

Ancient Monuments Laboratory
Report 33/95

ANALYTICAL RESULTS FOR THE
ROMAN BROOCHES FROM SANDY,
BEDFORDSHIRE

J Bayley

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Summary

A total of 49 Roman brooches were analysed qualitatively by X-ray fluorescence. The results are presented and discussed. The applied decoration on the brooches is also described.

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Analytical results for the Roman brooches from Sandy, Bedfordshire

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All the Nauheim derivative brooches from Sandy are bronzes. Although the majority of this type are normally bronzes, brass or gunmetal examples are widespread and most sites with any number of examples include some that are not bronze.

All Langton Down and rosette brooches are normally brass, as these examples demonstrate. The Langton Downs are unusual in having tin inlay surviving; where it was originally present it would often have been lost during burial, and past conservation treatments may also have contributed to its poor survival. Hod Hill and one-piece Colchester brooches are also normally brass; the bronze examples are unusual but not unique. It is possible that bronze one-piece Colchesters are the first stage in the experimentation that led to the development of the various Colchester derivative types when brass ceased to be readily available for brooch-making in the later 1st century. The sprung dolphin brooches were a not very successful part of this development; the spring's attachment was not robust enough. The two-piece Colchester is a more successful development; most, as here, are heavily leaded bronzes.

Trumpet-headed brooches are normally decorated and made of brass or gunmetal. 3287 is a good example, with inlaid silver wires and patches of tinning (solder) surviving which would originally have attached further silver decoration to the head and foot.

Both the enamelled bow brooch and the geometric plate are probably of continental origin, and this is supported by their compositions which are typical of brooches of these general types. Most zoomorphic plates are made from unleaded alloys, but there is no strong correlation with particular alloys. On the other hand, most umbonate discs are bronze so the example from Sandy fits the expected pattern, as does the gilded oval disc - where most analysed examples are brass.

Sandy brooches grouped by type

Site no	Type	Decor	Alloy
267	Nauheim derivative		bronze
1171	Nauheim derivative		bronze
3928	Nauheim derivative		bronze
512	Nauheim derivative		bronze
1354	Nauheim derivative		bronze
2289	Nauheim derivative		bronze
3573	Nauheim derivative		bronze
1576	Nauheim derivative		bronze
1533	Nauheim derivative		bronze
1686	Langton Down	I^	brass
3930	Langton Down	I^	brass
1116	rosette	A<	brass
1543	Aucisa copy		brass
1563	Hod Hill		bronze
1792	Hod Hill	W	brass
1000	Hod Hill		brass
1872	Hod Hill		brass
457	Hod Hill		brass
946	Hod Hill	W	brass
3292	Hod Hill		bronze
1290	one-piece Colchester		brass
1380	one-piece Colchester		brass
1495	one-piece Colchester		brass
1702	one-piece Colchester		brass
1766	one-piece Colchester		bronze
1877	one-piece Colchester		brass
3702	one-piece Colchester		brass
3706	one-piece Colchester		brass
523	one-piece Colchester		brass
1375	one-piece Colchester		brass
3713	one-piece Colchester		brass
559	two-piece Colchester		leaded bronze?
1432	two-piece Colchester		leaded bronze
1711	two-piece Colchester		leaded gunmetal
3725	two-piece Colchester		leaded bronze/gunmetal
3755	two-piece Colchester		bronze
1270	sprung dolphin		bronze
1586	sprung dolphin		bronze
3477	sprung dolphin	sold	bronze/gunmetal
3724	sprung dolphin	W?sold	bronze
3287	Alcester brooch	WI>(A>)	gunmetal
3504	continental bow brooch	E	leaded gunmetal
3385	zoomorphic plate	EW	bronze
856	geometric plate	E	(leaded) brass
1489	umbonate disc	E	bronze
540	disc with conical centre		leaded gunmetal
3904	oval plate with 'stone'	GWS	brass
3656	penanular		brass
3630	penanular		bronze

Sandy brooches in site no order

Site no	Type	Decor	Alloy
267	Nauheim derivative		bronze
457	Hod Hill		brass
512	Nauheim derivative		bronze
523	one-piece Colchester		brass
540	disc with conical centre		lead ed gunmetal
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3656	penanular		brass
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3713	one-piece Colchester		brass
3724	sprung dolphin	W?sold	bronze
3725	two-piece Colchester		lead ed bronze/gunmetal
3755	two-piece Colchester		bronze
3904	oval plate with 'stone'	GWS	brass
3928	Nauheim derivative		bronze
3930	Langton Down	I^	brass

Key to codes in Decor column

W	tinning
sold	solder
A <	repousse decorated brass sheet attached
(A >)	silver sheet/wire attached, but now lost
I ^	inlay of tin/lead
I >	silver inlay
G	gilding
S	glass 'gemstone'
E	enamel

Question marks denote uncertainty

The gilding on 3904 is mercury gilding.

The solder on the dolphin brooches helped attach the spring to the body of the brooch; it may be an original feature or a later repair. 3724 has been mis-assembled during conservation.

The enamel on 856 is an opaque blue field with a central millefiore rod (white with 8 blue petals and a ?red centre spot) and red spots (hemispheres) near the corners.

The enamel on 1489 alternately opaque red and translucent blue in both rings of triangular fields.

The enamel on 3385 is opaque turquoise on the shoulder and red on the neck and rump of the animal.

The enamel on 3504 is blue in the central field and now green (but probably originally red or orange) in the two flanking fields.