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# THE PLVRA NATAL FEL COIN TYPE OF CONSTANTINE I AND THE EMPEROR'S BIRTH YEAR

*Abstract*. The date of birth of Constantine I is known to be the 27 February. Unfortunately, the year is uncertain. However, a unique coin held by the British Museum for almost 200 years has been suggested to celebrate Constantine's 50th birthday. The coin bears the legend PLVRA NATAL FEL, "May there be many happy birth[day]s". If this coin could be accurately assigned to a bronze coin emission with a known date, the riddle may be solved. The portrait style of the coin points to the 320's. During this decade Constantine's portrait underwent a succession of changes enabling us – when we combine the iconography and the mint marks - to restrict possible dates of production of a particular coin to a few years or less. Now a second example of the PLVRA NATAL FEL type has surfaced. The authenticity of the BM coin has never been questioned, but examination of the actual specimen revealed that it is a forgery. The new example shows the same indications of manipulation, and it is concluded that it is also an old forgery. Both were produced using genuine coins, by grinding down the original reverse and creating a new reverse with wax and acid treatment. They cannot be used to deduce the year of birth of Constantine I, which remains uncertain. The methods used to produce these forgeries are discussed<sup>1</sup>.

Keywords: Constantine, birthday, bronze coin, forgery, iconography, style.

*Methodology.* An essential axiom for this study is the general idea that, during the time period of concern, each Roman mint produced coins showing an iconographical style restricted to that mint<sup>2</sup>. That is, the producing mint of

<sup>&</sup>lt;sup>1</sup> I am grateful to the staff at the Department of Coins and Medals at the British Museum for giving me the opportunity to study the *PLVRA NATAL FEL* coin in their care. Wolfram Tillack kindly alerted me to the existence of the second *PLVRA NATAL FEL* example.

This is not the place to discuss the complex issue of how a "style" is defined and delimited. "Style" is often a highly subjective idea, lacking strict definition and delimitation, as in the examples of architecture or art periods. In Roman coinage, the general "style" changes over time, so that for example tetrarchic coins are stylistically different from those of the 310s or 320s. The "style" of a particular mint has been used many times for identifying

any individual coin can potentially be identified on iconography alone. This circumstance has been axiomatic for a long time and is generally accepted among numismatists<sup>3</sup>, but it has never in itself been subjected to a scientific study. Following pioneering work by Andreas Alföldi and others, the present author has repeatedly used this circumstance, for example in confirming that the early 4th C Festival of Isis tokens were produced in Rome and showing that they can be dated by comparison to the evolving iconography displayed in the coinage of Rome<sup>4</sup>. One may expect that in the future computer-based image recognition programs will become available, capable of identifying characteristics of different mints, but for the time being such recognition is done manually and is based on experience. It should be understood that the comparisons and resulting conclusions performed in this study are not random or subjective but are based on decades of practice, and that the results can be replicated by any researcher working long time with this material.

The material used for the comparisons has foremost been the author's image data base<sup>5</sup>. In addition, the large number of coins on the Internet sites Coryssa and Nummus Bible II have been used.<sup>6</sup>

Constantine's year of birth. The birth date of Constantine I is given as 27 February in the Calendar of Philocalus, dating from 354 CE7. The place of birth was Naissus (modern Niš in Serbia)<sup>8</sup>. We also know that Constantine died

coins and tokens lacking a mint mark identifying the place of production. Three examples may illustrate this: 1) a large number of bronze medallions were produced of several occasions during the reign of Constantine I. The style of the medallions show that they were produced by the mint of Rome (RIC VII = P. M. Bruun, *The Roman Imperial Coinage*, ed. by C. H. V. Sutherland – R. A. G. Carson, vol. VII: Constantine and Licinius, A.D. 313–337, London 1966, p. 282; F. Ntantalia, *Bronzemedaillons unter Konstantin dem Großen und seinen Söhnen. Die Bildtypen der Constantinopolis und die kaiserliche Medaillonprägung von 330–363 n. Chr.*, Saarbrücken 2001 (Saarbrücker Studien zur Archäologie und Alten Geschichte 15). 2) A large number of unmarked bronze fractions have been identified by style as the products of the mint of Trier (C.-F. Zschucke, Die Bronze-Teilstuck-Prägungen der römischen Münzstätte Trier. Trierer Petermännchen 3, 7-65. Petermännchen–Verlag, Trier, Germany, 1989 (Ergänzte und erweiterte 2. Auflage, 92 pp, 2002). 3) An issue of unmarked folles could be assigned to the mint of London based on style (H. J. Cloke - L. Toone, *The London Mint of Constantius & Constantine*. Spink & Son Ltd. 2015).

