

THE KOILA OF EUBOIA

Part I: Herodotus and the Koila of Euböia (viii 6-14)

It has been said that from Herodotus' account<sup>1</sup> we cannot draw any conclusions on the location of the Koila<sup>2</sup>. Indeed, modern scholars have found such great difficulties in his narration that either they reject the whole section dealing with the mission of the Persian squadron round Euböia as fictitious and unhistorical<sup>3</sup>, or, at least, suggest that the despatch of the squadron had preceded the arrival of the Persian fleet at Aphetai<sup>4</sup>: in both cases they suggest that Herodotus is mistaken. In fact Köster (*art. cit.* 68) gives only an account of those who reject Herodotus (Beloch, Obst, Munro, Bury) and immediately he adds: 'Ich sehe keinen Grund, auch nur im geringsten daran zu zweifeln, daß die Entsendung und der Untergang des persischen Geschwaders sich so zugetragen haben, wie wir es bei Herodot lesen'. Mason - Wallace on the other hand, though giving prominence to Herodotus' account in order to support their own theory regarding the location of the Koila and concluding that 'Herodotos' account of the Deep Sea Squadron may stand' (*art. cit.* 139), do not attempt a closer approach to it. Thus, despite admitting that 'the distance the Persians travelled is clearly a problem' (138), they locate the wreck 'near Philagra' (west of Cape Kaphereus —SE of Euböia—, 139, n. 33), i.e. at the place where they believe that the Koila must be, questioning however 'how seriously should Herodotos' chronological details be taken?' (*ibid.*).

Following Herodotus' text in some detail one can readily see that the

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1. ...ἔοῦσι κατὰ τὰ Κοῖλα τῆς Εὐβοίης (viii 13); οὗτοι μὲν περὶ τὰ Κοῖλα τῆς Εὐβοίης διεφθείροντο (*ibid.* 14).

2. 'Die Nachrichten bei Herodot VIII 7. 13. 14. Liv. XXXI 47 ...lassen keine sicheren Schlüsse auf die Lage zu.', *RE* xi 1 (1921) s.v. 'Koila 1' col. 1048 ll. 35-8 (Geiger).

3. C. Hignett, *Xerxes' invasion of Greece*, Oxford 1963, 182-3, 188, 383, and 386-392 (under the title 'The alleged voyage of Persian warships round Euböia').

4. J. A. R. Munro, *JHS* xxii (1902) 309; (The same writer, in *CAH* iv [1969] (repr. of 1926<sup>1</sup> with slight corrections), Chap. IX, iii, 284-291, dealing with the despatch of the Persian fleet and its fate and the activities of the 53 Attic ships (viii 14) and assuming Herodotus' account of the naval operations at Artemisium to be a 'tangled tale' (284), gives Herodotus' text his own interpretation, which, to say the least, is a misleading one -cf. his 'Diary of Operations...', facing p. 316.); R. W. Macan, *Herodotus, The seventh, eighth & ninth books...*, i-ii, London 1908 (Reprint Ed. New York 1973), i 366, 367 (7.1); 368 (7.9); 370 (9.3); ii 278 (mainly), where 'a fresh arrangement' of the data in Herodotus is attempted.

For other objections to Herodotus see A. Köster, *Klio* Beih. xxxii NF Heft 19 (1934) end of p. 67, also 68 *ad init.* and notes 1, 2; cf. p. 71; H. J. Mason - M. B. Wallace, *Hesperia* xli (1972) 139 and n. 32.

Persians could never have reached the SE coast of Euboia and almost approached Kaphereus. Thus, although Mason - Wallace's general opinion about where the Koila must be agrees after all more or less with our own (see Part III), we shall show that according to the text of Herodotus it is impossible for this area to be located so far south on the east coast of Euboia. In Part I of this paper, by a close examination of the text of Herodotus, which we shall assume to be correct in its details—and it can be such, as we shall see—, we shall try to locate whereabouts the Persians might have been wrecked (see also p. 247/8). This will constitute Herodotus' account on the location of the Koila. In Part II we shall examine Livy's account of a similar matter.

As soon as the Persians arrived at Aphetai<sup>5</sup> and saw the Greek warships at Artemision<sup>6</sup> they were ready to attack with a view to capturing them (viii 6.1). But an attack ἐκ τῆς ἀντίης did not yet seem safe, lest the Greeks might retreat and the night cover their flight (*ibid.* 6.2). So, as their intention was that none of the Greek ships should escape, they decided to send the 200 ships round Euboia in order to block up the Greeks from the rear while they would sail upon them from the opposite direction.

The Persians with their 200 ships would first sail outside Skiathos, so that they would probably avoid being seen by the Greeks to be following a route directly to the SE, in which case their actual purpose might well be suspected. Macan, 367 (7.3), comments that this 'mysterious, not to say senseless manoeuvre... would be fully in view of the Greeks at Artemision'. Also How & Wells<sup>7</sup>, 237 (7.1), comment that 'Bury and Munro urge that to send the ships from Aphetai outside Skiathos could not prevent the Greeks from seeing them. On this and other grounds they argue that they were dispatched from the Sepias strand<sup>8</sup>; cf. also their App. XX, §5 (p. 372), and §6.3 (374). But in fact, granted that the ships started from Aphetai, the idea was that they should not be seen (by the Greeks at Artemision) sailing directly south-eastwards, and this is what the expression ὡς ἂν μὴ ὀφθείησαν (viii 7.1) must imply; for, if they were to be seen after they had

5. Aphetai has been best placed at the modern village Platania in southern Magnesia, cf. Munro, *CAH* iv 287; also F. Geyer, *Quellen u. Forsch. zur alten Gesch. u. Geogr.* herausg. von W. Sieglin, Heft 6, Berlin 1903 ('Topogr. u. Gesch. d. Insel Euboia') I, 93-4. The modern village Aphetai (about in the middle of the peninsula of Magnesia, NW of Platania) seems not to be related to the ancient Aphetai, on the location of which there has been a major disagreement in general.

6. For the location see Hignett, 149 ff. The most probable place is 1 1/4 miles (on the map) west of the modern village Artemision at Pefki (Peuki) bay in the northernmost part of Euboia.

7. W. W. How & J. Wells, *A Commentary on Herodotus...*, I-ii, Oxford 1964 (repr. of 1912'). (All references are to ii).

8. The Σηπιάς ἀκτῆ (Hdt. vii 183.3 188.1,3 190 191.2 195; viii 66.1), at the SE end of Magnesia.

doubled Skiathos, it would have been the same whether they had started from Sepias or Aphetai!

However, the Greeks at Artemision would not have been likely in any case to see the 200 ships, even after they had doubled Skiathos, firstly because they had a very restricted optical field from where they were stationed to the southernmost coast of Skiathos (which was reduced even more if one takes into account the small islands south of Skiathos)<sup>9</sup> and secondly because they would not have visibility to a distance of about 19 naut. miles. Besides, since the circumnavigating Persians would avoid being seen by the Greeks at Artemision, they would sail as far as possible from the east coast of Euboia, that is to say along the coast of the island Skopelos (the ancient Peperethos), this after all being the shortest route to Cape Kyme, then Cape Kaphereus, etc., and in this case it is doubtful whether the Persian ships would be visible to Greek watchers even on the heights of the NE coast of Euboia<sup>10</sup>. Therefore, only watchers in Skiathos could inform the Greeks about the direction that the Persian squadron finally followed, e.g. by means of beacons (*cf.* Hdt. vii 183.1).

The final decision of the Persians appears to have been not to proceed to any attack before the 200 circumnavigating ships reached their destination (viii 7.2)<sup>11</sup>.

Herodotus next deals with the flight of the diver Skyllias and his announcement to the Greeks at Artemision about (a) the shipwreck κατὰ Πήλιον and (b) the despatch of the vessels round Euboia<sup>12</sup>. Hignett (182) holds that 'it is unlikely that both parts of this message are historical'. 'Some', he writes, 'have objected to the first, on the ground that the Greeks knew all about the Persian losses<sup>13</sup> already, others to the second, either because the circumnavigating squadron had been sent off before the storm and its

9. To send the ships first outside Skiathos 'was an effective manoeuvre, because the island completely fills in the sea horizon of the mouth of the channel' (G. B. Grundy, *The Great Persian War and its preliminaries*, ..., London 1901, 331).

10. The visibility actually achieved during summer in the Aegean is, as the Central Port Office of Peiraeus says, 6-8 miles. However, watchers from an elevated place, as those on the heights of NE Euboia, and in an atmosphere much cleaner than the polluted one of our own day, would surely have had a much more extensive visual field. But the prevailing weather conditions described by Herodotus may have influenced visibility.

11. According to the text of Herodotus it is clear that the 200 ships were sent off after the Persians reached Aphetai. Macan, too, 366 (7.1), admits in the first place that the despatching of those ships 'is here apparently dated after the arrival of the Persians at Aphetai'; also Hignett, 182 in n. 7.

12. Hdt. viii 8.3: ἐσήμηνε τοῖσι στρατηγοῖσι τὴν τε ναυαγίην ὡς γένοιτο καὶ τὰς πεμφθείσας τῶν νεῶν περὶ Εὐβοίαν.

13. By this Hignett refers to ἐν τῇ ναυαγίῃ τῇ κατὰ Πήλιον γενομένη (8.1), *cf.* ἐκ τε τῆς ναυαγίης καὶ τοῦ χειμῶνος τοῦ γενομένου κατὰ Πήλιον (12.2).

departure observed by Greek watchers on Skiathos or Euboia, or because the whole story of the dispatch of this squadron is to be rejected' (*ibid.*).

However Skyllias announced not only the result of the wreck — which the word 'losses' that Hignett uses implies— but mainly ἐσήμνηε τὴν ναυαγίην ὡς γένοιτο (8.3 fin.). The expression ὡς γένοιτο broadens the meaning of the verb ἐσήμνηε, so that we understand the whole as 'he related how the wreck happened'<sup>14</sup>. The Greeks on the other hand had already been told πάντα τὰ γερόμενα περὶ τὴν ναυαγίην (vii 192.1). Yet the daywatchers on the heights of northern Euboia<sup>15</sup> had started their way to Chalkis (*cf.* vii 183.1) to inform the Greek fleet about the Persian wreck at Pelion on the 2<sup>nd</sup> day of the storm (vii 192.1), which in fact abated only on the 4<sup>th</sup> day (*ibid.*, *cf.* 191.2)<sup>16</sup>. Consequently, the Greeks knew about the Persian misfortune —not of course to its full extent or in detail— before they sailed (from Chalkis) for a second time to Artemision (vii 192.2). But all this has nothing to do with the arrival of Skyllias at Artemision: first, he could not know beforehand that the Greeks had been informed of what had happened (though he knew much more than they perhaps did); secondly, he did not desert to the Greeks specially to give them these two pieces of information — in fact the thought of desertion had been in his mind for some time but he was not given the chance before then (viii 8.1).

Granted that the Greeks knew about the Persian wreck at Pelion, it is still very unlikely that they knew the intentions of the circumnavigating squadron, which they had seen leaving Aphetai but following an enigmatic NE course<sup>17</sup>. Thus, the second part of the message of Skyllias was really news

14. *Cf.* also Macan, 369 (8.16); How & Wells, 238 (8.3).

15. Hdt. vii 183.1; *cf.* J. B. Bury, 'The campaign of Artem. and Thermop.', *BSA* ii (1895-6) 95, §15.

16. It is possible that the watchers on Euboia during the first day of the storm round Cape Sepias were informed from Skiathos of the Persian wreck; it is equally possible, however, that they had seen part of the disaster themselves, the distance from the heights of Cape Artemision to Cape Sepias being about 11 n. miles. Regarding the duration of the storm, Munro asserts (*CAH* iv 287) that this 'raged for 24 hours', and that it is Herodotus who 'makes it last for three days and three nights'!

17. In fact Bury (90, §7) clearly hints that the Greeks at Artemision did not see at all the 200 ships when they started from Aphetai; this becomes a strong belief in §8 (91), and therefore, he infers, their voyage northwards was a 'loss of time'. But we really wonder how 200 ships could depart from Aphetai in full daylight without being seen by the Greeks at Artemision (Pefki bay, n. 6 above) within a distance of 8.3 n. miles. Apart from the relative geographical positions of the two anchorages, being almost opposite one another (in fact Aphetai lies a little to the East), Herodotus twice makes it clear that the opposing forces had a full view of each other: (a) in viii 4.1, when the Greeks saw the Persians arriving at Aphetai, and (b) in viii 6.1, when the Persians estimated the Greek ships at Artemision as being not many, as soon as they reached Aphetai. But more surprising is the fact that this argument is one of the main ones which tempts Bury (91, §9) to subscribe to Boloch's view 'that the incident of the two hundred ships is entirely fiction!' We would remark here, with regard to the distance from Aphetai to Artemision, that Köster is

for the Greeks (*cf.* Munro, *CAH* iv 288), and this Herodotus makes very clear: he begins §9 with τοῦτο ἀκούσαντες οἱ Ἕλληνες..., where the pronoun τοῦτο refers indisputably only to the second part of the message (i.e. to the circumnavigating squadron). On hearing this the Greeks hold a war council<sup>18</sup>. The temporal adjunct τὴν ἡμέρην ἐκείνην (§9) must signify "so long as it was dayling *during the same day*", that is to say they decided to stay there for the rest of that day and later in the night to start in order to meet the 200 Persian ships — probably in the vicinity of Euripos. Subsequently, after making a statement about the time<sup>19</sup>, Herodotus continues with the sea-fight, which ended as soon as the night came (11.3). For that day we would make the following time-table:

Arrival of the Persian fleet at Aphetai περὶ δειλὴν πρωΐην γινομένην:  
about 13.00' hrs.

Departure of the circumnavigating squadron (200 ships): 14.30' hrs.

Arrival of Skyllias at Artemision: 16.30' hrs.

Greek naval attack against the barbarians, δειλὴν ὀψίην γινομένην τῆς ἡμέρης: soon after 18.00' hrs.

The sea-fight has come to an end by 20.00' hrs. (sunset within the last third of July<sup>20</sup> in Greece between 19.45' - 19.36' hrs.), *cf.* τοὺς δ' ἐν τῇ ναυμαχίῃ... νύξ ἐπελθοῦσα διέλυσε.

