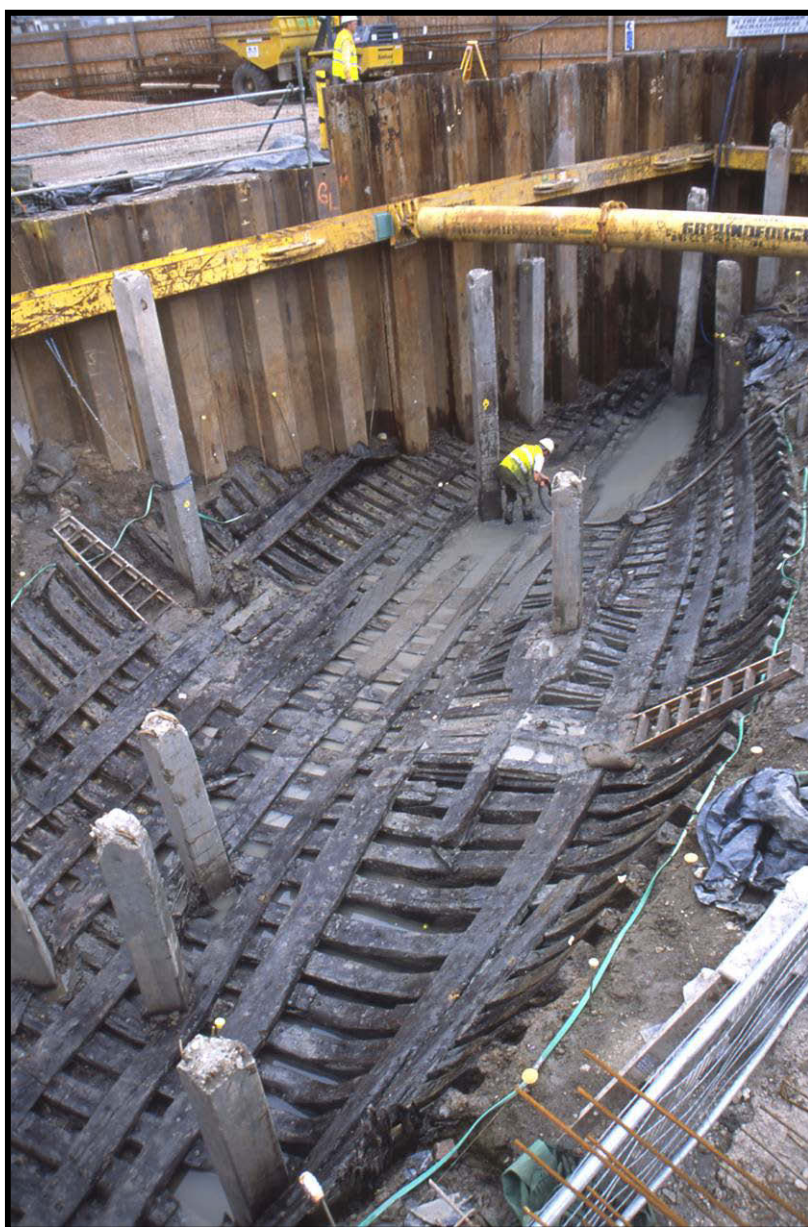


Newport Medieval Ship Project Specialist Report: Selected Artefacts



CONTENTS:

Introduction

Selected Artefacts Found During The Excavation Of The Newport Medieval Ship

By

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13 October 2013

The Newport Ship Project

Introduction

In 2002, during the construction of the Riverfront Theatre, on the banks of the River Usk in Newport, South Wales, an archaeological find of great significance was unearthed. In the summer of that year, while undertaking the excavations for the theatre's orchestra pit, the well-preserved remains of a 15th century clinker built merchant vessel were discovered.

The site, which was surrounded by a cofferdam, was being monitored by the Glamorgan Gwent Archaeological Trust at the time of discovery. The ship lay in what is locally known as a pill or small inlet, with its stern closest to the river and its bow facing into the inlet. The timbers were covered in thick alluvial mud, which created an ideal anaerobic environment for successful preservation. Seventeen strakes of planking remained on the port side and thirty-five on the starboard side of the ship. The vessel was approximately 30m in length.

A silver French coin was found purposely inserted into the keel of the vessel, dating the ship to after May 1447. Dendrochronological research has shown the hull planking to be from the Basque country and after 1449 in date.

After a much publicised 'Save Our Ship' campaign, it was decided that the ship would not be recorded and discarded but excavated with the aim to conserve. The riders, stringers, braces, mast step, frames and overlapping clinker planks and keel were dismantled one by one and lifted. Almost 2000 ship components as well as hundreds of artefacts were excavated.

This report summarises the analysis of selected artefacts that has taken place during the Newport Medieval Ship excavation and post-excavation research phase.

SELECTED ARTEFACTS FOUND DURING THE EXCAVATION OF THE NEWPORT MEDIEVAL SHIP

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Artefacts found during the excavation

by Mark Redknap

The objects found associated with the Newport ship can be considered according to their functionally related groups. In view of the importance of some artefact types to the dating and of the ship, these are reported in more detail. The bulk of the leather from the ship, including ship equipment and shoes, is treated in another report by Quita Mould.

Personal possessions

A number of objects may have been the personal property of men on board the vessel, either as crew or passengers, though the later history of the ship implies that these objects had since either been discarded or lost within the hold. They include a single-sided and a double-sided comb (MSG 10/SF 168/CT 3099 and MSG 7/SF149/CT 3086 respectively); wooden bowls; a wooden gaming piece, and a knife handle.

Eating

Turned wooden bowls (often defined as $H = > 1/3 D$) and dishes were standard eating vessels for most people in the later Middle Ages, often occupying a position as important as pottery within households. Most were discarded at the end of their useful lives – hence their discovery in waterlogged anaerobic conditions, discarded in ditches, moats, pits.

CT 3084 (MSG 9/SF 135). Small wooden bowl (Figs. 1, 2 and 2A)

Description: complete lathe-turned bowl with horizontal, everted rim, made from ash. It is externally decorated by a groove around its girth, and there is an owner's mark on its flat base. Surviving H 15mm; max remaining D about 110mm.

Context: 130



Figure 1



Figure 2

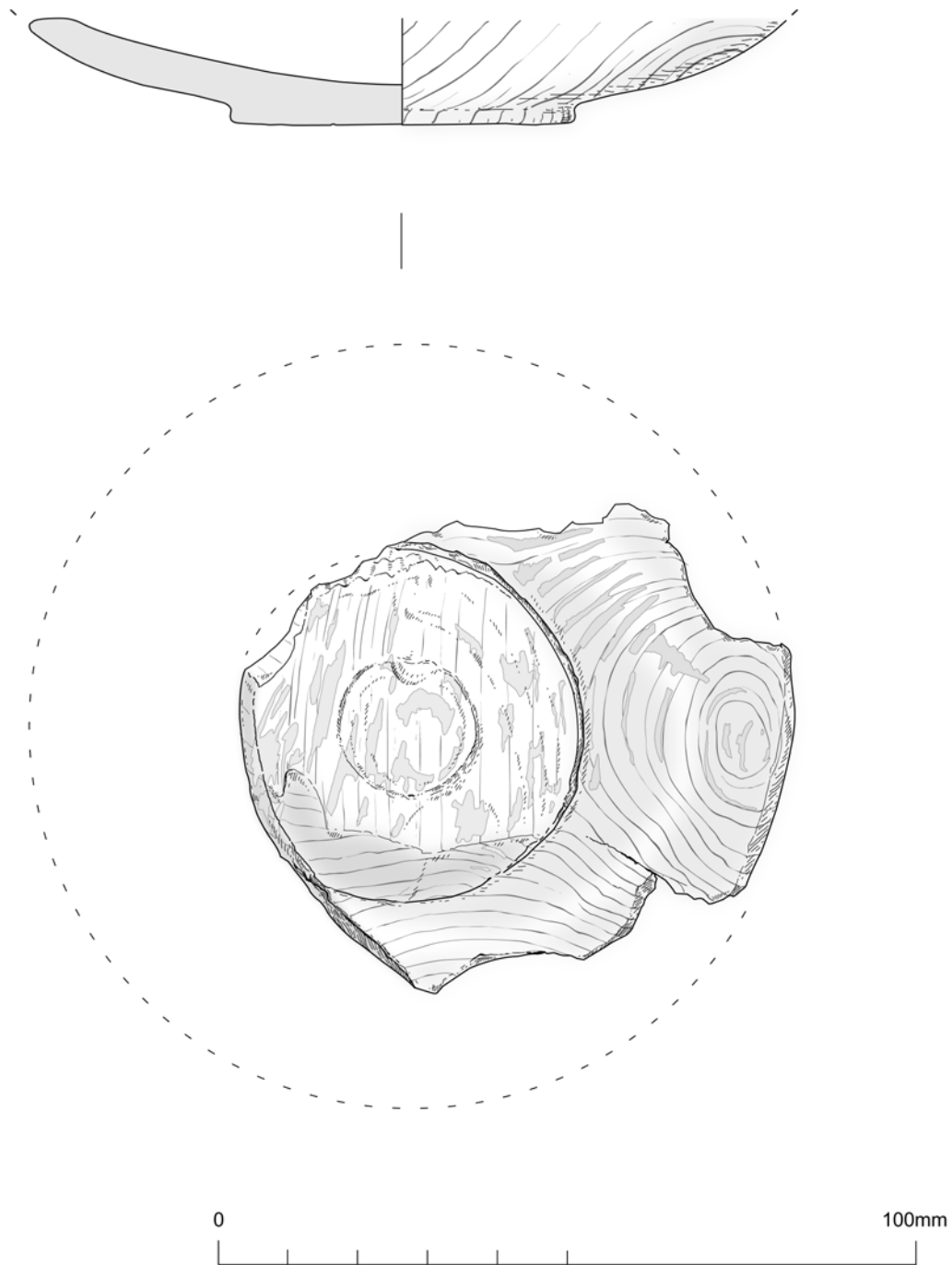


Figure 2A. CT 3084 (MSG 9/SF 135). Small wooden bowl. (Drawing by Anne Leaver).

CT 3088 (MSG 40/SF 141). Wooden bowl (Figs. 3, 4, 5, 6 and 6A,B,C)

Description: complete lathe-turned bowl made from ash.

H 33mm; max D 125mm; min D 89mm.

