

The Ritual Foundation of Rome and miscalculation of the Egyptian calendar

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Abstract

This research investigates the horoscope that Varro commissioned from the astrologer Tarutius in order to calculate the foundation date of Rome. The date obtained by Tarutius, through Varro's work, later became the accepted and official date: 21st April 753 B.C. The research concludes that there could be: (a) a *coincidence error* in the calculation of the Vagus civil Egyptian calendar; (b) a *calendrical gap* between the Julian calendar and the proleptic Julian calendar; (c) a correspondence of Tarutius' horoscope with 15th October (also in 753 B.C.), the day of the most sacred celebration of the god Mars ("father" of Romulus and patron of Rome) celebrated at a popular level on 21st April.

Keywords: Rome, foundation, horoscope, Varro, Egyptian calendar

«Rome was founded by Romulus in the month of Pharmouti
on the ninth day, between the second and the third hour»
(*Plutarch*, I:12,6)

1. Foreword

The foundation date of Rome or "Rome's birth" has always been a much debated issue. The difficulty in verifying ancient chronicles also (but not only) stems from the uncertainty of the calendars preceding the Julian calendar, promulgated in 46 B.C. by Julius Caesar as *pontifex maximus*, and elaborated by Sosigenes a Greek astronomer from Alexandria. Before the Julian calendar, as Suetonius recalls in the *Lives of the Caesars* (121 A.D.), «the calendar had long since been distorted by the carelessness of the *pontifices maximi* who arrogated to themselves the privilege of adding months or days at pleasure, so that harvest festivals no longer fell in Summer, nor the grape harvests in Autumn» (I:40).

Censorinus, in his work *De natali dei* (3rd cent.), asserts that, according to some authors, the oldest Roman calendar – and as such usually attributed to Romulus – already had 12 months, while according to other authors it had 10 months, divided into six *hollow* months (of 30 days) and four *full* months (of 31 days), as was also the case with the Albans from whom the Romans descended (cf. 20:2-3).

Solinus, in the *Collectanea rerum memorabilium* (3rd cent.), argues – as do most of the sources that have come down to us today – that the “Romulan” calendar consisted of 304 days divided into 10 months and began in March (cf. I:35-36). This would be confirmed by their “numerical names” (...Quintile, Sextile, September, October, November and December) and the natural start of the year in Spring.

The “Romulan” calendar is unusual not only for the number of months, but also in their duration (30 and 31 days). The most ancient calendars, in fact, were usually calculated through direct observation of the phases of the moon. The calendar of Romulus also has three fixed days each month: the *calends* (new moon) and the *ides* (full moon), i.e. the beginning and middle of the lunar month, as well as the *none* (the day on which the *pontifex maximus* announced religious festivals). But normal lunar calendars had months of 29 and 30 days, similar in duration to the phases of the moon, which in fact last about 29.5 days.

Approximately 61 days of the year (from 304 to 365) were often calculated “at pleasure”. This suggests strong inaccuracies in the calculation of days: this in fact led to the necessary reform of the calendar by Julius Caesar. Therefore, if we use the proleptic Julian calendar (i.e. backdated) to try to calculate dates from earlier eras, we can easily run into calendar deviations and errors.

Censorinus, again in *De natali dei*, states that «the year was increased to 12 months and 350 days by Numa, as Fulvius claims, or by Tarquinius, as Junius claims» (20.4); Solinus, on the other hand, again in his work *Collectanea*, believes that, of the two added months, «one was of 29 days and the other of 28, so that the year had 355 days» (I,38-39). Livy, in *Ab Urbe condita* (29-7 B.C.), following traditional beliefs, attributes to king Numa Pompilius the reordering of religious rites and therefore also of the calendar, i.e. the transition to the lunisolar calendar, the 12-month year and the use of the intercalary month every 20 years to try to compensate for the gap between lunar and solar cycles (cf. I-19,6).

Archaeology (as well as archaeoastronomy) is also an important tool for historical investigation. The archaeological research carried out on the Palatine Hill and in the Capitol area seems to confirm the presence of small settlements (some even prior to the 8th century B.C.) and traces of a wall that could correspond, in terms of location and dating, to the mythical initial *pomerius* traced out by Romulus. The archaeologist Andrea Carandini writes: «Excavating for the last twenty years between the Forum and the Palatine, I have collected data that seem to confirm the beliefs of the ancients: the first material evidence relating to the city of Rome – the walls, the king’s house, the place of public assemblies – are in fact dated to the second quarter of the 8th century B.C., let us say around 775-750 B.C. They therefore agree with the date, 21st April 753 B.C., which the ancients held with such conviction to be the day of the beginning of Rome’s history» (Carandini 2013, 11-12).

With this in mind, let us try to investigate which references and methods Varro (116-27 B.C.) used – according to the knowledge and beliefs of the time – to

date the foundation of Rome ... but not only. The date calculated by Varro then became, and still is today, the traditional one and precisely 21st April 753 B.C.

2. Tarutius and Varro: dating by horoscope

Cicero, in his work *Academica* (45 B.C.), calls Varro one of the greatest scholars of ancient Rome: «You have shed light on every epoch of the homeland, on the stages of its chronology, on the rules of its rituals, on its priestly offices, on its civil and military institutions, on the dislocation of its quarters and various points, on names, genders, duties and causes of our affairs, both divine and human» (I:9). Petrarch, in his *Trionfi* (1351), described Varro as the «third great Roman light» (IV:3) after Cicero and Virgil who, in the *Aeneid* (19 B.C.), narrates the myth of Rome and the lineage of the emperor Octavian Augustus (the *gens julia*).

Virgil, in the astrological and mythological language of the ancient traditional wisdom, had already narrated an advent in the 4th canto of the *Eclogues* (39 B.C.): «The last age of the Cuman oracle has arrived: the great order of the ages is born again. And already the virgin returns, the kingdoms of Saturn return, already the new progeny descend from the heights of heaven. Thou, O chaste Lucina, protect now the rising child, with whom the generation of iron shall end and throughout the world that of gold shall arise: already thy Apollo reigns. Under your consulship the glory of this age will begin, O Pollion, and the great months will begin to pass» (vv. 4-12). The Catholic Church, until the Middle Ages, sustained that these verses spoke of the advent of Jesus and made Virgil a kind of “Christian prophet” (so much so that Dante chose him as his guide for his journey in the Afterlife). But Virgil is more likely to be talking about Augustus, the first emperor of Rome (cf. Brescia 2012, pp. 235-241), or about the son of the consul and historian Gaius Asinius Pollonius.

It was Marcus Terentius Varro (116-27 B.C.) who, at the time of Julius Caesar, in his work *Antiquitates rerum humanarum et divinarum* (c. 59-46 B.C.), now lost but much quoted by the ancients, calculated the date of the foundation of Rome, which became the traditional one: 21st April 753 B.C. (this is how we will read it after Dionysius the Little, in 525 A.D., introduced the words B.C. and A.D.). To calculate it, Varro turned to the famous mathematician and astrologer Lucius Tarutius (?-86 B.C.), who was both his friend and Cicero’s. Although Cicero and later Plutarch (47-127 A.D.) considered the feat bizarre, it was part of the typical traditions of the time. Varro, based on Tarutius’s horoscope, dates the foundation of Rome and from there the installation of the first consuls to 509 B.C. And since Varro enjoyed great fame from the outset, his dating was soon accepted.

