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A Cromwellian Warship wrecked off Duart Castle, Mull, Scotland, in 1653

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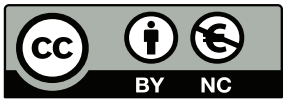

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Chapter 9

OTHER FINDS AND RELATED ACTIVITIES 2

9.1 Pewter: the Scots tappit hens

Peter Spencer Davies, George Dalgleish & David Lamb

(this is an abridged and modified version of a paper published by these authors in the *Proceedings of the Society of Antiquaries of Scotland*, which places the Duart Point finds into the wider context of Scottish pewter studies. See also Davies 2014: 171–4)

Three lidded pewter vessels were found during the excavation of the collapsed stern. This form of measure, known as the 'tappit hen', is peculiar to Scotland. The name is applied to measures comprising a small straight-sided top section, a larger straight-sided bottom section and a curved section joining them. Typically, the measure has a domed lid raised by means of an erect thumbpiece located on a hinge at the top of the handle. The largest is a Scots pint, the second a half-pint or chopin, and the third one-eighth of a pint, commonly referred to as a half-mutchkin.

119 DP00/204, **110.081**, pewter tappit hen, height to rim 250mm, top diameter 92mm, base diameter 120mm (Illus 259–60).

120 DP03/063, **132.099**, pewter tappit hen, height to rim 210mm, top diameter 73mm, base diameter 98mm (Illus 259–60).

121 DP01/131, **173.090**, pewter tappit hen, height to rim 102mm, top diameter 46mm, base diameter 55mm (Illus 259–60).

Examples of the Scots pint capacity (which approximates to three of today's imperial pints) dating from the late 18th century, are not hard to come by. However, very little Scottish pewter has survived from the 17th century, when the craft of the pewterer was at its peak. This is largely because pewter is a relatively soft metal and easily damaged, and the damaged pewter was sold back to the pewterer for recycling, much in the same way that silver was melted down (Dalgleish & Fotheringham 2008: 29–31). As a consequence, our knowledge of the early forms of the tappit-hen measure has until now been based on a single excavated example (Ingleby Wood 1904: pl 22), dating to some time after 1669, when the maker became a master-pewterer. It had never been subjected to detailed examination and several interesting features had been overlooked. However, the discovery of three tappit hens from the Duart Point wreck, together with the recognition of four very early 18th-century examples previously overlooked in private collections (Davies et al 2012), enables us for the first time to piece together the early evolution of this distinctive Scottish measure.

Throughout the 16th and 17th centuries the generic term for a vessel was a 'stoup' (*Dictionary of the Scots Language*). A stoup could be made from wood, silver or other metals, but it is probable that most were made of pewter. After the Reformation stoups are recorded as being used for carrying wine to the communion table and for water at baptism. Those used as measures were referred to by their capacities. Thus there were pint stoups, based upon the Scottish Stirling pint (1696ml or 103.35in^3, compared to the English pint of 591ml) (Connor et al 2004: 279–83, item 108), and its sub-divisions of chopin (848ml or 51.67in^3), mutchkin (424ml or 25.84in^3), half-mutchkin (212ml or 12.92in^3) and gill (106ml or 6.46in^3). In commerce they were used in the sale of liquids, from wine and ale to buttermilk and vinegar, and were to be found in the kitchens of larger houses. There were two distinct forms of these stoups. In the north-east of Scotland a pot-bellied type was made by the pewterers of Aberdeen and Inverness, and was clearly derived from similar vessels in use in the Low Countries (cf 122 below). They continued to be made well into the 18th century. There is no evidence that they were ever made in Edinburgh, which instead adopted the tappit-hen form. It is important to recognise that this name was not used until the early 18th century, and prior to that they were simply referred to as pint stoups, chopin stoups, and so on. For clarity, however, we will use the term 'tappit hen' here.

At the time of discovery the three measures on the Duart Point wreck were covered in a heavy calcareous accretion. This was painstakingly removed by Dr Theo Skinner of National Museums Scotland, exposing their previously unknown early features. The amount of information they contain is remarkable, and they have massively extended our knowledge of this vessel-type.

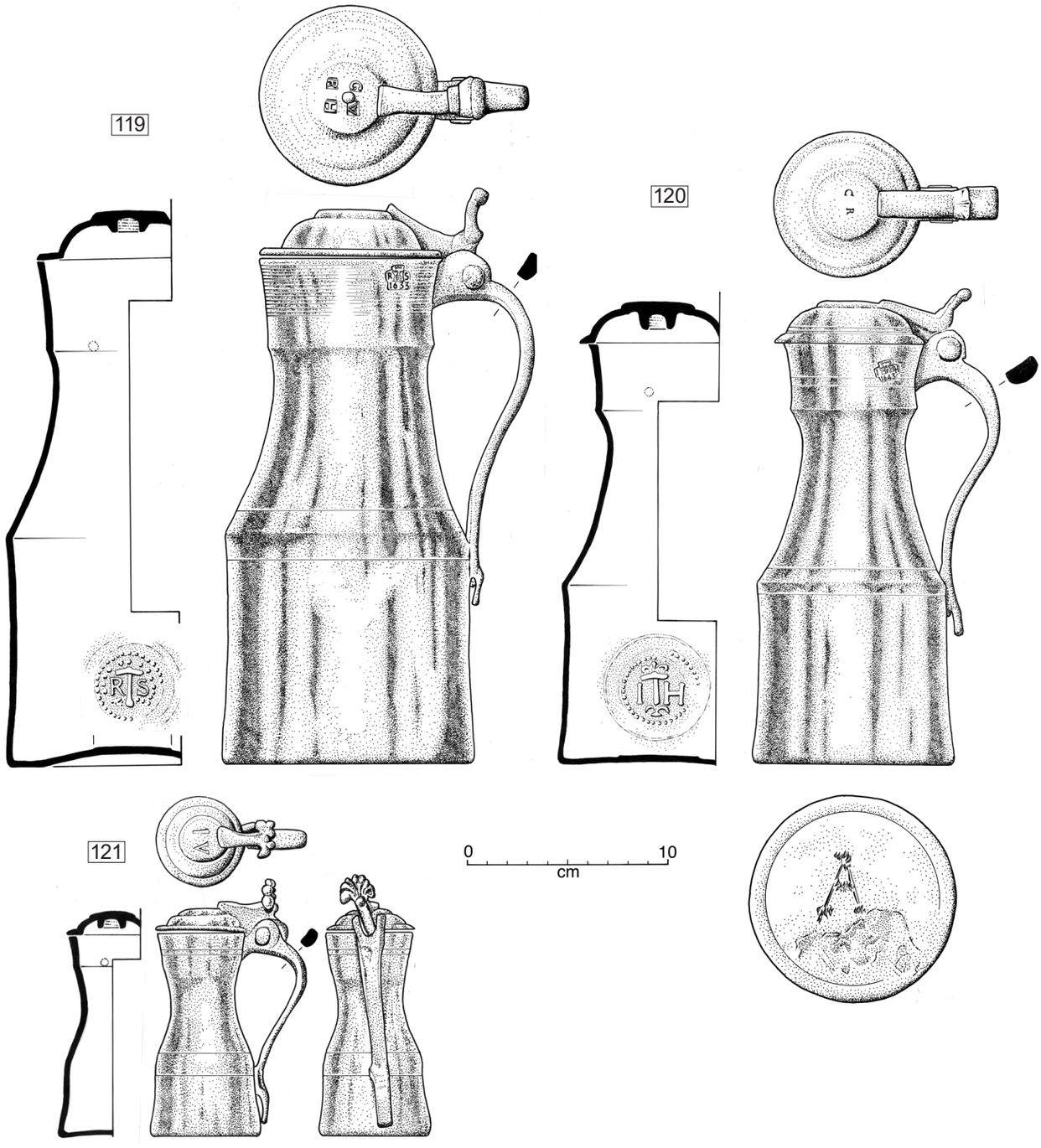

Illustration 259

Pewter tappit hens: 119 by Robert Somervell of Edinburgh, one Scots pint capacity; 120 by John Harvie of Edinburgh, one chopin capacity; 121 maker unknown, half-mutchkin capacity (DP 174070)

Illustration 260
The three tappit hens 119–21 showing their 'plouks' or certified volume marks (DP 174070)

Compared with the familiar 18th-century forms they are more heavily cast, with thicker walls. The most interesting feature is their method of construction. The bodies of 18th-century tappit hens were cast in three parts, circular in section, which were then joined together along horizontal seams running around the circumference. However, the Duart Point tappit hens, and other early examples examined during the course of their study, demonstrate a distinctively different manufacturing technique, apparently confined to this period. The body was cast in bronze moulds as two vertical halves of semi-circular section. Only four moulds would have been required – for the half-bodies, the lid, the thumbpiece, and the handle. The two halves of the body were then joined using pewter as the solder. The two vertical seams were left unfinished on the inside, where they can be seen clearly (Illus 261), but on the outside the body was finished by turning, followed by burnishing to give it a high surface polish.

In order to hold the vessel on the lathe it would have been centred on a fixed iron headstock and tailstock. The base was an integral part of the casting, and each of the two base halves had a semi-circular cut-out in the centre. When joined a circular hole was left. Wooden plugs would have been inserted at the base and top openings to centre the vessel against the headstock and tailstock. When the surface treatment was complete the base-hole was filled with a plug of pewter. Excess metal on the outside was removed using a hand-scraper tool. On the inside the pewterer used a punch to strike a circular mark onto the top of the plug. The mark was in the form of a beaded circle surrounding a hammer flanked by the maker's initials. Traces of the plug can be seen on close examination of the bases (Illus 262). The internal marks are clearly seen on the pint and chopin measures. Because of difficulties of access, the calcareous

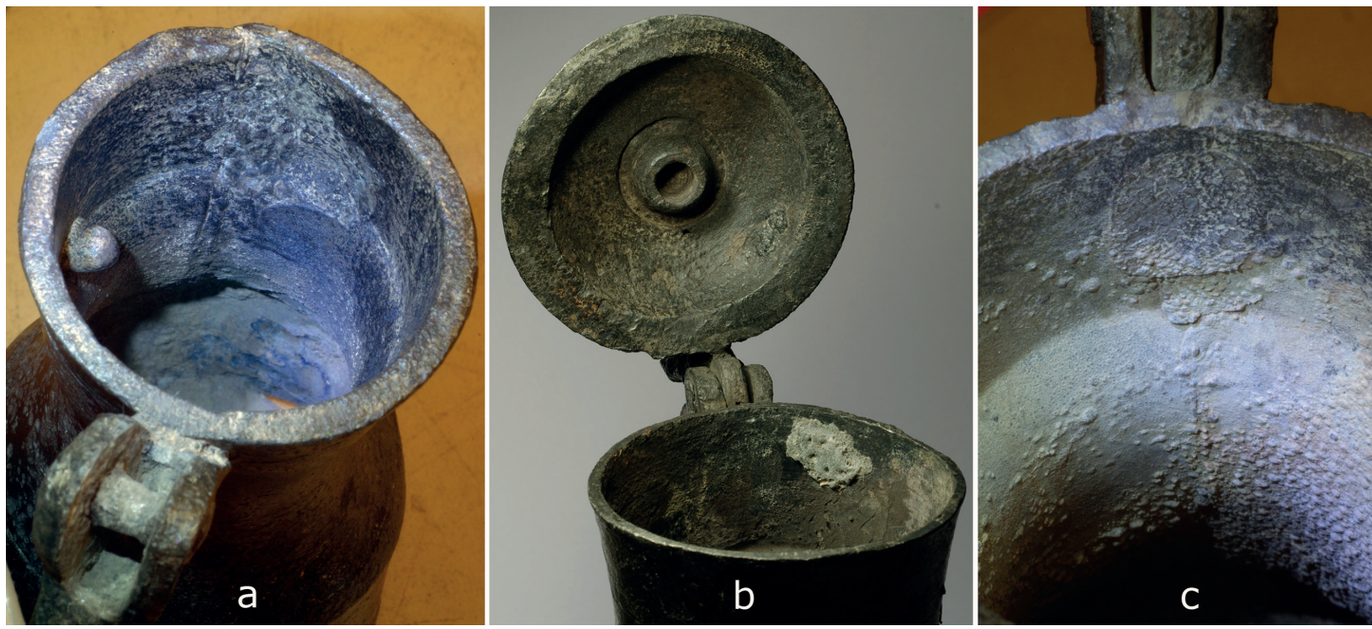

Illustration 261
(a) Internal view of the half-mutchkin measure 121, showing the plouk and vertical seam-joint; (b) open lid of the pint measure 119 showing detail of the hinge and the screw-threaded projection at the centre of the lid interior; (c) detail of the half-mutchkin interior, showing the 'cloth mark' that was left when the handle was joined to the body. Below it the soldered vertical seam joining the body's two halves is clearly visible

accretion covering the base of the half-mutchkin measure has not yet been removed, so we do not know whether it also bears a mark.

Lathes of the period were turned by hand, rotation being provided by a large iron flywheel. The woodcut (Illus 263) shows a German pewterer of 1568 finishing a flagon, while his journeyman or apprentice turns the wheel. The wooden plug in the hole in the base, which was used to hold it against the tailstock of the lathe, is clearly shown. At some time during the mid 18th century this method of manufacture ceased, and

Illustration 262
Left: base of the pint measure 119 (120mm diameter) showing evidence of the plug which filled the hole in the base where the vessel was held on the lathe during the finishing process. Right: enlarged photograph of the inner face of the plug showing the stamped hammer and initials mark of Robert Somervell

the body was subsequently cast in horizontal sections. This allowed the base to be made in one piece, doing away with the need for a hole.

On the insides of the necks of all the measures, to the left of the handle and below the rim, is a blob of pewter referred to as the 'tapoun' or, more commonly, the 'plouk' (a Scots word for pimple) (Illus 260–1). This indicates the level to which the measure was to be filled to hold its certified capacity. The requirement of a tapoun was first mentioned in legislation passed by Edinburgh Town Council on 31 January 1543 (ECA SL1/1/2). A further statute of 16 February 1555 (ECA SL1/1/2) is explicit:

> Compeared John Rynd John Weir John Watsoun and James Cranstoun pewterers and obliged themselves in time coming to make their stoups pints and chopins … of the just measure of the manner following viz. that each measure have a tapoun an inch beneath the lip and the stoup to be just measure to the tapoun.

Tappit hens continued to be made with the tapoun or plouk throughout the 18th century, and the makers of pot-bellied measures in the north-east of Scotland were also required to adopt this method of showing certified capacity.

The dome-shaped lids are very heavily cast and bear in their centres a slightly raised disc, as on all later tappit hens. In the centre on the inside they have a short tubular projection, with coarse-cut threads on the inner surface (Illus 261). It is suggested that this was used to screw the lid to a threaded iron rod in the chuck of the lathe to hold it in position for surface finishing. This feature is not seen in 18th-century examples. The thumbpieces and their attachments to the lids are all very heavily cast. These were attached with solder after the lid had been turned (Illus 259–60). On the pint and chopin measures the thumbpiece is of the erect type also seen on pot-bellied measures and 18th-century tappit hens. The half-mutchkin measure, however, has a double-sided palmette thumbpiece with six lobes. In all three measures the lid attachment is an almost horizontal trapezoidal or wedge-shaped bar reaching to the central disc of the lid. The hinge at the top of the handle is also massive and heavily cast, and is in three parts, linked by a pin, the centre section being a part of the lid (Illus 259–61). The handles of the pint and half-mutchkin measures are

Illustration 263
A 16th-century woodcut showing a pewterer finishing a flagon on a wheel-driven lathe. Note the cylindrical chuck inserted into a hole in the base (after Amman & Sachs 1973)

rectangular in cross-section, while the chopin has more of the D-section handle familiar on later forms.

The makers

The half-mutchkin measure has no maker's mark on the neck, and we are so far unable to tell whether there is a mark on the plug inside the base. The other two measures have remarkably clear maker's touchmarks, located to the left of the hinge and directly behind the position of the plouk. The positioning of the mark dates from 1554, when the statute of Edinburgh Town Council referred to above also called for 'on the outer side of the tapoun that the town's mark be thereon and maker's mark beside it' (ECA SL1/1/2).

The pint measure has the mark of Robert Somervell (Illus 262), comprising a castle with the initials RS and the date 1633. We know that Robert Somervell was the son of James Somervell, pewterer (Watson 1929) and became a burgess in 1633, becoming a freeman of the Incorporation of Hammermen of Edinburgh in the same year (ECA ED008/1/3). This was the date at which he opened his workshop as a master-pewterer, and would have struck a record of his mark, or 'touch', on the touchplate of the Incorporation of Hammermen. The set of two touchplates, each a 5mm-thick slab of pewter measuring 315mm × 110mm, now belongs to National Museums Scotland.

Of particular interest is the mark struck on the base-plug. It depicts a hammer with Robert Somervell's initials on either side. This mark, together with similar ones inside the Duart Point chopin measure and the John Abernethie chopin already in the Museum's collection, are the earliest recorded examples of this type. However, similar marks were struck on the bases of vertical-seam flagons in France and Germany in the 15th and 16th centuries. The use of a hammer in all three marks is appropriate, since a crowned hammer forms the centrepiece of the insignia of the Edinburgh Incorporation of Hammermen. Careful examination of the marks shows that the hammer, in this case, does not have a crown above it.

The chopin tappit hen has the touchmark of a castle, the initials I H, and the date 1643 (Illus 259), while the mark on the base comprises a hammer with the same initials and some scrollwork above, possibly representing a crown. The maker can be identified as John Harvie, the first of two Edinburgh pewterers of that name. He became a burgess in 1642 (Watson 1929) and a freeman pewterer in 1643. He died in 1658 (Davies 2014: 66).

Owners' initials

Pewter utensils usually bore the owner's initials, either punched or engraved. The pint measure has the punched initials G W above R H on the lid, while the chopin is stamped C R and the half mutchkin has the initials I V (or possibly I K). The pint tappit hen presumably carries the initials of a husband and wife, and that all three vessels have different groups of initials indicate that they are not parts of a set.

