Vestnik drevney istorii
80/3 (2020), 654–674

Вестник древней истории
80/3 (2020), 654–674

DOI: 10.31857/S032103910010636-2

(RE-)LOCATING GREEK AND ROMAN CITIES ALONG THE NORTHERN COAST OF KOLCHIS Part II. FOLLOWING ARRIAN'S *PERIPLOUS* FROM PHASIS TO SEBASTOPOLIS

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After the first part of this study has argued to look for ancient Dioskourias near Ochamchire Harbour based on a broad literary tradition (especially Eratosthenes, Timosthenes, Strabo, Pliny, Pomponius Mela and Claudius Ptolemy), the present second part will focus on ancient *periplous* literature and itineraries, most of all Arrian of Nikomedeia and the *Tabula Peutingeriana*. After reflecting on distances given in stades, I shall try to measure out the various sections on the way from Phasis to Sebastopolis and beyond to Herakleion. A complementary approach will try to disentangle the literary tradition from Eratosthenes to Arrian, to convey a better sense of how the transmitted numbers came about. Both approaches will support my approximate location of Phasis, Gyenos, Dioskourias, Sebastopolis, Pityous, and Herakleion, besides providing some clues of how the ancient riverscape has changed.

Keywords: Arrian, *Periplus Maris Euxini*, Charies, Dioskourias, Eratosthenes, Gyenos, Kolchian rivers, Phasis, Sebastopolis, stadion, *Tabula Peutingeriana*

В ПОИСКАХ ГРЕКО-РИМСКИХ ГОРОДОВ НА СЕВЕРНОМ ПОБЕРЕЖЬЕ КОЛХИДЫ Часть II. ЗА «ПЕРИПЛОМ» АРРИАНА ОТ ФАСИСА ДО СЕБАСТОПОЛЯ

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For critical feedback and bibliographical or editorial support, I would like to thank Alexandru Avram, Anca Dan, Germain Payen, Jess Russell and Gocha Tsetskhladze. I am particularly grateful to Stone Chen for working on the maps with me. All remaining shortcomings are my own.
See Part I in VDI 80/2, 2020, p. 354–376.

В первой части настоящего исследования мы показали на основании обширной литературной традиции (в особенности сочинений Эратосфена, Тимосфена, Страбона, Плиния, Помпония Мелы и Клавдия Птолемея), что древнюю Диоскурию следует искать в современной Очамчирской бухте. Вторая часть посвящена античным периплам и итинерариям, в особенности Арриану и Певтингеровой карте. После анализа расстояний, данных в стадиях, в статье дается оценка различных отрезков пути от Фасиса до Себастополя и далее до Гераклейона. Параллельно с этим предлагается анализ формирования литературной традиции от Эратосфена до Арриана, нацеленный на установление происхождения сохраненных традицией чисел. Оба подхода поддерживают мою гипотезу о локализации Фасиса, Гиеноса, Диоскурии, Себастополя, Питиунта и Гераклейона, а также дают некоторые данные об изменении античного речного ландшафта.

Ключевые слова: Арриан, «Перипл Понта Эвксинского», Гиенос, Диоскурия, Певтингерова карта, Себастополь, стадий, Фасис, Хариэс, Эратосфен

Having drawn on diverse and independent evidence, I have corroborated the expectation to find Dioskourias / Aia on the banks of the Hippos / Tskhenistsqali and Moches / Mokvi Rivers by Ochamchire, south-east to the Korax / Bzipi River and north-west to the Gyenos / Kyaneos / Okumi River. The next part of my argument will put this claim to a test: I shall systematically revisit ancient *periplous* literature for the north-eastern stretch of the eastern-Euxine coastline from Phasis to Herakleion, to show that my location of Dioskourias is consistent with the Greek cities in its neighbourhood. Some background information of Arrian (§ 5) and his usage of distances in stade (§ 6) will start the discussion, before following up on the naval route from Phasis to Herakleion (§ 7 and 9). A map depicting the coastline from Phasis to Herakleion (fig. 1) will help the reader navigate virtually along the Kolchian coast. A digression will explain the principles I have applied to comparing and 'correcting' information from different traditions (§ 8). The conclusion will summarize the results of the whole study, with some further reflection on the methods applied and the potential for further research on the historical geography of ancient Kolchis and beyond.

5. *PROLEGOMENA* TO ARRIAN'S *PERIPLUS MARIS EUXINI*

The reconstruction of the ancient Euxine coastline with its fluvial landscape faces several problems. Beside the fragmentary state of the literary tradition, uncertain conversion rates for measures[1], and many inaccuracies in our accounts[2], the dynamics of nature as well as human interference with the river courses pose significant problems. The effect of millennia of sedimentation stand out along the western shores of Georgia, where most river mouths are blocked by natural sandbars of hundreds or even thousands of metres in length. The most famous example is the Paleostomi Lake, the 'Old Mouth' of the Phasis. The sandbar gradually cut off the river from the Euxine, whence an old side arm (which I suggest identifying with the aforementioned Charies) developed into the main outlet above the industrial zone of modern Poti. Not long ago, Otar Lordkipanidze described the impact as follows:

[1] See below, § 6.

[2] Numerical data was particularly prone to guesswork, generous rounding and faulty copying, see, e.g., Geus, Guckelsberger 2017, 168.

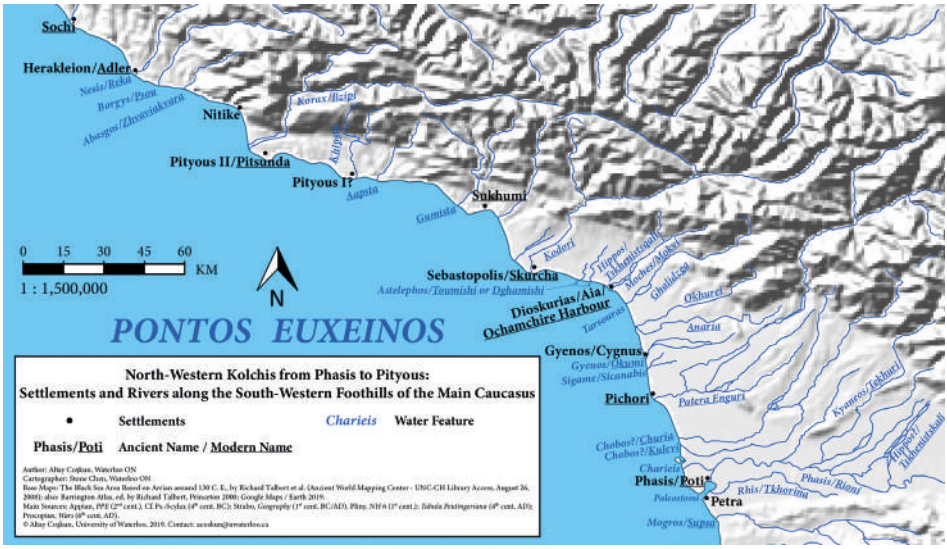

Fig. 1. The coastline from Phasis to Herakleion

The frequent shifts of the Rioni river-bed, recorded over a vast area: from the bed of the modern Pichori, emptying into lake Paleostomi, to the north up to the present bed of the Rioni, have long since been noted in geographical literature ... I repeatedly came across former channels left by the Rioni. As a rule, all of them lie south of the modern bed of the Rioni – in parallel rows ... The southernmost channel is within more than 3 km of the present-day channel. Residents of local villages lying along the lower course of the Rioni remember the changes of the river-bed that took place in the recent past. Thus, for example, the residents of the village of Patara Poti, situated on the right bank of the Rioni, within 5–6 km of the modern city of Poti, remember well that earlier their settlement was on the left bank of the river. ... the drift of the Rioni into the sea reaches approximately 10–12 million tons of sand and silt per year, its volume totaling 10 million m^3. Thus, the rate of land increase is rather considerable, reaching an average of 3 m annually, and sometimes even more[3].

