

Željko Demo (Zagreb, HR)  
e-mail: zeljko.demo@zg.t-com.hr

UDK 737.1.041(37)“04”  
Original scientific paper

## A NEW SEMISSIS OF THEODORIC MINTED IN ROME AT THE BEGINNING OF THE REIGN OF THE EMPEROR ANASTASIUS: WHAT DOES IT UNCOVER?

*A special place is occupied in the Ostrogothic monetary system by the semmissis, the only gold denomination so far represented with only two examples. The first of them has been known for almost two hundred and thirty years (from 1791), but only in 1912 was it recognized as a probable Ostrogothic coin, and it was definitely attributed to the Ostrogothic monetary system in the early 1970s. The second one appeared in 2011 at a Munich auction, where it achieved a very high price but despite that did not attract adequate professional and scientific attention. Both these semisses are connected by the use of the same obverse die, hence the time and purpose of their creation and minting are closely related and seemingly took place in the same (fiscal) year. The reverse depictions, although both are from the Vota group, differ in numerous details, because of which it can be suggested that their differences, arrangement, and design marked the content of any possible numismatically interesting message.*

**Key words:** Italy, Rome; Early Byzantium, Ostrogoths; Emperor Anastasius, King Theodoric; gold coins, semisses, Roman mint

At the end of 2100, the auction house *Bertolami Fine Art* presented in what was then its Munich branch *Art Coins Roma* (further: *Bertolami/ACR*), a fourth numismatic auction where 1171 coins were offered for sale, including 3 Ostrogothic specimens: a decanummius of King Athalaric (no. 1172), a quarter siliqua of King Theodoric minted in the name of Emperor Justin I (no. 1171), and a well preserved semmissis minted by Theodoric in the name of Emperor Anastasius (no. 1170), a denomination which in the previously published fundus of Ostrogothic coinage had long been represented by a single example known from as long ago as 1791, but seemingly numismatically verifiable not before 1887 (Fig. 1:1).<sup>1</sup> The description of the semmissis presented at the above auction in Munich reads: “*Theodoric (493-526), Semmissis in name of Anastasius I*

<sup>1</sup> The semmissis was described and the collection in which it was originally located was first mentioned by Gerolimo Tanini (Taninius 1791, 379). A decade later, the composition of the collection was published by Baron Friedrich Christian Heinrich Ludwig von Schellersheim (1752-1836), a passionate antiquities collector and its famous owner (1800, 238-239). Some eighty years later, Schellersheim's semmissis was already part of the renowned collection of Gustav Ponton d'Amécourt (1825-1888), when it was sold in Paris in 1887 (Rollin-Feuardent 1887, 140 no. 870, Pl. XXXIII: 870) to the London lawyer Hyman M. Montagu (1844-1895). His collection, no less significant than the previous ones, some ten years later could also be found at an auction taking place in Paris (Rollin-Feuardent 1896, 149 no. 1089, Pl. XXXVIII: 1089). On that occasion, the semmissis was purchased for his already well-known collection by the Russian politician, numismatist, and collector, Count Ivan Ivanovich Tolstoy (1858-1916) and was published in 1912 as Ostrogothic (p. 207 no. 124), in contrast to Warwick Wroth, who four years earlier still, it is true with caution, claimed that this product was “*not of the imperial mint*” (1908, 2 n. 3). The semmissis together with the immense Tolstoy collection ended up at the beginning of the October Revolution in the Hermitage in Saint Petersburg (Spasski 1970, 198-199, 203), where it is located today.

(491-518), Rome, c. AD 493-518, AV, g 2,20, mm 16, DN ANASTASIVS AVG, Diademed bust r., R/ VICTORIA AGVSTORVM, Victory seated r. writing VOTV MLX (sic) on shield; in the field at r., star; in ex. COMOB, point below. Cfr. Metlich -, per nominale 9 = Tolstoi 124. Extremely rare. Unpublish. Good extremely fine. The Ostrogoths' reign of Theodoric started in 493 with the defeat of Odovacar, with emperor Zenon's approval."<sup>2</sup> The estimated value of this coin at the beginning of the auction was €2500, but this increased during to auction by as much as 80%, and the semmissis was sold to the new owner for €4500. (Fig. 1:2) Some would say this was a lot of money for just a little gold, if different means of calculating value did not exist among numismatists and collectors.