- <sup>3</sup> In fact, for as long as numismatics have existed, "style" has been used to determine the place of production of any coin that lacks an indication of its origin.
- <sup>4</sup> L. Ramskold, A die link study of Constantine's pagan Festival of Isis tokens and affiliated coin-like 'fractions': chronology and relation to major imperial events. *Jahrbuch für Numismatik und Geldgeschichte,* Vol. 66, 2016, pp. 157-239.
  - <sup>5</sup> This database includes over 10,000 coins from the reign of Constantine I.
- 6 Coryssa lists and figures approximately 74,000 coins struck under Constantine I (for himself, the Caesars Constantine, Crispus, Constantius, Constans, and Delmatius, and for Fausta, Helena, Urbs Roma and Constantinopolis, but excluding Licinius father and son). Nummus Bible II includes 47,764 coins under the same categories.
- 7 Philocalus: kal. Mart. III, N(atalis) D(ivi) CONSTANTINI CM XXIIII. Also Polemius Silvius: kal. Martii. III, NATALIS CONSTANTINI.
- <sup>8</sup> Origo 2. Origo Constantini imperatoris, ed. Th. Mommse, MGH, AA IX, vol. 1, Chronica minora sec. IV, V, VI, VII, Berlin 1892. English translation: *The Origin of Con-*

22 May 337. The year of birth is, however, uncertain, and with that, the age of Constantine when he died. The Roman Imperial Secretary Eutropius wrote in the 360's that Constantine was 66 years old when he died. Also Jerome stated that Constantine died aged 66¹0. However, as the Romans did not count from zero but from one, Eutropius and Jerome actually say that Constantine was 65 (i.e. in his 66th year) when he died. Constantine would therefore have been born in 272. This year is also indicated by Socrates Scholasticus¹¹¹. Other sources indicate a slightly later date. Constantine's chronicler, bishop Eusebius of Caesarea, stated that Constantine lived twice as long as Alexander the Great, who died aged 32, and that Constantine's life was twice as long as his reign, which was close to 32 years. Eusebius thus provides an approximate birth date of 273¹². A late 4th C work earlier ascribed to Aurelius Victor wrote that he died aged 63, giving 275 CE as the date of birth¹³.

Modern authors have used these and other sources and come up with a whole array of suggested dates, including some considerably later. Attempts to date Constantine's birth between 280 and 288 have, however, been convincingly argued against by Barnes<sup>14</sup>. Later, Barnes gave 273 as Constantine's birth year<sup>15</sup>, and most scholars today agree on a birth date between 271-273<sup>16</sup>. Beside

stantine, transl. J. Stevenson, in: S. N. C. Lieu & D. Montserrat (eds.), From Constantine to Julian: Pagan and Byzantine Views. London and New York 1996, pp. 43-48.

- <sup>9</sup> Eutropius Breviarium 10.8.2, "he died in the *Villa Publica*, at Nicomedia, in the thirty-first year of his reign, and the sixty-sixth of his age." (*Eutropius Breviarium. Translated with an introduction and commentary by H. W. Bird.* Liverpool 1993. (Origo Constantini = Anon. Vales).
- <sup>10</sup> Jerome, Chronicon, Olympiad 279, 31 b.4. Chronicle. Translated by R. Pearse and Friends from the Text of J. K. Fotheringham: The Bodleian Manuscript of Jerome's Version of the Chronicle of Eusebius. Chronica, Oxford 1905.
- <sup>11</sup> Socrates states that "the Emperor Constantine having just entered the sixty-fifth year of his age, was taken with a sickness", and that he died some time thereafter. Historia Ecclestiastica I, 39. The *Ecclesiastical History* of *Socrates Scholasticus*. *Revised*, with *Notes*, by the *Rev. A. C. Zenos*, *D.D.* Hartford, 2016.
- 12 Eusebius Vita Constantini 1.7-8, "He [Alexander] reached two years past thirty, and of this the period of his reign measured one-third." "our Emperor began where the Macedonian ended, and doubled in time the length of his life and trebled the size of the Empire he acquired." and 4.53, "He was completing the thirty-second year of his reign, short of only a few months and days, and about twice that number of years of life." *Vita Constantini*, English translation from http://www. fordham.edu/halsall/basis/vita-constantine.asp.
- 13 Aurelius Victor 41.15, "And when, with his children and his brother's son, Delmatius, confirmed as Caesars, he had lived sixty-three years, half of which thus, so that thirteen he alone ruled, he was consumed by disease." Aurelius Victor, *Liber de caesaribus*, eds. F. Pichlmayer, R. Gruendel, Leipzig 1961. English translation: H. W. Bird, *Aurelius Victor, Liber De Caesaribus. Translated with an introduction and commentary by H. W. Bird.* Liverpool 1994.
- <sup>14</sup> T. D. Barnes, *The New Empire of Diocletian and Constantine*, Harvard University Press 1982, pp. 39-42, with references.
- <sup>15</sup> T. D. Barnes, *Constantine. Dynasty, Religion and Power in the Later Roman Empire.* Blackwell Ancient Lives, Chichester/Malden, MA 2011, p. 171.
- 16 The date most often suggested is 272; e.g. S. Doležal 2020, Kdy se narodil Konstantin Veliký? (When was Constantine the Great born?), Auriga (ZJKF) 62/1, pp. 7-24.



Fig. 1. The PLVRA NATAL FEL coin in the British Museum collection, London, B.2238, 18mm, 2.76g. Copyright the Trustees of the British Museum.

the ancient authors, there are no sources where information is given regarding Constantine's year of birth. It was not customary to commemorate the birthdays or anniversaries of Roman emperors with inscriptions or other lasting means of celebration. It was much more important to celebrate the *dies imperii*, the day of accession to the throne. There may, however, exist one more source: the coinage. Although it was not a Roman custom to strike coins commemorating the emperor's birthday, a remarkable coin featuring Constantine I may be just that: a celebration of his birthday.

