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Early medieval shrine fragments from Park North Cave, Co. Cork and Kilgreany Cave, Co. Waterford

Griffin Murray

Amongst the corpus of material recovered in the course of archaeological excavations in caves in Ireland are two highly decorative pieces of metalwork made of copper alloy which have been interpreted as fragments of portable shrines of early medieval date. One of these was discovered in 1942 in Park North Cave near Midleton in Co. Cork (Coleman 1942, 74–75, pl. I), while the other was found in Kilgreany Cave in the Cappagh valley near Dungarvan in Co. Waterford (Movius 1935, 277–278, fig. 9). The purpose of this study is to reassess the artefacts, to test whether previous interpretations withstand more rigorous analysis, to see if any new interpretations can be advanced, and to explore the possible context of how these objects came to be deposited in caves. The study also includes more detailed descriptions of the objects than has hitherto been given, as well as the results of X-ray fluorescence (XRF) analysis carried out by Dr Paul Mullarkey of the National Museum of Ireland.[1]

Cork, Park North townland, Park North Cave (Fig. 10.1; Pl. 34)

The mount from Park North Cave, or 'Bronze Bar' as it was referred to in the excavation report, was dated to the eighth century by the excavator on the basis of its decoration and was interpreted as being 'possibly part of the mounting of a shrine' (Coleman 1942, 75).[2] Curiously, the significance of this object seems to have escaped the attention of more recent scholars despite the fact that it has been published for many years and has been on permanent display in Cork Public Museum. The original dating and interpretation of the object as being part of a shrine are largely followed here. However, the mount can be more specifically identified as the ridge-mount of a house-shaped shrine.[3] This is indicated by its general shape: the fact that it is three-sided and has a splayed Π-shaped cross-section. Its open ends may be explained by the likelihood that separately made terminals, now missing, possibly in the form of animal-heads, would have originally been attached to it; as in the case of the insular house-shaped shrine found at Melhus in Norway where the ridge-mount terminals were separately made (Blindheim 1984, 44, fig. 41). If one allows for the fact that it was originally longer when its terminals were in place, the Park North example compares favourably in length with the ridge-mounts on the larger shrine from Lough Erne, Co. Fermanagh, and on the so-called 'Copenhagen' shrine from Norway, as well as with a detached example of unknown locality in the National Museum of Ireland (Mahr 1932, pl. 18:1; Blindheim 1984, 33, 40). In fact, the Park North ridge-mount was probably originally slightly longer than those examples by one or two centimetres, so one might expect that the total length of the original shrine was in the region of the larger surviving shrines, which includes the larger Lough Erne example, as well as that from Clonard, Co. Meath, i.e. around 17.7–19.2cm long (Ó Floinn 1990, 53).

XRF analysis in the NMI revealed that this object is principally made of leaded gunmetal rather than bronze.[4] This follows the latest terminology proposed by Bayley (Bayley and Butcher 2004, 14–15). Although the term is unwieldy, it avoids using the generic but imprecise label 'copper alloy'. Copper/tin alloys are called bronzes, and copper/zinc alloys brasses, depending on the relative proportions of the alloying elements. Gunmetal is defined as