That the process is still ongoing is shown by satellite images easily accessible through *Google Maps*: sand heaps at the estuary of the Rioni are visible for up to 10 km offshore under the surface of the sea. The higher resolution of a satellite photograph from the European Space Agency (ESA) (fig. 2) seems to extend the effect of sedimentation to up to 30 km off the coast. Latest geomorphological research allows for an even more differentiated picture[4]. No less spectactular is the recent discovery of the 'Kuban Bosporos', a second strait or channel of the 'Kimmerian Bosporos' that runs parallel to the modern Strait of Kerch: it effectively cut off Phanagoreia and Hermonassa from the Sindike on the Asian continent (the modern Taman Peninsula). Another major challenge is that artificial canalization has dramatically changed the riverscape, to a degree that some streams have been drained and

[3] Lordkipanidze 2003, 1308. For a recent description of the coast and riverscape, also see Tsetskhladze 2018b, 431–434; cf. Braund 1994, 102–103; Tsetskhladze 1998, 7; Sens 2009, 125–127, 133: „Gewaltige Anschwemmungen des Rioni haben die Küstenlinie allein innerhalb der letzten 100 bis 200 Jahre stellenweise um mehrere hundert Meter verschoben"; Dan 2016.

[4] Laermanns *et al.* 2018.

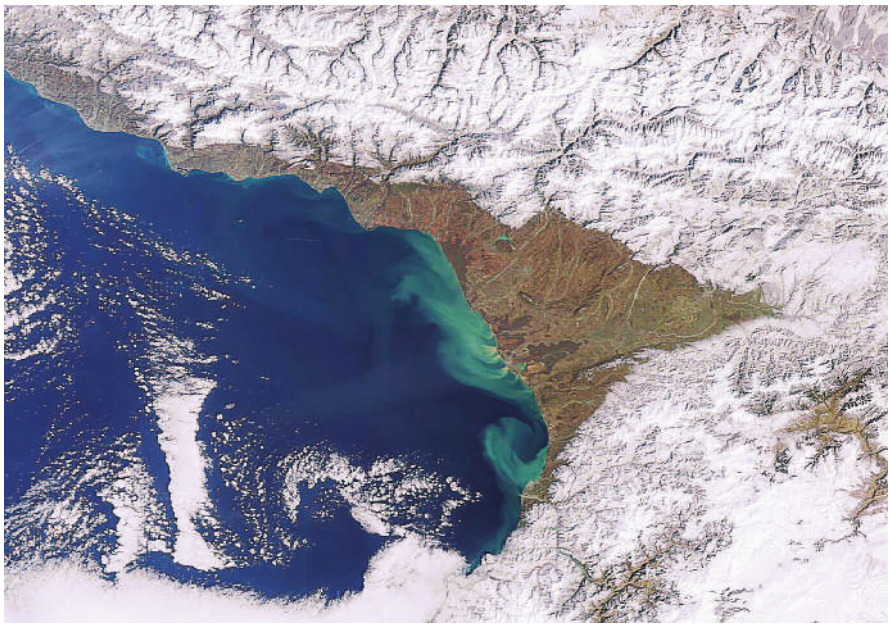

Fig. 2. Satellite photograph from the European Space Agency (ESA)

others redirected[5]. Once again, *Google Maps* conveys a strong sense of the artificial nature of some of the present-day riverbeds, which appear as drawn with a ruler.

The best ancient source we have is the *Periplus Maris Euxini* by Arrian, the famous *homme de lettres* who happened to be the Roman governor of Cappadocia in the 130s AD. His information on the littoral from Trapezous to Sebastopolis is particularly valuable, since it is based at least in part on autopsy during the inspection of the coastline under his command, most likely conducted in summer AD 132[6]. That he also used written

[5] Kuban Bosporos: Schlotzhauer *et al*. 2017; cf. Dan 2016, 270–271; Tsetskhladze 2016; 2018a, 34–36; Bolikhovskaya *et al*. 2018; Papuci-Władyka 2018, 312.

[6] For the date of Arrian's travel, see Rémy 1989, 213–217 (AD 131/32–136/37); Braund 1994, 178 (AD 132); Silberman 1995, VII (AD 131 or 132); Tsetskhladze 1998, 15; cf. 49–50 (AD 134); Liddle 2003, 5–12 (AD 131/138); Rood 2011 (130s). My impression is that Arr. *Peripl. M. Eux.* reports his first inspection of the Pontic coast, thus around AD 132. The same date is also suggested by the note that, when Arrian heard of the death of King Kotys II of the Bosporos (AD 123/24–131/32), he 'made an effort also to describe the navigation to the Kimmerian Bosporos in case that you (sc. Hadrian) have any plans regarding the Bosporos' (Arr. *Peripl. M. Eux.* 17.3). Less certain is the implication of the statue that King Rhoimetalkes (AD 131/32–153/54) set up in year 430 of the Bosporan / Mithradatic era (AD 133/34), while Arrian was governor. Since the accompanying inscription (*IOSPE* II 33 = *CIRB* 47, *Pantikapaion*) calls him *philokaisar* and possibly also *philorhomaios*, we can assume that he had sent an embassy to Rome, possibly stopping by the governor of Cappadocia, and received notice of his recognition; cf. Belfiore 2009, 206–208, n. 207 (though dating the inscription to AD 132/33). Arr. *Peripl. M. Eux.* 6.2 mentions that he paid the soldiers at Apsaros, and *Peripl. M. Eux.* 10.3 specifies that he did so in Sebastopolis 'on the very day', which seems to denote one of the regular pay days, 1 January, 1 May or 1 September. Belfiore 2009, 36 thinks of fall AD 131 or spring AD 132. I would rather suggest that Arrian prepaid his soldiers at Apsaros and reached Sebastopolis by

sources is clear from his first chapter, where he begins engaging with Xenophon's *Anabasis*. He also quotes Homer, Herodotos and Aischylos, and his frequent references to the Argonautic myth likewise betray his deep roots in a much broader Greek literary culture[7]. It would be helpful to know in how far he was drawing on similar written sources or alternatively on information from his staff or from local inhabitants when naming the rivers along his journey and specifying the distances between their mouths.

At least, some general observations can be made. First, nearly all of his figures are multiples of 30 stades, which implies a substantial amount of rounding on the one hand and a practice shaped by an established geographical tradition on the other[8]. Second, the various sections that I have investigated are based on a stade that is significantly shorter than the traditional (Olympic) conversion rate of 177.42 m. As I shall explain in the next section (§ 6), I experimented with various conversion rates and discovered that, depending on the sections of Arrian's journey, 123, 150 or 167 m / stade are much more effective averages. If they are granted, Arrian's *Periplus Maris Euxini* allows us to reconstruct his itinerary with only two corrections. To avoid circularity for these emendations, we can draw on internal and external evidence, as will be explained below (§ 7–8).

Moreover, we shall see that the *Tabula Peutingeriana* – even in its insufficient state of transmission – is far from providing random information. This might well be the first impression, when considering that its first route from Phasis to *Cariente* (ablative of *C<h>aries*) only measures 3 miles, seemingly contrasting with the 90 stades (ca. 11–13.5 km) of Arrian. But this discrepancy is justified, if Phasis City was located to the north-east of the Paleostomi Lake, perhaps a little bit further north than the modern coastline[9]: a ship might have had to sail up to 5 km south-west to reach the open sea, and

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1 September. He would have avoided the coast for the stronger currents in spring. Most likely, then, Kotys II died in spring or summer AD 132, his son Rhoimetalkes dispatched envoys who might have met Arrian on his naval inspection tour (which could have justified the detour), went on to Rome and returned by summer AD 133; the king commissioned a statue for the emperor, which was inaugurated in AD 133/34, perhaps in fall 133.

[7] Arr. *Peripl. M. Eux.* 1–11 reports on his journey from Trapezous to Sebastopolis; cf. 17 for a summary. Arr. *Peripl. M. Eux.* 1.1–2.3; 11.1 and 251.1 quotes Xenophon; 3.2 Homer; 18.1 Herodotos; 19.2 Aischylos. Also see *Peripl. M. Eux.* 1.2 for a Greek inscription in Trapezous and 9.1–2. for the statue of Phasiane. Cf. Rood 2011, esp. on Xenophon and the Argonautic tradition.

[8] Arnaud 2005, 73 speaks of a 'fréquence remarquable' and relates it to a more widespread literary tradition that drew on units of 60 or even 120 stades, the latter being a typical Herodotean measure, equalling one parasang or 1/6 of a daily average of 700 stades (cf. p. 72–78). These figures are also compatible with Strabo's preference to round in units of 20s or 40s (cf. Geus, Guckelsberger 2017, 168). The latter is even more noteworthy, given the diverse sources that Strabo was relying on, as Arnaud points out.

