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'Bullion-Rings' in Viking Age Britain and Ireland

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ABSTRACT

This paper examines a simple type of silver ring, here termed the 'bullion-ring', that occurs in several Viking Age contexts in Britain and Ireland. It is proposed that the type may be dated to the later ninth and early to mid-tenth century, and that it developed in Ireland as a convenient way of storing silver as a result of inspiration from southern Scandinavia. Its distribution patterns suggest that it may have developed in one of Munster's Scandinavian settlements rather than in Dublin, the core of the Hiberno-Scandinavian silver-working tradition.

Keywords: Silver hoards, bullion-rings, Ireland.

INTRODUCTION

A 'bullion-ring' may be defined as a small penannular ring made from a thick band of silver of approximately rectangular cross-section, often with a concave outer face; examples are invariably plain, that is unornamented (see Fig.1). The majority of examples vary from 4–6 mm in thickness and taper in width towards the terminals, which may end convexly or angularly and frequently overlap for a short distance. They are too small to function as arm-rings and are generally too large and cumbersome for use as finger-rings. This simple type of ring, over twenty-two examples of which have been found in hoards in Ireland, has previously been known both as the 'penannular ingot' (Sheehan, 1998b, 155–6) and as 'Irish ring-money' (Graham-Campbell & Briggs, 1986; Graham-Campbell, 1995, 30, Fig. 16), though neither of these terms should now be considered appropriate. The term 'penannular ingot', for instance, is too suggestive of a relationship between these rings and standard ingots, while the term 'Irish ring-money' not only suggests a specific cultural attribution (which, in any case, is probably incorrect) but also implies that the primary function of these objects was to serve as a form of currency (which cannot be satisfactorily demonstrated). The new term 'bullion-ring' is more neutral and acceptable, implying no more than that these rings – like ingots – served first and foremost as convenient way of storing bullion.



Fig. 1. 'Bullion-rings from the 'Ireland no. 2' hoard. (Photo: National Museum of Ireland.)

HOARD OCCURRENCES IN IRELAND

'Bullion-rings' are known to occur in at least five hoards in Ireland, those from: Castlelohort Demesne, Co. Cork (Graham-Campbell & Briggs, 1986); Derrynahinch, Co. Kilkenny (Graves, 1852; Graham-Campbell, 1976, 50, 67, 68, note 3); Cushalogurt, Co. Mayo (Hall, 1973); Carraig Aille II, Lough Gur, Co. Limerick (Ó Ríordáin, 1949, 62-4, Fig. 7; Sheehan, 1998b, Fig. 15.2); and an unprovenanced find (Fig. 1), known as 'Ireland no. 2' (cf. Graham-Campbell, 1995, 30, Fig. 16). In addition, one further hoard, an unlocalised find from Co. Kilkenny (Windele, 1851, 332), now lost, may also have been composed of such rings, though the suggestion that a 'bullion-ring' formed part of the hoard from Ballyadams, Co. Laois (Sheehan, 1998b, 155), is now withdrawn. The total number of objects of this type represented in these hoards is at least twenty-two, though this is a minimum estimate given the incomplete records that exist for several of the finds (Fig. 2). In addition, there are four apparent single-finds from Ireland, all unprovenanced nineteenth-century discoveries. When the hoards and single-finds are combined, it appears that there may be between at least twenty-six and thirty rings of this type represented amongst Ireland's Viking Age silver finds.

Provenance	Number	Complete	Hack-Silver	Associated Material
'Ireland', 2	6–10	•	–	–
'Co. Kilkenny'	2+	•	–	–
Castlelohort Demesne	6	•	–	–
Derrynahinch	2+	•	?	•
Cushalogurt	3	•	–	•
Carraig Aille	1	•	–	•

Fig. 2. Hoards containing bullion rings from Ireland.

