

NOTAE NUMISMATICAE

ZAPISKI NUMIZMATYCZNE



Tom XX

MUZEUM NARODOWE W KRAKOWIE
SEKCJA NUMIZMATYCZNA
KOMISJI ARCHEOLOGICZNEJ PAN
ODDZIAŁ W KRAKOWIE

Kraków 2025

NOTAE NUMISMATICAE

ZAPISKI NUMIZMATYCZNE

Tom XX

MUZEUM NARODOWE W KRAKOWIE
SEKCJA NUMIZMATYCZNA
KOMISJI ARCHEOLOGICZNEJ PAN
ODDZIAŁ W KRAKOWIE

Kraków 2025

Komitet naukowy / Scientific Committee:

Prof. Peter van Alfen, Prof. Michael Alram, Prof. Aleksander Bursche, Prof. François de Callatay, Dr Karsten Dahmen, Prof. Georges Depeyrot, Dr Haim Gitler, Prof. Wiesław Kaczanowicz, Elżbieta Korczyńska, Prof. Katerini Liampi, Prof. Andrew Meadows, Prof. Mariusz Mielczarek, Dr Hab. Jiří Militký, Prof. Janusz A. Ostrowski, Prof. Maciej Salamon, Prof. Bernhard Weissner

Redakcja / Editorial Board:

Redaktor / Editor in Chief – Jarosław Bodzek

Zastępca redaktora / Associate Editor – Mateusz Woźniak

Sekretarze / Secretaries – Barbara Zając, Dorota Malarczyk, Anna Bochnak

Redaktor tematyczny / Theme Editor:

Peter van Alfen

Redaktor językowy / Linguistic Editor:

Peter van Alfen

Recenzenci / Reviewers:

Dr Hab. Bartosz Awianowicz, Dr Hab. Tomasz Bochnak, Dr Hab. Mateusz Bogucki, Dr Gilles Bransbourg, Dr Barbara Butent-Stefaniak, Dr Vincent Drost, Dr Przemysław Dulęba, Dr Hab. Arkadiusz Dymowski, Dr Witold Garbaczewski, Dr Marek Jankowiak, Dr Piotr Jaworski, Dr Szymon Jellonek, Dr Lajos Juhász, Prof. Agata Kluczek, Dr Lucian Munteanu, Dr Hab. Kyrylo Myzgin, Dr Evgeni Paunov, Dr Agnieszka Smołucha-Sładowska, Prof. Petr Vorel, Dr David Wigg-Wolf, Dr Michał Zawadzki, Dr Bernward Ziegau

Redaktorzy prowadzący / Managing Editors:

Barbara Zając, Dorota Malarczyk, Katarzyna Kwinta

Korekta / Proofreading:

Aeddan Shaw, David Wigg-Wolf

Projekt graficzny i typografia / Graphic design and desk top publishing:

Luiza Berdak

Skład i łamanie / Typesetting and page layout:

Knight Press

Adres redakcji / Address of the Editorial Office:

Muzeum Narodowe w Krakowie

ul. Marszałka Józefa Piłsudskiego 12, 31-109 Kraków

tel. (+48) 12 433 58 50, e-mail: notae@mnk.pl

<http://mnk.pl/notae-numismaticae-zapiski-numizmatyczne-1>

Wyłącznie odpowiedzialność za przestrzeganie praw autorskich dotyczących materiału ilustracyjnego ponoszą autorzy tekstów.
Authors of the texts bear the sole responsibility for observing the copyright illustrations.

Wersją pierwotną *Notae Numismaticae – Zapiski Numizmatyczne* jest wersja elektroniczna.

The electronic edition of the *Notae Numismaticae – Zapiski Numizmatyczne* is treated as its original version.

© Muzeum Narodowe w Krakowie i Autorzy, 2025

ISSN 1426-5435

SPIS TREŚCI / CONTENTS

- 9 Od redakcji
10 From the Editors

ARTYKUŁY / ARTICLES

- WIOLETTA PAZOWSKA
13 A New Specimen of the Krakow Type Stater
Nowy egzemplarz statera typu krakowskiego
- ŁUKASZ KIEFERLING
23 Comments on the Technology of Production of Krakow Type Staters
Uwagi na temat technologii produkcji staterów typu krakowskiego
- BARBARA ZAJĄC
45 The Cultural Identity of the “City of the Blind”. Roman Provincial Coinage in Calchedon
Tożsamość kulturowa „miasta ślepców”. Rzymskie mennictwo prowincjonalne Chalcedonu
- SZYMON JELLONEK
67 Coins from the *Retentura* (Sector XIII) of the Legio I Italica Fortress in Novae
Monety z retentury (sektor XIII) obozu legionowego Legio I Italica w Novae
- LAJOS JUHÁSZ
81 A Miscast Denarius from the Hungarian Barbaricum
Wadliwie odlany denar z węgierskiego Barbaricum
- KRZYSZTOF JARZECKI
103 A Gold-plated Barbarian Imitation of a Roman Coin Found in Karczyn-Wieś in Kuyavia
Brązowe pozłacane barbarzyńskie naśladownictwo rzymskiej monety znalezione w Karczynie-Wsi na Kujawach
- JACEK PIKULSKI, KYRYŁO MYZGIN, JAROSŁAW BODZEK
125 A New Find of a Solidus of Constantine I from the Vicinity of Jakuszowice
Nowe odkrycie solidu Konstantyna I z okolic Jakuszowic

- STEPAN STEPANENKO, ERIC OLLIVIER, HENNADII SVYSTUN,
IEVHENIIA KALUHINA
- 147 Tracing Early 9th-Century Islamic Silver Flows: New Evidence from Tsarino (Mayaki) on the Donets River, Ukraine
Śledzenie napływów islamskiego srebra na początku IX wieku: nowe dowody z Tsarino (Mayaki) nad Dońcem, Ukraina
- PAWEŁ MILEJSKI, RADOSŁAW ZDANIEWICZ
- 199 Coins from the Archaeological Research at the Church of St. George in Czechowice
Monety z badań archeologicznych kościoła św. Jerzego w Czechowicach
- DARIUSZ F. JASEK
- 249 A Reassessment of the Attribution of the BB Dies of Sigismund III Vasa's 100 Ducats Issue
Rewizja atrybucji autorstwa stempli BB studukatówki Zygmunta III Wazy
- JAROSŁAW BODZEK
- 273 Zygmunt Mineyko (1840–1925) and His Gift of Ancient Greek, Roman, and Byzantine Coins to the Jagiellonian University
Zygmunt Mineyko (1840–1925) i jego dar starożytnych monet greckich, rzymskich oraz bizantyńskich dla Uniwersytetu Jagiellońskiego
- BARBARA ZAJĄC
- 311 The Paper Money Collection of the Numismatic Cabinet of the National Museum in Krakow between 1919–1949
Kolekcja pieniądza papierowego Gabinetu Numizmatycznego Muzeum Narodowego w Krakowie w latach 1919–1949

RECENZJE / REVIEWS

- JAROSŁAW BODZEK
- 343 STEFAN KRMNICEK and EREN-CAN MERAL, *Sylloge Nummorum Graecorum Deutschland. Münzsammlung der Universität Tübingen 7. Heft Ägypten: Alexandria und Gaumünzen. Augustus–Diocletianus. Nr 1–1154*, Propylaeum, Heidelberg 2025
- PAWEŁ KOCHAŃSKI
- 346 PIERLUIGI DEBERNARDI, *Roman Republican Silver Coins*. Vol. 1: *Beginnings – 200 BC*, Artemide Aste s.r.l., San Marino 2024

