

ART. IV – *A find of Viking-period silver brooches and fragments from Flusco, Newbiggin, Cumbria*

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IN October 1989, it was reported to the writer that a number of “Celtic brooches” had been found at Flusco by two individual using “divining rods” and a metal-detector.¹ The objects were examined at first-hand on the 9 October in Carlisle, when it was immediately apparent that the find comprised some five penannular brooches and fragments of Viking-period date.

Following initial recording at Tullie House Museum, the objects were transferred to the British Museum for further examination and specialist report including metallurgical analysis.² The brooches and fragments were declared to be Treasure Trove at an Inquest held at Penrith on the 23 July 1990, and were acquired by the British Museum.³

The Site

The objects were recovered from a location known as “Silver Field” (NY 464288). Following a site meeting with the landowner, Mr N. J. Harrison and one of the finders, Mr J. Longton, on the 11 October 1989, it was decided to carry out further investigations in the vicinity of the findspot. The back-filled holes from which the objects were said to have been retrieved, were marked for closer scrutiny.

On the 12 October, a systematic metal-detector search was carried out in the findspot area while the remainder of the field was subjected to a random search. One particularly promising area was pegged-out and machined off to a depth of one metre, but yielded no further ancient artefacts. The underlying mineral deposits interfered greatly with the metal-detector readings.

Surface disturbance was observed at various points around the field where turf had been lifted and holes excavated at depths up to 30 cms. Immediately below the long grass cover, the soil was a sandy texture and rich orange in colour and contained water-worn stones of varying rock types, shapes and dimensions. The soil overburden varied greatly in depth throughout the area investigated. The detector search was eventually widened to include the elevated ground leading up to Flusco Pike itself. No further finds of any antiquity were encountered and samples of metalworking debris picked up on the Pike proved to be zinc and of relatively recent date.⁴

Historical context

The brooches and fragments found in 1989 can be closely compared with other silver penannular brooches of the late ninth and early tenth centuries A.D. with a distribution centred on the Irish Sea. The bossed penannular type with flat

expanded terminals is well-represented in the assemblage by at least three specimens (Nos. 2, 4, and 5), with two others of the so-called "thistle brooch" type (Nos. 1 and 3). These brooches are thought to have been produced in Ireland under Viking influence, and their origins, development and chronology have been fully discussed elsewhere.⁵ Graham-Campbell considers the thistle brooch to have originated in Ireland during the second half of the ninth century and taking on its familiar elaborate form in the first half of the tenth century.⁶ The majority of finds are from Ireland, Isle of Man, Cumbria, Orkney and Shetland, with large numbers from Norway and a few from Sweden and Denmark.

The origin of the bossed penannular brooch has been the subject of much debate since the 1970s, with some authorities advocating a Norse or Hiberno-Norse context for their manufacture.⁷ However, Graham-Campbell argues convincingly for them being a native Irish product "firmly rooted in the native Irish brooch tradition, although displaying influences from both England and Scotland".⁸ Norse traders and settlers would have played a part in their distribution but the bossed brooches never achieved the level of popularity enjoyed by the thistle type. The number of recorded finds from Ireland far outweighs those from other areas with only four from northern England. While it is always possible that northern England was a secondary production centre, Ireland was undoubtedly the main area of manufacture.

Examples of both thistle type and bossed penannular brooches have turned up in Cumbria, indeed, two of the largest known thistle brooches are recorded from the county. A superb silver thistle brooch was found in Silver Field in April 1785,⁹ and is in the British Museum. A second such brooch of comparable size was recovered from a field "near Penrith" in 1830, and bequeathed to the British Museum by William Forster, of Carlisle, in 1904.¹⁰ It was complete when exhibited at Carlisle for the meeting of the Archaeological Institute in 1859, but is now missing a terminal. A replica is on display in Tullie House Museum. The precise findspot for the 1830 brooch is unknown, but it is quite possible that it came from the same location as the 1785 and 1989 finds. The results of the metallurgical analysis carried out on the earlier brooches and the recent finds shows a similar silver composition, and there is a strong possibility that the 1989 finds are associated with the 1785 discovery and also perhaps the 1830 find.