Castlelohort Demesne (Lohort), Co. Cork

This hoard was discovered in 1848 during quarry work near Lohort Castle, a late medieval tower-house. A contemporary account, by John Windele, recorded that the find comprised six rings, linked together, their average weight being 'about two oz each, but some exceeded and others were less'. On this basis it appears that the total weight of the hoard amounted to *c.*310 gm. Windele's records also feature sketches of several of the rings, from which it is clear that they are 'bullion-rings'. The find was dispersed sometime following its discovery, with most of its components being acquired by local Cork antiquarians. Some of these individuals later sold on the rings into the antiquities trade through London auction houses, though some were acquired either then or subsequently by museums. Five of the six original Castlelohort Demesne rings may now be identified in museum collections; at Tullie House Museum, Carlisle, the Pitt Rivers Museum, Oxford, and the National Museum of Ireland.

Derrynahinch, Co. Kilkenny

In March 1853 the Rev. J. Graves reported the acquisition of a plain silver ring by the museum of the Kilkenny Archaeological Society (Graves, 1852, 355–6). He described it as the 'sole remaining, or at least discoverable' piece from a hoard 'which consisted of about a quart full of rings and pieces of silver' that had been found at Derrynahinch in 1851, during the construction of a railway cutting. He noted that the hoard consisted of about 'twelve or fourteen rings, some of them flat', similar to the one acquired by the Society's museum, and others 'twisted like a curb-chain', as well as 'many flat pieces of silver, some square, about the size of a shilling, others of different sizes, and amongst them

were oblong flattened pieces, tapering at the end, exactly like the ring which has been preserved, but straight'. He furthermore recorded that 'when the hoard was thrown out of its hiding-place, the pieces of silver being oxidized, and consequently black, attracted little attention, the greater part of them were shovelled into wagons and 'tipped' over the embankment'. He finally noted that the surviving ring was 'picked up by an intelligent ganger … who placed it on his finger, where it gradually assumed its pristine lustre'. Described as comprising 'about a quart full of rings and pieces of silver', the Derrynahinch find was undoubtedly one of Ireland's largest hack-silver hoards. The records indicate that it comprised twelve or fourteen penannular rings, some of which were of 'bullion-ring' type and some, possibly, of twisted-rod arm-ring form, as well as 'many' pieces of hack-silver, derived from ornaments or ingots, or both. Its weight is unknown, but it appears to have been quite substantial. The townland is a large one within which, and close to the railway line, is located Derrynahinch church. It has recently been suggested that this hoard may have ultimately derived from the Scandinavian *longphort* at Woodstown, Co. Waterford (Sheehan *forthcoming* c).

Cushalogurt, Co. Mayo

This hoard was discovered by a farmer in 1939 while moulding potatoes about half-way along the northern shore of Urrisaun Point, a small peninsula located within the inner reaches of Clew Bay, in the west of Ireland (Hall, 1973). The find was made close to the shoreline. The finder noted, in a letter (NMI topographical file: Cushalogurt), that 'when found they were linked into each other', indicating that the rings in the hoard had been suspended within one another. He also noted that 'there were broken bits fourteen, a farm implement coming close will account for the bits', though it is clear from an examination of the fragments in the hoard that most of them had been reduced to this form prior to the hoard's deposition. The hoard comprises one complete Hiberno-Scandinavian broad-band arm-ring, a further six arm-rings of this type with a small portion of one or both terminals cut off, fourteen hack-silver fragments of such rings (of which four join with the terminals of incomplete broad-band arm-rings in the hoard), one penannular rod arm-ring, and three 'bullion-rings'. The total weight of the hoard, one of Ireland's largest, is 594.84 gm.

Carraig Aille II, Co. Limerick

This hoard was discovered in 1948 during the archaeological excavation of a stone ringfort known as Carraig Aille II, part of the Lough Gur archaeological complex. It had been concealed in an interstice on the inner face of the ring-fort's enclosing rampart (Ó Riordáin, 1949, 62–4). Excavation demonstrated that the site's occupation possibly started in the eighth century, and continued

until after the remains of the enclosing stone ramparts were covered with debris. This indicates that occupation continued well after the deposition of the hoard, which had been inserted in the rampart while it was still exposed. The hoard comprises one 'bullion-ring', two ingots, one hack-silver fragment derived from an ingot, one hack-silver fragment derived from a rod of lozenge-shaped section, and two hack-silver fragments derived from Hiberno-Scandinavian broad-band arm-rings. One component of the hoard, an ingot, cannot currently be located in the National Museum of Ireland. This, however, was somewhat smaller than the other ingot in the find, and, if it weighed proportionally less, the overall weight of the hoard would be *c.*90 gm. Comber has recently interpreted the find both as representing 'possibly a stockpile of silver intended for use in the manufacture of items on site' and as 'merely fragments of objects broken after loss' (2004, 38–9), though it seems far more likely that it is a hack-silver hoard of standard Viking Age type.

