Metallum Messallini – A New Roman Lead Ingot from the Danube Provinces

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Keywords

Roman lead ingot, mines, senatorial property, M. Valerius Messalla Messallinus, Illyricum, Latin epigraphy, lead isotope analysis, provenance studies, Novo Brdo/Kosovo

Abstract

A Roman lead ingot with the mould mark *metallo Messallini* provides highly interesting insight into the economic side of power politics pursued by the first Roman emperor Augustus. The proprietor of the mine, Messallinus, can be identified with Marcus Valerius Messalla Messallinus, consul in 3 BC and governor of Illyricum in AD 6. At the beginning of the Illyrian revolt in AD 6 he achieved important victories over the insurgent tribes. The mines were likely a gift from Augustus (who owned mines in that region) to Messallinus for his deeds. The shape of the panel and the inscription on the ingot as well as lead isotope analysis suggest an origin in the ore regions of Serbia and the Kosovo. According to the isotope comparison, the mines were located in the district of today's Novo Brdo in eastern Kosovo (Figure 1).

Figure 1. The lead ore deposit of Novo Brdo (Kosovo) and find locations of Augustan lead ingots in the western Balkan region (yellow dots) that are significant in this study.

Historical and epigraphical classification

The collection of ancient ingots at the DEGUSSA Goldhandel GmbH in Frankfurt holds a Roman lead ingot, which previously was part of a private collection in Vienna. Unfortunately, no information about its find spot is available. The ingot is in excellent condition and bears a mould mark hitherto unknown (Figure 2).

The lead ingot is of truncated and elongated pyramidal shape, which is characteristic for ingots from the Roman provinces of Germania, Britannia, Sardinia, or from the Balkans, dating from the reign of Augustus (31 BC – 14 AD) onwards. The dimensions of this ingot are 51.8 x 13 cm at the base and 46.3 x 5.3 cm at the face; the height is 9 cm, the weight 40.1 kg. There are no traces of marine encrustations on the surface: the ingot is therefore likely to have been found on the mainland. A moulded cartouche in the form of an ansate panel can be seen on the face, with the following inscription:

Figure 2. Lead ingot with unknown provenance. The inscription metallo Messallini says that it was produced in the mines of Messallinus (Photo: Gorny & Mosch, Munich).

METALLO M[E]SSALLINI

Although the inscription is damaged at the E of *Messallini*, its reading is not in doubt: "From the mines of Messallinus". This text is unique amongst the known mould marks on ingots. The use of the term *metallum* and the shape of the moulded panel give first clues on the possible provenance. The use of *metallum* on Roman lead ingots is not very common. The ablative *metallo* is attested only on two examples from southern Serbia, Niš-Jasenovik and Kuršumlija-Žuč (Figure 1) (IMS IV nos. 135 and 136) and mentions mines of the emperor Augustus: *metallo Imperatoris Augusti* and *metallo Caesaris Augusti*, "from the mine of Imperator Augustus" and "from the mine of Caesar Augustus".

In the 2nd century AD *metallum* appears also on three lead ingots from the Derbyshire district in Britannia, but the general formular of these inscriptions is different and the locative is used: *metalli Lutudare(n)s(is)* (RIB II.1, 2404.39-40 and 51).

The second specific feature, the ansate panel, again can be observed on the two ingots from southern Serbia, but also on one of the ingots from Derbyshire (RIB II.1, 2404.40), furthermore on two ingots from the Mendips (RIB II.1, 2404.17-18) and on three ingots found in Caesarea Maritima (CIIP 1382-1384, originating from Dalmatia). The ansate panel of the Messallinus ingot shows the closest similiarities to the Augustan ingots from southern Serbia. Based on these epigraphic and typological considerations, the place of production was possibly in southern Serbia or its neighbouring regions. What is more, the epigraphic and stylistic observations might also provide us with a date for the ingot in question – the Augustan era or the 1st half of the 1st century AD. The inscription gives the name of the owner of the metal mines: a person with the cognomen Messallinus. It is a well-known, but not very common cognomen. Apparently, the owner of the mine or mining area was not an ordinary Roman citizen but a person of the socio-economic elite. This observation leads us almost inevitably to focus on members of the senatorial order. The cognomen Messallinus is almost exclusively linked to a branch of the *gens Valeria*, the Valerii Messallae, an old and important senatorial family. In the early Principate they had close relations to the emperors. The following men bearing the cognomen Messallinus are known living during the reign of Augustus and in the 1st century AD:

1) M. Valerius Messalla Messallinus (cos. 3 BC);
2) M. Aurelius Cotta Maximus Messallinus (cos. AD 20), younger brother of no. 1;
3) M. Valerius Messalla Messallinus (cos. AD 20), son of no. 1;
4) L. Valerius Catullus Messallinus (cos. AD 73).

