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THE BLACK SEA AS A SCYTHIAN BOW: GENESIS OF AN IMAGE

The Black Sea-Scythian bow comparison occurs in many sources (in particular Strabo 2. 5. 22 C125) but only Ammianus Marcellinus (22. 8. 10) mentions Eratosthenes, Hecataeus and Ptolemy in the context of a description focusing on the perimeter of this sea.

In this paper I would like to examine the possibility that the comparison with the Scythian bow could be traced back to Eratosthenes. Examination of Strabo's complex testimony, in fact, reveals a polemical attitude on the part of the geographer from Amasea with regard to the scientist from Alexandria concerning the Black Sea area. In particular, Eratosthenes considered Issos and not Dioskourias to be the eastern end of the Mediterranean and evidently attributed different characteristics and functions to the Black Sea compared to those imagined by Strabo.

In the description by Strabo, the role of Timosthenes of Rhodes, who was Ptolemy II's admiral and who provided Eratosthenes with most of the measurements from his periplographical experience at the service of the Lagids, can be clearly highlighted.

Through the examination of the important literary, papyrological and archaeological documentation and through the recent discussion of the historical-political significance of the evidence, a dense network of commercial and political relations that linked the Black Sea to the Egypt of the early Lagids seems to emerge. In this context, the role of Timosthenes is undoubtedly relevant and the examination of some fragments of his work reveals important points of contact with the work of Eratosthenes, who echoed the court admiral. It is hypothesized here that even the Black Sea-Scythian bow comparison may derive in some way from Timosthenes' description.

Finally, the testimony of Ammianus Marcellinus, which shows a differently oriented bow, is nevertheless precious in that it allows us to identify and comprehend the traces of a different conception from that of Eratosthenes, probably one of Polybian origin, and perhaps part of the numerous "corrections" that Polybius wanted to make to the Alexandrian "map". The role of Polybius in the representation of Pontus, which we attempt to reconstruct here through the complex testimony of Ammianus, also contributes to clarifying the importance of Eratosthenes in defining an image (Pontus-Scythian bow) which is entirely consistent with the method of the scientist, who used comparisons of geographical areas with concrete objects (chlamys, butcher's knife, ship) to make his complex geometrical theories on world map construction more comprehensible to readers.

Keywords: Black Sea, Scythian bow, Ammianus Marcellinus, Eratosthenes, Hecataeus, Ptolemy

The comparison between the Pontos Euxinos and a Scythian bow is present in many sources¹. Amongst these are Strabo (2. 5. 25 C126) who generically mentions “some”, and Ammianus Marcellinus who is the only one to explicitly (22. 8. 10) mention by name Eratosthenes, Hecataeus and Ptolemaeus: *Omnis autem eius velut insularis circuitus litorea navigatio viginti tribus dimensa milibus stadiorum, ut Eratosthenes affirmat et Hecataeus et Ptolemaeus aliique huius modi cognitionum minutissimi scitatores, <in> speciem Scythici arcus nervo coagmentati geographiae totius assensione formatur.*

Of the three names mentioned, we can say that Ptolemaeus does not make any comparison between the Black Sea and the Scythian bow. As far as Hecataeus is concerned, if he can be identified with Hecataeus of Miletus (Geus 2007. P. 116 thinks of Hecataeus of Abdera), it must be said that the few fragments that have come down to us contain no useful references and therefore do not allow us to come to any reliable conclusions.

Modern critics have been divided on the mention of Eratosthenes. On one hand, some like Berger (1880. P. 332), have accepted the reference and consider the scientist from Cyrene to be the creator of this comparison. On the other hand, others such as Dan (2013b), have disputed the paternity of the comparison, their stance being based both on the fragmentary state in which the *Geography* has come down to us and also on the fact that the comparison with a sea – rather than a land surface – would be an isolated case within the Eratosthenic work. The latter group therefore deem it preferable to fix the origin of the comparison in a period between late Hellenism and first century AD and to trace its origin in contexts other than mathematical geography.

In this paper an attempt will be made to analyze the genesis of the comparison in order to evaluate the possibility that, for specific reasons, it could in fact be attributed to Eratosthenes. Justification can be found, on the one hand, in the indirect evidence as reported in the descriptive method used by the scientist, and on the other hand, in that which might have been described by Timosthenes of Rhodes concerning the Lagid policy in the Pontic area and which constitutes an important source of the Eratosthenic *Geography*.

1. Strabo’s testimony

In order to approach both aspects of the problem, it is necessary to start from the above-mentioned passage by Strabo (2. 5. 22 C125):

¹ Sall. Hist. 3. 63M: *Speciem efficit Scythici arcus*; Manil. 4. 755: *Euxinus Scythicos pontus sinuatus in arcus*; Mela 1. 102: ... *ad formam Scythici arcus maxime incurvatus* (see Grilli 1979. P. 179–181); Plin. NH 4. 76: ... *ut sit plane arcus Scythici forma* (cf. 4. 86 ...*quae maxime ratio Scythici arcus formam efficit*); Val. Fl. 4. 728: ... *Scythicum specie sinuatus in arcum*; Avien. Orb. terr. 238: *Scythici speciem facit arcus*; Dion. Per. 157: *τόρνῳ ἐειδόμενον (scil. Πόντου) περιηχέος ὄμματι τόξου*, without reference to the Scythian one (Ilyushechkina 2010. P. 209, n. 15; Lodesani 2022. P. 209–210).

“This (*scil. Euxeinos Pontos*) is a double type of sea, for about its middle two capes project into it, one from the Europe and the northern regions, and the other opposite, from Asia, bringing the strait between them together and creating two large seas. The European promontory is called the Ram’s Forehead and the Asian, Karambis, and they are separated from each other by about 2,500 stadia. The western sea has a length from Byzantium to the outlet of the Borysthenes of 3,800 stadia and a width of 2,000; the island Leuke is in it. The eastern is oval-shaped, ending in a narrow recess at Dioskourias and is 5,000 stadia [long], or a little more, and with a width around 3,000. The circumference of the entire sea is about 25,000 stadia. Some compare the shape of the circumference to a stretched Scythian bow, with the sinew like what is called the right-hand portion of the Pontos. This is the coastal sailing route from the mouth to the recess at Dioskourias, since except for Karambis the entire coast has only small inlets and projections, so it is like a straight line. The rest is the horn of the bow with its double curve, the upper part more rounded and the lower straighter. Thus two gulfs are formed there, with the western one more rounded” (Transl. Roller 2014).