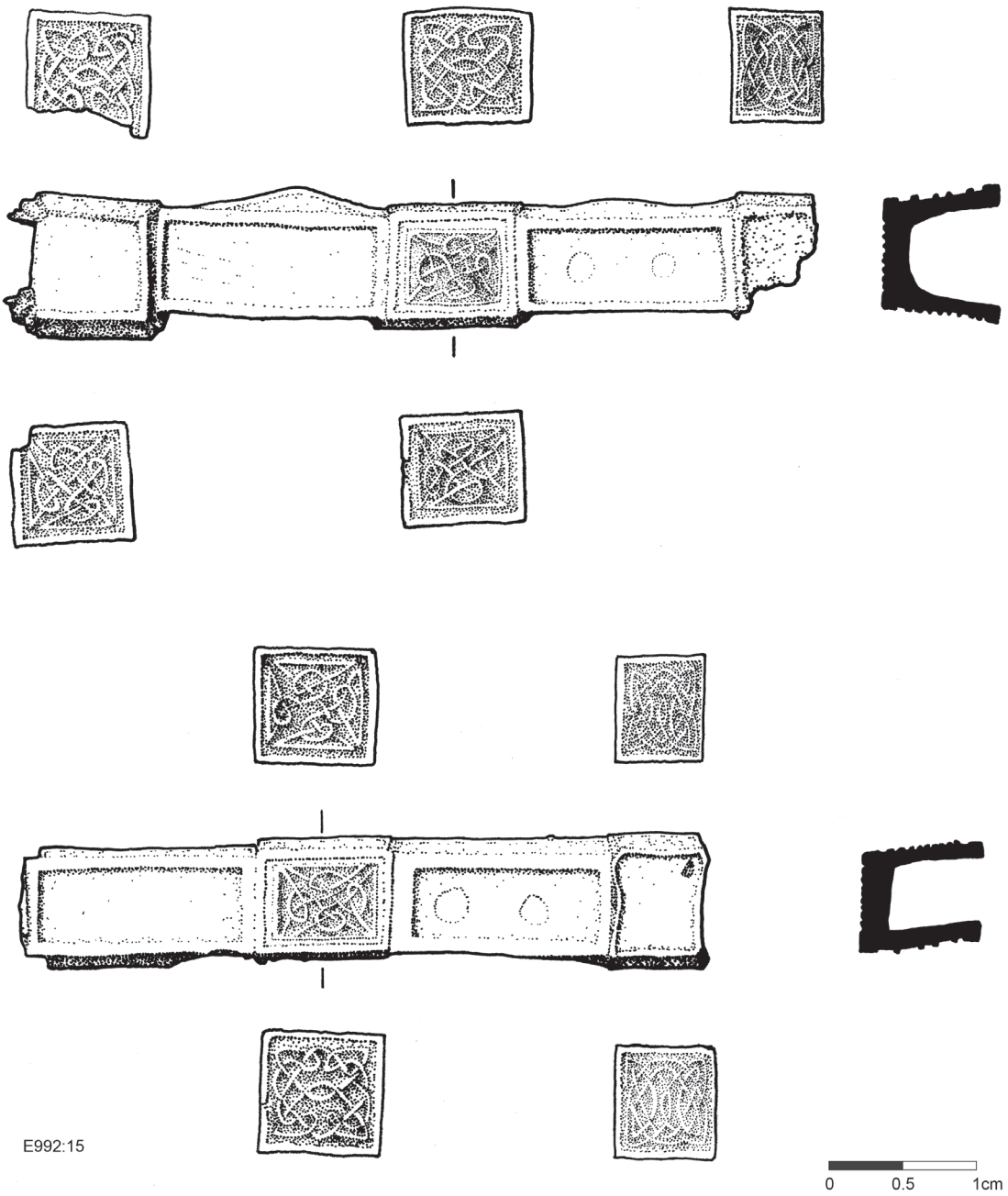


Figure 10.1 Ridge-mount of an early medieval house-shaped shrine from Park North Cave (Dowd 2015, 191).

bronze with a low percentage of zinc. Where other house-shaped shrines have been analysed – the larger Lough Erne, the Monymusk, and the Melhus shrines – they have all been found to be made of bronze, while the 'Copenhagen' shrine was found to be principally made of copper with 'a little lead and a fraction of zinc and iron' and its frame is made of 'copper with some lead and fractions of tin, zinc and iron' (Blindheim 1984, 35, 38, 42, 44). However, recent XRF analysis of the Melhus shrine has shown that one of its circular mounts is made of brass.[5]

The gilded chip-carved ornament on the Park North ridge-mount is particularly fine and similar ornament occurs on the ridge-mounts of the Monymusk, larger Lough Erne, and Bologna shrines (Youngs 1989, 134–137, 139–140, cat. nos. 129, 130b, 132). XRF analysis found the gilding to contain mercury, which means that the fire gilding technique was employed (see Cradock 1989, 173), as it was on the Monymusk shrine (Blindheim 1984, 38). The now empty rectangular panels, which are undercut around their edges and are very shallow, were probably originally filled with

either panels of gold filigree or stamped silver foil and may be compared with similar empty panels on a fragment of a shrine ridge-mount from Shanmullagh, Co. Armagh (Bourke 1993, 28–29; Bourke 2010, 48–49, cat. no. 141, fig. 18: 141). These panels contain patches of a white powdery material on their surfaces, which analysis indicates is lead residue. This may be the remnants of a lead solder used to attach the now missing decorative panels of silver or gold.[6] Of the three more deeply set square-shaped panels on the top of the ridge-mount, one contains the remnants of a green powdery material, which may be degraded enamel. An empty panel for a glass or enamel setting may be seen in a similar position in the centre of the Shanmullagh fragment and on the ridge-mount of the Monymusk shrine (Blindheim 1984, 38, fig. 31). Enamel insets are a feature of many of the surviving house-shaped shrines including the 'Emly', Melhus, Setnes, Monymusk, 'Copenhagen' and Bologna shrines (*ibid*., cat. nos. 2, 3, 5–7 and 9).

It is argued here that the ridge-mount was not the only fragment of the shrine to be recovered in the excavations at Park North. The present author originally speculated that a copper alloy ring (Coleman 1942, 74, fig. 5:5) found during the dig may also have come from the same shrine, but XRF analysis showed this to be made of a modern alloy of copper, zinc and nickel. This object can now be discounted in any future interpretation of the early medieval assemblage from the cave. Most of the artefacts recovered during the excavation were from the 'Black Layer' (layer 2) within the cave, the majority of which came from 'Section 8', a trench approximately 3m long and 1m wide (10×3ft). It is from this trench that the ridge-mount was recovered, from 'near the bottom of the Black Layer' (Coleman 1942, 74). Three angled strip fragments (no. 14)[7] were found together in the same trench and in Coleman's original plan of the site they are marked as having been discovered immediately adjacent to the ridge-mount (no. 13) at the 'bottom [of] Layer 2' (see Dowd 2013, fig. 6). Coleman (1942, 73) further stated that: 'Near 14 a number of very much corroded bronze fragments were found embedded in the clay and charcoal. It was thought that these may be portions of No. 14, but as the material was almost powder, no reconstruction was possible.'

