

## THE EARLIEST GREEK SETTLEMENTS ON THE BLACK SEA

THE date and circumstances of the first Greek settlements on the Black Sea are matters of considerable disagreement. This is the result both of the scattered nature of the literary evidence on the subject, and of the dearth of archaeological evidence for Pontic settlements other than those on the western and northern shores. A century ago it was commonly thought that although the great majority of colonies were sent out in the seventh and sixth centuries, Trapezus and Sinope, as our sources say or imply, were founded in the middle of the eighth.<sup>1</sup> For a variety of reasons, among them an increased reliance on archaeologically secured dates, this view went out of favour, and opinion inclined toward the view that the Greeks did not enter the Black Sea at all until after 700. This view was both expressed in and supported by Rhys Carpenter's thesis that not until the penteconter was invented (an invention which he dated to the early seventh century) could the Greeks make head against the four-knot current which flows through the Bosphorus from the Black Sea.<sup>2</sup> Articles by B. W. Labaree and A. J. Graham,<sup>3</sup> however, have undermined Carpenter's argument, and it is now once again not unusual to find references to Greek activity in the Black Sea before 700.

The matter will undoubtedly not be settled for some time to come, and no verdict will be regarded as final until more archaeological evidence is available for the north Turkish coast.<sup>4</sup> In the meantime, however, it will be useful to see what sort of overall picture, however tentative, emerges when the present evidence is assembled. The literary evidence has not yet yielded all the information which it contains: Graham has dealt with most but not all of the essential items bearing on chronology, and I think that one can be more confident than has been supposed in dating the initial penetration of the Black Sea to the eighth century. The literary evidence also provides both some identification of the first colonisers, and a clue which helps to explain their enterprise.

Before looking at our literary authorities, however, a word is in order about other types of evidence on the chronology of the earliest Pontic colonies. Archaeological evidence shows only that by the late seventh century Greeks inhabited a fair number of sites all around the Black Sea,<sup>5</sup> and this does not tell us very much. Scholars who hold to an eighth-century date for the earliest Greek penetration of the Black Sea have been not unsympathetically characterised by John Boardman as 'undeterred by the many excavations which have so far produced no evidence for it'.<sup>6</sup> The only sites which count here, however, are Trapezus and Sinope, since it is only for these two cities that the literary evidence suggests an eighth-century foundation. E. Akurgal did some digging at Sinope, but Graham made the pertinent observation that the probing was restricted to the cemetery opposite the peninsula on which the town stands, and so provides a *terminus post quem non* for the first use of the cemetery, not necessarily for the town.<sup>7</sup> At Trapezus there has been no archaeological work at all. For both towns the archaeological *argumentum ex silentio* is obviously somewhat weak. In this connection it is salutary to remember that although the material record, especially the excavations at Al Mina and Pithecusae, has rounded out our picture of early Greek colonisation and suggested some motivations for it, it has not radically altered the chronology endorsed a century ago.<sup>8</sup>

<sup>1</sup> Although Grote dated Sinope and Trapezus to the late seventh century, both were dated to the middle of the eighth by Meyer and Busolt.

<sup>2</sup> Carpenter, 'The Greek Penetration of the Black Sea', *AJA* lii (1948), pp. 1-10.

<sup>3</sup> Labaree, 'How the Greeks Sailed into the Black Sea', *AJA* lxi (1957), pp. 29-33; Graham, 'The Date of the Greek Penetration of the Black Sea', *BICS* v (1958), pp. 25-42.

<sup>4</sup> An archaeological survey of the Samsun province (although primarily of sites in the interior) is now under way, directed by Prof. U. Bahadır Alkım. See *Anatolian Studies* xxiii (1973), pp. 62-5, and xxiv

(1974), pp. 50-3.

<sup>5</sup> For a survey of present archaeological evidence on Greek settlements in the Black Sea one can still rely on John Boardman's *The Greeks Overseas* (Harmondsworth and Baltimore, 1964), pp. 245-67. Cf. Graham, 'Black Sea' pp. 31-3.

<sup>6</sup> *The Greeks Overseas*, p. 247.

<sup>7</sup> Graham, 'Black Sea' p. 33.

<sup>8</sup> Graham, 'Patterns in Early Greek Colonisation', *JHS* xci (1971), pp. 36-8, has commented on what archaeology can and cannot show about Greek colonisation, and on the surprising validity of the traditional chronology for the western colonies.

Carpenter's argument against an eighth-century date for Greek entry into the Pontus has proved a broken reed. Labaree demonstrated that the Greeks sailed into the Black Sea, and so did not need to await the invention of the penteconter. Graham pointed out that not only do the mid-day currents in the Bosphorus flow southward more slowly than do the morning currents to which Carpenter referred, but also close to the shores of the Bosphorus there are countercurrents which flow northward at half a knot per hour. In view of these facts it is superfluous to note that the most recent discussions of the invention of the penteconter assume its invention long prior to the seventh century.<sup>9</sup>

Nor is logic a reliable guide. In dismissing the possibility that Sinope and Trapezus might have been founded in the eighth century, J. M. Cook stated that 'it is inherently improbable that trade with the most distant shores of the Black Sea would have preceded the exploration of the Marmara'.<sup>10</sup> Yet the first settlement of the Greeks in Magna Graecia, Pithecusae, was also the most distant.<sup>11</sup> And Al Mina was still further away. The rules of logic do not allow us to conclude that Trapezus was therefore the first Greek colony north of the Aegean, but the Pithecusan analogy does neutralize any 'inherent improbability' in an eighth-century date for Sinope and Trapezus.

We must turn, then, to the literary evidence. Before looking at the explicit statements about these two towns let us examine those passages which have a more general bearing on the date of the first Greek acquaintance with the Black Sea. The Corinthian poet Eumelus said that Borysthenis was one of Apollo's daughters,<sup>12</sup> and Borysthenis, so far as we know, was from the beginning the Greek name either for the Dniepr river or for the city at its mouth. The same poet had a good deal to say about Colchis: Aeëtes went from Corinth to Colchis, and when the Corinthians found themselves without a ruler Medea came from Colchis to take the throne.<sup>13</sup> Here one cannot prove that Eumelus' Colchis was understood as lying beyond the Bosphorus, but the burden of proof would lie on those who propose another location. As for Eumelus' date, some might disagree with Bowra's and Huxley's suggestion of c. 730,<sup>14</sup> but there is no reason to bring him down much if at all below 700. Pausanias and Eusebius placed him well back into the eighth century.<sup>15</sup> Another source placed him before Archilochus and Callinus, and made him a contemporary of the Archias who founded Syracuse.<sup>16</sup> That he was a Bacchiad is explicitly stated.<sup>17</sup> Eumelus therefore provides some evidence that by c. 700 the Greeks had involved the Black Sea in a number of their traditions.

Hesiod, in his *Theogony*, also shows some acquaintance with the area. Among the rivers which he enumerated as the sons of Ocean and Tethys we find not only the Ister but also such smaller streams as the Phasis, Aldescus, Sangarius and Parthenius, all of which flow

<sup>9</sup> L. Casson, *Ships and Seamanship in the Ancient World* (Princeton, 1971), pp. 43-4, and J. S. Morrison and R. T. Williams, *Greek Oared Ships* (Cambridge, 1968), p. 47. Neither Casson nor Morrison and Williams mentions Carpenter's suggestion.

<sup>10</sup> *The Greeks in Ionia and the East* (London, 1962), p. 53.

<sup>11</sup> Pithecusae was perhaps founded as early as c. 775. See Giorgio Buchner, 'Pithekoussai', *Expedition* viii (1966), pp. 4-12.

<sup>12</sup> *Fr.* 17 (Kinkel).

<sup>13</sup> See Pausanias ii 3.10-11. Eumelus said that Corinth (anciently called Ephyre) was the original home of Aeëtes, who went to Colchis to become king there. Medea was summoned from Colchis to become queen of Corinth, and Jason came with her. According to Eumelus, Medea, far from killing her and Jason's children, tried to make them immortal. Ed. Will, *Korinthiaka* (Paris, 1955), pp. 128-9, discusses the evolution of the Corinthian version of the Medea legend.

<sup>14</sup> G. Huxley, *Greek Epic Poetry from Eumelos to Panyassis* (London, 1969), p. 62, and C. M. Bowra,

'Two Lines of Eumelus', *CQ* xiii (1963), pp. 145-53, date Eumelus' 'Delian Prosodion' to the outbreak of the First Messenian War. Although attractive, the suggestion does pose difficulties: Hesiod does not seem to have known the poem in which Eumelus worked out his genealogies (see F. Jacoby, p. 299 of commentary on *FGrH* 451); and, like Hesiod, Eumelus used the 'Homeric' dialect.

