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SMALL LEAD SEALS AND SEALING IN EARLY MEDIEVAL EAST-CENTRAL EUROPE

ABSTRACT: This article discusses the use of small lead seals (seal tags) in early medieval Poland for commercial and customs control in the context of an economic crisis. The introduction of sealing goods by the Piasts is explained by its cultural transfer from Rus'. Polish commercial lead seals were in use synchronously with *Hohlpfennigs* from the middle of the 13th to the middle of the 14th century. Their design systematically reflected signs and symbols on bracteates and differed significantly from other small seals of *Drohiczyn* type from Rus'. The extraordinary number of small lead seals found at Drohiczyn possibly reflects a short-term relocation of trade routes caused by military conflicts.

ABSTRAKT: Artykuł zawiera analizę stosowania plomb ołowianych we wczesnośredniowiecznej Polsce, jako metody kontroli handlowej i celnej w sytuacji kryzysu gospodarczego. Zwyczaj plombowania towarów przez Piastów jest postrzegany jako transfer kulturowy z Rusi. Polskie plomby handlowe były używane równolegle z brakteatami guziczkowymi w okresie od połowy XIII do połowy XIV w. Wyobrażone na nich przedstawienia nawiązywały do znaków na brakteatach i znacznie różniły się od plomb typu drohiczynskiego z terenów Rusi. Nadzwyczajna liczba odnalezionych w Drohiczynie plomb może być odzwierciedleniem przesunięcia szlaków handlowych wskutek konfliktów zbrojnych.

KEYWORDS: Early Middle Ages, Poland, Rus', Polish lead seals, small lead seals of *Drohiczyn* type, *Hohlpfennigs*, cultural transfers, administrative practices, trade, customs control

SŁOWA KLUCZOWE: wczesne średniowiecze, Polska, Ruś, polskie pieczęcie ołowiane, plomby typu drohiczynskiego, brakteaty guziczkowe, transfery kulturowe, praktyki administracyjne, handel, kontrola celna

In the Middle Ages, the European symbol of wealth and power was not only gold or silver, but also another metal – lead. Lead seals were used for sealing different kinds of public and private documents and correspondence to validate po-

litical, social and economic relations.¹ Having originated in Antiquity, the practice of sealing peaked in Byzantium,² whence it spread to Early Rus' and to other territories under Byzantine influence (Bulgaria, Serbia, Hungary, Italy, Crusader states).³ Western and Central Europe started using wax seals instead of lead ones relatively quickly, no later than at the end of the 11th – beginning of the 12th century.⁴ Later, the use of lead seals in Western Europe was typical only for Roman Popes,⁵ and in the second half of the 13th century customs and commercial lead seals known as “cloth seals” – still used in contemporary world economy, albeit in an updated form – appeared.⁶

Against this historical background, finds of six Polish lead seals of Bolesław III the Wrymouth (1107–1138) are sensational. Several researchers believe that this phenomenon could have arisen under different influences: Byzantine, Rus' or Western European. An alternative hypothesis stresses that the person who brought to Poland the idea of seal with a legend containing the word *sigillum* must come from Italy or was acquainted with Italian practices.⁷

However, despite close contacts between the Piasts and the Rurikids and the active use of lead seals immediately east of the Polish border (Drohiczyn, Gródek upon the Bug River, Sutiejsk-Sąsiadka, Przemyśl, Trepcza near Sanok),⁸ Rus' lead seals at first do not seem to have affected medieval Poland. According to our observations, the seals of Bolesław III significantly differ from Rus' examples morphologically and technologically. Their blanks of flat surface were larger and thicker; it is likely that representations on them were imprinted with a pair of separated matrices, and not with a *bullotirium*.

It is worth adding that the finds of Early Rus' lead seals on the territory of the Piast State are extremely rare.⁹ However, several groups of archaeological finds allow us to assume that in the middle of the 13th century the Piasts borrowed from the Rus' the idea of using lead seals for the fiscal control of commercial operations.

¹ The article presents a revised and updated version of my research results first published in Polish (Musin 2022). The present English text clarifies some conclusions and concentrates on the chronology and attribution of several types of seals.

² See, for example Oikonomidès 1985.

³ For Eastern Europe see Ianin 1970a; Ianin 1970b; Ianin, Gaïdukov 1998. See also Musin 2022, for further references.

⁴ Kittel 1970, pp. 166–168; Suchodolski 2009, p. 220.

⁵ See, for example Clemens 2005; Paszkiewicz 2018.

⁶ See i.a. Endrei, Egan 1982; Kocińska, Maik 2004; Hittinger 2008.

⁷ The finds came from Głębokie near Ostrów Lednicki, Poznań, Gniezno, Susk-Sierpc near Płock and the vicinity of Brześć Kujawski. For the last find of 2021 in Zawichost-Trójca see Florek 2022, p. 44, fig. 9. For a discussion see Suchodolski 2009; Hlebionek 2009.

⁸ For details and further references, see Musin 2022.

⁹ The finds come from Kalisz-Zawodzie, Kruszwica and Wrocław. See Musin 2023.

Lead seals, designed for sealing goods to confirm customs dues, also derived from Antique and Byzantine traditions.¹⁰ This practice found its continuation in the Eastern Europe in the use of lead seals referred to as *Drohiczyn* type. These seals, small in size and varying in shape, bore a variety of symbols, signs and figures on both sides. More than 30,000 items are recorded now in East-Central Europe and more than 14,000 of them were collected in Drohiczyn on the Bug River (Siatyccze County, Podlaskie Voivodeship, Eastern Poland), which was in the Early Middle Ages under the jurisdiction of the Rurikids¹¹ and where these lead seals were first attested in the 1860s.¹²

This kind of lead seals is little known among experts in medieval sigillography. The seals are usually described as “crudely made lead seals” and their concentration may suggest that princely agents levied here customs dues on traders entering and leaving their territories at specific points.¹³ Obviously, these lead seals played the role of seal tags, and referring to them as “small lead seals” is preferable¹⁴ in order to avoid confusion with other types of lead seals of the Byzantine tradition different in function and bigger in size.

The appearance of small lead seals in Eastern Europe is reliably dated to the end of the 11th century according to the dendrochronology of archaeological sequences of Veliky Novgorod.¹⁵ For a long time it was believed that the use of small lead seals had disappeared in the 1240s as a result of the Mongol invasion. However, recent finds of similar seals dated to the second half of the 13th–14th century (Novgorod, Moscow, Vyazma, Russia)¹⁶ testify to the fact that Eastern European economy continued to develop even after the invasion which can be hardly regarded as the crucial moment of local history.

In historiography spanning over 150 years, the discussion continues on functions of small lead seals – commercial, customs or monetary i.e. related to the confirmation of value of commodity money.¹⁷ Naive hypotheses about the religious and esoteric meaning of seals, pagan or Christian (Konstanty Tyszkiewicz, Nikolaï Leopardov, Karol Bołsunowski), cannot be taken into consideration. However, from the very beginning researchers noted that symbols and figures on small seals had close parallels among Western European heraldry and numismatics, including Polish coats of arms (Karel Zap, Ivan Luchitskiï, Nikolaï Avenarius, Karol Bołsunowski, Nikolaï Likhachev). These symbols are still unusual for the sign system

¹⁰ See, e.g. Oikonomidès 1986, pp. 19–24.

¹¹ See on this site in the Early Middle Ages – Dzik, Jusupović 2019.

¹² Gaydukov 2019, pp. 187–191 – further literature there.

¹³ Franklin, Shepard 1996, p. 329.

¹⁴ Musin, Wołoszyn (eds) 2019, p. 16.

¹⁵ Tarabardina 2019.

