

## BOOK I

### *Introduction and Predecessors*

Book I is Strabo's introduction to the discipline of geography. Much of it is a discussion of its history, beginning with Homer, whom Strabo and others considered the first geographer. In Hellenistic times there were repeated attempts to fit Homer's geographical knowledge into the wider world of that era, and this was a common theme of the *Geography*. Many other predecessors were also examined, but the primary emphasis was on the *Geography* of Eratosthenes, which is summarized in detail. There are also lengthy discussions about siltation, deposition, changes to the earth, and the nature of its surface.

#### **Part I: Introduction and Purpose of the Work**

**I.I.I.** Strabo began his treatise acknowledging his debt to his predecessors, using the term "geography" for the first time in extant Greek literature. The word was the invention of Eratosthenes (*Geography* F1), active in the second half of the third century BC, and the opening sentences are probably paraphrased or quoted from the beginning of his *Geography*. Strabo immediately established the importance of geography as a discipline, insisting that it was a legitimate genre of scholarship.

The first part of the list of predecessors is also from Eratosthenes, as they all predate him. Homer was probably less important geographically to Eratosthenes than to Strabo. Anaximandros (early sixth century BC) was involved in the early history of map-making (Eratosthenes, *Geography* F12) and was the first to theorize about the shape of the earth (Duane W. Roller, "Columns in Stone: Anaximandros' Conception of the World," *AntCl* 58 [1989] 185–9; Robert Hahn, *Anaximander and the Architects* [Albany, N.Y. 2001] 192–200). Hekataios of Miletos (c. 500 BC) was also connected with map-making and wrote the earliest known topographical treatise, the *Circuit of the Earth* (FGrHist #1), which survives in nearly 400 fragments. The contribution of Demokritos (fifth century BC) to geography is

uncertain, yet the catalogue of his works includes the title *Geographia* (Diogenes Laertios 9.48), which in fact may be anachronistic. Eudoxos of Knidos (early fourth century BC) also wrote a *Circuit of the Earth* (Agathemerios 1.2; Plutarch, *On Isis and Osiris* 6), in which he suggested that the inhabited part of the earth was rectangular in shape and also speculated about the size of the earth and the terrestrial climate zones. Dikaiarchos, at the end of the fourth century BC, wrote yet another *Circuit of the Earth*, made further comments about the size of the earth and the zones, and created the primary terrestrial parallel (Paul T. Keyser, “The Geographical Work of Dikaiarchos,” in *Dicaearchus of Messana, Text, Translation, and Discussion* [ed. William W. Fortenbaugh and Eckhart Schütrumpf, New Brunswick, N.J. 2001] 353–72). And Ephoros, active before 340 BC, was the first to include a section on world geography in an historical work, defining the extremities of the inhabited world by ethnic groups (*FGrHist* #70, F131–4). Thus Strabo’s (or Eratosthenes’) list is a careful record of those responsible for the major theoretical advances previous to Eratosthenes, culminating in the geographical account of Ephoros, the first instance of applying geography to history.

Strabo then provided the names of the major scholars between Eratosthenes and himself. This list is limited to the two most important: Polybios, of the second century BC, who explored widely, wrote on geography, and like Ephoros included a geographical section in his history (F. W. Walbank, “The Geography of Polybius,” *C&M* 9 [1947] 155–82), and Poseidonios, whom Strabo called “the most learned scholar of my time” (16.2.10), and whose contributions to geography were extensive, especially in the west of Europe. Thus the catalogue from Homer to Poseidonios creates an unbroken chain of scholarship from the person whom Strabo saw as the first geographer to his own era.

The last two sentences of the section stress the importance of geography as a serious discipline. Its usefulness to “commanders” (presumably Roman field officers) is also emphasized, as well as its general utility for one’s well being. Strabo had already introduced a major Stoic scholar, Poseidonios, and at the end of the section he wrote in terms reminiscent of Cicero’s “art of life” (“ars vitae,” *de finibus* 3.4), the first assertion of the Stoicism that pervades the treatise: the Stoic scholar Athenodoros of Tarsos was one of his teachers (16.4.21; Laurent Jérôme, “Strabon et la philosophie stoïcienne,” *ArchPhilos* 71 [2008] 111–27).

1.1.2. Strabo named another predecessor, Hipparchos, of the second century BC, whose *Against the Geography of Eratosthenes* he cited extensively (55 of the 63 known fragments). Hipparchos was a mathematician and

astronomer rather than a geographer, who believed that Eratosthenes' methodology was flawed because he did not make adequate use of those disciplines (D. R. Dicks, *The Geographical Fragments of Hipparchus* [London 1960] 31–7). His work is more a polemic than a geographical treatise, yet Strabo relied heavily on him. Hipparchos was also quoted as support for the idea that Homer was both the first geographer and also infallible in his accuracy, yet to assume such views on the part of Hipparchos is somewhat of an exaggeration, as he seems more nuanced (F2 = 1.2.3). Nevertheless it was essential for Strabo to establish the primacy of Homer at the beginning of his treatise, and to assert that Homer knew about the entire inhabited world (as opposed to the totality of the earth itself), for which Strabo used the term *oikoumene*, a concept perhaps developed by Aristotle (*Meteorologika* 2.5), and part of the geographical diction of Eratosthenes. Despite Strabo's insistence, there is no evidence that Homer had heard anything other than the vaguest rumors about the world west and north of Italy: attempts to prove otherwise (3.2.13, 3.4.3–4), especially regarding Spain, do not seem to predate the Roman period. Nevertheless, Strabo's interest in Homer was intense, to say the least: the poet was quoted over 700 times, and the *Iliad* and the *Odyssey* are constant features in the fabric of the *Geography* (Lawrence Kim, "The Portrait of Homer in Strabo's Geography," *CP* 102 [2007] 363–88).

**1.1.3.** From here through Section 1.1.11, Strabo examined Homeric views about the extremities of the inhabited world. The material may have come from a separate Homeric commentary that Strabo wrote before he embarked on the *Geography*, vestiges of which appear sporadically in the treatise, especially in Books 8 and 13.

First, he asserted that Homer believed the inhabited world was encircled by the Ocean. Strabo's proof is Homer's mention of remote peoples (discussed more fully at 1.2.22, 31), as well as several other citations, all of which make the same point that celestial bodies rise from and sink into the Ocean. This does not actually prove Strabo's argument, and any scholarly consideration of an encircling Ocean probably does not predate Eratosthenes (*Geography* F30 = 2.5.5), or, at the earliest, Eudoxos of Knidos in the fourth century BC (Duane W. Roller, *Eratosthenes' Geography* [Princeton, N.J. 2010] 145).

**1.1.4.** Strabo was aware that Homer had little to say about the west, and thus used a passage in the *Odyssey* (4.563–8) – the prophecy given to Menelaos by Proteus about the Elysian Plain – to demonstrate that he knew about the wealth of Iberia and Herakles' voyage there. Yet there is no evidence as to where Homer placed the Elysian Plain beyond the

suggestion that it was at “the limits of the earth” and somehow connected with the west wind. In fact, the Elysian Plain seems originally to have been located in the eastern Mediterranean (Pliny, *Natural History* 4.58) and moved west as knowledge increased. Any association of Herakles with the far west is post-Homeric, probably first outlined in Stesichoros’ *Geryoneis* (of the early sixth century BC), which Strabo knew (3.2.11; see also Sallust, *Jugurtha* 18). Strabo fell into the trap of trying to localize a mythical place.

1.1.5. The change from Elysian Plain to Blessed Islands shows a new source, and mention of Marousia (Mauretania) demonstrates that it is almost certainly Juba II, Strabo’s contemporary and king of the territory from 25 BC to AD 23. Juba discovered and examined the Canary Islands (Pliny, *Natural History* 6.201–5), which he believed were the Blessed Islands, and the location provided by Strabo corresponds to their situation. Juba published this information in his *Libyka* (F3; Duane W. Roller, *Scholarly Kings: the Writings of Juba II of Mauretania, Archelaos of Kappadokia, Herod the Great and the Emperor Claudius* [Chicago, Ill. 2004] 48–103), written between 25 and 2 BC, but Strabo’s failure to cite either author or title demonstrates that he probably received the information in a private communication. The several references to Juba in the *Geography* (6.4.2, 17.3.7, 12, 25) indicate that he and Strabo were probably in contact.

1.1.6. The Aithiopians had long been defined as the farthest of peoples, but their exact location was not specified in early times. Homer mentioned them frequently, and they were one of Ephoros’ four ethnic classifications of people at the extremities of the earth (F30a = 1.2.28). The ethnym was so generic that it had only a vague connection with the people of the Upper Nile (but must have originated there). Since it was used for all remote southern peoples, there was a tendency to speak of different groups of Aithiopians (a distinction already apparent in the text of Homer), something that Strabo deconstructed in great detail (2.3.7–8). The Aithiopians were believed to extend to the Atlantic, as noted in the Greek translation of the *Periplus* of Hanno (11; although it is unlikely that Hanno referred to them by that name), and they visited Carthaginian trading posts on the coast (Pseudo-Skylax 112). As late as the end of the second century BC the term was still used to describe all the peoples of sub-Saharan Africa (2.3.4), but it was becoming localized, referring to those living on the Upper Nile above the First Cataract, especially after the expedition of Ptolemy II around 275 BC (Agatharchides F20, Diodoros 1.37.5).

Strabo then examined the extreme north. Homer used both the names Bear and Chariot for the constellation (e.g. *Iliad* 18.487), but was unaware of the Little Bear, which was first identified by Thales of Miletos around

600 BC (Kallimachos, *Iambos* 1.52–5 [= F191]). Strabo made certain that the reader did not consider Homer's failure to mention the latter constellation a mark of ignorance, noting that constellations were still being named in recent times. He cited as evidence the astronomical poem of Aratos of Soloi, *Phainomena*, written in the early third century BC. There was also the Lock of Berenike (today the Coma Berenices), identified by the astronomer Konon to honor Berenike II, the wife of Ptolemy III: the queen had dedicated a lock of hair when her husband returned safely from the Third Syrian War in 246 BC. The circumstances were recorded by Kallimachos (F110), but are best known in Catullus' translation (Catullus 66: see further P. M. Fraser, *Ptolemaic Alexandria* [Oxford 1972] vol. 1, 239, 729–30).

Canopus (today  $\alpha$  Carinae), the second brightest star, lies far to the south (as viewed from northern latitudes), visible only south of 38° (the latitude of southern Italy, Delphi, and Sardis). It was named after Kanobos, the pilot of Menelaos, and has been important to navigators from ancient to modern times. Eudoxos of Knidos was the first known to have mentioned it (Poseidonios F204 = 2.5.14).

The assertion that Homer knew of the concept of the arctic circle is anachronistic. It was a circle on the sphere of the heavens that marked the limit of the stars which were always visible (thus it varied according to the viewer's latitude). Homer knew there were stars that were always visible, but the more sophisticated astronomical idea was probably developed by Eudoxos of Knidos in the fourth century BC (Aristotle, *Meteorologika* 2.5; see also Poseidonios F49 [= 2.2.2–3]; Dicks, *Hipparchus*, 165–6). As support for his assertion, Strabo cited Krates of Mallos and Herakleitos of Ephesos, although neither seems to be relevant. The former was a Homeric scholar of the first half of the second century BC and the first to construct a globe (see 2.5.10). He was the Pergamene envoy to Rome at the time of Attalos II and an early and important Greek scholar in that city (see also 1.2.24; Suetonius, *Grammarians* 2). Herakleitos was the inscrutable natural philosopher of around 500 BC, who probably had no idea of the concept of the celestial circles. Mention of Homer and Orion is also less than clear and not germane: the passage is typical of Strabo's tendency to wander off into somewhat irrelevant areas, especially in support of Homer.

At the end of the section Strabo returned to his discussion of Homeric concepts of the far north, yet Homer nowhere used the word “nomads” (the earliest citation is probably Herodotos 1.15). For the Mare Milkers and the others, see 7.3.2–10.

1.1.7. Strabo continued his discussion of the Ocean, insisting that Homer was aware of the tides. As proof of this he used Homer's knowledge of the currents through the strait between Sicily and Italy (the modern Strait of Messina), basing his arguments on Poseidonios, who was less certain about the matter than was Strabo. Yet Strabo objected to Poseidonios' assertion that the tides were implied in Homer's concept of the Ocean as a river (e.g. *Iliad* 14.245), preferring Krates' idea that Homer was speaking more generally, and that parts of the Ocean flowed like a river. Krates' concept of a great oceanic estuary reaching from the winter tropic (Tropic of Capricorn) to the south probably reflects the uncertainty in his day (and even in the time of Strabo) of the relationship of the Red Sea and the Persian Gulf to the Indian Ocean (Maria Broggiato, *Cratete di Mallo: i frammenti* [La Spezia 2001] 223–4). Strabo further discussed the flow through the Strait of Messina at 1.2.15–16.

1.1.8. The encircling Ocean was implicit in the geography of Homer, although details were lacking. Strabo catalogued the evidence for it, using (but not citing) the report of Patrokles (F4b = 11.11.6) from the early third century BC about the possibility of sailing from the Caspian Sea to India (thus presuming a Caspian Sea connected to the External Ocean), and those of Eudoxos of Kyzikos and others (2.3.4) for circumnavigating Africa. Therefore it was believed that it was also possible to sail from the Caspian counterclockwise to the Atlantic coast of Europe. The extent of this northern portion of the coast, from Europe to the Caspian, Strabo rather ingenuously claimed was “not so great.” In his day there already was the idea that the Atlantic (which in theory stretched west from the Pillars of Herakles to India) might be interrupted by another continent, something that Krates (F37 = 1.2.24, 2.3.7) had suggested, but which Strabo rejected. Evidently some who had attempted to circumnavigate Africa had said that there was another continent, perhaps as an excuse for the failure of their cruise: among these were the Persian Sataspes (Herodotos 4.43) and Euthymenes of Massalia, both active around 500 BC. The former said that his ship had become stuck and the latter seems to have encountered plant matter or mud (Duane W. Roller, *Through the Pillars of Herakles: Greco-Roman Exploration of the Atlantic* [London 2006] 20–1).

1.1.9. Tidal phenomena were a difficult problem for the Greeks, and are still not totally understood. Hipparchos objected to the idea that the tides were regular, a view based on his own observations (F8 = 1.3.11) and, more importantly, those of Seleukos of Seleukeia, of the second century BC, who wrote the first treatise on the topic (see also 3.5.7–9; Duane W. Roller, “Seleukos of Seleukeia,” *AntCl* 74 [2005] 111–18). He is also remembered

for being the last known proponent of the heliocentric system of Aristarchos of Samos, allegedly proving his hypothesis (Plutarch, *Platonic Questions* 8.1). Tidal theory seems to have originated with Pytheas of Massalia in the fourth century BC, who connected the tides to lunar activity (Aetios 3.17.2; see also Pliny, *Natural History* 2.217), but they remained little understood and were often confused with currents and even river outflows into the ocean. Poseidonios and Athenodoros of Tarsos were Strabo's most recent authorities on tides: Athenodoros, whom Strabo knew personally (16.4.21), was famous as the teacher of Octavian and may have been Poseidonios' pupil. Little is known about his writings on the tides beyond Strabo's general comments (see also 1.3.12). The final note about moisture is probably from Poseidonios (I. G. Kidd, *Posidonius 2: The Commentary* [Cambridge 1988] 762).