Context: 149



Figure 3



Figure 4



Figure 5



Figure 6

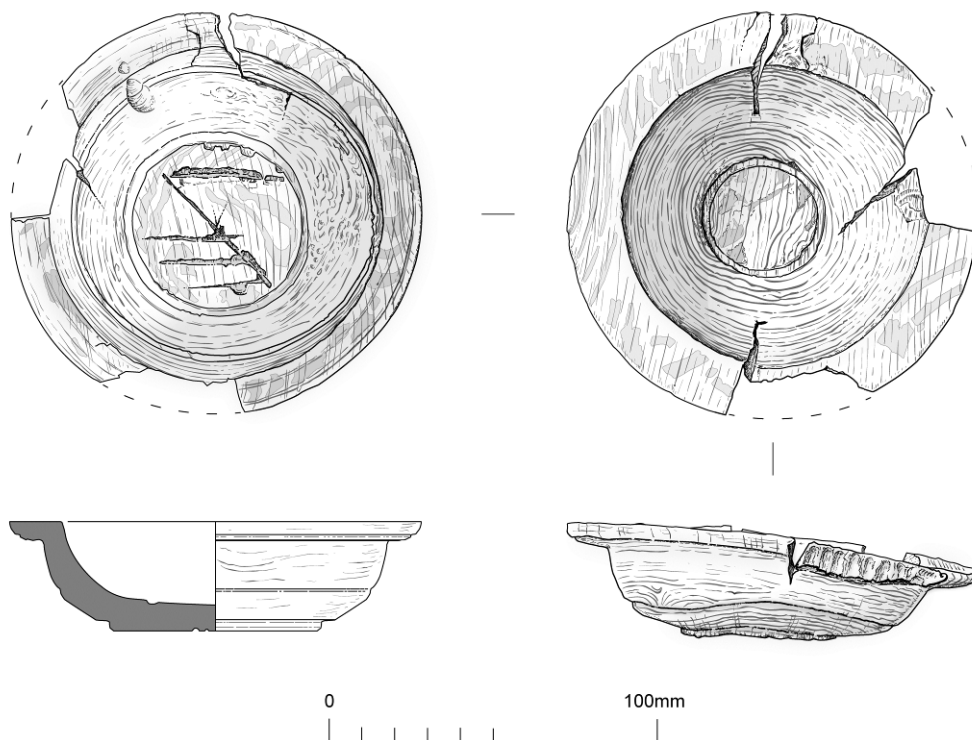
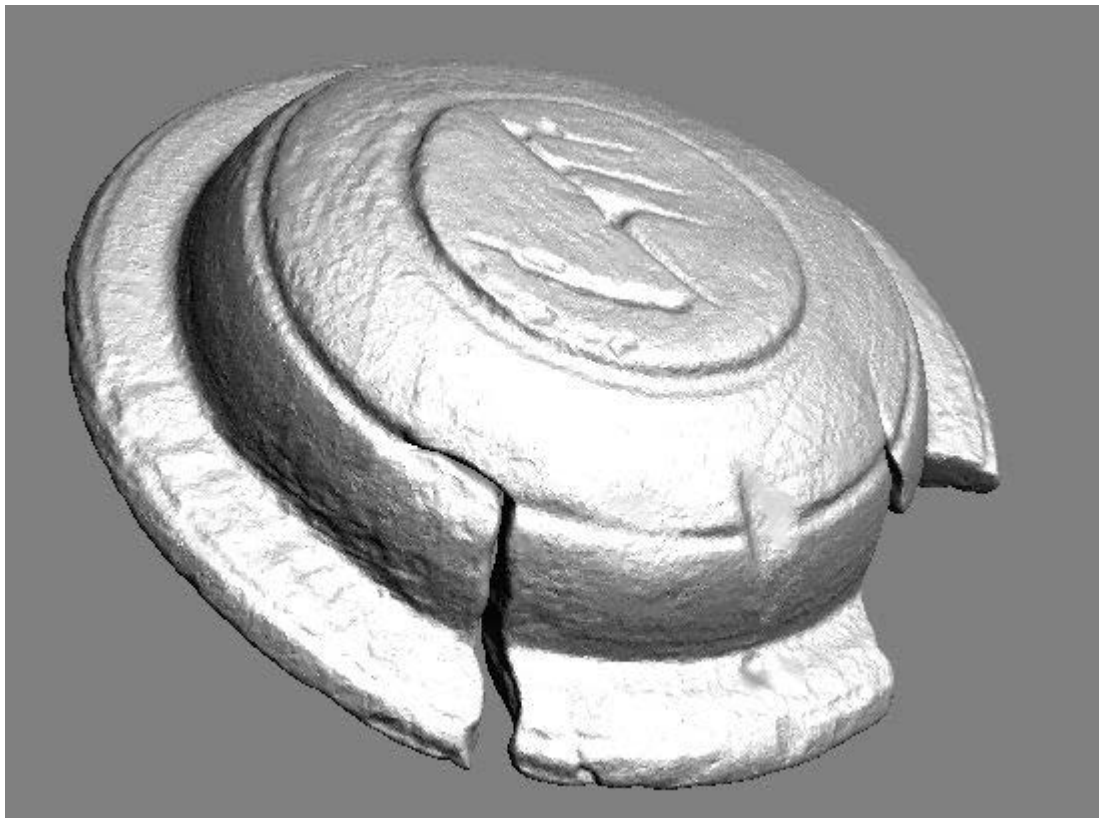
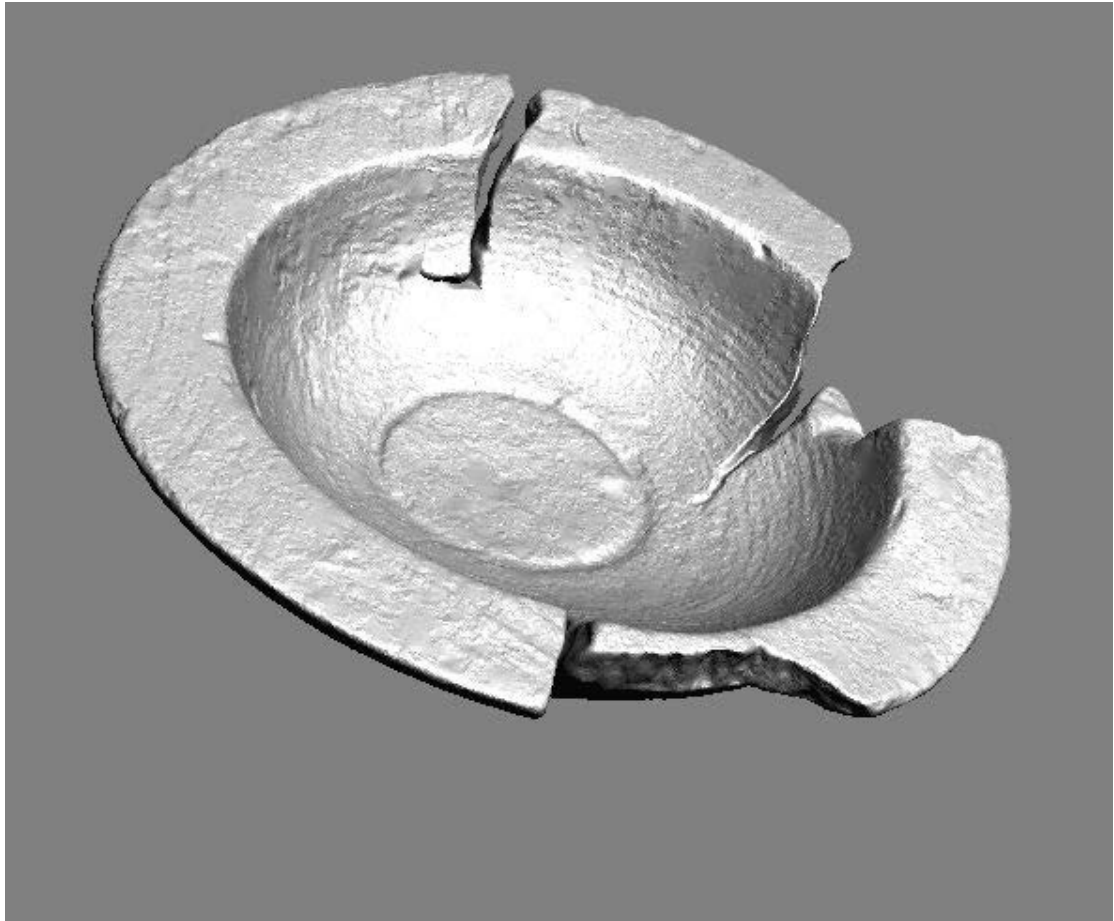


Figure 6A. CT 3088 (MSG 40/SF 141). Wooden bowl (Drawing by Anne Leaver)



Figures 6B, 6C, Laser Scan on wooden bowl. **CT 3088 (MSG 40/SF 141).**

CT 3111 (MSG 1214/no SF no.). Wooden bowl fragments (Fig. 7)

Description: two conjoining fragments of a lathe-turned wooden bowl. The largest fragment measures 66mm x 25mm x 5mm thick. The smaller fragment measures 45mm x 24mm x 5mm thick. Both pieces have one original edge - presumably the vessel rim - and have dark inner surface and paler outer surfaces. The outer surface has a chamfered edge around the top rim. Ash?

Context 171 (F52-2072), found in sample 209.



Figure 7

The Newport ship group of wooden bowls is small compared with those from St Mary Spital, London (eighteen vessels; Thomas, Sloane and Phillpotts 1997, 204 table 48), Austin Friars, Leicester (ten vessels; Clay 1981, 139-42), and Westminster (eight vessels from a cess pit dated *c.* 1230-1350; Thomas, Cowie and Sidell 2006, 78, fig. 49). Assemblages of wood bowls have been recovered from a range of medieval town

excavations, including Waterford (Hurley and McCutcheon 1997, 560-64), Southampton (Platt and Coleman Smith 1975, 228-30), Exeter (Allan and Morris 1984, 305-6) and Winchester (Keene 1990, 959-65). Wooden bowls from Wales are rare, one of the best known being a fifteenth-century burr maple mazer with engraved silver gilt rim binding which may have once belonged to the collegiate foundation at Clynnog Fawr, Gwynedd. That such wooden bowls continued into use in the sixteenth century is illustrated by those from the *Mary Rose* (1545), where their durability was an advantage. These were made from elm, beech, alder, birch, and have carinated rim edges. The nineteen examples with measurable diameters from the Tudor shipwreck ranged from 110mm to 465mm, and of these seven belonged to the 230-40mm range (Weinstein 2005, 446). Fifty-two bowls with diameters of less than 260mm were recovered, of these twenty five were beech, four birch, eighteen alder and the remainder unidentified (Weinstein 2005, 448). A wooden bowl with simple bevelled rim was also recovered from the Cattewater wreck (Redknap 1984, fig. 26, no. 27).

The complete bowls from the Newport Ship are characterized by their flat, everted rims, emulating metalware and continental ceramic forms. Flat rims occur in the Waterford assemblage (Hurley and McCutcheon 1997, fig. 16:2, 4), but are not common. Flat topped everted rims occur on medieval wooden bowls from Exeter, both with blackened surfaces. One made of elm was associated with pottery dated *c.* 1300; the other was made of lime (Allan and Morris 1984, 305, W1, W8; Fig. 173, no. 1, 8). Similar horizontal flanged rims are found on bowls from Konstanz (Prohaska-Gross and Soffner 1992, 314, top right).

One bowl has been marked with a device crudely cut with a knife blade. This is unlikely to be an official ownership mark or maker's mark (these were often branded onto bowls: eg those from the latrine of the Freiburg Eremitenkloster; Schmidt-Thomé and Ecker 1992, 102). The marking of treen appears to be more common within shipboard assemblages than settlement sites, where bowls were often shared within family groups (Frutiger 1978; Easton 1999).

