

ASTRONOMICAL SYMBOLS ON COINS OF THE ROMAN EMPIRE - PART I: 27 BC TO 96 AD

ELENI ROVITHIS-LIVANIOU¹, FLORA ROVITHIS²

¹*Dept of Astrophysics, Astronomy & Mechanics, Faculty of Physics,
Athens University, Panepistimiopolis, Zographos 15784, Athens, Greece*

Email: elivan@phys.uoa.gr

²*Email: florov11@yahoo.gr*

Abstract. We continue to present and describe some ancient Roman coins with astronomical symbols like the Moon, the Zodiac signs, the stars, etc. The coins presented in this Paper correspond to the Roman Empire covering the period **27 BC** to **96 AD**. This means that starting with coins of Augustus (the first Roman Emperor), **2** dynasties: the Julio-Claudian (14-68) and the Flavian (69-96) were examined. Besides, some other coins issued during **69 AD**, known as the year of the **4** emperors are shown, too. Any further available information for these coins is given, and a general discussion is made.

Key words: coins – Roman Empire – Roman Emperors – astronomical symbols.

1. PROLOGUE

In a previous paper (Rovithis-Livaniou and Rovithis 2014 hereafter refer as Paper I) a systematic presentation of ancient Roman coins with stellar symbols was made. In Paper I, we limited to the coins of the Roman Republic *i.e.* till **27 BC**. In this paper, we continue presenting ancient Roman coins with the same subject, but we now cover the early period of the Roman Empire, and especially the interval from **27 BC** till **96 AD**.

During the period we examine *denary*, *i.e.* the basic silver Roman coin, which had firstly appeared in **269 BC**, was a very *strong* coin, recognizable and acceptable not only in the restricted bounds of Rome. It was divided in **2** *hemi-denary*, or in **4** *sistertia*, while one *sisterius* or *sestertius* was equal to **2** *dupondius*. In the beginning the denary contained **4.5g** silver. Augustus reduced it to **3.9g**, and remained so until Nero's era when it was reduced again and became **3.4g**; while, in the late third century it contained only **3.0g** of silver. Other mayor changes in denary's silver content were made by emperors Caracalla (198-217), Elagabalus (218-222) and Diocletian (285-305) AD. These, will be discussed in another paper, as they are not referred to the period examined here.

On the other hand, **gold** Roman coins issued around **217 BC**, while since *Julius Caesar* era the basis of the Roman numismatic system was the gold coin with values

equal to **25 denary**, as already referred in Paper I.

Almost all coins of the Roman Empire have on their observe sides the head or/and bust of the Roman emperor; while, various other themes are shown on their reverses. In some cases, the head of emperor's wife is also presented either with emperor or alone.

Various legends or abbreviations are used on both observe, or reverse side of a coin. The meaning of most abbreviations is easily explainable, like huge S and C or EX S.C., meaning *Ex Senate Consult*. Besides, some coins do not bear the signature of a triumvir monetialis (monetarist), but the inscription CVR.X.FL., meaning *Curator Denary Flade*, while others have a P, a Q or the letters CVR AED, which means that they were signed by *Praetors*, *Questars* or *Aediles*. The meaning of other abbreviations can be found in the literature.

We start our presentation of coins with astronomical symbols from the Roman Empire with the coins of the first Roman Emperor, Augustus^[1].

2. COINS OF THE FIRST ROMAN EMPEROR AUGUSTUS (27BC-14AD)

The coins with an astronomical symbol issued by the first Roman emperor, Augustus, were issued in the memory of his uncle and *father* Julius Caesar and are presented in Fig. 1. The latter was deified after his assassination, and there was a Temple dedicated to him, *i.e.* to *divus*^[2] Julius, as was said.



Fig. 1 – Coins of Augustus, Observe a: Head of Julius Caesar, star below his chin, legend DIVI F, Reverse: Legend DIVVS IVLIVS, *i.e.* Julius, within wreath; Observe b: Head of Augustus, legend DIVI F AVGVSTVS, Reverse: Head of Julius Caesar, star above his head, legend; Observe c: Bust of Augustus, legend CAESAR AVGVSTVS=AUGUSTUS, Reverse: Comet with 8 rays and tail, legend DIVVS IVLIVS=DIVVS IULIVS; Observe d: Head of Julius Caesar, legend, Reverse: Temple of Divus Julius with a star in its pediment.

And although we do not know the exact meaning of the star in front of the neck of Julius Caesar, or above his head, this is not the case for coin (c) of Fig. 1. Because, it is known that soon after the assassination of Julius Caesar in 44 BC, a comet was appeared, (Plutarch, *Alexander-Julius Caesar*, 69). And, as is said, almost 25 years later Augustus issued a coin where this event was shown.

Augustus had issued some other coins with a star above his head, as **a** and **b** of Fig. 2. Besides, in coin (d) of the same figure, both he and his wife Livia^[3] are shown as god Ἥλιος , *Helios*^[4], (*i.e.* Sun, *Sol* in Latin) and goddess Σελήνη , *Selene*^[5], (*i.e.* Moon, *Luna* in Latin) with a star and a crescent Moon above their heads, respectively, (see also Fig. 13 right).



