Small lead seals of "Drohiczyn type" as the Sphinx of Slavic sigillography: an introduction

Aleksandr Musin, Marcin Woloszyn

U ŹRÓDEŁ EUROPY ŚRODKOWO-WSCHODNIEJ / FRÜHZEIT OSTMITTELEUROPAS 6:1

THE SPHINX

of Slavic sigillography – small lead seals of "Drohiczyn type" from Czermno in their East European context

SFINKS

Słowiańskiej sfragistyki – plomby „typu drohiczyńskiego" z Czermna na wschodnioeuropejskim tle porównawczym

Leibniz-Institut für Geschichte und Kultur des östlichen Europa

Instytut Archeologii i Etnologii Polskiej Akademii Nauk

Instytut Archeologii Uniwersytetu Rzeszowskiego

The Sphinx of Slavic sigillography – small lead seals of “Drohiczyn type” from Czermno in their East European context

Sfinks słowiańskiej sfragistyki – plomby „typu drohiczyńskiego” z Czermna na wschodnioeuropejskim tle porównawczym

U ŹRÓDEŁ EUROPY ŚRODKOWO-WSCHODNIEJ / FRÜHZEIT OSTMITTELEUROPAS

Leibniz-Institut für Geschichte und Kultur des östlichen Europa, Leipzig
Instytut Archeologii i Etnologii Polskiej Akademii Nauk, Warszawa
Instytut Archeologii Uniwersytetu Rzeszowskiego, Rzeszów

Tom 6, część 1 / Band 6, Teil 1

The Sphinx of Slavic sigillography – small lead seals of "Drohiczyn type" from Czermno in their East European context

Sfinks słowiańskiej sfragistyki – plomby „typu drohiczyńskiego" z Czermna na wschodnioeuropejskim tle porównawczym

edited by
Aleksandr Musin and Marcin Wołoszyn

Kraków – Leipzig – Rzeszów – Saint Petersburg – Warszawa 2019

U ŹRÓDEŁ EUROPY ŚRODKOWO-WSCHODNIEJ / FRÜHZEIT OSTMITTELEUROPAS
Leibniz-Institut für Geschichte und Kultur des östlichen Europa, Leipzig
Instytut Archeologii i Etnologii Polskiej Akademii Nauk, Warszawa
Instytut Archeologii Uniwersytetu Rzeszowskiego, Rzeszów

Redakcja tomu / Herausgeber des Bandes
Aleksandr Musin, Marcin Wołoszyn
Sekretariat naukowy / Redaktionsassistenz
Barbara Chudzińska, Iwona Florkiewicz
Recenzenci tomu / Rezensenten des Bandes
Sebastian Brather, Jonathan Shepard

Tłumaczenia / Übersetzungen
Autorzy / Autoren oraz / sowie Barbara Chudzińska (s./S. 37-59, 61-73, 119-134, 193-209, 303-404, 461-477, 529-646, 687-698, 711-735, 771-824, 843-865, 879-889, 911- 942, 961-980, 999-1020), Grzegorz Haczewski (s./S. 119-134, 771-824, 879-889, 911-942, 961-980, 999-1020), Anna Kinecka (s./S. 13-35, 61-73, 113-117, 125-134, 187-192, 199-302, 443-460, 479-527, 579-646, 681-686, 693-698, 703-709, 719-735, 741-770, 800-824, 827-842, 859-865, 875-878, 883-889, 895-909, 927-942, 951-960, 971-980, 987-998, 1011-1020) i / und Anna Sosenko (77-83, 93-95, 103-105, 141-146, 153-162, 167-169, 175-179, 1027-1029, 1035-1036, 1041-1042, 1045-1046, 1059-1062, 1067-1071)
Skład / Layout
Irena Jordan
Obróbka graficzna / Graphik
Autorzy / Autoren oraz / sowie Svetlana Bočarova, Iwona Florkiewicz, Irena Jordan, Jolanta Ożóg, Rafał Ratajczak, Natalia Vojceščuk, Piotr Zagórski
Projekt okładki / Layout des Umschlages
Magdalena Bujak
Wyobrażenie na okładce / Photo auf dem Umschlag
Czermno. Plomba „typu drohiczyńskiego" (Muzeum w Tomaszowie Lubelskim, nr inw. MT/1921/17/A); fot. Beata Polit; opracowanie graficzne: Magdalena Bujak
Czermno. Plombe vom „Typ Drohiczyn" (Museum in Tomaszów Lubelski, Inv. Nr. MT/1921/17/A); Foto: Beata Polit; graphische Gestaltung: Magdalena Bujak
Źródło finansowania / Finanzierung
Narodowe Centrum Nauki / National Science Centre
Publikacja powstała przy wsparciu Leibniz-Instytut Historii i Kultury Europy Środkowej i Wschodniej w Lipsku. Jest ona współfinansowana z wpływów podatkowych, na podstawie budżetu zaakceptowanego przez parlament Kraju Związkowego Saksonia.
Gedruckt mit Unterstützung des Leibniz-Instituts für Geschichte und Kultur des östlichen Europa e. V. in Leipzig. Diese Maßnahme wird mitfinanziert durch Steuermittel auf der Grundlage des vom Sächsischen Landtag beschlossenen Haushaltes.
Druk / Druck
Poligrafia Salezjańska, Kraków
Dystrybucja / Distribution
Leipziger Universitätsverlag
Instytut Archeologii i Etnologii Polskiej Akademii Nauk, Warszawa
Instytut Archeologii Uniwersytetu Rzeszowskiego, Rzeszów

ISBN: 978-3-96023-289-6
ISBN: 978-83-66463-00-4
ISBN: 978-83-7996-693-6

The present volume is the result of co-operation of institutions named here:

Leibniz Institute for the History and Culture
of Eastern Europe (GWZO), Leipzig

Leibniz-Institut für
Geschichte und Kultur
des östlichen Europa

Institute of Archaeology and Ethnology
Polish Academy of Sciences, Warsaw

Institute of Archaeology
University of Rzeszów, Rzeszów

Institute for the History of Material Culture
Russian Academy of Sciences, Saint Petersburg

Maria Curie-Skłodowska University
Institute of Archaeology, Lublin

UMCS
INSTYTUT ARCHEOLOGII

Dr Janusz Peter Regional Museum
in Tomaszów Lubelski

DUMBARTON OAKS

ART • NATURE • SCHOLARSHIP

A publication financed by the National Science Center / Sponsored by the:

NARODOWE CENTRUM NAUKI

SACHSEN

Ten years have elapsed since I first chanced upon the diminutive bits of worked lead from Drohiczyn […]; *every newly acquired lot of these pieces contributed to my list more new and heretofore unknown, perplexing designs, each of them identifiably a sigillographic sphinx*; *each design – a puzzle to be solved, enticing the researcher to exert himself anew to wrest the word, the cryptic meaning and – possibly more fascinating still – the reasons for its minting, veiled by the symbol*

Karol Bołsunowski,
Znaki symboliczne na ołowiu (plomby). Ich znaczenie i klasyfikacja,
Światowit 4 (1902), p. 54-72, here p. 54

Dziesięć lat upływa od chwili, gdy po raz pierwszy wpadły mi do ręki ołowianki z Drohiczyna [...]; *każda partya nowonabytych ołowianek przynosiła mi nowe serye nieznanych, zagadkowych znaków, z których każdy można było poczytywać za mały sfinks sfragistyczny*; *każdy z nich urokiem tajemnicy zachęca badacza do nowych wysiłków, aby wydrzeć ukryte pod symbolem tajemnicze słowo, zagadkowe znaczenie i może ciekawsze jeszcze cele, dla których znak wybito*

Karol Bołsunowski,
Znaki symboliczne na ołowiu (plomby). Ich znaczenie i klasyfikacja,
Światowit 4 (1902), s. 54-72, tu s. 54

CONTENTS

IV. SMALL LEAD SEALS OF "DROHICZYN TYPE" IN EAST-CENTRAL AND EASTERN EUROPE: *RESEARCH PROBLEMS – ARCHAEOLOGICAL CONTEXT (SELECTED EXAMPLES)*

IV.1. RUSSIA

IV.2. UKRAINE

IV.3. BELARUS'

IV.4. POLAND

SPIS TREŚCI

IV. OŁOWIANE PLOMBY „TYPU DROHICZYŃSKIEGO” W EUROPIE ŚRODKOWO-WSCHODNIEJ I WSCHODNIEJ: *PROBLEMY BADAWCZE – KONTEKST ARCHEOLOGICZNY (WYBRANE PRZYKŁADY)*

IV.1. ROSJA

IV.2. UKRAINA

IV.3. BIAŁORUŚ

IV.4. POLSKA

***

***

The Sphinx of Slavic sigillography
Sfinks słowiańskiej sfragistyki
A. Musin, M. Wołoszyn (eds.)
U ŹRÓDEŁ EUROPY ŚRODKOWO-WSCHODNIEJ/FRÜHZEIT OSTMITTELEUROPAS 6:1
Kraków-Leipzig-Rzeszów-Saint Petersburg-Warszawa 2019, p. 13-73

Aleksandr Musin, Marcin Wołoszyn

SMALL LEAD SEALS OF "DROHICZYN TYPE" AS THE SPHINX OF SLAVIC SIGILLOGRAPHY: AN INTRODUCTION

Dear Reader, the book before you is an attempt by medieval historians and archaeologists at solving the riddle posed for over a hundred years now by the unassuming small lead seals of "Drohiczyn type" – a true "Sphinx of Slavic sigillography".

These diminutive "sigillographic Sphinxes" range from 0.7 to 1.7 mm in size, and were stamped on flat, pieces of lead (blanks), often of irregular shape: roughly circular, oval, rectilinear, or resembling a sector of a circle. The rich iconography of small lead seals of "Drohiczyn type" includes diverse marks, letters, symbols, images of saints, angels, lay persons as well as beasts, more notably, birds (Fig. 1).

As early as at the beginning of the 20th c. Karol Bołsunowski (1838-1924) had noted that these "bits of lead" were characterized by, "an enigmatic origin and exceptional diversity of symbolic patterns", and every one of them may be regarded as a small sigillographic »Sphinx«"[1]. He had borrowed this expression from Ivan Tolstoy (1858-1916), who had used the similar words to describe Rurikid emblems represented on the coins of the princes of Kyiv[2]. To this day, these devices, and the bullae depicting continue to perplex researchers – truly a riddle of the Sphinx.

In Eastern Europe the small lead seals of "Drohiczyn type" examined here make up the largest pool of sigillographic finds. Their number is constantly growing. If in the 1990s researchers were familiar with 15,000 or so small lead seals of "Drohiczyn type", today more than 30,000 finds have been reported. Their geographic range and the list of findspots has grown as well. If at the end of the 20th c. 40 findspots had been recorded, today there are over 900 of them!

In the historiography of Eastern Europe it was usual to date small lead seals of "Drohiczyn type" to the 11th- first half of the 13th c. and assign them to the Pre-Mongol Period, i.e., before the Tatar-Mongol invasion of 1237-1240 which – as previously thought – had destroyed the production, consumption, trade and the tax system of Eastern European societies forming the "Rurikid Empire"[3]. However, today it has become apparent that, in different regions of its territory small lead seals of "Drohiczyn type" go out of use during a different period in the Galich and Volhynia lands, and in eastern Poland (Mazovia) they continued in evidence until approximately 1350, and have been found in context with West European lead cloth and commercial seals. At the same time, fourteenth-century urban deposits excavated at Novgorod and Moscow have yielded lead seals, which in their construction, design, archaeological context, and presumably their function, resemble small lead

[1] K. Bołsunowski, *Znaki symboliczne na ołowiu (plomby). Ich znaczenie i klasyfikacja*, Światowit 4 (1902), p. 54-72, specifically p. 54.
[2] И.И. Толстой, *О древнейших русских монетах X-XI вв.,* Записки Императорского Русского археологического общества. Новая серия 6: 3-4, (1893), p. 311; see also А.Л. Сокульський*, Національна символіка України*, Запоріжжя (Інтербук) 1993, p. 11.
[3] On this subject *cf.* for example Н.А. Макаров, А.В. Чернецов (eds.), *Русь в XIII веке: древности темного времени*, Москва (Наука) 2003.

seals of "Drohiczyn type" of the "Pre-Mongol Period". This suggests that they continued in use into the 14th c., although in some areas this use was different than earlier[4].

The challenge small lead seals of "Drohiczyn type" have been posing to the research community is occasioned by more than their staggering and steadily growing numbers or the difficulty of their classification and dating. There are other aspects too.

Many small lead seals of "Drohiczyn type" are known only from brief reports about their discovery. They remain in private collections, and only some of them are available for analysis. And where they are available, their study is all too often challenged by the following considerations: poor preservation, diminutive size, lack of inscriptions, of poor quality of the impression, the diversity of depictions, lack of a recorded archaeological context, undated archaeological context, scattered geographic spread, lack of systematization and classification, and of even general analytic overviews.

Other than that we must add to the list of unresolved problems: the relationship of small lead seals of "Drohiczyn type" to other sigillographic objects, lead seals in particular, and also, the place and role of small lead seals "type Drohiczyn" in the medieval sigillography; terminological difficulties; the question of their history, sources and origin; problems associated with collecting, conservation, the study of the isotope and chemical composition of the lead of which small lead seals were made.

Nevertheless, the issue which is the most important of all must be the still unresolved question of their function and purpose. The views in research are greatly divided: they have been recognized as marks of ownership which were attached to moveable property or goods, as customs and fiscal seals, applied to commodities to ensure their integrity and safety in transport (thus they would have a function similar to the modern security lead and wire seals tags; *cf*. Fig. 2); other suggested uses include that of money, marks authenticating the value of fur money, i.e., bundles of pelts of the more valued species – in the name of the princely authority. Those in favour of this interpretation can refer to the late medieval-early modern depictions, like the one in St. Nicholas Church (Nikolaikirche) at Stralsund where the merchants of Veliky Novgorod are shown holding bundles of animal skins, or illuminations in the *Radziwiłł Chronicle* (Figs. 3-4). However, what is shown are only bundles of furs paid as tribute, their function of 'fur commodity money' affixed with a lead seal remains unconfirmed.

A question which is definitely related to that of the function of small lead seals of "Drohiczyn type" is their geographic distribution, and the fact that they tend to turn in groups. It is a reasonable guess that their findspots were a place of concentration of some objects to which these lead seals had been attached. This is where the lead seals were detached, and lost their value as a result. It is remarkable that lead – a valuable and relatively rare material – was not collected for reuse by craftsmen to make new objects. There is no saying if this was dictated by the nature of the local crafts production and economy, or was an effect of administrative regulations. The historical and archaeological description of such places may be central to improving our understanding the function of the small lead seals of "Drohiczyn type".

All the above issues have led us to an inevitable conclusion. An analytic publication of the assemblage of small lead seals of "Drohiczyn type" from the archaeological fieldwork at Czermno calls for a new approach to the history of their study, for comparing them with finds of lead seals of that type from other areas in Central and Eastern Europe. Their historiography is encumbered by too many inaccuracies and contradictions made by some researchers who instead of taking the trouble to address the primary source were content to reiterate the limited selection of other researchers' views drawn from pre-existing publications.

Our work was made possible by the following projects: *Seals at the Border, Seals in Context: Seals and Dorogichin-Type Seals from Czermno (Cherven' Towns)* financed by the Dumbarton Oaks Center (2011-2012)[5] and *The Sphinx of Slavic sigillography – Dorogichin seals from Czermno in their East European context*

[4] See in this volume: P. Gaydukov, *The topography of finds of early medieval small lead seals from Eastern and East-Central Europe: catalogue = Rozprzestrzenienie znalezisk wczesnośredniowiecznych plomb ołowianych w Europie Środkowo-Wschodniej i Wschodniej: katalog,* [in:] A. Musin, M. Wołoszyn (eds.), *The Sphinx of Slavic sigillography – small lead seals of "Drohiczyn type" from Czermno in their East European context = Sfinks słowiańskiej sfragistyki – ołowiane plomby „typu drohiczyńskiego" z Czermna w kontekście wschodnioeuropejskim,* U Źródeł Europy Środkowo-Wschodniej = Frühzeit Ostmitteleuropas 6:1, Kraków-Leipzig-Rzeszów-Saint Petersburg-Warszawa (Leibniz-Institut für Geschichte und Kultur des östlichen Europa [GWZO]/Instytut Archeologii i Etnologii Polskiej Akademii Nauk/Instytut Archeologii Uniwersytetu Rzeszowskiego/Институт истории материальной культуры Российской академии наук) 2019, p. 187-440.