The PLVRA NATAL FEL coin

A unique coin in the collections of the British Museum shows the laureate head of Constantine I surrounded by the legend CONSTAN-TINVS AVG<sup>17</sup>. The other side (the reverse) is dominated by a large wreath, inside of which is the legend *PLVRA/NATAL/FEL* in three lines. Below the wreath are the letters R P. The BM coin was first figured by the French numismatist Maurice in 1908<sup>18</sup>. One may note that a bronze coin of Constantine with the same legend and of the same size was mentioned already in 1815 by Mionnet<sup>19</sup> and again in 1834 by

However, year 282 was suggested by Potter 2013, pp. 1 and 307, but without references (D. Potter, *Constantine the Emperor*. Cambridge University Press 2013).

<sup>17</sup> London BM, B.2238, 2.76g.

<sup>&</sup>lt;sup>18</sup> J. Maurice 1908, Numismatique Constantinienne: Iconographie et Chronologie, description historique des émissions monétaires. II, vol. I, p. 180 ("Pièce inédite", referring to London), pl. XVII, fig. 6. E. Leroux, 1908.

<sup>19</sup> Mionnet 1815, p. 391, "Plura natal. fel., dans une couronne". Not illustrated. (T. E. Mionnet, De la rareté et du prix des médailles romaines, ou Recueil con- tenant les types rares et inédits des Médailles d'or, d'argent et de bronze, frappées pendant la durée de la République et de l'Empire romain, Paris 1815).

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Fig. 2. Bronze fraction struck for Constantine as Caesar in Trier in 307. RIC VI Trier 746; Zschucke 2002, emission 6.14. 14.0 mm, 1.19 g. Private coll.

Akerman<sup>20</sup>, but without illustrations. It is therefore impossible to say whether or not they described the BM coin or another one<sup>21</sup>. The BM coin is abbreviated the PNF-P coin below.

All numismatists who has mentioned this coin agree that it was struck for the emperor Constantine I, and that the place of minting is Rome, in the first officina, P (for Prima). The legend PLVRA NATAL FEL may be translated as "May there be many happy birth[day]s". Already Sabatier (1866 op. cit., p. 91) remarked that "I will nevertheless point out that the legend quoted by Mionnet, and where the word PLVRA is found, may have been used in the same sense; it would then have to be completed as follows: PLVRA NATALitia FELicia, since the word natalitium also meant, among the Romans, day of birth. It is in this sense that they said, "convivium natalitium", speaking of a meal given on the day of birth."

The *PLVRA NATAL FEL* coin thus appears to commemorate a birthday of Constantine I, not an anniversary of accession to the throne. In general, the anniversaries that the Romans tended to celebrate were multiples of 10, indicating that the coin should have been struck for an even birthday, like the 40<sup>th</sup>, 50<sup>th</sup> or 60<sup>th</sup>. With this in mind, it would be possible to pinpoint the year of Constantine's birth if the coin could be dated on other criteria, primarily the mint mark and the iconography.

I have previously published several papers indicating that, in any given mint, the engraving style tended to change over time, and that the style of an

Akerman 1834, vol. 2, p. 244, no. 20: PLVRA.NATAL.FEL. within a garland (no image). Category "Third brass" meaning c. 18-20mm. (J. Y. Akerman, *A Descriptive Catalogue of Rare and Unedited Roman Coins: From the Earliest Period of the Roman Coinage, to the Extinction of the Empire under Constantinus Paleologos, vol. II*, London 1834).

<sup>&</sup>lt;sup>21</sup> Sabatier 1866, p. 91, could not verify the type listed by Mionnet: "Mionnet p. 235 [in 1847 edition] signale également un petit bronze de Constantin le Grand, avec la légende: PLVRA – NATAL - FEL.; mais il n'indique pas à quelle collection cet exemplaire appartient.". J. Sabatier 1866. Médailles Romaines inédites. *Annuaire de la Société Française de Numismatique et d'Archéologie*, 1, pp. 61-99.



Fig. 3. The reverse of the PLVRA NATAL FEL coin. Note the flat upper surface of the lettering, the wreath, and the peripheral ring, which is a band rather than a pearl ring. This flat surface is interpreted here as the result of forgers having ground down the original reverse to a flat surface. Also note the very irregular background surface, interpreted here to be the result of acid etching. British Museum collection, London, B.2238, 2.76g. Copyright the Trustees of the British Museum.

individual coin can indicate a fairly narrow time interval for its production<sup>22</sup>. In some cases that interval is less than a year (as is the case in several mints in 325-327), but in most cases one has to allow for a span of a few years<sup>23</sup>. Combining the style with the mint mark, the *PLVRA NATAL FEL* coin appears to hold a promise of finding new evidence for Constantine's year of birth.

Before we go further, we need to take a quick look at some fractional silver and bronze emissions struck in Trier for Constantine (and used also with an obverse for Maximian<sup>24</sup>). The legend for Constantine is FL VAL CONSTANTINVS NOB C (or CAES), showing that these fractions were struck very early in his reign. The reverse shows a wreath, inside of which is the legend *PLVR/NATAL/FEL* in three lines<sup>25</sup>. The difference in the reverse between these fractions and the BM bronze coin is a single letter (PLVR versus PLVRA) and in the absence of a mint mark in the fractions. A similar fraction from the same

<sup>&</sup>lt;sup>22</sup> For the development of Constantine's diadem in the mint of Rome, see Ramskold 2018, pp. 157-160 and Fig. 3. (L. Ramskold, The silver emissions of Constantine I from Constantinopolis, and the celebration of the millennium of Byzantion in 333/334 CE, *JNG* 68, 2018, pp. 145–198). For the bronze coinage of Constantinopolis, see Ramskold 2020, pp. 242-254 (L. Ramskold, A treatise on Constantine's SPES PVBLIC coins, with notes on the Chi-Rho, the staurogram, and the early bronze coinage of Constantinopolis. *JNG*, vol. 69-70, pp. 201-360). For the diadem changes in the silver donatives of Constantinopolis, see Ramskold 2018 *op. cit* 

<sup>&</sup>lt;sup>23</sup> For example, the mint of Rome 313-315 and 330-335, see Ramskold in press ("Constantine's gold and silver donatives of Rome from 313 to 337 CE", *Numismatic Chronicle*).