MSG 420 (no SF no.). Small stone mortar (Fig. 8)



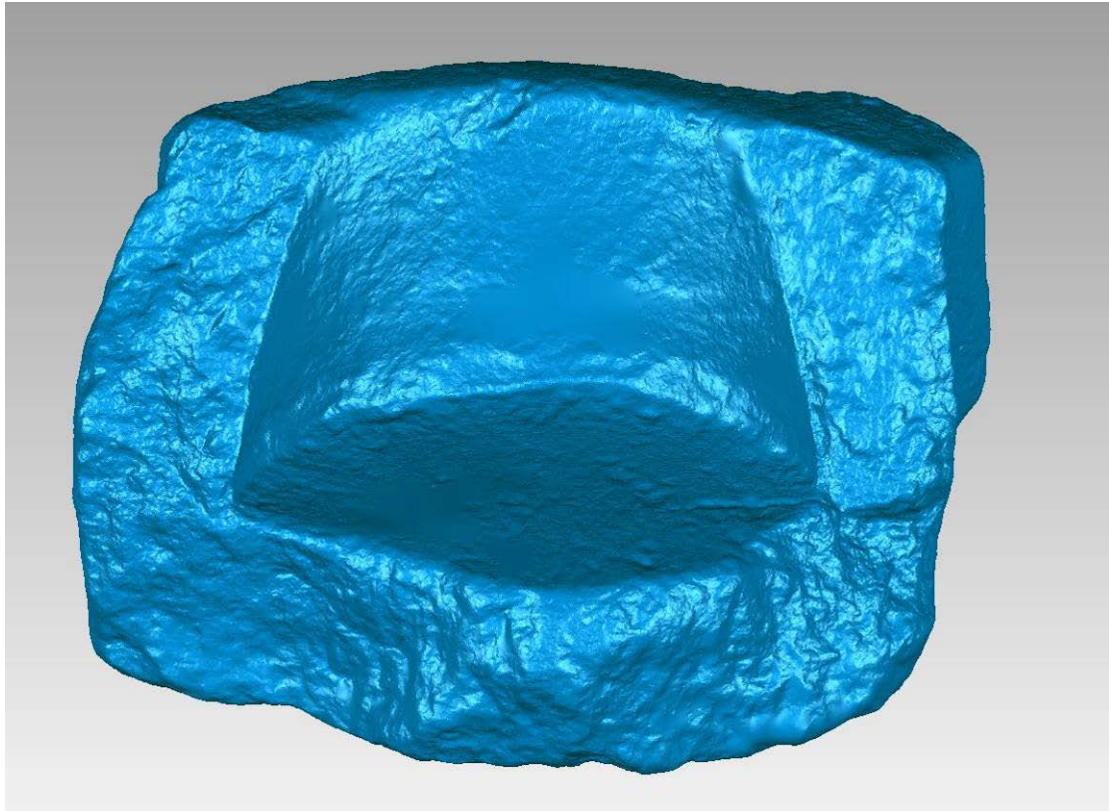
Description: fragmentary stone mortar originally with two surviving vertical ribs or lugs out of a probable four. Base thickness 52mm; wall thickness 27-50mm. Overall height 125mm; maximum reconstructed overall diameter (including lug) 270mm; internal diameter 136mm; outer diameter (excluding lugs) 211mm. Reconstructed internal volume approximately 1.1 litres.

Geological identification (JH): medium-grained grey sandstone (Munsell 5Y 6/1), closely resembling Pennant sandstone, which outcrops over a large part of Wales.

Context: unstratified.

Discussion: Similar forms from Southampton appear in different types of stone, such as Purbeck marble, English limestone and Caen stone (eg Southampton; Platt and Coleman-Smith 1975, fig. 268, no. 2200 (late medieval), fig. 268, no. 2208 (early fourteenth century), fig. 269, no. 2212 (c. 1300-1350)). Pennant sandstone was used for mortars closer to Newport, such as Acton Court, south Gloucestershire (Courtney 2004, fig. 9.44). The use of sandstone in the Newport Ship example suggests local manufacture, and as its context is uncertain, this object may be a later intrusion, or derived from the medieval town.

MSG 420 (no SF no.). Laser Scan of Small stone mortar (Figure 8a)



MSG 204 (SF 169). Knife handle (Fig. 9)

Description: knife handle made of boxwood from a small personal knife of scale-tang type, with simple iron pommel cap of gabled form. There is a suspension hole lined with thin copper-alloy sheet passing through the ‘scales’ and flat tang, while three small bi-metallic rivets originally with round ‘washer’ heads fasten both scales to the tang. Length 96.8 mm; max width 28.7mm; max thickness 13mm.

Context: 152



Figure 9

Discussion

The unstratified context for the stone mortar, coupled with the possibility of it being locally sourced, suggests either that this particular object may not have formed part of the ship contents and be a later intrusion, or that it is an item brought on board during its period of south Walian ownership.

Small multi-functional knives were essential kit for all adult males in the fifteenth century – as useful tools for eating and cutting / whittling items, rather than weapons. Similar handles have been found on the Cattewater wreck (also with a brass lined suspension hole for a leather thong; Redknap 1984, fig. 26, no. 23) and the *Mary Rose* (Every and Richards 2005, fig. 3.38, no. 80A 232), as well as within towns such as Winchester (sixteenth-century: Biddle 1990, fig. 261, 2899). A knife with scale tang handle was also found on board the early fifteenth-century cog from Almere Wijk 13

on the Zuiderzee (Vlierman 1996, fig. 32). Box is the most common type of wood for handles from the Mary Rose, and as in the case of the Newport example, some have a single row of decorative rivets with larger heads. No knife scabbards have been recovered from the Newport ship.

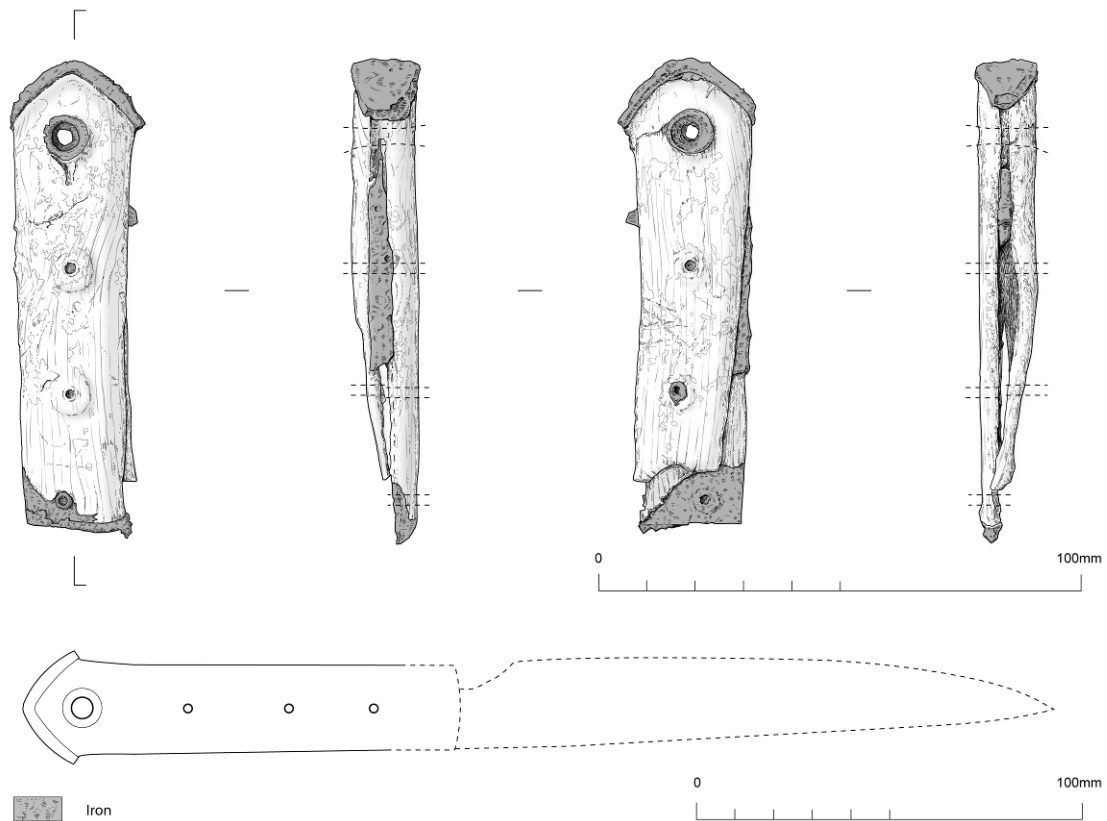


Figure 9A. (Drawing by Anne Leaver)



Figure 9B. Replica of knife MSG 204 (SF 169).

Appearance/hygiene

MSG 10/SF 168/CT 3099. **Single-sided comb (Fig. 10)**



Figure 10

Description: single-sided comb made of boxwood, rectangular with rounded corners, single tooth and part of one end missing. Width 92mm; H 48mm, 7mm thick

Context: 130

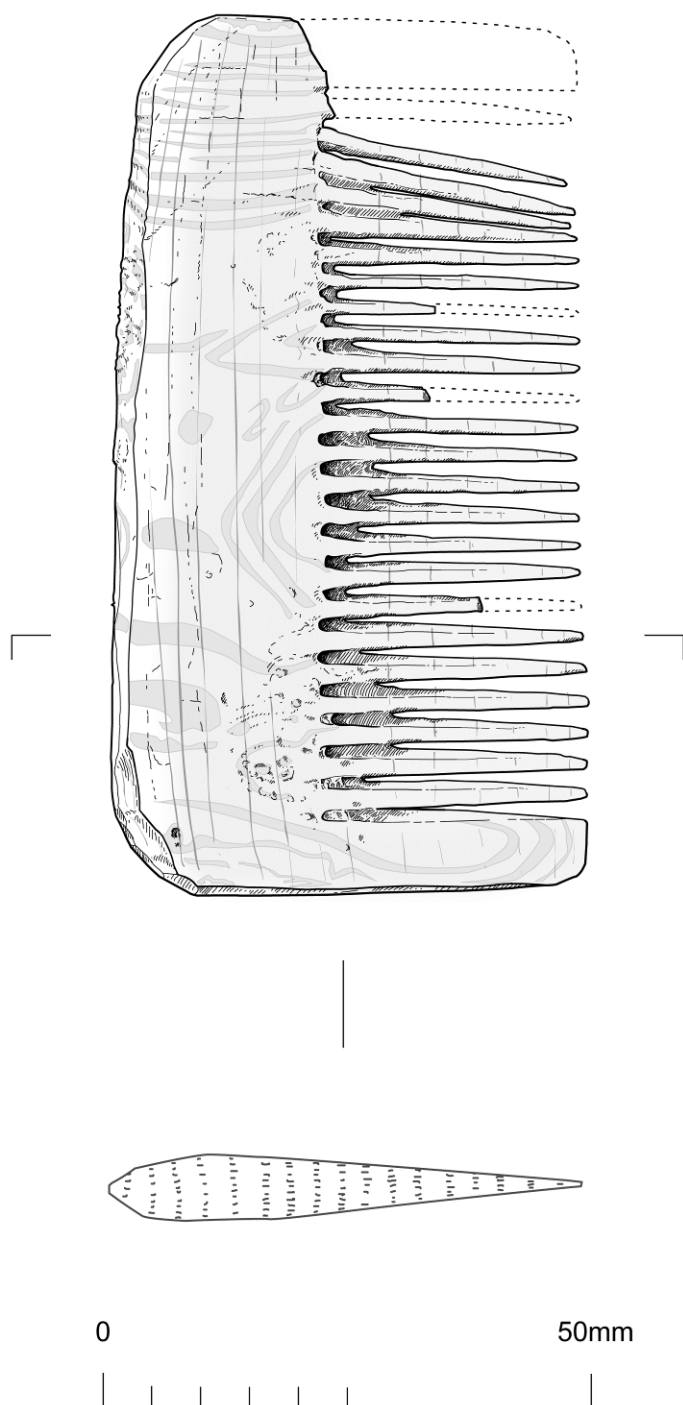


Figure 10A. MSG 10/SF 168/CT 3099. Single-sided comb (Drawing by Anne Leaver)