[9] The site of Phasis City is generally expected to be somewhere east of modern Poti, buried under layers of up to 12 metres of alluvial sand: Tsetskhladze 1998, 7–11; 2019, 24–25; cf. Silberman 1995, 30; Lordkipanidze 1996, 228–232; 2003, 1297–1298 (linguistic argument for the derivation of Poti from Phasis, with some hesitation); 1307–1308 (probable location near Poti Harbour); 1310 (possible location on eastern shore of Paleostomi Lake). Braund, Sinclair 1997/2000, 1227; map 87 recommend the results of underwater archaeology by Gamkrelidze 1992 for identifying the site largely in the Paleostomi Lake. But Lordkipanidze 2000, 47–53 (cf. Nawotka 2005, 235) and Tsetskhladze 2013, 293–294 prefer to ignore this claim and contradict explicitly in their later publications. Lordkipanidze 2000, 1310–1311 emphasizes that

then some further 7 km north to the mouth of the Charies. It is thus easily fathomable that the distance from the harbour of Phasis City to the harbour of Charies (or Charioustos, as Ptolemy calls this place) was about 3 miles / 4–5 km over land[10].

Another problem of the *Tabula* is that the stretches from Phasis to Sebastopolis only add up to 58 miles (87 km), which pales before the 100 miles that Pliny claims for the way to *Sebastopolis castellum*[11]. As we shall see, however, the problem seems to be that one or two stations before Sebastopolis have gone amiss in the course of the transmission. At the same time, Pliny seems to have calculated his Roman miles too generously. Every single piece of information is thus to be checked for compatibility with the overall evidence and for plausibility from the point of view of an ancient travelor. Considering these principles, we can reconstruct Arrian's naval inspection tour from Trapezous to Sebastopolis with more precision than has been done in previous scholarship. After explaining my approach to converting Arrian's stades into kilometres (§ 6), I shall follow him on his journey from Phasis over Dioskourias / Aia to Sebastopolis / Dioskourias (§ 7). Next will come another methodological reflection, which tries to uncover Arrian's sources and his work procedure. This will in part confirm the results of the previous section, but also call for some modification. Thereafter, I shall explore Arrian's *periplous* further to Herakleion (§ 9), before drawing some final conclusions (§ 10).

6. A NOTE ON THE CONVERSION RATES OF THE ANCIENT STADE

Before we embark on Arrian's ship towards Sebastopolis, we should concern ourselves a bit more with conversion rates for distances measured in stades. This topic has occupied generations of scholars[12]. With reference to Eratosthenes, Pliny applied a convenient ratio of 8 stades per Roman mile (1 *mp* = 1,480 m), which yields 185 m per stade, whereas others calculated averages ranging between 7.5 and 8.33 stades[13]. More telling is

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under-water finds are late and dislocated, so that they may well have been carried into the lake by the river; cf. Tsetskhladze 2018a, 36 and 2018b, 477: "Underwater exploration of Lake Palyastomi has yielded pottery of the Byzantine period but only one sherd of a Greek vessel (dated to the 4th–3rd centuries BC) and the foot of a Rhodian amphora. Most probably, Byzantine Phasis is situated beneath the waters of the lake. One opinion is that Greek and Roman Phasis is underneath the airport". Sens 2009, 125–127, however, also points to Pseudo-Skymnos 928–931 and Anon. *Peripl. M. Eux.* 9v9, who locate the city to the left of those sailing into the Phasis River, whereas he qualifies the archaeological material from the Lake as too late to be decisive (also p. 134, n. 893). Bäbler Nesselrath 1999, 1057 does not specify why she suggests that we look for *Phasis* some 20 km east of Poti.

[10] Arr. *Peripl. M. Eux.* 10.1; *Tab. Peut.* 11.1.1; Ptol. *Geogr.* 5.10.2: the coordinates show that the two places lay much closer by each other than at an average distance; see the map (*Asia* 3) in Stückelberger, Graßhoff 2006, II, 854.

[11] Plin. *NH.* 6.4.14 and *Tab. Peut.* 11.1.1–11.3.1. Pliny's figure is too high, the *Tabula*'s too low, see below.

[12] For recent discussions, see, e.g., Hornblower, Spawforth 2003, 942–943; Arnaud 2005, 61–106; Roller 2010, 272.

[13] Plin. *NH.* 12.53 = Eratosth. F 27, with Roller 2010, 58, 272; Geus, Guckelsberger 2017, 170; also see Arnaud 2005, 81–83, with Plin. *NH.* 3.100–101. Anon. *Peripl. M. Eux.* gives distances in stades plus miles converted at a fixed rate of 7.5 stade. For an example of undue applications of those rates to determine the location of Dioskourias, see part I.2 n. 16.

Strabo's discussion of the distance from Rhodes to Alexandria, once again with reference to the famous geographer from Kyrene, who had rejected the number of 5,000 stades as pure guesswork of sailors and suggested 3,750 as result of his geometrical calculations. In contrast, the geographer of Amaseia prefers a distance of 4,000, resulting from a navigation of four days and nights. His time indication implies a high average speed of 500 stades per 12 hrs (or somewhat more during a long summer day and less during a short summer night)[14]. This figure is in line with the premise of Ps.-Skylax and also compatible with the assertion of Markianos of Alexandria in the fifth century AD, according to whom leading-edge ships could cover 900 stades per day, whereas poorly construed vessels could barely do 500[15]. In contrast, Herodotos and other writers surmise a higher but still realistic daily average of 700 stades[16].

We are thus well advised not to press measurements in ancient accounts too hard. Robert Bauslaugh, for instance, demonstrates that there was a significant variance, normally between 150 and 200 m per stade, but often well beyond these limits[17]. Duane Roller emphasizes that not even Eratosthenes was able to use a consistent standard of the stade, since he was drawing on heterogeneous sources[18]. The same was the case for Strabo; he is said to have favoured numerical data, not so much in order to provide a very accurate and reliable account as to convey 'a sense of precision to his readers', to use the words of Roller. According to Klaus Geus and Kurt Guckelsberger, Strabo's stade ranged between 116 and 240 m, despite his preference for 178 and 185 m. This observation is, however, contrasted by his persistent employment of multiples of 20, which seems to imply to Pascal Arnaud that Strabo thoroughly revised and adapted the data of his sources[19].

Arnaud proposes also, with a view to Ps.-Skylax' and Strabo's average, that 500 stades were a 'consensual' conversion rate per day. However, he makes a similar claim for Herodotos' 700 stades, concluding: 'C'est donc non une distance strictement mesurée, mais une valeur conventionnelle, largement approximative, qui a été ici retenue: celle qui évaluait, par principe, à 700 stades un parcours effectué dans la journée, sans souci de plus de précision'[20]. His argument seems strong at times, while many examples appear a bit forced, since they offer much variation (multiples or fractions of 500, 600 and 700) and rarely go along with time indications to prove the actual claim of a daily average,

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[14] Strab. *Geogr*. 2.5.24 (126 C), with Arnaud 2005, 68.

[15] Ps.-Skylax, *Asia* 69; cf. Counillon 2004, 52; Arnaud 2005, 68. And Mark. *Epit*. 5, with Arnaud 2005, 68, 70–72; also 79–81 for further attestations or variations.

[16] Hdt. 4.86 and Mark. *Epit*. 5, with Arnaud 2005, 72–78. For further variations, see Arnaud 2005, 78–79 (600 stades) and 81–86 (100 *mp* = 800 stades, although he admits on p. 84: 'le mille romain, était spécifiquement vouée à l'expression des distances terrestres').

[17] Bauslaugh 1979, esp. 5, n. 22. Arnaud 2005, 68–106 lists many other examples, although his conclusion (p. 85) is surprising: 'le plus petit stade connu avoisinant les 150m, quand le plus long dépasse 298m, selon les opinions les plus généralement admises'.– Similar uncertainties pertain(ed) to the relation between stades and parasangs, but they need not concern us here.

[18] Roller 2010, 271–273. Arnaud 2005, 85 assesses the stade of Eratosthenes at 157.5 m or 158.7 m.

[19] Geus, Guckelsberger 2017, 167 (cf. 173), with a brief survey of the different measurements Strabo used, and pp. 168–170 on various conversion rates. Cf. also Arnaud 2005, 73 (see above, n. 49).

[20] Arnaud 2005, 72–78, quotation on p. 74.

nor are other factors that affect travel times taken into account. This renders at least part of the argument circular.