<sup>15</sup> Pausanias iv 4.1 makes him a contemporary of Phintas, who ruled Messenia one generation before the outbreak of the First Messenian War; and two strands of the Eusebian tradition put his *floruit* at 760 and 744 respectively.

<sup>16</sup> The source followed by Clem. Alex. at *Strom.* i 131.8 said that Eumelus' life 'overlapped' that of Archias, and regarded him as somewhat earlier than Archilochus and Callinus. If the synchronism with Archias resulted from a reference to Syracuse in Eumelus' poetry, 733 would be the terminus post quem for his composition.

<sup>17</sup> Pausanias ii 1.1 calls Eumelus 'son of Amphilytus, of the family called Bacchiads'.

into the Black Sea.<sup>18</sup> Hesiod's lines would be more helpful if the poem's date were otherwise secured, but unfortunately (in that circularity of argument from which we can never quite escape) this very passage has been used as evidence for a relatively late dating of the *Theogony*.<sup>19</sup> The poem may have been composed as early as 730 (so Walcot and West),<sup>20</sup> or as late as the opening of the seventh century. It is also possible, as Kirk argues, that rhapsodes continued to add to it both individual lines and whole sections.<sup>21</sup> There are, however, reasons to doubt that the section on Ocean's sons was a late addition: if it had been composed much later than 700 the ratio of Greek to non-Greek rivers would perhaps have been less steep; furthermore, it is even possible that the poet who composed *Iliad* xii 1–33 drew his list of Trojan rivers from this section.<sup>22</sup> Accordingly, it should be safe to say that in the late eighth or early seventh century Hesiod had heard of the Danube and several rivers on the south shore of the Black Sea.

The Homeric poems, finally, also have something for our purposes. Many critics have held that the Odyssean story of the passage through Scylla and Charybdis was inspired by the first attempts to sail up the Bosphorus, and the Black Sea is full of Odyssean memorabilia. The credulous can today be shown, in the waters near Sinop, the rock which the Cyclops hurled at his departing guest. Since most of these associations are fantastic, and since Graham has already dealt with those which are not,<sup>23</sup> I shall leave them to the side. On the other hand, there is no doubt about the Pontic associations of *Iliad* ii 851–7, a passage from the Catalogue of Trojan Allies, and this passage has not yet been thrown into the scales:

*Παφλαγόνων δ' ἤγγετο Πυλαμένεος λάσιον κῆρ*  
*ἐξ Ἐνετῶν, ὅθεν ἡμιόνων γένος ἀγροτεράων,*  
*οἳ ῥα Κύτωρον ἔχον καὶ Σήσαμον ἀμφενέμοντο*  
*ἀμφί τε Παρθένιον ποταμὸν κλυτὰ δώματα ναῖον*  
*Κρῶμνίν τ' Αἰγιαλὸν τε καὶ ὑψηλοὺς Ἐρυθίνους.*  
*Ἀτὰρ Ἀλιζώνων Ὀδῖος καὶ Ἐπίστροφος ἦρχον*  
*τηλόθεν ἐξ Ἀλύβης, ὅθεν ἀργύρου ἐστὶ γενέθλη.*

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In historical times the Paphlagonians lived along the coast west of the Halys. The Eneti are unknown, although writers from Hecataeus on identified them with the area around Amisus (Samsun). Cyturus (Kidros today) and Sesamus (Amasra) lay west of Sinope; the Parthenius river enters the Black Sea just west of Amasra and has as its modern namesakes both the river and town of Bartin. Cromna, a settlement, and Aegialus, a stretch of coastline, lay close to Cyturus.<sup>24</sup> The Halizones and Alybe I shall discuss below.

Everyone, of course, has recognised that the passage in question reveals considerable knowledge of the southern shore of the Black Sea. It is for this very reason that the passage, or the most unequivocal portion of it, is usually excised as an interpolation. Having done so one can say, 'the Black Sea . . . seems to have been unknown to Homer'.<sup>25</sup> Or, like Denys Page, one can find in the Catalogue of Trojan Allies 'not a word about Bosphorus or Black Sea', and footnote the comment, 'except the lines interpolated in the 2nd or 1st century B.C., 853–5'.<sup>26</sup> Less dogmatically, in the last comprehensive study of the Catalogues it is said

<sup>18</sup> *Theogony* 337–45.

<sup>19</sup> M. L. West, *Hesiod: Theogony* (Oxford, 1966), pp. 41–2, uses these lines (rightly, I think) to set a terminus post quem of 756 for the poem, and eventually dates it to the period 730–700. The lines have also been used to support a date c. 675.

<sup>20</sup> P. Walcot, *Hesiod and the Near East* (Cardiff, 1966), p. 109, argues that Hesiod's father came to Ascrea c. 760, and that that suggests 'a floruit about 730 for Hesiod himself'.

<sup>21</sup> G. S. Kirk, 'The Structure and Aim of the Theogony', *Hésiode et son influence* (Ent. Hardt VII, 1962), p. 63, places 'the composition of the Theogony not earlier than around 675' and assumes that much was added thereafter.

<sup>22</sup> West, *Hesiod*, p. 260.

<sup>23</sup> Graham, 'Black Sea', pp. 37–8, has pointed out some striking parallels between the passage through the Bosphorus and the course which in *Odyssey* xii Odysseus follows through the wandering rocks.

<sup>24</sup> For a still valuable survey of these locations see J. A. Cramer, *A Geographical and Historical Description of Asia Minor* (1832, rep. 1971), pp. 222 ff.

<sup>25</sup> Thus Helen Thomas and F. H. Stubbings in Wace and Stubbings, *A Companion to Homer* (London, 1962), p. 284; in a footnote *Iliad* ii 853–5 is identified as an interpolation.

<sup>26</sup> *History and the Homeric Iliad* (Berkeley, 1959), p. 137 and n. 56.

they contain 'nothing about the south coast of the Black Sea (unless lines 853-5 are genuine)'.<sup>27</sup>

The lines are genuine. That they are a late interpolation was first proposed by T. W. Allen, who in his conviction that the Catalogues originated in pre-Dorian times set forth an argument which does not stand up under close scrutiny.<sup>28</sup> His argument was based on Eratosthenes' and Apollodorus' verdict that Homer was poorly informed about the non-Aegean world:<sup>29</sup>

Apollodorus . . . commends Eratosthenes' statement, in which he says that Homer and other ancient poets knew Greek matters, but were quite unfamiliar with distant peoples, being unacquainted with either long journeys or distant voyages.

Although Homer knew that Aulis was rocky and Haliartus grassy, Apollodorus noted that of the forty-odd rivers which flow into the Pontus, he mentions not even one of the most famous, such as the Ister, Tanais, Borysthenis, Hypanios, Phasis, Thermodon, or Halys; and that he had learned about the Paphlagonians in the interior from those who went through those areas on foot, and that he did not know the coast.

These comments, Allen contended, were irreconcilable with the knowledge of the Black Sea revealed in *Iliad* ii 853-5. Therefore, he deduced, lines 853-5 could not have been in Eratosthenes' text of the *Iliad*. They were in Strabo's text, for it is to these lines above all that Strabo refers in his attempt to refute his esteemed predecessors. Allen concluded that 'between the time of Eratosthenes and Strabo these lines had got into the text', being imported into the *Iliad* from the *Cypria*.<sup>30</sup>

Let us analyse the argument and the evidence. In the first place, if stated accurately it must hold that the interpolation occurred not only after Eratosthenes delivered his opinion, but in fact after Apollodorus approved of it and developed it.<sup>31</sup> In other words, we are to believe that between the late second century and the end of the first the offending lines were not only inserted, but were inserted so surreptitiously that neither Strabo nor any other ancient commentator was aware of any doubts about their validity. Secondly, that these lines were originally in the *Cypria* is an indefensible assumption; had they been there presumably Eratosthenes and Apollodorus would have exempted the author of the *Cypria* from their complaint that neither Homer nor any *other* ancient poet knew much about non-Greek lands. Thirdly, line 855 had been referred to already in Callisthenes' essay on the Catalogue of Ships,<sup>32</sup> and Strabo himself shows that the line was not only widely known but had been emended by some to read Cobialus instead of Aegialus, since the latter could not be identified.<sup>33</sup> Lastly, instead of showing that his text of the *Iliad* did not contain ii 853-5, Apollodorus' statement suggests the very opposite. In stating his opinion that Homer did not know the Black Sea, Apollodorus knew that someone was bound to object, 'Well, then, how did Homer know about those Paphlagonian towns which he mentions in ii 853-5?' To anticipate that objection Apollodorus proposed that Homer's information about Paphlagonia was drawn from travellers who had gotten there on foot, not by sea.<sup>34</sup>

All in all, the argument on which *Iliad* ii 853-5 has for so long been designated an interpolation is singularly deficient. We may therefore conclude that when the Catalogue of Trojan Allies was composed, the Greeks had already penetrated the Black Sea. If one

<sup>27</sup> R. Hope Simpson and J. F. Lazenby, *The Catalogue of Ships in Homer's Iliad* (Oxford, 1970), p. 177.