This passage, which is inserted by Strabo in the description of the seas formed by inlets of the Ocean, reproduces the ancient Ionian conception, which had been taken up in substance also by Eratosthenes, whereby the inhabited world was an island and in penetrating the land, the Ocean formed four gulfs: the Mediterranean, the Caspian, the Red Sea and the Persian Gulf.

Starting from 2. 5. 18 C121, Strabo therefore describes the “Internal or Our Sea which takes its beginnings from the west at the Pillars of Heracles and is lengthened toward the east but with varying widths, dividing at the end into two gulfs-like seas, one on the left that we call the Euxeinos Pontos and the other consisting of the Egyptian Sea, as well as the Pamphylian and the Issic”².

In addition to the division of the inhabited world into three continents, Strabo immediately recalls the shape of the island-inhabited world: it is a chlamys (Macedonian cloak), which immediately evokes Eratosthenes’ idea, which had been already described in detail by Strabo in 2. 5. 14 C118. Although the scientist from Cyrene is not specifically mentioned, he is unmistakably recognizable due to the description of the procedure used to define the space occupied by the inhabited world within the terrestrial sphere (Berger 1880; Geus 2007. P. 111–122; Biffi 2012. P. 181–214).

The name of Eratosthenes is mentioned in 2. 5. 20 C123 (= F III B, 56 Berger 1880) regarding the size of the Great Syrtis and the whole passage suggests a precise scanning of the different sections of the Mediterranean carried out by the scientist from Kyrene (Bianchetti 2013. P. 293–314).

² On the viewpoint used by Strabo in this and other comparisons see Biffi 2012. P. 198–199.

This conception was criticized by Polybios and Artemidoros, according to whom Strabo, who is a non-neutral witness, also provides a description in which it is often difficult to identify each individual and different contribution.

The Pontos Euxinos, with which we are concerned here, is presented as a sort of “double” sea, divided by a segment whose extremities are, to the north, i.e. in Europe, the promontory of the Ram’s Forehead³, situated in the Crimean Peninsula, and to the south, i.e. in Asia, the Karambis Promontory⁴. The linear distance between the two promontories is estimated to be about 2,500 stadia⁵. This is a measurement that we can find in Dionysios Periegetes (150–155) and in the *Commentary* of Eustathios to Dionysios (*ad loc.*)⁶, where there are close analogies with the text of Strabo.

The basin, which is defined first as ‘western’ and shortly afterwards as ‘upper’ (ἄνω) in relation to the bow handle, is 2,000 stadia wide (πλάτος) and 3,800 stadia long (μῆκος) stretching from Byzantium to the mouth of the Borysthenes-Dnjeper. The words used to define length and width are here reversed compared to Eratosthenes’ use as witnessed by Strabo (2. 1. 33 C86): according to Eratosthenes, indeed, length (μῆκος) is to be understood as stretching in the east-west direction and width (πλάτος) in the north-south direction. This inversion is already found in 2. 5. 21 C124 so that Strabo was thought by Germaine Aujac (1969. P. 105) to have drawn the stretch from Timosthenes of Rhodes.

It must be said, however, that what is given here is clearly a linear measurement, derived from a nautical one (Erat. F III A, 39 = Strabo 2. 5. 7 C114: “Again, everyone agrees that the sea route from Alexandria to Rhodes is in line with the course of the Nile, as well as the sailing route from there along Karia and Ionia to the Troad, Byzantium and the Borysthenes”). Byzantium and Borysthenes are two points on a line that constituted the fundamental me-

³ The Ram’s Forehead (od. Cape Sarych), at the southern end of the Crimea, is indeed west of Karambis: Minns 1913. P. 19; Hind 2001. P. 25–31.

⁴ The Karambis (Kerembe Burnu) is located west of Sinope, about 400 km. west of Themodon. On the history of this area Dan 2013b. P. 42 (with bibliography).

⁵ Radt 2002 corrects Strabo’s text to 1,500. But see Strabo 7. 4. 3 C309: “Now the distance from Karambis to the city of the Kersonesites is two thousand five hundred stadia, but the number to Ram’s Forehead is much less”. On the measurements of Pontos, ‘the most wonderful of all seas’, see Hdt. 4. 85–86: the length, from the mouth to the Phasis, is estimated at nine days and eight nights of navigation, equivalent to 11,600 stadia according to the historian, while the maximum width, from the Syndika to Themiskyra, on the Thermodon, is calculated at three days and two nights of navigation, equivalent to 3,300 stadia according to the historian. On these measures see Armayor 1978. P. 45–62; Corcella 1993. P. 302; West 2003. P. 151–167. For the representation of a Scythian archer bending his bow on an Scythian gold vessel (Hermitage Museum n. KO 11) found in the kurgan of Kul-Oba cf. Bord, Mugg 2005. P. 9–28; Dan 2013b. P. 44–45 for a miniature bow from Olbia (5th century BC).

⁶ See Lodesani 2022. P. 207–208 on the three days of navigation (Dion. Per. 155) between the two promontories, calculating the distance considering the hours of daylight during each day (i.e. 12 hours). On this basis the distance would be 1500 stadia (3X500 stadia) which corresponds to the Strabonian text as it was corrected by Radt 2002.

ridian, and which was imagined, for this stretch, on the basis of nautical data dating back to Timosthenes of Rhodes⁷ and reworked by Eratosthenes in order to develop a grid of meridians and parallels⁸.

On the basis of updates matured thanks above all to a broader knowledge of the areas concerned, Eratosthenes also constructed a Nile-Borysthenes alignment, replacing the disposition dating back to Eudoxos of Knidos which connected the Nile with the Tanais-Don (Lasserre 1966. P. 241). This is an important innovation which also involved a different conception of the Maiotic Lake, in that it was imagined not so much as being inclined towards the east but stretching northwards.

To set the pivotal points of his map of the inhabited world, Eratosthenes defined the network of parallels and meridians after carefully selecting cities and places of great historical importance (Bianchetti, forthcoming a). The reference to Dioskourias, instead of the river Phasis, seems to respond to this criterion. Strabo, in fact, reproaches the scientist (Erat. F III B, 93 = Strabo 1. 3. 2 C47) for having considered Issos, instead of Dioskourias, as the eastern extremity of the Mediterranean Sea. The latter nevertheless played a role in Eratosthenes' map, although it was not considered the eastern extremity of the Inland Sea, as Strabo would have thought appropriate.