Of these four men, only the consul of 3 BC, Marcus Valerius Messalla Messallinus, had a closer relation to Illyricum in his career; he therefore is the likeliest candidate of the four Messallini to be the one mentioned on the ingot (for a detailed study of this question, see Rothenhöfer, Bode and Hanel [in preparation]). The Roman historian Velleius Paterculus names him as a *praepositus Illyrico*. From AD 6 onwards, he was commanding the 20th legion in the Pannonian revolt. Velleius and later Cassius Dio praise his victory over the Dalmati and report that he was awarded with *ornamenta triumphalia* in the Illyrian triumph of Tiberius in AD 12 (Vell. 2.112.1-2; Dio. 55.29.1). We do not have any evidence that Mar-

cus Valerius Messalla Messallinus used his position in the Illyrian provinces to gain personal profit, but there might be another explanation in which way he could have acquired large holdings there. The main source is the *senatus consultum* against Gnaeus Calpurnius Piso Pater – another member of the senatorial elite with close relations to Augustus. We learn from this text (line 85-90) that Augustus had awarded Piso with a *saltus*, a very huge area of land, in Illyricum (e.g. Eck, Caballos and Fernández, 1996, pp.76, 204-207). So it seems to have been a common practice of the *princeps* to award distinguished members of the imperial elite for their service to the emperor and the Roman state with land in the conquered territories (cf. Parassoglou, 1978 for Egypt with remarks by Crawford, 1980). Taking this into consideration, the question of the provenance of the lead ingot and thus of the land given to Messallinus comes into the focus of attention.

Roman lead ore mining in the Illyricum and adjacent regions

In the course of the Rome's military expansion, especially in the 1st century BC, more and more areas of the Balkans were incorporated into the provincial system. With the establishment of Roman rule the economic structure of the subjected societies changed drastically (see for instance Rothenhöfer and Bode, 2015). In the case of natural resources such as metals, intensified production was sought (cf. Florus *epit*. 2.33.60). Roman lead ore mining on an industrial scale can be suggested from several sites (described e.g. by Davies, 1935; Gaul, 1942; Meier, 1995; Dušanić, 2004; Hirt, 2010; Westner, 2017): e.g. near Srebreniča, at the eastern edge of the Bosnian Ore Mountains (Davies, 1935, pp.194-195; Hirt, 2010, pp.71-72; Škegro, 2000, pp.84-87). Inscriptions prove that the mines were run by imperial officials. To the east, in the later province Moesia superior, which mainly extends over Serbia and the Kosovo, the Sumadija ore district south of Belgrade was of greatest importance. Archaeological remains of Roman mining have been reported from Rudnik and Mt. Kosmaj, for instance (Davies, 1935, pp.214-217; Hirt, 2010, pp.59-60; Merkel, 2007). Although traces of ancient exploitation have been erased by subsequent mining or destroyed by war, galleries, inscriptions and 44 Roman lead ingots provide evidence for an important lead production district. Further to the south are the ore deposits of Kopaonik and the mining fields around Priština with the Roman city Ulpiana (detailed overview in Westner, 2017), which seems to have been the administrative centre of the later province Dardania (Dušanić, 2004).

Provenance studies by lead isotope comparison

Provenance studies in archaeometallurgy are mainly based on lead isotopes, often in combination with trace element analyses. Lead consists of four stable isotopes: ^{204}Pb, ^{206}Pb, ^{207}Pb and ^{208}Pb. As the lead isotope composition of ores basically depend on the time of formation, deposits of different age can be distinguished. Not only the geological age, but also the local geochemical environment influences the lead isotope composition in an ore body (for details about the lead isotope method, see e.g. Gale and Stos-Gale, 2000). The lead isotope comparison is a relatively simple method, because its signature is directly transferred from ore into metal. Mixing of metal from different ore sources handicaps this method. But as Roman lead ingots were cast in the mining districts, they exactly reflect the isotopy of the exploited ores.

Sampling of the Messallinus ingot and chemical digestion were carried out as part of the Corpus of Roman Lead Ingots (CRLI)-project of the Deutsches Archäologisches Institut and the Deutsches Bergbau-Museum Bochum (DBM) (information about the project e.g. in Hanel and Rothenhöfer, 2013). Trace element content was determined at the DBM with a Thermo Fisher Scientific Element XR (single-collector-ICP-MS) (Table 1) (cf. Bode, 2016 for analytical details). Lead isotope ana-

Table 1. Trace elements in the lead of the Messallinus ingot (values in g/t, n. d. = not determined).

lab-no. DBM	Ag	Au	As	Bi	Sb	Cu	Fe	Ni	Co	S
4266/13	85	n. d.	<0.5	410	50	2800	<0.5	40	0.9	65

