

Original article

THE SYMBOLISM OF THE CRESCENT MOON AND SEVEN STARS' SYMBOL ON ROMAN COINS DURING THE 2<sup>ND</sup> CENTURY A.D.

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Article info.

Article history:

Received: 26-7-2023

Accepted: 10-6-2024

Doi: 10.21608/ejars.2024.396695

Keywords:

Astronomical symbols

Seven stars

Coin

Pleiades

Ursa Major & Minor

EJARS – Vol. 14 (2) – Dec. 2024: 263-268

Abstract:

This paper aims to shed light on one of the astronomical symbols spread on Roman Coins during the Second Century A.D., the Crescent moon and seven stars' symbol, which was depicted in two different types. The first type is seven stars within and above the moon, it is found on the coins of Hadrian, Niger, Septimius Severus, and his family. The second type is a star within the moon and six around it, this type appeared only on the coins of Faustina I, and II. This study shows how the inscription on the coin helps to explain the exact Astronomical interpretation of this symbol. And it hasn't the same astronomical interpretation, but each type has a different astronomical interpretation. As well the study proves that this symbol isn't related to a specific astronomical event like most other astronomical symbols, but Roman emperors used it on their coins to support their political and religious purposes.

1. Introduction

Astronomical symbols were used on the ancient Roman coins from the third century B.C. onwards, like sun, moon, stars, comets, constellations, etc., these symbols are often related to astronomical events such as lunar eclipses, solar eclipses, and comets. During The second century, Roman coins were very rich in astronomical symbols; as most of the emperors of this period, particularly Hadrian (117-138 A.D.) and Septimius Severus (193-211 A.D.), were obsessed with astronomy and astrology, literary sources asserted that they were so expert in astrology, they even themselves become an adept astrologer [1-6], and their reign witnessed clear support for astrologers and astronomical studies[1,4,5]. As well new astronomical symbols, that didn't find before, appeared on the reverse sides, besides old astronomical symbols had been kept. The crescent moon and seven stars' symbol is one of the most common astronomical symbols on the coins during the second century. The earliest representation of this symbol appeared on the Roman Republic coins, it found on the silver denarius, struck in Rome by the moneyer Lucius Lucretius Trio 76 B.C., fig. (1).

**Obverse:** Radiate head of Sol right.

**Reverse:** TRIO within the crescent moon and seven stars, below inscription L. LVCRETI. [7,8].

But it is striking that there are two various types in the representation of this symbol during the second century. Although there are some recent studies presented the astr-

onomical symbols on Roman coins during this period, these studies lack archaeological study, especially the relationship between this symbol and the inscription on the coin or the political and religious trends of the Roman Empire during the years which the coin was minted; So the representation of the crescent moon and seven stars' symbol on roman coins requires more of analysis. In this paper, I will more specifically focus on these subjects, and explore how this symbol was used to represent a variety of astronomical symbols, it hasn't the same astronomical interpretation, and why this astronomical symbol mint on the coin in these years.



Figure (1) Denarius L. Lucretius Trio (After: Rovithis, 2014)

2. The Crescent Moon and Seven Stars' Symbol

We find that the crescent moon and seven stars' symbol has appeared with two different types from Hadrian to Septimius Severus.

➤ **The 1<sup>st</sup> type:** it is seven stars within and above the crescent moon, it is found on the reverse of Hadrian coins minted

either in Rome or East, circa 124-128 A.D., For example, silver denarius struck in Rome, 125-128 A.D., fig. (2-a) [9, 10]. **Obverse:** laureate head of Hadrian right. Inscription, Hadrians ADRIANVS AVGVSTVS. **Reverse:** seven stars within and above the crescent moon, inscription: COS III, which means that he has the third consulship. This type was also issued on the coins of Emperor Pescennius Niger (193-194 A.D.), but it appeared with the inscription: SAECVLI FELICITAS, “the Age of the Happiness”. For example, Denarius, Antioch mint, 193-194 A.D., fig. (2-b) [11,12], obverse: laureate Head of Niger, right, IMP CAES C PESC NIGER IVST AVG, reverse crescent moon within seven stars, inscription: SAE-CVLI FELICITAS. Many similar to the foregoing coin were issued either by Emperor Septimius Severus, his wife Julia Domna, or even by his sons [12]. For example, this symbol appeared on the reverse of several denarii of Septimius Severus and his wife mint 194-195 A.D., from Emesa, figs. (2-c & d) [11,12].



