

TWO NORTHUMBRIAN STYCAS OF EANRED AND ÆTHELRED II FROM EARLY MEDIEVAL TRUSO IN POLAND

MATEUSZ BOGUCKI

SINCE 1982 extensive excavations have been conducted at the site of the Viking Age emporium at Janów Pomorski on the south coast of the Baltic Sea, near the town of Elbląg.¹ The coin finds from these excavations cast important new light on long distance ties between the British Isles, Scandinavia, the South-Eastern Baltic and the Orient, but before discussing these in detail, the site must be introduced. The site is most probably the well known historical Truso (Fig. 1), described by Wulfstan around AD 880.² The settlement was established directly on the bank of a former bay and was probably surrounded by a semi-circular rampart. A little stream flowed through the centre of the settlement. The buildings, most of which were divided into three sections, used various construction techniques. Secondary buildings often adjoined the main ones, forming distinct units. The houses in Truso followed a regular street plan; the ditches found situated at regular intervals suggest that these were used to separate neighbouring plots. Geophysical research and the analysis of aerial photographs indicate that there were port basins for ships in Truso, similar to those in Ralswiek on Rügen. The remains of several ships were found lying directly on the sand in this area.

Many traces of craft production activities and workshops have been discovered in the settlement at Janów Pomorski. The most important of these is probably the blacksmith's workshop in which numerous iron bars, partially made objects and finished products were found. In addition to iron working, there is evidence of very intensive amber-working at Truso. To date, more than 30 kg of unworked, partially made or finished amber objects like beads, amulets, pendants, Hnefi game stones and other artefacts have been found. In 2006, an amber 'hoard', weighing 10 kg, was found in one of the houses. Horn (comb) and glass manufacture, weaving and boat building (padding, rivets and hundreds of iron nails were found) also played an important role. Of no less importance were the goldsmiths. A great variety of tools have been unearthed, such as small hammers, anvils and files, as well as melting pots (one containing a few half-melted dirhams), clay moulds (for oval brooches), partially made objects, production refuse and finished ornaments, mainly of Scandinavian type. Evidence of active trade may be seen in the *c.*600 weights of different types and fragments of balances, and in over 1000 coins and their fragments.

Analysis of the finds showed that the settlement at Truso can be dated from the end of the eighth to the beginning of the eleventh century, but the majority of finds (apart from the coins) date to the ninth and tenth centuries. However, Truso's beginnings are earlier than the finds indicate, as a comparison between the chronological analysis of the finds and the stratigraphy revealed. The deepest layers contain a few traces of buildings without rich metal finds, which could be interpreted as the first phase of occupation in this area. The Scandinavian settlers arrived later and probably arranged the whole site into parcels. In my opinion, the beginning of Truso should be dated to the fourth quarter of the eighth century.

It is important to note that the end of Truso as a trading port should be dated no later than the middle or third quarter of the tenth century. Only a few finds (some combs, weights and one spur) can be dated to the beginning of the eleventh century. In the middle of the tenth century a strong political power, probably of the Piast dynasty, was present in the delta of the Vistula river in the vicinity of Gdańsk. It is possible that these rulers tried to seize control of

¹ Jagodziński and Kasprzycka 1991; Jagodziński 2000a; Jagodziński 2000b; Jagodziński 2006; Bogucki 2004.

² Bosworth and Hampson 1859.



Fig. 1. Janów Pomorski (*Truso*) and the most important emporia in the late eighth, ninth and the first half of the tenth century (Bogucki 2007b).

Truso and, when this proved impossible, destroyed the town and redirected the main trade routes to Gdańsk.³ There were still people living in Truso at the end of the tenth and beginning of the eleventh century, but by this time the town had lost its international importance and commercial function.

The majority of the finds from Janów Pomorski are of Scandinavian origin. The most important are six sword pommels, arrowheads, bone combs, pins, silver and gold finger rings, bronze and silver Valkyrie figures, Hnefi game stones and various brooches: Vendel Period equal-armed, Viking-Age equal-armed, trefoil, oval, disc, and horseshoe brooches. In addition, objects from the Carolingian Empire and Oriental states have been found at the site.⁴

Among many different types of finds, more than 1000 coins have been found on the site to date.⁵ In October 2006 only 515 specimens were recorded. Subsequently, *c.*500 coins were found during systematic surface metal detecting and rescue excavations of the four hectare area in 2007 and 2008. In the so-called ships' wreckage-place, a hoard of sixteen coins was found in one of the boats. It contained two Sasanian drachms, and fourteen Abbāsīd dirhams (*t.p.q.* 815/16).⁶ At present, only a third (*c.*360) of the single finds from Truso have been identified and described.⁷ The oldest oriental coins found in Truso are Sasanian drachms of Khusro I and Khusro II, together with some Arab-Sasanian ones: nine specimens of these coins are known. The remaining oriental coins are mainly small fragments of Umayyad and early Abbāsīd dirhams and their imitations from the 770s to 810s. Umayyad dirhams are quite rare in Truso: to date only twenty-four specimens have been identified. Two of them were struck in Wāsīt, one in Basra and one in Istahr.