<sup>&</sup>lt;sup>24</sup> RIC VI Trier 747, BM 1867,1223.17.

<sup>&</sup>lt;sup>25</sup> RIC VI Trier 640 (silver), 745-747 (bronze); Zschucke 2002 (op. cit.), emission 6.13-15.

emission shows the reverse legend *MVLT/NATAL/FEL*<sup>26</sup>. According to Strauss (1954, pp. 33 ff.) and unanimously followed in subsequent studies, these fractions were struck for the one-year celebrations of Constantine's natalis imperii, that is, they were produced for the anniversary 25 July 307<sup>27</sup>. In spite of the obvious similarities to the bronze coin in the BM, it is clear that the Trier fractions are unrelated to that coin<sup>28</sup>.

Commemorating Constantine's birthday? There have been some attempts at dating the BM coin and relate it to an anniversary of Constantine. The authors of LRBC connected the *PLVRA NATAL FEL* coin to the earliest VOT XXX coinage<sup>29</sup>, which they dated to 325-326. They stated that "it is likely to have commemorated a special anniversary, perhaps his 50th birthday, which must have fallen about this time. If this is so, this issue enables us to fix the date of his birth at 27 Feb. 276<sup>30</sup>." Bruun (1966, *op. cit.*) mentioned this suggestion and agreed with the connection to the VOT XXX emission, but – somewhat surprisingly - dated both the vota emission and the *PLVRA NATAL FEL* coin to 329<sup>31</sup>. Sear (2011) noted that if the coin dates from 329 "it would appear to be too late for his half-century and too early for his 60th birthday<sup>32</sup>." Victor Clark, who clearly put emphasis on the mint mark combined with the iconography concluded that "It would fit nicely in the Rome series from A.D. 321, and would mean that Constantine, if indeed born in A.D. 271, celebrated his fiftieth birthday on

<sup>26</sup> RIC VI Trier 744.

There is a consensus among numismatists that these fractions celebrate "the first anniversary of Constantine's acclamation by the British army upon Constantius' death in July 306. It is true that the *Plur Natal Fel* issue could allude to Constantine's birthday on 27 February rather than to his *natalis imperii* on 25 July, but the *Haec Vota Mvlt Ann* and, even more, the *Vot X Feliciter* issues suggest (in concert with the ambition expressed by his types on gold and *aes*) that it is the *natalis imperii* and not the *natalis genuinus* which is being turned to numismatic advantage in a coinage of military character." (J. P. C. Kent, The Roman Imperial Coinage, ed. by C. H. V. Sutherland – R. A. G. Carson, vol. VIII: The Family of Constantine I, A.D. 337–364, London 1981, p. 153).

The *PLVR NATAL FEL* fraction was discussed already by J. Eckhel (*Doctrina Nummorum Veterum*, *viii.*, Vienna 1796), p. 72: "PLVR. NATAL. FEL. This epigraph, which appears within an oaken garland, on the reverse of one of Constantine the Great's third brass, and is the only instance of the kind extant, appears to have originated in the fancy of some pious mint-master, who prays for *Plurimi Natales Felices* to Constantine. The Kalendars assign three natal days to that Emperor; one the natural time, or, as it was called, *genuinus*; the second, on which he was created Caesar; the third, when he was proclaimed Augustus."

<sup>&</sup>lt;sup>29</sup> RIC VII Rome 318.

<sup>&</sup>lt;sup>30</sup> P. V. Hill – J. P. C Kent, Part 1. The Bronze Coinage of the House of Constantine, A.D. 324–346, in: R. A. G. Carson – P. V. Hill – J. P. C Kent, *Late Roman Bronze Coinage A.D.* 324–498, London 1960, p. 14.

<sup>31</sup> Bruun's date was clearly based on the mint mark. Bruun believed that after 1-2 years of inactivity, the mint of Rome re-opened in 329 with VOT XXX issues mint marked R P. One type showed Constantine in bust B1, the last occurrence of the emperor in this bust type. Bruun assigned the PLVRA NATAL FEL coin to this emission. However, on the same grounds he might as well have assigned it to the VOT XX emissions from 321, also showing Constantine in bust B1 and the mint mark P R (RIC VII Rome 232, 237).

<sup>32</sup> D. R. Sear, Roman Coins and Their Values Volume 4. Spink, 2011, p. 478.

this occasion<sup>33</sup>." If the proposal by Clark could be substantiated (e.g., by a die link to other emissions datable to 321), the riddle of Constantine's year of birth would be solved. There is just one problem: the coin is a forgery.

## The PLVRA NATAL FEL forgeries

Until now, no one has questioned the authenticity of the *PLVRA NATAL FEL* coin. However, when I studied the coin in the BM in August 2011, it became clear that a genuine coin of Constantine I had been used to produce a forgery. Several features unambiguously showed that the coin is a forgery and the two most important of these are 1) the imagery of the reverse is not struck but acid etched, and 2) features of the bust of Constantine are incompatible with the mint of Rome. We will first examine the reverse (Fig. 3).