Plutarch, a Greek philosopher priest and historian who lived under the Roman Empire and held Roman citizenship, recounts the feat in his famous work *Parallel Lives*:

«In the time of the philosopher Varro, a Roman scholar of history, lived Tarutius, his friend (...) who was considered to be an excellent astrologer. Varro proposed to him to find the day and hour of the birth of Romulus (...) and he very resolutely and courageously affirmed that Romulus was conceived in his mother's womb in the 1st year of the 2nd Olympiad [772-71 B.C.], in the Egyptian month of *Koiak* on the 23rd day [about 19th December in the Julian calendar], in the third hour [08:00-09:00], when there was a total eclipse of the Sun, and the birth followed in the month of *Thout* on the 21st day [circa 18th September in the Julian calendar], at sunrise; and that Rome was founded by him in the month of *Pharmouti* on the 9th day, between the second and third hour [07:00-09:00]» (I:12,3-6).

According to Plutarch, therefore, Tarutius first identifies the horoscope of Romulus's conception – whose birth date was traditionally celebrated on 20th September – and from there that of Rome's foundation. Plutarch seems to argue that, according to Tarutius, Rome was founded on 9th *Pharmouti* of the Egyptian calendar, which in the Julian calendar corresponds to 4th April, and that Varro moved the date to 21st April in order to make it coincide with the festival of the Palilias.

3. The *Palilie* and the popular rite for the foundation of Rome

Is it possible that Varro – despite the indications of Tarutius whom he himself engaged – shifted the “sacred” foundation date to coincide with the pre-existing festival of the Palilias? “Today we think this way about some Christian festivals in comparison to earlier Roman festivals (e.g. Christian *Christmas* in comparison to the Roman *Sun invictus*). But this is not necessarily the correct way of thinking” (cf. Brescia 2012).

Plutarch (47-127 A.D.), in *Parallel Lives*, states that «it is now agreed that the city was founded on 21st April (...) but even earlier (...) on that day there was a pastoral festival called Palilia» (I:12.1). In contrast, Cicero (106-43 B.C.), a contemporary and friend of both Varro and Tarutius, wrote in *De Divinatione* (44 B.C.): «Lucius Tarutius of Fermo, our close friend, the main scholar in Chaldean doctrine, also traced the date of the birth of our city to those Palilian festivals, on which it is said that it was founded by Romulus, and affirmed that Rome was born while the Moon was in Libra» (II:47). Dionysius of Halicarnassus (60-7 B.C.) too, in his work *Roman Antiquitates*, also goes on to claim that «Rome celebrates (...) the day of its anniversary of origin called Palilia» (I:79). Valleius Paternus (19 B.C.-30 A.D.) states the same in his *Historiae Romanae* (published posthumously): «Romulus (...) founded the city of Rome on the Palatine, during the Palilie» (I:8). And Solinus (210-258? A.D.), in the work *Collectanea rerum memorabilium* (3rd century A.D.),

after Plutarch, continues to say: «Romulus laid the foundations of the walls (...) 11 days before the Kalends of May [21st April] (...) as Tarucius has revealed» (I:18).

These authors seem to affirm, unlike Plutarch, that the day of Rome's foundation indicated by Tarutius is 21st April and is called Palilie. That is, that Romulus chose the day of the Palilie to perform the foundation rite of Rome. The Palilie or Parilie was the day on which the rite was executed on the Palatine Hill to purify and protect shepherds and flocks and to propitiate harvests.

The name of the Palatine Hill, *Palatium* for the Latins, derives according to the ancients from *Pallanteus* (Livius I:5): Evander, Roman myths say, was king of the Greek region of Arcadia and settled in Latium. Here he founded, on that hill, the city of *Pallanteo* in honour of his son Pallanteus (or *Pallas*). It was they, again according to the myths, who first welcomed the Trojan prince Aeneas to Italy. From Aeneas's lineage (starting with his son Ascanius known as *Iulus*) would be born Romulus and Remus and the *gens iulia* (to which Caesar and Augustus belonged). Pallas (javelin thrower) is also the epithet for *Athena*, the Greek goddess and warrior of wisdom. According to legend, Zeus gave Dardanus, mythical founder of Troy, a statuette of Athena to protect the city; then Odysseus and Diomedes stole it and at last Aeneas took it with him to Italy. Palatine, finally, may derive from *Pales*, the goddess (or god) of hay and sheep farming, from which the name Palilie may also derive.

In any case, the indication of 9th *Pharmouti* in Plutarch may have another explanation which opens up a double question: the calendar of ancient Egypt and Octavian's reform of that calendar.

4. Miscalculation of the Egyptian calendar

The oldest Egyptian calendar – besides probably the lunar calendar (common to most ancient people) – was called *Nilotic* because it was divided into the three seasons of the Nile (*Akhet*, *Peret* and *Shemu*: flood, retreat and harvest). «It was made up of three seasons of four months, each of thirty days, for a total of 360 days, followed, at the end, by five additional days (...) called “epagomena”, according to the Greek denomination» (Petruccioli 2001, 66). Its first day, called 1st *Thoth*, began with the first flood of the Nile at Memphis around the summer solstice (21st June), but could fluctuate according to the arrival of the flood.

«Starting from the New Kingdom (1540-1076 B.C.) (...) each month received its own name» (Ibid.) and the nilotic calendar was supplemented with a solar calendar in which the summer solstice initially corresponded with the rising of Sirius, the alpha star of the constellation of the Greater Dog (a star called *Sothis* by the Greeks and *Canicola* by the Romans, hence the Sothic or Canicular calendar). This calendar was also called the *Vagus civil calendar* because it was only used for civil matters

(peasants used the Nilotic and Lunar calendars) and because New Year's Day "shifted", i.e. «advanced by one day every four years» (Mariani 2018, 661).

In fact, following the motions of Sirius instead of the Sun, «the Egyptian Solar calendar consisted of 365 days, divided into twelve 30-day months, with an additional five days at the end of the year. The Egyptians had known for centuries (...) that the year lasted more than 365 days, but the priests had always opposed the correction of the traditional calendar: in 238 B.C., they prevented Ptolemy III Evèrgete's reform, intended to insert an intercalary day every four years, from taking effect» (Polverini 2016, 99). Therefore, since the solar year lasts about 6 hours longer than 365 days, the Egyptian New Year (1st Thoth) advanced $\frac{1}{4}$ day per year, thus 1 day every 4 years, 1 month every 120 years, and reentered the axis every 1460 years.

Only in 22 B.C. Augustus officially introduced the Alexandrian calendar in Egypt, so called because it had already been developed in Alexandrian times (323-32 B.C.), but first used in Rome since the reform of the Julian calendar (developed by Sosigene of Alexandria). Augustus in that year – as commonly believed until today – fixed the Egyptian New Year on 29th August because «in 30 B.C. (...) 1st Thoth was fixed on 30th August (...). In the following three years, in fact, the New Year fell on the Julian 29th August» (Cristoforetti 2003, 53).

Censorinus, in *De natali dei*, referring to 238-39 A.D. and the vague civil calendar, writes: «It always starts on the first day of its month, whose name among the Egyptians is Thoth, and this year was 7 days before the calends of July [23-24 June], while a hundred years earlier, when in Rome Antoninus Pius was emperor and Bruttius Presentius II was consul [138-39 A.D.], that same day is 13 days before the calends of August [19-20th July], at which time in Egypt the Canicola usually rises» (21.10), i.e. Sirius.