'Ireland no. 2'

This unprovenanced hoard (Fig. 1) is known to have been discovered sometime prior to 1837. It comprises at least six, but possibly as many as ten, rings. Six of these are illustrated in Sir William Betham's ms., *Sketch-Book of Antiquities* (Nat. Lib. Ireland: Tx.1959, p. 26), where they are assigned individual weights, amounting to a total equivalent of 278.46 gm. The drawing probably dates to before 1837, when Betham published an illustration of the group of four linked rings together with the weights of all six illustrated in his *Sketch-Book* (1837, 15; Graham-Campbell & Sheehan, 2007). Information in the 1841 *Dawson Catalogue* and in the Royal Irish Academy's *Museum Register of Antiquities 1846–1853*, under registration nos. 558c–566c, gives rise to the possibility of there originally having been a hoard of ten such rings. The records relating to this hoard are, obviously, rather unsatisfactory and it is not possible, at present, to conclude how many rings actually constituted the find or, indeed, to ascertain if it originated as two separate finds. As Graham-Campbell observed, 'until the history of these groups can be more satisfactorily resolved, it would seem wisest to accept the existence of only one such hoard' (1976, 69). Based on the information supplied concerning the weights of the rings in the nineteenth-century sources, and given that the hoard comprised at least six and possibly as many as ten rings, its overall weight appears to lie within the range of *c.*270 gm to *c.*440 gm.

Co Kilkenny

The evidence for this find, which possibly was comprised exclusively of 'bullion-rings', is contained in the writings of Windele who recorded: 'Silver rings have been rarely found in Ireland. Several specimens, about the thick-

ness of the little finger, were found in 1840, in one of the ancient *lioses*, in the County of Kilkenny, as Mr. Lindsey informed me; but they appear to have been soon after melted down' (1851, 332). The 'Mr. Lindsey' referred to was the renowned numismatist, John Lindsay. From Windele's description of the size of these rings, it seems probable that they were 'bullion-rings'. The find was made in a ringfort, the term *lios* usually being used to refer to ringforts of the earthen variety.

Occurrences in Britain

In Britain, 'bullion-rings' are only definitely represented in one recorded hoard, that from Cuerdale, Lancashire. This find contains almost twenty complete and hack-silver fragments, making it the largest known collection of such rings (Sheehan *forthcoming* a). The occurrence of such a large proportion of the total number of 'bullion-rings' from Britain and Ireland in this single hoard is not surprising given the immense size of the non-numismatic element of this find and the fact that its culturally diagnostic bullion contains many fragments of other Hiberno-Scandinavian and Irish types of ornament, suggesting that a considerable portion of the hoard originated in Viking Age Ireland, probably in Dublin (Graham-Campbell, 1987, 339–40). The presence of such rings in Cuerdale, deposited *c.*905–10, is of special significance given that this find represents the only coin-dated hoard context for 'bullion-rings'.

The Isle of Skye (no. 3) hoard, from Scotland, now lost, was composed of three linked rings. It has been proposed by Graham-Campbell that these rings may reasonably be identified as 'bullion-rings' on the basis of details contained in a mid-nineteenth-century account of their discovery in 1850 (1995, 30, 105, no. 20). Again, as in the case of the Cuerdale find, it is possible that the Isle of Skye hoard derived from a Hiberno-Scandinavian milieu in Ireland, as most of the hoards deposited in Scotland during the period between *c.*850 and *c.*950 display such connections.