In his mention of Dioskourias, Eratosthenes (F III B, 65 = Strabo 2. 1. 39 C92) considered this city to be 8,600 stadia away from the Kyanean Rocks, a distance shared by Strabo (12. 3. 17 C548) who reported a series of measurements, totaling 8,000 stadia, taken along the coast of Pontos from Hieron to Phasis.

If we consider that Pliny (NH 6. 15) mentions Timosthenes for the description of Dioskourias where there were 300 different-speaking peoples, we should suppose that Ptolemy II's admiral may have provided Eratosthenes with essential data for the description of the Pontos Euxeinos and for the mapping out of the coasts of this sea.

The measurements of the eastern gulf of Pontos, which were evaluated by Strabo with the same definition of length (north-south) and width (east-west) already noted for the measurement of the western gulf, may also point to Timosthenes. Indeed, the periplographical data reported by Ptolemy II's admiral may have been reworked (together with some data collected for other areas) by Eratosthenes and adjusted to fit the design of the map and the description of the inhabited world contained in his *Geography*, which, for the first time in the history of geographical thought, "dialogued" with the map.

⁷ On Timosthenes: Wagner 1888; Gisinger 1937. P. 1310–1322; Hauben 1996. P. 220–242; Meyer 2013; Prontera 2013. P. 207–217; Roller 2019. P. 56–60; Jones 2020. On the difficulties of navigation in the Black Sea see Labaree 1957. P. 29–33; Arnaud 1992. P. 57–77; Sayar 2021. P. 188–193.

⁸ However, Eratosthenes does not mention Byzantium but the Hellespont in the definition of the main meridian (F II C. 2 = Strabo 1. 4. 2 C63). See n. 44.

In the passage we are discussing here, Strabo, estimates the perimeter of the Pontos to be about 25,000 stadia⁹. Strabo himself (16. 3. 2 C766) quotes Eratosthenes on the Persian Gulf, the perimeter of which (20,000 stadia) was considered by the scientist to be slightly less than that of Pontos. Therefore, the probable Eratosthenic measurement of Pontos can be deduced from Pliny¹⁰ who also quotes the scientist from Cyrene when he reports that the two seas measured 1,546 miles (= 12,360 stadia) + about 100 miles less than 1,438 (= 10,708 stadia).

Regarding the circumference of the Pontos, Ammianus speaks of 23,000 stadia¹¹. This slight contrast concerning these measurements has been differently understood¹², but what seems deducible from the passage by Strabo we are examining is that the two gulfs delineating the two horns of the bow have their meeting point in the Crimean Peninsula (which constitutes the space in the bow handle). They are measured by Strabo, in the case of the western one, from Byzantium to the mouth of Borysthenes, and in the case of the eastern one from the Ram's Forehead to Dioskourias.

We can therefore see that the north-western end of the bow is measured up to a different point from the one where the eastern gulf begins, i.e. the Ram's Forehead. This difference, which moreover indicates greater navigation activity in the western part of Pontos than in the eastern part (Saprykin 2014. P. 353–366; Sayar 2021. P. 188–193), reveals the peculiarity attributed to the Byzantium-Borysthenes section, along which both a highland route and a small cabotage route ran, touching the numerous arbors of the western coast of the Black Sea.

At this point in the description, the geographer introduces the opinion of “some” who represent the contour of Pontos in the form of a Scythian bow¹³ where the chord corresponds to what was by common consent referred to as

⁹ We find Strabo's measurement in the anonym Hypotypopsis § 53: Mittenhuber 2011 constituted a new edition of this text (already published in GGM II 494–509) in which he identified three main sources: Strabo, Ptolemy and a periplographical tradition with echoes from Dyonisos Periegetes. The compilation of the Hypotypopsis can be dated between 4/5 and 9 Century AD.

¹⁰ Plin. NH 5. 47 = Erat. F III B, 77: Eratosthenes calculates the distance from the mouth of Pontos to the mouth of the Maiotic Lake as 1,545 miles; Plin. NH 6. 3 = Erat. F III B, 78: “Some sources estimate the size of Pontos from the Bosphorus to the Maiotic Lake to be 1438½ miles, Eratosthenes considers it to be 100 miles smaller”.

¹¹ Measures analogous to Ammianus' are found in the anonymous PPE 92 (GGM I, 423 = Podossinov 2021) where we read 23,587 stadia, while in Arrian PPE 25 the sum of the single distances is 22,715 stadia (Silberman 1995. P. 66; cf. 1993. P. 276–311). The 3,350 stages of Agathemeros 11 (Diller 1975. P. 63) are interpreted by Leroy 2018 as a possible misunderstanding of the 3,300 stadia of Hdt. 4. 85 relating to the width of Pontos.

¹² Gardthausen 1873. P. 540–41, who thought that both Ammianus and Strabo drew on Eratosthenes, explained the difference in measurements (25,000 in Strabo, 23,000 in Ammianus) as a mistake in the text whereby, in the course of time, an E would have become Γ.

¹³ On the Scythian bow see Godehardt 2007; 2009; Dan 2013b; Meyer C. 2013. P. 13, fig. 3.

the right bank of Pontos, i.e. the line from Byzantium to Dioskourias. The double curvature of the bow, constituted by the two gulfs described above, is here considered in relation to a bow being held in the hand, thus determining the definition of high and low for the two bays.

It seems to me that we can only note the composite character of the description that Strabo generically attributes to “some”, among whom I find it difficult not to see Eratosthenes. Although not mentioned directly, the scientist is in fact an undoubted point of reference for Strabo in his description, in which we can also detect the presence of Timosthenes, who was Eratosthenes’ source and perhaps the first creator of a comparison, which the scientist from Cyrene was able to develop precisely by exploiting the results of the experience of Ptolemaic seamanship.

2. The Lagids and the Pontos Euxinos

Traces of intense activity on the part of Lagid ships in the Black Sea have been identified and extensively studied by modern critics, who have attempted to read in a global perspective the scarce data coming from historical documentation, from papyrology, epigraphy and archaeology.

A fragment of the historical work by Memnon of Heraclea, handed down by Photios¹⁴, informs us of a conflict between Byzantium and an alliance comprising Kallatis, the foundation of Heraclea, and Istria regarding the emporium at Tomi. Heraclea did not respond despite the urging of both contenders and then offered diplomatic mediation, an agreement being reached when Kallatis found itself in great difficulty as a result of the conflict.