The tendency to disconnect the number of stades from the geographical realities is taken even further by other scholars, such as Tim Rood and Anca Dan, who point to the literary functions that measures of distance served, especially in Xenophon's *Anabasis*[21]. Such an approach may be useful to explain some omissions or other selections of information, but we should not discard too quickly an author's genuine intention of producing reliable spatial information, whether for its practical use (such as is the case with the drier *periploi*) or for the rhetorical purpose of underpinning one's credibility with adequate rather than random figures. My expectation is that authors of non-fictional prose normally shrank away from fabricating their numbers. This view is still compatible with 'guesstimates' to fill occasional gaps in the sources, rounding of uneven values and committing errors of calculation or copying. The general vulnerability of numerals in the course of the literary transmission becomes most obvious when one glances into the critical apparatus, say, of the *Itinerarium Antonini* or *Burdigalense*.

Measuring distance indeed posed a practical challenge in antiquity. On land, at least sometimes, professional step counters (*bematistai*) were available, whereas distances on sea could in theory draw on geometrical calculations. In most cases, however, ranges appear to have been based on a conversion of travel times. An open question is in how far data in stades took into account variable factors, such as mountains, marshland etc. on land or winds, currents or dangerous cliffs on sea, not to mention the means of transportation. Perhaps with the exception of less detailed descriptions of major world regions, it is a fair assumption that values given in stades (or miles) were supposed to be the same on the outbound and return way, and they would not change for a man on foot or on horseback[22].

This is not to deny a strong subjective factor in the calcululations, but one may still expect some consistency within itineraries composed by individuals or at least within stretches thereof, as much as they were based on a homogenous source or even better on autopsy. If not, such information might have been useless, if not dangerous, since it could have caused perilous shortcomings in the organization of travels. It would, in fact, be difficult to explain that no (preserved) ancient author ever blamed the literary tradition of travel distances in stades as fictitious or useless. At any rate, even those who might still hesitate to accept my more optimistic premise will perhaps yield to Arnaud's observation that the practice of converting stades into Roman miles gradually brought about an inclination towards producing more fact-based distances in the Roman Imperial period[23]. Accepting this would be sufficient to grant the numbers reported by the Roman governor Arrian as high a level of authority as I am proposing: while their absolute value is open to question, their proportions should be meaningful.

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[21] Rood 2011 and Dan 2014.

[22] That currents or winds might have advised sailors to take an alternative route back is a different matter.

[23] Arnaud 2005, 87: 'les valeurs dont nous pouvons désormais disposer sont réputées être l'expression d'une norme statistique qu'elles acquièrent une valeur documentaire particulière.' Perhaps even more convincingly, one may argue for a trend towards rationalization or standardization under Roman rule.

I began my investigation of his *periplous* by applying traditional conversion rates of 178–185 m / stade, but when they turned out to be futile, I chose two more meaningful values: my first is derived from the traditional (Eratosthenean) distance of 600 stades between Phasis and Dioskourias: based on my approximate locations, these cities were about 74 km apart from each other, which yields an average of 123 m / stade. The second rate is based on Arrian's information that the distance between Phasis and Sebastopolis was 810 stades, from which I subtracted 150 stades (identified as erroneous on two independent ways, see sections 7 and 8 respectively). Since I measure 94 km between those two ancient cities, the average is 149 m / stade, which I rounded to 150 m for the sake of convenience. Without this correction, the conversion rate would have been 116 m / stade and, for the most problematic portion of the way, the stretch from the Tarsouras (if it is the Ghalidzga) to the Hippos (if it is the Tskhenistsqali), 7 km / 150 stades = ca. 47 m / stade. Obviously, this would be beyond reason. Neither 123 nor 150 m / stade is suitable for the stretch from Sebastopolis to Herakleion, a theoretical addition to the *periplous*, since Arrian travelled only as far as Sebastopolis in person. He sets the two places apart by 770 stades, which equals 129 km according to my reckoning. This yields an average of 167 m / stade. Such discrepancies indeed call for caution: any plausible conversion rate requires sufficient context information.

My method implies yet another difficulty in that my new locations of Dioskourias and Sebastopolis are a premise for the numbers to work. Another problem is that I adjusted Arrian's total of 810 stades to 630 stades. Had I maintained the traditional location of *Sebastopolis* at Sukhumi, the total distance by sea would have been ca. 120 km, according to which Arrian's stade would have averaged 148 m and Eratosthenes' 200 m respectively. No scholar has so far been able to apply these and other relevant numbers in a consistent scheme that would support the choice of Sukhumi. As a result, moving away from an entire *aporia* towards a model in which an approximate rate of 123 m / yields acceptable locations consistent with the literary tradition should be welcomed as an improvement. Given the partial circularity, however, I admit that the argument deployed in part II will not prove that the new locations suggested for *Dioskourias* and *Sebastopolis* are correct. It is sufficient to show that, if my suggestions are accepted, we are in a position to apply the extant *periploi* consistently to a historical map[24].

7. REVISITING ARRIAN'S PERIPLOUS I: FROM PHASIS VIA THE RECESS TO SEBASTOPOLIS

Let us finally start delineating Arrian's itinerary. He set out from Phasis City, took the necessary southern detour described above and reached the mouth of the Charies after 90 stades, which yielded 13.5 km if a conversion rate of 150 m per stade is applied, and ca. 12 km, if we allow for an average stade as short as 123 m. On a modern map, the Kulevi and Churia Rivers come next at distances of ca. 7 and 6 km respectively. These 13 km compare well with Arrian's 90 stades / 12–13.5 km to the Chobos[25]. One might argue against this reconstruction that the ancient Chobos should rather be identified with

[24] See part I.2, p. 359–363 for examples of cherry-picking from the transmitted distances.

[25] Arr. *Peripl. M. Eux.* 10.1. Anon. *Peripl. M. Eux.* 9v19 also gives 90 stades each, which he converts automatically as 12 *mp*.

the modern Khobistsqali. This is the name of the upper and middle course of the current Kulevi, which originates in the Main Caucasus and enters the Kolchian plain roughly in its northern center, to run through the town of Khobi before bending south-west towards the sea. But the distances provided by Arrian and the *Tabula* (see below) may well imply that the Chobos / Khobistsqali previously followed a course further to the north. It is even possible that it shared part of its river bed with the little stream Munchia, which now runs parallel to the Khobistsqali north of Khobi.

What is a bit surprising is that the *Tabula* assesses the according land route at 16 miles / 24 km. Konrat Miller felt the need to reduce this to ca. 10 miles, but there may be better explanations. One possibility is that swampland along the shore required substantial detours, although this could be said for nearly the entire littoral. Another potential factor for the discrepancy is that the ancient estuary was a bit further north than that of the Churia, or at least the settlement of Chobos, to the effect that this stretch was longer than the distances between the river mouths as encountered by Arrian. If so, then the subsequent journey was relatively shorter[26].

By ship, it is 8 km from the Churia River to the Patara-Enguri River. Arrian does not mention it, although its estuary is (at least now) located on a little cape, which hosts the modern city of Anaklia. He likewise does not pay attention to the iron-age settlement of Pichori (which may not have been visible from the sea) or the Gagida River, which merges into the sea some 14 km north of Anaklia. I do not recognize any particular landmark or river before the Second Gudava after another 8 km (altogether 30 km from the Chobos / Churia River), but we have to keep in mind that the riverscape has been profoundly changed through modern channels, such as the Second Gudava itself. I therefore assume that Arrian's next stage, the mouth of the Sigame River, lay somewhere in-between the Gagida and Second Gudava, perhaps around 5 km past the former and 27 km past the Chobos. It is quite possible that the highly regulated Patara Eristsqali, which now empties into the lower course of the Second Gudava, was the ancient Sigame.

Ptolemy speaks of Siganeon, probably the town at the estuary, whereas the *Tabula* calls it Sicarabis. Arrian declares 'at the utmost' 210 stades (ca. 25.8–31.5 km) for this route. On the one hand, this exceeds even the 19 miles / 28.5 km of the *Tabula*, although it is the latter's land route that should be longer; on the other hand, Arrian himself indicates doubts about his own figure. We should therefore – tentatively – reduce Arrian's distance by 30 to 180 stades (ca. 22–27 km). This would be compatible with a land route of 19 miles / 28.5 km, if only we remember that the settlement of Chobos seems to have been located a few km north of the homonymous river[27].

Arrian tells us that, on the subsequent stretch of his journey, his ship 'bended its course to the left' (west). This is still an accurate description of the current littoral from

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[26] *Tab. Peut.* 11.1.1. Cf. Miller 1916, 652, who, by the way, does not doubt the identity of the Chobos and the 'Khobi'; he is right to point out that the town 'Chopi' (Khobi) is too far inland and vaguely refers to a 'Flecken Kopi' along the coast, which I could not verify. But for the possibility of identifying the Kulevi with the Chobos, see below, § 8.