1.1.10. Having established Homer's knowledge of the External Ocean, Strabo then examined the inhabited world proper, making a circuit beginning at the Pillars of Herakles and identifying places and peoples mentioned by him. The route is along the southern and eastern coast of the Mediterranean and southern Anatolia, and up to the Troad. Then it moves through the Propontis and into the Euxeinos (Black Sea), and counterclockwise around that sea to Kolchis, the Kimmerian Bosphoros, and the Istros (Danube) River. Leaving the Euxeinos, the route then passes through the Greek peninsula, Italy, Sicily, and back to Iberia, thus creating a "Periplous of Homer" (for the genre, see 1.1.21). Whether this itinerary was Strabo's invention or from a previous source is unknown, but it is essentially an artificial construct. Despite Strabo's protestations that the places mentioned were cited by Homer, some significant ones were not: the Pillars of Herakles (first mentioned by Herodotos 2.33), Kolchis (first by Aischylos, *Prometheus Bound* 415), and the Istros River (first in Hesiod, *Theogony* 339), which in fact are the most remote localities cited. Yet Strabo firmly believed that these regions were familiar to Homer, based on the same methodology that he had used in presuming knowledge about Iberia (1.1.4). Homer's awareness, however vague, of the voyage of Jason (*Iliad* 7.468; *Odyssey* 12.72) meant that he knew about Kolchis. Knowledge of the Mysians (*Iliad* 2.858 etc.) presumed the Istros, since the Mysians were said to live along the river. Homer mentioned the Kimmerians (*Odyssey* 11.14), so to Strabo he knew about the Kimmerian Bosphoros on the north side of the Black Sea. This view was strengthened by the synchronism between Homer and the Kimmerian invasions of Anatolia (1.3.21; Herodotos 1.6), something perhaps obtained from Eratosthenes' *Chronographiai* (FGrHist #241, F1–3), the first work on universal chronology. Strabo's techniques



may be questionable to modern scholars, but provide an insight into the methodology of Homeric scholarship in the Hellenistic period.

Strabo disliked Eratosthenes' statement that poets entertain rather than teach, a view of Homer that had developed as early as Xenophanes of Kolophon in the sixth century BC (F11–12, 14–16), who was the first to object to much of the tone of the poetry of Homer. See further 1.2.3 and Roller, *Eratosthenes* 112–14.

This section has the first of dozens of references to the Euxeinos (Black Sea), a region that pervades the work, whose history and geography were explored in detail by Strabo. His intimate connection with the world of Mithridates VI of Pontos made this possible (see 1.2.1), and he is the primary source on the topic (David C. Braund, "Greek Geography and Roman Empire: the Transformation of Tradition in Strabo's Euxine," in *Strabo's Cultural Geography: The Making of a Kolossourgia* [ed. Daniela Dueck et al., Cambridge 2006] 216–34).

1.1.11. Continuing to follow Eratosthenes, Strabo moved to the two successors of Homer in terms of geography, Anaximandros and Hekataios of Miletos. Yet there is no discussion of either: in fact Anaximandros, despite his stated contributions (see 1.1.1), was not mentioned again except in a list of notable Milesians (14.1.7). Hekataios, on the other hand, was cited several times as a source. There was also an ongoing controversy regarding the legitimacy of his *Circuit of the Earth*, since Kallimachos had attributed part of it to an otherwise-unknown Nesiotes (Athenaios 2.70b).

1.1.12. Strabo was probably paraphrasing Hipparchos' preface, which set forth his view that mathematics and astronomy were essential for geographical scholarship, since only through those disciplines could anyone determine accurately the latitude and longitude of places. In this Hipparchos set himself in opposition to Eratosthenes, who used overland or sailing measurements (Eratosthenes, *Geography* F52, 131), a technique that Hipparchos found dangerously flawed. Yet Hipparchos actually made few astronomical calculations himself (Ptolemy, *Geographical Guide* 1.4), and there certainly was no process available for recording and coordinating such observations throughout the known world. Hipparchos seems to have been the first to suggest that longitudes could be determined through lunar eclipses (Dicks, *Hipparchus* 121–2).

"Alexandria next to Egypt" is the proper designation of that famous city, although rarely used: its location west of the Kanobic Mouth of the Nile meant that it was outside the Delta and thus technically outside Egypt. Since Strabo only used the term in his first two books (see also 1.3.17, 2.5.40), he may have taken it from Hipparchos.



1.1.13. Although still paraphrasing Hipparchos, using the astronomical term *apostema* (“intervals”; Strabo, ed. Radt, vol. 5, p. 61), Strabo moved beyond the limited definitions of the earlier scholars. The analogy with architecture is remindful of Vitruvius’ statements about what an architect needed to know, especially his 1.1.10, where the zones, climate, and astronomy are mentioned as professional necessities. It is difficult to determine who was quoting whom, as they were contemporaries and lived in Rome at the same time, but Strabo’s statement seems forced and thus may suggest that the original phrase was by Vitruvius.

Strabo’s argument that the expanse of the inhabited world could create large errors in measurement reflects some of Eratosthenes’ difficulties (Eratosthenes, *Geography* F62 = 2.1.36), which in turn were emphasized by Hipparchos. The use of the term *antipodes* (“opposites”) reflects a theory that there was an opposite to the inhabited earth. It came to be applied to the unknown portions south of the equator, seen to be the “opposite” of what was known (Plato, *Timaios* 63a; Diogenes Laertios 8.26), and survived in this sense until the discovery of Antarctica in the nineteenth century.

1.1.14. Perhaps continuing to paraphrase Hipparchos, Strabo emphasized that one’s view of the cosmos varied from place to place, and that the heavenly bodies tended toward the center of the universe, an Aristotelian concept (*On the Heavens* 2.14).

1.1.15. A distinction was made between the inhabited world (*oikoumene*) and the entire earth (*gē*). The former was thought to be roughly rectangular, with dimensions of 70,000 by 30,000 stadia, figures proposed by Eratosthenes (*Geography* F30 = 2.5.6) and a refinement of suggestions going back to Demokritos (Agathemeros 1.2). But this was only a small portion of the entire earth, whose circumference was 252,000 stadia (Eratosthenes, *Measurement of the Earth* F1–9). The person who could comprehend the cosmos but not the entire earth is not identified, but may be a comment by Hipparchos about Eratosthenes. Strabo continued to stress the interdisciplinary nature of the field of geography, a point of view that probably derived from Eratosthenes.

1.1.16. Strabo made a plea for broad education – a Stoic tenet – arguing that in addition to the obvious need to become proficient in geographical scholarship, one must have understanding about everything that is produced on the surface of the earth. Moreover, wisdom was equated with extensive travel (a number of mythological travelers were noted), which allowed Strabo to connect the wisdom of the Homeric heroes with modern political needs, since the greatest contemporary leaders were those who understood geography (an expansion of 1.1.1). Indirectly he commended

the Roman policy of providing a single administration for the entire inhabited world, and thus the broad reach of the Roman world was equated with the broad travels of the heroes. Strabo may have had in mind conspicuous examples of Roman commanders who were not geographically literate and thus came to disaster, especially Aelius Gallus on his Arabian expedition in the 20s BC (16.4.22–4), as well as Quinctilius Varus in Germany in AD 9 (7.1.4). Nevertheless, Strabo was perhaps the first to move geography from the private sphere of the specialist (such as Eratosthenes) to the public world of the political leader (Emilio Gabba, “Political and Cultural Aspects of the Classicistic Revival in the Augustan Age,” *CLAnt* 1 [1982] 43–65, at 59–61).

Yet he stressed that the inhabited world was so complex and diverse that one person could not write about it in its entirety; an odd claim, given what he was doing. Here he used the rare word “chorographer,” perhaps for the first time (see also 2.4.1, 8.3.17). Alleged earlier citations, such as by Polybios (34.1.5 = Strabo 10.3.5) are in quotations or paraphrases and thus are suspect. The word provides another connection with Vitruvius (his 8.2.6) and refers to a regional study (see Ptolemy, *Geographical Guide* 1.1), as opposed to geography, which concerns itself with the entire inhabited world.

1.1.17. Continuing the theme of the need for education, Strabo provided several examples of the importance of geographical knowledge as one of its necessary components. The first instance is from the *Kypria*, the post-Homeric epic whose setting immediately precedes the events of the *Iliad*. The Greek forces erroneously landed at Teuthrania in Mysia (near the future site of Pergamon), with disastrous results, and were forced to return to Aulis and start again (*Greek Epic Fragments* [ed. Martin L. West, Cambridge, Mass. 2003] 73–4). Then there were incidents regarding Greek pilots for foreigners. Salganeus, known only from this account and 9.2.9, guided Xerxes along the coast of Greece, and Peloros led Hannibal through the Strait of Messina (Valerius Maximus 9.8 ext. 1; Pomponius Mela 2.116). The two stories are strangely parallel: in both cases the pilots knew what they were doing yet were executed for treason, as neither Xerxes or Hannibal understood the sinuous nature of the coast. Both leaders repented too late and erected memorials to those whom they had condemned. The accounts are more moral paradigms about the impetuosity of leadership rather than geographical incidents. Strabo’s source seems to be an account of Greeks guiding foreigners, since he then told the most famous example of such stories, that of Ephialtes at Thermopylai (Herodotos 7.213).

This catalogue, which began with incidents from mythological times, was brought to Strabo's own era with the contemporary Roman wars and the ability of the locals to use topography skillfully. No specifics were mentioned but Strabo was perhaps referring to the difficulties of Marcus Antonius in the 30s BC (16.1.28) and the destruction of the legions of Varus in 9 BC (7.1.4), as well as his own account (4.3.4–5) of the locals hiding in forests and marshes in the vicinity of the Rhenos (Rhine) and Sequana (Seine), perhaps taken from the *Gallic War* of Julius Caesar (6.3).

1.1.18–19. The summary of various types of government is standard Greek political theory, going back to Herodotos' account of the debate among the Persian conspirators (3.80–3) as well as Plato (*Republic* 1.12). Strabo's point is that whatever the form of government, the ruler who understands geography will be better equipped than the one who does not.

He further emphasized that understanding geography requires proficiency in other disciplines, and this includes a comprehension of mythology. He thus rejected the view of Eratosthenes (*Geography* F2–11) that myth was of limited value. Some of the general comments about education may have originated with Poseidonios.

1.1.20. Strabo returned to his thesis about the necessity of mathematics and astronomy for geography (see 1.1.13). Previously he had used the ambiguous word *klima* merely to mean "latitude" (1.1.12), but here it is in its more technical sense of "[terrestrial] zones." The word actually means "slope" but was adapted to the concept of the zones. Since the heavens were seen to slope toward the poles, by analogy so did the earth and its zones. The word is not documented before the second century BC (Polybios 2.16.3, 7.6.1), but the concept of zones had originated much earlier with Parmenides (Strabo 2.2.2).

Perhaps following Eratosthenes, Strabo also believed that it was necessary to stress the sphericity of the earth (Eratosthenes, *Geography* F25 = 1.4.1; Johannes Engels, "Die strabonische Kulturgeographie in der Tradition der antiken geographischen Schriften und ihre Bedeutung für die antike Kartographie," *OT* 4 [1998] 63–114). This idea was as old as the Pythagoreans (Roller, *Eratosthenes* 5) but always needed to be reinforced. He reminded his readers of the primary proof of a curved earth – the rising up of landmasses when approached from out to sea – and included the inevitable Homeric reference. A "gnomon" was originally "one who interprets (or knows)" (Aischylos, *Agamemnon* 1130), but became the name of a tool for land surveying (perhaps originating in Egypt, Herodotos 2.109). From at least the time of Eratosthenes it was used for geographical measurement.

1.1.21. Political and military leaders needed some knowledge about celestial phenomena – especially the changes that occur when they are observed in different places – but not a high degree of scholarly understanding. As an example of someone who did not know where he was, Strabo used Odysseus' speech to his companions when approaching the home of Kirke. The list of phenomena that follows is almost certainly from Hipparchos (his F40), since it is the data that he would have used to locate places (Dicks, *Hipparchus* 165), although he was not mentioned by name.

Strabo believed that such details were necessary only for a scholar, but he did expect his readers to be familiar with a globe, something invented by Krates of Mallos in the early second century BC (2.5.10). Moreover, in order to be geographically literate it was necessary to have passed a basic course in mathematics, which would include Euclidian geometry, implicit in the *Geography* (cf. 2.1.10) although Euclid was never named. The reference to writings on harbors probably refers to the work of that name by Timosthenes of Rhodes, who was cited a number of times (see 1.2.21). A *periplous* was a coastal sailing itinerary: the word originally meant “circumnavigation” (e.g. Herodotos 6.95) but had come to be a literary genre. Since most sailing was largely coastal, *periploi* had been an essential part of Greek expression since the *Odyssey*, and appear (mostly derivatively) throughout Greek historical and geographical literature. A few actually survive: the earliest is the Greek translation of the voyage of Hanno of Carthage down the west coast of Africa around 500 BC. Strabo used them frequently and often fell into their diction (e.g. 14.3.1–9 and 16.4.4–14). See further, Duane W. Roller, *Ancient Geography: The Discovery of the World in Classical Greece and Rome* (London 2015) 5.

1.1.22. Again Strabo emphasized that a high degree of technical education was not necessary for his readers. Having noted the usefulness of his treatise for politicians and military persons, he also suggested that it would be valuable for the “general public,” in other words, educated Greeks and Romans. Yet different parts of the work would appeal to different people within this category: Books 5–6 on Italy are obviously for Greeks but Books 11–14 on Anatolia would be more for Romans, since they emphasize the superiority of the region as well as its contributions, especially intellectual, to world culture.

1.1.23. To conclude his first part, Strabo referred to his *Historical Commentaries* (BNJ #91), completed before he started his geography. The work was forty-three books long, over twice the length of the *Geography*, and was completed after 37 BC (F18 = Josephus, *Jewish Antiquities* 15.8). It began with the end of Polybios' history in 146 BC and may have continued to the

end of the Roman civil war in 29 BC. Unlike the geographical work, it seems to have been conventionally published and was available throughout the first century AD, used by Plutarch, Josephus, and others. Strabo mentioned it again at 11.9.3.

Strabo compared the *Geography* to a great work of art, using the word “colossal.” The noun, “colossus,” was first used by Herodotos (2.130) to refer to Egyptian sculpture, and in fact there is a Herodotean tone to this passage of the *Geography*. By late Hellenistic times the adjective (*kolossiaios* or *kolossikos*) had come to have a more general meaning similar to the modern definition (Diodoros 2.34.5, 11.72.2). Strabo’s readers would also be reminded of the famous Colossus of Helios on Rhodes (14.2.5), which, although it had fallen around 227 BC, remained one of the Seven Wonders of the World. To describe his treatise, Strabo invented the word *kolossourgia*, “a colossal work.” Although this self-analysis may seem immodest, the *Geography* remains one of the longest and most varied surviving works of Greek literature.

## Part 2: Homeric *Geography*

1.2.1. Like Eratosthenes, Strabo lived in an era of significant advances in geographical knowledge. Eratosthenes had profited from the material acquired by Alexander and his successors; in Strabo’s lifetime the Romans advanced as far as the Albis (Elbe), reached by Drusus in 9 BC (Dio 55.1–2). There is no record of a specific expedition to the Tyras (Dniester), but Roman involvement with the local king, Byrebistas, meant contact with this region from at least the time of Cn. Pompeius (7.3.11; *SIG* 762). The remainder of the Black Sea coast had been part of the Pontic kingdom of Mithridates VI. In addition to reports from L. Licinius Lucullus and Pompeius (the Roman commanders who had been sent against the king in the 70s and 60s BC), Strabo probably had internal information since his great-uncle, Moaphernes, had been the Mithridatic governor of Kolchis (11.2.18). Parthyaian (Parthian) information about the regions beyond the Black Sea was available through both Roman commanders such as Pompeius (and his chronicler, Theophanes: see 11.2.2), and the *Parthika* of Apollodoros of Artemita (1.3.21). Yet Strabo made it clear that he was not going to critique all sources – indeed some were not worthy of consideration – but only the most important: essentially Eratosthenes, Poseidonios, Hipparchos, and Polybios. These were cited collectively over 200 times and are listed in order of frequency of quotation. After Homer they are Strabo’s four most commonly used authors.

This is also the first mention of Mithridates VI, the king of Pontos from 120 to 63 BC, a formidable presence in the eastern Mediterranean world and a major cultural figure and opponent of Rome. Moreover, he was the employer of a number of Strabo's ancestors, and thus it might be expected that he would play a prominent role in the *Geography*, although Strabo's view of him was not always favorable (Glen W. Bowersock, "Strabo and the Memory of Mithridates Eupator," in *Monumental Gregorianum* [Moscow 2013] 378–87).

1.2.2. The critique of Eratosthenes runs through section 1.2.14, but it quickly became a defense of Homeric geography. First, however, there is a brief biographical statement about Eratosthenes. The Polemon cited here is probably the scholar from Ilion, who in the early second century BC wrote on the monuments of Greece (Plutarch, *Symposium* 5.2) and seems to have objected to Eratosthenes' lack of fieldwork. Most of Eratosthenes' research for his *Geography* was in the Alexandria library, although there is evidence for some time on Rhodes and a field trip to the northwest Peloponnesos (Eratosthenes, *Geography* F128, 139–40 = 2.5.24, 8.7.2, 8.8.4).