No doubt many incidents had accumulated from the early afternoon until the end of the same day; *cf.* A. R. Burn (*Persia and the Greeks*, London 1962): 'All this is too much for a day' (p. 395, and ff.); Macan: 'It is, however, possible that these events are unduly accumulated' (p. 370, 9.3). For this reason Macan repeats the devices and guesses that previous scholars have suggested (Bury -p. 90, §7 - finds that 'taking the story just as Herodotus tells it, it does not hang together!'), which, apart from distorting the narration of Herodotus, rather confuse the situation than offer a satisfactory interpretation — for references see nn. 3, 4, above. Despite all this, we are trying to follow the narrative of Herodotus, adhering exclusively to what he tells us, especially since we do not find anything either inconsistent in his account or unlikely to have happened as he describes it. Our final intention is

completely wrong in holding (64) that this distance is 14 n. miles = 25,9 km.; what is more, he (*loc. cit.*, n. 4) attributes an error to Fabricius, who in fact was correct in his estimation of this distance as 15,4 km., (but perhaps Köster locates Aphetai elsewhere, *cf.* above n. 5). On the other hand, it is to be remarked that Herodotus (viii 8.2) estimates this distance at about 80 stades, which gives approximately 8 n. miles!

18. Hignett prefers to transfer the war council meeting to 'on the morning of the next day' (183), 'possibly in consequence of the information brought by Skyllias' (384).

19. δειλὴν ὀψίην γινομένην τῆς ἡμέρης (§9), *cf.* §6.1 περὶ δειλὴν πρωΐην γινομένην. Macan suggests as a possibility 'that these early and late afternoons are not on the same day' (370, 9.6).

20. *Cf.* ἦν μὲν τῆς ὥρης μέσον θέρος (Hdt. viii 12.1).

to consider where on the Euboian coast the Persian squadron might have been wrecked, and in this respect Herodotus' information περί τὰ Κοῖλα τῆς Εὐβοίης §14.1, cf. §13 κατὰ τὰ Κοῖλα, is exactly the problem that concerns us. This place, differently located by ancient authors, has been differently located by modern scholars as well. Many of the latter have actually failed to attend to the text of Herodotus because they have started their inquiries by taking for granted the opinion of another particular ancient author. So, as the majority of them have followed Strabo (x 1.2 - C. 445), who locates the Koila on the west (SW) coast of Euboia, and the narration of Herodotus is inconsistent with this location (no ancient vessel, starting from S. Magnesia and sailing south-eastwards along the east coast of Euboia, could reach the west coast of the island within 14 hours — cf. also Bury, p. 90, §7), they have thought that Herodotus was mistaken and thereupon started their chain of guesses as described above<sup>21</sup>! Accordingly, some of them have held that the squadron must have set out earlier, i.e. before the Persians reached Aphetai; others have inserted one or more days, so that the squadron would have had enough time to reach the coast to which Strabo refers as Koila. (So Grundy, who, after making the 200 ships start from Aphetai on the next morning after their arrival there — see our n. 22 — suggests that the disaster took place at the Hollows, SW of Euboia, 'early in the night of the 18<sup>th</sup> day' (336), i.e. after about 36 hours sailing). But after they have made the Persian ships reach there, the northerly storm (cf. the one at the Sepias strand — vii 188.2f., 189ff.) could not have blown them on to the Euboian coast (cf. Munro *CAH* iv 290 — though we do not accept the whole of his account, see below, n. 35): on the contrary such a storm would have carried the ships away from it. Thus, since only a storm from the south could have forced the ships on to there, these scholars accordingly introduce one. It has been said, as we shall see, that apart from the northerly storm (or rather instead of it) a southerly storm must have arisen, which caused all the ships to be destroyed (see n. 27, below). Another solution that some scholars have suggested (cf. this Part *ad init.*) is that since the 200 ships had to be wrecked on the SW Euboian coast (where the Koila are located by Strabo), and the narration of Herodotus was in disagreement with this assumption, they have denied — an easy evasion! — the mission of those ships round Euboia at all.

Despite all this, Herodotus appears rather punctilious in defining even

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21. Note in addition that Macan objects to Herodotus because, as he thinks, the latter made the Persian ships pass Geraistos (at the southernmost point of Euboia) by mentioning that they perished περί τὰ Κοῖλα τῆς Εὐβοίης, which Strabo locates in the SW parts of Euboia. Of course Herodotus does not locate the Koila either before or after Geraistos, simply because he does not name this or any other site. And the irony of it is that in spite of Strabo's opinion — on which Macan bases his view about the Koila — Macan cannot finally accept that the 200 ships were wrecked after Geraistos but before they rounded even Kaphereus, 376 (13.6).

parts of the day (*cf.* time-table, above), while at the beginning of §§14 and 15 we have indications of a second and a third day. Consequently, since in this case he does not make any statement concerning any succession of days, we are not allowed to insert one or more days<sup>22</sup> because of an accumulation of incidents.

At an average speed of 5,35 knots (this taking into account the rather difficult conditions of sailing at this period of the year —see n. 20; *cf.* Arat. *Phaen.* 148 ff.— especially in the Aegean, see the «Note on Etesian winds» at the end of our text)<sup>23</sup> it would take the 200 Persian ships 31 hours to arrive before the strait of Euripos, where presumably the Greek vessels would have waited in order to prevent the Persian advance into the North Euboic gulf<sup>24</sup>. The Persian squadron, following the shortest route after doubling the island Skiathos, which was to set course directly for Cape Kyme, then Cape Kaphereus and so on, had to cover a distance of 166 n. miles. Thus, according to our calculations, the squadron was to reach the south entrance of Euripos at about 21.30' hrs. on the following day.

If Skyllias had arrived at Artemision not after some days (see n. 22) but only on the following afternoon, the special mission of the Persian squadron, as announced by him, could not have been news for the Greeks (see above), since watchers, at least from Skiathos, would meanwhile have let them know<sup>25</sup>. Besides, if he had not deserted on the same afternoon on

22. Macan 370 (9.3): 'The interval between the despatch of the squadron and the arrival of Skyllias at Artemision may have comprised not hours, but days! (But contrast Grundy, 330: 'Herodotus does not say, but he certainly implies, that this flying squadron was despatched on the very day of the arrival at Aphetai. It is not necessary to insist that this was, under the circumstances, hardly possible'. However, on p. 331 *init.* Grundy holds that 'the despatch of the squadron round Euboia must have taken place on the morning of the 17<sup>th</sup> day', *cf.* also 330). The supposition of Macan that ἐν τοῦτω τῷ χρόνῳ (viii 8.1) might imply such a length cannot be accepted. After the Persians had despatched the squadron, and since they did not intend to attack the Greeks during the rest of that day, (a Greek attack, on the other hand, would not be normally expected, as the Greeks were in a state of defence) they started a muster of their ships, which were bound to be considerably fewer owing to the recent losses and to the mission of the 200 ships around Euboia.

23. A. W. Gomme, *A Historical Comment. on Thuc.* [i-iii Oxford 1945-56 (Reprs., some from corrected sheets of the first ed., 1959-79)], iii 728 mentions as a general information that a distance of about 200 miles could be covered in c. 35 hrs. 'with no stops en route' and another of 160 miles within 24 hrs. These data give a speed of 5,7 knots, in the first instance, while in the second 6,6 knots, which is an extreme. What is more likely is Köster's estimation, according to which 'a trireme could make 115 to 147 nautical miles a day (of twenty-four hours) under sail' (W. K. Pritchett, *Studies in Ancient Greek Topography, Part II*, Chap. iii 'The Hollows of Euboia', Berkeley & Los Angeles 1969, 23, with reference to Köster's *Das antike Seewesen*, 179), which gives a speed 4,79 to 6,12 knots (average 5,45 knots).

24. On the west side of Euboia. This is the modern name for the Euboic gulf north of Euripos; south of it the same gulf bears the name South Euboic gulf. See map I.

25. Here we cannot follow Macan and his estimates, because according to his conjectures the circumnavigating squadron 'was detached from the Persian fleet not at Aphetai, but off the

which the 200 ships started from Aphetai, the prevailing opinion among the Greeks could never have been to wait till midnight and then to start their way to encounter the Persian ships (viii 9), as these would meanwhile have reached (and already passed) Euripos. But on the contrary, since the Greeks at Artemision knew at what time the Persians started from Aphetai, they could anticipate that the enemy squadron would not be able to reach Euripos until, at best, late in the afternoon of the next day; as for themselves, they at any rate had to be there well before the Persians were expected<sup>26</sup>. Finally, Macan's supposition that the phrase ἐν δὲ τούτῳ τῷ χρόνῳ might have comprised days (see n. 22) is inconsistent with the way in which Herodotus reports the facts when he gives a brief account of the recent Persian misfortunes (12.2); notice the immediate succession of the facts given in the emphasised construction πρὶν γὰρ ἢ καὶ ἀναπνεῦσαι σφεαεῖς ἔκ τε τῆς ναυαγίης καὶ τοῦ χειμῶνος τοῦ γενομένου κατὰ Πήλιον, ὑπέλαβε ναυμαχίη... (cf. vi 27.3): «before they took even a breath from the wreck and the storm..., a sea-battle followed next...».

Next we must examine the narrative of Herodotus applying to the night storm by which the Persians were destroyed. The heavy rain accompanied by thunder started ὡς... εὐφρόνη ἐγεγόνεε (viii 12.1) soon after the opponents had returned to their anchorage from the sea-fight (*ibid.* 11.3), i.e. some time between 21.00' and 21.30 hrs., and lasted all night through (12.1). The dead bodies and wrecks (from the recent sea-battle) were cast on shore at Aphetai probably by reason of certain sea-currents, or of a swell after the storm, not because of an alleged south wind, since Herodotus mentions nothing about winds blowing at Aphetai. (But if any wind blew, it could only be a northerly one -cf. n. 32-, since the storm was coming from the North -cf. ἀπὸ τοῦ Πηλίου, 12.1). In fact Köster, as well, speaks of a swell ('Seegang', 73), but he attributes it to a 'Südsturm' (69-70, n. 1) and a south

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Magnesian coast, if not already, still earlier, at the start from Therme', 367 (7.1). This is of course in contradiction to Herodotus' narrative (viii 7). As for the storm by which the 200 ships were caught, Macan contends —376 (13.6 fin.)— that Herodotus duplicated it.

26. Herodotus' narrative is here somewhat compact, and one should understand that not all the Greeks would participate in this movement, so leaving Artemision without garrison. Although it seems that this movement never finally took place, the plan would be that a part of the Greek fleet would sail after midnight (N.B. νύκτα μέσσην παρέντας - viii 9) down to Euripos across the North Euboic gulf (n. 24) and reach there early on the next afternoon, covering a distance of about 68 miles within 12 1/2 hours (average speed 5,44 knots). Strangely enough Herodotus uses here πορεύεσθαι (viii 9), not πλεῖν. Πορεύεσθαι is normal for the movement of land forces, but the Greek land forces were at Thermopylai, not at Artemision, where a Greek naval force was keeping guard of the entrance to the strait. The only soldiers at Artemision were those serving as fighting men on shipboard, but they (or a detachment of them) can never be expected to have been appointed to *march* to encounter the despatch of the Persian squadron *alone* without some of the fleet.

wind<sup>27</sup>. On the other hand Munro (*JHS* xxii [1902] 310, n. 28), Macan (374, 12.3), and How & Wells (239, 12.1) assign the drift to the tide. But the phenomenon of the tide (well-known at Euripos) does not occur there. Further, Macan (375, 12.5) wonders 'who are the soldiers or fighting men in the place?', οἱ στρατιῶται οἱ ταύτη (12.2)... In fact one might well infer that by στρατιῶται are meant «soldiers serving on ship-board»<sup>28</sup>.

At the beginning of §13 the narration is transferred to the Persians who were sailing round Euboa.

While the Persians at Aphetai were having a very unpleasant night, this very night became a really disastrous one for those in the circumnavigating ships, who perished περὶ τὰ Κοῖλα τῆς Εὐβοίης (14.1, *cf.* 13). The problem which arises is where on the Euboian coast the Persians might have been wrecked, because, as the identification of the Koila of Euboa is itself another major problem, the Herodotean περὶ τὰ Κοῖλα τῆς Εὐβοίης complicates the situation.

'Most scholars have located the Hollows on the south-west coast of Euboa' (Hignett, 386). In his Appendix VI (386-392) Hignett gives an account of different opinions on the location of the Koila, while he himself explains why the voyage of the Persian squadron round Euboa has to be considered fictitious!

It would seem that Hignett has not examined the situation closely enough as long as he does 'justice' (387) to Geiger who in fact repeats (*RE* XI 1 [1921] col. 1048 46-49) what C. Neumann - J. Partsch (*Physikal. Geographie von Griechenland.*, Breslau 1885), 145, wrote about the SW coast of Euboa. (Geiger does not express openly his own location of the Koila; actually he gives only a report of possible locations, supported by other writers, both ancient and modern). But neither Strabo (x. 1.2) nor Val. Maximus (i 8.10) wrote about the SW Euboian coast as being dangerous as Neumann - Partsch claim, as Geiger repeats, and as Hignett accepts. In fact J. Hawkins, 'On the Syrix of Strabo, and the passage of the Euripus', in R. Walpole, *Memoirs relating to European and Asiatic Turkey...*, London 1818<sup>2</sup>, 539-550 (1817<sup>1</sup>, 528-539), who visited the area, remarks (547) that 'the coast of Euboa on this side presents a series of noble harbours and roadsteads, without a shoal or sunken rock, and in most winds it is distinguished by the smoothness of its water', and our personal experience agrees with what Hawkins says. But we should note that while the west Euboian coast itself is relatively very mild, compared with the east one, what are dangerous are the small or very small islands and reefs scattered in the

27. '... dann kommt von Süden her Wind auf... Mit dem Winde kommt Seegang, gleichfalls von Süden her heranrollend', 73.

28. LSJ<sup>9</sup> s.v.; *cf.* Th. ii 88.1; *cf.* How & Wells 239 (12.2): 'στρατιῶται: the crews (*cf.* 10.1), or perhaps the mariners, encamped on land'.

sea of the South Euboic gulf that render navigation difficult and dangerous in stormy weather (see also n. 57). Therefore, if we are to take Neumann - Partsch's account seriously, we should at least notice another statement of theirs referring to the eastern Euboian coast, and mainly the coast of Cape Kaphereus<sup>29</sup>.