Fig. 2 – a: Aureus of 14 AD, Lungunum mint, Obverse: Head of Augustus with star above his head, legend DIVI F DIV OCTAVIANUS, Reverse: Head of Tiberius, legend AVGVSTVS PATER; Observe b: Head of Augustus, star above, legend DIVVS AVGVSTVS PATER, Reverse: Woman (Pax?, Livia?) seated holding sceptre, huge S & C in left & right field, respectively; c: Denary of Augustus minted in Rome by Lucius Cornelius Lentulus, in 12 BC, Obverse: Augustus head, legend AVGVSTVS, Reverse: Augustus is placing a star on the head of high priest of Mars (*Flamen Martialis*); d: Coin from Spain, (14-37) AD, struck under Tiberius, Obverse: Bust of Augustus with sun/star above his head, legend AVGVSTVS, Reverse: Bust of Livia with crescent Moon above her head, legend LIVIA AVGVSTA.

In Fig. 3 some other coins of Augustus are shown where on their reverses the Zodiac sign of Capricorn is presented. These, look somehow to the coin from Cyprus with the Capricorn and Scorpio, (Fig. 17, in Rovithis-Livaniou and Rovithis 2012). Similar coins issued other Emperors, too, some of which are shown below, (See Figs. 8 and 15left).

A Capricorn is also shown on the coins of Fig. 4.

We continue with some other coins of Augustus (Fig. 5a and b) and of his grandson Gaius Caesar, (Fig. 5c), respectively.

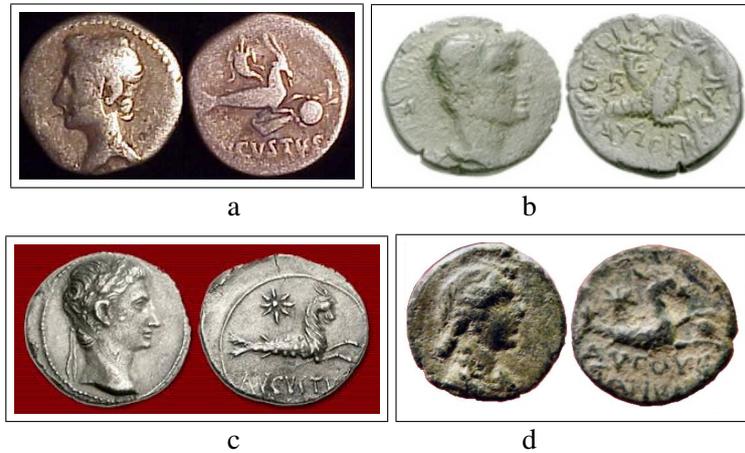


Fig. 3 – Coins of Augustus era with Capricorn; Observe a, b and c: Head of Augustus, Reverse a&b: Capricorn, gobble between its legs and cornucopia above, legend a: [A]VGVSTVS, legend b: in Greek meaning *GOD EMPEROR*, Reverse c: Capricorn with 8-pointed star above, legend AVGVSTVS below; d: Coin from Augusta^[6], Cilicia^[7], Observe: Livia's bust, Reverse: Capricorn carrying globe, star above, legend with the city's name in Greek.



Fig. 4 – Coins from the Thracian kingdom, Observe Left: Bust of king Phoemetalces, legend with king's name in Greek, Reverse: Head of Augustus, Capricorn on globe in front, legend; Middle Observe: Busts of king Phoemetalces & queen's Pythodoris of Thrace; Reverse: Busts of Augustus & Livia, Capricorn in front, legend in Greek meaning *CAESAR RESPECTABLE*; Right: Similar to middle, but without Kotys IV on observe.



Fig. 5 – Observe a: Crown head of Augustus, star above, Reverse: II within dotted border & wreath; b: *Δίχαλλο*^[8], dichalko of (10-5) BC, Alexandria, Egypt; Observe b: Head of Augustus, Reverse: Crescent Moon & star, Greek legend; c: Coin of (10-5) BC, Observe: Bust of Augustus, legend, Reverse: Bust of Gaius, star below, legend with his name in Greek.

We finish with 2 more coins of Gaius, (Fig. 6).



Fig. 6 – Left: Coin of Gaius Caesar, Obverse: Head of Gaius Caesar, legend CAESAR;
Reverse: Column with vase, various symbols, mainly of Sun and Moon, legend AVG VSTI;
Right: Confronted bare heads of Gaius & Lucius with stars above and globe below all within circle;
Reverse: II within dotted border & wreath.

3. THE JULIO-CLAUDIAN DYNASTY, (14-68) AD

The first Roman Emperors dynasty is known as Julio-Claudian and covers the interval from 14 till 68 AD. It starts with Emperor Tiberius^[9], (14-37), goes on with Caligula^[10] (37-41), Claudius^[11] (41-54) and ends with Nero^[12] (54-68). During this period, some coins with astronomical symbols were issued. On the obverse sides of all of them the head of the corresponding emperor is presented. So, we will not repeat it in legends, except if it is necessary. On the other hand, the themes on reverses vary depending on the place. And, when these places were semi-autonomous, then some themes from the old coins of the areas were used as we shall see.

We start our presentation with some coins of Tiberius from various parts of the Roman Empire, (Figs. 7 and 8).



Fig. 7 – Coins of Tiberius with his head on obverse, Left: Drachma of Tiberius from Caesarea^[13], Kappadokia, Asia Minor, Reverse: Radiative god-*Helios* with sceptre and globe on top of mount Argaeus^[16], Greek legend ΘΕΟΥ ΣΕΒΑΣΤΟΥ ΥΙΟΣ, meaning *SON of the RESPECTABLE GOD*;
Middle: from hemi-autonomous Mallus^[14], (37-41) AD, Reverse: Winged Nike & star in front; Right: from Tomis^[15], Thrace, Reverse: Eagle between Dioscouroi's^[17] caps with stars above.

Many other coins, similar to Fig. 7Left with mount Argaeus and either the god-*Helios*, or a star on top issued by other emperors, too, like Nero for example. As it is impossible to present all of them here, we are only referred to them.