[5] Project Leader: Marcin Wołoszyn, place of implementation: Institute of Archaeology and Ethnology Polish Academy of Sciences, Cracow; *cf*. https://www.doaks.org/research/byzantine/project-grants/woloszyn-piotrowski-nosek-2012-2013019 (accessed on: 06.06.2019).

implemented from the resources awarded by the National Science Centre (2014-2019)[6]. Also relevant in this context was the exhibition *Cherven': a stronghold between the East and the West* financed from the resources of the Ministry of Culture and National Heritage (2012)[7].

From the very beginning the implementation of the project *The Sphinx of Slavic sigillography – Dorogichin seals from Czermno in their East European context* we ran into serious problems of a theoretical, methodological and terminological nature. The problems of terminology are due to the fact that the book presented here was to be in two languages: English and Polish.

In Polish, Russian, Ukrainian and Belarusian languages a distinction is made between the terms "печать" /"пячаць"/"пячаць"/"pieczęć" and "пломба"/"plomba". The former are objects used to authenticate documents of a socio-political and personal nature the latter are more devices used to confirm ownership, quality or the safety of a commodity. In short, there is a terminological distinction between the two. The Slavic word "plomba" was coined from the Latin name of the metal used in making the lead seals or bullae – *plumbum* (Pb). However, in the English language there is no terminological distinction between "печать" and "пломба".

Let us note moreover that in the Russian, Ukrainian and Belarusian research literature the bullae have been referred to as *Dorogichin bullae/lead seals* ("дрогичинские пломбы"; the Russian version of the name of what is now a Polish town Drohiczyn) or bullae of "Dorogichin type" ("пломбы »дорогичинского типа«"/ "пломби дрогичинські"/"пломби дрогичинського типу" /"драгічынскія пломбы"). On occasion they have been referred to as *malye svintsovye plomby-pechati* ["малые свинцовые пломбы-печати"]. Similarly, in Polish historiography two terms are used – "plomby drohiczyńskie", "plomby »typu drohiczyńskiego«" ("znaki celne" – customs tokens), often preceded by the expression "so-called". This terminology has been in use since the late 19th c., when an impressive number of lead seals was collected on the banks of the Western Bug River at the town of Drohiczyn, its name subsequently eponymous with these archaeological objects. Time would show that this type of small lead seal has a much wider distribution definitely not confined to Drohiczyn.

Today this term no longer seems compatible with our current understanding of these lead seals. Rather than – as this name suggests – being limited to a single locality of Drohiczyn, bullae are a geographically wide-ranging phenomenon. Furthermore, the vast pool of these finds may be separated at present into regional groups based on their sigillographic and iconographic features. The name "Drohiczyn bullae" no longer adequately describes the phenomenon of East Central/Eastern European small lead seals. It definitely has served its purpose at a certain stage in the development of research, but must be recognized as outdated at present and replaced with a more appropriate substitute. The expression "bullae of »Drohiczyn type«" or "lead seals of »Drohiczyn type«" may be used only as a tribute to the historiographic tradition.

More difficulties appear when the terminology pertaining to bullae is to be translated into other languages still. As noted earlier, in English there is no distinction between "печать"/"pieczęć" and "пломба"/"plomba", necessary for the purpose of our study. In the English historiography the lead seals of "Drohiczyn type" had been described, on at least one occasion, descriptively as "crudely made lead seals excavated at Dorogichin"[8], but is this sufficient to prevent their being mistaken for Byzantine lead seals or molybdobulles?

A term introduced in the English language publications to describe a similar, late medieval phenomenon is "lead cloth seals"[9]. However, not all lead seals referred to as "cloth seals" were associated with the control of the process of production and sale of textiles. Some of their types may have been used in the control of imports of goods of a different type.

---

[6] Project No. 2013/11/B/HS3/0205; Project Leader: Marcin Wołoszyn; place of implementation: University of Rzeszów.

[7] Project No. 04644/12; EBOI-14875/11/A1; Project Leader: Eugeniusz Hanejko; place of implementation: Regional Museum in Tomaszów Lubelski; *cf.* Exhibition catalogue: J. Bagińska, M. Piotrowski, M. Wołoszyn (eds.), *Czerwień – gród między Wschodem a Zachodem: katalog wystawy = Červen' – eine Burg zwischen Ost und West: Ausstellungskatalog = Červen' – un castrum tra Oriente e Occidente: catalogo della mostra = Червень – град між Сходом і Заходом: каталог виставки,* Tomaszów Lubelski-Leipzig-Lublin-Rzeszów (Regional Museum in Tomaszów Lubelski/ Institute of Archaeology Maria Curie Skłodowska University in Lublin/Institute of Archaeology University of Rzeszów/Geisteswissenschaftliches Zentrum Geschichte und Kultur Ostmitteleuropas [GWZO]) 2012.

[8] "The large number of crudely made lead seals recovered at Dorogichin suggests that princely agents were levying customs dues on traders entering and leaving their territories"; *cf.* S. Franklin, J. Shepard, *The Emergence of Rus 750-1200*, New York (Longman) 1996, p. 329.

[9] *Cf.* e.g. G. Egan, *Provenanced Leaden Cloth Seals*, London 1987 (https://discovery.ucl.ac.uk/id/eprint/1349956/4/488665%20full.pdf; accessed on: 06.06.2019); S. Elton, *Cloth Seals: An Illustrated Reference Guide to the Identification of Lead Seals Attached to Cloth. From the British Perspective*, Oxford (Archeopress) 2017.

In German research a distinction is made between "Tuchplomben" and "Bleiplomben"[10]; in French research, we find a distinction similar to the one made in Slavic languages – "plomb" and "sceau", although the latter term is sometimes used when speaking of lead seals, both in medieval records and in modern research: "plombs", "sceaux de plomb des draps", "plombs des draps", "plomb des drapiers", "plombs de scellé", "plombs de scellement", "plombs à sceller les draps", "plombs de scellé de la douane", "plombs de marqué", "plombs de merchandise", "plombs pour marquer les marchandises", "plombs de commerce"[11].

Where their function is known we have a series of useful terms to describe lead seals – for example, custom seal, commercial seal, trade seal. However, as noted earlier, for small lead seals of "Drohiczyn type" this is a question still open to debate: were they used for reckoning, fiscal or commercial purpose, or did they serve as marks of ownership? It is evident at the same time that lead seals were used typically for sealing some property for safety and security, or to confirm its quality. In which case it is appropriate to use the modern names of security seals of a similar function – lead security seals or seal tags/tag seals, which are similar also in their construction to the medieval lead seals (see Fig. 2). On the other hand, the term commercial stopper seals[12], applied at times both to the European cloth seals and to lead seals of Eastern European tradition, appears to be ill-advised, as confirmed by the mainstream terminology adopted in research.

As a result of our discussions without rejecting the established name it may be said that the object of our research are commercial security lead seals from Central and Eastern Europe/medieval pendant commercial lead seals. The English term "commercial" appears to us be sufficiently capacious, uniting the economic, commercial, and even financial connotations of the phenomenon of "small lead seals of »Drohiczyn type«". Ultimately however, we decided to use "small lead seals" as the most acceptable term. The words "Drohiczyn type" added in the title of this monograph are meant to reflect the current stage in the research of small lead seals, but in the full awareness that it insufficient for understanding their phenomenon as a whole as its geographic range and significance go far beyond the small town on the Western Bug River, even if during the Middle Ages it used to be bridge between the East and the West.

It goes without saying that both the small lead seals examined by us here, mostly of a form which may be described as "single disc bulla-type seal with a channel" the latter for the cord for suspension, and the great seals-molybdobulles referred to in the Russian historiography as "vislye pechati" ("вислые печати") and "aktovye pechati" ("актовые печати"), i.e., "pendant seals" and "act or administrative seals" since they authenticated acts and documents and were suspended from them, may be traced in their origin to the Byzantine tradition. The widespread use of lead seals in the Byzantine world is confirmed not only by the written record or by documents (of which only a handful survives), but in the first place by the artefacts themselves. The number of Byzantine lead seals is estimated currently at 60,000[13] or even 80,000 specimens[14].

Blanks for small lead seals were cast in moulds, several at a time, as evidenced by rare fids of small lead seals retaining casting jets, and even whole bands of blanks still joined together, recovered for instance at Drohiczyn and Smolensk[15] (Fig. 5). On the other hand, also known are small lead seals impressed on a lead plate folded in half, as some finds from Czermno and Beloozero[16].

---

[10] *Cf.* e.g. D. Hittinger, *Tuchplomben. Warenzeichen des späten Mittelalters und der Neuzeit aus dem norddeutschen Küstengebiet,* Aachen (Shaker) 2009; H. Schäfer, *Bleiplomben in Vorpommern*, [in:] T. Maćkowski (ed.), *Florilegium historicum amicorum munera: Profesorowi Krzysztofowi Maciejowi Kowalskiemu w sześćdziesiątą piątą rocznicę urodzin przyjaciele, koledzy, uczniowie*, Gdańsk (Wydawnictwo Stara Szuflada) 2017, p. 365-382.

[11] *Cf.* e.g.: G. De Poerck, *La draperie médiévale en Flandre et en Artois*, Bruges (De Tempel) 1951, vol. II, *Glossaire français: technique et terminologie*; D. Cardon, *La draperie au Moyen Âge: essor d'une grande industrie européenne*, Paris (CNRS) 1999; L Dancoisne, *Les plombs des draps d'Arras*, Arras (Répessé-Crépel & Cie) 1885; J. Labrot, *Scellés de plomb des marchands, des marchandises, des douanes et des draps*, Moyen Âge 100 (2015), p. 46-55 ; J.-L. Roch, *Sceaux des plombs des draps*, [in:] M. Bloche, C. Dorion-Peyronnet, V. Maroteaux (eds.), *Empreintes du passé. 6000 ans de sceaux*, Rouen (Archives départementales de la Seine-Maritime, Musée départemental des Antiquités, Point de vues) 2015, p. 180-191.

[12] D. Colas, O. Kharkhordin (eds.), *The Materiality of Res Publica: How to Do Things with Publics*, Newcastle upon Tyne (Cambridge Scholars Publishing) 2009, p. X, 89.

[13] J. Nesbitt, *Sigillography*, [in:] R. Cormack, J. F. Haldon, E. Jeffreys (eds.), *The Oxford Handbook of Byzantine Studies,* Oxford (Oxford University Press) 2008, p. 150-156, specifically p. 150.

[14] J.-C. Cheynet, B. Caseau, *Sealing Practices in the Byzantine Administration*, [in:] I. Regulski, K. Duistermaat, P. Verkinderen (eds.), *Seals and sealing practices in the Near East. Developments in Administration and Magic from Prehistory to the Islamic Period. Proceedings of an International Workshop at the Netherlands-Flemish Institute in Cairo on December 2-3, 2009,* Orientalia Lovaniensia Analecta 219, Leuven-Paris-Walpole (Uitgeverij Peeters) 2012, p. 133-148, specifically p. 134.

[15] К.В. Болсуновский, *Дрогичинские пломбы*, Киев (тип. Г.Л. Фронцкевича) 1894, vol. I, Pl. XXI:922; О.М. Олейников, *Двор первых смоленских князей (по результатам охранных археологических исследований на ул. Ленина, 15 в Смоленске 2004 г.)*, [in:] А.Н. Хохлов (ed.), *Тверь, Тверская земля и сопредельные территории в эпоху средневековья* 7, Тверь (Старый город) 2014, p. 13, Fig. 7.

[16] С.Д. Захаров, *Свинцовые пломбы Белоозера*, [in:] Н.А.Макаров, А.В. Чернецов (eds.), *Русь в IX-XIV вв. Взаимодействие Севера и Юга,*

Designs were impressed on the lead seals with a pliers-shaped instruments – boulloteria (Greek and Latin singular forms – βουλλωτήριον / boullotèrion and *bullotirium* respectively) – known from finds recorded on the Byzantine territory[17], at Novgorod in a deposit dated to the 15th c.[18], at Navahrudak in Belarus' in a 13th-century layer[19] (Figs. 6-7). In Western Europe a boulloterion survives in the museum in Leyden[20].

It is possible also that designs could have been impressed using special matrices, known from Western European finds[21] (Fig. 8:2). As it is, the connection of the technology of sealing with the Roman and Byzantine tradition is incontrovertible. In the West and East of Europe this practice could have emerged independently, but as we shall see, contacts between the two environments, mutual influence even, are quite possible. This leads us to the question about the relationship between small lead seals and seals in history and research, and also, the place of lead seals in the medieval sigillography.

All too often lead seals cannot be distinguished from seals based on their appearance. Many small lead seals were impressed on blanks much larger than the diameter of the matrices of the boulloterion and the small lead seal turns out to be close in its size to the smaller act seals (lead seals sealing administrative documents). Nevertheless, on the whole small lead seals tend to be small (7-17 as compared to 20-40 mm act seals), and characterised by perfunctory execution and lack of longer inscriptions of several lines and a larger number of words. Other than that, the designs on the act seals are more complex and apparently more diverse than on the small lead seals. On the other hand, some impressions classified with confidence to the group of act seals were made on very small blanks. Consequently, the only relatively reliable criterion to differentiate small lead seals from seals would be that of weight. Even seals of a smaller diameter were impressed on blanks weighing more than 8 grams in contrast to the weight of even the larger small lead seals which rarely reaches 3-4 grams[22].

Thus, it would be a mistake to treat seals and small lead seals as sigillographic phenomena of the same order even if they were made following similar standards. The key difference between the two is in their function which, as noted earlier with regard to the small lead seals, is still open to discussion.

Recent years have brought new developments in the study of small lead seals. One of them has been the postulate to dedicate a separate auxiliary discipline of history – "plumbology" – to the study of their epigraphics. Other names have been suggested e.g., "plombistyka" and "plumbistyka"[23]. Another name suggested for this discipline is small sphragistics/sigillography – in Russian "малая сфрагистика" ("malaya sfragistika")[24] as a special branch of great sphragistics/ sigillography, in Russian "большая сфрагистика" ("bol'shaya sfragistika"). To the authors of this publication dedicating a separate discipline for the study of small lead seals does not seem productive. A small lead seal does not exist in isolation, it is inextricably linked to the geography of finds and the archaeological context.

To be sure, it is important to study the small lead seals in the context of sigillography, but they must be studied as an independent phenomenon, in connection with their iconographic and archaeological context.

Москва (Наука) 2005, p. 20-63, specifically p. 22; for Czermno see: I. Florkiewicz, A. Jusupović, A. Musin, *Early medieval small lead seals of "Drohiczyn type" from Czermno: a catalogue = Plomby „typu drohiczyńskiego" z Czermna: katalog znalezisk*, [in:] I. Florkiewicz, A. Jusupović, A. Musin *et al*., *The Sphinx of Slavic sigillography – small lead seals of "Drohiczyn type" from Czermno. Material evidence = Sfinks słowiańskiej stragistyki – plomby „typu drohiczyńskiego" z Czermna. Podstawy źródłowe,* U Źródeł Europy Środkowo-Wschodniej = Frühzeit Ostmitteleuropas 6:2, Kraków-Leipzig-Rzeszów-Saint Petersburg-Warszawa (Leibniz-Institut für Geschichte und Kultur des östlichen Europa [GWZO]/Instytut Archeologii i Etnologii Polskiej Akademii Nauk/Instytut Archeologii Uniwersytetu Rzeszowskiego/Институт истории материальной культуры Российской академии наук) 2020, p. 53-354.