[27] Arr. *Peripl. M. Eux.* 10.2 (repeated in Anon. *Peripl. M. Eux.* 9v20); *Tab. Peut.* 11.1–11.2.1; Ptol. *Geogr.* 5.10.2; Strab. *Geogr.* 2.1.39 (92C) = Eratosth. F 52 and 11.2.16 (497–498 C). They will all be discussed below.

the Second Gudava to Ochamchire[28]. On this route, sailors pass by the Okumi (3 + 3 km) and the Ghalidzga Rivers (9 km), the former a little stream that unites with a much larger channel shortly before merging into the sea, the latter reaching the Euxine just south of the modern city of Ochamchire[29]. Pomponius Mela confirms the characterization by Arrian, since he locates the city of Cycnus (i.e. Gyenos) 'where the curving of the coastline begins'[30]. Arrian appears to be completely unaware of this ancient Greek *polis*, but it figures on the *Tabula*, which locates a certain Cyanes 4 miles / 6 km north of Sicarabis. Kyaneos Potamos also follows on Siganeon in Ptolemy's *Geography* (though at a 'regular' distance). As a result, we should identify the Okumi with the Gyenos River attested by Pseudo-Skylax and expect to find the homonymous *polis* on its bank[31].

Gyenos was established by the Milesians as an *apoikia* right on the coastline in the sixth century BC, but constant sedimentation rendered its harbour economically unviable. By the second century BC, when we see most of the eastern-Euxine harbour cities decline, Gyenos was reduced to an inland village, which still had its minor role as a station on the land route from Phasis to Dioskourias, but was no longer visible as a town from the open sea. The satellite images provided by *Google Maps* show structures of a (probably ancient) settlement between 1 and 2 km away from the estuary of the Okumi. My reconstruction is further confirmed by the ensuing station on the *Tabula*, Tassiros, which is 12 miles / 18 km further ahead of Cyanes. This must denote the settlement on the estuary of the Tarsouras River mentioned by Arrian as the first station after Sigame, 120 stades / ca. 14.8–18 km to its north. The Tarsouras may therefore equal the Ghalidzga River[32].

The next section of Arrian's journey is the most complicated, likely due to a slip in his notes or logbook. He specifies the distances from the Tarsouras to the Hippos River as 150 stades / 18.45–22.5 km. But this is definitely too long, since the 'Horse' River seems to be the same as its Georgian namesake, the Tskhenistsqali, which flows into the sea on the left side of the bay of Ochamchire, some 7 km past the Ghalidzga. I admit some uncertainty, since Arrian does not mention the Moches / Mokvi, a much larger river. It empties into the sea about 1.5 km east of the Tskhenistsqali[33]. However, the Hippos may well have been the demarcation of the city's (or chora's) boundary, so that the

[28] However, I also see the possibility that this is a reflection of the recess location of Dioskourias, as expressed in the skewed *periplous* B, as reconstructed below, § 8.

[29] Arr. *Peripl. M. Eux.* 11.4. Note, however, that this is a summary version which does not specify the distances and skips the Tarsouras, both of which were mentioned in *Peripl. M. Eux.* 10.2. It is thus not entirely clear whether Arrian is referring to the light bending south of the Ghalidzga or to the sharp left turn just before the Mokvi. I assume the former, since he expresses the straight shift to the west after the Hippos in *Peripl. M. Eux.* 11.4.

[30] Pomp. Mela 1.99 (110): *At in primo flexu iam curvi litoris oppidum est quod Graeci mercatores constituisse, et quia cum caeca tempestate agerentur, ignaris qua terra esset cycni vox notam dederat, Cycnum adpellasse dicuntur.*

[31] Ps.-Skylax, *Asia* 81, see above; Ptol. *Geogr.* 5.10.2. The map of Stückelberger, Graßhoff 2006, II, 854 duly positions this Kyaneos between Siganeos and the Hippos / Mokvi (on which see below), but identify it with the Tekhuri, which is often suggested to be the Kyaneos that merges into the Phasis / Rioni. See part I.4, p. 368–370 for more on these rivers.

[32] Arr. *Peripl. M. Eux.* 10.2. Anon. *Peripl. M. Eux.* 9v21 differs, see below.

[33] Arr. *Peripl. M. Eux.* 10.2. A possible but unnecessary assumption is that the two rivers swopped their names at some point, perhaps because their lower courses had formerly shared

river called Moches in Late Antiquity would equal the Anthemous, on whose bank Pliny locates Dioskourias[34]. In fact, I suspect that Arrian took the much broader Moches for the Hippos. Another problem is that the compiler of the anonymous *periplous* identifies the Tarsouras with the Moches, while maintaining the same partial distances as Arrian; it is the Hippos that he relocates by identifying it with an otherwise unknown Lagumpsa River[35]. What caused the confusions in both *periploi* is ultimately uncertain, but, if we continue to believe that Arrian tried measuring or at least estimated the stretches of his journey, then he may have specified the distance from Sigame over the Tarsouras to the Hippos as 120 + 30 = 150, which then became 120 + 150 by a slip in the extant manuscript tradition as well as in the anonymous *periplous*.

By this understanding, Arrian would have identified the Tarsouras with the Ghalidzga and the Hippos with the Anthemous / Moches / Mokvi some 5–6 km away (rather than the Tskhenistsqali another km further)[36]. In accordance with this, the *Tabula* details Stempeo 4 miles / 6 km after Tassiros. Perhaps this awkward name derives from εἰς τὸν Ἵππεον? My reconstruction can draw on further evidence. The next stage in the *Tabula* is specified as Sebastopolis, allegedly only 4 miles past Stempeo. This is obviously wrong, and I have already mentioned above that one or two stations must have been omitted by accident, since a landroute of 58 miles from *Phasis* to *Sebastopolis* is too short by all accounts. But the 4 miles may still be an authentic piece of information, referring to the next (omitted) station close by the mouth of the Hippos / Tskhenistsqali. In Arrian's *Periplous Maris Euxini*, this is the Astelephos River, located 30 stades / 3.7–4.5 km west of the Hippos[37]. Its modern name is either Dghamishi or Toumishi, a pair of rivers which empty into the Black Sea 2.9 km and 5.8 km respectively past the Tskhenistsqali. Unless the river courses changed substantially, Arrian most likely related the 30 stades to the distance between the Mokvi and Dghamishi.

It is noteworthy that Arrian describes the route past the Hippos as directed straight to the sunset, which is a clear reflection of Dioskourias' or Aia's location in the 'recess' of the Black Sea. This observation would make little sense, were the Hippos located half-way between Ochamchire and Lake Skurcha, as the modern consensus requires us to believe. The next detail that the Main Caucasus emerges before the sailor's eyes, when turning towards Dioskourias / Sebastopolis, fairly describes the experience of those passing into Lake Skurcha or around Cape Kodori, and is thus compatible with either reconstruction[38].

Arrian assesses the way to the Astelephos as 30 stades / 3.7–4.5 km, followed by another 120 stades / 14.8–18 km mostly in the western direction towards Sebastopolis[39].

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a riverbed before reaching the Euxine. The Hippos / Tskhenistsqali must not be confused with the homonymous tributary of the Phasis / Rioni, on which see below.

[34] Plin. *NH*. 6.4.15.

[35] Anon. *Peripl. M. Eux.* 9v21. Also see part I.3, p. 364–365 with n. 30–34, and below, § 8.

[36] But see below, § 8, for an alternative approach.

[37] Arr. *Peripl. M. Eux.* 10.2 (cf. Anon. *Peripl. M. Eux.* 9v21–22); *Tab. Peut*. 11.2.1.

[38] Arr. *Peripl. M. Eux.* 10.2–3 (distances); 11.5 (direction and view, cf. Anon. *Peripl. M. Eux.* 9v36–37). And Plin. *NH*. 6.4.14 and 6.5.16, discussed in part I.2, p. 359–360. Counillon 2004, 57 with n. 271 adduces these passages for Dioskourias / Sukhumi.

[39] Arr. *Peripl. M. Eux.* 10.3. Anon. *Peripl. M. Eux.* (9v22) differs once more, specifying 135 stades between Ἀτέλαφος (*sic*) and Σεβαστούπολις (*sic*).

