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MUSEUM NOTES

New Discoveries on Roman Brooches

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The Museum of Antiquities annually sets aside part of its income to pay for conservation of artefacts in its care. Part of this programme concentrates on cleaning and preserving new acquisitions but attention is also paid to items which have been in the collection for some time.

In 1987 the staff of the North of England Museums Service were asked if they would treat a collection of brooches from South Shields and Benwell Roman forts which were showing signs of active corrosion. None of the brooches had been treated previously. With modern techniques of conservation coupled with fresh examination by high and low powered microscopes and X-ray refraction (XRF) analysis of metals, much new information has emerged which sheds light on Roman manufacturing techniques. This note draws attention to some details which, without conservation, would have remained hidden.

SOUTH SHIELDS: all the brooches have the accession number 1956.128.70.A so, to simplify the identification of the individual brooches, references have been confined to Allason-Jones and Miket 1984.

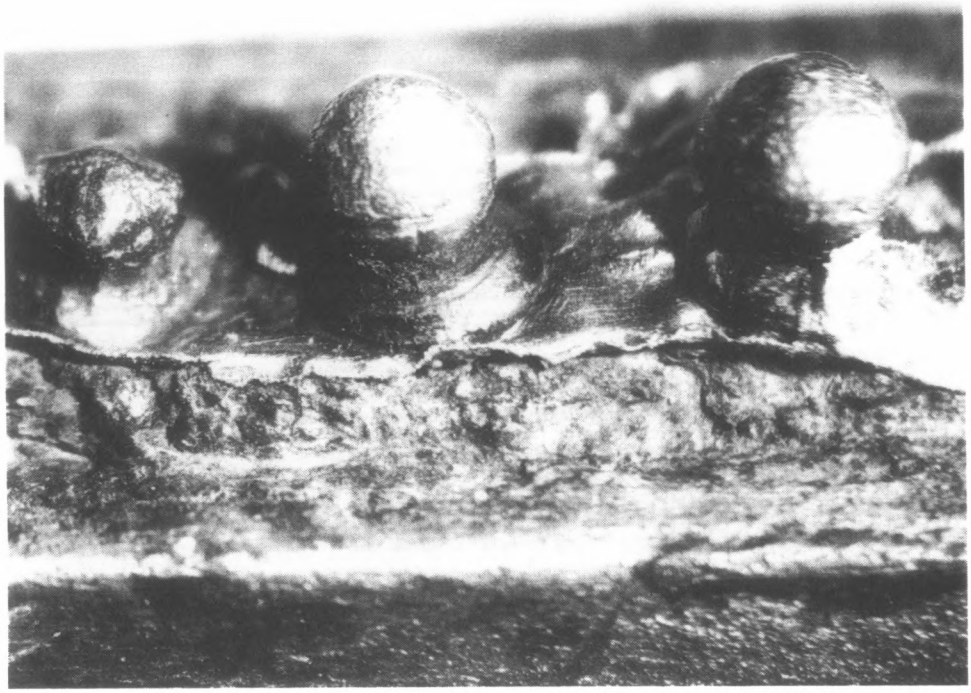
1. Allason-Jones and Miket 1984, No. 3.138. Circular copper alloy disc brooch with a gilded upper face and a tinned back. In the centre there is a domed inset of natural green and dark green glass keyed into position and held by a circular collar. The edge is raised enclosing a concentric ring of stamped S-shapes. The sprung pin and narrow catchplate still survive.

Although this type of brooch is common in the north of England from *c.* A.D. 250 onwards, it is unusual to find the glass inset made from two shades of green glass. D: 24 mm, L of pin: 22 mm, D of inset: 12 mm, Total H: 11 mm.

2. Allason-Jones and Miket 1984, No. 3.146. Copper alloy disc with a central circular rib encircling either a missing inset or enamel. Around this rib there is a circular trough which has contained enamel with reserved dots of copper alloy. The trough is enclosed by a narrow rib. A scalloped inner edge contains a field of dark blue enamel. The spring and shallow catchplate survive but the pin is missing.

