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Phrygian inventions by Pliny the Elder

Аннотация. В статье рассматриваются все изобретения, приписываемые Плинием Старшим фригийцам (обработка меди, повозка с четырьмя колесами, запряжка колесницы парой лошадей, поперечная и двойная флейты, фригийский музыкальный лад и вышивание иглой), и прослеживаются возможные источники соответствующих сообщений, а также анализируются причины, по котором именно эти открытия классическая традиция приписала фригийцам. Сюжеты, связанные с фригийцами в античной литературе, автор статьи условно делит на три большие группы: «мифологическую», «сакральную» и «реалистическую», демонстрируя, что скудные и разрозненные свидетельства об изобретателях-фригийцах в каталоге достижений человеческой культуры у Плиния Старшего лишь кажутся случайными, но на самом деле представляют собой закономерный синтез разнородной литературной традиции об этом народе, так или иначе отражающий все ее аспекты.

Ключевые слова: Плиний Старший, «Естественная история», фригийцы, Фригия, изобретения, πρῶτοι εὑρεταί, классическая литературная традиция, Идейские Дактили, литературный топос

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Phrygian inventions by Pliny the Elder

Abstract. The paper reviews all the inventions Pliny the Elder attributes to the Phrygians (copper working, four-wheeled vehicle, harnessing pairs of horses, transverse flute, double oboe, Phrygian musical mode, and embroidering with a needle) and tries to identify possible sources of these reports and the reasons why these particular discoveries were deemed "Phrygian" in the classical tradition. The analysis is focused on the literary tradition out of which Pliny made a compilation, and not on what we would now call the "real" historical origins of the abovementioned inventions. Each discovery is placed within the context of this tradition, but without isolating it from the immediate context of Pliny's catalogue. The topics related to the Phrygian people within the frames of the ancient tradition can conventionally be divided into three groups: "mythological", "sacred" and "realistic", and the inventions or inventors Pliny mentions can, in fact, be subsumed under these three categories. Even though at first glance there seems to be no logical pattern to the "Phrygian discoveries" as listed by Pliny, this approach helps demonstrate that the scarce information on Phrygian inventors offered by Pliny the Elder only seems random, but in fact the Roman author gives a synthesis of all the aspects of the rich literary tradition about this people.

Keywords: Pliny the Elder, *Naturalis Historia*, Phrygians, Phrygia, inventions, *protoi heuretai,* heurematology, Idaean Dactyls, classical literary tradition, *topoi*

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The 7th Book of the *Natural History*, dedicated to the treatment of man "for whose benefit great nature seems to have created everything else"[1] (7.1), is completed by a small post scriptum, added "before we leave the subject of man's nature" (*NH* 7.191), — a list of inventors and inventions. In this paper I shall list all the inventions Pliny attributes to the Phrygian people in general or to some characters traditionally identified as Phrygian, and shall try to find the reasons why these particular objects or skills were thought to originate in Phrygia. Within the context of this research it is important to remember that Pliny's text is based on literary tradition, which he analysed and made a compilation of, and not on research into what we would now call the "real" historical origins of things (cf. [Thraede 1962: 1192]).

The main sources of Pliny's catalogue of cultural achievements are: Euphorus's *On Discoveries* (4th c. BC) and Strabo's polemic answer to this work; and also a treaties of the same name by Philosthephanus of Cyrena (3rd c. BC). None of these works is known to us directly. Pliny also refers to Aristotle and Theophrastus, while of Roman authors he cites Cn. Gellius (2nd c. BC) and Varro. Obviously, this list does not exhaust all the works on discoveries and inventions written by the ancients: interest in the genesis of cultural achievements was strong among the sophists, the peripatetics, the stoics, and other Hellenistic scholars. Among Roman works we may point to Ennius and Lucretius, and, later, Seneca and the *Fabulae* attributed to Hyginus. Interest in this topic was not uncommon among Christian authors as well[2].

Pliny's catalogue is dominated by Greek inventors; many discoveries are attributed to other peoples, all of which, however, are commonly referenced by Greek literary tradition. In this context the total absence of Roman inventors is quite noticeable — Pliny mentions only those Romans who used some of the listed inventions on Roman soil for the first time, which further confirms the predominance of Greek sources for the text. The list of inventions is also euhemeric in nature, i. e., Pliny tries to avoid ascribing inventions and cultural achievements to deities as the tradition often does, and instead depicts the inventors as people who were later deified for their deeds. For instance, when Pliny says that Ceres was the first to teach people how to grow crops, he is quick to specify that it is actually because of this deed that she is regarded as a goddess (*NH* 7.191).

At first glance the list seems to be rather random: there is no obvious logic in the order in which the inventions are mentioned[3]: for example, first Pliny talks about trade, then about agriculture and laws, than about writing, etc. Moreover, issues of trade and writing are revisited later. The authorship of an invention can be ascribed to entire peoples as well as to specific individuals. In many cases, Pliny cites several contradictory sources that attribute one invention to different persons. It is not always easy to understand why a specific discovery is attributed to a specific inventor, but sometimes the attribution is quite obvious: it has either aetiological (e. g., Arachne invented thread and nets; *NH* 7.196) or mythological (e. g. Bellerophon was first to ride a horse; 7.202) reasons; etymology and aptronomy can also play a role (e. g. a man named *Pyrodes* invented striking fire from flint; 7.198), and so do

[1] All translations of Book 7 of *NH* are taken from Mary Beagon's edition [Beagon 2005].