<sup>28</sup> Allen, *The Homeric Catalogue of Ships* (Oxford, 1921), pp. 156 ff.

<sup>29</sup> Strabo vii 3.6.

<sup>30</sup> *Homeric Catalogue*, p. 157.

<sup>31</sup> Allen himself stated his thesis thus in the apparat. crit. of his Oxford text of the *Iliad*, at ii 853-5: 'Eratosthenes et Apollodorus non legerunt apud Strabo 298'. That it was Apollodorus and not Eratosthenes, whom Strabo summarised on Homer's ignorance of the Black Sea, is evident from another passage in Strabo. In xii 3.26 he attributes explicitly to Apollodorus the statement that Homer did not know the Black Sea coast, and that Homer's informa-

tion about Paphlagonia came from those who had visited it overland.

<sup>32</sup> Callisthenes *FGrH* 124, F 53.

<sup>33</sup> Strabo xii 3.10.

<sup>34</sup> Allen's thesis assumes that in Apollodorus' text of the *Iliad* there was nothing about Paphlagonia other than the mere mention of the name in line 851. But surely, if that is all that there was, Apollodorus would not have needed to speculate about the source of Homer's information on the Paphlagonians. His text of the *Iliad* must have had more detail on the Paphlagonians than it had, for example, on the Phrygians or Halizones; in fact, Apollodorus concedes that Homer not only knew that the Paphlagonians existed, but had availed himself of an *ιστορία* . . . τῶν Παφλαγόνων (Strabo xii 3.26).

accepts a fairly conventional date for the *Iliad* and ascribes the Catalogue of Trojan Allies to the poet of the *Iliad*,<sup>35</sup> one must conclude that by the late eighth-century some Greeks, at least, knew about a number of native settlements on the Paphlagonian coast.<sup>36</sup>

Taken together, the literary evidence demonstrates beyond reasonable doubt that by 700 the Black Sea was already becoming familiar to the Greeks. Accordingly, when we turn to the specific question of the date of the earliest Pontic colonies, we are necessarily disposed to assume their existence before 700. It is inconceivable that eighth-century Greeks frequented the Black Sea for reasons of uninterested exploration. They came either for trade or for settlement, or for both.

Eusebius' notice, 'Trapezus was founded in Pontus', is pegged to 756 B.C. Eusebius' colony-dates are not always reliable; nobody, for example, will agree with him that Cumae was founded in 1051. On the dozen Pontic and Propontic colonies which he dates, however, he is apparently better informed. Recent finds have shown that another colony which he dated to 756, Cyzicus, might after all have been settled that early.<sup>37</sup> It would therefore be wise to regard Eusebius' date for Trapezus as valid unless found to be incompatible with better evidence.

Incompatible evidence is not far away: another Eusebian datum places the foundation of Sinope in 631, and Sinope was regarded as the mother-city of Trapezus. A passage in no less an authority than Herodotus supports the belief that Sinope was not founded until well into the seventh century: in their invasion of Asia Minor the Cimmerians 'settled the peninsula on which the Greek city of Sinope is now situated'.<sup>38</sup> Although an effort has been made to reconcile this Herodotean passage with an eighth-century date for the foundation of Sinope,<sup>39</sup> the argument is not convincing. Herodotus, like Eusebius, seems to have known nothing of a Greek settlement at Sinope before the Cimmerian invasion.

There was, however, a persistent tradition which claimed high antiquity for Sinope. It is not significant that many late authors, from Apollodorus to Avienus, explained that Sinope was named after one of Asopus' daughters whom Zeus transported thither; or that it was named after one of the Amazons. These stories show only that the Greeks knew no more than we do about the origin of the name. More surprising is the fact that Herodotus' contemporary, Xanthus of Lydia, seems to have said that Gyges' mother came from near Sinope.<sup>40</sup> That tradition need not imply that Sinope already existed c. 720, but certainly

<sup>35</sup> The most recent works on the Catalogue of Ships have reached opposite conclusions about its date. Simpson and Lazenby, going almost as far as Page, place its origin in the LH IIIC period. A. Giovannini, *Étude historique sur les origines du Catalogue des Vaisseaux* (Berne, 1969), argues ingeniously but not very convincingly that it originated in the seventh century. For a judicious survey of earlier scholarship on the subject see C. Săndulescu, 'Recherches sur la valeur littéraire du Catalogue des vaisseaux (avec des observations sur le problème chronologique)', *Acta Ant. Hung.* xvii (1969), pp. 125-48.

<sup>36</sup> With J. M. Cook, 'Two Notes on the Homeric Catalogue', *SMEA* 1967, pp. 103-9, I believe that the Catalogue of Trojan Allies reflects the horizons of eighth-century Greeks. If, on the other hand, one believes (with Allen, Page, Lazenby and Simpson) that the Catalogue of Trojan Allies was passed down from the end of the Bronze Age, one must assume that the Mycenaean Greeks were familiar with the Paphlagonian coast, and that the native settlements on that coast retained their identity throughout the troubled early Iron Age. Serious difficulties, of course, adhere to both assumptions. The former must rely almost entirely on the Argonautic legend, since there is no other evidence for Mycenaean Greeks in the Black Sea (cf. James Mellaart, 'Ana-

tolian Trade with Europe and Anatolian Geography and Culture Provinces in the Late Bronze Age', *AS* xviii (1968), pp. 188-9). The Argonautica may have some Bronze Age antecedents, but at least those elements of the legend which pertain to Corinth should postdate the founding of the city (as opposed to the scattered LH villages near the site). Corinth was not much more than a name until c. 900, and was not a significant centre until the eighth century. See T. J. Dunbabin, 'The Early History of Corinth', *JHS* lxxviii (1948), pp. 62 ff., and John Salmon, 'The Heraeum at Perachora and Early Corinth and Megara', *ABSA* lxxvii (1972), p. 193 and n. 208. Whatever the saga of Jason of Iolcus may have been during the Dark Age, it must have undergone considerable alteration between c. 800 and the time of Eumelus.

<sup>37</sup> On the implications of the Greek settlement of c. 700, found twenty miles inland from Cyzicus and so suggesting that Cyzicus itself was founded considerably earlier, see Graham, 'Patterns', pp. 39-42.

<sup>38</sup> Hdt. iv 12.

<sup>39</sup> Graham, 'Black Sea', p. 34 and n. 15.

<sup>40</sup> Nicolaus of Damascus (*FGH* 90, F 46). It is generally agreed that Nicolaus' Lydian material came ultimately from Xanthus. That *fr.* 46 came from Xanthus' own *Lydiaca* and not from a Hellenistic reworking thereof is argued by H. Diller, 'Zwei

does assume that by that date intercourse had begun between the Lydians and the people who lived in the Ince Burun; since overland the latter is seven hundred airline kilometres from Sardis, one would suppose that if there was traffic between the areas it was by sea. Most important, however, is our single account of the foundation of Sinope. It was written by the geographer, sometimes referred to as Pseudo-Scymnos, who composed in iambic meter the *Periegesis ad Nicomedem Regem*. It may be objected that no good can come from preferring to the Father of History a mechanical poet who has travelled under the name of Pseudo-Scymnos, but the objection is unwarranted. Herodotus was usually right when he relied upon his own research, but it is not certain that he visited the south shore of the Black Sea and at any rate he was not well informed about Sinope. He wrote that Sinope lay opposite the mouth of the Danube, and that a man dressed for walking could cross from Cilicia to Sinope in five days.<sup>41</sup> Other than the sentence quoted above and a further unverifiable note that Pteria (where Croesus and Cyrus clashed) lay near Sinope,<sup>42</sup> these erroneous statements are his only references to the city, and what he knew about Sinope he may have learned from a not very reliable book.<sup>43</sup> The author of the *ad Nic.*, on the other hand, followed an authority who was as well informed as any classical author on the cities of the Black Sea.<sup>44</sup> As a result, the author of the *ad Nic.*, the one and only ancient writer who purports to describe the foundation of Sinope, provides us with traditions on that subject which are either indigenous or as close to indigenous traditions as one could fairly expect to find:<sup>45</sup>

