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THE GEOGRAPHY OF STRABO

Ι

Straw (Greek and English . 1917. Jones)

THE GEOGRAPHY OF STRABO

WITH AN ENGLISH TRANSLATION BY HORACE LEONARD JONES, A.M., Ph.D.

BASED IN PART UPON THE UNFINISHED VERSION OF JOHN ROBERT SITLINGTON STERRETT PH.D., LL.D.

IN EIGHT VOLUMES

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PREFACE

Professor John Robert Sitlington Sterrett, the eminent scholar who was originally chosen by the Editors of the Loeb Classical Library to prepare this edition of Strabo, died suddenly on June 15, 1914. His many friends and colleagues in the world of scholarship were greatly disappointed that he was thus prevented from bringing to a happy completion a task which would have been a fitting consummation of a long and notable career. In accordance with a desire he expressed to me shortly before his death, and at the invitation of the Editors, I have ventured, not without misgivings, to carry on the work from the point where his labours ceased.

The Introduction and the Bibliography remain substantially as they were left by Professor Sterrett; and the translation of the first two books, contained in Volume I., not only is indebted to him for much of its diction, but reveals in other elements of style many traces of his individuality. Nevertheless the

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present version, a fairly literal one perhaps, is so remote from the free rendering of Professor Sterrett, above all in the technical passages, that it would be unjust to hold him responsible for any mistakes or infelicities which the reader may now detect. The Editors, it is true, at first requested me merely to revise and see through the press the first two books as Professor Sterrett had left them, and then to proceed independently with the remaining fifteen; vet upon a closer examination of his work both they and I decided that to revise it for publication would be impossible without destroying its quality and aim, at all events for a new translator of the whole. Editors then decided, in view of the purposes of the Loeb Library and for the sake of unity in the work as a whole, to proceed as the title-page indicates; and hence, in order to avoid the danger of attributing to Professor Sterrett a method of interpretation for which he should not be held accountable, the present translator has been forced to assume all the responsibility from the beginning-for the first two books as well as the rest.

In constituting the Greek text I have tried to take into account the work that has been done by scholars, not only since the appearance of Meineke's edition, but prior to that edition as well. The map

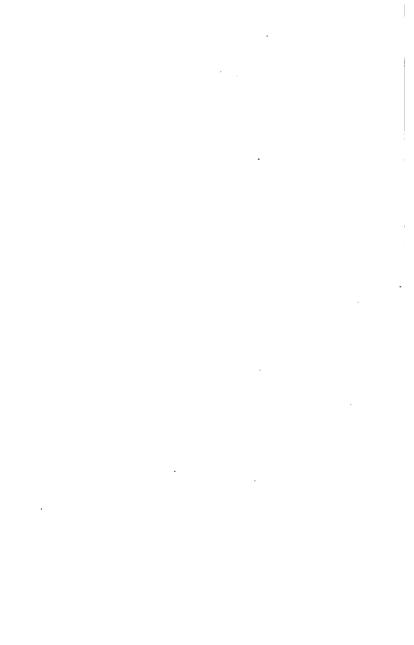
PREFACE

of The Inhabited World according to Strabo (drawn by Mr. L. A. Lawrence of Cornell University) is adapted partly from the *Orbis Terrarum secundum* Strabonem of C. Müller and partly from that of W. Sieglin.

I wish to acknowledge my great indebtedness to my colleagues, Professor Lane Cooper and Professor Joseph Quincy Adams, of Cornell University, for their criticism of the translation; and also to Professor Ora M. Leland, for assistance in technical problems related to astronomy. But above all, a desire to record an incalculable debt of gratitude to my lamented friend, Professor Sterrett, who, in the relation first of teacher and later of colleague, was to me, as to many others, an unfailing source of inspiration and encouragement.

H. L. J.

April, 1916.



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What is known about Strabo must be gleaned from his own statements scattered up and down the pages of his Geography; this is true not merely of his lineage, for we also learn much by inference concerning his career and writings. Dorylaus, surnamed Tacticus or the General, is the first of the maternal ancestors of Strabo to be mentioned by him, in connexion with his account of Cnossus (10. 4. 10). This Dorvlaus was one of the officers and friends of Mithridates Euergetes, who sent him on frequent journeys to Thrace and Greece to enlist mercenary troops for the royal army. At that time the Romans had not yet occupied Crete, and Dorylaus happened to put in at Cnossus at the outbreak of a war between Cnossus and Gortyna. His prestige as a general caused him to be placed in command of the Cnossian army; his operations resulted in a sweeping victory for Cnossus, and great honours were heaped upon him in consequence. At that juncture Euergetes was assassinated at Sinope, and as Dorylaus had nothing to hope for from the widowed queen and young children of the dead king, he cast in his lot permanently with the Cnossians. He married at

Cnossus, where were born his one daughter and two sons, Lagetas and Stratarchas. Their very names indicate the martial proclivities of the family. Stratarchas was already an aged man when Strabo saw him. Mithridates, surnamed Eupator and the Great, succeeded to the throne of Euergetes at the early age of eleven years. He had been brought up with another Dorvlaus, who was the nephew of Dorvlaus the general. When Mithridates had become king. he showed his affection for his playmate Dorylaus, by showering honours upon him, and by making him priest of Ma at Comana Pontica-a dignity which caused Dorylaus to rank immediately after the king. But not content with that, Mithridates was desirous of conferring benefactions upon the other members of his friend's family. Dorylaus, the general, was dead, but Lagetas and Stratarchas, his sons, now grown to manhood, were summoned to the court of Mithridates. "The daughter of Lagetas was the mother of my mother," says Strabo. As long as fortune smiled on Dorylaus, Lagetas and Stratarchas continued to fare well; but ambition led Dorylaus to become a traitor to his royal master; he was convicted of plotting to surrender the kingdom to the Romans, who, it seems, had agreed to make him king in return for his treasonable service. The details of the sequel are not known; for all that Strabo thinks it worth while to say is that the two men went down into obscurity and discredit along with Dorylaus (10. 4. 10). These ancestors of Strabo xii

were Greeks, but Asiatic blood also flowed in his When Mithridates annexed Colchis, he realized the importance of appointing as governors of the province only his most faithful officials and friends. One of these governors was Moaphernes. the uncle of Strabo's mother on her father's side (11.2.18). Moaphernes did not attain to this exalted station until towards the close of the reign of Mithridates, and he shared in the ruin of his royal master. But other members of the family of Strabo escaped that ruin; for they foresaw the downfall of Mithridates, and sought cover from the impending storm. One of them was Strabo's paternal grandfather, Aeniates by name (if the conjecture of Ettore Pais be accepted). Aeniates had private reasons for hating Mithridates, and, besides that, Mithridates had put to death Tibius, the nephew of Aeniates, and Tibius' son Theophilus. Aeniates therefore sought to avenge both them and himself; he treasonably surrendered fifteen fortresses to Lucullus, who made him promises of great advancement in return for this service to the Roman cause. But at this juncture Lucullus was superseded by Pompey, who hated Lucullus and regarded as his own personal enemies all those who had rendered noteworthy service to his predecessor. Pompey's hostility to Aeniates was not confined to the persecution of him in Asia Minor; for, when he had returned to Rome after the termination of the war, he prevented the Senate from conferring the honours promised by

Lucullus to certain men in Pontus, on the ground that the spoils and honours should not be awarded by Lucullus, but by himself, the real victor. And so it came about that Strabo's grandfather failed of the reward of his treason (12. 3. 13). A further proof of the existence of Asiatic blood in the veins of Strabo is the name of his kinsman Tibius; for, says Strabo. the Athenians gave to their slaves the names of the nations from which they came, or else the names that were most current in the countries from which they came; for instance, if the slave were a Paphlagonian, the Athenians would call him Tibius (7. 3. 12). Thus it appears that Strabo was of mixed lineage, and that he was descended from illustrious Greeks and Asiatics who had served the kings of Pontus as generals, satraps, and priests of But by language and education he was thoroughly Greek.

Strabo was born in Amasia in Pontus in 64 or 63 s.c. (the later date being the year of Cicero's consulate). It is plain that his family had managed to amass property, and Strabo must have inherited considerable wealth; for his fortune was sufficient to enable him to devote his life to scholarly pursuits and to travel somewhat extensively. His education was elaborate, and Greek in character. When he was still a very young man he studied under Aristodemus in Nysa near Tralles in Caria (14. 1. 48). His parents may have removed from Amasia to Nysa in consequence of the embarrassing conditions xiv

brought about by the victories of Pompey, the enemy of their house; but the boy may have been sent to study in Nysa before the overthrow of Mithridates the Great; and, if so, he was probably sent thither because one of his kinsmen held high office in the neighbouring Tralles. Ettore Pais points out that, when Mithridates the Great ordered the killing of the Roman citizens in Asia, Theophilus, a Captain in service in Tralles, was employed by the Trallians to do the killing. It seems probable that this Theophilus was the kinsman of Strabo, and the same person who was afterwards executed by Mithridates, an execution that caused Strabo's paternal grandfather to betray the king and desert to Lucullus.

In 44 B.C. Strabo went to Rome by way of Corinth. It was at Rome that he met Publius Servilius, surnamed Isauricus, and that general died in 44 B.c. (This was also the year of the death of Caesar.) Strabo was nineteen or twenty years old at the time of his first visit to Rome. In connexion with his account of Amisus (12. 3.16) we read that Strabo studied under Tyrannion. That instruction must have been received at Rome; for in 66 B.C. Lucullus had taken Tyrannion as a captive to Rome, where he gave instruction, among others, to the two sons of Cicero. It is Cicero (Ad Att. 2, 6, 1) who tells us that Tyrannion was also a distinguished geographer, and he may have guided Strabo into the paths of geographical study. It was probably also at Rome that Strabo had the good fortune to attend

the lectures of Xenarchus (14.5.4), the Peripatetic philosopher: for he tells us that Xenarchus abandoned Seleucia, his native place, and lived in Alexandria, Athens, and Rome, where he followed the profession of teacher. He also tells us that he "Aristotelized" along with Boëthus (the Stoic philosopher of Sidon), or, in other words, under Xenarchus in Rome (16. 2. 24). Strabo knew Poseidonius (7. fr. 98, quoted from Athenaeus 14. 75. p. 657), and it has been argued from that statement that Poseidonius, too, was one of Strabo's teachers. But in spite of the fact that his teachers were Peripatetics, there can be no doubt that he was himself an adherent of Stoicism. He confesses himself a Stoic (7. 3. 4); he speaks of "our Zeno" (1. 2. 34); again, he says: "For in Poseidonius there is much inquiry into causes and much imitating of Aristotle-precisely what our School avoids, on account of the obscurity of the causes" (2.3.8). Stephanus Byzantius calls him "the Stoic philosopher." Strabo lets his adherence to Stoicism appear on many occasions, and he even contrasts the doctrines of Stoicism with those of the Peripatetic School. What had brought about his conversion cannot be ascertained. It may have been due to Athenodorus: for in his account of Petra he says that it is well-governed, and "my friend Athenodorus, the philosopher, has spoken to me of that fact with admiration" (16. 4. 21). This philosopher-friend was the Stoic Athenodorus, the teacher and friend of Augustus. Strabo makes his xvi

position in regard to the popular religion quite clear in several passages; he insists that while such religion is necessary in order to hold the illiterate in check, it is unworthy of the scholar. "For in dealing with a crowd of women, at least, or with any promiscuous mob, a philosopher cannot influence them by reason or exhort them to reverence, piety, and faith; nay, there is need of religious fear also, and this cannot be aroused without myths and marvels. For thunderbolt, aegis, trident, torches, snakes, thyrsus-lances,—arms of the gods—are myths, and so is the entire ancient theology" (1.2.8). speaking of the supposed religiosity of the Getans (7.3.4) he quotes Menander to the effect that the observances of public worship are ruining the world financially, and he gives a somewhat gleeful picture of the absence of real religion behind those same observances of public worship. Yet Strabo had a religion, and even though he believed that causes are past finding out, he nevertheless believed in Providence as the great First Cause. He sets forth the Stoic doctrine of "conformity to nature" at some length in speaking of Egypt (17. 1. 36), and he also adverts to it in his account of the river-system of France (4. 1. 14).

As for his political opinions, he seems to have followed Polybius in his profound respect for the Romans, with whom, apparently, he is in entire sympathy; he never fails to show great admiration, not only for the political grandeur of the Roman

Empire, but for its wise administration as well; he is convinced of the necessity of a central monarchial power: "The excellence of the government and of the Roman Emperors has prevented Italy (which has often been torn by civil war from the very time when it became subject to Rome), and even Rome itself. from proceeding further in the ways of error and corruption. But it would be difficult for the Romans to govern so vast an empire in any other way than by entrusting it to one person—as it were, to a father. And certainly at no other period have the Romans and their allies enjoyed such perfect peace and prosperity as that which the Emperor Augustus gave them from the very moment when he was clothed with autocratic power, a peace which Tiberius, his son and successor, continues to give them at the present moment; for he makes Augustus the pattern in his policy and administration; and Germanicus and Drusus, the sons of Tiberius, who are now serving in the government of their father, also make Augustus their pattern" (6. 4. 2). And he constantly takes the Roman point of view. For instance, in leading up to his account of the destruction of Corinth by Mummius, he tells us that the Corinthians had perpetrated manifold outrages on the Romans; he does indeed mention the feeling of pity to which Polybius gave expression in telling of the sack of Corinth, and says that Polybius was horrified at the contempt shown by the Roman soldiery for the sacred offerings and the masterpieces

of art; "for Polybius says he personally saw how paintings had been thrown to the ground and saw the soldiers playing dice on them." But Strabo gives us to understand that his own private feeling is that the Corinthians were merely paying for the many insults they had heaped on the Romans (8, 6, 23). He is equally dispassionate in telling of the Roman conquest of his own native country (12. 3. 33). He seems to be thoroughly Roman at heart; for the Romans have united the world under one beneficent administration (1.1.16); by the extinction of the pirates the Roman peace has brought prosperity, tranquillity, security to commerce, and safety of travel (3. 2. 5; 14. 3. 3; 16. 2. 20); a country becomes prosperous just as soon as it comes under the Roman sway (3. 3. 8), which opens up means of intercommunication (2. 5. 26); friendship and alliance with Rome mean prosperity to the people possessing them (3, 1, 8; 4, 1, 5); so does the establishment of a Roman colony in any place (6. 3. 4).

We have seen that Strabo went to Rome in 44 B.C., and that he was nineteen or twenty years old at that time. He made several other journeys to Rome: we find him there in 35 B.C.; for that is the date of the execution of Selurus (6. 2. 6), which Strabo witnessed. He was then twenty-nine years old. He was in Rome about 31 B.C.; for he saw the painting of Dionysus by Aristeides (one of those paintings seen by Polybius at the sack of Corinth) in the temple of Ceres in Rome, and he adds: "But

recently the temple was destroyed by fire, and the painting perished" (8. 6. 23). It is known from Dio Cassius (50. 10) that the temple of Ceres was burned in 31 B.c. He was thirty-two or thirty-three years old at that time. We know of still another journey to Rome: "I landed on the island of Gyaros, where I found a small village inhabited by fishermen: when we sailed from the island, we took on board one of those fishermen who had been sent on a mission to Augustus (who was then at Corinth, on his way [from Egypt] to celebrate his triumph after his victory at Actium). On the voyage we questioned this fisherman, and he told us that he had been sent to ask for a diminution of the tribute" (10. 5. 3). Here we find Strabo journeying from Asia Minor, by way of the island of Gyaros and Corinth. and the clear inference is that he was on his way to Rome at the time. This was in 29 B.C., and Strabo was thirty-four or thirty-five years old. Augustus had just founded Nicopolis in honour of his victory at Actium (7. 7. 6), and it is not unlikely that Strabo visited the new city on that voyage. In 25 and 24 B.c. he is in Egypt, and accompanies Aelius Gallus up the Nile, proceeding as far as Svene and the frontiers of Ethiopia (2. 5. 12). At that time he was thirty-nine years old. He was still in Egypt when Augustus was in Samos in 20 B.C. (14, 1, 14). He was then forty-four years old. Accordingly he lived for more than five years in Alexandria, and we may infer that it was in the

Alexandrian library that he made from the works of his predecessors those numerous excerpts with which his book is filled. We find him again in Rome about 7 B.C.: for in his description of Rome he mentions buildings that were erected after 20 B.C., the last of them being the portico of Livia, which was dedicated in 7 B.c. (5, 3, 8). This was perhaps his final visit to Rome, and he was then fifty-six or fifty-seven years old. It seems that he lived to be eighty-four years old, for he chronicles the death of Juba in 21 A.D., but the last twenty-six or twenty-seven years of his life were spent far from Rome, and probably in his native Amasia. His residence at this remote place made it impossible for him to follow the course of recent political events and to incorporate them in the revised edition of his book.

Strabo thought that he had travelled much. He says: "Now I shall tell what part of the land and sea I have myself visited and concerning what part I have trusted to accounts given by others by word of mouth or in writing. I have travelled westward from Armenia as far as the coasts of Tyrrhenia opposite Sardinia, and in the direction of the South I have travelled from the Euxine Sea as far as the frontiers of Ethiopia. And you could not find another person among the writers on Geography who has travelled over much more of the distances just mentioned than I; indeed, those who have travelled more than I in the western regions have not covered as much ground in the east, and those who have travelled

more in the eastern countries are behind me in the western countries: and the same holds true in regard to the regions towards the South and North" (2. 5. 11). And yet it cannot be said that he was a great traveller; nor can it be said that he travelled for the purpose of scientific research—the real reason for his journeys will presently appear. He saw little even of Italy, where he seems to have followed without much deviation the roads Brindisi-Rome. Rome-Naples-Puteoli, and Rome-Populonia. It does not appear that he lived for any very long stretch of time at Rome; and it cannot be maintained with positiveness that in Greece he saw any place other than Corinth—not even Athens, strange as this In the South and the East his travels mav seem. were more extensive; in the South he visited the Nile valley as far as the frontiers of Ethiopia; he was at Comana Aurea for some time: he saw the river Pyramus, Hierapolis in Phrygia, Nysa in Caria, and Ephesus; he was acquainted with Pontus; he visited Sinope, Cyzicus, and Nicaea; he travelled over Cilicia and much of Caria, visiting Mylasa, Alabanda, Tralles, and probably also Synnada, Magnesia, Smyrna, the shores of the Euxine, and Beirut in Syria. Though we may not limit the places he saw to the places actually mentioned as having been seen by him, still it is clear that his journeys were not so wide as we should have expected in the case of a man who was travelling in the interest of science.

Ettore Pais seems to make good his contention that

the work of Strabo was not written by a man who was travelling on his own account and for scientific reasons, but by one who seized every occasion to study what circumstances and the pleasure of others gave him an opportunity of knowing. He contends, further, that it was for the sake of others that Strabo made his journeys; that he was instructor and politician, travelling perhaps with, and certainly in the interest of, persons of the most exalted rank; that he was the teacher and guide of eminent men. Strabo never fails to mention the famous scholars and teachers who were born in the East-the list is a long one; and we are fain to believe that he occupied a similar social position. He insists that his Geography is political: The greater part of Geography subserves the uses of states and their rulers; Geography as a whole is intimately connected with the functions of persons in positions of political leadership (1. 1. 16); Geography is particularly useful in the conduct of great military undertakings (1. 1. 17); it serves to regulate the conduct and answer the needs of ruling princes (1. 1. 18). sumably it was with just such people that he travelled. But Pais joins issue with Niese and others in their contention that the men with whom and in whose interest he travelled were Romans, and he makes out a good case when he argues that Strabo wrote his Geography in the interest of Pythodoris, Queen of Pontus. Even the great respect shown by Strabo for Augustus, Rome, and Tiberius is to be explained

by the circumstances in which he found himself; for subject-princes had to be obsequious to Rome, and as for Pythodoris, she owed her throne to Augustus fully as much as to Polemon. It was good business, therefore, that necessitated the retouching of the book and the insertion in it of the many compliments to Tiberius—all of which were added after the accession of that prince, and for fear of him, rather than out of respect for him.