The Mackenzie crest

A sharply incised mark has subsequently been cut on the base of the chopin measure, presumably by an owner (Illus 264). It is recognisable as 'a mountain inflamed proper', the crest of the Mackenzie clan (McIan & Logan 1983: 128). The crest symbolises the network of beacons in the highland landscape which linked a maritime clan's castles with its galley fleets. Prior to its arrival at Duart the 1653 Cromwellian expedition

Illustration 264
Mark cut on the base of the chopin measure 120 showing the 'mountain inflamed' crest of the Mackenzie clan

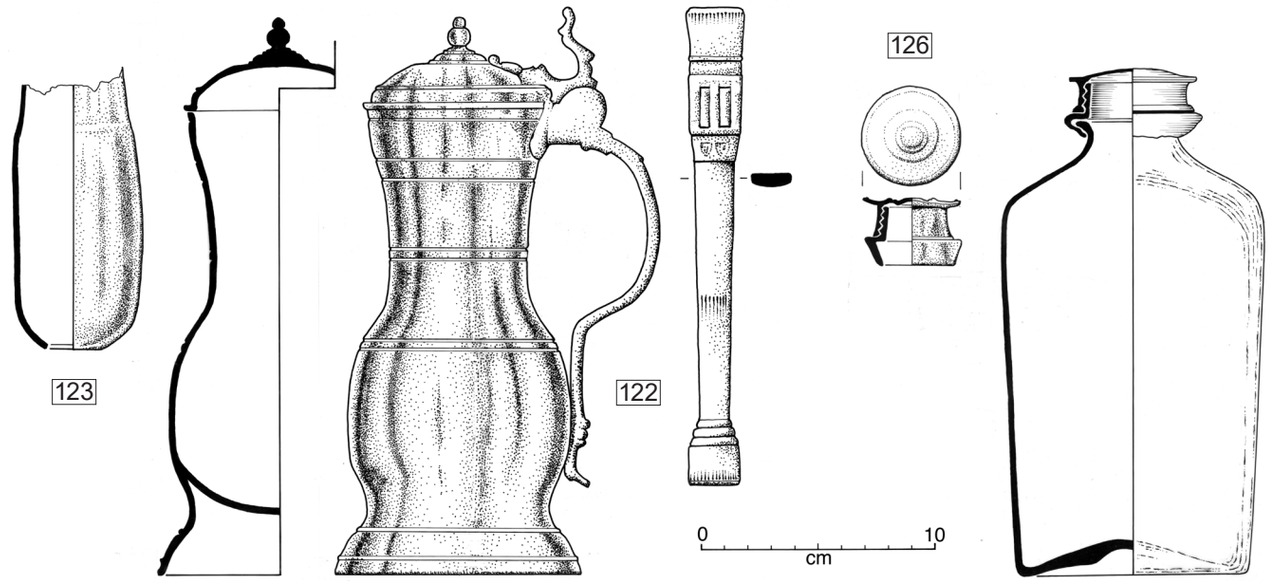

Illustration 265
Left: bulbous flagon 122, partially reconstructed. It was found in association with the tubular pewter object 123 to its left (DP 174837). Right: crimped pewter bottle-top and threaded cap 126. Far right: similar bottle-top and cap and square case-bottle (partly reconstructed) from the wreck of the Dutch East Indiaman *Kennemerland* (1664)

had seized the Mackenzie strongholds at Stornoway and Eilean Donan, and it is likely that this item was plunder from one or other of these castles, as the other two tappit hens may also have been. The historical significance of this evidence is considered in Chapter 11.

9.2 Other pewter finds

122 DP79/001a, findspot uncertain, pewter flagon, height to rim 202mm, top diameter 82mm, base diameter 105mm, recovered by John Dadd in 1979. It was crushed and damaged, and Illus 265 shows it in its conserved and restored state. The flagon is pear-shaped with a bulbous body, a wide flared base, a long neck which flares as it rises, and a domed lid with double-beaded finial. The lid is raised by an erect thumbpiece located on a hinge at the top of the handle. The heavy handle bears two incuse shields set side-by-side which are not decipherable but which are presumably maker's marks. A continental origin, perhaps Flemish, is likely.

123 DP79/001b, found inside DP79/001a, tubular pewter vessel, lacking its top, and with a hole at its base, surviving height 113mm, maximum width 54mm. Function unknown (Illus 265).

124 DP02/020, **283.083**, large pewter dish with wide rim, diameter *c* 340mm (Illus 113, 266).

125 DP99/026, **066.103**, large pewter dish with a narrower rim, diameter *c* 300mm (Illus 267). These two pewter dishes were found at opposite ends of the wreck. At the time of writing they were in conservation and not available for measured drawing.

126 DP01/132, **173.090**, pewter top for a glass case-bottle (Illus 265). The lower element was crimped to grip the rim of a glass bottle (of which no part had survived), and carried a threaded collar above it. A mating threaded lid with a flat top was still screwed in place. Such items are common on shipwrecks of this period, particularly Dutch East Indiamen. Examples have been recorded on *Batavia* (1629) (Green 1989: 173), *Lastdrager* (1653) (Sténuit 1974: 241), *Vergulde Draeck* (1656) (Green 1977: 215–17), *Kennemerland* (1664) (Price & Muckelroy 1977: 205–6), *Santo Christo de Castello* (1667) (Larn et al 1974: 77), and *de Liefde* (1711) (Bax & Martin 1974: 85). An example from *Kennemerland* is illustrated (Illus 265 right), together with the partly restored glass case-bottle to which it was attached. Square bottles thus capped, some containing traces of spirits, have been found on the *Kronan* wreck in the compartmented wooden cases which have given them their name (Johansson 1985: 81). They perhaps represent an early example of recyclable packaging, which may explain their almost complete absence from terrestrial assemblages.

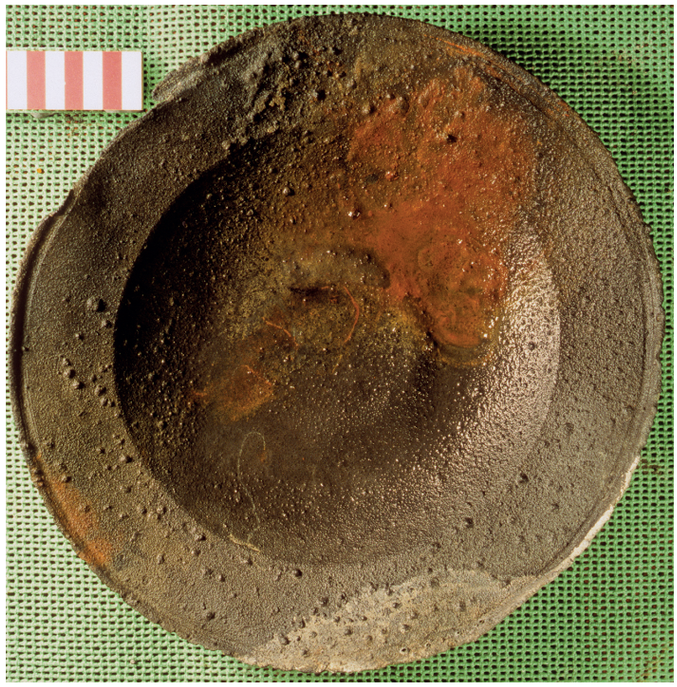

Illustration 266
Wide-rimmed pewter dish 124, diameter *c* 340mm. Scale in centimetres (DP 174178)

Illustration 267
Narrow-rimmed pewter dish 125 in situ, diameter *c* 300mm. Scale 15 centimetres (DP 173147)

9.3 Pottery

A relatively small quantity of pottery was found on the wreck. Other finds show that many domestic utensils aboard the ship were of wood, either turned or stave-built, or of pewter. But the paucity of ceramics may also reflect the fact that the ship had largely been emptied before she sank, a probability reinforced by the general dearth of other portable artefacts encountered during the excavation.

The pottery falls into two groups. The first appears to have been directly associated with the ship, and constitutes a closed and closely dated assemblage. It comprises four intact Rhenish stoneware bottles; several pieces of glazed red earthenware (GRE) including a butter-crock, a pipkin, and a chamber-pot; tin-glazed drug-pots, one of which is decorated; an unusual fluted slipware bowl which may perhaps be associated with smoking; and a hand-built Hebridean *crogan*. As is often the case with shipwreck-derived ceramics, many of the pieces are complete or nearly so, and relatively few small sherds were found. A second group of 11 sherds, none of them conjoining, was found among the gravel ballast, and the association with the ship is probably fortuitous (see Chapter 4.1).

Frechen salt-glazed stoneware

Four complete bottles of mottled salt-glazed stoneware characteristic of the Frechen potteries near Cologne (Gaimster 1997: 208–23), with their distinctive *bartmann* masks and escutcheons, were found in the after part of the wreck. Three were in or close to the area of the collapsed stern interior; the fourth, which was recovered in 1979, is believed to have been found in the same locality (John Dadd pers comm). No sherds of this fabric were noted elsewhere on the site during the excavation, although in 2007 a large body sherd was observed loose on the sea-bed by a diver participating in the historic-wreck visitor scheme operating on the site (Mark Lawrence pers comm). It was not recovered, and could not subsequently be located. Wall-thicknesses and corking space have been estimated in calculating the capacities of the bottles.

127 DP00/049, **102.087**, between collapsed timbers and adjacent to 132, stoneware bottle with external light-grey glaze with brown mottle, height 220mm, diameter 141mm (Illus 268–70). Bearded face-mask with elongated 'hour-glass' mouth. Oval escutcheon with eight petals each enclosing a stamen and a central eight-armed star within a circle. Cork in place and evidence of liquid inside. Capacity 0.995 litres.

128 DP79/003, private collection, *c* **10.11**, stoneware bottle with external dark-brown mottle against a lighter field, height 210mm, diameter 130mm, capacity 0.74 litres (Illus 268). Bearded face-mask with 'ladder' mouth.

Illustration 268
Frechen salt-glazed stoneware jars 127–30 (DP 174203)

Oval rosette escutcheon with two superimposed five-petalled flowers and a central five-pointed star within a circle.

129 DP01/117, **174.095**, in bilge deposit next to 130, stoneware bottle with even, light-brown glaze with slight mottle, height 210mm, diameter 132mm, capacity 0.89 litres (Illus 98, 268, 270). Marked forward skew of rim and neck. Bearded face-mask with 'ladder' mouth. The escutcheon is similar to 128 but oriented in the opposite direction.

130 DP01/120 and 121, **174.095**, in bilge deposit next to 129, stoneware bottle broken in two conjoining pieces, and missing the handle, height 240mm, diameter 152mm, capacity 1.38 litres (Illus 98, 268, 270). Cork still in place. Finely mottled light-brown glaze on a lighter ground. There is a pronounced depression on the shoulder, perhaps due to pressure from an adjacent vessel in the kiln. Bearded face-mask with narrow serrated mouth. Circular rosette escutcheon with eight-petalled outer flower and five-petalled inner, and central boss of

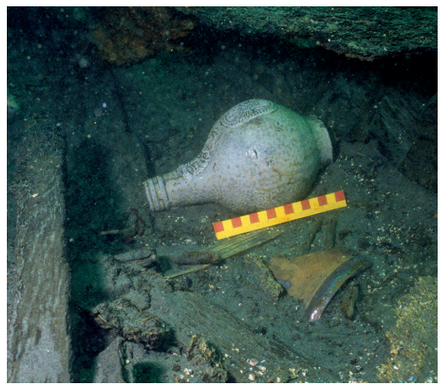

Illustration 269
Intact Frechen stoneware jar 127 in situ during excavation. Scale 15 centimetres. In front of the scale is a rim-sherd 132 from a glazed red earthenware jar (DP 174211)

Illustration 270
Three of the Frechen salt-glazed stoneware jars 130, 127, 129

indeterminate design. The escutcheon is much less crisp than the other examples, and was probably formed in a worn mould.

These bottles are characteristic of the major production centre at Frechen, a small town some 10km south-west of Cologne where nearly 50 kilns and associated waster-dumps have been identified (Gaimster 1997: 208). They were evidently mass-produced as containers for a variety of products, and are widely distributed throughout north-west Europe. A nearly intact example was found on the 17th-century wreck off Mingary Castle, Ardnamurchan (Phil Richards pers comm). Several important groups have been found on Dutch East-India Company shipwrecks, notably *Batavia* (1627) (Green 1989), *Lastdrager* (1652) (Sténuit 1974), *Vergulde Draeck* (1656) (Green 1977), and *Kennemerland* (1664) (Foster & Higgs 1973: 297; author's unpublished archive). Although the wreck-groups have firm *termini post quem* fixed by the dates of loss, many of the various forms and decorative moulds show little change from *c* 1625 to *c* 1675. Such bottles were clearly re-used for as long as they remained unbroken and many may have been of considerable age when lost.

The apparently random variation in capacities shown by this small sample gives no indication of what measures, if any, may have been intended, and this difficulty appears to extend to larger collections (Steane 1987). The closest chronological parallel to the Duart Point group is the large collection recovered from the Dutch East Indiaman *Vergulde Draeck*, lost off Western Australia in 1656 (Green 1977: 110–41). However the two groups are distinctively different in character. The *Vergulde Draeck* bottles, though they too show a random variation of size, are significantly larger than the Duart Point group, the 16 examples tested for volume ranging from 1.24 to 3.25 litres, with eight larger than 2.1 litres, in contrast to the Duart group's range of 0.74 to 1.38 litres.

Perhaps more surprising is the much squatter proportions of the *Vergulde Draeck* bottles compared with the Duart Point ones. It has been suggested that this is a dating attribute (Thwaite 1973; Hurst et al 1986: 220–1; Hildyard 1989), the squat form being earlier than the elongated one, but in view of the contemporaneity of these two groups the dating relevance of this criterion may be questioned. Moreover the *Kennemerland* group of 1664 includes both types (Foster & Higgs 1973: 297, figs 6–8). The difference in shape is perhaps due more to function and usage than to date, and it may be suggested that the larger and more stable squat form, with its broad base and low centre of gravity, was a specialised type intended for shipboard use. Though the squat form is not unknown in terrestrial contexts it is far less common, as

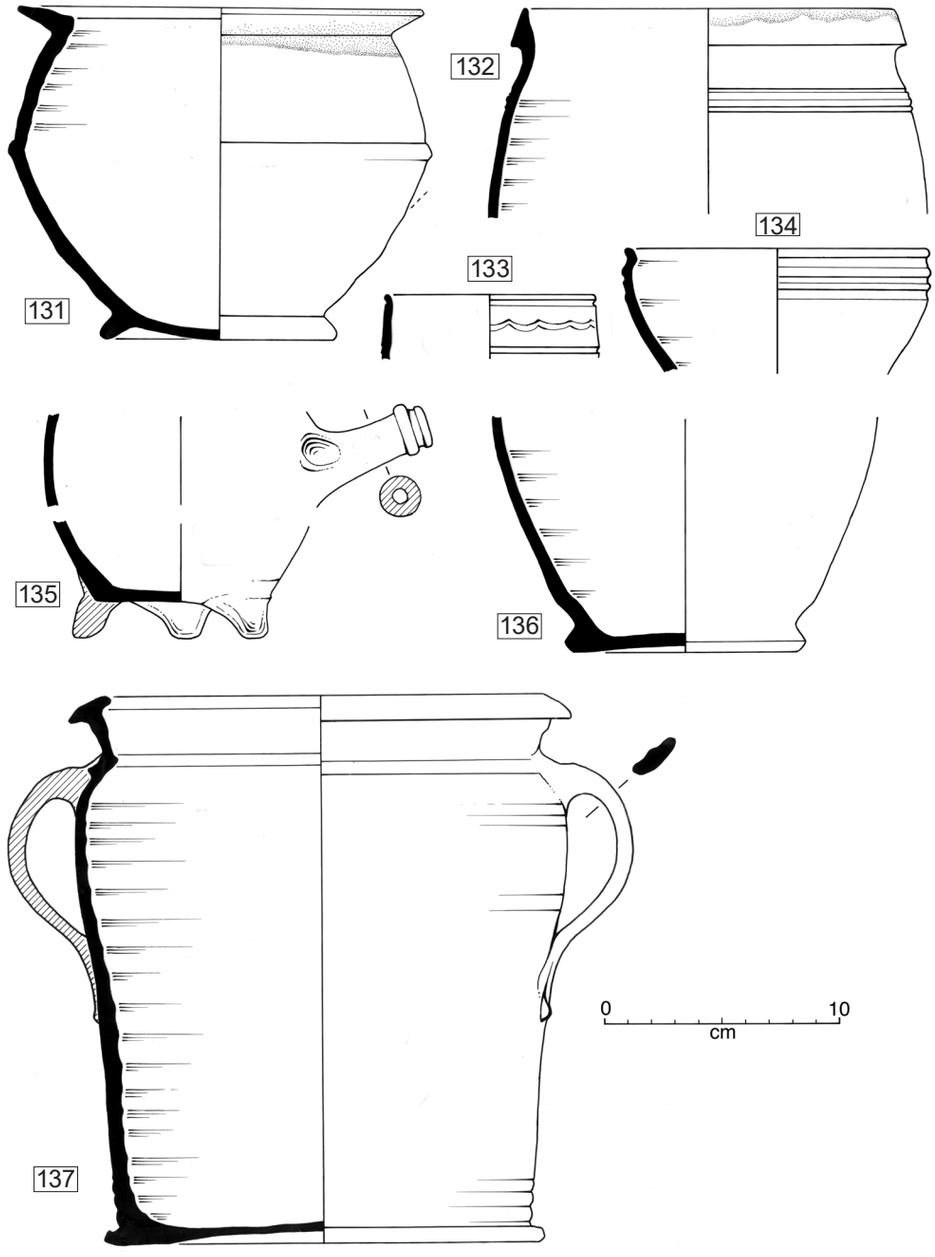

Illustration 271
Glazed red earthenwares (GRE) 131–7 (DP174863)

shown for example by the large groups from Basing House, Hampshire (Moorhouse 1970: 78–80) and Norwich (Jennings 1981: 119–23). That the Duart Point bottles are all of the elongated 'landlubberly' shape need occasion no surprise, since the Cromwellian supply bases at Newcastle and Leith were geared primarily to the requirements of land forces operating in Scotland.

Glazed red earthenware (GRE)

This red sandy earthenware, with small white and off-white gritty inclusions and a clear glaze which accentuates the deep hue of the fabric beneath, is of a generic type produced in many northern Europe centres from the 16th to 18th centuries, and there is little prospect of determining the precise origins of

Illustration 272
A selection of glazed red earthenware forms. Scale 10 centimetres (DP 174208)

the examples found at Duart Point. Important collections of similar ware have been identified at Norwich (Jennings 1981: 157–85), where it dominates the assemblage, and at Beeston in Cheshire (Harrington 2004: 116). The latter, which derives from a Civil War context, contains forms with parallels in the Duart group. A rather later group (late 17th/early 18th centuries), also with military associations, was recovered during excavations at Tilbury Fort, Essex (Meddens 2000).

Illustration 273
Rim fragment of a green-glazed vessel which has broken and fused in the kiln with the rim of the chamber-pot 131

131 DP02/021, **104.087**, in the collapsed stern deposit, GRE chamber-pot, reconstructed from several sherds, with scar from a single handle, height 141mm, max diameter 173mm, capacity 1.9 litres (Illus 271–3). Glazed internally and around the rim. Adhering to the inner edge of the chamber-pot is a broken rim-sherd from a green-glazed vessel in off-white fabric, which had evidently been stacked upside-down and above it in the kiln. The latter piece presumably broke during firing and the molten glazes on both vessels had fused.