We have mentioned all this because from what Hignett says (387) we might probably consider as the Koila the west coast of Euboea up to Eretria! In such a case the confusion about all possible locations of the Koila spreads even more, especially if we take into account the view of Köster, who holds (70-71) that the Persians were wrecked near Lefkonisia, a small group of tiny islands between Cape Artemision and Cape Hagios Vasileios on the NE Euboian coast. Under these circumstances, the Koila have been variously located by now as a coast extending for about 134 n. miles out of about 228 which one has to sail to circumnavigate the whole island<sup>30</sup>! The Koila are located on the SW Euboian coast also by G. Busolt (*Griech. Geschichte...*, ii, Gotha 1895<sup>2</sup>, 681-2, n. 3), Munro (*art. cit.* 310), who, taking this location for granted, seems to be confused further on (cf. *id.*, *CAH* iv 290), How & Wells (App. XX, §6.4), and N.G.L. Hammond (*History of Greece*, Oxford 1967<sup>2</sup> [1959], 235).

According to Herodotus (§13, cf. §§6,7) the circumnavigating Persians were seized by the storm during the first night of their departure from Aphetai. As a sequel to this, the Euboian coast upon which they finally met their fate can be defined from the distance that they could cover in a given time, and from the formation of the coast, which, as described by Herodotus, was rocky (ἐξέπιπτον πρὸς τὰς πέτρας, 13) and therefore dangerous. Another two pieces of information given by Herodotus are that the storm

29. 'Noch berüchtigter war bei der stärkeren Frequenz des vor ihr liegenden Meeresraumes die eiserne Küste Ost-Euboeas. Kein Punkt des ganzen Ufersaumes von Griechenland ward mit bangerer Scheu von den Seefahrern betrachtet als die unheimlichen Wände am Vorgebirge Kaphereus', 144.

For Kaphereus and its dangers cf. E. *Tr.* 90; *Phld.* i 260 20 (Sudhaus); *Sen. Her.* [Oet.] 777; *Ov. Met.* xiv 472 481, *Trist.* i 1 83, v 7 36; D. Chr. vii 31 [τὰς Καφηρίδας (sc. πέτρας)]. For similar periphrases cf. E. *Hel.* 1128-9; *Pac. fr.* 136 (*TRF* Ribbeck i, or Klotz i) (saxis); *Prop.* III vii 39 (saxa); *Sil.* xiv 143 (scopulos); *Tert. De Anim.* 52 4 (saxis); *Q. S.* vi 534, xiv 362; *Anth. Gr.* ix 90 (σκόπελον), 289 (πέτρας), 429 (πέτρης)]; *Stat. Theb.* vii 371, ix 307/8; *Q. S.* xiv 469 487 572; *Steph. Byz.* s.v. 'Καφηρεύς' (iv 653f.); *EM* 481, 53ff. From the moderns, cf. A. Baumeister, *Topograph. Skizze der Insel Euboea*, Lübeck 1864, 31; also his n. 92 on p. 70 (cf. our n. 84 below); C. Bursian, *Geogr. von Griechenland*. (i-ii, Leipzig 1862-1872), ii 400 *init.*; A. Philippson, *Die griechischen Landschaften*, Band. i - Teil ii, Frankfurt/M. 1951, 566: 'Der jetzige (italienische) Name *Goldkap* soll daher stammen, daß das Meer hier zuweilen byzantinische Goldmünzen ausspült'.

30. Cf. also Philippson in *RE* vi 1 (1907) 853-4: 'Wegen der Verengung des Landes wird dieser ganze Teil der Insel τὰ Κοίλα τῆς Εὐβοίας genannt', that is the whole of southern Euboea.

supervened as the Persians were sailing in the open sea<sup>31</sup>, and that it was windy<sup>32</sup>.

If, according to our time-table, the Persians left Aphetai at 14.30', then by about 21.45' on the same evening, when the northerly storm, on its rapid movement to the South, found them κατὰ τὰ Κοῖλα τῆς Εὐβοίης (13), they would have sailed for almost 7 1/2 hours, covering about 41 n. miles<sup>33</sup>. Given that the distance from Aphetai to Kyme (the doubling of Skiathos included) is 58 n. miles, the Persians would have reached a point situated on a line joining the village Myloi (on the east Euboian coast) to the southernmost part of the small island Skantzoura, east of Skopelos, and at a distance c. 9.5 n. miles from the Euboian coast (*cf.* ἐν πελάγει φερομένοι-σι, 13), see map I; also discussion below. Herodotus mentions that the storm and the rain fell upon the Persians while abeam of the Koila of Euböia (ἐοῦσι κατὰ τὰ Κοῖλα τῆς Εὐβοίης, 13)<sup>34</sup>, and as they were borne by the wind they were carried along there (τῇ ἐφέροντο) without seeing it, with the result that they were cast ashore upon the rocks (ἐξέπιπτον πρὸς τὰς πέτρας). According to the narrative of Herodotus, to which we have closely kept, the Persians must have been wrecked along that part of the Euboian

31. ἐν πελάγει φερομένοι-σι ἐπέπιπτε (§13). The statement that the night and the storm found the Persians *out at sea*, apart from pointing out their disadvantage compared with those anchored at Aphetai, inevitably suggests that they were sailing at some distance from the Euboian coast at that time. (On the possibility of their sailing closer to the coast shortly before the storm arose see below, n. 39).

32. Herodotus (§13) mentions that the Persians were borne along by the wind (φερόμενοι τῷ πνεύματι), but in his account of the storm at Aphetai he does not mention any winds (see above, comments on §12, p. 250). However, if a (northerly) wind blew, it would not cause particular harm—if any harm at all—to the Persian anchorage, as Aphetai does not face the Aegean; on the contrary its geographical position protects it from exposure to winds of the northern sector that regularly blow in the Aegean during summer. (This may suggest the reason why Herodotus did not count the northerly wind, which to all appearances blew at Aphetai, among the other misfortunes that struck the Persians at their anchorage). The situation at Sepias was different since there the ἀπλιώτης or Ἐλλησποντίης (NE wind) and Βορῆς (vii 188.2f., 189f.) forced the ships on to the land, which is open to these winds, also known as *Etesians*, where they were destroyed.

Here we should note that Etesian winds blow as a rule during the day (this was also the case at Sepias, *cf.* ἄμα δὲ ὄρθρω vii 188.2), while in the night either λωφῶσι (Arist. *Mete.* 362<sup>a</sup> 7), ἤπτον πνέουσι (id. *Pr.* 939<sup>b</sup> 10), or παύονται (*Mete.* 362<sup>a</sup> 1), οὐ πνέουσιν (*Pr.* 946<sup>a</sup> 12, *cf.* Thphr. *Vent.* 11). But the storm, which was the same for the Persians at Aphetai and for those who circumnavigated Euböia (viii 13), was actually coming from the North. This, stated by Herodotus with reference to Aphetai (...ἀπὸ τοῦ Πηλίου viii 12.1), is also deduced in his narration of the 200 ships (see our text below). In this case, it cannot be said that Etesians could not have blown in the open sea that night, when the squadron perished. (On these winds see separate «Note» at the end of the paper).

33. Assuming that the Persians would probably sail a little quicker in the daylight, for these 7 1/2 hours we estimate an average speed of c. 5.60 knots.

34. For the preposition κατὰ meaning 'opposite' *cf.* Hdt. i 76.1, ii 148.1; Th. ii. 30.2.

coast—which Herodotus specifies as Koila—extending west of Cape Kyme up to south of Cape Sarakenikon (see map I). The cause of the wreck must have been a northerly gale, a sudden intensification of the north (Etesian—see «Note» after the end of our text) winds otherwise prevailing in the Aegean at that season to which all the harbourless and rocky eastern coast of Euboia is exposed (here, *cf.* the situation at Sepias with the ἀπηνιώτης or Ἐλλησποντίας—vii 188.2,3, and 189ff.—with the sudden outburst of northerly winds a few days earlier).

Under the sudden gale with the N. wind and the rain—and all this in the darkness—rowing would have been disorganized. The Persians were unable to counteract the waves and the force of the drift that carried them helplessly on to the rocks of the Koila, where they were finally wrecked. And they were destroyed to a man (*cf.* τὸ τέλος σφι ἐγένετο ἄχαρι, 13; οὔτοι... διεφθείροντο, 14.1; ...πάντες εἶσαν διεφθαρμένοι ὑπὸ τοῦ γενομένου χειμῶνος, 14.2) during that night<sup>35</sup>—by dawn (14.1) the storm had already abated<sup>36</sup>—, for there is no further mention of any of the ships or of anyone of the crew at all<sup>37</sup>. Thus, according to Herodotus, the circumnavigating Persians perished περὶ τὰ Κοῖλα τῆς Εὐβοίης (14.1), i.e. *in*<sup>38</sup> the Koila of Euboia, and, following his narration, the only part of the Euboian coast on which the Persian squadron was destroyed, and which he designates Koila, must have been that which we have indicated above.

Köster holds that the squadron perished 'bei den Lephko-Inseln' (70) by the same 'Südsturm' which blew at Aphetai during the same night. His error about a south wind prevailing there applies also to the storm which destroyed the 200 ships. He holds that these ships, that started from Aphetai in the afternoon, would have been in the neighbourhood of 'Agios Vasileos' when the storm arose; then the 'Südsturm' pushed them up to 'bei den Lephko-Inseln weit nach Osten ins Meer reichenden Klippen und Untiefen geworfen, wo sie natürlich ihren Untergang finden mußten'.

35. Here Munro (*CAH* iv 290), apparently influenced by Strabo's location of the Koila, develops on this basis an arbitrary theory (*cf.* our n. 4, above) that 'not all the enemy's ships had perished on the east coast. The recorded scene of their destruction is the Hollows of Euboia, the south-western coast of the island, where the north-eastern gale could not have hurt them, in fact the best refuge whither they could have run'. But Munro's error takes a further extension in his misinterpretation of viii 14.2 (*ibid.* below).

36. Since the storm at Aphetai was the same as that which caught the 200 ships a little later in the same night, if it abated at Aphetai on the next morning, it should have abated also at the Koila.

37. According to what is the evidence on p. 274 (footn.), a violent gale of let us say 11 on Beaufort scale (wind-speed 56-63 knots) would have been able to cause the wreck of the greater part of the Persian mission within minutes(!); and what would have escaped wreck would have been cast ashore upon the coastal rocks.

38. For this meaning of περὶ *cf.* LSJ<sup>9</sup> s.v., C. 4. (literally 'round or about').

Apart from the fact that there was not a southerly storm, there are also some mistakes in Köster's account: He estimates the distance from Aphetai to Cape Hagios Vasileios as being about 25 n. miles, which the ships covered in about 6 hours (70, n. 4). In fact this distance is not 25 but not less than 30 n. miles (N.B. the manoeuvre round Skiathos). Besides, Köster estimates in this case a rather low speed for the Persian ships (25:6 = about 4,16 knots), and this in the daytime, whereas we saw above (n. 23) that he himself defines elsewhere a minimum of 4,79 knots for a trireme. On the other hand, we have no reason to accept that the Persians, after doubling Skiathos, made for the east coast of Euboia, as Köster's theory requires. On the contrary, we have explained above (p. 245) the reasons why they had not to approach the Euboian coast, at least so long as it was still daylight: first, they could have been easily visible from the coast, and, secondly, approaching Hagios Vasileios would have caused them a meaningless delay. Thus, instead of the 58 miles they would have to cover to reach Kyme, they would need 30 (up to Hag. Vasileios) plus 38 (from Hag. Vasileios to Kyme) = 68 n. miles. Further, if the storm arose when the squadron had reached 'in der Gegend von Kap Ag. Vasileios', how can the stormy night have come upon the Persians ἐν πελάγῃ φερομένοισι, as Herodotus says?<sup>39</sup> Besides, if the storm came from the south, as Köster holds, they would have been driven N. and thus could not all have fallen on the rocky promontory and the Lefkonisia — see map. I; (this would have been more likely if the wind had blown from the SE). Therefore, since it seems impossible that, according to Köster, 200 ships could be destroyed within a space as wide as just over 1 1/2 miles — which also contained open water between these very small islands forming the group named Lefkonisia — a considerable number of these would have slipped through to the North towards the south coast of Skiathos.

For these reasons we cannot accept Köster's account as regards the location of the Persian wreck. So far as the Koila are concerned, Köster expresses his view considering their situation after his own location of the Persian wreck at Lefkonisia, on the basis that the Koila had to be extended

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39. Of course, it is not unlikely that after doubling Skiathos the Persians were slightly directed towards the east Euboian coast, according to what was the rule for ancient navigation, namely to follow the coastline; however, this supposition could not be supported safely, since the main purpose of the Persians presumably was not to be seen by Greek watchers on the NE coast of Euboia, especially when they surely were in sight of the island on their sailing south-eastwards. But what is perhaps likely is that, as soon as night fell, when the Persians were already clear of the NE parts of Euboia, they sailed a little nearer to the coast so as just not to lose sight of the island. But this approach, if made, would also have accelerated their loss, since the sudden storm would have seized them when they were already closer to the fatal coast. In any case wind and almost side drift would have caused them to be destroyed on that part of the Euboian coast extending south-eastwards of Cape Sarakenikon to the west of Cape Kyme.

as far north as these small islands are situated. So he suggests that Herodotus denotes openly as Koila 'die ganze Ostküste Euböas, wo ein Sturm aus jeder Richtung den Persern gefährlich werden mußte' (70), while he himself would designate as the Koila 'die große Bucht an der Ostküste der Insel zwischen Kap Chersoneros<sup>40</sup> und Kap Kaphereus, die ihrer Stürme und Gefährlichkeit wegen berüchtigt war —auch heute noch ist—'<sup>41</sup> (*ibid.* above). So, a wrong location of the Persian wreck owing to his own misinterpretation of the situation and of the narrative of Herodotus made Köster extend his otherwise more or less acceptable opinion about the extent of the Koila to the whole eastern coast of the island, this extent being calculated as though it were actually implied by Herodotus himself.