In modern criticism this war is considered by some to have been limited to the Pontic area (Robu 2014), and by others (Avram 2003; 2004; Archibald 2013; Russell 2016. P. 116–117) as a competition between Hellenistic kingdoms engaged in acquiring spaces of prestige, with the Lagids taking a leading role in the anti-Seleucid function.

Memnon (434 F 15) (Dueck 2006. P. 43–61; Avram 2003. P. 1181–1190) mentions a siege of Byzantium by an Antiochus who can be identified as Antiochus II Theos (261–246), and who was engaged in the campaign in Thrace (Polyaen. 4. 16. Cf. Avram 2003. P. 1183, n. 3; Keaveney, Madden 2011. On numismatic evidence cf. Psoma 2008. P. 257–263). In this same context, it seems possible to place Ptolemy II’s aid to the besieged Byzantium, the plausibility of this intervention being deducible not so much from Photios’ patchy account, which quotes Memnon, as from the concession of divine honors by

¹⁴ BNJ 434 F 13: Keaveney, Madden 2011, on this war (*circa* 260 BC). On Memnon and the dating of his work see Janke 1963. P. 7 ss.; Bittner 1998. P. 4; Dueck 2006. P. 43–62; Yarrow 2006; Desideri 2007. P. 45–59; Davaze 2013; Gallotta 2014. P. 65–77. On Heraclea s. Grammenos, Petropoulos 2003. P. 1403–1419.

Byzantion to Ptolemy II¹⁵. These honors could be interpreted as gratitude to the sovereign for his support to the city in difficulty. According to this interpretation, Ptolemy reputedly played the role of arbiter of the complex situation in the Straits and Pontos, where Alexander's heirs were evidently playing out an important political and economic match.

Presence of the Lagid, which can be defined as significant is also attested, for the years around the middle of the 3rd century BC, by two archaeological testimonies from the Crimean Peninsula, one being the wall painting from Nymphaion, south of Pantikapaion (modern Kerch), the other an inscription on an altar from Tauric Chersonesos.

The fresco from Nymphaion shows a ship clearly bearing the inscription “Isis” on its bow. This ship was interpreted by Vinogradov as being a warship on a mission by Ptolemaios II in winter or spring 254¹⁶. Braund¹⁷ expressed reservations about this interpretation and studied the fresco, the numerous graffiti on these and the two adjoining walls, concluding that the inscription *Isis* was not necessarily contemporary with the image of the trireme. Whatever may be the case, the fresco and the graffiti constitute an “overwhelming concern with the sea” (162). In fact, at the prow of the extant trireme, a large male figure has been scratched, identifiable with one of the Dioscuri, the particular protector deities of sailors. Having examined the structure and the function of the building, Braund is of the opinion that it is not necessarily of religious nature and that the graffiti might have been scrawled in the later third century, when the civil war brought Eumelos to power (163). Braund's remarks about the fresco (in which Isis could simply be the name of the ship) are valid and invite a certain caution in considering it a central piece in the mosaic of international relations between Egypt and Bosporus.

However, the elements in favor of a network of relations between Lagid Egypt and Bosporos are strong and acknowledged by Braund himself, who underlines the religious nature of documents which should not be reduced to a feature of power politics.

Braund also expressed doubts about the second piece of evidence we cited above, i.e. the dedication inscribed on the altar slab from Tauric Kersonesos. It is a dedication by a man – Charmippos son of Prytanis – to Sarapis Isis and Anoubis¹⁸ and dated, on prosopographical and paleographic grounds, to the

¹⁵ Avram 2003. P. 1204–1208 with the arguments in favor of Ptolemy II's intervention in aid of Byzantium and the honors given by the city to the Lagid king. Cf. also Avram 2004.

¹⁶ Vinogradov 1999 (SEG 50, 696). See Sokolova 2000; Murray 2001 (SEG 51, 966); Archibald 2007. P. 254, 258; Marquaille 2008. P. 51: “perhaps a sacred gallery or a warship”. On the history of the ancient Nymphaion cf. Avram, Hind, Tsetskhadze 2004. P. 948.

¹⁷ Braunt 2018. P. 161 with photo; Bricault 2006 considered the meaning of the fresco obscure; sceptic on ptolemaic influences Kazakevich 2012. P. 186–187.

¹⁸ Vinogradov, Zolotarev 1999. P. 360–365; Braund 2018 notes that the nature of the instruction (*epitagma*) which caused Charmippos to dedicate this altar is not stated.

middle of the 3rd century BC. This date, in contrast to a more conservative estimate (early 2nd century) should also suggest reconsidering the extensive epigraphic documentation recording dedications to the Egyptian gods¹⁹.

Finally, papyrus evidence, to which attention has been drawn several times by Avram and Archibald²⁰, mentions an embassy (September 254) sent by Pairisades II, ruler of Bosporos (c. 284/3 to 245) to Alexandria and the conferring of divine gifts and honors by Byzantium on Ptolemy II²¹.

What is summarized here represents a cluster of information which, read in relation to the Ptolemaic international strategies directed towards the Aegean and beyond into the Black Sea region during the 3rd and 2nd centuries BC, led Avram (2003. P. 1211; cf. 2007. P. 127–153, cf. also Reger 2007. P. 273–285) to speak of a “remarquable domination de Ptolémée II Philadelphe en mer Noire” resulting in “contrôle de la côte méridionale, alliance avec Pairisadeès II, roi du Bosphore, et dissolution de l’alliance entre les villes de la côte occidentale et les Séleucides”.

Archibald (2004. P. 1–15; 2007. P. 253–271) in particular emphasizes the complexity of Black Sea-Ptolemaic relations and considers “formal links between the Ptolemaic crown and Black Sea communities”.

Despite not imagining an anachronistic network of diplomatic relations built up according to the canons of modern mentality, Archibald has nevertheless highlighted two possible levels of relationship between the Lagids and the Pontic area: firstly, an interstate level, with a prominent role played by Lagid diplomacy, and secondly, a local level involving the exchange of relationships between Ptolemaic officials stationed in the various centers of Pontos and local inhabitants.

Whatever the level and manner in which it took place, a network of relations linking Lagid Egypt to the Pontic kingdom undoubtedly emerges from our documentation, although these are not always easily interpretable. Within this context, it seems very likely that Timosthenes played a leading role. He was in fact admiral of Ptolemy II's fleet and author of geographical works, including *On Harbors* with its description of the coasts of Egypt, the Red Sea, the islands of Asia, Pontos and Europe.