Several GRE chamber-pots are recorded in Norwich (Jennings 1981: 175–6). The small diameter of this example would make it unsuitable for seated use, and it probably served mainly as a urinal. A parallel for the form is provided by a Westerwald stoneware chamber-pot from Cologne (Hurst et al 1986: 224 no 339) which is dated 1632 on its applied escutcheon. That this form continued through the century is indicated by an example from Hull dated 1672 (Bartlett 1970: 21, fig 29). A group of redware chamber-pots was found in a pit-deposit containing material from *c* 1650 to *c* 1714 at Guildford, Surrey, and these provide good parallels for the Duart Point example (Fryer & Shelley 1997: 168, figs 24–5 nos 108–11). Others have been identified at Tilbury, with diameters of between 170mm and 220mm (Meddens 2000: 45–7, fig. 34 nos 15, 17), placing the Duart Point specimen at the lower end of this range.

132 DP00/048, **105.087**, found in conjunction with Frechen bottle 127 within collapsed aft structure, rim sherd of GRE jar, reconstructed rim diameter 168mm (Illus 271). Glazed internally and splashed over rim. Similar in form to examples from Norwich (Jennings 1981: 174).

133 DP00/088, **114.077**, rim sherd of a small GRE straight-sided jar with incised wavy decoration, reconstructed diameter 90mm (Illus 271).

134 DP00/006, **099.094**, in sand beside starboard mid-ships structure, GRE bowl sherd, pronounced ribbing around rim. Reconstructed rim diameter 130mm (Illus 271).

135 DP00/117 (lug), 145 (base with 2 feet), 169 (handle) **105.084**, and 178 (foot), **103.084**, in the collapsed aft deposit, GRE pipkin (Illus 271–2). Basal sherd with tripod legs, and matching but not conjoining sherd with

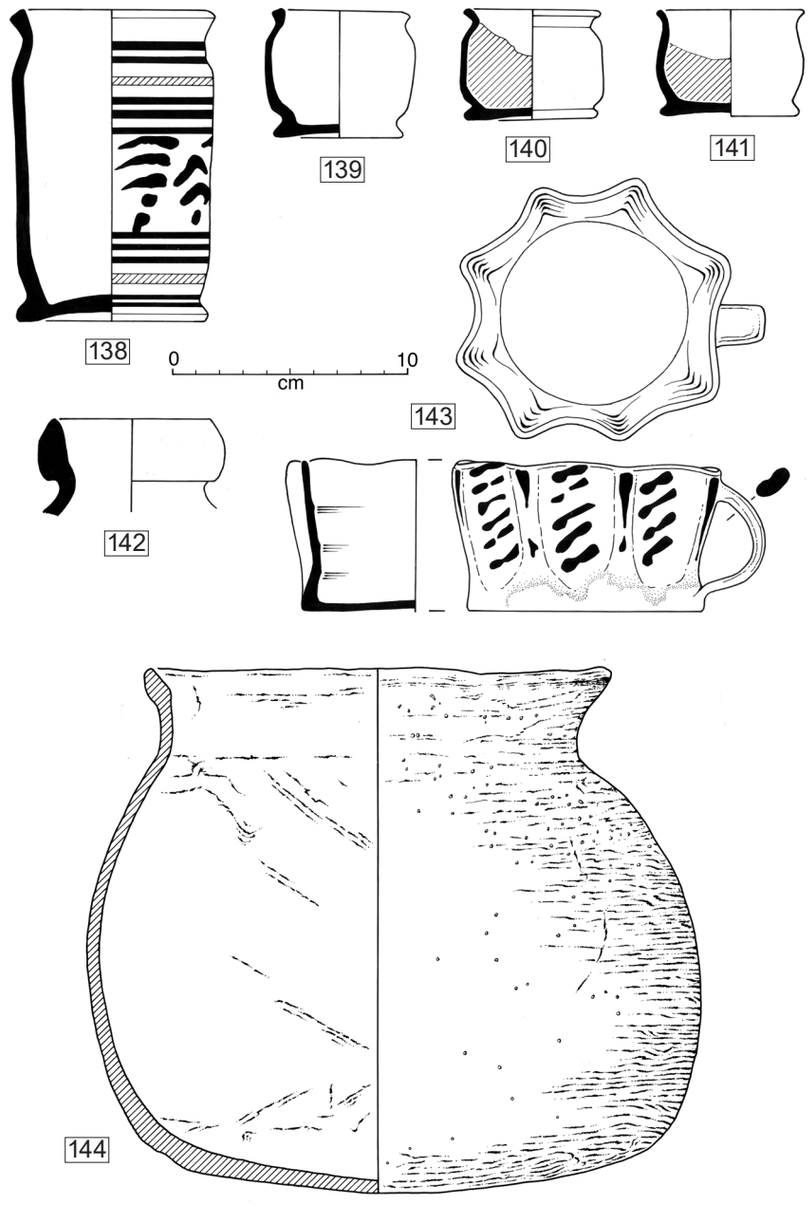

Illustration 274
Miscellaneous wares 138–44 (DP 174860)

Illustration 275
Albarello 140 showing grease-based contents, with its last user's finger scoop-mark in the top (DP 174214)

hollow thrown handle thumbed onto the body on either side. Internal glaze with external splashes.

136 DP00/127, **106.083**, GRE basal sherd of a flat-bottomed flared jar, glazed internally, base diameter 105mm (Illus 271). The form is paralleled at Norwich (Jennings 1981: 177, esp no 1277), and at Tilbury (Meddens 2000: 44–5).

137 DP03/007 and 013, **282.103**, from among collapsed galley debris in the port bow quarter, GRE butter-crock, glazed internally and externally, height 233mm, rim diameter 214mm, base diameter 188mm (Illus 271–2). This largely intact flat-bottomed two-handled vessel with near-vertical sides contained the remains of a yellowish fatty substance which appears to have been butter. The flanged rim would allow a cloth cover to be secured with cord. The estimated capacity if filled to the brim is 5.18 litres. Allowing butter a specific mass of 0.91 this would constitute a weight of 4.72kg, or 10.4lbs avoidupois (of 454g). This does not appear to be a standard unit of butter measurement. Similar jars occur in 17th/18th century contexts at Tilbury (Meddens 2000: 44–6).

Other wares

Tin-glazed albarelli, or ointment-pots, are ubiquitous at this period and come mainly from England or Holland, though the form derives from Italian, French, and Iberian prototypes.

138 DP00/128, **108.084**, Anglo-Dutch albarello in fawn fabric with heavily crazed ground glaze now stained greyish-blue but probably originally white. Light-purple and blue decoration. Height 133mm, rim diameter 87mm, capacity 0.44 litres (Illus 274). Its form and decoration are paralleled by a find in Norwich from a context of *c* 1625–50 (Jennings 1981: 206–7 no1474).

139 DP00/103, **091.096**, among collapsed panelling and close to the minion drake gun-carriage 83, tin-glazed albarello in light-buff fabric, height 56mm, rim diameter 59mm, capacity 0.09 litres (Illus 274).

140 DP00/185, **110.080**, concreted to timber near lower stern structure, plain tin-glazed albarello in light-buff fabric, height 47mm, rim diameter 57mm, capacity 0.08 litres (Illus 274–5). Partly filled with grease-based compound showing the mark of a finger-scoop on its surface.

141 DP99/096, **089.098**, plain tin-glazed albarello in light-buff fabric, height 46mm, rim diameter 63mm (Illus 274, 276).

Illustration 276
Albarello 141 in situ at **089.098**. Scale 15 centimetres (DP 174205)

142 DP01/017a and b, **174.095**, DP01/095, **218.085**, among gravel filling trench in the clay lining of the lower hull, rim and two body-sherds of Sevillian olive-jar in pinkish-buff fabric with gritty inclusions and a creamy external slip, rim diameter 80mm (Illus 166, 274). The rim-profile and fabric identify it as an olive jar or *botija*, a form made in industrial quantities in and around Seville between the 16th and 19th centuries. It was primarily used as a shipboard container for olive products and wine for trans-Atlantic trade, but was common throughout Atlantic Europe and beyond (Marken 1991: 68–193; Martin 1979). This sherd derives from the ballast gravel and is probably not associated with on-board use (see Chapter 6.1).

143 DP02/013, **102.074**, among organic deposits adjacent to the lower stern structure, complete flat-bottomed slipware cup in whitish fabric with eight lobes and a single strap handle, covered inside and out (but not on the bottom) with a light brownish-yellow ground glaze upon which short dashes of dark-brown slip have been trailed. The cup when found was in four pieces, cracked but not displaced, indicating that it had been intact when deposited but subsequently fractured by pressure or shock (Illus 274, 277 and 282).

Illustration 277
Slipware lobed cup 143 in situ during excavation. Scale in centimetres (DP 174204)

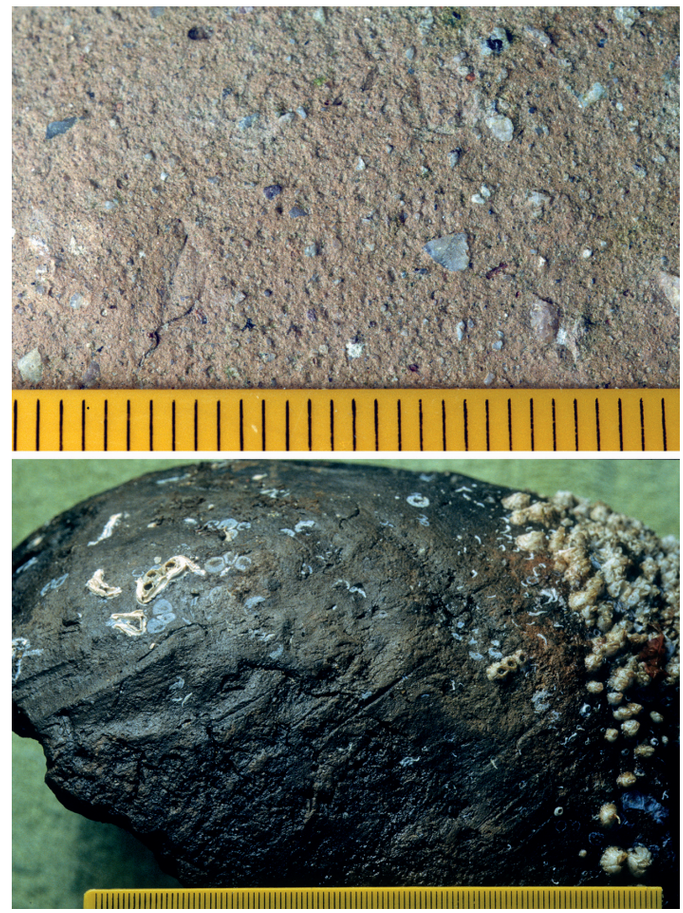

Illustration 278
Top: exterior fabric of *crogan* 144 showing characteristic micaceous inclusions (DP 174219). Bottom: detail of *crogan* base showing grass-impressions (DP 174218). The blackened surface indicates heating on an open fire. Scales in millimetres.

Though Staffordshire became synonymous with slipware in the later 17th century, the earliest production-centres were in the south of England, kiln-sites having been found at Harlow in Essex (Newton 1960: 358–62), mainly serving the London market from *c* 1615, though it was exported to East Anglia and even North America (Jennings 1981: 97). The technology had been developed in Holland during the later 16th century (Hurst et al 1986: 154). The slipware bowl found at Duart is typically English in fabric and glaze, though of unusual form. Such a vessel would be inappropriate for food and difficult to drink from, and its close proximity to two intact clay pipes suggest that it may have been a smoking accessory (Illus 282). A rather similar vessel was found in a context of *c* 1630–60 in Portsmouth (Fox & Barton 1986: 117 fig 52 no 3).

144 DP93/004, hand-built *crogan* with bag-shaped belly and everted rim. About half the vessel has survived, broken longitudinally so that its full profile is preserved, height 226mm, rim-diameter 200mm (Illus 127, 274 and 278). The fabric is a buff-coloured clay with numerous gritty inclusions. It was discovered *c* 15m south-east (down-tide) of the main grid, whither it had been dragged by an attached piece of kelp. An assumption has been made that it is associated with the wreck, and that it had become dislocated from the main wreck formation during the exposure episode of 1991–2.

Crogain derive from a vernacular tradition with roots in the Hebridean Iron Age, which continued well into the 20th century (Cheape 1988). They are hand-built vessels baked over an open fire and Martin Martin, writing *c* 1695, noted that they were always made by women (Withers & Munro 1999: 13). Dr John Walker, who visited the Hebrides in 1764, describes their manufacture in some detail (McKay 1980: 171). The Duart example may perhaps have been acquired as a container for local produce, probably butter.

Marks on the exterior and base indicate that it had been placed on straw or grass while still in a plastic state (Illus 278). The blackened interior surface is probably due to the vessel being filled with milk before firing, a traditional technique used to render the vessel impervious to liquids (McKay 1980: 171). Its capacity to the brim (assuming symmetry of the left-hand side, as drawn) works out at 7 litres, which by applying a specific-mass factor of 0.91 for butter indicates that it would hold about 14lbs avoidupois (1 stone, the normal unit in which butter was accounted). As suggested for the GRE butter-crock 137, the *crogan* would probably have been sealed with a cloth cover tied below its everted rim.

9.4 Clay pipes

By 1653 smoking was widespread throughout Britain, and nowhere more than among soldiers and sailors on active service. Thomas Sherman, the government storekeeper on Lewis, reported that he had lost 'beer, tobacco, pipes, strong water [whisky] and sugar' in the Duart wreckings, and it may have been concern for the troops' flagging morale as much as for private gain that motivated his urgent request for £10-worth of tobacco and pipes from the central stores at Leith (HMC Leyborne-Popham, 107–8).

Two complete pipes, 12 bowls, and two stems incorporating marks have been recovered from the wreck (Illus 280–81). Fifty-nine stem fragments without diagnostic features were also recorded. The group as a whole is remarkably cohesive. Five bowls bear heel-marks displaying the initials NW within a heart (Illus 279–81). The name of this maker is unknown but finds of his products have been, with the exceptions discussed below, confined to the Newcastle area, and it is clear that this is where he was based. Edwards (1988: 3) has argued convincingly that pipemaking on Tyneside began in the 1630s, a conclusion based on his own documentary research and on the investigation of a large group of pipes recovered from an excavation at Blackgate in Newcastle (Edwards 1986). This dating is two decades earlier than that proposed by Parsons for the origins of the industry in the north-east of England in his preliminary typology for the area (1964: 234).

The available material has been synthesised by Edwards (1988: 9–20) to create a revised typology for Tyneside pipes, the reliability of which is strongly endorsed by an analysis of the Duart Point material. Most of the pipes from the Duart Point wreck fall comfortably into Edwards's typology, though it should be stressed that some of the unmarked forms, particularly the earlier ones, can be matched elsewhere and may be from sources other than Newcastle. None appears to come from Scotland.

Parts of clay pipes were found throughout the vessel, but mainly in the area of the collapsed stern.

145 DP00/147, complete pipe with flat heel bearing within a heart NW in large letters above a simple fleur-de-lys, length 25cm (Illus 279, 280). Tyneside bowl-form 3a, NW stamp-type A2.

146 DP02/007, complete pipe similar to 145 (Illus 279, 280). Tyneside bowl-form 3a, NW stamp-type A2.

147 DP01/071b, bowl similar to 145 and 146 (Illus 279, 280). Tyneside bowl-form 3a, NW stamp-type A2.

148 DP01/059, bowl similar to three above, NW stamp with 2 dots above, 4 below (Illus 279, 280). Tyneside bowl-form 3a; NW stamp-type A4.

149 DP99/115, 105mm length of stem incorporating an NW-marked flat heel (Illus 279, 280). NW stamp-type A2.

150 DP00/072, bowl with clear but indeterminate heel-mark, perhaps a harp (Illus 279, 280). Tyneside bowl-form 2a.

151 DP01/060a, 40mm length of stem incorporating a flat unmarked heel with monogrammed initials on one side, perhaps RL (Illus 279, 280). No identified parallels.