J. Labarbe (*BCH* lxxvi [1952] 401-2, n. 4) also opposes Köster's location of the Koila so far to the North according to Herodotus' account, but he attributes it only to the fact that Köster made the 200 ships start from Aphetai very late, whereas Labarbe himself held that these ships started not from Aphetai in the afternoon but from 'cap Sépias dans la matinée'. Another point that Labarbe accepts is that the Persians sailed directly to Cape Kyme in order to economize time; that is why, as he says, 'les trières se trouvaient en haute mer (έν πελάγει φερομένοισι)', because after doubling the east coast of Skiathos 'elles avaient tâché de gagner du temps en mettant le cap sur le promontoire de Cymé'. But if Labarbe holds that the 200 ships 'peuvent avoir navigué une douzaine d' heures avant d' être surprises par la nuit et la tempête', as he estimates the distance from Sepias to Cape Kyme about 54 n. miles, the Persian ships would have covered this distance within these 12 hours, sailing at a fairly slow speed (54:12 = 4,5 knots). Consequently, when the storm arose the ships would not have been in the open sea, but very close to Cape Kyme; Labarbe admits this very clearly: 'Quant l' ouragan fondit sur les deux cents trières, elles arrivaient aux Koila, c' est-à-dire qu' elles étaient près du promontoire de Cymé'.

Labarbe, however, does not contradict himself; in fact he gives another interpretation to the text of Herodotus where he starts to deal with the storm, from §13, 'ὥς γάρ δὴ πλέουσι αὐτοῖσι χειμών τε καὶ τὸ ὕδωρ ἐπεγίνετο ἐοῦσι κατὰ τὰ Κοῖλα τῆς Εὐβοίης' and giving at the same time the preposition κατὰ the meaning *à proximité de, dans la voisinage de*. So he claims that the storm started not while the ships were sailing έν πελάγει but

40. Sic; the correct form is Chersonesos, official name of Cape Ochtonia.

41. Cf. also Baumeister, 30: '...so zieht sich nordwestlich von Kaphereus die schroffe Küste in einem weiten Bogen einwärts und geht dann nahezu, nördlich bis Kap Chersonesos hinauf. Das Meer in dieser geräumigen Bucht hat auch bei ruhigem Wetter eine starke Strömung von Hellespont her gegen die Küste und bricht sich namentlich am Kap in schäumenden Wogen. Kein Wunder daher, dass hier die Gefahr des Schiffbruches zu allen Zeiten gross gewesen ist und die Gegend von Alters her in mehrfacher Beziehung verufen war'.

while they were close to the Euboian coast (promontory of Kyme). But we should think of the storm as occurring right from the beginning of §13, where Herodotus deals with the Persians at Aphetai: "and for these such was the night, but for those who had been appointed to circumnavigate Eubolia the same night was even more wild, all the more so as it fell upon them while being in the open sea". The expression "the same night" cannot simply signify the succession of darkness after the daylight; the use of the verb ἐπέπιπτε suggests that the night supervened with all its special fierceness (ἕδωρ τε ἄπλετον... καὶ σκληραὶ βρονταὶ 12.1) in addition to the storm (χειμῶν τε 13) as they were sailing in the open sea. So the phrase ὡς γὰρ δὴ πλέουσι αὐτοῖσι... is not independent of the previous context but a continuation in meaning (N.B. γὰρ), and the expression κατὰ τὰ Κοῖλα must have the meaning which we suggested above (cf. also n. 34), i.e. "opposite to the Koila (and at some distance from this place out at sea)". If the case were not so, it is difficult to understand how Labarbe could interpret the φερόμενοι τῷ πνεύματι... τῇ ἐφέροντο, which implies a considerable distance between the position of the squadron and the coast.

Besides, Labarbe defines the beginning of the Koila within a radius less than one mile from the Cape of Kyme, where the small group of the islands Κουλίαι is situated, thinking that 'l' endroit marquant le début des *Koila* pour qui arrivait du N. avait reçu anciennement le nom du golfe entier'. He also reinforces his argument by quoting Köster, who (p. 70, n. 3) says: 'eine kleine Insel westlich von Kap Kyme heißt noch heute Κουλή'.

However, we should not rely only on names<sup>42</sup> in order to support a theory, because, as we shall see below, these sometimes rather confuse than help us with their variation. Thus, the name *N. Choile* is marked on the British Admiralty Chart (BAC) no. 1087 for the island which in the map of the Greek Statistical Service no. 11 bears the name Μεγάλη Νῆσος, opposite a smaller one 0,85 miles to the SE named Μικρὰ Νῆσος, which in the BAC no. 1087 bears the name *N. Platia*. In another good and detailed Greek map<sup>43</sup> the island *Choile* or Μεγάλη Νῆσος bears the name *N. Δήλος* and the smaller one bears the same name (Μικρὸ Νησί), while the site on the Euboian coast situated between these two islands is called Χηλή<sup>44</sup>. A similar situation is noted by Demertzes<sup>45</sup>, who mentions (p. 220.2) 'ἡ Χιλή, τὰ

42. Nevertheless, on modern sites in Eubolia which still bear their ancient names cf. Γ. Α. Παπαβασιλείου, *AE* 1905, cols. 25-8.

43. *Εὐβόια - Ἀττικοβοιωτία*: Χάρτης Πολιτικογεωφυσικός - Τουριστ. - Παραγωγ. - Ναυτικός καὶ Ἱστορικός ὑπὸ Β. Πλατῆ, Ἀθῆναι 1954.

44. In *BSA* lxi (1966) 76 *init.* (83), Χηλή is written Khili, and there is a mention of 'the hamlet of Khili'.

45. Δ. Δεμερτζής, 'Συλλογὴ τοπωνυμίων τῆς Νήσου Εὐβοίας', *Λαογραφία* xi (1964) 174-251.

Νησιά τῆς Χιλῆς (παράλιοι θέσεις)'; and Skouras<sup>46</sup>, p. 362.55, claims that the correct name in this case is Χηλή not Κοίλη (and presumably not Χιλή)<sup>47</sup>. However, apart from Κοίλη (or Χηλή) as the name of an island or a site at that place, very similar names occur also in SE Euboeia; so, 1) ἡ Κοίλη or τὸ Κοῖλι, a small village 9,3 miles (on the map) west of Cape Ochtonia (Chersonesos, cf. n. 40), and 2) ἡ Κοίλωση or τὸ Κοίλωσι, 3,3 miles (on the map) S-SW of Cape Philagra, which, in turn, is situated about 9,2 n. miles west of Kaphereus. This village was given another name (Ἐκάλη) some years ago<sup>48</sup>.

Should we therefore, under the circumstances, locate the beginning of the Koila whenever we come across a site bearing such a name? Labarbe has done the same kind of thing with the beginning of the Koila from the South (i.e. from Cape Kaphereus) in this case basing his view on a linguistic phenomenon: 'même phénomène linguistique au S., où le cap Capharé, semble-t-il, était parfois appelé *Koila*: cf. Dion de Pruse, VII, 2; 7;...'. We do not accept what Labarbe says here. If from the narrative of Dio we understand that the Koila must be situated near—or even very near—to Kaphereus, this does not suggest that Kaphereus itself was named Koila!

With regard to Labarbe's interpretation, we would add finally that 200 ships could never have perished in an area situated 2 miles NW of Cape Kyme only. Quite a number of them would have doubled this Cape and probably have been saved on their being cast ashore where the sandy coast of the bay of Kyme extends for some 10 statute miles down to Cape Ochtonia. Besides, the tremendous Koila of Euboeia could never start from a restricted area around a promontory (in this case that of Kyme) and be succeeded by a mild sandy beach extending as much as 10 statute miles.

To summarise: (a) Herodotus' narrative of the events at Artemision may stand; and it is easier to accept an accumulation of events in his account than many of the conjectures put forward by a number of modern scholars. (b) Although Herodotus does not define as the Koila a certain part of the coast of Euboeia, the area which, following his narration, we can regard as his Koila (see map I) shows characteristics of this notorious site as described both by ancient and modern writers and resembles very much, in respect of

46. Θ. Ι. Σκούρας, 'Οχυρώσεις στὴν Εὐβοία', *AEM* (Ἀρχεῖον Εὐβοϊκῶν Μελετῶν) xx (1975) 327-400.

47. Χηλή appears to be the grammatically correct form that can make sense as applied to a site situated by the sea; cf. D. Chr. vii 2 fin.; see also Σ. Κ. Καρατζῆς, Ἄθηνά I (1940) 248.

48. Ἐγκυκλοπαιδικὸν Λεξικὸν Ἐλευθερουδάκη, Ἄθηναι 1927-31, vii, s. vv. 'Κοίλη, Κοίλωση'. (Actually Labarbe quotes the above source, for the islands Κοιλίαι - vii, s. v. In this lexicon, incidentally, the Κοῖλα (vii, s.v.) are located between Cape Kaphereus and Cape Chersonesos; it is also added that it was there that the Persian squadron was destroyed.) Cf. also Δεμερτζῆς, 224.9, 241.49; the map of the Greek Statist. Service no. 11 and the map of B. Πλατῆς (above, n. 43).

its geographical formation and its being open to winds of the northern sector, the other bay further to the SE, that extends west of Kaphereus and is the Koila proper (see Part III). (c) Herodotus thinks of the Koila as being on the east coast of Euboia in any case. (d) The bare mention of the Koila of Euboia without any other definition of place leads us to the following tentative conclusions: (I) The Koila were well-known in Herodotus' time and there was no need for any further specification of the place. (II) Perhaps a greater part of the east coast of Euboia, most of which is dangerous for navigation, was understood by the nomenclature Koila, and 200 ships could not have been destroyed on a coast of narrow extent situated only near a certain town or between two other significant towns or sites, which would be the case if Herodotus had given a more exact definition of the Koila. But in any case, except for the city of Kyme the east Euboian coast all along has always been lonely and uninhabited. (III) Herodotus himself did not write a *Geography* and accordingly did not have to be precisely detailed in describing such places; the place where the wreck occurred did not count for his narrative as much as *the fact* of the destruction itself. Apart from this, the Koila appear to be the only known place along the east Euboian coast. (IV) Since the Koila were notorious for navigation one would naturally think of a wreck on the east coast of Euboia as having occurred at or near the Koila.

## Part II: Livy and the Koila of Euboia

In xxxi 47.1<sup>49</sup> Livy narrates that the Romans —after capturing Oreus in September 199 B.C.<sup>50</sup>— wished to get away from the Euboic gulf named Koila, which was distrusted by sailors, before the weather deteriorated; accordingly they returned to Peiraeus, whence they had set sail on their campaign (see *ibid.* 45.1-2). The problem fundamentally concerns which route the Romans followed on their sailing back to Peiraeus: through Euripos, or outside Euboia? — and, closely related to this, which the “sinus Euboicus”, that was named Koila, might be?

The above information of Livy must be understood in the light of the

49. Iam autumnale aequinoctium instabat, et est sinus Euboicus, quem Coela vocant, suspectus nautis; itaque ante hiemales motus evadere inde cupientes Piraeum, unde profecti ad bellum erant, repetunt.

50. Cf. Geyer, in *RE* Supp. iv (1924) s.v. 'Histiaia' col. 755 63-5: 'Im J. 199... wurde H. wieder von der römisch-pergamenschen Flotte... genommen'. For the date 199 B.C., cf. F. W. Walbank, *Philip V of Macedon*, Cambridge 1940 (Repr. 1967 with a new foreword, Archon Books, USA), 318, 341. J. Briscoe (*A Commentary on Livy Books xxxi-xxxiii*, Oxford 1973, 124) and A. Hus (*T. Live*, ed. Budé, introd. lxxvi) also agree. Others hold that the capture of Oreus occurred in 200 B.C. (W. Smith [ed.], *A Dictionary of Greek and Roman Geography*, s.v.; E. T. Sage, in *LOEB, Livy* ix [1935] 137).

situation as he describes it in xxxi 23ff.: After the Romans had surprised Chalkis and destroyed the city<sup>51</sup> they embarked on their ships and returned to Peiraeus, from where they had set out. But if the Romans had had enough soldiers both to hold Chalkis and not to desert the garrison in Athens, Chalkis and Euripos would have been taken away from Philippos. But the implication is that they had not enough soldiers and that they did return to Peiraeus; thus one must assume that after sacking Chalkis, killing or putting to flight the male inhabitants of military age and freeing political prisoners who would have been pro-Roman in their sympathies, or at least hostile to Philippos (*ibid.* 8-9), they left Chalkis in the dreadful state in which the king found it (24.3) and took all their forces with them, making no attempt to hold the city as a base for themselves.

The fact that Chalkis was not under the Romans when they captured Oreus for the second time<sup>52</sup> (Sep. 199 B.C.), is also proved by the proposition which Philippos made to the Achaean assembly on his unexpected appearance there (xxx 25.1-7): He proposed that he should fight for their sake against the Lakedaimonian tyrant Nabis, but in this case they had to protect his rear by sending enough soldiers to enforce his garrisons at Oreus, Chalkis and Korinthos (25.7)<sup>53</sup>. Hence we may safely say that Chalkis was not in Roman hands in 199 B.C., although probably not strong enough to do the Romans any harm at the autumn equinox of that year<sup>54</sup> — if, of course, the Romans sailed back to Peiraeus through Euripos. As a matter of fact, it would seem that none of the ancient authors ever identified the Koila as the North Euboic gulf<sup>55</sup> and accordingly, if the Koila must be placed on the west of Euboia, the *sinus Euboicus* of Livy could only be the South Euboic gulf<sup>56</sup>. On the other hand, before the Romans reached there they would first have had to sail along the North Euboic gulf, and already had experience of the difficulties caused there by currents etc. (*cf.* Liv. xxviii 6.

51. Mid-October, 200 B.C., *cf.* Walbank, 317, 341; also Hus, introd. lxiii, and E. A. Βρανόπουλος, *Ἑλληνιστικὴ Χαλκίς* (Diss.), ἐν Ἀθήναις 1972, 35. There is no chronological problem about this Roman assault against Chalkis.

52. The Romans had taken Oreus for the first time in June of 208 B.C., but Philippos regained it in the August of the same year; *cf.* Walbank, 97, 339. Sage, 136 footn. 1, asserts that Oreus had been taken in 207 B.C. (see our n. 50, above).

53. Even in the next year (198 B.C.) Chalkis was still under Philippos; *cf.* Liv. xxxii 16.8, *ibid.* 37.3; also Polyb. xviii ii 6-7, App. *Mac.* 8.

54. The disagreement about the year in which Oreus was captured (n. 50) does not affect our conclusions, as Chalkis was not under the Romans in either case.

