ANGLO-SAXON and other foreign coins circulated in the Irish Sea area from at least the ninth century, but it was only in the 990s that the Hiberno-Norsemen of Dublin under the rule of Sihtric III ‘Silkenbeard’ (c. 994–1030s, d.1042) instituted a coinage of their own. For the first twenty-five years (Dolley Phase I) the coin types copied those of the contemporary Anglo-Saxon issues of Æthelred II (978–1016) and Cnut (1016–35), while the subsequent coinages generally employed distinctive designs intended to differentiate them from the English currency. Of the five successive English types that inspired broadly parallel issues at Dublin in Phase I, it is the last of these, Cnut’s Quatrefoil type, that is the subject of this paper.

Research prompted by the discovery of two hoards from North Wales, Bryn Maelgwyn (1979) and Pant-yr-eglwys (1981), soon established that there are two distinct groups of imitations, one associated with Dublin and another which appears to be the product of a second independent mint in the Irish Sea area, possibly at Meols in the Wirral. These two groups of coins, which are listed in Appendices 1 and 2 below and illustrated on Plates 1–2 will be considered in turn.

Quatrefoil was Cnut’s first issue and it must have been introduced within a few months of his accession to the English throne following Edmund Ironside’s death in November 1016. There is no direct evidence by which to date the end of the type, and at present the best we can do is to regard Cnut’s three issues as being of broadly similar duration, thus assigning them each some six or seven years. A date bracket of c. 1017–23 is both conventional and currently our best estimate. One other feature of the Quatrefoil issue is that die-production in England was decentralised, and some nineteen die-cutting centres have been identified, responsible for forty-two distinctive styles or sub-styles. Thus we have a very clear idea of the style that one would expect at any given mint in England, and this is a powerful tool when it comes to detecting imitations purporting to come from English mints.

The Hiberno-Norse Quatrefoil issue

Quatrefoil is the rarest of the five Hiberno-Norse types in Phase I. We know of only thirty specimens, of which six are in public collections in the British Isles, twenty-three are in

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2 A version of this paper was read to the Society on 9 July 1983. It was prompted by a lecture given by George Boon in October 1982 on the Bryn Maelgwyn and Pant-yr-eglwys hoards, and it was to have been written jointly with Michael Dolley, although in the event this collaboration was prevented by his untimely death in March 1983. The paper still owes much to Prof. Dolley’s inspiration and encouragement, and to Mr Boon’s generosity in sharing the important Welsh material. Some points from the lecture were incorporated into Mr Boon’s prompt and thorough publication of the hoards; G. Boon, Welsh Hoards 1979–1981 (Cardiff, 1986), pp. 1–35. I should also like to acknowledge advice from Stewart Lyon and the late Bill Seaby, and assistance from museum colleagues who supplied information or photographs, Marion Archibald, Donal Bateson, Edward Bestly, Brita Malmer, Vsevolod Potin, and Tuukka Talvio. I am grateful to Stephen Doolan for drawing Fig. 1 and to the National Museum of Wales for permission to reproduce Figs. 2 and 4.

museums on the Continent, and one was recently in the trade. These thirty coins are struck from sixteen obverse and reverse dies, which suggests that we know a good proportion of the dies originally employed in the coinage. Unfortunately the sample is relatively small and a close prediction of the original number of dies used cannot be made, but the figures indicate that there were in the order of twenty-five obverse and reverse dies.\textsuperscript{5} This fairly small estimated number of dies does not appear merely to be the result of a limited group of coins having been exported to the Northern Lands, for each of the five coins with putative find

\textsuperscript{5} Using the formulae recommended in W. Esty, 'Estimation of the size of a coinage: A survey and comparison of methods', \textit{NC} 146 (1986), 185–215 (nos. J1, H5, and C2), it is estimated that there were originally some 27 obverse dies and 25 reverse dies; the ranges implied by the 95\% confidence limits are 44 to 17 obverse dies and 40 to 16 reverse dies. About 73\% of the original coinage would have been struck by the surviving obverse dies, and 77\% by the surviving reverse dies.
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provenances in the British Isles is die-linked to coins found in Scandinavia. It is unlikely, therefore, that more than a few dozen Quatrefoil dies were ever employed at the Dublin mint, a figure that is comparable to our estimate for the earlier Helmet issue, although considerably smaller than the number that must have been used in the Crux, Long Cross and Last Small Cross issues at Dublin. We are thus dealing with a very small coinage, and its rarity today is not due merely to a paucity of finds or to a dwindling of the coin export to the Northern Lands.

Only six of the obverse dies (HN4-7, 17-20) carry the name of the Dublin king, Sihtric. The other ten copy English legends, normally that of Cnut but one (HN1) surprisingly has the name of Æthelred II. The reverse dies, on the other hand, have predominantly Hiberno-Norse legends – eight have recognisable Dublin mint-signatures (DYFL, DIF, DYF1, DYF1I, DYFLI, DYN, D, DY, DVF), one or possibly two copy London coins (HN2, 7) and the others are essentially illiterate.

Two Dublin moneyers are named on the Quatrefoil coins. Fareman occurs on four dies in corrupt but discernible forms (FERENN, FEREMN, FNREII, FEINEI), and echoes of the same name probably lie behind three others (HEHEN, NERIN, NDREM). This is the most common moneyer’s name in the Hiberno-Norse series, found in each of the five issues of Phase I and repeated on coins of Phases II and III, thus spanning a period of some fifty years. At some stage the use of the name evidently became merely an immobilisation, and the rather illiterate forms observed here suggest that this had happened already by the time of the Quatrefoil issue. In the case of the second name, we can be reasonably confident that it does represent a moneyer who was active at this period. Stegn or Stegen (ON Steinn) is recorded in both this Quatrefoil issue and early coins of Phase II. It seems that when ordering dies, Stegn was rather particular about the form and accuracy of the legends. One of his pairs, of typical later Hiberno-Norse style, has an obverse reading +ZIHTRC RE+ DYFLMO, rather than the more usual Cnut legend. The reverse also has a somewhat pedantic inscription, +ZTEGEN MON ON D ('Stegen moneyer at Dublin'). Stegn used one other obverse and two other reverse dies, and these are of even greater interest, for he seems to have commissioned the Chester die-cutter to make them for him. Their inscriptions are also unusual and will be discussed below. One of the remaining coins with a respectable Dublin mint-signature (HN4) bears what at first sight could be the name of a third moneyer, +ZPIIIEI MO DYFL, but some letters are ambiguous and this may again be attempting the name ZTEGEN.

Dublin-cut dies

What would appear to be the earliest pair of dies (HN1) in this series is unmistakably related to the preceding Dublin issue, Last Small Cross. In both the proportions of the face and the angle of the head are similar, and moreover the die-cutter had not studied the new Anglo-Saxon coins with sufficient care to notice that there had been a change of ruler, so that he continued to put Æthelred’s name on the obverse. The reverse is more accomplished, and may be a slightly later production. It is likely that the same die-cutter was responsible for this and the Last Small Cross type, which would also suggest that there was some continuity of minting between the two issues.

Stylistically the next obverse die in the sequence seems to be that represented by Hildebrand 2541 and a coin from the Bryn Maelgwyn hoard (HN2–3). It shows a conscious attempt to

6 M. Blackburn, ‘Hiberno-Norse coins of the Helmet type’, Studies in Late Anglo-Saxon Coinage, edited by K. Jonsson (Stockholm, 1990), pp. 9-24, at p. 11. Some 38 obverse and 40 reverse dies of the Helmet type are estimated to have been used; the ranges implied by the 95% confidence limits are 66 to 24 obverse dies and 69 to 24 reverse dies. About 63% of the original coinage would have been struck by the surviving dies.
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reproduce the portraiture of the English prototype more closely. The proportions of the head with two curls projecting behind the neck and the crown with small straight fleures ending in pellets set it apart from the other dies. The prototype may well have been an early coin of London,7 and this view gains support from the reverse of HN2 which reproduces the legend of a coin of the London moneyer Leofsige (e.g. Hildebrand 2540, London Ae style). This Dublin obverse, in turn, appears to have served as the model for the remainder of the die-cutter’s work, and it explains why his subsequent dies all have a characteristic single curl or hook at the back of the neck.