This compares well with the distances that I have measured: 2.9 km from the Tskhenistsqali (or 4.4 km from the Mokvi) to the Dghamishi, another 16.5 km to the outlet of Lake Skurcha on Cape Kodori, whence it is 3 km to the first and another 2 km to the farthest arm of the (modern) Kodori Delta. The nominal distance from the Hippos of 150 stades (18.5–22.5 km) would thus be compared with an effective route of 19.4–24.4 km. But if one looks more closely at the structure of Cape Kodori, it appears to consist for the most part of alluvium, and Lake Skurcha emerges as a left-over of former branches of the Kodori, whose delta thus opened into the sea up to 3.5 km further east than today. The northern coast of Lake Skurcha, which may well have been a bay wide open to the sea in antiquity, was therefore most likely Arrian's final destination, some 20 km west of the Hippos[40].

8. DIGRESSION: TESTING AND CORRECTING THE COUNTS OF ARRIAN, THE *TABULA PEUTINGERIANA* AND PLINY

Even if there was a fact-based relation between the distance figures Arrian produces and the (historical) space that he travelled through, we have yet to find an answer to the question of how those figures were actually determined. Ideally, sailing times were converted into stades, with due consideration of the most influential factors such as currents, winds and the condition of the ship. The persistent direct or indirect references to a literary tradition may, however, suggest that the numbers of Eratosthenes (and Strabo) continued to be influential. Perhaps their major route descriptions, such as the 600 stades between Phasis and Dioskourias[41], were accepted as a framework and broken down into meaningful portions that were still measured out. A more pessimistic reconstruction might assume that Arrian drew on a literary tradition and did no more than trying to identify the named rivers and cities on his way, perhaps with the help of the transmitted distances, though not even caring about adjustments where problems were significant. We shall see that all three approaches lurk behind our convoluted literary tradition. Even if one of my results will be pessimistic in that it strongly limits Arrian's concern about measuring or assessing distances himself, his *periplous* will allow us to reconstruct older literary sources, whose archetype was based on a much more precise measurement.

Arrian covered the distance from the Chobos to Sebastopolis in a single day. This induced him to give us the total of this journey, which is 630 stades (210 + 120 +150 + 30 + 120)[42]. If we add the first two sections of the journey from Phasis over the Charies to the Chobos (90 + 90 stades), we obtain Arrian's nominal total distance for the way from Phasis to Sebastopolis (810 stades). Subtracting the 150 stades in-between the Hippos and Sebastopolis yields the nominal distance from Phasis to the Hippos, where I locate Dioskourias (660). As we have seen above, however, the route from Chobos to Sigame comes closer to 180 stades than ('at the utmost') 210 stades and the stretch from the Tarsouras (if the Ghalidzga) to the Hippos (if the Tskhenistsqali) should have been calculated as 30 instead of 150 stades. The corrected nominal totals are therefore

[40] According to Gabelia 2003, 1227, Dubois de Montpéreux identified the place of Skurcha with Dioskourias, partly due to its homophony. I would not want to exclude the possibility.

[41] Strab. *Geogr.* 11.2.16 (497–498 C), quoted in part I.3, n. 37. And 2.1.39 (92 C) = Eratosth. F 52, on which see part I.3, p. 367 with n. 41.

[42] Arr. *Peripl. M. Eux.* 10.4 *versus* 10.1–3.

510 stades for the way from Phasis to the Hippos and 660 stades respectively from Phasis to Sebastopolis.

In support of reducing Arrian's distances, one may also adduce Eratosthenes and Strabo, who, as we remember, assessed the distance between Phasis and Dioskourias as 600 stades. This said, none of Arrian's explicit or implicit totals (510, 630, 660, 810) is a match, so that one might (once more) draw the conclusion that Arrian's calculus is independent from those two major authorities. But, upon closer inspection, this does not seem to be entirely true. In fact, the confusion in Arrian's numbers allows for some unexpected insights into the sources that he or his staff drew on. Many different hypothetical reconstructions are possible, but the following seems to be the most plausible and economic to me.

At some point, there must have been a *periplous* that measured the distance from Phasis to the 'recess' / Dioskourias / Aia as 600 stades, no matter whether this resulted in or originated from Eratosthenes' *Geography*. I call this '*periplous* A' or the 'archetype'. The author of a much later source related the same 600 stades to the stretch from Phasis to Sebastopolis / Dioskourias (B): this version must have located the Hippos 450 stades north of Phasis, whereas Sebastopolis came after another 150 stades west, the total remaining 600. A third author (C) conflated both traditions by duplicating the last section of 150: it first figured as the last distance before the Hippos / the 'recess' and once more as the last stretch to Sebastopolis, bringing the total up to 750 stades. This duplication must have been the main root for the confusion that we see in Arrian and the anonymous *periplous*. But this is not yet the only divergeance. Further variation potentially crept in through *1)* contamination between the traditions B and C, *2)* singling out some of the stretches (e.g., Hippos to Sebastopolis = Hippos via Astelephos to Sebastopolis), and *3)* further adjustments in response to the changing coastline (such as at the Phasis estuary). These were the mechanisms that let the distance swell to 810 stades in Arrian's account and to 825 stades in the anonymous *periplous*[43].

We can try to be more precise, while still openly admitting the hypothetical nature of our endeavour. The abovementioned archetypical *periplous* A might have run as follows: Phasis to Chobos: 120 stades (instead of the 90 + 90 claimed by Arrian); Chobos to Sigame 210 stades (maintained by Arrian and the anonymous *periplous*); Sigame to Gyenos 120 stades; another 150 stades to Dioskourias, possibly with a mention not of its main river but its northern boundary, the Hippos. It is historically relevant that the author of *periplous* A had a much shorter way from Phasis to the Chobos about half a millennium before Arrian embarked on his naval campaign. This seems to imply that Phasis City had a more direct access to the open sea (and thus also to the Charies), not yet inhibited by a sandbar which would later close up the Paleostomi Lake. This assumption can be supported by the short distance (4 miles) on land between Phasis City and Cariente on the *Tabula Peutingeriana*.

The essential variation of B was the identification of Dioskourias with Sebastopolis, perhaps with the modification of some topographic detail. In particular, the Hippos now became a nominal landmark on the way to Dioskourias, rather than its north-western

[43] The latter maintained all but the last of Arrian's summands, the distance from Atelaphos (sic) to Sebastopolis, which rose from 120 to 135 stades.

boundary. Author C contaminated versions A and B by maintaining the distance of 150 stades between Gyenos and the Hippos and adding a further 150 stades after the Hippos on the way to Dioskourias / Sebastopolis. Since neither author B nor C had any effective knowledge of Gyenos or Dioskourias / Aia, either of them could have been responsible for other adjustments, such as replacing Gyenos with Tarsouras (120 stades after Sigame) or introducing the Astelephos; likewise possible is that later editors (B^2, C^2) were at work. One editor, who was no longer concerned with a total of 600 stades (as A and B had been), specified the stretch from Phasis to the Chobos by introducing the Charies as an intermediate station and bringing up the number of 120 to 180 (90 + 90) stades. I do not think that this was Arrian, because, in this case, he should have noticed that 150 stades for the distance between the Tarsouras and Hippos were too long. Whether the Roman governor operated with a single *periplous* (? C^2) or had two different versions, which he clumsily combined into one should remain open.

This (even still hypothetical) reconstruction may also shed new light on the difficulties we encountered when trying to identify Chobos, Sigame and the Tarsouras in the previous section (7). While our first conclusions are not yet invalidated, we may still consider potential modifications. Reducing the distance between Phasis and Chobos to 120 stades would give us sufficient leeway to regard the ancient Chobos as the modern Kulevi rather than Churia. If so, my 'correction' of the distance of 210 stades to Sigame may have been rushed as well. It would be interesting to know what ultimately evoked Arrian's doubts about the length of the way to Sigame. Was it that he found the distance between the two landmarks (as he identified them) a bit shorter or was it that he found alternative indications in his written sources?

Another ramification pertains to Tarsouras: understanding that it was somewhat randomly chosen to replace Gyenos by author B or C, I no longer want to exclude the possibility of its identity with the Moches, as the anonymous *periplous* has it. My preference remains, however, its equation with the Ghalidzga, which better accounts for the 4 miles to the Hippos given in the *Tabula Peutingeriana*. In addition, I would rather want to regard the Hippos and the Tarsouras as boundary rivers of Dioskourias / Aia, which was centered on the banks of the Anthemous / Moches respectively. Those names were no longer used by *periplous* writers who expected Dioskourias at Sebastopolis by the Kodori (whose ancient name escapes us).