Other interesting coins, struck in the Abbāsīd period but in the old Sasanian style, are the half dirhams of Abbāsīd governors of Tabaristān. One was struck in year 137 of the Post-Yazgard Era (AD 788), the very year when three Abbāsīd governors were ruling in Tabaristān: Garīr, Muqātil and Hānī ibn Hānī.⁸ The second specimen was struck in the name of Umar ibn al'-Alā in 124 PYE (AD 775). Another of these coins is of anonymous 'Afzūd' type.

³ Bogucki 2004, 112–18.

⁴ Bogucki 2007a.

⁵ Czapkiewicz, Jagodziński and Kmietowicz, 1988; Bartczak, Jagodziński and Suchodolski 2004, 21, 27–8; Suchodolski 1989; Suchodolski 2006; Bogucki 2006; Bogucki 2007b.

⁶ Czapkiewicz, Jagodziński and Kmietowicz, 1988, 165–8.

⁷ The information presented here and the numerical data are based on coins found in 1985–2006. Only 143 dirhams were professionally identified by A. Bartczak (Bartczak [n.d.]); see also Bartczak, Jagodziński and Suchodolski 2004, 28–32. I have identified coins from the excavations of 2002–6 only preliminarily. They need to be studied by a professional oriental numismatist.

⁸ Gaube 1973, 124–9.

Alongside the identified specimens, there are also a few unattributed small fragments of half dirhams. Generally, half dirhams struck by Abbāsīd governors form a very small but constant part of the finds from the Northern Lands; they are known from Russia, Scandinavia and from the Slavic and Baltic Lands.⁹

The most common coin type found in Truso are very small fragments of early Abbāsīd dirhams, dated to AD 750–c.814/28. To date, 312 of them have been identified; in this group, specimens from the central mint in Madīnat as-Salām dominate, while coins from the other mints of the Caliphate are represented by a few specimens:

Madīnat as-Salām	29
al-Muhammadīya	9
Balkh	3
Kūfa	3
Samarqand	3
Madīnat Isbahān	2
Madīnat Naysābur	2
Madīnat Harāt	1
Madīnat ash-Shash	1
Madīn Bajunays	1
Marw	1

Parts of dirhams from North Africa are also present in the collection (at least four specimens). The mint name is not preserved on these fragments, but they were most probably struck in the main mint of North Africa – al-Abbāsīya. One Idrisid and one Aghlabid dirham are also known.

The chronological structure of the rulers present in the coin material is as follows:

as-Saffāh (750–54)	1
al-Mansūr (754–75)	17
al-Mahdī (775–85)	10
Harūn ar-Rashīd (786–809)	19
al-Amīn (809–13)	11
al-Ma'mūn (813–33)	18

Some later, late-Abbāsīd dirhams struck after AD 813 were also found in Truso. Among at least twenty-two such specimens, one dirham of al-Mu'tasim bi-Allah (833–42) has been identified. The latest oriental coins at Truso are two fragments of al-Mutawakkil's (847–61) dirhams, one struck in AD 848/9 in Madīnat as-Salām and the other in AD 850/1–854/5 in ash-Shash.

A small but very important category of coins consists of imitations and counterfeits, of which six specimens have been found; this is a much lower proportion than at Birka, where almost twenty per cent of the coins were imitations and counterfeits.¹⁰ All the imitations were identified among the single finds.¹¹ However, detailed analyses will certainly identify more coins belonging to this group. According to Gert Rispling, the imitations of the early Abbāsīd type (group A1) are in fact of Khazar origin, and should be dated to the late 830s.¹²

Hitherto, only thirteen western European coins have been found: one Frisian imitation of the Madelinus tremissis, one Frisian/Danish sceat of the Wodan/monster type, five early

⁹ For other finds of Tabaristani coins see Berga 1988, 74, no. 43; Lundström 1981, 104, 107; Wiechmann 1996, Table 72, B:1–3; Kiersnowski 1964, 54, no. 143, 52, no. 132; Kiersnowska and Kiersnowski 1959, no. 232. Slaski and Tabaczyński 1959, no. 86.