Censorinus seems to state that among the Egyptians in 238-39 A.D., in the previous vague civil calendar, the summer solstice (21st June) was roughly back in line with nature because it fell on 23rd-24th June in the Julian calendar. He adds, however, that 100 years earlier, i.e. in 138-39 A.D., it is on 19-20th July. In one hundred years, the Egyptian Vague calendar shifts 25 days ($100:4=25$). If we add 25 days to 24th June we actually arrive at 19-20th July. If we go back another 160 years, from 138 A.D. to 22 B.C. ($138+22=160$), we are about 40 days off ($160:4=40$). Adding 40 days to July 19-20th effectively brings us to August 29-30th.

With respect to the correspondence between 1st Thoth and July 19-20th in 138-39 A.D., Censorinus gives precise references: «When Antoninus Pius was emperor in Rome and Bruttius Present II was consul». This could mean that Censorinus starts from this acquired data to calculate that 1st Thoth in his time (238-239 A.D.). If so, he starts from 19-20th July, subtracts 25 days and gets precisely the date of 23-24th June (... in respect to which and unlike the previous one, he does not

give any official reference of emperors, consuls, Olympics, etc., which would seem to show the date in fact derives from calculations).

But Censorinus's calculation – and those before and after him who adhered to it – could be inaccurate. This is because the Vagus civil calendar goes forward one day every four years, and therefore, going back in time, one would have to detract rather than add the days of offset. Consequently, the correspondence between this calculation and the date of the New Year “fixed” by Augustus in Egypt in 22 B.C. could be an *error of coincidence*. In fact, in 22 B.C. the 1st Thoth would fall on 9th June (and in 30 B.C. it would fall on 7th June).

If so, Augustus would have set 29 August as the beginning of the Egyptian calendar not because in 30 B.C. or 22 B.C. the 1st Thoth (summer solstice) is on 29th August but for a simpler reason: it is the day on which, according to the Julian calendar, he in fact conquered Egypt. We know that Augustus conquered it in August 30 B.C. and on 29th August had Pharaoh Ptolemy XV (Caesarion) killed, «after having him arrested while trying to escape» (Suetonius II:17), and had Cleopatra's other sons deported to Rome.

Exactly on 29th August, therefore, Egypt officially became a Roman province. Octavian conferred the new office of first governor or, more precisely, of first «Prefect of Alexandria and Egypt» (Lembke 2010, 265), on Gaius Cornelius Gallus (69-26 B.C.), who was a knight, politician and poet, member of the circle of Maecenas and friend of Virgil. He was also the first man of humble origins to become governor (cf. Suetonius II:66); he then fell out of favour, committed suicide and perhaps suffered a *damnatio memoriae*, which is shown on a stele in Egyptian, Greek and Latin from 12 B.C. found in the temple of File dedicated to Augustus (cf. Lembke 2010).

It is therefore much more likely that Octavian – like other conquerors, emperors and dictators before and after him – chose the date 29th August as first day (1st Thoth) of a new era for Egypt: The Roman Era.

5. The 9 Pharmouti and Caesar's Egyptian calendar

It was 46 B.C. when Caesar introduced the Julian calendar: the new “permanent” calendar of the Empire. Varro finished his work *Antiquitates* at that time and certainly “blocked” the dates reported by Tarutius before 86 B.C. (the year in which Tarutius probably died) in the Julian calendar.

Varro (116-27 BC), in turn, died before Augustus “fixed” the Egyptian calendar (22 B.C.). Why then did Varro indicate dates according to the names of the Egyptian calendar? It made no sense to indicate them in relation to the Vagus calendar, since it changed every year. Perhaps Augustus introduced his calendar immediately after conquering Egypt in 30 B.C., but only managed to make it official

from 22 B.C. onwards. If so, Varro may have published an updated edition before his death (27 B.C.). Another hypothesis: Augustus had an updated edition of Varro's work produced after 22 B.C. However, this would not explain the inconsistency between the date of 21st April and the indication of 9 *Pharmuti*, which instead corresponds to 4th April in Augustus' Egyptian calendar.

Augustus in 22 B.C. blocked the Egyptian *vagus* calendar according to the date on which he conquered Egypt. It is possible to assume that Caesar, in 46 B.C., when he introduced the new calendar of the Roman Empire, already wanted to align the Egyptian calendar correspondingly (i.e. to block it at 46 a.C.). In 48 B.C., in fact, Caesar besieged Alexandria, ousted King Ptolemy XIV and put Cleopatra, the king's sister, on the throne. He then married Cleopatra and had a son by her, Caesarion (Ptolemy XV). At the very beginning of 46 B.C., Caesar brought Caesarion, Cleopatra and her brother to Rome and accommodated them in his villa on the Janiculum Hill. They were still there when, on 15th March 44 B.C., Caesar was assassinated by a conspiracy of Republicans. Thus Ptolemaic Egypt, previously an important ally, was *de facto* united with the Roman Empire from 48 B.C. to 44 B.C.

Starting yet again from 138-39 A.D. (when in the Egyptian *vagus* calendar the Summer solstice, 21st June, fell on 19-20th July) and then go back to 46 B.C., 184 years pass ($138+46=184$) with a shift of 46 days ($184:4=46$). If we do not add but detract 46 days, starting on 19th July, we find that in that year the summer solstice (1st Thoth-21st June) falls on 3rd June. If we go from 21st June to 21st April, we go back two months (about 60 days). Starting from 3rd June, we arrive exactly on 4th April which in the Egyptian calendar is 9th *Pharmouti*.

Thus in the Egyptian calendar of Caesar (46 B.C.), 9th *Pharmouti* corresponds to the Roman 21st April, while in the Egyptian calendar of Augustus (22 B.C.), 9 *Pharmouti* corresponds to the Roman 4th April.

6. Romulus' date of birth: 24th June 771 B.C.

If, as Solinus writes, «Romulus laid the foundations of the walls at the age of eighteen» and, according to Plutarch, «was conceived in his mother's womb in the 1st year of the 2nd Olympics », i.e. in 772-71 B.C., then the year of the foundation given by Tarutius and reported by Varro is indeed 753 B.C. ($771-18=753$).

The account of the myth of the birth of Romulus and Remus and the foundation of Rome has come down to us through both historical (Pictor, Livy, Plutarch, etc.) and poetic (Virgil, Ovid, etc.) works. Furthermore, in *Parallel Lives*, Plutarch writes:

«The most likely story, based on a great deal of evidence, is the one first published by Diocles of Peparetus [3rd cent. B.C.] among the Greeks and also reported largely by

Fabius Pictor [c. 260-190 B.C.]. There are certainly many variants of the story, but the general plot is as follows: the descendants of Aeneas ruled in Alba as kings until the succession passed to Numitore and Amulius, two brothers. Dividing the inheritance into two parts, the treasure brought from Troy and the kingdom; Numitore, the elder, took the kingdom and Amulius the treasure. The latter, however, having become more powerful than his brother thanks to the treasure, soon ousted him [and had his male offspring eliminated]. Then, fearing that Numitore's daughter might have children [who would claim the throne], he forced her to become a priestess of Vesta, i.e. to live unmarried and a virgin all her life. Her name is said to have been Ilia or Rhea or Silvia. Sometime later, it was discovered that, contrary to Vestal law, she was pregnant. She was not killed, as was the norm, because Antioch the king's daughter intervened on her behalf; she was, however, kept in isolation so that Amulius would know the outcome of the birth. When she gave birth, she had two children, more than human in size and beauty. Amulius then out of fear ordered a servant to fetch them and take them away. The name of this servant was Faustulus, according to some (...). The servant obeyed, put the children in a basket and went to the river to throw them in. But when he saw that the river was very swollen and agitated, he was afraid to approach it and, placing the basket near the bank, he went away. The flood of the river took the basket and, floating it was carried to a small plain known today as *Kermalus*, but formerly *Germanus*, perhaps because the brothers are also called "Germans". Nearby was a wild fig tree called *Ruminale* from the name Romulus or, as is usually thought, from ruminant, because ruminant animals spend the midday there to enjoy the shade or, even better, to suckle their young; the ancient Romans in fact called *ruma* the teat; and a goddess, who might have overlooked the wellbeing of the young children, and still today is called *Rumilia* (...). There lay the babies while the she-wolf of the story suckled them and a woodpecker helped her to feed them and watch over them. These creatures are held sacred to Mars (...). According to some, the name of the children's nurse, due to its ambiguity, turned the story into a fable. In fact, the Latins called "lupae" not only she-wolves but also women of lynx-like conduct» (I:3-4).