The question as to when and where Strabo wrote his geographical work has long been a burning one in circles interested in Strabo criticism. Niese seemed to settle the question, when he maintained that Strabo wrote his Historical Geography at Rome, at the instigation of Roman friends who occupied exalted positions in the political world of Rome; and that he acted as the companion of those friends, accompanying one of them, Aelius Gallus, from Rome to Egypt, and returning with him to Rome: and further that it was at Rome that he wrote his Geography, between the years 18 and 19 a.p. In the main, scholars had accepted the views of Niese, until Pais entered the field with his thesis that Strabo wrote his work, not at the instigation of politicians at Rome, but from the point of view of a Greek from Asia Minor, and in the interest of Greeks of that region; that the material for the Geography was collected at Alexandria and Rome, but that the actual writing of the book and the retouching of it at a later period were done at Amasia, far from Romexxiv

a fact which accounts for his omissions of events, his errors, his misstatements, his lack of information concerning, and his failure to mention, occurrences that would surely have found a place in his book if it had been written in Rome; it accounts, too, for the surprising fact that Strabo's Geography was not known to the Romans—not even to Pliny—although it was well-known in the East, for Josephus quotes from it.

To go somewhat more minutely into this question, it may be stated that Strabo mentions Tiberius more than twenty times, but the events he describes are all connected with the civil wars that occurred after the death of Caesar and with the period in the life of Augustus that falls between the Battle of Actium (in 31 B.C.) and 7 B.C. He rarely mentions events in the life of Augustus between 6 B.C. and 14 A.D., and, as he takes every opportunity to praise Augustus and Tiberius, such omissions could not be accounted for if he wrote his Geography about 18 A.D. The conclusion reached by Pais is that Strabo wrote the book before 5 B.C. and shortly after 9 B.C., or, in other words, about 7 B.C. Such matters as the defeat of Varus and the triumph of Germanicus were not contained in the original publication of the work, and were inserted in the revised edition, which was made about the year 18 A.D. The list of the Roman provinces governed by the Roman Senate, on the last page of the book, was written between 22 B.C. and 11 B.c., and Strabo himself says that it was

antiquated; it was retouched about 7 B.C., not at Rome, but far from Rome. The facts are similar in the mention he makes of the liberality of Tiberius to the cities of Asia Minor that had been destroyed by earthquakes; in the case of the coronation of Zeno as king of Armenia Major (18 A.D.), and in the case of the death of Juba, which occurred not later than 23 A.D., Strabo made no use of the map of Agrippa—an omission with which he has been reproached—for the very good reason that the map of Agrippa had not been completed in 7 B.C.

If Strabo first published his Geography in 7 B.C., it appeared when he was fifty-six or fifty-seven years old, at a time when he was still in full possession of all his physical and mental powers. But if we say, with Niese and his followers, that the work was written between 18 and 19 A.D., we thereby maintain that Strabo began to write his Geography when he had passed the eighth decade of his life. He himself compares his book to a colossal statue, and it is incredible that he could have carried out such a stupendous work after having passed his eightieth year.

Strabo is so well-known as a geographer that it is often forgotten that he was a historian before he was a geographer. Indeed it may be believed that he is a geographer because he had been a historian, and that the material for his Geography was collected along with that for his Historical Sketches, which comprised forty-seven books (see xxvi

1. 1. 22-23, and 2. 1. 9, and footnotes). But his Geography alone has come down to us. In this connexion it will be useful to read Strabo's own account of his Historical Sketches and his Geography: "In short, this book of mine should be generally useful -useful alike to the statesman and to the public at large—as was my work on History. In this work, as in that, I mean by 'statesman,' not the man who is wholly uneducated, but the man who has taken the round of courses usual in the case of freemen or of students of philosophy. For the man who has given no thought to virtue and to practical wisdom, and to what has been written about them, would not be able even to form a valid opinion either in censure or in praise; nor yet to pass judgment upon the matters of historical fact that are worthy of being recorded in this treatise. And so, after I had written my Historical Sketches, which have been useful, I suppose, for moral and political philosophy, I determined to write the present treatise also; for this work itself is based on the same plan, and is addressed to the same class of readers, and particularly to men of exalted stations in life. Furthermore, just as in my Historical Sketches only the incidents in the lives of distinguished men are recorded, while deeds that are petty and ignoble are omitted, so in this work also I must leave untouched what is petty and inconspicuous, and devote my attention to what is noble and great, and to what contains the practically useful, or memorable, or

entertaining. Now just as in judging of the merits of colossal statues we do not examine each individual part with minute care, but rather consider the general effect and endeavour to see in the statue as a whole is pleasing, so should this book of mine be judged. For it, too, is a colossal work, in that it deals with the facts about large things only, and wholes, except as some petty thing may stir the interest of the studious or the practical man. I have said thus much to show that the present work is a serious one and one worthy of a philosopher" (1. 1. 22–23).

The Geography of Strabo is far more than a mere geography. It is an encyclopaedia of information concerning the various countries of the Inhabited World as known at the beginning of the Christian era; it is an historical geography; and, as Dubois and Tozer point out, it is a philosophy of geography.

TEXT

A. Baumeister: In Fleckeisen's Jahrb. f. Philol. 1857, 347.

Th. Bergk: In Philologus, 1870, 679. In Rhein. Mus. 1882, 298.

,, Emendat. Onomatolog. Halle, 1859.

In Neue Jahrbücher, 1860, 416.

G. N. Bernadakis: Symbolae criticae, vel censura Cobeti emendationum in Strabonem. Leipzig, 1877.

G. N. Bernadakis: Zu Strabon. In Neue Jahrbücher, 1876,

504.

G. Bernhardy: Analecta in Geographos Graecorum minores. Halle, 1850.

F. Bücheler: Conjectanea. In Neue Jahrbücher, 1875, 305.
C. Bursian: Geographie von Griechenland. Leipzig, 1862-72.

P. Cascorbi: Observationes Strabonianae. Greifswald, 1879.
 C. G. Cobet: Miscellanea critica quibus continentur observationes criticae in scriptores Graecos pruesertim Homerum et Demosthenem. Ad Strabonem, pp. 104 ff., 169 ff.,

206 ff. Also in Mnemosyne, 1876, 79 ff., 176 ff. C. G. Cobet: Syllabus Errorum, in Mnemosyne, 1876, 213.

C. Cobel: Sylutous Environme, in Innemosyne, 1870, 213.
 A. Corais: Σημειώσεις είς τὰ Στράβωνος Γεωγραφικά. Paris, 1819.

E. Curtius: Peloponnesus. Gotha, 1851-52.

,, In Zeitschrift f. Alterthumswissenschaft, 1852. A. Dederich: In Fleckeisen's Jahrb. f. Philol. 1879, 66.

M. G. Demitsas: Κριτικαὶ Διορθώσεις εἰς Στράβωνα. It 'Αθήναιον, 1879, 415.

L. Dindorf: In Neue Jahrbücher, 1869, 11 and 124.

W. Dittenberger: On 'Ομβρικοί in the first article on Ethnica und Verwandtes. In Hermes, 1906, 87. On Θρακικά. In Hermes, 1907, 195.

A. Forbiger: Strabo's Erdbeschreibung übersetzt und durch Anmerkungen erläutert. Stuttgart, published at intervals

after 1856 (1905-1908).

- C. Frick: Jahresbericht. In Bursian's Jahresbericht, 1880, 536.
- C. Frick: Zur troischen Frage. In Neue Jahrbücher, 1876, 289 ff.
- J. Geffcken: Saturnia Tellus. In Hermes, 1892, 381.
- C. G. Groskurd: Strabons Erdbeschreibung. 4 vols. Berlin and Stettin, 1831.
 P. F. J. Gosselin: The Notes signed "G" in the Translation
- of de la Porte du Theil, Corais, and Letronne.

 A. von Gutschmid: In Neue Jahrbücher, 1861, 204, and
- A. von Gutschmid: In Neue Jahrbücher, 1861, 204, and 1873, 418.
- F. Haase: Emendationes faciles. Breslau, 1858.
- R. Hercher: In Philologus, 1852, 553.
- P. Hirschfeld: Die Abkunft des Mithridates von Pergamon (on Strabo 625 C.). In Hermes, 1879, 474.
- A. Jacob: Curae Strabonianae. In Revue de Philologie, 1912, 148. It also contains a Collation for Book IV. of the Paris MSS. A C and s.
- H. Kallenberg: Straboniana. Beiträge zur Textkritik und Erklärung. In Rhein. Mus. 1912, 174.
- L. Kayser: Review of Meineke's Edition and of his Vindiciae Strabonianae, in Neue Jahrbücher f. Philol. 1854, 258, 273.
- L. Kayser: Review of Cobet's Variae lectiones. In Neue Jahrbücher, 1856, 166.
- A. Kirchhoff: In Hermes, 1866, 420.
- C. Kontos: In Bull. de Corr. Hell. 1877, 60, and 1878, 236.
- H. Kothe: In Neue Jahrbücher, 1888, 826.
- G. Kramer: Strabonis Geographica recensuit commentario critico instruzit. 3 vols. Berlin, 1844.
- G. L. Kriegk: Ueber die thessalische Ebene. In Neue Jahrbücher, 1859, 231 ff.
- R. Kunze: Zu Griechischen Geographen. In Rhein. Mus. 1901, 333.
- G. M. Lane: Smyrnaeorum res gestae et antiquitates. Göttingen, 1851.
- C. A. Lobeck: In Königsberger Ind. Lect. 1828.
- M. Lüdecke: De fontibus quibus usus Arrianus Anabasin composuit. In Leipziger Studien, xi. 14 (on Strabo 70 C.).
- I. N. Madvig: Adversaria critica ad scriptores graecos. Ad Strabonem: I., 520. Havn, 1871.

- A. Meineke: Strabonis Geographica recognovit. 3 vols. Leipzig, 1866. The Praefatio contains merely a statement of the points in which his text differs from that of Kramer.
- A. Meineke: Vindiciarum Straboniarum liber. Berlin, 1852. Contains much that Meineke did not insert in his text.
- C. Meltzer: In Fleckeisen's Jahrb. f. Philol. 1873, 193.
- L. Mercklin: Zu Strabo (v. 230). In Philologus, 1863, 134.
- E. Meyer: Forschungen zur alten Geschichte. Halle A/S, 1892.
- E. Meyer: Nochmals der ΛΟΓΟΣ des Königs Pausanias. In Hermes, 1907, 134.
- P. Meyer: Straboniana. Grimma, 1889-1890.
- A. Miller: Emendationum in Strabonis librum I. specimen. Bamberg, 1858.
- A. Miller: In Eos, 1865, 25.
 - ,, In Blätter für bayr. Gymn. 1874, 145 and 1878, 259.
- A. Miller: Die Alexandergeschichte nach Strabo. I. Theil. Würzburg, 1852.
- C. Müller: Index variae lectionis to the Müller-Dübner Edition.
- C. Müller: In Philologus, 1876, 74; 1877, 78. In Philol. Anzeiger, 1873, 507.
- B. Niese: Emendationes Strabonianae. Marburg, 1878.
- L. Pareti: Di un lucgo Straboniano su Regio. In Atene e Roma, 1913, 14 ff.
- L. Paul: Das Druidenthum. In Neue Jahrbücher, 1892, 786.
- N. Piccolos: In Philologus, 1860, 727.
- L. Rademacher: Observationum et lectionum variarum specimen. In Jahrbücher, 1895, 248.
- M. Rostowzew: Πυθόλαος (Strabo xvi. 4, 14 f.). In Archiv. f. Philol. v. 1-2, 181.
- L. Ross: Reisen auf den Inseln des griechischen Meeres. Stuttgart and Halle. 1845-49-52.
- L. Ross: Reisen im Peloponnesus. Berlin, 1841.
- G. Rucca: Interpretazione di un luogo di Strabone. Napoli, 1850.
- L. Spengel: In Münchner Gelehrte Anzeigen, 1845, 633 and 1848, 145.
- A. Schäfer: In Philologus, 1872, 184.

H. Schrader: In Neue Jahrbücher, 1868, 226. G. Schultze: Varia. In Hermes, 1893, 31.

A. Tardieu: In his Translation of Strabo.

W. Tomaschek: Miscellen aus der alten Geographie. In Zeitschrift f. österr. Gymn. 1867, 691.

T. Tosi: In Studi italiani di filologia classica, 17, 463. H. F. Tozer: Selections from Strabo. Oxford, 1893.

T. G. Tucker: Emendations in Strabo and Plutarch's Moralia. In Classical Quarterly, 1909, 99.

T. Tyrwhitt: Coniecturae in Strabonem. Erlangen, 1788.

L. Urlichs: In Rhein. Mus. f. Philol. 1856, 465.

A. Vogel: Jahresberichte in Philologus, 1880, 326, and 1881, 309, 508.

U. von Wilamowitz-Moellendorff: Griechisches Lesebuch. Short selections from Strabo.

U. v. Wilamowitz-Moellendorff: Parerga. In Hermes, 1878, 168.

MANUSCRIPTS

Strabo was not much read in antiquity: in a sense he was discovered in Byzantine times; copies of his work were rare, and apparently at one time the only manuscript extant was the so-called archetype, from which all the manuscripts now extant are descended. This seems clear because all the mistakes, the changes in the text, the transposed sentences, all the gaps, particularly the great gap at the end of the seventh book, are reproduced in all the manuscripts. The modern editions, beginning with that of G. Kramer, are based on the Paris manuscript No. 1397 for the first nine books (it contains no more), while books 10 to 17 are based on the Vatican manuscript No. 1329, on the Epitome Vaticana, and on the Venetian manuscript No. 640. But the Epitome, which goes back to the end of the tenth century, was based on a manuscript which still contained the end of Book VII.

J. Groeger: Quaestiones Eustathianae. De codicibus Strabonis Herodoti Arriani ab Eustathio in commentario ad Dionysii periegesin usurpatis. Trebnitz, 1911.

G. Kramer: Commentatio critica de codicibus, qui Strabonis geographia continent, manu scriptis. Berlin, 1845. And also in the Preface to his large edition, pp. 10-83.

xxxii

A. Jacob: Curae Strabonianae. In Revue de Philologie, 1912, 170.

E. Röllig: De codicibus Strabonianis qui libros I-IX continent. Halle, 1885.

FRAGMENTS

- G. Cozza-Luzi: Dell' antico codice della geografia di Strabone scoperto nei palinsesti della badia di Grottoferrata. Rome, 1875.
- G. Cozza-Luzi: Del piu antico testo della geografia di Strabone nei frammenti scoperti in membrane palinseste. Rome, 1884–98.
- G. Cozza-Luzi: Frammenti della geografia di Strabone. In Studi in Italia, vii. 1.
- D. Detlefsen: In Berl. philol. Wochenschrift, 1885, 1122.
- R. Hansen: In Philologische Rundschau, v. 517.
- G. Kramer: Fragmenta libri VII. e codd. prim. ed. Berlin, 1843.
- G. Kramer: Zu Strabo. Handschrift aus Grottoferrata. In Hermes, 1876, 375.
- R. Kunze: Strabobruchstücke bei Eustathius und Stephanus Byzantius. In Rhein. Mus. 1903, 126.
- R. Kunze: Unbeachtete Strabofragmente. In Rhein. Mus. 1902, 437.
- P. Otto: Strabonis 'Ιστορικῶν 'Υπομνημάτων fragmenta conlegit et enarravit adjectis quaestionibus Strabonianis. In Leipziger Studien xi. Suppl. 1889, 1.
- I. Partsch: In Deutsche Litteratur-Zeitung, 1885, 646.
- V. Strazzula: Dopo le Strabone Vaticano del Cozza-Luzi. Messina, 1901.
- G. L. F. Tafel: Fragmenta nov. curis emend. et illustr. Tübingen, 1844.
- A. Vogel: In *Philologischer Anzeiger*, 1886, 103.

 ,, Zu Strabo. In Hermes, 1884 (vol. 42), 539.

The Epitome is best found in C. Müller's Geographi Graeci Minores, 88, 529.

LANGUAGE

 Birke: De particularum μή et οὐ usu Polybiano Dionysiaco Diodoreo Straboniano. Leipzig, 1907.

xxxiii

P. Cascorbi: Observationes Strabonianae. Göttingen, 1879.

C. G. Cobet: Syllabus errorum. In Mnemosyne, 1876, 213.

H. Kallenberg: Straboniana, Beiträge zur Textkritik und Erklärung. In Rhein. Mus. 1912, 174.

J. Keim: Sprichwörter und parömiographische Ueberlieferung

bei Strabo. Tübingen, 1909.

H. Schindler: De Diodori Siculi et Strabonis enuntiationum relativarum attractione. Pars Prior: De admissa attractione. Frankenstein (Silesia), 1909.

ON THE SOURCES FROM WHICH STRABO DREW

G. Beloch: Le fonti di Strabone nelle descrizione della Campania. Rome, 1882.

H. Berger: Die geographischen Fragmente des Hipparch.

Leipzig, 1869.

H. Berger: Die geographischen Fragmente des Eratosthenes. Leipzig, 1880.

H. Berger: Geschichte der wissenschaftlichen Erdkunde der Griechen. 1887-93.

G. Bernhardy: Eratosthenica. Berlin, 1822.

R. Däbritz: De Artemidoro Strabonis auctore capita tria. Leipzig, 1905.

A. Dederich: Zu Strabon und Suetonius. In Neue Jahrb.

f. Philol. 1879, 66.

M. Dubois: Examén de la Géographie de Strabon. Paris, 1891.
,, Strabon et Polybe. In Revue des Études Grecques, 1891, 343.

W. Fabricius: Theophanes aus Mytilene und Quintus Dellius als Quelle der Geographie des Strabo. Strassburg, 1888.

- J. Groeger: Quaestiones Eustathianae. De codicibus Herodoti Arriani ab Eustathio in commentario ad Dionysii periegesin usurpatis. Trebnitz, 1911.
- A. H. L. Heeren: De fontibus Geographicorum Strabonis commentationes duae. Göttingen, 1825.
- F. Hennicke: De Strabonis Geographiae fide, ex fontium unde hausit auctoritate aestimanda. Göttingen, 1791.
- U. Höfer: Eine gemeinsame Quelle Strabons und des sog. Skymnos. Saarbrücken, 1901.
- G. Hunrath: Die Quellen Strabo's im sechsten Buche. Cassel, 1879.

xxxiv

- G. Hunrath: In Bursian's Jahresbericht, 1879, 311, and 1880, 93.
- A. Klotz: Caesarstudien, nebst einer Analyse der strabonischen Beschreibung von Gallien und Brittanien. Leipzig and Berlin, 1910.
- A. Miller: Strabo's Quellen über Gallien und Brittanien. Regensburg, 1878.
- K. J. Neumann: Strabons Quellen im elften Buche. I. Kaukasien. Leipzig. 1881.
- K. J. Neumann: Strabons Landeskunde von Kaukasien. Eine Quellenuntersuchung. Besondere Abdruck aus dem dreizehnten Supplb. des Jahrb. f. class. Philol. Leipzig, 1883.
- B. Niese: Apollodor's Commentar zum Schiffskataloge als Quelle Strabo's. In Rhein. Mus. f. Philol. 1877, 267.
- A. Oddo: Gl'Hypomnemata Historica di Strabone come fonte di Appiano. Palermo, 1901.
- G. D. Ohling: Quaestiones Posidonianae ex Strabone conlectae. Göttingen, 1908.
- E. Pais: Straboniana. Contributo allo studio delle fonti della storia e della amministrazione romana. In Rivista di Philologia classica, 1887, 97.
- E. Schweder: Beiträge zur Kritik der Chorographie des Augustus. Erster Theil. Kiel, 1878.
- E. Schweder: Ueber die gemeinsame Quelle der geographischen Darstellung des Mela und Plinius. In Philologus, 1887, 278.
- F. Sollima: Le fonti di Strabone nella geografia della Sicilia. Messina, 1897.
- C. Steinbrück: Die Quellen des Strabo im fünften Buche seiner Erdbeschreibung. Halle, 1909.
- A. Vogel: De fontibus quibus Strabo in libro quinto decimo conscribendo usus sit. Göttingen, 1874.
- A. Vogel: Strabons Quellen für das IX. Buch. In Philologus, 1884 (vol. 43), 405.
- H. Wilkens: Quaestiones de Strabonis aliorumque rerum gallicarum auctorum fontibus. Marburg, 1886.
- R. Žimmermann: Quibus auctoribus Strabo in libro tertio Geographicorum conscribendo usus sit, quaeritur. Pars Prior. Halle, 1883.
- R. Zimmermann: Posidonius und Strabo. In Hermes, 1888, 103.