Eratosthenes studied in Athens before coming to Alexandria, probably from the late 260s BC until summoned by Ptolemy III shortly after 246 BC (Roller, *Eratosthenes* 8–9). The source of the quotation among Eratosthenes' works is unknown. Some of his teachers are listed, including Arkesilaos of Pitane (c. 316–240 BC), a student of Theophrastos who was head of the Academy and an opponent of Stoicism (Diogenes Laertios 4.28–45), and Ariston of Chios, a student of Zenon of Kition. Zenon was the founder of Stoicism. There were several people named Apelles in Athens at that time: the most probable is a student of Arkesilaos. Bion of Borysthenes (Diogenes Laertios 4.46–58) was eclectic in outlook and was from one of the most distant areas of Greek settlement, the north edge of the Black Sea, a remote origin that may have helped interest Eratosthenes in geography. Contact with Zenon himself would have been minimal, and may not have included any significant academic association since he died about the time that Eratosthenes came to Athens. As a Stoic, Strabo was concerned that Eratosthenes did not pay proper homage to the contemporary Stoic presence in Athens. The two treatises mentioned are barely known: see Klaus Geus, *Eratosthenes von Kyrene* (Munich 2002) 79–97.

1.2.3. Strabo's major complaint about Eratosthenes was his attitude to poetry, especially that of Homer. The discussion was accompanied by Platonic thoughts about the value of poetry as a form of education (*Phaidros* 22; *Protagoras* 338e–339a), and includes the phrase "character, emotion, and actions," a direct quotation from the opening of Aristotle's

*Poetics*. Aristotle's student Aristoxenos of Taras, the major surviving source for ancient music, was also cited in support of these views, as was Homer. In fact, this is the first mention of music and musicians in the *Geography*, a theme that Strabo returned to on a regular basis as an important determinant of culture (Germaine Aujac, "Strabon et la musique," in *Strabone: Contributi allo studio della personalità e dell'opere* [ed. Francesco Prontera, Perugia, 1984–6], vol. 2, pp. 9–25). The quotation from the *Odyssey* is slightly irrelevant, as is often the case with Strabo's Homeric references, since the context seems nothing more than Aigisthos' removal of the man designated to watch over Klytaimnestra and who happened to be a singer and poet.

Strabo objected to what he saw as contradictions in Eratosthenes' thought. The latter believed that poets, while lacking scholarly depth, were in some ways geographically knowledgeable, but they did not need to understand much about geography, farming, warfare, or other skills. Strabo, following Hipparchos, did agree that too much detail might overload a poem. But Eratosthenes – who in his own day was better known as a poet than a geographer – was probably objecting less to Homer than to the didactic poetry that was currently in vogue, such as the *Phainomena* of Aratos of Soloi or the *Aitia* of Kallimachos, and especially the *Argonautika* of Apollonios, which had an excessive amount of geographical detail. Strabo, however, insisted on the didactic value of poetry, since those hearing the poems could apply the material to their own skills.

1.2.4. Odysseus was presented as the paradigm of the type of person Strabo was talking about: wise, militarily proficient, and also adept at the arts of civilization. Similar sentiments were expressed by Horace in his *Epistles* (1.2.17–22), which appeared about the time that Strabo began working on the *Geography*. The first line of the quotation from Book 10 of the *Iliad* (the words of Diomedes, who is seeking a companion for the spying expedition against the Trojans) is not in the accepted text of the poem, and this seems to be the earliest extant citation of it (repeated again in part at 13.1.41). Strabo had access to variant texts, including those of the famous Homeric scholars of the Hellenistic period, such as Zenodotos of Ephesos (9.2.35, 12.3.8, 25), Zenon of Kition (1.2.34), Aristarchos of Samothrake (1.2.24, 2.3.8), and Krates of Mallos (1.2.24, 2.3.8), and it is probable that this line came from one of their editions.

1.2.5. There are further examples of the character of Odysseus. The *Trial* is the first part of Book 2 of the *Iliad*, where Agamemnon foolishly tested the resolve of the Achaians. The *Prayer* is the section in Book 9 when Odysseus attempted to persuade Achilles to return to battle, and the



*Embassy* is in Book 3 (although only alluded to, lines 204–24), an incident where Odysseus met with the Trojans regarding the return of Helen. Odysseus was noted for his rhetorical persuasiveness, and Strabo thus argued that Homer must have been acquainted with the qualities of character that he displayed, applying the theory of mimesis (“imitation”) as outlined by Aristotle at the beginning of the *Poetics* (see also Horace, *Ars poetica* 317–18). Strabo may also have been influenced by contemporary oratory in Rome, which was believed to have a connection with Homeric oratory (e.g. Cicero, *de oratore* 3.57).

1.2.6. There is a brief summary of the history of the transition from poetry to prose, with the suggestion that prose developed from legal documents, probably including public inscriptions (Lionel Pearson, *Early Ionian Historians* [Oxford 1939] 4–5). Kadmos of Miletos, from the sixth century BC (*FGrHist* #489), wrote about his native city and was believed to have been the first to use the medium (Pliny, *Natural History* 5.112; Dionysios of Halikarnassos, *On Thukydides* 23).

Whether Strabo meant the early natural philosopher Pherekydes of Syros or the historian Pherekydes of Athens (*FGrHist* #3) is uncertain. In a late tradition, the former was also said to have been the first to write prose (*Suda*, “Pherekydes”), and was a contemporary of Kadmos. The latter was a younger contemporary of Herodotos and wrote genealogies (Dionysios of Halikarnassos, *Roman Antiquities* 1.13.1). His genre seems more to Strabo’s point but his later date does not. There was also a second Pherekydes of Syros (Diogenes Laertios 1.119), an astronomer, and in modern times all three continue to be confused.

The use of technical vocabulary such as *logoeides* (“prosaic form”) demonstrates that Strabo was following a treatise on poetic and prose writing, possibly the *On Style* of Poseidonios (F44 = Diogenes Laertios 7.60). The image of prose descending to the ground from a chariot is both a pun on the word *pezos*, which can mean “prosaic” and “on the ground,” and an invocation of the chariot of the Muses of Pindar (*Olympian* 9.81 and elsewhere).

1.2.7. Strabo disputed Eratosthenes’ contention that Homer only discussed nearby places, a topic examined in greater detail at 7.3.6 (= Eratosthenes, *Geography* F8). The geographical world credited to Homer seems to have begun to expand at the time of Alexander the Great, perhaps with the treatise of Kallisthenes of Olynthos (*FGrHist* #124, F53 = 12.3.5). Remote places that Homer described as “far off” (e.g. *Odyssey* 7.244) had become more accessible by Hellenistic times, such as the island of Kalypso, located south of Crete or near Malta (1.2.37, 7.3.6).

The unnamed commentators on Homer to whom Eratosthenes objected probably include Theagenes of Rhegion, of the late fifth century BC (perhaps the first critic of Homer), and Kleantes of Assos, a pupil of Zenon of Kition and his successor as head of the Stoic school (Diogenes Laertios 7.168–76), someone whom Eratosthenes probably knew.

**1.2.8.** Continuing his defense of the validity of myth, Strabo listed several examples of its usefulness, especially for the education of children, a point of view expressed by Plato (*Republic* 2.17). Strabo noted that myths are both frightening and inspiring. The former included Lamia (“The Gullet”), who fed on children and attractive men, originally a North African queen who became a monster (Douris of Samos [*FGrHist* #76] F17; Diodoros 20.41.3–5). Gorgo is the familiar Gorgon, and Ephialtes (“The Nightmare”) an obscure divinity (cf. LSJ). Mormolyke, or Mormo (Theokritos 15.40), was another female demon used to frighten children. The inspiring myths are somewhat better known.

Strabo suggested that myths also had a political purpose and could be used to control the population, a surprisingly modern idea. There is a list of divine attributes: the thunderbolt and aegis of Zeus, the trident of Poseidon, the torches of Hekate, the snakes of Athena, and the thyrsos lances of Dionysos, all having a certain political value. Moreover, he believed that poetry had a wider appeal than prose, for it was not only the language of Homer but that of tragedy and comedy.

**1.2.9.** The groundwork laid by Strabo about the importance of myth leads to a reinforcement of his principal thesis: that Homer’s use of myth required him to show care for the truth. Strabo, following Polybios, argued that the Homeric tales were coated with a certain element of falsehood merely for popular consumption. As examples, Aiolos was originally an actual ruler of the Liparaian Islands (north of Sicily), the Kyklopes and Laistrygonians were primitive violent peoples of Sicily, and the Strait of Messina was impassable due to brigands, which resulted in the tale of Skylla and Charybdis. Stories of actual rulers and peoples were then mythically enhanced into the familiar Homeric tales. Strabo further repeated his rather weak argument from 1.1.10, that Homer knew about the Kimmerian Bosphoros because he mentioned the Kimmerians, and that because they lived in the gloomy far north they were transferred to the darkness of Hades. Although there is a certain speculative logic to Strabo’s point of view, it remains uncertain just what the Kimmerians meant to Homer. They were mentioned only once (*Odyssey* 11.14), at the introduction to the underworld episode, and were residents of a city rather than a widespread ethnic group. In fact, Strabo had more recent data about

them that was outside the mythic tradition (I.3.21, II.2.5, 13.4.8) including their invasion of Anatolia familiar through the account of Herodotos (I.6, 15).

1.2.10. The discussion of Jason is an elaboration on the scant Homeric notices. He was mentioned in the *Iliad* solely because his son Euneos was a supplier to the Achaians (7.468–9, 21.41). In the *Odyssey*, Kirke, in outlining Odysseus' future route, described how Jason and the Argo were the only ones who had previously used it (12.66–72), the sole Homeric allusion to the voyage of the Argonauts. Kolchis and Medea were not mentioned by Homer: Medea first appears in Hesiod's *Theogony* (961) and Kolchis was not cited until the fifth century BC (Aischylos, *Prometheus Bound* 415), although the ethnym was known somewhat earlier (see David C. Braund, *Georgia in Antiquity* [Oxford 1994] 14–16). Strabo was correct in saying that Kirke and Medea were similar in many ways, both essentially sorceresses. To Homer, Kirke was the sister of Aietes (*Odyssey* 10.135–6), and to Hesiod Medea was his daughter (*Theogony* 992–1002); Strabo assumed that Homer knew about, or even created, this aunt–niece relationship (although there was also a tradition that they were sisters, Diodoros 4.45).

The western diversion of Jason – across the Keraunian Mountains (the modern Cikes Mountains of Albania, at the eastern side of the narrows at the south end of the Adriatic) into the Adriatic and around Italy to the Tyrrhenian coast – is a late elaboration of the Argonaut story. It perhaps originated with Hekataios of Miletos (*FGrHist* #1, F17–18) and was developed by Apollonios of Rhodes (4.627–84) and Timaios (*FGrHist* #566, F85 = Diodoros 4.56; see further Lionel Pearson, *The Greek Historians of the West* [Atlanta, Ga. 1987] 62–5). The Kyaneai (from Herodotos 4.85) and Symplegades (Euripides, *Medea* 1263, etc.) are names for rocks that were eventually equated with the Homeric Planktai (*Odyssey* 12.61, 23.327). These sailors' perils, originally at the entrance to the Black Sea, would move around and beyond the Mediterranean. Euripides may have been the first to associate the Symplegades with the Argonauts (*Andromache* 795). For Skyllaion and Charybdis, another navigational hazard, see 1.2.15–16.

There is no evidence that Homer knew about the Pontos (Black Sea), although he used the word *pontos* frequently in a generic sense. Again Strabo has assumed that Homer's extent of geographical knowledge was comparable to that of later times: to be sure, Greeks entered the sea shortly after the time of Homer, yet it was not documented in literature until the fifth century BC (Herodotos 3.93 etc.).

The Solymians were mentioned twice in the *Iliad* (6.184, 204) as opponents of Bellerophon, and in the *Odyssey* only in the passage quoted (5.282–3). They lived around the famous Anatolian city of Termessos (13.4.16), and although the highest peaks of the Tauros are in fact farther east, the coastal mountains in this region rise to over 3,000 m. in elevation: the Solymnian mountain is probably modern Güllük Dağ. Odysseus, who has just left the island of Kalypso, would be far to the west of the Solymian territory, but this does not demonstrate that Homer moved the toponym (gods can see far), and Strabo was taking the passage too literally.

He also suggested that the Kyklopes were Skythian in origin, quoting the obscure *Arimaspeia* of Aristeas of Prokonnesos, a work of perhaps the seventh century BC that was known to Herodotos (4.13–15), and which described the peoples of the far north. There is much about Aristeas that is mythical and fabulous, and he was also said to have been the teacher of Homer (14.1.18), but the poem provides some of the earliest data about the regions north of the Black Sea (see J. D. P. Bolton, *Aristeas of Prokonnesus* [Oxford 1962]). The Arimaspeians were one-eyed (Herodotos 3.116) and this would have suggested association with the Kyklopes, who are widespread in Greek literature far beyond those encountered by Odysseus.

**1.2.11.** As a general example of Homer's use of topographical data, Strabo examined the wanderings of Odysseus. His argument runs through section 1.2.14, and is in opposition to the views of Eratosthenes (as was made clear at 1.2.12). The wanderings could be interpreted both literally or in terms of a fantasy environment: if the former, one had to allow for mythic elaboration. Strabo assumed that this was the better interpretation, for he realized that there was much in the Homeric poems that was marvellous and could not be considered historical.

**1.2.12.** Because Eratosthenes believed that poetry existed to entertain rather than teach (*Geography* F2 = 1.2.3), what mattered was appreciation of it, not its topographical accuracy. But Strabo argued that myths could be invented about known places, citing Ilion and Ida, which were relevant to the Trojan War, or Pelion, associated with Jason and the Argonauts. He then initiated a long discussion about the topography of the Bay of Naples. This was probably not dependent on Eratosthenes, who would not have had Strabo's detailed information about the region. The thrust of the argument is the matter of the home of the Sirenes (Sirens), which Homer did not specify (*Odyssey* 12.39–54). Eventually (probably by the third century BC) there were three possible localities: Pelorias (the easternmost point of Sicily), the Seirennousai or Seirenes islets (modern Li Galli, south of the Sorrento peninsula), and the north side of the peninsula

(Bruno D'Agostino, "Dov'era il santuario delle Sirene?" *AION(archeol)* 14 [1992] 171–2). In his first use of a topographical argument, Strabo said that the survival of the name for the islets was a point in their favor but their location outside the Bay of Naples was against them. A temple of Athena (or Minerva) was at the end of the Sorrento promontory (modern Punta della Campanella), which was said to have been constructed by Odysseus (5.4.8).

**1.2.13.** Strabo believed that this evidence for possible locations of the home of the Seirenes proved the validity of Homeric topography, since all three were in the same general area. In fact, he actually suggested another location, Neapolis (Naples) itself, where in his day there was a memorial to one of the Seirenes, Parthenope. She was a cultic figure in the region and was honored there from at least the fifth century BC (Dionysios Periegetes 357–9; Timaios F98), but was not mentioned by name in the Homeric poems. Yet Eratosthenes argued the opposite: these multiple locations proved that Homeric topography was not reliable in its detail.

**1.2.14.** Continuing his discussion, Strabo quoted Eratosthenes concerning Hesiod, who seemed to function in a wider world than Homer. Eratosthenes provided a list of Hesiod's toponyms, all of which were outside the Bay of Naples. Yet Strabo insisted that this proved nothing. Quoting an unidentified line of lyric poetry, he argued that Homer's failure to mention a place did not mean he was ignorant of it. As expected, he was offended that Eratosthenes seemed to give Hesiod a higher level of topographic awareness than Homer.