We continue with some coins of Caligula and Claudius, (Figs. 9 and 10, respectively).

The coins shown in Fig. 11 are of Claudius and are again from various parts of the Roman Empire.

We go on with some more coins of Nero, (Figs. 12 and 13).



Fig. 8 – Coins of Tiberius with Capricorn. Left: Sesterius of 34/35 AD, Obverse: large legend OB CIVES SER in the middle of double oak wreath, 2 Capricorns confronting each other, legend DIVO AVGVSTOS P.Q.R, Reverse: Large S,C in the middle, legend CAESAR DIVI AVGF. AVGVST.P.MT POT XXXVITI inside circle of dots; Right: Coin from Panormon^[18], Sicily, Obverse: Radiated head of Tiberius, legend, Reverse: Capricorn up & triskeles^[19] below, legend CN DO PROC A LAETOR IIVIR.



Fig. 9 – Coins of Caligula; Observe Left: Head of Caligula, Reverse: Head of Augustus between 2 stars; Right: Coin from Philadelphia^[20], Lydia, Observe: Head of Caligula, star behind, legend, Reverse: Bust of Dioscuri, legend.



Fig. 10 – Coins of Claudius; Left: From Pergamon^[21], (40-60) AD, Observe: Laureate bust of Senate^[22], star in front & legend in Greek, Reverse: Bust of Roma^[23] & legend in Greek; c: Coin from Leukas^[24], Syria (hemi-autonomous), Observed: Head of Claudius with crescent Moon above, legend with his name in Greek, Reverse: Head of god-Helios, Greek legend meaning the citizens of Leukas.



Fig. 11 – Left: Diobol of 41/42 AD from Alexandria, Egypt, Observe: Bust of Claudius with star in front of his neck, Greek legend TI ΛY CEBAC ΓEPMAN, Reverse: Bull, legend in Greek meaning *EMPEROR* & LB below; Right: Similar to left, but of 42/43 AD, and with hippopotamus instead of bull on reverse.



Fig. 12 – Coins during Nero’s era with his head on observe; a: From Thessalonica, Macedonia, Reverse a: horse or monoceros & star at right above; b & c: Tetra-drachmae of 67/68 from Alexandria, Egypt; Reverse b: Head of goddess Hera, & star, legend with her name in Greek, ΗΡΑ, and an adjective designation of the town of her worship, ΑΡΓΕΙΑ^[25]; Reverse c: God Apollo and legend ΑΚΤΙΟΣ ΑΠΟΛΛΩΝ, Aktios Apollo^[26] & star; d: Coin of (55-60) AD from Knossos, Crete; Reverse d: Dioscuroi standing and holding sceptres, stars above their heads.



Fig. 13 – Left: Coin of (54-68) AD from Nysa, Lydia, Observe: Nero’s head in circle of dots, legend in Greek with his name and title, Reverse: bust of man (god?) with Phrygian cap, crescent behind, legend ΝΥΚΑ-ΕΩΝ in Greek, *i.e.* giving the citizens name; Right, Observe: Head of Nero, legend NIRO CLAV CAES AVG IMP LVPINO VOLVMNIO II, Reverse: Heads of Nero & his first wife Octavia legend NIRO CLAVD CAES AVG IMP ET OCTAVIA AVGVSTI, crescent Moon & Sun/star above their heads.

We notice that on the right coin of Fig 13, Nero and Octavia appeared as god-*Helios* and goddess *Selene*, respectively, as Augustus and Livia on one of the foregoing shown coins, (Fig. 2d).

4. THE YEAR OF THE 4 EMPERORS, 69 AD

During 69 AD, 4 emperors reined the Roman Empire: Galba^[27] (68-69) AD, Otho^[28], (for only 4 months), Vitellius^[29], (for 8 months) and finally Vespasian^[30] (69-79). Here, we’ll present coins of the 3 first of the mentioned emperors, since

the last one reigned for 10 years and founded the Flavian dynasty, which is examined separately.

We start with 3 coins issued during Galba's epoch and 1 during Otho's.



Fig. 14 – a & b: Tetra-drachmae of Galba, from Alexandria, Egypt, 68/69 AD; c&d: Tetra-drachmae of Galba & Otho, respectively, from Antioch ad Orontem^[31], Syria; Observe a, b & c: Head of Galba, legend in Greek with his name and some abbreviations meaning *CAESAR RESPECTABLE*, star in front of his neck on the right coin; Reverse a: Liberty -as the legend in Greek indicates- standing and holding wreath & sceptre, star at left below; Reverse b: Rome & Greek legend ΡΩ-ΜΗ , *i.e.* ROMA, star in front; Reverse c: Eagle, legend in Greek meaning the YEAR & giving it as 55; Observe d: Head of Otho, legend in Greek, meaning *EMPEROR CAESAR RESPECTABLE*, Reverse d: Eagle, wreath in its mouth and crescent Moon between its legs.

In general Otho and Vitellius, who were Emperors for a couple of months only, did not issue many coins with stellar symbols. Except the coin in Fig. 14d, we do not know any other of Otho's with astronomical symbols. As regard Vitellius, what is known up to now is that there are some coins from the Macedonian confederacy, (*KOINON* in Greek), where on their reverses the Macedonian shield was shown, (see Discussion).

5. THE FLAVIAN DYNASTY, (69-96) AD

The Flavian dynasty was founded by Vespasian, as was already referred, and continued by his sons: Titus^[32] (79-81) and Domitian^[33] (81-96) AD.