¹⁶ Gaydukov 2019, pp. 208, 209, 228, nos 122, 327, 423–434, fig. 14, 15, for further references.

¹⁷ For details and further references, see Dzik, Musin 2021, pp. 108–112; Musin 2022.

of Eastern Europe. It led to the assumption that the small lead seals discovered in Drohiczyn served at least partially as Western and Central European commercial seals. The hypothesis was strengthened *per analogiam* with large rectangular trade lead seals of the Roman period.¹⁸

Nevertheless the hypothesis about the exclusively Early Rus' origin of all small lead seals advanced later by Nikolai Avenarius and based on numerous Cyrillic letters on seals became dominant among researchers.¹⁹ Later it was additionally confirmed by representations of tamgas of the Rurikids on small lead seals of *Drohiczyn* type²⁰ as well as by statistics showing that most of seals of this type come from Eastern Europe. Several researchers insisted that these seals are not recorded outside Rus' and parallels to their symbols are not known in Central Europe.²¹

In Russian historiography of the 20th century there were two main approaches to the function of lead seals of *Drohiczyn* type. Nikolai Likhachev and Valentin Ianin considered them as seals approving public and private documents. However, neither of them excluded the possibility of their use for commercial purposes.²² Boris Rybakov associated them with the activity of craftsmen and princely or private trade.²³

In general, Polish studies followed the main conclusions of Russian historiography.²⁴ However, new hypothesis came when at the beginning of the 1950s Polish, Spanish and Czech translations of the work by the mid-12th century Arab geographer Abū Hāmid al-Gharnāī about his journey to Eastern Europe were published.²⁵ Based on his information about the circulation of fur and leather money in Rus' sealed with a "black lead" with "an image of a king" (according to the translation of Vladimir Minorskiĭ - "image of kingdom/power"²⁶), Tadeusz Lewicki suggested that small lead seals of *Drohiczyn* type served for approving Eastern European commodity means of payment during the coinless period, 12th–13th century.²⁷ Without any critical analysis of the Arabic text, which contains contradictory and unclear information,²⁸ this hypothesis became prevalent among researchers.²⁹ However, the account of Abū Hāmid does not allow us to recognize the circulation

¹⁸ Roach Smith 1868.

¹⁹ Avenarius 1890, pp. 13–18, plate III: 1–32.

²⁰ See Beletsky 2019.

²¹ Rybakov 1940, pp. 244–245; Liwoch 2015; Pawlata 2016.

²² Likhachev 1930, p. 66; Ianin 1970a, pp. 11, 150–153.

²³ Rybakov 1940.

²⁴ For details and further references, see Musin 2022.

²⁵ Lewicki 1951–1952; Dubler 1953; Hrbek 1955.

²⁶ See Ianin 1969, p. 323.

²⁷ Lewicki 1956.

²⁸ Kovalevskiĭ 1956, p. 44; Malarczyk 2019.

²⁹ See, for example Mongajt 1959.

of fur and leather money as an all-Rus' scale phenomenon,³⁰ and does not suggest that all of the lead seals of *Drohiczyn* type were used exclusively for validating commodity money. Nevertheless, at the beginning of the 21st century due to illegal metal detector searches large collections of small lead seals fell into the hands of private collectors in Russia, Ukraine, Belarus and Poland.³¹ This led to the revival of the old hypothesis about the monetary function of small seals and their exotic interpretations, divorced from historical and archaeological realities.³²

As a response to the challenge of the plundering of Polish cultural heritage, an archaeological prospection headed by Marcin Piotrowski from The Institute of Archaeology, Maria Curie-Skłodowska University, Lublin, was undertaken in 2010–2011 at the medieval settlement in Czerwno (Tomaszów Lubelski County, Lublin Voivodeship, Eastern Poland), medieval Cherven' in the western part of Rus'. An important collection of small lead seals was discovered there. This investigation formed the basis of the project *The Sphinx of Slavic Sigillography – Dorogichin seals from Czerwno in their East European Context*.³³ As a result of the project, two fundamental volumes of research on East-Central European small lead seals were published,³⁴ including a catalogue of 1,085 seals now stored in the Regional Museum in Tomaszów Lubelski.³⁵

However, the real sensation turned out to be the small lead seals discovered by Polish archaeologists in territories of the Piasts, mainly in Mazovia: Pułtusk (more than 150 items),³⁶ Grudusk and Maków Mazowiecki (more than 100 items),³⁷ Na-

³⁰ See Ianin 1969, p. 323; Adamczyk 2004, pp. 156–158.

³¹ Gaydukov 2019, for further references.

³² See, for example Guletskii, Doroshkevich 2018.

³³ Project no. 2013/11/B/HS3/0205 at the University of Rzeszów awarded by the National Science Centre, Poland (2014–2019), project leader: dr hab. Marcin Wołoszyn, prof. UR.

³⁴ Musin, Wołoszyn (eds) 2019; Florkiewicz, Jusupović, Musin *et al.* 2020.

³⁵ Florkiewicz, Jusupović, Musin 2020. Today it is the largest published collections of small lead seals, surpassing collections of K. Bołsunowski (1,039 items, now in the State Hermitage Museum, Saint Petersburg; see Bolsunovskii 1894; Orlov 2019) and N. Avenarius (716 items, now in the State Historical Museum, Moscow; see: <https://catalog.shm.ru/entity/OBJECT?query=%D0%BF%D0%BB%D0%BE%D0%BC%D0%B1%D0%B0%20%D0%B4%D1%80%D0%BE%D0%B3%D0%B8%D1%87%D0%B8%D0%BD%D1%81%D0%BA%D0%BE%D0%B3%D0%BE%20%D1%82%D0%B8%D0%BF%D0%B0>; [accessed 01.03.2023]). There are other important publications of Polish collections of small lead seals discovered in Drohiczyn, not so numerous, stored in the Museum of Archaeology and Ethnography in Łódź (Hanc-Maikowa 1988), Regional Museum in Drohiczyn (Pawlata 1993), Museum of Podlachia in Białystok (Pawlata 2010), Archaeological Museum in Kraków (Liwoch 2015) and Cabinet of Coins and Medals of National Museum in Warszawa (<https://cyfrowe.mnw.art.pl/pl/wyniki-wyszukiwania?phrase=plomba%20drohiczny%C5%84ska>; [accessed 18.06.2023]).

³⁶ Pela 2000, p. 26; Jakubowska 2019.

³⁷ Gaydukov 2019, pp. 274–275, nos 597, 597b.

sielsk (5 items),³⁸ Płock (6 items),³⁹ Poniaty Wielkie (1 item),⁴⁰ Piotrówka (Radom; 1 item)⁴¹ and Sandomierz (1 item).⁴² The representations on these small seals have close parallels among items from Drohiczyn and Czerwno and are still unknown in Eastern Europe. These new finds made it possible to reevaluate the sign system presented on small lead seals and to clarify the origin of some of them.

Researchers have long noted special features of small seals from Drohiczyn. Tamgas of the Rurikids on part of them have no parallels in other territories of Rus' and evidently belonged to local princely families.⁴³ Small seals with images of definitely non-Rus' origin are also attested in Drohiczyn.⁴⁴ For evaluating the small lead seals from Drohiczyn, Czerwno and Mazovia, a comparative analysis of the representations that they bear with comparable and synchronous mass material which systematically displays the sign system of neighboring territories is required. Such objects do exist. They are the *Hohlpfennigs* (Pol. *brakteaty guziczkowe*), light, uniface coins struck on thin silver planchet, which circulated in Poland mainly from the middle of the 13th to the middle of the 14th century in connection with the economic phenomenon of *renovatio monetae*, which involved a regular withdrawal of coins from circulation and forced exchange of old bracteates for new ones.⁴⁵ The *renovatio monetae* was firstly introduced in Poland by Bolesław III and subsequently developed and improved mainly by Mieszko III the Old (1173–1177, 1199–1202). However, only in mid-13th century the development of coinage led to the emergence of *Hohlpfennigs*.⁴⁶ The economic crisis and trade revolution led to a decrease the value of bracteates and the growing number of schematized signs and symbols represented on them as easily recognizable images of power.⁴⁷ The most representative Polish hoards of the second half of the 13th–early 14th century from Wieleń (Greater Poland Voivodeship), Brzegi nad Nidą, Przyłek (Świętokrzyskie Voivodeship), Sarbsk (Pomeranian Voivodeship), Radzanowo (Mazovian Voivodeship) and Lubomia (Silesian Voivodeship)⁴⁸

³⁸ Błoński, Bogucki 2019.