[17] G. Zakos, A. Veglery, *Byzantine Lead Seals*, Basel [s.n.] 1972, vol. I, part 1; see also G. Schlumberger, *Un « boullotirion » byzantin ou appareil à fabriquer les sceaux de plomb de l'époque byzantine,* Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres, 55e année, no 5, 1911, p. 411-417.

[18] П.Г Гайдуков, О.М. Олейников, *Новгородский буллотирий XIV в*., Археология и история Пскова и Псковской земли 28:58 (2013), p. 242-250.

[19] Ф.Д. Гуревич, *Древний Новогрудок (посад – окольный город)*, Ленинград (Наука) 1991, p. 98 f., 117, Fig. 7:6.

[20] N.M. Rodenburg, *"Seal and Deal." Cloth Production and Trade between the Netherlands and Scania during the Late Middle Ages and Early Modern Times* (Master Thesis, Lund University, Lund) 2011, p. 52, Fig. 10 (http://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=1968456&fileOId=1974547; accessed on: 06.06.2019).

[21] S. Schutte, *Tuchplomben als städtische Zeichen. Das Fallbeispiel Göttingen*, Anzeiger des Germanischen Nationalmuseum 1993, p. 135-141, specifically p. 137, Fig. 3.

[22] *Cf*. on the same subject С.В. Белецкий, *Размеры и вес актовых печатей*, [in:] Л.Б. Вишняцкий (ed.), *Ex Ungue Leonem: сборник статей к 90-летию Л.С. Клейна*, Санкт-Петербург (Нестор-История) 2017, p. 334-342.

[23] K.M. Kowalski, *Gotyckie plomby towarowe jako źródła epigraficzne (w świetle artefaktów przechowywanych w kolekcjach gdańskich)*, Studia Epigraficzne 2 (2006), p. 199-210; R. Liwoch, *Plomby typu drohiczyńskiego z Drohiczyna nad Bugiem w Krakowskim Muzeum Archeologicznym*, Materiały Archeologiczne 40 (2015), p. 237-244.

[24] О. Алфьоров, *Сфрагістика Київської Русі в інтернет-мережі (сайт sfragis.com)*, Спеціальні історичні дисципліни 21 (2013), p. 164-166.

This last aspect has a special significance. As noted earlier, the number of Byzantine lead seals is estimated at 60,000 or even 80,000 specimens[25], quite a few of them dated reliably which makes them extremely interesting. What is a major drawback is that most of these lead seals are known to us from early museum collections and have no recorded context of discovery. Fortunately, increasingly often attention is paid to recording this context. It is hard to refrain from invoking the observations of the eminent sigillographer Werner Seibt[26] or the contribution from Victoria Bulgakova concerning finds of Byzantine lead seals retrieved since the 1860s from the Sea of Marmara at Constantinople (Seraskerat). Contrary to their traditional interpretation as the remains of an archive, Bulgakova associated these lead seals with the local port[27]. Drawing on the findings from her research at Sudak in Crimea the same researcher is convinced in general that the group finds of lead seals are associated not so much with archives (and diplomacy) as with ports (and commerce)[28].

While her hypothesis has some weak points[29] it is hard to disagree that the study of Victoria Bulgakova has highlighted the importance of intensifying the study of the context of discovery of the Byzantine lead seals. Fortunately the number of publications on this subject continues growing, not only in Eastern Europe[30] or the Slavic area in the Balkans[31], but also in Greece[32] and Turkey[33].

The iconographic context is extremely important. The study of small lead seals is closely related to the understanding of a specific category of medieval symbols and images as the Rurikid emblems which cannot be understood taken out of the historical, archaeological and geographic context in which objects bearing such impressions came to light. However, the study of Rurikid emblems is encumbered with no less serious problems of terminology and methodology as small lead seals. The research terminology needs to be adapted to the international scientific dictionary of historical terms associated with systems of signs and emblems in use in Europe.

The nature of the Rurikid emblems continues to be discussed by researchers – are they heraldic, or protoheraldic marks, or do they belong to a different branch of emblematics. According to some observations, the Rurikid princely dynasty of Eastern Europe was using these princely devices to denote property rights over various items similarly to fully-fledged heraldic charges coat of arms. However, in contrast to the coats of arms of West European tradition, these emblems did not belong to whole families or kin groups but were personal symbols, with every prince having his own "sign".

---

[25] *Cf.* Footnotes 13-14 above.

[26] W. Seibt, *Zukuftsperspektiven der byzantinischen Siegelkunde – auf welchen Gebieten sind die bedeutendsten Wissenszuwächse zu erwarten*, [in:] Ch. Stavrakos, B. Papadopoulou (eds.), *Ἤπειρόνδε. Proceedings of the 10th Internationalen Symposium of Byzantine Sigillography (Ioannina 1.-3. October 2009)*, Wiesbaden (Harrassowitz Verlag) 2011, p. 17-36, specifically p. 33.

[27] V. Bulgakova, *"Der Siegelfund vom Seraskerat" in Konstantinopel: Ein historiographischer Mythos?*, [in:] Ch. Stavrakos, B. Papadopoulou (eds.), *Ἤπειρόνδε. Proceedings of the 10th Internationalen Symposium of Byzantine Sigillography (Ioannina 1.-3. October 2009),* Wiesbaden (Harrassowitz Verlag) 2011, p. 47-64; *cf.* also В.И. Булгакова, *„Скопление печатей с территории Сераскерата" в Константинополе: историографический миф?,* Сугдейский сборник 5 (*Материалы V Судацкой международной научной конференции "Причерноморье, Крым, Русь в истории и культуре", г. Судак, 23-24 сентября 2010 г.*), Киев-Судак 2012, p. 309-326.

[28] *Cf.* observations made by this researcher in her conclusion of the fieldwork of 2004-2005, "In a wider perspective, the results of the underwater excavations at Sudak challenge previous interpretations of the phenomenon of maritime (Constantinople, Sudak, Cherson), fluvial or on-land (Drogičin, Novgorod, Preslav) accumulations of seals in the Middle Ages. A strong case can be made that sigillographic complexes are mostly related to the handling of commercial cargo and do not, as has been generally assumed until now, originate from the remains of archives" (https://www.doaks.org/research/byzantine/project-grants/bulgakova-2005-2006; accessed on: 06.06.2019).

[29] *Cf.* O. Karagiorgou, Rev.: *Ἤπειρόνδε. Proceedings of the 10th International Symposium of Byzantine Sigillography (Ioannina, 1-3 October 2009)*, (ed.) *Christos Stavrakos and Barbara Papadopoulou, Wiesbaden: Harrassowitz Verlag, 2011 (360 p.)*, Byzantina Symmeikta 26 (2016), p. 375-394, specifically p. 367-379.

[30] V. Bulgakova, *Byzantinische Bleisiegel in Osteuropa: die Funde auf dem Territorium Altrußlands,* Mainzer Veröffentlichungen zur Byzantinistik 6, Wiesbaden (Harrassowitz) 2004. On the subject of lead seal discovered on Rus' territory see also articles in the book presented here.

[31] Outstanding in this respect is research in Bulgaria: I. Jordanov, *Corpus of Byzantine Seals from Bulgaria*, Sofia (Agato Publishers/Bulgarian Academy of Sciences. Archaeological Institute with Museum) vol. I (2003), vol. II (2006), vol. III (2009). In Northern Macedonia, recently R. Mihajlovski, *A collection of medieval seals from the fortress Kale in Skopje, excavated between 2007 and 2012,* Byzantion 86 (2016), p. 261-316; in Serbia see V. Ivanišević, B. Krsmanović, *New Byzantine seals from Morava (Margum) and Braničevo*, Starinar 68 (2018), p. 111-124.

[32] Notable is a catalogue of over 500 lead seals from Greece, *cf.* J. Koltsida-Makri, *Μολυβδόβουλλα από ανασκαφές και γενικότερα γνωστής προέλευσης στον ελλαδικό χώρο*, [in:] Ch. Stavrakos, B. Papadopoulou (eds.), *Ἤπειρόνδε. Proceedings of the 10th Internationalen Symposium of Byzantine Sigillography (Ioannina 1.-3. October 2009)*, Wiesbaden (Harrassowitz Verlag) 2011, p. 237-255.

[33] *Cf.* V. Bulgurlu, *Byzantine Lead Seals from the Kadikalesi/Anaia Excavations*, [in:] B. Böhlendorf-Arslan, A. Ricci (eds.), *Byzantine small finds in archaeological contexts*, Byzas. Veröffentlichungen des Deutschen Archäologischen Instituts Istanbul 15, Istanbul (Ege Yayinlari) 2012, p. 233-240; V. Bulgurlu, *Yenikapi'daki Theodosius Limani Kazilanndan Bizans Kursun Mühürleri* (= *Byzantine Lead Seals from the Theodosian Harbor Excavations at Yenrkapr*), [in:] P. Magdalino, N. Necipoglu (eds.), *Trade in Byzantium. Papers from the Third International Sevgi Gönül Byzantine Studies Symposium,* Istanbul (Koc University Press) 2016, p. 403-443; Ü. Demirer, N. Elam, *Lead Seals of the Kibyra Excavations,* Adalya. The Annual of the Koç University Suna & İnan Kıraç Research Center for Mediterranean Civilizations (AKMED) 21 (2018), p. 245-276.

Similarly, the history of these emblems themselves raises many questions. In his account of the 943-944 campaign of the Rus' against Barda, the historian Ibn Miskawayh noted that the Rus', when taking ransom for prisoners left their symbol in the form of a piece of clay, or a pottery shard, with a seal or sign, so that the former prisoner would be handled no more[34]. Additionally, in *Pravda Ruskaya* (Ruthenian Justice or Rus' Truth [Law]; source from 11th c.) we also find references to princely symbol or emblems, "for [stealing] the prince's horse, if it is branded [the offender is to] pay three grivnas"[35]. The horse presumably would have been branded with the prince's mark. But to what extent can we apply to these marks the terminology developed for the heraldry of Western Europe with its well-developed iconography and legal base? Is it legitimate to refer to the Rurikid emblems terms such as "princely device" or "heraldic device"?

In the Russian, Ukrainian and Belarusian historiographies the phenomenon is often described using terms such as "family or personal-family emblems of medieval Rus' princes", "princely emblems", "Rurikid emblems", "marks of princely property", "personal-family emblems", and "Rurikid coat of arms". In Polish research literature they are referred to as coat or arms or princely marks identified with representatives of the Rurik dynasty ("symbole herbowe Rurykowiczów", "znaki książęce Rurykowiczów"). In English-language research we find a great terminological diversity: "the symbols of the Rurikids, the Rurikid dynasty heraldic symbols, the crests of the Rurikid dynasty, the Rurikid family emblems, the emblems of the Rurikids, the signs of the Rurikids, the personal princely heraldic emblems/symbols of the Rurikid dynasty/family, the princely (knyaz's) brand (stamp), the princely symbol in the form of a bident or trident" or simply "Rurikids' tamga, bident, trident" or "trident-like authority symbol"[36].

In a new German-language version of a popular book on the archaeology of Eastern Europe the marks of the Rurikids ("Zeichen des Rjurikiden") are referred to as "altrussischen Fürstenwappen"[37].

Without a doubt, the researchers who have compared the Rurikid devices/marks/emblems to the tamga system of nomadic Turkic peoples are right (tamga as identification marks, tamga-like symbols). On the other hand, the tamgas need not necessarily have a connection with the sign system of Khazaria.

---

[34] „Когда он (Рус) убеждался, что у мусульманина не осталось ни золотых, ни серебряных монет, ни драгоценностей, ни ковров, ни одежды, он оставлял его и давал ему кусок глины с печатью, которая была ему гарантией от других", *cf*. Ибн-Мискавейх о походе Русов в Бердаа в 332 г. = 943/4 г., А. Якубовский (ed.), Византийский временник 24 (1926), p. 63-92, specifically p. 67. English version, "Only when the Russian was convinced that nothing remained to him, no gold, silver, bedding or clothing, would he let him go, giving him a piece of stamped clay to serve as a safe-conduct"; *cf. The concluding portion of the "Experiences of the Nations" by Miskawaihi,* H.F. Amedroz, D.S. Margoliouth (eds.), *The Eclipse of the Abbasid Caliphate*, Oxford (Blackwell) 1921, vol. II, p. 70.

[35] *Правда Русская*, Б.Д. Греков (ed.), Москва (Издательство Академии наук СССР) 1940, vol. I, p. 399; *The Laws of Rus' – Tenth to Fifteenth Centuries*, D.H. Kaiser (ed.), Salt Lake City (Charles Schlacks Publisher) 1992, p. CXIX, No. 45.
In this context see also the description of the Pillars of Gediminas given by the Polish historian Jan Długosz in his account of the Battle of Grunwald of 1410, "Decem tantummodo signum aliud habebant et a triginta aliis distinguebantur, in quibus in campo rubeo signa, quibus Withavdus equos, quorum multitudine abundabat, insignire consueverat, depicta erant, que quidem in hunc modum, quoniam rebus describi non possunt, pingebantur […]" = „Only ten [banners] had on them a different emblem, different from the other thirty. Painted on a field gules were devices used customarily by Vytautas in marking his horses, of which he had a good many. These devices, not easily described, were painted thus [drawing of the device]", Joannis Dlugosii *Annales seu cronicae incliti Regni Poloniae*, lib. X et XI (1406-1412), M. Plezia (ed.), Varsaviae (Wydawnictwo Naukowe PWN) 1997, p. 93.

[36] See for example: S. Franklin, J. Shepard, *The Emergence of Rus 750-1200*, London (Longman) 1996, p. 120 f.; O. Pritsak, *The Origins of the Old Rus' Weights and Monetary Systems*, Cambridge, MA (Harvard Ukrainian Research Institute) 1998, p. 81-89; M. Roslund, *Guests in the House: Cultural Transmission Between Slavs and Scandinavians 900 to 1300 AD*, The Northern World 33, Leiden (Brill) 2007, p. 428; A. Fetisov, *The 'Rurikid sign' from the B3 church at Basarabi-Murfatlar*, Apulum 44 (2007), p. 299-314; V. Spinei, *The Romanians and the Turkic Nomads North of the Danube Delta from the Tenth to the Mid-Thirteenth century,* Leiden (Brill) 2009, p. 54; Ch. Hedenstierna-Jonson, *Rus', Varangians and Birka Warriors,* [in:] L. Holmquist Olausson, M. Olausson (eds.), *The Martial Society. Aspects on Warriors, Fortifications and Social Change in Scandinavia,* Theses and papers in archaeology B:11, Stockholm (Archaeological Research Laboratory/Stockholm University) 2009, p. 159-178; R.K. Kovalev, *Grand princess Olga of Rus' shows the bird – her 'Christian falcon' emblem*, Russian History 39 (2012), p. 460-517, B. Zhivkov, *Khazaria in the Ninth and Tenth centuries*, East Central and Eastern Europe in the Middle Ages, 450-1450, vol. 30, Leiden (Brill) 2015, p. 275; И.Ю. Стрикалов, А.В. Чернецов, *Гончарное клеймо со знаком Рюриковичей из Старой Рязани*, Краткие сообщения Института археологии РАН 249 (2017), p. 109-115; F. Curta, *Eastern Europe in the Middle Ages (500-1300)*, Brill's Companions to European History 19, Leiden (Brill) 2019, vol. I, p. 209; see also on Internet https://en.wikipedia.org/wiki/Symbols_of_the_Rurikids (accessed on: 06.06.2019); https://commons.wikimedia.org/wiki/Category:Coats_of_arms_of_the_Rurik_Dynasty (accessed on: 06.06.2019); https://commons.wikimedia.org/wiki/File:Ruriks_crests1.png (accessed on: 06.06.2019); http://balticmuseums.ning.com/photo/amphora-with-rurikid?context=album&albumId=6480627%3AAlbum%3A13082 (accessed on: 06.06.2019); https://worddisk.com/wiki/Symbols_of_the_Rurikids/ (accessed on: 06.06.2019); https://en.birmiss.com/the-diving-falcon-the-symbol-of-the-falcon-on-the-signs-of-rurikovich/ (accessed on: 06.06.2019).