Emperors Vespasian and Titus issued some coins similar to these presented in Fig. 3, (See Fig.15Left and Middle, respectively). Furthermore, Vespasian issued a coin with a prow of galley, (Fig. 15Right), similar to those presented in Paper I, (Figs. 16, 21 and 23).



Fig. 15 – Left & Right: Denary of Vespasian; Obverse left & right: Head of Vespasian, legend IMP CAESAR VESPASIANVS AVG; Middle: Denary of Titus; Obverse: Head of Titus; Reverse left & middle: Capricorn on globe, legend; Reverse right: Prow, of galley, star above, COS VIII.

Other coins of Vespasian and Titus are shown in Fig. 16.



Fig. 16 – Coins of Vespasian and Titus, Left: Denary of 74 AD, Obverse: Head of Vespasian, legend IMP T CAESAR COS III, Reverse: Victory walking right holding wreath & palm, star & dot at lower right; Middle: Aureus of 76 AD, Obverse: Head of Vespasian, legend CAESAR IMP VESPASIANUS, Reverse: Aeternitas^[34] standing left, holding head of Sun & Moon, lighter altar at her feet, legend AETER-NITAS; Right: Denary of 79 AD, Obverse: Head of Titus, Reverse: God-Helios standing on column holding spear.

We continue with the presentation of some coins of Emperor Domitian.



Fig. 17 – Coins of Domitian, Left: Denary of 82-83 AD, Domitian and his son, Obverse: Bust of Domitian, legend IMP CAES DOMINIANVS AVG PM, Reverse: His son on globe, 7 stars around, legend DIVUS CAESAR IMP DOMINIANI F; Middle: similar to Left, but with head of Domitia^[35] instead of Domitian, legend DOMITIA AVGVSTA IMP DOMIT[IAN]; Right: From Leukas, Syria, 84/85 AD, Obverse: Domitian as god-Helios, Reverse: Artemis standing, holding sceptre.



Fig. 18 – Coins of Domitian with his head and legend with his name and title in Greek, Left: From Flaviopolis^[36], Cilicia, 89/90 AD, Reverse: Heads of Dioscourai with stars above and legend denoting its origin in Greek, and the year ZI; Middle: from Irenopolis^[37], 93/94 AD, Reverse: Hygeia^[38], holding branch and phiale^[39] from which serpents feeds, star in the left field, legend denoting its origin and giving the year; Right: From Caesarea, Cappadokia, 93/94 AD. Observe: Same as left & middle but with a star behind his head, Reverse: Head of Domitian and legend in Greek denoting the coin's origin.

6. DISCUSSION

Continuing our presentation of ancient Roman coins with astronomical symbols, in this paper (Rovithis-Livaniou & Rovithis 2015a) we show those covering the interval from **27 BC** till **96 AD**. In other words 2 dynasties of the Roman Empire: the Julio-Claudian, 27 BC 68 AD and the Flavian, (69-96) AD. Furthermore, similar coins issued during **69 AD**, known as *the year of the 4 emperors* were shown, too.

In most coins of the Roman Empire the head of Emperor is always presented on their observed side, as was shown; while, on these of the Roman Republic the heads of gods (Rovithis-Livaniou and Rovithis 2014b). And as was shown in this latter paper, some exceptions could not be avoided. So, the heads of Julius Caesar and Marcus Antonius were appeared in some coins during the last years of the Roman Republic.

Except the pure Roman coins, like denary etc., other coins were also used during the period we examined, like the Greek talants, drachmae etc. It is referred for example that when the young Julius Caesar was arrested by Syllas's soldiers, he gave **2** talants to their chief to free him. It is also said that once, when Julius Caesar leaved Italy, arrested by some pirates, who released him **40 days** later, after his friends offered them **50** talants.

In Paper I, we noticed the remarkable similarities of some coins of the Roman Republic with some Greek ones, as are those with Roma. In this paper, we saw many other similarities not only with the Greek coins, but also with coins from many other places. Because, the Romans allowed to the various occupied cities/countries, even even when they had been Roman Provinces, to *keep* themes of their old coins. This means that these coins presented on their observe sides the Emperor's head, but their reverse sides were kept the same as in their older coinage.

There are many such examples, as are some coins from areas of the kingdom of Pontus, where the *star inside a crescent Moon* was not only kept, but it was also

spread to other areas, too. And since these areas, (Syria, Egypt, Mauritania etc.) never belonged to the kingdom of Pontus, it is supposed that this symbol was either *borrowed*, or these coins represent an astronomical event, as is the occultation of a planet, or a star, by the Moon, which is not a rare phenomenon. Other examples are the coins with *Zeus*, god-*Helios* or other gods on their reverses.

Another example is the coins with the famous Macedonian shield on their reverses from the confederacy of Macedonia, when Macedonia was hemi-autonomous. These shields were usually decorated with stars. And not only many emperors like Claudius, Nero, Vitellius, Vespasian, Domitian and others issued such coins, but we find similar ones much earlier during Roman Republic. In this later case, except coins c&d of Fig. 28 in Rovithis-Livaniou and Rovithis (2012), there are others where on observe the head of a god/goddess or of a hero is shown in the middle of the Macedonian shield, (Rovithis-Livaniou and Rovithis 2015c). During the Roman Empire, gods' heads were replaced by the heads of the corresponding Roman emperor, while the Macedonian shields were now moved on their reverses; but, since the beautiful decoration with stars is now not well shown -if shown at all- we did not represent these coins here.

On the other hand, there are some cases in which old themes were kept even on observe sides of the coins instead of Emperor's head. For this reason, we did not represent these coins here, too. We refer that these are some coins from Sidon, Phoenicia with the head of goddess Tyche with a star inside crescent Moon on observe and a galley on reverse, issued during Vespasian, (69-79) AD.