³⁹ Trzeciecki 2019.

⁴⁰ Affelski, Bogucki 2019.

⁴¹ Trzeciecki, Auch, Stańczuk 2020, pp. 169, 176, 234–235, plate 116: 2.

⁴² Florek, Stempin 2015.

⁴³ Beletskii 1999.

⁴⁴ Likhachev 1930, pp. 73–74, 80; Kozubovs'kiĭ 2015, p. 36.

⁴⁵ Svensson 2012.

⁴⁶ Suchodolski 1973, pp. 109–111; Kopicki 1997; Paszkiewicz 2004; Suchodolski 2019.

⁴⁷ Garbaczewski 2007, pp. 2–8.

⁴⁸ Beyer 1876; Dannenberg 1885; Gumowski 1917; Gumowski 1937; Reyman 1972; Jędrzyk-Migdalska 1976; Kopicki 1997, pp. 55–81; Paszkiewicz 2009; Paszkiewicz 2012.

as well as the newly created *Corpus of Polish Hohlpfennigs* (CPBG)⁴⁹ give us a reliable picture of the sign-symbolic system of bracteates.

A parallel study of representations on bracteates and seals allows us to come to the conclusion that symbols and signs on *Hohlpfennigs* find a correspondence among small seals from Drohiczyn, Czeremno and Mazovia.⁵⁰ First of all, the reflection of Polish symbols of power on small lead seals is recognizable in the representation of the heraldic beast. K. Bołsunowski was the first who compared small lead seals with this image with bracteates from the Wieleń hoard, although he also proposed parallels to this symbol among coins of the Golden Horde⁵¹ (Fig. 1). A limited series of such seals with schematic representations is present in the collections of Drohiczyn (Fig. 2: 1–3) and Czeremno⁵² (Fig. 2: 4–6), but they are completely unknown in other territories of Rus'. On bracteates, images of the beasts are numerous⁵³ (Fig. 1: 7–15; Fig. 2: 7–10). However, there is no reliable attribution of these coins to Polish dukes or domains. It is worth noting the similarity of several representations with schematized images of a griffin on bracteates, which may be associated to emissions of the Duke of Sieradz Leszek II the Black (1261–1279).⁵⁴

It is logical to assume that comparable images on small seals reflect the iconography of bracteates and they are synchronous. These chronological observations make us doubt the reliability of the provenance of lead seals with the representation of beasts attributed to Czeremno and leave us to admit that they come from a different settlement. It is well known that in the mid-13th century, Czeremno lost its administrative and commercial functions. Thus, it is unlikely to expect numerous finds of seals typical of the second half of the 13th century there. Similarly, seals with ornitomorphic representations dating from the same period are practically unknown in Czeremno (see below). It is worth noting that none of the seals with the

⁴⁹ The project *The Corpus of Polish Hohlpfennigs (the mid-thirteenth to the early fifteenth century)* (2015–2018) at the University of Wrocław awarded by the National Science Centre, Poland, no. DEC-2014/15/B/HS3/02196, project leader: prof. dr. hab. Borys Paszkiewicz. See <https://brakteaty.archeo.uni.wroc.pl/pl> [accessed 01.03.2023].

⁵⁰ It is worth noting the poor state of preservation of collections of N. Avenarius and K. Bołsunowski from the Hermitage and the Historical Museum which does not always make it possible to identify images on small lead seals. These objects were restored more than 100 years after their discovery, in contrast to seals from Czeremno, which immediately received conservative treatments. In this regard, it is reasonable to involve in the study not only modern photographs, but also drawings and photographs of bracteates and seals dating to the late-19th century.

⁵¹ Bolsunovskii 1894, p. 14; Beyer 1876, plate V: 184; Fren 1832, plates XIII: 8, II, XLVI.

⁵² Bolsunovskii 1894, plates V: 188–191, XVIII: 839–840; Florkiewicz, Jusupović, Musin 2020, pp. 244–245, nos NN.189–193.

⁵³ See, for example Beyer 1876, pp. 39–40, plate V: 183–193; Milejski, Sroka, Wawrzczak 2017, p. 232, fig. 4.

⁵⁴ Garbaczewski 2007, pp. 172–173, figs 323–325.

representation of beasts, which supposedly come from the settlement, were discovered by means of archaeological prospecting, but originate from private collections acquired by the Museum in Tomaszów Lubelski. It is likely that they were found elsewhere, for example in Drohiczyn, and artificially included in the collection to give them legalization and provenance.

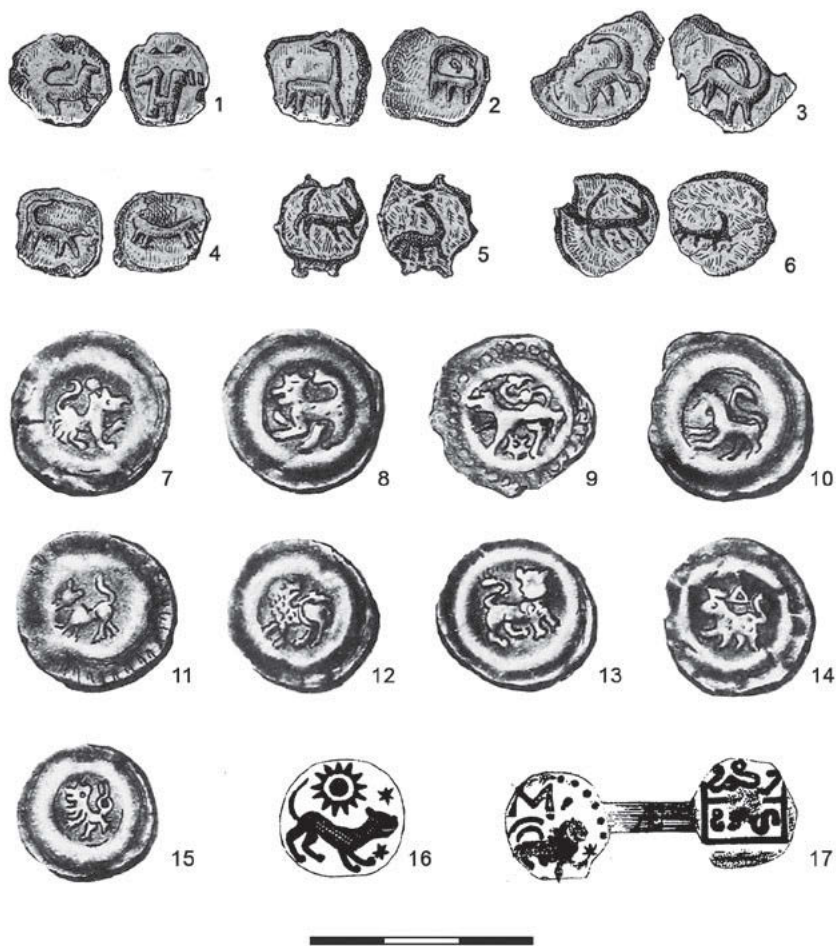


Fig. 1. Parallels for representations of heraldic beasts on small lead seals from Drohiczyn among *Hohlpfennigs* and coins of Golden Horde proposed by K. Bolsunowski: 1–6 – Drohiczyn (after Bolsunovskii 1894, plates V: 188–191, XVIII: 839–840); 7–5 – Wieleń (after Beyer 1876, plate V: 184–190, 192, 193); 16–17 – Golden Horde (after Fren 1832, plates XIII: 8, II: XLVI).
Computer graphic design by S. Bocharova