[2] For more on this subject — namely, the Greeks' and Romans' interest towards genealogies and inventions — in connection to Pliny's work see [Beagon 2005: 417–420]; on the connected topic of *mirabilia* and paradoxography see [Ibid.: 17–20]. More generally see [Thraede 1962].

[3] On possible pattern here see [Mistretta 2017].

well known real-life facts (e. g. mining of silver is associated with Athens; 7.197) [Beagon 2005: 419].

However, if one looks more closely at the structure of smaller parts of this list, i. e., passages devoted to similar discoveries, one is sure to note that they all are constructed on the same principle: from simple (i. e., from the first discovery of something) to complex (i. e., to the various modifications of the invention); for instance, from creating writing *per se* to the invention of the Greek alphabet and gradual adding to it of non-Punic letters (*NH* 7.192); or from the first boat to bireme, trireme, and so on (7.206). In order then to understand why Pliny ascribes an invention to an inventor one should not only mind the previous tradition but also the *NH*'s context, as it reflects the author's intention.

To begin with, let us review all the discoveries attributed to the Phrygians (or to specifically Phrygian characters) by Pliny. They are: copper working, the four-wheeled vehicle, harnessing pairs of horses, some musical instruments, and, of course, the Phrygian musical mode. Pliny's work contains one more reference to Phrygian inventions: in Book 8 he mentions that they invented embroidering with a needle.

The first subject on the list — the discovery of copper — is part of a passage telling the story of how humans learned to use metals. Metal-working has always been associated with magic[4], so it is not surprising to see a whole list of mythical creatures here — although Pliny definitely rationalizes the tradition:

> *Aes conflare et temperare Aristoteles Lydum Scythen monstrasse, Theophrastus Delam Phrygem putant, aeraria fabricam alii Chalybas, alii Cyclopas, ferrum Hesiodus in Creta eos qui vocati sunt Dactyli Idaei. Argentum invenit Erichthonius Atheniensis, ut alii, Aeacus; auri metalla et flaturam Cadmus Phoenix ad Pangaeum montem, ut alii, Thoas aut Aeacus in Panchaia aut Sol Oceani filius, cui Gellius medicinae quoque inventionem ex metallis assignat. Plumbum ex Cassiteride insula primus adportavit Midacritus. Fabricam ferrariam invenerunt Cyclopes, figlinas Coroebus Atheniensis…* (Aristotle thinks that the melting and working of copper was first demonstrated by Scythes the Lydian, while Theophrastus attributes it to the Phrygian Delas. Some authorities attribute the working of bronze to the Chalybes, others to the Cyclopes. According to Hesiod, iron was discovered by the people called the Idaean Dactyli in Crete. Erichthonius of Athens or, according to others, Aeacus discovered silver. Mining and melting gold was discovered by Cadmus the Phoenician or Aeacus in Panchaia, or, again, by Sol son of Oceanus to whom Gellius also attributes the discovery of the medicinal use of metals. Tin was first imported from the island of Cassiterris by Midacritus. Iron-working was invented by the Cyclopes, pottery by Coroebus of Athens… — *NH* 7.197–198).

So, a Phrygian named Delas is one of the candidates for the title of inventor of copper-working, while his competitor is a representative of a very close (both

[4] See e. g. [Delcourt 1959; Beagon 2005: 431].

geographically and culturally) people — a Lydian named Scythes[5]. The author of the translation and commentary to Pliny's Book 7, Mary Beagon (*ad loc.*), claims that both these characters are otherwise unknown, but, as we shall see, this is not entirely true.

The Idaean Dactyls, mentioned in the passage, are of particular interest in the context of this research. They are credited for discovering iron on the island of Crete. As M. Beagon states in her commentary, the iron deposits on Crete are quite poor, but they are indeed plentiful in Anatolia, so here we could have the usual confusion between two mountains Ida — the one on Crete and the one in Western Asia Minor [Beagon 2005: 431][6]. The mountain is located in Troad or Mysia, but the borders between regions in this part of Asia Minor were notoriously vague, and the Anatolian Ida was predominantly associated with Phrygia due to the cult of the *Magna Mater Idaea*, widespread in the Graeco-Roman world in Hellenistic and Roman times and believed to have come from (or be connected with) Phrygia (cf. Strab. 10.3.22)[7].

The Idaean Dactyls are a distinct group of mythical creatures, akin to the Cabiri, the Corybanthes, the Telchines and the Curetes (see, e. g. Strab. 10.3.7, 22), described by the sources as sorcerers and smiths. There are usually three or five of them and they are servants of Adrasteia, Rhea or the Great Mother of the Gods[8]. Like the mountain Ida, the Idaean Dactyls are connected to both Crete and Phrygia[9], but the earliest literary source points to Phrygia as their homeland[10]. Although all the early sources are known to us indirectly, owing to the quotations by later authors, we do possess at least one direct ancient testimony of the connection between the Dactyls and Phrygia: a marble stele dating back to the 4th c. BC (*IG* XII.9 259) found in the temple of Apollo in Eretria. On the stele there is a poetic hymn honouring the Dactyls, the servants of Mother Oreia — the text is very fragmentary, but it does mention Phrygia in connection with the Dactyls. The famous "Parian Marble" (*IG* XII.5 444), a Hellenistic historical chronicle compiled at around 263 BC, also mentions the Idaean Dactyls and names them the discoverers of iron (l. 11.21b–22). The location here, however, is Crete.

