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**ONCE AGAIN ABOUT
THE DEULTUM MEDALLION
FOR *CAESAR* DIADUMENIAN**

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Once again about the Deultum Medallion for Caesar Diadumenian¹

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Abstract: The text presents the results of metal analysis of the Deultum medallion bearing the name and portrait of Caesar Diadumenian, which some numismatists have declared counterfeit. However, the combined historical sources suggest the possibility that this numismatic object is in fact an authentic one. The measurement of its elemental composition is expected to provide further evidence in either direction.

Keywords: Deultum, Caesar Diadumenian, Emperor Macrinus, counterfeit, metal analysis.



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Introduction

A medallion with the name and portrait of *Caesar Diadumenian* (April/May 217 – May 218; see Kienast 2011, 170–171) on the obverse and the abbreviation COL FL PAC DEVLT (standing for *Colonia Flavia Pacis Deultensium*) on the reverse (**Fig. 1**) has attracted a lot of attention since its very first publication, when it was declared to be a counterfeit (Gerassimov 1963). Through the decades, this assessment has both been confirmed by some numismatists (Jurukova 1973, 52-53; Draganov 2007, 181–182) and questioned by historians (Boteva 1997, 328-329) and other numismatists (Kisiov, Prokopov, Dotchev 1998, 54, no 224). Due to the debate, a decision was met to subject this numismatic artifact to metal analysis within the project “Measuring Ancient Thrace” (КП-06-H50/3 from 30.11.2020, financed by the BNSF). The results of this metal analysis will be presented here below.



Fig. 1. Medallion of Caesar Diadumenian, issued in the name of *Colonia Flavia Pacis Deultensium* (Archaeological Museum – Plovdiv, inv. 1666). Photo: Ilya Prokopov, Courtesy: Archaeological Museum – Plovdiv.

Focus

Back in 1931, The Archaeological Museum of Plovdiv purchased from a private individual the medallion described above for 1500 Bulgarian leva (Draganov 2007, 181 with nt. 7) and introduced it into the Museum’s inventory book under the number 1666 (Kisiov, Prokopov, Dotchev 1998, 54, no 224; Draganov 2007, 181). The diameter of the medallion is 37 mm, its thickness is 6-7 mm, and the weight is 54.41 g. (Draganov 2007, 181). Only in 1963 it was published by Todor Gerassimov, who summarized his observations and judgement as follows:

“Il existe dans la collection numismatique de Plovdiv un médaillon faux avec le nom de la ville de Deultum de Thrace. Sur le revers de ce médaillon le falsificateur a utilisé la représentation d’un sacrifice existant sur un sesterce de Domitien (Mattingly, *Coins of the Roman Empire in the British Museum*, II, pl. 78,7). Le graveur moderne n’a pas compris de nombreux détails de cette scène et les a reproduits d’une manière inexacte sur le sceau. Le jeune Diadumenian n’a jamais visité Deultum, et s’est pourquoi il est impossible que le Conseil Municipal ait frappé des médaillons commémoratifs.” (Gerassimov 1963, 277).

In her book about the coinage of Deultum (1973) Jordanka Jurukova follows strictly the verdict on the medallion of her university teacher and mentor, Prof. Todor Gerassimov, stating:

“Bis zum heutigen Tage sind uns keine modernen Fälschungen von den Münzen der Stadt Deultum bekannt. (...) Als einzige interessante Fälschung besitzen wir ein Medaillon mit dem Namen der Stadt Deultum.

Der Grund für die Anfertigung dieses Medaillons dürfte darin zu sehen sein, daß während der römischen Herrschaft in vielen Städten Moesiens und Thrakiens eine große Anzahl von Bronzemedallions geprägt worden sind. Sein unbekannter, aber sehr geschickter “Urheber” wußte vermutlich, daß Deultum überhaupt keine Medaillons geprägt hat, und daher hat er sich vermutlich der Mühe unterzogen, ein Unikum zu schaffen. (...)