Fig. 2. Small lead seals and *Hohlpfennigs* with representations of heraldic beasts: 1–3 – Drohiczyn, collections of N. Avenarius and K. Bolsunowski (photo I. Simnovich, Białystok, 1888: Photoarchive of the Imperial Archaeological Commission, Saint Petersburg, no. O.696.3; State Historical Museum, Moscow, inv. no. KP OH 822084, GIM 93372/8302, modern stay of preservation of the small lead seal presented as no. 1; State Hermitage Museum, Saint Petersburg, inv. no. OH PII 4876, cf. Bolsunovskii 1894, plate XVIII: 839); 4–6 – Czermno (?) (after Florkiewicz, Jusupović, Musin 2020, nos NN. 189, 190, 192); 7–8 – Radzanowo (after Milejski, Sroka, Wawrzczak 2017, fig. 4; CBGP, M-M-00933); 9–10 – unknown provenance (CBGP, M-K-00166, A-J-00083). Computer graphic design by S. Bocharova

Small lead seals with different heraldic representations of an eagle or bird are known from Drohiczyn, Nasielsk, Poniaty Wielkie, Płock and Pułtusk. They comprise the following images: 1) human head and eagle with outstretched wings and head heraldically turned to the right on obverse and reverse,⁵⁵ 2) eagle with outstretched wings,⁵⁶ 3) head of bird of prey without crown and with open beak or with an unidentified object in its beak⁵⁷ and 4) bird of unknown species in full

⁵⁵ Bolsunovskii 1894, plate XVII: 781–783.

⁵⁶ Bolsunovskii 1894, plate XVIII: 837, 838; Jakubowska 2019, p. 1062, fig. 3:1.

⁵⁷ Bolsunovskii 1894, plates V: 173, 174, 176, 178, 179, XVIII: 835–838, XIX: 895, 896, 897; Błoński, Bogucki 2019, p. 1026, fig. 2:1; Affelski, Bogucki 2019, p. 1041, fig. 2; Trzeciecki 2019, p. 1051, fig. 2:2; Jakubowska 2019, p. 1062, fig. 3:6, fig. 4.

profile⁵⁸ (Fig. 3: 1–7). There are practically no seals depicting birds in Czermno⁵⁹ (Fig. 3: 8), which can serve as an additional chronological indicator for this type of small seals because since the middle of the 13th century this settlement ceased to be an important centre of trade.

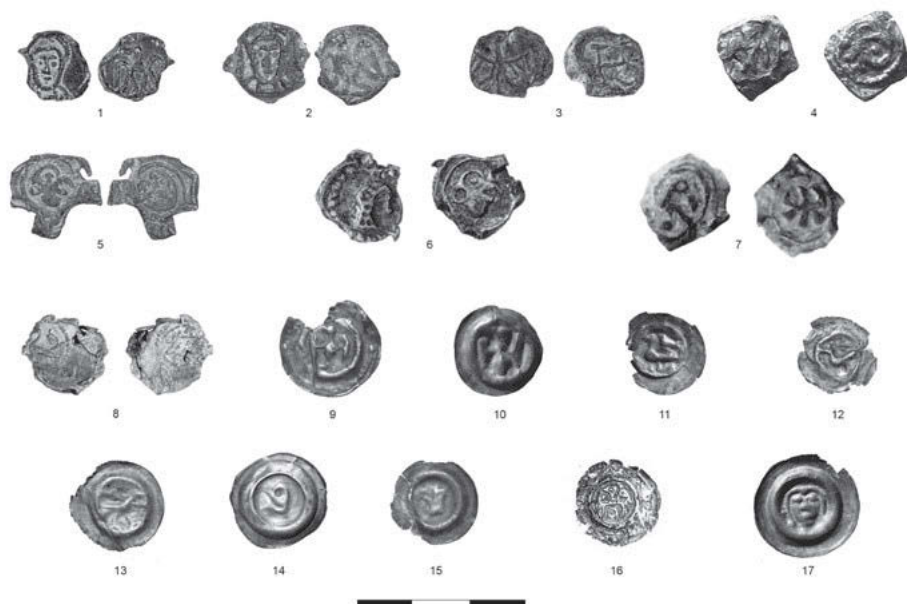


Fig. 3. Ornitomorphic representations on small lead seals and *Hohlpfennigs*: 1–3, 5 – Drohiczyn, collections of K. Bołsunowski and N. Avenarius (State Hermitage, inv. no. OH-P-II-5033, inv. no. OH-P-II-4874, OH-P-II-4932, cf. Bolsunovskii 1894, plates XVII: 782, XVIII: 837, V: 178; State Historical Museum, inv. no. KP OH 822084, GIM 93372/440); 4 – Pułtusk (after Jakubowska 2019, fig. 3:1); 6 – Nasielsk (after Błoński, Bogucki 2019, fig. 2:1); 7 – Płock (after Trzeciecki 2019, fig. 2:2); 8 – Czermno (?) (after Florkiewicz, Jusupović, Musin 2020, no. NN.276); 9–13 – Radzanowo (CPBG, M-M-00612, M-M-00930, M-M-00939, M-M-00938, M-M-00596); 14 – Przyłek (CPBG, M-J-00082); 15, 17 – unknown provenance (CPBG, M-K-00252, M-M-00639); 16 – Brzegi nad Nidą (after Paszkiewicz 1999, fig. 1:1). Computer graphic design by S. Bocharova

Similar or comparable representations become numerous on Polish bracteates of the second half of the 13th century⁶⁰ (Fig. 3: 9–15) what could be reflected in

⁵⁸ Avenarius 1890, p. 13; Bolsunovskii 1894, plates IV: 165 (?), V: 180, 181, 183, 199.

⁵⁹ Florkiewicz, Jusupović, Musin 2020, pp. 101, 241, 263, nos II.9, NN.174, 264.

⁶⁰ For example Beyer 1876, plate IV. See also Garbaczewski 2007, pp. 187–188, fig. 354, 355, 359; Gumowski 1936, p. 664, fig. 64b; about a possible connection of this image with coins of the Duke of Sandomierz Vladislaus I the Elbow-high (1289–1292), see Paszkiewicz 1986.

the iconography of seals. Bracteates with some representations of an eagle could be associated with both Greater Poland and Lesser Poland.⁶¹ There is a hypothesis that coins with representations of an eagle with outstretched wings, known from hoards from Radzanowo, Sarbsk and Wieleń, could have been issued in Mazovia in 1250–1300 (cf. CPBG; Fig. 3: 9–10). Bracteates with images of the bird in profile (Radzanowo, Wieleń) are regarded as Polish in the period of 1250–1300 (cf. CPBG; Fig. 3: 11–13). Representations of a head of a bird of prey without a crown (Przyłęk) may have been minted in Silesia in 1275–1300 (cf. CPBG; Fig. 3: 14), while crowned birds (Wieleń) could be the features of issue of Western Pomerania in 1250 (?)–1325 (cf. CPBG; Fig. 3: 15). An eagle with outstretched wings in combination with a man's head at the bottom of the coin and the inscription *Uladizlaus* (Brzegi nad Nidą) was depicted very likely on bracteates of the Duke Vladislaus I of Opole (1258–ca. 1270)⁶² (Fig. 3: 16).