[5] Another possibility here is that Lydus is the name while Scythes is the ethnicon (so [Lamer 1939]), as in all other corresponding cases in this context the personal name goes first and the *nomen gentis* follows. M. Beagon [2005: 430], however, calls this interpretation 'unlikely' due to the fact that it was Asia Minor, and not Scythia, that became an important center of metallurgy in early antiquity. On the other hand, as I have said before, Pliny was clearly dealing with literary tradition and not historical evidence as modern historians would conceive of it. Still, Clemens of Alexandria (*Strom*. I.16.75.5), as we will see below, seems to interpret Scythes as the proper name.

[6] On this confusion see also [Bürchner 1914; Delcourt 1959: 167; Roller 1999: 171–172].

[7] See [Jessen 1914; Roller 1999: 144 n. 5].

[8] Brothers Kelmis, Damnameneus and Akmon (*Phoronis*: F 2 Barnabé); Pausanias (5.7.6) names five Cretan Idaean Dactyls: Herakles, Paeonaeos, Epimedes, Iasios, and Idas (cf. 5.14.7; 8.31.3). The source material on the origins, names, number, and familial connections of the Dactyls is extremely diverse, which did not escape Strabo's attention, however, as he states, all agree on one thing: they were sorcerers and invented iron-working on the Mount Ida (10.3.22). All literary sources on the Dactyls are collected and analyzed by B. Hemberg [1952].

[9] On the Cretan vs Phrygian Dactyls see [Roller 1999: 172; Beagon 2005: 431] and commentary to *BNJ* 107 F 12a by S. Dmitriev. Diodorus Sicilus (5.64.4–5) tries to bring the two origin stories together by stating that the Dactyls were born on the Phrygian Ida and then moved to Crete.

[10] I. e. 7th or 6th c. BC poem *Phoronis* [Barnabé 1996: 118–121]. Stesimbrotos (*BNJ* 107 F 12a; 5th c. BC), however, takes the side of Crete.

The early Christian author Clemens of Alexandria mentions the Idaean Dactyls several times in the first book of his *Stromata*, on one occasion (I.16.75.4–5) saying that two of them discovered iron — this time on Cyprus, that another "Idaean", Delas, invented the art of making bronze and that Hesiodos names him Scythes (Κέλμις τε αὖ καὶ Δαμναμενεὺς οἱ τῶν Ἰδαίων δάκτυλοι πρῶτοι σίδηρον εὗρον ἐν Κύπρῳ, Δέλας δὲ ἄλλος Ἰδαῖος εὗρε χαλκοῦ κρᾶσιν, ὡς δὲ Ἡσίοδος, Σκύθης). It is obvious that this is an excerpt from the same source as Pliny's passage — it most probably goes back to the lost poem about the Dactyls (Περὶ τῶν Ἰδαίων Δακτύλων) by Hesiodos mentioned in *Suda* (s. v. Ἡσίοδος)[11]. For the purposes of our research, the most important aspect of this text is that it establishes a direct connection between Delas — a Phrygian, according to Pliny, and the Idaean Dactyls, even though no other source includes this name among the names of the Dactyls. So, the association between Mount Ida, the Idaean Dactyls and Phrygia or Crete was unavoidable in the context of the ancient tradition, and here we see Pliny combining the two strains of this tradition while trying to avoid the Phrygia *vs* Crete controversy by separating two discoveries (that of copper and that of iron) and 'assigning' them to different locations (one to Phrygia and the other — to Crete).

The second Phrygian invention in Pliny's catalogue is the four-wheeled vehicle:

> *Vehiculum cum quattuor rotis Phryges, mercaturas Poeni, culturas vitium et arborum Eumolpus Atheniensis, vinum aquae misceri Staphylus Sileni filius, oleum et trapetas Aristaeus Atheniensis, idem mella; bovem et aratrum Buzyges Atheniensis, ut alii, Triptolemus* (The Phrygians invented the four-wheeled vehicle, the Carthaginians invented commerce, Eumolpus of Athens viticulture and arboriculture, Staphylus son of Silenus the mixing of wine with water, Aristaeus of Athens oil and oil-presses. He also discovered honey. The ox and the plough were introduced by Buzyges the Athenian or, according to others, Triptolemus — *NH* 7.199).

Almost all other correlations between the inventors and inventions in this passage are quite obvious in one way or another. Who else, if not the Phoenicians, could have invented trade? The inventor of 'mixing wine with water' technique is named Staphylus, which in itself gives a direct connection to viniculture (σταφυλή — 'bunch of grapes', see *LSJ* s.v.). The fact that Silenus, a companion of Dionysus, is said to be his father makes the link to this 'civilized' way of drinking wine even stronger. Moreover, here we can remember the story of Silenus being captured by king Midas, who added wine into the water of a stream the satyr drank from. The name of *Buzyges* is just as telling — 'he who yokes the oxen'. The tradition on Eumolpus and Triptolemus as Athenian culture heroes is very rich (see [Beagon 2005: 436–437]). Less obvious connections also find their explanation: Aristeas is credited with the invention of making olive oil and procuring honey from the bees by other authors, e. g. Apollonius of Rhodes (4.1131) and Vergil (*Georg*. 4).