MSG 7/SF149/CT 3086. **Double-sided comb (Fig. 11)**

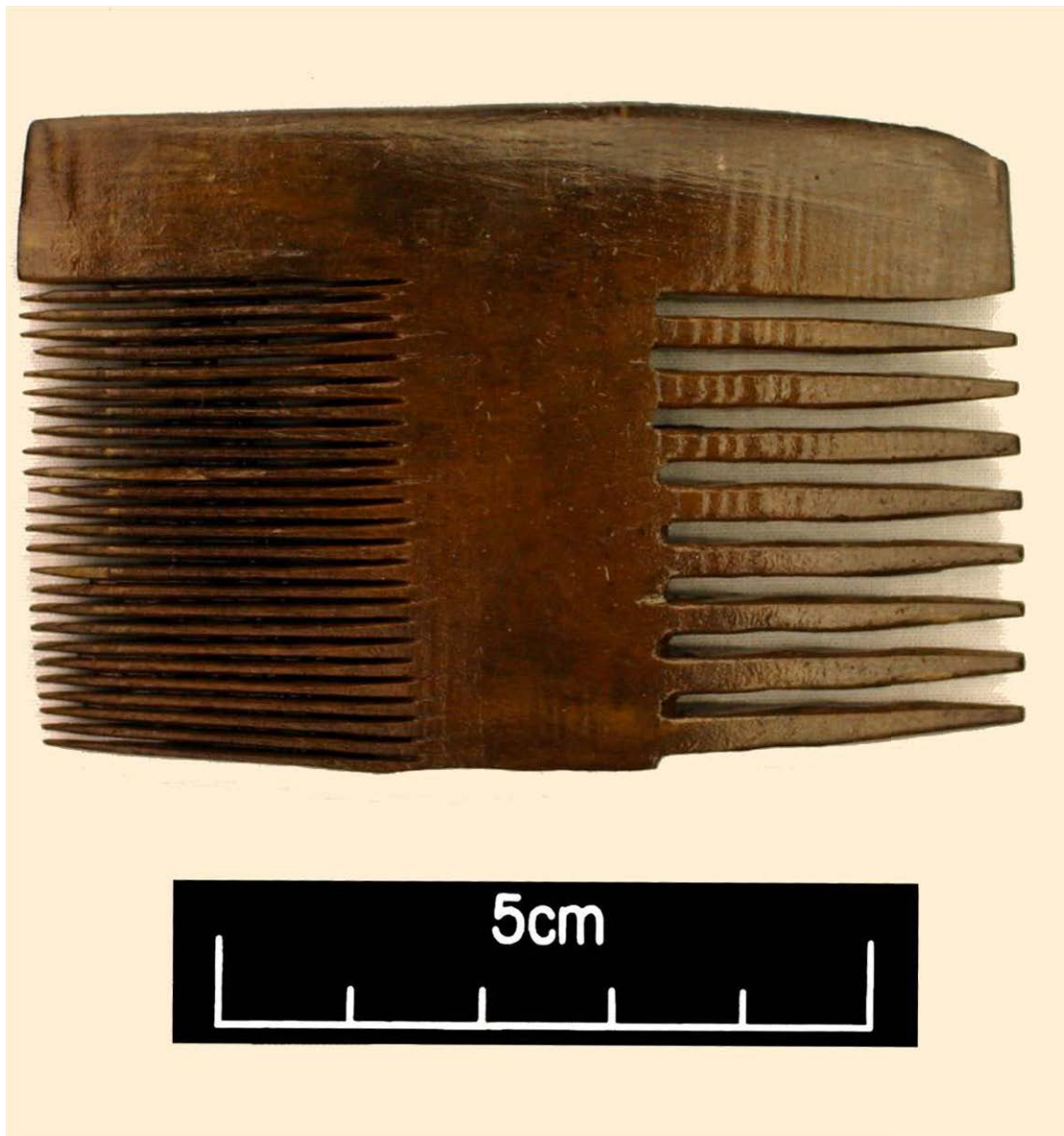


Figure 11

Description: double sided comb made of boxwood with fine teeth one side and coarse the other. W. 76.2mm; H. 50.3mm, 5 mm thick

Context: 149, F45-6, starboard

Discussion

Boxwood was often used to make combs as it is strong with a dense grain, does not warp when cut and can be finely worked to a smooth finish (bone and ivory were also used for the same reason), and it became a popular material for combs in the fifteenth

century. By the sixteenth century many were being imported into Britain in large numbers as they were much cheaper than bone, antler or ivory examples. Iberian ships such as the *San Juan* (1560) and *Trinidad Valençera* (1588) have produced wooden combs, some of boxwood and double-sided similar to the Newport example MSG 7/SF149/CT 3086 (Sullivan 2007, 220-221; Stevens *et al* 2007, fig. 19.1.17; Rodríguez-Salgado 1988, 196). Similar combs were found also on the Cattewater wreck (Redknap 1984, fig. 26, no. 28) and *Mary Rose* (Richards 2005, 156-59, fig. 3.48, nos 81A4652, 82A0945). A single-sided comb similar to MSG 10/SF 168/CT 3099 was found on board the *Mary Rose* (Richards 2005, fig. 3.48, no. 81A 4655), which produced eighty-one wooden combs. They would have comb cases of leather to protect the teeth, though none have been identified within the Newport finds.

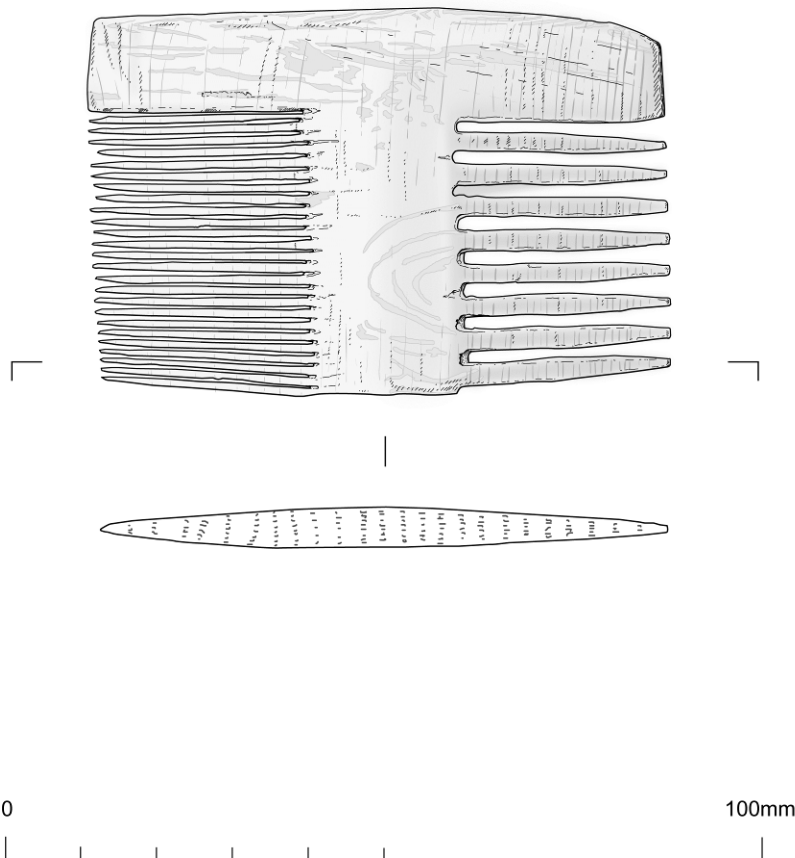


Figure 11A. MSG 7/SF149/CT 3086. **Double-sided comb (Drawing by Anne Leaver)**

Recreation

MSG 3087 (SF 169). Gaming piece (Fig. 12)

Description: disc-shaped gaming piece, made of boxwood and decorated on both sides with a concentric design. Probably for *tabula* or backgammon. Diameter 33mm; max. thickness 9mm.

Context: 130



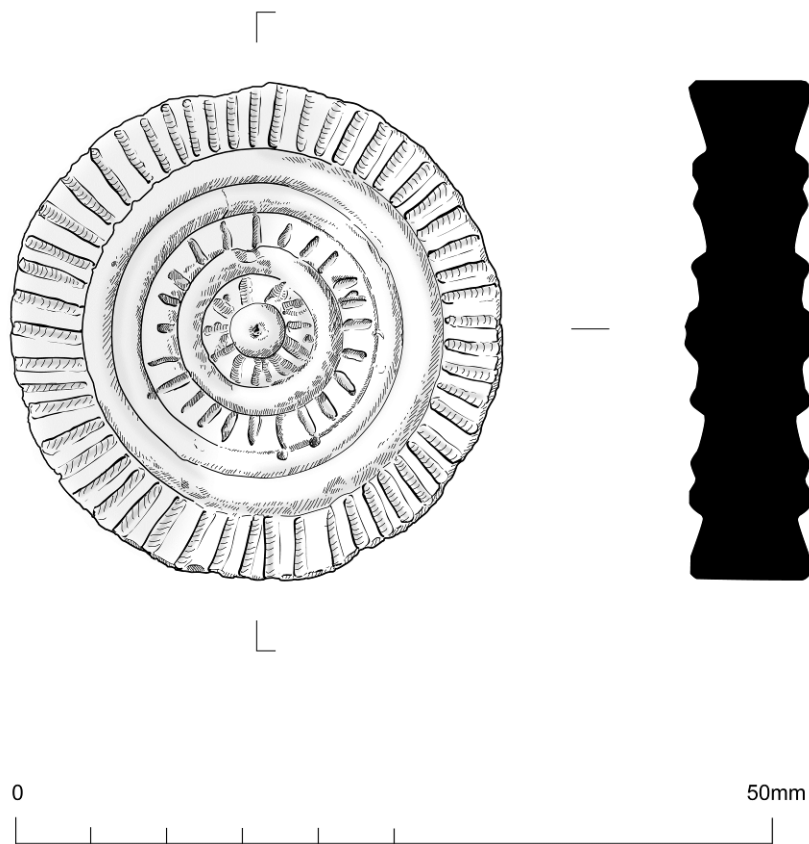
Figure 12

Discussion

The presence of discoid playing pieces on ships is illustrated by the *Mary Rose* (1545), and such pieces could have been used in a variety of games such as merels or

tabula (Murray 1952, 37ff.; Redknap 2005, fig. 3.32, no. 80A 0833). One insecurely stratified gaming counter with turned concentric mouldings on one face reminiscent of the Newport piece had a diameter of 25mm (Redknap 2005, fig. 3.32, no. 80A 0833). Turned wooden gaming counters decorated with concentric grooves are known from London (from a phase dated c. 1350-1400; Wardle 2010, no. 962 – 964).

Figure 12A. MSG 3087 (SF 169). Gaming piece (Drawing by Anne Leaver)



Work on board

MSG 3098. Awl or fid (Fig. 13)

Description: made of boxwood, rectangular in cross section at handle end, with a conical taper to a sharp point. Length 100mm, W 11mm, T 8mm.