Next, my equation of the last station prior to Dioskourias (until the Hippos) with Gyenos in the archetypical *periplous* A has so far been purely conjectural. One reason that led me to choose Gyenos is that it is the only *polis* mentioned in-between Dioskourias / Aia and Phasis by Pseudo-Skylax (*Asia* 81) in the fourth century BC, who also lists three otherwise unidentified rivers (Cherobios, Chorsos and Arios). This must have been a city of some size, but its harbour declined by the second century BC, whence it may no longer have been visible from the open sea.

Another argument can be developed from the distances reconstructed for the archetypical *periplous*: Gyenos as a station on the way from Phasis to Dioskourias was precisely three quarters (450/600) away from the former and one quarter (150/600) from the latter. The distance, although potentially rounded, implies more than that there were three posts altogether between the two major *poleis*, since the first was at a distance of 120 stades from Phasis and the second further away by 210 stades. The final proportion is

nearly paralleled by the *Tabula Peutingeriana* (despite its indication of a land route): the stretch from Phasis over Charies, Chobos, Sigame to Kyanes (3 + 16 + 19 + 4) adds up to 42 miles. Out of a total of 58 to the Hippos (Stempeo), this would yield 72.4%, but it is a fair assumption that the center of Dioskourias was located about 2 miles west of the Hippos, so that the relative distance to Kyanes / Gyenos would be 42/56 = 75%. Ptolemy's map points into the same direction by placing Phasis, Charioustos (Charies, confused with Chobos?), Neapolis / Siganeon, the estuary of the Kyaneos and the mouth of the Hippos at nearly equal distances from each other[44].

The distances that I have measured from the Phasis to the settlement by the Okumi River, my tentative identification of Gyenos, is ca. 6 + 13 + 27 + 3 = 49 km. Out of a total of 74 km to the Hippos, this only yields 49/74 = 66.2%, but if we reduce the distance by an adequate amount to reach the center of Dioskourias, the proportion will come quite close again, 49/71 = 69%. While I do not want to exclude the possibility that the site of Gyenos was located a bit further north I would still consider my current suggestion on the bank of the Okumi compatible with these figures. They contrast significantly with those resulting from the traditional locations of Gyenos at Ochamchire (ca. 71 km) and Sebastopolis at Sukhumi (120 km): if these were accepted, then the ratio would be 71/120 = 59.2% – which is quite out of line with the ancient literary tradition.

The *Tabula Peutingeriana* permits us to pursue yet another path. Its route from Phasis to the Hippos (by Dioskourias / Aia) adds up to 58 miles (or ca. 56 respectively). For the remaining stretch from the Hippos over the Astelephos to Sebastopolis, Arrian gives 30 + 120 stades, whereas the *Tabula* provides 4 miles as the equivalent of the former number. We may fill the blank with an approximate 4 x 4 = 16 miles, so that the uncorrupted version of the *Tabula* would have rendered the total distance from Phasis to Sebastopolis around 58 + 4 + ca. 16 = ca. 78 miles (ca. 117 km).

These figures may next help us put Pliny's information into perspective. As we remember, the Roman scholar assessed the distances from Phasis to Sebastopolis as 100 miles, from Sebastopolis to Herakleion as 70 miles and from Dioskourias to Herakleion as 100 miles. If correct, this yields distances of 70 miles from Phasis to Dioskourias and of 30 miles from the latter to Sebastopolis. A comparison with the Tabula, which also gives longer land routes rather than shorter sea distances, reveals that Pliny's figures are strongly inflated. We cannot know exactly where he got his numbers from, but, at least for the 70 miles from Phasis to Dioskourias, I would venture the suggestion that Pliny (or rather his source) drew on Eratosthenes' sea route defined as 600 stades. Pliny himself normally converted Eratosthenean stades to miles at a ratio of 8 to 1 (which would have yielded 75 miles); Polybios is known to have applied a rate of 8.3 (72 miles). Pliny's source thus either used a conversion rate closer to 8.5 (70.6 miles) or rounded down the result, though not yet enough to render it realistic[45].

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[44] Arr. *Peripl. M. Eux.* 10.3; Ptol. *Geogr.* 5.10.2. Cf. the map of Stückelberger, Graßhoff 2006, 2, 853. But apart from the uncertainty regarding Charioustos, also note that the Hippos is located closer to Sebastopolis than to the Kyaneos, although this runs parallel to the erroneous distance of 150 stades between the Tarsouras and the Hippos in the *periploi* of Arrian and the anonymous author.

[45] Also see above, § 6, on Pliny's mile. For Polybios, see Arnaud 2005, 83–84.

At any rate, Pliny must have used a heterogeneous tradition, since he had knowledge of *Sebastopolis* (*castellum*) and still located it 30 miles further up the coast. If we apply the convenient standard of 1.5 km per Roman mile, this would take us some 45 km north-west from the Hippos to reach Sebastopolis. If, however, this distance is flawed by the same ratio as the previous 70 miles, then we may expect to find Sebastopolis after 123/177.42 x 45 = 31.2 km. But the original number would have to define the distance on land, to be compatible with the ca. 20 km on sea, which I have measured between the Hippos and Lake Skurcha. Pliny obviously drew on heterogeneous sources.

9. REVISITING ARRIAN'S *PERIPLOUS* II: FROM SEBASTOPOLIS VIA PITYOUS TO CAUCASIAN HERAKLEION

Although Arrian's own journey ended in Sebastopolis, his *Periplous Maris Euxini* covers the whole coastline of the Euxine. Plenty of scholarship on this region was available to him, even if it was often inconsistent or simply inaccurate. Used with some caution, however, Arrian's brief second-hand account is still the most important source for the distances of the north-eastern littoral, which we are going to follow up until Caucasian Herakleion. The first station Arrian mentions after Sebastopolis / Dioskourias is Pityous, which he reached after 350 stades. Pityous is commonly identified with Pitsunda (also Pitzunda, Bitchvinta), mainly due to the near-homophony with the modern name, but the material evidence from Pitsunda is very inconclusive, epigraphic material is absent and Arrian's distance does not take us thus far. A straight line from the north bank of the Kodori estuary to Cape Pitsunda measures about 70 km, from Lake Skurcha it would be about 5 km more. The sea route would thus be around 75 to 80 km, so that Arrian's stade would now measure some 220 m, which is simply too much[46].

A better fit would be the bank of the Aapasta River, which is now at a distance of ca. 53 km from Lake Skurcha, thus nearly an exact match of Arrian's distance, if converted at a rate of 150 m / stade. An alternative candidate is the Khipsta River, at a distance of 60 km by sea from the Kodori or even 65 km from Lake Skurcha. The latter would, however, presuppose stades measuring ca. 186 m. Some unexpected support for the Khipsta may come from Ptolemy. Although this geographer misplaces *Pityous* on the southern coast of the Euxine (i.e. in north-east Asia Minor), the latitude of 71° seems to be a match of the Khipsta estuary, whereas it is far off from Pitsunda[47]. Even better in line with Ptolemy's coordinates and with the average conversion rate for the stade in the present segment of Arrian's *periplous* would be a location covered by present-day Gudauta, where satellite images show the traces of former branches of the Khipsta. This would reduce the distance from Lake Skurcha to possibly as little as 55 km (as the crow flies),

[46] Arr. *Peripl. M. Eux.* 18.1; cf. Anon. *Peripl. M. Eux.* 9v42.

[47] Ptol. *Geogr.* 5.6.6 locates Pityous between Trapezous / Trabzon (70° 45') and Pontic Athens / Pazar (71° 15'). For the most part, coordinates in Ptolemy's *Geography* do not result from absolute geometrical data, but are approximations based on known, experienced or estimated distances to other places; see Arnaud 2005, 67. Irrespective of the coordinates, Stückelberger, Graßhoff 2006, 2, 515 take the identity of this Pontic Pityous with Caucasian Pityous for granted, although they map it in Pontos (p. 848) without comment. I assume that the mislocation may be due to the establishment of a Roman garrison in the generation after AD 132. See part I, appendix 2, for the history of Pityous.

and thus the conversion rate to 157 m / stade. To be on the safe side, let us take some middle ground, assume a harbour place in the modern city of Gudauta (on the cape just south of the present Khipsta estuary) and further round up the distance by 2 km, to allow for the usual manoeuvring. This adds up to 58.5 km, which yields a conversion rate of 167 m / stade, about the same that will be the average for the whole distance from Sebastopolis to Herakleion, as we shall soon see.