(Σινώπη πόλις) ἐπώνυμος  
 Ἄμαζόνων τῶν πλησιοχώρων <ἀπὸ> μιᾶς,  
 ἣν ποτε μὲν ᾤκουν ἐγγενεῖς ὄντες Σύροι,  
 μετὰ ταῦτα δ', ὡς λέγουσιν, Ἑλλήνων ὅσοι  
 ἐπ' Ἄμαζόνων διέβησαν, Αὐτόλυκος τε καὶ 990  
 σὺν Δηλιέοντι Φλόγιος, ὄντες Θετταλοί.  
 ἔπειτα <δ'> Ἀβρώνδας γένει Μιλήσιος,  
 ὑπὸ Κιμμερίων οὗτος <δ'> ἀναιρεῖσθαι δοκεῖ.  
 μετὰ Κιμμερίου Κῶος πάλιν δὲ Κρητίνης  
 οἱ γενόμενοι φυγάδες <τε> τῶν Μιλησίων. 995  
 οὗτοι συνοικίζουσι δ' αὐτὴν ἡνίκα  
 ὁ Κιμμερίων κατέδραμε τὴν Ἀσίαν στρατός.

This tradition obviously cannot be reconciled with that followed by Herodotus and Eusebius, for here Sinope is said to have been in existence prior, even long prior, to the Cimmerian invasion and 631. As noted above, the *ad Nic.* reflects what the Sinopeans themselves believed. They regarded the Argonaut Autolycus as their oikist and maintained his oracular shrine. We also happen to know that in the fourth century they commissioned the sculptor Sthenis to set up for them a statue of Autolycus 'whom they honored as a god'.<sup>46</sup> Therefore, while it is theoretically possible that in Herodotus' time the Sinopeans claimed to be a young colony, and that their reverence for Autolycus emerged from some antiquarian enthusiasm in the time of Sthenis, it is infinitely more likely that in the fifth century as in the fourth the Sinopeans regarded their city as ancient and Autolycus as their founder, but that

Erzählungen des Lyders Xanthos', *Navicula Chilonensis. Studia F. Jacoby Oblata* (Leiden, 1956), p. 71.

<sup>41</sup> Hdt. ii 34.

<sup>42</sup> Hdt. i 76.

<sup>43</sup> If Hecataeus did say that 'Sinope' was the Thracian word for 'drunken woman' the *Periegesis* might have been that book; but see Jacoby's comments on Hecataeus (*FGH* 1, F 34).

<sup>44</sup> Demetrius of Callatis is the most probable candidate. See E. H. Bunbury, *History of Ancient Geography* II (1883), pp. 71-2; Ul. Hofer, 'Die Periegesis des sog. Skymnos', *RhMus* lxxxii (1933), pp. 67-95, proposed Eratosthenes as a major source.

In his *Die ionische Kolonisation* (*Philolog. Suppl.* xiv; Leipzig, 1920), Fr. Bilabel acknowledged that the *ad Nic.* is our only proper source on the foundation of Sinope, but rejected the possibility of a pre-Cimmerian foundation because the *ad Nic.* is the only authority for that tradition!

<sup>45</sup> Lines 986-97 in Aubrey Diller's edition, *The Tradition of the Minor Greek Geographers* (Lancaster, Pa., 1952); on line 992 see below. Diller's lines correspond to lines 941-52 in Müller's edition.

<sup>46</sup> Strabo xii 3.11. Plutarch, *Lucullus* 23.4 also speaks of Αὐτολύκου τοῦ κτίσαντος τὴν Σινώπην.

Herodotus was unaware of these local traditions. The source of the tradition followed by Herodotus and Eusebius will be discussed below.

To clinch the argument in favour of a pre-Cimmerian foundation for the city we may refer once again to the fiction that Sinope was named for a daughter of Asopus. That affiliation was claimed already by Eumelus.<sup>47</sup> The daughter indubitably personifies the Black Sea Sinope, and it will not do, as Huxley suggests,<sup>48</sup> to identify her as the promontory rather than the city itself. Among the numerous daughters of Asopus were many cities and no landmarks, and here analogy is a proper argument. Bowra has separated the cities fathered by Asopus into a Boeotian list and a Peloponnesian list, and proposed that Eumelus was responsible for the whole of the latter.<sup>49</sup> Whether or not that is so, Eumelus' affiliation of Sinope to Asopus renders untenable the tradition that Sinope was not founded until 631. The Bacchiad poet certainly did not write his *Corinthiaca* after the Bacchiads had been expelled from Corinth. That Sinope regarded Autolycus as its founder suggests that the first Greeks arrived before the close of the prehistoric (pre-Homeric?) period: the origins of Sinope, like those of Al Mina, Pithecusae, and Cumae (and like Homer himself) lay just before the remembered past.

In summary, the tradition known to Eumelus, the *ad Nic.*, the Sinopeans themselves, and apparently Xanthus, is to be preferred to that followed by Herodotus and Eusebius. Sinope was founded early, perhaps early enough to accommodate the Eusebian date of 756 for the establishment of her reputed colony, Trapezus.

For Trapezus' foundation-date there is no external corroboration of any kind. Yet the date itself may reveal an old tradition. The foundation of Trapezus was apparently tied horizontally to that of Cyzicus, for Eusebius places both settlements in 756, and may have been included in a vertical scheme involving several Pontic cities, the others being or claimed to be Milesian colonies. According to Eusebius' dates, Trapezus was founded 125 years before Sinope.<sup>50</sup> That may be nothing more than a coincidence, but it may also reflect a generational scheme of 25-year generations.<sup>51</sup> According to Eusebius the city of Istros was founded 100 years after Trapezus; and according to the *ad Nic.* yet another Milesian colony, Apollonia Pontica, was founded 'about fifty years before the reign of Cyrus'.<sup>52</sup> There are thus some grounds—admittedly slight—for suspecting that the Eusebian dates for Sinope and Trapezus (and Herodotus' information about Sinope) originated in a Milesian reconstruction of the Ionian city's most vaunted achievement: the Hellenizing of the Black Sea.<sup>53</sup> If Trapezus' foundation-date was part of such a scheme (we can be sure that if the Milesians conceded the date they will have claimed the colony) there will be no validity in its precision, but it would express in general terms the reported seniority of Trapezus and Cyzicus over the Milesian settlements at Istros, Sinope and Apollonia.<sup>54</sup> It would be prudent to say no more, but no less, than that Trapezus seems to have been founded *c.* 750.

From questions of chronology we may turn to the identity of the colonists who settled

<sup>47</sup> Fr. 8 (Kinkel).

<sup>48</sup> *Greek Epic Poetry*, p. 68.

<sup>49</sup> Bowra, 'The Daughters of Asopus', *Problems in Greek Poetry* (Oxford, 1953), pp. 57–8.

<sup>50</sup> Eusebius' date for Trapezus, the first year of the sixth Olympiad (756), appears in the Armenian version of the Chronicle (ed. Karst). His identical date for Cyzicus and his date for Sinope (the second year of the 37th Olympiad, i.e. 631) are given in Jerome's version (*Die Chronik des Hieronymus*, ed. R. Helm; 2nd edition, Berlin, 1956).

<sup>51</sup> R. van Compernelle, *Étude de chronologie et d'historiographie siciliotes* (Brussels, 1960), demonstrated that Thucydides' absolute dates for the Sicilian colonies originated in a generational scheme.

<sup>52</sup> Istros is dated to 656 in the Armenian version, 657 in Jerome, and to the time of the Cimmerian invasion in the *ad Nic.* The Armenian version's date for Astacus (706) would also fit a scheme of 25-year

generations. For Apollonia Pontica see *ad Nic.* 730–7 (Diller): 'Milesians, coming thither, founded (Apollonia) about fifty years before the reign of Cyrus. For from Ionia the Milesians sent out the most colonies into the Pontus. They caused the sea which before had been called "Axenos", because of the aggressiveness of the barbarians, to receive the name "Euxeinos".'