**1.2.15.** The next source that Strabo critiqued (through section 1.2.18) was Polybios (see 1.1.1), whom he found more sympathetic than Eratosthenes. The basic topic continues to be the wanderings of Odysseus. Polybios was personally familiar with the Liparaian Islands (the modern Eolie or Lipari Islands) and the sailing conditions there (Polybios 34.11.19 = Strabo 6.2.10), and believed that the story of Aiolos represented the realities faced by local sailors, who had to be knowledgeable about how the vulcanism (still highly active today) affected sailing conditions. Aiolos, indirectly connected with developments in navigation, is associated with two other cultural and royal figures noted for their innovation, Danaos and Atreus. The former was also credited with early nautical ability (*Marmor Parium* [FGrHist #239] F A9) and was said to have been the first to bring writing to Greece (Hekataios of Miletos [FGrHist #1] F20), as well as being involved in providing Argos with water (Apollodoros, *Bibliotheke* 2.1.4). Peculiar solar movements figure in the story of Atreus, which led to recognition of him as an astronomer (Lucian, *On Astrology* 12). Categories of wise men from other

cultures were also cited as proof that wisdom or innovation leads to honor as leaders. The entire account is somewhat confused (whether by Polybios or in Strabo's summary), with its mixture of myth, history, and foreign wisdom. Its final statement – that deification is a reward for capability – reflects the views of Euhemeros (or Eumeros) of Messene, of the third century BC (*FGrHist* #63, F1–11). On the passage generally see F. W. Walbank, *A Historical Commentary on Polybios* (Oxford 1957–79), vol. 3, pp. 579–81.

Using Polybios' arguments, Strabo again emphasized that myths elaborate history, and that both Homer and other unnamed sources consistently placed the wanderings of Odysseus around Italy and Sicily. Strabo made it clear that Polybios objected to the metaphorical interpretations of Eratosthenes, but since the views of Strabo, Polybios, and Eratosthenes have been tangled together, it is difficult to determine who said what, a common problem in interpreting Strabo's text.

The dogfish is known today in Italy as the *cane di mare*, a general term for a variety of small sharks, particularly *Galeus canis* and *Scyllium canicula*; the latter name shows its long association with the Skylla. The fish became a subject for Latin poets (Lucretius 5.892–4; Vergil, *Aeneid* 3.432; D'Arcy Wentworth Thompson, *A Glossary of Greek Fishes* [London 1947] 136–7).

A lengthy discussion ensues (through Section 1.2.16) about the hunting of the *galeotes*, a type of swordfish. This word – which normally seems to mean a gecko lizard (Aristophanes, *Clouds* 171–3) – was used for swordfish only by Polybios and Strabo, and only in this discussion. It must be a local term (the more common word for the fish is the literal *xiphias* [Aristotle, *Research on Animals* 2.13]). Swordfish (“spada”) of high quality is still available today in southern Italy and Sicily, a delight when found on the menu. Yet it was the method of fishing that interested Strabo, not the type of fish, and the passage is a fine example of the use of contemporary practices to rationalize myth, in this case the activities of the Skylla. This is one of a number of places in the *Geography* where Strabo showed particular interest in fishing (see also 7.6.2, 12.3.11, 19). The migrations of tuna are not yet fully understood, but are extensive, and the Strait of Messina was a fertile fishing ground because the constriction of the sea drove the fish into limited areas, just as would happen with animals in natural disasters. A tuna festival is still held annually in this region.

The Skylla (dubiously meaning “puppy”) was a mythical monster, a typical sailors' hazard, described in vivid detail by Homer (*Odyssey* 12.85–126), including the passage quoted. The name Skyllaion, the northwest

promontory of the toe of Italy, is preserved today in modern Rocca di Skilla and the town of Skilla.

1.2.16. There is an interesting discussion about fishing for the *galeotes*, which Polybios and Strabo found relevant because they believed it described the techniques used by the Skylla. The construction of the spear, a combination of oak and pine, is not clear, but it seems that it allowed it to float at an angle and therefore be visible for recovery. The tendency of swordfish to pierce the boat was a consistent problem (Pliny, *Natural History* 32.15).

Charybdis, the great whirlpool, is discussed in greater detail at 1.2.36 and 6.2.3. Strabo was concerned with a possible error in the manuscripts of the *Odyssey*, although the accepted text today is the rejected “three times” rather than “twice.” The emendation may have been by Krates of Mallos (see 1.2.24, 2.5.10; Walbank, *Historical Commentary*, vol. 3, p. 584).

1.2.17. Continuing his critique of Polybios’ analysis of the wanderings of Odysseus, Strabo abruptly jumped to the Land of the Lotus Eaters (whether this followed next in Polybios’ text is unknown). Its location had long been a matter of speculation, and Meninx (modern Jerba off the Tunisian coast, today a major resort) was proposed by Eratosthenes (F105 = Pliny, *Natural History* 5.41; see also Strabo 17.3.17). Herodotos (4.177) had placed it west of Kyrene, and since his time suggestions have centered on the North African coast in what is now western Libya and eastern Tunisia (Serena Bianchetti, “I Lotofagi nella tradizione antica: geografia e simmetria,” in *L’Africa Romana: Atti del XIII convegno di studio, Djerba 10–13 dicembre 1998* [ed. Mustapha Khanoussi et al., Rome 2000], vol. 1, pp. 219–29). The Homeric lotus has also been the object of much curiosity. There are numerous citations of many varieties of lotus in Greek and Near Eastern literature, including elsewhere in the Homeric poems (*Iliad* 2.776, etc.). The plant of the Lotus Eaters seems a type of waterlily: see Bernhard Herzhoff, “Lotus,” *BNP* 7 (2005) 822–3.

The matter of the Lotus Eaters allowed Polybios or Strabo to make another statement about the validity of poetic truth, using a series of Homeric epithets to prove the point. The source here is probably Eratosthenes (*Geography* F8 = 7.3.6), who was a poet himself, with his own professional views about the genre, which perhaps have been turned to Polybios’ purposes.

The Land of the Lotus Eaters was the first place Odysseus reached after a nine-day storm had made it impossible for him to round the Peloponnesos (*Odyssey* 9.82–104). Polybios argued against an unnamed source (probably Krates of Mallos), who believed that Odysseus was



carried out through the Pillars of Herakles into the Atlantic, a voyage that would be only marginally possible in nine days. Polybios and Krates were involved in a controversy as to whether the wanderings were inside or outside the Mediterranean, even having invented terminology (*exokeanismos*, first cited at Strabo 1.2.10) to support their views (Roller, *Eratosthenes* 122–3). Krates argued outside and Polybios inside, the latter strengthening his position with technical data about sailing times and the improbability of a storm blowing the entire length of the Mediterranean. The concerns are accurate. Basically, ancient ships could travel at 2–3 knots with a favorable wind, and from Italy to the Pillars of Herakles was considered fast in seven days (Pliny, *Natural History* 19.3–4). In the first century BC, Rhodes–Alexandria was normally less than four days (Diodoros 3.34.7; for these figures see Lionel Casson, *Ships and Seamanship in the Ancient World* [Princeton, N.J. 1971] 281–99). One could argue that Odysseus had an exceptional wind, but Bronze Age ships were slower than Hellenistic ones, and the fact remains that nine days from the southern Peloponnesos to the Pillars would be almost impossible. Furthermore, someone, probably Krates, had said that if Odysseus did not go to the Pillars, he would have ended up in Sicily, having gone through the Strait (of Messina). This was easily demolished by Polybios, who argued that Odysseus did not need to go through the strait until he visited Kirke, who is thought to have lived on the Italian coast to the north (the name Monte Circeo survives for the most prominent headland on this coast, about 95 km. south of the mouth of the Tiber), and that sailors did not go through the Strait unless it was absolutely necessary.

**1.2.18.** Strabo agreed with Polybios' premise that the wanderings were generally around Italy and Sicily, but could not resist pointing out that he was selective in his use of evidence, ignoring several cases where they were obviously in the Ocean. Yet Strabo did not develop this theme (perhaps to do so would raise too many questions about inconsistency on the part of Homer) – even stating twice in this section that such matters should not be investigated too carefully – and quickly returned to localization of the wanderings around the Bay of Naples, with two lists of features associated with Odysseus. For Parthenope see 1.2.13: there were probably memorials to her throughout the Bay of Naples region, as she was a major local cultic figure. The next name on the list is uncertain. The text has *besbioi*, which has been emended either to “Baiai” (Baiae, the resort city just south of Kyme [Cumae]), or to “Ouesouios,” the Greek form of Mt. Vesuvius. If the former, Strabo was suggesting that Baiai was named after the

companion of Odysseus mentioned below. Vesuvius was described in detail at 5.4.8.

What Strabo ignored – or failed to realize – is that most of the names on the first list are from a post-Homeric tradition. Only Pyriphlegethon and Acheron (in that form, with no reference to a marsh) appear in the *Odyssey* (10.513); the other names are first extant in the *Alexandra* of Lykophron (lines 687–737), of uncertain Hellenistic date. It is clear that Strabo was working from a late Hellenistic or Roman perspective of Homeric topography around the Bay of Naples: in fact, he is the earliest extant to name a Misenos as a companion of Odysseus (the *Alexandra* has only the toponym Misenon). Whatever Strabo knew, he realized he was in a questionable area and reiterated that one should not examine Homer too carefully on these matters.

**1.2.19.** Eratosthenes had much less personal familiarity with the topography of southern Italy than did either Polybios or Strabo, but he may have realized that there was emergent revisionism about the wanderings (insofar as they related to Italy), without too much understanding of what was happening. Strabo seems more planted in his own era than that of his predecessors, especially Homer. Yet Strabo was fully aware that the marvels recounted throughout the Homeric poems were more likely to be located in or near the Greek peninsula than elsewhere. But his source is uncertain, since his catalogue of events and toponyms is not from the Homeric poems. Kithairon and Helikon were not mentioned by Homer, and it is probable that the list is from a general discussion of mythic elaboration of known places.

**1.2.20.** Strabo emphasized that Homer's sense of geography was superior to that of other poets, especially since he put places in their proper order when necessary (something that Hipparchos, for unknown reasons, validated). Two tragedies were used as examples of what Strabo believed was an improper use of a topographical catalogue. The *Triptolemos* of Sophokles had a geographical context (the topic was the spread of agriculture through the world by the son of Demeter), but not enough is preserved of the play to understand Strabo's criticism. The extant *Bacchantes* does support his argument, with Dionysos' topographical narrative (lines 13–22) wandering over the Asian mainland in what seems to be no particular order. By contrast, Homer was normally careful about his topography, although not in the *Catalogue of Ships*, yet Strabo did not explain why this was acceptable.

Furthermore, Homer was said to be geographically astute in his comprehension of latitudes and the winds, and Eratosthenes was taken to task

by Strabo for objecting to Homer's statement that the north and west winds (Boreas and Zephyros) came from Thrace. Eratosthenes, who said that the west wind actually came from Iberia, probably had more interest than Strabo in the science of wind theory (a relatively new discipline in Eratosthenes' day, first developed in Aristotle's *Meteorologika*), something not germane to the Homeric scholarship Strabo was pursuing. As was often the case when Strabo defended Homer against his perceived critics, his argument (that Thrace is north and west of Troy and it is reasonable to say that the winds came from there) seems more polemical and trivial than reasonable. He could not resist adding both a list of winds and of Thracian toponyms that Homer knew, as well as a somewhat irrelevant Homeric quotation about the Ikarian Sea (the part of the Aegean southeast of the island of Ikaros).

**1.2.21.** Mention of the winds leads to a general discussion of wind systems, using Poseidonios as the primary source and continuing to refute Eratosthenes, although he is mentioned only at the end of the section as having needed "corrections." Posidonios had described two different systems of winds, both of whose proponents used Homer as authority. The first, not validated by Poseidonios (or, it seems, Strabo), is attributed to Thrasyalkes of Thasos, an obscure natural philosopher from perhaps no later than the fifth century BC (Henry Mendell, "Thrasualkes of Thasos," *EANS* 805). This is the only evidence for his thoughts on winds; he also theorized about the rising of the Nile (17.1.5), and in fact Strabo is the major source for what little is known about him. According to this particular wind theory, there are only two cardinal winds (Boreas from the north and Notos from the south: see Aristotle, *Meteorologika* 2.4). The other winds (Euros, Apeliotes, Argestes, and Zephyros, basically northeast, southeast, southwest, and northwest) are subsidiary. Generally the winds other than those from the cardinal directions were defined by their relation to sunrise or sunset at particular times of the year. There are some additional unknown sources in the passage that are not named.

The other system, supported by Poseidonios and Strabo, also had the authority of Aristotle (*Meteorologika* 2.6) and is more complex. Two additional sources were cited. Timosthenes of Rhodes was a naval commander for Ptolemy II and wrote *On Harbors*, which Strabo quoted several times (Emil August Wagner, *Die Erdbeschreibung des Timosthenes von Rhodus* [Leipzig 1888]). The other is a certain Bion, probably the astronomer from Abdera of around 300 BC, who was the first to suggest that the polar night was six months long (Diogenes Laertios 4.58; Paul T. Keyser, "Bion of Abdera," *EANS* 193). This system adds several winds: the Kaikias

(east-northeast), Lips (west-southwest), and Leukonotos (south-southwest). The Leukonotos was not listed by Aristotle and thus the system has been modified somewhat, presumably by Timosthenes. Eratosthenes, not actually mentioned in Strabo's summary of Poseidonios, also refined wind theory, attempting to solve the essential problem of finding a universal context for winds that was not limited by local topography, which is the problem with the Homeric comments cited at 1.2.20, where Strabo noted the topographically oriented wind names used in Attika. For a detailed discussion of the issue of the winds, with charts, see Kidd, *Commentary* 515–22. With this section Strabo came to the end of Book 1 of Eratosthenes' *Geography*.

1.2.22. Homer's limited knowledge about the Nile was also a problem for commentators. The name "Nile" does not appear in the Homeric poems (the first citation is Hesiod, *Theogony* 338), and Eratosthenes, rather trivially, pointed out that Homer did not even know there were a number of mouths to the river, something incomprehensible to a resident of Alexandria. Strabo grudgingly admitted it was possible that Homer was unaware of the mouths and the name "Nile" might be post-Homeric (to Homer, it was the Aigyptos River, *Odyssey* 4.477, 581; 14.257–8; 17.427). He resorted to his usual defense of Homer – failure to mention something did not mean ignorance – and citing a number of far-off places known to the poet. For the matter of the Erembians see 1.2.34.

1.2.23. The next concern is Pharos, on the Egyptian coast. Homer placed it in the open sea a day's travel offshore, a location with a good harbor where Menelaos stayed for 20 days (*Odyssey* 4.354–7). This seemed totally different from the well-known promontory (actually an island joined to the mainland) that was a familiar feature of Alexandria and which, since the early third century BC, had been the site of the famous lighthouse, one of the Seven Wonders of the World (17.1.6). Here there was certainly a major Homeric topographical crux. Strabo's conclusion is quite reasonable, that Menelaos was exaggerating the desperateness of his situation. There is no evidence that Homer knew about the flooding of the Nile: Strabo merely assumed that because Menelaos was said to have gone to Aithiopia (*Odyssey* 4.84) he would have learned about the phenomenon. But the flooding allowed another suggestion for the problem with Pharos: Nile siltation, something well known, had connected it to the mainland between the time of Menelaos and that of Homer. As usual, Strabo carried his presumption of Homer's knowledge far beyond the evidence. Yet it is probable that Greeks did not encounter the Nile floods until there was a permanent Greek presence in Egypt after the founding of Naukratis in

the seventh century BC (17.1.18). Thales of Miletos, active around 600 BC, was said to have been the first to address the matter (Seneca, *Natural Questions* 4a.2.22; Aetios 4.1.1).

1.2.24. Strabo returned to the divided Aithiopians (through 1.2.28). He juxtaposed this with Eratosthenes' assertion that Homer was ignorant of the isthmus from the Mediterranean to the Arabian Gulf (Red Sea), something Strabo disagreed with. Yet most of the discussion that follows is about the divided Aithiopians. Strabo outlined the views of two of the most noted Homeric scholars of the second century BC, Aristarchos of Samothrake and Krates of Mallos. The former was tutor to Ptolemy VII and librarian at Alexandria. Strabo had studied at the Homeric school that his pupil Menekrates had established at Nysa (14.1.48). Krates (see 1.1.16) was primarily a philologist, but was also interested in Homeric geography. Strabo recognized his value as a scholar, but given his own background, he generally sided with Aristarchos.