This very corroded brooch is now revealed as being of the same type as that found in Coventina's Well, Carrawburgh (Allason-Jones and McKay 1985, No. 43) and at Corbridge (Bishop and Dore forthcoming, No. 21). D: 24 mm, T of disc: 0·5 mm.

3. Allason-Jones and Miket 1984, No. 3.37. Copper alloy trumpet brooch with a heavily embossed decoration on the head giving a stylized zoomorphic appearance.



Close-up of brooch No. 10 showing the pins, foil and filling.

The short upper bow ends in a double rib which is reflected both below and in the centre of the stylized acanthus motif at the front of the waist. The semicircular-sectioned lower bow is fluted. At the foot a triple rib motif confines a band of tinning to the front of the bow above the cylindrical bossed foot. The spring, pin and catchplate are missing. L: 52 mm, W across head: 16 mm, W across acanthus waist: 9 mm, D of foot: 6 mm.

4. Allason-Jones and Miket 1984, No. 3.40. Very small copper alloy trumpet brooch with a short upper bow. The head has an incised marginal line and a short projection from the spring catch. Part of the spring with its undershot loop and iron pivot survives but the pin is missing. The stylized acanthus moulding which encircles the waist is very crisp and angular and is contained at top and bottom by double ribs. The distorted lower bow is triangular in section with two incised marginal lines. The cylindrical foot has three sharp ribs. The catchplate is undecorated. L: 40 mm, W of head: 14 mm, W across acanthus waist: 7 mm, D of foot: 5 mm, L of catchplate turnover: 11 mm.

5. Allason-Jones and Miket 1984, No. 3.31. Copper alloy trumpet brooch with a squared head which overshoots the spring. The head itself is decorated with a stamped design consisting of a central boss with crescents emerging on either side. The upper bow is narrow and circular in section with two grooves separating it from the stylized acanthus which encircles the waist. Another group of two grooves runs

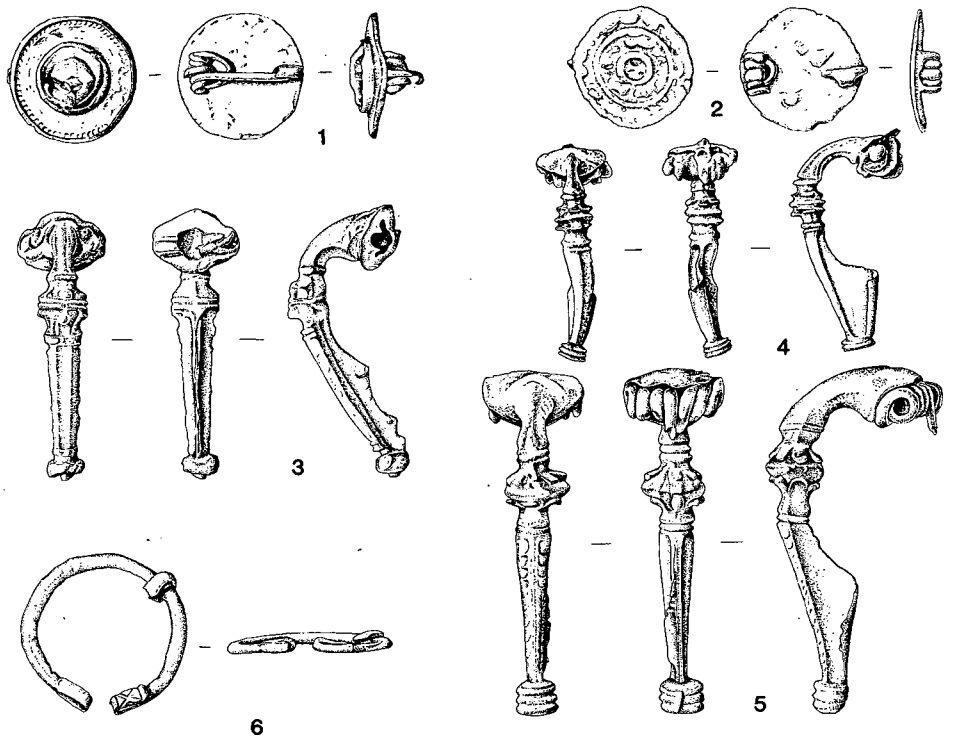


Fig. 1. Brooches from South Shields. 2:3. Drawn by L. Lazenby.