So it would seem that the link between the Phrygians and the four-wheeled cart in this context should be just as obvious, at least for well-educated readers of Pliny. However, we find no evidence on this point in ancient authors. Beagon comments

[11] It is worth mentioning that the cited phrases from Pliny and Clemens are the only fragments that can be attributed to this poem with certainty.

on the invention of four-wheeled vehicles in general and their appearance in Asia Minor and Greece in particular [Beagon 2005: 436], but this seems irrelevant in the context of Pliny's methods (compilation of previous tradition, not research into the 'actual' history — and of course Pliny couldn't have had any information on the earliest four-wheeled vehicles). However, besides data from specific authors Pliny used commonplace knowledge — as, for example, in the case of the connection between Phoenicians and trade (in reality they obviously did not invent the concept, but were prodigiously successful in this field). It therefore seems quite plausible that the association between Phrygians and carts be similar in nature.

There are numerous testimonies by ancient authors on the subject that cattle breading was a thriving (or at least important) branch of Phrygian economy. One of Pliny's sources, M. Varro, claims in his *Res rusticate* (2.1.5; 2.6.3) that there are abundant herds (*greges complures; greges multi*) of half-domesticated sheep and asses in Phrygia, and also reports (2.11.12) on the production of fabrics made of goat wool in the region. Pliny repeats (8.174) the information about wild asses (*onagri*); another passage from the same book, which will be reviewed later, implies successful production of wool fabrics in Phrygia. Pliny has yet another note on Phrygian cattle, this one of paradoxographical nature: he claims that Phrygian bulls can move their horns just like their ears (10.125; this piece of information comes most likely from Aristotle *HA* 517a 29).

As for the special role of cattle breading in the economy of the region, 1st c. BC author Nicolaus of Damascus says (*BNJ* 90 F 103i) that anyone who kills a worker ox in Phrygia is put to death. The same is reported by Claudius Aelianus (*NA* 12.34). The late Roman poet Claudianus (4th c. AD) describes the plains of Phrygia as "rich in horses, happy in cattle" (*Eutrop.* 2.273: *dives equis, felix pecori*). This view, it seems, reflected the reality: the culture of stock-breeding, which remains to this day an important part of the region's economy, finds its reflection on the stelae and altars dedicated to the sanctuaries of Phrygia in the first three centuries AD. The dedicatory inscriptions often contain pleas for the wellbeing not only of the dedicator and their family, but of their possessions as well, including the cattle. Moreover, dedicatory formulae "for the sake of bulls / cows" are known almost exclusively from Phrygia or closely neighbouring regions[12]. Horses, bulls, cows with calves and

[12] A list of such epigraphic texts (and the ones with similar formulae, i. e. ὑπὲρ / περὶ κτηνέων, τετραπόδων, θρεμμάτων, ζῴων, προβάτων, etc.) was compiled by Ch. Schuler [2012: 93–94]. Here I would like to cite his examples of ὑπὲρ / περὶ βοῶν dedications as well as add new ones to the list in order to demonstrate the scale of the phenomenon. Monuments from Phrygia: ὑπὲρ βοῶν *CIG* 3817; *MAMA* V 120; 152; 153; 212; VII 303; *BCH* 45: 558 No. 3; *SEG* 32: 1273; 56: 1514; 56: 1517–1518; 56: 1520; 56: 1524; 56: 1627; περὶ βοῶν *MAMA* V 170; 182; 213; R8; [Haspels 1971: 335 No. 99]; *SEG* 28: 1186; 44: 1044; 56: 1564; 56: 1577; 56: 1613; 56: 1622; 56: 1658; 62: 1152; 62: 1264–1265; from Galatia: *RECAM* II 61; from Lydia: *TAM* V.1 509; from Bythinia: *SEG* 29: 1288 (εἰς βοῶν); from Paphlagonia: *SEG* 44: 1000. The only inscription with a similar formula from another region is *IGBulg* III.2 1805 from Hadrianopolis (Edirne), which still belongs to a relatively close geographical area. The bulk of Phrygian examples originates from the regions of Dorylaion and Nakoleia (see *MAMA* V p. 29; [Schuler 2012: 93]). Cf. [Robert 1939: 204; 1955: 36–37; 108], for general analysis of such dedications see [Schuler 2012: 76–79] (with further references): the author suggests that the originality of this group of dedications did not lie in some unique underlying religious practice, but merely in the habit of inscribing it on stone. Of course, it is hard to deny that the welfare of cattle was indeed an everyday concern for farmers in all regions of the Greek world; however, the very fact that the inhabitants of Roman Phrygia were the only ones to write down such prayers en masse seems to be of some significance.

so on are very common objects of depiction on the reliefs on Phrygian dedicatory stelae (see [Schuler 2012: 76 n. 56, 77])[13]. So could this notion of a successful draft animal-rearing culture be the reason behind this connection between Phrygia and wheeled transportation?

It has already been mentioned that it is hard to define the general principle behind the catalogue's structure, however, one pattern catches the eye: Pliny tries to alternate peaceful and military inventions (see [Mistretta 2017]). After describing the most important peaceful achievements of human culture (agriculture, writing, house-building, metal-working, fire and types of government) he proceeds to the affairs of war: the invention of clubs, shields, armour, swords, the bow and arrow and so on. It is in this list of military achievements that we find the next Phrygian invention — the chariot harnessed with a pair of horses:

> *Equum (qui nunc aries appellatur) in muralibus machinis Epium ad Troiam, equo vehi Bellerophontem, frenos et strata equorum Pelethronium, pugnare ex equo Thessalos, qui centauri appellati sunt, habitantes secundum Pelium montem. Bigas prima iunxit Phrygum natio, quadrigas Erichthonius. Ordinem exercitus, signi dationem, tesseras, vigilias Palamedes invenit Troiano bello, specularum significationem eodem Sinon, inducias Lycaon, foedera Theseus* (The horse, a siege-machine now called the ram [was invented] by Epius at Troy. Horse-riding was invented by Bellerophon, reins and saddles by Pelethronius, fighting on horseback by the Thessalians called Centaurs who lived on Mount Pelion. The Phrygian people first harnessed pairs of horses, Erichthonius a team of four. Army formation, the giving of signals, watchwords, and sentries were inventions of Palamedes during the Trojan war, the campaign in which Sinon instituted signalling from watch-towers. Lycaon introduced truces, Theseus treaties — *NH* 7.202).