A silver penannular ring-brooch lacking a pin and one terminal, was found in a field near Casterton Hall, Kirkby Lonsdale, in 1846.¹¹ This brooch does not exhibit brambling on the surviving terminal or pin-head but carries punched decoration instead. The object is on display in Tullie House Museum (Acc. No. 14a-1910.1).

One of the finest examples of a silver bossed penannular brooch from the British Isles, was found at Orton Scar, Crosby Ravensworth, in April 1847. It was recovered from "a crevice of the limestone rock on the north side of Orton Scar" along with a twisted silver neck torc or arm-ring.¹² The brooch terminal plates are decorated with interlaced animal ornament and there are five bosses on each plate. It probably dates from the early tenth century and has been fully described and discussed by Cramp.¹³ The 1989 finds from Flusco included a five bossed brooch with fine zoomorphic decoration (No. 4) and fragments of another (No. 5).

Description of brooches and fragments

The fragmentary and damaged condition of the finds is probably the result of ploughing after initial deposition and not due to their being deliberately cut up before burial. There are considerable signs of wear and some abrasion, both ancient and more recent, on some pieces. The items are listed in the order in which they appear in the British Museum report to the Coroner.

Brooch No.

1. A virtually complete penannular thistle brooch (Plate 1), with only the pin tip missing. Both terminals and the pin-head are brambled at the front and plain on the back and are decorated by an encircling design of linked arches. The hoop is slightly oval-shaped, measuring externally 74 x 68 mm, internally 60.5 x 49 mm.; average thickness 7.5 mm. The max. diam. of each terminal is 19.5 mm. Overall length of pin from head to tip 261 mm, the cross-sectional form being roughly circular. The pin diameter varies from a maximum of 8 mm at the top to 3.5 mm at the broken end.

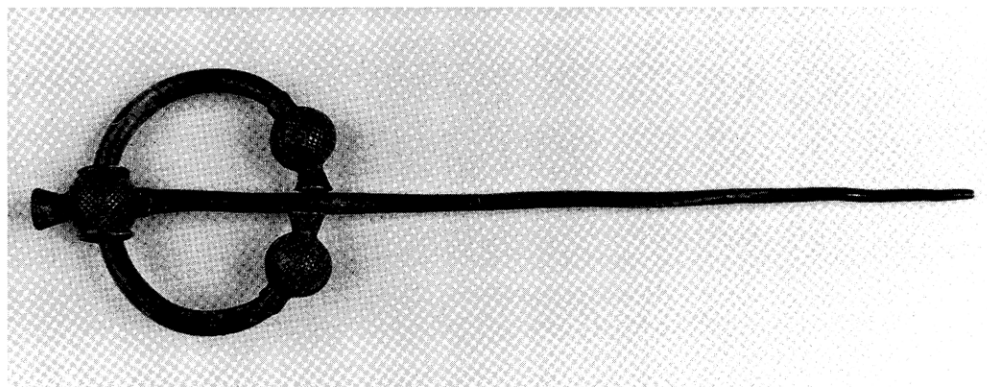


PLATE 1. Brooch No. 1. Flusco Pike.

2. A penannular brooch with flat expanded terminals and moveable pin (Plate 2), the latter broken-off at approximately the halfway point. Each plate terminal has a single boss located in the centre on both sides. The two larger bosses on one face (Plate 2a) are set within frames of raised pellet decoration, while the two smaller bosses on the reverse (Plate 2b) are framed by parallel incised lines with a single line of minute triangles set within the parallel lines. The larger bosses have a base diameter of 14 mm and protrude to a height of 7mm; the smaller bosses have a base diameter of 10 mm and are 4 mm high. There are lightly incised motifs and sketches on the backs of both terminals and key patterns and a Norse runic *futhark* on the back of the hoop.

Each terminal plate is grasped by the gaping jaws of an animal's head at the junction with the hoop, and there is a decorative band or collar encircling the hoop behind each head. A cylindrical pin-head with three beaded bands is secured to the pin shank by a single rivet which is capped by a boss on each side.