<sup>53</sup> In addition to the boast quoted in the preceding note see the evidence in Bilabel, *Die ionische Kolonisation*, pp. 10 ff. Even in the first century A.D. a Milesian inscription opened with a reminder that Miletus was the metropolis of the Greek cities in the Pontus.

<sup>54</sup> Nobody was quite sure which cities the Milesians had in fact founded. For Apollonia on the Rhyn-dacus the Milesians cited as evidence histories and other literature. See Bilabel, *Die ionische Kolonisation*, p. 11.

Sinope and Trapezus. Xenophon, who in 400 visited Trapezus while leading the 10,000 back to Greece, called the town 'a colony of the Sinopeans in the land of Colchis'.<sup>55</sup> This information he presumably learned from either the Trapezuntians or the Sinopeans, and it is the best we have. In his book on Arcadia, Pausanias reports that in 360 the citizens of an Arcadian town named Trapezus fled their homes and sought refuge in Colchian Trapezus, whose citizens welcomed the Arcadians as *μητροπολίτας τ'όντας καὶ ὁμωνύμους*.<sup>56</sup> It is not to be believed, and I think that no one does believe,<sup>57</sup> that citizens of a land-locked and otherwise unknown Arcadian village could have sailed to Colchis and founded Trapezus c. 750. Still, the episode of 360 is instructive. Although the general opinion in Trapezus may have been that Sinopeans had founded their town, that tradition was not very strong and was susceptible of being undermined by imaginative newcomers.

Sinope itself is commonly described as a Milesian colony, and it is also thus labelled by a number of ancient writers, but there are difficulties here. If, as seems to have been the case, Sinope was founded before 750, the chances that the Milesians founded it are not very good. Although Miletus was reputed to have established 75 or even 90 colonies, the only eighth-century colonies credited to her are Cyzicus, Sinope and Trapezus, and in each case the attribution is modern, not ancient. The *ad Nic.* assigns the initial Greek settlement at Sinope to the Argonauts. Eusebius places a foundation of Cyzicus in 685 as well as in 756, and some scholars have postulated that Milesians were responsible for both (the first being an abortive settlement);<sup>58</sup> there too however, the ancients placed the origins of the city in an Argonautic context.<sup>59</sup> It is tempting to see the Eusebian date for the foundation of Sinope, as well as the second date for the foundation of Cyzicus, as the dates at which Milesian colonists appropriated cities which other Greeks had established.<sup>60</sup> It cannot be denied that at one time or another Sinope did become a Milesian city; the existence of a cult of Poseidon Heliconius provides whatever proof of that claim is needed.<sup>61</sup> It is also apparent that the authority followed by the *ad Nic.* knew some circumstantial detail about Cousins and Cretines, the 'fugitives of the Milesians' who were the last to introduce colonists into Sinope. We need not doubt that Milesian colonists came to Sinope in 631. What, however, of the first Greeks on the site? It may be that there were conflicting claims about the oikist of the city, both Autolycus and Habronidas being so regarded. Autolycus, of course, has no Milesian connections. What about Habronidas? The manuscript of the *ad Nic.* refers to him as *ΑΒΡΩΝΤΑΣΓΕΝΕΙΜΙΑΛΗΣΙΟΣ*, customarily read as 'Αβρώνιδας γένει Μιλήσιος. Although a Milesian patronymic might perhaps have terminated in *-das*, the suffix certainly does not look Ionic. Aubrey Diller's reading, "Αβρων τῷ γένει Μιλήσιος, removes the offending patronymic;<sup>62</sup> but even a Habron, as noted below, may suggest a mother-city other than Miletus. Eumelus' naming of Sinope as Asopus' daughter provides a more substantial case for non-Milesians in early Sinope. The Asopus in question is not the Boeotian river but, as Bowra pointed out,<sup>63</sup> the stream which flows between Sicyon and Corinth. Along with Corinth a whole list of other cities was affiliated to the Peloponnesian

<sup>55</sup> *Anabasis* iv 8.22.

<sup>56</sup> Pausanias viii 27.6.

<sup>57</sup> One never knows, however. J.-Ph. Fallmerayer, *Geschichte des Kaiserthums Trapezunt* (1827), pp. 1-12, thought the passage said that the Colchian city founded the Arcadian, and on that basis argued that Trapezus was one of the oldest cities outside Egypt and Mesopotamia.

<sup>58</sup> A third and still earlier foundation-date for Cyzicus is usually ignored in scholarship on the question; Eusebius did, however, also report that the town was founded in 1276. For the thesis that the Milesians were responsible for both the eighth and the seventh century settlements of Cyzicus see C. Roebuck, *Ionian Trade and Colonization* (New York, 1959), p. 113; for the thesis that the first settlements at both Cyzicus and Sinope were destroyed by barbarians see Graham, 'Patterns', p. 40.

<sup>59</sup> The traditions are discussed in F. W. Hasluck's *Cyzicus* (Cambridge, 1910), pp. 157-62. The Argonauts killed King Cyzicus by mistake.

<sup>60</sup> Strabo xii 3.11 echoes a tradition of forcible entry by the Milesians: Autolycus 'seems to have been one of those who sailed with Jason, and to have taken possession of this place; later on, Milesians, seeing its good natural character, and the weakness of the inhabitants, made it their own and sent out colonists'. One might otherwise have assumed that the Milesians who arrived 'when the army of the Cimmerians overran Asia' came to bolster the city against the Cimmerian threat.

<sup>61</sup> For evidence see G. Doublet, 'Inscriptions de Paphlagonie', *BCH* xiii (1899), pp. 299-300.

<sup>62</sup> See note 45.

<sup>63</sup> 'The Daughters of Asopus', p. 57.



Asopus, among them not only Sinope but also Corcyra; and there is reason to think that the Asopid designation of Corcyra, like that of Sinope, appeared already in Eumelus' poetry.<sup>64</sup> At any rate, the most reasonable explanation for Eumelus' labelling of Sinope as a daughter of Asopus is that when Eumelus composed his *Corinthiaca* his townsmen and fellow Bacchiads claimed to have founded, or to have participated in the founding of, Sinope. That they did so cannot be proved, but I think that one cannot avoid the conclusion that they *claimed* to have done so. As for the substance of the claim, the relations which Sinope had with her own colonies bear some resemblance to those which characterised the colonial relationships of both Corinth and Corcyra: the colonies of Sinope were defended by their metropolis, and in turn paid her an annual *dasmos* and (at least in the case of Cerasus) included among their magistrates a Sinopean harmost.<sup>65</sup> Aside from the legendary links between Corinth and Colchis, surely Corinthian adventures in the Black Sea *c.* 750 are far more probable than are Milesian. At Corinth, traditionally the last resting-place of Jason's *Argo*, naval technology was apparently well advanced in the eighth century. Thucydides says that the Corinthians were the first to have a 'modern' marine, and that in 704 a Corinthian built four ships for the Samians.<sup>66</sup> The traditional date for the foundation of Syracuse, 733, implies that along with Chalcis and Eretria, Corinth was a pioneer in the colonising movement; and the presence of Corinthian pottery in the lowest levels at Pithecusae and at the site inland from Cyzicus attests to both the antiquity and the range of Corinthian trade.<sup>67</sup> Finally, although it may be merely a coincidence, the name Habron appears in a tradition from the eighth century: he was reputedly the grandfather of the boy whose death forced Archias to leave Corinth and go off as oikist of Syracuse.<sup>68</sup>

We may conclude by speculating about the reasons for the first Greek settlements on the Black Sea. Apart from allusions to the Golden Fleece, the only hint on the subject in eighth-century literature is the reference, in *Iliad* ii 857, to faraway 'Alybe, where is the birthplace of silver'. Since antiquity it has been held—correctly, I think—that Homer's Alybe is somehow related to the Chalybes, the people celebrated by the Greeks as the producers and perhaps the inventors of steel, or carburised iron.<sup>69</sup> By Aeschylus' time 'the Chalybes, among whom iron is born',<sup>70</sup> had already given their name to steel (*chalybs*), and so must have been among the chief purveyors of iron to the Greeks during the Archaic Period.<sup>71</sup> The 'Chalybes' cannot be equated with any of the peoples known to have lived in Asia Minor,<sup>72</sup> but there is no getting round the fact that the Greeks, from Hecataeus and Aeschylus to Byzantine writers, *said* that the Chalybes worked their mountain mines and

<sup>64</sup> *Ibid.*, pp. 58–9 for arguments. The earliest extant authority for the connection is Hellanicus (*FGRH* 4, F 77).