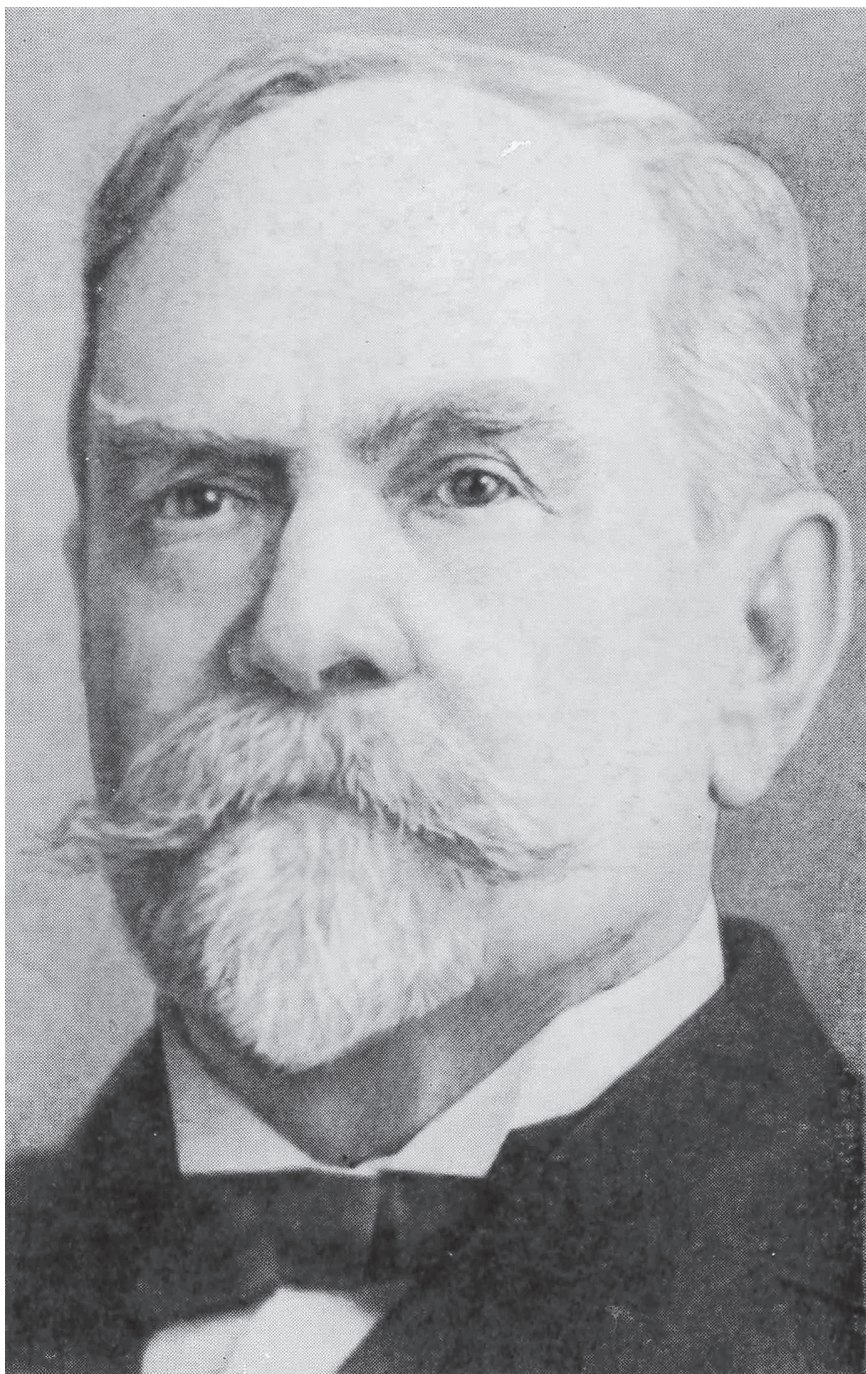
- JAROSŁAW BODZEK
350 BARTŁOMIEJ BARTECKI, ANNA HYRCHAŁA and KYRYLO MYZGIN
(eds.), *Skarb z Cichobórze. Studia nad depozytem rzymskich denarów oraz ich naśladownictw / The Cichobórz Hoard. A Study of the Deposit of Roman Denarii and Their Imitations*, Muzeum im. ks. Stanisława Staszica w Hrubieszowie, Hrubieszów 2023
- SZYMON JELLONEK
355 AGATA ALEKSANDRA KLUCZEK, *Ktistes i inni. Bohaterowie mitów i legend w rzymskim mennictwie prowincjonalnym (235–276)*, Wydawnictwo Uniwersytetu Śląskiego, Katowice 2025
- BARBARA ZAJĄC
358 CHRISTOPHER HOWGEGO, *Roman Provincial Coinage*. Vol. IV.4: *Antoninus Pius to Commodus (AD 138–192). Egypt*. Part 1: *Introduction and Catalogue*. Part 2: *Indexes and Plates*, British Museum Press, Bibliothèque nationale de France, London–Paris 2023
- KATARZYNA BALBUZA
364 JEROME MAIRAT, *The Roman Imperial Coinage*. Vol. V.4: *The Gallic Empire (AD 260–274)*, Spink & Son Ltd, London 2023

KRONIKI / CHRONICLES

- MATEUSZ WOŹNIAK
371 *Kronika Gabinetu Numizmatycznego Muzeum Narodowego w Krakowie (2024)*
379 *The Chronicle of the Numismatic Cabinet of the National Museum in Krakow (2024)*
- JAROSŁAW BODZEK
389 *Kronika Sekcji Numizmatycznej Komisji Archeologicznej Polskiej Akademii Nauk Oddział w Krakowie (2025)*
391 *The Chronicle of the Numismatic Section of the Archaeological Commission of the Polish Academy of Sciences, Krakow Branch (2025)*

NEKROLOGI / OBITUARIES

- NATHAN T. ELKINS
397 William E. Metcalf (1947–2025)
399 Bibliography of William Edward Metcalf
- HELLE W. HORSNÆS, JENS CHRISTIAN MOESGAARD
411 Jørgen Steen Jensen (Frederiksberg, 1 November 1938–Frederiksberg, 1 February 2025)



Zygmunt Mineyko (1840–1925). Fot. Archiwum Muzeum Narodowego w Krakowie
Zygmunt Mineyko (1840–1925). Photo: Archives of the National Museum in Krakow

Szanowni Państwo,

oddajemy w Państwa ręce tom XX *Notae Numismaticae – Zapisków Numizmatycznych*. Zgodnie z przyjętymi przez nas zasadami wszystkie teksty publikujemy w językach kongresowych, z angielskimi i polskimi abstraktami. Zawartość obecnego tomu oraz tomy archiwalne są zamieszczone w formie plików PDF na stronie internetowej Muzeum Narodowego w Krakowie (<https://mnk.pl/notae-numismaticae-zapiski-numizmatyczne-1>). Na stronie dostępne są ponadto wszelkie informacje ogólne o czasopiśmie oraz instrukcje dla autorów i recenzentów.

Sto lat temu 27 grudnia 1925 roku zmarł w Atenach Zygmunt Mineyko (1840–1925), człowiek o niezwykłym życiorysie, oddany Ojczyźnie patriota, weteran Powstania Styczniowego, emigrant, a jednocześnie filhellen i honorowy obywatel Grecji. Jego zasługi na polu walki z rosyjskim zaborcą, emigracyjna tułaczka i wkład w budowę Państwa Greckiego są dosyć dobrze znane, głównie dzięki spisany przez niego samego pamiętnikom przechowywanym w Bibliotece Jagiellońskiej w Krakowie, w części wydanych drukiem w 1971 roku pod tytułem *Z Tajgi pod Akropol*. Dzięki publikacjom polskich i greckich archeologów znane są również dokonania Mineyki na polu archeologii, a w szczególności jego udział w badaniach na terenie położonego w Epirze słynnego sanktuarium Zeusa w Dodonie.

Zygmunt Mineyko interesował się również numizmatyką i nie były to zainteresowania powierzchowne. Spod jego pióra wyszło – niestety nigdy nieopublikowane – dzieło poświęcone jak sam pisał „objawom numizmatyki”. Rękopis tej pracy przechowywany obecnie we Lwowie, w dawnych zbiorach Zakładu Narodowego im. Ossolińskich, pozwala uznać ją za bardzo nowoczesne i wyprzedzające swe czasy opracowanie. Zygmunt Mineyko jest również ściśle powiązany z historią zbiorów numizmatycznych Muzeum Narodowego w Krakowie. W latach 1924 i 1926 do zbiorów krakowskiego Muzeum Narodowego trafiło w dwóch transzach prawie sto antycznych monet podarowanych przez Stanisława Mineykę (1875–1924), syna Zygmunta. Choć formalnie ofiarodawcą był Stanisław najprawdopodobniej inspiratorem daru był jego ojciec, który z powodzeniem realizował ideę wzbogacania polskich instytucji naukowych i muzeów zespołami starożytnych monet. Dary takie zostały lub miały zostać przekazane Muzeum Narodowemu w Warszawie, Uniwersytetowi Wileńskiemu, Uniwersytetowi Jagiellońskiemu oraz jak wspomniano Muzeum Narodowemu w Krakowie. Niniejszy tom naszego czasopisma pragniemy dedykować pamięci Zygmunta i Stanisława Mineyków.