55. The gulf between Euboia and the mainland North of Euripos; *cf.* n. 24.

56. This is where Livy's contemporary Strabo located the Koila (SW of Euboia, *cf.* Parts I, III), and also Val. Maximus, whose chief source is Livy (*cf.* C. Bosch, *Die Quellen des Val. Max.*, Stuttgart 1929). But it is very doubtful whether Livy could have had access to what Strabo wrote in this respect.

9-11); furthermore, it would not have been easy for a fleet to pass through the straits at Chalkis, and the Romans could never have been sure whether they might meet troubles there as long as Chalkis did not belong to them; moreover, delays appear to have been undesirable (cf. *ante hiemales motus*).

The inconsistency in this situation is that while the Romans, as well as all sailors, looked upon the Koila with apprehension, this place (if it is thought to have been on the west side of Euboia) appears to be not quite equivalent to its notorious fame, because if the Romans had followed the course Oreus - Euripos - Koila - Peiraeus, they would have met probably more difficulties in reaching the Koila than in passing them: we have already referred to the state of the Euboian coast of the South Euboic gulf, which is not really dangerous<sup>57</sup>, and as regards the state of sea in the same gulf for a period shortly after the last week of September (i.e. a little after the *autumnale aequinoctium*) Livy also seems to be of the same opinion; for we have seen (n. 51) that Chalkis was destroyed and sacked in mid-October, 200 B.C., and although Claudius sailed from Peiraeus to Sounion and then directly to Chalkis, i.e. through the South Euboic gulf, Livy (xxxii 23.3-4) does not in this context mention anything about the Koila of Euboia, a place which he

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57. Cf. Part I, 251; also Part III for our general discussion of the Koila. In fact, the South Euboic gulf, though geographically sheltered from direct exposure to the N-NE winds by the body of Euboia, does not remain unaffected by them: Very strong currents rush down through openings between peaks and lower hills; L. N. Carapiperis comments relatively: 'When the Etesians are strong, on the leeward slopes of the mountains of various islands, stormy down-drafts are developed,... Such regions, for example, are the west coast of Euboia where, literally speaking, the winds sweep down like "cataracts" from mount Dirfis and Ochi. At Karystos on the foothills of Ochi, the Etesians develop down-drafts of wind of such intensity that objects such as chairs, tables etc., are swept into the sea' ('On the Geogr. Distribution of the intensity of Etesian winds in the Aegean sea', *Υπομν. τοῦ Ἐθν. Ἀστεροσκ. Ἀθηνῶν = Mem. Nat. Observatory of Ath.*, Ser. II, no 22, Athens 1970, 13); cf. Thphr. *Vent.* 32: ..., ἐν Καρύστῳ δὲ τηλικούτοι πνέουσιν (sc. οἱ ἐτησίαι) ὥστε ἐξαίσιον εἶναι μέγεθος. T. Ζάππας (in *AEM* xxii [1978-79] 175) mentions that from about the town Aliverion and the island Kavalliane (S. of the town) southwards this gulf is struck by violent, chiefly north, winds (cf. also his pp. 177 *init.*, 178 *fin.*, 181-2, where also wrecks that occurred in the S. Euboic gulf during the last century are described). But here one should notice that, both theoretically and practically, wrecks occurring in the S. Euboic gulf by reason of N-NE (Etesian) winds always happen at a distance from the Euboian coast, since small ships and boats are driven by these winds on to the numerous rocky islands scattered between Euboia and Attica. So, even if Livy, agreeing with Strabo in this respect, thought of the Koila as being the S. Euboic gulf, this area with the numerous small islands, cliffs and low rocks opposite a coast (i.e. the Euboian) forming many inlets and bays (this, if the Koila 'cavities' were so named after the configuration of the coast—deep inlets, etc.—see relevant discussion in Part III), could not of course be either the place where the 200 Persian ships perished or where Dio Chrysostomos was wrecked when on crossing from Chios he was actually thrown on to the lonely and remote area of Kaphereus (vii 31,32; cf. 55. See below, Part III).

introduces later (*ibid.* 47.1) as 'sinus suspectus nautis'<sup>58</sup>; on the contrary he mentions that Claudius reached his destination 'tranquillo'.

From the above-mentioned points we would conclude that the Romans should not be thought to have returned to Peiraeus through Euripos<sup>59</sup> and Livy never implies this (*cf.* n. 71, below); on the contrary when he mentions Euripos he does not mention the Koila and when he mentions the Koila he does not mention Euripos. It looks as though, for him, the two places were quite distinct and on different sea-routes. But in view of what we mentioned on p. 251/2, it is really very difficult to reach a definite conclusion on the course followed by the Romans on their voyage back to Peiraeus according to Livy's information, since if both Herodotus and Dio Chrysostomos connect the Koila with the rough and rocky Euboian coast, Livy's 'sinus Euboicus suspectus nautis' could refer to the reefs and rocky islands in the sea of the South Euboic gulf, surely dangerous for navigation under 'hiemales motus'. But unless the whole of the eastern coast of Euboea and the whole of the South Euboic gulf bore the nomenclature Koila, for different reasons, as we saw just above (precipitous and rocky harbourless coast — reef-infested sea, respectively), Livy's information that the South Euboic gulf, which was 'suspectus nautis', was named Koila, agrees in this respect with what Strabo defined as Koila, but it is inconsistent with Herodotus and Dio. To avoid this disagreement, because both Herodotus' and Dio's accounts are more fully

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58. We claim that the *sinus Euboicus* named Koila was not 'suspectus nautis' particularly because of the autumnal equinox; the phrase 'iam autumnale aequinoctium instabat' stands independently in the text as a definition of time at the end of a series of events which began from C. 45. Now the Romans, after completing their plans, had only to return to Peiraeus, i.e. to where they had started from, and, as the Koila could cause them trouble, they were in a hurry to sail clear of this gulf 'ante hiemales motus' of the sea, that is before any storms arose. The clause introduced by *itaque* is in close relation with the fact that the *sinus Euboicus* named Koila was generally feared by sailors (*suspectus nautis*) in storms, which of course occurred also at other times besides around the autumn equinox. Thus, as *hiemales motus* we should consider any storm which could arise from one day to the next, especially if by this phrase the Etesian winds as the cause for these storms are meant by Livy. (According to H. Γ. Μαριολόπουλος, *Τὸ κλίμα τῆς Ἑλλάδος*, ἐν Ἀθήναις 1938, 277, these winds blow periodically from end of May until end of October each year at more or less long intervals: More on this in «Note on Etesian Winds» at the end of our text). So, as the Romans were probably having calm weather for the last days of this expedition (that is a few days before the autumnal equinox, on Sept. the 22<sup>nd</sup>), presumably they wished to start on their way back under the prevailing weather conditions. Their eagerness to do so could find a justification if we recall what the hunter mentioned to Dio in §6 of the *Euboicus*: βουλοίμην δ' ἂν ἔγωγε καὶ μετὰ πέντε ἡμέρας λῆξαι τὸν ἄνεμον... etc. (Statistics on the Etesians blowing for a number of consecutive days are mentioned in our separate «Note», q.v.).

59. This is also what Girard (721) infers from Livy's information, though he admits that the sea-route of the Romans on their return to Peiraeus, as mentioned by Livy, does not give any topographical definition (J. Girard, 'Mémoire sur l'île d'Eubée', *Archives des missions scientifiques et littéraires* ii, 635ff., Paris —Imprim. National— 1851).

documented than the comparatively vague information given by Livy, it would be much safer to think that the Romans on the way back to Peiraeus sailed along the otherwise dangerous east coast of Euböia and that the Koila must accordingly be sought where the large gulf on the SE Euböian coast is, west of Kaphereus.

### **Part III: A general survey of ancient and modern views on the Koila with special reference to Dio Chrysostomos' account in the *Euboicus*.**

‘Über die Koīla herrscht großer Zweifel<sup>60</sup>’, and this is still the case as there has been no general agreement about the location of the place.

Herodotus' account has been examined in Part I. But while we are able to comment in detail on the narrative of Herodotus—which is coherent and connected with historical events—we cannot do this to the same extent with Livy, much less with his contemporary Strabo, who has simply defined the site as situated on the SW coast of Euböia<sup>61</sup>. In this Part of the paper it would seem reasonable to test Strabo's evidence by comparison with the accounts given by other authors and especially with that of Dio. It is not of course necessary to embark on a full-scale study of each of these authors in turn, but as regards the Koila we may examine their accounts of this place from the following points of view: (i) their respective purposes in mentioning the Koila, (ii) the relative amount of detail with which they write, (iii) how they acquired their knowledge of the Koila, and (iv) their general credibility in this matter.

Herodotus and Livy are historians and mention the Koila incidentally without actually determining the location of the place. In fact, in mentioning the Koila Herodotus defines the locality of the Persian wreck, not of the place (which to all appearances was well known), and Livy's purpose is also far from stating where the Koila are. Strabo, who as a geographer, locates the Koila in relation to their environment, fulfils his obligation in this respect, but Dio connects the Koila with his own personal experience of southern Euböia (vii 1, 2, *al.*) and of the life which two families led in the remote and wild area of Cape Kaphereus (vii 31, 38, *cf.* 55).

The amount of detail with which Herodotus and Livy furnish their mention of the Koila does not certainly refer to the location of the place. Strabo

60. Baumeister, *op. cit.* 69, n. 1.

61. Τῆς Εὐβοίας τὰ κοῖλα λέγουσι τὰ μεταξὺ Αὐλίδος καὶ τῶν περὶ Γεραιστῶν τόπων κολλοῦνται γὰρ ἡ παραλία, πλησιάζουσα δὲ τῇ Χαλκίδι κυρτοῦται πάλιν πρὸς τὴν ἡπειρὸν; Str. x 1.2 (C. 445). Instead of Αὐλίδος it has been proposed to emend to Χαλκίδος (see Teubner ed.), but this does not alter the location.

however determines the extent of the Koila, which, he says, cover the whole of the SW coast of Euboea, and gives the reason why the area holds this name (n. 61, above). As for Dio, the fact that the Koila ought by all means to be near Kaphereus limits their extent and defines their position, which according to his narrative can only be on the SE Euboian coast. It would not be possible to define whence Herodotus' knowledge of the Koila came, and his is the first mention of this place. But to judge from Livy and his contemporary Strabo it again seems that the name Koila, at least, if not the exact location of them, was widely known, since they use verbs like *vocant* (cf. n. 49) and *λέγουσι* (cf. n. 61). It is doubtful whether these verbs reveal an influence of the one author on the other, but what is clear is that they both repeated what others named Koila, and Strabo is notorious for repeating what others have written or said. Granted that Dio is the only one who claims autopsy (vii 1, 2, *al.*) and that Strabo indisputably lacks this advantage<sup>62</sup>—a thing which often diminishes credibility—the former comes out best as a source. Below, by comparison of the information of Strabo (see n. 61) with what Dio says in his seventh discourse (*Euboicus*) and with some other ancient and modern sources we shall try to show that the geographer is in error with his location of the Koila.

To begin with, the text in Dio's *Euboicus* §2 is as follows: ἐτύγγανον μὲν ἀπὸ Χίου περαιούμενος... χειμῶνος δὲ γενομένου χαλεπῶς καὶ μόλις διεσώθημεν πρὸς τὰ Κοῖλα τῆς Εὐβοίας. The way in which the two phrases are connected (μὲν... δὲ) combined with the extended «Aktionsart» (or verbal aspect) of the participle περαιούμενος emphasizes the impression that the storm arose while Dio was crossing the Aegean; and, since the Koila of Euboea, dangerous for navigation, are clearly located near Kaphereus (combine §§7, 31-32, 38, 55 of the *Euboicus*, cf. Tz., *ad Lyc.* 384<sup>63</sup>), the storm must have arisen while Dio's boat was not too far away

62. See C. H. Weller, 'The extent of Strabo's travel in Greece', *CPh* i (1906) 339-56. Yet L. Waddy (*AJA* lxxvii [1963] 296-300) in his article 'Did Strabo visit Athens?' supports Strabo in his belief (ii 5.11) that ἀκοή is for scientific knowledge 'much more important than sight' (296, col. II), and though his general conclusion is that 'in the great majority of cases Strabo did not think it worthwhile to say that he had visited a place, when he discussed it in the *Geography*' (298, col. I *init.*, cf. 296, l) he finally concludes (300, II) that 'as far as Greece is concerned, it is true that he can only be proved to have visited Corinth' and that 'it is extremely probable that he went to Athens also' (*ibid.*). Following on this, and granted that Strabo himself in x 1.2, where he gives the location of the Koila, uses λέγουσι, it is fully clear that his information of the Koila was gathered from ἀκοή. In this respect P. W. Wallace's argument (*Strabo's Description of Boiotia*, A Commentary, Heidelberg 1979, App. I entitled 'Did Strabo visit Boiotia?') that 'one might well ask whether there is a reason that Strabo necessarily had to mention personal visits to places which in fact he had visited' (169) does not also apply in this case.

63. Ἦψε (sc. Ναυπλίου) φρυκτὸν περὶ τὰ Κοῖλα τῆς Εὐβοίας καὶ ὃν εἶπομεν Καφηρέα, νῦν δὲ ξυλοφάγον καλούμενον..., cf. *ibid.* 373. See also our last note (87).

from this promontory, which lies opposite to the southernmost part of Chios<sup>64</sup>. Also in §2 Dio informs us that the very small boat was thrown ashore εις τραχύν τινα αἰγιαλὸν ὑπὸ τοῖς κρημνοῖς. The coast round Kaphereus is very rough indeed (*cf.* also §§3, 7, 22/23, 51), though the SW Euboian coast is far from being like that. Apart from what is said by Hawkins (see p. 251 above), who visited the area (*loc. cit.* 545), we can also support this argument by our own autopsy of the landscape<sup>65</sup>.

The area round Kaphereus is described by Dio as very wild and uninhabited: even the hut of the hunter was περὶ τετταράκοντα στάδια away from the coast (§10) and in fact μέχρι τῶν οἰκουμένων (end of §52) was a further distance — *cf.* also §3 καταλειφθεὶς δὴ μόνος... Even nowadays the conditions of living in the villages round Kaphereus are, *mutatis mutandis*, similar to those described by Dio in his 7<sup>th</sup> discourse<sup>66</sup>. It would be wholly unreasonable to suppose that Dio's boat could have doubled the promontory of Geraistos (S. of Kaphereus): such an attempt would have been difficult even without a storm as very strong currents flow southwards through 'Stenón Kafireus'<sup>67</sup>. Equally, if not much more unlikely, the very small boat (§6) was not destroyed on the SW Euboian coast because, as we have already held, a wild landscape like that round Kaphereus does not exist at all in this area. Besides, the N-NE Etesian winds

64. *Cf.* Girard, end of 716; A. R. Rangabé ('Mémoire sur la partie méridionale de l'île d'Eubée', Mémoires présentés par divers savants à l'Académie des inscriptions et belles lettres de l'institute de France, première série, iii [1853] Paris 1853, 197ff.), 236; Baumeister, 29; Neumann - Partsch, 145.