This narrative, in its general parts, is believed by many ancient historians:

«For modern historians, however, this tale would be nothing but a fable. Rome would not have been founded by a king, such as Romulus, nor would it have been founded on a precise day, 21st April 753 B.C., but would have been gradually formed over a much longer period of time» (Carandini 2013, 9). The third hypothesis is that in fairy tales, legends and myths in traditional wisdom, symbolic and real elements are intertwined: «We must therefore reflect on the testimonies of the ancients, on legends, on myths, and perhaps give them more credit in thinking that they report real data, even if enriched with fantastic components» (Carandini 2013, 12).

It is necessary to understand how myths were structured. By better understanding the structure and purpose of myths, rituals and symbols, one realises that, above all, the choice of dates of conception and foundation, in such eras and cultures (but not only) were made by the priestly class with the use of horoscopes. Therefore, when verifying or trying to recalculate such dates, it is necessary to bear in mind traditional wisdom, its astrology and its symbols, and to identify those considered most important in the specific culture and era in question. And it is necessary to do research in an extended interdisciplinary manner that combines the resources of history, archaeology, astronomy, anthropology (cultural, religious and symbolic), etc.

In any case, contrary to Plutarch's claims, popular tradition celebrates Romulus' birthday on 24th March (spring equinox) in 771 B.C., thus concluding his conception occurred in the summer solstice of 772 B.C.

To be precise, Plutarch in the *Parallel Lives* claims that, according to Varro, Romulus was «conceived in the womb in the 1st year of the 2nd Olympics [772-71 B.C.], in the Egyptian month of Koiak on the 23rd day, in the third hour [08:00-09:00], when there was a total eclipse of the Sun, and the birth followed in the month of Thout on the 21st day, at sunrise» (I:12.3-6).

The point is that, yet again, 23rd Koiak and 21st Thout correspond to 19th December and 18th September, respectively, from the calendar of Augustus (22 B.C.). We could therefore be faced with a similar case of *miscalculation* and (*double coincidence error*) with respect to the Egyptian calendar. In fact, in the Egyptian calendar from 22 B.C. onwards, 23rd Koiak and 21st Thout correspond to a winter solstice (precisely 19th December) and an autumn equinox (precisely 18th September), which commemorate the conception and birth of Augustus who, as the first emperor, is considered the new Romulus (first king).

But, if as always we start from the year 138-39 A.D. (when the 1st Thoth-21st June falls on 19-20th July) and go back again to 46 B.C. (when Caesar introduces the Julian calendar and Varro finishes *Antiquitates*), the 1st Thoth (summer solstice) – as we have calculated – falls on 3rd June. Plutarch states that, according to Varro, Romulus was born on 21st Thoth: this means that Varro indicates 24th June (3+21=24), the summer solstice. In this case, Romulus would have been conceived nine months earlier, in the Autumn equinox of the previous year. Plutarch argues that, again according to Varro, Romulus was born on 21st Thout: if in 46 B.C. the summer solstice (21st June) is on 3rd June, the autumnal equinox is roughly on 5th September (92 days later), since the autumnal equinox is around 23rd September. Therefore, in the Egyptian calendar of 46 B.C., it should correspond precisely to the 23rd Koiak (as could already be surmised from the solstitial-equinoctial relationship that these two days also appear in the Egyptian calendar reformed by Augustus in 22 B.C.).

Varro's dates, taken from Tarutius' horoscope, thus appear to be correct if read according to Caesar's Egyptian calendar (46 B.C.) and incorrect and distorted if

read according to Augustus' Egyptian calendar (46 B.C.). Ultimately, according to Varro's indications reported by Plutarch – and calculated with respect for the Egyptian calendar of 46 B.C. – Romulus would have been conceived on 23rd September 772 B.C. and born on 24th June 771 B.C.

The miscalculation of these two dates – unlike the miscalculation of the 9 *Pharmuti* – was not detected (or was detected but the incorrect dates were not changed) for at least two reasons: the coincidence with dates that were in any case equinoctial and solstitial (typical of the most important hierogamic rites in initiatic traditions); the coincidence of these dates with roughly those of Augustus' conception and birth.

7. The *great trigon* at the conception of Romulus

Plutarch's description of Tarutius' horoscope suggests that Romulus and his twin Remus had a "*hierogamic* conception, that is a sacred and ritual conception (often between priests and virgins), with a preferably solstitial or equinoctial date chosen by horoscope, as is typical of the initiatory tradition and, as such, common to all the major religions of history" (cf. Brescia 2024). Solstices and equinoxes were considered major alchemical gateways: passages of spiritual energies from heaven to earth, used for rituals. The similarities stemming from the common hierogamic tradition are evident: Romulus is the son of the god Mars and the vestal virgin Rea Silvia, Augustus (new Romulus) is the son of the god Apollo and the virgin Aitia ... Jesus (new David) is the son of God and the virgin Mary.

In fact, Suetonius, Plutarch's contemporary, in the *Lives of the Caesars* (121 A.D.) – again using the mythological and astrological language of traditional wisdom – describes Augustus as a kind of "reincarnation" of Romulus ... with elements that are also somewhat reminiscent of the lives of Moses or Christ:

«Some even wanted, as he was also the founder of the city, to be called Romulus, but in the end the nickname Augustus prevailed (...). During his first consulship, while he was taking the auspices, twelve vultures showed themselves to him, as they had done to Romulus, and while he was offering sacrifices, the livers of the victims appeared folded inwardly, down to the last fibre; all the interpreters unanimously saw in them omens of greatness and prosperity (...). A few months before his birth, a prodigy occurred in Rome, in a public place, by which it was announced that nature was about to produce a king for the Roman people; the Senate, frightened, decreed that no child born in that year should be brought up; the senators, however, who had pregnant wives and who hoped that the prediction referred to them, took steps to ensure that the Senate decree was not deposited with the Treasury. In the *Divine Adventures of Asclepias of Mende*, I read this tale: Atia, having gone at midnight to a solemn

ceremony in honour of Apollo, had her litter placed in the temple and, while the other women were returning home, she was asleep; all of a sudden a snake slithered up to her and immediately left; when she woke up Atia purified herself as if from the arms of her husband. And from that moment on she bore a stain in the form of a snake on her body that she could no longer remove, so that she had to give up public bathing forever. Augustus was born nine months later and was therefore regarded as the son of Apollo (...). They say that it was this prodigy that induced Caesar to want no other successor than this (his sister's) nephew. During his retreat to Apollonia Augustus had gone up, together with Agrippa, to the observatory of the astrologer Theogenes. Agrippa consulted him first, but when Augustus saw that Theogenes was making splendid, almost unbelievable predictions, he stubbornly refused to provide him with the data concerning his birth, out of fear and shame that he would find less shining origins there. When at last, after much prayer, though hesitatingly he consented, Theogenes rose from his seat and worshipped him. Afterwards Augustus was so confident in his destiny that he had his horoscope published and a silver coin minted with the sign of Capricorn, under which he was born» (II:8,95-94) or rather he was conceived.