Fig. 1 - Ostrogothic semisses minted for Theodoric in Rome at the beginning of the reign of the emperor Anastasius (ca. 3:1): 1 - Semmissis from the collection of Count I.I. Tolstoy, the Hermitage, Saint Petersburg (Grierson 1985); 2 - Semmissis sold at the auction Bertolami/ACR 4 in Munich in 2011 (no. 1170).

The “new” Ostrogothic semmissis shares, in addition to its exceptional rarity, an identical obverse with the “old” Schellersheim - Ponton d’Amercourt - Montagu - Tolstoy semmissis from the Hermitage in Saint Petersburg, given that both were minted with the same obverse die. The reverses were produced from different dies, although they both bear the same uninterrupted reverse legend VICTORIAAGVSTORVM (without one V), which on the semmissis from the Hermitage ends in a six-pointed star. Below the legend is a depiction of a sitting Victoria turned to the right, with a shield on a base (*cippus*) and a legend of the *vota* type: in three lines VOT/PC/✕ on the semmissis from the Hermitage, and in an uninterrupted single line along the edge of the shield VOT V ML X (= *vota v mult x = votis quinquenalibus multis decenalibus*) on the semmissis from the Bertolami/ACR auction. On both semisses, Victoria is sitting on armour, but the example from the

<sup>2</sup> ACR (=Bertolami) 4, München 2011, no. 1070.

Hermitage has an added winged genius,<sup>3</sup> winged figure,<sup>4</sup> Cupid,<sup>5</sup> or putto,<sup>6</sup> and a six-pointed star in the field right, while on the semmissis from the *Bertolami/ACR* auction the genius is missing and the six-pointed star was replaced by an eight-pointed star placed in the field to the left of Victoria. Additionally, in the exergue of the semmissis from the *Bertolami/ACR* auction a COMOB with a dot between the vertical hashes of the letter M can be clearly distinguished, while the semmissis from the Hermitage does not have one.



Fig. 2 - Main types of Western Roman semisses from the period of the emperor Valentinian III (425-455) to near the end of the 5th century (ca. 2:1): 1 - the Vota type of emperor Valentinian III (Nomos, 19/2019, no 390); 2 - the Chi-ro type of Galla Placidia with the legend SALVS REI PVBLICAE (NAC 42/2007, no. 245); 3 - The type with an inverse Chi-ro and the legend VICTORI-A AVCCC, minted during the reign of Odoacar (*Bertolami/ACR* 4/2011, no 1169 = NAC 78/2014, no. 1280).

<sup>3</sup> Taninius 1791, 379 (“*cum Genio alato*”); Saulcy 1836, 2-3 (“*un génie ailé*”); Sabatier 1862 (“*un génie ailé*”); Tolstoj 1912, 207 no. 124 (“*крылатымъ гениемъ*”).

<sup>4</sup> Kent 1971, 70 (“*winged figure*”).

<sup>5</sup> Grierson-Blackburn 1986, 35 (“*a winged Cupid*”).

<sup>6</sup> Metlich 2004, 19, 85 no. 9 (“*a putto*”).