As was already referred in Paper I, it is generally accepted that the astronomical symbols presented on the ancient Roman coins are very possibly related to an astronomical event, (Zimmermann, 1995). For example, soon after the assassination of Julius Caesar in 44 BC, a *comet* was appeared, (Plutarch, *Alexander-Julius Caesar*). In this work, Plutarch 69, refers that between the divine things happened after Julius Caesar's assassination was: 1) the appearance of a comet only a week after his death and 2) that during the following whole year the Sun was very weak and did not shine as usual. This had as result the fruits faded before ripening, due to the coolness of the atmosphere.

As was shown, the comet's appearance soon after the assassination of Julius Caesar was presented in some coins issued by the first Emperor of the Roman Empire, Augustus (right coin of Fig. 1 in this paper). Similar coins were found in various parts of the Roman Empire, (from Spain to Asia Minor). Later, the adopted son and Augustus' successor, Tiberius, issued some quite similar coins, with a star on their reverse sides instead of a comet.

The use of a star on the Roman coins has been examined (*e.g.*, McIvor, 2006). And as we already referred in Paper I, we think that in general a star was used to denote the superior, the high or even deity. A good example is the case of the first

Roman emperor Gaius Julius Caesar Octavianus Augustus. He is mainly known as *Augustus*, *i.e.* with the title originally given to sacred and holy things or places. And then it was given to some other Roman emperors, who were afterwards adored like gods and called divine, (*divus* in Latin), as Augustus. And as we show, this title appeared in most legends of his coins, or on coins struck later by some other Emperors for him, while a star there is above his head.

So, we showed some coins in which a star is above the head of the emperor and a crescent Moon above the head of his wife, (Fig. 2d, where Augustus and Livia are shown, and Fig. 13, Right with Nero and Octavia). This means that the Emperor and his wife appeared as god-*Helios*, (Sun, *Sol* in Latin) and goddess *Selene*. (Moon, *Luna* in Latin). And it is worthwhile to mention that in many of the coins presented in this paper Emperor's head is shown radiated, as the head of the god-*Helios*, (*e.g.*, Rovithis-Livaniou and Rovithis 2011, 2012, 2014b), or at least crown.

On the other hand, as we showed the Zodiac sign of Capricorn is represented on some coins issued by various Roman emperors. The same was done by some caesars, too, like Lucius for instance. These coins, as others similar, were not presented here because is impossible to show all of them. As regards Capricorn, some suggest that this happened because Capricorn was Augustus's Zodiac sign, but this is **not correct** as he born in September. Thus, it seems more probable the astrologists to have advised Augustus that Capricorn is the Zodiac sign of the Roman Empire, since Augustus reign started in **16** January of **27** BC, which corresponds to it.

Except of the coins with a Capricorn, there are some others from Syria and in particular from Antioch ad Orontem as referred in their Greek legends with another Zodiac sign: the Ram. As, on the observe side of these coins *Zeus* is represented, we did not show them here, although it is believed that they were issued during Augustus' era. It is only mentioned that some of these coins have been related to the star of Bethlehem, (Molnar, 1999).

It is also mentioned that some emperors issued similar coins with their predecessors. For example, there are some *aureus* with Augustus head on observe and Capricorn on reverse from Spain, Gaul, etc., issued during the civil war, 68-69, which are copies of a type of Augustus' coins that were still circulated.

Similarly, there are coins from the various Roman provinces, where on reverse the old themes had been kept. Such are for example some of the coins from Caesarea, Kapadokia, with mount Argaeus, (Fig. 7Left), these with the heads of Dioscuroi, (Fig. 12d), or those with an eagle, (Figs. 14c&d).

In another paper we shall represent similar coins covering the interval from 96 to 192 AD, which correspond to the Nerva-Antonian dynasty of the Roman Empire, (Rovithis-Livaniou and Rovithis 2015b).

7. APPENDIX

[1] Augustus, (63 BD- 14 AD): The first Roman Emperor (27 BD - 14 AD), whose full name was Gaius Julius Caesar Octavianus Augustus, but he is known as Augustus. A lot of traditional stories completed and/or confirmed his noble or even divine origin. His mother, for example, maintained that he was son of the god Apollo (Dion, Roman History, XLV 1, 2). He was adopted by his uncle, from his mother side, Julius Caesar. He managed to extend the empire adding to it German, Spain and African parts of land. Although there were almost continuous wars during his reign, there was also relative peace, known as *Pax Romana*. He died at the age of 77 and was succeeded by his adopted son Tiberius, by whom was deified, (Ovid, *Metamorphoses*, Book XV, ln. 745-850).

Originally, *augustus* was a title given to sacred or divine things and places, but the Senate in 27 BC gave this title to the first Roman Emperor to characterise him as holy person, whom the gods themselves had chosen as equal to them. And as is known since then the first Roman Emperor remained in history as **Augustus**. Later, Marcus Aurelius gave this title, which till then was given only to Emperors, to his brother Lucius Verus, whom he made co-Emperor. This was later repeated to some other cases, too.

[2] DIVUS, DIVA: Divine. It was supposed that Julius Caesar became similar to god after his death. This very probably comes from the old Greek custom of deification of great heroes, like Hercules for example, who were afterwards adored as gods. (DIVA was used for females).

[3] Livia Drusilla: (58 BC-29 AD), second wife of the first Roman Emperor Augustus. Livia was mother of Emperor Tiberius, paternal grand-mother of Emperor Claudius, and paternal great grand-mother of Emperor Caligula. She was deified by Claudius, who acknowledged her title of Augusta, (after her formal adoption by the Julian family in 14 AD). She is the first woman to appear on provincial coins in 16 BC.