STUDIES ON STRABO

D. Bartolini: Pro Strabone. In Ateneo Veneto, March, 1884. E. Beretta: Solution de problèmes historiques. Les Cités Mystérieuses de Strabon dans la région Cavare (Comtat Venaissin) l'Isaros et l'Isar. Lyons, 1907.

P. H. Bidder: De Strabonis studiis homericis capita selecta.

Gedani, 1889.

Bisciola, An Lib. XVII. geographiae Strabonis sint an Stratonis. Cologne, 1618.

H. Bötger: Wohnsitze der Deutschen nach Strabo. Stuttgart. 1877.

H. Butzer: Ueber Strabos Geographica, insbesondere über Plan und Ausführung des Werkes und Strabos Stellung zu seinen Vorgängern. Frankfurt a. M., 1887.

A. Calogiera: Nuova raccolta d'opusculi scientifici e filologici.

On Strabo in Vol. 18. Venice, 1755.

Ε. Castorchis: Περί τῶν ἐν Ναυπλία παναργαίων τάφων και τῶν αὐτόθι ὑπὸ Στράβωνος μνημονευομένων λαβυρίνθων. 'Αθήναιον, 1879, 515.

E. Curtius: Strabo über den Seebund von Kalauria.

Hermes, 1876, 385.

- H. Diels: Herodot und Hecataios. In Hermes, 1887, 443.
- W. Dörpfeld: Zum Elaitischen Golf. In Hermes, 1911, 444. A. Enmann: Geographische Homerstudien in Pausanias.

In Neue Jahrbücher, 1884, 497. Erhardt: Der Auszug der Cimbern bei Strabo.

Philologus, 1893, 557.

H. Fischer: Ueber einige Gegenstände der alten Geographie bei Strabo, als Beitrag zur Geschichte der alten Geographie. Erster Theil. Wernigerode, 1879. Zweiter Theil. Wernigerode, 1892-93.

C. Frick: Der χωρογραφικός πίναξ des Strabo. In Neue Jahrbücher, 1881, 650.

J. Geffcken: Die Gründung von Tarent. In Neue Jahrbücher, 1893, 177.

W. Gell: The Itinerary of Greece, with a Commentary on Pausanias and Strabo. London, 1810.

P. Giovio (P. Jovius): Libellus de legatione Basilii Magni Principis Moschoviae, etc. On the Rhipaean Mountains. Rome, 1525.

xxxvi

- A. Gronovius: Varia Geographica, containing Animadversiones in Strabonis libros novem. Leiden, 1739.
- A. Häbler: Die Nord- und Westküsten Hispaniens, ein Beitrag zur Geschichte der alten Geographie. Leipzig, 1886.
- G. Hirschfeld: In Geogr. Jahrb. 1888, 253.
- G. Hirschfeld: Die Abkunft des Mithridates von Pergamon. In Hermes, 1878, 474.
- E. Hübner: Egelesta. In Hermes, 1867, 456.
 E. Huverstuhl: Die Lupia des Strabo. Antwerp, 1910. (See H. Nöthe in Wochens. f. klass. Philol. 1911, 345.)
- C. W. F. Jacobs: Was sind σκολιά έργα beim Strabo? Leipzig, 1834.
- W. Judeich: Caesar im Orient. Kritische Uebersicht der Ereignisse vom 9 August 48 bis October 47. Leipzig, 1885.
- F. Kähler: Strabos Bedeutung für die moderne Geographie, Halle, 1900.
- W. Dittenberger: Methana und Hypata. In Hermes, 1907, 542.
- B. Keil: Zur Pausaniasfrage. In Hermes, 1890, 317.
- J. Keim: Sprichwörter und parömiographische Ueberlieferung bei Strabo. Tübingen, 1909.
- G. Knaack: Zur Sage von Daidalos und Ikaros. In Hermes, 1902, 598.
- U. Köhler: Der Areopag in Athen. (On 1. 4. 8.) In Hermes, 1872, 92.
- E. Kornemann: Die Diözesen der Provinz Hispania Citerior. In Lehmann's Beiträge zur alten Geschichte, 1884, 323.
- W. J. Law: Some Remarks on the Alpine Passes of Strabo. London, 1846.
- A. Linsmayer: Der Triumphzug des Germanicus. München, 1875.
- B. de Luca: Il Lago di Lesina in Strabone e Plinio. In Rassegna Pugliese, 1900, No. 11.
- G. H. L. Lünemann: Descriptio Caucasi, Gentiumque Caucasiarum, ex Strabone. Leipzig, 1803.
- G. Mair: Παντοῖα. (A). Pytheas' Fahrten in der Ostsee. (B). Πλεύμων θαλάσσιος bei Strabo, ii. 104. Marburg, 1907.
- E. Meyer: Forschungen zur alten Geschichte. Halle A/S, 1892.
- E. Meyer: Nochmals der ΛΟΓΟΣ des Königs Pausanias. In Hermes, 1907, 134.
- P. Meyer: Straboniana. Grimma, 1890.

- F. Meyer: Botanische Erläuterungen. Königsberg, 1852.
- H. Middendorf: Ueber die Gegend der Varusschlacht nach Vellejus und Strabo, etc. Münster, 1868.
- A. Miller: Der Rückzug des Kraterus aus Indien. Eine Strabonische Studie. Würzburg (no date).
- A. Miller: Die Alexandergeschichte nach Strabo. I. Theil. Würzburg, 1882.
- B. Niese: Straboniana. Die Erwerbung der Küsten des Pontus durch Mithridates VI. Sonderabdruck aus dem Rhein. Mus. f. Philol. 1887, 567.
- K. J. Neumann: Gesammturtheil über die homerische Geographie. In Hermes, 1886, 134.
- K. J. Neumann: Strabons Landeskunde von Kaukasien. Leipzig, 1883.
- K. J. Neumann: Patrokles und der Oxos. In Hermes, 1884, 165.
- P. Otto: Quaestiones Strabonianae. In Leipziger Studien, ii. Suppl. (vol. 12, 1889), 225.
- L. Paul: Das Druidenthum. In Neue Jahrbücher, 1892, 786.
- E. Petersen: Review of Benndorf's Forschungen in Ephesos. In Neue Jahrbücher, 1906, 713.
- A. Philippson: Zur Geographie der unteren Kaïkos-Ebene in Kleinasien. In Hermes, 1911, 254.
- A. J. Reinach: Delphes et les Bastarnes. In Bull. Corr. Hell. 1910, 249.
- H. Rid: Die Klimatologie in den Geographica Strabos. Ein Beitrag zur physischen Geographie der Griechen. Kaisersläutern, 1903.
- H. Rid: Kimalehre der alten Griechen nach den Geographica Strabos. Kaisersläutern, 1904.
- W. Ridgeway: Contributions to Strabo's Geography. In Classical Review, 1888, 84.
- C. Robert: Athena Śkiras und die Skirophorien. In Hermes, 1885, 349.
- G. Ruge: Quaestiones Strabonianae. Leipzig, 1888.
- A. Schulten: Polybius und Posidonius über Iberien und die iberischen Kriege. In Hermes, 1911, 568.
- A. Serbin: Bemerkungen über den Vulkanismus und Beschreibung der den Griechen bekannten vulkanischen Gebiete. Berlin, 1893.
- F. M. Schröter: Bemerkungen zu Strabo. Leipzig, 1887.

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E. Schweder: Beiträge zur Kritik der Chorographie des Augustus. Kiel, 1878.

E. Schweder: Ueber den Ursprung und die ursprüngliche Bestimmung des sogenannten Strassennetzes der Peutingerschen Tafel. In Philologus, 1903, 357.

J. Sitzler: Zu Kallinos und Tyrtaeus. In Neue Jahrbücher, 1880, 358.

L. V. Sybel: Pausanias und Strabon. In Neue Jahrbücher, 1885, 177.

J. Töpffer: Astakos. In Hermes, 1896, 124.

G. F. Unger: Frühlingsanfang. In Neue Jahrbücher, 1890, 393.

E. Wendling: Zu Posidonius und Varro. In Hermes, 1893, 346.

U. v. Wilamowitz-Moellendorff: Die Herkunft der Magneten am Maeander. In Hermes, 1895, 177.

U. Wilcken: Ein Theopompfragment in den neuen Hellanika. In Hermes, 1908, 475.

E. Ziebarth : Die Strabo-Scholion des Cyriacus von Ankona. In Mittheil. des Athen. Instit. 1898, 196.

EARLY EDITIONS

The editio princeps was published by Aldus in Venice in 1516, from a poor manuscript, Par. No. 1395. Then came the folio editions of Basle in 1549 and 1571 by G. Xylander. Xylander's work was revised and supplied with a commentary by Isaac Casaubon in 1587 (folio). Casaubon replaced this with his own edition, which was accompanied by Xylander's Latin translation and notes by F. Morrellius. Casaubon's edition did much for the text of the first three books, and Strabo is usually cited Next came the Amsterdam by Casaubon's pages (C). edition by T. J. van Almaloveen in 1707, in two folio volumes. Strabo is sometimes cited by his pages (A). In 1763 Bréquigny published the first three books (quarto) on the basis of a Paris manuscript. In 1796 the Leipzig (octavo) edition was begun: the first volume was revised by J. B. Siebenkees; the five following volumes by C. H. Tzschucke; the seventh volume by F. T. Friedmann. The first six volumes give the text and a revision of Xylander's Latin translation, and the seventh volume contains notes. In 1807 appeared at

Oxford the edition by T. Falconer in two folio volumes; much criticised. Between the years 1815 and 1819 Corais published the Greek text in three volumes, accompanied by a fourth volume containing valuable notes in Modern Greek.

MODERN EDITIONS

- A. Corais: Στράβωνος Γεωγραφικῶν Βιβλία Έπτακαίδεκα.
 4 vols. Paris. 1815.
- G. Kramer: Strabonis Geographica recensuit, commentario critico instruxit. 3 vols. Berlin, 1844.

A. Meineke: Strabonis Geographica recognovit. 3 vols. Leipzig, 1852. Various stereotype reprints since.

- C. Müller—F. Dübner: Strabonis Ĝeographica graece cum versione reficta accedit index variantis lectionis et tabula rerum nominumque locupletissima. Paris, 1853. Pars prior.
- C. Müller—F. Dübner: Pars altera. Apparatu critico indicibus rerum nominumque locupletissimis tabulis aeri incisis quindecim instruxit Carolus Müllerus. Paris, 1858.
- M. Bouquet: Recueil des historiens des Gaules. In vol. i. Paris, 1738.
- P. Carolides: Γεωγραφικών τὰ περὶ Μικρᾶς ᾿Ασίας μετὰ Σημειώσεων Ἑρμηνευτικών. Athens. 1889.
- E. Cougny: Extraits des auteurs grecs concernant la géographie et l'histoire des Gaules. Texte et traduction nouvelle. Paris. 1878.
- H. F. Tozer: Selections from Strabo, with an Introduction on Strabo's Life and Works. Oxford, 1893.

EARLY TRANSLATIONS

The Latin translation by Guarinus Veronensis and Gregorius Tifernas appeared in Rome in 1472 (folio), more than forty years before the publication of the Aldine Greek text. The translation was made from better manuscripts than that used in the Aldine edition, but these have since perished. The first ten books were translated by Guarinus and the remainder by Tifernas. This translation was revised by J. Andreas

(Venice 1480); edited and republished by A. Mancellinus (Venice 1494); republished 1510; revised by C. Heresbach (Basle 1523, folio); republished in Basle 1539 (folio); republished by M. Hopper in Lyons 1559 in two volumes; republished in Amsterdam in 1652 in two volumes; and the same translation appeared in the Basle edition of 1571 as revised by G. Xylander. The Latin of the translation was so good that it supplanted, for a time, the Greek text. but it has now been superseded by the Latin translation in the Didot edition. The translation of the first six books is by F. Dübner, and that of the other nine books by Müller. At the suggestion of Napoleon I. the publication of a translation into French was undertaken by the French Government with the advice of the Institut. The first fifteen books are by A. Corais and Laporte du Theil, the sixteenth and seventeenth books are by A. Letronne; the notes signed "G" are by Gosselin, and are geographical in nature. The work was published in five quarto volumes in Paris between the years 1805 and 1819. The first German translation was made by A. J. Penzel, Lemgo, 1775-1777. There is an Italian translation by Ambrosoli, Milan 1834-1835 (I have not been able to consult it).

TRANSLATIONS (used by the present translator)

The Latin Translation in the Müller-Dübner edition.

A. Buonaccivoli: La geografia di Strabone tradotta in volgare Italiano. La prima parte in Venetia, 1662. La seconda

parte in Ferrara, 1665.

E. Cougny: Extraits des auteurs grecs concernant la géographie et l'histoire des Gaules. Texte et traduction nouvelle publiés pour la Société de l'histoire de France. Paris, 1878.

A. Forbiger: Strabo's Erdbeschreibung übersetzt und durch Anmerkungen erläutert. 4 vols. Stuttgart, 1856-1860.

Stereotype reprints at intervals since (1905-1908).

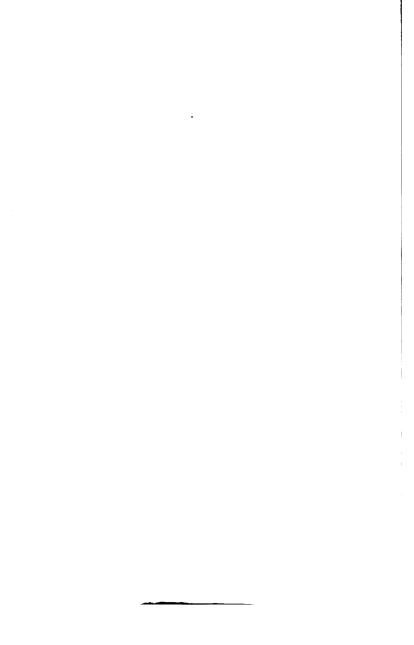
C. G. Groskurd: Strabons Erdbeschreibung in siebenzehn Büchern nach berichtigtem griechischen Texte unter Begleitung kritischer erklärender Anmerkungen verdeutscht. 4 vols. Berlin and Stettin, 1831-1834.

- H. C. Hamilton and W. Falconer: The Geography of Strabo, literally translated. 3 vols. London (Bohn's Classical Library. Reprint, 1892-93).
- K. Kärcher: Strabo's Geographie übersetzt. Stuttgart, 1851.
- E. Malgeri: Il VI. libro della geografia (antica Italia, Sicilia, Iapigia) tradotto e commentato. Traduzione corredata di una indice geografico. Palermo, 1897.
- de la Porte du Theil, A. Coray, et A. Letronne: Géographie de Strabon, traduite du grec en français. 5 vols. Paris, 1805-1819.
- G. Sottini: Geografia dell'Italia antica trudotta e corredata di una introduzione e note per uso delle scuole classiche. Pisa, 1882.
- A. Tardieu: Géographie de Strabon. Traduction nouvelle. 4 vols. Paris, 1909 (Third Edition).

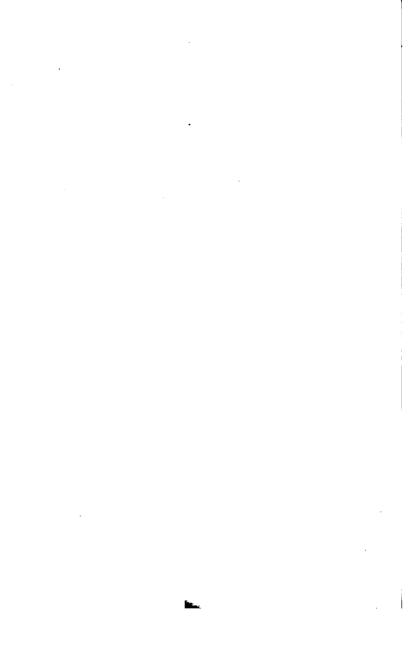
STRABO'S ORIGIN, BIRTH, LIFE, TEACHERS, TRAVELS, DATE OF COMPOSITION OF HIS WORK

- E. H. Bunbury: History of Ancient Geography, 1883, ii. 209.
- A. Forbiger: In his Handbuch der alten Geographie, i. 302.
- G. Fritz: De Strabone Stoicorum disciplinae addicto. Münster. 1906.
- A. Häbler: Hat Strabo seine Geographie in Rom verfasst? In Hermes, 1884, 235.
- J. Hasenmüller: De Strabonis geographi vita. Bonn, 1863.
- E. Meyer: Geschichte des Königreichs Pontus. Leipzig, 1879.
- P. Meyer: Quaestiones Strabonianae. In Leipziger Studien, ii. 49.
- Th. Mommsen: Res gestae divi Augusti. Berlin, 1883.
- B. Niese: Beiträge zur Biographie Strabos. In Hermes, 1878, 33.
- E. Pais: The Time and Place in which Strabo composed his Geography. In Ancient Italy (English translation). London, 1908, 379.
- E. Pais: Straboniana. In Rivista di Filologia, 1886, 97.
- W. Passow: De Eratosthenis aetate. In Genethliacon Gottingense, 1888, 122.
- F. M. Schröter: De Strabonis itineribus. Leipzig, 1874.

- G. Siebelis: De Strabonis patria, genere, aetate, operis instituto atque ratione qua vet. descripsit Graeciam. Bautzen, 1828.
- E. Stemplinger: Strabons litterarhistorische Notizen, München, 1894.
- H. F. Tozer: Selections from Strabo with an Introduction on
- Strabo's Life and Works. Oxford, 1893.
 C. H. Weller: The Evidence for Strabo's Travels in Greece.
 In Classical Philology, 1906, 339; see also A.J.A. 1906, 84.



GEOGRAPHY OF STRABO BOOK I



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THE GEOGRAPHY OF STRABO BOOK I

VOL. I.

ΣΤΡΑΒΩΝΟΣ ΓΕΩΓΡΑΦΙΚΩΝ

A'

I

C 1 1. Τῆς τοῦ φιλοσόφου πραγματείας εἶναι νομίζομεν, εἴπερ ἄλλην τινά, καὶ τὴν γεωγραφικήν, ἢν νῦν προηρήμεθα ἐπισκοπεῖν. ὅτι δ' οὐ φαύλως νομίζομεν, ἐκ πολλῶν δῆλον. οἴ τε γὰρ πρῶτοι θαρρήσαντες αὐτῆς ἄψασθαι τοιοῦτοι δή τινες¹ ὑπῆρξαν· "Ομηρός τε καὶ 'Αναξίμανδρος ὁ Μιλήσιος καὶ 'Εκαταῖος, ὁ πολίτης αὐτοῦ, καθὼς καὶ 'Ερατοσθένης φησί· καὶ Δημόκριτος δὲ καὶ
C 2 Εὔδοξος καὶ Δικαίαρχος καὶ "Εφορος καὶ "ἄλλοι πλείους· ἔτι δὲ οἱ μετὰ τούτους, 'Ερατοσθένης τε καὶ Πολύβιος καὶ Ποσειδώνιος, ἄνδρες φιλόσοφοι. ἤ τε πολυμάθεια, δὶ ἡς μόνης ἐφικέσθαι τοῦδε τοῦ ἔργου δυνατόν, οὐκ ἄλλου τινός ἐστιν, ἡ τοῦ τὰ θεῖα καὶ τὰ ἀνθρώπεια ἐπιβλέπουτος, ὧνπερ τὴν φιλοσοφίαν ἐπιστήμην φασίν. ὡς δ' αὔτως καὶ ἡ

ώφέλεια ποικίλη τις οὖσα, ή μὲν πρὸς τὰς πολίτικὰς καὶ τὰς ἡγεμονικὰς πράξεις, ἡ δὲ πρὸς ἐπιστήμην τῶν τε οὐρανίων καὶ τῶν ἐπὶ γῆς καὶ

θαλάττης ζώων καὶ φυτῶν καὶ καρπῶν καὶ τῶν

1 τοιοῦτοι δή τινες, Corais, on MS. authority, for τοιοῦτοί
τινες.