Further, both reverse depictions appear, each in its own manner, as interestingly arranged anachronisms. In that sense, the appearance of the *Vota* type with a seated Victoria and a winged genius on the semmissis from the Hermitage minted in Rome in the name of the emperor Anastasius was depicted with an iconographic concept utilized for western Roman semisses for the last time on the occasion of the tenth anniversary (VOT/X/MVLT/XX) of the reign of the emperor Valentinian III in 435.<sup>7</sup> (Fig. 2:1) This type was soon replaced on the semisses of Valentinian III, Galla Placidia, and Justa Grata Honoria by the type *Chi-ro* in a wreath with the legend SALVS REI PVBLICAE,<sup>8</sup> (Fig. 2:2) which as a celebratory minting in the West was renewed and became standard, as it now seems, only in the period of the reign of Libius Severus (461-465),<sup>9</sup> and his heir Antemius (467-472).<sup>10</sup> After them, the same type of reverse was used by Odoakar (476-491) on semisses minted in the name of the emperor Zeno in Rome with the legend SALVS REI PVBLICE,<sup>11</sup> and later in Ravenna, where the classic *Chi-ro*<sup>12</sup> and inverse *Chi-ro* were accompanied by the legend VICTORI-A AVCCC.<sup>13</sup>

The ambivalence of the display and epigraphic content, along with the anachronisms already mentioned, represent another dividing line between the two semisses mentioned above. Hence on the reverse of the “new” semmissis, i.e. the one from the *Bertolami/ACR* auction, not merely is there no genius, but there is also no legend written in three rows along the entire surface of the shield, as the quite visible and legible uninterrupted legend in a single row VOT V ML X was engraved to follow the rim of the shield. Such a position of the letters written on the shield is characteristic for the Eastern Roman semisses from the period of the emperor Marcianus (450-457) onwards.<sup>14</sup> (Fig. 4) On the contrary, the base on which the shield leans on the semisses belongs to the Western Roman tradition, while the abbreviation ML (=MVLT), despite being understandable and clearly carved is so far unique in the numismatic production of late antiquity and early Byzantium. The eight-pointed star in the field left of the seated Victoria is yet

<sup>7</sup> Kent 1994 (=RIC X), 372 no. 2048-2050.

<sup>8</sup> Kent 1994 (=RIC X), 371-372 no. 2051-2055, 2057 (Pl. 51:2051-2055, 2057).

<sup>9</sup> Lacam 1983, 358 Pl. XCVI, 359-360, Pl. XCVI, Pl. 18:54-61 (Rome); Kent 1994 (=RIC X), 189, 407 no. 2707-2708, Pl. 61:2708 (Rome).

<sup>10</sup> Lacam 1983, 505-506, 507 Pl. CXXXI, Pl. 30:110-117 (Rome); Kent 1994 (=RIC X), 197, 414 no. 2836-2840, Pl. 64:2836-2840 (Rome).

<sup>11</sup> Kent 1994 (=RIC X), 448 no. 3658 (Rome), Pl. 75:3658 (Naples). For the example from the Stift Schotten Collection in Vienna: Hübl 1910, 191 no. 3692; Metlich 2004, 12 Fig. 4 (Rome). For the example from Budapest: Metlich 2004, 13 Fig. 6 Pl. I:1. — For the example from Paris: Kent 1994 (=RIC X), 448 no. 3659 (Rome), Pl. 75:3659 = Taninius 1791, 374, Tab. IX = Lacam 1983, 678-679 Fig. 27, Pl. 44:137 (Nepos in the name of Zeno; Ravenna) = Deperyot 1996, 163 no. 89/2 (Nepos, second reign; Rome).

<sup>12</sup> Kent 1994 (=RIC X), 446 no. 3635 = Sabatier 1962, 139 no. 4 (Pl. VII:20) = Lacam 1983, 816-817, 820 Pl. CXCIX-A, Pl. 53:58 (Rome) = Deperyot 1996, 165 no. 89/1, Pl. 12:89/1 (Nepos, second reign; Rome) = Ranieri 2006, 69 No. 215 (Ravenna).