The corroded bronze fragments (no. 16) apparently no longer survive, but their noted presence is important, suggesting that the angled strips were part of a more complex object. The original interpretation of these strips having been possibly part of a brooch is an argument without basis and deserves little notice (*ibid*.). The fragmented angled strips can, however, be closely compared with the grid forming L- and T-shaped cells on the front of the 'Copenhagen' shrine (Youngs 1989, 138, cat. no. 131). The latter, like the Park North fragments, are also decorated with a series of dots. The fragments of bronze (no. 16) mentioned in the report, therefore, may have been the remnants of the sheet metal of the shrine over which the angled strips were fixed. XRF analysis confirmed that the angled strips are made of bronze and are tinned on one side.[8]

On the basis of the surviving fragments, the Park North shrine appears to have been one of the largest and most richly decorated in the series of surviving house-shaped shrines. The ridge-mount is gilded, was seemingly enamelled, and was set with either silver foil or gold filigree, while the angled strips were tinned. By comparing the Park North fragments with some of the complete house-shaped shrines, the 'Copenhagen' shrine in particular, it seems likely that the angled strips came from the principal side of the shrine. The fact that the metal composition of the ridge-mount and the angled strips differs need not be of concern, since it has been shown above that different elements of the 'Copenhagen' shrine were also made of different alloys. The fragments that were excavated in Park North Cave represent a significant portion of a house-shaped shrine that was dismantled and stripped of its precious metal and seemingly some of its decorative mounts, before the remnants were deposited in the cave.

One of the difficulties in recognising the significance of the Park North material has been the fact that the surviving artefacts have been separated. Originally, all of the finds were presented to the University College Cork museum in 1943 by Cork Distilleries Co. Ltd. (Anon. 1943). A select number, including the ridge-mount (E992:1a and b, 6, 7 and 13), were later transferred to Cork Public Museum at an unknown date, possibly when it was established a year later in 1944 (O' Kelly 1944) while the remainder of the finds, including the angled strips (E992:14), remained in University College Cork until they were transferred to the National Museum of Ireland in March 1999.

On the basis of its decoration and the techniques used, the Park North shrine appears to belong to Ó Floinn's group two, which he dates to between the eighth and early ninth centuries (Ó Floinn 1990, 52–53). All of these shrines have a wooden core and it seems that the Park North shrine was similarly constructed, as suggested by the position and size of the fixing holes in the ridge-mount. However, in terms of its large size the shrine would have been more akin to those that form Ó Floinn's third group, which he dates to the ninth century (*ibid*., 53). Nevertheless, the evidence of size alone is not sufficient to argue for a later date for this material and so an eighth or early ninth century date seems most likely.

House-shaped shrine ridge-mount

Park North Cave, Co. Cork
Cork Public Museum E992:15 (1777:1990)
Coleman 1942, 74–75, no. 13, pl. I
Length 100.2mm; width 9.7mm; thickness 8.5mm
This long three-sided object has a splayed Π-shaped cross-section and open ends. The decoration on all three sides

is divided into a series of square- and rectangular-shaped panels. It was originally cast as one piece but since it was discovered has broken into two separate parts. It has broken along the line of a central crack that is visible in photographs of the object reproduced in the original published excavation report (Coleman 1942, pl. I). These two sections measure 47mm and 55.4mm in maximum length respectively. Furthermore, a small section at one end, measuring a maximum of 11mm long and 6mm wide, has been lost since those photographs were taken resulting in the complete loss of one of the decorative panels. However, the ridge-mount was in a damaged state when found with some pieces already missing. On one of its sides it is buckled outward at one point and dented inwards at another, above which is a horizontal crack approximately 20mm long. The ridge-mount has not been conserved but appears to be in a stable condition.

Originally there were nine panels on each of its three sides, five square-shaped panels interrupted by four rectangular-shaped panels. The square-shaped panels are slightly prominent to the rest of the mount with the central square-shaped panel on each of the three sides being the most prominent of all. These central panels are raised approximately 1mm above the rest of the ornament. The square-shaped panels are smallest at the ends of the ridge-mount and increase in size towards the centre. The smallest, an end panel, measures 5.8×6.9mm while the largest, a central panel, measures 8.4×8.5mm. Most of the square-shaped panels consist of gilded chip-carved ornament with the exception of three examples on the top of the mount. The chip-carved panels consist of interlace ornament and are repetitive in that only three different designs were used. On the two sides of the ridge-mount the four end panels were matching. One of these is now lost but it is visible in the photograph in the published excavation report. Two further designs were used for the three middle panels on either side; one design on each of the two sides. The designs of the two chip-carved panels on the top of the mount are a repeat of the middle panels on one of the sides. Of the three square-shaped panels on the top of the mount that do not feature chip-carved ornament, two are empty while the third, which is badly damaged, contains a green powdery material with a dark crust. These are all 2mm deep and are positioned at either end of the mount and at the centre.

The rectangular panels are now all empty and are 1mm deep. Like the square-shaped panels, the rectangular panels vary in size and measure between 12.3×4.9mm and 16.2×5.2mm. They are all slightly undercut around their inner edges in order to retain some material. On one side two of these panels have been severely damaged and only fragments remain. On the top of the ridge-mount the rectangular panels at either end both feature two evenly spaced fixing holes, each of which is approximately 1.5mm in diameter.

Angled strips (x3)

Park North Cave, Co. Cork
National Museum of Ireland E992:14
Coleman 1942, 73, no. 14, fig. 5:14
Length 24.5×21mm; width 3mm; thickness 1mm
Length 30.4×8.3mm; width 3mm; thickness 1mm
Length 25×17.7mm; width 3mm; thickness 1mm
Three slight bronze angled strips decorated on one side with tinning, and a border consisting of an incised line with a single row of neatly punched dots inside it. Each example is merely a fragment, all of them featuring broken ends. There is a single tiny fixing hole in the corner of each piece; the remains of a second fixing hole may be seen close to the end of the longest strip.