2 τὰς πολιτικάς, Spengel, for τὰ πολιτικά.

THE GEOGRAPHY OF STRABO

BOOK I

I

1. The science of Geography, which I now propose to investigate, is, I think, quite as much as any other science, a concern of the philosopher; and the correctness of my view is clear for many reasons. the first place, those who in earliest times ventured to treat the subject were, in their way, philosophers -Homer, Anaximander of Miletus, and Anaximander's fellow-citizen Hecataeus-just as Eratosthenes has already said; philosophers, too, were Democritus, Eudoxus, Dicaearchus, Ephorus, with several others of their times; and further, their successors-Eratosthenes, Polybius, and Poseidonius—were philosophers. In the second place, wide learning, which alone makes it possible to undertake a work on geography, is possessed solely by the man who has investigated things both human and divine—knowledge of which, they say, constitutes philosophy. And so, too, the utility of geography-and its utility is manifold, not only as regards the activities of statesmen and commanders but also as regards knowledge both of the heavens and of things on land and sea, animals, plants, fruits, and everything else to be seen in

άλλων, όσα ίδειν παρ' έκάστοις έστί, τον αὐτον ὑπογράφει ἄνδρα, τον φροντίζοντα της περὶ τον βίον τέχνης καὶ εὐδαιμονίας.

- 2. 'Αναλαβόντες δὲ καθ' ἔκαστον ἐπισκοπῶμεν τῶν εἰρημένων ἔτι μᾶλλον. καὶ πρῶτον ὅτι ὀρθῶς ὑπειλήφαμεν καὶ ἡμεῖς καὶ οἱ πρὸ ἡμῶν, ὧν ἐστι καὶ "Ιππαρχος, ἀρχηγέτην εἶναι τῆς γεωγραφικῆς ἐμπειρίας "Ομηρον· δς οὐ μόνον ἐν τῆ κατὰ τὴν ποίησιν ἀρετῆ πάντας ὑπερβέβληται τοὺς πάλαι καὶ τοὺς ὕστερον, ἀλλὰ σχεδόν τι καὶ τῆ κατὰ τὸν βίον ἐμπειρία τὸν πολιτικόν, ἀφ' ῆς οὐ μόνον περὶ τὰς πράξεις ἐσπούδασεν ἐκεῖνος, ὅπως ὅτι πλείστας γνοίη καὶ παραδώσει τοῖς ὕστερον ἐσομένοις, ἀλλὰ καὶ τὰ περὶ τοὺς τόπους τούς τε καθ' ἔκαστα καὶ τοὺς κατὰ σύμπασαν τὴν οἰκουμένην, γῆν τε καὶ θάλατταν. οὐ γὰρ ἄν μέχρι τῶν ἐσχάτων αὐτῆς περάτων ἀφίκετο τῆ μνήμη κύκλφ περιιών.
- 3. Καὶ πρῶτον μὲν τῷ ἀκεανῷ περίκλυστον, ὅσπερ ἐστίν, ἀπέφαινεν αὐτήν ἔπειτα δὲ τῶν χωρίων τὰ μὲν ἀνόμαζε, τὰ δὲ ὑπηνίττετο τεκμηρίοις τισί, Λιβύην μὲν καὶ Αἰθιοπίαν καὶ Σιδονίους καὶ Ἐρεμβούς, οὖς εἰκὸς λέγειν Τρωγλοδύτας ᾿Αραβας, ἡητῶς λέγων, τοὺς δὲ πρὸς ταῖς ἀνατολαῖς καὶ δύσεσιν αἰνιττόμενος ἐκ τοῦ τῷ ἀκεανῷ κλύζεσθαι. ἐντεῦθεν γὰρ ἀνίσχοντα ποιεῖ τὸν

¹ For Strabo's definition of Libya see 17. 3. 1.

GEOGRAPHY, 1. 1. 1-3

various regions—the utility of geography, I say, presupposes in the geographer the same philosopher, the man who busies himself with the investigation of

the art of life, that is, of happiness.

2. But I must go back and consider each one of these points in greater detail; and, first, I say that both I and my predecessors, one of whom was Hipparchus himself, are right in regarding Homer as the founder of the science of geography; for Homer has surpassed all men, both of ancient and modern times, not only in the excellence of his poetry, but also, I might say, in his acquaintance with all that pertains to public life. And this acquaintance made him busy himself not only about public activities, to the end that he might learn of as many of them as possible and give an account of them to posterity, but also about the geography both of the individual countries and of the inhabited world at large, both land and sea; for otherwise he would not have gone to the uttermost bounds of the inhabited world, encompassing the whole of it in his description.

3. In the first place, Homer declares that the inhabited world is washed on all sides by Oceanus, and this is true; and then he mentions some of the countries by name, while he leaves us to infer the other countries from hints; for instance, he expressly mentions Libya,¹ Ethiopia, Sidonians, and Erembians—and by Erembians he probably means Arabian Troglodytes²—whereas he only indicates in general terms the people who live in the far east and the far west by saying that their countries are washed by Oceanus. For he makes the sun to

^{2 &}quot;Cave-dwellers." They lived on the western shores of the Red Sea.

ήλιον καὶ δυόμενον εἰς τοῦτον, ὡς δ' αὕτως καὶ τὰ ἄστρα·

ήέλιος μὲν ἔπειτα νέον προσέβαλλεν ἀρούρας,¹ ἐξ ἀκαλαρρείταο βαθυρρόου Ὠκεανοῖο.

(Il. 7. 421)

 $\vec{\epsilon}$ ν δ' $\vec{\epsilon}$ πεσ' ' Ω κεαν $\hat{\varphi}$ λαμπρον φάος $\hat{\eta}$ ελίοιο, $\vec{\epsilon}$ λκον νύκτα μέλαιναν. 2 (Π. 8. 485)

καὶ τοὺς ἀστέρας δὲ³ λελουμένους έξ ὠκεανοῦ

λέγειν. (ΙΙ. 5. 6)

4. Τῶν δ' ἐσπερίων ἀνδρῶν καὶ τὴν εὐδαιμονίαν ἐμφανίζει καὶ τὴν εὐκρασίαν τοῦ περιέχοντος, πεπυσμένος, ὡς ἔοικε, τὸν Ἰβηρικὸν πλοῦτον, ἐφ' δν καὶ Ἡρακλῆς ἐστράτευσε καὶ οἱ Φοίνικες ὕστερον, οἵπερ ἀρχὴν⁴ καὶ κατέσχον τὴν πλείστην μετὰ δὲ ταῦτα Ῥωμαῖοι. ἐνταῦθα γὰρ αἱ τοῦ C 3 Ζεφύρου πνοαί. ἐνταῦθα δὲ καὶ τὸ Ἡλύσιον ποιεῖ πεδίον ὁ ποιητής, εἰς δ πεμφθήσεσθαί φησι τὸν Μενέλαον ὑπὸ τῶν θεῶν.

άλλά σ' ἐς Ἡλύσιον πεδίον καὶ πείρατα γαίης άθάνατοι πέμψουσιν, ὅθι ξανθὸς Ῥαδάμανθυς, τῆ περ ρηΐστη βιοτὴ πέλει· οὐ νιφετός, οὔτ' ἀρ χειμων πολύς, άλλ' αἰεὶ Ζεφύροιο λιγὺ πνείοντος ὁ ἀήτας ᾿Ωκεανὸς ἀνίησι. (Od. 4. 563)

 Καὶ αἱ τῶν μακάρων δὲ νῆσοι πρὸ τῆς Μαυρουσίας εἰσὶ τῆς ἐσχάτης πρὸς δύσιν, καθ'

1 ἀρούραs, the reading of B, for ἀρούραιs.

³ δέ, Cobet inserts, after ἀστέρας.

² Meineke deletes both quotations; C. Müller, Cobet, approving; A. Miller defends the quotations.

GEOGRAPHY, 1. 1. 3-5

rise out of Oceanus and to set in Oceanus; and he refers in the same way to the constellations: "Now the sun was just beating on the fields as he climbed heaven from the deep stream of gently-flowing Oceanus." "And the sun's bright light dropped into Oceanus, drawing black night across the earth." And he declares that the stars also rise from Oceanus "after having bathed in Oceanus."

4. As for the people of the west, Homer makes plain that they were prosperous and that they lived in a temperate climate—doubtless having heard of the wealth of Iberia, and how, in quest of that wealth, Heracles invaded the country, and after him the Phoenicians also, the people who in earliest times became masters of most of the country (it was at a later date that the Romans occupied it). For in the west the breezes of Zephyrus blow; and there it is that Homer places the Elysian Plain itself, to which he declares Menelaus will be sent by the gods: But the deathless gods will convey thee to the Elysian Plain and the ends of the earth, where

blowing ² Zephyrus."

5. And, too, the Islands of the Blest³ lie to the westward of most western Maurusia,⁴ that is, west

is Rhadamanthys of the fair hair, where life is easiest. No snow is there, nor yet great storm; but always Oceanus sendeth forth the breezes of the clear-

² See page 107.

⁴ That is, Morocco, approximately.

¹ What is now Portugal and Spain.

³ Strabo has in mind the Canary Islands.

⁴ ἀρχήν, A. Miller transposes, from its position after την πλείστην, and makes it the adverb.

⁵ λιγὸ πνείοντος, Sterrett, for λιγυπνείοντας.

δ μέρος συντρέχει καὶ τῷ τῆς Ἰβηρίας τὸ ταύτης πέρας ἐκ δὲ τοῦ ὀνόματος δῆλον, ὅτι καὶ ταύτας ἐνόμιζον εὐδαίμονας διὰ τὸ πλησιάζειν τοιούτοις χωρίοις.

6. 'Αλλά μὴν ὅτι γε καὶ οἱ Αἰθίοπες ἐπὶ τῷ

ωκεανώ έσχατοι, δηλοί ότι μεν έσχατοι,

Αλθίοπας, τολ διχθὰ δεδαίαται, ἔσχατοι ἀνδρῶν, (Od. 1. 23)

οὐδὲ τοῦ "διχθὰ δεδαίαται" φαύλως λεγομένου, ώς δειχθήσεται ὕστερον. ὅτι δ' ἐπὶ τῷ ὠκεανῷ,

Ζεὺς γὰρ ἐς ᾿Ωκεανὸν μετ᾽ ἀμύμονας Αἰθιοπῆας χθιζὸς ἔβη μετὰ δαῖτα. (Il. 1. 423)

ότι δὲ καὶ ἡ πρὸς ταῖς ἄρκτοις ἐσχατιὰ παρωκεανῖτίς ἐστιν, οὕτως ἢνίξατο εἰπὼν περὶ τῆς ἄρκτου

> οἴη δ' ἄμμορός ἐστι λοετρῶν 'Ωκεανοῖο. (Il. 18. 489; Od. 5. 275)

διὰ μὲν γὰρ τῆς ἄρκτου καὶ τῆς ἁμάξης τὸν ἀρκτικὸυ δηλοῖ· οὐ γὰρ ἂν τοσούτων ἀστέρων ἐν τῷ αὐτῷ χωρίῳ περιφερομένων τῷ ἀεὶ φανερῷ οἴην ἄμμορον εἶπε λοετρῶν ὠκεανοῖο. ὥστ' οἰκ εὖ ἀπειρίαν αὐτοῦ καταγινώσκουσιν, ὡς μίαν ἄρκτον ἀντὶ δυεῖν εἰδότος· οὐδὲ γὰρ εἰκὸς ἢν πω τὴν ἑτέραν ἠστροθετῆσθαι, ἀλλ' ἀφ' οὖ οἱ Φοίνικες ἐσημειώσαντο καὶ ἐχρῶντο πρὸς τὸν πλοῦν, παρελθεῖν καὶ εἰς τοὺς Ελληνας τὴν διάταξιν ταύτην, ὥσπερ καὶ τὸν Βερενίκης πλόκαμον, καὶ τὸν Κάνωβον, ἐχθὲς καὶ πρῷην κατωνομασμένον

GEOGRAPHY, 1. 1. 5-6

of the region where the end of Maurusia runs close to that of Iberia. And their name shows that because those islands were near to blessed countries

they too were thought to be blessed abodes.

6. Furthermore, Homer assuredly makes it plain that the Ethiopians live at the ends of the earth, on the banks of Oceanus: that they live at the end of the earth, when he speaks of "the Ethiopians that are sundered in twain, the farthermost of men" (and indeed the words "are sundered in twain" are not carelessly used, as will be shown later on); and that they live on the banks of Oceanus, when he says "for Zeus went yesterday to Oceanus, unto the noble Ethiopians for a feast." And he has left us to infer that the farthest land in the north is also bounded by Oceanus when he says of the Bear that "She alone hath no part in the baths of Oceanus." That is, by the terms "Bear" and "Wain" he means the "arctic circle"; for otherwise he would not have said of the Bear that "She alone hath no part in the baths of Oceanus," since so many stars complete their diurnal revolutions in that same quarter of the heavens which was always visible to him. So it is not well for us to accuse him of ignorance on the ground that he knew of but one Bear instead of two; for it is likely that in the time of Homer the other Bear had not yet been marked out as a constellation, and that the star-group did not become known as such to the Greeks until the Phoenicians so designated it and used it for purposes of navigation; the same is true of Berenice's Hair and of Canopus, for we know that these two constellations have received

¹ For the meaning of the term "arctic circle" among the ancients, see 2. 2. 2 and footnote.

ἴσμεν, 1 πολλοὺς δ' ἔτι νῦν ἀνωνύμους ὄντας, καθάπερ καὶ "Αρατός φησιν (Phaen. 146). οὐδὲ Κράτης οὖν ὀρθῶς γράφει,

οίος δ' ἄμμορός ἐστι λοετρῶν

φεύγων τὰ μὴ φευκτά. βελτίων δ' Ἡράκλειτος καὶ όμηρικώτερος, όμοίως ἀντὶ τοῦ ἀρκτικοῦ τὴν άρκτον ονομάζων· "ηοῦς καὶ έσπέρης² τέρματα ή άρκτος, καὶ ἀντίον τῆς ἄρκτου οὖρος αἰθρίου Διός." ό γὰρ ἀρκτικός ἐστι δύσεως καὶ ἀνατολῆς C 4 δρος, οὐχ ή ἄρκτος. διὰ μὲν δὴ τῆς ἄρκτου, ἡν καὶ ἄμαξαν καλεῖ καὶ τὸν 'Ωρίωνα δοκεύειν φησί (Od. 5. 274), τὸν ἀρκτικὸν δηλοῦ διὰ δὲ τοῦ ώκεανοῦ τὸν ὁρίζοντα, εἰς δν καὶ ἐξ οῦ τὰς δύσεις καὶ τὰς ἀνατολὰς ποιεί.8 εἰπων δὲ αὐτοῦ στρέφεσθαι καὶ ἀμοιρεῖν τοῦ ὠκεανοῦ οἶδεν ὅτι κατὰ σημείον τὸ ἀρκτικώτατον τοῦ ὁρίζοντος γίνεται ὁ άρκτικός. ἀκολούθως δή τούτφ τὸ ποιητικὸν άρμόσαντες τὸν μὲν ὁρίζοντα ὀφείλομεν δέχεσθαι τὸν ἐπὶ τῆς γῆς οἰκείως τῷ ὠκεανῶ, τὸν δ' ἀρκτικὸν της γης άπτόμενον ώς αν πρός αισθησιν κατά τὸ άρκτικώτατον της οἰκήσεως σημείον ώστε καί τοῦτο τὸ μέρος τῆς γῆς κλύζοιτ' αν τῶ ὠκεανῶ

3 ποιεί, A. Miller, for ποιείται; A. Vogel approving.

 ¹ γσμεν, A. Miller inserts; A. Vogel approving in part.
 2 ἐσπέρηs, Corais, for ἐσπέραs; Meineke following;
 C. Müller, Cobet, approving.

GEOGRAPHY, 1. 1. 6

their names quite recently, and that there are many constellations still unnamed, just as Aratus says. Therefore Crates is not correct, either, when, in seeking to avoid what needs no avoidance. he alters the text of Homer so as to make it read. "And the arctic circle 1 alone hath no part in the baths of Oceanus." Better and more Homeric is Heracleitus, who likewise employs "the Bear" for "the arctic circle": "The Bear forms limits of morning and evening, and over against the Bear fair breezes blow from fair skies"2; for the arctic circle, and not the Bear, forms a boundary beyond which the stars neither rise nor set. Accordingly, by "the Bear," which he also calls "the Wain" and describes as keeping watch upon Orion, Homer means the "arctic circle," and by Oceanus he means the horizon into which he makes the stars to set and from which he makes them to rise. And when he says that the Bear makes its revolution in that region without having a part in Oceanus, he knows that the arctic circle touches the most northerly point of the horizon. If we construe the poet's verse in this way, then we should interpret the terrestrial horizon as closely corresponding to Oceanus, and the arctic circle as touching the earth -if we may believe the evidence of our senses-at its most northerly inhabited point. And so, in the opinion of Homer, this part of the earth also is

1 Crates emended Homer's feminine form of the adjective for "alone" (οἴη) to the masculine form (οἶος), so as to make it agree with "arctic circle" and not with "Bear."

² Heracleitus, with his usual obscurity, divides the heavens roughly into four quarters, viz.: the Bear (north), morning (east), evening (west), and the region opposite the Bear (south). Strabo's interpretation of Heracleitus as regards the "arctic circle" is altogether reasonable.

κατ' αὐτόν. καὶ τοὺς ἀνθρώπους δὲ οἶδε τοὺς προσβόρρους¹ μάλιστα, οῦς ὀνομαστὶ μὲν οὐ δηλοῖ (οὐδὲ γὰρ νῦν που κοινὸν αὐτοῖς ὄνομα κεῖται πᾶσι), τῆ διαίτη δὲ φράζει, νομάδας αὐτοὺς ὑπογράφων καὶ "ἀγαυοὺς ἱππημολγοὺς γαλακτοφάγους ἀβίους² τε" (ΙΙ. 13. 5, 6).

7. Καὶ ἄλλως δ' ἐμφαίνει τὸ κύκλω περικεῖσθαι

τη γη τὸν ὡκεανόν, ὅταν οῦτω φη ή "Ηρα:

εἰμι γὰρ ὀψομένη πολυφόρβου πείρατα γαίης ΄Ωκεανόν τε θεῶν γένεσιν. (Il. 14. 200, cf. 301)

τοῖς γὰρ πέρασι πᾶσι συνῆφθαι⁸ λέγει τὸν ὠκεανόν· τὰ δὲ πέρατα κύκλῳ περίκειται (Il. 18. 607).
ἔν τε τῆ ὁπλοποιία τῆς ᾿Αχιλλέως ἀσπίδος κύκλῳ
περιτίθησι τὸν ὠκεανὸν ἐπὶ τῆς ἴτυος. ἔχεται δὲ
τῆς αὐτῆς φιλοπραγμοσύνης καὶ τὸ μὴ ἀγνοεῖν τὰ
περὶ τὰς πλημμυρίδας τοῦ ὠκεανοῦ καὶ τὰς ἀμπώτεις, "ἀψορρόου 'Ωκεανοῖο" (Il. 18. 399) λέγοντα εκαὶ

τρὶς μὲν γάρ τ' ἀνίησιν ἐπ' ἤματι, τρὶς δ' ἀναροιβδεῖ. (Od. 12. 105)

καὶ γὰρ εἰ μὴ τρίς, ἀλλὰ δίς, τάχα τῆς ἱστορίας παραπαίσαντος, ἡ τῆς γραφῆς διημαρτημένης ἀλλ' ἡ γε προαίρεσις τοιαύτη. καὶ τὸ "ἐξ ἀκαλαρρείταο" (Il. 7. 422) δὲ ἔχει τινὰ ἔμφασιν τῆς πλημμυρίδος, ἐχούσης τὴν ἐπίβασιν πραεῖαν καὶ

3 συνήφθαι, Madvig, for συνήθη; Cobet approving.
 4 λέγοντα, editors before Kramer (who reads λέγοντι);
 Meineke restores; C. Müller approving.

5 παραπαίσαντος, Cobet, for παραπεσόντος.

¹ προσβόρρους, Meineke, for προσβορέους; C. Müller approving.