<sup>13</sup> For the inverse *chi-ro*, see Kent 1994 (=RIC X), 446 no. 3636, Pl. 74:3636 = Ercolani Cocchi 1983, 110-111 no. 298/2257 (in the exergue ICONOI) = Ranieri 2006, 70 no. 216 (in the exergue ICONOI). In addition, it is necessary to note a new so far unknown example of this group different than the previous ones, *Bertolami (ACR)* 4/2011, no. 1169 = *NAC* 78/2014, no. 1280. (Fig. 2:3)

<sup>14</sup> The numerical insignia on the shield began with the semisses of Marcianus, and later would differ increasingly from the actual years of the reign of individual eastern Roman and Early Byzantine rulers. For a brief overview of these issues, see Boyce 1965, 88-89.

another characteristic of the eastern Roman semisses of the Constantinople mint, which in combination with the brief and uninterrupted legend VICTORIA AVCCC appeared on the semisses minted in the name of the emperors Arcadius and Honorius as early as the year 403,<sup>15</sup> and since then it was a constant and as a rule applied to the semisses of all later Eastern Roman (but not for female members of the imperial family!) and early Byzantine rulers.



*Fig. 3 - A semmissis of emperor Marcianus (450-457) minted in Constantinople, (ca 2:1), CNG 450e/2019, no. 405.*



*Fig. 4 - A solidus of king Theodoric minted in the name of emperor Anastasius in Rome (ca. 2:1), RomNum XI/2016, no. 944.*

Although the reverses of both semisses of Theodoric differ in numerous details, the uninterrupted reverse legend VICTORIA ACVSTORVM with a missing (second) V was present on both semisses. The dropping of a letter as an omission was done on a coin considered to be a ceremonial minting,<sup>16</sup> and was attributed to the arrival of Anastasius on the imperial throne,<sup>17</sup> but this does not appear likely particularly since it appears

<sup>15</sup> Kent 1994 (=RIC X), 243 no. 33-33a, Pl. 2:33-33a. On the previous series of semisses minted according to the model of the semisses of Theodosius I with a long and uninterrupted legend VICTORIA AVGVSTORVM, the star in the field to the left of Victoria is still missing, Kent 1994 (=RIC X), 241 no. 16-17, Pl. 2:16-17.

<sup>16</sup> Grierson 1985, 21.

<sup>17</sup> Metlich 2004, 19.

on two differently formed reverses of the Ostrogothic semisses. Hence the question of whether this was coincidental or did a purpose actually exist in fact is not a dilemma, as the repetition implies a reason and probably even more than that. The letter V was not merely the 22<sup>nd</sup> letter in the classic Roman alphabet, but also denoted the number 5 in the Roman period, because of which it can be hypothesized that the omission of the letter V in the reverse legend was not caused by the “ignorance” of the die cutter or even irresponsibility on the part of the procurator monetae, who did not spot the mistake by the cutter in time and demand correction of the error or re-carving of the die but rather an intentional omission of the letter V to note or emphasize its possible (22) or even actual numerical meaning and value (5).<sup>18</sup>

Other than the reverse legends, on the Ostrogothic semisses a legend was also located on the shield being held by Victoria. On the semmissis from the Hermitage, the legend VOT/PĀ/✱ (six-pointed star) written in three lines was variously interpreted in the 19<sup>th</sup> century when the coin was considered to be Byzantine (“*vota populi Constantinopolitani*”),<sup>19</sup> differently at the beginning of the 20<sup>th</sup> century (“*vota publica civum*”), and again in the third quarter of the 20<sup>th</sup> century, when certain quite different interpretations of the legend were offered (“*Vota patrum conscriptorum*” and “*vota principis*”). This was when the attribution of these semisses to the mint in Rome was finally affirmed, but the dilemma about the period of minting, which was determined only approximately in 1912 (“во времена Θεодорика / *during the time of Theodoric*”) appeared only after 1971, when the minting of the semisses was attributed for the first time to the beginning of the reign of Anastasius (“*to an early date in Anastasius’ reign ... the beginning of the reign*”). Dilemmas about placing the minting of these semisses in 493, 500, or even 509 were denied then and later by the typological characteristics of the obverse busts, close to those on the coinage of Anastasius’ predecessor the emperor Zeno (474-491), because of which the connection of the semmissis from the Hermitage to the period of Anastasius’ (491-518) accession to the throne, as suggested in 2004, seems the only correct solution. (**Table 1**)