Figure (2) denarius of a. Hadrian (After: Rovithis, 2015), b. Niger (After: Mattingly, 1975), c. Septimius Severus, d. Julia Domna (After: Rovithis, 2017),

➤ **The 2<sup>nd</sup> type:** it is a star within the crescent moon and six around it, this type appeared on the coins of Antonian Empresses, Faustina I (138-140 A.D.), and Faustina II (161-175 A.D.), for example, denarius mint 141 A.D., Rome, fig. (3-c). **Obverse:** bust of Faustina I, draped with legend DIVA AVG FAVSTINA; **Reverse:** crescent with seven stars-one inside, two at points, two each to left and right, below inscription SC, which are the abbreviation for "senatus consulto," which stands for "by decree of the Senate" [10,13]. Again. The same type appeared on the coins of Faustina II with the inscription: CONSECRATIO, meaning "deified", for example, denarius mint at Rome, in 176 A.D., fig. (3-d) obverse: Bust of Diva Faustina II, draped, right, inscription DIVA FAVSTINA PIA, reverse: star within crescent and six around it, and is written around it the inscription: CONSECRATIO [13].



Figure (3) denarius of a. Faustina I, b. Faustina II, (After: Rovithis, 2017)

### 3. Results

From the coins presented here, we conclude that there are two types of the moon and seven stars' symbol on the coins during the second century A.D., each type has appeared with a specific inscription. **The 1<sup>st</sup> type** is the seven stars are arranged in an almost triangular shape within a crescent moon, and it appeared with the inscription SAECVLI FELICITAS. **The 2<sup>nd</sup> type** is a star within the crescent moon and six around it, this type was only appeared on the coins Antonine empresses, Faustina I, and II, after their death, it is closely related to inscriptions of apotheosis, DIVA, and CONSECRATIO “deified”, tab. (1).

Table (1) two different types of the moon and seven stars' symbol during the 2<sup>nd</sup> century A.D.

Type	Reverse	Emperor	Year A.D.	Inscription on the reverse
1		Hadrian	124-128	COS III
		Niger	193-194	SAECVLI FELICITAS
2		Septimius Severus and his family	194-195	SAECVLI FELICITAS
		Faustina I	141	SC
		Faustina II	176	CONSECRATIO

### 4. Discussion

The number seven was very special to the ancients; this connected to seven planets that were known to ancient man: Mercury, Venus, Mars, Jupiter, and Saturn, along with the sun and the moon. But the seven stars here cannot be the seven planets, as the moon is depicted as a crescent. In addition to the seven planets, the number seven is also connected to the other constellations, like the Pleiades, Ursa Major (the greater bear), and Ursa Minor (the lesser bear). So some scholars [7,10] interpret the seven stars on these coins as the seven brighter stars of Ursa Major or Pleiades, the exact meaning of the seven stars is not known yet. Of course, these constellations are associated with the seven stars, **but to what do the seven stars mean exactly on these coins?** We must first examine which one is associated with the moon, either astronomically, mythologically, or even on other archaeological evidence. According to astronomy, the Pleiades are a famous cluster of bright stars within the constellation of Taurus. They are located on the nape of the bull's neck, fig. (4) and consist of seven stars. Hence this constellation is called "seven-starred" [14-17]. They are close to the ecliptic, the moon passes in front of them during its rotation, and it occulted frequently the Pleiades.