¹⁰ See Rispling, 2004, 39 on the Birka imitations; the real number of imitations from Truso may be much higher, but they have not been identified yet.

¹¹ Bartczak, Jagodziński and Suchodolski 2004, 31.

¹² Rispling 2005, 173–5, 208.

Danish deniers (four of Malmer type KG 3 and one of KG 5 type),¹³ three deniers of *XPISTIANA RELIGIO* type (two of Louis the Pious and one of Lothar I),¹⁴ and one penny of Æthelwulf, king of Wessex,¹⁵ struck in Rochester. A very characteristic feature is that almost all the western European coins were pierced or looped. The latest western European coins found at Truso are two Northumbrian stycas of Eanred (*c.*810–40)¹⁶ (Fig. 2) and Æthelred II (first reign *c.*841–4, second reign *c.*844–8) (Fig. 3). The coins were found in August 2007 and August 2008 in the ‘harbour’ area of the site, in the plough soil.

1. *Northumbria*, mint York, Eanred (810–40), brass¹⁷ styca. Pirie 570, 570a.¹⁸ Weight 0.90 g, diameter 11–12 mm, square flan. Field II; Inv. No. 501/2008.
Obv.: Equal armed cross with slightly broadening arms, +EANREDREX.
Rev.: Equal armed cross with slightly broadening arms, +MONNE, outer circle of pellets.



Fig. 2. Janów Pomorski, no. 1. Styca of Eanred. Scale 2:1 (Photo L. Okoński).

2. *Northumbria*, mint York, Æthelred II (840–8), brass styca from the first reign (840–4). Dies identical with Pirie 211,¹⁹ *SCBI* 4, no. 326.²⁰ Weight 0.99 g, diameter 12 mm, irregular flan, heavily corroded surface, some letters illegible. A large patch of corrosion on the reverse. Field II, square XLII/19, Inv. No. 58/2008
Obv.: Equal armed cross with slightly broadening arms, +EDELREDR, outer circle of pellets. Die nos Pirie 210, 211 (obverse die also found with a reverse die of the moneyer Eanred; Pirie 292–3).
Rev.: Equal armed cross with slightly broadening arms, +LEODEG[NX], outer circle of pellets. Die no. Pirie 211.

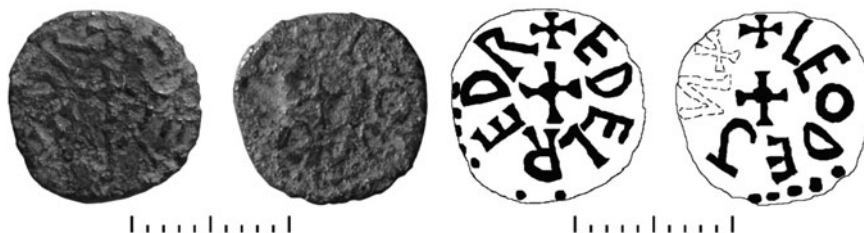


Fig. 3. Janów Pomorski, no. 2. Styca of Æthelred II. Scale 2:1 (Photo and drawing M. Bogucki).

The first styca found in Truso is a common coin struck for Eanred by the moneyer Monne. Two coins struck with the same dies as the Truso specimen are held in the Yorkshire Museum in York. These dies are not known to die-link with other coins. Most probably both coins were part of a hoard from Bolton Percy, North Yorkshire (found in 1847), which was

¹³ Bartczak, Jagodziński and Suchodolski 2004, 32–45; Suchodolski 1989. Two more specimens of KG 3 deniers were found in May and August 2007.

¹⁴ Bogucki 2006. A second specimen of the Louis the Pious denier was found in May 2007.

¹⁵ Suchodolski 2006.

¹⁶ The chronology of Northumbrian rulers is still debated. Besides the traditional dating based on written sources (placing the rule of Æthelred II in the 840s), a new chronology based on numismatic finds has been proposed (placing Æthelred II's rule in the 850s, in 854–62): see Pagan 1969, 1–15. This problem has been discussed extensively by Kirby 1987 and Lyon 1987. This article uses the traditional dating, as described in Grierson and Blackburn 1986, 302–3.

¹⁷ No metal analyses of the Truso stycas have been made. The metal composition of stycas struck from the same dies as no. 2. are as follows: Pirie 210a (Cu 70.4%, Zn 13.9%, Ag 2.6%, Sn 8.1%), Pirie 211 (Cu 74.3%, Zn 11.2%, Ag 3.4%, Sn 6%); see Pirie 1996, 68.

¹⁸ Pirie 1996, no. 570, Pl. XV.

¹⁹ Pirie 1996, 91–2, no. 211.