Redakcja

Dear Readers,

We are delighted to present you with volume 20 of *Notae Numismaticae – Zapiski Numizmatyczne*. As is our policy, we publish all texts in the congress languages, with English and Polish abstracts. The contents of current volume and archive numbers are available as PDF files on the website of the National Museum in Krakow (<https://mnk.pl/notae-numismaticae-zapiski-numizmatyczne-1>). The website also provides all general information about the journal, along with guidelines for authors and reviewers.

One hundred years ago, on 27 December 1925, Zygmunt Mineyko (1840–1925) died in Athens. He was a man with an extraordinary life story, a devoted patriot, a veteran of the January Uprising, an emigrant, and at the same time a philhellene and honorary citizen of Greece. His achievements in the fight against the Russian invader, his wanderings as an emigrant, and his contribution to the building of the Greek state are quite well known, mainly thanks to his memoirs, stored in the Jagiellonian Library in Krakow, some of which were published in 1971 under the title *Z Tajgi pod Akropol* (From the Taiga to the Acropolis). Thanks to publications by Polish and Greek archaeologists, Mineyko's achievements in the field of archaeology are also well known, in particular his participation in research at the famous sanctuary of Zeus in Dodona, located in Epirus.

Zygmunt Mineyko was also interested in numismatics, and this interest was far from superficial. He wrote a work devoted to what he called “the manifestations of numismatics”, which, unfortunately, was never published. The manuscript of this work, currently stored in Lviv, in the former collections of the Ossoliński National Institute, allows us to consider it a very modern and ahead-of-its-time study. Zygmunt Mineyko is also closely associated with the history of the numismatic collections of the National Museum in Krakow. In 1924 and 1926, almost a hundred ancient coins donated by Stanisław Mineyko (1875–1924), Zygmunt's son, were added in two tranches to the collection of the National Museum in Krakow. Although Stanisław was formally the donor, it was most likely his father who inspired the donation, as he had successfully implemented the idea of enriching Polish scientific institutions and museums with collections of ancient coins. Such donations were or were to be donated to the National Museum in Warsaw, Vilnius University, the Jagiellonian University in Krakow, and, as mentioned, the National Museum in Krakow. We would like to dedicate this volume to the memory of Zygmunt and Stanisław Mineyko.

The Editors

DARIUSZ F. JASEK

Technical University of Ostrava, Faculty of Economics;

Polish Numismatic Society, Krakow Branch

ORCID: 0009-0005-9874-8635

A Reassessment of the Attribution of the BB Dies of Sigismund III Vasa's 100 Ducats Issue

ABSTRACT: The article addresses the problem of the authorship of the BB dies used for the 1621 gold 100 ducats of Sigismund III Vasa, traditionally attributed to Samuel Ammon. Through a detailed comparative analysis of the AA and BB pair of dies, including stylistic, iconographic, and technological features, the author demonstrates their fundamental differences in craftsmanship. Provenance data and the chronology of the appearance of coins struck with the BB dies, whose first confirmed specimens were recorded only in the 20th century, are also of crucial importance. The author has furthermore conducted a detailed analysis and classification of a recently recorded silver specimen from the collectors' market, identifying it as a precisely chased cast, most probably dating from the 19th century. In light of the arguments presented, it is not possible to determine either the time of production of the BB dies themselves or their author; however, the coins struck with BB dies should be regarded rather as later products than of 1621, as suggested by the date they bear, which leads to a revision of existing attributions and a new interpretation of the entire issue.

KEY WORDS: 100 ducats, Samuel Ammon, die analysis, Sigismund III Vasa, Polish gold coinage

ABSTRAKT: *Rewizja atrybucji autorstwa stempli BB studukatówki Zygmunta III Wazy*

Artykuł podejmuje problem autorstwa i genezy stempli BB studukatówki Zygmunta III Wazy z 1621 roku, tradycyjnie przypisywanych Samuelowi Ammonowi. Na podstawie szczegółowej analizy porównawczej par stempli AA i BB, obejmu-

jącej cechy stylistyczne, ikonograficzne oraz technologiczne, autor wykazuje ich zasadniczą odmienność warsztatową. Istotne znaczenie mają również dane proveniencyjne oraz chronologia pojawiania się monet wykonanych stemplami BB, których pierwsze potwierdzone egzemplarze odnotowano dopiero w XX wieku. Autorowi udało się ponadto poddać szczegółowej analizie i sklasyfikować niedawno notowany na rynku kolekcjonerskim srebrny egzemplarz jako precyzyjnie cyzelowany odlew, najprawdopodobniej XIX-wieczny. W świetle przedstawionych argumentów nie są możliwe ani jednoznaczne określenie czasu powstania samych stempli BB, ani identyfikacja ich autora, a wybite nimi monety należy uznać raczej za produkty późniejsze niż sugerowana przez nie data: 1621, co prowadzi do rewizji dotychczasowych atrybucji i nowej interpretacji całej emisji.

SŁOWA KLUCZOWE: studukatówka, Samuel Ammon, analiza stempli, Zygmunt III Waza, złote mennictwo polskie

In the existing literature, the differences among known specimens of the 1621 issue of Sigismund III Vasa's 100 ducats have not been subjected to systematic analysis and have in practice remained largely overlooked. While in the context of 19th-century scholarship this may be regarded as understandable, in relation to publications of the 20th, and especially the 21st century, it must be assessed as a significant research gap. The principal studies devoted to this subject, including the works of Marian Gumowski (1881–1974), together with his article on Samuel Ammon (ca. 1590–1622),¹ which by virtue of its character constitutes particularly valuable material for the analysis, do not address this problem. In his work, Gumowski refers to the 100 ducats as the “large medal for Jacobson dated 1621” and characterizes it as “essentially a repetition of the previously described medal of 1617, albeit in an even more splendid and elaborate form. It is of considerably increased dimensions, entirely exceptional within our [means Polish] numismatics”.² Without reference to the analysis, the author also lists “gold specimens” weighing from 30 to 100 ducats as well as silver strikes. In his earlier monographs, devoted to the medals of Sigismund III Vasa³ and to the Bydgoszcz mint,⁴ Gumowski classified the 100 ducats inconsistently: initially as “a Bydgoszcz medal of 1621”,⁵ and subsequently as “a commemorative coin”,⁶ in each case omitting the issue of the differentiation.

¹ GUMOWSKI 1957: 230–279.

² *Ibidem*: 266.

³ GUMOWSKI 1924.

⁴ IDEM 1955.

⁵ IDEM 1957: 264.

⁶ IDEM 1955: 153–154, Tab. X, 949.

The distinguished scholar of medals, Maria Stahr (1942–2025), discussed the iconography of the 100 ducats in detail in her work,⁷ defining it as “a medal”; however, she entirely omitted the issue of die differentiation, limiting herself to the observation that, “among current Polish numismatic objects, this medal stands out for its size and weight. It measures 70 mm in diameter and is known in gold specimens weighing from 30 to 100 ducats and in silver ones, weighing from 3.5 to 6 thalers”. Since Stahr did not notice die differentiation within the issue of the 100 ducats, it isn’t surprising that Edmund Kopicki (1924–2017) likewise omitted this problem, describing them as a single type under the designation “medallic one hundred ducats”.⁸ Evidence of this author’s superficial treatment of the differences among individual specimens is provided by his assignment of an identical rarity grade to all fractions, encompassing both gold issues with denominations from 30 to 100 ducats and silver strikes with weights corresponding to 3.5–6 thalers.

In contrary, Jarosław Dutkowski (1954–2019) identified only one pair of a “dies of the 100 ducats coin”⁹ with a diameter of 68.8–70 mm, but distinguished also “donatives struck with a corrected die featuring a broad wreath border”.¹⁰ This classification is erroneous, since in this case we are dealing with separate, independent dies, a fact that Dutkowski failed to recognize, despite its being crucial for determining the authorship of individual pairs of dies. The differences between these both pairs of dies used for the issue of 100 ducats certainly cannot be reduced to the corrections of the original die, as suggested by Dutkowski. It is striking that, many years before the publication of his work, numerous specimens struck with the BB dies were already known from auction catalogues and other sources; they were clearly stylistically distinct from the other specimens of this issue directly accessible to the researcher, including museum pieces: two in Krakow, three in Budapest, and one in Dresden.