Indeed, “Augustus was born on 23rd September 63 B.C., in the autumnal equinox under the sign of Libra, and was conceived on 20th December 64 B.C., in the winter solstice, under the sign of Capricorn, which became his symbol” (Brescia 2012, 235-241).

Asclepiades of Mende – to whom Suetonius, his contemporary, attributes the narrative about Augustus – is a scholar of the «Egyptian books» and the «harmony of all theologies», as recounted in the *Suda* (a 10th century Byzantine encyclopedia). The hierogamic rite predetermines dates of conception under astrological signs (planetary *syzygies*) that are considered sacred. Ritual conceptions and births, on equinoctial and solstitial dates, are typical of the initiatory tradition. Part of this tradition is the wisdom and astronomy of the Magi, which, in Greek philosophy, gives rise to the Pythagorean-Platonic strand.

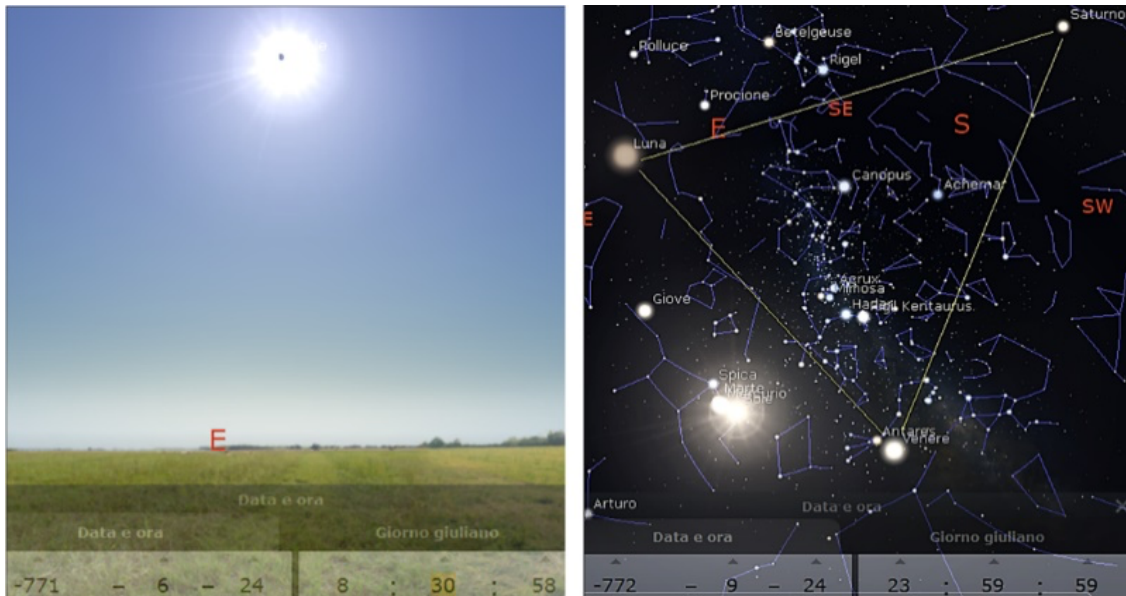
A landmark text in the Pythagorean-Platonic strand – much earlier than Ptolemy's *Almagest* (150 A.D.) – is the work *Phenomena and Prognosis* (273 B.C.) by the Greek poet Aratus of Soli, which in turn is the result of the versification of *Phenomena* (370 B.C.) by the mathematician and astronomer Eudoxus of Knidos, a disciple of the Pythagorean Archita of Tarentum and of Plato. «From the 1st century B.C. to the 4th century A.D. – from Varro Atacinus to Cicero, from Germanicus [born Tiberius, nephew of Nero] to Manilius and Festus Avienus – Roman culture also engaged in translations of the work, with varying degrees of success, while illustrious poets such as Virgil (*Buc.* III:60, *Georg.* I) and Ovid (*Fas.* III:105-110) drew on the arathean text, as is shown by clear echoes of it. Even the apostle Paul, in

the *Areopagitic* discourse (Act. 17, 28-29) quoted v. 5 of the introduction, without specifying the name of the poet» (Biondi 2004, 41-42).

According to Varro's indications reported by Plutarch – but calculated according to Caesar's Egyptian calendar (46 B.C.) – Romulus was conceived on about 23rd September 772 B.C. and born on 24th June 771 B.C. If, according to Solinus, «Romulus laid the foundations of the walls at the age of eighteen», then he did so in 753 B.C. (771-18=753). That is, he turned 18 on 24th June and founded Rome on 15th October.

Plutarch states that, according to Tarutius, Romulus was conceived «in the third hour [08:00-09:00], when there was a total eclipse of the Sun». Astronomical verifications seem to tell us that in 772 B.C. and the years close to it (from 775 to 769), in the days around 23rd September or 19th December – the dates calculated by Plutarch according to the Egyptian calendar of Augustus (22 B.C.) – there were no eclipses visible from Rome, not even partial ones. Even if we take into account the 14-15 day gap between the Pre-Julian and Julian calendars, there do not seem to have been any eclipses.

Instead, astronomical verifications (by means of software *Stellarium* and <https://eclipse.gsfc.nasa.gov/5MCSEmap/-0799--0700/-771-06-24.gif>) detect a partial eclipse of the Sun visible from Rome in the third hour [08:00-09:00] exactly of the 24th June 771 B.C. (fig. 1a), i.e. on the day of his birth.



According to popular tradition, Romulus' birthday is celebrated on 24th March (perhaps also because it is the month dedicated to Mars). Consequently, his

conception is traced back to the summer solstice. So that same eclipse on 24th June may have been mistakenly linked to his conception.

“Astrology, finally, like every discipline in the sapiential and magical strand, has always had both exoteric and esoteric knowledge and signs (such as trigons, great trigons, stars and crosses) connected to ritual foundations and conceptions” (cf. Brescia 2024). “At the conception of Augustus (at midnight in the winter solstice in 64 B.C.) we find a *great trigon* of remarkable precision, that is, three planets placed about 120° apart in the circle of the zodiac” (cf. Brescia 2012, 235-40). At midnight on 24th September 772 B.C. (and we have seen that Romulus may have been conceived around 23th September 772 B.C.) we find a quadruple conjunction in Virgo (fig. 1b) and a *great trigon* of remarkable precision between Saturn in Pisces, Moon in Cancer and Venus in Scorpio (fig. 1b).

8. A possible discrepancy between the Pre-Julian and Julian calendars

Before Varro – according to Dionysius of Halicarnassus – it was almost universally agreed that the republican consuls took office in 508-07 B.C. and that Rome was therefore founded between 752-51 B.C. The double year depends on the Greek dating via the Olympics, which ran from one summer solstice to the next. It must also be taken into account that the chronology of the Olympics proposed by the Greek geographer and historian Diodorus Siculus (90-27 B.C.) in his work *Historical Library* had some relevance at the time. The work, also praised by Pliny the Elder (23-79 A.D.), postpones the start of the Olympics by four years (772 B.C. instead of 776 B.C.)” (cf. Brescia 2017, 58-72).

Moreover, the gap year between the astronomical calendar (which includes the year zero) and the civil calendar must be taken into account for verification purposes: for example, the astronomical 753 B.C. corresponds to the civil 754 B.C. It therefore becomes necessary, with regard to the foundation of Rome, to investigate the years from 754 to 751 B.C. in relation to the events, including astronomical ones, indicated by the various authors. It is also necessary to investigate the foundation horoscope compiled by Tarutius, on which Varro’s dating is based, because – even in the possibly uncertain version handed down to us some four centuries later by Solinus (again in his work *Collectanea*) – it provides us with an entire astral picture (the position of all 7 heavenly bodies in ancient astrology).