[37] A.A. Molčanov, *Die Zeichen der Rjurikiden: Die altrussischen Fürstenwappen*, [in:] N.A. Makarov (ed.), *Die Rus' im 9.-10. Jahrhundert: ein archäologisches Panorama*, Studien zur Siedlungsgeschichte und Archäologie der Ostseegebiete 14, Göttingen (Wachholtz Murmann Publisher) 2017, p. 444-455; note that the translation of the title of the article does not correspond to the concept of the author Arkadi Molchanov who by no means regards the Rurikid marks as coat of arms and assigns them solely to emblematics..

In our study we intend to adhere to the naming of these devices/marks/emblems associated with their most likely origin: the princely bident/trident of the Rurikids, although as a more general term for all types of these marks/devices/emblems we concede to the use of the term "princely device", all the while aware of the difference between the Eastern European emblematics and Western European heraldry[38].

***

As noted earlier, the archaeological context is extremely important in the study of small lead seals. However, at present approximately 6% of small lead seals derive from professionally excavated or surveyed archaeological sites. Only in these cases we can hope to establish a reliable archaeological context or at the least to specify the spatial distribution of finds on the surface of the site. Most small lead seals were collected by amateurs, or even come from illegal excavations and metal detector searches. The study of such collections raises scientific and ethical issues, yet another challenge for the research community.

It is no secret that most small lead seal collections known before the beginning of the 20th c. – approximately 15,000 specimens, had also been amassed by amateurs. We could call these collections illegal, although in those days there were no laws against their activities. As it were, the research community today is free to make use of materials in these collections now regarded as legal after they were entered into museums or published.

However, the situation is much more serious today now that black archaeologists ("черные археологи" / chernye arkheologi) carry out illegal excavations and metal detecting activities with an eye on commercial gain on an unprecedented scale. The community of these "site looters" is far from uniform. It includes genuine buffs and criminal groups who lack ethical principles and moral criteria, and also understanding of the scientific approach to antiquity and the importance of the archaeological context when it is discovered. Members of these groups and individual diggers not only take the artefacts out of their context but often fabricate information about the site and circumstances of discovery, thereby creating a distorted historical and archaeological reality. Another negative effect of the spread of black archaeology is corruption among government officials and law enforcement functionaries, yet another adoption of double standards by the leaders of some academic bodies.

Also the small lead seals from Czermno published in the present volume are known to us primarily thanks to metal detector use, both illegal and as within authorized field survey projects completed by Andrzej Kokowski, Marcin Piotrowski and Artur Troncik in 2010-2011 (Fig. 9), and stationary archaeological fieldwork carried out since 2013[39]. The subject of metal detector use is mentioned in nearly all of the research articles published in the present volume discussing finds of small lead seals. The recording by Petr Gaydukov of a truly impressive number of these objects (almost 35,000!) has been and continues to be largely the effect of metal detector use.

It is evident that the current stage of the civil development of societies and states of Central and Eastern Europe the problem of non-professional and illegal search for archaeological artefacts cannot be resolved. It cannot be denied, however that thanks to the rampant use of metal detectors by amateurs and site looters the sharp increase in the number of small lead seals fillings enabling us to take their study to a new level.

In this situation we decided to devote some remarks to the problem of amateur detectorists. Not confined to Europe alone this essentially has become a global problem. In our observations on this subject we focus in the main on the territory of Belarus', Poland, Russia and Ukraine – the country of origin of small lead seal finds discussed here.

The framework for the protection of archaeological remains and objects in Europe is provided by the *European Convention on the Protection of the Archaeological Heritage* (the Malta Treaty) of 1992. It was signed by forty-five states so far, including Poland, Russia and Ukraine (but not Belarus')[40]. However, the

[38] We dedicated a separate part (III) in this monograph to the history of the study of Rurikid emblems in Eastern Europe with possible interpretations of specific devices.

[39] On the history of research at Czermno see T. Dzieńkowski, I. Florkiewicz, M. Wołoszyn, *Early medieval settlement complex at Czermno: an itroductory essay = Wczesnośredniowieczny kompleks osadniczy w Czermnie: esej wprowadzający,* [in:] I. Florkiewicz, A. Jusupović, A. Musin *et al., The Sphinx of Slavic sigillography: small lead seals of "Drohiczyn type" from Czermno. Material evidence = Sfinks słowiańskiej sfragistyki: plomby „typu drohiczyńskiego" z Czermna. Podstawy źródłowe,* U Źródeł Europy Środkowo-Wschodniej = Frühzeit Ostmitteleuropas 6:2, Kraków-Leipzig-Rzeszów-Saint Petersburg-Warszawa (Leibniz-Institut für Geschichte und Kultur des östlichen Europa [GWZO]/Instytut Archeologii i Etnologii Polskiej Akademii Nauk/Instytut Archeologii Uniwersytetu Rzeszowskiego/Институт истории материальной культуры Российской академии наук) 2020, p. 15-51.

[40] *Cf.* https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/143/signatures (accesssed on: 06.06.2019).

Convention does not set any more specific rules for dealing with amateur metal detecting. In Europe (both in the EU and non-EU countries) there are no uniform solutions in this respect.

Very liberal regulations are in force in Scandinavia, particularly in Denmark and in Great Britain.

It is worth taking a closer look at the Danish model which demonstrates that the problem of amateur metal detecting is not only a matter of the legal regulations in force but also of the legal tradition that is alive within that society. To quote Helle Horsnaes, "Since the late 1970s a new find category has altered the way we study coin finds in Denmark. When metal detectors first became available and affordable to the general public the dangers for archaeological heritage were soon recognized. In Denmark as in other countries there was a lot of discussion, but while private use of metal detectors was banned in most countries in the Continent, a pragmatic stance in the end prevailed in Denmark. Rather than demonizing the metal detector, it was seen as a tool that can be used with good or bad intentions. A leaflet describing the already existing legislation and stressing the obligation to follow the rules was issued, and amateur archaeologists and local museum authorities were urged to cooperate. Illegal looting of archaeological sites – so-called night-hawking – was and is the major fear in most European countries when discussing the use of metal detectors. No doubt illicit surveying (with and without metal detector) and excavation have taken place in Denmark, but the general impression is that when it comes to metal detecting the cooperation between local authorities and amateur archaeologists have been a considerable success: Little damage to the heritage is caused by the use of metal detectors, and there are few known examples of looting. Reasons for this success are manifold, and probably the sheer interaction of different reasons is of major importance. First of all the Danish danefæ (treasure trove) legislation is age old, ultimately deriving from Medieval legislation, and it was well implemented before the invention of the metal detector. The reward and the recognition of the finder (rather than the landowner) ensure an impetus to declare the finds, and in particular from the 19th century there are tales about a poor man or woman who made an exceptional find and received a generous reward enabling even social ascent. On the other hand, Denmark has been blessed with a lack of demand for archaeological finds. It has simply not been fashionable to collect Danish antiquities, and few object types would reach high prices in the market. Thus there is little to lose but a good chance to gain economically, when fulfilling the legal requirements. […] Metal detector use is allowed on all areas, provided the owner has given his permission. In practice this means that detection cannot take place on public areas, and it is strictly forbidden on sites with protected heritage. Metal detector surveys rarely affect coastal areas that are normally public property, and urban areas are naturally impossible to survey. The countryside of Denmark is on the contrary well suited for detector archaeology. Around 60% of the country is farmed land, and much farming is based on cereal-growing, often alternating with other types of crops such as beet or rape. These fields are worked all year round and they are regularly ploughed and harrowed. As such they are ideal for metal detector use: The harrowed field presents a relatively level surface with good visibility, and the trained detectorist will often be able to see changes in soil colour indicating the existence of ploughed up cultural layers"[41].

In the United Kingdom legislation provides for exclusive State ownership of assemblages of precious metals (*Treasure Act* 1996; *Dealing in Cultural Objects [Offences] Act* 2003). In England and Wales, the Portable Antiquities Scheme (PAS) launched in 1997 by the United Kingdom government helps to record new discoveries of minor archaeological objects of non-precious metals in cooperation with amateur metal detectorists without whose hobby these archaeological objects would be unrecorded or perhaps never found at all[42].

The liberalism of Scandinavia and Great Britain, the result not only of specific legal norms (including those concerning ownership) but also of specific traditions, legal culture of a civic society (and let us add – its level of prosperity!) has met and continues to meet with resistance outside this region of the Old continent. As aptly expressed by Samuel A. Hardy, "Historically, due to the number of metal detectorists, the behaviour of metal detectorists, the freedom with which metal detectorists operate and the level of professional/state

[41] H.W. Horsnaes, *Coin finds and metal detector archaeology. Evidence from surveys and excavations in Bornholm*, *Denmark*, [in:] G. Pardini, N. Parise, F. Marani (eds.), *Numismatica e archeologia. Monete, stratigrafie e contesti, Dati a confronto. Workshop internazionale di numismatica*, Roma (Edizioni Quasar) 2017, p. 501-510, specifically p. 502.

[42] R. Bland, *The development and future of the Treasure Act and Portable Antiquities Scheme*, [in:] S. Thomas, P.G. Stone (eds.), *Metal Detecting and Archaeology*, Woodbridge (The Boydell Press) 2008, p. 63-86; R. Bland, *Ustawa Treasure Act i program Portable Antiquities Scheme w Anglii i Walii*, Wiadomości Archeologiczne 68 (2017), p. 3-11.

facilitation of metal detecting in England, metal detecting for cultural property has been characterised as the "English disease" by continental European observers[43].

In continental Europe, its East Central and Eastern regions included, the approach to metal detector use is much less liberal.

In Poland the relatively severe law regulating metal detectorist activities was enacted recently (2018) but metal detector use has been met with opposition from professional archaeologists ever since the early 1990s. While we are on this subject, we need to make a distinction between two aspects of this practice: the use of metal detectors by professional excavation teams (research teams led by professional archaeologists, acting on the basis of a permission from relevant conservation services) and by the so-called treasure hunters.

The discussion on the legitimacy of metal detector use by professional archaeologists took place in Poland at the end of the 1990s[44]. By way of example, Zenon Woźniak prominent archaeologist of the older generation who was in favour of metal detector use while Paul Barford, British archaeologist living and working in Poland, was mostly critical[45]. Obviously, the argument in support of metal detectors was that their use brings in truly impressive results. From the Polish perspective very enlightening were the results of metal detector survey made on the Roman Period settlement at Jakuszowice in southern Poland. Out of 109 coins recovered on this site over eleven seasons of archaeological fieldwork (1982-1991; 1995) 48 originated from regular excavation and not less than 61 from a metal detector assisted field survey which lasted only a few days (!)[46].

At the same time, as pointed out with good reason archaeology is indebted to metal detector use not only for fine artefacts but also for the major revolution in our ideas about the culture of prehistoric and later societies inhabiting Europe. As Zenon Woźniak has stressed, the very unimpressive archaeological record recovered from La Tène culture in Poland sites as compared to e.g., the Oppidum of Manching may simply be due to the fact that the latter has been studied with metal detectors since as early as 1973[47].

As we write the use of metal detectors by professional archaeologists assisting the excavation does no raise any major controversy[48].

In Poland heritage objects, including those extracted from the ground/found in the ground are the property of the State Treasury. According to article 189 of the Civil Code if circumstances of discovery of an object give no hope of identifying its fractional co-owners are to be the finder of the object and the owner of the property on which it had been discovered. However, a heritage object of archival material becomes property of the State Treasury, and the finder must submit that object immediately to the relevant head of the county administration (Dziennik Ustaw [Journal of Laws] 19th June 2019)[49].

The 20th February 2015 law on finds regulates the handling of potential heritage objects (Dziennik Ustaw [Journal of Laws] of 2015, item 397, Articles 22-25)[50]; similarly, the 23rd July 2003 law regulating monuments protection and conservation (Dziennik Ustaw [Journal of Laws] of 2003, No. 162, item 1568, Articles 32 and 33, finders are obliged to report their discovery to the relevant regional monuments authority, of if need be, to the local government authorities)[51].

---

[43] S.A. Hardy, *Quantitative analysis of open-source data on metal detecting for cultural property: Estimation of the scale and intensity of metal detecting and the quantity of metal-detected cultural goods,* Cogent Social Sciences 2017:3 (https://www.cogentoa.com/article/10.1080/23311886.2017.1298397; accessed on: 06.06.2019), p. 2; *cf.* P. Barford, *But don't they recover wonderful objects? Na i PAS ar Gyfer Cymru: No to a Welsh PAS*; from http://paswales.blogspot.com.tr/2011/10/but-dont-they-recover-wonderful-objects.html (accessed on: 06.06.2019).

[44] *Cf.* W. Brzeziński, Z. Kobyliński (eds.), *Wykrywacze metali a archeologia*, Warszawa (Generalny Konserwator Zabytków/Stowarzyszenie Naukowe Archeologów Polskich) 1999.

[45] P. Barford, *Stosowanie wykrywacza metali podczas badań archeologicznych*, Sprawozdania Archeologiczne 52 (2000), p. 443-454; Z. Woźniak, *Wykrywacze metali w rękach archeologa – zagrożenie czy niezbędne narzędzie*?, Sprawozdania Archeologiczne 52 (2000), p. 455-466.

[46] K. Godłowski, *Jakuszowice, Woiwodschaft Kielce, Gemeinde Kazimierza Wielka, Fundstelle 2, Siedlung der Trzciniec und Przeworsk – Kultur und des Mittelalters*, Recherches Archéologiques de 1990 (Kraków) 1992, p. 36-53; A. Bursche, *Roman Coinage from Jakuszowice Settlement in North Małopolska*, Notae Numismaticae=Zapiski Numizmatyczne 2 (1997), p. 119-148; A. Bursche, P. Kaczanowski, J. Rodzińska-Nowak, *Monety rzymskie z Jakuszowic*, [in:] R. Madyda-Legutko, T. Bochnak (eds.), *Svperiores Barbari: księga ku czci Profesora Kazimierza Godłowskiego*, Kraków (Instytut Archeologii. Uniwersytet Jagielloński) 2000, p. 101-130.

[47] Z. Woźniak, *Wykrywacze metali w rękach archeologa – zagrożenie czy niezbędne narzędzie*?, Sprawozdania Archeologiczne 52 (2000), p. 455-466, specifically p. 461.

[48] *Cf.* A. Makowska, A. Oniszczuk, M. Sabaciński, *Some Remarks on the Stormy Relationship Between the Detectorists and Archaeological Heritage in Poland*, Open Archaeology 2 (2016), p. 171-181 (https://doi.org/10.1515/opar-2016-0013; accessed on: 06.06.2019).

[49] *Cf.* http://prawo.sejm.gov.pl/isap.nsf/download.xsp/WDU19640160093/U/D19640093Lj.pdf (accessed on: 06.06.2019).

[50] *Cf.* http://prawo.sejm.gov.pl/isap.nsf/download.xsp/WDU20150000397/U/D20150397Lj.pdf (accessed on: 06.06.2019).

[51] *Cf.* https://www.google.com/url?q=http://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20031621568/U/D20031568Lj.pdf&source=gmail&ust=1574168060430000&usg=AFQjCNFU6Ss1WRl0D0nX9seYRUlA3Cz23g (accessed on: 06.06.2019).

Article 36 of the 2003 law regulating monuments protection and conservation lists activities which require a permit from the provincial monuments authority. According to § 1.12 of the same law, a permit is needed also to search for concealed or discarded movable objects, including archaeological objects, using all manner of electronic and technical devices and diving gear. All manner of electronic devices definitely included metal detectors[52].