*Reverse produced by etching.* The following features indicate that the reverse is a modern, etched design:

- 1. When the coin is viewed from the side, all design parts of the reverse are part of a single, flat surface. The upper surface of the letters, the wreath, and the "pearl ring" are flat and smooth.
- 2. The "pearl ring" is merely a raised, flat band, without any hint of pearls (Figs. 1 and 3).
- 3. The recessed background, which in a genuine, struck coin is completely flat (because it was shaped by the ground and polished upper surface of the die) is extremely irregular (Fig. 3).
- 4. The wreath has only a superficial resemblance to wreaths seen on genuine coins. The long, slender, stick-like leaves are shapes never seen on genuine coins, and the irregular shape of each leave is unique. In one place (at 10 o'clock) a leaf has come lose, moved up to 11 o'clock and got stuck there in an aberrant position, forming a half circle (Fig. 4A). This shows that each leaf was produced by covering the parts to remain raised with wax, and that occasionally, a piece of the design accidentally came lose and ended up in the wrong position.
- 5. Romans engraved coin dies with sharp chisels. Straight parts of individual letters tend to be equally wide, and curved parts show a series of vertical striations resulting from the gradual forward movement of the edge of the chisel. In coins struck from fresh dies such marks may be seen in many places (Fig. 5)<sup>34</sup>. However, the letters in the *PLVRA NATAL FEL* coin show not the slightest trace of striations and many letters are remarkably uneven. The *N* in *NATAL* is so clumsily produced that the first line is twice as wide as the first one in the subsequent A (Fig. 4B). The strings binding together the base of the wreath are so irregular that they look more like aliens or dancing dinosaurs (Fig. 4C).
- 6. The definitive proof for acid etching comes from the flan crack that runs at 12 o'clock on the reverse. When the coin was painted with wax before

<sup>&</sup>lt;sup>33</sup> V. Clark, Constantine the Great: the coins speak. MA thesis, Middle Tennessee State University, Murfreesboro, Tennessee, USA 2009.

<sup>34</sup> Of the two examples in Fig. 5, one is from an official coin and one from a contemporary imitation. They show that the same engraving technique was used in both official and unofficial mints.

Fig. 4. Details of the reverse of the PLVRA NATAL FEL coin. A, the leaves of the wreath have not been engraved but acid etched. The wax cover for one leaf has come lose from the metal surface to form a semicircle. B, the strongly varying width of the letter parts is not seen on any Roman coin. C, the strings binding together the base of the wreath are extremely irregular. D, the flanges along the flan crack show that the reverse was produced by etching. All images are to the same scale. BM, B.2238. Copyright the Trustees of the British Museum.

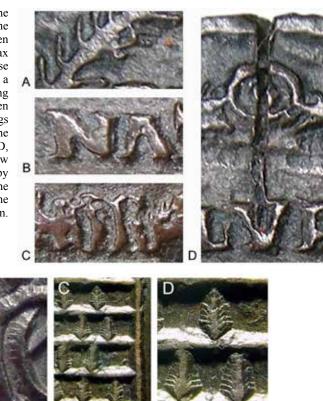


Fig. 5. Engraving marks on the sides of curved and straight features, produced by the chisel used by the engraver. A, B, marks along the strands of hair and the ear of Constantine I. Official coin. C, D, marks along the sides of the vertical block lines of a "camp gate".

Irregular coin from an unofficial mint. Private collection.

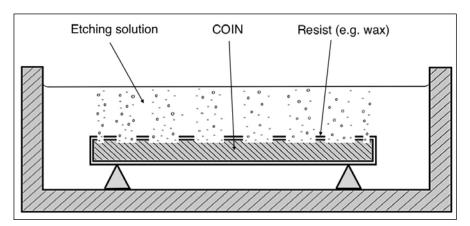


Fig. 6. Schematic illustration of acid etching of one side of a coin.

etching, the crack was filled. When the surface was etched, this resulted in the raised flanges seen on the sides of the crack, because these sides were protected by the wax (Fig. 4D). This alone proves beyond doubt how the forgery was produced.

The etching process. There are two possible ways to produce the reverse of the PLVRA NATAL FEL coin through acid etching (Fig. 6):

#### Method A

- 1. A genuine coin was used, of sound metal and preferably of over-average thickness.
  - 2. The reverse was ground down flat.
- 3. Melted, hot wax (or similar) was applied to cover all surfaces of the coin.
- 4. The reverse design was created by scraping off wax to expose the metal on surfaces forming the background of the design.
- 5. The reverse was etched with acid, until a depth of c. 0.2 mm was reached.
  - 6. The wax was removed.
  - 7. The etched area was smoothed slightly.
  - 8. Artificial patination was applied.

#### Method B

- 1-2. As above.
- 3. Melted, hot wax was applied to cover the obverse and the side edge.
- 4. The reverse design was painted with hot wax with a fine hair-brush or similar on the smooth reverse surface.
  - 5-8. As above.

Determining which mint struck the original coin

Examining compatibility with the Roman mints. In the early 4th C, each of the many mints in operation had a characteristic style of engraving. It is often easy to determine the mint from the style of the bust, without knowledge of the reverse or mint mark.

