raised lines on the griffin heads from a belt plate and buckle from Enns-Lauriacum. Rather closer to the Kelvedon brooch are the triple line necks of the downward-biting creatures on the Lunde (Lista, Norway) relief brooch, and the double line necks of the downward-biting animals on the Skerne (Falster, Denmark) relief brooch, both in the south Scandinavian 5th-century Nydam Style, with successors on early Salin's Style I brooches. The form of the bird heads is also reminiscent of the inward-looking terminals on 5th-century firesteels of Brown's Bonn, Porchester and Krefeld types.

In conclusion, the Kelvedon ring-brooch was manufactured in central Europe, possibly in the 4th century, but more probably in the 5th. Apparently it received a replacement pin of insular British or Irish origin, whose date of manufacture unfortunately cannot be closely defined.

MARTIN G. WELCH

NOTES

1 Permission to publish this artefact in advance of the definitive site report was granted by M. R. Eddy, who directed the excavations on behalf of Essex County Council and the Department of the Environment's Ancient Monuments Branch.

2 I am also extremely grateful to Mrs Leslie Webster and Mrs Katherine East of the Department of Medieval and Later Antiquities, British Museum, for arranging to have the metal analysed and for their advice and assistance in an initial discussion of this unusual brooch.

3 E. Fowler, 'The Origins and Development of the Penannular Brooch in Europe,' Proc. Prehistoric Soc., new ser. 26 (1960), 149-77, see fig. 1; E. Fowler, 'Celtic Metalwork of the Fifth and Sixth Centuries A.D., A Re-appraisal', Archaeol., 120 (1963), 98-160, see fig. 3.


7 Koch, op. cit. in note 4, 245, Abb. 2.


12 Koch, op. cit. in note 5, 192-223; H. Bullinger, 'Spätanatome Grübeltüchtflächen', Dissertationes Archaeologicae Gandenses, 12 (1969), Abb. 35, 56, Taf. XXVII.1, XXIX.1 and XXXI.


14 Haseloff, ibid., pl. IVa.

15 Haseloff, ibid., pl. IIb.

16 Haseloff, ibid., pl. IVc.

17 D. Brown, 'Firesteels and Pursemounts again', Bonner Jahrbücher, 177 (1977), 457-58, 460-62, figs. 1, 2, 4, 6 and 7.

LATE ANGLO-SAXON OR EARLY ANGLO-NORMAN CLOISONNÉ ENAMEL BROOCHES (Fig. 4)

Fifteen late Anglo-Saxon or early Anglo-Norman cloisonné enamels, fourteen of them the centrepieces of brooches of two types, were catalogued in Medieval Archaeology three years ago. The hope was then expressed that, since three examples had originally been published as late 4th century, further examples would emerge from Romano-British and other collections. The ‘lost’ brooch catalogued in the earlier article as no. 5 has now been located in a Roman costume display-case in Colchester Castle, and, in republishing it below, the opportunity has been taken to bring the original catalogue up to date.

A 1985 metal-detector find, alluded to in the earlier article, is now added to the corpus. Since it originally had seven lobes, it has been appended to the seven-lobed examples and given the catalogue number 5A. There are now eight of the lobed brooches known to have
come from English soil, four of the wire-flanged examples, and the detached centrepieces of
three more.

Analyses of two of the brooches\(^3\) have since been published, showing that the metal is
94% copper, 5% tin, 1% or 2% lead, 0.5% zinc and 0.5% arsenic. This can be regarded as a
low-tin bronze, but equally as an impure copper; since the metal was to be used as sheet and
strip, soldered and eventually enameled and gilded, it is probable that it was regarded as
copper, and that some recycled bronze had found its way into the melting-pot.\(^4\) The
references are added below.

The author has recently examined Scandinavian finds of both the lobed ('Saunderton')
and wire-flanged ('Colchester') types of brooch described in detail in the earlier article.
These share so many peculiarities with the English finds (e.g. translucent dark blue enameled
backgrounds, idiosyncratic colour-pairings, gilding on the reverse, iron pins) that had they
come out of East Anglian or Kentish soil they would have occasioned no surprise. While, like
the English examples, most of the Danish finds were made by metal-detector, two with
archaeological contexts — of the 11th century and of about 1120 — were mentioned in the
earlier article.\(^5\) A further brooch, wire-flanged and with a centrepiece identical to that of the
Roach Smith example in the British Museum,\(^6\) was excavated at Lõddeköpinge, Scania,
Sweden, from a stratum dated to 1100 and the early part of the 12th century.\(^7\)

The revision of the earlier article begins with the republication of no. 4, which the author
has now been able to examine first-hand:

4 Copper-gilt disk-brooch with seven lobes and cloisonné enamel centrepiece, from Hilton, Cambs.\(^8\)
Privately owned, D. E. Brown collection. (Illustrated in *Medieval Archaeol.*, 30 (1986), 10, fig. 2, 4;
pl. iii, 4)