In practice, the monuments authority decides on who will be given a permission to carry out archaeological fieldwork. When applying for a permit the applicant must prove that he or she has the qualifications required to conduct archaeological fieldwork and specify the methods planned for his or her research (*cf*. the Ordinance of the Minister of Culture and National Heritage of 2nd August 2018, Dziennik Ustaw [Journal of Laws] of 2018 item 1609)[53]. Moreover, article 37e of the 2003 law regulating monuments protection and conservation specifies qualifications obligatory for directing archaeological fieldwork – "a master's degree in archaeology and experience from at least twelve months of archaeological fieldwork"[54].

What is relevant from our point of view, since 1st January 2018 penalties have been for unauthorized archaeological fieldwork have become more stringent. Until recently this used to qualify as an offence, now it is crime liable to a prison sentence. Pursuant to article 109C of the 2003 regulating monuments protection and conservation the penalty for searching for concealed or abandoned heritage objects, also using all manner of electronic and technical devices and diving gear may be a fine, community sentence or a prison term of up to 2 years[55].

In Russia archaeological investigation and searching for archaeological and historical objects is regulated by the Federal law No. 73 *On objects of cultural heritage of the peoples of the Russian Federation* of 25th June 2002[56], and by relevant articles of the Criminal Code and the Code of Administrative Offenses. Specific measures that counteract the private archaeological initiative and the outright looting of the archaeological heritage were introduced into these acts by Federal Law No. 245 of 23rd July 2013 *On the amendments in the legislative acts of the Russian Federation on combating illicit activity in archaeology.*[57]

Under Article 243.2. of the Criminal Code on illegal search and (or) removal of archaeological objects from their place of occurrence the search or removal of archaeological objects from their place of occurrence without an archaeological excavation permit causing damage or destruction of the cultural layer is punishable by a fine of up to 500,000 rubles (about 6,765 EUR) or in the amount of wages or other income of the guilty person for a period of up to eighteen months, or correctional labour for up to one year, or imprisonment of up to two years.

The same acts committed on an archaeological site included in the unified state register of objects of cultural heritage of historical and cultural monuments of the Russian Federation, or on a newly identified site of cultural heritage, are punishable by a fine in the amount of up to RUB 700,000 (about 9,479 EUR) or in the amount of wages or other income of the offender for a period of up to two years or imprisonment for up to four years[58].

The same acts committed using special technical means of search, i.e. metal detectors, by an individual using his or her official position or by an organized group, are punishable by a fine in the amount of up to 1,000,000 rubles (about 13,530 EUR) or in the amount of wages or other income of the offender for a period of up to five years, or by the loss of the right to occupy certain positions, or forced labour for up to five years, or imprisonment for up to six years.

In addition to the Criminal Code, administrative punishment is also provided for in accordance with Article 7.15 of the Code of Administrative Offenses on *Archaeological fieldwork without permission*. Conducting archaeological work without the archaeological excavation permission ("открытый лист"/otkrytyj list) entails the imposition of an administrative fine in the amount of from 1,500 to 2,500 rubles (about 20-34 EUR), for officials – from 4,000 to 5,000 rubles (about 54-68 EUR), for legal entities – from 40,000 to 50,000 rubles

[52] *Cf*. http://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20031621568/U/D20031568Lj.pdf (accessed on: 06.06.2019).
[53] *Cf*. http://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20180001609 (accessed on: 06.06.2019).
[54] *Cf*. http://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20031621568/U/D20031568Lj.pdf (accessed on: 06.06.2019).
[55] https://www.google.com/url?q=http://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20031621568/U/D20031568Lj.pdf&source=gmail&ust=1574168060430000&usg=AFQjCNFU6Ss1WRl0D0nX9seYRUlA3Cz23g (accessed on: 06.06.2019).
[56] https://rg.ru/2002/06/29/pamjatniki-dok.html (accessed on: 06.06.2019).
[57] https://rg.ru/2013/07/26/arch-dok.html (accessed on: 06.06.2019).
[58] http://www.pravo.gov.ru/proxy/ips/?docbody=&link_id=1&nd=102041891 (accessed on: 06.06.2019).

(about 540-675 EUR). The same acts committed using special technical search tools entail the imposition of an administrative fine on citizens in the amount of from 2,000 to 2,500 rubles (about 27-34 EUR), for officials – from 4,500 to 5,000 rubles (about 54-68 EUR), for legal entities – from 50,000 to 100,000 rubles (about 676-1,353 EUR). In all cases the regulations provide for the confiscation of archaeological objects found and equipment[59].

Under the same Law No. 245 (Article 8, Part 3) individuals and legal entities are entitled to own archaeological objects on the condition that these collections have been included in the non-state part of the Museum Fund no later than 1st September, 2016. However, according to lawyers these measures are ineffective, since in Russia currently there are no procedures or mechanisms for such registration[60].

Changes to the legislation of 2013 were initiated, prepared and lobbied for by the professional archaeological community of Russia. However, their propaganda impact on society seems more significant than the specific application of law. In accordance with a well-known joke, in Russia the stringency of laws is compensated for by non-enforcement or its selective application. Inaccurate wording regarding cultural heritage sites, the lack of comprehensive national and regional registers of historical and archaeological monuments, lack of legal documents confirming the status of an archaeological settlement or grave-site as objects of cultural heritage, as their not being listed in the official record, corruption among the police and officials, as well as the desire to turn some bodies of the Russian Academy of Sciences into a "Ministry of Archaeology" are threatening a further destruction of the archaeological heritage.

Similarly in Belarus' where the legislative measures are modelled in general on the Russian practice. On 14th December 2015 the President Alexander Lukashenka signed Decree No. 485, aimed on improving the protection of archaeological sites and artefacts[61]. This was followed by Law No. 407-З of the Republic of Belarus' on Amendments and Additions to the Criminal Code, Code of Administrative Offenses and the Procedurally Executive Code, adopted on 19th July 2016[62]. However, to this day illegal search and trade in archaeological objects has been treated as only an administrative and not a criminal offence. Articles 19.8 and 19.9 were added to the Code of Administrative Offenses on respectively, *Illegal search for archaeological artefacts* and *Illicit trafficking in archaeological artefacts*. As a result, the search for archaeological artefacts, carried out without permission to conduct archaeological research issued to professional archaeologists by the National Academy of Sciences of Belarus' shall be sanctioned by a fine of 15 to 50 of "base units" (≈ minimum wage) in Belarusian rubles (about 383-1,275 EUR). Equipment may be subject to confiscation. Acquisition, sale, donation, barter, pledge of archaeological artefacts in cases prohibited by legislative acts are punishable by a fine of between 10 and 30 "base units" in Belarusian rubles (about 110-332 EUR) and artefacts will be confiscated. Articles 344-345 of the Criminal Code apply to the full or partial destruction, also through neglect, of historical and cultural goods, or ones that might be ascribed with this status, but do not apply to archaeological finds.

Other details are regulated by the decree. The use of metal detectors is allowed only archaeological research carried out by qualified archaeologists. Citizens who own private archaeological collections were required to report them to the state register of archaeological artefacts by 1st January 2017. The new regulations sparked protests of amateur metal detectorists who petitioned Alexander Lukashenko to cancel the measures taken. We can only add that despite the authoritarian system of government in Belarus' the illegal search for archaeological artefacts has yet to be suppressed.

The situation in Ukraine is quite different. Despite legislative measures taken to protect the cultural heritage in general and the archaeological heritage in particular, there are no legal measures pertaining to the use of metal detectors by private individuals unauthorized to conduct archaeological research to search for artefacts. Thus, So, the Law of Ukraine on the *Protection of Cultural Heritage* No. 1805-III of June 8th, 2000, as amended in Article 35 *Permits for conducting archaeological excavations, reconnaissance and other excavation work*, allows the use of metal detectors on archaeological sites only when conducting scientific

[59] http://pravo.gov.ru/proxy/ips/?docbody&nd=102074277 (accessed on: 06.06.2019).

[60] Ю.С Зубенко, Л.В. Чиконова, *Правовой режим археологических предметов, находящихся во владении частных лиц*, Вопросы российского и международного права 7:7A (2017), p. 87-98.

[61] http://president.gov.by/ru/news_ru/view/kommentarij-k-ukazu-485-ot-14-dekabrja-2015-g-12720 (accessed on: 06.06.2019).

[62] http://www.pravo.by/document/?guid=3961&p0=H11600407 (accessed on: 06.06.2019). Процессуально-исполнительный кодекс (Code of civil procedure of the Republic of Belarus') on administrative crimes establishes the administrative procedure, the rights and obligations of its participants, as well as the procedure for exercising the administrative penalty.

research on the basis of an official permission. Consequently, the law does not prohibit private metal detector use outside of archaeological sites – what is not prohibited is permitted[63].

In addition, according to experts, in Ukraine there is no single state register of archaeological sites. in article 10, the Law *On the Protection of the Archaeological Heritage* (No. 1626-IV of 02/18/2004) considers it illegal to carry out archaeological excavations and explorations without permission from the law to conduct such studies and use a metal detector, but the legislator did not go further than this statement[64].

Article 298 of the new edition of the Criminal Code on *Unlawful prospecting on monuments of archaeological heritage* again refers to "already identified archaeological sites entered in the register". Illegal search for artefacts is punishable by a fine of up to 100 "tax-free minimum incomes" (60 EUR) or imprisonment of up to 2 years and a ban on holding certain positions[65].

Under article 92 of the Ukrainian Code of Administrative Offenses adopted in 1984 on *Violation of the requirements of the legislation on the protection of cultural heritage* the failure to submit for permanent storage in a state museum artefacts found during archaeological fieldwork is punishable by a fine of between 50 and 100 "tax-free minimum incomes" (30-60 EUR), the same penalty for officials is from 100 to 150 "minimum wages" (about 60-90 EUR)[66].

Recently, the Supreme Council (Verkhovna Rada) of Ukraine has considered a draft Law Amending Certain Legislative Acts of Ukraine to Counter the Illegal Search for Archaeological Heritage Sites (No. 8314 of 20th April 2018) with a view to increasing the penalty for the failure to submit collections of archaeological objects to a state museum, and in article 92.2, for the failure to report a hoard, understood as a movable object of cultural heritage of high material value, however[67]. Which means that the rule does not apply to ordinary archaeological finds. The new draft law provides that metal detector use, as well as searching in the ground for objects of cultural and historical value, and for relics of prehistoric occupation is subject to licensing according to the Law of 2015 *On the licensing of economic activity*[68]. Obviously, this rule is aimed on legalization of metal prospecting as an activity unrelated scientific archaeological research, and obtaining official permission for excavation and exploration.

It remains to be added that in 2011 the Ukrainian legislation revoked the regulation requiring obligatory archaeological inspection of sites earmarked for construction development. Similarly, Ukrainian laws do not regulate the ownership of private collections of archaeological objects. This situation is related to the position of Ukrainian oligarchs who are actively buying archaeological finds from private individuals for their own collections and have no interest in legislation meant to penalize unofficial archaeological activities and in legally banning metal detector use.

Having presented the legal situation of metal detector use in East Central and Eastern Europe we wish to emphasize that the key problem are not the legal regulations themselves but their execution (the situation in Ukraine is extreme – in this case we cannot escape noticing the connection between the inaction on the part of the State and the lobbing by the oligarchs interested in collecting archaeological objects).

As aptly expressed by Jan Mařík in his analysis of the situation in the Czech Republic, "Treasure hunting of any kind was clearly forbidden already in the law issued in 1987; however, metal detectors were not explicitly mentioned in this law. In the Czech Republic, penalties for private individuals can reach up to approximately 80,000 € and concealment of valuable archaeological finds may be punished by up to eight years in prison. However, in spite of severe penalties, the legal adjustments have had a minimum impact in practice. Based on the number of metal detector users, we may assume that tens of thousands of archaeological finds are found yearly and only a few reported to the state"[69]. The disparity between legal standards and the reality was described much more bluntly by Karl Raimund when he analysed the Austrian system of monuments conservation: "Thus, the good intentions behind a theoretically perfect law turn out to be the pavement for a highway to archaeological heritage hell"[70].

[63] https://zakon.rada.gov.ua/laws/show/1805-14/paran1275 (accessed on: 06.06.2019).
[64] https://zakon.rada.gov.ua/laws/show/1626-iv (accessed on: 06.06.2019).
[65] https://zakon.rada.gov.ua/cgi-bin/laws/main.cgi?nreg=2341-14&p=1214905443606898 (accessed on: 06.06.2019).
[66] https://zakon.rada.gov.ua/laws/main/80731-10 (accessed on: 06.06.2019).
[67] http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_2?pf3516=8314&skl=9 (accessed on: 06.06.2019).
[68] https://zakon.rada.gov.ua/laws/main/222-19 (accessed on: 06.06.2019).
[69] J. Mařík, *The System of Organisation of Czech Archaeology and the Protection of Archaeological Heritage*, [in:] P. Novaković, M. Horňák, M. Pia Guermandi, H. Stäuble, P. Depaepe, J.-P. Demoule (eds.), *Recent Developments in Preventive Archaeology in Europe. Proceedings of the 22nd EAA Meeting in Vilnius, 2016*, Ljubljana (Ljubljana University Press, Faculty of Arts) 2016, p. 205-218, specifically p. 214-215.
[70] K. Raimund, *On the Highway to Hell: Thoughts on the Unintended Consequences for Portable Antiquities of § 11(1) Austrian Denkmalschutzgesetz,* The Historic Environment 2:2 (October 2011), p. 111-133.

It is obvious on the other hand that the severe penalization of amateur metal detectorists will only lead to their criminalization, and the lack of information about private (illegal) searches is only a deceptive success. On the other hand, analysis of data available on metal detectorist internet fora shows that only a part of their finds is submitted to professional archaeologist, proving that a full legalisation of amateur metal detector use is not a good solution either[71].

All of which explains the acrimonious discussion ongoing within the research community as to the direction that needs to be taken for the best future relationship between professional archaeologists and the metal detectorist community[72]. As noted earlier, for many years now metal detector use has not been the reserved to the members of the research community and consequently the discussion has spread to the daily press[73].

One way out of this situation is cooperation with amateur metal detectorists during the excavation of archaeological sites. This has been done in the Czech Republic (Libice nad Cidlinou)[74], Poland (Ostrów Lednicki)[75] and Germany (Schleswig-Holstein)[76]. Obviously, here also the situation is not clear-cut: on the one hand this type of cooperation helps to "train" amateur metal detectorists introducing them to cooperation with the staff of museums, research units and monuments conservation services, on the other, it makes legal large-scale mass investigation of archaeological sites by people who are not qualified archaeologists. Success of this type of initiatives depends largely on the level of organization of all the monuments protection services, museums in a given country (region) the legal status of property on which a given archaeological site is found, and also the involvement and ability of archaeologists to forge friendly relations with local communities.

Needless to say metal detector use is not the main focus of the present analysis we wish to close its discussion here by highlighting some problems:

1) Metal detectors do not only cause archaeologists to have more artefacts at their disposal than previously, these artefacts are *different* than previously.

   Long-term observations – made chiefly by coins specialists – show that wide-scale metal detector use to a dramatic increase in the number of recovered archaeological objects which as less eye-catching tended to escape notice during archaeological excavations carried out without metal detector survey.

   A good example would be Sorte Muld, an Iron Age site in Ibsker parish on the island of Bornholm, best known for the large number of finds of gold-foil figures (Gullgubber). Excavated by archaeologists in 1948-1949, 1950-1953 the site had been investigated since 1980s also by amateur metal detectorists. The efforts of the latter brought in a vast number of finds, numerous gold-foil figures, and more. As noted by Helle Horsnaes "Detector surveys have changed this picture (based on the findings from research made without resort to metal detectors – A.M., M.W.) radically. During the last three decades

[71] On the threat to the archaeological record posed by amateur metal detectorists in Poland, Belarus', Ukraine and Russia, see S.A. Hardy, *'Black Archaeology' in Eastern Europe: Metal Detecting, Illicit Trafficking of Cultural Objects, and 'Legal Nihilism' in Belarus, Poland, Russia, and Ukraine*, Public Archaeology 15:4 (2016; Metal detecting and illicit antiquities protection in Europe), p. 214-237 (https://doi.org/10.1080/14655187.2017.1410050; accessed on: 06.06.2019).