The first systematic classification of the dies used for striking Sigismund III Vasa’s 100 ducats, based on a division into the principal obverse–reverse AA and BB pairs of dies, was presented in my monograph, entitled *Studukatówka bydgoska 1621 Zygmunta III Wazy / The Poland 1621 Gold 100 Ducats*, published in 2018,¹¹ and subsequently upheld in the second edition of 2021.¹² The monograph included visual material for comparison, which clearly demonstrated differences between

⁷ STAHR 1990: 81–83.

⁸ KOPICKI 1976: 120, 186.

⁹ DUTKOWSKI 2015: 115.

¹⁰ *Ibidem*: 127. Dutkowski incorrectly omits the only known strike of 100 ducats produced with the BB dies, sold at a Stack’s auction in 1989 (and previously offered there in 1980, 1974, 1953, and 1952).

¹¹ JASEK 2018a: 21–24.

¹² IDEM 2021a: 25–29.

the AA and BB pairs of dies,¹³ indicating a simplification of artistic form and the replacement of the fine compositional elements characteristic of the AA pair (Fig. 1) with their larger counterparts on the BB dies (Fig. 2). It was further established that the majority of known specimens of the 1621 100 ducats were struck with the AA dies, which in almost all recorded examples exhibit a crack on the reverse. This classification of dies into AA and BB pairs has been accepted within the numismatic community both domestically and internationally, as well as by grading companies.¹⁴

COMPARATIVE ANALYSIS OF THE AA AND BB DIE TYPES OF THE 1621 100 DUCATS ON THE EXAMPLE OF A SILVER SPECIMEN WEIGHING 10 THALERS

A comprehensive analysis of all 28 gold strikes (weighing from 30 to 100 ducats) and eight silver ones from this issue, known from current collections or archival photographs, was conducted in an article published in *Numizmatyk Krakowski* 4/2021.¹⁵ I argued there that the issue produced with the BB dies most likely represented the final stage of production, as indicated by the progressive cracking of the A reverse die. At the same time, I considered the possibility of parallel striking with the AA and BB dies to be unlikely. In accordance with all previous publications, I attributed the execution of both die pairs to the great Gdansk medallist, Samuel Ammon.

This state of affairs persisted until April 2025, when a silver strike of the 100 ducats, with a weight corresponding to 10 thalers, appeared at an auction in Oslo (Fig. 3). High quality photos of this specimen were shared with me by the Norwegian auction house, Oslo Myntgalleri AS, even before the official announcement of the sale. Already at this stage, the first interpretative doubts emerged. The best previously known image of this particular coin, originating from the 2008 Stack's auction, was so unclear that it made the recognition of many minor details impossible. At the invitation of the auction house, I conducted several hours of examination of the object. The coin, initially offered at auction as a silver strike from 1621, was ultimately classified as a later, most probably 19th-century, chased cast.¹⁶

In Oslo, I made a series of macro photographs of the 10 thaler piece (Fig. 4), and the conclusions of the conducted inquiry were presented on 15 May 2025 at the Czapski Museum during a meeting of the Krakow branch of the Polish Numismatic

¹³ *Ibidem*: 28.

¹⁴ In January 2022, a gold coin weighing 80 ducats was sold at the New York auction of Stack's Bowers, encapsulated in a slab bearing the designation "Jasek-A/A" on the label (PCGS cert. no. 43297976).

¹⁵ JASEK 2021b.

¹⁶ As a result of the revised dating to a later strike, its starting price was reduced to 30% of the previous valuation.

Society.¹⁷ The discussion accompanying the lecture and its continuation after the presentation confirmed the formulated assumptions and became an impulse to attempt a synthetic approach to the problem in the present article. An important factor in this decision was also the confirmation of my hypotheses regarding the rejection of attribution of the analyzed details to Samuel Ammon by Agnieszka Smołucha-Sładkowska, a medal specialist from the Numismatic Cabinet of the National Museum in Krakow.

In a light of the above, I undertook a comparative analysis of another available coin from this issue, struck with the BB dies. The aim was to obtain a point of reference and to determine whether all specimens produced with the BB die pair are casts, or whether struck specimens are also present among them. Thanks to the courtesy of Michał Zawadzki,¹⁸ I conducted a detailed examination of an exceptionally well-preserved 40 ducats from the numismatic collection of the Royal Castle in Warsaw, thereby excluding the possibility that it had been produced by casting. Significantly, apart from the silver 10 thalers from Oslo, this was the only specimen known to me of all made with the BB dies that could be subjected to direct analysis.¹⁹ At this point, a difference in the character of specimens produced with the BB dies should be clearly noted: the silver 10 thalers from the Oslo auction is a cast, whereas the gold 40 ducats from the collection of the Royal Castle in Warsaw was struck.

A comparative analysis of the AA and BB die pairs used for striking the 1621 100 ducats leads to the conclusion that they differ in a fundamental, indeed essential, manner both technically and artistically. These differences are not limited to minor variations in die details but encompass the entire engraving workshop practice together with the manner of detailing.

In the case of the AA dies, we observe a process of gradual degradation typical of intensively used minting tools, particularly evident on the reverse. These damages accumulate in a sequential and systematic manner, most likely leading to the cracking of the die in the final phase of its use. This phenomenon is confirmed by the analysis of successive strikes, which display increasingly advanced surface defects in the area of the aforementioned crack at the bottom of the reverse.²⁰

By contrary, the situation with the BB dies is different: the dies of this group for obverse and reverse have been preserved in excellent condition, and as it seems all known strikes are characterized by a uniform, very high technical quality, without any traces of progressive tool wear.

¹⁷ A lecture entitled "Emisja 100 dukatów z 1621 r. stemplem BB – czyje to dzieło?" [The 1621 100 Ducats Issue Struck with the BB Dies – Whose Work Is It?].

¹⁸ I would like to express my gratitude to Mr Michał Zawadzki for the opportunity to conduct a direct analysis of the coin.

¹⁹ Apart from these two specimens, I had the opportunity to directly examine 14 other 100 ducats coins struck with the AA dies: eight full weight gold specimens, two lighter gold strikes, and four silver strikes.

²⁰ JASEK 2021b: 12.

Even a quick observation, however, reveals that the overall execution of the BB dies differs significantly from the standards known from the AA dies. This applies both to the level of detail and to the manner of modelling the royal portrait and heraldic elements. This is all the more striking given that Samuel Ammon, widely regarded as one of the greatest medallists and engravers of his era, was famous for his exceptional attention to detail, including elements on a submillimeter scale. Meanwhile, the 100 ducats pieces struck with the BB dies clearly lack this precision and consistency of craftsmanship.

These differences are particularly evident in the smallest compositional elements, with dimensions below one millimeter. On the superb strikes produced with the AA dies, these details – such as the rosette placed before the royal name on the obverse (Fig. 4) or the microscopic date located behind the ruler's bust – were executed with exceptional precision and subtlety. In the case of strikes made with the BB dies, these elements (Fig. 5) were clearly enlarged, simplified, and rendered in a disproportionate manner, at times even crudely, which stands in contradiction to the aesthetic principles and workshop practice characteristic for Ammon.

Similar differences can be observed in the treatment of the royal portrait. The portraits attributed to Ammon, known from his earlier coins, medals, and donatives, are characterized by an excellent sense of form, naturalism, and consistency in rendering anatomy and texture. A good point of reference is the series of donatives from 1614, comprising specimens weighing from 5 to 20 ducats (Fig. 6). These were struck using die pairs of different sizes, each developed individually, without mechanical repetition of ornamental motifs. We can assume that the artist was given free rein at the mint. Despite the technical possibilities available to him, Ammon did not employ simplifications consisting in the use of the same dies for different denominations with only an increase in the thickness of the flan corresponding to the greater weight expressed in ducats. Instead, he chose a fully independent development of the composition for each die pair.

Therefore, it would be difficult to accept that seven years later, after producing a series of outstanding works, the same master would have deliberately created dies of such clearly reduced artistic and technical quality as those of the BB type, in comparison with the AA die pair.

The analysis of the face of Sigismund III Vasa on strikes produced with the BB dies reveals far reaching simplifications of form. The hair is rendered in a schematic manner, without the finesse characteristic of Ammon. Particularly striking is the treatment of the moustache, the end of which has been unnaturally exaggerated, acquiring an almost grotesque character and departing from the realism evident on strikes made with the AA dies. Other elements of the physiognomy, including the eye, likewise betray a lack of skill: the pupil is marked awkwardly and off center,

and the overall outline of the eye gives the impression of careless engraving, and is inconsistent with the aesthetic known from Ammon's works.