The laureate head. In order to find a close comparison for the obverse bust of the PNF coin, we may note that the laureate head of Constantine I – the B¹ bust of RIC VII – was introduced on a large scale in 320. Before that, military busts had dominated for several years. The laureate head then remained the dominating type until around 327, near the end of the *PROVIDENTIAE* coinage. The search for similar obverses was therefore focused on coins with the B¹ bust, going through the mints one by one³5.

*Rome.* Obviously, the first mint to check was the mint of Rome. The available material was the largest of all mints, comprising well of 1,000 Rome mint

<sup>35</sup> The image data bases used in the comparisons are listed under Methodology above.



Fig. 7. The obverse of the *PLVRA NATAL FEL* coin compared to the closest obverses from the mint of Rome, struck in 321 (B, C) and 322 (D, E). A, BM, London, B.2238. Copyright the Trustees of the British Museum. B, RIC 237, off. P, Numismatik Naumann 82 (06 Oct. 2019), lot 639, 2.87g. C, RIC. 237, off. P, Numismatik Naumann 96 (01 Nov. 2020), lot 707, 2.64g. D, RIC 245, off. P, Numismatik Naumann 94 (04 Oct. 2020), lot 710, 3.10g. E, RIC 245, off. Q, Victor's Imperial Coins 17 August 2020, 2.9g, ex Dattari Coll.



Fig. 8. The obverse of the *PLVRA NATAL FEL* coin (center) compared to the closest obverses found from the mint of Thessalonica, struck in 326-328. A, Thessalonica RIC 153, off. E, eBay, ID dionysos numismatic 09 Sept. 2012, 3.48g. B, BM, London, B.2238. Copyright the Trustees of the British Museum. C, Thessalonica RIC 153, off. A, Roma Numismatics E-sale 74 (20 Aug. 2020), lot 1269, 2.70g.

coins with the B¹ bust of Constantine. No obverse was found to show close similarity to the PNF-P coin. In particular, Rome coins never have a median wreath line, and never a rectangular posterior wreath end. There are no obverses more similar to the PNF-P coin than the obverses of the four Rome coins in



Fig. 9. The obverse of the *PLVRA NATAL FEL* coin compared to the closest obverses from the mint of Siscia. The latter are all of RIC 214 officina B, dated to 328-329, from the last emission before the *GLORIA* coinage replaced the previous types. A, BM, London, B.2238. Copyright the Trustees of the British Museum. B, eBay 26 Jan. 2012, ID ancient treasures, Nummus Bible II NDB 9288. C, eBay 07 April 2022, ID virus\_1984, 3.0g. D, CGB E-auction 351 (06 Jan. 2020), 3.02g. E, eBay 01 March 2017, ID carpe-diem-nvmismatics, 3.40g.

typical style shown here in comparison with the PNF-P coin (Fig. 7). It can be concluded that the PNF-P coin was not struck in the mint of Rome. Whoever produced the *PLVRA NATAL FEL* forgery made a revealing mistake in not using a coin from the mint of Rome.

Thessalonica. After rejecting the mint of Rome, we can next compare with coins from Thessalonica. This is a mint known to consistently portray Constantine with a laurel wreath carrying a median line (Fig. 8). However, Thessalonica used a stronger median wreath ridge, the posterior end is never sharply angular as in the PLVRA NATAL FEL coin, the nose is smaller, and there is a smoothly curved hairline over the forehead, not angular as in the PNF-P coin. Accordingly, Thessalonica is ruled out as the mint for the original PNF-P coin

*Siscia*. From Thessalonica we will skip the comparisons to the remaining mints<sup>36</sup> except one, Siscia (Fig. 9). It turns out that the obverses of the Siscia

<sup>36</sup> It should be noted that hundreds and hundreds of comparisons were made with

Fig. 10. The PLVRA NATAL FEL coin from the John Casey collection. 17.3mm wide, 2.55g. Private coll.



coins agree in great detail with the *PLVRA NATAL FEL* coin in the BM. More precisely, a number of obverses from Siscia RIC 214 compare very closely to the PNF-P coin<sup>37</sup>. RIC 214 is dated to 328-329. It was the last emission before the *GLORIA* coinage replaced all previous types. After rejecting all other mints and recognising the close similarities between the BM coin and the obverses from Siscia we can conclude that the characteristic features seen in the obverse of the BM coin indicate that it was almost certainly struck in the mint of Siscia and not in Rome. The Siscia coinage indicates that the original coin used to produce the PNF-P forgery can be dated to 328-329.

#### The second PLVRA NATAL FEL specimen

When the Roman coin collection of the late British scholar and collector John Casey was sold, one of the lots<sup>38</sup> turned out to include a *PLVRA NATAL FEL* coin (Fig. 10). This coin has never been published or mentioned before now. The mint mark is R Q, meant to indicate that it was struck in the fourth officina in the mint of Rome. The weight is 2.55g.

Like the example in the BM, the second PNF coin - PNF-Q - shows signs indicating that it was produced from a genuine Roman coin by grinding down the reverse and producing a new one by acid etching. The fabricated design of the reverse is similar to the one of the BM coin, but the mint mark is R Q rather than R P. The pearl ring is well defined, not just a band as in the BM specimen, and the raised areas of the design do not share a smooth upper surface. Both coins share the uneven surface of the background, the irregular letters of the legend, the thin and irregularly spaced leaves of the wreath, and the double circles of the medallion. Also the obverse of the coin shows an irregular surface, with

coins from all mints but that mint after mint could be rejected as the one striking the original PNF-P coin.