[72] *Cf.* recently: S.A. Hardy, *Quantitative analysis of open-source data on metal detecting for cultural property: Estimation of the scale and intensity of metal detecting and the quantity of metal-detected cultural goods*, Cogent Social Sciences 2017:3 (https://www.cogentoa.com/article/10.1080/23311886.2017.1298397; accessed on: 06.06.2019); P. Deckers, A. Dobat, N. Ferguson, S. Heeren, M. Lewis, S. Thomas, *The Complexities of Metal Detecting Policy and Practice: A Response to Samuel Hardy, 'Quantitative Analysis of Open-Source Data on Metal Detecting for Cultural Property', Cogent Social Sciences 3, 2017*, Open Archaeology 4 (2018), p. 322-333 (https://doi.org/10.1515/opar-2018-0019; accessed on: 06.06.2019); E.B. Banning, *The Archaeological Impacts of Metal Detecting,* Open Archaeology 5 (2019), p. 180-186 (https://doi.org/10.1515/opar-2019-0013; accessed on: 06.06.2019) with further reference literature.

[73] Two symptomatic views: P. Urbańczyk, *Rabusie przeczesują pola i lasy, czekając na sygnał „biiiip". Detektoryści szkodzą archeologii*, Gazeta Wyborcza, 27 XI 2018 (*cf.* http://wyborcza.pl/7,75968,24218654,rabusie-przeczesuja-pola-i-lasy-czekajac-na-sygnal-biiiip.html; accessed on: 06.06.2019); A. Bursche, T. Wiścicki, *Detektoryści. Wróg czy sojusznik,* Newsweek Polska, 10 IV 2019 (*cf.* https://www.newsweek.pl/wiedza/historia/aleksander-bursche-o-ludziach-z-wykrywaczem-metali-wywiad/qxnw77p; accessed on: 06.06.2019).

[74] J. Mařík, *Amateur and professional archaeologists: Legal mode for their cooperation in the Czech Republic*, [in:] A. Lagerlöf (ed.), *Who cares? Perspectives on Public Awareness, Participation and Protection in Archaeological Heritage Management*, EAC Occasional Paper 8, Budapest (Archaeolingua/National Heritage Board, Sweden) 2013, p. 105-108.

[75] M. Kostyrko, A. Kowalczyk, L. Żuk, *Projekt Lednica „Razem dla ratowania zabytków". Sprawozdanie za rok 2018*, Studia Lednickie 18 (2019), p. 323-333.

[76] C. von Carnap-Bornheim, U. Ickerodt, E. Siegloff, *Archeologia landu Szlezwik-Holsztyn a archeologia detektorystyczna*, Wiadomości Archeologiczne 68 (2017), p. 13-18; J. Schuster, *Sypiając z wrogiem? Potencjał badawczy amatorskiej „archeologii detektorystycznej" na przykładzie zabytków z okresu wpływów rzymskich i okresu wędrówek ludów z lat 2006-2014, odkrytych w kraju związkowym Szlezwik-Holsztyn*, Wiadomości Archeologiczne 68 (2017), p. 19-31.

966 coins have been found, among them 803 denarii, 30 solidi, seven Roman bronze coins, one radiate (antoninianus), and one siliqua. The gold rich site has become a silver rich site as well (emphasis – A.M., M.W.)"[77]. From our point of view of a particularly relevant are the conclusions formulated by this Danish researcher, "This pattern of old gold finds being supplemented with large numbers of silver objects when detector surveys are conducted is also encountered in the Gudme chieftain centre on Funen, and it is a clear warning against comparing detector sites with sites only known through material recovered by accidental finds or field surveys without use of metal detector. Silver and bronze objects in general, and thereby the most commonly struck coin types, would obviously be under-represented in the latter"[78].

These observations apply also to objects made of lead such as seals and small lead seals of "Drohiczyn type", but not only. The extent to which metal detector use can increase the recovered quantity of sigillographic objects is reflected by the observations of Jan Mařík about the site at Libice nad Cidlinou[79].

It is obvious therefore that the number of finds of small lead seals from particular archaeological sites and regions is directly related to metal detector use and the extent to which evidence obtained from metal detectorists is put into academic circulation.

The more often metal detectors are used the more reports about fragments small lead seals, damaged artefacts *etc.*

2) With the spread of amateur metal detecting activities we can expect an increase in the percentage of small lead seal finds reported by metal detectorists rather than professional archaeologists. Clearly, the Medieval Period will not be an exception, as exemplified by the Migration Period history of the Kujawy region (central-northern Poland) which – exactly on the basis of amateur metal detector finds is now being rewritten[80]. It is more than certain that the metal detector phenomenon is unstoppable but we need to grasp its consequences namely that the view of the past created by us, professional archaeologists – is one based now and in future increasingly on the findings of non-archaeologists.

   This fact is an additional reason to monitor and document the amateur metal detectorist activities!

3) Finally it is important to note that indiscriminate prospecting on archaeological sites (often unauthorized, assisted by e.g., ploughing) may result in the depletion of the culture deposit trough the removal of all the metal artefacts. This is suggested by the findings of Samuel A. Hardy from his monitoring of amateur metal detectorist internet fora, some of them concerning Eastern Europe[81].

   This fact could be additional motivation for the State to buy properties where archaeological sites of major importance are found to restrict their investigation. While on this subject, we cannot neglect to mention the settlement complex at Czermno a large portion of which lies on property which is now in private hands[82].

4) Our view is that cooperation with private collectors and the study of private collections are necessary, but also that private collector activities should be subject to some restrictions. An important factor is trust in the information volunteered by finders, and also, a selective approach and working with volunteers. It is essential to practice caution when using information about the exact findspot and its association with a particular archaeological site.

5) This makes it important in our research to focus on collections of small lead seals and their single finds which derive from professionally conducted and recorded archaeological excavations and fieldwalking surveys.

---

[77] H.W. Horsnaes, *Coin finds and metal detector archaeology. Evidence from surveys and excavations in Bornholm*, *Denmark*, [in:] G. Pardini, N. Parise, F. Marani (eds.), *Numismatica e archeologia. Monete, stratigrafie e contesti, Dati a confronto. Workshop internazionale di numismatica*, Roma (Edizioni Quasar) 2017, p. 501-510, specifically p. 504.

[78] *Ibidem*.

[79] *Cf.* J. Mařík, *Amateur and professional archaeologists: Legal mode for their cooperation in the Czech Republic*, [in:] A. Lagerlöf (ed.), *Who cares? Perspectives on Public Awareness, Participation and Protection in Archaeological Heritage Management*, EAC Occasional Paper 8, Budapest (Archaeolingua/National Heritage Board, Sweden) 2013, p. 105-108. We refer also to the paper on metal detectors as a key instrument in the nondestructive investigation of fortified sites, case study: site Libice nad Cidlinou read by Jan Mařík at the Conference *Cherven' Towns – the golden apple of Polish archaeology*, Seminar No. 4 (Cracow, 7th-9th December 2016).

[80] *Cf.* B. Kontny, M. Rudnicki, *Finds of purse fastenings from the iron age 'central place' at Gąski-Wierzbiczany in Kuyavia (Central Poland)*, Acta Archaeologica Carpathica 51 (2016), p. 307-318.

[81] S.A. Hardy, *Metal-Detecting for Cultural Objects until 'There Is Nothing Left': The Potential and Limits of Digital Data, Netnographic Data and Market Data for Open-Source Analysis*, Arts 2018:7, p. 40 (doi:10.3390/arts7030040; accessed on: 06.06.2019).

[82] *Cf.* M. Florek, *Some Issues Related to the Problem of Heritage Conservation of Archaeological Complexes in Czermno (Tomaszów Lubelski County) and Gródek (Hrubieszów County)*, Analecta Archeologica Ressoviensia 13 (2018), p. 357-375.

Besides presenting the series of small lead seals collected at Czermno in the course of archaeological fieldwork made in 2010 and 2011 our monograph dedicates individual chapters to small lead seal retrieved during regular archaeological excavation or surface survey projects.

***

Another challenge in the study of small lead seals is related to their conservation, curation and exhibition in museums.

Unfortunately, the surface of lead objects may develop a layer of corrosion products which hamper or fully prevent identification of the image (macroscopy analysis) and impede metallographic analysis. In extreme cases it may even lead to the disintegration of sigillographic objects. Even if this does not happen, the designs and inscriptions on sigillographic objects become increasingly harder to decipher. Needless to say this is a problem which concerns all manner of sigillographic objects and is not limited to their finds from East Central and Eastern Europe and affects bullae and small lead seals found on the former territory of Byzantium e.g., the collections in the Istanbul Archaeological Museum[83].

Because of this, in our study of the sigillographic objects from Czermno a major role was played by their conservation, financed from the projects *Seals at the Border, Seals in Context...* (Dumbarton Oaks Center; 2011-2012), *Cherven': a stronghold between the East and the West* (Ministry of Culture and National Heritage; 2012), and also, from *The Sphinx of Slavic sigillography...* (National Science Centre; 2014-2019). In 2012-2019 the exhibition *Cherven': a stronghold between the East and the West* was taken to many venues across Poland (*cf*. below) which made it necessary to subject to conservation many of the exhibits, also the lead bullae and small lead seals. The treatment of the latter was undertaken in 2012-2017 by Elżbieta Nosek (Cracow, in cooperation with Janusz Stępiński and Aldona Garbacz-Klempka), Krzysztof Rybka (Metal Artefacts Conservation Laboratory, Institute of Archaeology, the Nicolaus Copernicus University in Toruń), and in 2018-2019 by Szymon Bednarz (Koszalin)[84]. Some of the methods applied were published in a separate article[85].

For reasons given above in the book presented to the reader some space is accorded to state of the art methods of restoration and conservation of small lead seals used in different museums and laboratories, more notably the State Hermitage Museum and the Institute for the History of Material Culture Russian Academy of Sciences in St. Petersburg[86].

One of the most important issues is to use in the study of small lead seals the most recent achievements of technical sciences.

In medieval archaeology the study of non-ferrous metal objects used to focus on analyses of jewellery, particularly those made of silver. Increasingly often in this research analyses are made of selected isotopes (lead in particular) to identify the sources of silver. Relevant in this context would be the projects implemented by Władysław Duczko (*Origin and circulation of silver in early medieval Poland using lead isotopic analysis*)[87]

---

[83] *Cf.* O. Karagiorgou, rev.: *Jean-Claude Cheynet – Turan Gökyildirim – Vera Bulgurlu, Les sceaux byzantins du Musée archéologique d'Istanbul, Istanbul Research Institute 2012, p. 1074. ISBN 978-6-05-464208-3*, Byzantina Symmeikta 28 (2018), p. 451-461, specifically p. 461.

[84] This work was completed within a project of developing the exhibition space of the Regional Museum in Tomaszów Lubelski (Polish name: *Adaptacja budynku byłego internatu na cele muzealne wraz z organizacją wystaw stałych przy ul. Wyspiańskiego 8 w Tomaszowie Lubelskim* co-financed by the European Regional Development Fund Priority Axis 7 Protection of cultural and natural heritage, Measure 7.1, Cultural and natural heritage – local projects of the Regional Operational Program of the Lublin Voivodship for 2014-2020. Project No. RPLU.07.01.00-06-0086 / 16, Contract No.: RPLU.07.01.00-06-0086 / 16-00).

[85] *Cf.* M. Wołoszyn, E.M. Nosek, J. Stępiński, A. Rafalska-Łasocha, W. Łasocha, E. Bielańska, *The seals from Czermno (Cherven Towns, eastern Poland*) – *chemical analysis and metallurgical examination*, Archeologia Polski 60 (2015), p. 123-152.

[86] *Cf.* papers in this volume: K. Orlov, *Karol Bołsunowski's collection of small lead seals from Drohiczyn in the State Hermitage Museum: storage and conservation, research and publication issues* = K. Orłow, *Ołowiane plomby z Drohiczyna w kolekcji Karola Bołsunowskiego w zbiorach Państwowego Muzeum Ermitażu: uwagi na temat ich przechowywania, konserwacji, opracowania oraz publikacji,* [in:] A. Musin, M. Wołoszyn (eds.), *The Sphinx of Slavic sigillography – small lead seals of "Drohiczyn type" from Czermno in their East European Context = Sfinks słowiańskiej sfragistyki – ołowiane plomby „typu drohiczyńskiego" z Czermna w kontekście wschodnioeuropejskim,* U Źródeł Europy Środkowo-Wschodniej = Frühzeit Ostmitteleuropas 6:1, Kraków-Leipzig-Rzeszów-Saint Petersburg-Warszawa (Leibniz-Institut für Geschichte und Kultur des östlichen Europa [GWZO]/Instytut Archeologii i Etnologii Polskiej Akademii Nauk/Instytut Archeologii Uniwersytetu Rzeszowskiego/Институт истории материальной культуры Российской академии наук) 2019, p. 113-139; S. Beletsky, R. Veretyushkin, K. Gorlov, N. Kurganov, *Small lead seals from the excavation of the Detinets in Kursk: research and restoration* = S. Bielecki, R. Wierietiuszkin, K. Gorłow, N. Kurgnow, *Ołowiane plomby z kurskiego dietińca: analiza i konserwacja,* [in:] *Ibidem*, p. 895-948.

[87] *Cf.* http://iaepan.vot.pl/osrodkiwszystkie/osrodek-etnologii-i-antropologii-wspolczesnosci/553-pl/projekt/1549-pochodzenie-obieg (accessed on: 06.06.2019); see also currently: E. Miśta-Jakubowska, R. Czech-Błońska, W. Duczko, A.M. Gójska, P. Kalbarczyk. G. Żabiński, K. Trela, *Archaeometric studies on early medieval silver jewellery from Central and Eastern Europe,* Archaeological and Anthropological Sciences 11 (2019), p. 6705-6723 (https://doi.org/10.1007/s12520-019-00935-z; accessed on: 06.06.2019).

and the project *Hacksilberschätze im Oder-Neiße-Gebiet – archäologisch-analytische Untersuchungen zur Herkunft des Silbers im frühmittelalterlichen Ostmitteleuropa* financed by VolkswagenStiftung and directed by Felix Biermann, Jasper Freiherr von Richthofen and Ernst Pernicke[88], and last, but definitely not least, the studies of Stephen Merkel concerned with Scandinavian silver (Hedeby)[89] and the currently implemented project *Silver and the Origins of the Viking Age* directed by Jane Kershaw[90]. Similar studies have been made also of coins, silver ones in particular[91].

While the use of lead in Byzantium and in Rus' in the manufacture of bullae and small lead seals is well-known it has never been addressed at more extensively in the research. The written record relating to the uses of this metal in the Byzantine territory are relatively rare[92] and concern mostly the mining of lead in the Balkans[93]. The Byzantines often used lead[94] and were aware of that it went into making their bullae. This is confirmed by the inscription on the seal (reverse) of Theodoros Phrangopolos (13th c.): „Ως ἀσπίδι σε τ ῷ μολ(ύ)βδῳ ν(ῦ)ν γράφω / κ(αὶ) Θεόδωρον Φραγόπωλον ἀσπσ(αι)ς" = "As on a shield, I now inscribe you on the lead, so may you (St Theodoros) be a shield for Theodoros Frangopolos"[95] (Fig. 10).

It is paradoxical that in Poland with its rich lead resources and a long tradition of lead mining going back to the Middle Ages[96], finds of early medieval lead seals are virtually unknown[97], differently than in the territory of Rus' where thousands of them have been recorded despite the lack of major lead resources there.