[4] god-Helios: Ancient god, who is supposed to be the personification of our sun. In numismatic, he was represented by a young man with rays around his face, or at least with crown head; reason for which we included coins with him. In Greek mythology, he is considered earlier than the 12 principal gods/goddesses. It is supposed that he has been replaced by Apollo, although it seems that there were some others earlier gods of light, too. God's Helios father is supposed to be the Titan of light Hyperion, Ὑπερίων, while as regards his mother others consider the Titaness of sight Theia, Θεία, (Hesiod, *Theogony*, ln. 371-374), and others Eurufaessa, (Homeric Hymns, *To Helios*).

[5] goddess Selene: Ancient Greek goddess of the Moon. It is supposed to be daughter of the Titan of light Hyperion, Ὑπερίων, and the Titaness of sight Theia,

Θεία, (Hesiod, *Theogony*, ln. 371-374). Her brother was god-*Helios* (*Sol* in Latin) and her sister Eos, *i.e.* dawn. Various goddesses have been identified with Selene as are Ekate, Hera, or Artemis for example, all of whom were considered as protectors of *maternity* and of *fertility* in general. The name Selene comes from the Greek word σέλας=φως=light, because she is shining. In Greek she was also called Μήνις, from the word μην or μήνας=month, connected to the time needed for a complete revolution around the Earth. The arm of Selene was driven by flying horses, or even bulls, the horns of which are related to her astrological symbol, *i.e.* μηνίσκος=crescent. She was referred as *Luna* in Latin.

[6] Augusta: An ancient city founded in **20** AD and named after Livia Augusta (see n. 3 above). It was **16** Km north of Adana at Asia Minor, and today is the city *Campestris* of Turkey.

[7] Cilicia: S-E part of Asia Minor, opposite to Cyprus.

[8] Dichalko, δίσχαλκο in Greek: Copper coin of the ancient Athens equal to 1/4 of an obol.

[9] Tiberius, (Claudius, Nero, Julio Caesar): Second Roman Emperor, (14-37) AD, successor of Octavian (Augustus). His father had the same name as he, and he was higher priest, magister and ex director of the navy under Julius Caesar. His mother was the beautiful Livia Drusila, who married very young and he was born when she was only **13** years old. Some historians characterised him as the most capable Roman Emperor.

[10] Caligula: The third Roman emperor, (37-41) AD, whose real name was Gaius Julius Caesar Augustus Germanicus. He is known with his nickname Caligula, given to him by his father's soldiers, which means the boot of the little soldier. Because, he followed his father Germanicus in the battle fields of Northern Germany he was dressed in uniform and boots.

[11] Claudius: The third Roman Emperor, (41-54) AD, who was also historian. His whole name was Tiberius Drusus Nero Germanicus. Born in 10 BC, he was son of Nero Claudius Drusus, a succeeded and loved by the people person. He was nephew of Emperor Tiberius and grandson of Augustus's wife, Livia Drusilla. Claudius married to his second cousin Messal(l)ina in 38 AD, and he became Emperor after Caligula was killed in early 41 DC. He managed to extend Roman sovereignty in North Africa and made Bretagne Roman province.

[12] Nero: Roman emperor, (54-68) AD, whose original name was Lucius Domitius Ahenobarbus. He was driven forward to the throne of the Rome at the age of 17, because of his mothers marriage, Agrippina, with her uncle Claudius. He remained in history as the personification of cruelty. On the other hand, because the famous Seneca was his teacher, and he also served as his advisor for a short time, he appears as protector of learning and arts.

[13] Caesarea of Kappadocia: Ancient city of Kappadocia, *i.e.* the central

west part of Asia Minor, in the foot of mount Argaeus. The original city's name was Mazaka, which means city of the Moon, and it used to be the capital of Kappadocia. Later, the city was named Eusebeia in honour of the king *Αριάθους του Ευσεβούς*=Ariathous the Devout. Finally, the name Caesarea was given to the city by Emperor Tiberius, in honour of his adopted father Caesar (Augustus), and was the capital of Cilicia Secunda. The place of the city was very good and important, because it was in the meeting point of the roads: Sinope-Efrates, Sardis-Sousa and Ephesus-Antioch. After a catastrophic earthquake the city was destroyed and rebuilt by Emperor Justin I, and was named Justinopolis. Even so, the name Caesarea prevailed. Caesarea was the birth place of Basil the Great, and when during the 4 century AD he built a new city, Basileiada, northern to Caesarea, the old city was abandoned.

[14] Mallus: Ancient city of Cilicia in Asia Minor close to the river Pyrates, (today the Kara Tas of Turkey). There are various traditions as regards who founded it. So, according to some it was Mallos, from whom the city's name. According to others it was Amfilohos and Mapsos, while some others considered it as Greek colony founded by people of the city of Argos, in Peloponnesus. During the Hellenistic epoch the city reached at its higher flourishing. It became Roman province during Eliogabalus era, (218-222) AD.

[15] Tomis: Ancient Greek colony in Thrace (today in Romania). According to some, the city was probably founded by the Millecians at the beginning of the 6th century BC on a peninsula situated nearby the present Romanian town Constantza at the Black sea coast. On the other hand, according to Apollodorus, the city was founded by the king of Aea, Aeetes. Besides, it is believed that the name Tomis comes from the Greek word *τομή* =cutting, because at this place Aeetes buried the pieces of the body of his son, when his daughter *Μήδεια*, Medea, going away with *Ιάσων*, Jason, and the golden fleece cut it in pieces and thrown it into the sea.