The next thirteen obverse dies have a distinctive and consistent Dublin style, and are undoubtedly the work of a single artist. On four of them (HN4–7), probably the earliest, the head is more upright and the nose less protruding than on others. Three of these essay Sihtric’s name and title, or corruptions of them, and the fourth copies the normal English Cnut legend. On the other nine dies (HN8–18) the bust has developed a rather aquiline pose, with the nose thrusting forward and the neck at an angle behind. Here the Cnut legend predominates, found on seven dies compared with only two for Sihtric. A further ‘Cnut’ die of the late Hiberno-Norse style which was transported to Scandinavia will be discussed below (see SI1–2).

Chester-cut dies

One obverse and two reverse dies (HN19–20) used at Dublin were specially commissioned from the die-cutter at Chester by Stegn. The evidence is essentially that of style, supported by the forms of the inscriptions.

The Chester mint cut its own dies throughout the Quatrefoil issue.8 They are very distinctive, and evidently the work of one individual (see, for example, Plate 2, A–D).9 His style is not particularly neat – the lettering is large, thin and irregular, and the portrait also shows considerable variation in size and in the shape of the face. However, in certain respects he was very consistent. He almost invariably began the obverse legend at between 9 and 11 o’clock on the die-face, whereas other die-cutting centres adopted different norms and the Dublin die-cutter usually started the legend at around 12 or 6 o’clock. The bust is rendered in thin outline with the face raised in only light relief. The drapery on Chester dies splays out from a pellet which abuts the king’s chin, and the crown, which has three fleurs with prominent central wedges, is often perched precariously on the front of the head. Within the group one can see a progressive development, or rather degeneration, in the style. On earlier dies the back of the neck is formed with a simple line and the drapery curls up behind it, while on later dies with smaller faces the back of the neck is often a double line.

Fig. 2. Line drawing of HN20 (source Boon, Welsh Hoards).

7 Probably one of the ‘London Am’ style, which has similar curls behind the neck; Blackburn and Lyon, ‘Regional die-production’, p. 244.
8 The Chester style is described in Blackburn and Lyon, ‘Regional die-production’, pp. 234–6. The range of variation within the style can best be seen from illustrations in SCBI Chester i 178–239 and Boon, Welsh Hoards, pp. 28–30, nos 2–172.
9 The illustrations are from the Bryn Maelgwyn hoard (A = 138, B = 39, C = 43, D = 2), courtesy of the National Museum of Wales.
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Stegn’s obverse (Fig. 2) is quite unlike the other Dublin dies and is plainly of Chester work – the legend begins at 10 o’clock, the form of the crown, the large lettering, and the pellet under the chin are classic Chester features. The two reverses are also typical of Chester work, with large spidery lettering and deep cusps to the quatrefoil. Within the stylistic sequence, the dies are relatively early, although not the earliest.

This obverse die was not simply a regular one taken from the Chester mint, for it carries the name of Sihtric, not Cnut. It must have been made specially, with the two reverses, for use at Dublin, presumably to the order of the moneyer Stegn. Interestingly the die-cutter has spelled the king’s name SITERIC, rather than the form almost invariably used at Dublin, SIHTRC. A parallel for the use of an anglicised form can be found some twenty years earlier in the Long Cross issue, when a group of dies were commissioned from the London die-cutter, who spelt the name SIHTRIC. Furthermore, the Chester die-cutter was not familiar with the title customarily accorded to Sihtric (rex Dyflin), and he chose instead rex Irum which is never found elsewhere. *Irum* appears to be an inflected form of the Old English or Old Norse *Iras* (meaning ‘the Irish’). The ethnic on coins would normally be in the genitive plural, i.e. *Ira* (king of the Irish), which is a position Sihtric clearly did not hold. But whether *Irum* was deliberately chosen as the dative plural of *Iras* in both Old English and Old Norse (king among the Irish), or was intended as merely a crude Latinisation to accompany the title rex we cannot be sure. The legend is, in any event, a curious combination of Latin and the vernacular.

It may seem remarkable that in the eleventh century one state should have obtained coinage dies from its neighbour. However, this was by no means an isolated incident. Dies were made of very high quality carbon steel, and a sophisticated technology was required to forge the hardened steel cap on to a softer shank. They could soon fracture if badly made or of the wrong materials. English dies may have had a reputation for quality, for there are dozens of cases in the late tenth and early eleventh centuries of dies being taken from English mints for use in Scandinavia, and this had also occurred on a smaller scale between England and Dublin in each of the four preceding issues of Phase I. Interestingly, the movement was not only one-way, for in the Long Cross issue two York moneyers, Hildulf and Thurulf, used obverse dies made in Dublin, as did Colgrim also at York in the Helmet issue. In the 1020s a pair of Dublin dies was taken to establish a mint on the Isle of Man. Furthermore, a pair of Hiberno-Norse Quatrefoil dies appears to have been taken from Dublin to a mint in Scandinavia where they were used with other dies (see below). Most of the cases just cited involve the removal of regular dies, and instances of dies being commissioned abroad with special inscriptions, as here, are much rarer. It had happened in the Long Cross type, as already mentioned, and in Last Small Cross and Quatrefoil the mint of Lund obtained dies cut at Lincoln with the inscription +CNVT REX DENOR. Stegn’s Chester dies therefore fit into an established context.

Hoard evidence

Only four of the thirty Hiberno-Norse Quatrefoil coins appear to have been found in the British Isles, and probably none of these were discovered in Ireland itself. This is not
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untypical, since for our understanding of Phase I we are heavily reliant on the hoards from Scandinavia and the Eastern Baltic. Fewer than a hundred of the seven or eight hundred extant coins of Phase I have come from insular hoards, and the majority of those are of the first issue, Crux. The reason is essentially the pattern of hoarding, with very few finds from the period 1000–1020 having been discovered in the British Isles.17 There are only five hoards from Ireland containing Phase I coins, and these all belong to the opening years of the coinage – deposited around the millennium – and the same is true of the only hoard with Hiberno-Norse coins from the Western Isles, Inch Kenneth. From the Isle of Man there are two hoards of the late 1020s or early 1030s, Park Llewellyn which contained one Long Cross coin of Phase I along with Phase II and Hiberno-Manx coins, and a shadowy hoard of c. 1786 from Ballacannell(?) which probably consisted mainly of Phase II coins, with at least one coin of Cnut of uncertain type, but it may have included some of Phase I as well.18 The Bryn Maelgwyn hoard from North Wales contained two Hiberno-Norse Quatrefoil coins with two hundred English coins of the same type and two of the Pointed Helmet issue. Some 85% of the coins are of the Chester mint, and the hoard appears to represent a sum of money put together in Chester at the very end of Quatrefoil and the inception of Pointed Helmet. The two Hiberno-Norse coins may well have been circulating in Chester at that time.

Two other Quatrefoil coins appear to be insular finds and are die-duplicates (HN12c and d). They first surfaced in the late eighteenth century and were acquired by Samuel Tyssen (1756–1800), one of them at least via Richard Southgate (1729–95); this latter coin was illustrated by Pinkerton in 1789.19 One is now in the British Museum and the other is in Glasgow. In 1958 Dolley and Metcalf postulated the existence of a major hoard of English Quatrefoil coins found in the 1780s, and dominated by Chester and the Severn Valley mints.20 They suggested that it was found in the West Midlands, and probably at Kingsholm, near Gloucester, where a large hoard of Anglo-Saxon pennies was discovered c. 1780, although that provenance cannot be proved. When they were writing, no Hiberno-Norse coins were known to have been found in England or Wales, and it is not surprising, therefore, that although many specimens from this Quatrefoil hoard had been acquired by Southgate and Tyssen, they shrank from associating the two Hiberno-Norse coins with it. In the light of the Bryn Maelgwyn hoard, a stray find of a Phase I Helmet coin from Torksey, Lincs.,21 and two Phase V pennies from a grave at Trowbridge, Wilts.,22 it is now quite plausible that the two Quatrefoil Dublin coins did come from this West Midlands hoard. If so this would support an early dating for the Hiberno-Norse issue, since Lyon has shown that the hoard was composed predominantly of heavy (i.e. early) coins.23

Eight hoards from Scandinavia and the Eastern Baltic are recorded as having contained Hiberno-Norse Quatrefoil coins (see List of Finds below), and most of the other specimens in Scandinavian or Russian collections without provenance will have been local finds. The earliest of the hoards is that from Kelstrup, Denmark, deposited after c. 1023, with an English element ending with coins of the Cnut’s Pointed Helmet type. The Enner hoard, with three specimens, was deposited after 1029.