The Torksey find

An example of what is to be considered, at least, a prototype 'bullion-ring' forms part of the large assemblage of metalwork that has emerged in recent years from Torksey, Lincolnshire. Like the Hiberno-Scandinavian 'bullion-rings', this somewhat misshapen object is a small, plain, penannular ring made from a rather thick band of silver (illustrated in Blackburn 2011, fig. 4). Torksey was the location of the winter-camp of the Danish 'Great Army' in 872–3, and Blackburn has drawn attention to the wide range of finds from the site, which includes coins, polyhedral weights and hack-silver. The ring find is of significance, despite having no formal archaeological context, because, firstly, of the apparent likelihood that it was deposited in 872 or 873 and, secondly, it provides an indicator of the potential occurrence of prototype 'bullion-rings'

Provenance	Broad-Band Arm-Ring	Penannular Rod Arm-Ring	Plaited Ring	Lozenge-Sectioned Ring	Ingot
'Ireland', 2	–	–	–	–	–
'Co. Kilkenny'	–	–	–	–	–
Castlelohort	–	–	–	–	–
Derrynahinch	–	–	?	–	?
Cushalogurt	•	•	–	–	–
Carraig Aille	•	–	–	•	•

Fig. 3. The hoard associations of 'bullion-rings' in Ireland.

within ninth-century cultural contexts in southern Scandinavia, from where most of the Torksey silver must ultimately derive. The only parallel known to the author for the 'bullion-ring' form within Viking Age Scandinavia lies within a small, coinless hoard from an unlocalised findspot on Gotland (Stenberger, 1947, 258–9, pl. 189.4, no. 676; SHM:12884). In terms of its overall form, closely-spaced rounded terminals, dimensions and weight, it conforms very well with 'bullion-rings' from Britain and Ireland, though its transverse-hammered marks do not (though this feature does occur on several items in the Torksey assemblage and the Cuerdale hoard). Its date, however, is unknown, though the date of deposition of the hoard, on the basis of the presence in it of a brooch of Stenberger's Rn Type 1 (1958, 65ff; Graham-Campbell 1984, 32–4), is unlikely to be much earlier than the mid-tenth century.

The date and location of the Torksey assemblage probably indicates both the main period and the route by which prototype 'bullion-ring' material travelled to the west and initiated the development of the type in Ireland, where by far the dominant Hiberno-Scandinavian arm-ring type, the broad-band type (Sheehan, *forthcoming* b), was also of southern Scandinavian inspiration. This reinforces the connections that existed between the ninth-century Hiberno-Scandinavian and southern Scandinavian silver-working traditions, connections which, ultimately, were due to the primary importance of the southern Scandinavian and Baltic regions as a source for the silver that was used to supply the silver-working tradition that developed in Ireland (Sheehan, 2001, 58–9). The Torksey find, therefore, is of major significance in that it provides a potential indicator of the origins of the Hiberno-Scandinavian 'bullion-rings', as well as an indication that the ultimate origins of the type lie in the 870s.

DATING

It is unfortunate that 'bullion-rings' are not recorded from coin-dated hoards in Ireland. The Cuerdale hoard, deposited *c.*905–10, therefore, represents the only coin-dated hoard context for the currency of this type of object. The only other method of establishing its date range is by associative dating but, here too, problems arise from the fact that in four of the remaining seven hoards the 'bullion-rings' are not known to have been associated with other material. We are, therefore, confined to a consideration of the associated objects in the hoards from Derrynahinch (now lost), Carraig Aille II and Cushalogurt (see Fig. 3).