²⁰ *SCBI* 4 (Copenhagen), no. 326.

deposited after 849.²¹ These coins seem to be a regular issue of Eanred's reign, from Phase II, which should be dated to the 830s according to the traditional chronology.²²

The second styca also belongs to a very common series of Æthelred II's coins, struck by the moneyer Leofthegn. However, coins like this specimen, struck with the legend EDELRED R (belonging to Pirie's group A),²³ and with the name of the moneyer written as LEODEGN X, are somewhat less common. Three coins struck with the same dies as the specimen from Truso were found in a hoard discovered in 1843 at St Leonard's Place, York, deposited after 849, as is the whole hoard (Fig. 4).²⁴ The same hoard also contained a styca struck with the same obverse but with another reverse die, where the name of Leofthegn is written differently.²⁵ Two other specimens identical with the find from Truso constituted a part of a hoard from Bolton Percy.²⁶ Two other coins come from the biggest hoard of stycas, discovered in Hexham, Northumberland, which, according to the traditional chronology, was deposited shortly after 844. These coins are known from nineteenth-century engravings based on coins then in the possession of the collector John Adamson (Fig. 5a–b).²⁷ Therefore it is difficult to say whether they were struck with the same dies. It is very likely, however, that this was the case. Additionally, two other coins struck with the same dies, but without a specified find spot, are known. The first formed part of the collection of George Baron, and is now preserved at the Leeds City Museum;²⁸ the other is a part of the numismatic collection of the National Museum in Copenhagen (Fig. 6).²⁹ The cracked obverse die of the coins described combines also with another reverse die, with the name of the moneyer Eanred. Such coins were found in the St Leonard's Place hoard from York.³⁰ The die combination chain, to which the styca from Truso belongs, is more developed, but there is no need to describe it further here.



Figs 4, 5a–b, 6. Stycas of Æthelred II from York, Hexham and the National Museum in Copenhagen struck with the same pair of dies as the styca from Janów Pomorski (Pirie 1996, Pirie 1987, Galster 1964).

In the period between the eighth and the ninth century, only a small number of western European coins reached the coast of the Baltic Sea. These are mostly Carolingian deniers, Anglo-Saxon pennies and Frisian sceattas.³¹ Finds of Northumbrian stycas are truly exceptional in this area. They have been studied by R. Wiechmann³² and E.J.E. Pirie.³³ However, new finds have been recorded since their studies were written. All in all, outside the British Isles, only eighteen specimens have been recorded (Fig. 7). Four of them were found in Friesland;³⁴ three of these, struck for Eanred in around 810–40 (moneyers Monne, Eadwini, Fordred), come from the Dorestad emporium. The fourth, struck for Archbishop Wigmund of York in the years 837–54 (moneyer Edilweard), was found at Schouwen. Two other stycas

²¹ Pirie 1996, no. 570.

²² This coin was found after this text was already written, and I have been unable to study it in detail. I am very grateful to Hugh Pagan and Mark Blackburn for finding analogies in Pirie 1996, which is not available in Warsaw.

²³ Pirie 1996, 38.

²⁴ Pirie 1996, 16–17, nos 211, 211a, 211b.

²⁵ Pirie 1996, no. 210.

²⁶ Pirie 1996, 17–18, nos 211c, 211d.

²⁷ Pirie 1987, 291, nos 138, 139.

²⁸ Pirie 1996, 17–18, no. 211e.

²⁹ *SCBI* 4 (Copenhagen), no. 326.

³⁰ Pirie 1996, nos 292, 292a, 293, 293a.

³¹ Bartczak, Jagodziński and Suchodolski 2004, 32–45; Bogucki 2006.

³² Wiechmann 1998; Wiechmann 2007a, 39–40; Wiechmann 2007b, 211–13, 261 (no. 59), 275.

³³ Pirie 2000, 90.

³⁴ Pirie 2000, 90, nos 293, 294.

have been found in the Rhine basin: a coin of Eanred was found at Mainz,³⁵ and another at Zutphen.³⁶ Two further coins have been found in Menzlin, although these have not yet been published.³⁷ Seven stycas have been found in Scandinavia. Two specimens, struck for Eanred (moneyer Herred), were reworked to form weights through fastening them to pieces of lead (Fig. 8a–b); they were discovered in a warrior's grave in Vig, Fjære, Norway.³⁸ A third such styca has been recently found in Norway in Hjelle, Sogn og Fjordane.³⁹ Two more specimens were discovered in southern Denmark. One was found in the harbour of Hedeby, and was struck during the reign of Æthelred II by the moneyer Leofthegn (Fig. 9). The second coin, from the settlement of Schuby, was struck for Æthelred II by the moneyer Monne (Fig. 10).⁴⁰ Two of Æthelred II's stycas have been found at Birka in Sweden, in graves 29 and 176 (Figs 11, 12).⁴¹ So far, the most eastern find of this type has been recorded at Staraya Ladoga in northern Russia.⁴²