Context: 128 (F31, starboard, near mast step)



Figure 13

Discussion

Fids occur in small numbers on medieval wrecks, such as the early fifteenth-century cog from Almere Wijk 13 on the Zuiderzee (Vlierman 1996, fig. 29, no. 48).

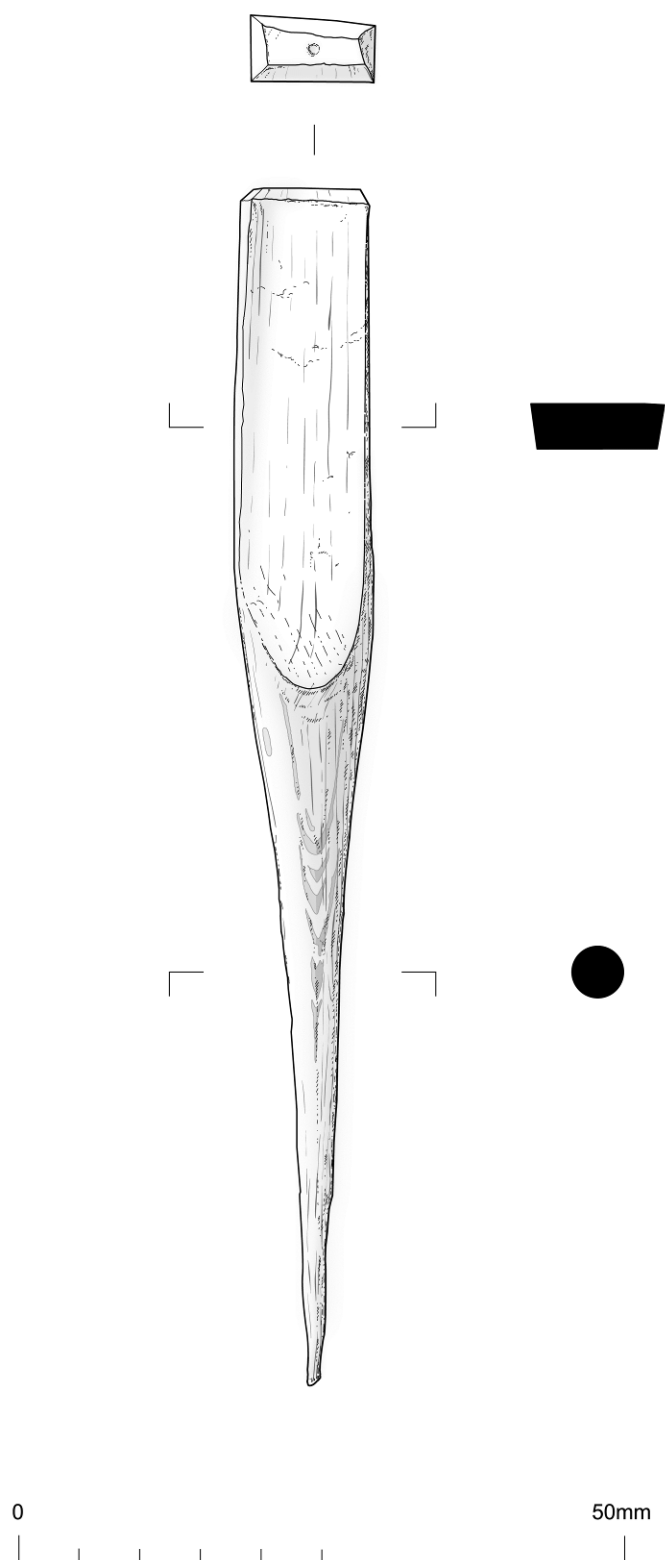


Figure 13A. MSG 3098. Awl or fid. (Drawing by Anne Leaver)

Navigation

MSG 56 (SF 120). Sandglass (Fig. 14)

Description: everted neck of a blown sandglass or running glass *vial*, *ampoule* or *ampule*. Chemical analysis has established that it is made of a cloudy potash glass, typical of that made in NW Europe and the NW Iberian peninsula between the fourteenth and sixteenth centuries (Peake 2011). A second fragment of similar glass from the same context is probably from the same item. Minimum external D 32mm, maximum external D 37mm; hole D about 4mm.

Context: 130, near the mast-step.



Figure 14

Discussion

Sandglasses or running glasses recorded the passage of time of board ship (providing an absolute measure of a set period of time), essential for the pilot to track the progress of the ship on a particular course, and for providing a basis for regulating the timing of watches. Two similarly formed glass bottles would be fitted mouth to mouth within a wooden holder, usually comprising a pair of circular or hexagonal case ends, and up to six upright staves. A thin metal diaphragm with a central hole would have been placed between the opposing glass rims of the vessels, and the junction sealed with thread and wax. The remains of four, possibly five, sandglasses have been recovered from the *Mary Rose* (1545; Richards and Stimson 2005, 281).

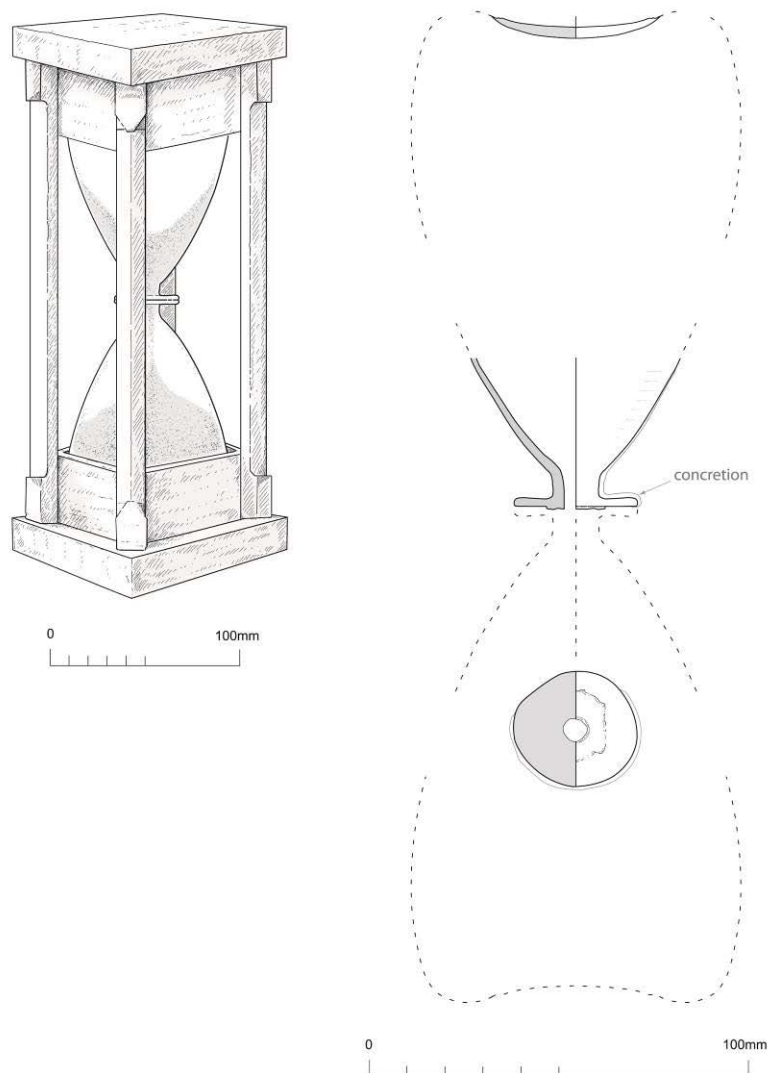


Figure 14A. MSG 56 (SF 120). Sandglass (Drawing by Anne Leaver)

Weaponry

i. Armour

Two gilt copper-alloy strips were found between ship futtocks, and originate from the same object (MSG 172/SF 153, MSG 171/154; designated strip one and strip two respectively).

MSG 172 (SF 153). Brass strip attached to iron plate (Fig. 15).

Description: Strip one is still attached to a fragment of iron plate measuring 148 x 73mm x 4mm thick. The strip, which is 21-22mm in width, has one scalloped edge and rivet attachment holes, and is engraved in Gothic *textura* (*textualis quadrata*) script, bearing the letters .ENS followed a foliate/organic scroll, forming a break between words. The alloy contains a minor amount of lead (copper 80.8%, zinc 18.9%, lead 0.3%; Kate Hunter, pers. comm.; McDonnell 2011). L 75mm; W 22mm; rivet diameters 3-4mm. X-radiographs reveal a pattern of rivets to secure brass strips and internal padding, and at least one small rove-type iron washer to secure and protect a leather strap (?chin strap).

Context: 152, found between Frames 21 and 22.



Figure 15

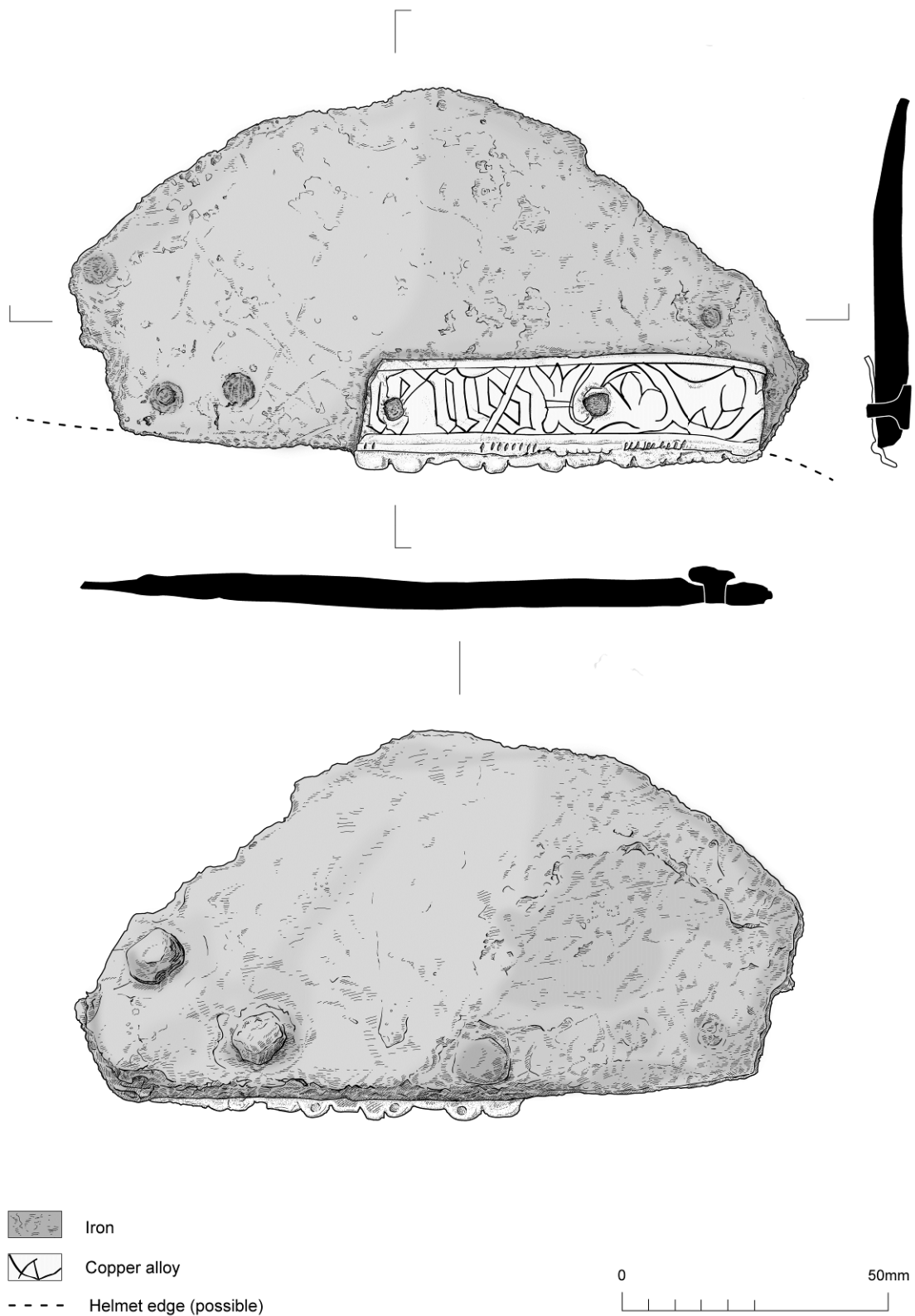


Figure 15A. MSG 172 (SF 153). Brass strip attached to iron plate (Drawing by Anne Leaver).