Date of the Hiberno-Norse issue

There are a number of factors that point to the Dublin Quatrefoil issue being contemporary with its English prototype, and to it being a relatively short-lived issue that had ceased before the type's withdrawal in England. The most direct evidence is the use of dies cut at Chester, and these appear to belong fairly early in the stylistic sequence. As we have seen, the first of the dies made by the Dublin engraver also suggests continuity with the preceding Last Small Cross type. As far as the find evidence is concerned, the Bryn Maelgwyn hoard again shows that it is broadly contemporary with the English issue, and if as seems likely two specimens can be attributed to the Kingsholm hoard of c. 1780, this also implies an early date within the issue.

The Quatrefoil type was replaced at Dublin by the new coins of Dolley Phase II, in what should be seen as a major reform of the coinage. The Hiberno-Norse monetary system was reaching maturity, so that they were able to stop copying the economically dominant coinage of their English neighbours and establish their own distinctive 'national' coinage. The fact that in so doing they chose a design which was essentially an earlier one of Æthelred II may not have occurred to them, for the Long Cross type had also been the Hiberno-Norsemen's largest and most successful issue a generation earlier. For them it was an entirely appropriate choice. The coins of Phase II are generally distinguished from the Phase I Long Cross issue by the presence of a small pellet in each quarter of the reverse. However, it now seems that some coins with pellets on the reverse in the best and most literate style and of high weight belong to Phase I, as shown by the Everlöv hoard from Skåne. The exact division of the pelleted coins as between Phases I and II is still somewhat uncertain, but it seems clear that those of lighter weight with degraded inscriptions belong to the later group.

This has a bearing on the date of the Phase II reform, for there are two Scandinavian hoards with English elements ending in Quatrefoil, that contain Hiberno-Norse coins of Phase II with degraded inscriptions. The first is the Hår hoard from south west Norway, containing some 250 English and five Hiberno-Norse coins of which three were of Phase II. Apart from these, the latest coins are English Quatrefoil pennies. The other hoard is that from Hemängen (Barjby), Gotland, which has a terminus post quem of 1024. These finds suggest that the Quatrefoil issue at Dublin was replaced by new coins of Phase II before the issue had run its course in England. As we have seen, a relatively short period for the Dublin Quatrefoil coinage would accord well with its size, compared with the Last Small Cross type.

Metrology and fineness

The late Anglo-Saxon monetary system was highly sophisticated, involving periodic recoinages and each issue being struck to a series of weight standards that stepped down, only to be increased again at the beginning of the next issue. The Hiberno-Norse coinage appears to have been quite different, for while it outwardly mirrored that of England, the system was more primitive. The Dublin mint was concerned to strike coins that would be equally as
Fig. 3. Weight distributions of Quatrefoil coins: a. Chester mint (179 coins, mean 1.06g); b. Hiberno-Norse (24 coins, mean 1.03g); c. Irish Sea imitations (36 coins, mean 0.87g).
acceptable as the Anglo-Saxon ones in Dublin itself and in international trade. The weights of each of the five Phase I issues broadly mirror the average weights of their prototypes, which over the period c. 995–1020 were generally falling. The standard at Dublin was never allowed to fall far out of line with the current weight of the English penny. Petersson looked at pairs of die-duplicates to see how accurately the Anglo-Saxon moneyers controlled the weights. He found that over 70% of die-duplicates had weights of within 0.06g of each other.²⁷ In a similar calculation based on Hiberno-Norse coins of Phase I, my own analysis indicates that about 40% of die-duplicates fall within the same limit, the results being moderately consistent over each of the five issues. This indicates that the Dublin moneyers did not control the coin weights nearly so accurately as their Anglo-Saxon counterparts, but it confirms that they were none the less aiming at an approximate standard.

The weights of the Quatrefoil coins follow the general pattern just outlined. Among the Anglo-Saxon coins five distinct and successive standards have been identified, of roughly c. 1.40g, c. 1.30g, c. 1.20g, c. 1.10g., and c. 1.00g.²⁸ The distribution of a sample of Chester coins in Scandinavian collections is shown in Fig. 3a,²⁹ their weights averaging 1.06g. The predominantly late coins in the Bryn Maelgwyn hoard are mostly struck to the last standard and have an average weight of 1.01g. The Hiberno-Norse coins (Fig. 3b) cover the same general weight range, though omitting the higher standards, and their average (1.03g) is comparable to that of the Chester coins.

The fineness of some 55 Quatrefoil coins of Chester has been analysed³⁰ – more than for any other single mint and issue. They show remarkable consistency in their fineness, with the great majority of coins falling in the range 94–96% ‘silver’ (i.e. Ag + Au + Pb). There was no appreciable difference between the products of different moneyers, as has been observed at other mints. A study of the trace elements present does not suggest that Chester’s source of silver was any different from other Anglo-Saxon mints, and it must largely have consisted of recycled coinage. After re-refinement a mixture of copper and brass probably derived from scrap metal was added to adjust the alloy to the appropriate standard.

Only two Hiberno-Norse Quatrefoil coins have been analysed – those from the Bryn Maelgwyn hoard – as part of a wider study of the metal content of Hiberno-Norse coinage.³¹ These contained 94% and 97% ‘silver’, and were just as fine as their Anglo-Saxon counterparts. Nor is there any appreciable difference in the proportions of trace elements present in the Hiberno-Norse and English coins, either in the Quatrefoil type or in Phase I generally, and this has led to the suggestion that English coin may have been reminted at Dublin without re-refining it.

Scandinavian imitations struck from a Hiberno-Norse die

Two remarkable coins in the collection of the Hermitage Museum (Plate 1, SI1–2) have a Quatrefoil obverse in the name of Cnut that is of impeccable Hiberno-Norse style, and the die concerned was clearly cut at Dublin during the later phase of the issue. It is a shock, then, to turn the coins over and find that they have two different reverses that are very crude and entirely illiterate forms of the Small Cross type. These are the work of a quite different die-

²⁸ Blackburn and Lyon, ‘Regional die production’, p. 254.
²⁹ The standards are not all evident from a simple distribution such as Fig. 3a here, but are identified from a combination of different forms of evidence.
³⁰ Based on 179 well preserved coins in the Stockholm systematic and Copenhagen collections.
cutter from that of the obverse. On one of the coins (SI1) he did not understand the design, for it omits the inner circle that is otherwise invariably present, and the pseudo-epigraphy is small and thin, perhaps engraved rather than punched. The other coin (SI2) has larger, thicker lettering that is little more than a series of strokes.

The coins have no provenance, but it is likely that they came to the collection during the nineteenth century and are finds from Russia or the Baltic States. The fact that they have sequential inventory numbers does not necessarily mean that they arrived at the Museum together, for these numbers were probably assigned more recently. No other coin from this obverse die has been published, and while there could be specimens in the Stockholm collection Professor Dolley and I were not aware of any.

Where were these two coins produced? Although the obverse dies are of good Dublin style, the reverses are much cruder than anything found in Phase I. Such reverse dies are however frequently found in the Scandinavian imitative series. Mules between types are unknown in the Hiberno-Norse Phase I coinage, but they are common in the Scandinavian series. The weights of the two coins (1.28g and 1.35g) would be quite acceptable for Scandinavian imitations, but they do not fit well into the distribution of the Hiberno-Norse Quatrefoil issue (Fig. 3b) in which all but one of the coins fall below 1.20g. On balance it is much more likely that these two coins were struck in Scandinavia than at Dublin. In due course, when the Stockholm imitations are published, it may be possible to find a die-link to confirm the attribution.