One of the lobes is missing; glass spheres set on the other lobes are of translucent pale blue (four)
and translucent dark blue (two). The pin is missing; of the hinge and the catch only the soldered
attachment-points remain. The brooch is gilded all over, including the back and the remains of hinge
and catch. The copper-gilt cloisonné enamel centrepiece depicts Medusa's head.\(^9\) The enamel surface is
slightly cracked and chipped, and there are three small areas of complete loss; despite this, the
condition of the enamel is good. The colours are (background) translucent blue, varying from dark to
light, 5 PB 2/2-6/4, (Medusa's face) opaque light grey-blue 5 PB 5/2, (eyes and nose) translucent dark
blue 5 PB 2/2, (serpents' heads) translucent green 2.5 GY 2/2, (triangle to either side of head)
translucent blue-green 10 BG 4/4.
Dimensions: overall 26.2 mm; diam. of enamel 16.5 mm.

Bibliography: Buckton, op. cit. in note 1, no. 4.

5 Copper-gilt disk-brooch with seven lobes and cloisonné enamel centrepiece, probably from Colchester.
Colchester, Colchester and Essex Museum, Joslin collection, no. 509. (Illustrated in *Medieval
Archaeol.*, 30 (1986), 10, fig. 2, 5; pl. iii, 5)

Glass spheres set on the lobes are of translucent greyish blue (four) and translucent dark blue
(two); the setting on one of the lobes is empty. The collar setting of the enamel centrepiece is torn and
distorted. The hinge and catch survive intact, but the pin is a modern replacement. The brooch is gilded
on the face and back. The copper cloisonné enamel disk has four semicircular cells spaced out around its
perimeter, leaving an equal-armed cross in the centre; in the middle of the cross is a lozenge of
cellwork.\(^10\) The enamel is cracked and chipped in one cell; the colours are: (cross) translucent dark
blue 2.5 PB 2/2, (centre lozenge) opaque red 10 R 3-4/2, (two diametrically opposite semicircular cells)
opaque greyish blue 5 PB 5/2 and (the other two semicircular cells) opaque yellow 7.5 Y 6/4.
Dimensions: overall 26.0 mm; diam. of enamel 17.0 mm.

Bibliography: Buckton, op. cit. in note 1, no. 5; probably also referred to in T. D. Kendrick, *Anglo-Saxon

5A Copper-gilt disk-brooch with seven lobes and cloisonné enamel centrepiece, from Lakenheath,
Suffolk.\(^11\) Bury St Edmunds, Moyse's Hall Museum, 1985. 123.1. (Fig. 4)

Only four of the lobes survive, and these are damaged. Glass spheres set on the surviving lobes are
of semi-translucent white (two) and translucent dark blue (one); the colour of the fourth (fragmentary)
sphere is obscured by corrosion-products. The hinge (intact) and catch (broken) are corroded; the pin,
which was of iron, has all but rusted away. The brooch is gilded all over, including the back. The
copper-gilt cloisonné enamel disk has three petals radiating upwards, to the left and to the right of a
heart- or kidney-shaped cell, below which is a symmetrical arrangement of two simple scrolls of cellwork. The colours are: (background) translucent dark blue 2.5 PB 3/2-4, (heart-shaped cell) opaque yellow 7.5 Y 6/4-6 and (petals) opaque off-white N 9.25/84.2% R.
Dimensions: overall 22.6 mm; diam. of enamel 15.8 mm.
Bibliography: Buckton, op. cit. in note 1, 18 note 39.

7 Copper-gilt disk-brooch with four principal and eight subsidiary lobes and cloisonné enamel centrepiece, thought to come from London... Additional bibliography: W. A. Oddy, S. La Niece and N. Stratford, with P. T. Craddock and M. J. Hughes, Romanesque metalwork: copper alloys and their decoration (London, 1986), Appendix 1, 23, no. 90; pl. 23, 90.

10 Copper-gilt disk-brooch with flange and cloisonné enamel centrepiece, from Ixworth, Suffolk... Additional bibliography: Oddy et al., op. cit. in cat. no. 7 (above), Appendix 1, 23, no. 91; pl. 23, 91.

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DAVID BUCKTON

NOTES

2 Buckton, op. cit. in note 1, 18 note 39.
3 Buckton, op. cit. in note 1, nos 7, 10.
4 The author is grateful to Sue La Niece, British Museum Research Laboratory, for confirming this interpretation.
5 Buckton, op. cit. in note 1, 15, 18 note 31.
6 Buckton, op. cit. in note 1, fig. 2, 7.
8 Metal-detector find, 1985.
9 See Buckton, op. cit. in note 1, 17 note 6.
10 Cf. Buckton, op. cit. in note 1, no. 6, fig. 2, 6.
12 See full catalogue entry in Buckton, op. cit. in note 1, no. 7.
13 See full catalogue entry in Buckton, op. cit. in note 1, no. 10.