MSG 171 (SF 154). Brass strip (Fig. 16).

Description: Strip two (SF 154) is now detached from its original iron. Strip 2, like strip 1, is 21-22mm in width, has one scalloped edge and rivet attachment holes, and is engraved in Gothic *textura* (*textualis quadrata*) script, bearing the text **MEDIUM ILLORUM**, separated by a diamond-shaped stop, and a foliate scroll after 'illorum'. . The alloy contains a minor amount of lead (copper 79.9%, zinc 19.7%, lead 0.3%; Kate Hunter, pers. comm.; McDonnell 2011). L 117mm; W 21mm; D of rivet holes 2-3mm.

Context: 152, found between Frames 20 and 21



Figure 16

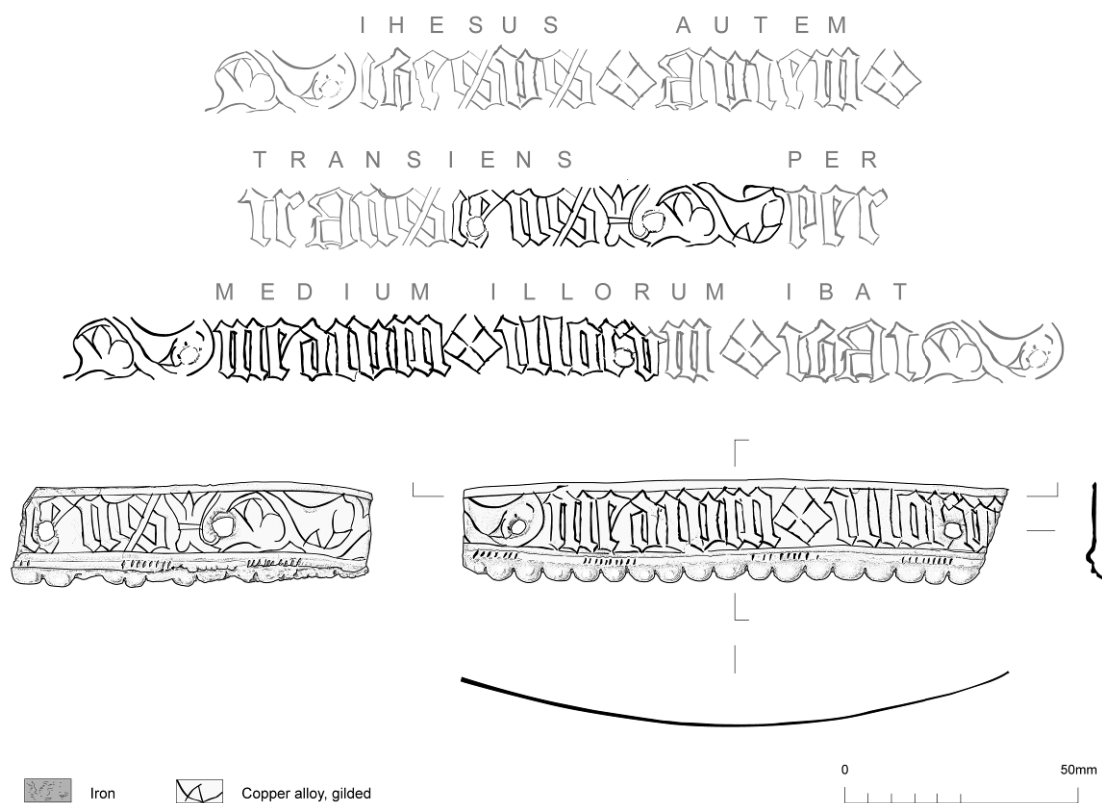


Figure 16A. MSG 171 (SF 154). Brass strip. (Drawing by Anne Leaver).

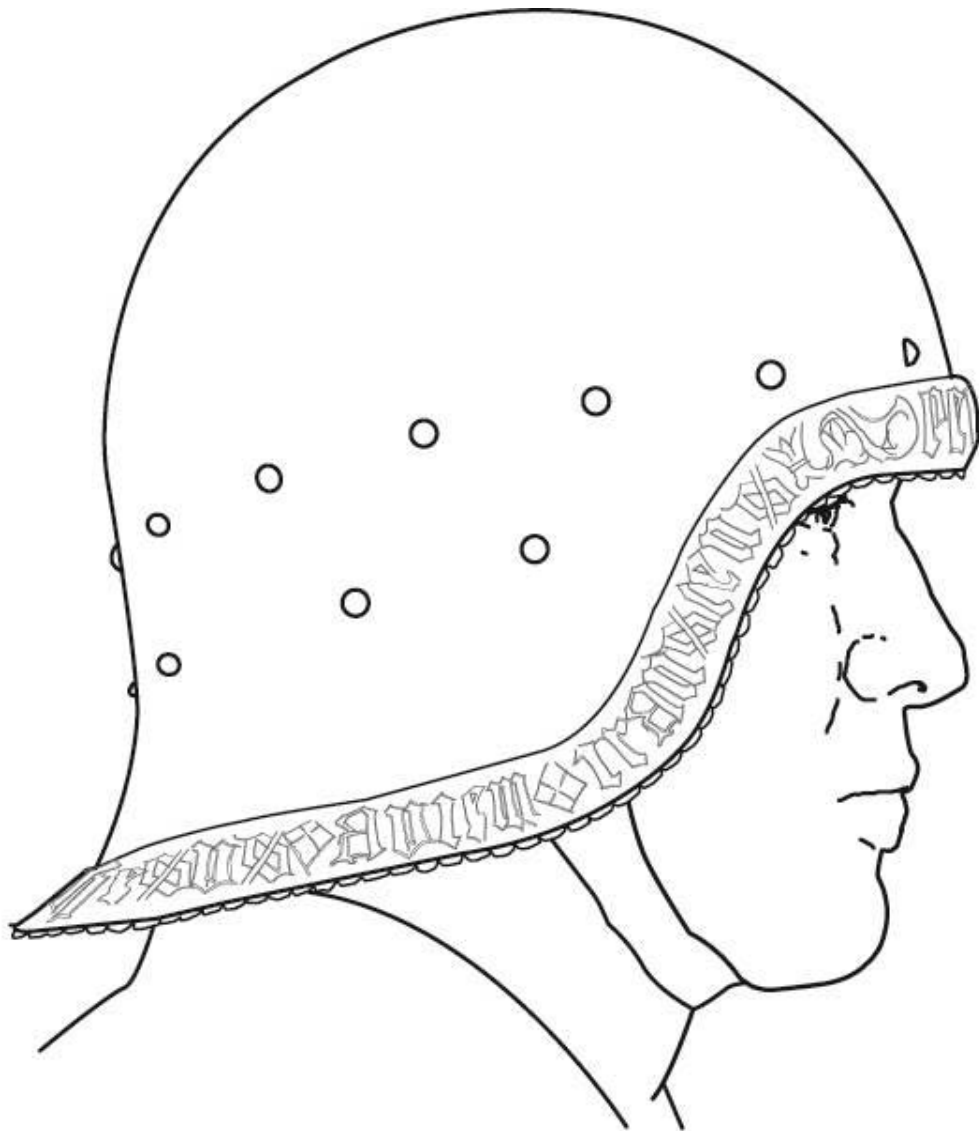


Figure 16B. MSG 171 (SF 154) and MSG 172 (SF 153). Iron Helmet with Brass strip. (Drawing by Anne Leaver).

Discussion

Both strips, which are of identical widths, have the same cusped edge design, rivet attachment holes, and are engraved in the same size and style of letters in Gothic *textura* (*textualis quadrata*) script. X-ray fluorescence analysis by G. McDonell has established that the strips were made from brass, containing a minor level of lead (see pp. 00): 79.7-79.9% copper, 19.7-19.9% zinc and 0.3% lead for one strip, 80.8% copper, 18.9% zinc and 0.3% lead for the other.

Applied ornamental borders of metal (in *latten*, silver or gold) occur on European armour from about 1340. A vital clue to the original function of the two strips is provided by the slightly concave shape of the back of the surviving iron plate, and the slight curvature to its surviving edge, along which one strip remains attached: both features appear to be original rather than a result of post-depositional distortion. The second engraved strip is bent in a regular manner which may reflect the curvature of the iron to which it was originally attached. These suggest that the strips may have formed decorative copper-alloy strips from a helmet – and there are indications that other sections of strip have been wrenched off, both ends of one fragment one have lifted slightly. However, it is very unusual to have decorative cusps along a manufactured armour edge in this manner as they overhang the edge – at times wrapped around the edge. Decorative brass cusped edging is usually found along the strip edge away from an armour edge. However, a parallel to the orientation of the inscription with moulded edge at base and plain edge at top is provided by the same Textura text ('Iesus · autem · trans · ie...') on strips from a gauntlet from Castello di Soffumbergo, Faedis, Udine, Italy (Grönwald 2010, Abb. 14).

The dimensions of the Newport strips can be compared to those on a Milanese open-faced sallet now in the collections of the Royal Armouries (the Domenico Negroli sallet no. IV.424; Norman and Wilson 1982, no. 9; Dufty 1968, pl. LXXVII, top; Karcheski and Richardson 2000, 16-18). The larger Newport fragment appears to come from the right side and brow area of a helmet, allowing for a missing word **PER** for most of the curve around the eye. There appears to be a square iron washer/rove and rivet on the inside of the Newport iron fragment in a position to secure a chin-strap, and a smaller rivet to hold lining.

The text on the decorative binding probably originally read IHESUS AUTEM TRANSIENS PER **MEDIUM ILLORUM** IBAT , ‘But Jesus passing through the midst of them went on his way’. This biblical text from Luke Ch.IV.30 was one of the commoner Biblical quotes commonly adopted as a charm and consequently found on a range of objects in the later medieval period. As a protection against thieves, it was sometimes applied to boxes or small coffers/coffrets: examples include the Talbot casket (c. 1400; BM M&LA 1977, 5-2, 1; Cherry 1980). It also occurs on standard gold nobles (the largest English gold coins of the period) which depict ships during the fourteenth and fifteenth centuries, and on a gilt band about the level of the deck on the late fourteenth-century silver *nef* that was bequeathed to Toledo Cathedral by Archbishop Pedro Tenorio (AD 1377-99; Oman 1963, Plate I). The reconstruction drawing provides a ‘best fit’ interpretation, based on the available evidence (Fig. 0).