In this situation we decided to subject the bullae and small lead seals investigated within the project *Sphinx of Slavic sigillography* to a broad spectrum of physico-chemical analyses.

This research was implemented by specialists from Cracow (AGH University of Science and Technology: A l d o n a G a r b a c z - K l e m p k a, M a ł g o r z a t a P e r e k - N o w a k), Warsaw (Institute of Nuclear Chemistry and Technology: E w a P a ń c z y k, J a k u b D u d e k, J e r z y G o l d f i n g e r). Analysis was made of materials from Poland (Chełm, Czermno, Drohiczyn, Gdańsk, Gródek). Quantitative and qualitative chemical and microstructural analyses were carried out to assess the structure and the chemical composition of the artefacts. The metallographic analyses were made using the following techniques: macroscopic and microscopic, both optical (including selective ion etching) and scanning electron microscopy; chemical structure was investigated by X-ray fluorescence (XRF) in SEM, spectrometry, the method of inductively coupled plasma atomic emission spectroscopy (ICP AES) and X-ray diffraction. A series of Byzantine lead seals was analysed by Stephen Merkel (Bergbaumuseum Bochum / University of Oxford).

The primary aim of these studies was analysis of the chemical composition of the metal of the small lead seals (and bullae) and isotope analysis of the lead. These studies were expected to trace the "migrations" of lead to this or other region of Europe, to improve our understanding of the small lead seal production technology, and also to encompass the full range of issues related to small lead seals within a broad context of European commercial, economic and production exchange.

---

88 *Cf.* https://portal.volkswagenstiftung.de/search/projectPDF.do?projectId=6216 (accessed on: 06.06.2019).

89 S. Merkel, *Silver and the Silver Economy at Hedeby*, Der Anschnitt. Beiheft 33, Bochum (Verlag Marie Leidorf) 2016.

90 *Cf.* https://cordis.europa.eu/project/rcn/217935/factsheet/en (accessed on: 06.06.2019); see also S. Merkel, *Provenancing Viking Age Silver: Methodological and Theoretical Considerations and a Case Study*, [in:] J. Kershaw, G. Williams (eds.), *Silver, Butter, Cloth: Monetary and Social Economies in the Viking Age*, Oxford (Oxford University Press) 2019, p. 206-226.

91 E. Pańczyk, B. Sartowska, L. Waliś, J. Dudek, W. Weker, M. Widawski, *The origin and chronology of medieval silver coins based on the analysis of chemical composition*, Nukleonika 60:3 (2015), p. 657-663 (doi: 10.1515/nuka-2015-0108).

92 *Cf.* e.g. J. Koder, *Die Byzantiner: Kultur und Alltag im Mittelalter*, Wien-Köln-Weimar (Böhlau) 2016, p. 131.

93 P.K. Matschke, *Zum Anteil der Byzantiner an der Bergbauentwicklung und an den Bergbauerträgen Südosteuropas im 14. und 15. Jahrhundert*, Byzantinische Zeitschrift 84/85 (1991/92), p. 49-71, specifically p. 59.

94 *Cf.* S. Foppe, *Zur Kulturgeschichte des Bleis*, [in:] M. Grünbart (ed.), *Gold und Blei: byzantinische Kostbarkeiten aus dem Münsterland. Ausstellung im Ikonen-Museum Recklinghausen, 23. Juni 2012-21. Oktober 2012 und im Archäologischen Museum der Westfälischen Wilhelms-Universität Münster, 7. September 2013-12. Januar 2014*, Wien (Phoibos Verlag) 2012, p. 43-51, specifically p. 48-51.

95 *Cf.* W. Seibt, M.L. Zarnitz (eds.), *Das byzantinische Bleisiegel als Kunstwerk: Katalog zur Ausstellung*, Wien (Verlag der Österreichischen Akademie der Wissenschaften) 1997, p. 139, Cat. No. 3.3.4. ("Wie auf einen Schild schreibe ich Dich nun auf das Blei, und Du [heiliger Theodor] sei Schild für den Theodoros Phrangopolos"); English version: https://pbw2016.kdl.kcl.ac.uk/seals/?list=bibliography&page=319 (accessed on: 06.06.2019).

96 *Cf.* D. Molenda, *Der polnische Bleibergbau und seine Bedeutung für den europäischen Bleimarkt vom 12. bis 17. Jahrhundert*, [in:] W. Kroker, E. Westermann (eds.), *Montanwirtschaft Mitteleuropas vom 12. bis 17. Jahrhundert: Stand, Wege und Aufgaben der Forschung*, Der Anschnitt. Beiheft 2, Bochum (Deutsches Bergbau-Museum) 1984, p. 187-198; M. Karbowniczek, T. Karwan, D. Rozmus, I. Suliga, *New archeological and archaeometallurgical research of medieval lead and silver smelting sites in the border areas of Upper Silesia and Małopolska* [in:] J. Labuda, D. Harvan (eds.), *Argenti fodina MMXVII. Zborník prednášok z medzinárodnej konferencie Argenti Fodina 2017: 6.-8. septembra 2017*, Banská Štiavnica (Slovenské banské múzeum) 2018, p. 55-69.

97 *Cf.* S. Suchodolski, *Bulles de plomb et les monnaies en Pologne au XII^e siècle*, [in:] N. Holmes (ed.), *Proceedings of the XIV^th International Numismatic Congress*, Glasgow (Spink & Son Ltd.) 2011, p. 1640-1645.

***

We plan to publish the findings from this research, of isotope analysis in particular, in the form of articles contributed to specialist journals. However, the principal result of the project *Sphinx of Slavic sigillography* is the book presented here. Its contents are briefly described below.

***

Authors who contributed their chapters to the monograph obviously differ in their methodological approach and terminology. Many of the chapters are accompanied by a detailed catalogue of small lead seal finds. No attempt was made by the editors to unify these approaches and the terminology used when describing, cataloguing and classifying the ordering their material, leaving the authors freedom of expression of their research views and approach. This principle adopted by the editors reflects the current stage in the study of small lead seals, which is marked by a lively debate and differences of opinion. Unifying the terminology in this field of sigillography and medieval archaeology is one of our future goals.

At the same time, there are significant translation problems related, first of all, to the description of socio-political processes and state-nation history. For example, in Eastern European historiography – Ukrainian, Belarusian, and Russian – terms such as Kyiv Rus' ("Киевская Русь"/"Київська Русь"/"Кіеўская Русь") and Ancient Rus ("Древняя Русь") are commonly regarded as synonyms and used to describe the political realities of medieval Eastern Europe. However, this terminology stems directly from the Russian imperial and Soviet historiographic heritage, which sought to present the most ancient past of Eastern European peoples as part of the history of the Russian Empire. If in the 19th c. historiography Kyiv Rus' was understood as Rus' territory lands around Kyiv, in the 1930s Boris Grekov filled this term with a new content. Kyiv Rus' then emerged as a unified state with a developed system of government and juridical system with inhabitants who all regarded themselves as Rusy or Rusiny[98]. Just like the USSR, only transplanted to the Middle Ages[99]. This concept triggered a serious discussion, soon suppressed by Grekov whose position as official historian of the regime was then unassailable[100], because it was consistent with state policy and political sentiment of the era. After the dissolution of the Soviet Union and the loss of Russian control over Kyiv, the term "Ancient Russia" began to be used in the Russian historiography which only in some situations corresponds to the English term "Early Rus'". Despite these reservations the editors agreed to its use in some of the contributions to the monograph.

All in all, it might be more acceptable to speak of the lands of Eastern Europe which were part of the "Rurikid empire". At the same time, while different regions of that territory were ruled by different lines of the House of Rurik, the population of these lands preserved its inherent cultural and legal features and self-identity without identifying itself with Rus' with its centre in Kyiv.

There is this to note also that in the Russian historiography the people and the culture of the period 1000-1300s are often described using the term "древнерусский" ("old Russian"), which again is related to ideas about an ethnic and central unity of these lands. The use of this term seems unjustified. Another term used often in relation to the towns is "летописный" or "annalistic". Its origin and evolution are unclear, its application irregular. This term is not always used when speaking of towns mentioned in the chronicles, ones that were in existence in the "age of the yearly records". In fact, it seems to be used as a synonym of "Early medieval".

Similarly, with the term "домонгольский период" – which translates as "Pre-Mongol Period". Chronologically the period ends in 1237-1240, the time of the Mongol invasion. However, the use of this term is based on the exaggerated ideas in the Russian historical consciousness about the destructive changes triggered by

[98] Б.Д. Греков, *Рабство и феодализм в Киевской Руси*, Известия Государственной академии истории материальной культуры имени Н.Я. Марра 86, Ленинград (ГАИМК) 1934; Б.Д. Греков, *Феодальные отношения в Киевском государстве*, Москва-Ленинград (Издательство Академии наук СССР) 1936; Б.Д. Греков, *Киевская Русь*, Москва-Ленинград (Издательство Академии наук СССР) 1939[3]; Б.Д. Греков, *Киевская Русь*, Москва-Ленинград (Издательство Академии наук СССР) 1944[4].

[99] А.Е. Мусин, *Corpus fratrum или «союз архонтов»? Историко-археологический комментарий к моделям власти в Восточной Европе конца XI века*, Stratum plus 2018:5, p. 183-206; A. Musin, *Polska Piastów i Ruś Rurykowiczów: nieuniknioność niemożliwych porównań (niektóre uwagi do badań komparatystycznych nad średniowieczną Europą Środkowo-Wschodnią)*, [in:] V. Nagirnyy, T. Pudłocki (eds.), *Rus' and Poland (10th-14th centuries). Publication from the 9th International Scientific Conference, Przemyśl, 5th-8th December*, *2018*, Colloquia Russica. Series I:9, Kraków (Towarzystwo Wydawnicze „Historia Iagellonica"/ Towarzystwo Przyjaciół Nauk w Przemyślu) 2019, p. 93-11.

[100] Н.И. Платонова, *История археологической мысли в России. Вторая половина XIX- первая треть XX века,* Санкт-Петербург (Нестор-История) 2010, p. 238 f.; В.В Тихонов, З*абытые страницы советской историографии: дискуссия Б.Д. Грекова и Б.И. Сыромятникова о характере социально-экономического строя Киевской Руси*, Исторический ежегодник 2012, Новосибирск 2012, p. 34-45; A. Musin, *„Ród ruski", „ród wareski" i narodowość staroruska*, Orientalia Christiana Cracoviensia 4 (2012 [2015]), p. 11-23.

this invasion in Eastern Europe. In the Russian mentality the calamity of 1237-1240 explain away civilization backwardness of Russia as compared to Western Europe. And yet, the socio-political and economic changes of the 13th c. were not fatal. There was a cultural continuity in the development of Eastern Europe. Many lands had not been affected by the invasion to the same extent as the territories of Kyiv, Ryazan, Vladimir and Suzdal. There is evidence from archaeology that major changes of culture, economy and settlement network in Halych, Volhynia and Kyiv lands date back at the earliest to the middle of the 14th c., the time of their incorporation into the Polish and Lithuanian states. The general chronology and periodization of the Medieval Period in these regions is different than elsewhere in Eastern Europe. In their case, the term Pre-Mongol does not really apply since the local development was not critically affected by the events of 1237-1240. In view of these considerations the editors of this volume in most cases propose to translate all of the above terms in the English language version as "Early medieval".

***

The study presented here includes 20 articles which we divided into four parts[101].

Part I opens with a research paper M i c h a ł D z i k and A d r i a n J u s u p o v i ć dedicated to the medieval history of the stronghold at Drohiczyn.

In our attempt to fathom the identity of small lead seals of "Drohiczyn type" we are forced to rely almost solely on the analysis of these objects. The only exception is the reference in the writings of Abū Ḥāmid al-Ġharnātī to "a seal with an image of the king" or in alternative translation, to "a seal with an image of the kingdom" as a symbol of authority. This source is examined in detail by D o r o t a M a l a r c z y k.

As in the past so at present, like coins and bullae, small lead seals continue to draw attention of collectors. Three contributions to our volume focus on larger series of small lead seals, now in the collections of the Hermitage in St. Petersburg – the collection of Karol Bołsunowski (K i r i l l O r l o v), State Archaeological Museum in Warsaw (J o a n n a C i c h o ń s k a and A n d r z e j P i o t r o w s k i) and in the Hutten-Czapski Museum, branch of the National Museum in Krakow (A n n a B o c h n a k). Much invaluable information about Karol Bołsunowski, a leading collector of small lead seals, and especially his collection is to be found in the contributions from A n n a B o c h n a k, and more particularly, of K i r i l l O r l o v.

In Part II of the book we publish a contribution from P e t r G a y d u k o v – the catalogue of findspots of small lead seals of "Drohiczyn type" recorded in East Central and Eastern Europe – more than 30,000 finds from Russia, Belarus', Ukraine, Poland, Lithuania and Latvia. The relevance of this work is cannot be exaggerated. Until recently the number of published small lead seals type was ca. 12,000-15,000 specimens. The catalogue of P e t r G a y d u k o v not only presents double this number, in effect it is also the first such a comprehensive publication on the subject of small lead seals of "Drohiczyn type". A detailed map included in this volume (as an inset) is the work of A l e k s a n d r M u s i n and P i o t r Z a g ó r s k i (numbers on the map correspond to the numbers in the Catalogue).

Among different aspects (functional purposes, chronology *etc.*), what makes the small lead seals a Sphinx of Slavic sigillography are the diverse symbols and letters depicted on them. Many of these designs are identifiable as Rurikid emblems – bidents and tridents of various forms. As noted earlier, the study of small lead seals is inextricably tied to the study of Rurikid emblems and *vice versa*. In Part III of this book S e r g e i B e l e t s k y undertakes to attribute individual Rurikid emblems to particular Rurikid princes of the 10th and 11th c. and proposes to systematize and classify emblems of 12th and 13th c. princes. An overview of past research in Rurikid emblems, their origin, meaning and content, their relationship to the heraldic systems of Central and Western Europe, and the break in the use of bidents and tridents in the 13th-14th c. is presented in a historiographic contribution written by S e r g e i B e l e t s k y and A l e k s a n d r M u s i n.

Part IV includes 12 contributions from archaeologists who report on the finds of small lead seals from selected sites/regions of East Central and Eastern Europe. The editors of this volume did not make it their ambition to unify the assorted methodological principles deployed in the study of the lead seals and their scientific description by different authors invited to contribute to our monograph. Rather, the object was to show the reader the diversity of approaches that are adopted in the study of lead seals and their description them by researchers associated with some respected academic centers of archaeology in this part of Europe.

[101] The names of authors are in expanded spacing.

Even without professional interest in the archaeology of Rus' one cannot be unaware of the importance of research completed and ongoing at Novgorod for East European studies. It is hard to exaggerate the value of dates established for archaeological objects excavated there using the dendrochronological method. This applies also to small lead seals – in our book the dendrochronological dating of archaeological contexts and assemblages containing small lead seals recovered at Novgorod is discussed by Olga Tarabardina.

We linger in these northerly reaches of Rus' thanks to contributions on finds of small lead seals from Novgorod (Mikhail Petrov, Vyacheslav Volkhonsky and Viktor Singh), Staraya Ladoga (Sergei Beletsky) and Staraya Russa (Sergei Toropov and Elena Toropov).

The overview of small lead seal finds from Russia closes with a report on their finds from Kursk, a joint effort by four authors (Sergei Beletsky, Roman Veretyushkin, Konstantin Gorlov, Nikolai Kurganov).

Two other studies address lead seals from Ukraine and Belarus'. Hlib Ivakin, Dmitro Bibikov, Vsevolod Ivakin and Vyacheslav Baranov report on the finds from Kyiv, Vadzim Koshman and Mikalai Plavinski discuss small lead seals found in Belarus' (Minsk in particular).