A schematic representation of a human head facing is also found on bracteates of uncertain issuer dated to 1250–1300 (Radzanowo, Sarbsk, cf. CPBG; Fig. 3: 17). As it has been mentioned above, a similar representation on the obverse correlates with the eagle with outstretched wings on the reverse of small seals from Drohiczyn (Fig. 3: 1–2). It is quite possible that this was a solution for presenting the two-part image of *Uladizlaus* type bracteates on double-sided lead seals, which leads to the conclusion that these small seals can be hypothetically attributed to Vladislaus I of Opole.

The representation of an arrowhead sometimes on a pedestal or on a bar is found at least 35 times in the collection of Czermno,⁶³ although it is less known in Drohiczyn⁶⁴ (Fig. 4: 1, 2). Arrowheads of various forms are also attested on bracteates sometimes attributed to the strike of Stralsund, Western Pomerania (1250–1325, cf. CPBG)⁶⁵ (Fig. 4: 3). However some variants of arrowhead are significantly different from representations on small seals (Fig. 4: 4, 5) and can be compared with the knightly coat of arms of Bogoria. Bracteates with this representation are sometimes attributed to the Duke of Sandomierz Vladislaus I the Elbow-high (1305–1333, cf. CPBG) (Fig. 4: 6).⁶⁶

⁶¹ Kopicki 1997, p. 78, plates X, XI.

⁶² Paszkiewicz 1999; Garbaczewski 2007, p. 188.

⁶³ Florkiewicz, Jusupović, Musin 2020, pp. 84–85, 124–126, 172–173, 219, 223, 260–263, nos I. 39–43, 100–109, III.53–58, NN. 88, 105, 106, 252–263.

⁶⁴ Bolsunovskii 1894, plates III: 113, XI: 482 (?), XVII: 826.

⁶⁵ See also for the discussion: Kopicki 1997, p. 62, plate VII.

⁶⁶ Beyer 1876, plate II: 43, 44; Kopicki 1995a, p. 213; Kopicki 1995b, p. 254. See also Paszkiewicz 2012.



Fig. 4. Small lead seals and *Hohlpfennigs* with representations of arrowheads and comparable figures: 1 – Drohiczyn (after Florkiewicz, Jusupović, Musin *et al.* 2020, p. 528, fig. 1: 7); 2 – Czermno (after Florkiewicz, Jusupović, Musin 2020, no. NN.255); 3, 4, 6 – unknown provenance (CBGP, A-N-00127, A-N-00341, A-N-00158); 5 – Wieleń (after Beyer 1876, plate II: 44). Computer graphic design by S. Bocharova

A sign in the form of the Latin letter “Y” with three dots between branches that could be interpreted as forked or robber’s cross (*crucifixus dolorosus*) is known in Czermno and Piotrówka and still unknown in Eastern Europe. It is obviously a Polish emblem, also presented on Polish bracteates (Wieleń)⁶⁷ which have not been attributed to a particular duke (Fig. 5).⁶⁸

Some symbols and signs are also presented in parallel on bracteates and small seals, for example the sign in the form of an equal-armed cross with dots between branches. It is attested on small lead seals from Drohiczyn, Czermno, Nasielsk and Piotrówka⁶⁹ (Fig. 6: 1–4) and on coins from Wieleń, Radzanowo and Gdańsk.⁷⁰ Obviously, this sign goes back to the design of *Kreuzpfennigs*, characteristic of Polish coinage since the 11th–12th century and in use on bracteates of Kuiuia in 1380–1420 (cf. CPBG) (Fig. 6: 5–7).

⁶⁷ Florkiewicz, Jusupović, Musin 2020, pp. 127, 326, 330, 331, nos II.114, NN.516, 529, 535; Trzeciecki, Auch, Stańczuk 2020, plate 116: 2. See also the small seal of unknown provenance from a private collection in Kyiv (Anokhin 2012, plate IV: 40).

⁶⁸ Beyer 1876, plate I: 1, 2.

⁶⁹ Bolsunovskii 1894, plates I: 14, III: 92, 93 (?), 96 (?), 97 (?), IV: 132–134, 142, 151, IX: 383, 394; Florkiewicz, Jusupović, Musin 2020, pp. 77, 107, 216–218, nos I.11, II.35, NN.79–85; Błoński, Bogucki 2019, p. 1026, fig. 2: 5; Trzeciecki, Auch, Stańczuk 2020, plate 116: 2. See also Likhachev 1930, p. 75, fig. 54.

⁷⁰ See, for example Beyer 1876, plate I: 11, 12, 14–16; cf. CPBG.

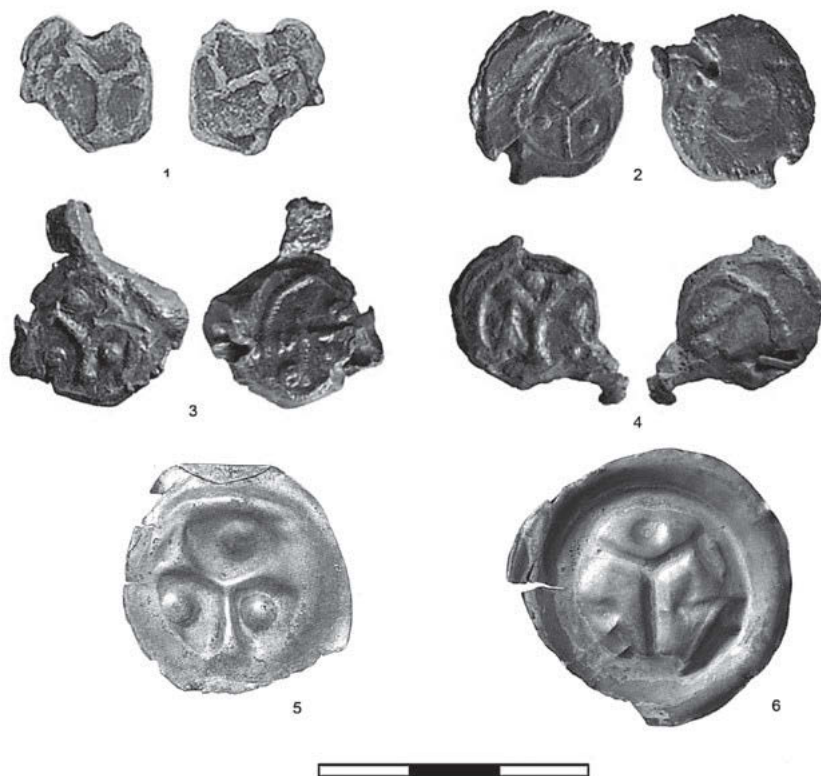


Fig. 5. Small lead seals and *Hohlpfennigs* with representations of Y-shaped sign: 1 – Drohiczyn, collection of N. Avenarius (State Historical Museum, inv. no. KP OH 822061, GIM 93372/830); 2–4 – Czermno (after Florkiewicz, Jusupović, Musin 2020, nos NN.535, 516, 529); 5, 6 – unknown provenance (CPBG, A-J-00166, A-J-00031, reverse). Computer graphic design by S. Bocharova

A symbol resembling a wheel with spokes, rare both on seals and on bracteates (Fig. 6: 8–10),⁷¹ may be associated with solar signs. The representation of a rosette which semantically correlates with it, is known on bracteates⁷² and on small lead seals from Drohiczyn and Czermno.⁷³ (Fig. 6: 11–12). It has no reliable attribution or chronology.

⁷¹ Florkiewicz, Jusupović, Musin 2020, pp. 267–268, nos NN. 280, 281.