<sup>65</sup> Cf. Graham, *Colony and Mother City in Ancient Greece* (Manchester, 1964), pp. 149–51 and 201–3.

<sup>66</sup> Thuc. i 13.2–3.

<sup>67</sup> According to J. N. Coldstream, *Greek Geometric Pottery* (London, 1968), p. 377, the pottery at the site near Cyzicus is Corinthian and East Greek. On the quantity of Corinthian pottery found at Pithecusae see Graham, 'Patterns', p. 36.

<sup>68</sup> Plutarch, *Am. Narr.* 772E–773A says that Habron came to Corinth from Argos.

<sup>69</sup> Strabo xii 3.20–7 canvassed ancient opinion on the equation of Alybe and the Chalybes. Callimachus *fr.* 110, 48 ff. (= Catullus 66, 48 ff.) says that the Chalybes discovered iron-working and taught the art to the rest of mankind. Cf. Pliny, *Nat. Hist.* vii 197.

<sup>70</sup> For the phrase, which echoes Homer's 'Alybe, where is the birthplace of silver', see *Et. Mag.* p. 805, 22; *Suda*, s.v. *Χάλυβες*; scholion on Apol. Rhod. i 1323.

<sup>71</sup> Roebuck, *Ionian Trade*, p. 82, suggests that Chalybian iron began to be imported into the Aegean *c.* 550, but the evidence seems to point to an

earlier date. Homer knows only the word *sideros*; but in *Septem* 728 ff. Aeschylus uses 'the Chalybian stranger' as a metaphor for a steel blade; cf. also Sophocles, *Trach.* 1260. The earliest instance of *stomoma* as a word for steel is Cratinus *fr.* 247 (Koch), where it is modified: *Χαλυβδικόν στόμωμα*. It would thus seem that *chalybs* was the Greeks' first word for carburised iron, and therefore that the 'Chalybes' were already supplying the metal when a special word for it was first required. The old word, *sideros*, apparently originated when iron was synonymous with meteoric iron; in Homer's time no new word had yet been adopted for carburized iron which was then available.

Had Chalybian iron not been imported until *c.* 550, in putting a Chalybian metaphor into the mouths of Eteocles' subjects Aeschylus would have been committing a fairly obvious anachronism. As *Prometheus* 714 ff. shows, Aeschylus assumed that the Chalybes had been working iron when Io was pursued by her gadfly.

<sup>72</sup> They do not show up in the list of peoples in Darius' nineteenth satrapy or in Xerxes' Pontic contingents; see Herodotus iii 90 and vii 78.

forges in the area of Cappadocia between Amisus (Samsun) and Colchis. More particularly, they were said to live east of the Promontory of Jason (Yasun Burnu), especially in the hinterlands of Cerasus and Trapezus,<sup>73</sup> and both Xenophon<sup>74</sup> and Strabo<sup>75</sup> tried to identify them with the Haldi (perhaps Homer's Halizones) who dominated the area. This location

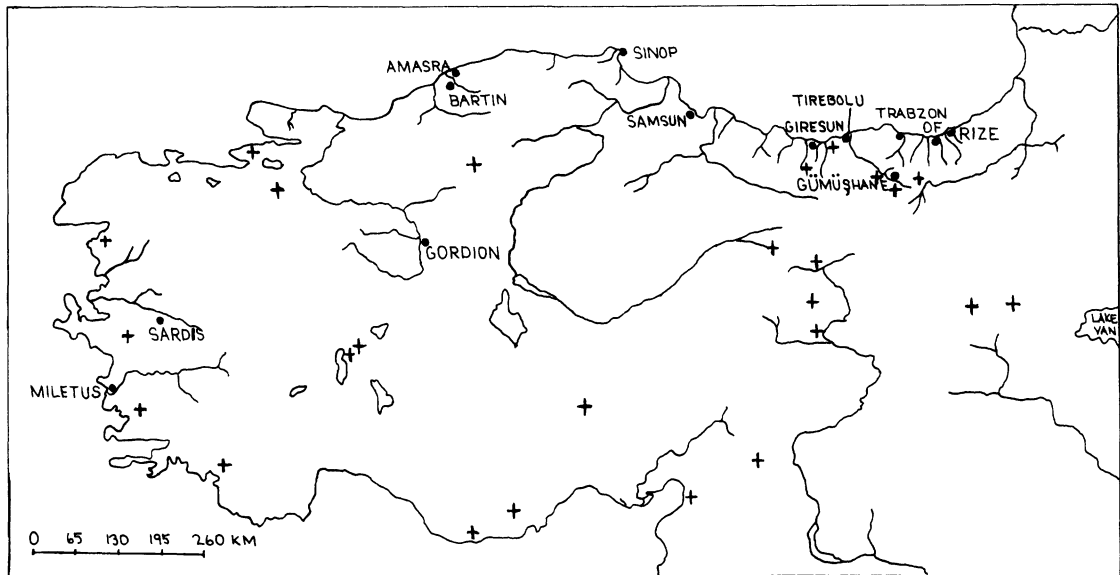


FIG. 1. Asia Minor, with Major Iron-Ore Deposits (adapted from Karte II, p. 91, in S. Przeworski's *Die Metall-Industrie Anatoliens*).

corresponds exactly with the densest concentration of iron deposits on the north coast of Turkey.<sup>76</sup> From Giresun (Cerasus) westward there are virtually no such deposits, while in a rectangle 15 to 75 km. deep from the coast, between Giresun (100 km. west of Trabzon) and Of (ancient Ophis, 50 km. east of Trabzon) there are no less than 53 known deposits of

<sup>73</sup> Our earliest source, Hecataeus (*fr.* 202 and 203), located them north of Armenia and around the town of Stamene (somewhere along the coast between Trapezus and the Yasun Burnu). In *Prometheus* 714 ff. Aeschylus speaks vaguely of 'the iron-working Chalybes' as living somewhere between the sea and the Caucasus. Apollonius Rhodius, who usually followed the earliest traditions he could find, placed them one day's sail east of the Thermodon (*Arg.* ii 970 ff.). Strabo, who identified them with the Chaldaei, located them (xii 3.19 and 28) above Pharnacia and Trapezus. Pliny, *Nat. Hist.* vi 11, describes Trapezus as 'liberum (*sc.* oppidum) monte vasto clausum. ultra quod gens Armenochalybes'.

Two sources place them west of the Halys, where there are no iron mines: Pomponius Mela i 5 and Herodotus i 28. The latter passage may be a gloss, although Herodotus' knowledge of the south shore of the Black Sea was not distinguished.

<sup>74</sup> Xenophon reports two groups of Chalybes, one east and one west of Trapezus. The large tribe which Xenophon met between Armenia and Colchis (*Anabasis* iv 7) was surely that of the Haldi, and Xenophon knew it. Although he does not describe passing through the land of the Chaldaei, he mentions them both in prospect (iv 3.4) and in retrospect (v 5.17), describing them with the same adjectives and attributing to them the same weaponry which characterise his 'Chalybes' in iv 7.15-17. There is

no avoiding the conclusion that he called the Haldi 'Chalybes' because he knew that the latter were supposed to be the most famous people between Armenia and the Black Sea.

In v 5.1 Xenophon mentions passing through the territory (in a fraction of a day) of another group of 'Chalybes'. This tiny community did make their livelihood as iron workers. Possible Xenophon called them 'Chalybes' because his other candidates for that name were warriors, not miners and smelters.

<sup>75</sup> Strabo xii 3.19: 'The people now called Chaldaei were long ago called Chalybes'. He thereupon argues that barbarous names are subject to such vagaries; his argument shows that the Haldi themselves had no tradition that they were once the storied Chalybes.