2 Aβιοι is a proper name in Homer.

GEOGRAPHY, 1. 1. 6-7

washed by Oceanus. Furthermore, Homer knows of the men who live farthest north; and while he does not mention them by name—and even to the present day there is no common term that will embrace them all—he characterises them by their mode of life, describing them as "nomads," and as "proud mare-milkers, curd-eaters, and a resourceless folk."

7. In other ways, too, Homer indicates that Oceanus surrounds the earth, as when Hera says as follows: "For I am going to visit the limits of the bountiful earth, and Oceanus, father of the gods." By these words he means that Oceanus touches all the extremities of the earth; and these extremities form a circle round the earth. Again, in the story of the making of the arms of Achilles, Homer places Oceanus in a circle round the outer edge of the shield of Achilles. It is another proof of the same eagerness for knowledge that Homer was not ignorant about the ebb and flow of the tide of Oceanus: for he speaks of "Oceanus that floweth ever back upon himself," and also says: "For thrice a day she1 spouts it forth, and thrice a day she sucks it down." For even if it be "twice" and not "thrice"—it may be that Homer really strayed from the fact on this point, or else that there is a corruption in the text² —the principle of his assertion remains the same. And even the phrase "gently-flowing" contains a reference to the flood-tide, which comes with a gentle

² See 1. 2. 16, where Polybius is referred to as making a

similar statement.

¹ Homer here refers to Charybdis. Strabo himself seems to be doing Homer an injustice by confusing the behaviour of Charybdis with the tides of Oceanus.

οὐ τελέως ροώδη. Ποσειδώνιος δὲ καὶ ἐκ τοῦ σκοπέλους λέγειν τοτὲ μὲν καλυπτομένους, τοτὲ δὲ γυμνουμένους, καὶ ἐκ τοῦ ποταμὸν φάναι τὸν ἀκεανὸν εἰκάζει τὸ ροῶδες αὐτοῦ τὸ περὶ τὰς πλημμυρίδας ἐμφανίζεσθαι (Π. 14. 245). τὸ μὲν οὖν πρῶτον εὖ, τὸ δὲ δεύτερον οὐκ ἔχει λόγον· οὖτε γὰρ ποταμίφ ρεύματι ἔοικεν ἡ τῆς πλημμυρίδος ἐπίβασις, πολὸ δὲ μᾶλλον ἡ ἀναχώρησις οὐ τοιαύτη. ὅ τε τοῦ Κράτητος λόγος διδάσκει τι πιθανώτερον. βαθύρρουν μὲν γὰρ καὶ ἄψορρον (Od. 11. 13; 20. 65) λέγει, δμοίως δὲ καὶ ποταμὸν τι ποταμὸν καὶ ποταμοῖο ρόον, οὖ τοῦ ὅλου, ἀλλὰ τοῦ μέρους, ὅταν οὕτω φῆ·

αὐτὰρ ἐπεὶ ποταμοῖο λίπεν ῥόον ஹακανοῖο νηῦς, ἀπὸ δ' ἵκετο κῦμα θαλάσσης εὐρυπόροιο. (Od. 12. 1)

οὐ γὰρ τὸν ὅλον, ἀλλὰ τὸν ἐν τῷ ὠκεανῷ τοῦ ποταμοῦ ῥόον μέρος ὄντα τοῦ ὠκεανοῦ, ὅν φησιν ὁ Κράτης ἀνάχυσίν τινα καὶ κόλπον ἐπὶ τὸν νότιον πόλον ἀπὸ τοῦ χειμερινοῦ τροπικοῦ διήκοντα. τοῦτον γὰρ δύναιτ΄ ἄν τις ἐκλιπὼν ἔτι εἶναι ἐν τῷ ὠκεανῷ· τὸν δὲ ὅλον ἐκλιπόντα ἔτι εἶναι ἐν τῷ ὅλῳ, οὐχ οἶόν τε. "Ομηρος δέ γε οὕτω φησί·

"ποταμοῖο λίπεν ῥόον, ἀπὸ δ' ἴκετο κῦμα θαλάσσης,"

ήτις οὐκ ἄλλη τίς ἐστιν, ἀλλὰ ὠκεανός. γίνεται οὖν, ἐὰν ἄλλως δέχη, ἐκβὰς ἐκ τοῦ ὠκεανοῦ, ἠλθεν εἰς τὸν ὠκεανόν. ἀλλὰ ταῦτα μὲν μακροτέρας ἐστὶ διαίτης.

GEOGRAPHY, 1. 1. 7

swell, and not with a violent current. Poseidonius conjectures both from Homer's reference to the headlands as sometimes covered with the waves and sometimes bare, and from his calling Oceanus a river, that by the current of Oceanus Homer is indicating the flow of the tides. The first conjecture of Poseidonius is correct, but the second is unreasonable. swell of the tide is not like a stream of a river, and still less so is the ebb. The explanation given by Crates is more plausible. Homer speaks of the whole of Oceanus as "deep-flowing" and "back-flowing," and, likewise, as being a river; he also speaks of a part of Oceanus as a river, or as a "river-stream"; and he is speaking of a part of Oceanus, and not of the whole, when he says: "Now after the ship had left the river-stream of Oceanus, and was come to the wave of the wide sea." Not the whole, I say, but the stream of the river, which stream is in Oceanus, being therefore a part of it; and this stream, Crates says, is a sort of estuary or gulf, which stretches from the winter tropic in the direction of the south pole. Indeed, one might leave this estuary and still be in Oceanus; but it is not possible for a man to leave the whole and still be in the whole. At any rate Homer says: "The ship had left the river-stream, and was come to the wave of the sea," where "the sea" is surely nothing other than Oceanus; if you interpret it otherwise, the assertion becomes: "After Odvsseus had gone out of Oceanus, he came into Oceanus." But that is a matter to be discussed at greater length.

¹ Strabo placed the "summer tropic" and "winter tropic" respectively at 24° north and south of the equator. They correspond, therefore, pretty closely to our Tropic of Cancer and Tropic of Capricorn.

8. "Οτι δὲ ἡ οἰκουμένη νῆσός ἐστι, πρῶτον μὲν έκ της αισθήσεως και της πείρας ληπτέον. πανταχή γάρ, όπουποτοῦν ἐφικτὸν γέγονεν ἀνθρώποις έπὶ τὰ ἔσγατα τῆς γῆς προελθεῖν, ευρίσκεται θάλαττα, ην δη καλούμεν ωκεανόν. καὶ ὅπου δὲ τη αίσθήσει λαβείν οὐχ ὑπηρξεν, ὁ λόγος δείκνυσι. τὸ μὲν γὰρ έωθινὸν πλευρόν, τὸ κατὰ τοὺς Ἰνδούς, καὶ τὸ ἐσπέριον, τὸ κατὰ τοὺς "Ιβηρας καὶ τοὺς Μαυρουσίους, περιπλείται παν έπι πολύ του τε νοτίου μέρους και τοῦ βορείου τὸ δὲ λειπόμενον άπλουν ήμιν μέχρι νθν τφ μή συμμίξαι μηδένας άλλήλοις των άντιπεριπλεόντων ου πολύ, εί τις συντίθησιν έκ των παραλλήλων διαστημάτων των έφικτων ήμιν. οὐκ εἰκὸς δὲ διθάλαττον εἰναι τὸ πέλαγος τὸ ᾿Ατλαντικόν, ἰσθμοῖς διειργόμενον ούτω στενοίς τοίς κωλύουσι τον περίπλουν, άλλά μάλλον σύρρουν καὶ συνεχές. οί τε γάρ περιπλείν έπιχειρήσαντες, είτα αναστρέψαντες, ούχ ύπὸ ηπείρου τινός αντιπιπτούσης και κωλυούσης τον ἐπέκεινα πλοῦν ἀνακρουσθηναι φασίν, ἀλλὰ ὑπο άπορίας καὶ ἐρημίας, οὐδὲν ήττον της θαλάττης έγούσης τὸν πόρον. τοῖς τε πάθεσι τοῦ ἀκεανοῦ τοίς περί τὰς ἀμπώτεις καὶ τὰς πλημμυρίδας όμολογεί τοῦτο μάλλον πάντη γοῦν ὁ αὐτὸς τρόπος των 2 μεταβολων ύπάρχει καὶ των αὐξήσεων

¹ ἐπιχειρήσαντες, the reading of the MSS., is retained; C. Müller approving. Dübner and Meineke read ἐγχειρή-

² τε, A. Miller deletes, before μεταβολών.

GEOGRAPHY, 1. 1. 8

8. We may learn both from the evidence of our senses and from experience that the inhabited world is an island; for wherever it has been possible for man to reach the limits of the earth, sea has been found, and this sea we call "Oceanus." And wherever we have not been able to learn by the evidence of our senses, there reason points the way. For example, as to the eastern (Indian) side of the inhabited earth, and the western (Iberian and Maurusian) side, one may sail wholly around them and continue the voyage for a considerable distance along the northern and southern regions; and as for the rest of the distance around the inhabited earth which has not been visited by us up to the present time (because of the fact that the navigators who sailed in opposite directions towards each other never met), it is not of very great extent, if we reckon from the parallel distances that have been traversed by us. It is unlikely that the Atlantic Ocean is divided into two seas, thus being separated by isthmuses so narrow and that prevent the circumnavigation; it is more likely that it is one confluent and continuous sea. For those who undertook circumnavigation, and turned back without having achieved their purpose, say that they were made to turn back, not because of any continent that stood in their way and hindered their further advance, inasmuch as the sea still continued open as before, but because of their destitution and This theory accords better, too, with the behaviour of the ocean, that is, in respect of the ebb and flow of the tides; everywhere, at all events, the same principle, or else one that does not vary much, accounts for the changes both of high tide and low

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καὶ μειώσεων, ἡ οὐ πολὺ παραλλάττων, ὡς ἄν ἐφ'¹ ἐνὸς πελάγους τῆς κινήσεως ἀποδιδομένης καὶ ἀπὸ

μιᾶς αἰτίας.

9. "Ιππαρχος δ' οὐ πιθανός ἐστιν ἀντιλέγων τῆ δόξη ταύτη, ὡς οὔθ' ὁμοιοπαθοῦντος τοῦ ὡκεανοῦ C 6 παντελῶς, οὔτ', εἰ δοθείη τοῦτο, ἀκολουθοῦντος αὐτῷ τοῦ σύρρουν εἶναι πᾶν τὸ κύκλφ πέλαγος τὸ ᾿Ατλαντικόν, πρὸς τὸ μὴ ὁμοιοπαθεῖν μάρτυρι χρώμενος Σελεύκφ τῷ Βαβυλωνίφ. ἡμεῖς δὲ τὸν μὲν πλείω λόγον περὶ τοῦ ἀκεανοῦ καὶ τῶν πλημμυρίδων εἰς Ποσειδώνιον ἀναβαλλόμεθα καὶ ᾿Αθηνόδωρον, ἰκανῶς διευκρινήσαντας ² τὸν περὶ τούτων λόγον πρὸς δὲ τὰ νῦν ἐπὶ τοσοῦτον λέγομεν, ὅτι πρός τε τὴν ὁμοιοπάθειαν οὕτω βέλτιον νομίσαι τά τε οὐράνια συνέχοιτ' ἄν κρεῖττον ταῖς ἐντεῦθεν ἀναθυμιάσεσιν, εἰ πλεῖον εἴη τὸ ὑγρὸν περικεχυμένον.

10. Πσπερ οὖν τὰ ἔσχατα καὶ τὰ κύκλῳ τῆς οἰκουμένης οἰδε καὶ φράζει σαφῶς ὁ ποιητής, οὕτω καὶ τὰ τῆς θαλάττης τῆς ἐντός. περιέχει γὰρ ταύτην ἀπὸ Στηλῶν ἀρξαμένοις Λιβύη τε καὶ Αἴγυπτος καὶ Φοινίκη, ἐξῆς δὲ ἡ περαία³ τῆς Κύπρου, εἶτα Σόλυμοι καὶ Λυκίοι καὶ Κᾶρες, μετὰ δὲ τούτους ἡ μεταξὺ Μυκάλης καὶ τῆς Τρφάδος ἦων καὶ αἱ προκείμεναι νῆσοι, ὧν

¹ ἐφ', Corais, for ἐπί; C. Müller approving.

3 περαία, Madvig, for πέριξ. 4 ήών, Meineke, for ἡιών.

² διευκρινήσαντας, R. Hercher and Piccolos independently, for διακρατήσαντας; C. Müller and A. Vogel approving in part. Corais reads διακροτήσαντας, C. Müller approving; Kramer διακρατύναντας; Meineke διακριβώσαντας (Ε. Stemplinger, L. Kayser, approving) or διασαφήσαντας; Madvig διαιτήσαντας.

GEOGRAPHY, 1. 1. 8-10

tide; as would be the case if their movements were produced by one sea and were the result of one cause.

- 9. Hipparchus is not convincing when he contradicts this view on the ground, first, that the ocean does not behave uniformly throughout, and, secondly, that, even if this be granted, it does not follow that the Atlantic Ocean runs round the earth in one unbroken circle. In support of his opinion that the ocean does not behave uniformly he appeals to the authority of Seleucus of Babylon. But for a further discussion of the ocean and its tides I refer the reader to Poseidonius and Athenodorus, who have examined the argument on this subject with thoroughness. my present purpose I merely add that it is better to accept this view of the uniform behaviour of the ocean; and that the farther the mass of water may extend around the earth, the better the heavenly bodies will be held together by the vapours that arise therefrom.2
- 10. Homer, then, knows and clearly describes the remote ends of the inhabited earth and what surrounds it; and he is just as familiar with the regions of the Mediterranean Sea. For if you begin at the Pillars of Heracles,³ you will find that the Mediterranean Sea is bounded by Libya, Egypt, and Phoenicia, and further on by the part of the continent lying over against Cyprus; then by the territory of the Solymi, by Lycia, and by Caria, and next by the seaboard between Mycale and the Troad, together with the islands adjacent thereto; and all these lands are

See 1. 3. 7. and 1. 3. 12.
 A doctrine of the Stoics.
 See 3. 5. 5 for the different conceptions of what the Pillars were.

άπάντων 1 μέμνηται καὶ ἐφεξῆς τῶν περὶ τὴν Προποντίδα καὶ τοῦ Εὐξείνου 2 μέχρι Κολχίδος καὶ τῆς Ἰάσονος στρατείας. καὶ μὴν καὶ τὸν Κιμμερικὸν βόσπορον οἶδε, τοὺς Κιμμερίων εἰδώς οὐ δήπου τὸ μὲν ὅνομα τῶν Κιμμερίων εἰδώς, αὐτοὺς δὲ ἀγνοῶν, οῖ κατ' αὐτὸν ἡ μικρὸν πρὸ αὐτοῦ μέχρι Ἰωνίας ἐπέδραμον τὴν γῆν τὴν ἐκ βοσπόρου πᾶσαν. αἰνίττεται γοῦν καὶ τὸ κλίμα τῆς χώρας αὐτῶν ζοφῶδες ὄν, καὶ ὡς φησίν,

ἠέρι καὶ νεφέλη κεκαλυμμένοι· οὐδέ ποτ' αὐτοὺς Ἡέλιος φαέθων ἐπιδέρκεται,⁸ ἀλλ' ἐπὶ νὺξ ὀλοὴ τέταται. (Od. 11. 15, 19)

γνωρίζει δὲ καὶ τὸν Ἰστρον, μεμνημένος γε Μυσών, ἔθνους Θρακίου παροικοῦντος τὸν Ἰστρον. καὶ μὴν καὶ τὴν ἐξῆς παραλίαν οἶδε, Θρακίαν οὖσαν, μέχρι Πηνειοῦ, Παίονάς τε ὀνομάζων καὶ ᾿Αθω καὶ ᾿Αξιὸν καὶ τὰς προκειμένας τούτων νήσους. ἐξῆς δέ ἐστιν ἡ τῶν Ἑλλήνων παραλία μέχρι Θεσπρωτῶν, ῆς ἀπάσης μέμνηται. καὶ μὴν καὶ τὰ τῆς Ἰταλίας ἄκρα οἶδε, Τεμέσην καλῶν καὶ Σικελούς, ⁵ καὶ τὰ τῆς Ἰβηρίας ἄκρα καὶ τὴν εὐδαιμονίαν αὐτῶν, ῆν ἀρτίως ἔφαμεν. εἰ δέ τινα ἐν τοῖς μεταξὺ διαλείμματα φαίνεται, συγγνοίη τις ἄν· καὶ γὰρ ὁ γεωγραφῶν ὄντως πολλὰ παρίησι τῶν ἐν μέρει. συγγνοίη δ' ἄν, καὶ εἰ μυθώδη τινὰ προσπέπλεκται τοῖς λεγομένοις ἱστορικῶς

 $^{^1}$ άπdντων, Casaubon, for $\dot{a}π aσ \dot{ω}ν$; Kramer, Groskurd, Forbiger, Tardieu, Meineke, following.

² τά, Meineke deletes, before μέχρι; C. Müller approving.
³ ἐπιδέρκεται, C. Müller restores, for the usual reading καταδέρκεται, from the MSS. of the Odyssey.

GEOGRAPHY, 1. 1. 10

mentioned by Homer, as well as those farther on. about the Propontis and the Euxine Sea as far as Colchis and the limits of Jason's expedition; more than that, he knows the Cimmerian Bosporus, because he knows the Cimmerians—for surely, if he knows the name of the Cimmerians, he is not ignorant of the people themselves—the Cimmerians who, in Homer's own time or shortly before his time, overran the whole country from the Bosporus to Ionia. At least he intimates that the very climate of their country is gloomy, and the Cimmerians, as he says, are "shrouded in mist and in cloud, and never does the shining sun look upon them, but deadly night is spread o'er them." Homer also knows of the River Ister,1 since he mentions Mysians, a Thracian tribe that lives on the Ister. More than that, he knows the sea-board next to the Ister, on the Thracian side, as far as the Peneus² River; for he speaks of Paeonians, of Athos and Axius,3 and of their neighbouring islands. And next comes the sea-board of Greece, as far as Thesprotia, which he mentions in its entirety. And yet more, he knows the promontories of Italy also, for he speaks of Temesa and of Sicily; he also knows about the headland capes of Iberia, and of the wealth of Iberia, as I have stated above. If between these countries there are some countries which he leaves out, one might pardon him; for the professed geographer himself omits many details. And we might pardon the poet even if he has inserted things

¹ Danube.

² Salambria.

³ The River Vardar.

 ⁴ τοῦ, before Μυσῶν, Kramer deletes; Meineke following.
 ⁵ Reference is made to Od. 1. 184, but that Temesa is in Cyprus.

καὶ διδασκαλικῶς, καὶ οὐ δεῖ μέμφεσθαι. οὐδὲ C 7 γὰρ ἀληθές ἐστιν, ὅ φησιν Ἐρατοσθένης, ὅτι ποιητής πας στοχάζεται ψυχαγωγίας, οὐ διδασκαλίας· τάναντία γὰρ οἱ φρονιμώτατοι τῶν περὶ ποιητικῆς τι φθεγξαμένων πρώτην τινὰ λέγουσι φιλοσοφίαν την ποιητικήν. άλλά πρὸς Ἐρατοσθένη μεν αὐθις ερούμεν διὰ πλειόνων, εν οίς καὶ περί του ποιητού πάλιν έσται λόγος.

11. Νυνί δὲ ὅτι μὲν "Ομηρος τῆς γεωγραφίας ῆρξεν, ἀρκείτω τὰ λεχθέντα. φανεροί δὲ καὶ οἰ ἐπακολουθήσαντες αὐτῷ ἄνδρες ἀξιόλογοι καὶ οικείοι φιλοσοφίας ών τους πρώτους μεθ' "Ομηρον δύο φησὶν Ἐρατοσθένης, Αναξίμανδρόν τε, Θαλοῦ γεγονότα γνώριμον καὶ πολίτην, καὶ Εκαταίον τον Μιλήσιον τον μέν οθν έκδοθναι πρώτον γεωγραφικόν πίνακα, τον δε Εκαταίον καταλιπειν γράμμα, πιστούμενον εκείνου είναι εκ τής άλλης αὐτοῦ γραφής.