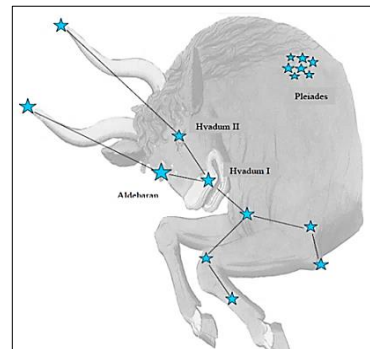


Figure (4) Pleiades stars on Taurus constellation (After: Mullen, 2007)

In mythology, The Pleiades were the seven daughters of Atlas and the nymph Pleione, they were associated with Artemis; they were her Maidens, who after being chased by the mighty hunter Orion, were placed in the sky by Zeus. Orion in his turn and his dog Sirius were catheterized by Artemis [15,17-20]. Moreover, the representation of the Pleiades connected to the moon on other archaeological arts, there is good evidence for that, fig. (5), an oval Carnaline gemstone depicting a bull (Taurus) facing left, above its horns a bust of the god Sol with a radiant crown, there are two ears of wheat in front of it, while above its back are seven stars with six arms representing the Pleiades stars, including the lunar crescent [21]. Hence, this evidence reflects that the Pleiades were associated with the moon and agriculture.

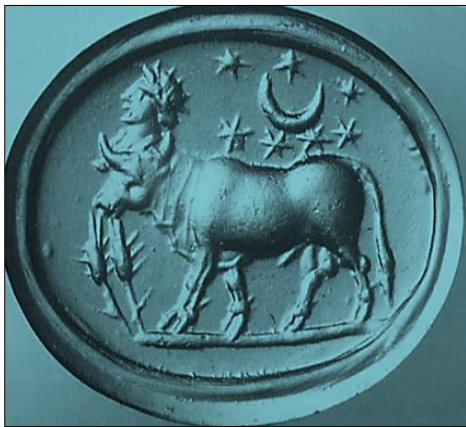


Figure (5) carnelian depicting Pleiades stars, Registry no. 656, Martinovon –Wagner Museum, in Wurzburg, (After: Weiss, 1994)

Consequently, we can say that there is a close correlation between the moon and Pleiades. Ursa Major and Ursa Minor are north constellations, they never set below the horizon, and they are always visible throughout the year [14,15,20,22]. Ursa Major has seven stars which constitute one of the most characteristic figures in the northern sky, fig. (6-a) [16,23], Likewise Ursa Minor has seven bright stars, fig. (6-b).

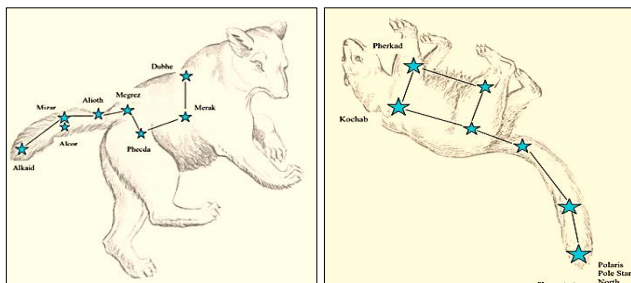


Figure (6) a. Ursa Major stars, b. Ursa Minor stars, (After: Mullen, 2007)

The Romans called them Septem Triones, “seven Oxen”, from which is derived the word “septentrio” for the north [15,20,23]. In mythology, the two bears were associated with various myths. They may have been nymph Callisto and her son Arcas. Callisto, daughter of Lycaon, was ravished by Zeus, when Artemis knew Callisto had not preserved her virginity, she turned her into a bear [20], Zeus to save her when she was pursued by Arcadians, set her together with her son Arcas

among the stars as Ursa Major and Minor [14,16,19,23,24]. There is another legend, the two Bears the Cretan nurses of infant Zeus, were placed among the constellations by Zeus for their devotion to their charge [14,15,19,20,23]. On celestial globes, they are often depicted as bears [25]. The moon never appeared with them. As well as the examination of the coins, which representation of the seven stars of Ursa Major, we find that they are associated with Zeus Cretagenes, not with the moon or Artemis, ex. Tetradrachm of Emperor Titus, from Crete, 79-81 A.D., fig. (7), on the reverse appeared Zeus with thunderbolt and scepter, surrounded by seven stars of Ursa Major, four stars at right & three at left, with legend ZEYS KPHTArENHS. The seven stars are placed exactly as they are shown on celestial maps, four on one side, forming a square, and three on the other, forming a broken line [26,27].