<sup>76</sup> For a very general map of iron deposits in the Near East see fig. 30 of R. J. Forbes, *Studies in Ancient Technology* ix (2nd ed., Leiden, 1972). The map on p. 91 of S. Przeworski, *Die Metallindustrie Anatoliens in der Zeit von 1500-700 v. Chr.* (Leiden, 1939) provides a better picture of the deposits in Turkey. The most accurate and detailed map of this kind is that which follows p. 56 in *Iron Ore Deposits in Turkey* (Publications of the Mineral Research and Exploration Institute of Turkey, no. 118; Ankara, 1964). My information is drawn from that map and from C. W. Ryan, *A Guide to the Known Minerals of Turkey*, 2nd ed. (Min. Res. and Expl. Inst. of Turkey, Ankara, 1960).

iron, many of which show traces of old workings.<sup>77</sup> The largest deposit of all is found at an altitude of 2300 m. on a mountain known as Demir Dağ, 'Iron Mountain', where the old shafts and tunnels cover an area of 3500 sq. m.<sup>78</sup> This particular mine lies in the Rize District, 50 km. south by south-east of Of and 75 km. south-east of Trabzon, on a river still known as the Kalopotmos. In the Trabzon District itself there are nine known iron deposits, at one of which slag piles are in evidence. Directly to the south, in the Gümüşhane District, fourteen deposits have been counted, at least three of which were worked in the past.<sup>79</sup>

A meticulous topographical survey of the area around Trabzon,<sup>80</sup> in the best tradition of such studies by French and Belgian scholars, has established that the natural trading area of ancient Trapezus and medieval Trebizond extended south and southwest to the Gümüşhane range, and that to the east traffic from the upper valley of the Çoruh river also finds its easiest route to the sea along the Değirmen river, which enters the Black Sea half a kilometer east of Trabzon.<sup>81</sup> Classical scholars will find this familiar, for Xenophon's men marched west along the Çoruh, then climbed the Zigana pass and headed north to the sea at Trapezus. That town was therefore situated at the outlet of an enormous hinterland, and a hinterland rich in metals of all sorts.

Even more impressive than the iron deposits of the area are the silver mines. Of the 71 known deposits of silver in Turkey, fourteen are located in the natural trade area which issues at Trabzon.<sup>82</sup> The centre of this concentration is near the town of Gümüşhane in the mountain range of the same name.<sup>83</sup> Here, I would suggest, was Homer's faraway 'Alybe, where is the birthplace of silver'. Gümüşhane, in fact, means 'Place of Silver', and the designation is as old as our evidence on the area (in Marco Polo's time the town was called Argyropolis).<sup>84</sup>

It is not, therefore, too much to suggest that the first Greek colonising activity in the Black Sea was designed to provide access to the metals which came so easily from the ranges of Pontic Cappadocia.<sup>85</sup> Anyone who travels eastward today along the Turkish coast will

<sup>77</sup> Ryan, *Guide*, pp. 76-7 and 99-101. It is apparently very difficult to determine the date at which 'old workings' were worked. While visiting Ankara in May of 1974 I learned from Mr Prentiss de Jesus, of the American Research Institute in Turkey, how arbitrary are some of the present designations of the age of a mining or smelting site, and how incomplete is our list of the 'old workings' in Anatolia (and in Greece, for that matter). He is at present engaged in a survey of the ancient mining and smelting sites in central Turkey. Not until the same is done for north-eastern Turkey, he assures me, will we have any real idea of the extent of the ancient iron mining in that area. Unfortunately, such a survey is not yet even in the planning stage. For an example of Mr de Jesus' activity see his 'A la recherche du métallurgiste ancien', *Archéologia* no. 68 (March, 1974), pp. 70-2.

<sup>78</sup> Ryan, *Guide*, p. 101; according to Ryan this deposit 'has been known from ancient times'.

<sup>79</sup> Ryan, *Guide*, p. 101; cf. *Iron Ore Deposits*, pp. 13-14.

<sup>80</sup> E. Janssens, *Trebizonde en Colchide* (Brussels, 1969), pp. 7-31.

<sup>81</sup> *Ibid.*, p. 20: 'Nous devons admettre que la route de Trébizonde à Gümüşhane a toujours eu le tracé qu'elle a aujourd'hui'. On pp. 21-2 Janssens shows why a route along the Harşit river, issuing at Tirebolu (ancient Tripolis) was less feasible.

<sup>82</sup> Ryan, *Guide*, pp. 1 and 19-20.

<sup>83</sup> Although one deposit here is estimated to contain about 200,000 tons of pyritic ore (cf. Ryan, *Guide*, p. 20) silver has not been mined at Gümüşhane

since the emigration of the Greek population after the First World War. For a description of the mines in the 1830s, even then in decline, see W. J. Hamilton, *Researches in Asia Minor, Pontus and Armenia* i (London, 1842), pp. 234-8.

<sup>84</sup> Janssens, *Trebizonde*, p. 16, notes a preponderance of Greek place names (on the 1:200,000 District map) along the route through the Zigana pass and up to but not beyond Argyropolis. It is, of course, recognised that the Gümüşhane mines were once very productive; cf. T. E. Gattinger, *Türkiye jeoloji haritası: Trabzon* (Min. Res. and Expl. Inst. of Turkey, Ankara, 1962), p. 71; 'The silver mines of Gümüşhane—where lead had been produced along with silver—had been quite famous in the past'. But the extent of their fame is not widely recognised. Byzantine sources (like their classical predecessors) say almost nothing about mining activity here or elsewhere. Yet Marco Polo and other travellers from Europe were greatly impressed, and noted that in Argyropolis one could see merchants from as far away as Syria and Iraq. On all this see Speros Vryonis, 'The Question of the Byzantine Mines', *Speculum* xxxvii (1962), pp. 1-17. Vryonis, who had to depend on non-Greek authorities for information about the provenance of Byzantine metals, explains that 'the Byzantines simply do not mention this type of ordinary or common matter'. The same is unfortunately true for ancient writers, Strabo excepted; for his indication of mines in this area see xi 14.9, xii 3.19, and xii 3.30.

<sup>85</sup> This merely revives the suggestion made by Rostovtzeff, *Iranians and Greeks in South Russia* (Ox-

admire the courage of the first Greeks who sailed that way. The fringe of the coastland is congenial enough, and for a few hundred yards inland hazelnuts and fruit trees are planted on low hills; but behind them rise the foothills of the Pontic ranges, and then the mountains themselves, which remain snowcapped for most of the year. I believe that we must find a sufficiently compelling reason for the Greeks to have left the Aegean for the colder, wetter, more intimidating lands of Sinope and Trapezus, 800 to 1100 km. away from anything familiar. It has been suggested that they came for fish,<sup>86</sup> but such a motivation seems somewhat weak. The territory of Sinope supports agriculture, although not of a type familiar to men born in the Aegean and no more bountifully than many sites much closer to home.<sup>87</sup> At Trapezus the arable land is quite limited, and it would be difficult to find a site by nature more vulnerable to attack from the interior. Foothills bring the mountains down toward the city (with a bluff known as Boztepe intruding directly into it) in stepped crescents, and the Degirmen would provide a convenient avenue for any army from the south heading for the sea. If, however, Trapezus was intended as an emporium, its limited farmland and vulnerability would not have been drawbacks, and the Degirmen will have been the very feature which attracted the colonists.

I suggest, then, that Trapezus was founded as an emporium of Sinope; that Sinope was envisaged as the means and Trapezus (and perhaps other emporia) as the end; and that the Corinthians and others who settled Sinope *c.* 750 did so because of the silver and iron available to the east. There are no mines anywhere near Sinope, but so far as I know the only products to which Sinope gave its name were Sinopic iron<sup>88</sup> and *sinopis*, a pigment of iron oxide which R. J. Forbes assumed was derived from the smelting of iron ore.<sup>89</sup> That *sinopis* came from ore transported to Sinope from Cappadocia is stated by our sources,<sup>90</sup> and Sinopic iron must have originated in the same place. The hauling of ore over long distances may not have been unprofitable in the eighth century: the Euboeans, it has now been established, were at the same time bringing iron ore from Elba to foundries at Pithecusae, where iron slag, blooms and a metal-workers' quarter have been found at eighth-century levels.<sup>91</sup> Long-distance transport of iron in ingot form, of course, is attested by Homer.<sup>92</sup> Some surprise might be occasioned by the suggestion that the Greeks sought silver and iron from outside the Aegean (a 1955 survey indicated that in that year Greece had iron reserves of over 100,000,000 tons).<sup>93</sup> We simply do not know, however, to what extent the silver mines at Laurium were worked *c.* 750, and how many communities had access to Laurian

ford, 1922), pp. 61–3, which in turn had been anticipated by Minns and others. Rostovtzeff, however, assigned the initial settlement of Sinope and Trapezus to the tenth century and credited it to the Milesians. J. M. Cook noted with disapproval that some historians 'believe that the Ionian colonisation of Sinope and Trapezus was very ancient, and economic objectives have been postulated to account for this Dark Age enterprise—for instance, the importation of the high-grade iron of the Chalybes, and the gold of Colchis which romantic scholars find symbolised in the story of Jason and his sheepskin. But there is no evidence to support such theories' (*The Greeks in Ionia*, pp. 52–3). That is true only if evidence and pottery are synonymous.