In contrast to the reverse of the semmissis from the Hermitage, which still retains elements based on the Western Roman tradition for the design of the reverse depiction, on the “new” Ostrogothic semmissis the single-row, uninterrupted legend placed along the edge of the shield of the *Vota* type, i.e. VOT V ML X, the eight-pointed star in the field to the left of Victoria, the outstretched right leg of Victoria, and the removal of the genius more than clearly indicate a desire to align further the design of the reverse depiction engraved in Rome to that engraved in Constantinople. The increased presence of Constantinople elements on the semmissis from the *Bertolami/AC* auction is an indirect indicator of its later minting in relation to the minting period of the semmissis from the Hermitage, which is also not contradicted by the reverse legend of the VOT V ML X (= *vot v mvl x*) type, which could have been used as early as on issues minted not

<sup>18</sup> At present, the reasoning remains questionable and unanswered according to which the cited numerical meaning could be classified among administrative marks (such as the design, content, and appearance of legends, busts, diadems, etc.), and be considered a constituent part of a lustrum-related identification system, as was the case with certain other artistic contents and markings on early-Byzantine coinage.

<sup>19</sup> In the mid 1960s this interpretation was still represented in the numismatic literature as well as the concept that these semisses were part of early Byzantine monetary production, cf. Boyce 1965, 89.

**Table 1 - Numismatic evaluations and interpretations of the Ostrogothic semmissis from the Hermitage in Saint Petersburg in the period from 1791-2004**

Author	Mint	VOT P C (interpretation)	Date
1. TANINIUS 1791, 379	(COMOB)	-	(Anastasius)
2. SAULCY 1836, 2-3	(COMOB)	"vota populi Constantinopolitani?" [p. 3]	(Anastasius)
3. SABATIER 1862, no. 6	(COMOB)	"vota populi Constantinopolitani" [p. 153]	(Anastasius)
4. WROTH 1908, 2 (bilj. 3)	"not of imperial mint"	-	(Anastasius)
5. TOLSTOI 1912, no. 124	Roma or Ravenna	"vota publica civum nauvili Constantinopolitana?" [p. 207]	"во времена Θεοδορjka / in the time of Theodoric" [p. 207]
6. KRAUS 1928	-	-	-
7. KENT 1971, no. 16	Roma	"Vota patrum conscriptorum" [p. 70]	"to an early date in Anastasius' reign" [p. 69] ili "the beginning of the reign" [p. 70]
8. HAHN 1973, no. 2	Roma	"vota patrum conscriptorum" [p. 83]	"500 (?)" [Prägetabelle X]
9. GRIERSON 1985, no. 3	Roma	"vota principis" [p. 22]	"509" [p. 21]
10. ARSLAN 1989, no. 4	Roma	-	"immediatamente dopo l'eliminazione di Odoacre (493)" [p. 21]
11. METLICH 2004, no. 9	Roma	-	"at least seven years earlier than 500" [p.19]; "493" [Tabla]

long after the ruler's (Anastasius) accession to the imperial throne, serving as a kind of announcement of the emperor's first consulate, which as a rule would have followed in the next year.<sup>20</sup> That this could truly be the case is indicated by yet another segment of the "new" semmissis, i.e. the legend COMOB in the exergue, where a clearly visible dot is located between the vertical hashes of the letter M. A similarly positioned dot is also visible on individual only slightly later minted Ostrogothic solidi of the Roman mint, with the Greek letter Θ at the end of the reverse legend,<sup>21</sup> as well as on the Roman tremisses (chronologically very close to these solidi) with an eight-pointed star in each field to the left and right of Victoria, as has already been noted elsewhere.<sup>22</sup>

The above details are interesting only in relative chronological terms, as for the true chronological position of the Ostrogothic semisses, the design of the imperial bust on the obverse is "most relevant". Both semisses, as was noted earlier, were produced using the same obverse die, and in that sense no difference between them exists, but a full comparative similarity of their obverse depiction can be found on two equally rare Ostrogothic tremisses of the Victoria-palm-to the right, no globe, which were dated some fifteen years ago to the period between 491 and 493 (**Fig. 5:1-3**).<sup>23</sup> The suggested chronological span seems too long for these quite rare examples of tremisses, and they, like both Ostrogothic semisses, should be dated to a shorter chronological period, in the same year, and that year is 491, the first year of the reign of emperor Anastasius.