Augenfällig sind vor allem die ungewöhnlich gelbe Farbe der Legierung, aus der das Medaillon angefertigt ist, sowie die Dicke des Schrötlings (ungefähr 5 mm) und sein glatter, fast mit einer Feile geschliffener Rand. Abgesehen davon gibt es noch eine Reihe von Eigenheiten bei der Ikonographie, an denen man die Hand eines

modernen Graveurs erblicken kann.” (Jurukova 1073, 52).

Further in her publication, Jordanka Jurukova translates into German the observations of Todor Gerassimov concerning the iconographic features of the numismatic artifact supporting the opinion that it is a counterfeit (Jurukova 1973, 52). She also translates Gerassimov’s historical reasoning, keeping firmly his belief that Diadumenian never visited Deultum – an essential element within the analysis, due to the fact, that such medallions were minted by the cities in the Roman provinces of Lower Moesia and Thracia only in connection with imperial visits to respective cities (Jurukova 1973, 53). Of course, Jurukova’s position is expected due to the huge authority of Todor Gerassimov, who mentored her in the numismatic field of research. However, it should be underlined that Jurukova’s judgement on the medallion is published in a book devoted to the entire minting activity of the Roman colony of Deultum, where some important features are standing out. During the brief reign of Emperor Macrinus, who was at the head of the Roman empire for only circa thirteen months, between April 11th, 217, and May 16th, 218 (Kienast 2011, 169; Goldsworthy 2009, 75–77) the mint of Deultum issued an impressive amount of coins for both father and son with numerous obverse dies and several dozens of reverse dies, among them at least four depicting the emperor (Jurukova 1973, 63-73). Highlighting the rare reverse type with the emperor as a priest, Jurukova even puts forward the possibility that Macrinus himself has managed to visit Deultum (Jurukova 1973, 23). Concerning the coinage with the name and portrait of *Caesar* Diadumenian, Jurukova describes it with only one sentence, noting that it does not differ from the issues of the father (Jurukova 1973, 23), thus failing to recognize a possible connection between the medallion published by Todor Gerassimov and the Deultum coinage for Diadumenian.

The peculiarities of the Deultum coinage for Macrinus and Diadumenian have been analyzed by Dilyana Boteva within the entire complex of sources on Lower Moesia and Thracia for the period AD 193–217/8 in her PhD thesis, defended in 1994 and published in 1997. In her opinion, numismatic evidence from both Lower Moesia and Thrace argues easily in favour of Diadumenian’s probable presence in the lands south of the Danube River, while for Macrinus such a possibility is totally excluded. “The assumption that when busy in Syria the emperor sent his son on military mission to the Danubian limes soon after the latter was proclaimed *Caesar*, does not contradict the data known so far. (...) If this solution is correct, it explains the numismatic evidence of an imperial visit to Lower Moesia and Thrace during the first half of Macrinus reign.” Coins suggesting Diadumenian’s presence are issued in the mints of Nicopolis ad Istrum, Marcianopolis, Deultum and Byzantion. In addition, epigraphic evidence hints that Histria probably also hosted the *Caesar* (Boteva 1997, 328). “The historical background thus reconstructed argues plausibly for a re-assessment of the medallion with the name and portrait of Diadumenian on the obverse and the name of Deultum on the reverse that is considered at present a forgery. Indeed, all evidence for Lower Moesia and Thrace under Macrinus says it is authentic and not a forgery.” (Boteva 1997, 329).

Without any mention of the doubts concerning the medallion’s authenticity, Costadin Kisiov, Ilya Prokopov and Constantin Dotchev include the medallion here under discussion as one of the artefacts, forming the numismatic riches of the Archaeological Museum – Plovdiv (Kisiov, Prokopov, Dotchev 1998, 54, no 224).

In 2006 (in Bulgarian) and in 2007 (in English), Dimitar Draganov published a direct response to Boteva’s 1997 challenge regarding the medallion. After studying the respective numismatic artefact personally, he was “also convinced that it is a modern forgery”, adding that “this conclusion is based on numerous observations, some of which have been made already by the scholars who first published it” (Draganov 2007, 181, with footnote 10).