Arrian's next station was *Nitike*, if we read the manuscript ΣΤΘΗΝΝΙΤΙΚΗΝ as (εἰ)ς τὴν Νιτικήν. His report is embellished with a brief digression on the local Scythians, whom Homer already characterized as 'people who dwell on fir cones' (φθειροτραγέοντες). Nothing helps us locate this tribe, other than the distance of 150 stades, which translates to 25 km, if we apply the aforesaid new conversion rate of 167 m[48]. This takes us exactly to the Bzipi River, which is believed to have been known by the name of Korax in antiquity. Ptolemy calls this the northernmost boundary of Kolchis[49]. Thereafter, Arrian details 90 stades / 15 km to the Abasgos River and another 120 stades / 20 km to the Bogrys River. We lack independent evidence for them (other than the anonymous *Periplus Maris Euxini*, which compiled Arrian's report with others). It is of little help to us that these names can be related to the Abchasian people in the north-west of Georgia and perhaps also to the Brouchoi, another Caucasian ethnic, because we do not know their whereabouts either[50]. Arrian's distances suggest the identity of the Abasgos with the Zhvaviakvara (16 km) and of the Bogrys with the Psou (19 km), which merges into the sea just west of Adler.

This modern city is built on the namesake cape, where the littoral verges to the north again; 60 stades / 10 km further on, Arrian encountered the Nesis. This must be the Mzytma River (9 km), which reaches the sea by running south-west, thus nearly cutting through the middle of the cape. Previous branches of the delta may have merged up to 2 km further north. It is in this area where Arrian locates Ἡράκλειον ἄκρα and where we should expect the ruins of Pliny's *Heracleum oppidum*. The compiler of the anonymous *periplous* gives Pyxites as another name of the ἄκρα[51].

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[48] Arr. *Peripl. M. Eux.* 18.1, referencing Hdt. 4.109. The commentators Silberman 1995, 50; Liddle 2003, 120 and Belfiore 2009, 209, n. 229 suggest the Gagra area 25 km north of Pitsunda; cf. Braund, Sinclair 1997/2000, map 87. Also see Anon. *Peripl. M. Eux.* 9v44: εἰς Σθηννιτικὴν χώραν (same distance).

[49] Ptol. *Geogr.* 5.10.1–2. See, e.g., Braund, Sinclair 1997/2000, 1228; map 87 and Stückelberger, Graßhoff 2006, II, 541 for the identification with the Bzipi, also p. 854 for map *Asia* 3. Ptolemy lacks information for the further section from the Korax to Phanagoria, see the map *Europa* 8 (p. 807). I assume that the homonymy with the *Koraxoi*, whom Plin. *NH.* 6.5.15 names as the ethnic living around Dioskourias, is due to the Greek conception of Kolchis, see part I.4, n. 45.

[50] Arr. *Peripl. M. Eux.* 18.2; cf. Anon. *Peripl. M. Eux.* 9v45–46. Belfiore 2009, 209, n. 231–232 identifies the Abaskos with the modern Lapsta or Liapipista, whereas he equates the Borgys only with the ancient Bourka (Ptol. *Geogr.* 5.9.9) or Brouchon, which was also called Mizygos (Anon. *Peripl. M. Eux.* 9v46). Cf. Silberman 1995, 15, n. 187 and 50, n. 186; Braund, Sinclair 1997/2000, map 87; Liddle 2003, 120. On the sources and the method of the anonymous compiler, see Diller 1952, 102–113.

[51] Arr. *Peripl. M. Eux.* 18.2; cf. Anon. *Peripl. M. Eux.* 9v46–10r1. On the Nesis / Mzymta, also see Belfiore 2009, 209, n. 233 and Liddle 2003, 121 (Mzynta). For Pliny and the further discussion on Herakleion / Adler, see part I, appendix 3.

Altogether, Arrian puts this cape at 770 stades from Sebastopolis. Applying the convenient rate of 150 m per stade, this would equal 115.5 km. This is not enough to match the effective sea route of no less than 129 km (following the anchorages listed by Arrian)[52], possibly even a bit more, if we account for accessing harbours or avoiding sand banks. While we saw that Arrian's use of the stades for the route that he travelled and measured himself was up to 20% shorter than our convenient rate of 150 m, the stations after Sebastopolis, for which he was depending on literary sources, used a stade that was up to 15% longer, averaging around 167 m.

10. CONCLUSIONS AND OUTLOOK

Throughout this study, I have addressed the obstacles to identifying the more famous ancient Greek cities on the eastern Euxine coast from Phasis City to Herakleion. Without better technology and more financial resources, we may never see the organization of excavations that may bring forth conclusive epigraphic or numismatic material. Only this may one day enable us to establish ultimate certainty about the cities' exact locations and historical developments. As long as we do not have such hard evidence at our disposition, we should try to make better sense of our ancient literary tradition. Admittedly, the currently prevailing views make frequent recourse to the written sources, where they seem to fit preconceived ideas. As far as I see, however, no convincing attempt has been made to explain the difficult evidence as a whole. I cannot claim to have solutions for every single problem, but I have tried to show that the combined documentation provided by Strabo, Pliny, Arrian, and the *Tabula Peutingeriana* allow for a solid basis to start from. Pomponius Mela, Claudius Ptolemy and the early-Byzantine anonymous *periplous* occasionally complete our evidence. By comparing the different strands of the tradition with each other and cautiously trying to apply it to the current coastline and riverbeds as accessible through *Google Maps / Earth*, we can identify and neutralize some of the gross errors that have crept into the literary accounts.

While conducting my research, I had to make repeated adjustments and modifications to my methodology and to my intermediate results. One important insight is that the use of any constant conversion rate of the ancient stade is inadmissible. In fact, even the standard equation of a Roman mile with 1.48 or 1.5 km is risky, if the information derives from a Greek literary work that operated with stades. Firm context data is required for a meaningful, if still approximative, conversion. More optimism is, however, inspired by the observation that the proportions within certain narrow contexts, such as Arrian's description of the *periplous* from Phasis to Sebastopolis, can be of high value. My high expectation of Arrian's diligence in measuring distances was shattered not due to occasional errors, which might be excused, but due to the fact that those shortcomings betrayed a very close dependency on literary sources which he did not bother to correct. On the positive side, his *modus operandi* allowed me to draft – even if hypothetically – the basic outline of an archetypical *periplous* probably dating to the fifth–third century BC: it either drew on or influenced Eratosthenes, who defined the distance between Phasis and Dioskourias as the canonical 600 stades. I have further suggested that major variations to this early account were due to the physical changes of the Kolchian coastline around

[52] Sailing directly from Sebastopolis to Nesis would have been about 128 km.

Phasis and Gyenos in the Hellenistic period as well as to the refoundation of Dioskourias as Sebastopolis in the Augustan age.

If my study of these written sources holds ground, we should look for Phasis City somewhere near the north-eastern coast of the Paleostomi Lake. Gyenos was most likely located on the lower course of the Kyaneos / Okumi River, and Dioskourias should not be expected under the modern city of Sukhumi, but just north-west of Ochamchire, on the banks of the Hippos / Tskhenistsqali and Moches / Anthemous / Mokvi Rivers. The fortress city Sebastopolis was founded on Cape Kodori, possibly on the northern coast of Lake Skurcha (then a bay open to the sea), and absorbed the population of Dioskourias by the early first century AD. There is at least a possibility that its refoundation in the later years of Justinian's reign moved the city further westwards, perhaps as far as Sukhumi. Graeco-Roman Pityous was probably situated at the estuary of the Khipsta River, which then, however, merged into the sea closer to modern Gudauta. Its Byzantine refoundation migrated westwards to modern Pitsunda by the Korax / Bzipi River. Only in the case of Caucasian Herakleion, the traditional identification with Cape Adler has found confirmation in my re-evalutation of the literary evidence.

I close by once more admitting that some of my arguments are hypothetical or even partly circular. I have tried to counter-balance the potentially negative impact of that by drawing on a wide range of source genres and diversifying my methodological approach, evaluating topographic features, names related to a mythical land- and riverscape, and attested distances between rivers and *poleis*. My hope is thus to reopen the debate on the geography of ancient Kolchis or, ideally, to direct some scholars on the ground to uncover the one or other of the many secrets of Georgia's mysterious past.

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