around the lower bow which is also decorated with stamped crescents at the top. An incised vertical line, with marginal oblique grooves, runs down the right side. The double-grooved foot has been made separately and wrapped around the end. The catchplate is undecorated and lacks much of its turnover. The pin is missing but the six-coil spring with its undershot loop survives. L: 35 mm, W of head: 19 mm, W of acanthus waist: 12 mm, L of catchplate turnover: 19 mm, D of foot: 8 mm.

6. Allason-Jones and Miket 1984, No. 3.127. Copper alloy penannular brooch of circular section. The terminals have been moulded to give the impression that the shank has been folded back, and one retains an incised cross between two transverse lines. The wrap-over hinge is all that survives of the pin.

This is now seen to be of Fowler's Type D3 (1960, p. 152). D: 34 mm, T: 2·5 mm.

7. Allason-Jones and Miket 1984, No. 3.55. Incomplete copper alloy crossbow brooch with onion-headed terminals and head. The arms are circular in section. The bow is flat at the back and facetted at the front. The pin and foot are missing.

This brooch is unusual in that it has been tinned all over its surface and then a gilded stripe applied down the front of the bow. L: 34 mm, W of bow: 3 mm.

8. Allason-Jones and Miket 1984, No. 3.59. Copper alloy bow brooch with a tubular springcase forming the head. A band of short incised vertical lines runs along a rib at the top of the head. The bow is flat at the back and facetted at the sides with a

wide filed trough running to the vestigial disc at the base of the bow. The trough has transverse nicks along the edge and contains a row of drilled dimples suggesting that the trough has held a row of small pins (see No. 10). The motif of dimpled trough with nicked edges is reflected on the front of the tubular catchplate. The foot has a forward projection with a step at the back. Traces of tinning are evident all over the brooch. The pin is missing. L: 52 mm, W of head: 20·5 mm, W of bow: 5·5 mm, L of catchplate: 28 mm approx.

9. Allason-Jones and Miket 1984, No. 3.60. Copper alloy bow brooch with a narrow rectangular-sectioned bow and a tubular springcase. The front of the bow has a filed trough with a row of drilled dimples running down the full length, suggesting that the trough has held a row of small pins (see No. 10). A projection at the end of the tubular catchplate reflects the vestigial disc projecting from the base of the bow. The brooch has been tinned all over the surfaces. The spring survives projecting from the back of the shallow grooved springcase. L: 47 mm, W of head: 18 mm, L of catchplate: 16 mm, W across bow: 3·5 mm.

BENWELL: several brooches were conserved from the group excavated by Petch in 1926 (Acc. No. 1926.70) but only one produced new evidence.

10. Petch 1927, pl. XL, no. 1 (left). Base silver bow brooch with a deep trough running down the face from the head to the end of the foot. The trough has been filled with a substance which on analysis appeared to be largely unidentified insoluble silicates with 10·0% copper, 0·98% zinc, 0·65% silver and 2·5% lead. The exact identification of this substance must wait for more sophisticated techniques of analysis but it is clearly not solder.

Fitted into the trough, and covering the filling, was a sheet of gilded silver foil, stamped with a design of short transverse lines and then pierced from the back to allow small dome-headed pins with lathe-turned waisted collars to act as rivets. It was noticed that possibly two alloys were involved in the manufacture of the pins, the difference being between those which pierced the brooch and those which merely sat in the trough filling. Unfortunately it was not possible to test this. At least six pin/rivets pierced through the brooch—the end pin passing right through the tubular catchplate.