12. 'Αλλά μὴν ὅτι γε δεῖ πρὸς ταῦτα πολυμαθείας εἰρήκασι συχνοί εὖ δὲ καὶ Ίππαρχος έν τοις πρός Ἐρατοσθένη διδάσκει, ὅτι παντί, καὶ ιδιώτη καὶ τῷ φιλομαθοῦντι, τῆς γεωγραφικῆς ίστορίας προσηκούσης αδύνατον μεταλαβείν 1 άνευ της των οὐρανίων καὶ της των ἐκλειπτικών τηρήσεων επικρίσεως οίον 'Αλεξάνδρειαν την προς Αιγύπτω, πότερον άρκτικωτέρα Βαβυλώνος η νοτιωτέρα, λαβείν οὐχ οἶόν τε, οὐδ' ἐφ' ὁπόσον διάστημα, χωρίς της διά των κλιμάτων επισκέ-

¹ Strabo discusses the point more fully in 1. 2. 3.

¹ μεταλαβείν, Capps, for λαβείν.

² Hipparchus took as a basis of calculation for latitudes and longitudes a principal parallel of latitude through the Pillars of Heracles and the Gulf of Issus, and a principal meridian through Alexandria. He then drew parallels of

of a mythical nature in his historical and didactic narrative. That deserves no censure; for Eratosthenes is wrong in his contention that the aim of every poet is to entertain, not to instruct; indeed the wisest of the writers on poetry say, on the contrary, that poetry is a kind of elementary philosophy.¹ But later on I shall refute Eratosthenes at greater length, when I come to speak of Homer again.

11. For the moment what I have already said is sufficient, I hope, to show that Homer was the first geographer. And, as every one knows, the successors of Homer in geography were also notable men and familiar with philosophy. Eratosthenes declares that the first two successors of Homer were Anaximander, a pupil and fellow-citizen of Thales, and Hecataeus of Miletus; that Anaximander was the first to publish a geographical map, and that Hecataeus left behind him a work on geography, a work believed to be his by reason of its similarity to his other writings.

12. Assuredly, however, there is need of encyclopaedic learning for the study of geography, as many men have already stated; and Hipparchus, too, in his treatise Against Eratosthenes, correctly shows that it is impossible for any man, whether layman or scholar, to attain to the requisite knowledge of geography without the determination of the heavenly bodies and of the eclipses which have been observed; for instance, it is impossible to determine whether Alexandria in Egypt is north or south of Babylon, or how much north or south of Babylon it is, without investigation through the means of the "climata." In

latitude through various well-known places, and thus formed belts of latitude which he called "climata." By means of the solstitial day he determined the width of each "clima," differences of latitude, and so on. But Strabo uses the term primarily in reference to the parallels of latitude themselves. ψεως όμοίως τὰς πρὸς ἔω προσκεχωρηκυίας 1 ἡ πρὸς δύσιν μᾶλλον καὶ ἡττον οὐκ ᾶν γνοίη τις ἀκριβῶς, πλὴν εἰ 2 διὰ τῶν ἐκλειπτικῶν ἡλίου καὶ σελήνης συγκρίσεων. οὖτος δὲ δὴ ταῦτά Φησιν.

- 13. "Απαντες δε δου τόπων ιδιότητας λέγειν έπιχειροῦσιν οἰκείως προσάπτονται καὶ τῶν οὐρανίων και γεωμετρίας, σχήματα και μεγέθη και άποστήματα καὶ κλίματα δηλοῦντες καὶ θάλπη καὶ ψύχη καὶ άπλῶς τὴν τοῦ περιέχοντος φύσιν. έπει και οίκον κατασκευάζων οικοδόμος ταθτα αν προορώτο και πόλιν κτίζων άρχιτέκτων, μή τί γε όλην επισκοπών την οίκουμένην ανήρ πολύ γάρ τούτω προσήκει μάλλον. έν μέν γάρ τοῖς μικροῖς γωρίοις τὸ πρὸς ἄρκτους ἡ πρὸς νότον κεκλίσθαι παραλλαγήν ου πολλήν έγει, έν δε τώ παντί κύκλω της οἰκουμένης, τὸ 4 πρὸς ἄρκτον μὲν μέγρι των υστάτων έστι της Σκυθίας ή της Κελτικής. μέχρι δὲ τῶν ὑστάτων Αἰθιόπων τὰ πρὸς νότον τοῦτο δὲ παμπόλλην ἔχει διαφοράν. δμοίως δὲ καὶ τὸ παρ' Ἰνδοῖς οἰκεῖν ἡ παρ' Ἰβηρσιν ων C 8 τούς μεν εφους μάλιστα, τούς δε εσπερίους, τρόπου δέ τινα και ἀντίποδας ἀλλήλοις ἴσμεν.
 - 14. Πῶν δὲ τὸ τοιοῦτον ἐκ τῆς τοῦ ἡλίου καὶ τῶν ἄλλων ἄστρων κινήσεως τὴν ἀρχὴν ἔχον καὶ

προσκεχωρηκυίαs, Corais, for προπαρακεχωρηκυίαs.
 εἰ, Corais, for ἤ, after πλήν; Meineke following.

^{*} δέ, Casaubon inserts, after &παντες.

^{*} το προς άρκτον μέν, Corais, for προς άρκτον μέν τό.

GEOGRAPHY, 1. 1. 12-14

like manner, we cannot accurately fix points that lie at varying distances from us, whether to the east or the west, except by a comparison of the eclipses of the sun and the moon. That, then, is what Hippar-

chus savs on the subject.

- 13. All those who undertake to describe the distinguishing features of countries devote special attention to astronomy and geometry, in explaining matters of shape, of size, of distances between points. and of "climata," as well as matters of heat and cold, and, in general, the peculiarities of the atmosphere. Indeed, an architect in constructing a house, or an engineer in founding a city, would make provision for all these conditions; and all the more would they be considered by the man whose purview embraced the whole inhabited world; for they concern him more than anyone else. Within the area of small countries it involves no very great discrepancy if a given place be situated more towards the north, or more towards the south: but when the area is that of the whole round of the inhabited world, the north extends to the remote confines of Scythia and Celtica,2 and the south to the remote confines of Ethiopia, and the difference between these two extremes is very great. The same thing holds true also as regards a man's living in India or Iberia; the one country is in the far east, and the other is in the far west; indeed, they are, in a sense, the antipodes of each other, as we know.
- 14. Everything of this kind, since it is caused by the movement of the sun and the other stars as well

² France, approximately.

¹ That is, by a comparison of the observations of the same eclipse, made from the different points of observation.

ἔτι τῆς ἐπὶ τὸ μέσον φορᾶς, ἀναβλέπειν ἀναγκάζει πρὸς τὸν οὐρανὸν καὶ πρὸς τὰ φαινόμενα παρ' ἐκάστοις ἡμῶν τῶν οὐρανίων ἐν δὲ τούτοις ἐξαλλάξεις ὁρῶνται παμμεγέθεις τῶν οἰκήσεων. τίς ἄν οὖν διαφορὰς τόπων ἐκτιθέμενος καλῶς καὶ ἰκανῶς διδάσκοι, μὴ φροντίσας τούτων μηδενὸς μηδ' ἐπὶ μικρόν; καὶ γὰρ εἰ μὴ δυνατὸν κατὰ τὴν ὑπόθεσιν τὴν τοιαύτην ἄπαντα ἀκριβοῦν διὰ τὸ εἶναι πολιτικωτέραν, τό γε ἐπὶ τοσοῦτον, ἐφ' ὅσον καὶ τῷ πολιτικῷ παρακολουθεῖν δυνατόν, προσήκοι ἄν εἰκότως.

15. 'Ο δ' οὕτω μετεωρίσας ἤδη τὴν διάνοιαν οὐδὲ τῆς ὅλης ἀπέχεται γῆς. φαίνεται γὰρ γελοῖον, εἰ τὴν οἰκουμένην γλιχόμενος σαφῶς ἐξειπεῖν τῶν μὲν οὐρανίων ἐτόλμησεν ἄψασθαι καὶ χρήσασθαι πρὸς τὴν διδασκαλίαν, τὴν δ' ὅλην γῆν, ῆς μέρος ἡ οἰκουμένη, μήθ' ὁπόση, μήθ' ὁποία τις, μήθ' ὅπου κειμένη τοῦ σύμπαντος κόσμου, μηδὲν¹ ἐφρόντισε· μηδ', εἰ καθ' ἔν μέρος οἰκεῖται μόνον τὸ καθ' ἡμᾶς, ἡ κατὰ πλείω, καὶ² πόσα· ὡς δ' αὕτως καὶ τὸ ἀοίκητον αὐτῆς πόσον καὶ ποῖόν τι καὶ διὰ τί. ἔοικεν οὖν μετεωρολογικῆ τινι πραγματεία καὶ γεωμετρικῆ συνῆφθαι τὸ τῆς γεωγραφίας εἶδος, τὰ ἐπίγεια τοῖς οὐρα-

² ή, Corais deletes before καὶ πόσα, Meineke following.

¹ μηδέν, Corais, for μηθέν; Meineke following; C. Müller approving.

GEOGRAPHY, 1. 1. 14-15

as by their tendency towards the centre,¹ compels us to look to the vault of heaven, and to observe the phenomena of the heavenly bodies peculiar to our individual positions; and in these phenomena we see very great variations in the positions of inhabited places. So, if one is about to treat of the differences between countries, how can he discuss his subject correctly and adequately if he has paid no attention, even superficially, to any of these matters? For even if it be impossible in a treatise of this nature, because of its having a greater bearing on affairs of state, to make everything scientifically accurate, it will naturally be appropriate to do so, at least in so far as the man in public life is able to follow the thought.

15. Moreover, the man who has once thus lifted his thoughts to the heavens will surely not hold aloof from the earth as a whole; for it is obviously absurd. if a man who desired to give a clear exposition of the inhabited world had ventured to lay hold of the celestial bodies and to use them for the purposes of instruction, and yet had paid no attention to the earth as a whole, of which the inhabited world is but a part-neither as to its size, nor its character, nor its position in the universe, nor even whether the world is inhabited only in the one part in which we live, or in a number of parts, and if so, how many such parts there are; and likewise how large the uninhabited part is, what its nature is, and why it is uninhabited. It seems, then, that the special branch of geography represents a union of meteorology 2 and geometry, since it unites terrestrial and celestial phenomena as

1 See § 20 (following), and footnote.

² The Greek word here includes our science of astronomy as well as our science of meteorology.

νίοις συνάπτον εἰς εν, ως εγγυτάτω όντα, ἀλλὰ μὴ διεστωτα τοσούτον,

όσον οὐρανός ἐστ' ἀπὸ γαίης. (Il. 8. 16)

16. Φέρε δη τη τοσαύτη πολυμαθεία προσθώμεν την επίγειον ιστορίαν, οίον ζώων και φυτών καὶ τῶν ἄλλων, ὅσα χρήσιμα ἡ δύσχρηστα φέρει γη τε καὶ θάλασσα οίμαι γὰρ ἐναργὲς αν γενέσθαι μάλλον δ λέγω. πάντα γάρ τὰ τοιαῦτα παρασκευαί τινες είς φρόνησιν μεγάλαι 1 τω μαθείν δὲ τῆς χώρας τὴν φύσιν καὶ ζώων καὶ φυτῶν ίδέας προσθείναι δεί και τὰ της θαλάττης. αμφίβιοι γαρ τρόπον τινά έσμεν και οὐ μαλλον χερσαίοι ή θαλάττιοι. ότι δε καὶ τὸ ὄφελος μέγα παντί τῷ παραλαβόντι τὴν τοιαύτην ίστορίαν, ἔκ τε τῆς παλαιᾶς μνήμης δῆλον καὶ ἐκ τοῦ λόγου. οἱ γοῦν ποιηταὶ φρονιμωτάτους τῶν ήρωων αποφαίνουσι τους αποδημήσαντας πολλαχοῦ καὶ πλανηθέντας ἐν μεγάλφ γὰρ τίθενται τὸ "πολλῶν ἀνθρώπων ἰδεῖν ἄστεα καὶ νόον γνωναι" (Od. 1. 3), καὶ ὁ Νέστωρ σεμνύνεται, διότι τοις Λαπίθαις ωμίλησεν, έλθων μετάπεμπτος

τηλόθεν έξ ἀπίης γαίης καλέσαντο γὰρ αὐτοί. ($Il.\ 1.\ 270$)

καὶ ὁ Μενέλαος ώσαύτως,

Κύπρον Φοινίκην τε καὶ Αἰγυπτίους ἐπαληθεὶς Αἰθίοπάς θ' ἰκόμην καὶ Σιδονίους καὶ Ἐρεμβοὺς καὶ Λιβύην, (Od. 4. 83)

¹ Piccolos reads and punctuates μεγάλαι· τῷ μαθεῖν δὲ τῆς χώρας τὴν φύσιν καὶ ζώων καὶ φυτῶν ἰδέας προσθεῖναι δεῖ καὶ τὰ 28

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being very closely related, and in no sense separated from each other "as heaven is high above the earth."

16. Well, then, to this encyclopaedic knowledge let us add terrestrial history—that is, the history of animals and plants and everything useful or harmful that is produced by land or sea (this definition will, I think, make clear what I mean by "terrestrial history"). In fact all such studies are important as preliminary helps toward complete understanding. And to this knowledge of the nature of the land, and of the species of animals and plants, we must add a knowledge of all that pertains to the sea; for in a sense we are amphibious, and belong no more to the land than to the sea. That the benefit is great to anyone who has become possessed of information of this character, is evident both from ancient traditions and from reason. At any rate, the poets declare that the wisest heroes were those who visited many places and roamed over the world; for the poets regard it as a great achievement to have "seen the cities and known the minds of many men." Nestor boasts of having lived among the Lapithae, to whom he had gone as an invited guest, "from a distant land afarfor of themselves they summoned me." Menelaus, too, makes a similar boast, when he says: "I roamed over Cyprus and Phoenicia and Egypt, and came to Ethiopians and Sidonians and Erembians and Libya"

τῆς θαλάττης, for μεγάλαι τῷ μαθεῖν τῆς χώρας τὴν φύσιν καὶ ζώων καὶ φυτῶν ἰδέας. προσθεῖναι δὲ καὶ τὰ τῆς θαλάττης; C. Müller, Sterrett, approving.

² A. Miller transposes the words πάντα γὰρ τὰ...ἡ θαλάττιοι to this place from a position before και τὸν Ἡρακλέα (line 9, p. 30); A. Vogel, Sterrett, approving.

προσθείς καὶ τὸ ἰδίωμα τῆς χώρας,1

ΐνα τ' ἄρνες ἄφαρ κεραοὶ τελέθουσι· C 9 τρὶς γὰρ τίκτει μῆλα τελεσφόρον εἰς ἐνιαυτον.

έπὶ δὲ τῶν Αἰγυπτίων Θηβῶν.

 $(τ \hat{\eta} πλείστα φέρει ζείδωρος ἄρουρα· <math>(Od. 4. 229)$ καὶ)

αΐ θ' έκατόμπυλοί εἰσι, διηκόσιοι δ' ἀν' έκάστην ἀνέρες ἐξοιχνεῦσι σὺν ἵπποισιν καὶ ὅχεσφιν.
(Il. 9. 383)

καὶ τὸν Ἡρακλέα εἰκὸς ἀπὸ τῆς πολλῆς ἐμπειρίας τε καὶ ἰστορίας λεχθῆναι

μεγάλων ἐπιίστορα ἔργων. (Od. 21. 26)

ἔκ τε ² δὴ τῆς παλαιᾶς μνήμης καὶ ἐκ τοῦ λόγου μαρτυρεῖται τὰ λεχθέντα ἐν ἀρχαῖς ὑφ' ἡμῶν. διαφερόντως δ' ἐπάγεσθαι δοκεῖ μοι πρὸς τὰ νῦν ἐκεῖνος ὁ λόγος, διότι τῆς γεωγραφίας τὸ πλέον ἐστὶ πρὸς τὰς χρείας τὰς πολιτικάς. χώρα γὰρ τῶν πράξεών ἐστι γῆ καὶ ³ θάλαττα, ἡν οἰκοῦμεν τῶν μὲν μικρῶν μικρά, τῶν δὲ μεγάλων μεγάλη· μεγίστη δ' ἡ σύμπασα, ἤνπερ ἰδίως καλοῦμεν οἰκουμένην, ὥστε τῶν μεγίστων πράξεων αὕτη ἀν εἴη χώρα. μέγιστοι δὲ τῶν στρατηλατῶν, ὅσοι δύνανται γῆς καὶ θαλάττης ἄρχειν, ἔθνη καὶ πόλεις συνάγοντες εἰς μίαν ἐξουσίαν καὶ διοίκησιν πολιτικήν. δῆλον οὖν, ὅτι ἡ γεωγραφικὴ πᾶσα ἐπὶ τὰς πράξεις ἀνάγεται τὰς

¹ A Miller transposes the words προσθείς και το ἰδίωμα τῆς χώρας to this place from a position after τ ελέθουσι; Sterrett approving.

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-and at this point he added the distinctive peculiarity of the country-" where lambs are horned from the birth; for there the ewes yean thrice within the full circle of a year." And in speaking of Thebes in Egypt, he says that Egypt is the country "where earth the grain-giver yields herbs in plenty"; and again he says: "Thebes of the hundred gates, whence sally forth two hundred warriors through each, with horses and chariots." And doubtless it was because of Heracles' wide experience and information that Homer speaks of him as the man who "had knowledge of great adventures." And my contention, made at the outset, is supported by reason as well as by ancient tradition. And that other argument, it seems to me, is adduced with especial force in reference to presentday conditions, namely, that the greater part of geography subserves the needs of states; for the scene of the activities of states is land and sea, the dwellingplace of man. The scene is small when the activities are of small importance, and large when they are of large importance; and the largest is the scene that embraces all the rest (which we call by the special name of "the inhabited world"), and this, therefore, would be the scene of activities of the largest importance. Moreover, the greatest generals are without exception men who are able to hold sway over land and sea, and to unite nations and cities under one government and political administration. It is therefore plain that geography as a whole has a direct bearing upon the activities of commanders: for it describes continents

² ἔκ τε, Meineke, for ἐκ δέ.

 ³ ἡ, Corais deletes, before θάλαττα; Meineke following;
 C. Müller approving.

ήγεμονικάς, διατιθείσα ήπείρους καὶ πελάγη τὰ μέν έντός, τὰ δὲ ἐκτὸς τῆς συμπάσης οἰκουμένης. πρὸς τούτους δὲ ἡ διάθεσις, οίς διαφέρει ταῦτα έχειν ούτως ή ετέρως, και γνώριμα είναι ή μή γνώριμα. βέλτιον γαρ αν διαχειρίζοιεν εκαστα, είδότες την χώραν όπόση τις και πως κειμένη τυγχάνει καί τίνας διαφοράς ίσχουσα, τάς τ' έν τῶ περιέγοντι καὶ τὰς ἐν αὐτῆ. ἄλλων δὲ κατ' άλλα μέρη δυναστευόντων καὶ ἀπ' άλλης έστίας καὶ ἀρχής τὰς πράξεις προχειριζομένων καὶ ἐπεκτεινόντων τὸ τῆς ἡγεμονίας μέγεθος, οὐκ ἐπ' ἴσης δυνατὸν οὔτ' ἐκείνοις ἄπαντα γνωρίζειν οὔτε τοῖς γεωγραφοῦσιν άλλά τὸ μάλλον καὶ ήττον πολύ έν ἀμφοτέροις καθοραται τούτοις. μόλις γαρ αν τὸ ἐπ' ἴσης πάντ' είναι φανερά συμβαίη τῆς συμπάσης οἰκουμένης ὑπὸ μίαν ἀρχὴν καὶ πολιτείαν ύπηγμένης άλλ' οὐδ' οὕτως, άλλὰ τὰ ἐγγυτέρω μᾶλλον ἃν γνωρίζοιτο. καὶ προσήκοι ¹ ταῦτα διὰ πλειόνων ἐμφανίζειν, ἵν' εἴη γνώριμα· ταῦτα γὰρ καὶ τῆς χρείας ἐγγυτέρω ἐστίν. ὥστ' οὐκ ἂν εἴη θαυμαστόν, οὐδ' εἰ άλλος μὲν Ἰνδοῖς προσήκοι χωρογράφος, άλλος δὲ Αἰθίοψιν, άλλος δὲ Έλλησι καὶ 'Ρωμαίοις. τί γὰρ ᾶν προσήκοι C 10 τῷ παρ' Ἰνδοῖς γεωγράφω καὶ τὰ κατὰ Βοιωτους ούτω φράζειν, ώς "Ομηρος.

