

***Sea Venture* Second interim report— part 2: the artefacts**

Allan J. Wingood

Box HM 254, Hamilton 5, Bermuda

Introduction

Sea Venture was an English emigrant ship of 300 tons. On 2 June 1609 as flagship of a fleet of nine vessels *Sea Venture* sailed from Plymouth, Devon with settlers and supplies for the infant colony of Jamestown, Virginia.

Separated from the other ships six weeks later in a hurricane said to have inspired Shakespeare's last play, 'The Tempest', she was stranded on Bermuda's reefs, leading to the colonization of the island by the English in 1612.

An interim report on the preliminary investigation in 1958 and 1959, and subsequent work from 1978 to 1981 appeared in the November 1982 issue of *IJNA*. On 14 November of that year the *Sea Venture* Trust was formally inaugurated in order to continue the archaeological investigation of this shipwreck to the highest possible standards. The Bermuda law firm of Appleby, Spurling and Kempe kindly donated all the necessary legal services and the Board of Governors of the Trust included businessmen with the welfare of Bermuda's most historic shipwreck at heart.

A provision attached to the diving licence required that a qualified underwater archaeologist be obtained to consult and advise on the exploration and documentation of the wreck. On the recommendation of Margaret Rule, Director of the *Mary Rose* project, Jonathan Adams, came to Bermuda in that capacity. As archaeological director he has made six visits to Bermuda, and with the author as project supervisor and a competent group of local volunteer divers the primary aims of the Trust have been implemented. They were to excavate and record the wreck, and to collect, record, research, preserve and ultimately display the artefacts retrieved for the people of Bermuda for all time. Although the artefacts were to remain the

property of the Crown, the Bermuda Maritime Museum was designated custodian for their display.

On 2 September 1984 a well-conceived exhibit at the Bermuda Maritime Museum was opened by the Governor of Bermuda, His Excellency, the Viscount Dunrossil. This exhibit will be added to in the future as more information comes to light.

An interim report mentioned above (*IJNA*, 1982, 11.4: 333–47) covered the work to July 1981. A second interim report part I by J. R. Adams has been presented in *IJNA* (1985, 14.4: 275–99), and deals with the hull and the work of the 1982 and 1983 seasons. This paper, forming part 2 of the second interim report will discuss and illustrate various classes of artefacts recovered in the 1982 and 1983 seasons and include several recovered during the 1984 season. The reason for including the 1984 finds is that the material is considered in groups rather than being presented as a catalogue.

Armament

Seventeen examples of linked shot with no discernible variation have been found in a widely scattered context. They are made entirely of lead, are cast in one piece with the sprue clipped and are believed to be small bar shot for use in a swivel gun to repel boarders. On 22 February 1827 Samuel Rush Meyrick, a student and collector of armour, read a paper entitled *Observations upon the History of Hand Fire-arms and their Appurtenances* to the Society of Antiquaries. The section of the paper dealing with the musket describes a type of shot for use with that weapon as follows ... 'The balles-ramées, or branch-bullets, formed of two held together by a small iron cylinder about half an inch long, no doubt to prevent the rotary

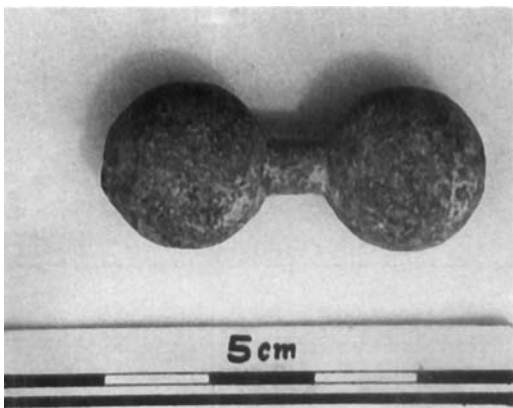


Figure 1. Double-headed lead shot. Cast in one piece with the sprue clipped.

motion which occasions its never being carried with certainty, were used for it, and considered to be very effective' (page 75). This parallels a description in *Harfords Military Discipline* (London, 1680) of a similar missile (Wingood, 1982: 341). A photograph of this object is offered again in the event anyone can assist in its positive identification (Fig. 1).

The heavily encrusted basket hilt (Fig. 2) raised in 1981 was X-rayed cleaned and drawn at the Department of Archaeology of the Colonial Williamsburg Foundation, Virginia

(Fig. 3). This firmly dated piece establishes beyond doubt that the English basket hilt had developed its characteristic form by the beginning of the 17th century (Credland, 1982: 202).