65. *Cf.* also Γ. Π. Γκίκας, *Οἱ Ἀρβανίτες καὶ τὸ Ἀρβανίτικο τραγούδι στὴν Ἑλλάδα*, Ἔρευνα στὴ νότια Εὐβοία, Ἀθήνα 1978, 44.

66. See Γκίκας, 27, 45-8. In a few words this writer (who comes from the village Γιαννίτσι, W. of Kaphereus) mentions that the inhabitants of those villages isolated from the world, are without electricity and regular means of communication; there is not even a doctor in those villages and in many of them no water in the houses. Finally, as there are no roads for cars, these villages are accessible only to hunters and mountain climbers; *cf.* also Σ. Μαρσέλος - Γ. Καρδούλας, *ΑΕΜ ν* (1958) 25-6; Χ. Δ. Φαράντος *ΑΕΜ xx* (1975) 95-8. It should be mentioned in addition how Greek TV-viewers were astonished in the course of a documentary film, on June the 27<sup>th</sup> 1983, when two children aged 8-10 from the village Amygdalea, the main one of the small villages a little south of Kaphereus (see map II), admitted that they did not know what a car was, since they never happened to have seen one (*cf.* the narrative of the hunter in the *Euboicus*, 21-4). In another scene of this film a few inhabitants were listening to a church service on a Sunday morning from a battery radio in the small local church, since no priest existed there. The film in question was shown on the occasion of a road construction, in progress for several years, to connect these villages with the main road to Karystos; and it is a very difficult task to open a road for cars where the rocky and abrupt slopes of mount Oche are hard even for mules to pass. A sort of communication and some commercial dealings are effected so far by a boat starting from Karystos once a week if the wind and sea-conditions allow: cases were mentioned when the boat returned without being able to approach the rocky coast of Amygdalea.

67. See BAC no 1630.

rather push the boats out to sea at this point than force them on to the Euboian shore (cf. §§6,7: the small boat κατηνέχθη; for this see also above, n. 57). The east coast of Euboia, in fact, presents a more or less continuous and dangerous lee-shore (and that not only for primitive vessels — see below, pp. 271-2).

Consequently Dio's narrative contradicts Strabo's location of the Koila in three indisputable respects:

- (a) The storm arose while Dio was crossing the Aegean sea<sup>68</sup>.
- (b) The Koila are firmly connected with Kaphereus and its storms — §§31, 32. (Kaphereus has nothing to do with the SW coast of Euboia).
- (c) The landscape of the area round Kaphereus as described by Dio can be identified: The phrase... ὡς ἄγρια καὶ σκληρὰ τῆς νήσου τὰ πρὸς τὸ πέλαγος (§7) denotes that the coast on to which Dio's boat was destroyed faced the open sea — and in the south part of Euboia the only coast which faces the open sea is the one round Kaphereus, i.e. a little south, and, along a more extended area, west of this Cape; as for ἄγρια καὶ σκληρὰ, we have seen that the SW Euboian coast is neither wild nor rugged. To this, contrast §51 fin.

Thus, to sum up, the Koila could not be situated where Strabo puts them, i.e. from Aulis to Geraistos, and this being so Valerius Maximus (i 8.10) and Lucan (v 194), who evidently followed him, or the same literary sources as he used, are also wrong. In *Chrétomathiae e Strabonis Geographicorum* Libro x<sup>69</sup>, even the epitomiser of Strabo opposes him: τὰ δὲ μετὰ Κηφηρέως καὶ Γεραιστοῦ τὰ Κοῖλα τῆς Εὐβοίας καλεῖται<sup>70</sup>. Just to point out the confusion regarding the location of the Koila among modern scholars we shall mention now views expressed mainly during the two last centuries:

Rangabé (232), after making a prefatory allusion to Strabo's error and in order to support his personal view, writes: '...., et c' est par ignorance des lieux que Rupert l' applique (i.e. the Koila) à la côte désignée par Strabon'.

The location given by Strabo is followed however by W. Weissenborn - H. J. Müller who commenting on Livy (xxxi 47.1) hold that 'die Flotten müssen also nach der Einnahme von Oreus durch den Euripus (s. 28, 6, 8) gesegelt

68. Cf. G. C. Richards, 'The Hollows of Euboea', *CR* xliv (1930) 61-2: 'If in the open sea a storm arose, the wreck is certainly intended to be on the east coast of Euboea' (61).

69. In *GGM* (C. Müller), Parisiis, ii, 588.

70. Cf. also Hawkins, 546-7, Rangabé 233; Mason - Wallace mention however that 'Strabo's epitomator placed the Hollows between Karystos and Kaphereus' (138).

sein'<sup>71</sup>. Wilamowitz<sup>72</sup> also appears to think of the Koila as being the South Euboic gulf (9) and he writes that 'Kaphereus ist das östlichste Kap Euboias, also nicht an den Koila' (11). A. Fouriotes in *AEM* xvi (1970) 291-2, locates the Koila on the west coast of Euboia near Styra, but on a sketch-map of Euboia in *AEM* xv (1969) 290, where the first part of his extended article appears, the Koila are marked a little west of Kaphereus!

Rangabé, basing his view on the observation of Rupert (*ad. Liv.* xxxi 47.1) 'que ce mot désigne plutôt la configuration d' un terrain encaissé dans de hautes montagnes' and, further on, that the word Koila '...ne doit signifier qu'un pays coupé de profondes vallées...' (232), locates the Koila between Kaphereus and Geraistos. But he mentions, on the other hand, that the word *Koila* can also apply to the configuration of the coast; in this case, and according to the information of Strabo κοιλοῦται γὰρ ἡ παραλία, '...celle (i.e. côte) qui s' étend du cap Capharée au cap de Cume a ce caractère avant tout autre en Eubée' (*ibid.*)<sup>73</sup>. Regarding the location of the Koila between Kaphereus and Geraistos, Pritchett follows Rangabé openly<sup>74</sup>, and just before him in the collective papers of L. H. Sackett and others 'Prehistoric Euboia' (*BSA* lxi [1966] 33-110), of a clear archaeological character, reference is made to the area of Koila as follows: '...there are only

71. (*T. Livi ab Urbe condita libri*, siebender Band, Buch xxxi u. xxxii, vierte Auflage, Berlin - Dublin - Zurich 1962). The fact that Sulpicius, encouraged by the easy first capture of Oreus, sailed afterwards through the N. Euboic gulf intending to attack Chalkis (*Liv.* xxviii 6.8) has nothing to do with the Romans wishing to return to Peiraeus as soon as possible after the second capture of Oreus (*xxxi* 47.1): it does not follow from what Livy says here either (a) that the Romans again sailed past Chalkis or (b) that the Koila must therefore be to the west of Euboia. Consequently, the arbitrary suggestion of Weissenborn - Müller, along with their irrelevant reference to Sulpicius, leads to no convincing conclusion.

72. U. von Wilamowitz-Moellendorf, *Griechisches Lesebuch*, ii. Erläuterungen, Erster Halbband, 9ff., Dritte unveränd. Aufl., Berlin 1904.

73. *Cf.* Jahn, 60 footn. 2: 'Die Höhlungen von Euböa nannte man die geraümige Bucht an der Ostküste der Insel am Vorgebirge Kaphereus, an deren schroffer Küste sich das Meer selbst bei ruhigem Wetter in starker Strömung bricht und bei Sturm den Schiffen sicheren Untergang bringt' (O. Jahn, 'Eine antike Dorfgeschichte', *Aus der Alterthumswissen. Populäre Aufsätze*, Bonn 1868, 51ff.); Philippson (*op. cit.* end of n. 29), 567: 'Auf das Kap Kymi folgt wieder ein kürzerer Bogen bis kap Oktonia, dann die lange Bogenform der "Höhlungen Euboeas" bis Kap Doro'; see also above, p. 256 *init.* (Köster), and n. 41.

74. *Op. cit.*, 19: '...the identification of Rangabé... is the correct one'; also 20, where he quotes a whole paragraph of Rangabé's text. On p. 21 (plan of Southern Euboia) Pritchett characterizes as 'Hollows' the area between Kaphereus and Platanistos (south of Kaphereus, see map II) after he has made the remark (20) that 'this is where the majority of the ancients places it'. Furthermore, to show the configuration of the land in this area 'cut by deep valleys' (20) he has drawn seven of these valleys. But the landscape which extends west of Kaphereus is not much different from the one that has already been described by both Rangabé and Pritchett: in fact another seven valleys, some of them wild and deep, occur along the above mentioned area up to the promontory named Philagra; *cf.* also Kiepert, *Neuer Atlas...* (no. 5...) —see n. 78(h),— and below.

small coastal valleys, round which the hills rise high and make communication difficult, particularly to the south and east of Mt. Okha at the notorious Hollows of Euboea' (77 — *cf.* 110), i.e. judging from the configuration of the land (*cf.* Rangabé, above), to which Pritchett (in 1969) agreed.

Of the moderns, the first who opposed Strabo seems to have been Rangabes, who named the Koila 'τὰ κατὰ τὸν ἀνατολικὸν αἰγιαλὸν, ἀπὸ Καφρέως μέχρι τοῦ ἀκρωτηρίου Χερσονήσου'<sup>75</sup>. It would also seem that he first suggested that the name *Koila* could be applicable to both sides of S. Euboea<sup>76</sup>, not without justification, if one is to judge from Strabo and perhaps Livy (see our last remarks on Part II, above). Another view about the Koila is held by Richards —*art. cit.*— but the arguments he uses cannot be accepted:

- (1) He contends that livy (xxxi 47.1) has followed Strabo as regards the location of Koila 'between Aulis (Chalkis?) and Cape Geraistus... from his mention of Geraistus in c. 45'. But in fact the mention of Geraistos (situated east —and a little to the South— of Karystos) in xxxi 45 may well be related to the Koila being, instead, on the SE coast of Euboea, according to our own interpretation of the narrative of Livy (see Part II).
- (2) Supporting the suggestion of J.A.R. Munro that 'the term Hollows refers to the plain containing lakes', Richards locates the Koila in the neighbourhood of the town Dystos on the eastern coast of Euboea where, as he says, 'according to Grundy's map —I have no autopsy— one can pass from sea to sea past two lakes without any great rise in the ground'. This is what 'περὶ τὰ Κοῖλα in Herodotus meant' and he suggests that 'Dio meant the same'!

Here we should note that Grundy, in his map, which appeared in 1901, actually depicts another (smaller) lake besides the lake *Dystos* (south of it), and this presumably is the so-called Λίμνη τοῦ Ἀργυροῦ. However this (smaller) lake dried up, probably in the early years of this century, as its water drained into the sea. Yet Girard, in the last pages of his work (see n. 59), published in 1851, where he deals with the area of Δύστος

75. Ἰάκ. Ρ. Ραγκαβῆς, *Τὰ Ἑλληνικά, ἐν Ἀθήναις 1854*, iii 6.

76. "Ἴσως δὲ καὶ ἡ ἔκφρασις κοῖλα νὰ δύνανται νὰ ἐφαρμοσθῆ εἰς ἀμφότερα τὰ μέρη, τὸ τε ἀνατολικὸν καὶ τὸ δυτικόν, διότι ἐκατέρων οἱ αἰγιαλοὶ ἐπίσης κολλοῦνται' (*op. cit.*, *ibid.*); *cf.* Philippson, in *RE* vi 1 (1907), s.v. 'Euboea', col. 853, 34: 'Wegen der Verengung des Landes wird dieser ganze Teil der Insel τὰ Κοῖλα τῆς Εὐβοίας genannt'; P. Mazon ('Dion de Prouse et la politique agraire de Trajan', *Lettres d'humanité* ii, Paris 1943, 47ff.), 60 n. 2 fin.: 'La définition de Strabon n'est point inexacte pour cela, elle est seulement incomplète: le nom de *Creux de l'Eubée* s'applique en réalité à toute la partie méridionale de l'île, qui se rétrécit peu à peu à la hauteur d'Érétie et se *creuse* en deux larges golfes sur deux faces N.E. et S.O.'; also Briscoe, *op. cit.*, 157: 'but the name may in fact have referred to the coasts of the southern part of Euboea as a whole'.

mentions only one lake there! The reason for this confusion may be that also lake Dystos dries up in summer.

- (3) The mention of the Koila by Herodotus as it stands is quite vague: however, as it emerges from his narration, the Koila cannot be thought to be further south than Cape Kyme in any way. Now, if Richards suggests that according to Dio, too —see above, (2)— the Koila can be on the coast east of Dystos he must clearly have missed the fact that in the *Euboicus* the Koila are very closely connected with Kaphereus (see above) —as to this the information of Dio surely is much more definite compared with Herodotus' simple mention of the place— and that accordingly Herodotus and Dio speak about two different places. As a matter of fact, Richard's suggestion, almost dividing the distance between just west of Cape Kyme (i.e. the point where the last few Persian ships must definitely have been wrecked according to Herodotus' narration — see above, p.253/4) and just west of Cape Kaphereus (where the hunter lived), by which he defines the Koila in the neighbourhood of Dystos for both cases, is really an unfortunate one.

Meletios writes that 'μετὰ τὸν Καφηρέα ἦτον Πόλις τὰ Κοῖλα τῆς Εὐβοίας, καὶ τόπος παραθαλάσσιος οὕτω καλούμενος διάσημος εἰς τοὺς συγγραφεῖς'<sup>77</sup>.