152 DP01/037, bowl with unmarked flat heel (Illus 281). Tyneside bowl-form 3a.

153 DP01/046, bowl with unmarked flat heel (Illus 281). Tyneside bowl-form 3a.

154 DP93/001a, bowl with part of stem, 115mm long, unmarked flat heel (Illus 281). Tyneside bowl-form 3a.

155 DP93/001b. Spurred bowl with unmarked flat heel and 130mm of stem (Illus 281). Tyneside bowl-form 5.

156 DP00/116a, bowl with unmarked flat heel (Illus 281). Tyneside bowl-form 3a.

157 DP92/281, bowl with unmarked flat heel (Illus 281). Tyneside bowl-form 2a.

158 DP03/009, bowl with unmarked flat heel (Illus 281). Tyneside bowl-form 3b.

159 DP01/096, bowl with unmarked flat heel and 70mm of stem (Illus 281). Tyneside bowl-form 3a.

160 DP00/148, bowl with unmarked flat heel and 60mm of stem (Illus 281). Tyneside bowl-form 2a.

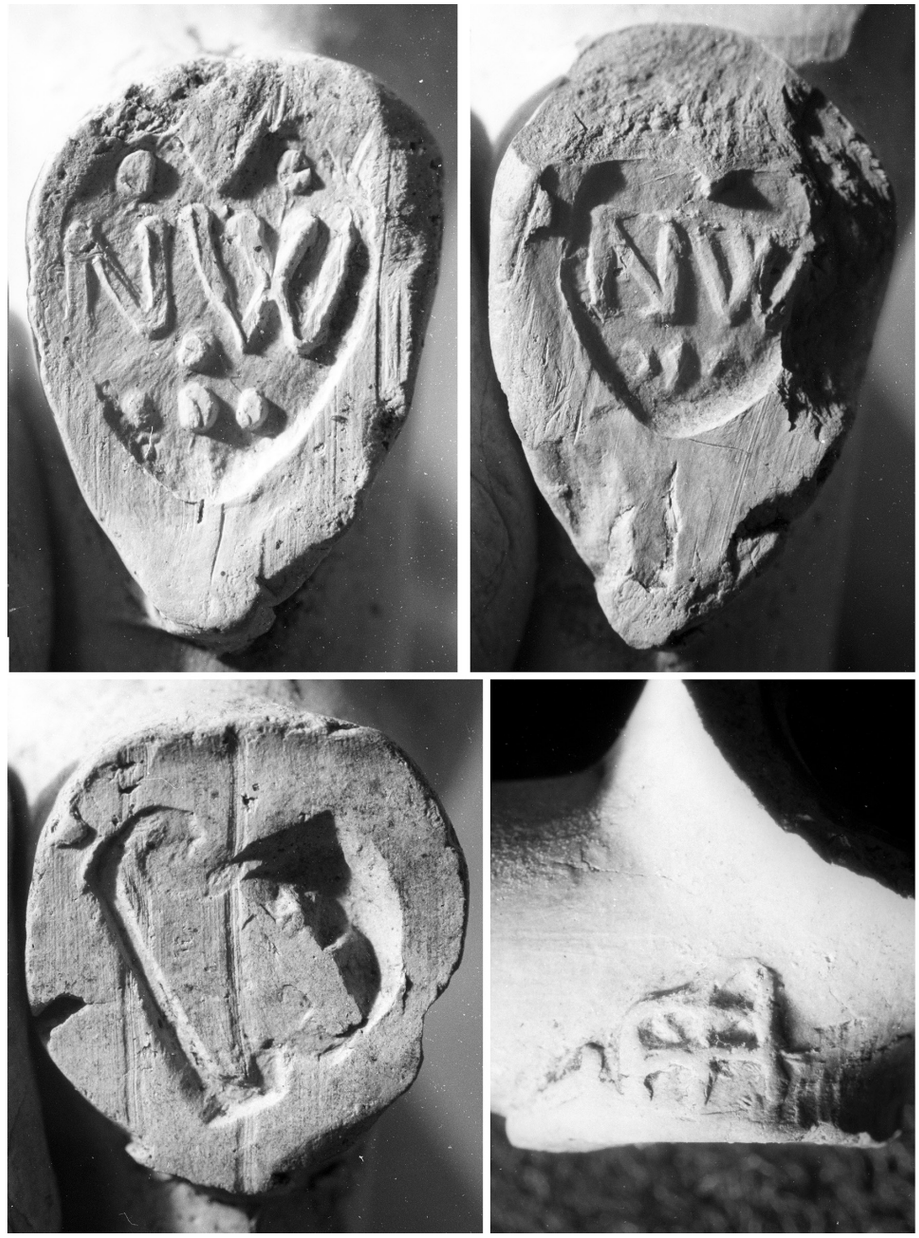

Illustration 279
Top: NW heel-marks: type 3a with pellets; type 3b with fleur-de-lys. Bottom: two other marked pipes. Left: harp; right: unidentified mark on side of heel (DP 173203, DP 173204, DP 173205, DP 173428)

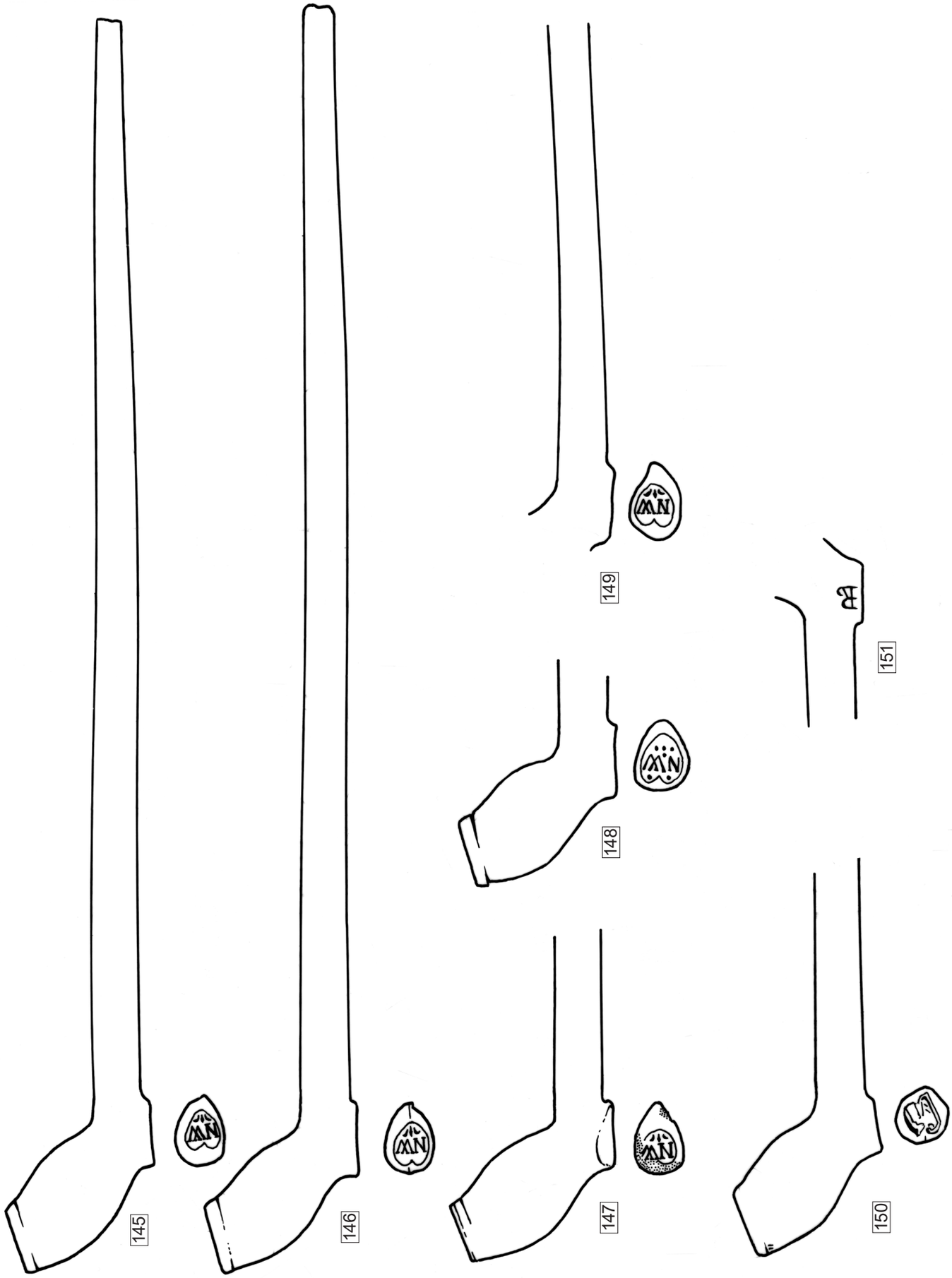

Illustration 280
Marked clay pipes 145–51. Scale 1:1

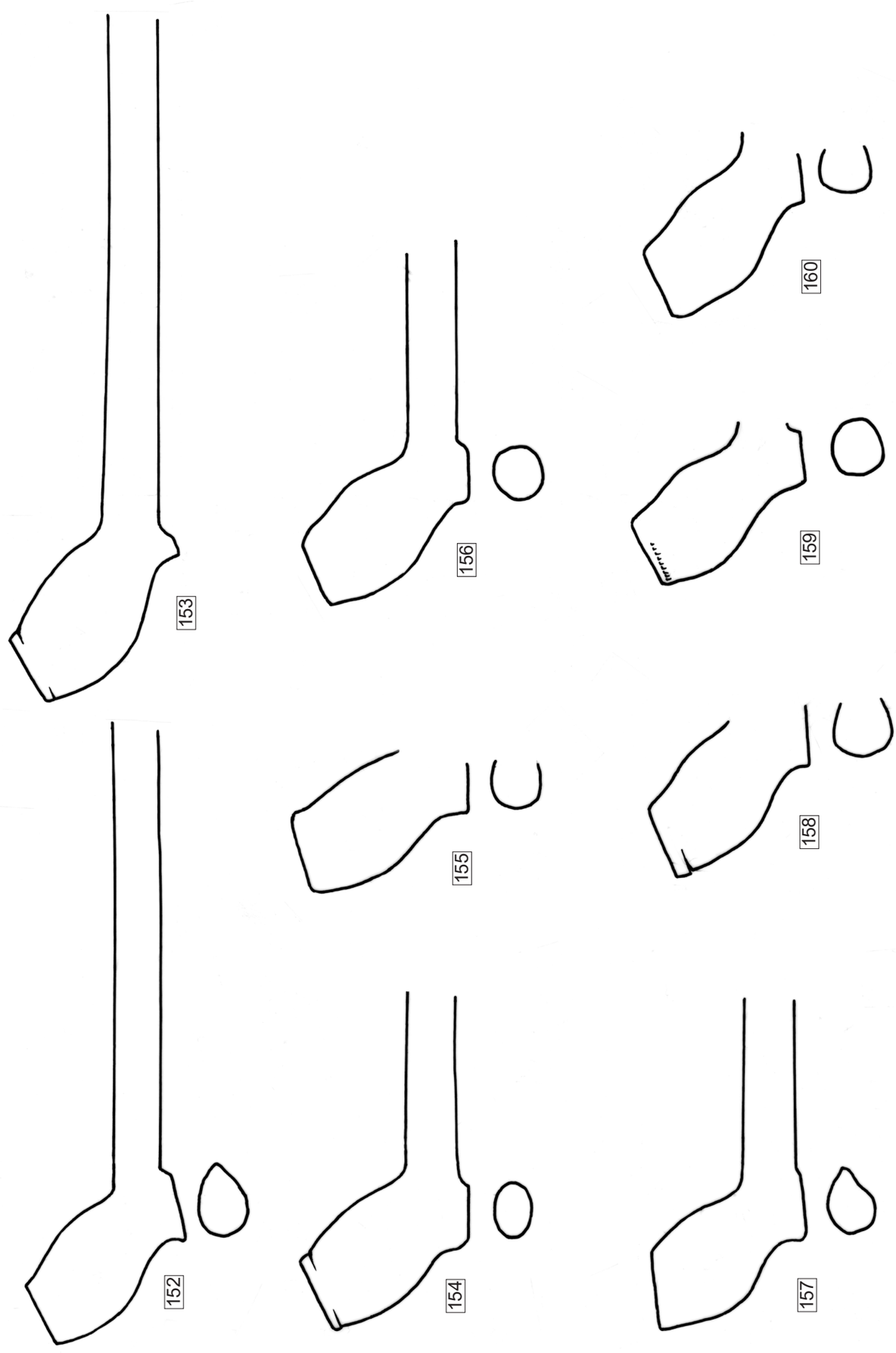

Illustration 281
Unmarked clay pipes 152–60. Scale 1:1

Typological dates

By comparing these bowl-forms with Edwards's Tyneside typology the following date-brackets are obtained:

2a,	150 157 160	*c* 1645–60
3a	145–8 152–4 156 159	*c* 1650–75
3b	158	*c* 1650–75
5	155	*c* 1630–45

This pattern is compatible with the pipe group's archaeologically secure *terminus ante quem* of 1653. The only bowl-form which does not straddle this date on typological criteria is the single Type 5, an early Tyneside form which accounts for only 7% of the sample and might therefore be explained as old stock. Type 2a falls neatly across the median date of 1653 and, with three bowls, represents 21.5% of the sample. It is the later date bracket, however, of the 3a and 3b forms that dominates the collection with 9 bowls, or 71.5%. Though the argument is in part circular, this concordance helps to confirm the validity of the Tyneside typology (at least for the period under discussion), and provides independent evidence for dating the wreck. That the 3a/3b forms appear to have been recent introductions in 1653 is significant, since Newcastle was the main Cromwellian base for operations in Scotland during the early 1650s, and it is reasonable to suppose that the city's pipemakers stepped up production to meet increasing demand, perhaps introducing new forms in the process. The absence of Scottish pipes in the group is notable, for there was a vigorous industry centred on Edinburgh by the mid 17th century (Gallagher 1987) and Leith was a supply base for Cromwellian operations in the north and west. We may suppose that pipes held by the commissariat stores at Leith had been shipped from Newcastle which, it seems, held a monopoly to supply Cromwell's forces with their smoking requirements while on active service in the North.

Such a mechanism explains the rare appearance of NW-marked pipes in contexts outwith the Newcastle area. One is known from St Andrews (Davey 1997: 95–7) while another has been recorded at Kirkwall in Orkney (Oswald 1975: 44–5). Both places were occupied by English forces during the invasion of Scotland in the early 1650s (Dow 1979: 14, 236) and, together with the five examples now recovered from the Duart Point wreck, it is not unreasonable to see these pipes as markers of Cromwellian troop-movements at the time. Peter Davey (pers comm) has informed me of another occurrence of the mark in Belfast.

Illustration 282
Pipes in fluted slipware bowl 143 (DP 174228)

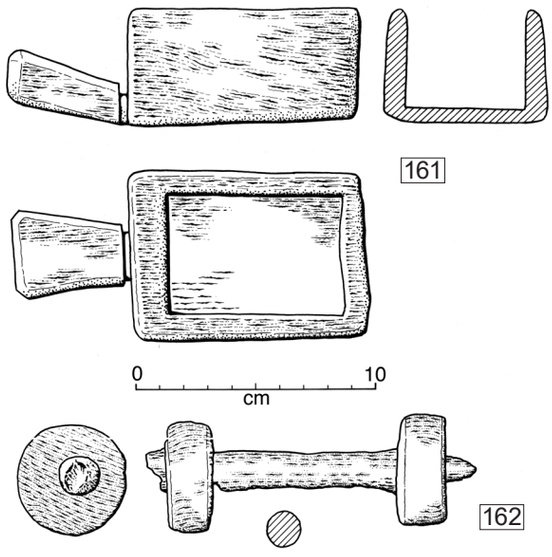

Illustration 283
Wooden oil-box 161 and bobbin 162 (DP 174807)

The two intact NW-marked pipes were found near the stern, in close association with a lobed slipware cup 143. The latter seems inappropriate as a utensil for eating or drinking, and its possible function as a smoking accessory is suggested in Illus 282.

This small collection of pipes demonstrates the capacity of a dated shipwreck assemblage to test and refine typological sequences from a wholly objective standpoint and, from the other end of the spectrum, to provide evidence relevant to determining the date and associations of the ship in which it was contained. As argued elsewhere (Chapter 2.2) there is no doubt that the Duart Point ship was a victim of the well-documented Cromwellian episode in 1653, so its date is absolutely secure. The association is further pointed up archaeologically by the five marked pipes from Cromwell's supply base at Newcastle. This conjunction may in future inform the interpretation of sites with similar associations of purpose and date, especially in Scotland and Ireland.

9.5 Tools and utensils

Miscellaneous implements and fittings

161 DP01/119, **176.093**, monozylous rectangular wooden box with integral flared handle (Illus 283). Its internal measurement of 70mm × 50mm × 40mm give it a capacity of 0.14litres. The saw-kerf isolating the handle has been cut too deep on three sides, an error which would have rendered it prone to breakage. It may be identified as a caulker's oil-box, described by Horsley (1978: fig 9; 126) as 'a simple oil box, cut from solid wood, and kept topped up with linseed oil. The caulking-irons were dipped in the oil to prevent them sticking in the seams. Linseed and pitch are compatible, and the oil does not prevent the pitch sticking'.

162 DP00/182, **107.082**, part of a multiple-collared wooden bobbin with two 45mm-diameter collars set 76mm apart on a 14mm-diameter shaft (Illus 283). A continuation of the shaft at either end suggests that at least two further shaft/collar elements had been present. The arrangement is similar to the four bobbins recorded on *Mary Rose* (Every 2005: 327–8), although the stoppered cavity through the centre of the shaft for holding pins or needles, noted on the *Mary Rose* examples, was not present in the Duart Point bobbin. It is likely that this object held thread or twine associated with rigging and sail-maintenance.

163 DP00/172, **107.077**, dowel or shaft 28mm in diameter and 265mm long, broken at both ends, whipped along 225mm of its length with 44 turns of 5mm-diameter hemp cord (Illus 284). Marks show that whipping had continued in both directions.

164 DP92/DG02, findspot uncertain, block hand-brush of oak (*Quercus* sp), 205mm × 22mm × 18mm with 60 8mm bristle-holes arranged in five rows of 12 (Illus 284). The centre hole of the top row had been drilled through, presumably for hanging the brush. No traces of bristles survive. Similar brushes have been recovered from the *Mary Rose* and *Invincible* wrecks (McKewan 2005: 354–5; Bingeman 2010: 166–8).

165 DP03/064, **124.092**, wooden turnbutton with central hole, 180mm × 55mm × 11mm (Illus 284).

166 DP99/030, **075.096**, wooden peg, 125mm × 35mm, with octagonal head and tapering square-sectioned shaft terminating in a shallow point (Illus 284).

167 DP03/061, **093.083**, wooden peg, 120mm × 20mm, rounded section, pointed at bottom and notched towards the top (Illus 284).

168 DP92/???, findspot uncertain, wooden peg, 120mm × 30mm × 10mm, notched at top and broken at lower end, sub-rectangular cross-section (Illus 284).

169 DP03/041, **098.073**, wooden peg, 75mm × 24mm diameter (Illus 284).

170 DP00/087, **121.069**, wooden wedge, 130mm × 35mm × 29mm with chamfered top edges and central 8mm hole (Illus 284) (cf wedge from *Mary Rose*, McKewan 2005: 350).