In 1974 Dolley published a Quatrefoil coin (SI3) purporting to be by the Dublin moneyer Færeman which die-links via the obverse into a large Scandinavian die-chain. The obverse die, which is of Lincoln style, had been taken to Scandinavia from an English mint. The reverse has hitherto been regarded as a careful Scandinavian copy of a Hiberno-Norse coin. It is harder to recognise the style of a reverse die and to be categorical about its origin because the design is simpler to copy than that of a portrait obverse. However, the workmanship of this ‘Færeman’ reverse is very similar to that of regular Dublin coins – note especially the shape and weight of the quatrefoil, the blobs on the points in each quarter and the letter forms – and there is nothing particular to indicate that the die was a copy made in Scandinavia. As we now know that a Quatrefoil obverse found its way from Dublin to a Scandinavian mint, it is quite possible that this reverse was also Hiberno-Norse; indeed it could well have been the original pair to that obverse die. This would be the first recorded instance of Hiberno-Norse dies being taken to Scandinavia, but as indicated above we know of several that passed between Dublin and English mints, and many English dies went to Scandinavia, so that this is just another piece in an ever developing and complex puzzle.

The Irish Sea imitations

In 1981 a small group of four Quatrefoil coins was found at Pant-yr-eglwys on the Great Orme in north Wales. Three of these fused together were regular issues of the Chester and Hereford mints. The fourth piece was more enigmatic, but proved to belong to a distinctive series of imitations that was made in the British Isles, though not apparently at any of the known mints.


33 Boon suggests that these coins were in the course of being melted and had therefore lost their premium as coined money, implying that the hoard was deposited after Quatrefoil was obsolete (Boon, Welsh Hoards, p. 13). However, small groups of fused coins are not uncommon, particularly as surface finds, and it is probable that they had been in a fire, perhaps when an original building was burnt or as a result of modern stubble burning.
The main criterion for recognising these imitations is stylistic, but in many cases the identification is supported by blundered legends or low weights. The majority imitate coins of Chester, but they fail to capture the style of the Chester die-cutter accurately. The portrait on the imitations (Fig. 4) is composed of thin, often curved lines. The drapery consists of two forward projecting lines, and three parallel lines curving back over the shoulder, often extending beyond the line of the neck as on genuine coins of Chester. The crown tends to follow the curve of the brow, and the portrait is generally less sculptured and less angular than on Chester coins. The obverse legend can begin anywhere between 6 and 12 o’clock – on Chester pieces, as we have seen, it starts almost invariably between 9 and 11 o’clock. The most objective feature of the imitations is the use of a + for the x in rex, which occurs on all the imitative obverse dies, but never on ones from Chester.

Stewart Lyon identified this as a distinctive group during the course of his work in Stockholm in the early 1960s, and he then thought that it might be of Irish origin. Subsequently, when we came to prepare our joint paper on the Quatrefoil styles, the nature and extent of the group became apparent. Some forty-three specimens have been identified to date, including twenty-one in the Stockholm cabinet, and still more would no doubt be found there if a systematic search of the Swedish hoards were made. These forty-three coins were struck from twenty obverse and reverse dies, which implies a similar survival rate and an issue of comparable size to that of the Hiberno-Norse Quatrefoil type.

On all the obverse dies the legend renders, or attempts to render, Cnut’s name and English title, although on only six is it spelt without error. Half the reverse dies bear a Chester mint-signature or a recognisable version of it. The remaining ten dies are so garbled as to be meaningless, although Gruber and Keary found the letters RIC on one and tried to make Richborough an Anglo-Saxon mint on the strength of it. The names of ten moneyers are found on the coins in varying degrees of accuracy (Alcsi, Ceolnoth, Croc, Godwine, Gunleof, Leofsige, Leofwig, Leofwine, Snel, and Swartinc), and all of them are known moneyers of Chester in this type. Only five of the reverse dies are thoroughly garbled. By and large one is impressed by the skill and stylistic consistency of the die-cutter’s work.

There are a few die-links within this group, including some between literate and semi-literate dies (1S5–7). However, there are no die-links into the regular Chester coinage or with Hiberno-Norse coins.

Metrology and fineness

The weight pattern of the imitative group differs from that of the English and Hiberno-Norse coinages. As we have seen, the lowest standard to which regular Chester coins were struck was c. 1.00g and individual specimens rarely weigh less than 0.90g. The Hiberno-Norse...
IMITATIONS OF CNUT'S QUATREFOIL TYPE

Quatrefoil coins mostly fall between 1.20g and 0.90g (Fig. 3b). Yet the imitations all weigh less than 1.00g and they range down to 0.70g (Fig. 3c). Their mean weight is 0.87g, which compares with 1.03g for the Hiberno-Norse Quatrefoil coins. The analysis of die-duplicates shows that in striking to a particular weight they were slightly less accurate than the Dubliners (only 36% have weights within 0.06g of each other), yet the way in which the histogram cuts off at 1.00g suggests that heavier coins were culled after weighing them individually. These imitations, then, bear all the hallmarks of an issue that was struck deliberately lighter than their prototype in order to make a profit.

Although the weights may be unduly light, the fineness of the metal does not appear to have been tampered with, to judge from the composition of the only specimen that has been analysed (IS18, from the Pant-yr-eglwys hoard). Not only is its 'silver' content (94% Ag + Au + Pb) comparable to that of both English and Hiberno-Norse coins, but the proportions of trace elements are similar as well, suggesting that the imitative mint was recycling metal from contemporary coins without refining or adulterating it.

Find provenances

As with the Hiberno-Norse issue, the great majority of the surviving specimens have been found in Scandinavia or the Slav lands. Eleven coins come from identified Continental hoards. A further sixteen can be assumed to be Swedish finds from their presence in the Stockholm cabinet, and several others can be shown to have come from the Northern Lands by the presence of peck marks on them. Four of the hoards were deposited in the 1020s (Kelstrup, terminus post quem 1023; Djuped, t.p.q. 1024; Nesbøen, t.p.q. 1024; Sund, t.p.q. 1027), confirming that the imitations are broadly contemporary with the Quatrefoil issue in England, and that they reached Scandinavia soon after they had been produced.

One specimen was found in north Wales (IS18) – a significant provenance – and two others (IS4, 5a) look as though they may have been old finds from the British Isles since they are entirely flat and unpecked. One of them was in the collection of Richard Southgate (d. 1795) and the other was a pre-1838 acquisition of the British Museum. They may derive from the major hoard of Quatrefoil coins discovered in the 1780s in the west Midlands, possibly at Kingsholm, Glos., though they could be from some other find such as the 1786 hoard from Ballacannell(?) in the Isle of Man about which we know little.

Where were the imitations minted?

There are a number of clues to the origin of this group. The one secure find-provenance from the British Isles – from Pant-yr-eglwys, on the Great Orme – is powerful evidence for establishing that it is an insular rather than Scandinavian group. The flow of coinage in the late tenth and eleventh centuries was overwhelmingly towards the Continent, for while some 60,000 Anglo-Saxon and Hiberno-Norse coins have been found in Northern Europe, less than twenty Scandinavian coins of this period are known to have come from British finds. These few finds are all from southern and eastern England, with the exception of three from islands off north-west Scotland (two from Shetland and one from North Uist). Thus the finding of a specimen of this rare imitative group in north Wales raises a strong presumption that it was struck in the British Isles. The reverse inscriptions provide conclusive support for this view. Fifteen of the twenty dies copy the names of Chester moneyers and/or the Chester mint-signature. The coins available to the die-cutter as models must have been preponderantly ones

of the Chester mint, and that could only have been the case in north-west England or around the Irish Sea.

It is unlikely that they were produced by a forger operating within the Anglo-Saxon kingdom, for the scale of production is really too substantial, comparable to one of the smaller to medium-sized Anglo-Saxon mints. Moreover, the rate at which they reached Scandinavia suggests that they penetrated the currency circulating in the Irish Sea area very effectively, although not apparently that of Chester itself to judge by their absence from the Bryn Maelgwyn hoard. On balance this group of imitations looks like the product of a rather well organised, if anonymous, ‘mint’ operating consistently over a fair period of time (i.e. probably a few years, rather than merely weeks).