In the 1982 interim report mention was made of a very basic type of dagger in use from the 14th to the 17th century, a kidney dagger or ballock knife. The drawing of this weapon shows the diamond shaped blade in section (Fig. 4). It is understood that many examples of pommels of these daggers in good condition were found during the excavation of *Mary Rose*, although the blades had not survived.

Ceramics

West of England plain pottery is continually being found and it is hoped that eventually many of the fragments can be cross-mended into complete jars. Most of the fragments appear to come from baluster storage jars approximately 0.35 m tall with rims measuring 0.15 m in diameter (Wingood, 1982: 341) although rim sherds indicating a vessel with a rim diameter of 0.25 m and so far unknown height were found in 1983. In addition to the two intact baluster jars from the *Sea Venture* the author has seen similar jars in Devon, England—one at the Merchants House, Plymouth, the port of *Sea Venture's* departure, and a second example taken from an excavation

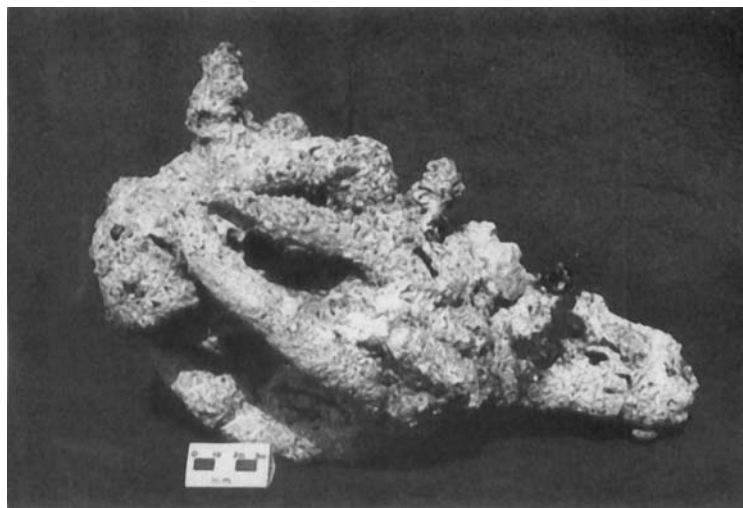


Figure 2. The heavily encrusted basket hilt of a broadsword as found on the sea bed.

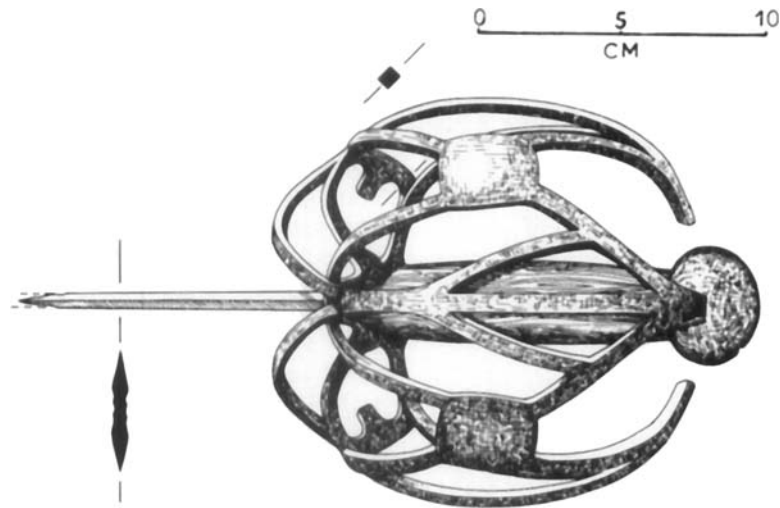


Figure 3. Drawing of the sword hilt after cleaning. Courtesy of the Colonial Williamsburg Foundation.