Strictly speaking, the word '*bigae*' can designate any type of tandem, not necessary a chariot. However, given the predominantly military nature of the passage, it is impossible to link this invention directly to the previous one. Crediting the Phrygians with any kind of military achievement seems rather odd in the general context of Greek and Roman literature: most authors describe this people as cowardly and effeminate, totally incapable of any achievement in war [Levick 2013: 43–44; Andreeva 2017: 603–605]. M. Beagon also tells a brief story of chariots' appearance in the Near East and Asia Minor, and points to the success in chariot warfare achieved by the Hittites, the predecessors of the Phrygians in Central Anatolia [Beagon 2005: 443]. However, there can be no direct connection here: neither Greeks nor Romans knew of the existence of the Hittites, much less of their success in horse-breeding and chariot-riding. Just as in previous cases, the context of the *NH* itself is most important for understanding the logic behind this attribution.

[13] Bovines are also sometimes depicted on funerary monuments, but are more characteristic of dedicatory ones (see comm. ad *MAMA* V 50; [Robert 1939: 204]).

One association between the Phrygians and chariots in the classical tradition seems to come in the form of the Pelops story[14]: he won a chariot race in Pisa[15]. The connection between Pelops and chariots is strongly reflected in Greek art [Triantis 1994: 284–285]. However, the origins of this hero are not so clear — Pindar calls him Lydian (*Ol*. 1.24), while Herodotus — Phrygian (7.8); in any case he was the son of Tantalus, a Lydian king. And even though strict borders between these two Anatolian regions in literary narratives are hard to draw (this will be discussed later), the rest of Pelops's story is connected to continental Greece, not Asia Minor. According to Pindar (*Ol*. 1.71–88) Pelops got his horses and the chariot from Poseidon, so, following the euhemeric principle, Pliny could have removed the divine intervention from the story, much like he does when he credits Marsyas with the invention of the flute, which was traditionally thought to have been made by Athena (see below). However, unlike the satyr and the flute story, Pelops was never depicted as the *first* mortal to use some device invented by a god.

On the other hand, it is not Pelops himself, but the *Phrygum natio* (Phrygian *people*) who is said to have invented the *bigae.* Moreover, the context seems to suggest military and not agonal use of chariots. As we can see, of the thirteen inventions that are in direct connection to the one in which we are interested, more than a half are linked to the Trojan war, and it is therefore possible that this invention should also be regarded in the Trojan context. The *Iliad* mentions the Phrygian people only twice (2.862 and 10.431), and they do not generally stand out among other allies of Troy, however, they are said to be ἱππόμαχοι ('fighting from horses') — an epithet used in the poem only once, that could, according to J. N. O'Sullivan, in this context actually mean 'using horse drawn chariots in battle'[16]. A similar epithet — ἱππόδαμος ('horse-taming') — is used constantly and refers to various heroes on both sides, but most often it describes the Trojans as a people, and can also refer to the use of horses for drawing chariots[17].

Later literary tradition, starting with Aeschylus and especially Euripides, has the word "Phrygian" for a synonym of "Trojan", an *usus* most characteristic of Greek drama (see [Hall 1988]). Strabo complains about this mix-up between the names of Anatolian peoples, caused mostly not by the constant migrations and merging of peoples, but by the efforts of tragic writers: "An obscurity arose not from these changes only, but from the disagreement between authors in their narration of the same events, and in their description of the same persons; for they called Trojans Phrygians, like the Tragic poets; and Lycians Carians, and similarly in other instances" (12.8.7) and "the poets, however, particularly the tragic poets, confound nations together; for instance, Trojans, Mysians, and Lydians, whom they call Phrygians, and give the name of Lycians to Carians"[18] (14.3.3; trans. H. C. Hamilton). This equating of Phrygians and Trojans continued to exist in Greek literature of the Hellenistic and Roman epochs and was adopted by Roman poets, the most prominent example being Virgil's *Aeneid*.

[14] I would like to thank Dr A. Dan and Dr D. V. Panchenko for pointing this out to me in course of the conference discussion.

[15] For details of Pelops myth see [Scherling 1940; Stenger 2006].

[16] *LfgrE* II, 1208.

[17] Τρῶες: *Il.* 2.230; 3.127, 251, 343; 4.80, 333, 352, 355, 509; 6. 461; 7.361; 8.71, 110, 516, 525; 10.424; 11.568; 12.440 etc. See *LfgrE* II, 1206.

[18] Cf. Dion. Hal. *Ant*. 1.47; Claud. *Eutorp*. 2.242–246.