Data

This historiographical picture urged an attempt to find an indisputable proof, either in the direction of the medallion’s inauthenticity or of its authenticity. Accordingly, a step in this direction was taken within the project “Measuring ancient Thrace” through metal analysis performed by

Assoc. Prof. Dr. Boika Zlateva on June 2nd 2023, at the Archaeological Museum – Plovdiv.² The portable XRF instrument used for this study was a Bruker Titan S1 spectrometer equipped with a Fast Silicon Drift Detector (SDD) cooled by Peltier elements and resolution of the order of 160 eV FWHM at 6 KeV. The excitation source of this instrument was a Rh target X-ray tube, 4W, 40 kV, with a spot size of 3 mm and five positions automatic filter change.

The small-sized spot (about 3 mm²) is cleaned by a diamond drilling machine to remove patina and to obtain the original metal alloy. The RSD (relative standard deviation) is estimated of four independent measurements and is in range 8.0-10.2%.

The results from XRF measurements (**Fig. 2**) show that the original metal alloy is made on the basis of a semi-red brass combination of copper and zinc in a ratio of 8/1; this means that the original metal alloy is made from a very common metallurgical process. The concentrations of all other elements do not exceed 0.2% (mass).



for the results from XRF measurements of the elemental compositions of the Deultum medallion with the name and portrait of Caesar Diadumenian on the obverse, executed with a portable Bruker Titan S1 spectrometer

(Results are given in mass percentages, %)

P	Ti	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Ag	Cd	Sn	Sb	Pb	Bi
0.09	<LOD	0.067	<LOD	0.06	<LOD	<LOD	84.79	11.66	0.2	0.11	<LOD	0.15	0.16	0.09	<LOD

Plovdiv, June 2nd, 2023

Analysis executed by Assoc. Prof. Dr. Boika Zlateva

Fig. 2. Protocol for the results from the XRF measurements of the elemental compositions of the Deultum medallion.

It is well known that the melting point of the alloy decreases and the melted metal achieves higher fluidity when the concentration of lead is in the range of between 3 and 5%. In this case, we can conclude that it is due to the presence of lead in the ore, and it was not intentionally added to the alloy (Scott 1991).

The intentional addition of tin (up to 5%) and arsenic (up to 3%) to the alloy aims to produce a lighter shade of the bronze alloy to achieve similarity to the objects made of gold. In our case, however, the finding shows a level of As 0.2% and Sn 0.15%.

Another common trace or minor element in Cu-based artefacts is iron, which is mainly present with copper as copper-iron sulfides or as an iron oxide. This element could come from the impure copper ore or the fluxing compounds used during the smelting process. An amount of about 0.05 wt.% is typical of the early processes carried out under poor reducing conditions, while content higher than 0.3 wt.% indicates a more efficient process and, therefore, the iron content could evidence the advanced technological competency and skill of the smelting operator (Craddock, Cowell et al. 2010).

In the elemental compositions of the medallion are found some Ag and As (0.11 and 0.16% resp.) and Ni below the limit of detection of the used method (LOD). This is indicative that copper ores of nickel arsenide had not been used, but it is possible that copper arsenide arsenic ores were in fact used. All other elements are found as normal impurities in the used ores, and their

² The authors extend their sincere gratitude to Assoc. Prof. Dr. Kostadin Kisiov (Director of the Archaeological Museum of Plovdiv), and Chief Assist. Prof. Dr. Desislava Davidova (Head of the Numismatics Department at the Archaeological Museum of Plovdiv) for their support and cooperation during the research.

levels are not statistically significant.

Accordingly, the elemental composition of the Deultum medallion for Diadumenian is indicative rather of its authenticity and not inauthenticity.

To conclude

The elemental composition of the Deultum medallion, bearing the name and portrait of Caesar Diadumenian, provides further proof that this numismatic artefact could very well be an authentic ancient object. Its physical features (colour, thickness, rounded edge and lack of patina), being so remarkable and distinguishable, would make the medallion easily recognisable if it were a forgery, which could not serve any modern forger. The alternative would be that the medallion is an authentic object, and the experts' immediate task is to find a reasonable explanation for all its iconographic and physical peculiarities. And if this is an authentic artefact, as proven by metal analysis, one could expect other pieces of such medallions to appear in the future.

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