171 DP00/198, **098.098**, wooden object of uncertain function, 480mm long (Illus 285).

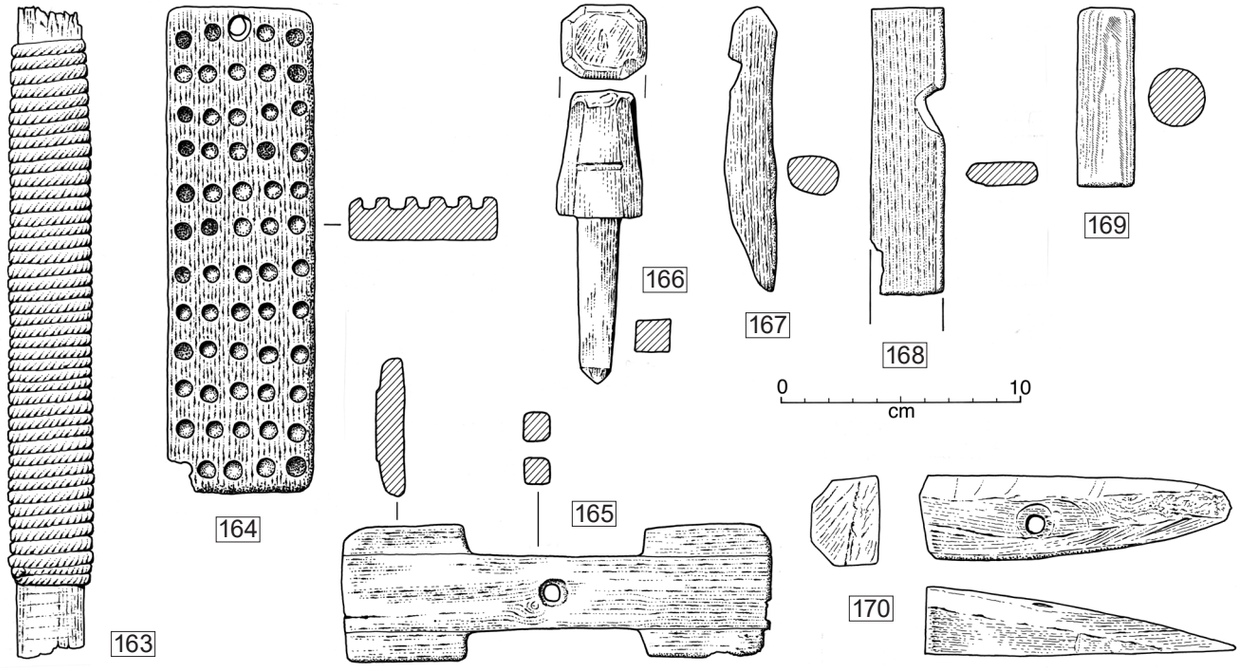

Illustration 284
Assorted wooden implements and fittings 163–70

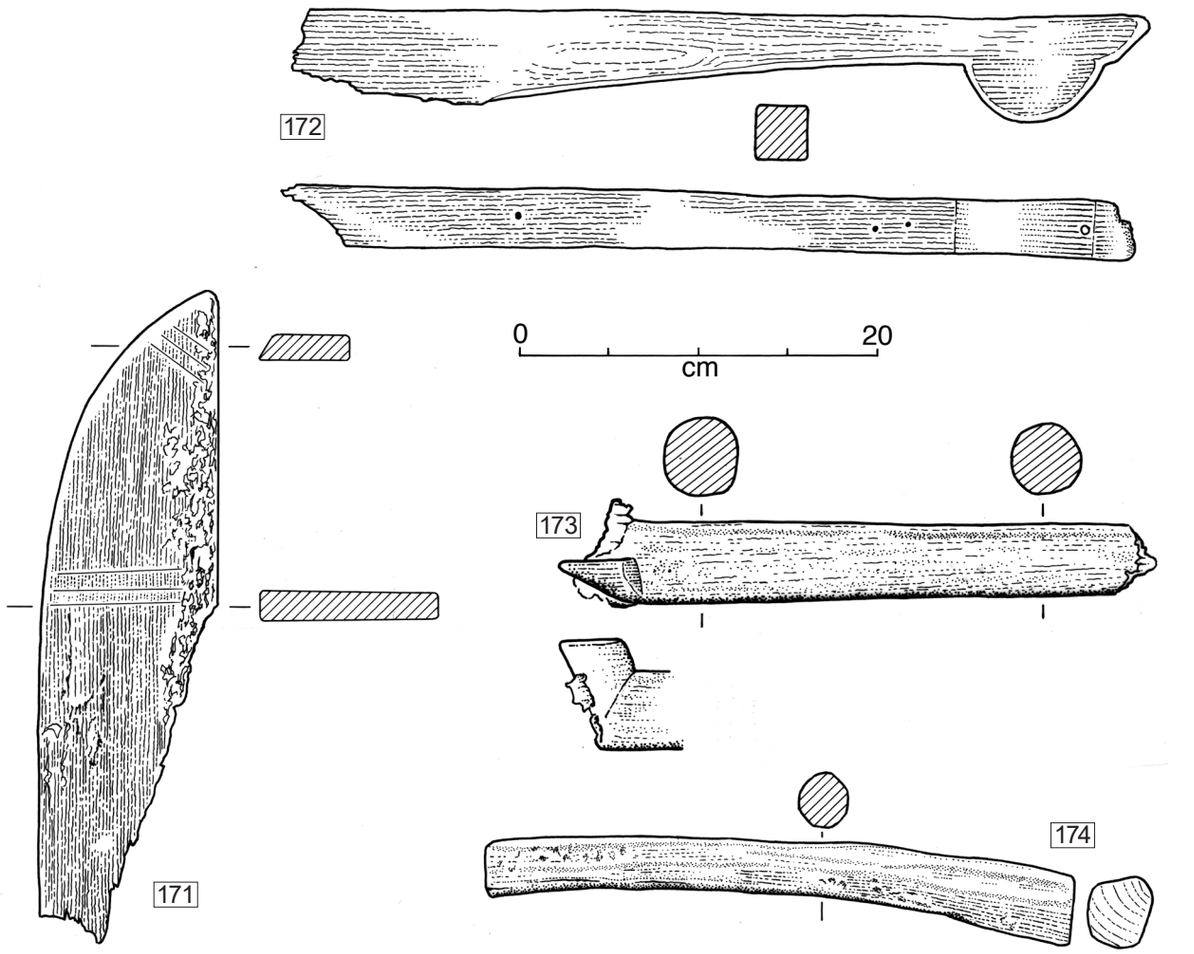

Illustration 285
Left, top and centre right: three unidentified objects 171–3. Bottom right: probable hatchet handle 174

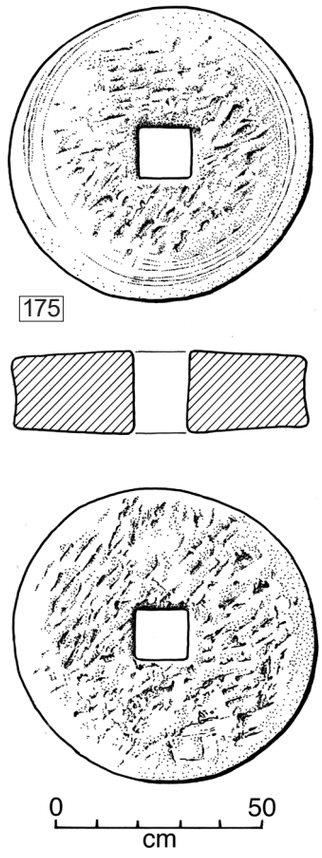

Illustration 286
Rotary grindstone 175 (DP 174847)

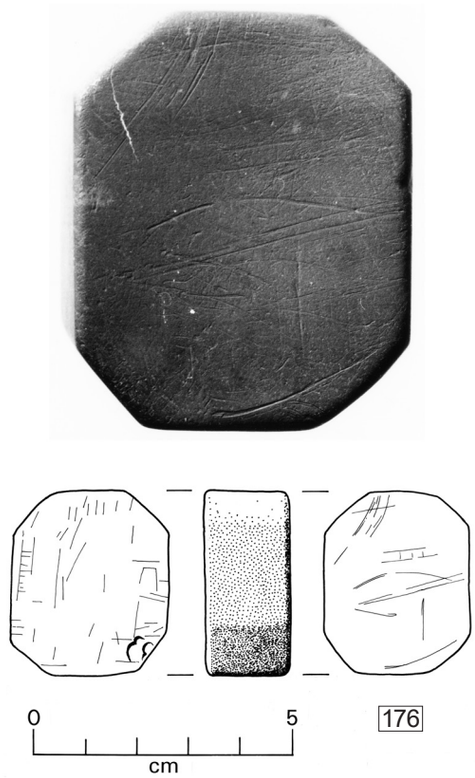

Illustration 287
Probable touchstone 176 (DP 174848)

172 DP92/032, findspot uncertain, carefully dressed timber 370mm × 100mm × 19mm with one edge curved and chamfered towards the point, the other edge straight and vertical (Illus 285). Incised lines on the surface. Function unknown.

173 DP92/???, findspot uncertain, wooden object of uncertain function, 330mm long (Illus 285). It consists of the broken-off end of a round-sectioned haft 40mm diameter at the break, expanding to 46mm. The much-damaged end shows indications of additional features including a well-fashioned flange extending forwards and to one side.

174 DP99/038, **064.103**, curved piece of ash, sub-circular in section, 0.23m long, probably an unused chopping-axe handle (Illus 285).

175 DP92/DG13, findspot uncertain, rotary grindstone of coarse sandstone, slightly ovoid, with a diameter varying from 690 to 730mm (Illus 286). The spindle-hole is 120mm square. The stone is 200mm thick at the centre reducing to 185mm at the rim. It shows evidence of use not only on its outer face but also on its sides close to the rim. The stone would have been turned by a handle and mounted upright on a bracket with its lower part in a trough of water to lubricate and cool the grinding surface and the metal edge. Such a grindstone appears in a political cartoon showing the Covenanting Scots putting Charles II's nose to it, mocking his coronation as puppet king of Scotland in 1651 (Illus 12). A rotary grindstone complete with its trough and wooden side-supports was found on *Mary Rose* (Gardiner 2005: 340–1).

176 DP92/DG04, findspot uncertain, a dark, hard-grained stone of roughly octagonal shape, 30mm × 35mm × 17mm (Illus 287). Scratch-marks on both faces show evidence of careful but occasional use, suggesting that it may have been a touchstone for assaying gold or silver. Known in Classical times (Singer et al 1956: 45), by the 16th century the technique had been replaced by more accurate scientific methods, though because of its simplicity it continued to be used when approximations would serve (Singer et al 1957: 65–6). A campaign which, like Cobbett's 1653 expedition, was charged, among other things, with recouping unpaid fines or taxes, might well have used such an item for assessing the values of confiscated precious metals.

9.6 Domestic treen

177 DP92/DG07, findspot uncertain, complete turned bowl, max diameter 130mm, height 60mm, shallow foot-ring (Illus 288).

178 DP92/066, **074.092**, complete turned pedestal cup of maple (*Acer* sp), its sides decorated with four grooves, diameter 102mm, height 62mm (Illus 288).

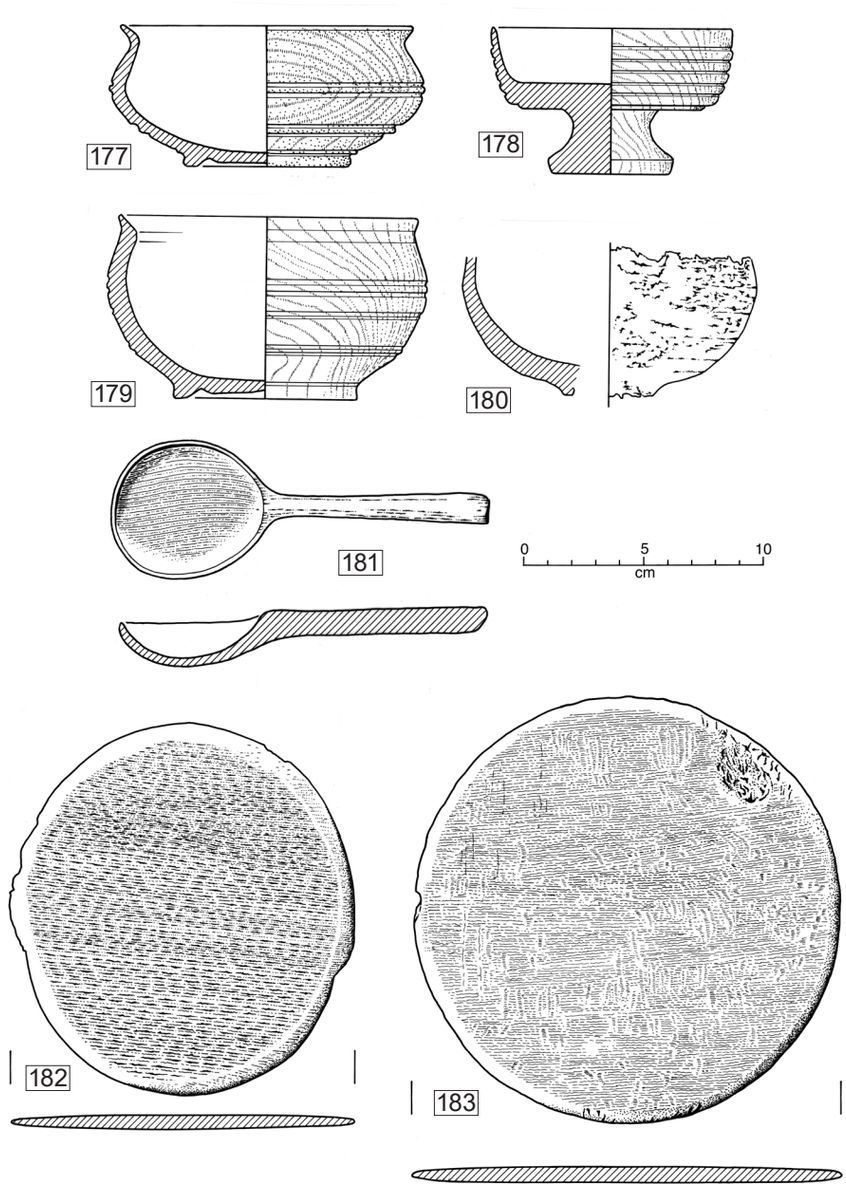

Illustration 288
Top: wooden bowls and spoon 177–81. Bottom: two wooden platters 182–3

179 DP93/006, **055.087**, largely complete turned bowl of maple (*Acer* sp), part of the rim and upper body lost to erosion and biological attack, max diameter 135mm, height 79mm (Illus 124, 288). Shallow foot-ring. The turning and finish is of high quality, with side mouldings and a finely tapered lip.

180 DP00/036, **108.083**, turned wooden bowl much damaged by erosion and missing the lip., max surviving diameter 123mm, height 64mm (Illus 288). Though what may be part of a vestigial foot-ring is evident, a ragged-edged hole penetrates the base, and it is uncertain whether or not this was an original feature.

181 DP97/A026, **089.097**, wooden spoon of maple (*Acer* sp), 158mm long and 57mm across the bowl (Illus 288). Shape similar to an example from *Mary Rose* (Weinstein 2005: 449 no 81A1578).

182 DP00/159, **104.086**, slightly ovoid disc of a fine-grained wood, diameter varying between 155mm and 145mm, 6mm thick at the centre, tapering towards the edges, which are rounded (Illus 288). The surface and edges are

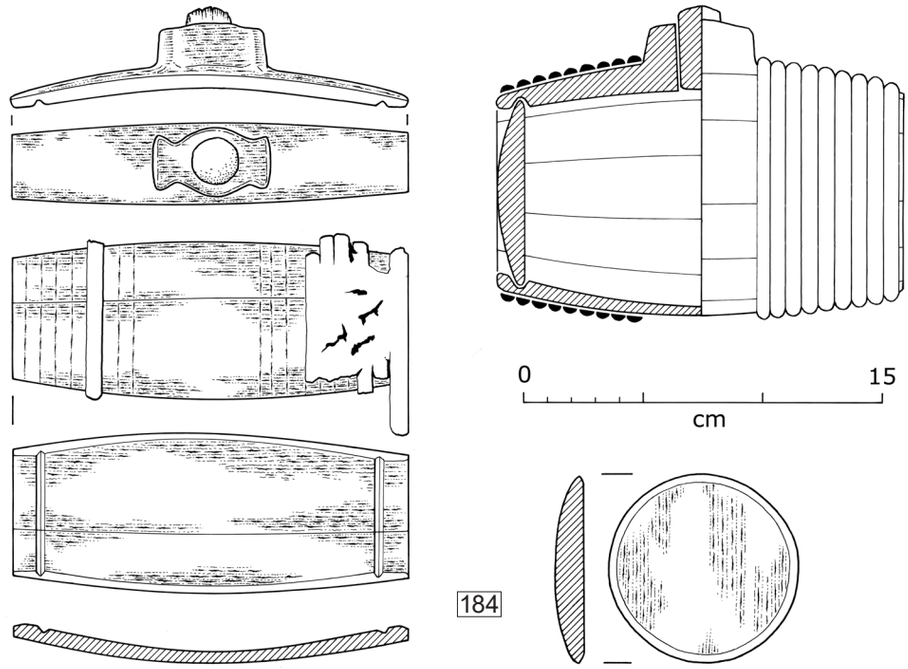

Illustration 289
Staved barrel costrel 184 (DP 174885)

abraded. It lacks the chamfered edge characteristic of keg-end and is perhaps best identified as a 6-inch platter.

183 DP99/053, **068.107**, circular disk of a fine-grained wood, diameter 177mm. 7mm thick at the centre with a sectional profile similar to 182 above (Illus 288). Probably a 7-inch platter.

184 DP92/063, **084.102**, barrel-costrel of oak (*Quercus* sp) with split-willow hoops (*Salix* sp), length 165mm, max diameter 110mm, capacity *c* 850ml (1½pt) (Illus 289). This vessel was found adjacent to the cherub carving during the ADU's 1992 rescue operation (Illus 118), and had suffered recent damage through exposure. Seven staves and one end survived in articulated form, as had parts (or the impressions) of 18 split-willow hoops. The staves are of varying width, the surviving ones ranging between 21 and 40mm. Three or perhaps four appear to be missing, having become dislocated and dispersed as the once-buried vessel became progressively exposed.

A feature of its construction is the stave that incorporates the neck. This is monoxylous; that is, it is fashioned from the solid with the required curve carved rigidly from the parent wood. The piece would not otherwise have bent sweetly because of its thickness and the intrusive neck. It thus forms a control-stave to which its straight-cut and thinner fellows were drawn into place by the pull of the hoops. The form is akin to 19th century 'bever' barrels used by farm-workers (Kilby 1977: 7). Barrel-costrels sometimes occur as ceramic skeuomorphs (for example Webster 1969: 9 and 29).

185 DP92/DG08, findspot uncertain, and DP97/A027, **084.095**, three staves of juniper (*Juniperus* sp) from a small flared wooden tub or bucket 130mm high, with a restored diameter of 165mm at the mouth and 125mm at the base (Illus 290). Capacity *c* 1460ml (2½pt). The piece shows impressions of the withy hoops which had bound it, a pair at the top and another pair at the base, the latter gripping the internal slot which housed the now-missing bottom disc. A diamond pattern has been executed on its exterior surface with a small round-headed punch.

186 DP99/020, **065.101**, basal disc from a staved vessel, diameter 125mm, thickness 7mm constant to the bevelled edge (Illus 290). Traces of what is probably a letter 'H' within a circle cut or branded on the base.