⁷² Beyer 1876, plate I: 32–35; Kopicki 1997, p. 57, 58; Garbaczewski 2007, pp. 80–83.

⁷³ Bolsunovskii 1894, plates II: 88, III: 117, IV: 146, XII: 530; Florkiewicz, Jusupović, Musin 2020, p. 86, no. I.44.

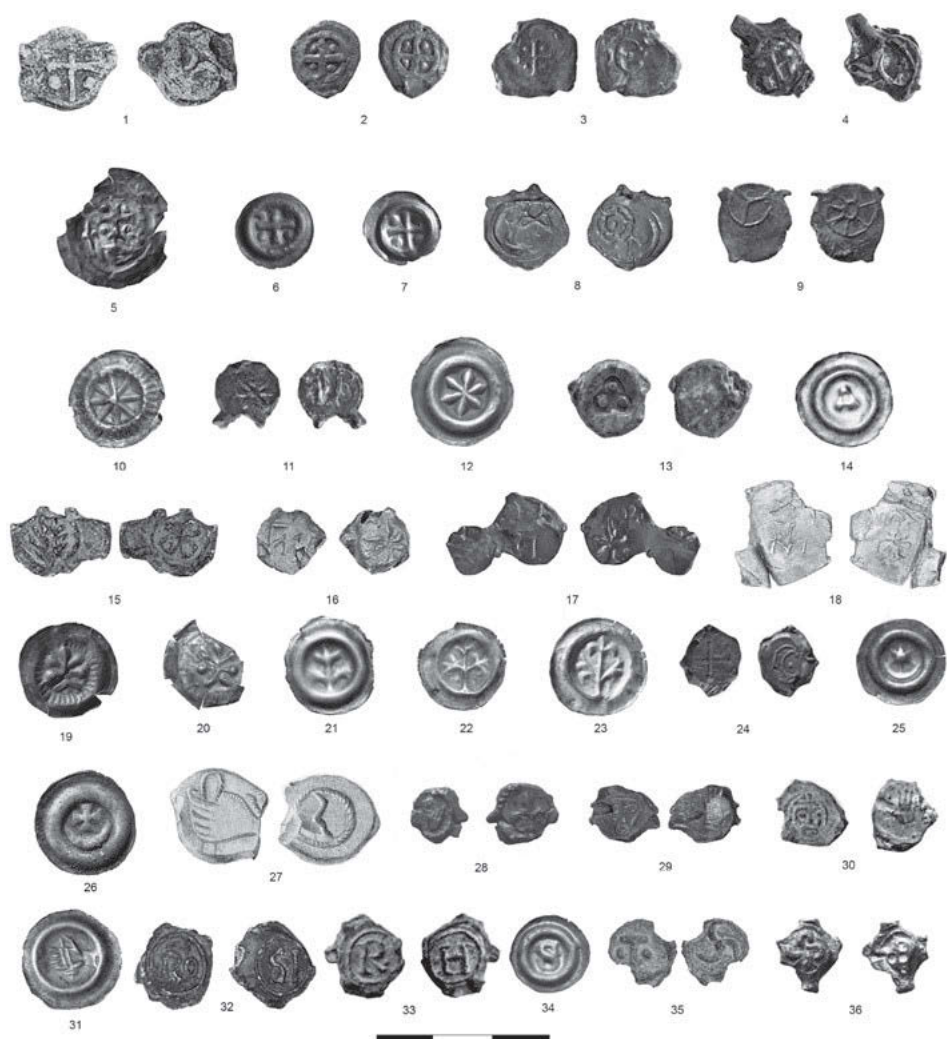


Fig. 6. Small lead seals and *Hohlpfennigs* with representations of different symbols and signs:
 1, 15, 27, 29, 32, 35 – Drohiczyn, collections of K. Bołsunowski and N. Avenarius (State Historical Museum, inv. no. KP OH 822061, GIM 93372/569; State Hermitage Museum, inv. no. OH-P-II-4209, cf. Bolsunovskii 1894, plate V: 171; Archives of the Imperial Archaeological Commission, collection 1, no. 1886–55, f.16; State Historical Museum, inv. no. KP OH 822061, GIM 93372/202; State Hermitage Museum, inv. no. OH-P-II-5006, cf. Bolsunovskii 1894, plate XXI: M; State Historical Museum, inv. no. KP OH 822061, GIM 93372/35); 2, 3, 8, 9, 11, 13, 16–18, 24 – Czeremo (after Florkiewicz, Jusupović, Musin 2020, nos NN.81, II.30, NN.280, 281, I.44, NN. 294, 200, 197, 198, II.23); 4 – Nasielsk (Błoński, Bogucki 2019, fig. 2: 5); 5, 19, 20, 26 – Radzanowo (CPBG, M-M-00948, M-M-00956, M-M-00272, M-M-00466); 6, 10, 12, 21–23, 25, 31 – unknown provenance (CPBG, A-N-00172, M-K-00029, A-J-00069, A-J-00179, M-K-00301, M-K-00300, A-J-00007, A-J-00164, A-J-00042); 7 – Gdańsk (CPBG, A-S-00069); 14 – Przyłęk (CPBG, M-J-00055); 28, 36 – Pułtusk (after Jakubowska 2019, fig. 3: 7, 5: 1); 30, 33 – Płock (after Trzeciński 2019, fig. 2: 4). Computer graphic design by S. Bocharova

The symbol, represented by three dots, or a three-petal rosette, is known on bracteates (Wieleń, Przylęk, Lubomia)⁷⁴ and on seals from Czermno⁷⁵ (Fig. 6: 13–14). It may be associated with Silesia (1275–1300) and interpreted as a symbol of the Holy Trinity known in Romanesque art.

The palmette motif on small seals is attested on small lead seals from Drohiczyn and Czermno⁷⁶ (Fig. 6: 15–18), while vegetal representations, including those resembling a tree (tree of life?), are well-known on bracteates (Wieleń, Brzezi, Sarbsk, Radzanowo) from the rule of Mieszko III the Old till the period of 1250–1300 and even later (Fig. 6: 19–23).⁷⁷

The figure which combines a crescent and a dot, star or cross is known both on small seals and bracteates⁷⁸ (Fig. 6: 24–26). Sometimes this symbol is attributed to Greater Poland or Lesser Poland, coins of the Duke Henry III of Głogów (1274–1309) or private minting of the knightly family of Leliwa.⁷⁹

In addition, on small seals from Drohiczyn and Mazovia and on bracteates (Wieleń, Sarbsk, Radzanowo), there are representations of a hand bearing a sword or a scroll (*manus Dei* [?], a human head and hand⁸⁰ (Fig. 6: 27–31), letters of the Latin alphabet, in particular R, RO, IS, S (Drohiczyn, Mazovia) (Fig. 6: 32–34). Some symbols like the *triskelion* (Drohiczyn, Czermno) and the “Solomon’s knot” (Drohiczyn, Mazovia), are found on small lead seals but still nearly unknown in Poland and in Rus’ (Fig. 6: 35, 36).⁸¹

It is interesting to compare different types of *fleur de lys* on small lead seals and bracteates.⁸² In the collections of Drohiczyn, Czermno and Pułtusk there are small seals with schematic representations,⁸³ as well as seals with *fleur de lys* of definitely Western European origin (Fig. 7: 1–7). Bracteates bearing *fleur de lys*

⁷⁴ Beyer 1876, plate II: 66; Kopicki 1997, p. 57.

⁷⁵ Florkiewicz, Jusupović, Musin 2020, pp. 271–272, nos NN. 294–298.

