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FORGED COINS IN EARLY MEDIEVAL POLAND

Coin forgeries are as old as money itself. The Medieval Period was no exception, and at least three different types of coins diverging from the normal can be distinguished in this period: imitations, forgeries and legal coins with reduced content of precious metal. Imitations were made of pure silver; popular and accepted patterns were used to introduce another's silver in monetary form onto the market. This is a proof that the value of coins was higher than the gross value of the metal used for their production.

As opposed to imitations, forgeries were made with the purpose of deceiving their recipients. Such coins were made of copper, brass or bronze and covered with a thin layer of silver or other white metal, for example tin, so as to resemble legal silver coins. Rarer are coins made exclusively of base metals such as tin or lead. Forgeries could have been produced in both official mints and illegal workshops. The third type consists of legal coins with reduced content of silver. In the early medieval period, especially in its later phases, legal rulers would sometimes intentionally reduce the amount of silver in the alloy. An early example of such proceedings are Ruthenian coins made of an alloy with low silver content or even of silver-plated copper (S o t n i k o v a, S p a s s k i 1982). Those coins are a manifestation of the fiscal policy of the rulers who produced them, and therefore they will not be further discussed in this article. Only forgeries as such — coins made of base metal and, most often, plated with silver — will be the topic of this essay. Coins exclusively of copper, without any traces of silver plating, which can also be found in the material from excavations, are discussed here as well. They are treated as forgeries, because of the high probability that traces of silver plating were lost in the process of corrosion. For example, the latest chemical analyses of copper coins found in Parchim near Schwerin have shown that all of the coins had been initially plated with silver or with tin (see below).

Henryk Mańkowski, in his work on false coins has stated, 'Already in the times of the Piast rulers, forgeries of coins must have existed. Yet, even the legal

coins of the Piast era pose many difficulties to the researcher, what would it be indeed, if we tried to identify and analyse also forgeries?" (Mańkowski 1930, p. 7). As the result of such an attitude early medieval forgeries lay beyond the scope of researchers' interests for a long time. The first study of early medieval forgeries was carried out by Ryszard Kiersnowski, who identified three such coins in the hoard of Kamień Pomorski (Kiersnowski 1959, pp. 197–218). Jadwiga Zakrzewska-Kleczkowska (1980, pp. 155–160) has continued studies on this topic, but the coins analyzed by her were in fact silver ones produced in an official mint (Suchodolski 1998, pp. 37–38). The basic study of early medieval forgeries is still a short work by Stanisław Suchodolski, who collected and conducted preliminary analyses of all the forgeries then known (Suchodolski 1998, pp. 37–47). Roman Grodecki (1919, pp. 41–46, 131–136) studied the problem of late medieval forgeries from the perspective of the written sources, while Ryszard Kiersnowski (1973, pp. 81–89), Jerzy Piniński (1973, pp. 91–104), Andrzej Mikołajczyk (1980, pp. 179–183) and Borys Paszkiewicz (1998a, pp. 79–94) have confronted written sources with archaeological material. In regard to the early medieval period, two more studies, by A. Mikołajczyk (1985, pp. 21–28) and B. Paszkiewicz (2006, pp. 15–19), are worth mentioning. Those authors analyzed a brass pendant with an imprint looking very similar to obverse on cross pennies (Sachsenpfennige, Wendenpfennige), discovered in a grave in Brześć Kujawski (Pl. IB. 42). Both authors shared the point of view that some cross pennies have been produced in Polish mints, including mints placed in Kuyavia. Even though the latter conclusion was made with regard to officially minted (silver) coins, I will try to prove that it strengthens the presumption that forgeries too had been produced in this region.

FORGED COINS IN POLAND

Up to today, 60 forgeries of early medieval coins have been registered in Poland (fig. 1). They were found in 12 hoards (19 coins) and on at least 18 sites (38 coins). Three coins lack any information about their origin. To this accumulation several dozens forged pennies from Kruszwica should be added (the exact number is unknown), as well as some 70 unidentified coins from Włocławek.

The oldest forgeries from the territories of modern Poland can be dated as early as the beginning of the ninth century. They include three forged dirhams (no. 24-26)1 found at the emporium in Janów Pomorski (Truso) in northern Poland (Bartczak, Jagodziński, Suchodolski 2004, p. 31; Bogucki 2006, pp. 88, 90, Fig. 6b.26). It is, however, difficult to determine where they had been produced. Their close resemblance to originals indicates that they had been produced, as were the official coins, in the Caliphate, or in the neighbouring

¹ Full data and bibliography to coins mentioned in text have been placed in the catalogue at the end of this article.

Khazar Khaganate. Nonetheless, their Scandinavian origin cannot be excluded, especially considering the latest discovery in the harbour of Hedeby, where nine dirhams of Harun ar-Rashid from Madinat as-Salam, dated 807/9 AD were found. All those coins were cast in the same mould in an alloy of tin and lead (H o v é n 1990, pp. 171–176; S t e u e r 2003, pp. 129, 149). Such a concentration of coins cast in the same mould proves that they had been produced in Hedeby. The forgeries from Truso (Pl. IA. 1), however, were produced with the use of the copper core silver plating technique, and differ from those found in Hedeby.

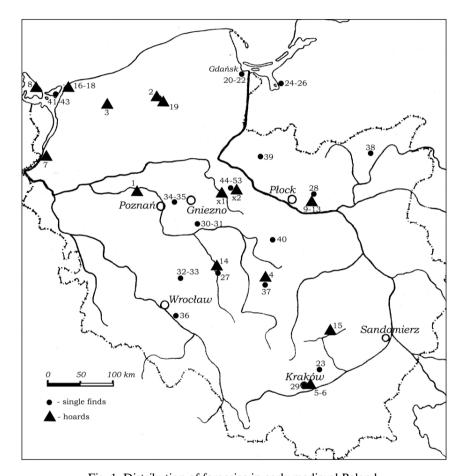


Fig. 1. Distribution of forgeries in early medieval Poland.

The next known forgeries are dated significantly later, to the end of the tenth century. They have been found in two hoards — from Obrzycko in Great Poland (*tpq* 970 — PSW I, pp. 45–46) and from Garsk II in Pomerania (*tpq* 996 — S u c h o d o l s k i 1998, p. 46). In the first hoard, a copper, silver plated pfennig, imitating coins of bishops of Metz, has been found (no. 1), in the second,



a false Mainz pfennig of Otto III (no. 2). These two pennies are the oldest examples of European coin forgeries found in Poland. It is still impossible to determine whether they had been produced in this area; they might have been imported from the German Reich or from Scandinavia.

More numerous are forgeries produced in the first half of the eleventh century. In the hoard of Oleśnica, district Poddębice, deposited after 1037, a false Otto-Adelheid pfennig (no. 4),² Hatz type VI (1961), has been identified. It is the only known forgery of this type of coin, which is interesting considering how popular those coins were at the end of the tenth and in the first half of the eleventh century. It would seem that they too should often have been counterfeited. Two false pfennigs of Duke Henry V from Regensburg (nos. 5, 6) come from the same period and have been found in the hoard deposited in Nowa Huta near Kraków (*tpq* 1037 — Reyman-Walczak 1987, p. 134, nos. 177 and 178). Two forgeries found at a settlement in Ląd on the Warta River can be also dated to the first half of the eleventh century (Suchodolski 1975, p. 33; 1978, pp. 64–65). One of them is a pfennig of Frankish type (no. 30) found in a hill-fort, while the second, a false pfennig of King Otto III from Dortmund (no. 31), found either in the nearby settlement or at a graveyard. Both coins are characterized by being plated with tin rather than with silver.

The earliest forgeries of cross pennies are known from the second quarter of the eleventh century. Four of them resemble each other. One of them was found in Ostrów Lednicki (no. 34, S u c h o d o l s k i 1998, pp. 38–39, see below), three at Wolin (no. 41–43, H o r o s z k o, in press). All are characterized by a simple and schematic type; the pattern for them might have been cross pennies of type II (CNP 400–467) or other pennies of Saxon type, for example Dbg 585–589 (Pl. IA. 4–7). A very impressive forgery of a cross penny of type V, found probably in Tum at Łęczyca (no. 40), can be dated to the end of the first half of the eleventh century. This coin stands out with the high quality of its impression and a proper high edge (Pl. IA. 8), which might indicate that it had been produced in an official Saxon mint, rather than in a workshop in Poland. It can only be guessed that it might have been the personal initiative of a mint worker and not representative of the official fiscal policy of the issuer.