<sup>37</sup> The material available for comparison is large. On Nummus Bible II alone, there are photographs of 260 specimens of RIC Siscia 214. The examples illustrated here are the ones closest to the PNF-P coin from those on Nummus Bible II and numerous additional examples. A die match was not found, however.

 $<sup>^{38}\,</sup>$  The PLVRA NATAL FEL coin was part of lot 464 of Morton Eden Auction 84 (02 Dec. 2016).



Fig. 11. The obverse of the second *PLVRA NATAL FEL* coin compared to the closest obverses from the mint of Rome. A-C, RIC 225 officina P, dated to 320-21; D, F, RIC 237 officina Q, dated to 321. A, Ancient Imports 02 Feb. 2017. B, Roma Numismatics E-sale 47 (28 June 2018), lot 819, 3.27g. C, Victor's Imperial Coins 28 May 2016. D, CGB web shop, brm\_600833, 3.13g. E, the *PLVRA NATAL FEL* coin from the John Casey collection. F, Victor's Imperial Coins 07 May 2022, 3.0g.



Fig. 12. The obverse of the second PLVRA NATAL FEL coin compared to the closest obverses from the mint of Arles, all are from officina P. A, the PLVRA NATAL FEL coin from the John Casey collection. B, Arles RIC 228, eBay Sept. 2015, 3.14g, Nummus Bible II NDB 42878. C, Arles RIC 233, Agora 81 (22 Jan. 2019), lot 187, 4.73g. D, Arles RIC 246, Numismatik Naumann 70 (07 Oct. 2018), lot 674, 3.26g. E, Arles RIC 252, Roma Numismatics E-sale 75 (15 Oct. 2020), lot 837, 3.69g.

some pitting resulting in an uneven surface. These surface irregularities are of the type caused by natural corrosion. On the reverse, the irregular lettering and wreath details could not, however, be produced by corrosion or wear of a struck design. The only reasonable interpretation is that the reverse of the PNF-Q coin was produced in the same way as the BM coin.

The realization that the PNF-Q coin was a forgery produced from a genuine coin meant that a search for the original mint and type must be undertaken. Again, a large number of coins from all mints were compared to the PNF-Q coin. The preliminary result was that only the mints of Rome and Arles could be considered. From the mint of Rome, only some coins from the emissions from 320-321 show some similarity to the obverse of the PNF-Q coin, in particular RIC 225 officina P, dated to 320-21, and RIC 237 officina Q, dated to 321<sup>39</sup>. For example, these coins have a similar short distance between the shoulder and the chin is notable, creating a short fold-like neck. However, there are some important differences. The rounded posterior termination of the wreath seen in the PNF-Q coin occurs very rarely in the Rome mint (Fig. 11A). Further, the vast majority of the comparable coins from Rome have the obverse legend broken CONSTA-NTINVS AVG, while only a small number have the break CONSTAN-TINVS AVG seen in the PNF coin. Importantly, the PNF-Q coin has Constantine's ear set further back than in any Rome mint coin.

The differences between the PNF-Q coin and the obverses from Rome and indicate that the PNF-Q coin was not produced at Rome. After detailed comparisons only Arles remained as a candidate. A comprehensive comparison of the PNF-Q obverse with coins struck in Arles revealed that in the period 321-323, obverses from Arles showed detailed similarities to the PNF-Q coin (Fig. 12). The similarities were seen in several emissions: RIC 228 and 233, dated to 321; RIC 246, dated to 322; and RIC 252, dated to 322-23. All of the most similar coins were struck in officina P. No die match was found with the PNF-Q obverse, but some obverses of Arles RIC 228 are exceedingly similar (compare Fig. 12 A and B).

It can be concluded that it is almost certain that the PNF-Q coin was produced in officina P of the mint of Arles in 321 or possibly 322.

### Weights

The weight of the first *PLVRA NATAL FEL* coin is 2.76g and that of the second coin is 2.55g. We can compare the two PNF specimens with the weights of genuine coins from the relevant emissions.

Bruun (1966, *op. cit.*) assigned the PNF type to the Rome emission including the laureate type RIC 318. The weights of the 35 best examples of Rome 318 in the author's database range from 2.48 to 3.80g, with an average of 3.06g. The original coin used to produce the PNF forgery was most probably

<sup>&</sup>lt;sup>39</sup> The material in the author's image database of Rome RIC 225 officina P was 19 examples and of RIC 237 officina P: 178, off. S: 15, off. Q: 139.



Fig. 13. The two *PLVRA NATAL FEL* specimens flanked by the stylistically closest coins found by the author. The characteristic styles of the mints Siscia and Arles are evident.

RIC Siscia 214. The weights of 50 well preserved examples<sup>40</sup> of RIC Siscia 214 range from 2.65 to 3.83g, with an average of 3.10g. Finally, the weights of 40 coins of the Arles emissions where the original of the second PNF coin originated, RIC Arles 228-252, range from 2.44 to 3.99g, with an average of 3.17g<sup>41</sup>.

nated, RIC Arles 228-252, range from 2.44 to 3.99g, with an average of 3.17g<sup>41</sup>. The two PNF coins weigh 2.76g and 2.55g. These weights are considerably below the average for the respective emissions identified here as the original ones for the coins, and they are also below the one of the Rome emission to which Bruun (1966, *op. cit.*) assigned the first coin. The PNF coins are actually near the lower end of the range of weights of all these emissions. Both PNF coins show some surface corrosion, indicating some metal loss, but both are still made up of sound metal (a necessary prerequisite for being used to pro-

Weights for the 50 examples were taken from auction data on Nummus Bible II.