Figure (7) reverse of Titus's tetradrachm, (After: Gury, 2001)

Therefore, by studying the astronomy and mythology of these constellations, and gods which accompany these stars, the moon was associated with the Pleiades and not with Ursa Major or Minor. Consequently, it is a great probability this symbol refers to the Pleiades. *Nonetheless, several questions remain unanswered, do two types of this symbol have an astronomical interpretation (Pleiades)? Is there a correlation between this symbol and the inscription on the coin? Why did this symbol depict on the coin this year?* The first type, fig. (2) seven stars are arranged in an almost triangular shape within a crescent moon, with the inscription SAECVLI FELICITAS. The study suggests that this type could refer to the Pleiades. There are several reasons that this type is associated with Pleiades; According to Hipparchus (190-120 B.C.) said about the Pleiades “these stars are prominent, having a triangular shape [15]”. Also, the Pleiades enjoy greater honor than other stars; they are used as a weather sign. So, they are very special to farmers and sailors [20,28-30]. The Romans generally called the Pleiades “Vergilias” or “spring stars” because they rise after the vernal equinox; the rising of their sign signals summer, while its setting signals winter [15,20]. No other signs are accorded this role [15]. The Pleiades were the sign of the return of spring, and renewal of nature. Thus, the representation of the Pleiades on the coins are as a symbol of prosperity, the return of life and happiness on the earth again; Consequently, the appearance of the inscription SAECVLI FELICITAS, “the Age of the Happiness” with this

type quite agrees with the astronomical symbolism of the Pleiades. Therefore, by placing seven stars in a triangular shape, the presence of the moon, which is closely associated with the Pleiades, and the appearance of the inscription SAECVLI FELICITAS with it, we can say that the seven stars in this type refer to the Pleiades. As well, in my opinion, the Pleiades became one of the most common astronomical symbols issued on the coins, due to the astronomical and astrological importance enjoyed by the Pleiades rather than other stars. Furthermore, what is noticeable in this type, it appeared in the Hadrian age, and it quite disappeared during the Antonine age, then again spread widely during (193-195 A.D.) on the coins of Niger, Septimius and his wife in Syria province, especially Antioch and Emesa. Syria province was the most important province during the civil war (193-195 A.D.), after the death of Emperor Pertinax had led three rival candidates to declare themselves, each in command of frontier armies. First to stir was Niger, governor of Syria. He was proclaimed emperor by the four Syrian legions in the middle of April and made Antioch his temporary capital. Also, Septimius was acclaimed as emperor by the Danube legions in April 193. Emesa is the hometown of his wife Empress Julia Domna, she was the youngest daughter of Gaius Julius Bassianus, who was a priest of god Helios at Emesa, Hence Emesa was loyal to Septimius Severus and it supported him against his rival Niger. And in March or April 194 near Issus, the final defeated and killed. Thus, this explains the reason for the presence of Pleiades on the coins of Niger from Antioch, while their appearance widely on the coins of Septimius and his wife from Emesa. As well as the Pleiades rose heliacally at the beginning of April heralding the return of spring. This means the Pleiades is rising at the time of their elevation to the imperial throne in April 193. Consequently, it is likely that the Pleiades were issued on the coins to refer to the time of their elevation to the imperial throne, and imperial propaganda exploit the astronomical importance of Pleiades to serve the emperor's political ends. However, if the appearance of astronomical symbols is often related to astronomical events, then the study suggests that the representation of the Pleiades on these coins aren't related to a specific astronomical event, but due to the association of these stars with the spring, and their distinguishing astronomical importance as signs to the agriculture seasons. Then, these stars are an emblem for the return of goodness, prosperity, and happiness. This symbolism was confirmed by the inscription SAECVLI FELICITAS. As regards the second type a star within the crescent moon and six around it; it appeared only the coins of Empress Faustina I, and Faustina II, fig. (3). Rovithis [10] supposed that this type specifically could present the Pleiades; the Pleiades are seven in number, but only six of the seven stars are visible. The reason was given for this that six of seven married with immortals [15,19,20], whereas one "Merope" made the mistake, married a mortal, Sisyphus, King of Corinth, so she appears very faint. Hence this star was called "the Lost Pleiad." by the poets [15,19,20,31]. So, the six stars around the moon could show the well-visible stars of Pleiades, whereas the star inside is a hidden one. This opinion may be astronomically