Table 2. Lead isotope composition of the Messallinus ingot with 2-σ absolute standard deviation.

lab-no. DBM	^{206}Pb/^{204}Pb	2SD *(abs)*	^{207}Pb/^{204}Pb	2SD *(abs)*	^{208}Pb/^{204}Pb	2SD *(abs)*	^{207}Pb/^{206}Pb	2SD *(abs)*	^{208}Pb/^{206}Pb	2SD *(abs)*
4266/13	*18.611*	*0.013*	*15.653*	*0.012*	*38.750*	*0.037*	*0.84108*	*0.00022*	*2.0822*	*0.0009*

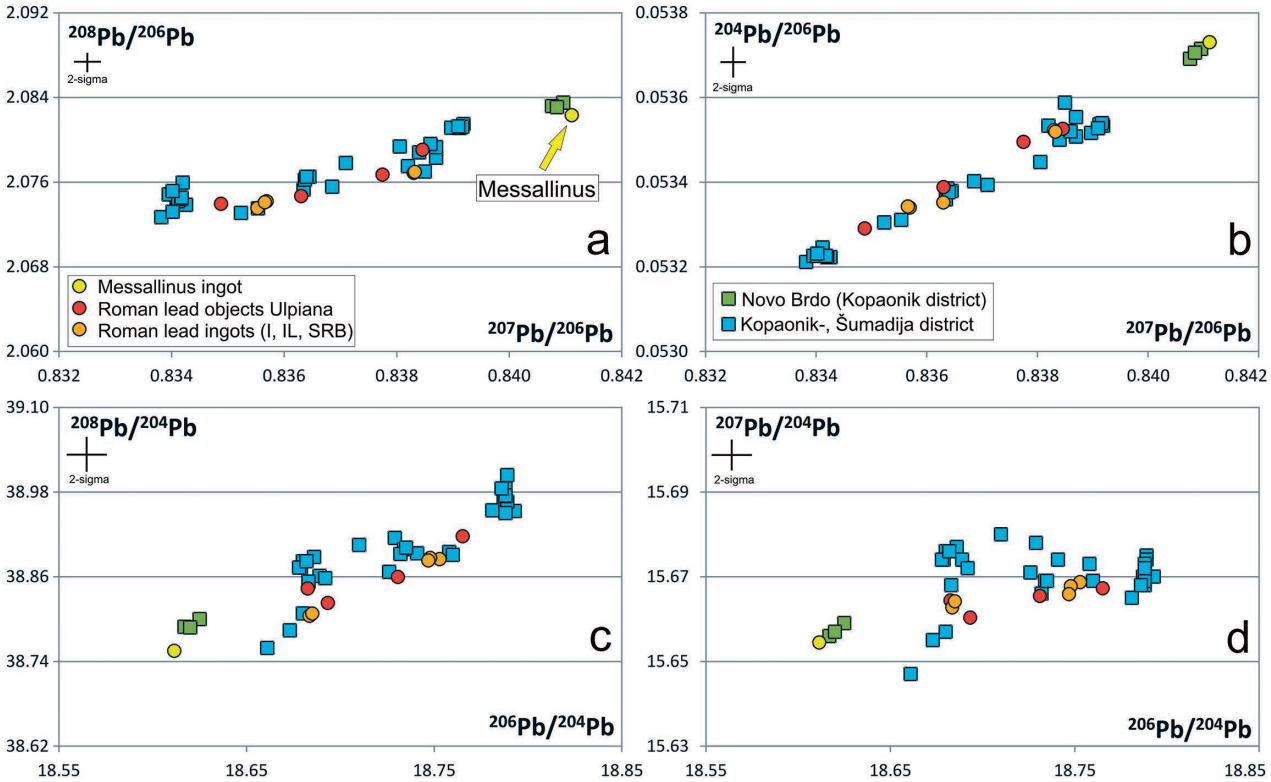

Figure 3. Lead isotope diagrams (a-d) comparing the Messallinus ingot with imperial ingots, certainly made of Serbia/Kosovo lead (Raban, 1999, unpublished data) as well as with lead finds from Ulpiana (Westner, 2017) and ore data from the Kopaonik and Šumadija districts (Pernicka, et al., 1993, Veselinovíc-Williams, 2011, Westner, 2017). Error bars refer to analyses of Messallinus ingot and Raban (1999). For other data, error bars are smaller.

lysis was performed at the Institut für Geowissenschaften, Goethe-Universität Frankfurt am Main by S. Klein, using a Thermo Fisher Scientific Neptune instrument (multi-collector-ICP-MS) (Table 2) (for analytical details, see Klein, et al., 2009).