187 DP99/010, **072.103**, staved tankard found intact with all its components in place except the lid, and with some of its withy bindings. Because of its fragile condition it was disassembled for recovery. There are five staves, a basal disc and a handle with a hole for attaching the missing hinged lid. The tankard's re-assembled height is 155mm, its base diameter 82mm, its rim diameter 55mm and its

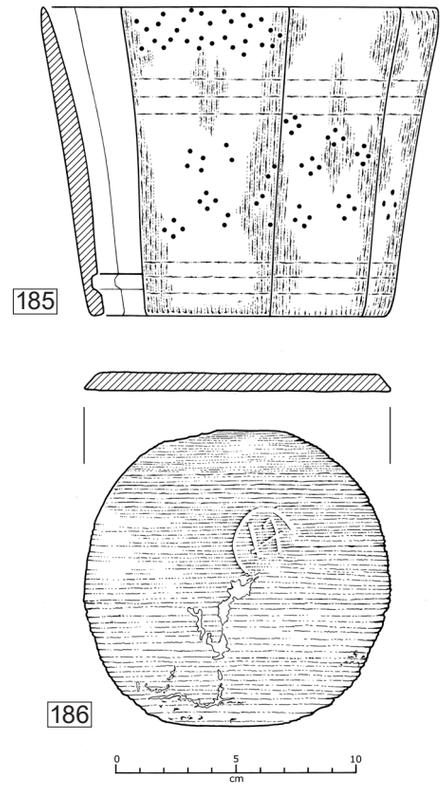

Illustration 290
Staves from a decorated flared bucket 185, and a base 186

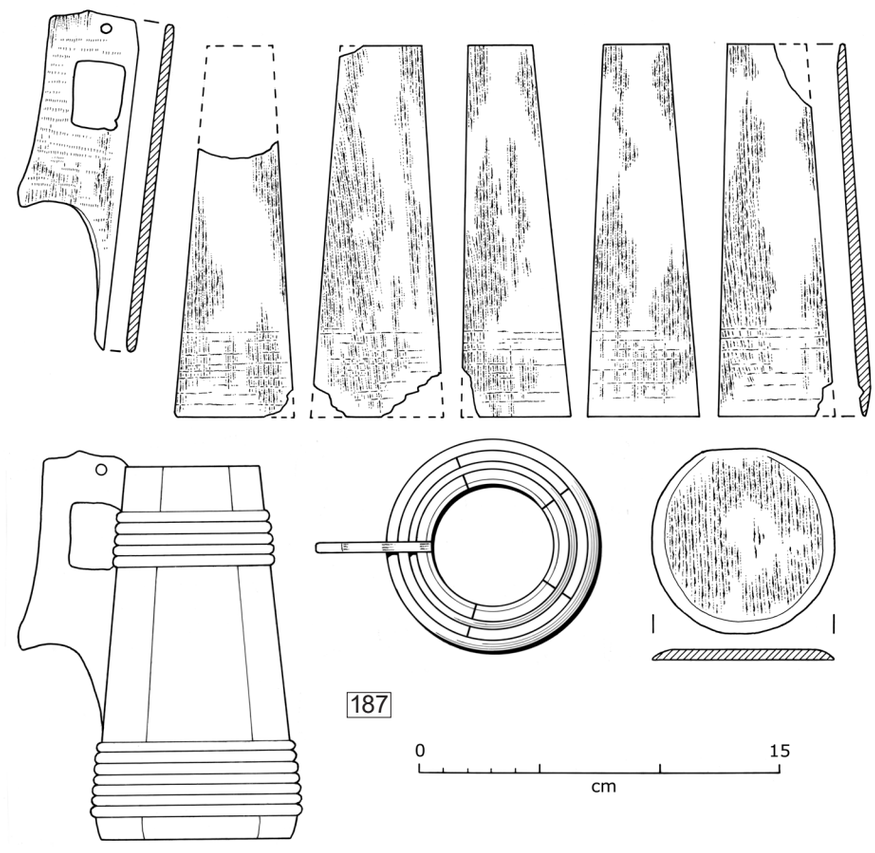

Illustration 291
Small staved tankard 187 (DP 174886)

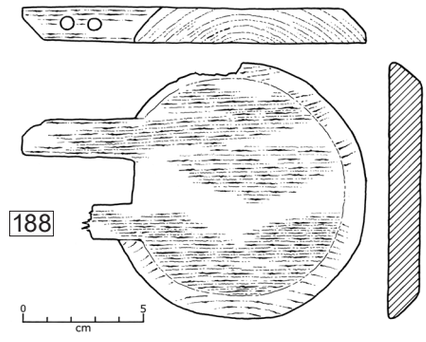

Illustration 292
Hinged lid from a larger staved tankard 188

capacity *c* 380ml (⅔pt) (Illus 291). The five staves are of slightly unequal widths and were bound, along with the handle piece, with seven hoops around the bottom and five towards the top, the latter passing through the inner cut-out of the handle. The tail of the handle does not extend all the way to the base, which would have left a slot between the adjacent staves which must have been filled in some way, though no evidence survives. The vessel is considerably smaller and more elongated than any of the 27 comparable examples from the *Mary Rose* (Weinstein 2005: 45–52).

188 DP97/A024, **061.094**, wooden lid for a staved tankard much larger than 187 108mm in diameter and 14mm thick. Two arms, one now broken, are set 18mm apart and extend 45mm beyond the rim to act as a hinge for the handle. Two holes are drilled in the intact arm (Illus 292). The associated vessel was probably a measure for liquids, and comparison with examples from *Mary Rose* suggests that it may have had a capacity of around half a gallon or a 'pottle' (1.8 litres) (Weinstein 2005: 435–9).

189 DP03/047, **113.072**, locking wooden lid from a staved tub, a 170mm-diameter disc, now broken into two unequal pieces, 11mm thick at the centre and tapering to 6mm at the edges. Its top side is cut by a central square-sectioned groove running from side to side across the grain, 10mm wide by 5mm deep on one side, tapering to 5mm × 5mm on the other (Illus 91, 293). A check some 5mm deep has been cut from the lid's circumference at both groove ends, extending about 50mm on either side of them (these dimensions are approximate because of the abraded condition of the edges). Seated in the groove is a snugly fitting tapered wooden pin, flat on the bottom but with a 50mm recess 5mm deep cut in the centre of its top so that this part of the pin would be level with the lid's top. This suggests that a strip or band was wrapped over the lid across the pin for additional security. The strip might have been sealed if the tub contained a rationed commodity such as butter. The narrow end of the pin is finished with a slightly upturned wedge-shaped point. There is an inwards bevel around the edge of the lid.

Staved tubs with locking lids of this kind are known from the Oseberg Viking ship-burial (Almgren 1975: 182–3, fig 3) and *Vasa* (Matz nd: 37). The *Vasa* example contained butter. Its lid is similar to the Duart Point find, though the pin in the groove is flush with the lid surface

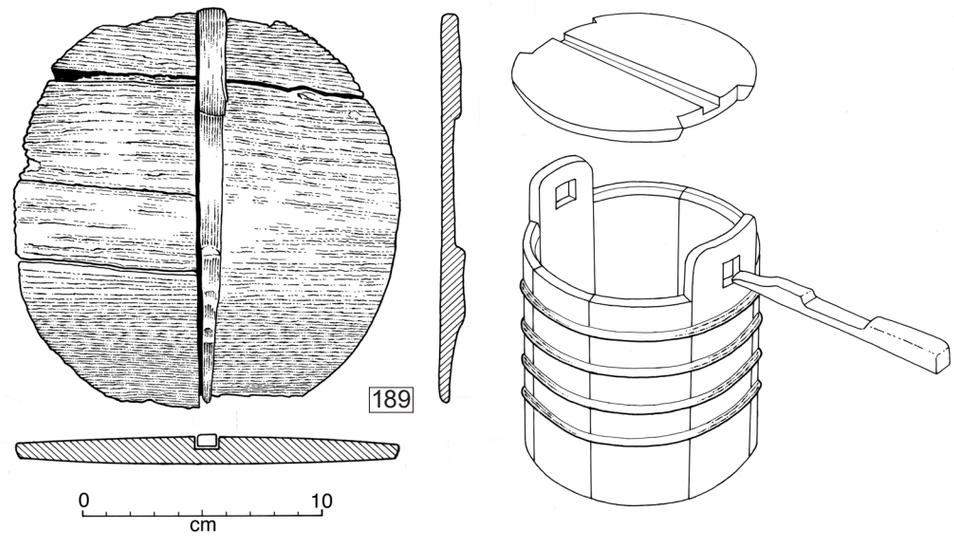

Illustration 293
Left: wooden lid of a butter-keg 189. Centre: section of locking-pin. Right: reconstruction of a staved butter-keg

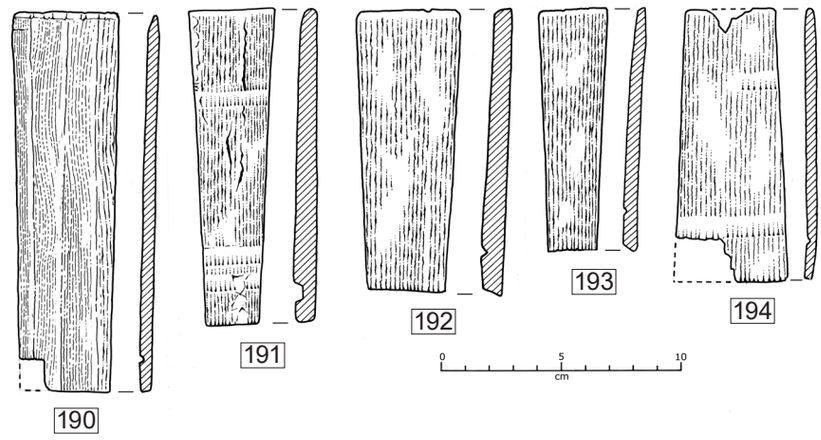

Illustration 294
Assorted staves 190–4

rather than raised at each end. A reconstruction of the Duart lid, and its missing staved tub, is presented in Illus 293. The lid and pin are as found. Two longer staves set opposite one another in the postulated tub form lugs above the rim, the latter being chamfered to fit the bevel of the lid. Square holes are cut in these lugs to accept the locking-pin. The remainder of the tub is stave-built in the normal manner, and bound with withy hoops.

An early reference to such a lidded tub is in Adomnán's *Life of Columba*, which records a miracle performed by the 6th-century saint concerning milk spilt from a vessel when the 'fastening peg of the lid was thrust back through its two holes and the lid fell to the ground' (bk 2, ch 16, Anderson & Anderson 1961: 167). Similar pinned lids have been noted on prehistoric/early historic butter-filled kegs from Scottish bogs, though these vessels are not staved but carved out of the solid, with separate bases and attached lugs for the locking-pins (Earwood 1991).

The five single staves (Illus 294) have suffered flattening distortion so no reliable estimates of the diameters of the original vessels can be made.

190 DP99/027, **085.099**, single stave from an outward-flaring vessel, 158mm tall, thickness at median point 5mm (Illus 294).

191 DP00/073, **098.096**, single stave from an outward-flaring vessel, 117mm tall, thickness at median point 8mm. Single withy impression towards top; double impressions near base (Illus 294).

192 DP92/033, findspot uncertain, single stave from an outward-flaring vessel, 115mm tall, thickness at median point 8mm (Illus 294).

193 DP03/072, **104.072**, single stave from an outward-flaring vessel, 100mm tall, thickness at median point 5mm (Illus 294).

194 DP03/059, **071.108**, single stave from an inward-flaring vessel 113mm tall, thickness at median point 4mm. Single withy impressions near top and around base (Illus 294).

195 DP00/160, **105.084**, much abraded circular wooden disk or plug 97mm in diameter (Illus 295). Slightly concave top, depth at centre 13mm increasing to 16mm near edge. Chamfered downwards around edges.

196 DP01/108, **094.093**, flat circular disc 65mm diameter and 7mm thick, vertical edge trimmed with a flat chisel, with little attempt to ease the angles (Illus 295).

197 DP99/017, **066.101**, finely turned object of unknown function, 79mm across the base and 59mm high (Illus 296). The mark of a central lathe-pin at the top end indicates that the object is complete, though two opposing edges on the top disc have broken off along the grain.

198 DP00/107, **071.102**, small turned decorative finial 35mm × 16mm (Illus 296).

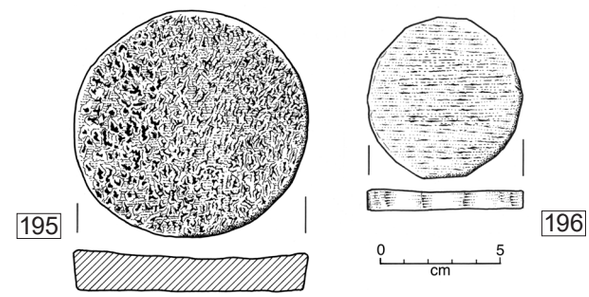

Illustration 295
Two wooden bungs 195–6

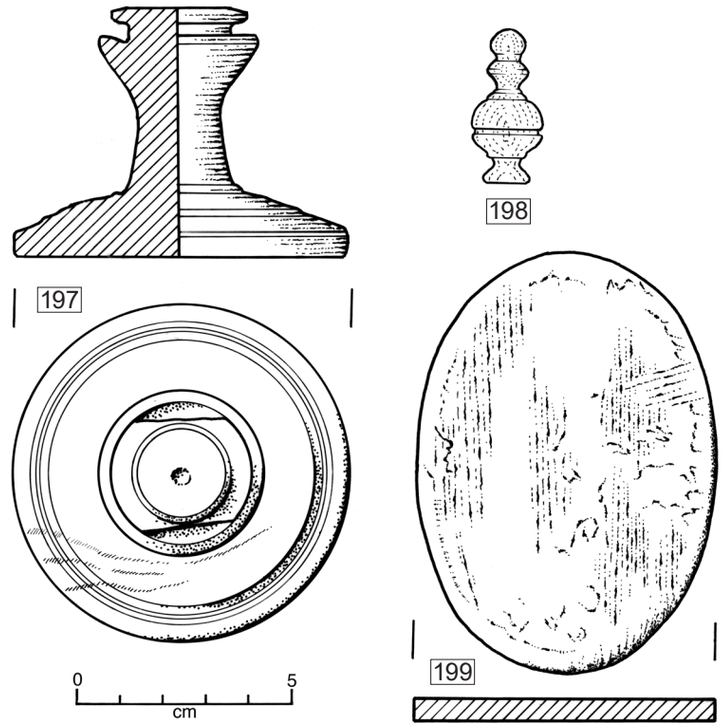

Illustration 296
Left: turned wooden object of uncertain function 197. Top right: wooden finial 198. Bottom right: flat oval piece 199, perhaps backing for a mirror or small picture (DP 174799)

199 DP01/011, **072.102**, well-finished oval piece of wood, 98mm × 69mm × 5mm thick, with carefully squared edges (Illus 296). Perhaps the bottom of a small box, or the backing of a mirror or miniature.

9.7 Lanterns

The remains of three, possibly four, wooden lanterns were found. They consist of two complete top pieces, one segment from which the profile and diameter of another top-piece can be reconstructed, and an upright.

200 DP99/002, **081.107**, turned dome-shaped lantern-top of poplar, 220mm (8¾in) in diameter, height 50mm (2in) (Illus 297). There is a 42mm (1⅝in) diameter opening at the top, and beyond it on either side is a 3mm (⅛in) hole, presumably for fixing a cowl or carrying-handle. Flat rim 27mm (1⅛in) wide with five roughly evenly spaced 10mm (⅜in) holes for uprights, positioned towards the outer edge of the rim; a broken-off tenon and locking-wedge survives in one of them.

201 DP99/008, **072.106**, turned lantern-top of poplar, similar to 200 200mm (8in) in diameter, 63mm (2½in) high, with a 43mm (1¾in) top opening and 5mm holes on either side (Illus 82, 297). Flat rim 20mm (¾in) wide with five evenly spaced 8mm × 10mm elliptical holes. Unlike 200, these holes are positioned at the inner edge of the rim, and partly cut into the side of the central dome.

202 DP00/109, **107.086**, segment comprising *c* 25% of the full circumference of a third turned lantern-top of poplar, 220m (8¾in) in diameter and 64mm (2½in) high (Illus 297). Two round 10mm (⅜in) holes are centrally placed on the 24mm (1in) rim, at a distance that suggests that this lantern too had five evenly spaced uprights. The top opening is 35mm (1⅜in) wide and there is a 5mm hole to the side, presumably one of a pair as on the other two examples.

203 DP99/093, **084.113**, upright of poplar 301mm (12in) long and 42mm (1⅝in) wide, with tenons protruding 12mm (½in) at either end (Illus 297). The stave is flat on one side and ridged on the other, giving a thickness at the centre of 10mm (⅜in). The 5mm sides are cut by V-sectioned slots which extend 5mm into the wood. Narrow horizontal grooves run 75mm from either end of the stave.