The few remaining fragments of his work give us an idea of the description of the Pontic area. In F 9 Meyer (= Harpocrat. s.v. ἐφ'Ιερόν = F 24 Roller 2019) and F 10 (Sc. Ap. Rh. 2. 531= F 25 Roller) we read that in

¹⁹ Archibald 2007. P. 254 with important observations on the penetration of Egyptian cults in the Pontic area. Cf. Avram 2011. P. 426–437. On the contacts between Greeks and non Greeks in the Black Sea cf. Dana 2021. P. 31–42.

²⁰ Skeat 1974. P. 62–66. Cf. Archibald 2004. P. 1–15; 2007. P. 253–271; cf. Avram 2012. N 5 (184) on the advancement of Lagid troops from Byzantium to Apollonia.

²¹ Dion Byz. Anapl. Bosp. 41 Güngerich 1958² (νέως Πτολεμαίου τοῦ Φιλαδέλφου); on the history of the text cf. Marcotte 2000. P. XXXVIII; CLXIV.

On Harbors, Timosthenes mentioned the sanctuary to the Twelve Gods, located at the Bosporos²². In F 11 Meyer (= Plin. NH 6.15 = F 27 Roller) Timosthenes is reported to have described the city of Dioskourias as being inhabited by three hundred different peoples speaking different languages²³.

In F 25 Meyer (= sch. Theocr.13. 22/23 = F 26 Roller, who omitted the sentence relating to whether the two places belong to Europe or Asia)²⁴ the testimony of Timosthenes is reported within a commentary on the passage of the Argonauts through the Thracian Bosphorus. Timosthenes names only one islet with several peaks called Kianeiai (νησίδιον σκοπελώδες, καλεῖσθαι δὲ τὰς τούτου ἄκρας Κυανέας). He adds that the islet is in Europe while the ἄκρα is in Asia (τὸ μὲν νησίδιον τῆς Εὐρώπης, ἡ δὲ ἄκρα τῆς Ασίας) and that they were situated 25 stadia apart (ἀπέχουσι δ' ἀλλήλων σταδίους κε')²⁵.

Wieseler (1879. P. 9) assumed that Timosthenes was the first to describe the Symplegades as a rock with a double peak, formed, according to the myth, by the collision of the rocks after the Argo had passed through. Ptolemy II's admiral also seems to have noted the European and Asian position of the two points, which he considered with a perspective on the division of the continents. This point of view is confirmed by the testimony of a *scholion* to Lu- can²⁶ reporting on the theories concerning the division of the inhabited world into continents: Timosthenes is mentioned here among those who divided the inhabited world, not into two or three parts, but into four, adding Egypt to Europe, Asia and Libye.

On this subject, Eratosthenes took a different position and denied that the continents could be divided by rivers or isthmus because the Earth had to be considered unique. I have already observed that behind this position we could perceive the necessity of not entering into a controversy that would have involved the possession of territories by Libya or Asia, which would have involved contrasts between Seleucids and Lagids (Bianchetti 2007–2008. P. 25–39).

²² The sanctuary is also mentioned by Polyb. 4. 39. 5–6 and located by the historian on the Asian coast of the Bosphorus. Walbank (1957. P. 487; 489) thinks that Polybios derived the two “geographical” sections (39.1–6 and 43.1–44.10) from marine handbooks (*periploi*) to them he went back through some literary intermediary, perhaps Diophantos or Demetrios of Kallatis, who wrote on the Black Sea in the third century. Dion. Byz. (Anapl. Bosp. 75) instead located the sanctuary on the European coast, as is also evident from the scholia to Apollonios Rhodios: Long 1987. P. 55 ss.; 153 ss.; 217 ss.; Meyer 2013 comm. *ad loc.*

²³ Strabo (11. 2. 16 C498) attributed this plurality of idioms to the difficulty of communication of these peoples. Wagner 1888. P. 69 believed the Strabo's passage was derived from Eratosthenes.

²⁴ On The ‘Rocky island’ (Skopelodes) also known as Symplegades or Kyaneai, located at the mouth of the Thracian Bosphorus, cf. Ruge 1922. P. 2236; Delage 1930. P. 130–135; Meyer 2013. comm. to F 25; Dan 2013a.

²⁵ Cf. PPE 25. 3–4, where there were forty stadia to Hieron. On Hieron Moreno 2008. P. 655–709.

²⁶ F 1 Meyer = F 10 Roller: cf. Zimmermann 1999. P. 73–76.

Despite having different views on the division of the continents, with regard to the area of Pontos as mentioned above, it cannot be ruled out that the both reference to the Symplegades (Erat. F III B, 82 = Tzet. ad Lyc. *Alex.* 1285, to which we have to add Sch. Eur. *Medea* 2. 7) as well as that to Diokourias (Erat. III B, 65 = Strabo 2. 1. 39 C91) in the *Geography* of Eratosthenes may come from Timosthenes' *On Harbors*.

In addition, the distance from the mouth of Pontos to that of the Maiotic Lake, which was calculated as 1,545 miles by Eratosthenes in Pliny's report (NH 5.47 = Erat. F III B, 77), seems to derive from Timosthenes. Within the Fragments of Eratosthenes, Berger, referring to Pliny's words, also included the measurement of the distance from the canopic mouth of the Nile to the mouth of Pontus (= 2,638 miles) calculated by Timosthenes²⁷.

We have mentioned here the Byzantion-Borysthenes (Erat. F III A, 39 = Strabo 2. 5. 7 C114) and Karambis-Ram's Forehead alignments, which seem to be related to a periplographic method probably used by Timosthenes and it is from Timosthenes that Eratosthenes appears to have derived the use of alignments of localities considered geographically opposite each other and moved by the scientist into the alignment on a meridian, this being the case of Metagonion (Cape tres Forcas, near modern Melilla, in Morocco) which had been placed opposite Massalia by Timosthenes²⁸.

If these traces, which although not numerous are significant, can help us to understand Eratosthenes' debt to the data derived from Timosthenes, we could also hypothesize that the Pontos–Scythian bow comparison was already present, in a more or less defined form, in Timosthenes' work. Eratosthenes may have reworked or constructed the comparison with geometric precision, drawing from it a comparison that was well suited to the descriptive form of the scientist, who favored images that would bring his readers "closer" to remote locations, making it easier for them identify them both on the map and in the text of the *Geography*²⁹.