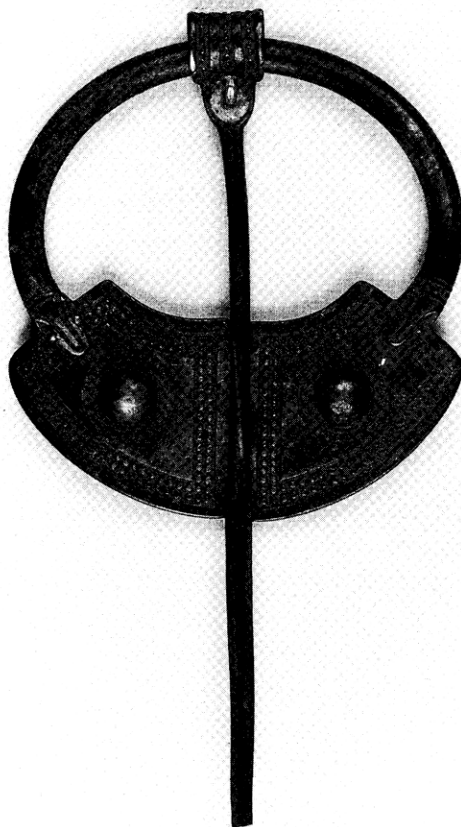


PLATE 2A. Brooch No. 2. Flusco.



PLATE 2B. Brooch No. 2. Flusco reverse face.

One boss has recently detached itself. The surviving pin length is 182 mm and is circular in cross-section for a distance of 80 mm from the head, before changing to a square section. There is a lightly incised key pattern and diagonals on the square-sectioned length of the pin shank. The hoop is oval-shaped, measuring 105 mm externally, 88.5 mm internally, and is plano-convex in section with a width of 8 mm.

3. A penannular thistle brooch (Plate 3) which has suffered considerable damage. The two terminals and the pin-head are heavily brambled all over and carry incised decoration on the expansions or collars. There is an attractive elaborate incised design on the flat surface of the pin-head. The pin tip is missing (recent damage) and the shank changes in section from round at the top to square at the break point and is cracked and bent (ancient damage).

The section of hoop which carries the attached terminal is badly bent (ancient damage), while the other terminal is now detached and damaged with a piece missing. Surviving pin length 198 mm; max. length of hoop 161 mm; length of terminals 36.5 mm; diameter of terminals 27 mm.