The lettering is Gothic *textura* used for epigraphic inscriptions for a long period between 1320s and 1590s. Letters diagnostic of an individual craftsman’s style are missing (a, h, y), though the first minim of the u is higher than the second, a feature of some brasses dated to the period 1438-1445 (Jerome Bertram, *in litt.*). The diamond shaped stop appears on brasses from the 3rd quarter of the fourteenth century, though the jumble of devices separating words on the Newport strips also occurs on some mid-fifteenth-century brasses such as Brightwell Baldwin, Oxfordshire c. 1445 (S. Badham, *in litt.*). The degree of separation of individual letters seems most indicative of a date around the second quarter of the fifteenth century (*ibid*).

The text on the strips was clearly an appropriate message for armour, and the same legend occurs on a fourteenth-century breastplate and basinet visor from Churburg (armour of Count Ulrich IV von Matsch, Milan, c. 1370-90; Churburg, Gräflliche Rüstkammer inv. CH13; Beaufort-Spontin and Marti 2005, 230), late fourteenth-century gauntlets in the Bargello, Florence and the Meath armour, a slightly composite etched Italian half-armour of about 1510-20 in the Royal Armouries collection (no. II.392). The copper-gilt parade helmet of Charles VI of France (1368-1422) recovered in fragments from the Cour Napoleon excavations at the Louvre in Paris and thought to date c. 1410 has an ornamental strip engraved EN BIEN (Fleury

1986; Curry 2002, 54); fifteenth-century armour with copper-alloy borders includes Henry V's helm in Westminster Abbey, an unpublished sallet in Whaplode Church, Lincolnshire, and the German armours of the Emperor Maximilian I and the Archduke Sigmund of Tyrol (Kunsthistorische Museum, Vienna; C. Blair, *in litt.*).

ii. *Archery*

MSG 154 (SF 164). Archer's bracer (Fig. 17)

Description: eight-sided bracer made of two panels of leather, the thicker outer panel of cattle hide being decorated, and thinner inner lining of calfskin being plain. Both have a quadrilateral form with truncated corners, orientated at 45° to the arm. The external surface of the leather is decorated, except for a longitudinal section between two of the truncated corners, which is outlined with a single row of stamped ringlets (diameters 1.5mm). This plain section tapers in width from 34mm to 22mm at the wrist end, and would have been worn along the inside of the arm, to deflect the bowstring. There are two small slit-shaped holes 3mm in length and 13mm and 19mm apart on either side for straps to attach the bracer to the arm. The outer piece is 116mm long by 119 mm and 4.2mm thick. The lining measures 110 x 111mm x 1.5 – 2mm thick.

Decoration takes the form of two heart/arrow-shaped perforations (H 12-13mm, W 11-12mm) through the cattle hide outer panel, and on two sides of this perforation punched scrolls, each bearing a word **AMILLA** in Gothic *textura*, between clusters of pellets. Over-stamping has obliterated the beginnings or ends of the four scrolls, but by overlaying each fragmentary scroll, it has been possible to reconstruct the complete word. There are six punched hexafoils, some over-stamping the scroll and lettering. It is possible that the calfskin lining was coloured red, to show through the heart-shaped perforations in the outer panel.

Context: 130, from near base of the maststep.



Figure 17

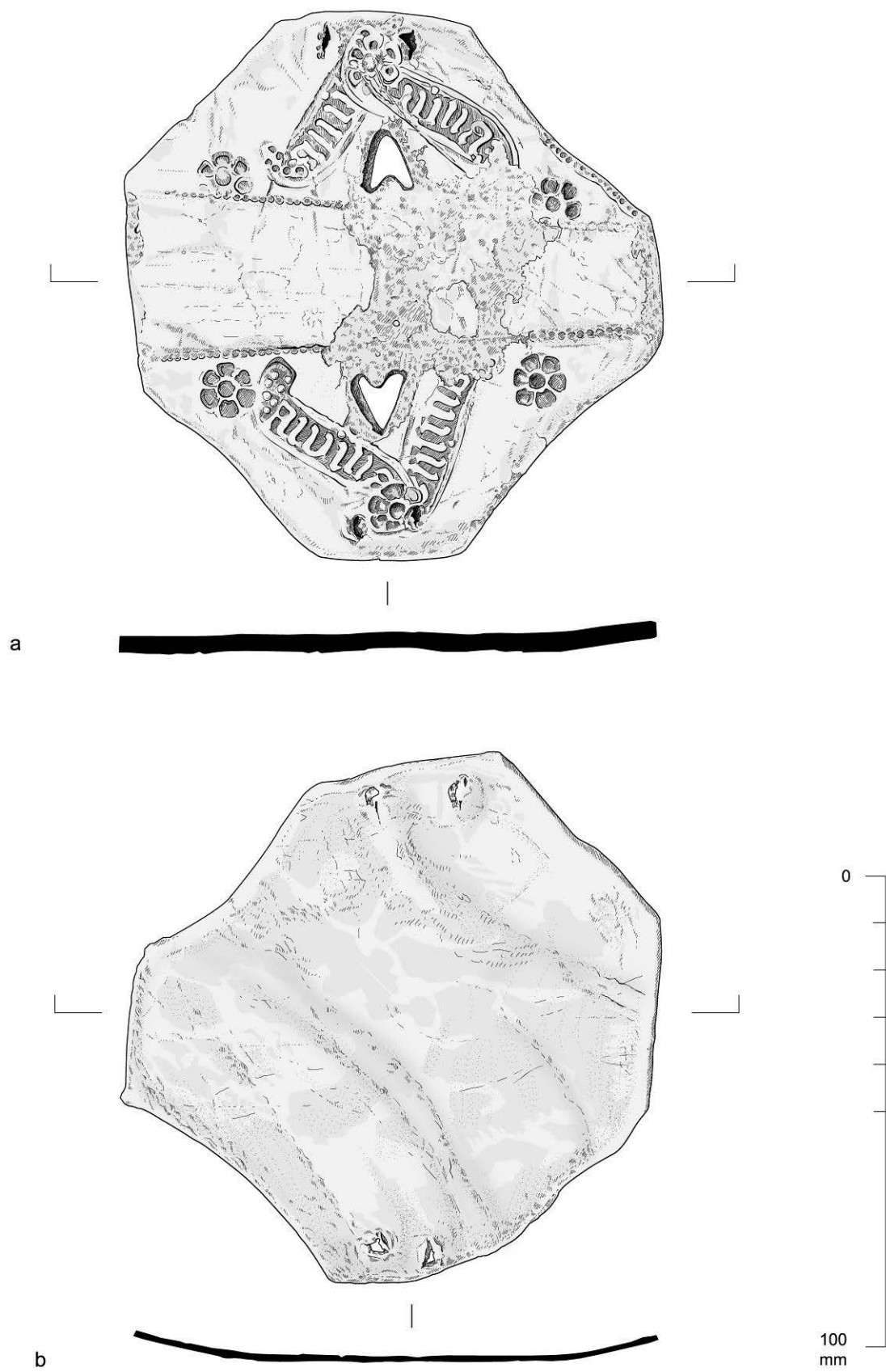


Figure 17A. MSG 154 (SF 164). Archer's bracer. (Drawing by Anne Leaver).

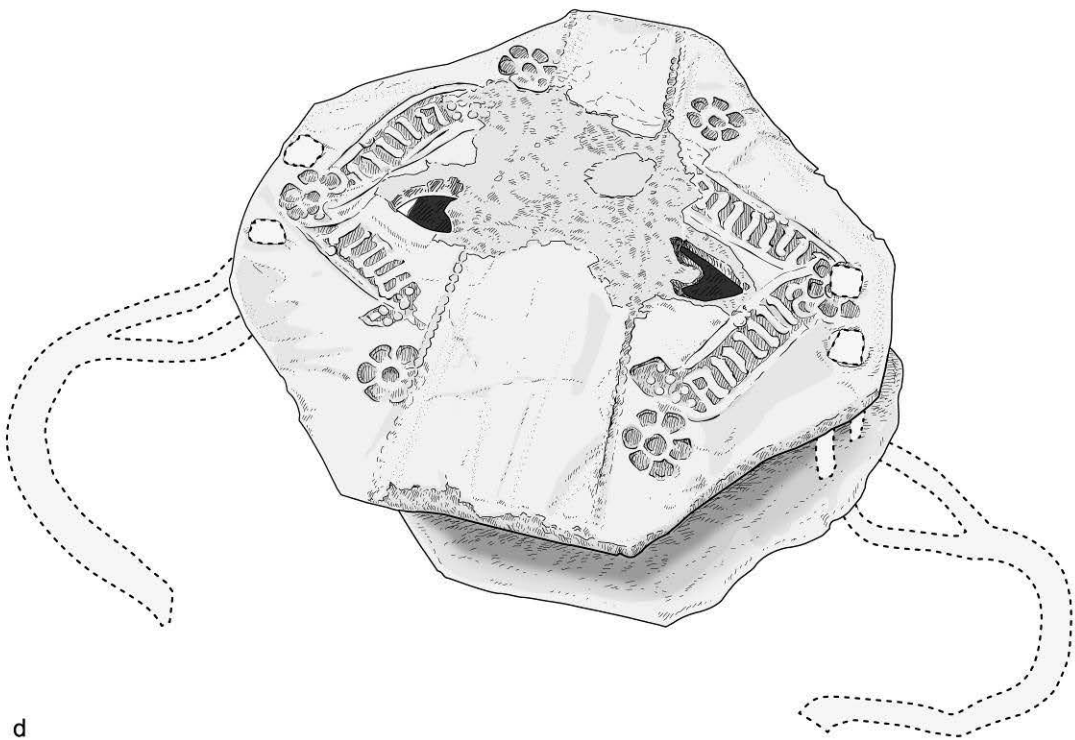
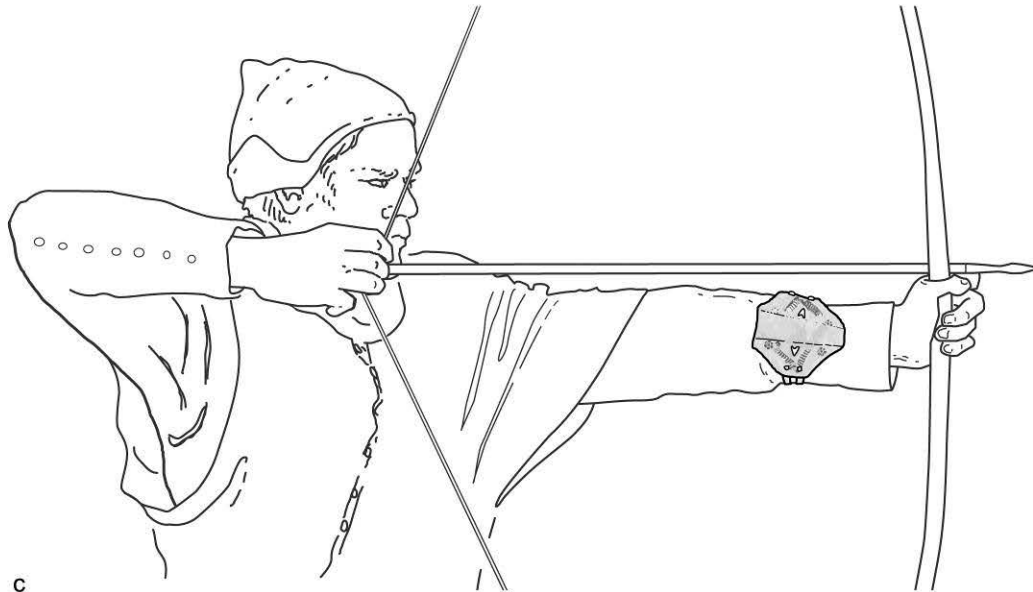


Figure 17B. MSG 154 (SF 164). Archer's bracer. (Drawing by Anne Leaver).