Cicero, in *De Divinatione* (44 B.C.), argues that almost all philosophers approved of divination, somewhat less so of astrology, that Romulus and Remus themselves were astrologers, but that he is a sceptic and considers them enemies of reason and religion (a position to which he owes his fortune since the advent of Catholicism, which opposes the magical tradition). As regards astrology, Cicero

writes: «Even the birth of a city depends on the influence of the stars and the Moon? Let us admit that, as far as an infant is concerned, the condition of the heavens when it inhaled its first breath is of some importance. But how can the same be affirmed of the bricks or stones with which Rome was built? Then what is the use of going on about it?» (II:47).

In *De Repubblica* (54-51 B.C.), Cicero had written: «C. Sulpicius Gallus, as you well know, was one of the most learned men (...). While he was at the house of M. Marcellus, who had been consul with him, he ordered the orb that Marcellus' grandfather had brought home after the taking of Syracuse (...) to be taken away. Gallus said that the other sphere, solid and full, was an earlier invention of Archimedes and that Thales of Miletus had given to Eudoxus of Knidos, a disciple, it is said, of Plato, a model decorated with representations of the constellations. And all the illustrative decoration, described by Eudoxus, had many years later been turned into verse by Aratus, who had more poetic flair than astronomical culture. In addition, the synthetic rotation of the motion of the Sun, Moon and the five wandering or errant stars (...) was the praiseworthy element of Archimedes' invention: he had found how to reproduce, in a single rotation, the unparalleled motions of the stars and their path» (I:14).

In that same work, regarding the study of eclipses, Cicero adds: «Thales of Miletus is said to have seen it first. This did not escape even our Ennius, who also writes that in the year 350 of the foundation of Rome, on the *none* of June [5th June], the Sun was opposed by the Moon and the night. And in this survey so much is the reason and diligence that, ever since, not only in Ennius but in all the greatest annals, we see them recorded and have been able to calculate even the previous solar eclipses, until the one that took place on July 9th during the reign of Romulus: during such a darkness it is said that Romulus himself was elevated to heaven by virtue, although he was taken from the living by natural causes» (I:16).

If Cicero already considers the Varronian year 753 B.C., then 350 years after the foundation of Rome he means 403 B.C. If instead he still considers 751 B.C., then he means 401 B.C. Astronomical verifications (by means of software *Stellarium* and <https://eclipse.gsfc.nasa.gov/5MCSEmap/-0499--0400/-401-01-18.gif>) indicate that there was a total solar eclipse on 18th January 401 B.C., visible from Rome at 08:21 am (fig. 2a).

The name January comes from “month of Ianus” (the god *Janus*) and *Iunius* is the month of June: could there have been a transcription error here (5th of the month of *Iunius* instead of 5th of the month of *Ianus*)? This could lead us to speculate that at the time (and we will find further possible correspondences) there was a deviation of the sky forward from the calendar, of about 14-15 days (5th to 18th January).

The reign of Romulus ran from 753 to 715 B.C. Cicero reports two eclipses: one occurred on «ninth July in the reign of Romulus», the other in 715 B.C. on the death of Romulus. At the beginning of Romulus' reign, we detect a small eclipse

visible from Rome on 16th July 754 B.C. (fig. 2b) at 06:15 am (perhaps, being at the beginning of the reign and its calendar, the calendar offset was minor). In 715 B.C., the year of Romulus' death, we have a small eclipse on 6th June at 07:15 am (fig. 2c).



Suetonius in the *Lives of the Caesars* (121 A.D.) tells us that when, in 46 B.C., Julius Caesar «reformed the calendar (...), he adapted the year to the course of the Sun, structuring it in 365 days, removing the intercalary month and adding one

day every four years. Moreover (...) the year in which he made this reform lasted fifteen months, including the intercalary month, which according to ancient tradition is in that year» (I:40). And also the change from the Julian to the Gregorian calendar (1582) was introduced by Pope Gregory XIII to correct the errors later accumulated by Julius Caesar's calendar (already much more precise than those of Romulus and Numa). Gregorian calendar made it necessary to eliminate 10 days in the month of October (in 1582, 4th October was followed by 15th October), confirming to some extent a forward shift in the Julian calendar.

Livy, in his work *Ab Urbe condita* (29-7 B.C.), re-proposes Varro's version and claims, following traditional beliefs, that Romulus (together with his twin brother Remus) was the son of Rea Silvia (vestal virgin and daughter of Numitore, the rightful king of Alba Longa) "who was forced to conceive and attributes the paternity of the twins to Mars" (cf. I:4).

Censorinus (3rd cent.), in *De natali dei*, writes that there are three ages: the mythological age of the beginning of the world, the age of the great catastrophes of the Earth, and the age «from the 1st Olympics down to us, called history, because the things narrated are true stories (...). Concerning this third age there was indeed some disagreement among the authors, which lasted only six or seven years. But Varro discussed all this with his uncommon wisdom, now recounting the times of the different city-states, now recounting backwards their end and duration, and he gathered the truth and showed the light, so that now it is possible to discern not only the certain number of years but also of days. According to his narrative, this year, titled under the consulship of V.C. Pius and Pontian, is the 1014th year since the first Olympics (...) and the 991st year since the foundation of Rome, that is, since the Palilias, from which the years of the city are counted» (XXI:1-6).

By the time of Censorino, therefore, Varro's dates had become 'classic': 776 B.C. for the 1st Olympic and 753 B.C. for the foundation of Rome and 509 B.C. for the first consuls. In fact, Censorino confirms the canonical dating of the consuls mentioned above, which is 238 A.D. ($1014-776=238$ and $991-753=238$). 238-239 A.D. is the same year for which he miscalculates the 1st *Thot* of the Egyptian calendar.

9. The year 751 B.C. and Plutarch's alternative hypothesis

Regarding the year of Rome's foundation, «Some ancient authors indicate 753, others 751, still others 728» (Carandini 2013, 11). Valleius Paterculus (19 B.C.-30 A.D.), in the work *Historiae Romanae* (published posthumously), had written that «at the time of the 6th Olympics, which took place 22 years after the first, Romulus, son of Mars, in order to avenge the shame of his grandfather, founded the city of Rome on the

Palatine, during the Palilie. From that time to you consuls 981 [error: means 781] years have passed; this was 437 years after the fall of Troy» (I:8).

If Paterculus calculates the Olympics from 776 B.C. (a date that has become traditional), by 22 years later he means 754-753 B.C.; if, on the other hand, he calculates them according to Diodorus Siculus' dating (i.e. from 772 B.C.) he means 751-750 B.C. The consuls he refers to are those to whom he dedicated the work (i.e. Vinicius and Longinus, consuls in 30 A.D.), so he is actually indicating the year 751 B.C. (781-30=751).

If Paterculus used the date that has become traditional, that is 1184 B.C., for the fall of Troy, he would even be indicating 747 (1184-437=747). Historically today, the fall of Troy is dated around 1250 B.C. or, more likely, between 1194 and precisely 1184 B.C. In the 20th book of the *Odyssey*, in the episode in which Odysseus kills the Proci, Homer writes: «the Sun has disappeared from the sky, evil darkness has fallen!» (vv. 356-7). «Some researchers have traced the episode to the eclipse of 16th April 1178 B.C. Consequently, they date the fall of Troy to 1188 B.C. because, as Homer writes, after the fall of Troy Ulysses takes ten years to return to Ithaca and upon arriving there kills the Proci» (cf. Baikouzis-Magnasco 2008, 8823). If Paterculus were referring to the date of 1188 B.C., he would again be indicating 751 B.C. for the foundation of Rome (1188-437=751).

