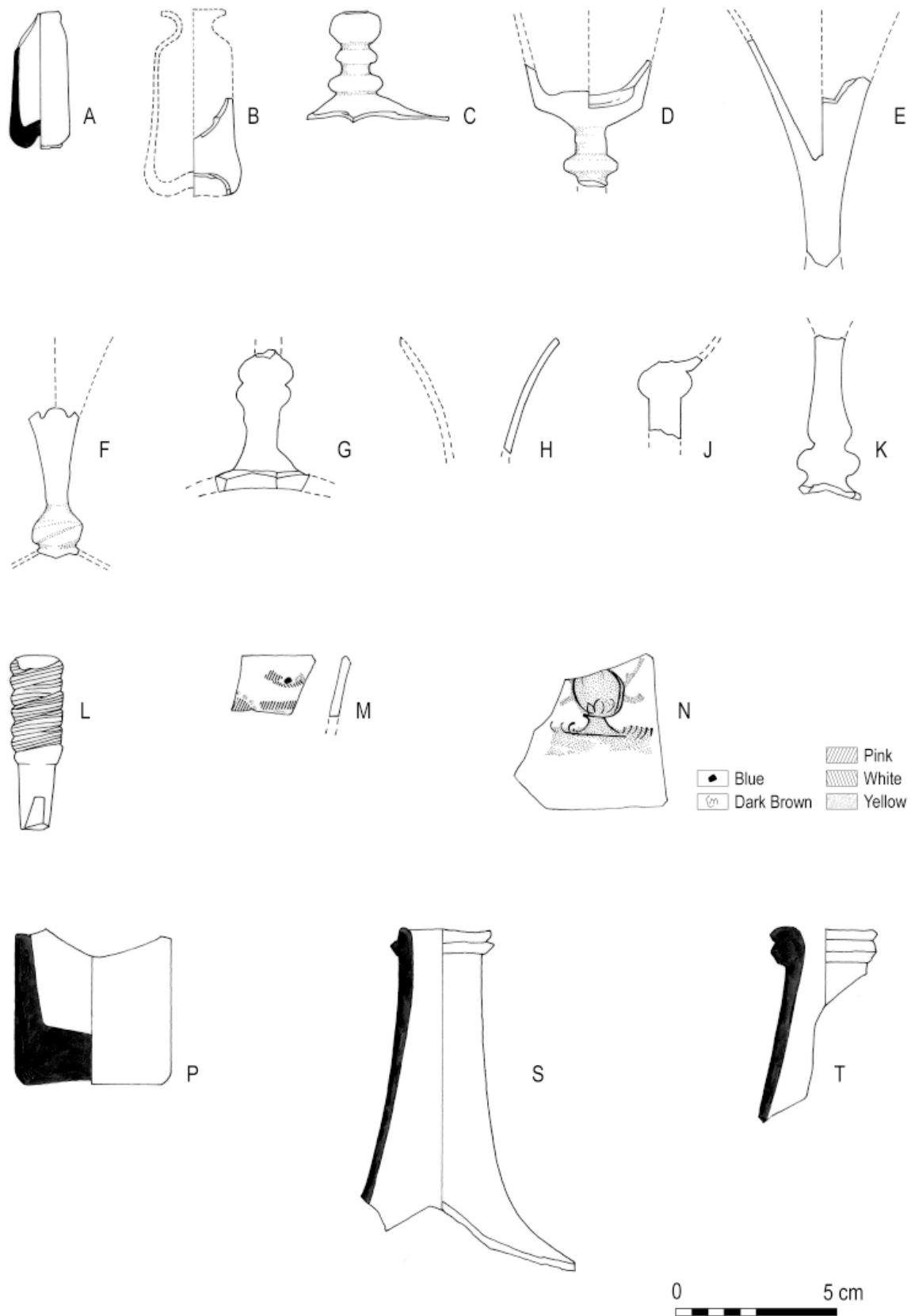
N is from a small hexagonal vessel, possibly a decanter for oil or vinegar rather than wine. The glass colour and thickness is very similar to M and the decoration is in cold colour paint rather than enamel. Phillips (1990, 452) observes that most of the early German/Bohemian (16th–early 17th century) decoration was cold painted. The quality of the decoration is not particularly good, which would possibly indicate early German/Bohemian, but it is interesting to observe that the vessel actually portrayed in the decoration has a pedestal foot more in keeping with late 15th- or early 16th-century styles, certainly as far as drinking vessels are concerned. However, that style did persist in jugs and carafes into the 17th century (Henkes 1994, 224–5). On balance, it is believed that this vessel is German or Bohemian manufacture, but Venetian cannot be entirely ruled out. (*See Archive for complete catalogue.*)

8.6.7 The industrial waste

Irene Cullen

N range: the smithy

A furnace had been built into the NW corner of the church with the flue opening to the SE. It was constructed from white sandstone and mortar with a stone-flagged base (146). The primary deposit within the furnace (140) contained fragmentary pieces of bloomery debris (2047g) which had sunk to the bottom of the furnace during smelting. The debris was crusted with mortar



Illus 8.30 Vessel glass.

from the furnace structure, or from the mortar floor of the smithy (141). The mortar did not appear heat affected and the slags may have been tapped out of the furnace onto the mortar floor of the smithy. The mortar floor (141), into which the furnace and stone trough (142) had both been built, contained only a small amount of bloomery debris (7g) and one concreted nail.