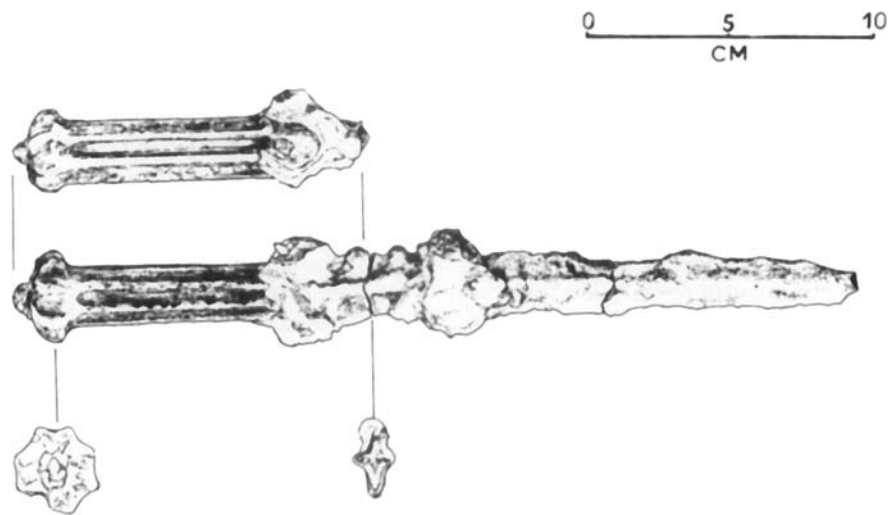


Figure 4. Ballock knife or kidney dagger, a popular item of personal weaponry from the 14th until well into the 17th century, showing the diamond-shaped blade in section.

in Joy Street, Barnstaple. Both these jars were 0.35 m tall.

In May 1983 a tankard with a glossy dark brown glaze was found in excellent overall condition except for a triangular section measuring 7.8 cm by 8.3 cm broken from one side. It stands 10.8 cm tall, with a top diameter of 7.1 cm and a

bottom diameter of 7.9 cm. Three bands of rilling decorate the tankard above the handle and four bands below (Fig. 5).

Personal items

Pewter spoon fragments, including knobs, pieces of stem and stems with bowl fragments

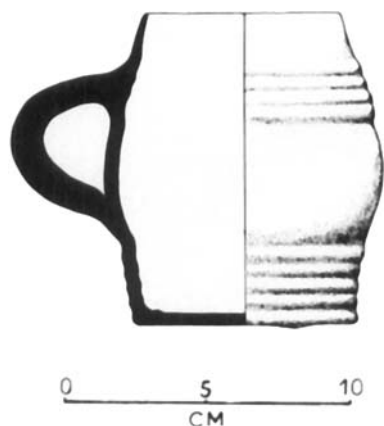


Figure 5. Earthenware tankard with glossy dark brown glass datable to 16th century. Drawing by J. Geisen.

have been retrieved on many dives since 1978, the majority being the type referred to as slipped-end spoons, i.e. the end of the stem is cut off diagonally from the front to the back (Fig. 6). Of the four spoons in relatively good condition two have slipped tops, one has a melon knop and the other an acorn knop, and all have the characteristic 'fig-shaped' bowl of the late 16th/early 17th century. Spoon no. 6a has been cleaned by electrolysis and polished. We believe that the stem of spoon no. 6b was bent to shorten it, to make it easier to hold, to make it more convenient to carry in the pocket or to enable the owner to attach it to a lanyard. This example appears to have the initial 'H' and a touchmark on the inside of the bowl. Another stem bent in this fashion had only a small section of the bowl remaining. A spoon retrieved in 1979 and now on exhibit at the Bermuda Maritime Museum was cleaned by electrolytic reduction at Texas A & M University and the initials 'M' and possibly 'B' were found scratched on the back of the bowl (Hoyt, 1984).

Two brass anglets, one undamaged and one broken in half, both measuring 31.75 mm long and 3.18 mm at the widest part, have been found in the course of excavation. An anglet is the tapering metal tip of a lacing cord or point, used for attaching the hose to the doublet or lacing a bodice, much as a shoe lace is used today. Each Englishman planning to emigrate to Jamestown was advised to take with him 'one dozen of

points' (Cotter & Hudson, 1957: 49). Many examples can be seen on clothing in portraits painted during this period in history.

A badly eroded fragment of brass, recovered in 1983, when cleaned proved to be a crowned Tudor Rose measuring 27 mm by 16 mm. During the cleaning and preservation of this object small pieces of leather were found adhering to two prongs on the reverse side. This type of decoration on leather belts, pouches or bandoliers was not uncommon in the 16th and early 17th century (Rosemary Weinstein, personal communication). In a well-known portrait of Queen Elizabeth I, known as the Pelican Portrait, an example of this particular design may be seen. A reproduction of the Pelican Portrait, so-called because a jewelled brooch resembling a pelican is worn on the Queen's breast, can be seen in *The Tudor Period*, published by the *Connoisseur* (1956, facing page 140) (Fig. 7).