<sup>86</sup> Graham, 'Black Sea', p. 39; Roebuck, *Ionian Trade*, p. 47.

<sup>87</sup> For a description of Sinope see D. M. Robinson, 'Ancient Sinope', *AJP* xxvii (1906), pp. 125–53 and 245–79.

<sup>88</sup> Cf. Daimachus (*FGRH* 65, F 4): 'Of the steels (*σπομομάτων*) there are, in fact, the Chalybic, Sinopic, Lydian and Laconic'.

<sup>89</sup> Forbes, *Studies*, p. 190. Theophrastus, *de Lapid.* 52–3, speaks of three sources of this pigment: the best comes from the iron mines of Ceos, 'but there

is the Lemnian and the one which they call "Sinopic". This one, however, is really Cappadocian, and is transported to Sinope'. Cf. Pliny, *Nat. Hist.* xxxv 31.

<sup>90</sup> In addition to Theophrastus, Strabo xii 2.10 also tells us that Sinopic ruddle comes from Cappadocia. We can assume that Theophrastus' Cappadocia corresponds to the area of Persia's nineteenth satrapy. If Strabo had in mind the land-locked Cappadocia of late Hellenistic and Roman times he had the wrong Cappadocia in mind.

<sup>91</sup> Graham, 'Patterns', pp. 43–5, argued that it was premature to describe Pithecusae as an iron-working centre. In 1970, however, Buchner found not only the 'industrial center' on Mezzavia Hill, with numerous pieces of iron slag and blooms, but also 'a piece of iron mineral in its natural state (pure hematite) that can definitely be assigned to the Rio Marina deposit on the island of Elba'. See Buchner, 'Recent Work at Pithekoussai (Ischia), 1965–1971', *Archaeological Reports* xvii (1970–1), p. 66; cf. also Jeffery Klein, 'A Greek Metalworking Quarter', *Expedition* xiv (1972), pp. 34–9.

<sup>92</sup> *Odyssey* i 184.

<sup>93</sup> *A Roster of Greek Metal Mines* (U.S. Operations Mission to Greece, Mining Branch; pamphlet published in 1955), p. 10.

silver,<sup>94</sup> nor do we know whether at that time most Greek communities had begun to work their local iron deposits. The Euboeans, one suspects, had not. Many of the deposits today deemed suitable for working, including those of Attica, were not worked in antiquity.<sup>95</sup> At the dawn of the Full Iron Age (which some experts say did not arrive in Greece until the eighth century)<sup>96</sup> it may have been preferable to pan and wash the ore which the rivers brought down to the Pontic coast between the Thermodon plain and Colchis,<sup>97</sup> or to obtain from the 'Chalybes' blooms of wrought iron or ingots of carburized iron. Once the process of smelting and extraction were perfected the Greeks would have been less dependent on Sinopic or Chalybic iron.<sup>98</sup> Our evidence indicates that in the fifth century neither the Athenian Confederacy nor the Persians had much interest in the southern shore of the Black Sea. Although Darius organized Cappadocia as Persia's nineteenth satrapy, by Xenophon's time the satrapal government had disappeared. And not even Isocrates advocated the 'liberation' of any part of Anatolia east of Sinope.

One last topic invites speculation: how did the Greeks learn about the metals of Cappadocia? Surely they did not coast along the Mediterranean and other seas, testing the local ores. Nor were any of the Pontic peoples merchants or mariners. It can hardly be a coincidence that after having dropped from sight at the destruction of the Hittite empire, the inhabitants of Pontic Cappadocia, along with the Colchians, first came into contact with the civilised world during the first half of the eighth century. The kingdom of Urartu, which had begun its expansion c. 840, in the second year of Argishti I (785) finally subdued the Diauehi.<sup>99</sup> This people seems to have been located just south of the Pontic ranges,<sup>100</sup> and their mineral resources are indicated by the tribute in copper, silver and gold which Argishti imposed upon them. Under Sardur II (c. 764–735) the Urartians came into con-

<sup>94</sup> R. J. Hopper, 'Mines and Miners of Ancient Athens', *Greece and Rome* viii (1961), pp. 139–41. Apparently some mining was done at Laurium; cf. A. M. Snodgrass, *The Dark Age of Greece* (Edinburgh, 1971), p. 248. Yet from eleventh- and tenth-century Greece the only silver artefacts thus far found are two finger-rings from the neighbourhood of Cnossus. See V. Desborough, *The Greek Dark Ages* (London, 1972), p. 314.

<sup>95</sup> Hugo Blümner, *Technologie und Terminologie der Gewerbe und Künste bei Griechen und Römern* iv (Leipzig, 1887), pp. 74–5, listed the various Greek iron mines which were or were not exploited in antiquity. For an analysis of the ores I have consulted the table between pp. 10 and 11 of *A Roster of Greek Metal Mines*. The highest percentage of iron content (52%) is found in the ores of Chania in Crete and Neapolis in Laconia.

<sup>96</sup> Snodgrass, *Dark Age*, pp. 228 ff., dates the transition to the Full Iron Age to the late eleventh century. Przeworski believed that the transition had not ended until c. 750, a view upheld by Radomir Pleiner, *Iron Working in Ancient Greece* (Prague, 1969), p. 15. J. Waldbaum, *The Use of Iron in the Eastern Mediterranean 1200–900 B.C.* (Diss. Harvard, 1968; summary in *HSCP* lxxiii [1969], pp. 328–31) concluded that the transition was 'not yet complete by the end of the tenth century'. Cf. Forbes, *Studies*, p. 273. For the importance of the bronze industry in the Dark Age see H. W. Catling, p. 29 in Popham and Sackett, *Excavations at Lefkandi, Euboea 1964–1966* (London, 1968). Even in the Assyrian Empire iron was not in common use until the late ninth century; R. Pleiner and J. K. Bjorkman, 'The Assyrian Iron Age', *Proc Amer Philos Soc* cxviii (1974), conclude (p. 292) that the documents 'indicate clearly the increasing quantities of iron, from small quantities

shortly after 900 to considerable amounts around 800'.

<sup>97</sup> Ps.-Aristotle, *de Mir. Ausc.* 48, and Pliny, *Nat. Hist.* xxxiv 141 report that Chalybian iron was panned from the sand borne down by the rivers. A law of Süleyman the Magnificent (quoted by Ryan, *Guide*, p. 75) ordered that 'miners shall collect sand of the Black Sea coast, wash it, smelt it, and produce iron'. For the easy, if inefficient, methods in use in the early nineteenth century see Hamilton, *Researches* i pp. 271 ff.

<sup>98</sup> In his discussion of the Pithecan iron-trade, Snodgrass, *Dark Age*, p. 336, remarks, 'the most surprising implication of all this is that the supply of iron-ore available from the quite copious deposits in Greek lands must have begun to fall short of demands; but when we come to consider the question of population increases, this may no longer seem so remarkable'. Snodgrass may be correct in his view that the mining and smelting of iron was well established in Greece by the tenth century, and that it was because of a sharp increase in population that in the eighth century the Greeks had to turn to foreign ores. One could object, however, that the argument for a population surge in the early eighth century is seriously weakened if it is conceded that the settlements at Pithecusae and Trapezus (like that at Al Mina) resulted from a desire for metals rather than a desire for land. Perhaps the reliance on foreign iron in the period 800–750 reflects both an increase in demand for iron and a prevailing inefficiency in extracting it from the native ores.

<sup>99</sup> In Fr. König's *Handbuch der chaldäischen Inschriften* (*Archiv für Orientforschung*, Beiheft 8; Graz, 1957), the relevant inscriptions are nos. 80, 1, iv, and 82, 10, iv.

<sup>100</sup> Ch. Burney and D. M. Lang, *The Peoples of the Hills: Ancient Ararat and Caucasus* (London, 1971), p. 137.

tact several times with Qulha,<sup>101</sup> 'an area whose identification with the later Colchis seems acceptable'.<sup>102</sup> It is possible that it was from the Urartians, who were allies and patrons of the North Syrian cities around Al Mina and Sukas, that the Greeks learned of the silver, gold and iron of 'Alybe' and Colchis.

ROBERT DREWS

*Vanderbilt University*

<sup>101</sup> König, *Handbuch* no. 103, 3, iii ff.

<sup>102</sup> Burney and Lang, *Peoples of the Hills*, p. 147.  
Cf. R. D. Barnett, 'Oriental Influences on Archaic

Greece,' *The Aegean and the Near East: Studies Presented to Hetty Goldman* (Locust Valley, N.Y., 1956), p. 229.