[16] Mount Argaeus: Mount in the central part of Asia Minor. In its foot the city of Caesarea was built. Argaeus was the mount-god, or better the mounts personalization. This mount is shown in many coins of Caesarea, presented either with the god-Helios or with a star on its top. According to Strabon, (C 538) it was the highest mount of Kappadocia, and it was said that from its top one could see both the Black and the Aegean Sea.

[17] Dioscourai: Their name means Zeus's sons, coming from the Greek words *Διός* =(of Zeus)= of Jupiter and *κούρος*=son. According to the Greek Mythology Dioscourai were sons of Zeus and the queen's of Sparta, Leda. They were, thus, brothers of the beautiful Helen. Dioscourai had taken part in many exploits and travelled to various parts of the main Greece and to Greek colonies both in Magna Graecia as well as in Asia Minor. They were considered as protectors of the sailors, and were presented wearing always their caps with stars above. (More info by Rovithis-Livaniou and Rovithis 2014a).

[18] Panormon: Ancient city in Sicily, the Palermo today. It was founded in the 8th century BC by Phoenician merchants, who named it Ziz. It was also used by Greek merchants and sailors, from whom it took its name because of its wonderful natural harbour, although it was not a Greek city-country.

[19] Trisceles: The word comes from the Greek words *τρις* = three and *σκέλος* = leg, meaning everything consisting of 3 legs. Originally it was used as a *solar symbol* used in god's Apollo worship. Today the word is used for everything consisting of 3 equal parts.

[20] Philadelphia (in Lydia): Ancient Greek city established in 189 BC by the king Eumenes II of Pergamon (197-160 BC). The city was named so, because of Eumenes' love for his brother Attalus II (159-138 BC). For this reason he was also named Philadelphos, because philadelphos in Greek means one who loves his brother, coming from the words *φιλό*=*αγαπώ*=love and *αδελφός*=brother. Philadelphia was in the administrative district of Sardis, and it became Roman province in 133 BC, after Attalus's III, the last of the Attalid kings, death. Emperor Tiberius released the city from taxes, when it was suffered because of an earthquake in 17 AD, while Caligula helped also the city. There are some coins in which the gratitude of the people of the city is expressed to these emperors.

[21] Pergamon: Ancient Greek city at Aeolis in Asia Minor, at a distance of about **26 Km** from the Aegean Sea. The city became capital of the kingdom of Pergamon under the Attalid dynasty (281-133) BC. It was for a short time capital of the Roman province of Asia, before the capital was transferred to Ephesus. At Pergamon there was one of the greatest Libraries of the ancient world, but the Roman general Antonius offered its books to the queen of Egypt Cleopatra. Besides, at Pergamon there were many important buildings and Temples, many of which were moved to Rome. Similarly, the great Altar of Pergamon, as is known, has been moved to the Pergamon Museum in Berlin, Germany. At Pergamon was born the great ancient Greek surgeon, physician and philosopher Galenus, in **130 AD**, known as *Galen of Pergamon*.

[22] Senate: Personification of the Senate of Roma.

[23] Roma: A goddess personified the city of Roma. It was thus supposed that she cared about Rome and broadly about the Roman Empire.

[24] Leukas: Ancient city in Syria, which has the same name as one of the Ionian islands of Greece.

[25] ΑΡΓΕΙΑ (HPA): The Greek goddess *Ηρα*, Hera, *Juno* in Roman, was called so because she was the protector of the ancient Greek city of Argos, at Peloponnesus, where she was mainly worshipped.

[26] Aktios Apollo, *Ακτιος Απόλλων*: So was called Apollo worshiped at Action, where Octavian Augustus built a magnificent Temple for the god in reminding his victim against Mark Antony. Besides, Augustus consecrated some games

similar to *Nemean*, *Phythian*, and *Isthmian*, which were hold there every 5 years starting from 28 BC.

[27] Galba, 3 BC to 69 AD: He became Praetorian in 20 and Consul in 33 AD. He was Roman emperor for 7 months during 68-69 AD being the first of *the year of the 4 emperors*.

[28] Otho, (32-69) AD: Marcus Salvius Otho was Roman Emperor for only 4 months, (15/1 to 16/4), during 69 AD being the second of *the year of the 4 emperors*.

[29] Vittelius, (15-69) AD: Aulus Vittelius Germanicus Augustus was son of Lucius Vittelius Veteris and Sextilia, and Roman Emperor for 8 months, (16/4 to 22/12), during 69 AD being the third of *the year of the 4 emperors*.

[30] Vespasian: Roman emperor, (69-79) AD, whose whole name was Titus Flavius Vespasianus was the fourth and last of *the year of the 4 emperors*. He was the fountain of the Flavian Dynasty, since none other member of his family has got any higher position in Rome. He was thus the first emperor who was from a new family, as it was said. His basic contribution is considered the stability restoration in a period of civil wars and confusions, which started after Nero's death in 68 AD. Besides, he strengthened the emperor's competences towards those of the Senate.

[31] Antioch ad Orontem: Ancient city of Syria founded by Seleukos A, known as Nikator, (305-281) BC, one of Alexander the Great generals and one of his descendants. The city was close to the river Orontes, from which the second part of its name comes, and was used as harbour of Seleukeia, which was at a distance of about 22 Km. The place where Antioch founded was of great importance. Thus, in the original city three others were added soon. For this reason, Strabo calls it *Tetrapolis*. Antioch was under the Romans when Pompeii the Great occupied Syria in 64 BC. On most of its coins the Tyche, (Fortune, *Fortuna* in Latin) of Antioch is shown. Possible because the city was destroyed by earthquakes and re-built. Although, there are astronomical symbols in these coins, they were not presented here, since they are mainly Greek issued by Alexander's the Great descendants, the Seleucids, and will be presented elsewhere.