The Koila appear as a town also in two old undated maps: (a) *Achaiae descriptio*, Amstelodami apud P. Mortier cum privilegio; (b) *Achaiae nova & accurata descriptio*, by I. Laurenbegio. These maps obviously lack accuracy and show a poor shape of Euboea, but in both of them the town Koila is marked South of the Cape Chersonesos, on the East coast of Euboea; nevertheless, what is interesting is that the coast, where the town is, forms a hollow. Further, in many other maps, some of them very old and inaccurate according to today's data, the place Koila of Euboea is often marked on the

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77. Μελετίου Γεωγραφία Παλαιά καὶ Νέα, ..., ἐν Βενετίᾳ 1807<sup>2</sup> [Ἐνετίῃσι 1728], 400. In the same place there is today a small village named until lately Κοῖλωση (see above, p. 258), but it is risky, because of that alone, to identify the village with the 'πόλις' which Μελετίος mentions, or with the ancient place named Koila. We need only note however that the village Κοῖλωση (=Cavity), lies now about 2 1/2 miles away from the sea. But, as it is situated very near a ravine, it is likely that in ancient times it was closer to the sea than it is now, this owing to alluvial deposit from the torrent. In some very old maps we can see that at this very point there is an evident inlet in the coast. For those who wish to consider the quality of the rock stratifications in this area (e.g. whether they permit alluvia) we refer to F. Teller, 'Der geologische Bau der Insel Euboea', *Denkschr. Kaiserl. Akad. Wissensch. Wien, Mathem.-Naturwiss. Klasse*, xl (1880), Wien 1880, 129-82 (Süd-Euboea, 148 ff.), and J. Deprat, *Étude géologique et pétrographique de l'île d'Eubée* (Thèse), Besançon 1904, 14-5, 28-33, 120-3 (and the geological maps at the end of these works).

SE Euböia, west of Kaphereus, usually with a deep cavity on the coast<sup>78</sup>.

On the other hand, Richards (*art. cit.*) is quite right to ask 'is a bay intended at all by the phrase the *Hollows?*', noting that the expressions Κοῖλα τῆς Χίης χώρας (Hdt. vi 26.1)<sup>79</sup>, Κοίλη ὁδός (Hdt. vi 103.3) seem to denote 'a place on the land' and 'in a depression on land' respectively. Also in expressions like κοῖλον Ἄργος (S. OC 378, 1387), κοίλη Θεσσαλίη (Hdt. vii 129.1; Livy xxxii 4.3), κοίλη Συρία (Livy xxxiii 19.8), the adjective κοῖλος again refers to the configuration of the land, and not to the shape of the coast (*cf.* Girard, 720; also the opinion of Rangabé, above). Polybius however uses the same adjective in iii 18.10<sup>80</sup> and v 103.4<sup>81</sup>, but since in both cases he mentions that Koila were accessible to ships, first and foremost they were situated by the sea, although at least in the first instance one would surely think that the adjective denotes mainly the configuration of the land.

In two examples Euripides uses κοῖλος clearly of the shape of the coast: λιτόντας ἡμᾶς Αὐλίδος κοίλους μυχούς Αἴγαιον οἶδμα διαπερᾶν (IA 1600-1), and πλησον δὲ νεκρῶν κοῖλον Εὐβοίας μυχὸν (Tr. 84). In the second case Euripides is evidently speaking about the Koila of Euböia, connected as usually with Kaphereus (*ibid.* 90), while the first one *perhaps* helped to influence Strabo in defining the Koila as from Aulis down to Geraiatos, where —after the end of the numerous inlets and bays, on the west Euböian coast— the Aegean opens out to the East. Consequently, the

78. (a) N. Sophianus, *Totius Graeciae descriptio*, Romae 1552.

(b) F. Bertelli, *Totius Graeciae descriptio*, Venetiis 1564.

(c) N. Sanson, *Graecia Sophiani*, Paris 1636.

(d) *Hellas seu Graecia Sophiani*, Amsterdam (?) 1640 (?).

(e) F. de la Pointe, *Ἑλλάς, Carte de Grèce*, Paris (1660?).

(f) *Ἑλλάς, Graecia Sophiani per A. Ortelium descripta*,... cura et sumptibus P. Vander Aa., Lugduni Batavorum 1710 (?).

(g) *Graeciae antiquae designatio nova*... studio et impensis M. Seutteri, August[ae] Vindelicorum 1730 (?).

(h) H. Kiepert, *Neuer Atlas von Hellas und den Hellenischen Colonien* in 15 Blättern (no. 5 *Mittleres Hellas*), Berlin 1872.

79. For the Koila of Chios see K. Ἀμαντός, *Γλωσσικά Μελετήματα*, Ἀθήναι 1964, 147-8. These Koila are situated a little west of the ancient Place Δελφίνιον in the NE part of Chios, about 1 1/2 mile away from the east coast of the island; see the map *Χίος* 338 x 442 mm. by A. Γ. Πασπάτης, Ἀθήνησι 1888, and *Τοπογραφικός Πίναξ τῆς Νήσου Χίου*, edited by Ν. Κανελλάκης, Χίος 1903.

80. Ποιησάμενος δὲ τὸν ἐπίπλουον νυκτὸς ἐπὶ τὴν νῆσον παντὶ τῷ στρατεύματι, τὸ μὲν πλεῖον μέρος τῆς δυνάμεως ἀπεβίβασεν εἰς τινὰς ὑλώδεις καὶ κοίλους τόπους...

81. Ὁ δὲ βασιλεὺς... διέπλευσε μετὰ τῆς δυνάμεως πρὸς τὰ λεγόμενα Κοῖλα τῆς Ναυπακτίας, ἃ τῆς πόλεως εἰκοσι μάλιστα σταδίου ἀπέστηκε. About the location of the Κοῖλα τῆς Ναυπακτίας see the map 'Tabula qua Graecia superior, qualis tempore belli Peloponnesiaci ineuntis fuit', by C. O. Muller; also Murray's *Handy classical map of Greece*, ed. by G. B. Grundy.

adjective κοῖλα was apparently used both of the configuration of the land being hollowed, and of the coast forming a hollow, and for this reason the extended bay west of Kaphereus (*cf. E. Tr.*, above) is the most likely to bear this name (*cf. Girard*, 717). As for the expression of Euripides, κοίλους μυχοῦς (in *IA*, above), this could be merely a poetical description of that place without further significance for the definition of the Koila; in this case, supposing that Euripides was Strabo's source, the latter could have been misled.

The land south of Kaphereus is also cut by deep ravines (*cf. above*, n. 74 - Pritchett) but the coast does not form a hollow at all. Apart from this observation, the evidence in the text of Dio is in support of the argument that the Koila were not south of Kaphereus but extended west of this Cape — and not too far away from it: In §2 Dio mentions that after the wreck the fishermen joined some πορφυρεῖς, and Gounaropoulos<sup>82</sup> writes that near the village Ἅγιος Δημήτριος (W. of Kaphereus) there is a site named Πορφύρα, where it is likely that purple-fishers used to live in ancient times; as regards Byzantine times, *cf. Μιχαήλ Ἀκομινάτου τοῦ Χωνιάτου τὰ Σωζόμενα* by Σπ. Λάμπρος, ii (ἐν Ἀθήναις 1800 - repr. Groningen 1968), 275 ll. 9-11; 635 *ad loc.* Demertzes (222,5) also describes Πορφύρα as a 'παράλιος θέσις'.

In §7 the hunter explains to Dio why it is inevitable for a ship to be destroyed on such a wild and rugged coast as that which bears the name κοῖλα τῆς Εὐβοίας: granted that the hunter has not yet spoken about the configuration of the land in his area (to this he refers in §14), this constitutes a good hint that the reason for introducing that place as *the Koila* was primarily the shape and the nature of the coast<sup>83</sup> and only secondarily the configuration of the land; for the deep ravine, the stream, the spring, the glades and the meadows (§§14-15) which form or adorn the landscape further inland are unaffected by the very strong N-NE winds that drive the ships on to the natural cavity of the rough coast<sup>84</sup>, immediately affected by these winds. Thus, following the narrative of Dio we must admit that the precipitous coast of the Koila is where the steep sides of Mt. Oche cut by deep valleys end abruptly in the sea west of Cape Kaphereus. In this cavity shipwrecks occur even today: according to the natives, 70% of these occur along this area<sup>85</sup>, and only 30% on the coast south of Kaphereus, although

82. K. A. Γουναρόπουλος, *Ἱστορία τῆς Νήσου Εὐβοίας*, Θεσσαλονίκη 1970, 135.

83. Philostratus (*VA* iii 23.114) gives the information that ἐν Εὐβοίᾳ κοίλη (an expression referring also to the shape of this part of the island) the sea had reefs, οὐπερ πολλὰ τῶν ἀκρωτηρίων ἀναπέπηνεν.

84. *Cf. Girard*, end of 716; I. Γ. Τσολάκης, *Τουριστικός ὁδηγὸς Καρύστου*, Κάρυστος (undated), 45 *init.*; see also our n. 29 (on Kaphereus).

85. *Cf. also* Deprat, 13: 'Les vents soufflent généralement du large, poussant les vagues avec violence contre la côte, assez pour rendre la navigation difficile aux caiques, surtout dans

the sea-route through the *Stenon* of Kaphereus (between SE Euboia and the island of Andros) is much more frequent. It was on the coast near the village Hagios Demetrios that a foreign mercantile ship was wrecked, about a year before we visited the area in the summer of 1978, as related to us by the inhabitants<sup>86</sup> — and these inhabitants did not return from the coast emptyhanded! (cf. *Euboicus* §31, also §§51,52).

Finally, the well-known story about Nauplios and his false beacons is strictly connected with the Koila of Euboia situated only west of Kaphereus<sup>87</sup>. The explanation of these beacons is that he lit them a little west of the head of that promontory: the sailors coming from Troia, thinking that the fires denoted the head of the promontory, had entered already the cavity. And, as also the present inhabitants hold, once a vessel has entered the cavity it is very difficult to get out of it unharmed: the reefs and the rugged rocks of the coast west of Kaphereus are merciless and destroy every vessel which the rough waves and the currents force on to them.

In the light of all evidence and discussion one may safely conclude that the Koila were situated in SE Euboia, Cape Kaphereus defining their limit to the East, and the two Capes Letra and Philagra (see map I) the middle of their extension to the NW.

### NOTE ON ETESIAN WINDS

On Etesian winds in the Aegean cf. Hdt. vi 140.1; D. iv 31; on ἐτησίαί, generally, cf. Hdt. ii 20.2,3, where, according to a theory put forward, although Herodotus does not accept it finally, it was these winds that caused

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la region du cap Iserta et du cap d' Oro; le dernier était déjà redouté des navigateurs de l' antiquité'. 'Cap Iserta' is the contemporary Cape Letra, situated next to Cape Philagra (and west of it) west of Kaphereus ('cap d' Oro').

86. The incident is mentioned also by Γκίκας, 45 init.

87. On the well-known story about king Nauplios and his son Palamedes (a brief allusion to the theme occurs also in D. Chr. xi 130) see Hyg. *Fab.* 105, 116; how Odysseus inculpated Palamedes, cf. Polyaen. i, Prooem. 12. On the death of Palamedes, cf. D. Chr. xiii 21; also E. *Or.* 433 (mention), cf. Scholiast on *id.* 432; X. *Mem.* iv. 2. 33; Apollod. *Epit.* iii 8. On Nauplios and his treacherous beacon-fires which caused the wreck of the Greeks returning from Troia (see also end of Part III), cf. E. *Hel.* 766-7, 1126 ff.; Apollod. ii 23, *id.* *Epit.* vi 7.11; cf. also mentions in Verg. *Aen.* xi 260 (and Serv. *ad. loc.*); Str. viii 6.2; Prop. iv 1. 115; Sen. *Ag.* 568 ff., *Med.* 659; Stat. *Ach.* i 93 (also Placid. *ad. loc.*); Paus. ii 23.1, iv 36.6; Philostr. *Her.* x, xi; Q.S. xiv 611 ff.; Tz. *ad Lyc.* 384. Also, cf. *Script. rer. mythic. Latini* (ed. G. H. Bode), i 46, 141 (First Vatican Mythographer, 144; Sec. Vat. Myth., 201). The story was probably told by Hagias in his epic *Nostoi*, though in the abstract of that poem there occurs merely a mention of 'the storm at the Kapherean Rocks' (see EGF [Kinkel], i, 53). The wrecker Nauplios was the subject of a tragedy by Sophocles, cf. Nauck (*TGF*), 541 ff.; Pearson (*S. Fr.*), ii 80 ff.; Radt (*TrGF*), 4, 353 ff.).

the swell of the Nile by preventing the water of the river from flowing out into the sea. Nevertheless this is an indication confirming, in any case, the northerly direction from which the Etesian winds blow, cf. Arist. *Mete.* 362<sup>a</sup> 11, Hp. *Aër.* 10 (ii, 44 Littré). For another indication of the direction of these winds, cf. Hp. *Epid. A.*, 4 (ii, 616 Littré), with reference to Thasos: θέρους οὐ λίην καυματώδες ἐγένετο· ἐτησίαι ξυνεχέες ἐπνευσαν; (northerly winds are always cool). For ἐτησίαι in Thasos cf. *ibid.* 7 (ii, 640 Littré). On the Etesian winds, cf. also E. C. Semple, *The Geography of the Mediterr. Region*, ..., London 1932, 618: 'The Etesian winds of midsummer swept down from the black Sea and swirled around this headland (*sc.* Kaphereus) with a force which daunted the bravest seaman'; Mariolopoulos (*op. cit.*, n. 58), 277-9, who makes the following main points:

- (a) The Etesian winds blow from the end of May to the end of October and are more frequent (and stronger) during August — prop. from Mid-July to Mid-September (277);
- (b) Principally they blow on the high sea, becoming weaker as we approach the coasts (*ibid.*);
- (c) In the Aegean they blow at a speed more than 20 metres per second (278), that is about 40 knots;
- (d) Calm is for the Greek coasts and islands something unusual and very extraordinary (279). See also *id.*, *Τὸ κλίμα τῆς Ἑλλάδος*, 'Ἐπιτομή, 'Ακαδ. Ἀθηνῶν, Κέντρον Ἑρεῦνης Φυσικῆς τῆς Ἀτμοσφαιρας καὶ Κλιματολογίας, Publ. no. 7, Ἀθῆναι 1982, 65-6.

It is a fact that the prevailing winds in Greece are the northern ones, cf. J. S. Paraskevopoulos, 'The Etesians', *Monthly Weather Review* 50 (8) [1922] 420 col. I, and Table 3 (*ibid.* col. II). This is shown clearly in the figure that Mariolopoulos has in his *Epitome of Τὸ Κλίμα τῆς Ἑλλάδος* (above), 63, a photocopy of which is attached to the end of this «Note» (cf. also the Fig. 1a, p. 573, ΠΑΑ lii [1977] 'On the Etesians over the Aegean' by C. C. Repapis & others).

