UCL INSTITUTE OF ARCHAEOLOGY – CONSERVATION FOR ARCHAEOLOGY AND MUSEUMS

CONSERVATION TREATMENT RECORD

Lab number: 7788
Brief description: Roman copper alloy trumpet brooch
Name of owner: S. Thomas
Owner's number: n/a

Name of student: Alexa Keppler
Date allocated: 05/02/2009
Date completed: 26/03/2009

Dimensions:
Thickness of bow: approx. 6mm
Width of head: approx. 1cm
Length of head: approx. 1.5 cm
Width of catch-plate: approx 0.7cm
Thickness of catch-plate: approx. 0.5mm

Material type:
Copper Alloy

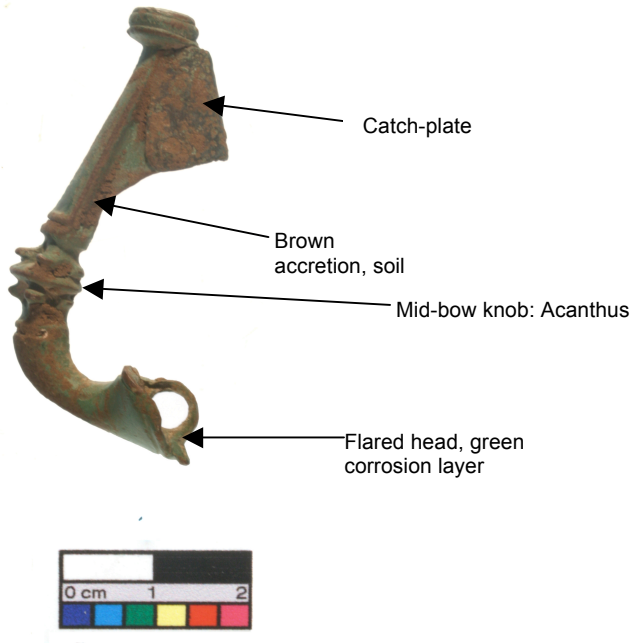
Weight before: 10.55g after: 10.59g

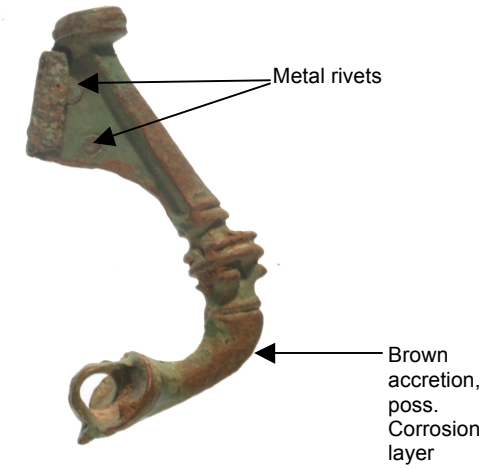
Technology

The brooch was cast in one piece of a copper alloy. The classic shape of the brooch as referred to as a trumpet brooch due to its bow-shaped design. The brooch has a flared head, which would have held the coil of the spring from which the pin would have extended towards the catch-plate. The bow bears a central decorative knob called, the 'acanthus', which follows around the width of the bow. The catch plate was attached with two metal rivets and is composed of an alloy of different composition, having a higher percentage of silver and tin but a lower percentage of lead.

Pre-treatment condition

The object was in good condition although the spring and needle were missing from the bow of the brooch. The surface was moderately dirty.





Significance

The object is associated with the excavation of the Roman site at Thwing, East Yorkshire. It is a field-walk find by S. Thomas. Its significance is mainly archaeological due its connection to the site. It may however also be of personal value to the owner.
The brooch is an excellent example of a Roman trumpet brooch (Hattatt 1985) bearing characteristic stylistic features. It is therefore also of significance considering roman metal working techniques and jewellery design.

Examination

Visual examination under the microscope

Tests / analysis
XRF: identification of difference in metals
Main elements of bow of brooch (approximately):
Cu – 70%
Zn – 3%
Ag – 0.06%
Sn – 0.8%
Pb – 7%

Main elements of the catchplate:
Cu – 72%
Zn – 3.5%
Ag - 0.1%
Sn – 5%
Pb - 3.5%

Various layers and percentages of Paraloid B 44 (methyl methacrylate copolymer) were tested on similar metal in order to achieve a suitable appearance.

Justification for treatment

Since the object will be returning to a private household without environmental control the protective coating of the object is justified. This is further backed up by the completed analysis of the metal composition. Since the object will be handled without gloves a corrosion inhibitor was avoided.

Cleaning

Soil was removed from the surface of the object with a soft brush. No other methods were necessary.

Stabilisation

A protective coating of Paraloid B 44 (methyl methacrylate copolymer) 5% w/v was applied in two layers to protect the metals from moisture and mechanical damage.

Reconstruction / repair

N/A

Loss compensation

N/A

Other
N/A

Packaging

The object was packaged in a crystal box (polystyrene). It was supported with plastazote (expanded cross-linked ethylene copolymers) and covered with acid free tissue paper for protection.

Condition after treatment

The object has been cleaned and coated and is stable. Since it has been coated it should be safe to handle without gloves.

Student evaluation of treatment

The object has been cleaned and coated successfully and is safe to handle without gloves.

Recommendations for further care The object should be monitored and it is advisable to store it in a stable environment. It is advisable to keep the object dry and avoid fluctuations in temperature as well as RH.	
Photography / other illustrations ***Colour slide/digital/ print***	Other documentation (analytical, object report, etc)
Student signature	Date
Staff signature	Date