4. Three joining fragments from an elaborate bossed penannular brooch with flat

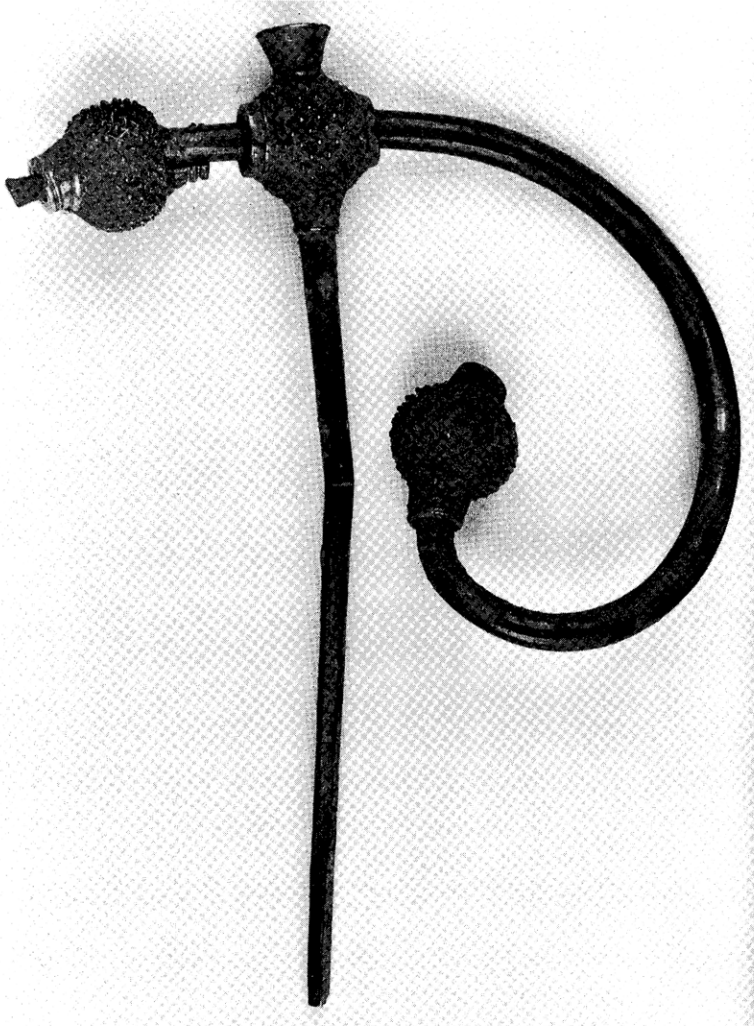


PLATE 3. Brooch No. 3. Flusco.

expanded terminals (Plate 4). The hoop and most of one terminal survives but only part of the other terminal; the pin is missing. The complete terminal plate displays a fine zoomorphic decoration on one face with five bosses, two of which are now missing. The rivet is still *in situ* for one missing boss which has been lost recently, probably at the time of recovery. The reverse face is decorated with an incised intricate design which includes hatched bands and interlace. None of the five bosses have survived from this face.

A small fragment of terminal plate is attached to the other end of the hoop and exhibits incised decoration on both faces. One rivet hole is present although the boss is missing. The hoop is distorted with stress cracks (ancient damage) and is plano-convex in cross-sectional form. External hoop measurement 82 mm; internal 68 mm; average width 7 mm. The base diameter of the bosses averages 10 mm and 7 mm.



PLATE 4. Brooch No. 4. Flusco.



PLATE 5. Brooch No. 5. Flusco.

5. Four joining fragments from a bossed penannular brooch (Plate 5) similar to No. 4. The pieces comprise part of the hoop and one terminal with boldly incised zoomorphic ornament on the surface carrying three bosses. The central boss is slightly larger (base diam. 11 mm; height 8 mm) than the two flanking bosses (base diam. 10 mm; height 6-7 mm). One of the smaller bosses has a beaded collar encircling its base.

The reverse surface is smooth and undecorated apart from two concentric incised line encircling each boss rivet. Whether these are intended decoration or simply marking-out lines, is not easy to determine. The hoop is plano-convex in section and is 8 mm wide.

- a) length of terminal fragment with hoop attached and single boss 70 mm; max. width 23 mm.
 - b) terminal fragment with large boss 24 x 31 mm.
 - c) terminal fragment with smaller boss and beaded collar 24 x 24 mm.
 - d) terminal fragment with no boss 17.5 x 11 mm.
6. Five assorted fragments from penannular brooches:
- a) pin fragment, length 81.5 mm; round in section at one end turning to square at the other.
 - b) crushed boss, possibly from the pin-head on brooch No. 2; length 12.5 mm.
 - c) pin-head fragment with ribbed decoration; length 24 mm.
 - d) conical-shaped boss with internal rivet *in situ*; base diameter 8.5 mm., height 7 mm.
 - e) boss with associated rivet (detached) and beaded collar; base diameter 9.5 mm., height 7 mm.

Analysis

Various components of the brooches were analysed by Duncan Hook of the British Museum Research Laboratory using x-ray fluorescence on mainly unabraded surface metal.¹⁴ The exception being the pin on brooch No. 1, which was analysed at an area of clean metal caused by recent abrasion of the surface metal. Most of the results in the following table should therefore be regarded as semi-quantitative only. The five miscellaneous brooch fragments (No. 6) were also analysed to try and establish whether they were related to the main brooches in term of their composition.