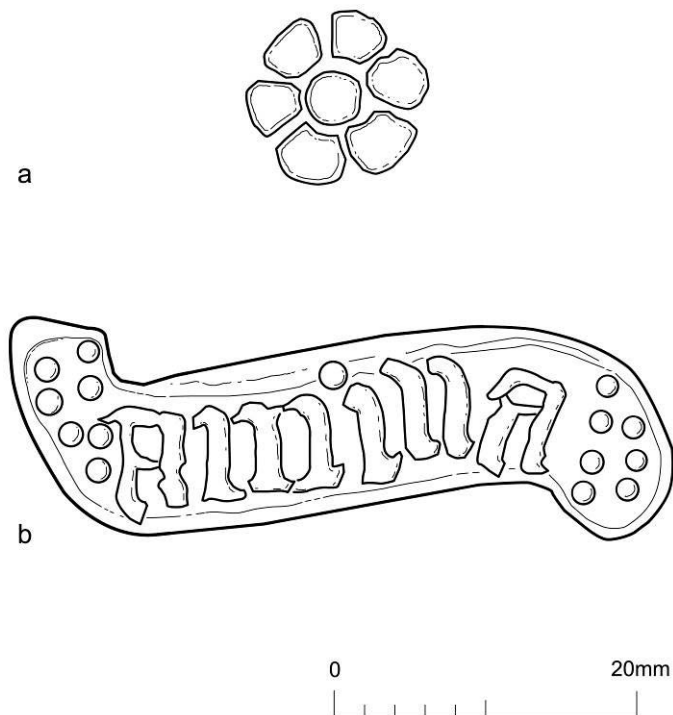


Figure 17C. MSG 154 (SF 164). Archer's bracer. (Drawing by Anne Leaver).

Discussion: the bracer both protected the inside of the forearm from the bowstring, and ensured that loose sleeve fabric was kept clear of the path of the string (Hodgkin 1951). They were made of leather or horn, and sometimes ivory (elephant). A total of twenty-four leather bracers have been recovered from the *Mary Rose* (1545), most having a rectangular form, with the corners cut off. Of these, the higher quality bracers had riveted bifurcating 'Y' shaped straps of leather to fasten them to the arm (MR 81 A4242, A1460, A00943, A0815; H. D. H. Soar, *in litt.*; Soar 2011, 644-665).

The lettering within the overstamped scrolls is hard to make out. The normal Latin term for bracer was *bracea* or *bracera*, and the term *armilla* (bracelet, armlet) does not appear in medieval arms and armour inventories (C. Blair, *in litt.*). One suggestion is that *amilla* may be a fifteenth-century 'phrase of menace', perhaps the fifteenth-century imperative of the contemporary Spanish verb *Amilantar*, which means 'to terrify or to intimidate' (J. Brazier, *in litt.*). However, the coincidence of abbreviated word for armlet cannot be ignored, and may have been deliberately selected from a range of punches, such as those used by bookbinders. The scroll type is very similar to those used to decorate fifteenth-century book covers, such as the bindings of the

Opera of Johannes Gerson printed at Strasbourg in 1488 and bound in Saxony (Thomas 1975, 67, fig. 56), or on the anonymous binding from an Augsburg shop active from the 1470s of an edition of Guillelmus Peraldus (Sotheby's 1989, cat. no. 60). Similar combinations of pentafoils and scrolls occur on leather bindings, such as that for Gabriel Biel's *Sacri canonis missae expositio* of 1488 (Sotheby's 1994, cat. no. 56).

One *Mary Rose* bracer has a similar form to the Newport example, and is randomly punched with decoration of segmented horseshoe ('nimbus'; MR80 A0901/1-4) form either side of the presumed string path (length 143mm; width 124mm: 80 A0901/1-4). Three of the *Mary Rose* examples bear the royal coat of arms (*honi soit qui mal y pense*), while others have randomly positioned castles and pomegranates (Catherine of Aragon), heraldic devices/monograms. Some would indicate in whose service the archer was employed or recruited. An elaborately decorated example in the British Museum bears the legend **IHS HELPE** 'Jesus help) and crowned rose (length 125mm; width 147mm; thickness 3mm; BM MLA 1922, 1 – 10, 1; British Museum 1924, 17, fig. 11; Waterer 1981, 84, ill. 74). Examples said to date from about 1500 with punched ornament are in the Royal Ontario Museum, Toronto (ibid, 84). Other examples include a plain example with six lace perforations down each side from Coventry (Shelton Collection, Herbert Art Gallery and Museum, Coventry); a bracer at Bolton Hall traditionally 'said to have belonged to Henry VI and left behind after Battle of Hexham' (1464) bearing the legend **ihs** and crowned rose; a leather bracer made from re-used shoe parts (a cut-down poulaine sole for the guard, and shoe straps and buckle) from a late fourteenth-century context at 16-22 Coppergate, York (Mould, Carlisle and Cameron 2003, 4303-5). The Museum of London core collection contains nine bracers, all finds made during the late nineteenth or early twentieth centuries, many from 'Finsbury', a good place for archery in the fifteenth and sixteenth centuries. One (A26607) is very similar to the Newport example, being octagonal with incised leaf decoration, and two simple perforations on each side; others are A2272; A4845; A25527; A26749; A26846; A28271; NN20994; NN20995; two are rectangular, with random stamps similar to the *Mary Rose* types; J Clark, *in litt.*)

Bracers are sometimes shown on fifteenth-century manuscript illustrations of archers, and different forms of strap are sometimes indicated. Burgundian archers are shown with Y-shaped straps (Bern Historical Museum), while single straps appear on MS in the Bibliothèque nationale, Paris; British Library, London (Cotton Julius E IV, fol. 18v, 20v, Beauchamp Roll), and in 'Sebastian's altar' by The Master of Hl. Sippe', c. 1493 (Köln, Wallraf Richartz Museum). The spacing of the holes on the Newport bracer suggest that it was originally fastened by a single strap on either side, about 20-22mm wide (now missing). Wear to the surface of the decorated face in the centre of the plain longitudinal rubbing section suggests that it had seen considerable use. The form and close spacing of the lettering confirms a date in the second half of the fifteenth century.

iii. *Stone shot* (Figure 18)

The discovery of five stone shot within the hold points to the Newport Ship being armed with early wrought iron guns.

MSG 421 (SF 157). *Stone shot*

Description: D 80-82mm; weight 623g.

Geology (JH): pale cream, ooidal limestone with individual, densely packed ooids (<750µm) in diameter. This can be classified as an oomicrite or a calcilutite. The lithology is different from MSG 423 (SF128).

Context: 130

MSG 422 (SF 147). *Small stone shot*

Description: max. D 55mm; weight 193g.

Geology (JH): Sandstone similar in lithology to MSG 424/425, although slightly finer grained (fine to medium grained) and with a slightly higher non-clear or frosted quartz content, minor green grains and reddish, possibly jasper, grains.

Context: 130

MSG 423 (SF 123) *Stone shot*

Description: D 80-83mm; weight 643g.

Geology (JH): pale grey, medium to coarse-grained, quartz arenite (a sandstone dominated by quartz grains and with a small amount of matrix material). The grains are 0.25 to 0.5 mm in diameter, sub-rounded and well sorted. Most grains are of clear, or slightly frosted quartz but other coloured grains are also present. These include red, orange, and black types, the former two may be varieties of quartz, possibly iron stained, whilst the latter may be of shale or chert.

Context: 128

MSG 424 (SF 155). *Stone shot*

Description: D 82mm; weight 624g.

Geology (JH): sandstone, very fine grained, moderately well-sorted, quartz-dominated, with minor iron-stained quartz grains.

Context: 130

MSG 425 (SF 307). Stone shot

Description: D 67-70mm; weight 416g.

Geology (JH): sandstone (quartz arenite), quartz dominated, with orange iron-stained grains and minor green (unidentified) grains. Reminiscent of Monmouthshire sandstone.

Context: 1001



Figure 18

Discussion

Late medieval merchantmen and warships both carried guns – the former for defence. Five examples of stone shot have been found. It is likely that four of the five stone shot recovered from the hold of the Newport ship are derived from the same sandstone lithology but from different horizons, probably from the Old Red Sandstone Carboniferous succession of England and Wales (Horák 2011, 5-6). The limestone appears to be from non-local Jurassic strata, the closest coastal outcrops lying in Dorset (Beer/Seton), although outcrops in Normandy on the east side of the Cotentin Peninsula and on the west coast near la Rochelle are other possible sources.

Consequently if the stone shot is not intrusive, it is possible that some at least results from resupply after the ship had been acquired by new owners based in Britain.

At least three sizes are represented: 55mm diameter (MSG 422), 67/70mm (MSG 425), and 80-82mm diameter (MSG 421, 423, 424) (2 3/16", 2 3/4" and 3 1/4"). These are small in comparison to the shot from the *Mary Rose* (where shot gauges to match shot to gun bore, range from 10cm, 11.8cm, 13cm, 14.8cm, 15.75cm, 18.6cm), and the larger stone shot on the sixteenth-century Mortella II and III wrecks in Saint Florent Bay, Corsica (22cm; de la Roche 2011, 74). The Cattewater wreck produced three wrought iron swivel guns or *serpentynes*, which were used defensively by merchantmen. The bore of 55mm matched smaller stone shot from the wreck, and is close to the smaller shot from the Newport ship (Redknap 1984, fig. 47, nos 136, 137). The ship may therefore have been equipped with light defensive pieces, breech loading swivels sometimes depicted on mizzen tops of larger vessels, but placed strategically around the ship. In contrast, the shot from the later Basque whaler *San Juan* (1560) is all cast iron round shot (Stevens *et al* 2007, 162-63). An early example of iron ordnance from Welsh waters is the gun discovered about 1830 during dredging in Tenby Bay, and now in Tenby Museum. The length and width (17cm) of its wrought iron barrel and gun form is similar to iron 'port pieces' found on the *Mary Rose* (lost 1545). Swivel guns appear in contemporary ship representations, such as on the mizzen top of the carvel-built 'Kraek' drawn by 'W.A.' (second half of the fifteenth century; Oxford, Ashmolean Museum), and the Schlüsselfelder nef of c. 1503 (Oman 1963, plates XV-XVII). The 70mm diameter also corresponds with that of serpentines looted after the defeat of the Burgundian army at the battle of Grandison in 1476 (La Neuveville, Musée d'Histoire, inv. 232.234; Reichen 2009, 327).

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