Waterford, Kilgreany townland, Kilgreany Cave (Fig. 10.2; Pl. 35)

The mount from Kilgreany Cave was found at a depth of 1m in Trench H in the innermost chamber of the cave and was originally interpreted as being 'possibly part of a shrine' and dated to the eighth century (Movius 1935, 277–278). Like the Park North shrine fragments, this mount has received very little attention from scholars since it was first published, although more recently Raghnall Ó Floinn has suggested that it may have derived from an early medieval bell-shrine (Dowd 2002, 88). Indeed, it is mostly likely from an ecclesiastical object and its arched shape is reminiscent of the curved upper portions, namely the crests, of early medieval shrines for hand-bells. If this mount did derive from the crest of a bell-shrine, on the basis of the angle of its curve and the proportions of the surviving shrines, the shrine in question would have to have been around twice as wide as this mount is long, i.e. about 260mm wide. The largest surviving bell-shrine, the early twelfth century *Bearnán Chúláin* from Glenkeen, Co. Tipperary, is only 190mm wide. Of the surviving early medieval Irish hand-bells, Class 1 bells measure 140–310mm high and 100–240mm wide while Class 2 bells measure 70–310mm high and 60–260mm wide (Bourke 1980, 52). Therefore, it is conceivable that the Kilgreany mount may have originally belonged to the shrine of a very large hand-bell.

While the majority of surviving bell-shrines date from the eleventh or twelfth centuries, the *Corp Naomh* dates from the tenth century (Wallace and Ó Floinn 2002, 272, pl. 7:33). Fragments of an eighth or ninth century bell-shrine also survive in the collections of the National Museum of Ireland (Youngs 1989, 143–144, cat. no. 137a–c). These fragments, consisting of a crest and mounts from one of the side-plates, were originally in the Chapman Collection at Killua Castle, Co. Westmeath. Although their provenance has been unknown since they were acquired by the museum in 1920, they match the description of the supposed missing bell-shrine fragments recovered from the River Brosna at

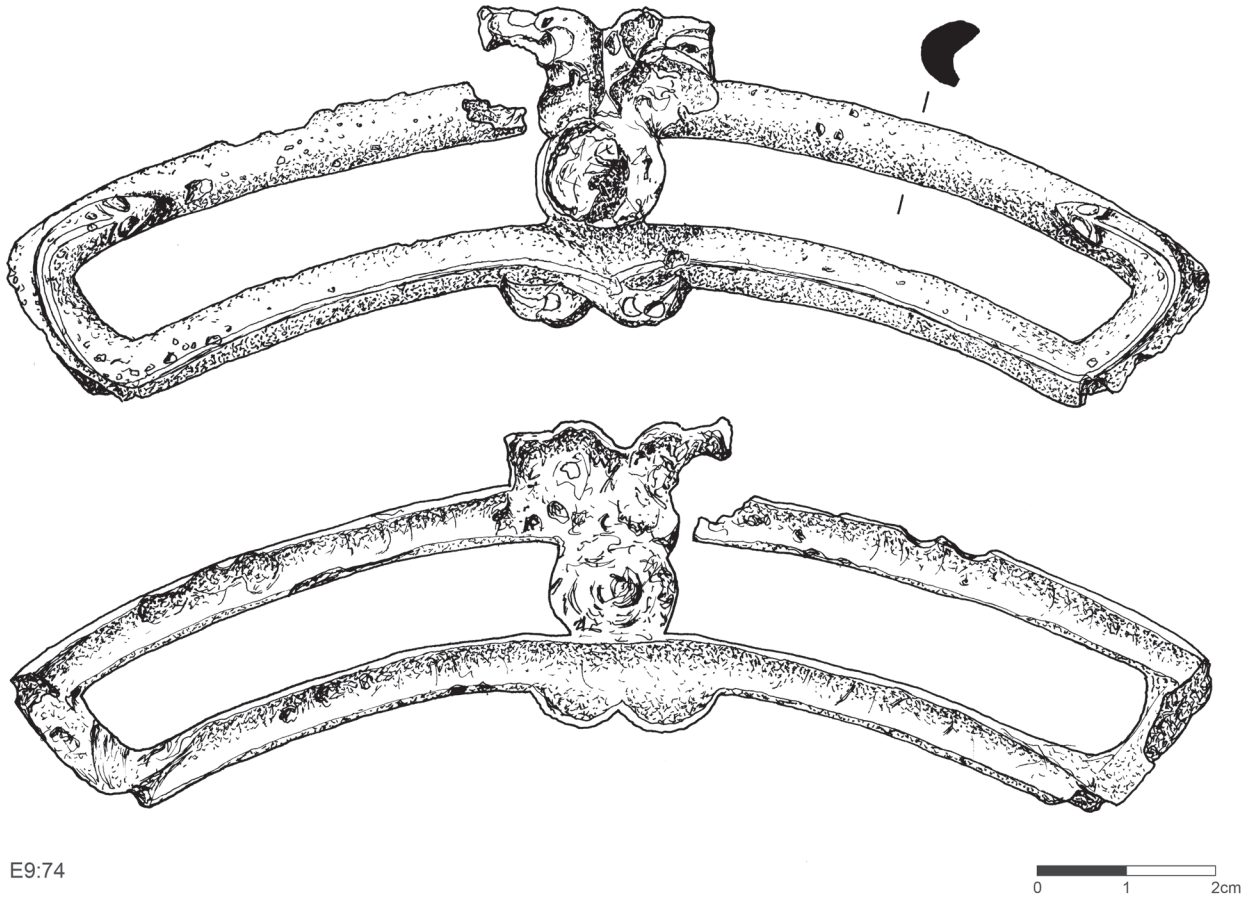


Figure 10.2 Early medieval decorative mount, possibly from a bell-shrine, from Kilgreany Cave (Dowd 2015, 192).