The argument, rather tendentious (even Strabo noted that parts of it were irrelevant), is an insight into the functioning of Homeric scholarship in the Hellenistic period and the attempts to produce a proper text. The matter of the divided Aithiopians centers around whether the second set of Aithiopians live across the Ocean (Krates' view) or were simply a second portion of the Aithiopians known to the Greek world (Aristarchos' view). Krates believed that there was another temperate zone beyond the equator, which would be where the other Aithiopians lived, and emended *Odyssey* 1.24 to support his point. Since the nature of the zones north and south of the equator would be identical, it could be argued that there would be similarities in their inhabitants, and thus the doubled Aithiopians. Strabo was dubious about this and found Krates' argument more complex and astronomical than necessary.

In contrast Aristarchos merely said that the Aithiopians known to the Greeks were divided in two, both living in Aithiopia, an idea developed further in Sections 25–6. But Aristarchos was also criticized by Strabo for assuming that part of the problem was Homer's ignorance, and Strabo felt the need to refute this (1.2.27).

The section ends with a seemingly irrelevant introduction of Apollodoros of Athens, perhaps because he was Aristarchos' student (*Suda*, "Aristarchos"), and was a major source used by Strabo in later books of the *Geography*. He wrote on chronology, and, most importantly, twelve books on the Homeric *Catalogue of Ships*, which Strabo cited several times although often in disagreement.

1.2.25. Continuing the discussion of the Aithiopians, Strabo astutely noted that the text of Homer could be used for whatever purpose one wanted – a technique at which Strabo himself was quite adept – and that many of the emendations were trivial. His solution to the divided Aithiopians was quite simple (and most probably the correct one): the division was marked by the Nile. He pointed out that the Nile had long been considered the division between the continents of Libya and Asia, but nevertheless there were difficulties with this, most notably that the same people lived on both sides of the river, whether Egyptians or Aithiopians. As early as the time of Herodotos (4.45) there were reservations about using the Nile as a continental boundary, yet despite these concerns – which Strabo saw as valid – this belief lasted well beyond Strabo's time (Pliny, *Natural History* 6.177). For Meroë see 17.1.2, 5.

1.2.26. A further reason to divide the Aithiopians was the matter of the so-called Western Aithiopians, the indigenous peoples living on the Atlantic coast of Africa. Strabo suggested that these could be the other Aithiopians about whom Homer wrote. The idea that these people were also Aithiopian first appears in the Greek translation of the voyage of Hanno (II), although it is by no means certain what word Hanno actually used in his Punic original (which does not survive). Around 500 BC, he set forth from Carthage on a voyage of exploration (seeking trade locations) and settlement, and went as far as Mt. Cameroon (which he saw in the process of eruption), providing the first extant account of the West African coast (for text and translation see Roller, *Through the Pillars* 29–43, 129–32).

There are several reports of explorers becoming stuck while off the coast of West Africa, or turning back because of hazards (see 1.1.7–8). Nevertheless Strabo (probably following Krates) admitted that it was theoretically possible to circumnavigate Africa, and that the Ocean was continuous, at least in this region.

Ephoros of Kyme, one of Strabo's most frequent sources, made further comments about the Western Aithiopians. Dyris is generally associated with Mt. Atlas (17.3.2). The Tartessians are peoples of southwestern Iberia (3.2.11), whose origins may be as early as the Bronze Age, and whose name may be connected with biblical Tarshish. From the sixth century BC their homeland was a region of interest to Greeks from Ionia and then Massalia (Herodotos 1.163, 4.152), and Ephoros' source may be from their merchants or seamen.

1.2.27. Continuing to use Ephoros as a source (although not mentioned in this section), Strabo criticized the tendency to assign a single ethnic name to remote peoples or a wide area, a comment on Ephoros' ethnic

division of the extremities of the world (see 1.2.28). Despite what Strabo said, the ethnym cited here are all post-Homeric (as is the toponym Aithiopia) but, as seen previously, Strabo tended to assume that Homer had a broad range of knowledge beyond specific mention of toponyms. This is the earliest extant Greek citation of both Keltiberians and Keltoskythians, perhaps taken from Polybios (see Strabo 3.2.11 = Polybios 34.9.12; also Catullus 39).

A quotation from Aischylos' *Prometheus Unbound* is used to demonstrate that the Aithiopians extended from the Erythran (Red) Sea to the Ocean (presumably the Atlantic), along the course of the sun (in other words, well to the south of the Greco-Roman world). Strabo preserved more of the Greek text of the *Prometheus Unbound* than any other source (see also F199 = 4.1.7), citing the section of the play where Prometheus outlines to Herakles the route to complete his Labors.

The second quotation, from the *Phaethon* of Euripides, also provides data about the route of the sun. The play is about Phaethon, the son of Helios and Klymene, a daughter of Okeanos who was later married to Merops. Extensive fragments are preserved on a palimpsest in Paris (see Euripides, vol. 8, *Fragments* [ed. and trans. Christopher Collard and Martin Cropp, Cambridge, Mass. 2008] pp. 323–9). The lines quoted by Strabo are at or near the beginning of the play, when Klymene is describing her situation. The Aithiopians are not specifically mentioned, but the “black mortals” (*melambrottoi*, a word perhaps unique to Euripides) seems to imply them, and the quotation connects with the previous one in mentioning the route of the sun and its location in the south.

1.2.28. Ephoros' division of the extremities of the inhabited world into four large ethnic areas is a significant statement in the early history of geographical scholarship. His historical work (*FGrHist* #70) extended from the Return of the Herakleidae to around 340 BC; *On Europe* is probably merely a portion of it. The geographical section may have begun with the scheme outlined here, which is the earliest known attempt to create a geographical plan for the entire inhabited world. A more detailed summary of the passage was preserved by Kosmas Indikopleustes, of the sixth century AD (*Christian Topography* 2.148 = Ephoros F30b). He reported that the Skythian and Aithiopian regions were larger and the other two smaller, and included more precise astronomical calculations, details not relevant to Strabo's argument about the Aithiopians (Georgia L. Irby, “Mapping the World: Greek Initiatives From Homer To Eratosthenes,” in *Ancient Perspectives* [ed. Richard J. A. Talbert, Chicago, Ill. 2012] 81–107, at 96–7).



Strabo listed a number of Homeric passages that supported his views, one of several parts of the *Geography* that seem to have had their origins in a Homeric commentary. The theme is the use of sunlight and darkness as directions, which Strabo connected to the previous citations from tragedy. The thrust of the argument continues to be that Homer believed the Aithiopians extended along the entire southern extent of the inhabited world, even if this meant adjusting details of Homeric topography, which was an occasional necessity, as was the case with the Solymians (see 1.2.10).

The Pygmaians were also brought into the discussion. First mentioned in the Homeric passage cited and probably originally an ethnym, by the early sixth century BC they were associated with sub-Saharan Africans who came to be called “pygmies,” as shown on the François Vase. Sataspes, who attempted to circumnavigate Africa for Xerxes, encountered “small people” but did not use the specific name (Herodotos 4.43). Strabo suggested that the migration patterns of cranes – a matter of interest in antiquity (Aristotle, *Research on Animals* 8[9].10) – which pass over the Mediterranean but do not settle there, would bring them to the entire southern coast. He further used the textual juxtaposition between them and the Pygmaians to locate the latter in the south. The point being made is not immediately obvious but seems to have had the effect of providing further evidence for Homer’s knowledge of the southern (i.e. Aithiopian) regions.

Strabo then returned to the matter of the divided Aithiopians, drawing his conclusion from the disparate evidence presented. He believed that the division referred to the Arabian Gulf (Red Sea), which contradicts his assertion in Section 1.2.25 that the Nile was the boundary, indicative of Strabo’s tendency to be drawn into the point of view of his current source. He further provided topographical details about the distances along the Arabian Gulf. The length and width come from explorers such as Anaxikrates of Rhodes (16.4.4), who, in the late fourth century BC, calculated a length of 14,000 stadia, extended to 15,000 probably by Ptolemaic merchants and seamen. Strabo then reiterated what he had set forth at 1.2.24: Homer could not have been ignorant of the isthmus between the Mediterranean and the Arabian Gulf because of its importance as the continental boundary between Libya and Asia. Thus this led to comprehension of the divided Aithiopians, who inhabited the entire southern reaches of the inhabited world but were divided by the sea.

**1.2.29.** Strabo’s argument is that Homer’s knowledge of remote places such as Egyptian Thebes (*Iliad* 9.381, *Odyssey* 4.126) means he would have known about nearer places that were important without mentioning what

was obvious, and also well-known characteristics of Egypt, especially the peculiarities of the Nile.

It was part of the biographical tradition about Homer that he had a fondness for travel (*philekdemos*, a rare word, also at 2.3.5; see also *phileidemon*, fondness of learning, only here and at 1.1.23). There were numerous biographies of Homer available (Plutarch, *Epicurus Actually Makes a Pleasant Life Impossible* 12).

1.2.30. The “Egyptians” and “Syrians” have generally been assumed to mean Aristarchos and Krates (e.g. Strabo, *Géographie* [ed. Germaine Aujac et al., Paris 2003–15], vol. 1, p. 197), yet it is an unusual mode of expression and does not take into account the peculiar use of the plural to assume only one person from each place. Moreover, Mallos, the home of Krates, was actually in Kilikia (14.5.16), and even though it was often under Seleukid control (as well as Ptolemaic, see A. H. M. Jones, *The Cities of the Eastern Roman Provinces* [2nd edn, Oxford 1971] 197–200), it is unlikely that Strabo, knowledgeable and precise about regional boundaries in Anatolia, would ever have called it “Syrian.” Aristarchos was from Samothrake, and even though he spent most of his professional career in Alexandria, he would hardly have been considered an “Egyptian.” Poseidonios, who was from Apameia, unquestionably in Syria, may have been one of the sources that Strabo had in mind.

Strabo repeated his presumption that Homer did not mention well-known topographical details, in particular the matter of the flooding of the Nile; his failure to do so was a concern to those wishing to validate Homeric topography. A number of proverbs were listed to illustrate use of hyperbole, originally from a collection that perhaps was known to Poseidonios. Proverbs are a regular feature of the *Geography* – around forty can be identified – and provide part of the coloration of the work, perhaps assisting in making geography more palatable for the non-specialist (Daniela Dueck, “Bird’s Milk in Samos’: Strabo’s Use of Geographical Proverbs and Proverbial Expressions,” *SCI* 23 [2004] 41–56). The matter of the mouths of the Nile also falls in the same category of obvious things not mentioned. Alkaios of Mytilene was active in the politics of his native city around 600 BC (13.2.3): this is the only evidence that he visited Egypt.

The island of Pharos was cited again (see 1.1.23) as proof that Homer knew about the flooding of the Nile, and Strabo reminded his readers that even the most improbable myths are not based on ignorance. A further difficulty with Pharos is that it lacked a water source (presumably in Strabo’s day), yet Menelaos appeared to have watered his ships there.

Strabo noted that the text does not literally state the water source was on the island.

**1.2.31.** The wanderings of Menelaos, summarized in Book 4 of the *Odyssey* (80–99, 351–582) but treated in greater detail in the lost epic *Nostoi*, had a number of geographical issues, which are discussed through 1.2.35. Strabo’s major source was his contemporary, the Homeric scholar Aristonikos. Whether the material on Menelaos was separate from, or part of, Strabo’s general Homeric treatise remains unknown. Problems connected with the understanding of Menelaos’ travels included the difficulty of accounting for the eight years of wandering that Homer specified, and especially how he reached the Aithiopians, apparently inaccessible by sea from the Mediterranean.

Aristonikos offered several explanations for the latter. Strabo rejected the one originally proposed by Krates, that Menelaos had circumnavigated Africa, not because it was impossible but because of the amount of time required. The idea that he went from the Mediterranean to the Red Sea by a canal was also rejected, since there was no canal in his day. The earliest attempt to make one had been by the semi-mythical king Sesostris, never completed, and there was no later effort until well after the time of Menelaos (17.1.25; Herodotos 2.158). This suggested another possibility: that there had actually been a sea passage across the isthmus, something that Eratosthenes believed but Strabo did not, although he admitted that the issue was obscure. Nevertheless this introduced a topic examined in much greater detail at 1.3.3, the changes in the surface of the earth.

**1.2.32.** Admitting that a water passage between the Mediterranean and Red Sea would make a solution of the problem of the divided Aithiopians easier, Strabo nevertheless pointed out that the rather poor Aithiopians would hardly have been fertile ground for plunder and trade. The same applied to nearby Arabia. To be sure, it had been known for its wealth since the fifth century BC, by which time it had already acquired the epithet “Fortunate” (“Eudaimon”: Euripides, *Bacchants* 16), and then had seen its mystique enhanced by Alexander’s unfulfilled plans to conquer it (16.1.11), but in Homer’s day it was perceived as lacking in riches. Whether he was even aware of it remains a disputed matter (see Section 1.2.34). He certainly did not know about India (ancient Indike), the other region fabled for its luxury goods.

Strabo believed that the returning Achaians would have been well received wherever they went, because of their victory at Troy, and thus he acknowledged that much of their wandering was in the eastern Mediterranean, where their reputation would be known. Menelaos

probably only “touched” Aithiopia at the Egyptian border on the Nile (interestingly the issue of sea access seems to have been abandoned). For Syene and Philai see 17.1.48–50. Ardanis is probably modern Ras el-Melah on the eastern coast of modern Libya: at 17.3.22 Strabo described Ardanis (as Ardanixis) and the harbor of Menelaos as slightly separated places, the latter perhaps in the vicinity of Marsa Ahora to the west. But it is probable that this and several other regional places named Menelaos (e.g. 17.1.23) were named after the brother of Ptolemy I rather than the hero.

**1.2.33.** In another section that seems to belong more to a Homeric commentary than a geography, Strabo explored the tendency to cite the whole and one of its parts on equal footing. The passage in question, *Odyssey* 4.83–4, mentions both the Phoenicians and the Sidonians, who were the inhabitants of a particular Phoenician city. Previously (Section 1.2.31) there had been the suggestion that these Sidonians were not the inhabitants of the famous city on the Levantine coast, probably a proposal made by Aristonikos (see further, Section 1.2.35). This technique of the whole and the part occurred a number of times in the Homeric poems and later literature, and Strabo’s conclusion was that it was a way of indicating the particular importance of Sidon in the narrative. Several passages in the poems demonstrate the prominence of the Sidonians, and Sidon was the only traditional Phoenician city mentioned by Homer. Thus it was an important locale in the compositional history of the Trojan War material, since not only Menelaos but Paris (Alexander) and Helen spent time there (see also Herodotos 2.116).

**1.2.34.** The Erembians were another topographical problem for Homeric scholars (see also 16.4.27). It is an ethnym that occurs nowhere else in the Homeric poems, and indeed almost nowhere in ancient literature except in discussions of this passage. From at least the time of Zenon of Kition, in the early third century BC, there had been attempts to emend the text: in Zenon’s case to “Arabians.” Strabo disapproved of this, as the original reading had the authority of antiquity. Following Poseidonios, he suggested that it represented a certain type of ethnym beginning in “Aram,” such as Aramaian (Aramaeans), a name existing in a variety of forms in Syria and Upper Mesopotamia. Of the two citations of the Armenians in this passage, the first is probably an error for another Aram- name, although the second is valid. Strabo inserted a popular etymology for the Erembians, associating them with cave dwellers (not the Trogodytes of the area between the Nile and Red Sea, for whom see 17.1.2). The final part of the section demonstrates that Strabo preferred the idea that the Erembians were Arabians, noting the existence of the eponym Arabos by the time of

Hesiod and Stesichoros, or not long after Homer. Despite the emphasis on Homeric criticism, the passage, with its comments on physiology, is a rare discussion of the racial characteristics of the ancient Levant (Fergus Millar, *The Roman Near East, 31 BC–AD 337* [Cambridge, Mass. 1993] 10–11).

1.2.35. The final section about the wanderings of Menelaos is largely a catalogue of rejected sources, but with comments about the nature of myth-making. Strabo's list of possible locations for the Erembians may be satirical, covering a wide range of possibilities. Kephenian is an ancient name for the Persians (Herodotos 7.61); for the Pygmaians, see 1.2.28. The unspecified sources Strabo mentioned are not known, but perhaps include Hellanikos of Lesbos (*FGrHist* #4, F154), the mythographer and ethnographer of the fifth century BC, who said that the Erembians were along the Nile, or were Arabians. A Phoenician presence in the Persian Gulf was actually reasonable (Herodotos 7.89), since the Phoenician city names Tyros (or Tylos, modern Bahrain) and Arados (probably modern Muharraq) occur there (16.3.4). The Phoenician settlements on the Atlantic (17.3.2) were actually Carthaginian. The inference that the Phoenicians were so named because of their origins on the Red Sea is inaccurate: the word *phoenix* was used as early as Homer (*Iliad* 4.141 etc.) for a dark red or purple color, and probably came from the ethnym, since the Phoenicians developed the famous Tyrian purple dye (16.2.23).