The following results were obtained:

Brooch No.	Part	Ag%	Cu%	Au%	Pb%	Weight/grams
1	Pin (abraded)	96.3	2.8	0.4	0.3	208.0
1	Hoop	96.2	2.5	0.4	0.6	
2	Pin	96.4	2.5	0.4	0.5	151.8
2	Hoop	96.0	2.5	0.3	1.0	
2	Boss	97.0	2.0	0.3	0.6	
3	Pin	96.2	2.5	0.5	0.6	301.9
3	Hoop	96.4	2.5	0.4	0.6	
4	Hoop	95.7	2.8	0.4	1.0	49.7
4	Boss	95.6	3.0	0.4	0.8	
5	Hoop	95.8	2.9	0.8	0.5	50.6

5	Large boss	97.4	1.7	0.6	0.2	
5	Small boss	98.0	1.1	0.7	0.2	
6a	Pin frag.	97.2	2.1	0.4	0.2	11.39
6b	Crushed boss	98.5	0.7	0.4	0.2	1.02
6c	Pin-head frag.	98.0	1.3	0.4	0.2	4.97
6d	Conical boss	96.2	2.7	0.4	0.7	1.41
6e	Boss	95.8	2.8	0.5	0.7	1.04

All the items analysed were found to have similar compositions, with small amounts of copper and traces of gold and lead. This overall similarity in composition and the inaccuracy of the analytical method used, meant it was not possible to ascribe the loose fragments of No. 6 to particular brooches.

Analysis was also carried out on the two earlier brooch finds of 1785 and 1830 in the British Museum collection in order to compare their composition with the 1989 finds. X-ray fluorescence was carried out on areas of gently cleaned metal by the museum Research Laboratory,¹⁵ with the following result:

British Mus. Reg. No.	Part	Ag%	Cu%	Au%	Pb%
Penrith, 1830. 1904, 11-2,3	Pin	94.9	3.8	0.5	0.7
1904, 11-2,2	Hoop	93.4	5.5	0.5	0.6
Flusco, 1785. 1909, 6-24,2	Pin	96.3	2.9	0.5	0.3
1909, 6-24, 2	Hoop	92.6	4.9	0.7	1.8

The results show there is a very close similarity in composition between these early finds and the 1989 brooches.

Discussion

The laboratory analysis of the brooches and fragments found in Silver Field in 1989 produced two interesting results. The silver composition is consistent with results obtained for other Hiberno-Viking silver of the late ninth and early tenth centuries. Secondly, and more particularly, it closely matches the metal of the silver brooches found in 1785 and 1830.

Leslie Webster comments that "the bossed penannular brooches and the smaller of the two thistle brooches (No. 3) are variants current in the later ninth century, possibly extending in the case of the bossed brooches into the early years of the tenth. The larger thistle brooch (No. 1) is typologically rather later in date, perhaps by a couple of decades. The two large and elaborate thistle brooches previously found in the area also belong to this later type."

The incised *futhark* and other graffiti on brooch No. 2, suggests it was in use for some time before deposit. Such a conclusion is also supported by the wear on brooch No. 3, the smaller and typologically earlier of the two thistle brooches.

The brooches recovered from Silver Field in 1989 were almost certainly a single deposit. Their present fragmentary and damaged condition occurred subsequent to burial, probably by ploughing, and this would also account for their dispersal within the area of investigation. There is no evidence to suggest that they were deliberately cut up for re-smelting before being deposited. In the absence of any associated

evidence for contemporary metalworking, it seems unlikely that their deposition is related to a manufacturing site. Their appearance in a location which has already produced at least one brooch of similar type and date, can hardly be coincidental. It strongly suggests that they were buried for safe-keeping, "probably in the troubled times following the Viking expulsion from Dublin in 902". It is not possible to assign a closer date for their deposition in the absence of any associated coins. However, Leslie Webster comments that "a date no earlier than the 920's may be suggested by the presence of the later form of thistle brooch and the likely association of this assemblage with the similar large thistle brooch found at Silver Field in 1785".¹⁶