Provenance of the Messallinus ingot

Not only the archaeological and historical information point to a production of the Messallinus ingot within the western Balkan region. The same conclusion can be drawn from the lead isotope comparison (Figure 3). However, instead of forming a joint cluster with lead finds from Ulpiana, which can generally be attributed to the Roman mining districts of Serbia and Kosovo, as confirmed by ingots with imperial mould marks (Besnier, 1921, p.128, Fig.18, Cat.no.69; Mircović and Dušanić, 1976, 155, Cat.no. 165; Raban, 1999, p.181, 183, Fig.5, 9, Cat.no.2, pp.179-182, Fig.4, 6-8), the yellow cycle-symbol of the Messallinus ingot in diagrams 3 a-d is clearly off the data cloud. But thanks to very recently published lead isotopes of Kosovo ores by Westner (2017), the conclusion drawn above is still valid, as with the new data the silver- and gold-bearing Pb-Zn mining district at Novo Brdo isotopically matches exactly the Messallinus ingot (information about its metal contents e.g. in Féraud and Deschamps, 2009; Monthel et al., 2002). Férault and Deschamps (2009, pp.55-57) mention modern lead concentrate samples with up to 1000 g/t Ag, 3.9 g/t Au and 740 g/t Bi. If Novo Brdo was actually the lead source of the ingot, the rather low Ag content of c. 85 g/t indicates that the lead was desilvered before the casting (Table 1). And although bismuth tends to migrate into silver during cupellation (as Au does, which was not determined), the relatively high Bi content (410 g/t) of the ingot's lead is consistent with the characteristic of Novo Brdo's lead ores.

For completeness, it should be mentioned that the ore data from the Aegean (e.g. Pangeon mountains, Lavrion, Thasos [see Chalkias, et al., 1988, Gale, Picard and Barrandon, 1988, Stos-Gale, Gale and Annetts, 1996, Vavelidis, et al., 1988, Wagner, et al., 1986]) have similar lead isotope ratios, but differ from Balkan ores.

Dušanić (2004, p.257) places Novo Brdo in the territory of Ulpiana, which was one of the districts of *Metallum Dardanicum*. Whether and to what extent ores were exploited there not only in the Middle Ages, but also in

Roman times and especially in the early imperial era, has not yet been clarified, but is being investigated. In this regard, we hope to gain new insights from the *Metalla Dardanica*-project initiated in 2013 by the Deutsches Bergbau-Museum Bochum and the Goethe-Universität Frankfurt (see e.g. Gassmann, Klein and Körlin, 2015; Körlin and Gassmann, 2016).

Conclusions

The combination of epigraphic, archaeological, and finally lead isotope data provides valuable new insights into the early history of the Roman province *Illyricum*. We learn that not only the emperor Augustus, but also members of the senatorial elite were engaged economically in the subdued province. Augustus was in possession of argentiferous lead mines in the area of modern southern Serbia and the Kosovo. Donating land and mines to senators like Gnaeus Calpurnius Piso and Marcus Valerius Messalla Messallinus must be understood not only as reward, but also as a clever move to get them involved in the development of the region.

Acknowledgments

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Abbreviations

CIIP = Corpus Inscriptionum Iudaea/Palaestinae
IMS = Inscriptions de la Mésie supérieure
RIB = The Roman Inscriptions of Britain

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Cover Images

1. Detail of a selection of finds from Třísov, an Iron Age *oppidum* in the Czech Republic. Metal objects such as these have been subjected to geochemical analysis, and conclusions regarding the metal supply at this settlement are presented by Danielisová, et al. Photo: A. Danielisová.

2. Detail of an elaborately decorated multi-ribbed dagger from a Middle Bronze Age II burial at Rishon le-Zion, Israel. This and other examples of MBA II daggers from burials from this site have been analyzed non-destructively to discuss the interrelationship of form and alloy and to gain information about technology and the supply of raw materials. See contribution by Kan-Cipor-Meron, et al. Photo courtesy of the Israeli Antiquity Authority.

3. Sampling of numerous Roman lead ingots has been carried out during the Corpus of Roman Lead Ingots (CRLI)-project. The present work discusses the analysis and historical context surrounding a special ingot with the inscription *metallo Messallini*. The contribution of Rothenhöfer, Bode and Hanel shows how the convergence of natural science, ancient history and archaeology can create a new and deeper understanding of past events. Photo: Rothenhöfer.

4. A cluttered office desk is commonplace in many professions. Archaeometallurgy is no exception. Writing and desk-based research belong to the daily life of archaeometallurgists, regardless of background, scientific training or career stage. The article of Sabatini and Mödlinger presents and discusses the results of an anonymous survey among archaeometallurgists that explores many aspects of this scientifically and socially diverse field. Photo: Mödlinger.

metallum, i, n:
Mine (often pl.)
Metal, also stone, mineral

μεταλλον, το:
Mine, shaft, gallery;
esp. a) Mine (usually pl.)
b) Quarry

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