Two finds from the first half of the eleventh century deserve a separate description. One of them is a pierced brass plate struck on only one side, discovered in Gdańsk (no. 22 — Pl. IA. 2). The imprint displays a cross with three crescents at the endings of its arms and a centrally placed rectangular with its corners marked with three dots. Originally, Anatol G u p i e n i e c (1963, p. 168, no. 4), although acknowledging the resemblance of the plate to Æthelred II's pennies, described it as an imitation of semi-bracteates from Hedeby. This identification was accepted by S. S u c h o d o l s k i (1998, p. 39), who additionally described it

² This find has not been published in full. A preliminary description of the hoard can be found in A. Gupieniec (1958, pp. 47–48) and A. Mikołajczyk (1982, p. 46, no. 211). The false coin has been identified by Jerzy Piniński.

as a piece of jewellery and therefore omitted it in his catalogue of forgeries. As to the real origin of this object, it seems that the first impression of A. Gupieniec appears to be correct. The image on the object from Gdańsk is almost identical with those found on reverses of *Helmet* type pennies of Æthelred II which had been produced between c. 1003 and 1009 (North 1994, no. 775). Although such an image or its imitations can also be found on coins of Cnut, Harold, Harthacnut, Edward and even William I (North 1994, nos. 779, 811, 817, 824), some details prove that the pattern for the imitation from Gdańsk was the penny of Æthelred II. Therefore, the object from Gdańsk can be dated after c. 1003, most probably to the first half of the eleventh century. The second interesting find is the coin from Ostrów Lednicki (no. 34), already mentioned above, imitating Saxon pfennigs. Like the imitation from Gdańsk this coin is one-sided, and had been twice pierced with a knife (Pl. IA. 7).

The fact that both artefacts are one-sided, that the same kind of metal was used for their production, and finally that both had been pierced, poses the question, whether those objects can indeed be treated as coins, especially as moneyimitating jewellery was widespread in the early medieval period (Belyakov 1990, pp. 35-41; Leahy 2006, pp. 267-285; Wiechmann 2006a, pp. 161-167; Berga 2007, pp. 171-174; Archibald 2007, pp. 127-138; Ilisch 2008, pp. 37–39). An analogy for these Polish finds, although rather far distant, can be found in Lapland. Among many votive offerings discovered there, a lot of coins, including copper ones were found. They are characterized by the fact that most of them have been either pierced with the sharp point of the knife, or supplied with an eye. In some cases, a metal ring, a piece of wire, or even a piece of cord, were found in the pierced holes (Jammer, Linder Welin, Malmer, R as muss on 1956, pp. 185–222). Before deposit those coins must have been put together in bunches or necklaces. Nonetheless, it has to be emphasised that originally almost all of those votive deposits were coins or imitations of coins; no blank planchets of metal or pieces of what obviously would be round, coin like jewellery have been discovered. It seems that the items sacrificed had to be connected with the money market: they were deposited as a means of exchange.

Going back to the finds from Gdańsk and Ostrów Lednicki, I believe that both, despite being one-sided, originally served as coins. There are numerous examples of silver pennies used in the same period, of which one side was illegible (worn out or struck with a worn out die). Legal silver coins struck on just one side (for example coins of Boleslav the Brave, 992–1025) had been functioning also on the medieval market (S u c h o d o l s k i 1967, pp. 142–143; B o g u c k i 2008, pp. 77–89). As to the holes, so characteristic for votive finds, on the coins from Gdańsk and Ostrów Lednicki they were made later and in a very simple manner — by piercing the coins with a sharp edge of a knife. However, the question remains why copper coins had been used for possible cult purposes (although the archaeological context in which the coins from Gdańsk and Ostrów Lednicki have been found does not support the thesis of them being used for



cult purposes). A possible explanation is that 'good', silver coins were spared for use on the monetary market. An analogy is offered by the fact that often only fragments of coins were deposited in graves; they have been interpreted as a sign of the thrift of those offering grave gifts (Suchodolski 1959, pp. 97–98; Kiersnowski 1959, p. 201).

In the second half of the eleventh century, a shift in the type of forgeries can be observed. Various coins imitating German pfennigs disappeared in favour of more unified types imitating cross pennies. Only two exceptions have been registered so far. The first was a forgery of a Bayarian coin with a temple and a cross (no. 8) found in the hoard from Vossberg on Rügen (tpg 1084 — D a n n e n b e r g 1884, p. 309, no. 334). The second exception is interesting forgery found in the hoard from Naruszewo in Mazovia (tpg 1095 — Mitkowa-Szubert 2002, p. 22). Apart from four false cross pennies of younger types³ (no. 10–13 — see below), also a copper, silver plated forgery of the Pomeranian Łupawa style has been identified (no. 9 — Pl. IA. 3). It combines motives of Otto-Adelheid pfennigs and Anglo-Saxon pennies (see Fiala 1916, nos. 961, 972). This coin proves that Pomeranian issuers of the Łupawa imitations wanted to profit not only from imitating pennies, but also from producing obviously false coins. It is hard to believe that someone else wanted to forge the Łupawa imitations, which were rare in the market. The forgery in question was most probably made in a workshop which also produced full-silver imitations.

Virtually all other known forgeries were based on cross pennies of younger types, from the second half of the eleventh century (Pl. IA. 9–22; Pl. IB. 23–40). 39 such finds from various archaeological sites have been registered so far. They come mostly from Pomerania (11 coins), Kuyavia (10 certain finds and possibly several dozen other coins), Mazovia (7 coins), Great Poland (5), Silesia (3) and Little Poland (3). Pennies of type VI with a plain cross had been most often forged (19 coins); a little less popular were pennies of type V, with a pelleted cross (15 coins). Two forgeries of type VII, with a crosier, have also been registered. Three of the forged coins are so corroded and damaged that it is not possible to distinguish which type of cross pennies they imitate.

An important question concerns the place where these forgeries were produced. Although most of the older forgeries were probably produced outside the area of the Piast kingdom, it is quite certain that the forgeries of younger cross pennies had been produced locally. A few facts prove this thesis.

The first is the discovery of ten forgeries of cross pennies at a settlement in Zgłowiączka in Kuyavia (nos. 44–53 — Pl. IA. 11, 13, 15, 18; Pl. IB. 24, 26–28, 38, 39). The number of forgeries found in one place, and the fact that some of

³ Cross pennies of various types are divided into older and younger groups. In this paper I use the term 'younger' for types V, VI and VII which means that they are from the second half of the eleventh and in some cases even from the very beginning of the twelve century.

them could have been struck with the same pair of dies⁴, allows the inference that forged coins had most likely been produced locally at this settlement. The thesis of local production is particularly probable due to the economic importance of this village. Since the beginning of its existence at the end of the eleventh century, Zgłowiączka was a significant place of salt production (Andrzejewska 1996). This importance is additionally proved by the discovery of a hoard, deposited at the end of the eleventh or at the beginning of the twelfth century. It contained three denarii of Duke Ladislaus Herman (c. 1080–1102), 95 cross pennies and pieces of jewellery (Bulkiewicz 1989, p. 53; Andrzejewska 1996, p. 150; Piniński 1998, pp. 3–4). Unfortunately, full description of the coins from this deposit has not been published yet. It will be crucial to compare the dies of the pennies from the hoard with the forgeries found at the same site and at others, as it is already known that some of the silver cross pennies were minted in Poland (Kedzierski 1998, pp. 21–48; Kedzierski 2005, pp. 23–38). Regrettably, it was not possible to compare the dies used for the forgeries with the imprint on the brass plate found in the grave in Brześć Kujawski (Mikołajczyk 1985, pp. 21–28), due to the poor state of preservation of both the forgeries and the brass plate.

In analyzing the problem of the forgeries produced in Kuyavia, some other finds have to be taken into account. In 1950, a few dozen cross pennies were found in Kruszwica, also in Kuyavia. The coins had a high edge and were made of silver with such a large addition of copper that they rather resembled copper coins (no. x1). Most of these coins were unfortunately lost after they had been discovered; it is certain, however, that they included at least one penny each of types V, VI and VII, and at least four whole and eight fragments of pennies of younger types. All the above mentioned coins were allegedly found in a layer, or several layers, dated to the twelfth century (PSW I, p. 76, no. 9). S. Suchodolski who analyzed the coins some years after their discovery, stated that all the coins except for numbers 14 (type VII, CNP 984–987), 17 (type V or VII, CNP 612-620, 656-665 or 966-981) and 21-23 (illegible) have been lost after excavations. He also assumed that the coins were deposited either loosely together or in an organic container which had decomposed. Therefore, the coins were found separately and were treated during the excavations as single finds (Suchodolski 1974, pp. 113, 118). Leaving aside the question about the coins being single finds or parts of one hoard, and considering only their descriptions, one has to say that they were most probably forgeries of cross pennies. If so, the fact of hiding a collection of forgeries would be puzzling. Usually, only coins of full value were deposited, and false coins were quickly disposed of on the market, deprived of their monetary function, or even simply thrown away. If forgeries are

⁴ It is very hard to compare those coins because of their poor state of preservation. One penny from Zgłowiączka (no. 48) is die identical with one coin from the Naruszewo hoard (no. 11). It is also possible that coins nos. 49 and 50 were struck with the same dies as nos. 11 and 48. Coins nos. 45–46 were also struck with another pair of dies.

found in hoards, it is only in insignificant amounts. In conclusion, it is possible that coins discovered in Kruszwica did not form a part of a treasure; quite the opposite, they might have been identified as forgeries and therefore eliminated from circulation. That forgeries were thrown out intentionally we know from both written and archaeological sources. A set of forgeries, including two Roman denarii and eighteen pennies from the thirteenth century, were found in a latrine in Aachen (Zedelius 1993, pp. 101–104). In the thirteenth century Jutland Law (1241) there is a regulation that forgeries should be melted down or thrown out to sea (Jensen 1998, p. 96). The other possible explanation of the Kruszwica find is that the forgeries were hidden with the aim of saving them for later use.