⁷⁶ Bolsunovskii 1894, plates V: 168–172, XIX: 898; Florkiewicz, Jusupović, Musin 2020, pp. 119, 247, nos II.80, NN.197–200. The palmette motif on small seals from Czermno was identified by Iwona Florkiewicz while working on the catalog.

⁷⁷ Beyer 1876, plate III: 81–85, 88; Kopicki 1997, pp. 43, 61; Garbaczewski 2007, pp. 309, 315–316, fig. 606; cf. CPBG.

⁷⁸ Florkiewicz, Jusupović, Musin 2020, pp. 86, 107, 264, 270, nos I.46, II.33, NN. 254, 290–292; Beyer 1876, plate II: 36, 37.

⁷⁹ Kopicki 1997, p. 35, 44, 55, 56, 104; Kopicki 1995a, p. 250; Kopicki 1995b, p. 305.

⁸⁰ Both types remain unknown in Czermno, which may be regarded as a chronological indicator for their dating – not earlier than the end of the 13th century.

⁸¹ Bolsunovskii 1894, plates I: 24, XXI: M; Florkiewicz, Jusupović, Musin 2020, pp. 174, 268, nos III.61, NN. 282, 283; Błoński, Bogucki 2019, p. 1028, fig. 2: 2; Trzeciecki 2019, p. 1051, fig. 2: 4, 6; Jakubowska 2019, p. 1062, fig. 3:7, 5:1–4; Beyer 1876, plates II: 64, VI: 199; cf. CPBG.

⁸² Beyer 1876, plates II: 69–75, VI: 211; Garbaczewski 2007, pp. 55–56.

⁸³ Bolsunovskii 1894, plate IV: 159, 160, 164; Florkiewicz, Jusupović, Musin 2020, pp. 107, 216, 264, nos II.32, NN.76–79, 265–266.



Fig. 7. Small lead seals and *Hohlpfennigs* with representations of *fleur de lys*: 1–8 – Czermno (after Florkiewicz, Jusupović, Musin 2020, nos NN.76–79, II.32, II.110, NN. 265, I.2); 9–12 – Radzanowo (CPBG, M-M-00497, M-M-00499, M-M-00500, M-M-00485). Computer graphic design by S. Bocharova

(Wieleń, Radzanowo) could have been minted in Eastern Pomerania⁸⁴ or in Silesia in 1230–1290 (cf. CPBG) (Fig. 7: 9–12).

It is worth paying attention to a series of at least nine seals from Czermno with a schematic representation of *fleur de lys* and a military saint with a spear against his right shoulder (Fig. 7: 8).⁸⁵ The design of lead seals comprising an image of a saint on the obverse, and a sign or figure on the reverse was typical for Rus'.⁸⁶ However, the *fleur de lys* was unknown there. Most probably, this design reflected a rare influence of Polish symbols of power on the political culture of the Rurikids.

Thus, some small lead seals from Drohiczyn and Czermno and items from Mazovia definitely have images typical for power symbols and coinage of the Piast dynasty. They should be recognized as small seals of the Piasts, and not of the Rurikids. In general, about 20–25% of the small lead seals from Drohiczyn and Czermno can be considered as Polish seals. Small Polish lead seals should be regarded as an outcome of the impact of the Rurikids' administrative system on practices of the Piasts due to cultural transfer. Having borrowed from Rus' the idea of small lead seals and sealing objects and goods for fiscal control, Polish rulers used on their own seals symbols and signs familiar to their citizens. Like *Hohlpfennigs*, small lead seals would have been introduced by the Piasts in a situation of political and social changes and were aimed at additional economic exploitation of the local society to increase financial income. It chronologically coincided with the decen-

⁸⁴ Kopicki 1995a, p. 32; Kopicki 1995b, p. 12; Kopicki 1997, p. 60.

⁸⁵ Florkiewicz, Jusupović, Musin 2020, pp. 75, 160, 198–199, nos I.2, III.7, NN.5–11.

⁸⁶ See Ianin 1970a.

tralization of coin emissions and the formation of regional fiscal and customs systems.⁸⁷ These small lead seals were obviously of commercial, customs and fiscal nature and did not serve for approving commodity money. Medieval Poland had a developed monetary economy and did not know the global coinless period, like Eastern Europe, but knew only limited coinless circulation of fur money.⁸⁸

We observe a relative synchronism in the appearance, design and circulation of small lead seals and *Hohlpennigs* in Poland in mid-13th century – the first half of the 14th century. It is mainly proved by the iconographic analysis of representations on seals and bracteates. Additional arguments in favor of such synchronicity can be seen in their archaeological chronology.

The comparison of realistic and high-quality images on silver bracteates with abstract and schematic representations on lead seals should indicate that symbols and signs on bracteates served as a model for the design of seals, and not *vice versa*. The difference in image quality was primarily due to the difference in material, technology of manufacturing and smaller sizes of lead blanks. Evidently, signs on bracteates were more numerous and varied than signs on seals. Not all numismatic types were reflected in small lead seals. Only the most characteristic symbols that were significant for the Polish political culture can be evidenced.

The chronology of Polish small lead seals originating from stratified archaeological layers deserves special attention. Small seals from Nasielsk and Poniaty Wielkie come from open archaeological contexts. Their dating of to the 12th–13th centuries in publications based on irrelevant chronology of seals of *Drohiczyn* type in Eastern Europe, taken from previous historiography.⁸⁹ These finds do not provide us with the necessary information about the circulation of Polish small lead seals.

The chronology of small seals from Pułtusk-Stare Miasto (12th century) is based on general observations on the history of the site,⁹⁰ while the dating of finds from Pułtusk-Fontanna (13th century)⁹¹ seems to be more reasonable, but needs further stratigraphic analysis. In Płock, some seals were initially dated to the second half of the 12th – beginning of the 13th century,⁹² and yet their chronology can be updated to the middle of the 13th century when the year 1237 (or several years later), when city rights modeled on the Magdeburg law were introduced.⁹³ Thus, this urban redevelopment played a role of a *terminus ante quem* for the introduction of small seals in Poland. These observations make it possible to synchronize the mass ap-

⁸⁷ See Paszkiewicz 2004.

⁸⁸ Adamczyk 2004, pp. 182–184.

⁸⁹ Błoński, Bogucki 2019, p. 1029; Affelski, Bogucki 2019, p. 1041.

⁹⁰ Pela 2000, pp. 11–34.

⁹¹ Jakubowska 2019, p. 1061.

⁹² Trzeciecki 2019, pp. 1051–1052.

⁹³ The author wishes to thank dr. Maciej Trzeciecki for his kind consultations on this matter.

pearance and active use of two medieval Polish economic innovations – small lead seals and *Hohlpfennigs* – since the second quarter of the 13th century.

Polish *Hohlpfennigs* and small lead seals should be studied in tandem taking into account their designs and geographic distribution. Today, one of the key research problems must be the attribution of individual types of bracteates and small lead seals which in most cases remain anonymous.⁹⁴ However, representations of the heraldic eagle are mainly associated with Silesia or Greater Poland, while some symbols can be correlated with coats of arms of Polish elite families.⁹⁵ In the future, such parallel studies will allow specialists to clarify the chronology of appearance and distribution of *Hohlpfennigs* and small lead seals and to identify commercial and cultural ties in East-Central Europe.

It is logical to assume that small lead seals were introduced in Poland by the Duke Conrad I of Mazovia (1200–1247) or his son Siemowit I (1247–1262) who had close connections with Rus'.⁹⁶ There have been some attempts to attribute to them certain types of symbols on coins and bracteates.⁹⁷ In the 13th century wax seals of the Dukes of Mazovia appeared, on which shields of rulers bore *fleur de lys* representations (Siemowit I) and an eagle with outstretched wings and head heraldically turned to the right (Conrad II, ca. 1271–1294; see also above, Fig. 3: 9–10).⁹⁸ Both symbols are well known on small lead seals. However, and it should be specially stressed, the use of small lead seals for commercial and customs operations very likely introduced by the Mazovian dynasty could quickly have become an all-Polish phenomenon, characteristic of different branches of the Piasts.