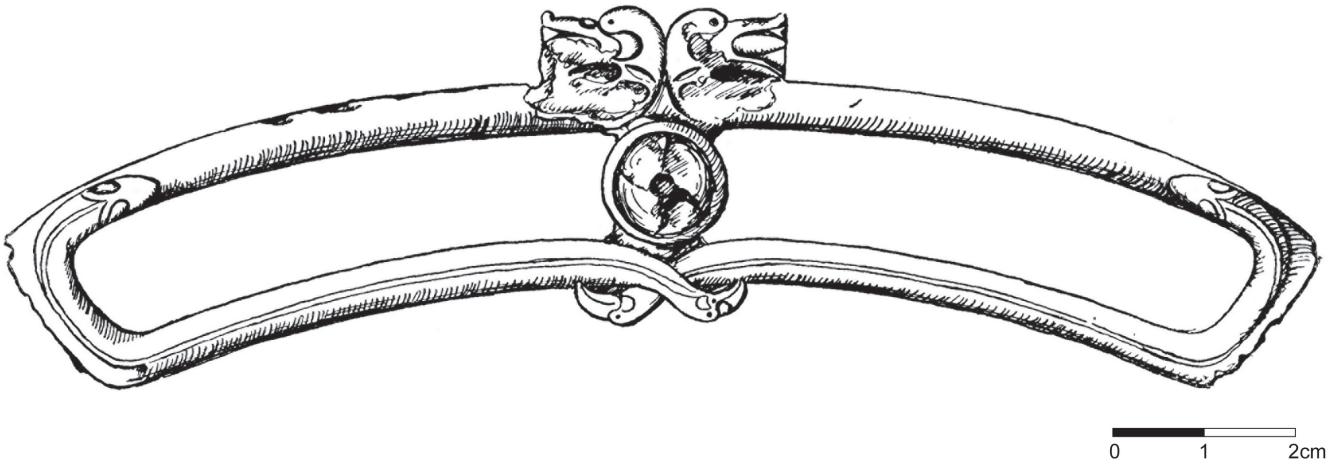


Figure 10.3 Illustration of the early medieval mount from Kilgreany Cave at the time of discovery in 1934 (Movius 1935, 278).

Wheery near Ferbane, Co. Offaly in 1849 (Graves 1869, 347) and may tentatively be identified as them. If one accepts that the Kilgreany mount was also part of a bell-shrine, then it is of some significance in surviving, along with the Chapman fragments, as the earliest evidence for bell enshrinement in Ireland.

XRF analysis has confirmed that the Kilgreany mount is made of bronze.[9] In the published excavation report the mount was described as being silver plated (Movius 1935, 277). This is highly improbable as the technique of silver plating is unknown among surviving eighth and ninth century Irish metalwork. It is far more likely that the object was tinned, like the angled strips from Park North Cave (E992:14), which was a method commonly used in Ireland at this time to give a silvery appearance to copper alloy objects (see Craddock 1989, 173). However, as a result of its chemical treatment (see below) there are now only minute traces of tinning to be seen on the Kilgreany mount. From the drawing in the original report (Fig. 10.3), it appears that there was a rivet hole in the centre of the amber stud and it may be noted that some of the amber studs on the Chapman bell-shrine fragments are similarly attached.

It is further stated in the excavation report that:

> 'Several small fragments of a long piece of gilded bronze with rather fine interlacing ornament were found. This is a plain basket pattern. They came from Trench H, 50 cm. below the silver plated object. The interlacing is of a type likely to be contemporaneous with the object described above; in fact these fragments may well be a part of the decoration of the same shrine' (Movius 1935, 278).

Unfortunately, at the time of writing these fragments could not be located in the National Museum of Ireland's collections.[10] Indeed, as they were not illustrated in the report, no opinion can currently be given.

An eighth century date for the mount was arrived at by the excavators through comparing the snakes on it with those on the Irish shrine finials in the Musée des Antiquités Nationales, St Germain en-Laye (see Youngs 1989, cat. no. 138a, b), and the bird-heads and amber stud with those on the 'Tara' brooch (Movius 1935, 278). The resemblance of the ornament to that seen on both the front and back of the 'Tara' brooch is striking (Wallace and Ó Floinn 2002, pl. 5:16 and 17). Similar crossing bird-heads, although in a more debased form, may be seen on the Westness brooch-pin and the 'Londesborough' brooch (Youngs 1989, cat. nos. 70 and 71). Such comparisons indicate a wider date bracket for the Kilgreany mount to sometime in the eighth or early ninth century.