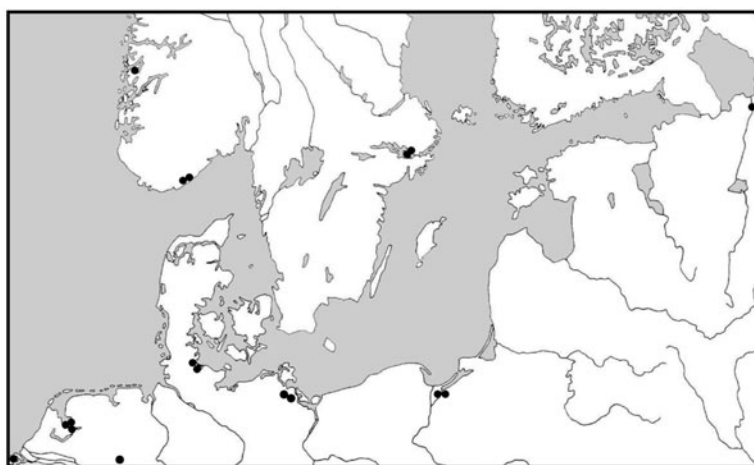


Fig. 7. Northumbrian stycas found outside the British Isles (compiled by M. Bogucki).



Fig. 8a–b. Vig, Fjære, Norway. Eanred stycas reworked to form weights (Skaare 1976).

Fig. 9. Hedeby, Germany. Æthelred II styca (Wiechmann 1998).

Fig. 10. Schuby, Germany. Æthelred II styca (Wiechmann 1998).

Figs 11–12. Birka, Sweden. Æthelred II stycas from graves 176 and 29 (Arbman 1940).

³⁵ Pirie 2000, 90, no. 296; Stoess 1994, 178, no. 26; Wiechmann 2007a, 40.

³⁶ Willemsen 2004, 134–6; Wiechmann 2007a, 40.

³⁷ Wiechmann 2007a, 40.

³⁸ Skaare 1976, 44–5, 144, Pl. IV.12–13; Pirie 2000, 25–6, 90; Williams 1999, nos 6–7.

³⁹ This coin has not yet been published; I owe this information to Elina Screen, Cambridge.

⁴⁰ Wiechmann 1998.

⁴¹ Arbman 1940, Plate 141, nos 1–2; Arbman 1943, 12 (grave 29, illustrated at Abb. 11, 7), 75 (grave 176); Blackburn and Jonsson 1981, 150; Wiséhn 1989, 25.

⁴² This coin has not been published yet; I owe this information to Mark Blackburn, Cambridge.

Returning to the stycas found in Truso, it has to be underlined that, unlike other European coins from this site (the sceat of Wodan/monster type, deniers of Louis the Pious, Danish deniers and Æthelwulf's penny), they have not been re-made into pieces of jewellery. This can be explained by the fact that they are brass, not silver, coins. The fact that these stycas were kept in their original form may be of significance in explaining the function of the other European coins, which were deprived of their monetary character. So, it is very likely that these coins were brought to Truso by tradesmen, who regarded them as a means of payment. There, they were lost or rejected during trade activities. Other silver deniers could have been remade into jewellery already in Scandinavia; therefore, it is difficult to say whether they were brought to Truso to function exclusively as jewellery, or as money too.⁴³ The brass stycas show, however, that European coins could have been brought to the southern coasts of the Baltic Sea to function as a means of payment, and only lost their monetary function after arriving there.

From where were the stycas brought to Truso? Denmark, and especially southern Jutland with its main settlements in Ribe and Hedeby, can be named with high probability. These settlements were, without any doubt, involved in the trade between the British Isles and other parts of Europe. It is worth mentioning that some scholars attribute to the mint in Ribe both the sceattas of Wodan/monster type and also the deniers of type KG 5, which to date have been seen as struck in Hedeby.⁴⁴ This, and the well-known fact of the journey undertaken by Wulfstan to Truso around 880, show that the ties between Truso and southern Jutland were strong. Other artefacts found at Truso also attest to these close relations.⁴⁵