The outstanding concentration of small lead seals in Drohiczyn and the high numbers of Polish seals among them need to be explained. Usually this phenomenon is associated with the intensive flow of trade through this border town, where princely agents detached seals from goods, levying customs dues on merchants. In the 1230s there were several customs offices here for water and land transport.⁹⁹

However, one gets the impression that the increase in significance of Drohiczyn as a centre of transit trade in the second half of the 13th century was caused by rather random circumstances. Since the 1240s the military activity of Princes Daniel and Vasil'ko Romanoviches in the upper reaches of the Bug and Mongol raids in Poland and Hungary through this area¹⁰⁰ could have forced trading communities to temporarily move routes to the North towards Drohiczyn.

⁹⁴ Kopicki 1995a, pp. 35–38; Kopicki 1995b, pp. 14–20; Kopicki 1997, pp. 94, 99.

⁹⁵ Kopicki 1997, pp. 25–26, 97.

⁹⁶ See Samsonowicz 2008.

⁹⁷ Kopicki 1995a, p. 32; Kopicki 1995b, p. 12; Kopicki 1997, p. 46. Cf. CPBG (M-M-00930, M-M-00939).

⁹⁸ Kuczyński 1970, pp. 193, 201, 203, 204–205, fig. 10, 11.

⁹⁹ Kochanowski (ed.) 1919, pp. 421–422, no. 366.

¹⁰⁰ See *Chronica Galiciano-Voliniana* 2017, pp. 259–260, 457–462, 533–535.

Meanwhile, already by the first half of the 14th century main trade routes from Poland to Eastern Europe were located further south from Drohiczyn.¹⁰¹ The decline of Drohiczyn as a transit centre coincided not only with the stabilization of the political situation in the southern region, but also with the withdrawal of the Polish state from the use of bracteates as a main unit of monetary economy, although in Mazovia bracteates would circulate relatively longer.¹⁰² The stabilization of the economy resulted in the rejection of small lead seals as an effective means of fiscal control.

To conclude, in medieval Europe, the use of small lead seals became a result of cultural transfer. The Byzantine tradition influenced the adoption of sealing by the Umayyads' in Spain in the 8th century.¹⁰³ At the end of the 11th century, the Byzantine practice of customs and commercial seals was transferred to Early Rus'. The next stage the cultural transfer took place in the 13th century, when the Piasts borrowed the idea of small lead seals from their eastern partners for controlling commercial and fiscal operations. However, there are reasons to believe that in Europe the cultural transfer of using small lead seals, Byzantine in their origins, did not end in Poland. The institution of sealing may have transferred from Poland to Western Europe,¹⁰⁴ where cloth and commercial lead seals appeared already in the second half – end of the 13th century and have continued to exist until the present day. The possible mechanism of the supposed transfer during the 13th century needs further study.

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¹⁰¹ Höhlbaum (ed.) 1882, pp. 312–314.

¹⁰² Grodecki 1921, pp. 52–56; Kopicki 1997, p. 23. See also Paszkiewicz 2019.

¹⁰³ Sénac, Ibrahim 2017.

¹⁰⁴ Musin, Toropov 2020, pp. 374–375.

ABBREVIATIONS

CPBG – *Corpus of Polish Hohlpfennigs*, scientific project funded by the National Science Center, Poland (no. DEC-2014/15/B/HS3/02196), project leader: prof. dr. hab. Borys Paszkiewicz.

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PLOMBY OŁOWIANE I PLOMBOWANIE WE WCZESNOŚREDNIOWIECZNEJ EUROPIE ŚRODKOWO-WSCHODNIEJ

(Streszczenie)

Stosowanie pieczęci i plomb ołowianych we wczesnośredniowiecznej Europie Środkowo-Wschodniej było związane z ekonomiczną i polityczną potrzebą potwierdzania różnych relacji społecznych. Stało się powszechną praktyką w Bizancjum, skąd zostało zapożyczone na Ruś, gdzie od końca XI do końca XIV w. używano plomb typu *drohiczynskiego*. Znaleźiska w Polsce sześciu pieczęci ołowianych Bolesława Krzywoustego są wyjątkowe. Jednak później polscy władcy zapożyczyli z Rusi praktykę używania plomb i plombowania towarów i stosowali na nich symbole i znaki znane ich poddanym. Analiza zbiorów z Drohiczyna i Czerмна oraz znalezisk z Pułtuska, Gruduska, Makowa Mazowieckiego, Płocka, Nasielska, Poniat Wielkich, Sandomierza i Piotrówki na terenie Radomia pozwoliła na wyróżnienie grupy plomb, których figury i znaki korespondowały z wyobrażeniami z brakteatów guziczkowych (przedstawienia ornitomorfczne, wizerunki drapieżnej bestii, równoramienny krzyż z punktami w polach między ramionami, strzały, krzyż łotrowski z punktami w polach między ramionami, motywy roślinne, trójpłatkowa rozeta, lilia

heraldyczna i in.) i znacznie się różniły od plomb typu *drohiczynskiego* z terenów Rusi. Plomby te miały funkcjonować równoległe z brakteatami guziczkowymi od 1. połowy XIII do 1. połowy XIV w. Można je zdefiniować jako piastowskie plomby handlowe i celne. Nie należy ich wiązać wyłącznie z akceptacją pieniądza futrzanego i skórzanego, jak się czasem uważa, opierając się na bezkrytycznym wykorzystaniu informacji arabskiego autora Abū Hāmida al-Gharnāīego. Równoległe funkcjonowanie plomb i brakteatów miało związek z pojawieniem się w średniowiecznej Polsce regionalnych systemów fiskalnych i celnych oraz z decentralizacją emisji monet. Można to postrzegać jako próby przetrwania kryzysu gospodarczego. W XIII w. najwyraźniej są widoczne wykorzystywane przez Piastów dodatkowe możliwości eksploatacji gospodarczej społeczności lokalnych, kontroli więzi międzyregionalnych i międzynarodowych.

Do Polski praktykę masowego stosowania plomb wprowadził prawdopodobnie książę Konrad I Mazowiecki lub jego syn Siemowit I. Następnie ich stosowanie mogło nabrać charakteru powszechnego na ziemiach średniowiecznej Polski pod panowaniem Piastów, co sugerują znaki i symbole na plombach. Systematyczne badania nad symboliką analizowanych plomb oraz brakteatów guziczkowych mogą teoretycznie pozwolić na skorelowanie ich z określonymi układami terytorialno-administracyjnymi i rodami książęcymi w średniowiecznej Polsce. Na podstawie naszych badań plomby z przedstawieniem ludzkiej głowy oraz ptaka z rozpostartymi skrzydłami na jednej i drugiej stronie można kojarzyć z działalnością księcia Władysława I Opolskiego. Koncentrację plomb w Drohiczynie, gdzie znaleziono ponad 14 000 zabytków z ponad 30 000 znanych dzisiaj, tłumaczy się jego wyjątkowym znaczeniem i pozycją w systemie stosunków między Polską i Rusią, a także tymczasowym przesunięciem szlaków handlowych na północ w wyniku działań wojennych, które miały miejsce w latach około 1240–1280 na obszarze południowego Pobuża. Niewykluczone, że polskie plomby mogły mieć wpływ na pojawienie się plomb tekstylnych w Europie Zachodniej, jednak potwierdzenie tego specyficznego mechanizmu kulturowego wymaga dalszych badań.

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