The story of Andromeda, the wife of Perseus, was first mentioned in extant literature by Herodotos (7.61, 150); fuller versions are in the *Bibliothēke* of Apollodoros (2.4.3–5) and by Ovid (*Metamorphoses* 4.663–803). Strabo suggested that the tale may first have been treated by Hesiod. Yet none of those sources, or other early ones that are fragmentary (such as Euripides' *Andromeda*), placed the tale at Iope (modern Jaffa, near Tel Aviv). The story was at first always situated in Aithiopia (using the term exceedingly vaguely); it is only by the fourth century BC (Pseudo-Skylax 104) that it is located at Iope, perhaps as a result of hellenizing tendencies of the Phoenician or Judaeian mythographers (Erich S. Gruen, *Rethinking the Other in Antiquity* [Princeton, N.J. 2011] 260–1). Strabo attempted to reconcile the two locations by noting that some placed Iope in Aithiopia.

This leads to a catalogue of anatomically improbable people. The names are all descriptive terms turned into ethnyms, and all except the Pygmaians (the only ones who actually existed) are post-Homeric. They reflect the common idea that things change when one goes beyond the limits of the known world. None of the sources is later than the early fifth century BC: Alkman is normally dated to the late seventh century BC, a century or so after Hesiod. Strabo's point is that such unusual people are part of myth-

making and do not represent ignorance, a view of history espoused by Theopompos of Chios (*FGrHist* #115), a contemporary of Ephoros who was at the court of Philip II of Macedonia and wrote a universal history centering on the career of the king. Strabo approved of his method of using myth because it would validate the historicity of Homer. For the authors on Indian matters see 2.1.9.

**1.2.36.** Charybdis was the great whirlpool opposite Skylla. Homer did not specify its exact location but by the fifth century BC it was placed at the north end of the Strait of Messina, north of the city of Messana (modern Messina) itself (Thoukydides 4.24). A remnant, the whirlpool of Garofalo, survives today, but due to tectonic changes it is much less threatening than in antiquity, yet still a danger to small craft. Kirke described how Charybdis sucked water in and out three times a day, which seems at odds with the twice-daily flow of the strait. This kind of issue always bothered Strabo, because it made Homer seem inaccurate, and thus he explained in detail possible reasons for the apparent inconsistency, including that “three times” was a generic formula, or that Odysseus’ encounters with the whirlpool may have taken longer than a daily cycle.

**1.2.37.** Strabo returned (through 1.2.40) to the matter of whether the wanderings occurred in the Mediterranean or External Ocean. Eratosthenes and Kallimachos were academic opponents, and in his *Geography* Eratosthenes complained about the quality of Kallimachos’ scholarship (see Roller, *Eratosthenes* 11–12). They were compatriots (from Kyrene) and both had come to the Ptolemaic court as writers of poetry. Although Eratosthenes was in one sense the protégé of Kallimachos, their antagonism hints at the academic dynamics in Alexandria during the reign of Ptolemy III. Eratosthenes’ objection was to the location of the island of Kalypso (at Gaudos, which is probably modern Gozo, one of the Maltese islands, or Kaudos, south of Crete) and of Scheria (at Korkyra, modern Corfu), both within the Mediterranean. Yet the views of the three scholars cited have become tangled in Strabo’s recension, and the argument over whether the wanderings were in or out of the Mediterranean is situated more in the second-century BC environment of Apollodoros than Strabo’s own day (see also 1.2.17).

**1.2.38.** Further attempting to credit Homer with as wide a geographical knowledge as possible, Strabo turned again to the matter of Jason and the Argonauts, repeating some of the material at 1.2.10. Demetrios of Skepsis (*BNJ* #2013), of the late third century BC, wrote an astonishing 30 books on the 62 lines of the Trojan catalogue (13.1.45). Since Skepsis was only a short distance southeast of the site of Troy (13.1.52–4), he was well placed to do

his research. Strabo cited his work numerous times, although often in disagreement (Walter Leaf, "Strabo and Demetrios of Skepsis," *BSA* 22 [1916–18] 23–47). Neanthes of Kyzikos (*FGrHist* #84) wrote a Greek history, although information about him is obscure. He may be the same person who wrote a biography of Attalos I of Pergamon (Athenaios 15.699d).

The limited Homeric notices about Jason and the Argonauts did not prevent Strabo from assuming that Homer knew about the entire tale. Yet he did not mention Phasis, Kolchis, or Medea; Jason was cited only as the father of Euneos, who ruled on the island of Lemnos. Jason's father Pelias was mentioned in the passage noted (*Iliad* 2.714–15) and in one place in the *Odyssey* (11.254–6), but it is not recorded that he was the father of Jason. It seems clear to a modern reader that Homer had little knowledge of the full career of Jason. The connection of the hero with Lemnos is merely an episode in the Argonaut tale – discussed most thoroughly in Book 1 of Apollonios' *Argonautika* and also in Apollodoros' *Bibliothēke* (1.9.17) – when Jason had a relationship with the Lemnian queen Hypsipyle, which produced Euneos.

1.2.39. Having established – according to his theoretical structure – that Homer knew about Jason and the Argonauts, Strabo cited a number of proofs of the voyage. Since his great uncle, Moaphernes, was governor of Kolchis under Mithridates VI (11.2.18), one would expect the geographer to be well informed about that region.

The city of Aia is unknown today, but mementos of the palace of Medea's father Aietes were visible at the city of Phasis into late antiquity (Zosimos 1.31). The Phasis River (modern Rioni in Georgia) was known to Greeks from early times (Hesiod, *Theogony* 340), and the homonymous city at its mouth was a Milesian foundation of probably the sixth century BC (Braund, *Georgia* 96–103). The name Aietes is documented in Kolchis throughout antiquity, from the fifth century BC (Xenophon, *Anabasis* 5.6.37) to the sixth century AD (Agathias 3.12.1). Although the degree of historicity of Medea can be debated, she was a widespread figure in myth and cult from the Black Sea to Italy (Braund, *Georgia* 8–21). The tale of Phrixos – which Strabo rightly separated from that of Jason – was also remembered in Kolchis, even more so than that of the Argonauts. In the hinterland above the upper Phasis there was an oracle of the hero that was still active in the early first century BC (11.2.17), and farther inland there was a city named Phrixopolis (11.2.17–19). Strabo suggested economic reasons for at least the earlier expedition, and there was a long tradition of mining precious metals in the region. Relics of both expeditions were



found throughout the southern and eastern Black Sea littoral: the anchor of the Argo was on view at Phasis in Roman times (Arrian, *Periplous* 9.2), and there was another one at Kyzikos in the Propontis (Pliny, *Natural History* 36.99).

The story that the Argonauts returned home by means of the Istros (Danube) and the Adriatic (see 1.2.10) meant that there were also relics in those areas, some of which were mentioned by Kallimachos. He placed the Argonauts in the Aegean (Anaphe, an island east of Thera where they landed [Apollonios 4.1717]), Thessaly (called Haimonia), and on the Istrian (Histrian) peninsula, where the pursuing Kolchians founded Pola (modern Pula in Croatia). Such a return for the Argo is based on the idea that the Istros split into two branches, one to the Black Sea and the other to the Adriatic, a geographical improbability first mentioned in the fourth century BC (Pseudo-Skylax 20; Aristotle, *Research on Animals* 7[8].13). The idea may have come through erroneous understanding of the complex river systems of the region, the fact that tributaries of the Danube are within 20 km. of the Adriatic in Croatia, and the similarity of the names Istros (the river) and Histria (the peninsula).

1.2.40. In summary, Strabo provided a credible account of how Homer took known elements and wove them together to create his tale, adding myth. Because Homer had said that the Argo story was “famous to all,” Strabo believed this meant much of the tale must have taken place in known locations. In this he disagreed with the poet Mimnermos (late seventh century BC), who placed everything about the Argonauts far to the west, in the Ocean (P. Dräger, “Ein Mimnermos-Fragment bei Strabon (11/11a W, 10 G/P 11 A),” *Mnemosyne* 49 [1996] 30–45).

### Part 3: Siltation, Deposition, and Other Changes to the Earth

1.3.1. Strabo complained about Eratosthenes’ choice of sources, citing the egregious and peculiar example of Damastes of Sigeion (a city in the Troad, 13.1.31), who wrote on geography in the late fifth century BC (*FGrHist* #5). Strabo often had a narrow view of the reliability of sources, and here his criticism is justified. A certain Diotimos (probably the Athenian general of the Peloponnesian War era [Thoukydides 1.45]) went up the Kydnos River from Tarsos and, allegedly traveling by river all the way, ended up at the Elamite city of Sousa, 1,000 km. away and on the other side of Mesopotamia. Eratosthenes understood the impossibility of this, and the only plausible explanation is that the data have become confused and Diotimos’ journey was not by a single riverine route. Strabo also objected

to Eratosthenes' report that Damastes believed the Arabian (Persian) Gulf to be a lake, but in his day (before the explorations of the Arabian region by those with Alexander) its extent was unknown.

To strengthen his case, Strabo cited Euhemeros (Euemeros) of Messene – who around 300 BC wrote a fantasy about the lands in the region of Arabia (*FGrHist* #63) – describing him as a “Bergaian,” an oblique reference to another perceived writer of geographical fantasy, Antiphanes of Berge in Thrace, who wrote about the far north (Roller, *Through the Pillars* 24). Strabo used the term “Bergaian” to describe a writer of fantasies (2.3.5, 2.4.2). Although he knew that geographical knowledge was constantly expanding (1.2.1), he often tended to forget this, and also seemed unaware that reliable information could be buried in fantasy accounts.

1.3.2. Further objections to Eratosthenes continue to reflect the changes in geographical knowledge from the third to the first century BC. The Pontos (Black Sea) and Adriatic had become much better known, given the rise of the Pontic kingdom (and the Roman campaigns against it), as well as the Roman presence in the upper Adriatic after the founding of Aquileia in 181 BC.

A specific error in Eratosthenes' data was also noted. The Gulf of Issos (the northeastern corner of the Mediterranean) was not the easternmost portion of “Our Sea,” which in fact was the eastern coast of the Black Sea near Dioskourias (modern Sukhumi in Georgia), whose longitude is about 325 km. to the east. In fact, the mouth of the Rioni (Phasis) is still farther east, but the issue is more a matter of topographical definitions than geographical detail, since it hinges on whether the Black Sea should be considered part of “Our Sea.”

Strabo also criticized Eratosthenes' seeming ignorance of the west coast of Africa, as he had mentioned Kerne, a place unknown to Strabo. Kerne had been founded by the Carthaginian explorer Hanno around 500 BC (Hanno 8; its location is uncertain: see Roller, *Through the Pillars* 37). By Eratosthenes' day it was already in decline (Pseudo-Skylax 112), and was perhaps abandoned when Polybios visited the site in the 140s BC (Polybios 34.15.9). Although Strabo knew about the fading Carthaginian presence in West Africa (17.3.3), Kerne had clearly been forgotten by his time.

Eratosthenes had also argued that there was little long-distance sailing in early times, which, needless to say, would deny the existence of the long voyages of the Homeric heroes, and so Strabo disagreed. Moreover, Jason, in particular, was said to have made part of his journey by land, perhaps an attempt to create a parallel between him and Alexander the Great in order

to make the latter more heroic (11.4.8, 11.5.5). Strabo listed a number of early travels that were lengthy. Dionysos and Herakles were the original divine travellers: the widespread journeys of the former are recounted in the Homeric *Hymn to Dionysos* and the opening of Euripides' *Bacchantes* (1–31). Herakles went from the Peloponnesos to northwest Africa (Pliny, *Natural History* 5.1–3), and seems to have been everywhere. Theseus and his companion Perithoos went to Hades to abduct Persephone, since Perithoos wanted a daughter of Zeus and had failed with Helen (the story was the topic of a poem by Hesiod [F216]; see also Hellanikos [*FGrHist* #4] F134; Diodoros 4.26.1; Plutarch, *Theseus* 31). The Dioskouroi were known from early times as the guardians of seamen, the topic of their Homeric hymn. As was common, Strabo used the term “Phoenician” to refer both to the original Phoenicians from the Levantine coast as well as the Carthaginians, who were the settlers of West Africa (see above).

Antenor and the Enetians allegedly settled the north end of the Adriatic, an account not documented before Strabo's own era (5.1.4, 12.3.8; see also Livy 1.1.1–3; Vergil, *Aeneid* 1.242–53), as it is unlikely to have been the subject of Sophokles' play *Antenoridai*, despite the ambiguity of 13.1.53. The story probably originated from the similarity between two ethnyms: the Enetians (or Henetians), who were Trojan allies (*Iliad* 2.852), and the Keltic group known as the Venetians, who populated this region (4.4.1).

This is also Strabo's first mention of piracy, an institution that would be discussed frequently in the *Geography*, and which had only recently been eliminated when he wrote. To be sure, the context here is the era of Eratosthenes (or even the Bronze Age), but piracy was still a familiar issue to those of Strabo's own time (Philip De Souza, *Piracy in the Graeco-Roman World* [Cambridge 1999] 201–4).

**1.3.3.** A new topic (through Section 1.3.20) is the shape of the earth and the changes in its surface. This is one of the most thorough extant ancient discussions of the issue. Still following Eratosthenes, Strabo's first point was that the earth is spherical. This was a Pythagorean idea validated by Plato (*Phaidon* 58), but which was new enough even in Strabo's day that it needed to be reinforced. The Pythagoreans had believed that the earth was a perfect sphere, but scholarship since Aristotle (*On the Heavens* 2.13) had moved away from any assumption of perfection, even though it was not a significant issue mathematically (due to the size of the earth). Nevertheless the irregularities on the surface of the earth are the topic for the following lengthy discussion.

1.3.4. Oceanic material, particularly shells, had long been recorded far from the sea (Herodotos 2.12), and was especially visible at the famous oasis and shrine of Ammon (modern Siwa), about 325 km. from the Mediterranean in western Egypt. The oasis was famous in Greek history, especially after Alexander visited there in 331 BC (Diodoros 17.49–51). It lies below sea level, and seashells are encountered both at the site and along the routes to it. The Greek city of Kyrene (on the coast to the northwest) had long been involved with the oasis, and thus Kyrenaian paraphernalia would expect to be found there, but it was believed that the depression in which the oasis lies had once been under the sea, and that the Kyrenaian material proved this, a dubious proposition. Nevertheless it all raised questions of changes to the earth's surface.

Eratosthenes relied on two sources for his discussion of this issue. The earlier was Xanthos of Lydia, perhaps from Sardis, who wrote a *Lydiaka* (*FGrHist* #765) in the fifth century BC that reported extensively on the unusual geological phenomena, volcanic and otherwise, of south central Anatolia, a region Strabo knew well (13.4.9–17). Xanthos traveled widely in Anatolia, recording marine phenomena far from the sea, and was one of the first to discuss the effects of drought, even (it seems) making observations in remote Matiane, between Anatolia and the Caspian Sea. The second source was Straton of Lampsakos, Theophrastos' successor at the Lyceum, from the early third century BC. He wrote on the natural processes of the formation of the surface of the earth, and probably provided the material about the oasis of Ammon. Strabo's summary of Straton's views is one of the longest extant fragments of the latter's work, but the treatise from which it was taken is not known: none of the titles listed by Diogenes Laertios (5.59–60) seems to provide an obvious place for this material. See further, *Strato of Lampsacus: Text, Translation, and Discussion* (ed. Marie-Laurence Desclos and William W. Fortenbaugh [New Brunswick, N.J. 2011]).