Similar issues are evident in the treatment of the decorated armor. While the large elements, such as the collar of the Order of the Golden Fleece, appear correct at first glance, detailed analysis reveals numerous inconsistencies. For instance, the ring between the chain and the pendant is missing, and all decorative rosettes have been simplified in artistic form. The smallest ornaments, present on strikes made with the AA dies, disappear entirely on the BB specimens. The micro dates, legible on the AA dies, are completely illegible on the BB strikes, which in turn raises the question of the purpose of engraving them on the dies. In the case of Ammon's works, doubts of this kind do not arise.

Significant differences are also evident in the legend. The letter punches used on the BB dies differ considerably from those known from the AA dies. It is unlikely that the punches used for the AA dies were destroyed after the production of only a single pair of the dies; therefore, the change in the appearance of the letters within what is theoretically the same issue is difficult to explain. For example, the Roman numeral III within the royal titlature is shaped differently on the two pairs of dies (Fig. 7): on the AA dies the numeral III is made of three I characters of equal height, whereas on the BB dies the first I in the numeral III is shorter. Moreover, the analysis of the legend on pieces made with the BB dies under high magnification indicates that the letters of the legend on both sides of the coin were, at least partly, engraved by hand, which is particularly evident in more demanding forms such as the letters S and G.

The only element that previous researchers have consistently indicated as a die related difference is the "broad oak wreath", surrounding the royal image together with the legend. The wreath occurs on strikes made with both dies, the AA and the BB pair. However, on the BB obverses it clearly dominates the portrait, not fully harmonizing with it stylistically and visually separating itself from it. This impression occurs because the wreath, on both sides, is very clear on all specimens produced using the BB dies, and seems to be wider than on coins struck with the AA dies. It is executed with exceptional precision and uniformity on all known specimens made with BB dies, regardless of metal and weight, in both gold and silver. This quality stands in contradiction to the possibilities of the Bydgoszcz mint around 1621. To the best of my knowledge, no techniques available there at the time would have made it possible to strike an object with a diameter of seven centimeters with such perfection, which is clearly demonstrated by the AA imperfectly struck specimens. Comparison with other Bydgoszcz coins of the period leads to a conclusion bordering on certainty that such execution was then impossible. While the majority of specimens made with the BB dies display striking uniformity.

At the same time, this broad oak wreath, approximately 3.0–3.5 mm wide, occurs in parallel with a clearly reduced overall diameter of the coins. Whereas the diameter of specimens of the 100 ducats struck with dies attributed to Samuel Ammon (AA dies) falls within the range of 69–70 mm, in the case of coins produced using the BB dies it amounts to only about 68–69 mm. This difference, although seemingly minor, is of significant analytical importance and constitutes a further argument in favor of a different technological and workshop origin of the strikes made with the BB dies.

The most important argument supporting this assumption remains the issue of the technology used in producing the analyzed specimens. The technical aspects of the 1621 100 ducats issue indicate that a drop hammer²¹ was used to strike these coins. The application of mechanized striking was neither known nor employed in the conditions of the Bydgoszcz mint in 1621. At the stage of development of minting technology at that time, the significant achievement was already the preliminary preparation of flans by shaping them not as entirely flat discs, but with partially raised relief in areas crucial for ensuring proper metal distribution during striking. There are, however, no grounds for assuming that it was possible at that time to produce coins struck in a completely uniform manner, without traces of uneven striking, double strikes, and other typical technological imperfections. Similar phenomena are observed on the reverses of specimens produced with the BB dies. Elements of almost microscopic size have been enlarged, the rosette terminating the legend has lost its original character, and the details of the royal crown – especially the small jewels in its band – have undergone significant simplification and enlargement, while some were entirely changed in shape. At the same time, it is striking that some straight lines, angles, and arcs are executed unevenly and imprecisely. As on the obverse, differences in the letters of the legend are also clearly visible here. The micro date and the initials of Jacob Jacobson van Emden and Samuel Ammon have been enlarged, with the initials of the latter, particularly the letter S, being distorted in a manner not found in the master's other works (Fig. 8). A lack of precision is also evident in the heraldic elements, including certain Swedish crowns in the combined coat of arms.

One may, of course, assume that Samuel Ammon's work on the second die pair was interrupted, following his premature death in March 1622 after completing the AA dies, and subsequently continued by his apprentice or entrusted to another medallist. This, however, does not explain the abovementioned differences in the simplified appearance of the coins made with BB dies (for example why were

²¹ In German-language literature it is known as the *Fallwerk*, a heavy drop hammer used for striking large coins and medals, especially those with high relief.

the existing punches from the first die not used?) nor the use of production techniques that were unavailable in Bydgoszcz in 1621.

It is worth noting that the 2025 Norwegian auction allowed me to directly examine a specimen struck with the BB dies for the first time, which led to a revision of earlier assumptions based on the insufficient photographic documentation from the 2008 Stack's auction. Only in-hand examination made it possible to classify the coin undoubtedly as a later production.

This case illustrates the mechanism by which research conclusions are revised, occurring not only as a result of the appearance of previously unknown specimens on the collectors' market but also as a consequence of renewed analysis of objects long absent from scholarly circulation. The current quality of photo documentation provides researchers with incomparably greater possibilities for detailed assessment of numismatic objects than were available in analyses conducted several decades ago.

Despite the attractive first impression, a detailed analysis of the 10 thalers piece at high magnification leaves no doubt that the BB dies did not originate from the hand of Samuel Ammon. This raises the question of their authorship and the time of their production. In this context, the analysis of the provenance of known specimens and the determination of the moment of their appearance on the collectors' market are of crucial importance.

257

DATING THE APPEARANCE IN CIRCULATION OF KNOWN SPECIMENS STRUCK WITH THE AA AND BB DIES

A 17th-century source, the inventory (dated 1631) of Count Krzysztof Radziwiłł (1585–1640), records a gold 90 ducats specimen;²² however, the lack of graphic documentation makes further analysis impossible. A similar situation applies to the gold 70 ducats, donated by Rafał Andrzej Leszczyński (1650–1703) to Jasna Góra, recorded in 1685,²³ the silver 3 thalers from the collection of Wilhelm Radziwiłł (1797–1870; the catalogue of his collection was published in 1869),²⁴ and a specimen which is twice as heavy from the collection of Leon Mikocki (1809–1875; auction of 1850).²⁵ Much better documented, through photographs or *bartynotyp* prints, are the specimens known from 19th-century sources and from the early 20th century, including, among others, the collections of:

- Emeryk Count Hutten-Czapski (1828–1896; Jasek 100.01²⁶): a gold 100

²² JASEK 2021a: 85.

²³ *Ibidem*: 89.

²⁴ TRACHSEL 1869.

²⁵ Collection of Leon Mikocki (1 April 1850), lot 802.

²⁶ JASEK 2021a: 38–41.

ducats (purchased from a family member),²⁷ and a silver 5.5 thalers (most likely formerly in the collection of Leon Mikocki²⁸ – the above-mentioned specimen; Jasek S.55²⁹).

- Franciszek Count Potocki (1788–1853): there exists a 90 ducats specimen from the main collection of Franciszek Potocki (the coin is listed in the manuscript inventory³⁰ of the collection; Jasek Z.90³¹); a second 90 ducats specimen, that was previously in the same collection (listed as a duplicate; Jasek Z.90),³² was sold at the Helbing auction in 1904;³³ silver 4 thalers (acquired from Helbing in 1904;³⁴ Jasek S.4)³⁵ and 3.5 thalers (recorded in the above-mentioned inventory of the Potocki collection; Jasek S.35)³⁶ are preserved today in the Coin and Medal Cabinet of the National Museum in Warsaw. A *bartynotyp* print of another coin with the Pilawa punch is also known, most likely representing one of the remaining gold specimens, recorded in the inventory of the collection of Franciszek Potocki, weighing 30, 50, and 90 ducats.³⁷
- Julian Ursyn Niemcewicz (1757–1841): a gold 80 ducats specimen (Jasek Z.80)³⁸ sold to S.N. Oberndorffer and recorded in his Munich sale's catalogue of January 1841³⁹ – it is most likely the same coin that was sold recently at auctions in the United States (Stack's, 2022)⁴⁰ and in Monaco (MDC, 2024).⁴¹
- Stanisław Tarnowski (1838–1909): a gold 100 ducats from the collection of

²⁷ From Adolf Czapski, after uncle Stanisław. This information is written on the coin inventory card from the Czapski's numismatic card system.