The imitations do not apparently belong to the Dublin series. The dies are in a quite different style, and must be the work of a different die-cutter, from that of the Hiberno-Norse Quatrefoil coins considered above. They could theoretically have been successors, but two other factors militate against this. The weight pattern evinced by the imitations is quite different from that of the orthodox Dublin coins, in particular the apparent culling of the heaviest coins from the imitative series. The reverse inscriptions are also quite unlike those found in the Dublin coinage, where among Quatrefoil coins the only literate legends have a Dublin mint-signature and the name of a Dublin moneyer. Earlier in Phase I, when one does encounter direct copies of English mint- and moneyer-names, they reflect a wide range of mints, with perhaps some bias towards those in north-west and south-west England, typical of the coins that would have been present in Dublin. The finds from hoards and excavations in Dublin also demonstrate the mixed nature of its currency. The exclusive use of Chester models therefore points to a source for the imitations that must have been much closer to Chester itself. But where can this have been?

Some years ago Michael Dolley identified a coinage similar to that of Hiberno-Norse Phase II but which appears to have been struck on the Isle of Man commencing c. 1025. Might not our Quatrefoil group have been its forerunner? The answer seems to be no. The Manx coinage was started with a pair of Phase II dies transferred from the Dublin mint in the mid or late 1020s, and the series is composed of extremely crude copies of that one pair of dies. They are totally different from the very sophisticated imitations that we are considering. Moreover, the Manx coins have rarely been found outside the Isle of Man, which evidently represented quite a closed circulation pool. More than 90% of the known find provenances of Hiberno-Manx coins are from various hoards from Man, and the remainder come from Scandinavia. In the case of the ‘Chester’ imitations the proportions are reversed, with 90% coming from the Baltic region, a difference which cannot be accounted for merely by their slightly earlier date. The absence of these imitations from Manx hoards such as Park Llewellyn, deposited c. 1030 and containing Hiberno-Norse and earlier Anglo-Saxon coins, suggests that they were not minted on Man. Even if the large eighteenth-century hoard from Ballacannell(?) might possibly have included the odd specimen of this imitative group – for which there is no evidence – they could not have been present in the sort of proportion that one would expect if this coinage had been indigenous to the island. However, the Manx coinage does show that a Norse colony other than that at Dublin could support a mint, and the differences in their distributions need to be explained in terms of trade patterns and the local function of coinage.

In 1980 Dolley published a small group of imitations of Cnut’s last type, Short Cross, issued c. 1030–35. Four coins sharing a common obverse die occurred in the 1874 Kirk Andreas hoard from the Isle of Man. No other specimens have been identified in either insular or Scandinavian hoards, and in the absence of other evidence Dolley tentatively attributed the group to the Isle of Man. The case is not as strong as that for the main Manx series, which has

been found in larger numbers and in several hoards from the island. The Short Cross imitations could have been brought there as a parcel from elsewhere in the region, but from where? It could not have been Dublin which was producing its distinctive coinage of Phases II and III, nor was it necessarily from the same ‘mint’ as the Quatrefoil imitations that we are considering, for while there are obvious parallels there is a significant difference in that the four reverse dies copy coins of London and Winchester, not Chester.

The discovery of one specimen of the Quatrefoil group at Pant-yr-eglwys on Great Orme raises the question whether it might not originate from North Wales. The native Welsh are generally regarded as an essentially coinless society, and the few early medieval coin finds have a coastal distribution which may imply losses resulting from Scandinavian influence or activity.40 The nature and extent of Scandinavian presence in Wales is difficult to assess.41 The only area of significant settlement appears to be in Pembrokeshire. A number of coastal features in the north, including Orme’s Head, have Scandinavian names, but these may imply navigation points or staging posts rather than a permanent presence.42 The island of Anglesey is perhaps the exception, with an early tenth-century settlement recently discovered at Llanbedrgoch, and some documentary evidence for raids being mounted from the island in the eleventh century. Overall, however, while an origin in north Wales for the group cannot be excluded, there is little on which to build a case.

Of other possible sites around the Irish Sea, Cumbria lay on the fringe of Cnut’s jurisdiction and had a significant Norse element in its culture, having been settled in the later ninth or early tenth centuries from the Western Isles and Ireland.43 Scandinavian influence is seen particularly in the place-names and remarkable tradition of ornamental sculpture, which is sui generis but borrows elements from both Northumbria and Ireland.44 Cumbria lay athwart the difficult but important Pennine routes between York and Dublin, but the community is also thought to have participated in a wider trade with Man, the Western Isles and Scandinavia. However, if this area fell under the influence of any particular mint it was York rather than Chester, as can be demonstrated by the Halton Moor hoard of Cnut’s Pointed Helmet coins. For this reason alone, Cumbria cannot be a prime candidate for the location of the imitative mint.

Closer to Chester, the north-western end of the Wirral peninsula is another area of strong Scandinavian settlement, as demonstrated by the place-names, stone crosses and other artefacts.45 The harbour at Meols had supported an active trading site since perhaps the fifth or sixth century, and prolific finds of coins and other artefacts were made in the nineteenth century as the shore eroded.46 It has been argued that the North Wirral enjoyed a separate political identity as a Viking enclave, with Meols operating as a beach market ‘outside the official orbit of the port of Chester’.47 Of the six coins of Cnut found there four were of the

40 D. W. Dykes, Anglo-Saxon Coins in the National Museum of Wales (Cardiff, 1976), esp. p. 26; Boon, Welsh Hoards, p. 18, nn. 53 and 57 (note the suggestion that a levy of a penny per head on the Welsh in 987 implies that they did have coin). Boon also raises the possibility (p. 14) that the group of Quatrefoil imitations may have been a native Welsh response to the need for coin.


43 Loyn, The Vikings in Britain, pp. 65.


47 D. Griffiths, ‘The coastal trading ports of the Irish Sea’, Viking Treasure from the North West. The Cuerdale Hoard in its Context, edited by J. Graham-Campbell (Liverpool, 1992), pp. 63–72, at pp. 67–9; Griffiths, ‘The maritime economy’, at pp. 54 and 56, arguing that the limited independence of the North Wirral dates from Æthelflæd’s grant of land there to Ingimund in the early tenth century and continued at least up to the Norman Conquest.
Chester mint, including two of the *Quatrefoil* type; one of these is a regular Chester coin, but the other is now lost and we cannot tell whether it was an official or imitative piece. Of the various possible locations that have been considered for the 'imitative mint' around the Irish Sea, the Wirral emerges as the strongest candidate, but a firm attribution will have to await the discovery of further finds from the Irish Sea littoral.

**Conclusions**

This paper has considered two very distinct and compact series of coins of the late 1010s or early 1020s that appear to have been produced on different sides of the Irish Sea, and it is instructive to draw comparisons between them. They were struck on similar scales, each involving some twenty to forty dies, comparable to the number that would have been used at one of the smaller to medium-sized Anglo-Saxon mints, such as Leicester, Bedford, or Hereford. The die-cutting in each group was of a competent standard, even allowing for the errors and lapses into illiteracy, for such is common in an imitative series where the inscriptions do not have to convey information but merely look authentic. Each of the die-cutters developed his own distinctive style.

One of the groups is clearly the royal coinage of the king of Dublin, for twenty-one of the thirty coins bear either the name of Sihtric or that of the Dublin mint and/or a Dublin moneyer, whereas only one or two coins reproduce the name of an Anglo-Saxon mint. A similar pattern is found in the succeeding Phase II coinage of Dublin. By contrast, in the other imitative *Quatrefoil* group thirty-two of the forty-three coins reproduce the names of Chester moneyers and the Chester mint-signature, while the remaining coins have meaningless reverse inscriptions. If, as seems likely, the die-cutter was copying the coins that were most readily available to him he must have been based somewhere that was close to Chester and dominated economically by it. Of the various sites considered Meols on the Wirral fits the criteria best, but the attribution is far from certain.