correct, but if we connect this type to the inscriptions on the coin and the general trend of their coins in this period, we would find that this symbol has a completely different astronomical interpretation. This type found only on the coins of Faustina I, and Faustina II, which were issued after their death, in honor of Diva, of course, it was appeared with inscriptions referring to apotheosis, Whether DIVA on the obverse or CONSECRATIO "deified" on the reverse. This means that stars of this type are related to apotheosis and immortality. According to a popular belief, which had come to Rome from the East, the soul becomes a star among stars [32], and the souls of great men were carried up to heaven among the stars to reside there amidst the northernmost stars which never set [32,33]. Ursa Major and Ursa Minor are among the eternal northern constellations which never set, not the Pleiades. Thus, I believe that the seven stars of this type may refer to Ursa Major or Minor. These seven stars were used to express symbolically the immortality world. The question that arises here: *Why did the moon find between the stars of Ursa Major and Minor, especially it isn't related to them whether astronomical or mythological?* Roman Emperors and Empresses were deified after their death. So, a star was above the head of the emperor or the radiant crown and a crescent moon above the head of his wife, meaning that the Empress appeared as the moon goddess Selene [10,34]. Faustina I, after her death in 140 A.D., was deified by senatorial decree, awarding her the title "diva", that was issued on the enormous imperial coinage in her memory – more than for any other empress, and a temple voted in her honor at the Forum Romanum [35-37], as well she was worshipped in a joint cult of Artemis [35]. Likewise, Faustina II, after her death in 175 A.D., was deified by the senate, and Marcus Aurelius renamed Halala in Cilicia, where she died, after her, 'Faustinopolis', and there built a temple in her honor [1,36]. Furthermore, this type appeared only on the coins of the Antonine empresses, not emperors. Therefore, I believe that the moon here symbolizes the empress, or rather, the soul of the deified empress, and placed the moon between the eternal stars as a symbol of the empress's elevation to the stars, there to enjoy divine immortality. In this respect, it is noteworthy that this type agrees with the noticeable dominant trend of the coins issued after their death in honor of Diva [10,37,38], which clearly refers to the symbolism of consecration and the eternity of empress among stars such as appearance star of eight rays (symbol of celestial divinity and immortality) with AETERNITAS 'Eternity', fig. (8-a) [10,37], and the empress's apotheosis borne aloft on the back of a peacock with inscription CONSECRATIO "deified", fig. (8-b) [35,27,38].





**Figure (8)** **a.** denarius of Diva Faustina I, Rome, 141 A.D., (After: Rovithis, 2015). **b.** sestertius of Diva Faustina II, Rome, 176-180 AD., (After: Bergmann, 1999)