[32] Titus: Roman emperor, (79-81) AD, the greatest son of emperor Vespasian. He was smart, educational and people loved him, while he was rather cruel when he was young. During his regime the Coliseum was completed, although the beginning of his reign is related to big disasters: the Vesuvius explosion, the pestilence, and the fire that destroyed Rome.

[33] Domitian: Roman emperor, (81-96) AD, son of emperor Vespasian, Titus' brother and the last of the Flavian dynasty. As Emperor he behaved rather well, although he was malicious and ambitious. During his regime the Senate lost what had remained from its validity, which his father had weakened. He constructed a temple for goddess Athena, (*Minerva* in Latin), whom particularly respected. Besides, he sent people to Alexandria, Egypt, and to other Greek cities, to enrich the Libraries

of Rome with copies of various books. He thought that all people around conspired against him, and he was finally murdered in 96 AD.

[34] Aeternitas: The divine personification of eternity. It appears on the coins issued by various Roman Emperors like Vespasian, Titus, Trajan, Hardrian, and others. She appears as a young lady usually holding the Sun and the Moon.

[35] Domitia: Daughter of the general Gnaeus Domitius Corbulo and wife of Emperor Domitian. She bore a daughter and a son, who died in his infancy, and Domitian deified him. Besides, he issued coins with either his or his wife's head on observe, and the boy on reverse. Soon after this event, Domitian exiled Domitia for unknown reasons.

[36] Flaviopolis: Ancient Greek city in Adana of Asia Minor, which was previously named Cratia. The city was renamed Flaviopolis by Constantine the Great.

[37] Irenopolis or Eirenopolis: Ancient Greek city in the N-W Cilicia. Its name means the city of peace coming from the Greek words: *ειρήνη*=peace and *πόλις*=city. (Two other cities, one in Isauria and another in Balkans have the same name).

[38] Hygeia, *Υγεία*: Ancient Greek deity, personalization of the health of both the body and the soul. According to the Greek mythology she was daughter of *Ασκληπιός*, Asclepeos.

[39] Phiale, *φιάλη*: The utensil used by the Greeks to offer libation to the gods.

REFERENCES

- Burnett A., Amandy M. & Ripolles P.: 1992, *Roman Provincial Coinage*, Vol. 1: 44 BC AD 69, British Museum Press, London.
- Dion: *Roman History*, XLV 1,2.
- Hesiod: 1975, *Theogony*, ALL WORKS OF THE ANCIENT GREEK WRITERS, Scientific Company of Greek History of Literature, Publ. PAPHOS, Athens, (in Greek).
- Homeric Hymns: 2002, *To Helios*, Ancient Greek Literature, THE GREEKS, 826, Publ. KAKTOS, Ed. O. Xatzopoulos and Co., Athens (in Greek).
- McIvor R.S.: 2006, *JRASC*, Vol. 98, p. 87.
- Marshall Faintich: 2007, *Astronomical Symbols on Ancient and Medieval Coins*, McFarland & Co. Inc. Publ., U.S.A.
- Molnar M.R.: 1999, *Star of Belthehem: The Legacy of the Magi*.
- Ovid: *Metamorphoses*, Book XV.
- Pindar: *Odes*, (in Greek).
- Plutarch: 1975, *Alexander-Julius Caesar*, ALL WORKS OF THE ANCIENT GREEK WRITERS, Scientific Company of Greek History of Literature, Publ. PAPHOS, Athens, (in Greek).
- Rovithis-Livaniou H. & Rovithis F.: 2011, *Stellar Symbols in Ancient Greek Coins I*, Ro. Astron. J. **21**, 165.
- Rovithis-Livaniou H. & Rovithis F.: 2012, *Stellar Symbols in Ancient Greek Coins II*, Ro. Astron. J. **22**, 83.
- Rovithis-Livaniou H. & Rovithis P.: 2014a, *Greek Myths for the Gemini Constellation*, Ro. Astron. J. **24**, 133.
- Rovithis-Livaniou H. & Rovithis F.: 2014b, *Astronomical Symbols on Coins of the Roman Republic*, Ro.

- Astron. J. **24**, 169, (Paper I).
- Rovithis-Livaniou H. & Rovithis F.: 2015a, *Astronomical Symbols on Coins of the Roman Empire - Part I: 27 BC to 69 AD*, *Romanian Astron. J.* (present Paper).
- Rovithis-Livaniou H. & Rovithis F.: 2015b, *Astronomical Symbols on Coins of the Roman Empire - Part II: 69 to 92*, *Romanian Astron. J.* (submitted).
- Rovithis-Livaniou H. & Rovithis F.: 2015c, *Decoration of the Macedonian shields as seen via the ancient Greek-Roman coinage*, (in preparation).
- Strabo: 1975, *Geographica*, ALL WORKS OF THE ANCIENT GREEK WRITERS, Scientific Company of Greek History of Literature, Publ. PAPYROS, Athens, (in Greek).
- Zimmermann L.: 1995, *Heads and Tales of Celestial Coins*, Vol. 91, p. 28.
- <http://en.wikipedia.org>
- <http://www.asiaminorcoin.com/gallery/index.php>
- <http://www.museum.com.ua>
- <http://www.pontos.dk>
- <http://www.wildwinds.com/coins/greece/i.html>

Received on 25 January 2015