The Cushalogurt hoard, in addition to its three 'bullion-rings', comprises one complete and six almost complete Hiberno-Scandinavian broad-band arm-rings, fourteen hack-silver fragments of such rings, and one penannular rod arm-ring. The Carraig Aille II find, as well as a single 'bullion-ring', comprises two broad-band arm-ring hack-silver fragments, two ingots, one ingot hack-silver fragment and one hack-silver fragment derived from a rod of lozenge-shaped section. Thus, apart from the 'bullion-rings', these two hoards both share the occurrence of broad-band arm-rings in common. Broad-band arm-rings represent the most important product of Ireland's Hiberno-Scandinavian silver-working tradition and form the largest and most impressive group of silver arm-rings known from Ireland, where they occur in twenty-nine hoards. However, only three of these finds are known to have contained coins, those from Dysart Island (no. 4), deposited *c.*907(+), Co. Antrim, deposited *c.*910(?), and Magheralagan, deposited *c.*910(?). The type is also known from Viking Age hoards in Britain and Scandinavia where they occur in thirteen coin-dated finds, the great majority of which were deposited between *c.*900 and *c.*930. On this basis the currency of the broad-band arm-ring type is broadly datable to the period between *c.*850 and *c.*950, though the majority appear to have been produced during the fifty-year period of *c.*880–*c.*930 (Sheehan, *forthcoming* b).

The penannular rod arm-ring from Cushalogurt is too simple in form to be of any real use in dating. The fragment of a lozenge-sectioned rod from Carraig Aille II is also of limited value in this regard, though lozenge-sectioned rings do occur in hoards from Ireland that date from the later ninth and tenth centuries. The only other object type found in association with 'bullion-rings' are ingots, where they are found in the Carraig Aille II hoard and, possibly, in the Derrynahinch find. Ingots occur, in either complete or hack-silver form, in at least half of the Viking Age hoards from Ireland that contain non-numismatic material. Seventeen of these finds also contain coins, and in each instance these are of tenth-century date.

Little is known about the content of the Derrynahinch hoard apart from

the fact that it contained an impressive amount of silver, including hack-silver. It is possible, however, that it featured plaited rings of some form as a contemporary antiquarian account of its discovery noted that among the twelve or fourteen rings that formed part of the find were some that were 'twisted like a curb-chain' (Graves, 1852, 356). This term, of unusual occurrence in the antiquarian literature, may have been meant to denote a chain formed with loops linked end-to-end, with each loop being angled slightly so that they fitted together smoothly, and Viking Age twisted-rod arm-rings could reasonably be described in this manner. Although twisted-rod arm-rings originated in the ninth century (Graham-Campbell, 2006, 74-6), these are largely a tenth-century phenomenon and of rare occurrence in Ireland's hoards, with hack-silver fragments of silver rod showing evidence of torsion occurring in the Dysart (no. 4) hoard, with its coin-dated deposition of *c.*907(+), and, possibly, in that from Magheralagan, deposited *c.*910(?). The limited evidence of the Derrynahinch hoard, therefore, indicates that this find may have been deposited in the tenth century.

Note should be taken of the broad context of the Isle of Skye (no. 3) hoard. Containing only three probable 'bullion-rings', it is not independently datable. Graham-Campbell, however, has noted that its presence in the Isle of Skye recalls the Irish connections of another Skye find, the Storr Rock hoard, 'with which it must be broadly contemporary' (1995, 30). This latter find, a coin-dated example that was deposited *c.*935–40, is comparable with hoards from Ireland on the basis of both its numismatic and bullion contents. A date for the Skye hoard towards the mid-point of the tenth century would be in keeping with the evidence from Ireland.

In overall terms, therefore, it may be proposed that 'bullion-rings', on the basis of a single coin-dated occurrence combined with associated material from a limited number of finds, were in circulation during the later ninth and early to mid-tenth century. Graham-Campbell has suggested that the type was a 'relatively short-lived development during the first half of the tenth century' (1995, 30), though the new evidence from Torksey raises the probability of a later ninth-century horizon.