Before Varro, Marcus Porcius Cato (234-149 B.C.), known as *The Censor*, placed the foundation of Rome 432 years after the destruction of Troy. If we subtract 432 years from the traditional date of 1184 B.C., we get 752 B.C. (1184-432=752). This reference is taken up or quoted by many later authors, including Dionysius of Halicarnassus (60-7 B.C.) who, in his posthumous work *Roman Antiquities*, indicates the foundation of Rome when «Romulus took command in the 1st year of the 7th Olympics (...) and 244 years will pass until the end of the kings» (I:66) or «in the 432nd year after the taking of Troy, in the 7th Olympics» (II:3). Indeed, 752 B.C. corresponds to the 1st year of the 7th Olympics. Although, as mentioned, each Olympic year is between two Summers and thus between two years: so the 1st year of the 7th Olympics would be from the summer of 752 B.C. to the Summer of 751 B.C.

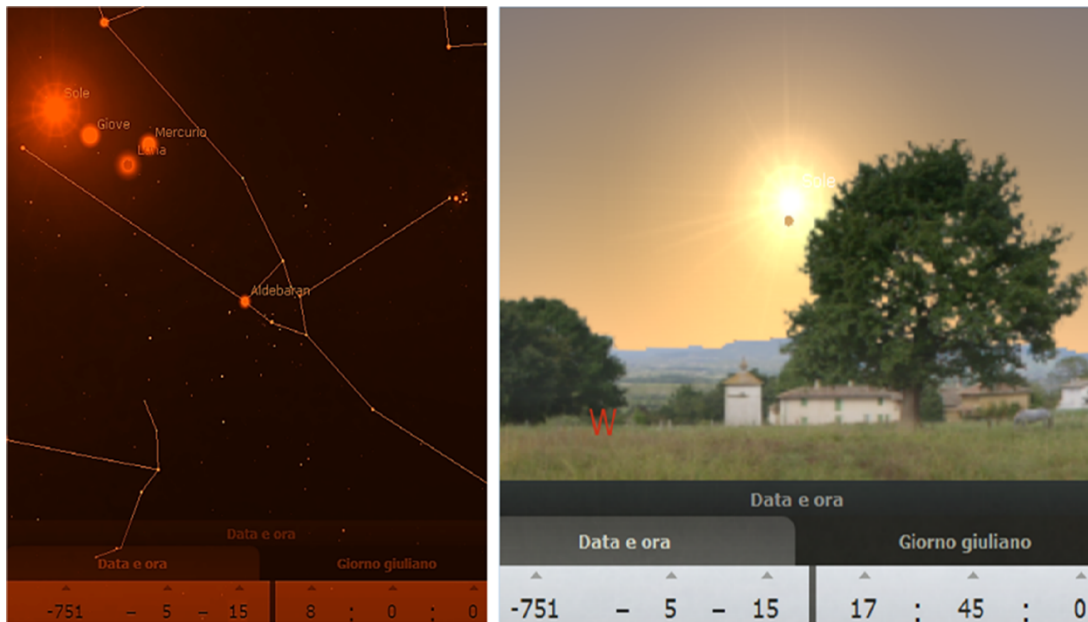
Tacitus (c. 55-120 A.D.), a contemporary of Plutarch, writes in his *Annals* (117-120 A.D.): «In that same year [58 A.D.], the fig tree Ruminale in the Comitium, which 830 years before [772 B.C.] had sheltered the newborn Romulus and Remus with its shade, is ill: some branches dried up and the trunk lost its sap. This was considered a bad omen, but then the tree recovered and new shoots sprouted» (13:58).

Flavius Eutropius, in the *Breviarium ab Urbe condita* (369 A.D.), takes up Livy's work and, also collecting data from Plutarch, adds that Romulus «at the age of 18 founded a small city on the Palatine Hill on the 11th day before the calends in May. It was on 21st April, in the third year of the sixth Olympics, for those who make approximate calculations, the year 394 after the destruction of Troy» (I:1). But 1184 -

394 = 790 B.C. (so Eutropius must have considered another date for the fall of Troy or made a mistake).

Also in *Parallel Lives*, Plutarch (47-127 A.D.) – who did not believe in astrology and therefore in Tarutius' horoscope and considered Varro's date to be an overlay on the Palilie – reports the hypothesis of a different date and a different sky configuration: «At present, indeed, there is no agreement between Roman and Greek months, it is said, however, that the day on which Romulus founded his city was precisely the 30th and that on that day there was a conjunction of the Sun and Moon with an eclipse, which is thought to be the one also seen by Antimachus, the epic poet of Theos, in the 3rd year of the 6th Olympics» (I:12,1-2).

The 3rd year of the 6th Olympics is 755-54 B.C., but in Diodorus Siculus' dating it is 752-51 B.C., which is also the foundation year proposed by Dionysius of Halicarnassus and almost universally agreed upon before Varro. On 30th April, the goddess Flora was celebrated in Rome, with games at the Circus Maximus. Astronomical verifications (by means of software *Stellarium* and <https://eclipse.gsfc.nasa.gov/5MCSEmap/-0799--0700/-751-05-15.gif>) tell us that if, once again, we move forward 15 days, i.e. from 30th April to 15th May, we find a quadruple conjunction of the Sun and Moon together with Jupiter and Mercury in Taurus and an occultation of Jupiter by the Moon (fig. 3a). Furthermore, the Moon causes a total eclipse of the Sun over Central America and South Africa, which in the Middle East and the Mediterranean appears partial (as Plutarch writes). It is visible from Rome in the afternoon until 6.30 p.m. before sunset (fig. 3b).



If this were the case, we would again be faced with a deviation of the sky, relative to the calendar, of about 14-15 days.

10. *October Equus* and Palilie: the ritual foundation of Rome

The Palilie are the popular Roman festivity of «Pales, goddess of shepherding, also called *diva Palatua* (...). In the city the festival coincided with Rome's birth, certainly in memory of the ancient organization of shepherds on the Palatine. But here too it had a purifying and propitiatory character for vegetation and livestock, as is shown by the ritual of throwing into the fire on the Palatine the ashes of the vituline foetus burnt in the Fordicidie [fertility festival celebrated on 15th April], the blood of the horse immolated to Mars on the Ides of October (*October Equus*) and broad beans. The surviving ashes were then scattered over the fields for fertility purposes. Of the things thrown on the fire, the ashes of the vituline foetus and the blood of the October horse had magical fertility value; and broad beans, as a legume sacred to the underground deities, had propitiatory significance for new germination sprouting from the earth. Vestal virgins participated in this rite, carrying the ashes of the vituline foetus mixed with the blood of the October horse they had collected and kept in store for this festival» (Turchi 1935).

As “father” of the founder of Rome and as God of war, Mars was celebrated with the *Equirria*, multiple festivals involving horse races (Mars was also the patron god of horses and horsemen: the warrior class). There were at least four main *Equirria* festivals and they coincided with the two most important phases of the year, those related to the military but also agricultural season: two in March (at the beginning of spring and thus the beginning of military campaigns) and two in October (at the beginning of winter and thus the end of military campaigns). These four festivals were as follows: *Mamuralia* (15th March), *Tubilustrium* (23th March) and then *October Equus* (15th October) and *Armilustrium* (19th October).