The chronological correspondence of the stycas with another Anglo-Saxon coin – a penny of Æthelwulf of Wessex, struck between 842 and 845 – is striking.⁴⁶ Five Danish deniers (KG 3 and KG 5) and both deniers of Louis the Pious of the *XPISTIANA RELIGIO* type are only a little bit older. The sceat of Wodan/monster type, which is almost a century older, represents an exception.⁴⁷ Still, such chronological unity among the European coins from different centres proves that the contacts between Truso and Western Europe in the second quarter of the ninth century were established through Danish tradesmen. It is impossible to determine, however, whether these artefacts are merely 'souvenirs from England', as R. Wiechman described them, or whether they are testimonies of lasting ties between the Elbląg Heights, southern Jutland and the British Isles in the ninth century AD. The comparison of coins with other artefacts from Truso suggest that the latter possibility is more likely. The Anglo-Saxon penny and the Northumbrian stycas are three of the latest coins found at Truso. Currently, despite many theories,⁴⁸ it is uncertain what caused coin usage in Truso to cease after the mid-ninth century, even though long-distance trade contacts were still lively.

The finding of two Northumbrian stycas at Truso can be explained in many ways; it is certain that this find is exceptional and of great significance. Although it does not answer the many questions connected with the use of coins at Truso, it certainly enriches our knowledge about long-distance trade relationships in the ninth century AD.

REFERENCES

- Arbman, H. 1940. *Birka. Untersuchungen und Studien*, vol. I. *Die Gräber. Tafeln*, (Stockholm).
 Arbman, H. 1943. *Birka. Untersuchungen und Studien*, vol. I. *Die Gräber. Text*, (Stockholm).
 Bartczak, A., [n.d.] 'Luźne znaleziska monet orientalnych z terenu Janowa Pomorskiego (1985–2001)' (manuscript in Museum in Elbląg).

⁴³ Bartczak, Jagodziński and Suchodolski 2004, 43.

⁴⁴ On the attribution of the Wodan/monster sceattas to the mint in Ribe see Metcalf 1984; Metcalf 1993, vol. II, 275–93; Metcalf 2006, 127–31. This was criticized by Malmer and Jonsson 1986, 66–9 and Suchodolski: see Bartczak, Jagodziński and Suchodolski 2004, 41–2. On the attribution of KG 5 deniers to the Ribe mint see Metcalf 1996a, 416–19, Metcalf 1996b, 74–7. Some of the ideas were criticized by Kierkegaard 1997, 6–7.

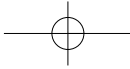
⁴⁵ Jagodziński 1999, 47–61, Jagodziński 2004, 100.

⁴⁶ Suchodolski 2006, 289.

⁴⁷ Bartczak, Jagodziński and Suchodolski 2004, 32–42; Bogucki 2006, 173–4.

⁴⁸ Bogucki 2007b.