The overlying deposits within the furnace and immediately outside it contained small quantities of slag (contexts 134, 139 and 138). Context 134 contained only hammerscale and a concreted nail. Context 139 also contained hammerscale and three indeterminate iron concretions. The upper layer (context 138) contained 9g of bloomery debris, some hammerscale, a smithy concretion and three nails. No furnace lining or debris was found within or in the vicinity of the furnace which may have indicated the nature of the superstructure, although redeposited fragments of furnace lining were recovered elsewhere. The layer sealing the furnace (133) contained a total of 55 iron objects, consisting of 42 nails, 2 rivets and 11 indeterminate objects.

A stone trough (142) was found within the smithy. Quenching of iron was carried out for two reasons: either the rapid cooling from a particular temperature (725 degrees Centigrade to 900 degrees Centigrade) for the purpose of hardening steel, or for cooling of objects for handling from any temperature. Since the majority of finds here were mostly unedged nails or rivets, the rapid cooling of finished objects for handling seems the most probable use of the trough although steel production could also have been taking place.

Both the smelting and smithing of iron took place in the smithy during the post-medieval period. The small quantities of smelting debris present, other than from the immediate area of the furnace hearth, suggests that smelting was on a small scale. Smithing was probably the main purpose of the hearth, with perhaps only one initial occasion of use as a smelting furnace. The presence of a quenching trough and hammerscale within the smithy deposits, as well as the large number of iron objects recovered from layer 133, all suggest secondary smithing: the final working of iron into objects, or the reworking and repair of old iron. There was very little debris present within the smithy to suggest primary bloomworking had taken place, although such debris is present within the pits in the S range. It is possible that the debris was collected and dumped in the ruins of the S range.

The E range: Bowl furnace and pit

A possible bowl furnace (context 209) and a pit (210) were located within the E range. Feature 209 contained a very small amount of bloomery debris (4g). The upper fill (234) contained a concreted nail and some cinder (6g). The pit was edged with fire reddened sand (236) burnt *in situ*. The form of feature 209 and the presence of *in situ* burning suggests that this was used as a bowl

furnace. However, there was little bloomery slag present in the fills to confirm this, nor were any remains of a furnace lining present. Feature 210 showed no sign of *in situ* burning at its edges nor did it contain any slags and so was possibly not a furnace. A single piece of molten lead was recovered from the S room of the E range in one of two small hearths (238, 239) situated on a floor surface (228). This may represent a fragment of lead window came which had become melted in the fire or it may be evidence of small scale lead working on the island. Other ironworking slags from the E range were found within the infill of the passageway 226 and post-medieval layers 199 and 216. Layers 216 and 226 contained small amounts of bloomworking debris and layer 199 contained a very small amount of bloomery debris (6g).

S range

The hollow (574), which was lined by four stones on its northern edge (574) that could have been utilised as a tuyère/bellows support, contained iron concretions. However, the lack of bloomery debris within the fill and the presence of coal (a fuel unsuitable for the smelting of iron due to its high sulphur content) argue against its use as a bowl furnace. The oval hollow (569), which was located immediately adjacent to hollow 574, contained sizable amounts of smithy concretions (1296g), bloomworking debris (40g), and cinder (34g). Hammerscale was present in large quantities and also prill. No evidence of burning was seen around the edges of the hollow and so it appeared to have been dug specifically to dispose of smithing debris. None of the debris in the pit was indicative of smelting. The very large quantities of hammerscale present within the fill suggest that the deposit was more the result of the final working of iron, or of the reworking or repair of old tools, than primary bloomworking. Bloomworking debris did occur, but only in small quantities. A lead pig fragment (340g) in the fill suggested that lead was also being worked, but it too had been redeposited in the pit.

Both pits had been dug into a layer of orange ashy material (562) and were sealed by a black ashy layer, containing coal fragments, smithing debris, a small quantity of bloomworking debris, some smithy concretions and hammerscale (contexts 536/547/568). Layer 565, also sealed by layer 536, contained a fragment of waste run lead (10g). A fragment of furnace lining vitrified onto daub was found in layer 547 and further fragments of furnace lining were recovered from the post-medieval debris above (contexts 506, 510 and 526). Smithing slags were also found in the overlying layers of debris including a bloom and a smithy bottom present in the rubble (context 505), and topsoil (500). Two further fragments of furnace structure were found in layers 510 and 526. Bloomery slags were also present in small quantities within the overlying layers. A bloomery bottom was found within context 506. It had a diameter

of 0.1m giving an indication of the diameter of the bowl furnace which produced it. It did not, however, match the diameter of either of the possible bowl furnaces excavated. A fragment of tapslag also indicative of smelting was found within topsoil 500.

Other fragments of bloomworking debris were found in post-medieval layers in the cemetery trench and Trench V, and also in the kitchen midden (Trench X) and the village (Trench U).