FUNCTION

In his consideration of the 'bullion-rings' in the Cushalogurt hoard, Hall suggested that they are 'most plausibly explained as ingots cast from small fragments, such as also occur in the hoard, as a more convenient way of carrying them' (1973, 83). Apart from the fact that they are formed by hammering, after casting, this is a reasonable suggestion. Since 'bullion-rings' may have func-

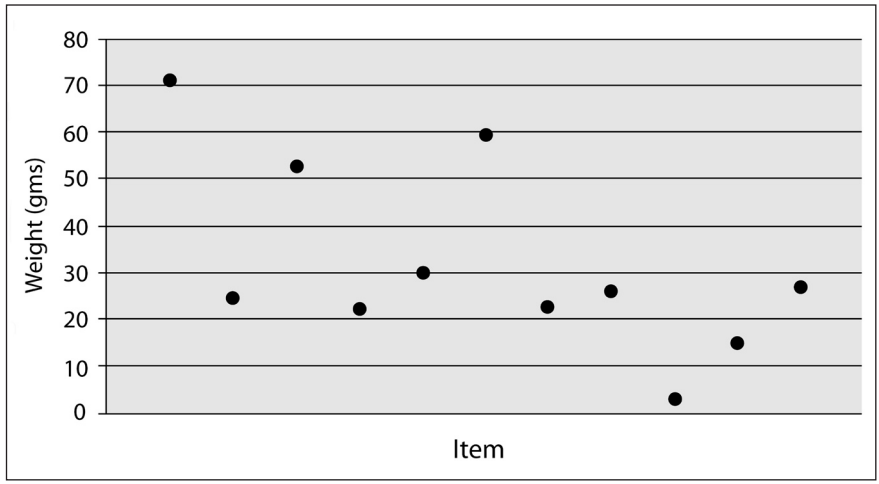


Fig. 4. Scatter diagram of the weights of 'bullion-rings' from Ireland.

tioned primarily, like ingots, as convenient ways of storing bullion, they may possibly have been made to a specific weight standard. A number of metrological studies of various types of Viking Age silver ornaments and ingots from Britain and Ireland have been undertaken in recent decades. Kruse conducted a study on ingots from hoards from England and Wales, and while no obvious standard could initially be ascertained there was a focus between 20 and 30 gm, with a basic 'fuzzy' unit of *c.*25–26 gm seeming possible (1988, 294). Warner performed quantum analysis on complete examples of Scoto-Scandinavian 'ring-money', searching for a basic weight unit within the data, and concluded that the material suggested a standard of 24.0±0.8 gm (1975–76, 141). Sheehan examined the weights of a sample of complete Hiberno-Scandinavian broad-band arm-rings and suggested a weight range of *c.*25.9±0.4 to *c.*27.3±0.9 gm; quantum analysis on this material suggested a weight target of 26.15 gm (1998a, 178–9). Kruse, however, has pointed out that problems may arise from the use of quantum analysis if multiple weight standards are present in the material (1988, 293). Several other Viking Age units or multiples around figures in the mid-20 gm have been proposed following studies on scale balance weights and silver artefacts from various areas of the Viking world. On this basis, therefore, although for various reasons it is incapable of statistical and mathematical proofs, it seems a reasonable proposition that a target weight of *c.*25–26 gm was in operation in the Viking Age bullion economy.

Too few 'bullion-rings' are known to exist, however, to permit any sort of statistically-meaningful analysis of their weights. Nevertheless, the recorded

weights of all extant complete examples from Ireland, both from hoards and single-finds, are plotted in a scatter diagram simply in order to note what, if any, trends emerge from the exercise (Fig. 4). The results show that the majority of examples lie within the 20–30 gm range, as is the case with studies of other forms of non-numismatic silver of the Viking Age. The suggested function of 'bullion-rings' as a convenient way of storing silver is supported, in a general way, by this exercise.