- Bartczak, A., Jagodziński, M.F., and Suchodolski, S., 2004. 'Monety z VIII i IX w. odkryte w Janowie Pomorskim, gm. Elbląg – dawnym Truso', *Wiadomości Numizmatyczne* XLVIII, no. 1, 21–48.
- Berga, T., 1988. *Monety v arkeologicheskikh pamiatnikakh Latvii IX-XII vv.* (Riga).
- Blackburn, M.A.S., and Jonsson, K., 1981. 'The Anglo-Saxon and Anglo-Norman element of north European coin finds', in M.A.S. Blackburn and D.M. Metcalf (eds), *Viking-Age Coinage in the Northern Lands. The Sixth Oxford Symposium on Coinage and Monetary History*, BAR International Series 122 (i) (Oxford), 147–255.
- Bogucki, M., 2004. 'The Viking-Age Ports of Trade in Poland', *Eesti Arheoloogia Ajakiri* 8/2, 100–127.
- Bogucki, M., 2006. 'Denar Ludwika Pobożnego znaleziony w Janowie Pomorskim – Truso', *Wiadomości Numizmatyczne* 50, no. 2, 173–80.
- Bogucki, M., 2007a. 'Some oriental finds from the Port of Trade at Janów Pomorski (Truso), Poland', in U. Fransson *et al.* (eds), *Cultural interaction between East and West. Archaeology, artefacts and human contacts in northern Europe during the pre- and early history* (Stockholm), 164–70.
- Bogucki, M., 2007b. 'Coin finds in Viking Age emporium at Janów Pomorski (Truso) and the 'Prussian phenomenon'', in S. Suchodolski and M. Bogucki (eds), *Money circulation in Antiquity, the Middle Ages and Modern Times. Time, range, intensity. International Symposium on the 50th Anniversary of 'Wiadomości Numizmatyczne', Warsaw 13–14 October 2006* (Warsaw), 79–106.
- Bosworth, J. and Hampson, R.T. (ed. and trans.), 1859. *King Alfred's Anglo-Saxon version of the compendious history of the world by Orosius* (1859), 21–3 ('The Anglo-Saxon Text'), 50–6 ('The English Translation with Notes').
- Czapkiewicz, M., Jagodziński, M.F., and Kmietowicz, A., 1988. 'Arabische Münzen aus einer frühmittelalterlichen Handwerker- und Handelsiedlung in Janów Pomorski, Gem. Elbląg', *Folia Orientalia* XXV, 157–69.
- Galster, G., 1964. *SCBI 4. Royal Collection, Copenhagen. Part I. Ancient British and Anglo-Saxon Coins*, (London).
- Gaube, H., 1973. *Arabosasanidische Numismatik* (Braunschweig), 124–9.
- Grierson, P., and Blackburn, M., 1986. *Medieval European Coinage. The Early Middle Ages (5th–10th centuries). With a Catalogue of the Coins in the Fitzwilliam Museum, Cambridge*, vol. 1 (Cambridge).
- Jagodziński, M.F., 1999. 'Rejon ujścia Wisły we wczesnym średniowieczu. Struktura zasiedlenia i stosunki etniczne', in M.F. Jagodziński (ed.), *Pogranicze polsko – pruskie w czasach św. Wojciecha. Materiały z konferencji 18–19 Września 1997 r. Elbląg* (Elbląg), 47–61.
- Jagodziński, M.F., 2000a. 'Truso – Siedlung und Hafen im Slawisch-Estnischen Grenzgebiet', in A. Wiczorek and H-M. Hinz (eds), *Europas Mitte um 1000. Handbuch zur Ausstellung 1* (Stuttgart), 170–4.
- Jagodziński, M.F., 2000b. 'Truso. Das frühmittelalterliche Hafen- und Handelszentrum im Ostseegebiet bei Elbing', *Westpreussen-Jahrbuch* 50, 41–56.
- Jagodziński, M.F., 2004. 'Czy Elbląg był kontynuacją Truso? Jeszcze jeden głos w dyskusji', in R. Czaja, G. Nawrońska, M. Rębkowski and J. Tandecki (eds), *Archaeologia et Historia Urbana. Pamięci Tadeusza Nawrońskiego* (Elbląg), 95–103.
- Jagodziński, M.F., 2006. 'Truso. Forschungsgeschichte, Ausgrabungen, Bewertung', in H. Beck, D. Geuenich and H. Steuer (eds), *Reallexikon der Germanischen Altertumskunde* 31 (Berlin), 291–5.
- Jagodziński, M.F., and Kasprzycka, M., 1991. 'The early medieval craft and commercial center at Janów Pomorski near Elbląg on the South Baltic Coast', *Antiquity* 65, 696–715.
- Kierkegaard, L., 1997. 'Ribe og Hedeby er Nordens ældste mønter', *Nordisk Numismatisk Unions Medlemsblad*, no. 1, 6–7.
- Kiersnowska, T., and Kiersnowski, R., 1959. *Wczesnośredniowieczne skarby srebrne z Pomorza*. Polskie Badania Archeologiczne, 4 (Warszawa-Wrocław 1959).
- Kiersnowski, R., 1964. *Wczesnośredniowieczne skarby srebrne z Polabia. Materiały*. Polskie Badania Archeologiczne, 11 (Wrocław).
- Kirby, D.P., 1987. 'Northumbria in the ninth century', in D.M. Metcalf (ed.), *Coinage in Ninth-Century Northumbria. The Tenth Oxford Symposium on Coinage and Monetary History*, BAR British Series 180 (Oxford), 11–25.
- Lundström, P., 1981. *De kommo vida. . . : Vikingarnas hamn vid Paviken på Gotland* (Uddevalla).
- Lyon, S., 1987. 'Ninth-century Northumbrian chronology', in D.M. Metcalf (ed.), *Coinage in Ninth-Century Northumbria. The Tenth Oxford Symposium on Coinage and Monetary History*, BAR British Series 180 (Oxford), 27–41.
- Malmer, B., and Jonsson, K., 1986. 'Sceattas och den äldsta nordiska myntningen', *Nordisk Numismatisk Unions Medlemsblad*, no. 4, 66–9.
- Metcalf, D.M., 1984. 'A note on sceattas as a measure of international trade, and on the earliest Danish coinage', in D. Hill and D.M. Metcalf (eds), *Sceattas in England and on the Continent. The Seventh Oxford Symposium on Coinage and Monetary History*, BAR British Series 128 (Oxford), 159–64.
- Metcalf, D.M., 1993. *Thrymsas and Sceattas in the Ashmolean Museum Oxford*, 3 vols (London).
- Metcalf, D.M., 1996a. 'Viking-Age Numismatics 2. Coinage in the Northern Lands in Merovingian and Carolingian Times', *NC* 156, 399–428.
- Metcalf, D.M., 1996b. 'Kan Hedeby mønter også være præget i Ribe og Birka?', *Nordisk Numismatisk Unions Medlemsblad*, no. 5, 74–7.
- Metcalf, D.M., 2006. 'Single finds of Wodan/monster sceattas in England and their interpretation for monetary history', *Nordisk Numismatisk Årsskrift 2000–2002*, 127–31.