The third find from Kuyavia which can be connected with medieval forgeries are about 70 coins discovered in the crypt of the Romanesque church in Włocławek (no. x2). All in all, about 100 coins were found there, including about 30 cross pennies. The rest of the coins were larger, copper coins with irregular edges (Jażdżewski 1956, p. 111; PSW III, p. 59, no. 121; Piniński 1998, pp. 3–4). It is uncertain whether the coins in question were early medieval, for it is common for coins of very different chronologies to be found in churches (Paszkiewicz 1998a, pp. 131–186). However, the fact that they have been found along with 30 cross pennies, no later coins having been recorded, permits the assumption that they were indeed early medieval coins.

To the forgeries found in Kuyavia, the four forgeries from Naruszewo in Mazovia (no. 10–13 — Mitkowa-Szubert 2002, p. 22), mentioned already above, can be added. All those sites, separated by a distance of about 100 km from each other, create a concentration in which above 40% of all forgeries of younger cross pennies found so far in Poland have been discovered. It is also worth mention that penny no. 11 from the Naruszewo hoard is die identical with penny no. 48 from Zgłowiączka. Remembering also the fact that on a nearby cemetery in Brześć Kujawski a plate struck with a mint die had been found, the thesis of Kuyavia being the place where those forgeries were produced is strongly reinforced.

It is possible that forgeries of cross pennies were produced in several locations at the turn of the eleventh and the twelfth century, part of them most probably in Saxon mints (Kiersnowski 1973, p. 85); proofs of this are false coins most probably struck with original dies (for example nos. 19 and 40). Still, our current state of knowledge allows the conclusion that most of the forgeries had been produced locally, on the territory of Piasts' Poland. According to the available material, Kuyavia can be indicated as a region of their origin. Within Kuyavia, the political and economic centres at Kruszwica, Włocławek and Brześć Kujawski could be named as the most probable places of their production. However, as I have tried to prove, smaller settlements too, such as Zgłowiączka, could have been sites of the production of forgeries.

As to the scale of the production of forgeries in Poland at the end of the eleventh and the beginning of the twelfth century, it has to be pointed out, that they constitute just 0.078% of the whole number of c. 50,000 cross pennies found

in Poland.⁵ It is certain that some examples of forgeries have not been identified because of their undamaged silver plating. This is mostly true for coins deposited in hoards, as the process of corrosion is slowest in such deposits. Nonetheless, I do not think that the number of unidentified forgeries would greatly change the overall proportions. Yet another proof of the insignificant scale of the production of forgeries is the fact that among a collection of 39 pennies from the second half of the eleventh century, at least four pairs (nos. 10–59; 11–48; 39–60; 45–46, 58) of coins are die-duplicates.

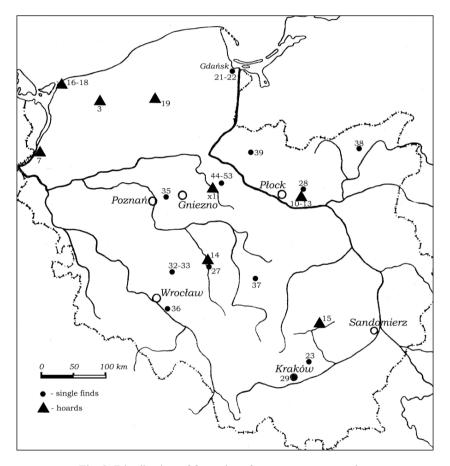


Fig. 2. Distribution of forgeries of younger cross pennies.

The character of the production of forgeries in early medieval Poland remains an unresolved question. It could have been initiated by tradesmen or elite members, as has been suggested in literature (Kiersnowski 1960, p. 327). It is

⁵ R. Kiersnowski (1960, p. 197) gives the number of over 48,000 cross pennies found in Poland. A few thousand newer finds have to be added.

difficult to answer this question, but later analogies can provide clues. Most data about forgeries concern the fourteenth and fifteenth centuries and consist both of written sources and archaeological material (Kiersnowski 1973, pp. 81-89; Piniński 1973, pp. 91-104; Mikołajczyk 1980, pp. 179-183; Paszkiewicz 1998a, pp. 79–94). Written sources have to be treated with some suspicion, for, as B. Paszkiewicz has pointed out, accusations of counterfeiting money might have been a part of political or even private intrigues. Nonetheless, both kinds of sources indicate that counterfeit money in the late Middle Ages was produced mostly by noblemen from the peripheral areas, by gentry and by town patricians, who had enough resources to manufacture and distribute their products. The situation in the second half of the eleventh century must have been similar, especially as it was also the period when minting ceased to be the monopoly of the prince or king. The first legal coins minted by elite members, and probably also by church officials, emerge in this period. The former are represented, for example, by pennies of palatine Sieciech (Suchodolski 1987, pp. 13–44), the latter, by cross pennies of type VIII with St. John's head (Kedzierski 2002, pp. 399–405). That the production of false coins was initiated by members of elite from borderland areas is also proven by the distribution map of finds (fig. 2), of which most were found in peripheries, not in central Great Poland which was the core of the Polish monarchy. On the other hand, forgeries have been found relatively close to more important administrative centres, such as Gdańsk, Płock, Kalisz, Wrocław and Kraków.

EARLY MEDIEVAL FORGERIES OUTSIDE POLAND

The Polish lands were, obviously, not the only territories where coins have been counterfeited. Western European and Scandinavian analogies have already been analyzed by S. Suchodolski (1998, pp. 42–45); therefore I will concentrate on finds from areas lacking their own mint tradition, but remaining, as Poland, under the influence of German coinage.

Here, some unusual brass and copper coins imitating cross pennies and Frisian coins have to be mentioned. 48 of them have been found in a settlement in Parchim near Schwerin (Mecklenburg) and a few others, separately, in seven further settlements (Kilger 2000, pp. 155–159, 256–261; Paddenberg 2002, pp. 91–93; Wiechmann 1 2006b, pp. 43–68; Paddenberg, in press; oral information from Dr. Ralf Wiechmann from Museum für Hamburgische Geschichte). These coins have been dated to the second half of the eleventh and the first half of the twelfth century. It has been assumed that these have been originally copper imitative coins, which would be untypical for eleventh century Europe. Early medieval legal copper, bronze or brass coins are known from Europe, but they are rare exceptions. The best known and described is the ninth century coinage of the kingdom of Northumbria (Grierson, Blackburn 1986, pp. 302–303; Pirie 1996). However, the monetary market on the British

Isles, where the so called "stycas" circulated was highly developed, unlike that in the south Baltic areas. Better analogies for the Parchim coins are copper imitations of Byzantine miliarensia, produced on the Taman Peninsula, on the coast of the Black Sea (Golenko 1965, pp. 87–94). Both the coins from Parchim and those from Taman were copper or brass imitations of foreign silver coins. The difference between the Taman and Parchim coins is that the former circulated in markets closely connected to the Byzantine monetary system where the copper folles were in common use, whereas the latter occurred in the area where silver was the only monetary metal.

Moreover the latest metallographic analyses, undertaken by Oliver Mecking from the Landesamt für Denkmalpflege und Archäologie, have shown that almost all of the coins from Parchim were initially covered with a thin layer of tin or, more rarely, silver. Coins from the eleventh century were made of brass, whereas later coins were usually made of copper. Among coins found in Parchim, several had been produced with the same dies⁶, which may indicate that they had been produced at this site. A characteristic feature of these pennies is the fact that they imitate and mix patterns from various types of original coins (fig. 3). It proves that the counterfeits were not meant to imitate a particular type of coin, but rather to imitate "a coin" as means of payment. The moneyers used patterns from the most popular coins — Frisian pfennigs and Saxon cross pennies.



Fig. 3. False copper penny produced in Parchim near Schwerin based on Frisian coins of Count Brun III (c. 1050–1057) and on a cross penny of type V (www.ebay.de).

Some rare forgeries of Danish and German coins are known from Mecklenburg from the beginning of the twelfth century. The best known is an accumulation of 10 coins from the hill-fort Dobin in Flessenow (Wiechmann 2006a, pp. 158–160, 172–174, no. 31–41, Taf. 2). These coins show unification of imitated patterns: nine of the ten coins are forgeries of Lower-Elbian Agrippiner type. This reflects the fact that genuine coins most often met on the markets of those areas were Agrippiner. The best comparative material are other coin finds from the same hill-fort — all in all 38 coins and seven fragments dated to the second half of the eleventh and the first half of the twelfth century were found, including the ten forgeries already mentioned, fifteen original Agrippiner and four cross pennies of type V.