## 5. Conclusion

The study proves that although the moon is associated with the seven stars of Pleiades mythically and astronomically, the representation of the moon and seven stars' symbol on the coins is not always the Pleiades. The inscription that appeared with this symbol on the coin helps a great role in determining the exact astronomical interpretation of this symbol. The moon and seven stars' symbol, which was depicted in two different types on the coins during the second century A.D., has not the same astronomical interpretation, but each type has a different astronomical interpretation closely associated with the inscription that appeared with it. The first type is depicted the seven stars in a triangular shape within the crescent moon, the study proves that this type agrees astronomical with the Pleiades, as well The study observed, by examination of the coins with astronomical symbols, that the inscription SAECVLI FELICITAS "the Age of the Happiness" only appeared with the Pleiades, and not appeared with other astronomical symbols. This confirms the astronomical importance of Pleiades, they were issued on the coins as a symbol of prosperity, and happiness. While another type was depicted a star within the crescent moon and six around it. It could refer to the Pleiades, as suggested by Rovithis. In my opinion, it is not true, thus this suggestion relies on only astronomical representation, completely ignores the inscriptions on the coin, or the general trend of themes on the coins in this period. The study shows that this type was only appeared on the coins Antonine empresses, Faustina I, and II, after their death, it is closely related to inscriptions of apotheosis, such as DIVA, or CON-SECRATIO "deified", then, the study suggests that the seven stars refer symbolically to the eternal northern constellations which never set, (Ursa Major, and Ursa Minor). Finally, we can say that most Roman emperors in the second century used this astronomical symbol on their coins to express specific meaning. Hadrian, Niger, and Severan dynasty used this as Symbol Pleiades, to political propaganda of prosperity, return "the age of the happiness". On other hand, Antonian Emperors, Antoninus Pius and Marcus Aurelius used this as a symbol of the eternal northern stars (Ursa Major or Minor), indicating eternity of their soul of wives, Faustina I, II, and expression of emperor's pietas and his loyalty to family. Thus, the Roman emperors were quite adept at utilizing this astronomical symbol to support their political and religious purposes.

## References

- [1] David, M. (1932). *Historia Augusta*, Harvard Univ. Press, Cambridge, USA
- [2] Cassius, D. (1905). *Roman history*, Vol. Vols. 69 & 77 Harvard Univ. Press, USA
- [3] Barton, T. (1994). *Ancient astrology*, Routledge, London.
- [4] Cramer, F. (1954). *Astrology in Roman law and politics*, The American Philosophical Society, Philadelphia.
- [5] Syme, S. (1976). *Astrology in the historia Augusta*, BHAC, Bonn, pp. 291-309.
- [6] Scarre, C. (1995). *Chronicle of the Roma. Emperors the Reign-by-reign Record of the Rulers of Imperial Rome*, Thames and Hudson Ltd, London.
- [7] Dimitrijevic, M. & Bajic, A. (2019). On the astronomical symbols on Roman and Greek coins. In : Frîncu, M. (ed.) *Sesiunea Națională de Comunicări a Societății Române Pentru Astronomie Culturală*, Lucrări in Extensio, Societatea Română Pentru Astronomie Culturală, Timișoara, An 2, pp. 106-114.
- [8] Rovithis, F. & Rovithis-Livaniou, E. (2014). Astronomical symbols on coins of the Roman republic, *Romanian Astron. J.* 24 (2): 169-184.
- [9] Mattingly, H. (1966). *Coins of the Roman empire in the British Museum, Nerva to Hadrian*, Vol.3, The Trustees of the British Museum, London.
- [10] Rovithis, F. & Rovithis-Livaniou, E. (2015). Astronomical symbols on coins in Roman empire, Part II, "96 to 192", *Romanian Astron. J.* 25 (1): 197-209.
- [11] Mattingly, H. (1975). *Coins of the Roman empire in the British Museum, Pertinax to Elagabalus*, Vol.5, The Trustees of the British Museum, London.
- [12] Rovithis, F. & Rovithis-Livaniou, E. (2017). Astronomical symbols on coins in Roman empire, Part III, "193 to 235 AD.", *Romanian Astron. J.* 27, (1): 47-64.
- [13] Mattingly, H. (1968). *Coins of the Roman empire in the British Museum, Antoninus Pius to Commodus*, Vol. 4, The Trustees of The British Museum, London.
- [14] Manilius, M. (2006). *Astronomica*, Harvard Univ. Press, Cambridge.
- [15] Condos, T. (1997). *Star myths of the Greeks and Romans: A sourcebook containing the constellations of Pseudo-Eratosthenes and the poetic astronomy of Hyginus*, Phanes Press, USA.
- [16] Mullen, B. (2007). *The myths & legends of the bright constellations*, The Wynyard Woodland Park Planetarium and Observatory, UK.
- [17] Snodgrass, M. (1997). *Signs of the zodiac: A reference guide to historical, mythological, and cultural associations*, Greenwood Pub. Group, London.
- [18] Vore, N. (1947), *Encyclopedia of Astrology*, Philosophical Library, New York.
- [19] Hyginus, (1960). *Astronomica*, Humanistic, No. 34, Studies Kansas Univ. Press, USA.
- [20] Olcott, W. (1911). *Star lore of all ages: A collection of myths, legends, and facts concerning the constellations of the northern hemisphere*, G. P. Putnam's Sons, NY.
- [21] Weiss, C. (1994). Virgo, Capricorn und Taurus, Zur Deutung augusteischer Symbolgemmen, *Jahrbuch des Deutschen Archäologischen Instituts.* 109: 353-369.
- [22] Blomberg, P. (2007). How did the constellation of the bear receive its name?"; In: Pasztor, E. (ed.) *Archaeoastronomy in Archaeology and Ethnography*, Bar Int. Series 1647, pp. 129-132.
- [23] Rogers, J. (1998). The origins of the ancient constellations: II. The Mediterranean Tradition, *J. of the British Astronomical Association.* 108 (2): 79-89.
- [24] Ovid, N. (1931). *Fasti*, Loeb Classical Library, London.
- [25] Künzl, E. (1998). Der globus im the römisch-germanisches zentralmuseum Mainz: Der bisher einzige komplette

