

## CONSERVATION TREATMENT RECORD

Lab number: 8150  
 Brief description: copper alloy broach catch  
 Name of owner: Thwing via Martin Millett  
 Owner's number: 170

Name of student: Sharon Penton  
 Date allocated: 12/13/06  
 Date completed: 30/5/07

## Material type

Dimensions Height 10.8 mm; Width 11.5 mm; Thickness 0.6 mm

Thin fragment of copper alloy with a 180 degree bend at one end

Weight before 0.35g after 0.33 g

## Technology

Based on the time period the object is dated to the metal would first have been cast in a mold then hammered to the desired shape and thickness. There is no further diagnostic evidence to be found from the object.

## Condition

The condition of the object is fair. There is no active corrosion and the metal is covered entirely with a stable patina of copper corrosion. The thinness of the object makes it very fragile and one corner is loose due to a crack and liable to fall off if inappropriately handled (see diagram). The object is a fragment of a larger object, diagram shows where it had been broken off.

## Significance

Object 8150 may be the catch from a Roman broach. However, the object yields little other archaeological evidence as there is very little of it left and it was surface find with no known context. The site, Thwing, has numerous examples of Roman broaches in complete and very good condition thus reducing the significance to this particular too little or non.

## Examination

I gave a visual examination of this object under a standard microscope and with an SEM. The SEM showed smooth consistent edges around the object except on one side. Here the edges were rigid and irregular confirming the idea that the object was broken off of something larger (see SEM images).

## Tests / analysis

## Justification for Treatment

As the object is of little significance I carried out a high magnification examination of it to obtain as much information about its form as possible but no other analysis was deemed necessary. I applied a consolidant of 3% Paraloid B48N, a ethylmethacrylate polymer, as I do not know under what conditions the object will be kept once returned to the owner. The consolidant act as a corrosion inhibitor in case the environment promotes corrosive reactions to the metal.

Fused silica was added to the Paraloid B48N to create a matte appearance.

## Cleaning

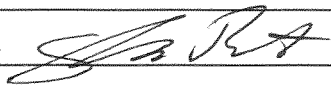
Object 8150 was cleaned of adhering soil and loose copper carbonate corrosion using a wooden skewer, scalpel and a stiff brush. It was then rinsed briefly in a bath of IMS.

## Stabilisation

N/A

## Reconstruction / repair

A repair was applied to the outer facing surface of the catch to give added strength and support to the corner that is cracked. The repair consists of a small fragment of nylon gauze adhered to the surface with with a 3% solution of Paraloid B48N.

Loss compensation	
N/A	
Other	
N/A	
Student evaluation of treatment Due to the extra support given by the nylon gauze repair this object should not sustain any loss while in storage. Furthermore, if it is decided that the object will go on display the repair is almost invisible.	
Packaging The object has been packed in a clear crystal box. It is embedded in plastizote with a thin plastizote covering to prevent it from moving while being transported.	
Recommendations for Further Care The object should be kept in a dry place with an RH ideally below 10% and a temperature around 20 Celsius. These environmental conditions should be kept constant and annual examination of the object should be carried out to ensure no further corrosion takes place.	
Photography / other illustrations <b>Colour slide/digital/ print</b> All digital images on computer in lab folder named Conservation Lab/MSc 1 2006/07/Sharon/Cu alloys/clasp (8150)	Other documentation (analytical, portfolio report, etc) Condition assessment Treatment proposal Drawings SEM images
Signature of student 	Date 14/6/07
Signature of practical tutor	Date