<sup>&</sup>lt;sup>41</sup> Weights for 40 examples were taken from auction data on Nummus Bible II.

duce forgeries). It can be concluded that their very low weights indicate that a fair amount of their original weight, perhaps around 20%, was lost through the grinding and acid etching<sup>42</sup>.

## Time and place of production

Since the early 1990s, a series of publications have detailed the massive production of forgeries in Bulgaria<sup>43</sup>, and still today, Bulgaria and the Balkans are undoubtedly the origin of numerous forgeries coming on the commercial market. However, the *PLVRA NATAL FEL* forgeries appear to have a different origin. At least one of the two known PNF forgeries dates back to the 1800s, possibly even to before 1815. The second specimen was in the John Casey collection and cannot be precisely dated, but it is likely that it was acquired well before the 1990s. The similar production method of the two PNF forgeries makes it probable that both were produced at the same time by the same forger. The two PNF forgeries come from collections in the UK, and it is possible that they were produced in that country.

#### Conclusions

The two known specimens of the *PLVRA NATAL FEL* type are both forgeries. They are not recent productions, however, but could even be 200 years old. Both specimens were made using genuine bronze coins, grinding down the reverse to a flat surface, creating a fantasy design with a resist (wax or similar), and then etching the reverse with acid. The design included a mint mark indicating the mint of Rome. Comparing the obverses of the two specimens with a large number of laureate head obverses from the whole series of Roman mints, it was found that the first example had been produced from an original coin from Siscia. The second one was made from a coin from Arles.

One lesson to learn is that 200 years in a museum collection is no guarantee for authenticity. Another aspect is that it is important to realise both the possibilities and restrictions offered by comparisons of "style". Even numismatists with long experience have ended up with the wrong conclusions in such comparisons<sup>44</sup>. In spite of this, the view held here is that style is an important

 $<sup>^{42}\,</sup>$  The low weights do not, of course, in themselves prove that the PNF coins are forgeries.

<sup>&</sup>lt;sup>43</sup> Prokopov, I., Kissyov, K., and Paunov, E., 2003. Modern Counterfeits and Replicas of ancient Greek and Roman coins from Bulgaria (Sofia); Propokov, I., 2004. Contemporary Coin Engravers and Coin Masters from Bulgaria. "Lipanoff" Studio (Sofia); Propokov, I., and Manov, R., 2005, Counterfeit Studios and their Coins. Coin Collections and Coin Hoards from Bulgaria, Vol. 4 (Sofia); Propokov, I., 2016. Lipanoff Studio. Catalog of all registered coin types. Coin Collections and Coin Hoards from Bulgaria, Vol. 9 (Sofia); Propokov, I., 2017. Counterfeit Steel Dies for Greek, Roman and Byzantine Coins: "Dimitrovgrad Studio". Coin Collections and Coin Hoards from Bulgaria, Vol. 10 (Gema).

<sup>&</sup>lt;sup>44</sup> For example, Bruun (1966, *op. cit.*), tentatively assigned many bronze fractions to Thessalonica (RIC Thessalonica 52-58) but as demonstrated by Zschucke (2002 *op. cit.*), they were unquestionably struck in Trier. Another erroneous case about "style" was the claims

feature, and that it can be used successfully to identify the mint of unmarked coins. Fig. 13 shows that it would be difficult to reject the identifications arrived at in this study.

#### *Ларс Рамсколд* (независни истраживач) PLVRA NATAL FEL ТИП НОВЦА КОНСТАНТИНА I И ГОДИНА ЦАРЕВОГ РОЂЕЊА

Датум рођења Константина Великог је 27. фебруар. Нажалост година рођења није позната. Ипак, сачуван је јединствени новчић који се чува у Британском музеју већ 200 година. Новчић би по својим обележјима могао дати разрешење године рођења Константина Великог. На новчићу се налази натпис PLVRA NATAL FEL, "Да буде много срећних рођендана". Ако би се овај новчић датовао, по свим одликама припадао би години 320. Тако би ова загонетка била решена. Почев од 320. године приметно је више измена када су у питању Константинови портрети. Аутентичност овог новчића из Британског музеја никада није довођена у питање, али су се недавно појавила још два примерка тог новчића. Реч је о фалсификатима по свим приликама старим 200 година. Занимљиво је да је фалсификат начињен од бронзе и да су на ивицама видљива оштећења од киселине. С обзиром да је реч о фалсификатима ипак се не може на осниву њих утврдити година рођења Константина Великог

made by Radnóti-Alföldi (1963, and again in 1998) that she could recognize the work of an especially gifted die cutter ("der Erste Graveur"), who moved from mint to mint, ending up in Constantinopolis, among other coins engraving the dies for the SPES PVBLIC coins (M. Radnóti-Alföldi, Die constantinische Goldprägung. Untersuchungen zu ihrer Bedeutung für Kaiserpolitik und Hofkunst, Mainz 1963; M. Radnóti-Alföldi, Das labarum auf römischen Münzen, in: U. Peter (ed.), Stephanos nomismatikos. Edith Schönert-Geiss zum 65. Geburtstag, Berlin 1998 (Griechisches Münzwerk), pp. 1–21). Elsewhere I have rejected these claims as unfounded (Ramskold 2020 op. cit., pp. 272-273).