- himmelsglobus aus dem griechisch-römischen altertum (The globe in the Römisch-Germanisches zentralmuseum Mainz: The only complete celestial globe found to-date from classical Greco-Roman antiquity, *Der Globusfreund*. 45/46: 7-153.
- [26] Svoronos, M. (1895). On the signification of certain ancient monetary types, *Am. J. of Numismatics*. 29 (4): 115-120.
- [27] Gury, F. (2001). Septem Triones. Un thème de la predestination dynastique à Rome. In: Molin, M. (ed.) *Images et Représentations du Pouvoir et L'ordre Social dans L'antiquité*. Actes du Colloque d'Angers, 28-29 Mai 1999, Paris, pp. 181-188.
- [28] Richard, C. (2019). *Aristotle, Aristotle's history of animals*, Chris Curnow & the Online Distributed, London.
- [29] Glenn, W. (1914). *Hesiod works and days*, Vol. 57, Loeb Classical Library, London.
- [30] Boutsikas, E. (2007). *Astronomy and ancient Greek cult: An application of archeoastronomy to Greek religious architecture, cosmologies and landscapes*, PhD., School of Archaeology & Ancient History Univ. of Leicester, UK.
- [31] Vore, N. (1947). *Encyclopedia of astrology*, Philosophical Library, NY.
- [32] Eisler, R. (1946). *The royal art of astrology*, Herbert Joseph Ltd., London.
- [33] Taylor, L. (1975). *The divinity of the Roman emperor*, Porcupine Press, Philadelphia.
- [34] Mattingly, H. (1928). *Roman coins from the earliest to the fall of the western empire*, Methuen & Co., London.
- [35] Bergmann, B. & Watson, W. (1999). *The moon and the stars, afterlife of a Roman empress*, The Trustees of Mount Holyoke College Art. Museum, South Hadley.
- [36] Birley, A. (2000). *Marcus Aurelius: A biography*, Routledge, USA.
- [37] Burns, J. (2007). *Great women of imperial Rome, mothers and wives of the Caesars*, Routledge, London.
- [38] Gradel, I. (2002). *Emperor worship and Roman religion*, Clarendon Press, Oxford.