⁶ Oral information from Dr. Ralf Wiechmann from Museum für Hamburgische Geschichte (see also Wiechmann 2006a, p. 159, note 13).

Silver plated copper coins were found also on lands lying further away, north-east from Poland — on Balt and Finnish lands, Best known are finds from Latvia (Berga 1990, pp. 49–53; 2006, pp. 435–443; 2007, pp. 171–174) and Estonia (Kiudsoo 2008, pp. 91–97). Several were discovered in the hill-fort in Daugmale and on nearby settlements and graveyards at the mouth of the Daugava River. Forgeries of dirhams, made of silver plated copper or tin, including one one-sided coin (Berga 2007, pp. 171–174, no. 1, 3, 4, 18), are known from this area. All these forgeries imitate dirhams dated to the tenth century and should be dated to the same period. It is uncertain whether they were made locally, as at least two of them strongly resemble original coins. They might have been produced in the Samanid Emirate or in the Khaganate of the Volga-Bulgarians. There is no doubt, however, that a group of about 40 silver plated copper coins from the second half of the eleventh century was manufactured in one of the most important hill-forts at the Daugava mouth, in Daugmale. It is proved both by the central character of the finding place and by the numbers of finds. Eight coins were found in the hill-fort, 12 at the nearby graveyard at Laukskola. One, two, three, and in one case even four coins had been found on 11 further sites. The patterns for these coins were German coins (35 cases), mostly Frisian and Saxon. Three coins copied English pennies. Such proportions are reflected also in the hoards of silver coins from the same period, found in Latvia (Molvõgin 1994, pp. 568–571). Interestingly, out of 38 forgeries from Daugmale, 24 have been discovered in graves, 14 in settlement, but none in a hoard. T. Berga assumes that this proves that those coins were not treated as means of payment, but used as jewellery or votive offerings (Berga 1990, p. 52).

Seven forgeries found in Estonia are similar in character to those found in Latvia. Four of them belong to the same type as coins form Daugmale. The remaining three are stylistically different. Most interesting is a counterfeited coin of bishop Herman II of Cologne, which was made correctly, including the shape of the letters, but the inscription itself is blundered. This coin was most probably produced in Germany. Where the Estonian coins differ from the Latvian is in the archaeological contexts in which they have been found. One coin was discovered in a settlement and one in a grave, whereas the remaining five were parts of two hoards: from Savastvere and from Kurtna-Kärsa. All the coins were parts of necklaces, together with other pendants and beads. It is assumed that those coins, deprived of their monetary function, were treated exclusively as pieces of jewellery (K i u d s o o 2008, pp. 91–97).

Finds from Finland had yet another character. These are predominantly silver copies of Byzantine miliarensia, or pieces of jewellery imitating coins with an eye provided already during production (Talvio 1978, pp. 26–38; 1994, pp. 146–154; 1995, pp. 178–182; 2001, pp. 206–212).

Conclusion

To sum up the material presented above, it has to be emphasized that all conclusions are still preliminary due to the continuous increase in the material. S. Suchodolski who examined the problem of forgeries in the early medieval period ten years ago recorded 15 such coins; today, the number has risen to 60. I am sure that even this number is still too low, limited by the good condition of coins preserved in various collections. In particular, forgeries lying unperceived within hoards can be so well-preserved that corrosion has not damaged the silver plating to reveal their copper core. A similar situation can be observed among Roman denarii. Several years ago, when recording drew mainly on hoards of Roman coins, only a small number of nummi subaerati were known (Makomaski 1958, pp. 14–22). Today, thanks to continuous metal detecting on the settlements, nummi subaeratii are known in much larger quantities (Bursche, Kaczanowski, Rodzińska-Nowak 2000, pp. 112–116). The question is again the same — were forgeries deposited in hoards, and just remain unrecognized by the researchers, or were they excluded from thesaurization already in the Roman Period, and were thrown away? While using the most frequently applied method of metallographic analysis — X-ray spectrometry — even when the analysed sample is taken from a crater on the surface of a coin, it is impossible to see through the relatively thick silver plating and to determine which material had been used in the core. However, even the accumulation of material now available is sufficient for some preliminary conclusions.

Another important question is whether all the copper coins were produced with the aim of bringing them onto the market. A significant part of the analysed pennies has been pierced and adapted to be worn as jewellery. Many of them have been discovered in graves, and the analogies mentioned above indicate that those forgeries might have had the function of votive offerings. However, despite all those circumstances, the original, monetary function of the forgeries cannot be precluded. The custom of adapting coins for use as jewellery had been widespread in central and northern Europe, but was always secondary to the original, monetary function. Another proof that forgeries had been produced for the use on the monetary market is the fact that they have been discovered in hoards. The finding of many of those coins in archaeological contexts indicating their votive character proves only that they have been eliminated from the monetary market, possibly as a result of identifying them as forgeries. Such gifts were intended to count as coins as measures of value, yet it was easier to sacrifice a forged coin than a full-silver one. In this process, the coin was still carrying out its function, and at the same time the former owner was freed from the defective product. Some of the forgeries were excluded from monetary circulation in that way.

The analysis of material from Polish finds has shown that forgeries started being produced on a larger scale in the second half of the eleventh century. However it is interesting to note the discrepancy in the localization of those finds discovered in settlements and in deposits (fig. 2). While hoards containing

forged coins have been found mostly in Pomerania, single finds come almost exclusively from other regions — Great Poland and Kuyavia. This phenomenon can be explained in many different ways. Apart from the fact that in Pomerania there are altogether more hoards, it seems that the monetary market in the centre of the state developed earlier and, in consequence, forgeries spread out earlier and in larger numbers. This in turn led to their easier identification and elimination either through disposal or through their being turned into pieces of jewellery. The development of the monetary market in Pomerania proceeded slowly, and payment was carried out with gross silver not with coins. Therefore coins were not examined so carefully and forgeries had a greater chance to stay in the monetary circulation. This led also to higher numbers of false coins in hoards. Referring to the discussion about the introduction of monetary market in early medieval Poland (Suchodolski 1995, pp. 67–71, where older literature), it has to be stated that the appearance of local forgeries must have happened simultaneously with the beginnings of monetization. Therefore, the latter can be dated to the second half of the eleventh century. The next conclusion is that a currency economy based on the gross value of noble metal had to be introduced earlier, R. Kiersnowski stated that this moment is marked by the appearance of hack silver hoards at the end of the tenth century (Kiersnowski 1960, pp. 426–484).

The material presented here indicates that forged coins were more widespread in early medieval Central Europe than it was believed before. Understandingly, the coins most often counterfeited were those which were common on the market. The oldest forgeries appear sparsely in the ninth and tenth centuries and were most probably produced illegally by workers at official mints. The largest amounts of counterfeited coins were produced during the second half of the eleventh and the first half of the twelfth century. These were already local products, made outside legal mints, based on foreign coins common and accepted on the local markets. The production of forgeries appear independently on large areas, from Mecklenburg, through Poland, to Latvia. The lack of later forgeries is a result of several causes. Most important were certainly general changes in the monetary market, such as renovatio monetae and the domination of local coins on the market, which resulted in a generally smaller number of finds. Even if forgeries were produced, they did not survive to our times. Of some impact were certainly also changes in production technology. During the twelfth century, pennies were becoming gradually smaller and lighter, which must have posed more technical difficulties to the forgers. Also, forgery of thin bracteates, which became very popular in the second half of the same century, was exceptionally difficult.