- Pagan, H.E., 1969. 'Northumbrian numismatic chronology in the ninth century', *BNJ* 38, 1–15.
- Pirie, E.J.E., 1987. 'Adamson's Hexham plates', in D.M. Metcalf (ed.), *Coinage in Ninth-Century Northumbria. The Tenth Oxford Symposium on Coinage and Monetary History*, BAR British Series 180 (Oxford), 257–327.
- Pirie, E.J.E., 1996. *Coins of the Kingdom of Northumbria c. 700–867 in the Yorkshire Collections* (Llanfyllin).
- Pirie, E.J.E., 2000. *Thrymsas, sceattas and stycas of Northumbria. An Inventory of Finds recorded to 1997*, Northumbrian Numismatic Studies 2 (Llanfyllin).
- Rispling, G., 2004. 'Catalogue and Comments on the Islamic Coins from the Excavations 1900–1995', in B. Ambrosiani (ed.), *Excavations in the Black Earth 1990–1995. Eastern connections. Part Two: Numismatics and Metrology*, Birka Studies 6 (Stockholm), 172–255.
- Rispling, G., 2005. 'Osteuropäische Nachahmungen islamischer Münzen', in T. Mayer, S. Heidemann and G. Rispling (eds), *Sylloge der Münzen des Kaukasus und Osteuropas im Orientalischen Münzkabinett Jena*, (Wiesbaden), 172–225.
- SCBI 4 (Copenhagen)*. See Galster 1964.
- Skaare, K., 1976. *Coins and Coinage in Viking-Age Norway* (Oslo).
- Slaski, J., and Tabaczyński, S., 1959. *Wczesnośredniowieczne skarby srebrne z Wielkopolski*. Polskie Badania Archeologiczne, 1 (Warszawa-Wrocław).
- Stoess, C., 1994. 'Die Münzen', in E. Wamers (ed.), *Die mittelalterlichen Lesefunde aus der Löhrrstrasse (Baustelle Hilton II) in Mainz*, Mainzer Archäologische Schriften 1 (1994), 177–89.
- Suchodolski, S., 1989. 'The finding of a Scandinavian coin of the earliest type (KG 3) on the southern coast of the Baltic Sea', *Festskrift till Lars O. Lagerqvist, Numismatiska Meddelanden XXXVII* (Stockholm), 425–30.
- Suchodolski, S., 2006. 'A coin of Æthelwulf of Wessex from ancient Truso in Poland', in B. Cook and G. Williams (eds), *Coinage and History in the North Sea World, c. 500–1250. Essays in Honour of Marion Archibald* (Leiden-Boston), 287–96.
- Wiechmann, R., 1996. *Edelmetalldepots der Wikingerzeit in Schleswig-Holstein. Vom "Ringbrecher" zur Münzwirtschaft*, Offa-Bücher 77 (Neumünster).
- Wiechmann, R., 1998. 'Souvenirs aus England? Zwei northumbrische "Stycas" gefunden in Schleswig-Holstein', in A. Wesse (ed.), *Studien zur Archäologie des Osteseeraumes. Von der Eisenzeit zum Mittelalter. Festschrift für Michael Müller-Wille* (Neumünster), 453–60.
- Wiechmann, R., 2007a. 'Hedeby and Its Hinterland: A Local Numismatic Region', in J. Graham-Campbell and G. Williams (eds), *Silver Economy in the Viking Age* (London), 29–48.
- Wiechmann, R., 2007b. 'Haithabu und sein Hinterland – ein lokaler numismatischer Raum? Münzen und Münzfunde aus Haithabu (bis zum Jahr 2002)', *Berichte über die Ausgrabungen in Haithabu*, 36 (Neumünster), 182–278.
- Willemsen, A., 2004. *Wikinger am Rhein, 800–1000* (Stuttgart).
- Williams, G., 1999. 'Anglo-Saxon and Viking coin weights', *BNJ* 69 (1999), 19–36.
- Wiséhn, E., 1989. *Sveriges Mynthistoria: Landskapsinventeringen. 4. Myntfynd från Uppland* (Stockholm).