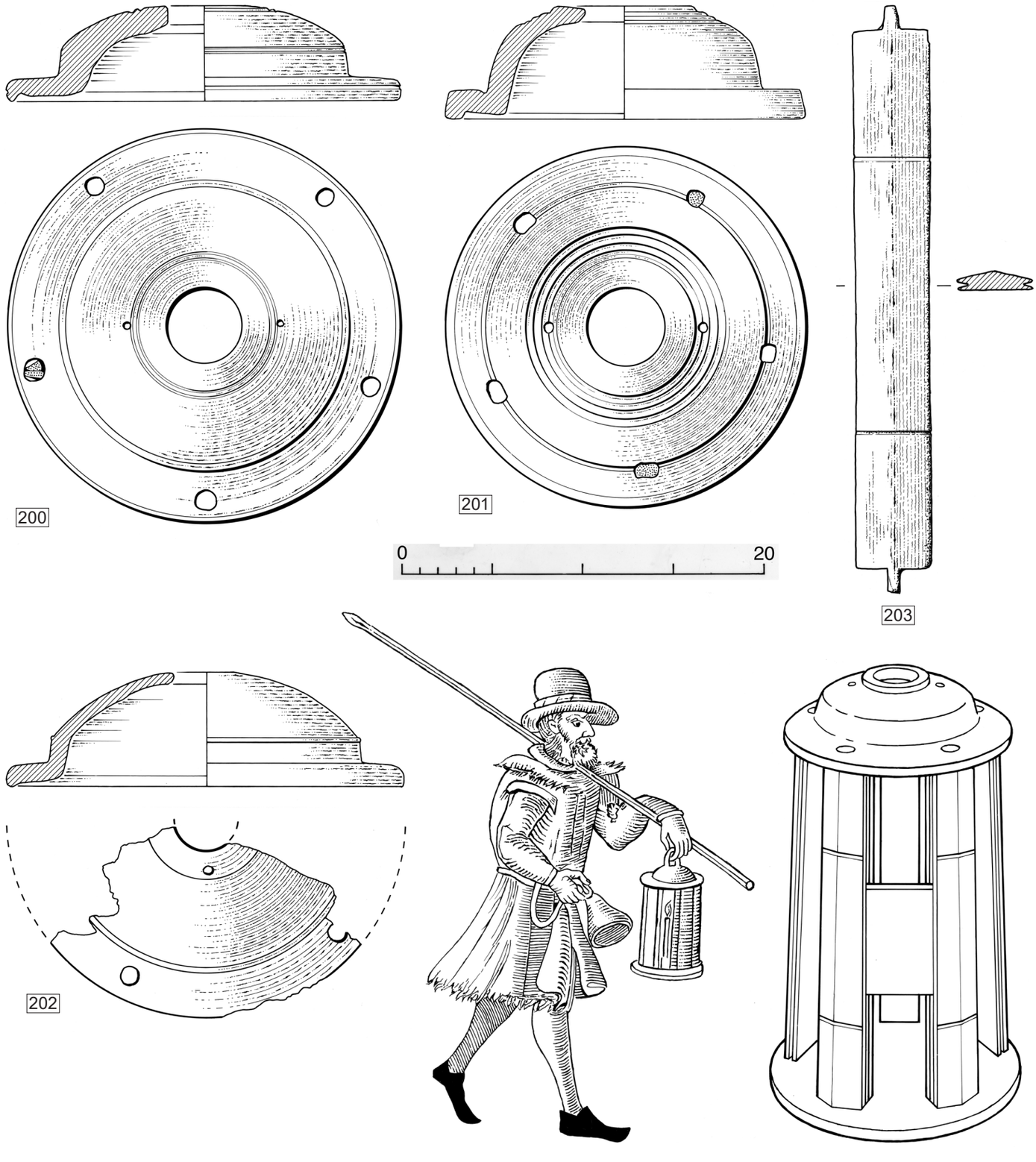

Illustration 297

Top: wooden lantern-tops 200–2 and upright 203. Bottom right: reconstruction of a Duart Point lantern (*Mary Rose* type 2). Bottom centre: night-watchman with bell and lantern from Thomas Dekker 1608, *The Belman of London*

These lantern parts are paralleled by finds from the 15th-century Aber Wrac'h wreck (L'Hour & Veyrat 1989: 293–96), *Mary Rose* (1545) (Richards 2005: 342–6), *La Trinidad Valencera* (1588) (Martin 1997: 9–10), and the 16th-century Yarmouth Roads wreck (Hampshire & Wight Trust 2010: 10). The *Mary Rose* group comprises parts of 17 lanterns, characterised as Type 1 (seven examples) and Type 2 (ten examples). Both types have uprights with slots cut into the edges, like that at Duart Point, and these grooves were intended to house thin translucent sheets of horn, of which fragments were found on the *Mary Rose* examples. *Mary Rose* Type 1 is distinguished by having two uprights close to one another, and this has been interpreted as an arrangement to accommodate a hinged door. *Mary Rose* Type 2 has five equally spaced uprights, like the Duart Point examples, and some of the uprights associated with this type – unlike Type 1 – have a double groove on one side. Such an arrangement would have provided a slot for a sliding door in front of the horn panel, as shown in the reconstruction (Illus 297). It can be assumed that the horn panel behind the door would not quite reach the base of the lantern, allowing access for igniting or extinguishing the light. With the door closed the gap between the outer and inner grooves would allow a sufficient intake of air to sustain the flame while excluding draughts. Loops of string tightened around the grooves in the uprights would have held the assembly secure. A Type 1 lantern was recovered from *La Trinidad Valencera*, and although no physical evidence of the lights remains the lading documents of the same ship make it clear that they were '*lumbradas de cuerno*' (lights of horn).

No example was found on the Duart Point wreck of an upright with one double-slotted and one single side, of which there would have been two in every Type 2 lantern, but since only one upright was found this is not significant. Nor was any bottom part found, though analogies from *Mary Rose* and *Trinidad Valencera* suggest that this would have been a circular wooden disc with holes for uprights matching those in the top piece. The remains of candle-stubs were found in two of the *Mary Rose* lanterns, and some of the bases bore tack-holes at the centre for fastening a cup or pricket for the candles. Two short pewter candle-holders were found close to one of the *Trinidad Valencera* lantern assemblages, though whether they were associated with it, and, if so, how they were fixed to the base, is not clear. That the *Mary Rose* Type 2 lanterns are in most respects identical to the Duart Point ones, though chronologically separated by more than a century, emphasises the innate conservatism of a successful simple design. The only additional features evident in later lanterns are horizontal grooves in the upright, no doubt for a strengthening binding of cord or wire.

Lantern housings for candles fulfilled two important criteria. The first is that they protected the flame from draughts, and could therefore be used outside. The second is that they isolated the flame from flammable surroundings. These precautions were essential in both domestic and nautical contexts where combustible materials were commonplace, but particularly in ships which suffered the added dangers of overcrowding and the presence of gunpowder.

It is noteworthy that these unremarkable objects have had a poor record of preservation in the terrestrial archaeological record or as surviving heirlooms. Hitherto they had been known only in rare pictorial representations such as Pieter Breugel the Elder's *Gloomy Day* (1559) in the Kunsthistorisches Museum, Vienna, or Thomas Decker's *The Belman of London* (1608) (Illus 297). The unique characteristics of a shipwreck, in terms both of the presence of such items and their capacity, in the right environmental circumstances, to survive, combine to bring to our attention this once essential but now largely forgotten aspect of past material culture.

9.8 Leather

Shoes

Seven shoes, six heels and ten soles or other parts of shoes were recorded. At the time of writing they are in wet storage awaiting conservation and detailed study, and the following brief descriptions of examples of the two main types identified should be regarded as provisional.

Latchet shoe

The latchet was a simple but effective design of shoe frequently associated with military footwear in the 17th century (Illus 298). Its upper consisted of three pieces sewn together edge-to-edge. One incorporated the instep, toes, and elongated tongue, while the two side pieces were joined at the back to form the heel and extended forwards into strap or latchet fastenings which were tied over the tongue in a bow with a single lace or ribbon. The uppers were stitched to the sole, and by the 17th century multi-layered heels were normally provided. The toe could be round or square, and the shoes were symmetrical and not made as inward-facing pairs. Until shaped by wear there was no left or right.

204 DP99/046, **076.105**, the most complete latchet shoe is square-toed and has a strong three-ply sole (Illus 298, two views). The heel has not survived but may be assumed.

205 DP99/024, **068.103**, another latchet shoe of which more of the side pieces have survived (Illus 128 bottom). Detail in this photograph is obscured by extraneous archaeological debris, including two human vertebrae and a clay-pipe stem.

A complete latchet shoe has been recovered from the wreck of *London*, an English warship lost in the Thames Estuary

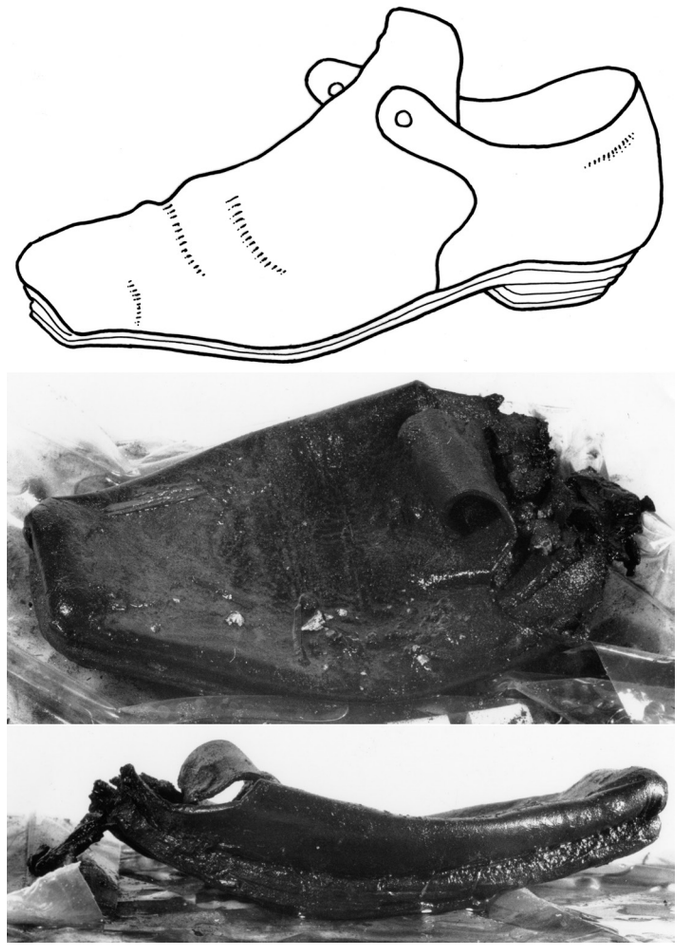

Illustration 298
Top: drawing of a latchet shoe. Centre and bottom: latchet shoe 204

in 1665 (*The Guardian*, 16 May 2014). The type is frequently depicted in contemporary portraits.

Heavy shoe or boot

206 DP99/025, **069.104**, other shoes in the Duart Point assemblage are of a rounded-toe configuration, with substantial soles and heels (Illus 299). Though none is complete they can probably be identified as heavy boots or shoes, and a parallel which may have a contemporary Civil War association was excavated at Basing House, the scene of a siege which terminated in October 1645 (Moorhouse 1971: 61–2, fig 26). A well-preserved example, again probably with military associations, was recovered from the bottom of a well in Jamestown, Virginia, with an associated date of 1626–50 (Cotter 1958: 193 pl 91).

Leather box- or book-cover

207 DP03/078, **109.073**, a folding wallet-type leather cover measuring 165mm × 82mm × 7mm (unfolded), with punched and incised decoration (Illus 300). It is closely paralleled by two box-covers from *Mary Rose*, one encasing two oblong wooden blocks with circular cut-outs containing a still-intact portable sundial, the other similarly arranged and recessed for a set of coin-scales and weights (Gardiner & Cowham 2005: 168–9; Crawforth-Hitchins 2005a). Small book-covers of similar construction were also recovered from this wreck (Richards & Gardiner 2005: 130–1). No evidence of the original contents of the cover was noted in the Duart Point example.

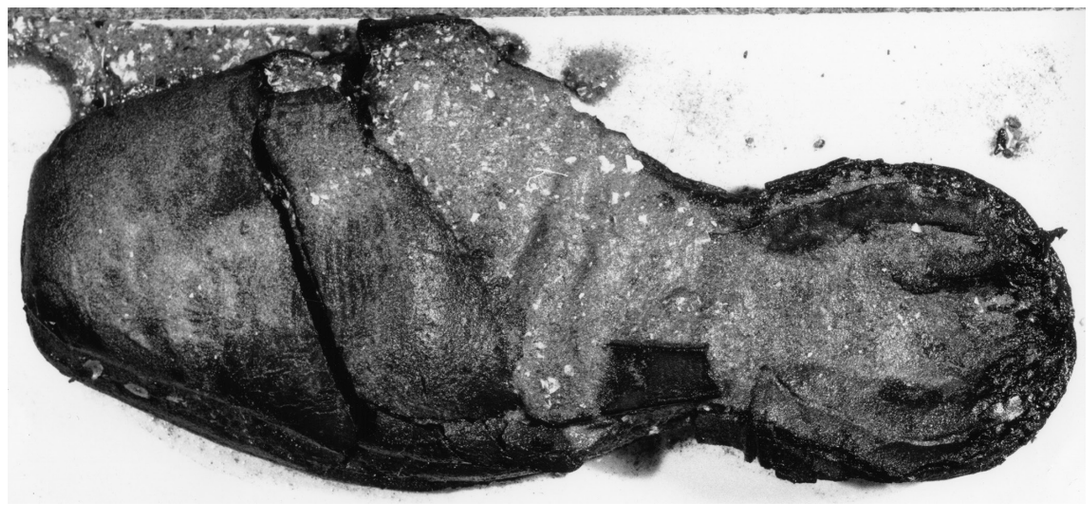

Illustration 299
Round-toed shoe or boot 206 (DP 173318)

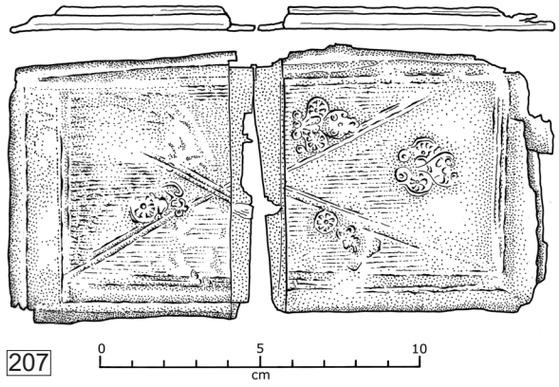

Illustration 300
Small leather case 207 (DP 174814)

9.9 Weights

Steelyard poise

208 DP97/A006, **087.069**, just beyond the after end of the wreck, a bulbous lead weight with looped top, 75mm high, 55mm max diameter, and weighing 1040g (Illus 301). It can be identified as a steelyard poise, used in conjunction with an asymmetric beam balance with a short and long arm suspended from a fulcrum. The item to be weighed was hung on the short arm, and its weight determined by moving the much-lighter poise along the long arm until a point of balance was reached. The scale on the long arm was calibrated to express, by a simple computation of balancing moments, the weight of the load on the other side of the fulcrum. It was not necessary for the poise to have a specific weight-value, since the graduations were normally calibrated by placing a series of known loads at the short end and balancing the much lighter poise by moving it along the longer arm, but generally the weight-ratio was *c* 50:1 (Crawforth-Hitchins 2005b: 330), suggesting that the steelyard associated with this poise was intended to weigh loads of up to 52kg, which equates closely with the avoirdupois hundredweight of 112lbs (50.8 kg).

Balance-pan weights

Three circular lead weights of different sizes were found within 1m of one another in the area of the collapsed stern, centred on **100.084**. All have slightly domed tops and concavities *c* 1.5mm deep across the bases, probably caused by post-casting shrinkage, the blanks having been formed upside-down in an open mould. The edges are slightly

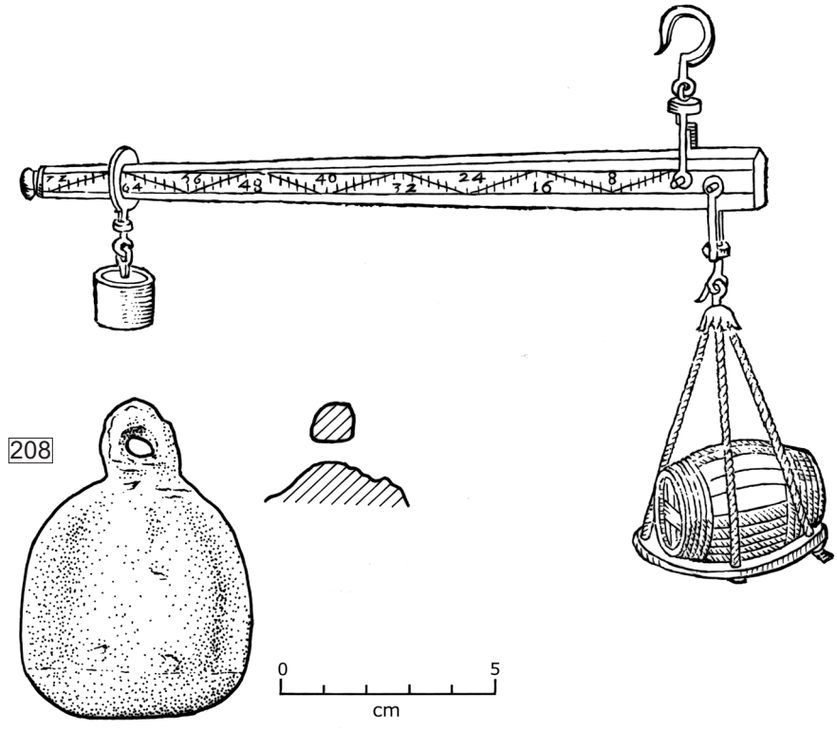

Illustration 301
Steelyard with poise (after Cyprian Lucar 1588). Lower: lead steelyard poise 208

bevelled, an operation evidently carried out after casting with a coarse file or similar tool (Illus 302–3). It may be supposed that this process allowed the weight-values to be precisely adjusted. All carry the same stamped markings consisting of a crowned 'C', representing the authority of the crown under Charles I, a short cruciform object which is the sword of St Paul, representing the City of London's Guildhall, and a winged figure holding a large set of scales, in an oval with a beaded border. This is the Archangel Michael weighing souls in the balance, the mark used since the reign of James I by the Worshipful Company of Plumbers to guarantee the value of weights they issued (Biggs & Withers 2000: 58–9). The three weights may be compared in Table 9.1.

209 DP97/A021, **088.090**, was in pristine condition, and showed no evidence of degradation by corrosion or mechanical abrasion (Illus 302). It was therefore presumed that its mass remains the same as the authenticated value, which was checked by weighing under scientifically controlled conditions through the good offices of Dr Barry Kaye of the Chemistry Department at St Andrews University. The result reveals that it is, to an extremely high degree of accuracy, a weight of 4lb avoirdupois (1.81kg).

210 DP00/033, **092.092**, weight 1lb (0.45kg) (Illus 302).

211 DP00/001, **099.098**, weight 8oz (227g) (Illus 302).

Table 9.1
The three balance-pan weights compared

No	*Dimensions in mm (diameter × height)*	*Weight in grammes*	*Avoirdupois equivalent*
DP97/A021	104 × 22.5	1814.37	3.99994lb (4lb)
DP00/033	69.5 × 13.5	450	0.991lb (1lb)
DP00/001	53.5 × 10.5	223	0.492lb (½lb)

These last two are in less good condition, and since they appear to have suffered some loss of mass to degradation, were weighed less precisely. Nevertheless their weights, despite a predicted small loss, are close enough to 1lb and ½lb values to make it clear that these were the standards intended. It may be presumed that the three are parts of a larger set.