List of early medieval forgeries found in Poland (60 coins)⁷

A. Hoards (19 coins from 12 hoards + above 100 coins from two presumed hoards)

- 1. Obrzycko, district Szamotuły, *tpq* 973. Forged pfennig of bishops of Metz; Dbg 11. Copper core with silver plating. Collection: Schleswig-Holsteinisches Landesmuseum für Vor- und Frühgeschichte (PSW I, pp. 45–46, no. 86; S u c h o d o l s k i 1998, p. 46).
- 2. Garsk II, district Człuchów, *tpq* 996. Forged pfennig of Otto III (983–1002) from Mainz; Dbg 778/9. Copper core with silver plating. Collection: Museum of Central Pomerania in Słupsk (S u c h o d o l s k i 1998, p. 46).
- 3. Stary Chwalim, district Szczecinek, *tpq* 1027 (second-third quarter of 11th century). Forged cross penny of uncertain type. Weight 1,17 g. Collection: Kulturhistorisches Museum Stralsund (PSW II, p. 97, no 157; S u c h o d o l s k i 1998, p. 40, no. 4).
- 4. Oleśnica, district Poddębice, *tpq* 1037. Forged Otto-Adelheid Pfennig, based on Hatz type IV; reverse in negative. Copper core with silver plating. Weight 0,91 g. Collection: Museum of Archaeology and Ethnography in Łódź (G u p i e n i e c 1958, pp. 47–48; M i k o ł a j c z y k 1982, p. 46, no. 211. The coin has been identified as a forgery by Jerzy Piniński).
- 5. Nowa Huta, part of Kraków, *tpq* 1037. Forged pfennig of Duke Henry V(?) from Regensburg; dated 1018–1026; Dbg 1090?, Hahn 31.a.1. Weight 0,548 g. Collection: Archaeological Museum in Kraków (Reyman-Walczak).
- 6. Nowa Huta, as above. Forged pfennig of Duke Henry V(?) from Regensburg, dated 1018–1026; Dbg 1090?, Hahn 31.a.1. Weight 0.999 g. Collection: Archaeological Museum in Kraków (Reyman-Walczak 1987, p. 134, no. 178 and oral information from Bożena Reyman-Walczak).
- 7. Widuchowa II, district Gryfice, *tpq* 1061. Fragment (*c*. 1/3) of forged cross penny of type V; CNP –; no high edge. Copper core with silver plating. Weight 0,48 g, ø 15,8 mm. Collection: National Museum in Szczecin (Horoszko 1987, pp. 77, 94, no. 76; Suchodolski 1998, p. 39, no. 3). Pl. IB. 32.
- 8. Vossberg, Kreis Usedom, *tpq* 1084. Forged pfennig (copper core) of Bavarian type, with a temple and a cross; within blundered rim legend (D a n n e n b e r g 1884, p. 309, no 324; PSW II, p. 115, no. 193; S u c h o d o l s k i 1998, p. 40, no. 5).
- 9. Naruszewo, district Płońsk, *tpq* 1077 (mid 1090s). Forged pfennig of Łupawa group; Copper core with silver plating, 6/5 pecks. Weight 1.11 g, ø 18 mm. Collection: State Archaeological Museum in Warsaw (Suchodolski 1998, pp. 40, 46, no. 6; Mitkowa-Szubert 2002, p. 22, no. 65). Pl. IA. 3.
- 10. Naruszewo, as above. Forged cross penny of type V; CNP 619; copper, no silver plating. Weight 0.91 g, ø 15 mm. Die identical with penny no. 59. Collection: State Archaeological Museum in Warsaw (Mitkowa-Szubert 2002, p. 22, no. 471). Pl. IA. 17.
- 11. Naruszewo, as above. Forged cross penny of type VI; CNP 836; copper core, damaged silver plating. Weight 1.05 g, ø 13.5 mm. Die identical with penny no. 48. Collection: State Archaeological Museum in Warsaw (Mitkowa-Szubert 2002, p. 22, no. 696). Pl. IB. 25.

⁷ The full description is given only for formerly unpublished coins.

- 12. Naruszewo, as above. Forged cross penny of type VI; CNP 834–850; copper core, silver plating, slightly raised edges. Weight 1.47 g, ø 16.2 mm. Collection: State Archaeological Museum in Warsaw (Mitkowa-Szubert 2002, p. 22, no. 697). Pl. IA. 20.
- 13. Naruszewo, as above. Forged cross penny of type VI; CNP 834–850; copper core, slightly raised edges. Weight 0.72 g, ø 15 mm. Collection: State Archaeological Museum in Warsaw (Mitkowa-Szubert 2002, p. 22, no. 698). Pl. IA. 21.
- 14. Jastrzębniki, district Kalisz, *tpq* 1086 (*c*. 1090–1095). Forged cross penny of type VI; CNP 860 (?); copper core with silver plating. Obv.: plain cross with annulets in angles, wedges and V in the rim. Rev.: cross patée, wedges and X in the rim. Weight 0.511 g, Ø 12 mm. Collection: City Museum in Kalisz (hoard currently in analysis, excavations 2008, coin's inv. no. 682. Oral information from Adam Kędzierski).
- 15. Małogoszcz, district Jędrzejów, *tpq* c. 1090–1100. Forged cross penny of type VI; CNP -; copper core with silver plating (?). Weight 1,52 g. Collection: National Museum in Kielce (hoard currently under analysis. Oral information from Bożena Reyman-Walczak).
- 16. Kamień Pomorski, district loco, *tpq* c. 1090–1100. Forged cross penny of type VI; CNP 715–802; copper core, silver plating; slightly raised edges. Weight 1.01 g, Ø 16 mm. Collection: National Museum in Szczecin (Kiersnowski 1959, p. 197, no. 102; Suchodolski 1998, pp. 37–39, no. 1). Pl. IA. 19.
- 17. Kamień Pomorski, as above. Forged cross penny of type V or VI; CNP -; plain edges. Only the silver cover of the reverse has been preserved. Weight 0.45 g, Ø 16–17 mm. Collection: National Museum in Szczecin (K i e r s n o w s k i 1959, p. 197, no. 125; S u c h o d o l s k i 1998, pp. 37–39, no. 1). Pl. IB. 33.
- 18. Kamień Pomorski, as above. Fragment (c. ¼) of a forged cross penny of type VI; CNP –. Weight 0.04 g. Collection: National Museum in Szczecin (Kiersnowski 1959, p. 197, no. 137; Suchodolski 1998, pp. 37–39, no. 1).
- 19. Mosiny, district Człuchów, deposited in the late 11th century. Forged cross penny of type V; CNP –; copper core, silver cover. Weight 0.85 g, ø 15 mm. Collection: Regional Museum in Koszalin (Piniński 1971, pp. 140, 156, no. 118; Suchodolski 1998, p. 39, no 2).
- x1. Kruszwica, site 4 (bailey), district Inowrocław. "Several dozens of coins"; 11/12th century (PSW I, p. 76, no. 9; S u c h o d o l s k i 1974, pp. 113, 118).
- x2. Włocławek. c. 70 copper coins with irregular edges, "larger" than cross pennies, found in a crypt of a Romanesque church (Jażdżewski 1956, p. 111; PSW III, p. 59, no. 121; Piniński 1998, p. 3–4).
 - B. Single finds (38 coins from 18 sites; 3 coins of unknown origin):
- 20. Gdańsk, site no. 1 (Rycerska Str.); trench II, NE from house 117, depth 484 cm, settlemental horizon 14. Forged cross penny of type V; CNP 612–619; coin made (cast?, struck?) of an alloy of lead and tin; pierced. Weight 1.0 g, ø 15.5 mm. Collection: Museum of Archaeology and Ethnography in Łódź (PSW II, p. 42, no. 33D; G u p i e n i e c 1963, p. 168, no. 2; S u c h o d o l s k i 1998, p. 41, no. 12). Pl. IA. 9.
- 21. Gdańsk, site no. 1 (Rycerska Str.); trench II, behind a wall of house 109 (street), depth 441, settlemental horizon 12. Forged cross penny of type V; CNP 612–619 (possibly made with the same dies as no. 20); coin made (cast?, struck?) of tin. Weight 1.05 g, ø 15.5 mm. Collection: Museum of Archaeology and Ethnography in Łódź (PSW II, p. 42, no. 33B; Gupieniec 1963, p. 168, no. 5; Suchodolski 1998, p. 42, no. 13). Pl. IA.10.