²⁷ Erat. F III B, 95 = Plin. NH 5. 47 = Timosth. F 2 Meyer = F 15 Roller. Cf. Erat. F II C, 2 = Strabo 1. 4. 2 C63: "In determining the width of the inhabited world, he [Eratosthenes] says that from Meroe it is 10,000 stadia along its meridian to Alexandria, and from there to the Hellespont about 8,100, then 5,000 to the Borysthenes"; F II C, 5 + II C,7 = Strabo 2. 5. 42 C135: "Eratosthenes says that these regions are a little more than 23,000 stadia from Meroe, sine it is 18,000 to the Hellespont and then 5,000 to the Borysthenes" (Transl. Roller 2014).

²⁸ F 29 Meyer = Strabo 17. 3. 6 C827 = F 33 Roller. On the importance of this alignment see Prontera 2013. P. 211: "The mental map underlying the nautical geography of Timosthenes is thus materialized in the geometric construction of Eratosthenes".

²⁹ For the comparison of the fourth part of the sphere in which the inhabited world is inscribed with the head of an artichoke and fort the inhabited world like a Macedonian mantel cf. Strabo 2. 5. 5–6 C112–113 = Erat. F II B, 27; for the rowing and sailing ship to which Mesopotamia is compared cf. Strabo 2. 1. 23–26 C78 = Erat. F III B, 25; for the comparison with a butcher knife for the area delimited by the northeastern ocean coast and the Taurus line cf. Strabo 11. 11. 7 C519: Bianchetti 2012. P. 155–171. Important observations on Strabo's comparatives by Biffi 2012. P. 181–214.

To confirm this hypothesis, it can be added that the comparison Pontos–Scythian bow leads us to the form of the Greek letter Σ, bringing to mind a usage to be found precisely in Egyptian contexts and to which Eratosthenes himself was a witness. It will be recalled that the course of the Nile was described as a N (F III B, 51=Strabo 17. 1–2 C 785–786) and that the shape of the mouth of the great Egyptian river was called Delta in the ancient tradition³⁰. These elements are clearly part of an Egyptian tradition, taken up and reworked in the geographical thought, of which we can find traces in the fragments of the works of Timosthenes and Eratosthenes.

The tradition reconstructed here, passed on from Timosthenes to Eratosthenes, probably includes Artemidoros. This seems to be possible to deduce from evidence provided by Strabo (11. 2. 14 C496), who mentions him in connection with sites located in opposite positions (*antikeisthai*) on the two shores of the Black Sea, the so-called Passages being located in front of Sinope, in the same way as Karambis Point faces the Ram's Forehead³¹.

The fact that Strabo quotes Artemidoros in the description of the coast as far as Dioskourias, i.e. as far as the city whose location Eratosthenes had contested, also suggests that Strabo used Artemidoros' text to criticize Eratosthenes' theories, which in turn were largely based, for this area, on Timosthenes.

3. Ammianus Marcellinus

Ammianus Marcellinus, who participated in Julian's Persian campaign in the second half of the 4th century AD, dedicates a geographical *excursus*³² to the region of Pontos in the book 22 of his *Res gestae* attesting the success of the comparison (Pontos–Scythian bow: 22. 8. 10; 13; 20; 37; 42–43) which I already mentioned at the beginning of this paper:

10. *Omnis autem eius velut insularis circuitus litorea navigatio viginti tribus dimensa milibus stadiorum ut Eratosthenes adfirmat et Hecataeus et Ptolemaeus aliique huiusmodi cognitionum minutissimi scitatores, <in> speciem Scythici arcus nervo coagmentati geographiae totius assensione formatur....*
13. *Extremitates autem arcus utrimque tenues duo exprimunt Bospori e regione sibi oppositi, Thracius et Cimmericus: hac causa Bospori vocitati, quod per eos quondam Inachi filia, mutata (ut poetae locuntur) in bovem, <usque> ad mare Ionium permeavit.*

³⁰ Hdt. 2. 15: see Vasunia 2001. P. 91. Geographical comparisons in: Berger 1880. P. 333–335.

³¹ Cf. also 7. 4. 3 C309; 11. 2. 14 C496; 12. 3. 10 C545.

³² On the *excursus* in Ammianus' work see Emmett 1981. P. 15–33; Caltabiano 1989. P. 289–296; Richter 1989. P. 209–222. On Ammianus see Gualandri 1968. P. 199–211; Cicchka 1975. P. 329–340; den Hengst 1992. P. 39–46; Lana 1993. P. 23–40; Drijvers 1998. P. 268–278; Feraco 2004; 2011 (with bibliography).

20. *Haut procul inde attollitur Carambis, placide collis contra septentrionem Helicen exsurgens, cuius e regione est Criumetopon, Taurices promunturium, duobus milibus et quingentis stadiis disparatum. Hocque ex loco omnis ora maritima, cuius initium Halys est amnis, velut longitudine lineali directa nervi efficit speciem, duabus arcus summitatibus complicati...*

37. *Hactenus arcus apex protendi existimatur. Eius nunc residua leniter sinuata, subiectaque ursae caelesti, ad usque laevum Bospori Thracii latus ut ordo postulat, exsequemur, id admonentes, quod, cum arcus omnium gentium flexis curventur hastilibus, Scythici soli vel Parthici, circumductis utrimque introrsus pandis et patulis cornibus, effigiem lunae decrescentis ostendunt, medietatem recta et rotunda regula dividente.*

10. “The complete navigation around its shores, similar to the route around an island, measures 23,000 stadia, as is asserted by Eratosthenes, Hecataeus, Ptolemy, and other very accurate investigators of such problems; and according to the testimony of all geographers it takes the form of a Scythian bow held together by a string.

13. Now the subtle extremities of the bow on both sides are represented by the two Bospori lying opposite to each other, the Thracian and the Cimmerian; and they are called Bospori, as the poets say, because the daughter of Inakos, when she was changed into a heifer, once crossed through them to the Ionian sea.

20. Not far from there the hill called Karambis lifts itself with gentle slope, rising towards the Great Bear of the north, and opposite this, at a distance of 2500 stadia, is Ram’s Forehead, a promontory of Taurica. From this point the whole seacoast, beginning at the river Halys, as if drawn in a straight line, has the form of the string joined to the two tips of the bow.

37. So far the peak of the bow is thought to extend; the remainder of it, gently curved and lying under the Bear in the heavens, we shall now follow as far as the left side of the Thracian Bosphorus, as the order demands, with this warning; that while the bows of all other races are bent with the staves curved, in those of the Scythians alone, or the Parthians, since a straight rounded handle divides them in the middle, the ends are bent downwards on both sides and far apart, presenting the form of a waning moon.” (Transl. J.C. Rolfe, Loeb 1940 with modifications).