On the direction of the Etesians L. N. Carapiperis, 'The Etesian Winds, I', *Mem. Nat. Observ. of Athens* Ser. II, no. 9, Athens 1962, 12 fin., writes that these 'blow from a northwest direction in Ionian sea and the coasts and islands of western Greece, from a north and northeast direction in the Aegean sea and their direction becomes northwestern in the south Aegean and the area of southern Dodecanese', cf. *id.*, 'Οἱ ἄνεμοι τῶν ἐλληνικῶν θαλασσῶν', *Publ. of the Meteor. Instit. of the Univ. of Athens* 8, Ἀθῆναι 1968, 11 (see the figure attached below, p. 276).

So, since the Etesians are winds of the northern sector (specially in the Aegean they are NE in N. Aegean, N. in central Aegean) they constitute the basic cause for the high frequency of the north winds in the Aegean sea (see B. Δ. Κατσούλης, *Αἱ ἀνεμολογικαὶ συνθῆκαι εἰς τὸ Αἰγαῖον πέλαγος* (Diss.), Ἀθῆναι 1970, 70 — also *al. passim*, since this work is fundamental

for the wind conditions in the Aegean), *cf.* Arist. *Mete.* 362<sup>a</sup> 11, *Pr.* 940<sup>a</sup> 35ff.; Thphr. *Vent.* 11. However, observations made at the National Observatory of Athens between the years 1893-1960 (period 1<sup>st</sup> of May - 31<sup>st</sup> of October) showed that 'the winds of the northern sector do not always have the character of an Etesian wind' (Carapiperis, 'The Etesian Winds, II', *Mem. Nat. Observ. of Athens* Ser. II, no 10, Athens 1962, 3), but the mean direction of the Etesians is N-NE (*ibid.*). This is in favour of our argument in the end of n. 32: There the night storm, even if not caused by the Etesians, was caused by a N. wind in any case; besides, νυκτερινοὶ βορέαι are mentioned by Aristoteles (*Pr.* 941<sup>a</sup> 20, 941<sup>b</sup> 34) and Theophrastus (*Vent.* 49). Be that as it may, both Prof. Mariolopoulos and Prof. Carapiperis have privately confirmed that the Etesians may not be considered as never blowing at night\*. And as Paraskevopoulos points out (*loc. cit.*), because of the fact that the prevailing winds in Greece are the northern ones (*cf.* Arist. *Pr.* 941<sup>b</sup> 38: βορέαι πλείστοι πνέουσι τῶν ἀνέμων, also 941<sup>a</sup> 27) 'it is clearly difficult to recognize the etesiens, not perhaps during their principal phase, but at least during their beginning and their end'.

According to Carapiperis, 'Οἱ ἀνεμοὶ τῶν ἐλλ. θαλασσῶν', 14, it is a rare thing that winds other than northern blow over the Greek seas in the warm period of the year. As for southerly storms in summer these are very rare, and in the event that they do occur they are of short duration. This is why, when N. winds prevail in the Aegean, the vessels may find refuge in the southern parts of the islands which are leeward, since it is improbable that the N. wind changes into S. all of a sudden. On the contrary the opposite tactic is really very risky, because a N. wind is likely to burst out at any moment.

Another characteristic of the Etesians is that they may blow for a number of consecutive days (*cf.* our n. 58). Carapiperis, 'The Etesian Winds, II', 12, says that 'from July to September the series of successive days of Etesian winds are more frequent than in May, June and October, but the series of

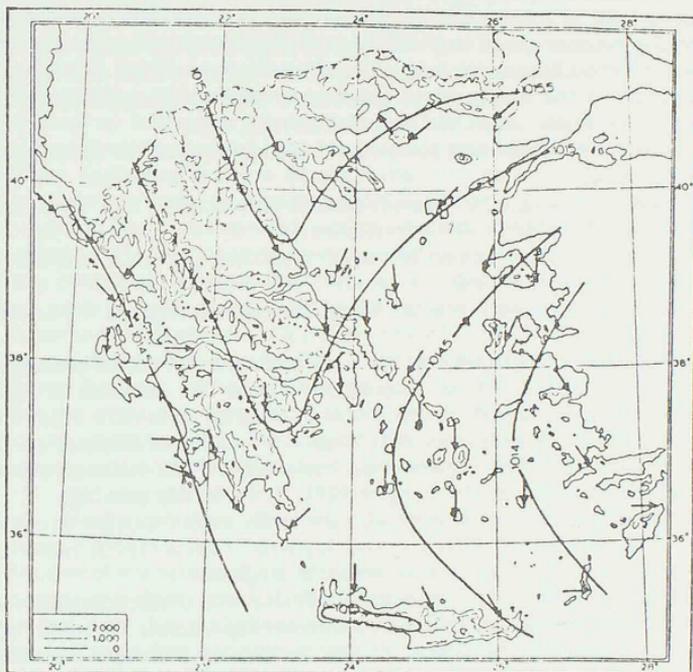
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\* A proof of this was the very sudden outburst of a strong squall at about 20.00 hrs., July the 21<sup>st</sup> 1983, when N-NE winds 9-10 on Beaufort scale, locally 13-14 (wind speed 80 knots!), and very heavy rain struck the NE Aegean and the coasts from Chalkidike to Magnesia (big hail-stones fell even in the city of Chalkis). A few days later (July the 25<sup>th</sup>) a new storm arose, this time in N. Aegean and the coasts of E. Macedonia and Thrake, with N. winds 8-9 (locally hurricane winds 12 Beaufort), at about 19.30 hrs. During these two gusts of wind, that blew in the extreme for no more than 25 minutes and in all about two hours (ὁ μὲν βορέας ἀρχόμενος μέγας, λήγων δὲ μικρός, Arist. *Pr.* 944<sup>b</sup> 30, *cf.* 945<sup>a</sup> 28; Thphr. *Vent.* 5), hundreds of trees were uprooted, roofs were swept away, and people lost their lives in accidents; others, mostly amateur fishermen, were drowned when their boats overturned. In both cases the winds, noticeably weaker, reached Athens later in the evening. A third gale-outburst in N. Aegean at about 22.00', July the 29<sup>th</sup>, caused no casualties, since it was forecast in time and found people more prepared.

more than 10 successive days of Etesian are rather rare. The longest series, amounting to 19 days, has been observed from 10 to 28 August 1932. After that, four series of 18 successive days of Etesian appeared, of which two in September, one in July and one in August'. Paraskevoopoulos (*art. cit.* 419, col. II) mentions that 'during 5 consecutive days in 1914 (August 9-13) the etesiens blew in Athens with a speed of storm winds, having a velocity oscillating between 20-21 m/s'. Finally, Carapiperis in his report 'Επί της συχνότητας διαδοχικών ημερών Έτησίου', ΠΑΑ xxx (1955) 291-5, gives an account of the frequency of successive days of Etesians based on observations made within the years 1893-1952.

We close our «Note» with some further bibliography on the Etesians (in chronol. order):

- K. Schneider - Carius, 'Die Etesien', *Meteor. Rundschau* 1. Jg., Heft 15/16 (Sep./Oct. 1948), 464-471 (Berlin).
- L. N. Carapiperis, 'The Etesian Winds, III', *Mem. Nat. Obs. of Athens Ser. II*, no 11, Athens 1962.
- G. Dimacopoulos, 'Les Étesiens', extrait de *La Météorologie* vi-73-1964, 15-21.
- D. A. Metaxas, 'A Contribution to the study of the Etesian Winds' presented at the Mediter. Meteor. Conference, under the auspices of Navy Weather Research Facility in Norfolk, Virginia, June 1970. Also 'The Etesians', *Digest of selected Weather Problems of Mediterr.* ed. by E. R. Reiter, Navy Weather Res. Facil. BLDG. R-48, Naval air station Norfolk, Virginia 23511, April 1971, 5. (114-132) plus App. C.
- L. N. Carapiperis, 'Επί αξιοσημειώτων τινῶν περιπτώσεων ἐτησίων ἀνέμων εἰς τὴν περιοχὴν τοῦ Αἰγαίου', ΠΑΑ vi (1970) 146-9, ἐν Ἀθήναις 1971 (with a summary in English).
- G. C. Livadas, 'Οἱ ἐτησῖαι ἄνεμοι ἀπόδειξις τῆς σταθερότητος τοῦ κλίματος τῆς Ἑλλάδος', *Πρακτικὰ Σεμιναρίου Φυσικῆς τῆς Ἀτμοσφαίρας (Proceed. of the Seminar on Atmosph. Physics)*, 17-20 Sep. 1973, Ἐθνικὸν Ἰδρυμα Ἑρευνῶν = ΕΙΕ (Nat. Hellenic Research Found.), Ἀθῆναι 1974, 33-42 (with an abstract in English and rich bibliogr. references).
- E. G. Marioloroulos & others, 'Μελέτη τοῦ ὀριακοῦ στρώματος τῆς ἀτμοσφαίρας εἰς τὸ Αἶγαῖον κατὰ τὸ θέρος' ('Atmosph. Boundary Layer study in the Aegean during the summer'), ΠΑΑ lvi (1981) 313-26 (with a summary in English).



Οι επικρατούντες άνεμοι και η μέση ετήσια διανομή της ατμοσφαιρικής πίεσεως (εις mb) εις την Ελλάδα.

(Direction of the prevailing winds and average annual distribution of the atmospheric pressure (in mb) in Greece).





## ΠΕΡΙΛΗΨΙ

Νικόλαος Γεωργαντζόγλου, *Τὰ Κοῖλα τῆς Εὐβοίας*

Στὴ μελέτη αὐτὴ γίνεται προσπάθεια προσδιορισμοῦ τῆς θέσεως τὰ *Κοῖλα τῆς Εὐβοίας* μὲ βάσι τὶς περιστασιακὲς ἢ συγκεχυμένες μαρτυρίες τῶν ἀρχαίων συγγραφέων, τὴν ἐρμηνεία ποὺ ἔδωσαν σ' αὐτὲς οἱ νεώτεροι, καὶ τὸ συνδυασμὸ τῆς ἱστορικότητάς τους μὲ τὴ γνώμη τοῦ γράφοντος, ἢ ὁποία στηρίζεται σὲ αὐτοψία καὶ ἐπιστημονικὴ τεκμηρίωσι τῶν ἰδιαζουσῶν στὸ Αἰγαῖο καιρικῶν συνθηκῶν.

Ἡ μελέτη χωρίζεται σὲ τρία μέρη: Στὸ πρῶτο ἐξετάζεται ἡ διήγησι τοῦ Ἡροδότου στὸ viii 6-14, ὅπου ἐκτίθενται τὰ γεγονότα τοῦ Ἄρτεμισίου. Ἐδῶ τὸ πρόβλημα ἐστιάζεται στὴν πληροφορία τοῦ συγγραφέα ὅτι τὰ 200 περσικὰ πλοῖα, ποὺ τάχτηκαν νὰ περιπλεύσουν τὴν Εὐβοία, γιὰ νὰ φράξουν στοὺς Ἕλληνες 'τὴν ὀπίσω φέρουσαν ὁδόν' (viii 7.1), καταστράφηκαν μετὰ ἀπὸ αἰφνίδια θύελλα 'περὶ τὰ Κοῖλα τῆς Εὐβοίης' (viii 14, πθ. 13). Στὸ πρῶτο αὐτὸ μέρος ἀκολουθεῖται πιστὰ ἡ ἀφήγησι τοῦ Ἡροδότου γιὰ τὸν ἐντοπισμὸ τῆς εὐβοικῆς ἀκτῆς ὅπου, σύμφωνα μ' αὐτὴν, ἐξέπεσαν τὰ πλοῖα. Νεώτεροι μελετητὲς ἔλεγχαν στὰ χωρία αὐτὰ τὴν ἀκρίβεια ἢ καὶ ἀλήθεια τῶν χρονολογικῶν δεδομένων τοῦ Ἡροδότου, γιατί, ἀκολουθώντας τὸ Στράβωνα (x 1.2), τοποθετοῦσαν τὰ Κοῖλα στὴ ΝΔ παραλία τῆς Εὐβοίας, κι ὄχι ὅπωςδὴποτε στὴν ἀνατολική, κατὰ τὴ διήγησι τοῦ Ἡροδότου.

Στὸ δεῦτερο μέρος ἐξετάζεται ἡ ἀναφορὰ στὴν ἴδια θέσι τοῦ Τίτου Λιβίου (xxi 47.1), καὶ στὸ τρίτο, καὶ τελευταῖο μέρος, ἐπιχειρεῖται σύννοψι καὶ ἔλεγχος τῶν ἀρχαίων καὶ νεώτερων ἀπόψεων γιὰ τὸ ποῦ βρίσκονται τὰ Κοῖλα μὲ ἔμφασι στὸ θέμα τῆς ἀξιοπιστίας τῶν πληροφοριῶν τοῦ Στράβωνος, γενικά, καὶ εἰδικὰ γιὰ τὰ Κοῖλα. Τὸ κείμενο τοῦ Ἡροδότου καὶ ἰδίως αὐτὸ τοῦ Δίωνος τοῦ Χρυσσοστόμου στὸν *Εὐβοϊκό* του (ὅπου τονίζεται ἡ προσωπικὴ τοῦ ἀρχαίου συγγραφέα ἐμπειρία τοῦ τόπου) δὲν ἀφήνουν καμμιά ἀμφιβολία ὅτι τὰ Κοῖλα πρέπει νὰ τοποθετοῦνται δίχως ἄλλο στὴν ἀνατολικὴ παραλία τῆς Εὐβοίας, μάλιστα δὲ στὴ ΝΑ, κατὰ τὴν τεκμηριωμένη —καὶ μὲ δική μας αὐτοψία— αὐτοβιογραφικὴ μαρτυρία τοῦ Δίωνος. Τὸ ὄλον πλαισιώνεται μὲ ἓνα ἐπὶ μέρος σημεῖωμα γιὰ τοὺς ἐτησίαις ἀνέμους, τῶν ὁποίων ἡ ἰδιαιτερότητα εἶναι καθοριστικὴ γιὰ τὰ πορίσματα τῆς μελέτης αὐτῆς.