- 22. Gdańsk, site no. 1 (Rycerska Str.); trench III; depth 477, settlemental horizon 14. One sided brass coin of Anglo-Danish type; pierced. Weight 0.55 g, ø 17 mm. Collection: Museum of Archaeology and Ethnography in Łódź (PSW II, p. 42, no. 33C; G u p i e n i e c 1963, p. 168, no. 4). Pl. IA. 2.
- 23. Gorysławice, district Busko-Zdrój, grave no. 16. Forged cross penny of type VI; CNP 871; copper core with traces of silver plating. Weight 0.47 g, ø 14 mm (S u c h o d o l s k i 1959, p. 97; 1998, p. 40, no. 9). Pl. IB. 31.
- 24. Janów Pomorski, district Elbląg; harbour of a trade and production settlement. Forged early Abbasid dirham, 750–822 AD; al-Kūfa mint; lead. Weight 1.58 g. Collection: Museum of Archaeology and History in Elbląg (Bartczak, Jagodziński, Suchodolski, 2004, p. 31).
- 25. Janów Pomorski, as above; fragment, *c*. 2/3 of forged early Abbasid dirham, 750–822 AD; copper core (?), silver plating. Weight 1.3 g, ø 23 mm. Collection: Museum of Archaeology and History in Elblag (B o g u c k i 2007, pp. 88, 90, Fig. 6b.26). Pl. IA. 1.
- 26. Janów Pomorski, as above. Fragment, c. 2/3 of forged early Abbasid dirham, 750–822 AD; copper core (?), silver plating. Weight 0,42 g. Collection: Museum of Archaeology and History in Elblag (Bartczak, Jagodziński, Suchodolski, 2004, p. 31).
- 27. Kalisz, settlement at Bolesława Pobożnego Street 44 (square XXX, topsoil). Forged cross penny of type V; CNP 538–541, 572–576; copper core without silver plating. Obv.: pelleted cross, wedges in the rim. Rev.: cross patée, wedges in the rim. Weight 0.932 g, ø 14.5 mm. Collection: City Museum in Kalisz (Unpublished coin from excavations lead by L. Ziąbka in 2006, inv. no. 8/2006. Oral information from A. Kędzierski).
- 28. Kołoząb, district Płońsk. Fragment, c. ½ of forged cross penny of type V; CNP 613–627; copper core with silver plating. Weight 0.34 g, ø 14.5 mm. (P a s z k i e w i c z 1996, p. 185; S u c h o d o l s k i 1998, p. 46). Pl. IA. 12.
- 29. Kraków, Wawel castle, area VI^C, square 610, test trench 3, layer VIb. Forged cross penny of type V; CNP 619. Weight 0.65 g, Ø 13 mm (Żaki 1974, p. 561, no. 3; Zakrzewska-Kleczkowska 1980, p. 156; Suchodolski 1998, p. 41, no. 10).
- 30. Ląd, district Słupca, hill-fort, square 170. Forged Frankish (Dbg 778, 789, 827, 845) or Saxon pfennig; copper core with remains of tin on surface (Dbg 1167). Weight 0.9 g, ø 19 mm. Collection: Archaeological Museum in Poznań (S u c h o d o l s k i 1975, p. 33; 1978, p. 64, no. 2; 1998, p. 40, no. 7).
- 31. Ląd, district Słupca, close to the hill-fort/graveyard, square 161/D, layer II, depth 0,22 m. Forged coin imitating pfennigs of King Otto III (Dbg 774) or King Henry II (Dbg 750) from Dortmund, 996–1014; copper core with remains of tin on surface. Weight 1.07 g, ø 19–20 mm. Collection: Archaeological Museum in Poznań (Suchodolski 1975, p. 33; 1978, p. 65, no. 6; 1998, p. 40, no. 8).
- 32. Milicz, hill-fort, trench III, square N19, layer II, depth 106.33-24 106.03-105.99 m AMSL. Lead planchet with high edges, as in case of the youngest cross pennies; two little holes close to the edge. Weight 0.98, Ø 11–11.5 mm; chemical analysis see table 1. Collection: University of Wrocław (Suchodolski 2008, p. 72, no. 11). Pl. IB. 40.
- 33. Milicz, as above, layer IIb, depth 105.97-92 105.79-68 AMSL. Lead planchet, flat edges, scratches and cuts. Weight 1.66 g, ø 15 mm; chemical analysis see table 1. Collection: University of Wrocław (S u c h o d o l s k i 2008, p. 72, no. 12). Pl. IB. 41.
- 34. Ostrów Lednicki, district Gniezno, trench I, are no. 10 N, quarter B, layer II, depth 112. One-sided copper forgery of cross penny of type II; CNP 405. Weight 0.7 g, ø 15 mm; chemical analysis see table 1. Collection: Museum of the First Piasts on Lednica, Dziekanowice (S u c h o d o l s k i 1998, pp. 38–39). Pl. IA. 7.



- 35. Ostrów Lednicki, as above, trench I/88, quarter D, layer I²; depth 110.31 (above the road, three meters from the first bridge span). Forged copper cross penny of type VI; CNP 793–807, 812; edges slightly raised. Weight 0.51 g, Ø 15 mm. Collection: Museum of the First Piast on Lednica, Dziekanowice (S u c h o d o l s k i 1998, p. 41, no. 11).
- 36. Ryczyn, district Oława, hill-fort, trench IV, feature 3, depth 100–110 cm. Heavily corroded copper cross penny of type VI. Obv.: plain cross, wedges in the rim. Rev.: cross patée, wedges in the rim Weight 0,19 g. Collection: Institute of Archaeology and Ethnology, Polish Academy of Sciences, Wrocław (Butent-Stefaniak, Malarczyk 2009, pp. 121–122, no. 58; Suchodolski 2008, pp. 65, 67). Pl. IB. 34.
- 37. Sieradz, site no. 3, cluster B, trench IV, cultural layer II, depth 100 cm; forged cross penny of type VI (?), CNP –. Coin severely corroded; weight 0.42 g. Collection: Regional Museum in Sieradz (G u p i e n i e c 1959, p. 222, no. 3).
- 38. Sypniewo, district Maków Mazowiecki, ca 1 km north from the hill-fort and settlement. Forged cross penny of type VI; CNP 834–850, silver plated copper core. Obv.: plain cross with annulets in angles, wedges in the rim. Rev.: cross patée with uncertain elements in angles, wedges in the rim. (Unpublished find, reported anonymously to the office of *Wiadomości Numizmatyczne*). Pl. IB. 23.
- 39. Szczuka, district Brodnica, hill-fort, courtyard, at southern embankment, layer II, depth 90 cm. Forged cross penny of type VI; CNP 851–853?, copper core, damaged silver plating. Obv.: plain cross with annulets in angles, V//IIIIA in the rim. Rev.: cross patée with annulets in the centre and angles, uncertain elements in the rim. Die identical with no. 60. Weight 1.47 g, ø 14 mm. Collection: Regional Museum in Brodnica (G r ą ż a w s k i 1992, p. 113; 2002, tabl. XXVIII, XXIX). Pl. IB. 30.
- 40. Tum, district Łęczyca. Forged cross penny of type V; silver plated copper core; CNP 607–611. Obv.: pelleted cross of younger form, wedges, dots and VERA in the rim. Rev.: cross patée, wedges and CRVX in the rim. Weight 1.1 g, Ø 15.5–16 mm. Collection of Lech Kokociński, Warsaw. Unpublished. Pl. IA. 8.
- 41. Wolin, district Kamień Pomorski, trench 1A/99 (pillar 18), quarter 6, layer IV (ditch), depth. -293 cm. Forged copper pfennig of Saxon type with cross patée at both sites, pseudolegend in the rim; edge slightly bent to one side. Weight 0.69 g, Ø 17 mm. Collection: Institute of Archaeology and Ethnology, Polish Academy of Sciences, Szczecin (H o r o s z k o, in press, no. 28). Pl. IA. 4.
- 42. Wolin, as above, trench no. 2/00, area a, layer IV, depth -198 cm. Forged copper Saxon pfennig. Obv.: cross with pellets in angles; blundered EL in the rim; reverse: cross, illegible signs in the rim. Weight 1.01 g, ø 18 mm. Collection: Institute of Archaeology and Ethnology, Polish Academy of Sciences, Szczecin (Horoszko, in press, no. 29). Pl. IA. 5.
- 43. Wolin, as above, trench no. 3/00, layer III, depth -101 cm. Forged copper German pfennig. Obv.: cross with pellets in angles. Rev.: illegible. Weight 1.07 g, ø 20 mm. Collection: Institute of Archaeology and Ethnology, Polish Academy of Sciences, Szczecin (Horoszko, in press, no. 30). Pl. IA. 6.
- 44. Zgłowiączka, district Włocławek; settlement (?)⁸. Forged cross penny of type V; CNP 612–619; copper core without any remains of silver plating. Obv.: pelleted cross of younger form, wedges in the rim. Rev.: cross patée with indefinite signs between its arms, wedges in the rim. Pl. IA. 11.

⁸ All coins from this site are unpublished and were reported anonymously to the office of *Wiadomości Numizmatyczne*. Some coins are known only from pictures, some other were borrowed for analysis.