Bell-shrine? mount

Kilgreany Cave, Co. Waterford
National Museum of Ireland E9:74
Movius *et al*. 1935, 277–278, fig. 9, no. 28.
Length 133mm; width 35mm; thickness 9mm

This arc-shaped bronze object was cast as one piece and was made as a mount to be attached to a larger object. It is an accomplished casting and principally consists of two parallel bands, approximately 6mm wide and generally 4.3mm thick, that meet at both ends and enclose an open area that is divided in two by a centrally placed circular setting. Since the object was found, and sometime after it was published, it was chemically treated. This most likely took place sometime in the late 1960s or 1970s. Unfortunately, this treatment has had a largely negative effect on the object in that its original surface has been all but completely stripped and the metal is now raw looking and heavily pitted.

The object is crowned by two closely set projecting animal-heads, which face in opposite directions. These animal-heads are depicted in profile and face towards the left and right respectively. They are both badly corroded and pitted, particularly their lower portions, so much so that there is now a perforation in that on the right, while part of the left animal-head has been completely lost. To the immediate left of it there is a large break in the upper band of the mount. While their details are now unclear, they both have rounded heads and long straight snouts and appear to have open jaws. Simple dot eyes are depicted on these animal-heads in the drawing of the object in the published excavation report (Fig. 10.3), one of which may still be discerned on the animal-head on the left. A snake is depicted at either end of the upper band, their heads facing towards the projecting animal-heads at the top of the piece. The heads of these snakes are depicted in plan and have pointed snouts slightly raised from the body of the object. It is at these points that the object is thickest, measuring 8mm and 9mm respectively. The snakes' mouths are closed and each has a pair of oval-shaped eyes while a central ridge runs the length of their bodies. Their bodies form the sides and entire lower portion of the object, where they cross each other at the centre before terminating in projecting bird-heads. Like the animal-heads, the bird-heads are depicted in profile and face away from each other towards the right and left respectively. They have closed curving beaks and rounded heads; they also have a little curved feature at the base of their beaks. Simple dot eyes are depicted on the bird-heads in the drawing of the object published in the excavation report, although these are not now visible. The central circular setting, which measures 11mm in diameter and 8.3mm in thickness, features an amber stud secured by a centrally placed rivet. While the stud is depicted as being cracked or damaged in the published drawing, it is

now in a much more damaged state and has the appearance of having been melted, probably as a result of the chemical treatment of the object.

The reverse of the mount has a largely concave hollowed surface, with the exception of the back of the circular amber setting and a flange at either end, which all have flat surfaces. The reverse of the circular amber setting features a rivet hole and the remains of the rivet that holds it in place. The two ends of the mount are C-shaped in cross section and were made to connect with additional elements. One of the terminal flanges has been truncated and only the lower half of it now remains.

Discussion

The presence of mounts in caves in the east Cork/west Waterford region is unusual and deserves further comment. One consideration is that the material may have derived from damaged objects that were destined for recycling by metalworkers. However, this seems unlikely given the definite sacred nature of the Park North material, which seems to represent a substantial portion of one shrine, and the lack of any evidence for the presence of early medieval metalworkers in these caves. A more convincing explanation is that this material derives from objects that were looted and subsequently broken up. Indeed, Dowd (2002, 91) has previously suggested that the Park North and Kilgreany mounts may have been stolen by the Irish or Vikings and notes the closeness of the latter cave to the Viking town of Waterford. The definite sacred nature of the Park North material, and the probable sacred nature of the Kilgreany mount, do not support the theory of Irish involvement. Indeed, most of the Irish metalwork that these pieces have been compared with here is material that was buried with Vikings in Norway and elsewhere, much of it looted Church metalwork. For instance, the Shanmullagh assemblage consists largely of broken up Church metalwork in association with Viking hack-silver, which may have been lost in transit by Vikings in the river Blackwater (see Bourke 1993, 24–38; Bourke 2010).

The Vikings were particularly active in the east Cork/west Waterford region during the ninth century, as evidenced by their raiding of the ecclesiastical sites of Cork, Cloyne, Lismore, and Kilmolash (Etchingham 1996), as well as by their *longphort* settlements at Cork and Youghal (Sheehan *et al*. 2001, 115). The two caves, which are only about 55km apart, are also both just a few kilometres from the coast. Indeed, both caves are located between the Viking towns of Cork and Waterford, which were established in the early tenth century, and there are a number of good harbours along this stretch of coast including those at Cork, Ballycotton, Youghal and Dungarvan. Park North Cave is 8km from Cloyne and only approximately 1.5km from the navigable reaches of the eastern part of Cork harbour. Cloyne was raided by the Vikings numerous times during the ninth century, including on one occasion in AD 888 when it was recorded in the *Annals of the Four Masters* that its abbot and vice-abbot were killed (Gwynn and Hadcock 1970, 65). The finds from the cave have also been generally compared with the Viking material from Cloghermore Cave, Co. Kerry (Connolly *et al*. 2005, 45). Furthermore, it has been argued that the placenames Dunkettle, Fota and 'Longeforde' in Ballincarroonig, which are all within Cork Harbour, were inspired by Scandinavian names and settlement (Sheehan *et al*. 2001, 114–115). Viking activity in the east Cork area probably also explains the find at Ballycotton of a Carolingian cross-brooch set with an Islamic amuletic seal (Porter and Ager 1999).