²⁸ GUMOWSKI 1957: 266.

²⁹ JASEK 2021a: 102–103, 105.

³⁰ *Katalog Summaryczny Numizmatycznego Zbioru Monet i Medalów święt: pam: Franciszka Hrabiego Potockiego*, Coins and Medals Cabinet of the National Museum in Warsaw.

³¹ JASEK 2021a: 84–85.

³² *Ibidem*.

³³ Otto Helbing, Collection of Sigismund Chelminski from Szarawka (25 April 1904), lot 208. The coin shown on Plate III in the auction catalog is labeled as “206, 207, 208”, but due to the Pilawa coat of arms on the obverse it cannot be that specimen. According to the author, the coin pictured on Plate III is the above-mentioned duplicate of 90 ducats from the collection of Franciszek Potocki.

³⁴ Otto Helbing, Collection of Sigismund Chelminski from Szarawka (25 April 1904), lot 206.

³⁵ JASEK 2021a: 108–109.

³⁶ *Ibidem*: 110–111.

³⁷ *Ibidem*: 83–84, 93, 97.

³⁸ *Ibidem*: 86–87.

³⁹ JASEK 2022: 97–98 and S.N. Oberndörffer's “Verzeichniß Einer, aus 200 Stücken bestehenden Sammlung meistens sehr seltner polnischer Gold- u. Silbermünzen (...)”. This refers to the fixed-price list of the Bavarian numismatist and dealer Samson Nathan Oberndörffer, published in January 1641, which included rare Polish coins and medals acquired from J.U. Niemcewicz, following an earlier unsuccessful attempt to sell them by the collector to Count Franciszek Potocki in 1836.

⁴⁰ Stack's 2022.

⁴¹ MDC Monnaies de Collection sarl, Auction 14 (3 May 2024), lot 1335.

the Wawel Royal Castle (Jasek 100.02),⁴² acquired in 1934 from the collector's widow;⁴³ the specimen had already been recorded in 1884 in the catalogue of the exhibition of artefacts from the times of Jan Kochanowski.⁴⁴

- The State Art Collections in Dresden (Jasek 100.06):⁴⁵ as recorded in the manuscript inventory of the collections "reorganized during the reign of John George II of Wettin",⁴⁶ a gold 100 ducats specimen has been held there since the second half of the 17th century.
- The Hungarian National Museum in Budapest: three gold coins, each weighing 100 ducats (Jasek 100.03–100.05);⁴⁷ they originate from the Esterházy family collection, and their acquisition into the museum's holdings is dated to a period prior to 1645.⁴⁸
- The museum in Rapperswil, which in 1896 received a posthumous donation from E. Witkowski in the form of a galvanotype of a 100 ducats coin (now preserved in the collection of the Coins and Medals Cabinet of the National Museum in Warsaw).⁴⁹

To the 13 coins listed above, we may add gold specimens from auctions held in the early 20th century, namely a 100 ducats from the Rev. Siedlecki collection (Chapman auction, 1911;⁵⁰ Jasek 100.07),⁵¹ and two 70 ducats examples: one from the collection of Kubicki (Jasek Z.70),⁵² sold in 1908,⁵³ and the other from the Gregory collection (Chapman auction, 1916;⁵⁴ Jasek Z.70).⁵⁵ Altogether, this yields 16 specimens of various weights, struck in gold and silver unquestionably with the AA dies, whose documented provenance is dated to the period from the second half of the 17th century to 1916.

In the case of the BB dies, the situation is entirely different. In the catalogue of the issue, forming part of the second edition of the monograph, I indicated that

⁴² JASEK 2021a: 42–44.

⁴³ NOWACKI 2012: 62.

⁴⁴ NIECZUJA-ZIEMIĘCKI 1884: 20.

⁴⁵ JASEK 2021a: 50–52.

⁴⁶ A manuscript entitled *Verzeichnis der Goldenen Münzen und Medaillen die unter Johann Georg II neu geordnet wurden*. Johann Georg II was an elector of Saxony in the years 1656–1680.

⁴⁷ JASEK 2021a: 45–49.

⁴⁸ IDEM 2018b: 62–63.

⁴⁹ IDEM 2021a: 36.

⁵⁰ Henry Chapman, Collection of Coins of the late Rev. Stanislaus Siedlecki (22 April 1911), lot 162.

⁵¹ JASEK 2021a: 53–55.

⁵² *Ibidem*: 88–89.

⁵³ Adolph Hess Nachfolger, Collection of Coins of Otto Kubicki (30 March 1908), lot 507.

⁵⁴ S.H. Chapman, The Collection of the late Charles Gregory, Esq. (19–24 June 1916), lot 540.

⁵⁵ JASEK 2021a: 88–89.

only eight known coins were produced with the BB dies.⁵⁶ They are listed below together with the date of the first recorded appearance of each specimen at auction:

- one gold 100 ducats specimen (Jasek 100.08):⁵⁷ listed in the Gimbels price list in 1952;⁵⁸ the same coin was sold with the Guggenheimer⁵⁹ collection at auction in 1953;
- five gold specimens weighing 40 ducats⁶⁰ (Jasek Z.40)⁶¹ each: Glendining 1938; Adolph Hess/Bank Leu 1961 (the coin now in the collection of the Royal Castle in Warsaw); Adolph Hess/Bank Leu 1969; Emile Bourgey 1978; and Schweizerischer Bankverein 1985;
- one silver specimen weighing 10 thalers (S.10):⁶² Schweizerischer Bankverein 1986;
- one silver specimen weighing 5 thalers (S.5):⁶³ Adolph Hess/Bank Leu 1963.

This list was appended in the course of later research with two more records:

- One silver specimen weighing 5 thalers (S.5): Karl Kress 1962;⁶⁴
- One silver specimen weighing 10 thalers (S.10): Karl Kress 1963.⁶⁵

From a geographical perspective, the distribution of confirmed ten specimens made with the use of the BB dies can therefore be presented as follows:

1. 1938 – United Kingdom (gold, 40 ducats),
2. 1952 – United States (gold, 100 ducats),
3. 1961 – Switzerland (gold, 40 ducats),
4. 1962 – Germany (silver, weight equivalent to 5 thalers),
5. 1963 – Switzerland (silver, weight equivalent to 5 thalers),
6. 1963 – Germany (silver, weight equivalent to 10 thalers),
7. 1969 – Switzerland (gold, 40 ducats),
8. 1978 – France (gold, 40 ducats),

⁵⁶ *Ibidem*: 35, 57–65, 94–95, 100–101, 106–107.

⁵⁷ *Ibidem*: 57–65.

⁵⁸ The first strike produced with the BB dies did not appear at an auction but – what from today's perspective constitutes an exceptional case – in the price list of the American corporation Gimbels, also known as Gimbels Brothers. In the absence of buyers, the object was subsequently consigned to the Stack's auction in 1953, where it was offered together with the Guggenheimer coin collection.

⁵⁹ Particular attention should be paid to the person of the first identified owner of this coin, Fred Guggenheimer. According to the information contained in the auction catalogue, unlike most known holders of specimens from the 1621 100 ducats issue, he was not identified as a numismatist.

⁶⁰ All 40 ducat specimens currently known to me from direct examination and from photos were produced using the BB dies; however, this does not mean that examples struck with the AA dies will not appear.

⁶¹ JASEK 2021a: 94–95.

⁶² *Ibidem*: 100–101.

⁶³ *Ibidem*: 106–107.

⁶⁴ Münchner Münzhandlung Karl Kreß, Auction 122 (30 May 1962), lot 3293a.

⁶⁵ Münchner Münzhandlung Karl Kreß, Auction 128 (25 November 1963), lot 1387.

9.1985 – Switzerland (gold, 40 ducats),

10.1986 – Switzerland (silver, weight equivalent to 10 thalers).