- 45. Zgłowiączka, as above. Forged cross penny of type V; CNP 619/672 var.; copper core with silver plating. Obv.: pelleted cross of younger form, wedges in the rim. Die identical with penny nos. 46, 58. Rev.: cross patée with pellets in angles, wedges in the rim. Weight 1.0 g, ø 14 mm. Pl. IA. 13.
- 46. Zgłowiączka, as above. Forged cross penny of type V; CNP 619/672 var.; copper core without any remains of silver plating. Obv.: pelleted cross of younger form, wedges in the rim. Rev.: cross patée with pellets in angles, wedges in the rim. Die identical to penny nos. 45, 58. Weight 0.67 g, ø 14.5 mm; chemical analysis see table 1. Pl. IA. 15.
- 47. Zgłowiączka, as above. Forged cross penny of type V; CNP 619/672 var.; copper core without any remains of silver plating. Obv.: pelleted cross of younger form, wedges in the rim. Rev.: cross patée with pellets in angles, wedges in the rim. Weight 0.72 g, ø 13.5 mm. Pl. IA. 18.
- 48. Zgłowiączka, as above. Forged cross penny of type VI; CNP 836; copper core with silver plating. Obv.: plain cross with annulets in angles, wedges in the rim. Rev.: cross patée, wedges in the rim. Die-identical with penny no. 11. Pl. IB. 26.
- 49. Zgłowiączka, as above. Forged cross penny of type VI; CNP 836 var.; copper core with silver plating. Obv.: plain cross with annulets in angles, wedges in the rim. Rev.: cross patée with pellets in angles, wedges in the rim. Coin pierced. Weight 0.68 g, ø 13 mm. Pl. IB. 27.
- 50. Zgłowiączka, as above. Forged cross penny of type VI; CNP 836 var.; copper core without any silver remains. Obv.: plain cross with annulets in angles, wedges in the rim. Rev.: cross patée, wedges in the rim. Coin pierced. Weight 1.03 g, ø 14.5 mm; chemical analysis see table 1. Pl. IB. 28.
- 51. Zgłowiączka, as above. Forged cross penny of type VI; CNP 834–850; copper core with silver plating. Obv.: plain cross with annulets in angles, wedges in the rim. Rev.: cross patée with uncertain elements in angles, wedges in the rim. Weight 0,80 g, ø 14 mm; chemical analysis see table 1. Pl. IB. 24.
- 52. Zgłowiączka, as above. Forged cross penny of type VII; CNP 966–988; copper core with silver plating. Obv.: crosier with two wedges on both sides, wedges in the rim. Rev.: cross patée with pellets and pelleted triangles in angles, wedges in the rim. Weight 1.24 g, ø 13 mm; chemical analysis see table 1. Pl. IB. 38.
- 53. Zgłowiączka, as above. Forged cross penny of type VII; CNP –; copper core with silver plating. Only the size and high edge suggest that is type VII. Heavily corroded, weight 0.62 g, ø 12.5 mm. Pl. IB. 39.
- 54. Northern Great Poland. Forged cross penny of type VI; CNP 834–850; silver plated copper core. Obv.: plain cross with annulets in angles, wedges and illegible letters in the rim. Rev.: cross patée, wedges and illegible letters in the rim. Weight 0,52 g, ø 16 mm. Collection of Lech Kokociński, Warsaw. Unpublished. Pl. IA. 22.
- 55. Western Pomerania(?). Forged copper cross penny of type VI; CNP –;. Obv.: plain cross with two circles in angles, wedges in the rim. Rev.: cross patée, wedges and illegible elements in the rim. Weight 0.872 g, ø 18.6 mm. Collection: National Museum in Szczecin (S u c h o d o l s k i 1998, p. 46). Pl. IB. 35.
- 56. Western Pomerania(?). Forged copper cross penny of type VI; CNP –. Obv. and Rev.: plain cross with circles in angles, wedges and illegible elements in the rim. Weight 0.763 g, ø 16.6 mm. Collection: National Museum in Szczecin (Suchodolski 1998, p. 46). Pl. IB. 36.
- 57. Western Pomerania(?). Forged cross penny. Forged copper cross penny of type VI; CNP –. Obv.: plain cross. Rev.: illegible. Weight 1,09 g, ø 17 mm. Collection: National Museum in Szczecin (S u c h o d o l s k i 1998, p. 46). Pl. IB. 37.



- 58. Unknown findspot. Forged cross penny of type V; CNP 619/672 var.; copper core. The coin is very similar to those from Zgłowiączka. Die identical with penny nos. 45, 46 (Internet auction at www.allegro.pl, 7.10.2007). Pl. IA. 14.
- 59. Unknown findspot. Forged cross penny of type V; CNP 619; coin struck with the same dies as penny no. 471 from the Naruszewo hoard (no. 10); silver plated copper core (Internet auction at www.allegro.pl, 2006). Pl. IA. 16.
- 60. Unknown findspot. Forged cross penny of type VI; CNP 851-853? Obv.: plain cross with annulets in angles, V//IIIIA in the rim. Rev.: cross patée with annulets in the centre and angles, uncertain elements in the rim. Coin struck with the same dies as denarius from the hill-fort in Szczuka (no. 39 above) (PDA 2006, p. 14, no. 76). Pl. IB. 29.

Table 1. Chemical analyses of the coins. The analyses were carried out by Elżbieta Pawlicka on spectrometer EDAX 9800 made by Philips. The analyses included the content of Mg, Au and Mn, but in none of the coins has the amount of those elements exceeded 0,00%, and they have therefore been omitted in the table.

| Coin number | Analysis no. | Ag | Si | S | Pb | Cl | Fe | Ni | Cu | Zn | Sn | Remarks |
|----------------|--------------|-------|------|------|-------|------|------|------|-------|------|-------|---|
| 20 | 11446,00 | 0.00 | 0.83 | 0.00 | 30.40 | 0.00 | 0.53 | 0.11 | 0.84 | 0.25 | 66.79 | Al=0.04; Mn=0.22; surface |
| 20 | 11446,01 | 0.00 | 0.79 | 0.00 | 49.44 | 0.00 | 0.00 | 0.00 | 0.23 | 0.35 | 49.20 | crater |
| 21 | 11447,00 | 0.00 | 0.61 | 0.21 | 0.00 | 0.00 | 0.00 | 0.00 | 0.78 | 0.75 | 97.66 | |
| 32 | 14333,00 | _ | 2.15 | - | 96.2 | - | _ | - | - | - | _ | Al=1.61; Suchodolski 2008 |
| 33 | 14337,00 | Ī | ı | 1 | 87.75 | 1 | 1 | ı | 0.3 | 1 | ı | P=6.8; Ca=3 Suchodolski 2008 |
| 34 | 11160,00 | 4.13 | 0.62 | 0.00 | 8.87 | 0.00 | 0.90 | 0.00 | 69.33 | 6.86 | 9.15 | Mn=0.15; Suchodolski 1998 |
| 46 | 13358,00 | 4.93 | 0.36 | 7.00 | 1.42 | 4.39 | 0.07 | 0.11 | 80.77 | 0.71 | 0.00 | surface; corrosion |
| 46 | 13358,01 | 0.37 | 0.03 | 0.00 | 0.26 | 0.00 | 0.03 | 0.00 | 98.24 | 0.91 | 0.00 | Sb=0.1; Ti=0.04, crater |
| 50 | 13359,00 | 10.88 | 0.32 | 12.9 | 2.24 | 3.27 | 0.09 | 0.00 | 69.80 | 0.50 | 0.00 | surface |
| 50 | 13359,01 | 4.58 | 0.09 | 0.31 | 0.50 | 0.00 | 0.08 | 0.06 | 93.71 | 0.67 | 0.00 | crater |
| 51 | 13360,00 | 73.34 | 0.32 | 8.99 | 1.77 | 0.12 | 0.29 | 0.23 | 14.46 | 0.49 | 0.00 | surface |
| 51 | 13360,01 | 2.36 | 0.09 | 5.17 | 1.73 | 1.09 | 0.41 | 0.09 | 86.73 | 1.18 | 0.00 | Ca=0.95; K=0.21, without plating |
| 52 | 13361,00 | 81.58 | 1.01 | 0.36 | 3.41 | 0.44 | 0.28 | 0.11 | 11.41 | 1.40 | 0.00 | surface |
| 52 | 13361,01 | 1.13 | 0.76 | 0.04 | 1.08 | 0.13 | 0.11 | 0.04 | 95.91 | 0.62 | 0.00 | Al=0.18, without plating |

ABBREVIATIONS

- CNP M. Gumowski, *Corpus nummorum Poloniae*, vol. 1. *Monety X i XI w.*, Kraków, 1930. Dbg H. Dannenberg, *Die deutsche Münzen der sächsischen und fränkischen Kaiserzeit*, t. I–IV, Berlin, 1876–1905.
- PSW⁹ I J. Slaski, S. Tabaczyński, *Wczesnośredniowieczne skarby srebrne z Wielkopolski*, Warszawa–Wrocław, 1959 (Polskie badania archeologiczne 1, Polskie skarby wczesnośredniowieczne 1).
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- WN Wiadomości Numizmatyczne.

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⁹ An updated version of the Inventory of Early Medieval Polish Hoards (PSW) is being prepared for publication. I have used this new version. The authors are: PSW I (Great Poland): Borys Paszkiewicz, Arkadiusz Tabaka; PSW II (Pomerania): Genowefa Horoszko, Jerzy Piniński; PSW III (Mazovia and Central Poland): Dobrochna Gorlińska, Stanisław Suchodolski. In all volumes Peter Ilisch is responsible for the German coins and Dorota Malarczyk for dirhams.

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MATEUSZ BOGUCKI

MONETA FAŁSZYWA W POLSCE WCZESNOŚREDNIOWIECZNEJ

(Streszczenie)

W wczesnym średniowieczu, obok wykonanych z dobrego srebra naśladownictw, czy oficjalnych denarów o celowo obniżonej zawartości srebra, pojawiają się też nieliczne fałszerstwa. Monety te wykonano zazwyczaj z miedzi, mosiądzu lub brązu i powlekano cienką warstwa srebra lub innego białego metalu, np. cyny, tak, by przypominały oryginalne, wykonane ze srebra monety. Fałszerstwa takie mogły powstawać zarówno w mennicach oficjalnych, jak i w warsztatach nielegalnych. Były one wykonywane z myślą o oszustwie użytkowników. Wczesnośredniowieczne fałszerstwa ze znalezisk polskich były już przedmiotem kilku studiów (K i e r s n o w s k i 1959, s. 197–203; S u c h o d o l s k i 1998, s. 37–47), lecz przyrost znalezisk takich monet pozwala na nowe ich przeanalizowanie.