> οί θ' Υρίην ἐνέμοντο καὶ Αὐλίδα πετρήεσσαν Σχοῖνόν τε Σκῶλόν τε· (Π. 2. 496)

ήμιν δὲ προσήκει· τὰ δὲ παρ' Ἰνδοις οὕτω καὶ τὰ καθ' ἔκαστα οὐκέτι. οὐδὲ γὰρ ἡ χρεία

¹ προσήκοι, C. Müller, on MSS. authority.

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and seas—not only the seas inside the limits of the whole inhabited world, but also those outside these And the description which geography gives is of importance to these men who are concerned as to whether this or that is so or otherwise, and whether known or unknown. For thus they can manage their various affairs in a more satisfactory manner, if they know how large a country is, how it lies, and what are its peculiarities either of sky or soil. cause different kings rule in different quarters of the world, and carry on their activities from different centres and starting-points, and keep extending the borders of their empires, it is impossible either for them or for geographers to be equally familiar with all parts of the world; nay, the phrase "more or less" is a fault much in evidence in kings and geographers. For even if the whole inhabited world formed one empire or state, it would hardly follow that all parts of that empire would be equally well known; nay, it would not be true even in that case, but the nearer regions would be better known. And it would be quite proper to describe these regions in greater detail, in order to make them known, for they are also nearer to the needs of the Therefore it would not be remarkable even if one person were a proper chorographer for the Indians, another for the Ethiopians, and still another for the Greeks and Romans. For example, wherein would it be proper for the Indian geographer to add details about Boeotia such as Homer gives: "These were they that dwelt in Hyria and rocky Aulis and Schoenus and Scolus"? For me these details are proper: but when I come to treat India it is no longer proper to add such details; and, in fact, utility does

ἐπάγεται· μέτρον δ' αὕτη μάλιστα τῆς τοιαύτης ἐμπειρίας.

17. Kal τοῦτο καὶ ἐν μικροῖς ἔνδηλόν i ἐστιν, οίον εν τοίς κυνηγεσίοις. ἄμεινον γάρ αν θηρεύσειέ τις είδως την ύλην, όποία τις καὶ πόση καὶ στρατοπεδεύσαι δε καλώς εν χωρίω του είδότος έστι και ένεδρεῦσαι και όδεῦσαι. άλλ' έν τοῖς μεγάλοις έστὶ τηλαυγέστερον, ὅσωπερ καὶ τὰ ἄθλα μείζω τὰ τῆς ἐμπειρίας καὶ τὰ σφάλματα τὰ ἐκ της ἀπειρίας. ὁ μέντοι 'Αγαμέμνονος στόλος την Μυσίαν ώς την Τρφάδα πορθών ἐπαλινδρόμησεν αίσχρως. Πέρσαι δὲ καὶ Λίβυες, τοὺς πορθμούς ύπονοήσαντες είναι τυφλούς στενωπούς, έγγύς μεν ήλθον κινδύνων μεγάλων, τρόπαια δε της άνοίας εκατέλιπον οι μέν τον του Σαλγανέως τάφον πρὸς τῷ Εὐρίπω τῷ Χαλκιδικῷ τοῦ σφαγέντος ύπὸ τῶν Περσῶν ὡς καθοδηγήσαντος φαύλως ἀπὸ Μαλιέων ἐπὶ τὸν Εὔριπον τὸν στόλον. οί δὲ τὸ τοῦ Πελώρου μνημα, καὶ τούτου διαφθαρέντος κατά την ομοίαν αιτίαν πλήρης τε ναυαγίων ή Έλλας ύπηρξε κατά την Εέρξου στρατείαν, καλ ή τῶν Αἰολέων δὲ καλ ή τῶν Ἰώνων ἀποικία πολλά τοιαθτα πταίσματα παραδέδωκεν. όμοίως δὲ καὶ κατορθώματα, ὅπου τι κατορθωθήναι συνέβη παρά την εμπειρίαν των τόπων καθάπερ έν τοις περί Θερμοπύλας στενοίς ο 'Εφιάλτης

¹ ἔνδηλον, Madvig, for μέν δηλον.

² ἀνοίαs, the MSS. reading is restored, for Casaubon's ἀγνοίαs; C. Müller approving.

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not urge it—and utility above all things is our standard in empirical matters of this kind.

17. The utility of geography in matters of small concern, also, is quite evident; for instance, in hunting. A hunter will be more successful in the chase if he knows the character and extent of the forest; and again, only one who knows a region can advantageously pitch camp there, or set an ambush, or direct a march. The utility of geography is more conspicuous, however, in great undertakings, in proportion as the prizes of knowledge and the disasters that result from ignorance are greater. Thus Agamemnon and his fleet ravaged Mysia in the belief that it was Troy-land, and came back home in disgrace. And, too, the Persians and the Libyans, surmising that the straits were blind alleys, not only came near great perils, but they left behind them memorials of their folly, for the Persians raised the tomb on the Euripus near Chalcis in honour of Salganeus, whom they executed in the belief that he had treacherously conducted their fleet from the Gulf of Malis 1 to the Euripus, and the Libyans erected the monument in honour of Pelorus, whom they put to death for a similar reason²; and Greece was covered with wrecks of vessels on the occasion of the expedition of Xerxes; and again, the colonies sent out by the Aeolians and by the Ionians have furnished many examples of similar blunders. There have also been cases of success, in which success was due to acquaintance with the regions involved; for instance, at the pass of Thermopylae it is said that Ephialtes,

¹ Lamia. See 9, 2, 9,

² Pelorus tried to conduct the Carthaginians through the Strait of Messina.

λέγεται δείξας τὴν διὰ τῶν ὀρῶν ἀτραπὸν τοῖς Πέρσαις ὑποχειρίους αὐτοῖς ποιῆσαι τοὺς περὶ Λεωνίδαν καὶ δέξασθαι τοὺς βαρβάρους εἴσω Πυλῶν. ἐἀσας δὲ τὰ παλαιά, τὴν νῦν Ῥωμαίων στρατείαν ἐπὶ Παρθυαίους ἱκανὸν ἡγοῦμαι τούτων τεκμήριον ὡς δ' αὕτως τὴν ἐπὶ Γερμανοὺς καὶ Κελτούς, ἐν ἔλεσι καὶ δρυμοῖς ἀβάτοις ἐρημίαις τε τοπομαχούντων τῶν βαρβάρων καὶ τὰ ἐγγὺς πόρρω ποιούντων τοῖς ἀγνοοῦσι καὶ τὰς ὁδοὺς ἐπικρυπτομένων καὶ τὰς εὐπορίας τροφῆς τε καὶ τῶν ἄλλων.

18. Τὸ μὲν δὴ πλέον, ὥσπερ εἴρηται, περὶ¹ τοὺς ἡγεμονικοὺς βίους καὶ τὰς χρείας ἐστίν· ἔστι² δὲ καὶ τῆς ἡθικῆς φιλοσοφίας καὶ πολιτικῆς τὸ πλέον περὶ τοὺς ἡγεμονικοὺς βίους. σημεῖον δέ· τὰς γὰρ τῶν πολιτειῶν διαφορὰς ἀπὸ τῶν ἡγεμονιῶν διακρίνομεν, ἄλλην μὲν ἡγεμονίαν τιθέντες τὴν μοναρχίαν, ἡν καὶ βασιλείαν καλοῦμεν, ἄλλην δὲ τὴν ἀριστοκρατίαν, τρίτην δὲ τὴν δημοκρατίαν. τοσαύτας δὲ καὶ τὰς πολιτείας νομίζομεν, ὁμωνύμως καλοῦντες ὡς ἄν ἀπ' ἐκείνων τὴν ἀρχὴν ἐχούσας τῆς εἰδοποιίας· ἄλλοις³ γὰρ νόμος το τοῦ βασιλέως πρόσταγμα, ἄλλοις³ δὲ τὸ τῶν ἀρίστων,

1 περί, Cobet, for πρόs.

³ ἄλλοις, Madvig, for ἄλλος; A. Vogel approving.

till his death in 9 B.c. But if Niese's theory be accepted as to the time when Strabo wrote (see Introduction, pp. xxiv ff.),

² τὰs χρείας ἐστίν. ἔστι δὲ καί, Meineke, for τὰs χρείας ἔτι δὲ καί; Cobet independently, C. Müller approving.

¹ Under Augustus and Tiberius no Roman army invaded Parthia, apparently. Strabo must be thinking of the campaign of Crassus or of that of Antony—or of both campaigns.

² The campaign of Drusus, apparently, which he carried on till his death in 9 B C. But if Niese's theory he accented as

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by showing the Persians the pathway across the mountains, put Leonidas and his troops at their mercy, and brought the Persians south of Thermopylae. But leaving antiquity, I believe that the modern campaign of the Romans against the Parthians is a sufficient proof of what I say, and likewise that against the Germans and the Celts, for in the latter case the barbarians carried on a guerilla warfare in swamps, in pathless forests, and in deserts 2; and they made the ignorant Romans believe to be far away what was really near at hand, and kept them in ignorance of the roads and of the facilities for procuring provisions and other necessities.

18. Now just as the greater part of geography, as I have said, has a bearing on the life and the needs of rulers, so also does the greater part of the theory of ethics and the theory of politics have a bearing on the life of rulers. And the proof of this is the fact that we distinguish the differences between the constitutions of states by the sovereignties in those states, in that we call one sovereignty the monarchy or kingship, another the aristocracy, and still another the democracy. And we have a corresponding number of constitutions of states, which we designate by the names of the sovereignties, because it is from these that they derive the fundamental principle of their specific nature; for in one country the will of the king is law, in another the will of those of highest rank, and in another the will of the

or if the above reference was inserted in a revised edition about 18 A.D. (p. xxv), then we might assume that allusion is made to the destruction of the Roman legions under Varus in 9 A.D.—to which Strabo refers in 7. 1. 4.

καὶ τὸ τοῦ δήμου. τύπος δὲ καὶ σχημα πολιτείας ὁ νόμος. διὰ τοῦτο δὲ καὶ τὸ δίκαιον εἶπόν τινες τὸ τοῦ κρείττονος συμφέρον. εἴπερ οὖν ἡ πολιτικὴ φιλοσοφία περὶ τοὺς ἡγεμόνας τὸ πλέον ἐστίν, ἔστι δὲ καὶ ἡ γεωγραφία περὶ τὰς ἡγεμονικὰς χρείας, ἔχοι ἄν τι πλεονέκτημα καὶ αὐτὴ παρὰ τοῦτο. ἀλλὰ τοῦτο μὲν τὸ πλεονέκτημα

προς τὰς πράξεις.

19. Έχει δέ τινα καὶ θεωρίαν οὐ φαύλην ή πραγματεία, την μεν τεχνικήν τε και μαθηματικήν καὶ φυσικήν, την δὲ ἐν ίστορία καὶ μύθοις κειμένην, οὐδὲν οὖσι πρὸς τὰς πράξεις οἶον εἴ τις λέγοι τὰ περί την 'Οδυσσέως πλάνην και Μενελάου και Ιάσονος, είς φρόνησιν μεν οὐδεν αν συλλαμβάνειν δόξειεν, ην ο πράττων ζητεί, πλην εί καταμίσγοι καὶ τῶν γενομένων ἀναγκαίων τὰ παραδείγματα χρήσιμα διαγωγήν δ' όμως πορίζοι αν οὐκ άνελεύθερον τῶ ἐπιβάλλοντι ἐπὶ τοὺς τόπους τοὺς παρασχόντας την μυθοποιίαν. καὶ γὰρ τοῦτο ζητοῦσιν οἱ πράττοντες διὰ τὸ ἔνδοξον καὶ τὸ ἡδύ, άλλ' οὐκ ἐπὶ πολύ· μάλλον γὰρ σπουδάζουσιν, ὡς εἰκός, περὶ τὰ χρήσιμα. διόπερ καὶ τῷ γεωγράφῷ τούτων μᾶλλον ἡ ἐκείνων ἐπιμελητέον. ὡς δ' αύτως έχει και περί της ίστορίας και περί των μαθημάτων και γάρ τούτων το χρήσιμον άει μαλλον ληπτέον καὶ τὸ πιστότερον.

¹ The definition ascribed to Thrasymachus, Plato's Republic, 1. 12.

² Strabo has in mind his theory (which he often takes occasion to uphold) as to the comparative mythical and historical elements in Homer and other poets.

GEOGRAPHY, 1. 1. 18-19

people. It is the law that gives the type and the form of the constitution. And for that reason some have defined "justice" as "the interest of the more powerful." If, then, political philosophy deals chiefly with the rulers, and if geography supplies the needs of those rulers, then geography would seem to have some advantage over political science. This advantage, however, has to do with practice.

19. And vet, a work on geography also involves theory of no mean value, the theory of the arts, of mathematics, and of natural science, as well as the theory which lies in the fields of history and myths 2 -though myths have nothing to do with practice; for instance, if a man should tell the story of the wanderings of Odysseus or Menelaus or Jason, it would not be thought that he was making any contribution to the practical wisdom of his hearers and that is what the man of affairs demands—unless he should insert the useful lessons to be drawn from the hardships those heroes underwent; still, he would be providing no mean entertainment for the hearer who takes an interest in the regions which furnished the scenes of the myths. Men of affairs are fond of just such entertainment, because the localities are famous and the myths are charming: but they care for no great amount of it, since they are more interested in what is useful, and it is quite natural that they should be. For that reason the geographer, also, should direct his attention to the useful rather than to what is famous and charming. The same principle holds good in regard to history and the mathematical sciences; for in these branches, also, that which is useful and more trustworthy should always be given precedence.

20. Μάλιστα δὲ δοκεῖ, καθάπερ εἴρηται, γεωμετρίας τε καὶ ἀστρονομίας δεῖν τῆ τοιαύτη ὑποθέσει. καὶ δεῖ μὲν ὡς ἀληθῶς σχήματα γὰρ καὶ κλίματα καὶ μεγέθη καὶ τὰ ἄλλα τὰ τούτοις οἰκεῖα ούν οίον τε λαβείν καλώς άνευ της τοιαύτης μεθόδου. άλλ' ώσπερ τὰ περί την άναμέτρησιν της όλης γης έν άλλοις δεικνύουσιν, ένταθθα δέ ύποθέσθαι δεί και πιστεύσαι τοις έκει δειχθείσιν, ύποθέσθαι δεί1 καὶ σφαιροειδή μεν τον κόσμον, σφαιροειδή δὲ καὶ τὴν ἐπιφάνειαν τῆς γῆς, ἔτι δὲ τούτων πρότερον την έπι το μέσον των σωμάτων φοράν αὐτὸ μόνον, εἴ τι² τῆς αἰσθήσεως ἡ τῶν κοινών εννοιών εγγύς εστιν, εί άρα, επισημηνάμενοι έπι κεφαλαίω μικρά οίον ὅτι ἡ γῆ σφαιροειδής, έκ μεν της έπι το μέσον φοράς πόρρωθεν ή ύπόμνησις καὶ τοῦ ἔκαστον σῶμα ἐπὶ τὸ αύτοῦ άρτημα νεύειν, εκ δε των κατά πελάγη καὶ τὸν C 12 οὐρανὸν φαινομένων ἐγγύθεν καὶ γὰρ ἡ αἴσθησις έπιμαρτυρείν δύναται καὶ ή κοινή έννοια. φανερώς γαρ επιπροσθεί τοίς πλέουσιν ή κυρτότης της θαλάττης, ώστε μη προσβάλλειν τοις πόρρω φένγεσι τοις έπ' ισον έξηρμένοις τη όψει. έξαρθέντα γοῦν πλέον τῆς ὄψεως ἐφάνη, καίτοι πλέον ἀπο-

> ¹ δεῖ, Groskurd, for δέ. ² εῖ τι, Madvig, for ἐπί. ³ ἐξηρμένοις, Meineke, for ἐξηρμένοις.

¹ See footnote 2, page 22.

² Strabo uses the word in its literal sense of "sphere-shaped," and not in its geometrical sense. The spheroidicity of the earth was apparently not suspected until the seventeenth century. See 2. 5. 5,

GEOGRAPHY, 1. 1. 20

20. Most of all, it seems to me, we need, as I have said, geometry and astronomy for a subject like geography; and the need of them is real indeed; for without such methods as they offer it is not possible accurately to determine our geometrical figures, "climata" 1, dimensions, and the other cognate things; but just as these sciences prove for us in other treatises all that has to do with the measurement of the earth as a whole and as I must in this treatise take for granted and accept the propositions proved there, so I must take for granted that the universe is spheroidal,2 and also that the earth's surface is spheroidal, and, what is more, I must take for granted the law that is prior to these two principles, namely that the bodies tend toward the centre 3: and I need only indicate, in a brief and summary way, whether a proposition comes—if it really does —within the range of sense-perception or of intuitive knowledge. Take, for example, the proposition that the earth is spheroidal: whereas the suggestion of this proposition comes to us mediately from the law that bodies tend toward the centre and that each body inclines toward its own centre of gravity, the suggestion comes immediately from the phenomena observed at sea and in the heavens; for our sense-perception and also our intuition can bear testimony in the latter case. For instance, it is obviously the curvature of the sea that prevents sailors from seeing distant lights that are placed on a level with their eyes. At any rate, if the lights are elevated above the level of the eyes, they become visible, even though they be at a

³ Strabo here means all the heavenly bodies. According to his conception, the earth was stationary and all the heavenly bodies revolved about the earth from east to west, the heavens having the same centre as the earth.

σχόντα αὐτῆς· ὁμοίως δὲ καὶ αὐτὴ μετεωρισθεῖσα είδε τὰ κεκρυμμένα πρότερον. ὅπερ δηλοῖ καὶ ὁ ποιητής· τοιοῦτον γάρ ἐστι καὶ τὸ

ὀξὺ μάλα προϊδών, μεγάλου ὑπὸ κύματος ἀρθείς. (Od. 5. 393)

καὶ τοῖς προσπλέουσι δὲ ἀεὶ καὶ μᾶλλον ἀπογυμνοῦται τὰ πρόσγεια μέρη, καὶ τὰ φανέντα ἐν
ἀρχαῖς ταπεινὰ ἐξαίρεται μᾶλλον. τῶν τε οὐρανίων ἡ περιφορὰ ἐναργής ἐστι καὶ ἄλλως καὶ ἐκ τῶν
γνωμονικῶν· ἐκ δὲ τούτων εὐθὺς ὑποτείνει καὶ ἡ
ἔννοια, ὅτι ἐρριζωμένης ἐπ' ἄπειρον τῆς γῆς οὐκ
ἄν ἡ τοιαύτη περιφορὰ συνέβαινε. καὶ τὰ περὶ
τῶν κλιμάτων δὲ ἐν τοῖς περὶ τῶν οἰκήσεων
δείκνυται.

21. Νυνὶ δὲ ἐξ ἑτοίμου δεῖ λαβεῖν ἔνια, καὶ ταῦθ' ὅσα τῷ πολιτικῷ καὶ τῷ στρατηλάτῃ χρήσιμα. οὕτε γὰρ οὕτω δεῖ ἀγνοεῖν τὰ περὶ τὸν οὐρανὸν καὶ τὴν θέσιν τῆς γῆς, ὥστ', ἐπειδὰν γένηται κατὰ τόπους, καθ' οῦς ἐξήλλακταί τινα τῶν φαινομένων τοῖς πολλοῖς ἐν τῷ οὐρανῷ, ταράσσεσθαι καὶ τοιαῦτα λέγειν·

ω φίλοι, οὐ γάρ τ' ἴδμεν ὅπη¹ ζόφος, οὐδ' ὅπη ήώς,

οὐδ' ὅπη ἠέλιος φαεσίμβροτος εἶσ' ὑπὸ γαῖαν, οὐδ' ὅπη ἀννεῖται· (Od. 10. 190)

οὔθ' οὕτως ἀκριβοῦν, ὥστε τὰς πανταχοῦ συνανατολάς τε καὶ συγκαταδύσεις καὶ συμμεσουρανή-

¹ $\delta\pi\eta$ — $\delta\pi\eta$ — $\delta\pi\eta$ — $\delta\pi\eta$ — $\delta\pi\eta$, Sterrett, for $\delta\pi\eta$ — $\delta\pi\eta$ — $\delta\pi\eta$ — $\delta\pi\eta$.