The last group of contributions discusses small lead seals from recent discoveries made in eastern Poland (Mazovia). Maciej Trzecieck i presents their finds from Płock; Mariusz Błoński and Mateusz Bogucki report on specimens from Nasielsk, Mateusz Bogucki and Jakub Affelski on finds from Poniaty Wielkie, in all cases, small series of small lead seals, and last, but certainly not least, from Pułtusk – more than 100 small lead seals presented by Izabela Jakubowska.

Originally, the studies dedicated to the remarkable group of small lead seals from the site at Czermno were to have been published in part II of the present volume. Ultimately, the decision was taken to publish them in 2020 as a separate book (volume II)[101a].

In volume II the site at Czermno is presented in brief by Tomasz Dzieńkowski, Iwona Florkiewicz and Marcin Wołoszyn. The next, lengthy chapter-cum-catalogue contributed by Iwona Florkiewicz, Adrian Jusupović and Aleksandr Musin introduces over 1,000 small lead seals known to us from Czermno.

The pool of early medieval finds from Czermno is mostly of East European (Rus') origin and this applies to the small lead seals as well. Consequently the discovery of cloth seal provenanced to Tournai, Belgium (belonged to the Kingdom of France during the Middle Age) is truly intriguing. They are discussed within a broad comparative context by Aleksandr Musin and Sergei Toropov with contribution of Anna Lozhkina.

At the end of the section dedicated to the sigillographic finds from Czermno we included some research papers in natural sciences. Aldona Garbacz-Klempka, Ewa Pańczyk, Małgorzata Perek-Nowak and Jakub Dudek discuss the methodology of studies in medieval lead (with some selected problems related to the conservation of small lead seals). Further papers prepared by Aldona Garbacz-Klempka report on the findings from metallographic analyses of small lead seals from Czermno (preserved in the Regional Museum in Tomaszów Lubelski) and from Drohiczyn, found at present in the museum collections in Białystok, Drohiczyn, Warsaw and Cracow.

We wish to note that these research papers are only an introductory presentation of the findings of metallographic analysis of small lead seals made within the project *Sphinx of Slavic sigillography*. The subject of metallographic analyses (and conservation of small lead seals) is addressed in their contributions (published in this volume) from Kirill Orlov and the research paper by Sergei Beletsky, Roman Veretyushkin, Konstantin Gorlov, Nikolai Kurganov (*cf*. below).

[101a] *Cf*. I. Florkiewicz, A. Jusupović, A. Musin *et al.*, *The Sphinx of Slavic sigillography – small lead seals of "Drohiczyn type" from Czermno. Material evidence = Sfinks słowiańskiej stragistyki – plomby „typu drohiczyńskiego" z Czermna. Podstawy źródłowe,* U Źródeł Europy Środkowo-Wschodniej = Frühzeit Ostmitteleuropas 6:2, Kraków-Leipzig-Rzeszów-Saint Petersburg-Warszawa (Leibniz-Institut für Geschichte und Kultur des östlichen Europa [GWZO]/Instytut Archeologii i Etnologii Polskiej Akademii Nauk/Instytut Archeologii Uniwersytetu Rzeszowskiego/Институт истории материальной культуры Российской академии наук) 2020.

***

Obviously, the principal outcome of the project *Sphinx of Slavic sigillography* is the book presented here. However, as our work on various project tasks was in progress we made sure to make public publish the results of our research.

We have reported on them at ten research conferences in and outside Poland – in the Czech Republic, Germany, Italy, Great Britain and Ukraine[102].

Of these the major event was most important event organized within the project[103] was the conference *The Sphinx of Slav sigillography. Seals of Dorogichin type in the light of interdisciplinary research* (Figs. 11, 13). Held on the 7th-9th May 2018 in the Hutten-Czapski Museum in Cracow this encounter was attended by forty-eight participants from eleven countries (Belarus', Bulgaria, the Czech Republic, Greece, Germany, Hungary, Poland, Russia, Slovakia, Turkey, Ukraine)[104].

Two exhibitions were organized with a more general public in mind. Some of the artefacts from the 2010-2011 fieldwork at Czermno – including the bullae and small lead seals studied within our project – were presented within the exhibition *Cherven': a stronghold between the East and the West*[105]. Between 2012 and 2018 it was displayed in Poland in no less than fourteen (!) museum venues[106].

Small lead seals have been the star of the exhibition *Important – inconspicuous. Lead seals* (The Hutten-Czapski Museum, branch of the National Museum in Krakow, 9th May-9th September 2018; *cf*. Figs. 12-13).

Information about the project *Sphinx of Slavic sigillography* is to be found on the website dedicated to the research in the archaeology and history of the Cherven' Towns[107].

***

Our studies in small lead seals "Drohiczyn type" and the publication of their outcomes would not have been possible without kind support of many people and institutions.

Archaeology is mostly about artefacts, museums and museum staff which care and conserve them. The institution central to our project has been the Regional Museum in Tomaszów Lubelski where most of the small lead seals recovered at Czermno are now found. We are greatly indebted to the staff of the Museum: Director Eugeniusz Hanejko and Senior Curator Jolanta Bagińska.

Access to some small lead seals was kindly given despite ongoing conservation work by Elżbieta Nosek (Cracow), and Szymon Bednarz (Koszalin) to whom we address our special thanks.

The need to transport the small lead seals from Czermno on so many occasions (to and from the exhibitions, conservation treatment and metallographic analyses) made supervision of this large collection of diminutive and all too often nearly identical objects a true challenge. For their capable contribution in this respect we are greatly indebted in ascending order, to Jolanta Bagińska, Anna Bochnak (Cracow) and Iwona Florkiewicz (Rzeszów).

More than 1,000 small lead seals were photographed by Beata Polit (Kielce; over 12,000 photographic images!!!), and by Anna Bochnak and Tomasz Bochnak (Cracow). Access to his private photographs was kindly by Szymon Bednarz (Koszalin).

[102] 1) Warsaw, 16-17.06.2014 (Conference: *Poland, Rus and Hungary, 10th-15th centuries*); 2) Berlin, 6-10.10.2014 (*8. Deutscher Archäologiekongress*); 3) Taormina, 21-25.09.2015 (*XV International Numismatic Congress*); 4) Lviv, 18-20.05. 2016 (*XIII International Archaeological Conference of Western Ukraine*); 5) Brno, 22-25.05.2017 (*Numismatica Centroeuropaea II*); 6) Warsaw, 30.11.-1.12.2017 (Conference: *Silver in early medieval Central Europe*); 7) Cracow, 7-8.12.2017 (Conference: *Numismatics in archival records and early prints*); 8) Leipzig-Halle, 15-17.05.2019 (Conference: *Reusing – Reprocessing – Transforming. The recycling of non-ferrous and precious metal*); 9) Bobolice, 30.05.-1.06.2019 (*22nd Conference on non-ferrous metals casting*); 10) Leeds, Great Britain, 1-4.07.2019 (*26th International Medieval Congress*).

[103] Organized by: Marcin Wołoszyn (Rzeszów, Poland; Leipzig, Germany), Aleksandr Musin (St. Petersburg, Russia), Anna Bochnak (Cracow, Poland), Iwona Florkiewicz (Rzeszów, Poland) and Katarzyna Kuźniarska (Lublin, Poland). Co-organizing institutions: Committee of Pre- and Protohistorical Sciences of the Polish Academy of Sciences (Warsaw, Poland), Institute of Archaeology University of Rzeszów (Rzeszów, Poland), Leibniz Institute for the History and Culture of Eastern Europe (GWZO; Leipzig, Germany), National Museum of Krakow (Cracow, Poland) and Institute for the History of Material Culture Russian Academy of Sciences (St. Petersburg, Russia).

[104] Program: www. https://grodyczerwienskie.pl/wp-content/uploads/2019/09/program-krakow_pl_na_strone_www1.pdf (accessed on: 06.06.2019).

[105] As noted earlier, the exhibition was financed from the resources of the Ministry of Culture and National Heritage; *cf*. footnote No. 7.

[106] The exhibition *Cherven': a stronghold between the East and the West* was presented at the following venues: 1) Tomaszów Lubelski – Dr J. Petera Regional Museum, 28.11.2012-31.03.2013; 2) Cracow – National Museum, the Bishop Erazm Ciołek Palace, 6.04.-1.09.2013; 3) Sieradz – District Museum, 14.02.-13.04.2014; 4) Krasnystaw – Regional Museum, 15.04.-15.09.2014; 5) Radom – Jacek Malczewski Museum, 23.10.-31.12.2014; 6) Rzeszów – District Museum, 3.02.-15.04.2015; 7) Lubaczów – Regional Museum, 1.05.-31.08.2015; 8) Chełm – Wiktor Ambroziewicz Museum of the Chełm Land, 30.09.-31.12.2015; 9) Hrubieszów – Father Stanisław Staszic Regional Museum, 28.01.-3.04.2016; 10) Biała Podlaska – Regional Museum, 22.04.-30.07.2016; 11) Przemyśl – National Museum of Przemyśl Land, 22.07.-16.-10.2016; 12) Tarnów – Regional Museum, 3.07.-30.08.2017; 13) Zamość – Regional Museum, 20.09.-31.12.2017; 14) Biłgoraj – Regional Museum, 16.02.-15.06.2018; 15) Gniezno –Museum of the Origins of the Polish State, 25.06.-16.11.2018; 16) Będzin – Regional Museum. 15.01.-30.04. 2019.

[107] *Cf*. https://grodyczerwienskie.pl (accessed on: 06.06.2019); see also https://pl-pl.facebook.com/Grody.Czerwienskie (accessed on: 06.06.2019).

Small lead seals from Czermno were described through the efforts of I w o n a F l o r k i e w i c z (Rzeszów), A d r i a n J u s u p o v i ć (Warsaw) and A l e k s a n d r M u s i n (St. Petersburg).

The metallographic analyses were carried out by specialists from Cracow (A l d o n a G a r b a c z - K l e m p k a, M a ł g o r z a t a P e r e k - N o w a k), Warsaw (E w a P a ń c z y k, J a k u b D u d e k, J e r z y G o l d f i n g e r) and Germany (Stephen Merkel), not without vital assistance of several fellow researchers needed to access comparative materials: A n n a B o c h n a k (Cracow), Robert Feind (Cologne), Olga Karagiorgou (Athens), Tomasz Maćkowski (Gdańsk), Piotr Mączyński (Lublin), Jan Mařik (Prague), Maxim Mordovin (Budapest).

While small lead seals from Czermno were the point of departure of our research, they are presented here within a broad context of small lead seal finds from Belarus', Russia and Ukraine. An important role in finalizing the project tasks was played by the encounter of most of the Project participants held in Cracow on the 7th-9th May 2018. For offering us a venue the resplendent interiors of the Hutten-Czapski Museum we are indebted to Director Jarosław Bodzek. For the patronage of the Committee of Pre- and Protohistorical Sciences of the Polish Academy of Sciences our thanks go to the Committee Chairman Bogusław Gediga. Our conference in Cracow could not have taken place without the efforts of Zbigniew Kubiatowski staff member of Institute of Archaeology and Ethnology of the Polish Academy of Sciences, Warsaw.

The research the results of which are being presented here was implemented within the project *The Sphinx of Slavic sigillography – Dorogichin seals from Czermno in their East European context* (National Science Centre, No. 2013/11/B/HS3/0205; Affiliation: University of Rzeszów; Project leader: Marcin Wołoszyn).

Implementation of the project, complete with the publication of its outcomes, was made possible thanks to long-term support of several institutions that have been cooperating in the Cherven' Towns research.

In this regard we are indebted, at the University of Rzeszów, in the first place, to Rector Sylwester Czopek, at the Institute of Archaeology, to senior academic staff members Andrzej Rozwałka and Michał Dzik, Małgorzata Rybicka and Katarzyna Trybała, and to members of the administrative staff Joanna Berdowska, Marzena Filipek, Bożena Pomianek and Magdalena Rzucek.

An exceptional role in our research, crucial for its implementation compatible with the international formula has been that of the Leibniz Institute for the History and Culture of Eastern Europe (GWZO) in Leipzig, Germany. The research completed within the project was funded from the resources awarded by the Federal Ministry of Education and Research of Germany (No. FKZ: 01UG1410 *Die Červenischen Burgen als Grenzbefestigungen am Fernweg von Krakau nach Kiev*). GWZO not only shouldered the lion's share of the cost of translating the research papers published in the book presented here, but also financed academic visits of Aleksandr Musin in Leipzig which significantly eased the completion of the works on the Project.

While these actions were in line with the *Forschen zum, mit und im östlichen Europa* guideline followed by the Leibniz Institute in Leipzig of promoting Eastern European research with researchers from Eastern Europe[108] in the end, everything depends on people and their decisions. And so, our heartfelt thanks go to the Christian Lübke the Director of GWZO, Matthias Hardt, Head of the Department *Man and Environment* and Arnold Bartetzky, Head of the Department of *Culture and Imagination*. We could always depend on the kindness of other researchers at the GWZO, more particularly, on Christian Zschieschang, and on members of the administrations as well (Anja Fritzsche, Ewa Tomicka-Krumrey, Juliane Reuther).

Our book is a part of a series U Źródeł Europy Środkowo-Wschodniej = Frühzeit Ostmitteleuropas published by the University of Rzeszów, Leibniz Institute for the History and Culture of Eastern Europe, but also by the Institute of Archaeology and Ethnology Polish Academy of Sciences. This would not have been possible without the kind interest shown by IAE PAN Directors Jerzy Maik and Marian Rębkowski.

The Editors thank the Polish Institute of Advanced Studies (PIASt), Warsaw, and its Director Przemysław Urbańczyk for supporting the individual research project of Aleksandr Musin: *Through the other eye of Europe: Poland of Piast and Rus' of Riurikids in East European comparative perspective, 10th-13th century* completed for publication in its final form during the academic year of 2018/2019.

Published as volume 6:1 of this series the book *The Sphinx of Slavic sigillography…* could not have been written without the contribution from the Institute of the History of Material Culture of the Russian Academy of Sciences in St. Petersburg, Russia. Its staff were actively involved in the implementation of the *Sphinx of*

[108] *Cf.* https://www.leibniz-gwzo.de/de/forschung/forschungsspektrum (accessed on: 06.06.2019).

Slavic sigillography and in the writing of the present volume. Senior researcher of the Institute, Aleksandr Musin is an editor of this book, and his home institution contributed to financing the work on this volume and its publication. The publishers thank the Institute Director Vladimir Lapshin and Deputy Director Oleg Boguslavsky.

For taking the trouble to write a peer review of our book we are grateful to Sebastian Brather (Freiburg am Breisgau) and Jonathan Shepard (Oxford).

The texts published in our monograph were translated from Polish and Russian into English, and from Russian into Polish by Barbara Chudzińska (Cracow), Grzegorz Haczewski (Cracow), Anna Kinecka (Wrocław) and Anna Sosenko (Cracow).

We are indebted to Barbara Chudzińska (Cracow) for her contribution in the editing of individual texts.

The painstaking technical editing work, the drawing of the finds and maps are the work of Jolanta Ożóg (Cracow), Svetlana Bocharova (St. Petersburg), and Natalya Voytseshchuk (Lviv) and in particular of Irena Jordan (Cracow), who was also responsible for typesetting. The map of the distribution of small lead seal finds to the Catalogue of Petr Gaydukov is the work of Aleksandr Musin (St. Petersburg) and Piotr Zagórski (Lublin).

Our book is a joint effort of researchers from Poland, Russia, Belarus’, Ukraine. Its publication in Polish and English is expected to make known to the international research community at large the problems of Eastern European history and archaeology inviting its members to join in the discussion about the features and function of small lead seals of “Drohiczyn type”.

***

As is well known, those attempting to solve the riddles posed by the mythical Sphinx did so at a great risk to themselves. Similarly, our struggles with the Sphinx of Slavic sigillography have taken their toll in terms of effort and nerves. Was it all worth it? Let the Reader decide!

Leipzig-Rzeszów-Saint Petersburg-Warsaw, 13th June 2019
Aleksandr Musin, Marcin Wołoszyn