As tobacco came into general use in England c. 1570 it was hoped that some evidence of pipe smoking would be found, as pipes are an excellent and well-recognised dating medium. Of three stem fragments found in May 1983 two measured 25 mm and 27 mm respectively, with a bore of 7/64 inch, and the third measured 22 mm with a bore of 6/64 inch and had part of a tear drop-shaped heel. In June we retrieved the bowl and a section of the stem measuring 6.4 cm of a pipe which can be dated to between 1580 and 1610 (Oswald, 1975: 39, no. 3). The bowl, measuring internally 1 cm in diameter and with slight traces of rouletting externally, 7/64 inch bore and tear drop-shaped heel indicate that the pipe is typical of the late Elizabethan period. A second, very similar pipe was unearthed on 30th October 1984 from what appeared to be previously undisturbed silt (Fig. 8). John Rolfe, who later married Pocohontas, was a passenger on *Sea Venture* and in 1611–12 experimented with tobacco plants in Virginia (he used Virginia plants as well as varieties from the West Indies and South America), and was successful in developing a sweet-scented leaf. This became popular immediately, was for many years the staple crop of the infant colony of Jamestown and on its introduction into England was an important factor in popularizing the use of clay pipes (Cotter & Hudson, 1957: 81).

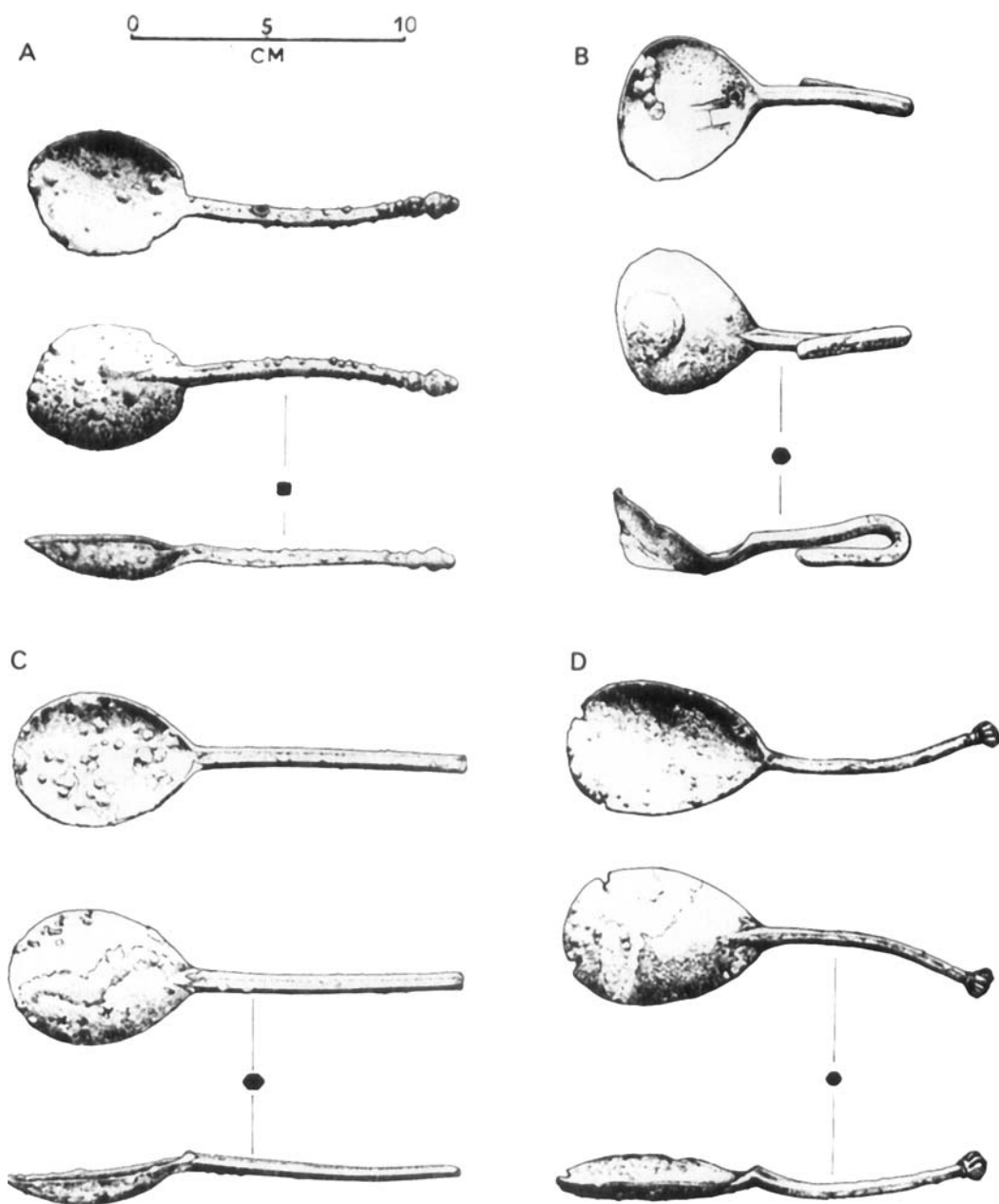


Figure 6. A. Square-stemmed, acorn knopped pewter spoon, since cleaned by electrolysis. B. Slipped-end, hexagonal-stemmed pewter spoon with what appears to be the initial 'H' and a touchmark on the bowl. C. Slipped-end, hexagonal-stemmed pewter spoon in excellent condition. D. Melon-knopped pewter spoon with rounded stem and elongated fig-shaped bown of the late 16th century.