There is now a growing body of evidence for the use of caves in Ireland by Viking populations (Dowd 2015, chapter 8). Both Cloghermore Cave, Co. Kerry and Dunmore Cave, Co. Kilkenny were used by Vikings, not only as places to hide their valuables but also seemingly as places to bury their dead (Dowd *et al*. 2007; Harrison and Ó Floinn 2014, 618–625, 724–725). John Sheehan has reviewed the evidence for diagnostic Viking or Hiberno-Scandinavian artefacts from Irish caves in this book (Chapter 11), which further supports the view that caves were resorted to by Viking groups in Ireland. Of particular relevance to the discussion here is the quantity of Viking material identified by Sheehan from Carrigmurrish Cave, which is in Ballynamintra Middle – an adjoining townland to the north of Kilgreany. This assemblage is similar in its composition to that excavated from Cloghermore Cave, Co. Kerry (Connolly *et al*. 2005). Amongst the material recovered from Carrigmurrish Cave was a gilded bronze object bearing interlaced ornament (Ussher 1886, 363), which is reminiscent of the description of the fragments of gilded bronze from Kilgreany (see above). Further material of possible Viking-age date was recovered from Brothers' Cave, Oonaglour Cave and Ballynameelagh Cave I, also close to Kilgreany (Dowd 2002, 87; Dowd and Corlett 2002, 8; Dowd 2015, chapter 8). In Kilgreany Cave itself other possible Viking-age material was discovered, including a *Hnefatafal* gaming-piece (Dowd 2002, 87–88).

Only approximately 2km to the south-east of Kilgreany, at Knockmaon, a Viking-age silver hoard was discovered dating from *c*. 1000 (Kenny 1987, 522; Sheehan 1998, 163). This, unusually, consisted of 'Scoto-Scandinavian "ring-money" rather than Hiberno-Scandinavian material, and as such is distinctive in the Irish context' (Sheehan 2008, 243). Approximately 10km to the east, at Shandon and close to Dungarvan itself, a number of Hiberno-Scandinavian objects have been found including a tenth century motif-piece (see Sheehan this volume). Also, a Viking sword pommel made of antler was recovered from 'the estuary near Dungarvan river, above the bridge' in the nineteenth century (Ussher 1886, 367–368). There appears to have been substantial and prolonged evidence for Viking/Hiberno-Scandinavian

activity in the Cappagh valley/Dungarvan area, further indicated by the placenames Helvick Head and Ballynagaul, on the southern side of Dungarvan harbour (Sheehan *et al*. 2001, 115). The identification of diagnostic Viking/Hiberno-Scandinavian material from the adjacent Carrigmurrish Cave strongly indicates that it was as a result of Viking activity that the possible bell-shrine mount came to be deposited in Kilgreany Cave. Indeed, the *Annals of Inisfallen* record that the ecclesiastical site of Kilmolash, which is only approximately 6km east of Kilgreany, was plundered by the Vikings in AD 833.

In conclusion, it is most likely that the house-shaped shrine fragments from Park North, Co. Cork and the possible bell-shrine fragment from Kilgreany, Co. Waterford were deposited in the respective caves by Vikings. It seems probable that this material was looted from church sites before being broken up and the remaining fragments hidden or abandoned in the caves. The early medieval settlement evidence from both of these caves and caves adjacent to Kilgreany (Dowd 2015, chapter 8) suggests that the caves were being used for temporary accommodation or as hideouts by Viking groups during the ninth century. While it is impossible to know where the material was looted from, Cloyne and Kilmolash, which are the closest important early medieval ecclesiastical sites to Park North and Kilgreany respectively, and are both known to have been raided by the Vikings, stand out as distinct possibilities.

Notes

1 I would like to thank Dr Paul Mullarkey, NMI for carrying out this work and for his invaluable contributions to this study. Dr Mullarkey and John Sheehan of University College Cork also read and commented on earlier drafts of the text and I am most grateful to them for their help.

2 I would like to extend my thanks to Stella Cherry and Dan Breen of Cork Public Museum for making this artefact available for study.

3 Also referred to as 'tomb-shaped' shrines.

4 The mount was analysed using a Spectro Midex EDXRF (energy dispersive x-ray fluorescence) spectrometer using a Molybdenum anode. The diameter of the tube collimator and the measurement spot size is 0.7mm, and the distance from the sample surface varies from 2–5mm. The operating conditions for the X-ray tube were 45kV and 0.6mA at normal air pressure. Sample counting time was 180 seconds livetime. The principal elements analysed were copper, tin, zinc, lead, silver, arsenic and antimony. There was no sample preparation, such as polishing or abrasion of the surface, as it would have resulted in unacceptable damage and since the mount was not conserved in the past there are contaminants, surface dirt and corrosion products present. Other factors affecting the results are the surface depletion and enrichment of copper, tin and lead, due to corrosion mechanisms during burial. The calculated percentages were: 64.4 % copper, 18% lead, 7.3% zinc and 6.6% tin.

5 I would like to thank Jon Anders Risvaag, Vitenskapsmuseet, Trondheim, for permission to refer to this analysis which was carried out by Ellen W. Randerz.

6 I am very grateful to Dr. Paul Mullarkey for this suggestion.

7 I would like to thank Éamonn P. Kelly, Maeve Sikora and Margaret Lannin for making these artefacts and the mount from Kilgreany Cave available for analysis.

8 The alloy is 83% copper, 13.4% tin, 1.6% lead and 0.4% zinc. See note 4.

9 The alloy is 83.8% copper, 14.9% tin, 0.4 % silver and 0.1% lead. See note 4.

10 E9:75. These fragments were originally stored with the large mount, E9:74, in C15:1 in the Irish Antiquities Division, NMI in which a label for both may still be found. E9:74 is currently stored in Safe 3:17, while the location of the fragments, E9:75, is unknown at present (June 2010).