In the *Mamuralia* they celebrated Mamurius, the mythical craftsman who would forge the *ancilia*: the 12 sacred shields, hung inside the Temple of Mars and carried in procession during the parade. In the *Tubilustrium* a purification rite of the trumpets used in war was performed and the beginning of the military campaign season was inaugurated. In the *October Equus*, an animal sacrifice in honour of Mars was celebrated as closing rite of the military activities. In the *Armilustrium*, a rite of purification and laying down of weapons was performed.

We know that the Palilias were celebrated on the Palatine Hill and that, according to myth: the Palatine is the hill on which Romulus founded the first nucleus of the city; Mars is the god father of Romulus (and Remus); the most important sacrifice to honour Mars took place during the October Ides (15th October) that is the *October Equus*.

Even today, many religious festivities have a priestly celebration date and a popular one, which is usually set on spring or Summer dates, because they are more suitable for celebrating outdoors and thus involving the entire populace. We could therefore assume that the ceremony for Rome's ritual foundation took place on 15th October in *October Equus*, whose popular festival was 21st April, the Palilie, the day on which the blood of the horse immolated to Mars in *October Equus* was burnt on the Palatine Hill.

11. The foundation date and Tarutius' horoscope: 15th October 753 B.C.

From what Plutarch (47-127 A.D.) writes, we deduce that: in his time the date of April 21st for Rome's foundation had long been accepted; conjunctions and eclipses had always been the most visible and therefore exoteric (popular) astronomical phenomena, as the alternative hypothesis he reported himself regarding Rome's foundation (April 30th during an eclipse); there seem to be no comments or specific details regarding Tarutius' horoscope (Cicero, a contemporary and friend of Varro and Tarutius, only reports that the «Moon was in Libra»).

Tarutius' original horoscope and Varro's work *Antiquitates* have been lost to this day. Authors such as Cicero, Plutarch, Solinus, Eutropius and others who quoted them, are not mathematicians and astrologers and, in their narratives, often report discordant or inaccurate data. And it is strange that only Solinus – who lived well over three centuries after Tarutius – reports a possible complete version of Tarutius' horoscope ... despite the fact that Varro starts from that very one to calculate the date of Rome's foundation that has become accepted and traditional. This may lead us to hypothesise different reasons (such as the *damnatio memoriae* of astrology in official Catholic culture) and the loss of knowledge and the inaccuracies in information sharing (in the attempt of reconstruction made by Solino too).

The Roman writer and geographer Gaius Julius Solinus, in his work *Collectanea rerum memorabilium* (3rd century A.D.), reports a complete version of Rome's horoscope performed by Tarutius (?-86 B.C.). That is, he indicates the position of all 7 celestial bodies of ancient astronomy and astrology (the *Sacred Septuagint*):

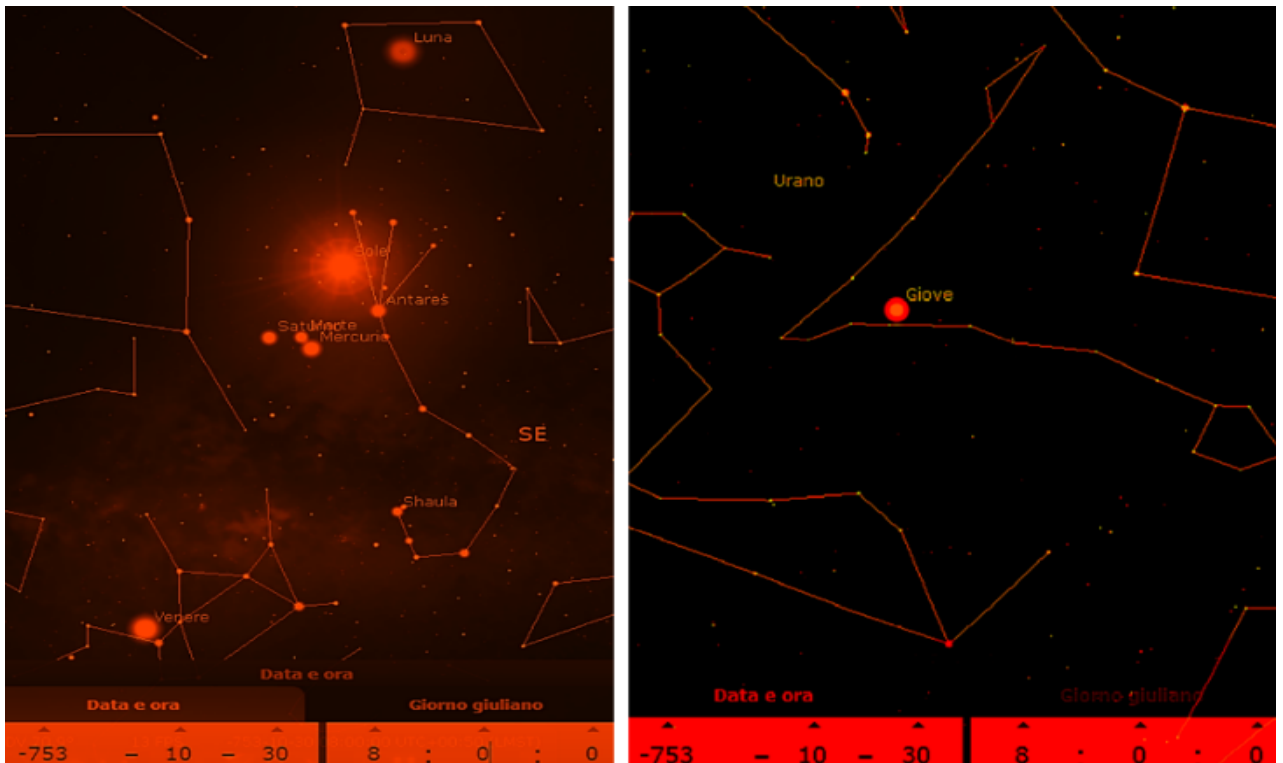
«As Varro, a very scrupulous author, states, Rome was founded by Romulus, born of Mars and Rhea Silvia or, as some say, Mars and Ilia. Previously, Rome was said to be square, because it would be balanced (...). Romulus laid the foundations of the walls at the age of eighteen, eleven days from the calends of May [21st April], one hour after the second, before the third full hour [08:45], as expounded by Lucius Tarutius, the noblest of mathematicians, with Jupiter in Pisces, Saturn, Venus, Mars and Mercury in Scorpio, Sun in Taurus and Moon in Libra» (I:17-18).

Tarutius, therefore – according to Solinus – gives us the time, the position of all seven celestial bodies and indicates, as the main sign considered propitious for the foundation rite of Rome, a quadruple conjunction in Scorpio and the Moon in Libra (already mentioned by Cicero).

The horoscope that comes closest to this reported by Solinus seems to be that of the 30th October in 753 B.C. (astronomical year). At the hour indicated by Solino, we find in fact: Jupiter in Pisces, Saturn, Mars, Mercury and Sun in Scorpio, Moon in Libra and Venus in Sagittarius (fig. 4).

The time seems to be right and also Jupiter was in Pisces, the quadruple conjunction in Scorpio (including three planets out of the four indicated by Solino) and the Moon in Libra. This could be yet another clue to show that there was a gap of about 14-15 days forward between the Pre-Julian and Julian calendars at the time.

If so, it would have taken place on the Palatine Hill on 15th October 753 B.C. (corresponding to 30th October in the Julian calendar) during the *October Equus* and would be celebrated popularly during the Palilie, on 21st April.



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