Figure 7. Eroded crowned Tudor Rose ornament of brass, used as a decoration on leather belts, pouches or bandoliers in the 16th and early 17th centuries.

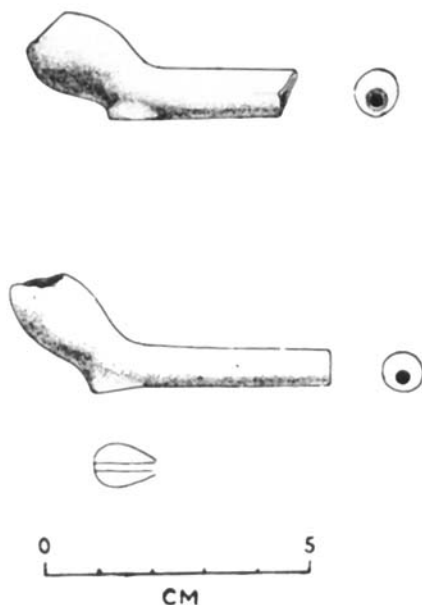


Figure 8. Two clay pipes with broken stems, showing small bowls and large bore typical of the late Elizabethan period. It is believed that the stems of these early pipes were approximately 15 cm long and 9 mm in diameter.

In 1983 a badly degraded fragment of a bone comb, of a type known as a close-and-narrow-tooth comb was found. These combs, rectangular in shape, with teeth of different sizes along their two opposite sides, were in use from medieval times throughout the 17th and 18th centuries (Noël Hume, 1978: 174).

Miscellaneous finds

Four plain, undecorated bronze pins have been found (Fig. 9), paralleling examples dating to prior to the 17th century, unearthed in Amsterdam between 1954 and 1974. During the 14th and 15th centuries pins were made in the home, but from the beginning of the 16th century workshops for their manufacture were established. The pin head was made by twisting a piece of brass wire around two or three times and attaching it to the pin. Small pins were used for hand and needle work and the larger variety as clothes fasteners. This type of pin was replaced by one with a flat head in the 18th century (Baart *et al.*, 1977: 135).

The first example of three completely different types of weight grouped together for convenience is a 1 lb merchants weight of lead in excellent condition with the crowned I of James I and the sword of Saint Paul, the hallmark of the City of London (Fig. 10). A weight of similar design weighing $\frac{1}{4}$ lb (112.9 g) was found in 1981 (Wingood, 1982: 345). The second weight,

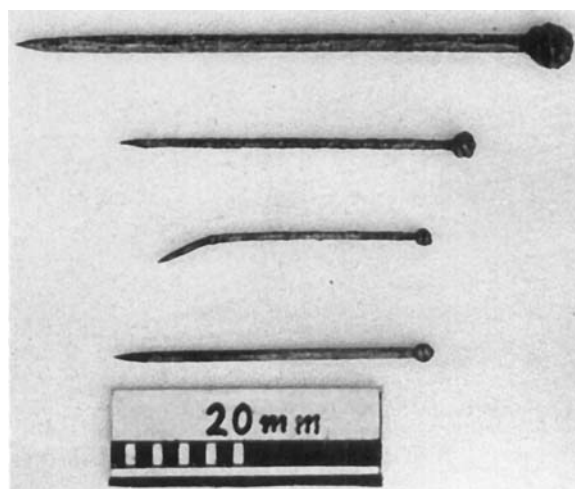


Figure 9. Plain bronze pins similar to examples dating to prior to the 17th century unearthed in Amsterdam between 1954 and 1974.