So is this notion of the Phrygians inventing the chariots connected to the tradition, unknown to us, but probably starting with Homer's description of them as ἱππόμαχοι, or is it grounded in their later identification with the Trojans, who were also depicted as skilled horse tamers by the *Iliad*? In any case, this discovery could be connected to the Trojan cycle just as well as to the Pelops myth, and probably even more so, as in the case of the former the tradition speaks of entire peoples, not individual heroes, as does Pliny.

After reporting the invention of peace treaties by Theseus, Pliny goes back to peaceful inventions — divination and music. The music-related inventions are the last ones ascribed to the Phrygians in *NH* Book 7:

> *Musicam Amphion, fistulam et monaulum Pan Mercurii, obliquam tibiam Midas in Phrygia, geminas tibias Marsyas in eadem gente, Lydios modulos Amphion, Dorios Thamyras Thrax, Phrygios Marsyas Phryx, citharam Amphion, ut alii, Orpheus, ut alii, Linus* (Amphion invented music, Pan son of Mercury the pan-pipe and the single oboe. Midas in Phrygia invented the transverse flute, while in the same country Marsyas invented the double oboe. Amphion invented the Lydian mode, the Thracian Thamyras the Dorian mode, the Phrygian Marsyas the Phrygian mode. The lyre was invented by Amphion, though others say Orpheus and others say Linus — *NH* 7.204).

In this case the mythological tradition is quite well-known. According to some authors (e. g. Apollod. 1.4.2; Hyg. *Fab*. 165; Ovid. *Fast*. 695–710; cf. Paus. 1.24.1) the satyr Marsyas picks up the flute-*aulos* (αὖλος) made and thrown away by Athena and learns to play it. It is with this flute that he loses the musical contest to Apollo (Diod. 3.59. Paus. 2.22.9; Ovid. *Met*. 6.382–403; Pliny himself briefly mentions this story in *NH* 16.89). We do not find, however, any other evidence of him inventing the Phrygian mode, one of the basic harmonies of ancient Greek music, but the later author Pausanias (10.30.9) reports that he is deemed to be the inventor of a specific kind of music for the flute, τὸ Μητρῷον αὔλημα. It is true that in some cases Marsyas is depicted as a companion of Cybele. For instance, Diodorus Siculus (3.58) narrating the childhood of the goddess, says that "the man who associated with her and loved her more than anyone else, they say, was Marsyas" (trans. C. H. Oldfather). In the same passage he reports that Cybele invented the pipe (πολυκάλαμος σύριγξ), while Marsyas adapted melodies for the *aulos* flute. The Phrygian mode itself was more associated with flute music among the Greeks [West 1992: 180].

The Phrygian city of Celaenae-Apamea more than others was connected to the story of Marsyas, and the satyr playing the flute was depicted on the city's coins in Roman times (1st c. BC — 2nd c. AD). On many coins of this type Marsyas is depicted playing a double flute, i. e. exactly the type of flute he is credited for inventing by Pliny[19]. Considering Pliny's tendency to rationalize, it is no wonder that goddess Athena was removed from the picture.

Of course, Marsyas was not the only mythological figure credited with the invention of the *aulos* by the ancient tradition. Another candidate is Olympos — an

[19] Some examples of the type: *BMC Phrygia* 47, 74, 130, 158; *SNG Cop*. 189, 191–193, 200; *SNG Tüb*. 3975; *SNG Aulock* 3474. On Apamean coins with Marsyas see [Nollé 2006: 79–84].

apprentice of Marsyas [Wegner 1939]. The abovementioned "Parian Chronicle" (l. 10.19–20) ascribes the invention of both the *aulos* and the Phrygian mode to a Phrygian named Hyagnis (who was probably regarded as Marsyas's father) [Abert 1913: 2624], but the event still takes place in Phrygian Celaenae. The ancients thought that the Phrygian mode could have different effects on the listeners, but one of these effects was causing religious frenzy and ecstasy and making people commit insane deeds. The inscription in question states that Hyagnis not only invented the *aulos* and the Phrygian harmony, but also put in place "other laws of the Mother, Dionysius and Pan", so the connection between the flute, the Phrygian mode and ecstatic religious rites is inescapable (see [Wegner 1939: 322–323; West 1992: 31, n. 89, 180–181, n. 79])[20].

The association between king Midas and musical instruments is more vague, but it was he (according to some authors) who judged that ill-fated competition between Marsyas and Apollo and preferred the sounds of flute to the sounds of cither — a mistake that resulted in him obtaining the famous donkey ears. There is a tradition that makes Midas an apprentice of Orpheus himself (Conon *BNJ* 26 F1; Ovid. *Met*. 11. 92; Clem. Al. *Protr*. 2.13.1)[21]: the sources focus more on mysteries than on the art of music, but it would seem that one is inseparable from the other. The author of *Suda*, for instance, states (*s. v*. ἔλεγος) that it was Midas who instituted flute-playing during sacrifices. Also, Athenaeus (14.617b) mentions some Phrygian king of sacred flutes (Φρύγα καλλιπνόων αὐλῶν ἱερῶν βασιλῆα), who was the first one to invent the light Lydian song in defiance of the Dorian Muse — and Midas is one of very few "candidates" for the role of this king.