DEVELOPMENT AND BACKGROUND

'Bullion-rings' have occasionally been culturally attributed as 'Irish' (as Graham-Campbell & Briggs, 1986), though without clear justification. While it is clear that Scandinavian activity in Ireland resulted in significant quantities of silver becoming available to Irish craftsmen for the first time, particularly from *c.*850 onwards, and that this led to the development of novel Irish types of objects, such as penannular brooches of the bossed and ball types, it is also evident that there are differences between the specific find-contexts of these Irish types and those of Scandinavian-type hoards, including those containing 'bullion-rings' (Sheehan, 1998b, 156). There are instances of the former entering the Hiberno-Scandinavian pool of silver and occurring as hoard components, but these are remarkably few in number. Indeed, these brooches are usually only found as single-finds rather than within hoards, the characteristic context of Scandinavian and Hiberno-Scandinavian material. On this basis alone it seems rather unlikely that the 'bullion-rings' are of Irish origin. It is worth noting, furthermore, that the form of these object types are without precedent in Ireland, and that when Irish craftsmen did experiment through the medium of silver they tended to produce highly decorative and sophisticated forms that were far removed in technical accomplishment and style from these plain 'bullion-rings'. It seems more likely that these rings derive from a Hiberno-Scandinavian milieu. As has been demonstrated above, they tend to occur in hoards of Scandinavian character, sometimes in association with diagnostic Hiberno-Scandinavian object-types and, most importantly, in a number of instances they exhibit the nicking that is characteristic of Scandinavian-type hoards.

The practice of nicking and pecking silver objects, bullion as well as coins, is a feature of some Viking Age silver hoards in Britain and Ireland and was presumably carried out to check silver purity (Graham-Campbell, 1995, 33). It is not a feature of native Irish silver artefacts, apart from a few examples that appear to have been deposited in Scandinavian-type hoards. It is difficult to ascertain to what extent nicking is truly a feature of 'bullion-rings', partly because a fairly large proportion of the material is known only from the anti-

quarian sources. Of the six relevant hoards from Ireland, three are problematic: the find from Co. Kilkenny and all but one of the objects from Derrynahinch are lost, while only two of the six rings from Castlelohort Demesne are available for inspection. Nevertheless, a significant proportion of the remaining rings from the Irish finds do feature nicking: four of the eight rings that currently constitute the 'Ireland no. 2' find exhibit this phenomenon, generally comprising a single slice on the edge of the rings, near their mid-points; one of the two available rings from Castlelohort Demesne is nicked, comprising two nicks and four slices; and five of the seven objects in the Carraig Aille II hoard are nicked, with the 'bullion-ring' featuring a slice, on the edge, near its mid-point, in the same manner as the 'Ireland no. 2' rings. On the other hand, nicking is not a feature of the three 'bullion-rings' in the Cushalogurt hoard, though it is noteworthy that only one of the twenty-five items in this hoard is nicked (and that only once). At the very least this pattern of evidence demonstrates that 'bullion-rings' formed part of the circulation of silver represented in Scandinavian-type hoards.

It, therefore, appears reasonable to suggest that the cultural background of the 'bullion-rings' is Hiberno-Scandinavian rather than Irish. The recent Torksey find, noted above, provides an indicator that the ultimate origins of the type lie in southern Scandinavia. The distributional pattern of 'bullion-rings' in Ireland is unusual, it being noteworthy that no example is represented amongst the many silver hoards on record from the midlands, north Leinster and Ulster. Of the five find-spots that have at least a county provenance, four are located in the southern third of the country (in counties Cork, Limerick and Kilkenny). This distribution appears to be significant, focused as it is on the early medieval province-kingdom of Munster, and suggests that 'bullion-rings' may have originated, not in the Dublin core of the Hiberno-Scandinavian silver-working tradition, but rather in one of the Hiberno-Scandinavian settlements of Limerick, Cork or Waterford (Sheehan 1998b, 155). The presence of examples of this ring type in the Cuerdale hoard, along with the Isle of Skye find, demonstrated that it gained some circulation outside the Munster area, both in Ireland and the Irish Sea region.

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BIBLIOGRAPHY

Betham, W. (1837). On the ring-money of the Celtæ, and their system of weights, which appears to have been what is now called Troy weight. *Transactions of the Royal Irish Academy,* xvii, 7–17.

Blackburn, M. (2011). The Viking winter camp at Torksey, 872-3. In M. Blackburn, *Viking coinage and currency in the British Isles*, British Numismatic Society, Special Publication No. 7, London, 1-44.

Comber, M. (2004). *Native evidence of non-ferrous metalworking in early historic Ireland*. British Archaeological Reports, International Series 1296. Oxford.

Graham-Campbell, J. (1976). The Viking-age silver hoards of Ireland. In B. Almqvist and D. Greene (Eds.), *Proceedings of the seventh Viking congress, Dublin 1973.* Dublin, 31–74.