The weight distributions of the two series suggest that their issuers had a fundamentally different approach to the coinage. The Dublin coins were struck to a loose standard that is similar to that of contemporary Anglo-Saxon coins, and it would seem that they were intended to stand on a par with them economically and be equally acceptable in regional or international trade. By contrast the producer of the light-weight Irish Sea imitations appears to have been aiming to make a profit by passing them off in exchange for the better Anglo-Saxon prototypes. If so one might expect that they were intended to be put into circulation in England, and in Chester in particular, yet the evidence of the Bryn Maelgwyn hoard suggests that this did not happen to any significant extent.

The finds of the two series are predominantly from Scandinavia and the southern Baltic, in marked contrast to those of the Hiberno-Manx coinage. Admittedly, a decade later when the Manx coins were being produced the export of coinage to the Northern Lands had begun to decline, but Hiberno-Norse coins of Phases II and III have none the less been found in substantial numbers, unlike the Manx ones. This suggests that the Dublin coins and the Irish Sea imitations were successful in entering international trade to a degree that the Hiberno-Manx coins were not. Quite why this should be is a puzzle, for the recent archaeological finds from Peel indicate that

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48 SCBI Chester 195.
50 If they were deliberately excluded from circulation in Chester or elsewhere, this cannot have been merely by weight since a number of the lighter coins in the Bryn Maelgwyn hoard fall into the same weight range as the imitations.
51 The Stockholm collection contains some 53 coins of Phase II and 18 of Phase III, but only one Hiberno-Manx coin. To make valid comparisons one ought to look at the survival rates of each coinage, but the necessary die studies have not been done. None the less, among Scandinavian finds I would be surprised if they did not show a much lower survival rate for Hiberno-Manx coins than Hiberno-Norse.
the Isle of Man was not isolated from trade, although there may have been a difference in scale. Nor is it likely that Manx coins were discriminated against and excluded from circulation, except perhaps in Dublin itself which seems to have had a well regulated monetary economy. The explanation is likely to lie in aspects of the Irish Sea economy that we can barely glimpse, but for which coins are one of our most promising sources of evidence.

APPENDIX 1: A CORPUS OF THE HIBERNO-NORSE QUATREFOIL COINS

In this and the following Appendix each die combination is given a separate number. The second column assigns the dies letters, uppercase for obverses and lowercase for reverses. After the obverse inscription in column three a number in brackets indicates the position at which the legend begins, expressed as hours of the clock. Where several specimens from the same dies are known, these are indicated by a., b., c., etc. Lists of finds and references follows the Appendices.

**Early-style dies**

<table>
<thead>
<tr>
<th>Code</th>
<th>Obverse</th>
<th>Reverse</th>
<th>Footnote</th>
</tr>
</thead>
<tbody>
<tr>
<td>HN1. Aa</td>
<td>+ADELREC RE+ ANI (8 o'clock)</td>
<td>-EL DOI YIVI REI</td>
<td>Same rev. die as 8.</td>
</tr>
<tr>
<td></td>
<td>a. Stockholm; ex Sigsarva hoard.</td>
<td>1.11g/17.1gr.</td>
<td>270°.</td>
</tr>
<tr>
<td>HN2. Bb</td>
<td>+CNVT REX ANGLORVI (1)</td>
<td>+LE OFZ IGL VND (ND ligatured)</td>
<td>Same obv. die as 3.</td>
</tr>
<tr>
<td></td>
<td>a. Stockholm (Hildebrand 2541).</td>
<td>1.08g/16.7gr.</td>
<td></td>
</tr>
<tr>
<td>HN3. Cc</td>
<td>Same obv. die as 2.</td>
<td>+HE HEN NIO HEH</td>
<td>Same rev. die as 9.</td>
</tr>
<tr>
<td></td>
<td>a. Cardiff; ex Bryn Maelgwyn hoard (Boon 1986, no. 203).</td>
<td>1.02g/15.8gr.</td>
<td>90°. 93% Ag (Boon 1986, p. 35).</td>
</tr>
<tr>
<td>HN4. Dd</td>
<td>+ZIHTRC RE+ DYLIM (4)</td>
<td>+ZPIH3E IMO DYL</td>
<td>Same rev. die as 6.</td>
</tr>
<tr>
<td></td>
<td>a. St Petersburg, Inv. Y-1075 (Dolley 1963, p. 7, and pl. 3, no. 17, where the moneyer was read as TPIOE, based on an inspection of photographs not of the coin itself).</td>
<td>1.13g/17.5gr.</td>
<td>0°.</td>
</tr>
<tr>
<td>HN5. Ee</td>
<td>+INRIC PI+ DIFILNIO (6)</td>
<td>+NE RIN ONL PVE</td>
<td>Same rev. die as 6.</td>
</tr>
<tr>
<td></td>
<td>a. Copenhagen (SCBI Copenhagen v 55); ex Enner hoard (Roth 1909, p. 126).</td>
<td>1.19g/18.4gr.</td>
<td>180°.</td>
</tr>
<tr>
<td>HN6. Ff</td>
<td>+HTRC DI+ DIFILNO (6)</td>
<td>Same rev. die as 5.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Stockholm; Glammunds I hoard.</td>
<td>1.07g/16.5gr.</td>
<td></td>
</tr>
<tr>
<td>HN7. Gg</td>
<td>+CNVT RE+ ANGLOR' (7)</td>
<td>+CNVT RE+ ANGLOR' (1)</td>
<td>Same rev. die as 1.</td>
</tr>
<tr>
<td></td>
<td>a. Copenhagen (SCBI Copenhagen v 56B); ex Lübeck hoard.</td>
<td>1.17g/18.1gr.</td>
<td>90°.</td>
</tr>
<tr>
<td>HN8. Hh</td>
<td>+CNVT RE+ ANGLOR (6)</td>
<td>Same rev. die as 3.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Helsinki (SCBI Helsinki 942); ex Nousiaienen hoard. 0.51g/7.9gr. (fragment, broken)</td>
<td>270°.</td>
<td></td>
</tr>
<tr>
<td>HN9. Ii</td>
<td>Same obv. die as 9.</td>
<td>+IR ELD NEL NMO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Copenhagen (SCBI Copenhagen v 56); ex Enner hoard. 1.10g/17.0gr.</td>
<td>0°.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Belfast (SCBI Ulster Museum ii 36); Glendining sale 14 March 1973, lot 112; ex Stryjewo Wielkie hoard. 0.93g/14.3gr.</td>
<td>240°.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. London (SCBI BM H-N 61; Ruding 1817, III, p. 300 and IV, pl. 28); ex Tyssen 1802; ex Kingsholm hoard c. 1780. 1.10g/16.9gr.</td>
<td>180°.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Glasgow; ex Coats; ex Wigan; ex Cureton; ex Durrant 1504; ex Tyssen duplicates 92; ex Southgate; ex Kingsholm hoard c. 1780. (illus. in Pinkerton 1789, p. 123 and pl., no. 13, as previously unpublished, in Southgate collection). 0.96g/14.8gr.</td>
<td>230°. No peck-marks.</td>
<td></td>
</tr>
</tbody>
</table>

**Later-style dies**

<table>
<thead>
<tr>
<th>Code</th>
<th>Obverse</th>
<th>Reverse</th>
<th>Footnote</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. Stockholm; no provenance.</td>
<td>1.35g/20.8gr.</td>
<td>0°.</td>
</tr>
<tr>
<td>HN11. Kk</td>
<td>+NIVT RE+ ANGLORV (1)</td>
<td>+FE REN NMO DIF</td>
<td>Same rev. die as 13.</td>
</tr>
<tr>
<td></td>
<td>a. Stockholm (Hildebrand Cnut 283). 1.10g/16.9gr.</td>
<td>150°.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Copenhagen (SCBI Copenhagen v 52); ex Enner hoard. 0.96g/14.8gr.</td>
<td>300°.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. London (SCBI BM H-N 61; Ruding 1817, III, p. 300 and IV, pl. 28); ex Tyssen 1802; ex Kingsholm hoard c. 1780. 1.10g/16.9gr.</td>
<td>180°.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Glasgow; ex Coats; ex Wigan; ex Cureton; ex Durrant 1504; ex Tyssen duplicates 92; ex Southgate; ex Kingsholm hoard c. 1780. (illus. in Pinkerton 1789, p. 123 and pl., no. 13, as previously unpublished, in Southgate collection). 0.96g/14.8gr.</td>
<td>230°. No peck-marks.</td>
<td></td>
</tr>
</tbody>
</table>
IMITATIONS OF CNUT’S QUATREFOIL TYPE

HN13. Ki
+CNVT RE+ ANGLORY (1)
Same rev. die as 12.
Same obv. die as 14, and possibly as 11 with some recutting.
a. Stockholm (Hildebrand, Cnut 282). 1.09g/16.8gr. 150°.