These weights were presumably connected with the disbursement of rations aboard the ship, a strictly controlled procedure watched as closely by the recipients as by the issuing authorities. In 1651 a near-mutiny occurred in Dundee when an attempt was made to deny Cromwellian troops the right to witness the weighing of their rations. "'What", shouted one of the disgruntled soldiery, "shall we not see our biscuit and cheese weighed, I hope to see such officers as you disbanded

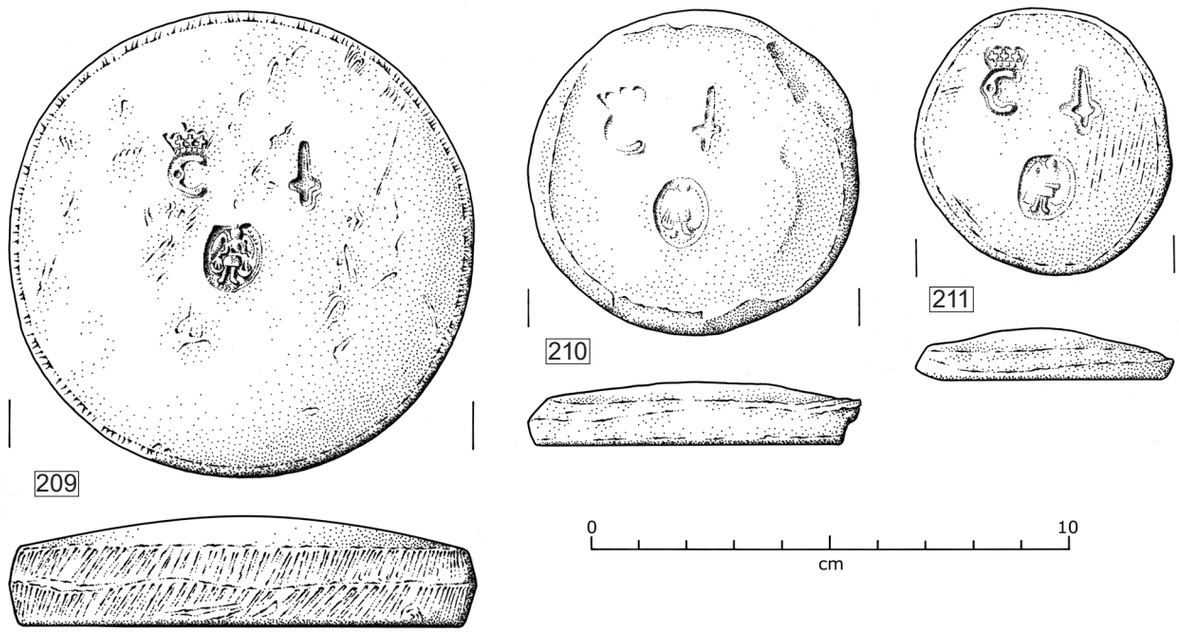

Illustration 302
Lead balance-pan weights of, left to right, 4lbs 209, 1lb 210, and 8oz 211 (DP 174828)

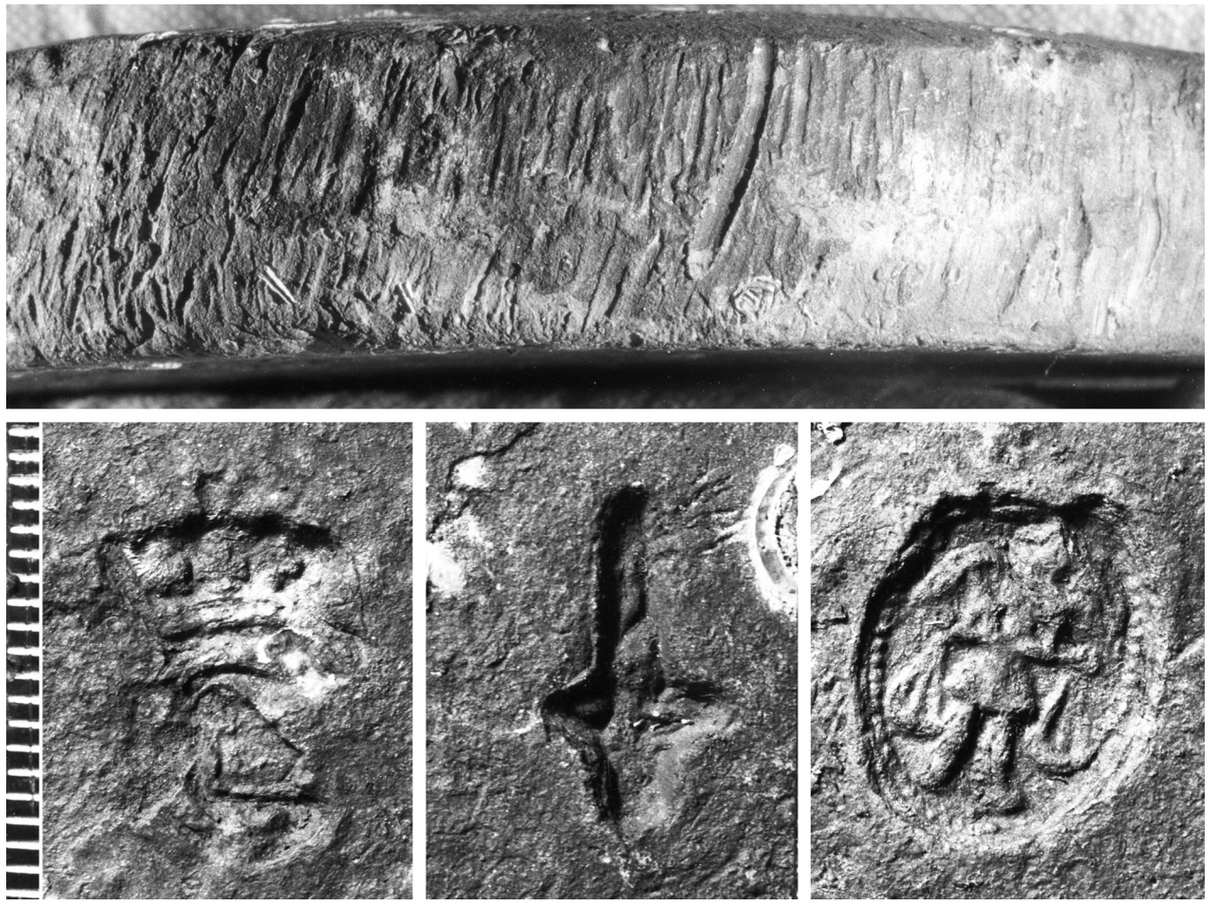

Illustration 303
Top: file-marks on the edge of the 4lb weight 209. This was presumably done to adjust the casting to the precise weight, which has proved extremely accurate. Bottom: control-marks common to all the balance-pan weights. From left, the crowned monogram of Charles I; the sword of St Paul representing the London Guildhall; and the Archangel Michael holding scales, the mark of the Worshipful Company of Plumbers. Scale in millimetres (DP 173359, DP 173352, DP 173351, DP 173350)

before long"' (Firth 1992: 224). The identification of the weight-standard used for ration-issue aboard a ship is one of the most telling indicators of its nationality and, as argued elsewhere, these avoirdupois weights make it virtually certain that the Duart Point ship was under English control when she sank.

9.10 Small objects

Copper-alloy

212 DP92/282, findspot uncertain, heart-shaped strap-terminal with clip at rear (Illus 304), paralleled by an example from *Batavia* (1629) (Green 1989: 175, BAT350).

213 DP92/062, **069.092**, plain rectangular buckle with prong (Illus 304).

214 DP92/257, **26.08**, 'spectacle'-type buckle missing the prong (Illus 304).

215 DP92/256, **26.08**, 'spectacle'-type buckle with prong (Illus 304). This form is common from *c* 1550 to *c* 1650 (Platt & Coleman-Smith 1975: 265 no 1858, fig 244).

216 DP92/DG14, findspot uncertain, fitting of uncertain use, possibly gun furniture (Illus 304).

217 DP00/115, **073.104**, hinge fitting, probably from a folding rule (Illus 304).

218 DP00/010, **097.103**, wire loop with twisted join and a short section of fine wire whipping (Illus 304).

219 DP00/047, **103.084**, sheet-brass mount of trapezoidal shape with four small corner holes and a larger raised central hole. The latter is edged with beaded decoration and what appears to be a crown (Illus 304). Function uncertain but paralleled by a find from Tantallon Castle (Caldwell 1991: 337 and illus 3.6). Tantallon was besieged by Cromwellian forces in 1651.

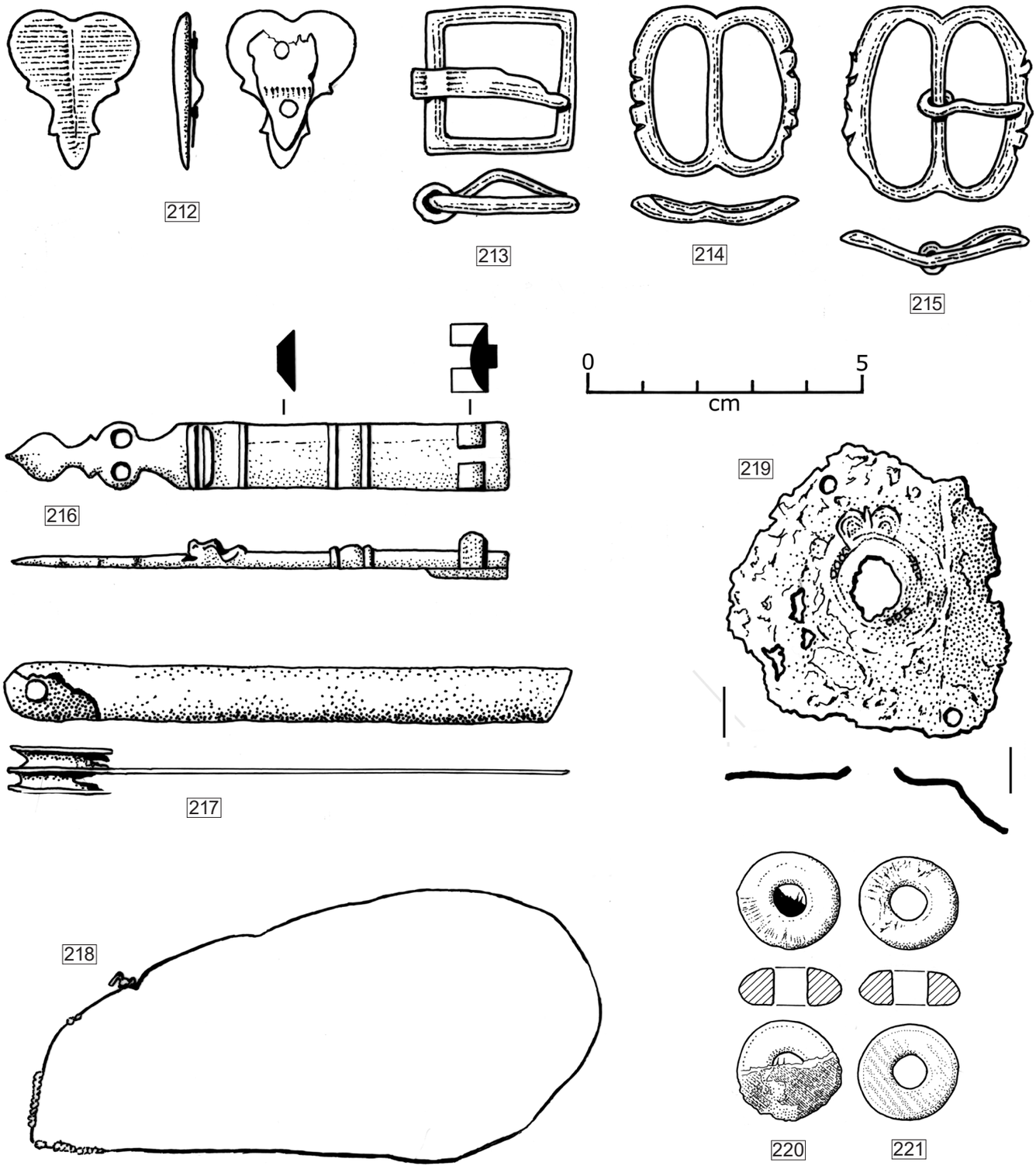

Illustration 304
Small copper-alloy and wooden finds 212–21

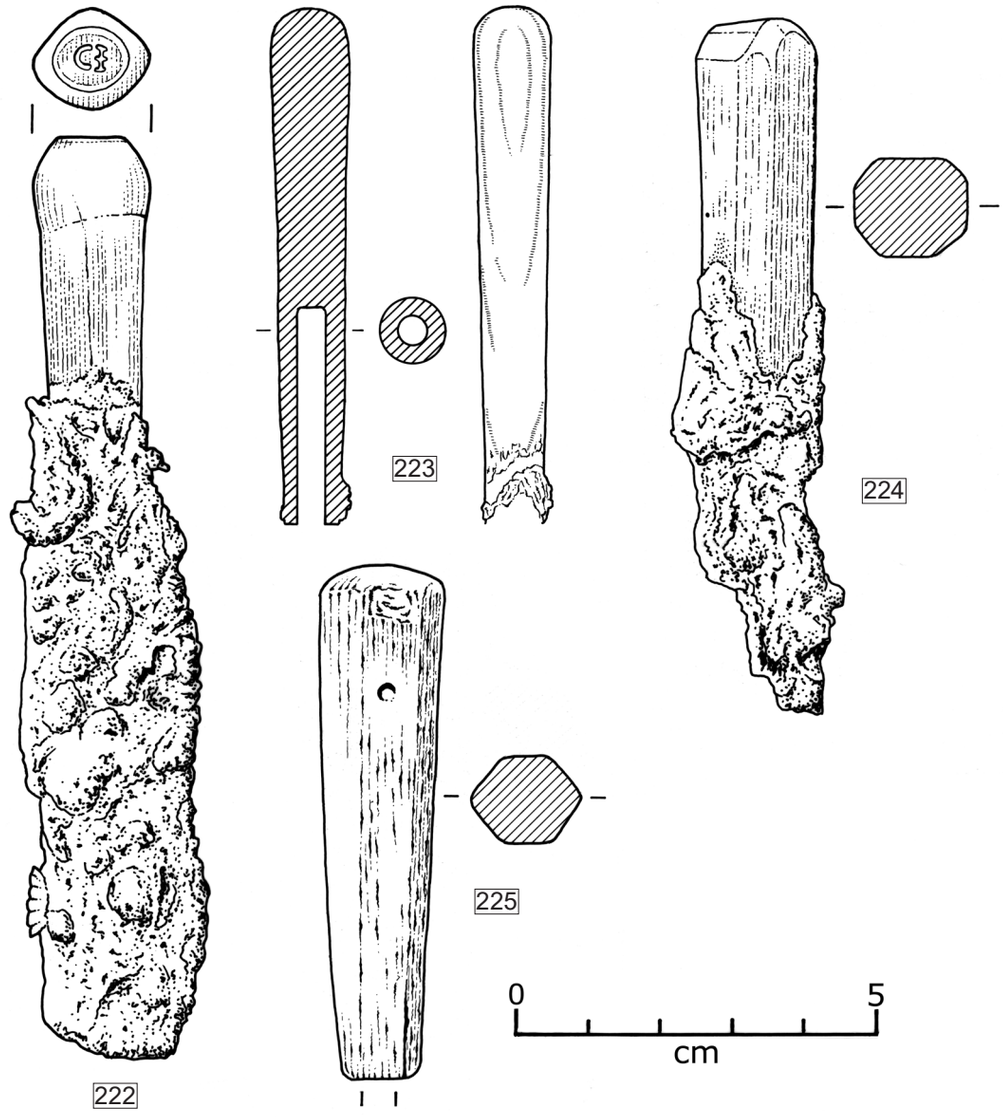

Illustration 305
Knife-handles 222–5 (DP 174864)

Wood

220 DP92/258, findspot uncertain, wooden button with remains of fabric covering (Illus 304). Small cloth-covered buttons of this type are shown on Edward Tarleton's waistcoat (Illus 14).

221 DP92/260, findspot uncertain, wooden button (Illus 304).

Knife-handles

222 DP00/019, **126.115**, bone knife-handle with rounded trapezoidal section and remains of the concreted iron blade (Illus 305). Initials 'C I' cut on the flat top of the handle.

223 DP99/094, **088.100**, bone knife-handle with circular section and circular tang-hole (Illus 305).

224 DP99/087, **081.102**, wooden knife-handle with octagonal section and remains of the concreted iron blade (Illus 305).

225 DP00/003, **129.102**, wooden knife-handle with hexagonal section and slightly rounded corners (Illus 305).

Illustration 306
Largest lump of coins 226 (DP 174160)

Illustration 307
Smaller lumps of coins 227–8 (DP 174161, DP 174158)

9.11 Coins

Several groups of silver coins were found by the Dumfries and Galloway Club in 1992 at approximately **08.07**. They were concreted into solid clumps covered with a grey to dark-brown corrosion residue, which in places shows the impressions of the cloth bags which once contained them.

226 The largest, DP92/DG03 (Illus 306), was estimated to contain *c* 300 pieces.

227 Clump of *c* 25 coins (Illus 307).

228 Clump of *c* eight coins (Illus 307). In this example the cloth impression is particularly clear, while two of the coins have lost their concretion to partially reveal their faces, of 28mm and 25mm diameter. Two 24mm diameter single coins which have lost their concretion on one side display the obverse sides of Elizabethan hammered sixpences, dated 1572 and 1578 respectively (Grueber 1970: 98 and pl 20; no 513).

Illustration 308
Individual coins, showing the range of sizes (DP 173224)

Illustration 309
The obverse and reverse of the Charles I crown 229 (DP 173226, DP 173227)

Three loose silver coins, all obscured by concretion, were recovered by the ADU in 1992 at **090.085** (Steve Liscoe pers comm). Forty more individual silver coins, in similar condition, were recovered during the excavation of Area 5 in grid square 17.09. The coins can be grouped into diameters of 20mm, 25mm, 30mm, and 36mm, of which a sample is shown in Illus 308. These sizes equate with those of English sixpences, shillings, half-crowns, and crowns. For display purposes the clumps have been kept intact, while at the time of writing the concreted single coins have not yet been cleaned and conserved. The silver is corroded and fragile, and the conservation implications are considerable, especially for the multiple-coin clumps. It is to be hoped that in due course this important hoard of Cromwellian military coinage can be conserved, identified, and fully studied.

229 DP99/054, **068.107**, one coin is preserved in good, though worn, condition (Illus 309). It is a silver half-crown of Charles I (Grueber 1970: 115; 618 and pl 25) which may be described thus: Obverse: X CARO[LVS]: D: G: MAG: BRIT: FRA: ET HIB: REX King riding to left holding an upright sword or baton, seated on a trotting horse, his sash tied in a bow behind, the whole within a dotted inner circle. Rose mark of Truro or Exeter mint. Reverse: [CHRISTO]:AUSPICE:REGNO Crowned oval garnished shield within a dotted inner circle.

This coin is typical of undated issues from the Royalist strongholds at Truro and Exeter in the early 1640s, the central mint in the Tower of London being under Parliamentary control. Cornwall was largely loyal to the King, and on 14 November 1642 Charles commissioned Sir Richard Vyvyan of Trelowarren to set up one or more mints in the county to produce coinage to established standards of purity and weight from whatever bullion could be obtained (Besly 1992: 102). The first of the new mints, at Truro, appears to have been short-lived, and its production limited. Exeter had been secured for Parliament at the beginning of the Civil War but in September 1643 the city surrendered to an army under Prince Maurice and remained in Royalist hands until it was recaptured by Sir Thomas Fairfax in April 1646. During this period the large-scale production of Royalist silver crowns and half-crowns was conducted on an *ad hoc* basis, from a bewildering variety of dies. All carry a rose mark denoting the Truro or Exeter mints. Exeter coins of 1644 and 1645 were dated, which suggests that the Duart Point crown is either a Truro minting or an early Exeter coin. In either case a date in the early part of the 1640s is assured, thus providing the Duart Point with a *terminus post quem* within this bracket (Besley 1992: 102–21; see also Lockett 1934).