Straton also examined the matter of sea levels, a topic originally developed by Aristotle (*Meteorologica* 2.1–2), who had believed that the Mediterranean had once been connected to the Red Sea but was eventually forced out through the Pillars of Herakles due to the flow (which today can be as much as 3–5 knots) from the Black Sea. These changes meant that in early times many places (especially around Egypt) had been under water, notably in the region of the isthmus separating the Red Sea from the Mediterranean. Lake Sirbonis (modern Sabhat el-Bardawil) and Lake Moiris (modern Birket Qarun) were seen to be remnants of this. Similarly, because of the outflow, it was believed that the Black Sea was

silting in, something assumedly demonstrated by the extreme shallowness of its western portions. Even today this is apparent: depths of no more than 55 m. are encountered 65 km. from the coast (NGIA Chart 55001). Questions were also raised about the nature of the seabed. For further on these issues, see Roller, *Eratosthenes* 128–31, and for the matter of sea depths see 1.3.9.

1.3.5. Strabo rejected Straton's reasoning for the flow between seas, and also noted that tides were not the cause, but rather movement of the seabed itself. Some of these conclusions may be based on Eratosthenes, although he was not mentioned by name again until 1.3.12. The idea of the rising and settling of the earth was put forth by Poseidonios in his *On the Ocean* (F49; see 2.3.6), a concept going back at least to Aristotle (*Meteorologica* 2.8), who suggested that such movement could be explained by a theory of exhalation analogous to human respiration. Poseidonios saw it as due to wind finding its way into cavities within the earth (F12 = Diogenes Laertios 7.154). Strabo further commented that such changes would also affect the External Ocean, and inferred that the flows at the opposite ends of the Mediterranean must be the same, since otherwise the level of the sea would steadily rise. His exact source for much of this remains uncertain.

1.3.6. Strabo outlined a perceived flaw in Straton's reasoning: he had assumed that the flow from the Black Sea to the Mediterranean was because the former was shallower, but this was irrelevant since a flow would occur only if the actual level of the former were higher, regardless of its depth. It would even happen if the Black Sea bed were lower than that of the Mediterranean.

1.3.7. Strabo's conclusion was that rivers are the primary reason for the flow of the seas: whether this was his idea, or Straton's, is not stated. Because of the influx from rivers, lakes may have flowed together and become confluent seas, but Strabo hastened to add that this does not mean seas are like rivers, since seas have no slope. The text is unclear, and the sentence about the flow in straits seems out of place, but Strabo next argued against a theory that siltation produced by rivers played a role in the matter of the flows of the seas. This was probably also from Straton's treatise, since he believed that the level of the seabed affected the flowing.

Strabo then embarked on a roughly clockwise tour of the rivers emptying into the Black Sea, regions discussed in greater detail in Book 11. He pointed out that none produces siltation far beyond their immediate mouths, and all are like the Nile, which was the best example of the terraforming process of river deposition. He then cited the Pyramos (modern Ceyhan Nehri) as a fine example of deposition, since it had

created much of the Kilikian plain, quoting from the fourth *Sibyline Oracle*, the late Hellenistic collection of prophecies largely from Levantine sources. It is uncertain whether Strabo had access to published oracles or simply knew popular local lore about the river that would eventually end up in oracular form. The quotation is repeated at 12.2.4, but there are no other citations of the *Sibyline Oracles* by Strabo. The Pyramos points directly toward the northeast promontory of Cyprus (about 130 km. away), and it is easy to see how local tradition could believe that the deposition from the river would in time reach the island.

1.3.8. Continuing his discussion of river siltation, Strabo, in a passage colored with several Homeric quotations and which was probably autoptic, described the process of wave action on a coast, stating that the sea is like an animate being. This idea was first developed by Pytheas of Massalia in the fourth century BC, who likened the sea around Thoule to respiration or a type of lung (Pytheas F5 = 2.4.1). The idea became part of Aristotelian metaphysics (*Metaphysics* 1.3). Strabo had great animosity toward Pytheas (see 1.4.3) and would not mention him by name unless necessary; his immediate source may have been his own contemporary Athenodoros of Tarsos (see 1.3.12).

1.3.9. A further characteristic of wave action is its ability to cast up matter in a sort of cartharsis, another concept originating with Aristotle (*Research on Animals* 6.13), but which Strabo may also have taken from Athenodoros. Yet the most interesting comment in this section is the matter of sea depth, previously alluded to at 1.3.4, where the source may have been Eratosthenes (*Geography* F15). The calculation is a remarkable effort to determine something exceedingly difficult, and it remains unknown how it was arrived at, although the round figure of 1,000 *orgyiai* (about 1,830 m.) indicates that it was probably an educated guess rather than a precise measurement. In fact the figure is far too shallow (the actual deepest point off Sardo [Sardinia] is over 3,500 m.). Yet there was an awareness that this was one of the deepest points in the Mediterranean (in fact, the deepest west of Italy). Determination of sea depths in antiquity remains one of the enigmas of scholarship. Strabo's immediate source was Poseidonios (F221), who was familiar with the region (T21-2 = 17.3.4, 3.2.5). See further, Kidd, *Commentary* 793-5.

1.3.10. Strabo reiterated his view – probably continuing to be influenced by Poseidonios – that the changes in the level of the sea were due to violent natural phenomena, of which several examples were cited. Boura was an Achaian village that disappeared in an earthquake of 373 BC (1.3.18, 8.7.5). Bizone in Thrace was affected by an earthquake of unknown date (7.6.1).

The most obvious examples of such activities came from around Sicily and the Bay of Naples, especially Mt. Aitna (Etna): see 6.1.6, 6.2.8–9.

**1.3.11.** A long passage (through Section 1.3.15) analyses Eratosthenes' thoughts on the levels and currents of the Mediterranean. Archimedes of Syracuse, the engineer and mathematician of the third century BC, thought highly of Eratosthenes as a mathematician and praised him in the preface to his *Method of Mechanical Theorems*. Yet in this case Eratosthenes disagreed with Archimedes, who believed that any body of water has a curved surface. Eratosthenes may well have been aware of the mathematical validity of such a view, but pointed out that empirical evidence was otherwise, given the different levels of the Mediterranean, something that hydraulic engineers understood. He cited the failure to build a canal across the Isthmos of Corinth, a project of Demetrios Poliorketes around 302–1 BC, whose engineers had vetoed the idea because it would create flooding as water flowed from the Gulf of Corinth into the Saronic Gulf: the modern flow is 1–3 knots (see further, Roller, *Eratosthenes* 132–3). Eratosthenes believed that the currents through straits were similar to tides, which were not fully understood either in his time or that of Strabo. Strabo had already mentioned the tidal treatise of Seleukos of Seleukeia (1.1.9), but relied here on more recent writings by Poseidonios and Athenodoros of Tarsos. The latter (*FGrHist* #746) was the teacher of Octavian and a friend of Strabo's (16.4.21), and perhaps Poseidonios' pupil. Late in life he was sent by Augustus to remove the tyranny at his home city of Tarsos (14.5.14), and ended up being ruler there. In Strabo's day he would have been the latest authority on the tides. It is no surprise that Strabo did not mention the originator of tidal theory, Pytheas of Massalia, who was probably Eratosthenes' source. Yet Strabo's discussion of tides is secondary to his examination of the flow through straits.

**1.3.12.** Strabo probably had little interest in, or little understanding of, tidal theory, and merely referred the reader to the most recent authorities (Poseidonios and Athenodoros). He returned to the matter of the currents through straits, citing the three most famous examples. Such currents were, like the tides, baffling and never totally understood. In particular, the Euripos at Chalkis, first examined by Aristotle (*Meteorologika* 2.8), is far more complex than Strabo realized (Strabo, ed. Aujac, vol. 1, p. 210). But the discussion is confused, perhaps aggravated by Strabo's partial reliance on Hipparchos' polemic against Eratosthenes. Hipparchos did not believe in the continuous Ocean (F4 = 1.1.9), and disagreed with both Straton and Eratosthenes (Dicks, *Hipparchus* 116–17). Invoking the four elements of Empedokles of Akragas (Lucretius 1.714–16) – also a Stoic belief (17.1.36;



Diogenes Laertios 7.155–7) – Strabo again confirmed Archimedes’ view of the spherical surface of a body of water. For further on Empedokles, see 6.2.8.

**1.3.13–14.** Strabo returned to the matter of the Oasis of Ammon (1.3.4) and other regions in Egypt that demonstrated changes in the surface of the earth. The emphasis is on the isthmus between the Mediterranean and the Erythra Gulf (Red Sea): for Mt. Kasion and Gerrha see 16.2.33. Yet the argument is immediately distracted by the quibbling over what “connected” means, due to an inconsistency in Eratosthenes’ argument that had been noted by Hipparchos. The question is why would the outflow from the Black Sea affect an exit into the Red Sea? The text remains unclear, perhaps because Strabo was juggling too many sources that were at disagreement with one another (at the very least Pytheas, Eratosthenes, Hipparchos, Seleukos, Poseidonios, and Athenodoros), as well as being burdened by his own imprecise knowledge about tides and currents.

**1.3.15.** The matter of the Kyrenaian dolphins was originally mentioned at 1.3.4. The issue has long seemed peculiar to commentators of both Eratosthenes and Strabo, and it is not clear what the point is (see Roller, *Eratosthenes* 133–4). The text is hardly certain, but effectively requires believing that the Oasis of Ammon, 325 km. inland, had been on the seashore at some time after the founding of Kyrene around 630 BC. Hipparchos rejected this, but Strabo sided with Eratosthenes in accepting it. Yet there was another difficulty: if Ammon had been on the sea, large parts of Egypt would also have been covered, for in fact the Red Sea was higher than the Nile (Pliny, *Natural History* 6.166). Eratosthenes was aware of these problems but the manner in which he may have solved them was not preserved by Strabo. Eratosthenes also recorded similar issues about the Black Sea, including the peculiar view that the Istros (Danube) split into two streams (see 1.2.39). This completed Strabo’s analysis of Eratosthenes’ views about sea levels, and he was not mentioned again until Section 1.3.22.

**1.3.16.** Sections 16–20 are a discussion of places affected by unusual natural phenomena. As expected, Sicily and the Bay of Naples, the most visibly volcanic regions in the Mediterranean world, were the first to be cited. The same three places appear as previously (1.3.10), but this list has the more mythological “Islands of Aiolos” rather than the contemporary “Liparaian Islands,” implying a source that was more mythologically oriented, probably Demetrios of Kallatis of the third century BC (see 1.3.20). The comment about the senses reveals a Stoic character to the catalogue.

Next are the Aegean islands of Thera and Therasia, the latter the small island just to the west of Thera that is also part of the caldera rim. The islands are incorrectly positioned (the same error was repeated at 8.3.19), as they are about 130 km. north of Crete, and the data may be an interpolation (Strabo, ed. Radt, vol. 6, p. 409), since no location is provided for any of the other places.

Strabo described a major eruption that occurred in the caldera of the Thera group. There is no date, but the connection with the Rhodian thalassocracy suggests the period that the Rhodians were asserting their presence in the Aegean. The account of the eruption comes from a Rhodian source, most probably Poseidonios, mentioned immediately thereafter and who spent much of his life on the island; Seneca (*Natural Questions* 2.26.4–7 = Poseidonios F228) seemed to confirm him as the source. The most probable date for the eruption is 198–7 BC. The new island was named Hieria or Automate, the latter meaning “Spontaneous” (Pliny, *Natural History* 4.70), and is modern Palaia Kameni. A chapel of St. Nikolaos located on it may mark the site of the shrine built by the Rhodians. See further, P. Y. Forsyth, “After the Big Bang: Eruptive Activity in the Caldera of Greco-Roman Thera,” *GRBS* 33 (1992) 191–204.

Poseidonios was acknowledged as the source for the next incident, a seismic event that was recorded from the Levantine coast across the Aegean. The most detailed comments are from the extremities of the reported area: from the city of Sidon (where the evidence of building collapse over a period of time indicates a traditional earthquake) to the island of Euboia (where a spring in the city of Chalkis failed and then reappeared elsewhere, and there was a lava eruption in the Lelanton Plain, just inland of the city). The report is an interesting account of a connected series of tectonic actions over an extent of several hundred kilometers. This is almost certainly not the event that occurred in the Thera group, unless Strabo was totally unaware of any relationship. There is no hint of any date, and the only other reference (Seneca, *Natural Questions* 6.24.6 = Poseidonios F232) is uninformative. One can speculate that it might have been during Poseidonios’ lifetime (roughly 135–51 BC).

1.3.17. In the time of Demetrios of Skepsis (and probably of Strabo) the springs of the Skamandros did not conform to the Homeric description; see further 13.1.43. There is a reference to a certain Demokles, probably the writer from Pygela (or Phygele), on the Anatolian coast just southwest of Ephesos at modern Kuşadesi. Strabo did not mention him again, but he appears in the list by Dionysios of Halikarnassos (*On Thoukydides* 5) of historical writers who flourished before the Peloponnesian War. It is

improbable that Demokles wrote specifically on earthquakes, given his early date, but merely referred to them as a part of mythological history. The mythic King Tantalos is associated with Mt. Sipylos (northeast of Smyrna) or Tmolos (above Sardis), and is best remembered for the excess that led to his perpetual torment in Hades, resulting in the word “tantalyze” (*Odyssey* II.582–92; Pindar, *Olympian* 1.37–69).

The issues about the location of Pharos were discussed at 1.2.23. Tyre (in Phoenicia) was originally on an island, but had been joined to the mainland by Alexander (16.2.23). Klazomenai in Ionia (14.1.36) was on the mainland but the inhabitants resettled on an offshore island, which Alexander also joined to the mainland (Pausanias 7.3.9). Moreover, there was an earthquake that occurred while Strabo was living in Alexandria (the 20s BC or later) and which affected the region of Pelousion and Mt. Kasion, on the coast east of the Delta. For “Alexandria next to Egypt” see 1.1.12. Mt. Kasion (modern Ras Qasrun), a prominent ridge, had been an important topographical feature on the route between Egypt and the Levant since prehistoric times (perhaps the Baal-Zephon of Exodus 14:2, 9). The earthquake recorded by Strabo submerged the coastal road, providing, he believed, credence to the view that the region from the Mediterranean to the Red Sea had once been under water (1.3.4), which was seen as proof of the Stoic view of the changing universe.

**1.3.18.** There is a further list of places that had changed, either tectonically or through human agency. Most of the locales cited are discussed more fully later in the treatise. The popular etymology of the name Peiraeus seems to have no linguistic credence; it is most probably a Greek personal name (e.g. Peiraios, the companion of Telemachos [*Odyssey* 15.539 etc.]). By one account, however, the sea had actually receded as much as five miles (Pliny, *Natural History* 2.201).

Leukas (also Leukadia, modern Lefkas), one of the Ionian Islands west of the Greek mainland, was originally a peninsula, but was separated at the time of the Corinthian settlement in the late seventh century BC. By the fifth century the channel had silted up (Thoukydides 3.81, 4.8), but was open again by the second century (Livy 33.17.5–7). Pliny (*Natural History* 4.5) reported it closed. As is often the case, the meaning of Strabo’s “today” is uncertain: whether that of his source (probably Demetrios of Skepsis in the second century BC) or his own time. Nevertheless keeping the channel open seems to have been a perennial problem. On Leukas, see further 10.2.8–9.

At Syracuse it was the opposite: the island of Ortygia, the original settlement, had been connected to the mainland through a causeway by

the sixth century BC (the date of the lyric poet Ibykos of Rhegion), which was eventually replaced by a bridge, whose successor exists today.

Boura and Helike were both in Achaia and disappeared in an earthquake in 373 BC (see 8.7.5). Methone (or Methana, 8.6.15) is a promontory in the Argolid just north of Troizen, which was affected by an eruption during the reign of Antigonos II of Macedonia (c. 277–239 BC, Pausanias 2.34.1–3). For Arne and Mideia, and the history of Lake Kopais in Boiotia, see 9.2.35. Lake Bistonis was in Thrace (Strabo 7.F18), and no longer survives today, as is the case with Aphnitis (13.1.9). For the Trierians, see 12.3.24, 12.8.7.

The Echinades are the small islands just off the shore of Akarnania in Greece, near the mouth of the Acheloos River (10.2.19), whose siltation was joining them to the mainland, a phenomenon recorded as early as the fifth century BC (Herodotos 2.10). Artemita is probably the peninsula just west of the site of Oiniadai, modern Khounovina. Asteria is the small island of Daskaleio between Ithaka and Kephallenia (see 10.2.16). For Ithaka and its numerous topographic problems, see 10.2.10–12.