*Fig. 5 - Tremisses of king Theodoric (Victoria-palm-to the right, no globe) minted in the mane of emperor Anastasius in Rome in 491 (ca. 2:1): 1 - Naples (Hahn 1981=MIB III, no. V3<sup>1</sup>); 2 - Verona (Metlich 2004, no. 10a1); 3 - London (Wroth 1911=BMCGerm, no. 71).*

<sup>20</sup> Burgess 1988, 79 and n. 10, 91.

<sup>21</sup> Arslan 1978, 35 no. 2. For a more recent example of this rare group, RomNum XI/2016, no. 944. (**Fig. 4**).

<sup>22</sup> Demo 1994, 77 no. 9-10, 127.

<sup>23</sup> Additionally, these two Ostrogothic tremisses should be repositioned chronologically as the tremissis from Naples (Hahn 1981=MIB III, no. V3<sup>1</sup> = Metlich 2004, no. 10b) was definitely minted before the tremissis from Verona (Schmidt-Dick 1995 = *TNRB* 9, no. 18884 = Metlich 2004, no. 10a1). Only after these would come the type Metlich 2004, no. 10a2 (= Wroth 1911=BMCGerm, no. 71 = Kent 1971, no. 15 = Hahn 1981=MIB III, no. V3<sup>2</sup>), which was recently joined by an example from the auction *NAC* 93/2016, 1153.



## Bibliography

ACR – Art Coins Roma, München.

*Arslan, Ermanno*, 1978. Le monete dei Ostrogoti, Longobardi e Vandali. Catalogo delle Civiche Raccolte Numismatiche di Milano, Milano 1978.

*Arslan, Ermanno*, 1989. La monetazione dei Goti, Corsi di cultura sull'arte ravennate e bizantina, seminario internazionale di studi sul tema "Ravenna e l'Italia fra Goti e Longobardi" (Ravenna, 14-22 aprile 1989) XXXVI, Ravenna, 1989, 17-72.

*Bagnall, Roger - Cameron, Alan - Schwartz, Seth R. - Worp Klaas A.* Consuls of the Later Roman Empire, Philological Monographs of the American Philological Association 36, Atlanta, 1987.

Bertolami - Bertolami Fine Arts, Roma.

*Boyce, Abaecherli Aline*, 1965. Festal and Dated Coins of the Roman Empire: Four Papers, Numismatic notes and monographs 153, New York, 1965.

*Burgess, Richard*, 1988. Quinquennial Vota and the Imperial Consulship in the Fourth and Fifth Centuries 337-511, Numismatic Chronicle 148, London, 1988, 77-96, Pl. 23-28.

CNG - Classical Numismatic Group, Lancaste (PA), London.

*Ercolani Cocchi, Emanuela* 1983. Imperi romano e bizantino regni barbarici in Italia attraverso le monete del Museo Nazionale di Ravenna, Ravenna, 1983.

*Demo, Željko*. Ostrogothic Coinage from Collections in Croatia, Slovenia & Bosnia and Herzegovina, Situla 32, Ljubljana, 1994.

*Deperyot, Georges*, 1996. Les monnaies d'or de Constantine II à Zenon, Collection Moneta 5, Wetteren, 1996.

*Grierson, Philip - Blackburn, Marc* 1986. Medieval European Coinage with a Catalogue of the Coins in the Fitzwilliam Museum, Cambridge. 1. The Early Middle Age (5th-10th centuries), Cambridge - London - New York - New Rochelle - Melbourne - Sydney, 1986.