Graham-Campbell, J. (1984). Western influences on penannular brooches and ringed pins. In G. Arwidsson (Ed.) *Birka II:1. Systematische Analysen der Gräberfunde*. Stockholm, 31–8.

Graham-Campbell, J. (1987). Some archaeological reflections on the Cuerdale hoard. In D. M. Metcalf (Ed.), *Coinage in ninth-century Northumbria: the tenth Oxford symposium on coinage and monetary history*. British Archaeological Reports, British Series 180. Oxford, 320–44.

Graham-Campbell, J. (1995). *The Viking-age gold and silver of Scotland (AD 850–1100)*. Edinburgh.

Graham-Campbell, J. (2006). The rings. In S. H. Fuglesang & D. M. Wilson (Eds.), *The Hoen hoard: a Viking gold treasure of the ninth century*. Acta ad Arch. et Art Hist. Pert. 14; Norske Oldfunn 20. Rome/Oslo, 73–81.

Graham-Campbell, J., & Briggs, C. S. (1986). Some neglected Viking-age silver hoards from near Athlone and Co. Cork. *Peritia,* 5, 309–16.

Graham-Campbell, J., & Sheehan, J. (2007). A Viking-age silver hoard of 'ring-money' from the Isle of Man re-discovered. *Proceedings of the Isle of Man Natural History and Antiquarian Society,* XI (4), 527–40.

Graves, J. (1852). Proceedings of the Kilkenny archaeological society 1853. *Transactions of the Kilkenny Archaeological Society*, ii (1852–53), 349–90.

Hall, R. (1973). A hoard of Viking silver bracelets from Cushalogurt, Co.Mayo. *Journal of the Royal Society of Antiquaries of Ireland*, 103, 78–85.

Kruse, S. E. (1988). Ingots and weight units in Viking Age silver hoards. *World Archaeology*, 20 (2), 285–301.

Ó Ríordáin, S. P. (1949). Lough Gur excavations: Carraig Aille and the "Spectacles". *Proceedings of the Royal Irish Academy*, 52C, 39–111.

Sheehan, J. (1998a). Early Viking Age silver hoards from Ireland and their Scandinavian elements. In H. Clarke et al. (Eds.), *Scandinavia and Ireland in the early Viking Age*. Dublin, 166–202.

Sheehan, J. (1998b). Viking Age hoards from Munster: A regional tradition? In

M. A. Monk & J. Sheehan (Eds.), *Early medieval Munster: archaeology, history and society*. Cork, 147–63.

Sheehan, J. (2001). Ireland's Viking-age hoards: sources and contacts. In A.-C. Larsen (Ed.), *The Vikings in Ireland*. Roskilde, 51–9.

Sheehan, J. *forthcoming* a. 'Bullion-rings'. In J. Graham-Campbell, *The Cuerdale hoard and related Viking-age silver and gold, from Britain and Ireland, in the British Museum*. London, forthcoming, 87–8.

Sheehan, J. *forthcoming* b. Hiberno-Scandinavian broad-band arm-rings. In J. Graham-Campbell, *The Cuerdale hoard and related Viking-age silver and gold, from Britain and Ireland, in the British Museum*. London, forthcoming, 94–100.

Sheehan, J. *forthcoming* c. The Woodstown silver, in context. In I. Russell & M. F. Hurley, *Woodstown: A Viking Age Settlement in County Waterford*, Dublin, forthcoming.

Stenberger, M. (1947). *Die Schatzfunde Gotlands der Wikingerzeit II: Fundbeschreibung und Tafeln*. Stockholm.

Stenberger, M. (1958). *Die Schatzfunde Gotlands der Wikingerzeit I: Text*. Stockholm.

Warner, R. (1975). Scottish silver arm-rings: an analysis of weights. *Proceedings of the Society of Antiquaries of Scotland*, 107, 136–43.

Windele, J. (1851). On the ring-money of ancient Ireland. *Transactions of the Kilkenny Archaeological Society*, 1 (1849–51), 328–33.