The mention of Eratosthenes, together with that of Hecataeus and Ptolemy, has given rise – as already noted – to discussions on the possible Eratosthenic authorship of the Pontos Euxinos–Scythian bow comparison, also in relation to Strabo’s testimony, when he alluded to Eratosthenes in the “some” supporters of the comparison.

We have already noted that Ammianus mentions a measurement of Pontos (23,000 stadia) which differs from that reported by Strabo (25,000). Gar-dthausen, who thought that the text was corrupted (E misrepresented as Γ),

was also convinced that Ammianus did not use Eratosthenes directly but through Dionysios Periegetes³³.

As for the comparison between Pontos and the Scythian bow, Ammianus's text shows lexical similarities with that of Strabo. However, difficulties, already highlighted by Berger and now by Feraco³⁴, arise concerning Strabo's ἐντεταμέμω, which seems to refer to the stretched bow, while Ammianus's *coagmentare* (22. 8. 10) simply means to join.

These difficulties can indeed be overcome in the light of remarks made by Lodesani (2013), where he suggested that Strabo's "stretched" bow should be understood in the light of the way Homer describes the bow scene in Od. 21,406 where τόξον τανύειν indicates the effort of hooking a νευρή string at the two ends of the bow whose curvature was thus accentuated. This would in essence, be the same image suggested by Ammianus who refers to the two ends of the string being joined together.

The statements contained in 22. 8. 13 and 8. 20 are undoubtedly more problematic: if the distance between the two facing promontories (Karambis and Ram's Forehead) is fixed at 2,500 stadia (22.8.20), similarly to Strabo, the design of the arch that emerges from the two passages does not seem very coherent.

In fact, the statement in 22. 8. 20 ("from the cape of Karambis the whole coast starting from the river Halys as in a long straight line takes the form of the string twisted at the two ends of the bow") seems to contrast with what we read in 22. 8. 13 ("represent the thin ends of the bow on the one hand and on the other the two Bosphorus, Thracian and Cimmerian opposite each other in a straight line"). In fact, in § 20 the string seems to start from Halys and proceed eastwards, excluding the stretch from the Thracian Bosphorus to Halys or Karambis (about 300 km between them).

³³ Gardthausen 1873. P. 547. Berger 1880. P. 333–334, n. 2 expressed doubts about the exclusively Eratosthenic origin of the data in 22. 8. 10. In the commentary of Groningen 1995. P. 102 it is assumed that the names of Eratosthenes, Hecataeus and Ptolemy were inserted by Ammianus only to give credibility to the reported data (see Fornara 1992. P. 426 "references to... Eratosthenes and others are mostly ornamental and usually derivative"). The possibility that Ammianus drew directly from Strabo has also been questioned, due to the lack of success and diffusion of Strabo's *Geography* in antiquity: Gardthausen 1873. P. 543–544; Keyser 1991. P. 345. Feraco 2004. P. 130–132; cf. Vanhaegendorf 2005. P. 500–503 (for the presence of Strabo in some passages of the *Res gestae*) who has pointed out some significant similarities between Strabo's text and that of Ammianus, believes that the possibility of a doxographic source from which Ammianus would have drawn most of his geographical information cannot be excluded (2011. P. 185). Moreover, on the sources of Ammianus in the description of Pontos Euxinos cf. Fontaine 1996. P. 271–72, n. 604; Sundwall 1996. P. 619–643; Feraco 2000. P. 247–281; Dan 2013b. P. 39–58.

³⁴ On the translations of Seyfarth 1970. S. 23 ("Bogen, der mit der Sehne gespannt ist"), Fontaine 1996. P. 106 ("arc scythique tendu") see Feraco 2011. P. 183–184, who also criticizes the interpretation of den Boeft et alii (1995) according to which when the bow is stretched the two ends appear to be joined and thus justify Ammianus' *coagmentare*.

There have been many attempts to resolve this discrepancy³⁵, and I believe that the most reasonable explanation is the interpretation formulated once again by Lodesani, who has attempted to trace the statements made by Ammianus back to a conception in which the Maiotic Lake was moved further east than it actually is in reality (22. 8. 11) and the two Bosporos were well spaced apart with the Cimmerian set back to the east.

It is a conception that Lodesani rightly compares to that of Polybius (4.39.1: “That which is called Pontos has a perimeter very close to 22,000 stadia and two mouths situated in diametrically opposite positions, one on the side of the Propontid, the other on the side of the Maiotic Lake, which in itself has a circumference of 8,000 stadia”) with the two Bosporos diametrically opposite each other. This was an hodological representation in which the water route running from the Propontid to the Thracian Bosporos and the Cimmerian was a line probably drawn along routes directly connecting centers of major economic interest.

What Polybius presents is, in substance, a different conception from the geometric one outlined by Ammianus (22. 8. 20) in terms similar to those of Strabo’s passage: in both texts the reference to a straight line for the bow’s string and the ends of it fixed to the Thracian Bosporos and to Dioskourias suggest a representation – a “map”, we might say – which I do not think it is hazardous to identify with that of Eratosthenes.

It is well known that Polybius disputed the Eratosthenic map on several occasions: the direction of the river Tanais, which Eratosthenes imagined as having a longitudinal course – probably on the basis of the description by

³⁵ Gualandri (1968. P. 205–220) saw a contradiction between the two passages concerning the chord of the bow, which in 8. 20 seems not to include the stretch between the Thracian Bosporos and the river Halys, while in 8. 13 the Thracian Bosporos is understood as one of the two ends of the bow. She found the origin of the contradiction in a passage by Dionysios Periegetes (156–162), who considered the southern coast of Pontos straight, located on the right of those arriving from the Thracian Bosporos: only the promontory of Karambis seemed to interrupt this line since it juts out to the north. The hypomnematic source from which Ammianus drew would have misunderstood the passage and therefore excluded from the line the stretch from the Thracian Bosporos to Karambis. den Boeft et alii 1995. P. 113 believe that Ammianus imagines a straight line from Karambis to the two Bosporos. Fontaine (1996. P. 285, n. 707), on the other hand, thinks that the bow should be imagined stretched with an archer who stretches the rope at the height of Karambis: the promontory would constitute an angle whose sides would be knotted at the two ends of the bow formed by the two Bosporos. Feraco (2011. P. 202–204), considering that Ammianus does not say where the rope ends but where it begins – i.e. at Halys, east of the Karambis – speculates that the beginning of the rope at the Hays was justified by the proximity of the river to the promontory or that Ammianus misunderstood the expression of Strabo (*ό παράπλονς ο ἀπὸ τοῦ στόματος*) and imagined that the end of the rope began not from the mouth of Pontos, i.e. from the Thracian Bosporos, but from the mouth of the river Halys, which is found shortly after Karambis. Finally, he believes that Ammianus uses different sources in 8. 13 and 8. 20 and refers in 8. 20 to the same map underlined by Strabo (2. 5. 22 C125) and unknown to us, while in 8. 13 the reference to the two Bosporos refers to another unidentifiable source. Feraco concludes that, since the Pontos is considered a double sea, cannot be excluded that Ammianus alludes in 8. 13 to a bow limited only to the western part of the Pontus (see Fig. 1: Fontaine 1996 with drawing).