HN14. Kj
Same obv. die as 13
+FE REM NMO DYFLI
a. Stockholm (Hildebrand, Cnut 280). 0.90g/13.9gr. 180°.

HN15. Lk
+NNT REO+ ANGLORE (12)
+FN REII MIO FIM
a. Stockholm (Hildebrand, Cnut 281). 1.02g/15.7gr. 0°.
b. Copenhagen (SCBI Copenhagen v 56A); ex Stockholm 1861. 0.95g/14.7gr. 180°.
c. Helsinki (SCBI Helsinki 941); Old Collection (Roth 1909, p. 126). 0.98g/14.7gr. 180°.
d. Norway? [A photograph of the obverse of a fourth coin from this die was found among pictures taken in Norway by Michael Dolley in 1976, but no further information is available.]

HN16. MI
+CNVT RE+ ANGLORYN (3)
+ND REM NMO DYFLI
a. Copenhagen (SCBI Copenhagen v 54); ex Kelstrup hoard. 0.91g/14.1gr. 180°.

HN17. Nm
+ZHTRC RE+ DYDFLIN (6)
XFE INE IMO DYF
a. Baldwin sale 13 (28 May 1997), lot 1722; ex Uncertain Scandinavian or Slav hoard. 1.04g/16.0gr. 90°.

HN18. On
+ZHTRC RE+ DYFLM0 (4)
+ZTE GEN MON OND
a. Copenhagen (SCBI Copenhagen v 51); Old Collection. 0.79g/12.2gr. (fragment) 90°.
b. London (SCBI BM H-N 60); ex Mrs Combe 1826?; pre-1708 find (Kerder 1708, pp. 18-19 and pl. II, no. 17; Simon 1749, p. 7 and pl. 2, no. 27; Ledwich 1790, pl. 23, no. 13; Roth 1909, no. 189; O'Sullivan 1949, no. 25). 0.99g/15.3gr. 270°.

From Chester-cut dies

HN19. Po
+SITERIC REX IRYV (10)
+ST EG NO NDY
Same obv. die as 20.
a. Stockholm (Hildebrand, Sihtric 101; Roth 1909, p. 126). 0.90g/14.0gr. (broken) 0°.
b. Berlin (SCBI Berlin 942); ex Dannenberg 1870. 0.83g/12.8gr. 180°. Not pecked.

HN20. Pp
Same obv. die as 19.
+ST EGN ON DVF
a. Cardiff; ex Bryn Maelgwyn hoard (Boon 1986, no. 204). 0.93g/14.4gr. 270° 96% Ag (Boon 1986, p. 35).

Scandinavian Imitations probably struck with a Hiberno-Norse Quatrefoil die

S11 Aa
+CNVT RE+ ANILORN (6)
+CVLOMEIIIC'COC (L, E and final C reversed)
Quatrefoil type, Hiberno-Norse die
a. St Petersburg (Inv. 1723); provenance unknown. 1.28g/19.8gr. 200°.

S12 Ab
Same obv. die as S11
NII'COI[ I'IN (N reversed)
Small Cross type, with inner circle, Scandinavian die
a. St Petersburg (Inv. 1724); provenance unknown. 1.35g/20.8gr. 220°.

S13 Bc
+CNVT REX ANGLORV:
Quatrefoil type, Lincoln-style,
Quatrefoil type, probably Hiberno-Norse die
English die
a. Copenhagen (SCBI Copenhagen v 53); ex Bruun 1922. 1.30g/20.1gr. 245°. Published in Dolley 1974 as part of a large Scandinavian die-chain.

APPENDIX 2: A CORPUS OF THE IRISH SEA IMITATIONS OF QUATREFOIL TYPE

With Chester mint signatures

Alcsi (OE Eahlsige)

IS1. Aa
+CNVT RE+ HNGLORVN (12)
+AL CNV ONI LEG (second N retrograde)
a. Stockholm; ex Lilla Klintegärda hoard. 0.80g/12.3gr. 60°.

Ceolnoth (OE)

IS2. Bb
+CNVT RE+ AINGILORI (12)
+CE LNO DON NEL
a. Copenhagen (SCBI Copenhagen iiic 3122); ex Bruun 1923. 0.82g/12.6gr. 270°.
IMITATIONS OF CNUT'S QUATREFOIL TYPE

IS3. Cc +LNVT RE+ ANGLOR (9) +CE LNO DON LEG
(a reversed)
a. St Petersburg; without provenance (Inv. 113581). 0.82g/12.7gr. 0°.

Croc (ON Krokr)

IS4. Dd +CNVT RE+ ANGLORY (10) +CR OFL ON LEI
a. London (BMC 276); without provenance, before 1838; possibly from the Kingsholm hoard, c. 1780. 0.93g/14.2gr. 150°.

IS5. Ee +INVVT RME+ ANGLORY (1) +CR OFL NEH RIC
Same obv. die as 6.
a. London (BMC 491, as Richborough?); ex Southgate 1795; possibly from the Kingsholm hoard, c. 1780. 0.94g/14.5gr. 300°.
b. Stockholm; ex Myrände hoard (CNS 1.1.19.1779). 0.89g/13.7gr. 90°.
c. Unknown location; ex Lockett 3753; ex Grantley (Glendining sale 22 May 1944, lot 1148). Wt and die-axis not recorded.

Godwine (OE)

IS6. Ef Same obv. die as 5. +GO DPI NEO NLEI
Same rev. die as IS7.
a. Stockholm (Hildebrand 1346). 0.75g/11.6gr.

IS7. Ff +CNVT RE+ ANGLORY (8)
Same rev. die as IS6.
a. Stockholm (Hildebrand 1345; Hildebrand 1846, 492). 0.94g/14.5gr.
b. Copenhagen (SCBI Copenhagen iiia 1391); ex Thomsen 1868. 0.76g/11.7gr. (slightly chipped) 100°.
c. J. Leighton; ex Glendining 14 March 1973, lot 27; ex Strýjewo Wielkie hoard. 0.89g/13.8gr. 225°.
d. Stockholm; ex Stora Bjers hoard. 0.97g/15.0gr. 200°.

IS8. Gg +CNVT E+ ANGLORVN (9) +GO DPI NEO NLEI Same rev. die as IS9.
a. Bergen; ex Arstad hoard.

IS9. Hg +CNVT E+ ANGLORVN (8)
Same rev. die as IS8.
a. Copenhagen (SCBI Copenhagen iiia 1393); ex Sanet Jørgensbjerg hoard. 0.90g/13.9gr. (chipped) 230°.

Gunleof (ON Gunnleifr?)

IS10. Ih +CNVT RE+ ANGLORV (5) +GV NLE FON LEG
a. Copenhagen (SCBI Copenhagen iiia 1398); pre-1794 acquisition (Beskrivelse 1794, no. 26). 0.98g/15.1gr. 0°.
b. Stockholm; ex Sund hoard. 0.69g/10.6gr. 0°.

Leofsige (OE)

IS11. Ji +CNVT RE+ ANGLOR (11) +LE OFZ ION LEI
a. Stockholm (Hildebrand 1374; Hildebrand 1846, 506). 0.94g/14.5gr.

IS12. Kj +ANVT RE + CNGLORVNI (11) +LE OF SOL NEI
a. Stockholm (Hildebrand 1371; Hildebrand 1846, 505). 0.94g/14.5gr.
b. Stockholm (Hildebrand 1371. bis). 0.98g/15.1gr.
c. Copenhagen (SCBI Copenhagen iiia 1418); ex Kelstrup hoard. 0.88g/13.6gr. 270°.
d. Copenhagen (SCBI Copenhagen iiia 1419); ex Bruun 1923. 0.78g/12.1gr. 180°.
e. Cambridge (Grierson loan); ex Baldwin sale 13 (28 May 1997), lot 1751 (part).