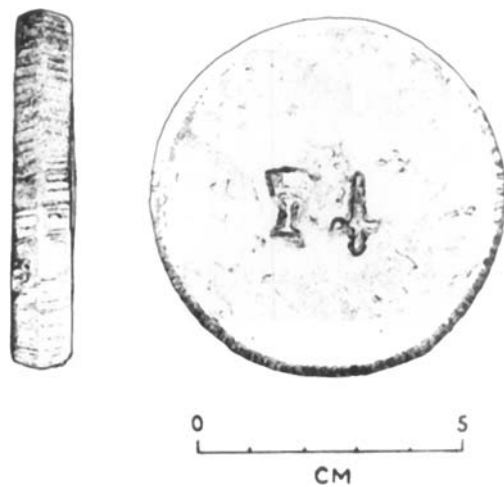


Figure 10. One lb merchants weight of lead, showing crowned I of James I and the sword of St Paul, in excellent condition. Parallels a quarter lb weight retrieved from the site in 1981.

a bronze apothecaries weight was found in 1983. It weighed 1 ounce (28.35 g) and would have originally been one of a nested set. Nests of weights were mostly made in Nuremberg, Germany from the 16th century onwards, and in most cases each cup is half the weight of that in which it rests, the lidded case weighing as much as the remainder put together (Graham, 1979: 27). An interesting find in 1983 was a brass coin weight measuring 15 mm square. Before the 17th century, when it became standard practice to produce coinage having a milled edge by machinery, coins in precious metal, especially gold, were frequently clipped or rubbed by dishonest persons to remove part of their metal. It thus became necessary to check the weight of the pieces used in transactions. The coin weights initially produced on one side the characteristic type of the coin to be checked, for example St Michael slaying the dragon on the English gold angel (Carson, 1962: 567–68). The *Sea Venture* coin weight (Fig. 11) has on the reverse a medieval ship and on the obverse the hand of the crest of the city of Antwerp within a wreath. It is significant that the weight for the Henrikus noble, a gold coin minted in the period 1583–87, has on the obverse a hand and star within a wreath and pearl border, and on the reverse a medieval ship (Baart *et al.*, 1977: 411, no. 774).

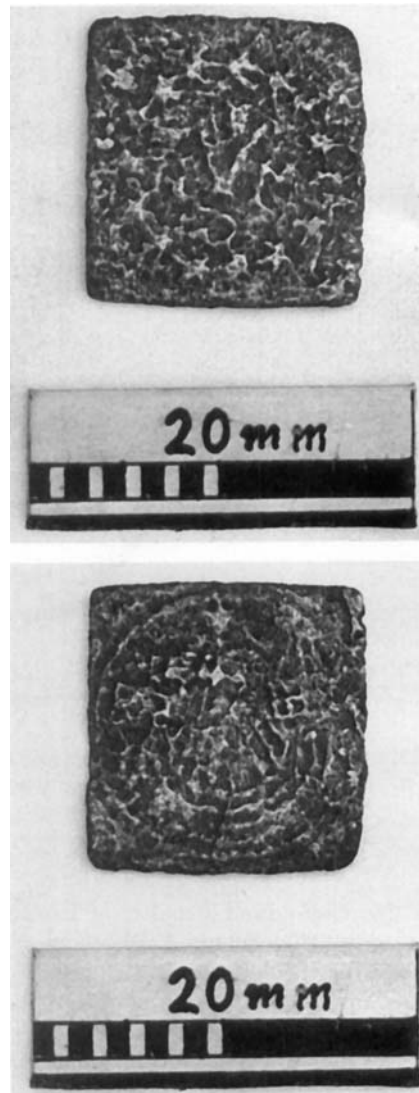


Figure 11. Brass coin weight which can be dated to the 1580s, showing top, the hand of the city crest of Antwerp within a wreath on the obverse and bottom, a medieval ship on the reverse. Probably used in checking a gold noble.

William Strachey's narrative of 1610 contains many references to the trials and tribulations endured by the ship's company during the four days of the hurricane. He tells of them continually bailing ... 'twelve hundred barricos an hour': 'besides three deepe Pumps continually going, two beneath at the Capstone, and the other above at the half Decke, and at each