Pytheas³⁶ – the Tauros, which Eratosthenes drew superimposed on the line of the 36th parallel, while Polybios imagined it inclined from south-west to north-east as in the “ancient maps” (Prontera 2001. P. 1061–1064; 2005–2006. P. 89–106), the Meotid Lake, located by Eratosthenes to the north rather than to the east of Pontos³⁷.

Even the description of Pontos, therefore, with the ends of the sea in the two Bosphors, seemed to be in conflict with the conception of Eratosthenes and the Scythian bow drawn by the geographer with the two ends defined in the manner described above.

Thus, the idea of Pontos which Polybios developed and which was different from that of Eratosthenes may have left a trace in the description by Ammianus, who (22. 8. 20) seems to have clumsily described the Asian coast, making it straight, except for the protuberance of the Karambis promontory. Thus, Ammianus may have meant: “After the Karambis the whole coast, starting from Halys, is straight and offers together with the coast before the Karambis the image of a tightstring”.

In conclusion it can be said that our sources provide us with traces of two different descriptions of Pontos: one of a periplographic-timosthenic matrix, on which Eratosthenes’ scientific conception is based, and one of a historical-geographical matrix – in short, a political conception of space – which is the basis of Polybios’ conception.

The genesis and elaboration of the comparison between Pontos and the Scythian bow (unmentioned by Polybios) can be identified in the context of the frequentation of the Black Sea, which, at the time of the Lagids and especially thanks to the work of Timosthenes, was translated into a precise and comprehensive description of the coasts of this sea. Eratosthenes may have drawn on this description by reworking the drawing of a sea or constructing it on a geometric basis so that it was comparable to a Scythian bow, just as other realities of the ecumene were considered similar to concrete objects (chlamys, butcher’s knife, ship).

This description becomes an unavoidable point of reference, as is also clear from Ammianus’ statement (regardless of how true it may actually be), which quotes Eratosthenes along with Hecataeus and Ptolemaeus in support of his own description.

Ammianus’ testimony, which shows a differently oriented bow, is in any case precious in that it allows us to identify and comprehend the traces of a different conception from that of Eratosthenes, probably one of Polybian or-

³⁶ Bianchetti forthcoming b.

³⁷ Berger 1903². S. 103; Fontaine 1996. P. 279 for the Maiotic Lake, sloped towards the east in Ammianus’ description.

igin, and perhaps part of the numerous “corrections” that Polybios wanted to make to the Alexandrian “map”.

The Scythian bow with the two ends of the string fixed in the two Bospors corresponds to a less geometric and more historical vision of space, in which it is possible to recognize, for example, a line through the two Bospors directly connecting political and economic realities of indisputable historical importance.

What is of course implicit in Polybios’ “correction” of the Eratosthenic conception, is the recognition of the importance of those world maps, which had become a point of reference for any representation of the ecumene. The choice of figures, such as the Scythian bow, which aimed to facilitate the understanding of distant spaces to a non-expert audience was destined to enjoy great fortune in the history of geographical thought. However, Eratosthenes’ choice of information and informants could not have been fully or indeed always shared by those who, like Polybios, were animated first and foremost by pro-Roman sentiments and would never have sacrificed their ideals in the name of science.

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ЧЕРНОЕ МОРЕ КАК СКИФСКИЙ ЛУК: ГЕНЕЗИС ОБРАЗА

Сравнение Черного моря со скифским луком встречается во многих источниках (в частности, Strabo 2. 5. 22 C125), но только Аммиан Марцеллин (22. 8. 10) упоминает Эратосфена, Гекатея и Птолемея в контексте описания, посвященного очертанию этого моря.

В данной работе я хотела бы исследовать, можно ли возвести сравнение со скифским луком к Эратосфену. Исследование комплекса сведений Страбона фактически выявляет полемику относительно Причерноморья, которую географ из Амасии ведет с ученым из Александрии. В частности, Эратосфен считал восточной оконечностью Средиземноморья не Диоскурию, а Иссос, и явно приписывал иные характеристики и функции Причерноморью по сравнению с представлениями Страбона.

В описании Страбона отчетливо вырисовывается роль Тимосфена Родосского, адмирала Птолемея II, предоставившего Эратосфену почти все данные измерений, полученных им в морских путешествиях, которые он совершил, находясь на службе у Лагидов.

В ходе исследования важных литературных памятников, а также папирологии и археологических данных, равно как недавней дискуссии об историческом и политическом значении этих сведений, предстает густая сеть торговых и политических отношений, связывавших Причерноморье с Египтом ранних Лагидов. В данном контексте роль Тимосфена, несомненно, усматривается, и исследование некоторых фрагментов его сочинения выявляет важные моменты использования сочинения Эратосфена, повторяющего придворного адмирала. Гипотетически даже сравнение Черного моря со скифским луком могло каким-то образом появиться на основании описания Тимосфена.

Наконец свидетельство Аммиана Марцеллина, показывающее иначе ориентированный лук, тем не менее ценно, поскольку позволяет идентифицировать и осмыслить следы отличной от Эратосфена концепции, вероятно, исходящей от Полибия; возможно, она относится к тем многочисленным «исправлениям» Полибия, которые он собирался внести в Александрийскую «карту». Роль Полибия в описании Понта, которое мы пытаемся реконструировать с помощью комплексного свидетельства Аммиана, также способствует разъяснению роли Эратосфена в определении образа (Понт-скифский лук), что вполне согласуется с методом ученого, который, создавая карту мира, использует сравнения географических регионов с конкретными предметами (хламида, нож мясника, корабль), чтобы его сложные геометрические теории стали понятными читателям.

Ключевые слова: Черное море, скифский лук, Аммиан Марцеллин, Эратосфен, Гекатей, Птолемей

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