The last Phrygian invention is mentioned in passing in Book 8, in the narration about sheep and fabrics made from their wool:

> *Acu facere id Phryges invenerunt, ideoque Phrygioniae appellatae sunt. aurum intexere in eadem Asia invenit Attalus rex, unde nomen Attalicis. colores diversos picturae intexere Babylon maxime celebravit et nomen inposuit. plurimis vero liceis texere, quae polymita appellant, Alexandria instituit, scutulis dividere Gallia* (Embroidering with the needle was discovered by the Phrygians, and consequently embroidered robes are called Phrygian. Gold embroidery was also invented in Asia, by King Attalus, for whom Attalic robes got their name. Weaving different colours into a pattern was chiefly brought into vogue by Babylon, which gave its name to this process. But the fabric called damask woven with a number of threads was introduced by Alexandria, and check patterns by Gaul — *NH* 8.196, trans. by H. Rackham).

As the invention of different ways to adorn a cloth is definitely not one of the most important achievements of the human race, it is no wonder that such inventions did not make it to the catalogue of man's discoveries in Book 7. In this particular case we, unfortunately, face a *circulus vitiousus* that cannot be broken by the information

[20] It is interesting to note that Clemens of Alexandria (1.15.73.1) names the Phrygian Idaean Dactyls the first wise-men and, among other things, the inventors of musical rhythm (cf. Strab. 10.3.7). On connection between the Idaean Daktyls and ecstatic music see [Wegner 1939: 322].

[21] This tradition, however, sees him as the king of Thracian *briges* [Eitrem 1932: 1526].

from existing sources: were the embroidered clothes called "Phrygian" because the Phrygians invented embroidering as Pliny suggests, or did the name give rise to the speculation that this particular type of ornament was devised by the Phrygians? The Latin language has two words for embroiderers, *plumarii* and *phrygiones*, which were often used without any difference in meaning [Scherling 1951]. We do not have any data on wide-scale production of embroidered fabrics for export in Central Anatolia; there is no doubt, however, that the people there produced some wool fabrics. Spindles and other weaving appliances were often depicted on Phrygian (usually women's) gravestones, however, this trend is not unique for the region [Masséglia 2013: 99].

At the first glance, there is no logical pattern to the "Phrygian inventions" listed above. So why then these particular achievements, and not others, were identified as Phrygian by Pliny? As I have already said, Pliny based his catalogue on the data of Greek and Roman literary tradition, so in order to answer the question one should review what the tradition states regarding the Phrygians in general. The topics linked to this people can be conventionally divided into three groups:

1) "Mythological" — a group of widely known stories whose heroes were thought to be Phrygians or at least were associated with this land. The legends of king Midas, the satyr Marsyas, the myths of Attis and Cybele, and so forth could be cited as examples. These narratives were very well known to the public and did not, in fact, stand out from the bulk of what today we call "Ancient Greek myths". We can also associate the literary *topos* of Phrygians = Trojans with this group.

2) "Sacred" — this group is closely connected to the previous one, but it can still be regarded separately. It involves the reports of rites of veneration for the Great Mother of the Gods. Of course, Cybele is the heroine of many myths, but here we are more interested not in the events of her and her companion's lives, but rather in the tales of sacred, arcane knowledge she was believed to bestow on her followers. Additionally, we will regard any data on "Phrygian wisdom", not necessarily directly connected to the goddess.

3) "Realistic" — unlike the ancient kings and the gods, contemporary Phrygians were regarded by the Greeks and Romans as a "lower race". The notions of Phrygian effeminacy and cowardice most likely originate in the stereotype of an 'eastern barbarian', maybe even in the equating of Trojans with Phrygians; however, the fact that they were regarded as a typical slave-race may be due not only to the traditional dramatic part of an Anatolian slave, but to the realities of the contemporary slave market as well[22]. Another common motive in the description of Phrygia and its people is the previously discussed aptitude for cattle-breeding.

This sort of classification seems (and actually is) artificial, as no ancient author catalogues Phrygian stories in this manner, and the narratives of all groups are in fact intertwined. However, the semantic differences are too noticeable to ignore them altogether, and this scheme can help us understand which branch of tradition

[22] Phil. *VA*. 8.7.12: "For though one can buy here on the spot slaves from Pontus or Lydia or Phrygia — for indeed you can meet whole droves of them being conducted hither, since these like other barbarous races have always been subject to foreign masters, and as yet see nothing disgraceful in servitude; anyhow with the Phrygians it is a fashion even to sell their children, and once they are enslaved, they never think any more about them…" (trans. by F. C. Conybeare). On slaves from Anatolia see [Bradley, Cartledge 2011, 93, 184, 304].

engendered Pliny's invention stories. For instance, the invention of *bigae* falls into the "mythological" category, regardless of its connection to the Trojan cycle or the Pelops story. The whole music-related group of discoveries could also be described as "mythological", at last in the way that Pliny and, probably, his immediate sources present it, even though its deeper roots are definitely connected to the cult of the Great Goddess, with its ecstatic music and dances.

If we turn to the "sacred" branch of the tradition, we find the Phrygians possessing the secret knowledge of metallurgy. The mystic character of this art is reinforced by the connection to the Idaean Dactyls (cf. [Delcourt 1959: 166]). However, the idea that the Phrygians possess — or at least possessed in ancient times — some kind of specific wisdom is not necessarily connected to the mysteries of the Great Goddess. For instance, the famous story of pharaoh Psammetichos' 'linguistic experiment', told by Herodotus (2.2), goes as follows: the king decided to raise two babies without them hearing any kind of human speech in order to determine which language is innate in humans and, thus, which race is the most ancient. The babies' first word was *bekos*, i. e., 'bread' in Phrygian, so the Egyptians had to admit that the Phrygians, and not themselves, were the most ancient race on Earth. As one of the most ancient peoples along with the Egyptians and the Babylonians, the Phrygians were thought to possess some kind of sacred knowledge told in the so-called "Phrygian tales" (Φρύγιοι λόγοι), mentioned by Hellenistic and later scholars. Such pseudo-oriental 'tales' (Egyptian, Chaldean, Persian and Lybian) usually contained allegoric and euhemeric interpretations of myths, presented as ancient Oriental wisdom[23]. In this context it is worth noting that the wise Aesop is said to be of Phrygian descent by some authors (Phaedrus, Dion of Prusa, Gellius, Lucian and others)[24].