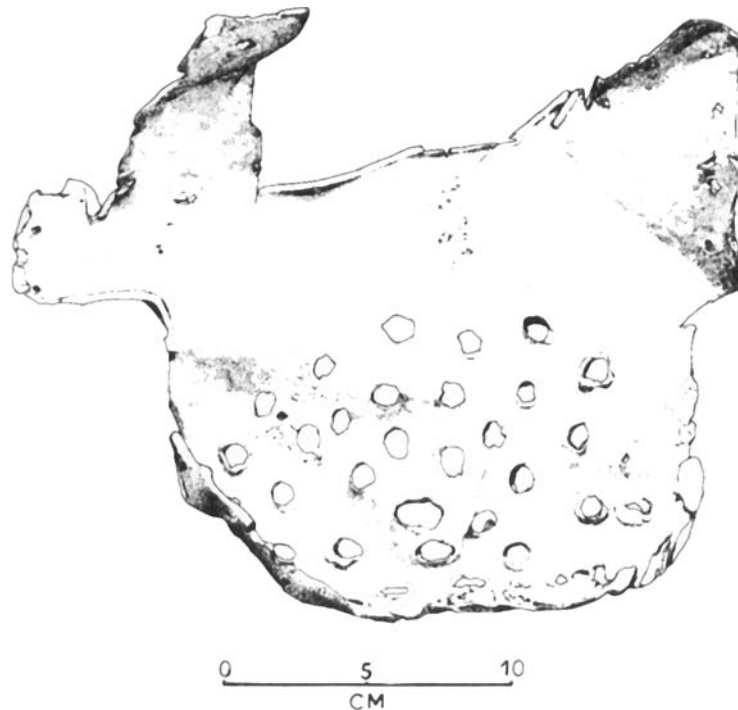


Figure 12. Lead pump strainer pierced with $\frac{1}{4}$ inch (6.35 mm) holes with indications of having been tacked to hollow log constituting the bore of the pump which had not survived.

Pumpe foure thousand stroakes at least at a watch . . .; and the pumps hindered by being 'choaked with bringing up whole and continuall Bisket' (Strachey, 1610). One of the pump strainers, made of sheet lead was found during the 1983 excavations. It is pierced with 6.35 mm holes and, from observation of the marks on the lead, would have been tacked to the bottom of a hollowed elm log, constituting the bore of the pump. It is understood that elm was the wood most commonly used. The bore had not survived but its shape was imprinted on the lead sheet (Fig. 12).

Two brass jettons or casting counters were retrieved in 1983, one in good condition measuring 2 cm in diameter and another very eroded example measuring 2.5 cm in diameter. Jettons or casting counters were first used at the beginning of the 13th century by the nobility of France for calculating the accounts of their establishments or domains, later by lesser magnates, corporations and the general public. By

the late 16th/early 17th century they were used by all the principal European nations. Jettons were struck in gold, silver, latten, brass, copper and even lead. Those made of the more valuable metals were quickly melted down and used as bullion and the intrinsic worthlessness of those of lesser metals has been their salvation. Although coin like in appearance they were comparatively valueless and were used much as a chip is used in gambling today. They were given or bought in sets or casts, usually 100 to a set or cast. Although the Dutch used cylindrically-shaped silver boxes (Barnard, 1917: plates LXI and LXII) for carrying their jettons, referred to as *requenpenningen*, in France and England they were kept in leather draw-string bags, the leather decorated to a greater or lesser degree dependent upon the importance of the owner (Barnard, 1917: 83). Used in conjunction with a lined cloth or board quite substantial numbers could be calculated. The *Sea Venture* jettons have HANS



Figure 13A. Obverse of brass jetton or casting counter measuring 2 cm in diameter from *Sea Venture* on left. On right is a similar jetton purchased from Spinks in London with identical markings.



Figure 13B. Reverse of 13A showing *Reichsapfel* or orb in double tressure of three curves and three angles set alternately.

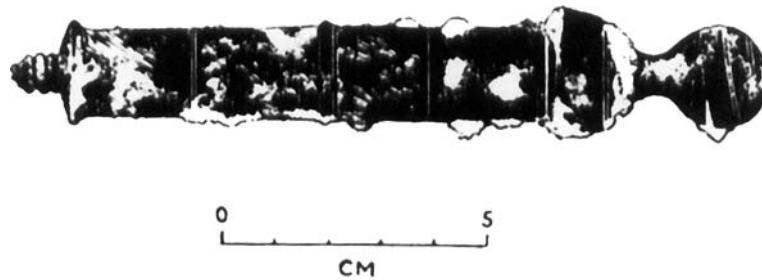


Figure 14. Pewter clyster or syringe, used for treatment of wounds and venereal disease aboard ship. In good condition.

KRAUWINCKEL NURNBERG stamped around their outer edge and were undoubtedly made between 1580 and 1610 in Nuremberg, Hans Krauwinckel being the principal maker of jettons during this period (Barnard, 1917: 70). Shakespeare mentioned counters in many of his plays, for example: 'What for a counter, would I do but good?'—*As You Like It*, 1599, and 'Pen, book and counters, so the acquittance follows'—*Cymbeline*, 1609 (Barnard, 1917: 86). Stock counters from Nuremberg of latten and brass are still plentiful in England. The author recently purchased several jettons from Messrs Spinks in London for purposes of comparison (Fig. 13).