References

Anon. 1943. Recent acquisitions in University College, Cork, Museum. *Journal of the Cork Historical and Archaeological Society* 48, 106.

Bayley, J. and Butcher, S. 2004. *Roman brooches in Britain: a technological and typological study based on the Richborough Collection*. London, Society of Antiquaries of London.

Blindheim, M. 1984. A house-shaped Irish-Scots reliquary in Bologna, and its place among the other reliquaries. *Acta Archaeologica* 55, 1–53.

Bourke, C. 1980. Early Irish hand-bells. *Journal of the Royal Society of Antiquaries of Ireland* 110, 52–66.

Bourke, C. 1993. *Patrick: the archaeology of a saint*. Belfast, HMSO.

Bourke, C. 2010. Antiquities from the River Blackwater IV: early medieval non-ferrous metalwork. *Ulster Journal of Archaeology* 69, 24–133.

Coleman, J. C. 1942. Cave excavation at Midleton, Co. Cork. *Journal of the Cork Historical and Archaeological Society* 47, 63–76.

Connolly, M., Coyne, F. and Lynch, L. G. 2005. *Underworld: death and burial in Cloghermore Cave, Co. Kerry*. Dublin, Wordwell.

Craddock, P. T. 1989. Metalworking techniques. In S. Youngs (ed.) *'The Work of Angels': masterpieces of Celtic metalwork, 6th-9th centuries AD*, 170–174. London, British Museum Publications.

Dowd, M. A. 2002. Kilgreany, Co. Waterford: biography of a cave. *Journal of Irish Archaeology* 11, 77–97.

Dowd, M., Lynch, L. G. and McCarthy, M. 2007. Recent archaeological discoveries in Dunmore Cave, County Kilkenny: further questions regarding Viking activity at the site. *Old Kilkenny Review* 59, 7–17.

Dowd, M. 2013. The Jack Coleman archive: insights into Cork's archaeology. *Archaeology Ireland* 27 (4), 34–37.

Dowd, M. 2015. *The archaeology of caves in Ireland*. Oxford, Oxbow.

Dowd, M. and Corlett, C. 2002. Brothers in caves: lost archives of subterranean Waterford rediscovered. *Archaeology Ireland* 16 (1), 8–11.

Etchingham, C. 1996. *Viking raids on Irish church settlements in the ninth century*. Maynooth, St. Patrick's College.

Graves, J. 1869. Proceedings and papers. *Journal of the Historical and Archaeological Association of Ireland* 1 (2), 346–347.

Gwynn, A. and Hadcock, R. N. 1970. *Medieval religious houses: Ireland*. Dublin, Irish Academic Press.

Harrison, S. H. and Ó Floinn, R. 2014. *Viking graves and grave-goods in Ireland*. Dublin, National Museum of Ireland.

Kenny, M. 1987. The geographical distribution of Irish Viking-age coin hoards. *Proceedings of the Royal Irish Academy* 87C, 507–525.

Lucas, A. T. 1967. The plundering and burning of churches in Ireland, 7th to 16th century. In E. Rynne (ed.) *North Munster studies: essays in commemoration of Monsignor Michael Moloney*, 172–229. Limerick, Thomond Archaeological Society.

Mahr, A. 1932. *Christian art in ancient Ireland*, volume 1. Dublin, Stationery Office.

Movius, H. L. 1935. Kilgreany Cave, County Waterford. *Journal of the Royal Society of Antiquaries of Ireland* 65, 254–296.

Ó Floinn, R. 1990. A fragmentary house-shaped shrine from Clonard, Co. Meath. *Journal of Irish Archaeology* 5, 49-55.

O'Kelly, M. J. 1944. Cork's new public museum. *Journal of the Royal Society of Antiquaries of Ireland* 14 (7th series), 229.

Porter, V. and Ager, B. 1999. Islamic amuletic seals: the case of the Carolingian cross brooch from Ballycottin. *La Science de Cieux, Sage Mages Astrologues, res Orientalis* 12, 211–218.

Sheehan, J. 1998. Viking age hoards from Munster: a regional tradition? In M. A. Monk and J. Sheehan (eds.) *Early medieval Munster: archaeology, history and society*, 147–163. Cork, Cork University Press.

Sheehan, J. 2008. The Viking-age silver hoard from Kilmacomma, Co. Waterford: a Woodstown connection? *Peritia* 20, 232–250.

Sheehan, J., Stummann Hansen, S. and Ó Corráin, D. 2001. A Viking age maritime haven: a reassessment of the island settlement at Beginish, Co. Kerry. *Journal of Irish Archaeology* 10, 93–119.

Ussher, R. J. 1886. A description of objects found in the kitchen middens of raths. *Journal of the Royal Historical and Archaeological Association of Ireland* 7 (4th series), 362–368.

Wallace, P. F. and Ó Floinn, R. (eds.) 2002. *Treasures of the National Museum of Ireland: Irish antiquities*. Dublin, Gill and Macmillan.

Youngs, S. (ed.) 1989. *'The Work of Angels': masterpieces of Celtic metalwork, 6th-9th centuries AD.* London, British Museum Publications.



Plate 34 Ridge-mount of early medieval house-shaped shrine (E992:15) from Park North Cave (Dara McGrath; © Cork Public Museum).



Plate 35 Early medieval decorative mount (E9:74), possibly from a bell-shrine, from Kilgreany Cave (© NMI).