ANALYSIS OF THE CHRONOLOGICAL AND GEOGRAPHICAL EVIDENCE

The above overview reveals several facts of significant interpretative importance. Particularly noteworthy is the appearance of the first confirmed strike produced with the BB dies on the collectors' market only in 1938, which constitutes a significant contrast in comparison with coins struck with the AA dies. Spatial analysis indicates a clear concentration of subsequent appearances in Germany and Switzerland, especially in the 1960s, accompanied by the repeated occurrence of the same auction houses in which these specimens were offered. Owing to the considerable visual similarity of the analyzed coins, their definitive differentiation presents serious difficulties; consequently, the observed phenomenon may indicate a specific mechanism of market circulation in the form of the entering of coins into the collectors' market several times.

The coin from the Guggenheimer collection (auction of 1953) is the only full weight gold 100 ducats coin struck with the BB dies and the second specimen, after the 1938 example, to have appeared on the collectors' market. Its subsequent records in Stack's auctions in 1974 (Henry C. Gibson Collection), 1980, and 1989 are complex and burdened with inconsistent provenance information, including unverified references to aristocratic collections.⁶⁶ Subsequently, the coin was allegedly sold again by Stack's in 1957, passing into the hands of its then owner. This statement, however, raises serious doubts, since the coins sold in 1953 (Jasek 100.08)⁶⁷ and 1957 (Jasek 100.09)⁶⁸ are in fact two distinct specimens, a fact that was noted neither by the auction house in the cited description nor in the numismatic literature prior to the publication of the 2018 monograph on the Polish 100 ducats.⁶⁹ This circumstance significantly undermines the credibility of the information contained in the auction catalogue.

⁶⁶ According to the description in the 1974 auction catalogue, this specimen had previously belonged to the collection of Count Reventlow, a cousin of King Christian X of Denmark (1870–1947), from which it was said to have passed into the collection of Henry Grunthal. However, I was unable to confirm this aristocratic provenance in the course of work on both editions of the monograph on the Polish 100 ducats, published in 2018 and 2021. According to the catalogue information from the 1974 auction, the sale in 1953 was to have resulted in the acquisition of the coin by Count Reventlow, who shortly thereafter resold it to a prominent collector.

⁶⁷ JASEK 2021a: 57–65.

⁶⁸ *Ibidem*: 65–71, 73.

⁶⁹ In fact, the provenance of the discussed specimen followed a different course. The coin was sold twice more by Stack's: first in 1980 as part of an anonymous collection, and subsequently in 1989 together with the Globus collection. See JASEK 2021a: 57–71, 73.

It is also worth noting that the last of the recorded specimens, a silver 10 thalers from the Norwegian auction, proved to be a cast, as it was discussed in detail above. This circumstance strengthens the hypothesis that at least some of the objects attributed to the BB dies may have originated in the 19th and/or 20th century as secondary products inspired by original mint works. The observed chronological and geographical distribution, together with the presence of an unquestionably later silver specimen weighing 10 thalers, indicates the need for a critical revision of existing attributions and a reassessment of the analyzed objects.

In the context of the first appearance of coins struck with the BB dies, it is worth mentioning the engraving of yet another specimen. I am aware of a copper plate engraving (Fig. 9) of a silver medal from the collection of the Imperial Academy of Fine Arts, published in the work of Dmitrij Prozorovsky (1820–1894) in 1872.⁷⁰ Since this would constitute the earliest known depiction of a coin struck with the BB dies, preceding the appearance of the first photographically documented specimen by 66 years (Glendining auction, 1938), it is justified to devote particular attention to it at this point. It must be emphasized, however, that this is solely a graphic representation, the documentary value of which with regard to actual minting characteristics is very limited. The illustration presented by Prozorovsky shows certain similarities to the BB dies, resulting primarily from the presence of a broad, homogeneous oak wreath. On the engraving of the medal, however, elements absent from the BB dies are present, in particular the ring connecting the fleece pendant with the chain of the Order of the Golden Fleece. These differences indicate that the engraving cannot be treated as direct evidence of the existence of the BB dies. In his description of the engraving, Prozorovsky notes that it is “a drawing based on a silver medal”,⁷¹ which in turn is of significant importance for research into the issue of the 100 ducats of 1621.

In recent months, the Traveller Collection,⁷² offered in a multi-part auction in Switzerland, has generated considerable interest within the Polish numismatic community. Attention has been drawn primarily to the presence of two gold coins struck with the dies of the 100 ducats issue: a specimen of 70 ducats, announced in the initial press release and originating from the collection of Otto von Kubicki (Jasek Z.70), and a 100 ducats from the Siedlecki collection (1854–1909; Jasek 100.08), sold in November 2025 at an auction in Zurich. The Traveller Collection, however, also contains two further specimens that had not previously been announced, with

⁷⁰ PROZOROVSKY 1872.

⁷¹ *Ibidem*: 12.

⁷² <https://news.artnet.com/art-world/100-million-coin-traveller-collection-auction-2625677> (accessed on 31 December 2025).

weights corresponding to 50 ducats (173.00 g) and 40 ducats (139.24 g), respectively. Importantly, both objects were produced using the BB dies; in the case of the 50 ducats piece, this constitutes the first known example of such weight made with BB dies.

An analysis of technological features based on photographs made available to me⁷³ indicates that both specimens most probably are struck pieces, which further expands our knowledge of the coins of this issue associated with the BB dies. However, as demonstrated by the previously discussed silver example from Oslo, once these coins are made available for inspection, a direct examination is recommended in order to confirm the method of production of both specimens.

CONCLUSIONS

The above observations lead to the conclusion that the BB dies, and consequently the coins produced with them, originated significantly later than the original issue of the 100 ducats of 1621. One possibility is that their production took place in the 19th century, as a result of the growing interest in collecting and the formation of aristocratic collections, in which the presence of a representative of this multiple issue from 1621 was highly desirable.

A different and significant perspective on the issue of the emissions produced with BB dies is provided by the analysis of the aforementioned Norwegian specimen, which I classified as a later product. In this coin, both the portrait on the obverse and the coat of arms on the reverse, as well as the overall surface characteristics of both sides, display features typical of a cast object. The element that introduces a significant interpretative ambiguity, however, is the sharp, high relief of the letters in the legend, whose character corresponds more closely to effects achieved in the striking process than to casting techniques. On the basis of a detailed photographic examination of the coin and consultations with specialists in the field, I tend to identify this object as a later, precisely chased cast, or possibly an object composed of cast of the obverse and cast of the reverse joined together.⁷⁴ In the case of the silver 10 thalers, a number of significant imperfections remained unnoticed by researchers, despite its presence on the collectors' market since 1986. Currently, owing to the almost identical appearance of all known strikes produced with the BB dies, as well as the lack of individual features allowing their definitive differentiation, it is still impossible to determine from which specimen the casting mold for the 10 thaler could have been done, or to establish the time of its production.

⁷³ I would like to express my gratitude to Mr Giuliano Russo of the Numismatica Ars Classica NAC AG auction house for his assistance in this matter.

⁷⁴ I would like to express my gratitude to Mrs Agnieszka Smółucha-Sładkowska and Mr Mateusz Woźniak of the Numismatic Cabinet of the National Museum in Krakow.

Although the engraving workmanship of the AA and BB pairs of dies may appear similar, the technology of the production of coins using these two pairs separates them by a distance of at least two centuries. However, in a light of the arguments presented in this article and the possible dating of the known specimens produced with the BB dies, I consider it impossible to determine whether BB dies themselves were created in the early modern period (possibly the 17th century), or represent a much later product, dating from the 19th or even the 20th century. The hypothesis that, following damage to the A reverse die and the impossibility of continuing production after the premature death of Samuel Ammon in 1622, the BB dies were prepared or completed by another skilled individual, is further contradicted by the fact that, under such a scenario, the existing and undamaged A obverse die would also have been replaced.