The "realistic" aspect of the tradition is less prominent in Pliny's catalogue, but this is not surprising: Pliny based his narrative more on historical and paradoxographical traditions, while the dramatic tropes on cowardly and servile nature of the Phrygians were re-interpreted in a realistic fashion in rhetoric literature (especially by Cicero ad Dion of Prusa)[25]. However, it is possible that the invention of the four-wheeled cart should be put in this bracket as some sort of common knowledge, especially as in the text it is a neighbor of "the Carthaginians invented commerce" statement.

As for the embroidery, this association could be due the stereotype of a luxury-loving oriental barbarian. As we can see, in the relevant passage of the *NH* almost all exquisitely adorned fabrics come from the East. Ovid (*Met*. 6.166) also talks about a Phrygian gown embroidered with gold (cf. Plaut. *Truc*. 536). The story of King Midas's 'golden touch' also comes to mind here. However, we should not forget that the fabrication of wool textile could in fact have been important for the region, which is known for a specific kind of wool — the angora — even today.

Through this research I have attempted to demonstrate that the scarce information on Phrygian inventors offered by Pliny the Elder only seems random, but in fact the Roman author gives a synthesis of all the aspects of the rich literary tradition about this people.

[23] On Φρύγιοι λόγοι see [Rives 2005].
[24] This version of his origin is predominant since the 2nd c. AD (see [Rives 2005: 235, n. 35]).
[25] For more details on the subject see [Andreeva 2017: 607–611].

Abbreviations

BCH — *Bulletin de correspondance hellénique.* Paris: École française d'Athènes. (In French).

BMC *Phrygia* — Head, B. V. (1906). *Catalogue of the Greek coins of Phrygia*. (*British Museum Catalog of Greek Coins*; Vol. 25). London: Gilbert and Rivington Limited.

BNJ — *Brill's New Jacoby.* Retrieved from https://referenceworks.brillonline.com/browse/brill-s-new-jacoby.

CIG — *Corpus inscriptionum graecarum* (1828–1877) (4 Vols.). Berolini: Ex officina academica. (In Latin).

IG XII.5 — Hiller von Gaertringen, F. (Ed.) (1903–1909). *Inscriptiones Graecae*, (Vol. 12.5) *Inscriptiones Cycladum*. Berolini: Apud Georgium Reimerum. (In Latin).

IG XII.9 — Ziebarth, E. (Ed.) (1915). *Inscriptiones Graecae*, (Vol. 12.9) *Inscriptiones Euboeae insulae*. Berolini: Apud Georgium Reimerum. (In Latin).

IGBulg III.2 — Mihailov, G. (Ed.) (1964). *Inscriptiones graecae in Bulgaria repertae*, (Vol. 3.2) *Inscriptiones inter Haemum et Rhodopem repertae. Fasciculus posterior: A territorio Philippopolitano usque ad oram Ponticam*. Sofia: In aedibus typographicis Academiae Litterarum Bulgaricae. (In Latin).

LfgrE — *Lexikon des frühgriechischen Epos* (1979–2010) (4 Vols.). Göttingen: Vandenhoeck und Ruprecht. (In German, English etc.).

LSJ — Liddell, H. G., Scott, R. A., Jones, H. S. (1996). *Greek-English lexicon with a revised supplement*. Oxford: Oxford Univ. Press.

MAMA V — Cox, C. W. M., Cameron, A. (Eds.) (1937). *Monumenta Asiae Minoris Antiqua*, (Vol. 5) *Monuments from Dorylaeum and Nacolea*. Manchester: Manchester Univ. Press.

MAMA VII — Calder, W. M. (Ed.) (1956). *Monumenta Asiae Minoris Antiqua*, (Vol. 7) *Eastern Phrygia*. Manchester: Manchester Univ. Press.

RECAM II — Mitchell, S. (Ed.) (1982). *Regional epigraphic catalogues of Asia Minor II: The Ankara District. The inscriptions of North Galatia*. Oxford. (BAR International Series, 135).

SEG — *Supplementum Epigraphicum Graecum* (1923–). Leiden; Boston: Brill.

SNG Aulock — *Sylloge nummorum graecorum Deutschland. Sammlung von Aulock* (1957–1968). Berlin: Mann. (In German).

SNG Cop. — *Sylloge nummorum graecorum. The Royal Collection of Coins and Medals. Danish National Museum* (1942–1979). Copenhagen: E. Munksgaard.

SNG Tüb. — *Sylloge nummorum graecorum Deutschland. Münzsammlung der Universität Tübingen* (1981–1999). München: Hirmer. (In German).

TAM V.1 — Herrmann, P. (Ed.) (1981). *Tituli Asiae Minoris, (Vol. 5.1) Tituli Lydiae linguis Graeca et Latina conscripti*. *Regio septentrionalis, ad orientem vergens*. Wien: Verlag der Österreichischen Akademie der Wissenschaften. (In Latin).

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