**1.3.19.** Antissa is a small promontory on the northwest coast of Lesbos. Myrsilos (*FGrHist* #477), from Methymna on Lesbos, wrote a *Lesbiaka* in the third century BC, and is the source for the original name of the island, Issa. Parenthetically Strabo commented that it was believed the island had broken away from Mt. Ida (which is about 50 km. to the northeast), and then listed several other examples of places that had been separated from one another. All except the last (Ossa from Olympos) are in southern Italy. The source for these comments is unknown. The Ladon River is one of the affluents of the Alpheios (8.8.4). It emptied into sinkholes, whose flow would be altered as seismic activity changed the underground passages.

Douris of Samos (*FGrHist* #76), a pupil of Theophrastos (Athenaios 4.128a), was active in the late fourth and early third centuries BC (Andrew Dalby, “The Curriculum Vitae of Duris of Samos,” *CQ* n.s. 41 [1991] 539–41). A polymath, he wrote a *Macedonian History* that went as far as 281 BC (F55 = Pliny, *Natural History* 8.143), the year Seleukos (I) Nikator died, who was the founder of Rhagai, or Rhaga (11.13.6). The section closes with a reference to the separation of Euboia from the mainland, a report of the fifth-century BC tragedian Ion of Chios. Omphale was a Lydian queen who was the lover of Herakles, but the context is unknown.

**1.3.20.** The tectonic event recounted by Ion led Strabo to describe one of the major earthquakes in Greek history, as it also affected Euboia. The text may have a gap at the beginning of the section, since there is no transition from the general to the specific. Demetrios (*FGrHist* #85) was from Kallatis, a foundation of Herakleia Pontica on the west coast of the Black

Sea (12.3.6), modern Mangalia in Romania. He was active in the third century BC (F3 = Lucian, *Makrobioi* 10). Only six fragments of his writings survive, and this one is longer than all the others combined.

The earthquake is probably the same one that Thoukydides (3.89) described as occurring in 426 BC, although this is not totally certain, and there are several other possibilities (I. Papaioannou et al., “The Earthquake of 426 BC in N. Evoikos Gulf Revisited: Amalgamation of Two Different Strong Earthquake Events?” *BGSG* 36 [2004] 1478–81). Since it happened at the time of the Thesmophoria, it was in early autumn. Twenty-one peoples and places are listed (the last, Atalante, an island off the coast of Opountian Lokris, was probably added from a second source, given Strabo’s “they also say”). All the localities are around the Malaic Gulf and on the western end of the island of Euboia, suggesting that the epicenter was somewhere in the lower part of the gulf, perhaps near the Lichades Islands (which disappeared but were just off northern Euboia). Because inundations went as far inland as 20 stadia, a tsunami was involved (J. A. González et al., “The Natural Landscape of Epicnemidian Locris: the Historical Condition of Its Physical Environment,” in *Topography and History of Ancient Epicnemidian Locris* [Leiden 2013] 9–61, at 54–6).

1.3.21. Having completed his discussion of natural disasters, Strabo turned to the matter of movements of populations, which he considered part of geography. “Absence of wonder” at the processes of the universe became a Stoic tenet common in Strabo’s day (Cicero, *Tusculan Disputations* 5.81); his phrase may be a direct translation of Horace’s “nil admirari” (*Epistle* 1.6.1).

The only source mentioned in the catalogue of migrations is Apollodoros of Artemita (in Babylonia, 11.11.7), who wrote a *Parthika* around 100 BC (*FGrHist* #779), most of whose extant fragments are cited by Strabo. Apollodoros’ contribution to the list is probably only the matter of the migration of the Iberians. This ethnic group invited comparison with the better-known Iberians at the west end of the Mediterranean, and it was believed that there had been a movement from the western to the eastern, although in fact it is unlikely that there was any connection between the two. The eastern Iberians were also said to have been of Thessalian origin, a component of the Jason story (Tacitus, *Annals* 6.34).

The catalogue of migrations covers many obvious examples of ethnic movement, which, as Strabo pointed out, are discussed more fully later in the treatise. The Egyptian king Sesostris (see below) was said to have gone to Kolchis (Herodotos 2.103). The Enetians, a Paphlagonian people according to Homer (*Iliad* 2.851–2; see also Strabo 12.3.8), were said to

have migrated to the upper Adriatic, a belief perhaps due a confusion with the local ethnym “Venetians” (see 5.1.3). In addition to the four major ethnic groups of the Hellenic peoples, there were the Ainianians, who had moved across northern Greece, and the Karians, who went from the islands to the Asian mainland (Herodotos 1.171). The Trerians migrated from Thrace to Anatolia (12.3.24), and the Teukrians from Crete to the Troad (13.1.48). The well-known movement of Keltic peoples across Europe into Italy and eventually to Anatolia, in the fourth and third centuries BC, found them eventually established in the region that came to be known as Galatia.

Madys (or Madyes) the Skythian invaded Anatolia during the reign of the Median ruler Kyaxares (Herodotos 1.103–6), at the time of the fall of Ninevah (612 BC). Tearko or Tearkon was an Aithiopian ruler of the early seventh century BC: see 15.1.6. Kobos is only known from the two references in this section.

Sesostris is a conflation of the three kings of that name of the Twelfth Dynasty, who reigned from 1956 to 1852 BC. To Greeks, Sesostris was believed to have been the greatest of Egyptian commanders, whose conquests ranged throughout the ancient world (Herodotos 2.102–10; Diodoros 1.53.8). Psammetichos is probably the second of that name (595–589 BC), who went as far as the Third Cataract of the Nile and left a number of monuments of his achievements (see Herodotos 2.160–1). His grandfather, Psammetichos I (664–610 BC), was more famous (Herodotos 2.151–7) and is often identified as the king cited by Strabo (e.g. Strabo, ed. Aujac, vol. 1, p. 215), but this seems less likely, since he did not travel as far, yet tradition may have associated the two. The Kimmerian invasion of Anatolia in the seventh century BC was well known from Herodotos’ account (1.15–16; see also Strabo 3.2.12, 11.2.5).

**1.3.22.** Strabo abruptly returned to his analysis of Eratosthenes (broken off at 1.3.15), who criticized Herodotos about the Hyperboreans, the semi-mythical peoples of the far north (Homeric *Hymn to Dionysos* 29; Pindar, *Pythian* 10.27–44). Herodotos was misquoted – whether by Eratosthenes or Strabo – and actually said the opposite: if there were Hyperboreans there also had to be Hypernotians (“Those beyond the South Wind”). This raised the question of who might live in the far south, well beyond the regions known to the Greek world. The Pythagoreans had suggested a southern land mass (Diogenes Laertios 8.25–6), but as a mathematical rather than a geographical concept. Yet Strabo developed the idea that whatever was in the south would be analogous to what was in the north.

**1.3.23.** Eratosthenes closed the first book of his *Geography* with a discussion of fantasy geography. The concept of other, unknown,

continents was Pythagorean but had been made better known by Plato with Atlantis (*Timaios* 24e–25d). In the Hellenistic period fantasy geography became an independent literary genre, through writers such as Theopompos (*FGrHist* #115, F75 c), Hekataios of Abdera (*FGrHist* #264, F7–14), Euhemeros of Messene (*FGrHist* #63, F1–11), and Antiphanes of Berga (see Strabo 2.3.5). Strabo objected to Eratosthenes' handling of this material, in part because of the expansion of geographical knowledge in the intervening two centuries, and because of Eratosthenes' belief in the legitimacy of the material reported by Pytheas of Massalia.

#### Part 4: The Surface of the Earth

**1.4.1.** Continuing his critique of Eratosthenes' *Geography*, Strabo considered its second book, which was largely technical and about the measurements of the earth. Strabo relied on it almost totally for this part of his own work. Yet by mentioning the use of mathematics and physics, he also referred to Eratosthenes' *On the Measurement of the Earth*, the treatise in which he set forth his calculations of the circumference of the earth (see Roller, *Eratosthenes* 263–7). Strabo felt that Eratosthenes was too lengthy and pedantic about such issues as the sphericity of the earth (see 1.3.3), again perhaps failing to realize that the concept was still novel in the earlier scholar's day. The "later writers" include Hipparchos and probably Poseidonios.

**1.4.2.** Eratosthenes had established a prime meridian (discussed more fully at 2.5.7–9) from Meroë (on the Upper Nile, see 17.2.2) north through Alexandria to the north shore of the Black Sea at Borysthenes (Olbia, see 7.3.17), and beyond to the parallel of Thoule (Thule). This is the first mention in the *Geography* of that far northern place, discovered by Pytheas of Massalia, the great explorer who travelled across France to the British Isles and beyond in the late fourth century BC. Eventually he reached the locality called Thoule, almost certainly Iceland, and probably also explored parts of the Baltic: see Roller, *Through the Pillars* 57–91. Strabo believed that Pytheas was a fantasy author and generally did not accept his material, but nevertheless preserved much valuable detail (such as the location of Thoule six days north of Brettanike) while disdaining its validity. The frozen sea is probably not the polar pack ice (which was farther north than Iceland) but drift ice or frozen inlets.

The Egyptian Island was in the Nile and had been a refuge for a group of mutinous soldiers, probably at the time of King Psammetichos II in the early sixth century BC (Herodotos 2.30–1). The Cinnamon Bearers lived in



the Horn of Africa (modern Somalia), so named because they were thought to reside where cinnamon originated (Herodotos 3.111), but the spice was actually imported to them from the Indian peninsula. Taprobane is modern Sri Lanka (2.1.14).

1.4.3. Having provided a summary of Eratosthenes' prime meridian as far as the latitude of Thoule, Strabo interrupted his account to complain about Pytheas. His argument is that no one later than Pytheas visited Thoule, even including those who had been beyond Brettanike and Ierne (Ireland), which Strabo believed was the farthest north place (2.1.13). But the measurement of 5,000 stadia for the length of Brettanike, as well as its position, are data almost certainly obtained from Pytheas. Strabo also objected to placing Kantion (Kent) several days' sail from the mainland, as it had taken Julius Caesar only about 18 hours to make the journey (4.5.2). Yet the exact place where Pytheas crossed is not known, and there is some evidence that he may have come up the English Channel from northwest France (see 1.4.5), the home of the Ostidaians, probably the Osismians known to Caesar (*Gallic War* 2.34, etc.). Ouxisame, another similar toponym, may survive as modern Ushant, the island at the northwest corner of France (Pytheas of Massalia, *On the Ocean* [ed. Christina Horst Roseman, Chicago, Ill. 1994] 38). Strabo's antipathy toward Pytheas has colored the information and made it deficient, but whenever he mentioned the explorer he preserved important data, as is often the case with topographical authors that Strabo rejected.

1.4.4. Hipparchos connected the parallel through Borysthenes (at the north edge of the Black Sea) with that through Brettanike (perhaps taken around York: see 2.5.8), and then related both to the Massalia parallel. Although Strabo rightly pointed out the errors in these calculations, he ignored the great significance of attempts to determine the relative location of places widely separated from one another. In fact, all the British Isles are well north of the mouth of the Borysthenes, which is on the latitude of central France.

1.4.5. Eratosthenes had extended the length (east–west) of the inhabited world to 74,000 stadia, although the evidence is somewhat contradictory and 70,000 was the more common figure (see 2.5.6). Because Eratosthenes used Pytheas' material as part of his calculation, Strabo rejected this length. Yet it was in fact excessive, perhaps 20,000 stadia too much (Roller, *Eratosthenes* 155–6), an error that made the westward voyage from the Pillars of Herakles to the Indian peninsula seem shorter than it was, which had a dramatic effect on Renaissance explorers. Despite his disdain of Pytheas, Strabo reported his itinerary in northwest Europe, naming

a number of places in farthest France. The Ostidaians appear under a variety of similar names: see 1.4.3. Kabaion seems to be a general term for the western part of Brittany, perhaps the vicinity of modern Pointe du Raz. Yet these localities are east of the westernmost point of Europe (Cabo de Roca, near Lisbon), and Strabo was thus correct in questioning how Pytheas' data affected the east–west length of the inhabited world. The three-day sail to Ouxisame is a frustrating remnant of Pytheas' itinerary. The final sentence – calculating the 74,000 stadia – cannot easily be explained, as it contradicts the previous data about the relationship of width to length. Strabo's failure to uphold this figure at 2.5.6 adds to the confusion.

1.4.6. Continuing with his analysis of Eratosthenes' data about the size of the inhabited earth, there follows a long and difficult passage about the division of the world into continents (through Section 1.4.8), which includes a direct quotation from Eratosthenes' treatise. He seems to have needed to emphasize that the inhabited world was longer east–west than north–south (see Strabo 1.4.5), a concept perhaps originating with Demokritos of Abdera in the fifth century BC (Agathemeros 1.2) and refined over the years. Aristotle (*Meteorologika* 2.5) was the first to suggest that one could sail from Iberia to the Indian peninsula, although, as noted above, the repeated tendency to elongate the east–west dimension of the inhabited world made such a voyage seem shorter than it was. Strabo was careful to point out that the distance depended on the latitude and, moreover, the figures provided were based on the latitude of Athens. He also could not resist yet another objection to Eratosthenes' lack of proper respect for Homer. In addition, he continued to fail to realize that Eratosthenes was presenting arguments that were new and relatively untested in his own day.

1.4.7–8. Strabo next considered the continents and the matter of boundaries, material further synthesized from Eratosthenes' data. The problems of the division between Libya and Asia had already been mentioned at 1.2.25. Although complaining about Eratosthenes' sloppy argumentation, Strabo generally upheld the earlier scholar's points.

The concept of continents had first been developed by Hekataios of Miletos (*FGrHist* #1) at the beginning of the fifth century BC. He conceived of two, Europe and Asia; eventually Libya was added, and the three continents of antiquity were established by later in the same century (Herodotos 4.42). But the problem was their boundaries, that between Asia and Libya as well as that between Europe and Asia east of the Black Sea, where the Tanais River (modern Don) was the original division (Herodotos 4.45), although some used the Phasis (modern Rioni). But the

Libya–Asia boundary was the difficult one. As early as the time of Herodotos, the Nile, the traditional boundary, was seen as problematic, but nevertheless it remained generally accepted through and after Strabo's time (Pliny, *Natural History* 5.52–4, 6.177). Yet Strabo did not discuss these issues in detail.

Strabo moved on to a theoretical consideration of the nature of boundaries themselves, taken from Eratosthenes' treatise. Several examples of the difficulties with boundaries were provided: two Attic demes, Thryea in the Argolid (disputed by Argos and Sparta), and the Oropia, situated between Attika and Boiotia. Strabo added that such problems were not limited merely to local disputes, and cited Egypt, where the fluidity of the Seleukid–Ptolemaic boundary – which could range all the way from the northern Levant to the Egyptian Delta – would bring into question the exact division between Libya and Asia. But Strabo stressed that it was not necessary to define every part of a continental boundary, and twice noted that continents are not islands, arguing against some otherwise unknown theory.

1.4.9. Strabo has reached the end of Eratosthenes' *Geography*, and his summary of the technical and historical data within it, although the treatise was cited many more times, especially in Book 2. With the expeditions of Alexander the Great and those after him, Greeks had learned that they were only a small portion of the inhabited world. Moreover, there were advanced cultures that knew nothing of the Greeks. Alexander, aware of this new reality, and against the advice of his advisors, moved away from traditional hellenocentric views and realized that all peoples had both faults and virtues, and should be treated accordingly. In this he conceived of a world community, views set forth in the third century BC by Zenon of Kition in his *Republic* (Plutarch, *On the Fortune and Virtue of Alexander* 6–8). Eratosthenes, who had some contact with Zenon (1.2.2), further refined the ideas in his essay *Alexander*, and then used such thought to bring his *Geography* to a conclusion, recognizing that the great variety of places and peoples examined in the treatise was visible support of Alexander's idea.

The Carthaginians had been seen as a model culture since the fourth century BC (Isokrates, *To Nikokles* 24; Aristotle, *Politics*, 2.8) but inclusion of the Romans seems Strabo's addition, a perspective from his world of the Augustan age. There is no evidence that Eratosthenes knew anything about Roman culture; to him Rome seems to have been nothing more than a topographical locus (*Geography* F60, 65 = 2.5.40, 2.1.40).