PRIMARY SOURCES

Katalog Summaryczny Numizmatycznego Zbioru Monet i Medalów święt: pam: Franciszka Hrabiego Potockiego, Manuscript in Coins and Medals Cabinet of the National Museum in Warsaw

Verzeichnis der Goldenen Münzen und Medaillen die unter Johann Georg II neu geordnet wurden, Manuscript in Staatliche Kunstsammlungen Dresden

264

REFERENCES

- DUTKOWSKI, J. 2015. *Złoto czasów dynastii Wazów / The gold of the Wasa dynasty / Gold während der Wasa-Dynastie*, t. 1, Gdańsk.
- GUMOWSKI, M. 1924. *Medale Zygmunta III Wazy*, Kraków.
- GUMOWSKI, M. 1955. *Mennica bydgoska*, Roczniki Towarzystwa Naukowego w Toruniu 58 (2), Toruń.
- GUMOWSKI, M. 1957. "Samuel Ammon, medalier gdański XVII w.", *Studia Pomorskie* 2: 230–279.
- JASEK, D.F. 2018a. *Studukatówka bydgoska 1621 Zygmunta III Wazy / The Poland 1621 Gold 100 Ducats*, 1st edition, Kraków.
- JASEK, D.F. 2018b. "Studukatówki Zygmunta III Wazy z kolekcji rodziny Esterházy", *Przegląd Numizmatyczny* 1 (100): 62–64.
- JASEK, D.F. 2021a. *Studukatówka bydgoska 1621 Zygmunta III Wazy*, 2nd edition, Kraków.
- JASEK, D.F. 2021b. "Złote, srebrne, pełnej wagi oraz frakcje. Jak wyglądała emisja monet stemplami studukatówki?", *Numizmatyk Krakowski* 4 (388): 11–17.
- JASEK, D.F. 2022. "Medal of the 16th International Numismatic Congress (INC 2022) and coins presented on the medal", *XVI International Numismatic Congress, 11–16.09.2022, A Special Issue of the Biuletyn Numizmatyczny*, Journal of the Polish Numismatic Society: 89–98.
- NIECZUJA-ZIEMIĘCKI, T. 1884. *Katalog wystawy zabytków z epoki Jana Kochanowskiego urządzona w 300-letnią rocznicę jego zgonu staraniem Zarządu Muzeum Narodowego w Krakowie*, Kraków.
- KOPICKI, E. 1976. *Katalog podstawowych typów monet i banknotów Polski oraz ziem historycznie z Polską związanych*, t. II: *Monety ostatnich Jagiellonów, Stefana Batorego i Zygmun-*

ta III 1506–1632, Warszawa.

NOWACKI, D. 2012. “Złote monety i medale z terenu dawnych ziem polskich w zbiorach Zamku Królewskiego na Wawelu”, *Przegląd Numizmatyczny* 1 (76): 61–65.

PROZOROVSKY, D.I. 1872. *Kollektsiya khranyashchikhsya v imperatorskoy Akademii khudozhestv gravyur na medi i rez'by na dereve, s izobrazheniyem medaley, istoricheskikh sobyitiy i gerbo*, St. Petersburg.

STAHR, M. 1990. *Medale Wazów w Polsce 1587–1668*, Wrocław–Warszawa–Kraków.

TRACHSEL, C.F. 1869. *Catalogue des monnaies et médailles polonaises composant Le Cabinet Numismatique de Son Altesse Le Prince Guillaume Radziwill*, Berlin.

Author's address:

Dariusz F. Jasek
Záměstní 1155/27, 710 00 Ostrava, Czechia
dariusz.jasek.st@vsb.cz

PLATE 1	Fig. 1. An example of 100 ducats minted with AA dies; diam 70 mm Photo: Stack's
PLATE 2	Fig. 2. An example of 100 ducats minted with BB dies; diam 70 mm Photo: Royal Castle in Warsaw
PLATE 3	Fig. 3a. Obverse of the silver 10 thalers dated 1621; diam 70 mm Photo: Oslo Myntgalleri AS Fig. 3b. Reverse of the silver 10 thalers dated 1621; diam 70 mm Photo: Oslo Myntgalleri AS
PLATE 4	Fig. 4. Comparison of the rosette placed before the royal name on the obverse of specimens produced with dies AA and BB; 4.0×10 mm Photo: Oslo Myntgalleri AS/The National Numismatic Collection, Dariusz F. Jasek/ National Museum in Warsaw Fig. 5. Comparison of selected microscopic dates on the obverse and reverse of specimens produced with dies AA and BB; 6.2×10 mm Photo: Oslo Myntgalleri AS/The National Numismatic Collection, Dariusz F. Jasek/ National Museum in Warsaw
PLATE 5	Fig. 6. A 1614 donative minted with the dies created by Samuel Ammon; diam 43 mm Photos: Niemczyk Auction House Fig. 7. Comparison of the Roman numeral III on the obverse of specimens produced with dies AA and BB; 4.2×10 mm Photo: Oslo Myntgalleri AS/The National Numismatic Collection, Dariusz F. Jasek/ National Museum in Warsaw Fig. 8. Comparison of the initials of Jacob Jacobson van Emden and Samuel Ammon on 100 ducats produced with dies BB and on other Samuel Ammon's works; 4.2×10 mm Photo: Oslo Myntgalleri AS/The National Numismatic Collection, Dariusz F. Jasek/ National Museum in Warsaw
PLATE 6	Fig. 9. A copper plate engraving from the Dmitrij Prozorovsky's work; coin diam 70 mm



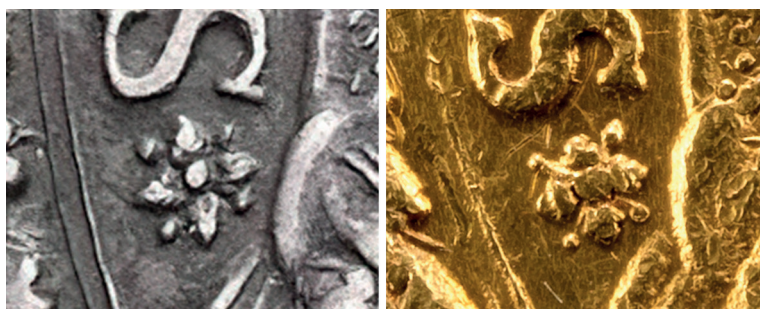




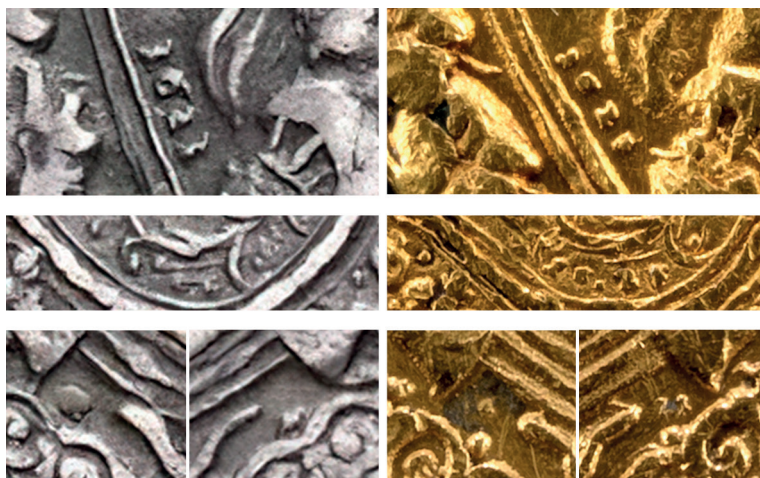
3a



3b



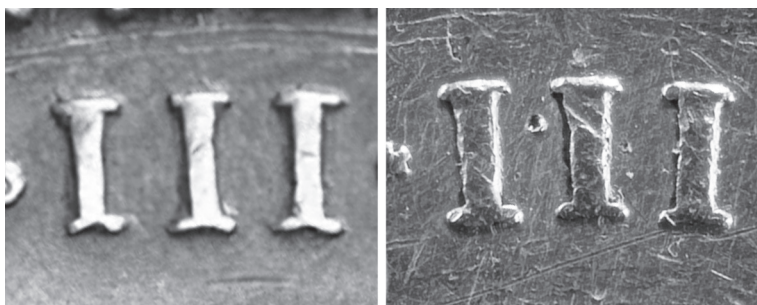
4



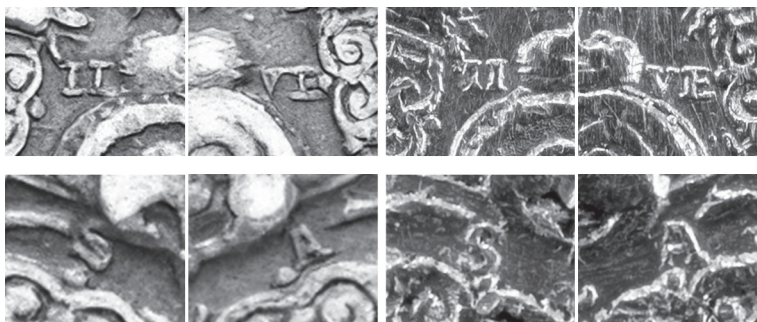
5



6



7



8



57

9