Clysters or syringes of varying sizes were important items at sea, the large type for the treatment of constipation or flux, the smaller ones being used to treat wounds, ulcers and venereal disease (Woodall, 1617; Rule, 1982: 192). Two clysters were discovered in the same context in July 1981, one slightly damaged, but with the twine around the plunger still intact, the second corroded but otherwise in good condition (Fig. 14). Although fragments of English delftware drug jars and gallipots were found nearby, no indication of a barber surgeon's chest has been found.

Conclusion

Compared to the objects from other shipwrecks, over 11,000 having been retrieved from *Mary Rose*, those from *Sea Venture* appear meagre. However it should be remembered that after the stranding in 1609 all the ship's company got safely to shore and then salvaged as much as possible of their possessions, cargo and stores. They also saved ships fittings and rigging

and parts of the ship itself. Bermuda at that time had little to offer the travellers but wild hogs, fish, fowl of the air, namely cahows and other sea birds, and some fruit and berries. There was nevertheless a plentiful supply of timber, mostly cedar, which enabled them to build *Patience* and *Deliverance* for their onward journey to Virginia in 1610.

Even taking into account the comparative paucity of artefacts, the remaining timbers, representing the flat of the floor, are unquestionably those of a ship of the late 16th or early 17th century.

Acknowledgements

The author is indebted to many people for their help with the project. I thank especially the Board of Governors of the Sea Venture Trust for their support and advice, and for legal and financial expertise. I am grateful to Jon Adams, the underwater archaeologist, for his enthusiasm for the project, his underwater photographs and drawings of the wrecksite, his meticulous keeping of records and drawings of the artefacts. My thanks go to I. Noël Hume, Resident Archaeologist of the Colonial Williamsburg Foundation, and Mrs Noël Hume for their continuing interest in *Sea Venture* and the benefit of their knowledge and experience on many occasions, and to the Colonial Williamsburg Foundation for cleaning, stabilizing and drawing the pewter candlestick and sword-hilt found in 1981.

The members of the diving team deserve great credit for donating many of their days off to the project, in particular Steve Cook who is also on

the Board of Governors, and Bob Steinhoff, who has additionally given much practical assistance with photocopying, use of his telex and word processor, and on occasions the use of his boat *Dom Perignon*; Dr Brian Luckhurst for underwater photography and Kirsten Luckhurst for DSM work; and C. P. Loving, A. Nash, J. Driscoll, B. Billings and S. Hetherton. Ashore I thank J. Geisen, formerly of the Mary

Rose Trust and D. Harrison for work on conservation of the finds.

I have constantly been inspired by the interest of the general public and am grateful to the many people in the business and private sector who have generously donated funds and/or services. Last, but not least, my thanks to my wife, Peggy for photographs of the artefacts and for typing the manuscript.

References

- Baart, J. *et al.*, 1977, *Opgravingen in Amsterdam*. Haarlem.
Barnard, F. P., 1917, *The Casting Counter and the Counting Board*. Oxford University Press.
Carson, R. A., 1962, *Coins of the World, Ancient, Medieval & Modern*. London.
Cotter, J. L. & Hudson, J. P., 1957, *New Discoveries at Jamestown*, Washington DC.
Credland, A. G., 1982, Some swords of the English Civil War with notes on the origin of the Basket Hilt. *Journal of the Arms and Armour Society*, vol. X, no. 6.
Graham, J. T., 1979, *Weights and Measures*, Shire Album 44. Shire Publications, Aylesbury, Bucks.
Her Majesty's Stationery Office, *Medieval Catalogue*.
Hoyt, C. A., 1984, *Bulletin of the Institute of Maritime History and Archaeology*, (A division of the Bermuda Maritime Museum), Bermuda.
Meyrick, S. R. 1829, Observations upon the History of Hand Fire Arms and their Appurtenances. Published by the Society of Antiquaries of London in *Archaeologia* 22: 1829.
Noël Hume, I., 1978, *A Guide to Artifacts of Colonial America*. New York.
Oswald, A., 1975, *Clay Pipes for the Archaeologist*. BAR 14: Oxford.
Rule, M., 1982, *The Mary Rose*. London.
Strachey, W., 1610, *A true reportory of the wreck and redemption of Sir Thomas Gates, Knight*.
Wingood, A. J., 1982, An interim report on an early 17th century shipwreck, lost in 1609. *IJNA* 11.4: 333–47.
Woodall, J., 1617, *The Surgeons Mate*, reprinted Kingsmead Press, 1978.