*Hahn, Wolfgang*, 1973 (= MIB I). Moneta Imperii Byzantini 1, Wien, 1973.

*Hahn, Wolfgang*, 1989 (= MIRB). Die Ostrprägung des römischen Reiches im 5. Jahrhundert (408-491), Moneta Imperii Romani-Byzantini, Wien, 1989.

*Hübl, Albert* 1910. Die Münzensammlung des Stiftes Schotten in Wien. 1. Bd.: Römische Münzen, Wien - Leipzig, 1910.

*Kent, John P. C.*, 1971. The Coinage of Theodoric in the Names of Anastasius and Justin I, in: R. A. G. Carson (ed.), Mints, Dies and Currency: Essays dedicated to the memory of Albert Baldwin, London, 1971, 67-74 Pl. VIII-IX.

*Kent, John P. C.* 1994 (=RIC X). The Roman Imperial Coinage, Vol. X. The Divided Empire and the Fall of the Western Parts, AD 295 - 491, London, 1994.

*Kraus, Franz F.* 1928. Die Münzen Odovacars und der Ostgoten in Italien, Halle, 1928.

*Lacam, Guy* 1983. La fin de l'empire Romain et le monnayage or en Italie, Vol. I-II, Luzern, 1983.

*Metlich, Michael A.* 2004. The Coinage of Ostrogothic Italy, London, 2004.

*Ranieri, Egidio* 2006. La monetazione di Ravenna antica dal V all' VIII secolo: impero romano e bizantino, regno ostrogoto e langobardo, Bologna, 2006.

NAC - Numismatica Ars Classica, Zürich.

Nomos - Nomos AG, Zürich

- Rollin, Charles - Feuardent, Félix-Bienaimé*, 1887. Collection de M. Le Vicomte de Ponton d'Amécourt, Monnaies d'or romaines et byzantines, Rollin & Feuardant (25-30 avril 1887), Paris, 1887.
- Rollin, Charles - Feuardent, Félix-Bienaimé*, 1896. Collection de Feu M. H. M. Montagu, F. S. A. Monnaies d'or Romaines & Byzantines, Rollin & Feuardant (20-25, 27-28 avril 1896), Vol. 1-2, Paris, 1896.
- RomNum - Roma Numismatics Limited, London
- Saulcy, Felicien de*, 1836. Essai de classification des suites monétaires byzantines, Metz, 1836.
- Schellersheim, Liber Baro de*, 1800. Numismata aurea antiqua indubitatae fidei familiarum augustorum, augustarum et caesarum ad Heraclium usque quae collegit et possidet Liber Baro de Schellersheim, Regi Borussiae a consiliis intimis, [Germany: s.n.] 1800.
- Schmidt-Dick, Francisca*, 1995 (= TNRB 9). Die römischen Münzen des Medagliere im Castelvechio zu Verona, Thesaurus Nummorum Romanorum et Byzantinorum 9 (= Veröffentlichungen der numismatischen Kommission 30 = Denkschriften Österreichische Akademie der Wissenschaften, phil.-hist. Klasse 239), Wien, 1995.
- Spasskii, Ivan Georgijevič*, 1979. Numizmatika v Ermitaže - Očerk istorii Minckabineta - Otdela numizmatiki, Numizmatika i epigrafika VIII, Moskva 1970, 123-234.
- Taninius, Hyeronimus*, 1791. Supplementum ad Banduri Numismata Imperatorum Romanorum, Roma, 1791.
- Tolstoi, Ivan Ivanovič*, 1912. Византійскія монети / Monnaies Byzantines 2, Sankt Peterburg, 1912.
- Wroth, Warwick*, 1908. Catalogue of the Imperial Byzantine Coins in the British Museum, Vol. 1, London, 1908.
- Wroth, Warwick*, 1911 (= BMCGerm). Western and Provincial Byzantine Coins of the Vandals, Ostrogoths and Lombards and the Empires of Thessalonica, Nicaea and Trebizond in the British Museum, London, 1911.