Leofwi (OE Leofwic)

IS13. Lk +CNVT RE+ ANIILOR (12) +LE OPI DIL' ECP
Same obv. die as IS14.
a. Stockholm (Hildebrand 1404). 0.78g/12.0gr.

Leofwine (OE)

IS14. L1 Same obv. die as IS13. +LE OPN NCO ECN
a. Stockholm (Hildebrand 163, as Canterbury). 0.80g/12.3gr.

IS15. Mm +CNVT RE+ ANGLORVM (9) +LE ONE NEOII LEG
a. Stockholm (Hildebrand 1397). 0.93g/14.4gr.
b. Stockholm (Hildebrand 1397. bis). 0.85g/13.0gr.
c. Copenhagen (SCBI Copenhagen iiia 1443); pre-1791 acquisition (Beskrivelse 1791, no. 17).
IMITATIONS OF CNUT’S QUATREFOIL TYPE

0.78g/12.1gr. (chipped) 270°.
d. Helsinki (SCBI Helsinki 611); ex grave find at Franttilannumi, Mynämäki 1933. 0.77g/11.9gr. (pierced) 300°.
e. Bergen; ex Nesboen hoard. 0.59g/9.1gr. (fragment) 0°.
f. Location unknown; ex Mack (SCBI Mack 1069); ex Argyll. 0.95g/14.6gr. 320° pecked.

Snel (OE Snel)

IS 15. Nn +CNVT RE+ ANGLOR (9) +SN EL ON LEC
a. Copenhagen (SCBI Copenhagen iia 1458); ex Gartz sale, Stockholm, 26 November 1901, lot 1181. 0.96g/14.8gr. 270°.

Swartinc (ON Svertingr)

IS 17. Oo +CNVT RL+ ANGLONE (5) +ZN ART NCO I NLE
a. Stockholm (Hildebrand 1426). 0.89g/3.7gr.
b. Stockholm; ex Djuped hoard. 0.78g/12.1gr. 280°.

Blundered reverse legends

IS 18. Pp +NVBT RE+ ANGL ORV (9) +ON REU HIO I INI
a. Cardiff; ex Pant-yr-eglwys hoard (Boon 1986, p. 26, no. 4). 0.79g/12.2gr. 93% Ag (Boon 1986, p. 35).

IS 19. Qq +LNVT RE+ ANGL OR (5) +NE OFN IOR REN
a. London (BMC 610); ex Rollin and Feuardent 1890. 0.89g/13.8gr. 20° not pecked.
b. Stockholm, without provenance. 0.81g/12.5gr. 20°.
c. Stockholm, without provenance. 0.96g/14.8gr. 110°.

IS 20. Rr +CNVT RE+ ANGLOR (6) +NI EICI ON ELV (second N reversed)
a. Stockholm (Hildebrand 2673). 0.80g/12.3gr.
b. Stockholm (Hildebrand 2674). 0.74g/11.4gr.
c. Stockholm (Hildebrand 2674 bis). 0.88g/13.6gr.
d. Copenhagen (SCBI Copenhagen iiic 4232); pre-1794 acquisition (Beskrivelse 1794, no. 32). 0.85g/13.1gr. 270°.
e. J. Chown (Chown 1993, fig. 2); ex Lockett 723; bt Baldwins. Wt not recorded.

IS 21. Ss +NVBT EI+ANGLOBVH (9) +IN ITH HIO- DN (first N reversed)
a. Copenhagen (SCBI Copenhagen iiic 4278); ex Thomsen 1868 (Thomsen 1853, p. 106, no. 2). 0.98g/15.1gr. 90°.

IS 22. Tt +CNVT E+ ANGLORVN (4) +HE RIFN CNTO HENL (first N reversed)
a. Stockholm; without provenance. 0.87g/13.4gr. 200°.

LIST OF FINDS

Årstad, Egersund, Rogaland, Norway. 1836f. UMK. HMB (Blackburn and Jonsson N37; t.p.q. 1030) IS8a
Bryn Maelgwyn, near Llandudno, Caer., Wales. 1979 NMW (Blackburn and Pagan 208; t.p.q. 1023) HN3, HN20
Djuped, Styrrås, Ångermanland, Sweden. 1919 SHM Inv. 16295 (Jonsson S61; t.p.q. 1024) IS17b
Enner, Tamdrup, Jylland, Denmark. 1849 FP 79 (Jonsson DS78; t.p.q. 1029) HN4, HN9a, HN12b
Franttilannumi, Mynämäki, Finland (grave find). 1933 NM 9750; 2b-c (SCBI Helsinki, p. xxxiv) IS 15d
Glammunds I, Akebäck, Gotland, Sweden. 1896-7 KMK Inv. 101663 (Jonsson –; NNA 1989–90, 194; t.p.q. 1047) HN6
Kelsstrup, Stillinge, Sjælland, Denmark. 1859 FP 207 (Jonsson DS65; t.p.q. 1023) HN15, IS12c
Kingsholm(?), Gloucestershire, England. c. 1780 (Blackburn and Pagan 206; t.p.q. 1017) HN12c–d?, IS4?, IS5a?
Lilla Klintegårda, Väskinde, Gotland, Sweden. 1876 SHM Inv. 5804 (Jonsson G144; t.p.q. 1039) IS1
Lübeck-Malkendorf, Holstein, Germany. 1875 (Blackburn and Jonsson W142; SCBI Berlin 06; t.p.q. 1038) HN8
Myrånede, Atlingbo, Gotland, Sweden. 1893 SHM Inv. 9392 (CNS 1.1.19; Jonsson G138; t.p.q. 1036) IS5b
Nebönen, Bolsøy, Møre og Romsdal, Norway. 1891 HMB B.4826 (Blackburn and Jonsson N35; t.p.q. 1024) IS15e
Nousiainen, Nikkila, Finland. 1895 NM 3132, 3579 (SCBI Helsinki, p. xxxii) IS15d
Pant-yr-eglwys, Great Orme, Caer., Wales. 1981 NMW (Blackburn and Pagan 207; t.p.q. 1017) IS18
Sanet Jørgensbjerg, Roskilde, Sjælland, Denmark. 1954 FP 2374a (Jonsson DS82; t.p.q. 1035) IS9
Sigurgeir, Hejde, Gotland, Sweden. 1891f. Inv. 16077,16200 (Jonsson G172; t.p.q. 1053) HN1
Stora Bjers, Stenkyrka, Gotland, Sweden. 1909f. SHM Inv. 14376, etc. (Jonsson G173; t.p.q. 1053) IS7d
IMITATIONS OF CNUT'S QUATREFOIL TYPE

Stryjecwo Wielkie, Ciechanów, Warszawa, Poland. Before 1973 (Blackburn and Jonsson W155; t.p.q. 1044) HN10b, IS7c

Sund, Skön, Medelpad, Sweden. 1891 SHM Inv. 9039 (Jonsson S65; t.p.q. 1027) IS10b

Uncertain Scandinavian or Slav hoard. Before 1997 (t.p.q. 1056). Parcels from this large hoard were sold at Baldwin sale 13 (28 May 1997), a subsequent Baldwin sale and Westfälische Auktionesgesellschaft sale 8 (10 April 1997). HN17

REFERENCES CITED IN THE APPENDICES

Beskrivelse 1791 Beskrivelsen over danske Mynter og Medailler i den Kongelige Samling (Copenhagen, 1791).
Beskrivelse 1794 Tillyg til Beskrivelsen over danske Mynter og Medailler i den Kongelige Samling (Copenhagen, 1794).


Hildebrand B. E. Hildebrand, Anglosachsiska mynt, 2nd edition (Stockholm, 1881).
Hildebrand 1846 B. E. Hildebrand, Anglosachsiska mynt, 1st edition (Stockholm, 1846).


Kerder 1708 N. Kerder, Nummorum in Hibernia antequam haec insula sub Henrico II Angliae rege Anglici facta sit juris cusorum indagatio (Leipzig, 1708).

Ledwich 1790 E. Ledwich, Antiquities of Ireland (Dublin, 1790).