At the head there is a knob formed by wrapping a gilded copper alloy strip around a pin which projects from the narrow double hinge. It is possible that this copper alloy knob might be a replacement. Fragments of the double spring survive with the two iron pivots still in position.

This extraordinary piece appears to be related to the two from South Shields (Nos. 8 and 9) and suggests that there was a tradition of bow brooches decorated with detachable pins in the military north in the 2nd or 3rd centuries A.D. Bow brooches decorated with tiny knobs which have been cast in one piece are already known (South Shields: Allason-Jones and Miket 1984, No. 3.18; Corbridge: Collingwood and Richmond 1969, fig. 105, no. 73). It is possible that many of the apparently plain bow brooches in the area may reveal dimpled troughs under their layers of corrosion.

One element which is remarkable in all the examples given above is the complexity of the surface decoration on Roman brooches. This can be lost so easily by rough cleaning or hidden beneath corrosion products. In particular Nos. 1, 3 and 7, show

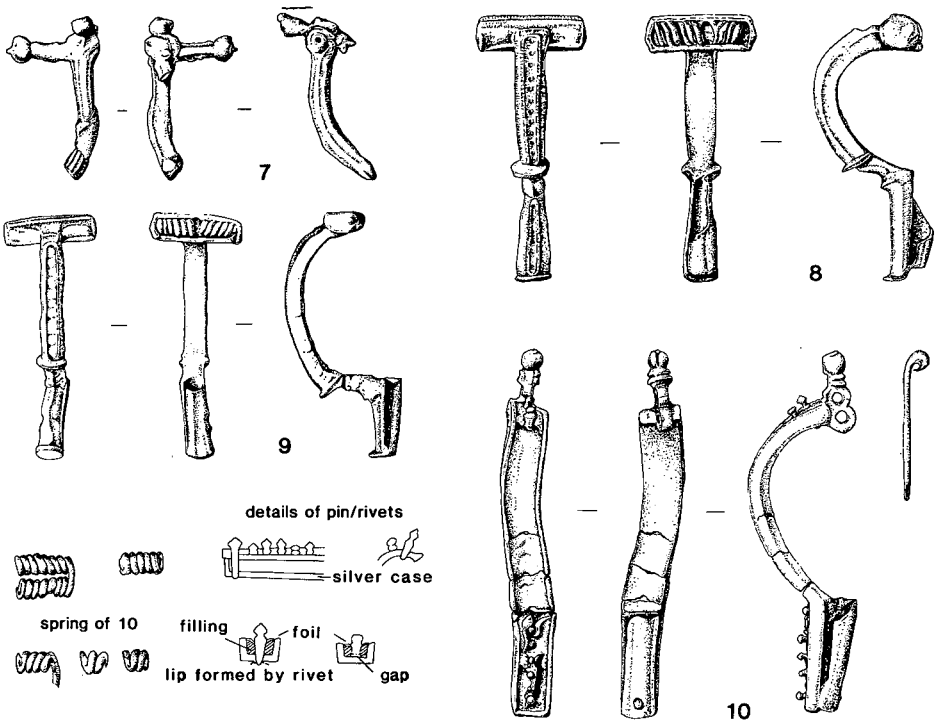


Fig. 2. Brooches from South Shields (7–9) and Benwell (10). 2:3. Drawn by L. Lazenby.

how traces of tinning or gilding found on one part of a brooch do not mean necessarily that the whole surface was tinned or gilded. On the contrary, it is clear that Roman jewellers experimented with the effects which might be achieved using different metals on a single piece, experimentation which appears to have been taken to extreme lengths in the case of No. 10 from Benwell.

Footnote

The authors are much indebted to Mr. P. Oakley in the Department of Geology, for analysing the metals and the trough filling on brooch No. 10. The XRF analysis was confined by the equipment available to testing for silver. A negative result for silver in the analysis of white metal was, as a consequence, interpreted as indicating tin in the absence of signs to the contrary.

The authors are also grateful to Liz Lazenby for drawing the brooches.

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