Notes and References

- ¹ I would like to express my thanks to Mr D. Cragg, Cumberland Newspapers Ltd., for reporting the discovery to Tullie House Museum (see *Evening News and Star*, 10 October, 1989). The finders were Mr J. Longton, Chorley, Lancashire, and Mr G Carter, Garstang, Lancashire.
- ² I am grateful to Mrs L. Webster, Deputy Keeper, Dept. of Medieval and Later Antiquities, British Museum, for her generosity in allowing me to draw heavily on information contained in her report to the Coroner for North-East Cumbria, dated 24 May 1990. Also for permission to use the results obtained by the British Museum Research Laboratory in their metallurgical analysis of the 1989 Flusco finds and the earlier brooch finds of 1785 and 1830.
- ³ Council for British Archaeology, *British Archaeological News*, vol. 6, no. 6, November 1991.
- ⁴ I am indebted to Paul Craddock, Research Laboratory, British Museum, for analysing the samples. In a report dated 18 October 1989, he points out that metallic zinc was not in commercial use before the 1800's and that the debris "cannot have anything to do with the brooches".
- ⁵ J. Graham-Campbell, "Some Viking-age penannular brooches from Scotland and the origins of the 'thistle brooch'," in D. Clarke and A. Grieve (eds.), *From the Stone Age to the Forty Five* (Edinburgh, 1979); J. Graham-Campbell, *Viking Artefacts: A Select Catalogue* (British Museum, 1980); H. Shetelig, (ed.), *Viking Antiquities in Gt. Britain and Ireland* (Oslo, 1940); R. A. Smith, "Irish Brooches of Five Centuries", *Archaeologia*, LXV (1914), 223-250.
- ⁶ J. Graham-Campbell, *op. cit.* (1980), 55.
- ⁷ O. S. Johansen, "Bossed Penannular Brooches: a Systematization and Study of their Cultural Affinities", *Acta Archaeologica*, xlv (1973), 63-124.
- ⁸ J. Graham-Campbell, "Bossed Penannular Brooches: a Review of Recent Research", *Medieval Archaeology*, xix (1975), 33-47.
- ⁹ *The Gentleman's Magazine and Historical Chronicle*, 55, Pt. 1 (1785), 347, fig. 8; J. Clarke, *A survey of the Lakes of Cumberland, Westmorland and Lancashire* (London, 1789), 46-7, Pl. V; W. Hutchinson, *History of Cumberland* (1794), 476-7, fig. 13; J. Britton & E. W. Brayley, *Topographical, Historical, and Descriptive Delineations of Cumberland* (London, 1803), 163-4; S. Jefferson, *The History and Antiquities of Cumberland: Leath Ward*, I (Carlisle, 1840), 200; *Archaeological Journal*, VI (1849), 70; *Catalogue of the Archaeological Museum formed at Carlisle during the Meeting of the Archaeological Institute of Great Britain and Ireland* (Carlisle, 1859), 15; *Proc. Soc. Ant. London*, 2nd. series, xxi (1906-7), 63, 68, fig. CW2, xxiii, 227; H. Shetelig (ed.) *op. cit.*, Pt. 4 (1940), 46, fig. 15; J. Graham-Campbell, *op. cit.* (1980) 54-5.
- ¹⁰ *Catalogue of the Archaeological Museum formed at Carlisle . . . etc.*, *op. cit.* (1859), 15; *Proc. Soc. Ant. London*, 2nd series, xxi, (1906-7), 68, fig.; H. Shetelig (ed.) *op. cit.* Pt. 1 (1940), 46-50, fig. 16; J. D. Cowen, "A Catalogue of Objects of the Viking Period in the Tullie House Museum, Carlisle", *CW2*, xxxiv, 183, Pl. IV, 3.
- ¹¹ *Archaeological Journal* vi (1849), 69-70, fig.; *Proc. Soc. Ant. London*. xi (1886), 223; J. D. Cowen, *op. cit.* (1934), 183-4, Pl. IV, 2.
- ¹² *Archaeologia*, xxxiv (1852), 446, Pl. xxxviii; *Reliquary and Illustrated Archaeologist*, ix (1903), 203-4; *Archaeological Journal*, ix (1852) 90-1, fig.
- ¹³ *CW2*, lxiv, 81-89.
- ¹⁴ D. R. Hook, "Analysis of silver brooches and fragments, carried out by British Museum Research

Laboratory”, dated 6 March, 1990.

¹⁵ D. R. Hook, “Report on Viking silver brooches analysed by the British Museum Research Laboratory, dated 29 March, 1990 (File 5941).

¹⁶ Leslie Webster, report to the Coroner for North-East Cumbria, 24 May, 1990.