Obecnie zostało zarejestrowanych 60 monet fałszywych z IX-początków XII wieku, pochodzących z ziem polskich. Dostrzeżono je zarówno w skarbach, jak i znaleziskach pojedynczych, odnajdywanych na Pomorzu, w Wielkopolsce, na Kujawach, Mazowszu, Śląsku i w Małopolsce (fig. 1). Najstarsze odnotowane fałszerstwa zostały odnalezione na osadzie handlowo-rzemieślniczej w Janowie Pomorskim (Truso). Są to trzy miedziane, powlekane srebrem dirhemy abbasydzkie z pierwszej połowy IX w. Następne fałszerstwa pochodzą z końca X i pierwszej polowy XI wieku i są to monety wzorowane na różnego rodzaju denarach niemieckich, głównie saskich i bawarskich. Znane jest jedno fałszerstwo pensa Etelreda II. Trudno określić miejsce produkcji tych monet, wydaje się jednak, że zdecydowana większość z nich powstała poza ziemiami polskimi. Część pochodzi zapewne z oficjalnych mennic niemieckich.

W drugiej połowie XI wieku można zaobserwować znacząca zmiane. Zanikaja bowiem zróżnicowane monety w typie niemieckim i zaczynają dominować fałszerstwa denarów krzyżowych młodszych odmian, przeważnie typu V i VI. Wyjątkowo zarejestrowano jedno fałszerstwo w typie bawarskim i jeden denar w typie łupawskim. Cześć z fałszerstw denarów krzyżowych powstała zapewne jeszcze w mennicach saskich, jednak zdecydowana wiekszość nosi już cechy produkcji lokalnej. O miejscowym pochodzeniu fałszerstw wiekszości denarów krzyżowych młodszych typów świadczy kilka przesłanek. Wśród 39 egzemplarzy zwraca uwagę grupa 10 monet pochodząca z osady w Zgłowiączce oraz znaczna koncentracja na Kujawach (nierozpoznany bliżej skarb lub zestaw kilkudziesięciu monet luźnych z Kruszwicy i Włocławka) i na Mazowszu (skarb z Naruszewa). Monety pochodzace z Kujaw i Mazowsza stanowia 40% wszystkich fałszerstw denarów krzyżowych młodszych typów. Wśród nich sa również co najmniej cztery pary monet wybitych tymi samymi stemplami. Wszystkie te argumenty stanowia wystarczająca przesłanke do stwierdzenia, że pod koniec XI, może nawet do początków XII wieku produkowano na Kujawach fałszerstwa denarów krzyżowych. Jako miejsce ich produkcji należy wskazać przede wszystkim lokalne ośrodki władzy politycznej — Kruszwicę, Włocławek czy Brześć Kujawski. Nie można jednak wykluczyć, że mogły one być produkowane i w mniejszych osadach, jak choćby wspomniana Zgłowiączka, która od drugiej połowy XI w. była ważnym miejscem wydobycia soli.

Zebrany materiał i jego charakter wskazuje, że produkcja fałszerstw pod koniec XI i zapewne na początku XII wieku była raczej niewielka. 39 fałszywych denarów krzyżowych stanowi zaledwie 0,078% wszystkich monet tej grupy. Również rozpoznane połączenia stempli (których zapewne jest więcej, trudno jednak je stwierdzić z powodu znacznej korozji fałszerstw) poświadczają, że denary te stanowiły niewielki ułamek ogółu monet obiegających na rynku. Odpowiedzialnością za fałszowanie monet w Polsce pod koniec XI i na początku XII wieku należy obciążyć przede wszystkim przedstawicieli ówczesnych elit, władających peryferyjnymi, ale ciągle ważnymi ośrodkami władzy lokalnej.

Znaleziska polskie porównano z innymi fałszerstwami, odkrytymi w Meklemburgii oraz na Łotwie i w Estonii. Wszędzie podrabiano współcześnie obiegającą na rynku monetę i mimo wynikających z tego różnic stylistycznych, fałszerstwa te wykazują wiele podobieństw. Produkowano je w lokalnych ośrodkach władzy i stanowiły one bardzo małą część całej masy monetarnej pozostającej na rynku.

W kontekście dyskusji o upieniężnieniu rynków na ziemiach słowiańskich we wczesnym średniowieczu, należy stwierdzić, że pojawienie się lokalnych fałszerstw w obiegu pozwala określić w przybliżeniu czas, kiedy doszło do monetyzacji rynku, co w przypadku Polski piastowskiej oznacza 2. połowę XI wieku. Stąd dalszy wniosek, że upieniężnienie oparte na srebrze ważonym musiało nastąpić wcześniej. W myśl tezy R. Kiersnowskiego, moment ten wyznacza pojawienie się dużej ilości skarbów siekańcowych, czyli koniec X wieku.

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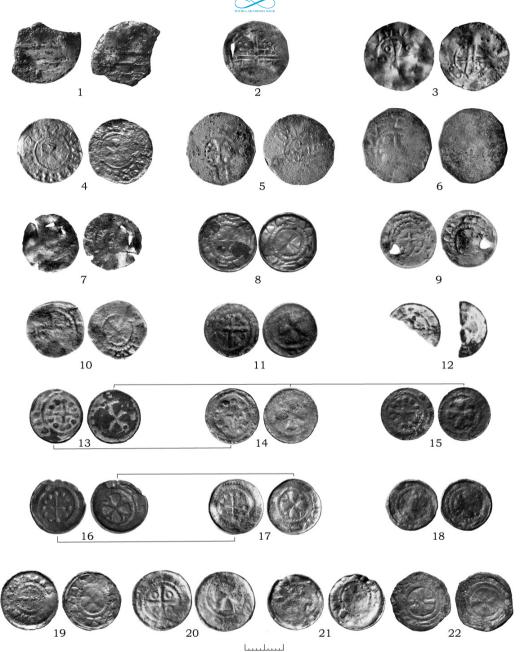


Plate IA. Early medieval forged coins from Poland in typological order with correlation to find numbers: 1. Dirham — no. 25; 2. Imitation of Æthelred II — no. 22; 3. Łupawa type — no. 9; 4–7. Cross pennies, type II: 4 — no. 41; 5 — no. 42; 6 — no. 43; 7 — no. 34; 8–18. Cross pennies, type V: 8 — no. 40; 9 — no. 20; 10 — no. 21; 11 — no. 44; 12 — no. 28; 13 — no. 45; 14 — no. 58; 15 — no. 46; 16 — no. 59; 17 — no. 10; 18 — no. 47; 19–22. Cross pennies, type VI: 19 — no. 16; 20 — no. 12; 21 — no. 13; 22 — no. 54. Photo nos. 1, 2, 8, 13, 15, 18, 22 by M. Bogucki, nos. 4, 5, 6 by G. Horoszko, no. 17, 20, 21 by T. Biniewski, no. 19 by M. Pawłowski.

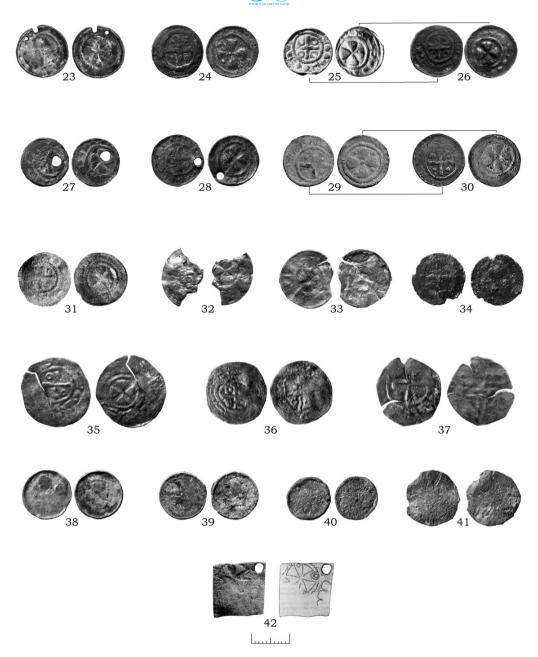


Plate IB. 23–37. Cross pennies, type VI: 23 — no. 38; 24 — no. 51; 25 — no. 11; 26 — no. 48; 27 — no. 49; 28 — no. 50; 29 — no. 60; 30 — no. 39; 31 — no. 23; 32 — no. 7; 33 — no. 17; 34 — no. 36; 35 — no. 55; 36 — no. 56; 37 — no. 57; 38–41. Cross pennies, type VII: 38 — no. 52; 39 — no. 53; 40–41. Unstruck lead coin imitations: 40 — no. 32; 41 — no. 33; 42. Brass pendant with cross penny obverse die imprint. Photo nos. 22, 24, 27, 28, 34, 38–41 by M. Bogucki, nos. 20, 21, 25 by T. Biniewski, nos. 32, 33 by M. Pawłowski, nos. 35–37 by G. Horoszko, no. 30 by K. Grążawski.