GEOGRAPHY, 1. 1. 20-21

greater distance from the eves; and similarly if the eves themselves are elevated, they see what was before invisible. This fact is noted by Homer, also, for such is the meaning of the words: "With a quick glance ahead, being upborne on a great wave, [he saw the land very near]." So, also, when sailors are approaching land, the different parts of the shore become revealed progressively, more and more, and what at first appeared to be low-lying land grows gradually higher and higher. Again, the revolution of the heavenly bodies is evident on many grounds, but it is particularly evident from the phenomena of the sun-dial; and from these phenomena our intuitive judgment itself suggests that no such revolution could take place if the earth were rooted to an infinite depth. 1 As regards the "climata" 2, they are treated in our discussion of the Inhabited Districts.

21. But at this point we must assume off-hand a knowledge of some matters, and particularly of all that is useful for the statesman and the general to know. For one should not, on the one hand, be so ignorant of the heavens and the position of the earth as to be alarmed when he comes to countries in which some of the celestial phenomena that are familiar to everybody have changed, and to exclaim: "My friends, lo, now we know not where is the place of darkness, nor of dawning, nor where the sun, that gives light to men, goes beneath the earth, nor where he rises"; nor, on the other hand, need one have such scientifically accurate knowledge as to know what constellations rise and set and pass the

¹ This was the doctrine of Xenophanes and Anaximenes. See footnote 2, page 22.

σεις καὶ ἐξάρματα πόλων καὶ τὰ κατὰ κορυφὴν σημεία καὶ ὅσα ἄλλα τοιαῦτα κατὰ τὰς μεταπτώσεις τῶν ὁριζόντων ἄμα καὶ τῶν ἀρκτικῶν διαφέροντα άπαντα, τὰ μὲν πρὸς τὴν ὄψιν, τὰ δὲ καὶ τη φύσει, γνωρίζειν ἄπαντα· άλλὰ τὰ μέν μηδ' όλως φροντίζειν, πλην εί θέας φιλοσόφου χάριν, τοις δὲ πιστεύειν, κᾶν μὴ βλέπη τὸ διὰ τί* καὶ γὰρ τοῦτο τοῦ φιλοσοφοῦντος μόνου, τῶ δὲ πολιτικώ σχολής οὐ τοσαύτης μέτεστιν, ή οὐκ ἀεί. οὐ μὴν οὐδ' οὕτως ὑπάρχειν ἁπλοῦν δεῖ τὸν ἐντυγχάνοντα τη γραφη ταύτη καὶ ἀργόν, ὥστε μηδὲ C 13 σφαίραν ίδειν, μηδέ κύκλους έν αὐτή, τοὺς μέν παραλλήλους, τούς δ' ορθίους πρός τούτους, τούς δὲ λοξούς μηδὲ τροπικών τε καὶ ἰσημερινοῦ καὶ ζωδιακοῦ θέσιν, δι' οὖ φερόμενος ὁ ήλιος τρέπεται καὶ διατάσσει 1 διαφοράς κλιμάτων τε καὶ ἀνέμων. ταῦτα γὰρ καὶ τὰ περὶ τοὺς ὁρίζοντας καὶ τοὺς άρκτικούς καὶ ὅσα ἄλλα κατὰ τὴν πρώτην ἀγωγὴν την είς τὰ μαθήματα παραδίδοται κατανοήσας τις άλλως πως δύναται παρακολουθείν τοίς λεγομένοις ένταῦθα. ὁ δὲ μηδ' εὐθεῖαν γραμμὴν ή περιφερή, μηδε κύκλον είδώς, μηδε σφαιρικήν έπιφάνειαν ή ἐπίπεδον, μηδ' ἐν τῷ οὐρανῷ μηδὲ τούς έπτα της μεγάλης άρκτου αστέρας καταμαθών, μηδ' άλλο τι των τοιούτων μηδέν, ή οὐκ αν

¹ διατάσσει, Madvig, for διδάσκει.

GEOGRAPHY, 1. 1. 21

meridian at the same time everywhere; or as to know the elevations of the poles, the constellations that are in the zenith, and all other such changing phenomena as meet one according as he changes his horizons and arctic circles, whether those changes be merely visual, or actual as well. Nay, he should pay no attention at all to some of these things, unless it be in order to view them as a philosopher. But he should take some other things on faith, even if he does not see a reason for them; for the question of causes belongs to the student of philosophy alone, whereas the statesman does not have adequate leisure for research, or at least not always. However, the reader of this book should not be so simple-minded or indifferent as not to have observed a globe, or the circles drawn upon it, some of which are parallel, others drawn at right angles to the parallels, and still others oblique to them; or, again, so simple as not to have observed the position of tropics, equator, and zodiac-the region through which the sun is borne in his course and by his turning determines the different zones and winds. For if one have learned, even in a superficial way, about these matters, and about the horizons and the arctic circles and all the other matters taught in the elementary courses of mathematics, he will be able to follow what is said in this book. however, a man does not know even what a straight line is, or a curve, or a circle, nor the difference between a spherical and a plane surface, and if, in the heavens, he have not learned even the seven stars of the Great Bear, or anything else of that kind, either he will have no use for this book, or else

¹ See 2. 2. 2, and footnote.

δέοιτο της πραγματείας ταύτης η οὐχὶ νῦν, ἀλλ' έκείνοις έντυχών πρότερον, ών χωρίς ούκ αν είη γεωγραφίας οἰκείος. οὕτως δὲ καὶ οἱ τοὺς λιμένας καὶ τοὺς περίπλους καλουμένους πραγματευθέντες άτελη την έπίσκεψιν ποιούνται, μη προστιθέντες όσα έκ των μαθημάτων και έκ των οὐρανίων συνάπτειν προσῆκε.1

22. Απλώς δέ κοινον είναι το σύγγραμμα τοῦτο δεί και πολιτικον και δημωφελές όμοίως, ώσπερ την της ιστορίας γραφήν. κάκει δε πολιτικον λέγομεν οὐχὶ τὸν παντάπασιν ἀπαίδευτον, ἀλλὰ τον μετασχόντα της τε έγκυκλίου και συνήθους αγωγής τοίς έλευθέροις και τοίς φιλοσοφούσιν οὐδὲ γὰρ ᾶν οὔτε ψέγειν δύναιτο καλώς οὔτ' έπαινείν, οὐδὲ κρίνειν ὅσα μνήμης ἄξια τῶν γεγονότων, ότω μηδέν εμέλησεν άρετης και φρονήσεως καὶ τῶν εἶς ταῦτα λόγων.

- 23. Διόπερ ήμεις πεποιηκότες υπομνήματα ίστορικά χρήσιμα, ώς ύπολαμβάνομεν, είς τὴν ηθικήν καί πολιτικήν φιλοσοφίαν, έγνωμεν προσθείναι καλ τήνδε την σύνταξιν όμοειδης γάρ καλ αὐτή, καὶ πρὸς τοὺς αὐτοὺς ἄνδρας, καὶ μάλιστα τους έν ταις υπεροχαίς. Ετι δε τον αυτον τρόπον, ονπερ έκει τὰ περί τους ἐπιφανείς ἄνδρας καί βίους τυγχάνει μνήμης, τὰ δὲ μικρά καὶ ἄδοξα
- 1 The words οδτως δε καί . . . συνάπτειν προσήκε are transposed to this place from the end of § 22 by Meineke, following the suggestion of Corais; C. Müller approving. Siebenkees deletes the a before συνάπτειν; Corais, Meineke, following; C. Müller approving.

¹ Strabo refers to his historical work (now lost) as his Historical Sketches and also as his History. The work contained both of these, and comprised forty-seven books, cover-

not at present-in fact, not until he has studied those topics without which he cannot be familiar with geography. And so those who have written the treatises entitled Harbours and Coasting Voyages leave their investigations incomplete, if they have failed to add all the mathematical and astronomical information which properly belonged in their books.

22. In short, this book of mine should be generally useful—useful alike to the statesman and to the public at large—as was my work on History.1 this work, as in that, I mean by "statesman," not the man who is wholly uneducated, but the man who has taken the round of courses usual in the case of freemen or of students of philosophy. man who has given no thought to virtue and to practical wisdom, and to what has been written about them, would not be able even to form a valid opinion either in censure or in praise; nor yet to pass judgment upon the matters of historical fact that are worthy of being recorded in this treatise.

23. And so, after I had written my Historical Sketches,1 which have been useful, I suppose, for moral and political philosophy. I determined to write the present treatise also; for this work itself is based on the same plan, and is addressed to the same class of readers, and particularly to men of exalted stations in life. Furthermore, just as in my Historical Sketches only the incidents in the lives of distinguished men are recorded, while deeds that are petty and ignoble are omitted, so in this work

ing the course of events prior to the opening and subsequent to the close of the History of Polybius. The first part was merely an outline of historical events, while the latter part presented a complete history from 146 B.C. to the time of the Empire.

παραλείπεται, κάνταῦθα δεῖ τὰ μικρὰ καὶ τὰ ἀφανῆ παραπέμπειν, ἐν δὲ τοῖς ἐνδόξοις καὶ μεγάλοις καὶ ἐν οἶς τὸ πραγματικὸν καὶ εὐμνημόνευτον καὶ ἡδὺ διατρίβειν. καθάπερ τε ¹ καὶ ἐν τοῖς κολοσσικοῖς ἔργοις οὐ τὸ καθ' ἔκαστον ἀκριβὲς ζητοῦμεν, ἀλλὰ τοῖς καθόλου προσέχομεν μᾶλλον, εἰ καλῶς τὸ ὅλον οὕτως κἀν τούτοις δεῖ ποιεῖσθαι C 14 τὴν κρίσιν. κολοσσουργία γάρ τις καὶ αὐτή, τὰ μεγάλα φράζουσα πῶς ἔχει καὶ τὰ ὅλα, πλὴν εἴ τι κινεῖν δύναται καὶ τῶν μικρῶν τὸν φιλειδήμονα καὶ τὸν πραγματικόν. ὅτι μὲν οὖν σπουδαῖον τὸ προκείμενον ἔργον καὶ φιλοσόφω πρέπον, ταῦτα εἰρήσθω.

II

1. Εἰ δὲ πολλῶν προειπόντων ἐπιχειροῦμεν καὶ αὐτοὶ λέγειν περὶ τῶν αὐτῶν, οὔπω μεμπτέον, ἄν μὴ καὶ τὸν αὐτὸν τρόπον διελεγχθῶμεν ἐκείνοις ἄπαντα λέγοντες. ὑπολαμβάνομεν δ' ἄλλων ἄλλο τι κατορθωσάντων ἄλλο πολὺ μέρος ἔτι τοῦ ἔργου λείπεσθαι· πρὸς οἶς ἂν καὶ μικρὸν προσλαβεῖν δυνηθῶμεν, ἱκανὴν δεῖ τίθεσθαι πρόφασιν τῆς ἐπιχειρήσεως. καὶ γὰρ δὴ πολύ τι τοῖς νῦν ἡ τῶν 'Ρωμαίων ἐπικράτεια καὶ τῶν Παρθυαίων τῆς τοιαύτης ἐμπειρίας προσδέδωκε· καθάπερ τοῖς προτέροις μέγα τι ἡ 'Αλεξάνδρου στρατεία,² ὥς φησιν 'Ερατοσθένης. ὁ μὲν γὰρ τῆς 'Ασίας

¹ τε, Meineke, for γε.

² καθάπερ τοῖς προτέροις μέγα τι ἡ 'Αλεξάνδρου στρατεία, C. Müller, for καθάπερ τοῖς μετὰ τὴν 'Αλεξάνδρου στρατείαν.

GEOGRAPHY, 1. 1. 23-2. 1

also I must leave untouched what is petty and inconspicuous, and devote my attention to what is noble and great, and to what contains the practically useful, or memorable, or entertaining. Now just as in judging of the merits of colossal statues we do not examine each individual part with minute care, but rather consider the general effect and endeavour to see if the statue as a whole is pleasing, so should this book of mine be judged. For it, too, is a colossal work, in that it deals with the facts about large things only, and wholes, except as some petty thing may stir the interest of the studious or the practical man. I have said thus much to show that the present work is a serious one, and one worthy of a philosopher.

II

1. If I, too, undertake to write upon a subject that has been treated by many others before me, I should not be blamed therefor, unless I prove to have discussed the subject in every respect as have my predecessors. Although various predecessors have done excellent work in various fields of geography. yet I assume that a large portion of the work still remains to be done; and if I shall be able to make even small additions to what they have said, that must be regarded as a sufficient excuse for my undertaking. Indeed, the spread of the empires of the Romans and of the Parthians has presented to geographers of to-day a considerable addition to our empirical knowledge of geography, just as did the campaign of Alexander to geographers of earlier times, as Eratosthenes points out. For Alexander

πολλην ανεκάλυψεν ημίν και των βορείων της Εὐρώπης ἄπαντα μέχρι τοῦ Ἱστρου οἱ δὲ Ῥωμαίοι τὰ έσπέρια της Ευρώπης ἄπαντα μέγρι 1 Αλβιος ποταμοῦ τοῦ τὴν Γερμανίαν δίχα διαιροῦντος, τά τε πέραν Ίστρου τὰ μέχρι Τύρα ποταμού τὰ δὲ ἐπέκεινα μέχρι Μαιωτών καὶ τῆς είς Κόλγους τελευτώσης παραλίας Μιθριδάτης ό κληθείς Εὐπάτωρ ἐποίησε γνώριμα καὶ οἱ ἐκείνου στρατηγοί οι δέ Παρθυαίοι τὰ περὶ τὴν Υρκανίαν καὶ τὴν Βακτριανὴν καὶ τοὺς ὑπὲρ τούτων γνωριμωτέρους ήμιν εποίησαν, ήττον γνωριζομένους ύπὸ τῶν πρότερον ὅστε ἔγοιμεν άν τι λέγειν πλέον των προ ήμων. δράν δ΄ έσται τοῦτο μάλιστα ἐν τοῖς λόγοις τοῖς πρὸς τοὺς πρὸ ήμων, ήττον μεν τούς πάλαι, μαλλον δε τούς μετ' Έρατοσθένη καὶ αὐτὸν ἐκεῖνον· οῦς εἰκὸς ὅσωπερ πολυμαθέστεροι των πολλών γεγόνασι, τοσούτω δυσελεγκτοτέρους είναι τοις ύστερον, αν τι πλημμελώς λέγωσιν. εί δ' άναγκασθησόμεθά που τοῖς αὐτοῖς ἀντιλέγειν, οῖς μάλιστα ἐπακολουθοῦμεν κατὰ τἄλλα, δεῖ συγγνώμην ἔχειν. πρόκειται πρὸς ἄπαντας ἀντιλέγειν, ἀλλὰ τούς μέν πολλούς έαν, οίς μηδέ ακολουθείν άξιον. έκείνους δε διαιτάν, ους έν τοις πλείστοις κατωρθωκότας ἴσμεν. ἐπεὶ οὐδὲ πρὸς ἄπαντας φιλο-

μέχρι, Meineke, for μέχρις.
 κατὰ τἄλλα, Cobet, for κατ' ἄλλα.

¹ Danube.

Elbe.

³ Dniester.

⁴ Sea of Azov. ⁵ Southern Caucasia.

GEOGRAPHY, 1. 2. 1

opened up for us geographers a great part of Asia and all the northern part of Europe as far as the Ister 1 River: the Romans have made known all the western part of Europe as far as the River Albis 2 (which divides Germany into two parts), and the regions beyond the Ister as far as the Tyras³ River; and Mithridates, surnamed Eupator, and his generals have made known the regions beyond the Tyras as far as Lake Maeotis 4 and the line of coast that ends at Colchis⁵; and, again, the Parthians have increased our knowledge in regard to Hyrcania and Bactriana, and in regard to the Scythians who live north of Hyrcania and Bactriana, all of which countries were but imperfectly known to the earlier geographers. I therefore may have something more to say than my predecessors. This will become particularly apparent in what I shall have to say in criticism of my predecessors, but my criticism has less to do with the earliest geographers than with the successors of Eratosthenes and Eratosthenes himself. For it stands to reason that because Eratosthenes and his successors have had wider knowledge than most geographers, it will be correspondingly more difficult for a later geographer to expose their errors if they say anything amiss. And if I shall, on occasion, be compelled to contradict the very men whom in all other respects I follow most closely, I beg to be pardoned; for it is not my purpose to contradict every individual geographer, but rather to leave the most of them out of consideration-men whose arguments it is unseemly even to follow-and to pass upon the opinion of those men whom we recognize to have been correct in most cases. Indeed, to engage in philosophical σοφείν ἄξιον, πρὸς Ἐρατοσθένη δὲ καὶ Ππαρχον καὶ Ποσειδώνιον 1 καὶ Πολύβιον καὶ ἄλλους τοιούτους καλόν.

C 15 2. Πρώτον 2 δ' επισκεπτέον 'Ερατοσθένη, παρατιθέντας ἄμα καὶ τὴν Ἱππάρχου πρὸς αὐτὸν ἀντιλογίαν. ἔστι δ' ὁ Ἐρατοσθένης οῦθ' ³ οῦτως εὐκατατρόχαστος, ὥστε μηδ' 'Αθήνας αὐτὸν ἰδεῖν φάσκειν, ὅπερ Πολέμων ἐπιχειρεῖ δεικνύναι οὕτ' έπι τοσούτον πιστός, εφ' δσον παρεδέξαντό τινες, καίπεο πλείστοις έντυχών, ώς εξρηκεν αὐτός, άγαθοῖς ἀνδράσιν, ἐγένοντο γάρ, φησίν, ὡς οὐδέποτε, κατά τοῦτον τὸν καιρὸν ὑφ' ἔνα περίβολον καὶ μίαν πόλιν οί * κατ' 'Αρίστωνα καί 'Αρκεσίλαον ανθήσαντες φιλόσοφοι. οὐχ ίκανον δ' οίμαι τοῦτο, άλλα τὸ κρίνειν καλῶς, οίς μαλλον πειστέου. 5 ο δε 'Αρκεσίλαον και 'Αρίστωνα των καθ' αύτὸν ἀνθησάντων κορυφαίους τίθησιν, 'Απελλής τε αὐτῷ πολύς ἐστικαί Βίων, ὅν φησι πρώτον ανθινά περιβαλείν φιλοσοφίαν, άλλ' όμως πολλάκις εἰπεῖν ἄν τινα ἐπ' αὐτοῦ τοῦτο.

οΐην ἐκ ῥακέων ὁ Βίων. (Od. 18. 74)

έν αὐταῖς γὰρ ταῖς ἀποφάσεσι ταύταις ἱκανὴν ἀσθένειαν ἐμφαίνει τῆς ἐαυτοῦ γνώμης· ἡ τοῦ Ζήνωνος τοῦ Κιτιέως γνώριμος γενόμενος ᾿Αθήνησι

^{1 «}Ιππαρχον και Ποσειδώνιον, Spengel, for Ποσειδώνιον και Ιππαρχον; Meineke following.

² πρῶτον, Spengel, for πρότερον; Meineke following.

³ οδθ', Meineke, for οὐχ.

⁴ Kai, Xylander deletes, after oi; Meineke following.

^{*} πειστέον, the correction of the prima manus, Spengel, A. Vogel, prefer, for προσιτέον.

GEOGRAPHY, 1. 2. 1-2

discussion with everybody is unseemly, but it is honourable to do so with Eratosthenes, Hipparchus, Poseidonius, Polybius, and others of their type.

2. First, I must consider Eratosthenes, at the same time setting forth the objections which Hipparchus urges against the statements Eratosthenes. Now Eratosthenes is not so open to attack as to warrant my saying that he never saw even Athens, as Polemon undertakes to prove; nor, on the other hand, is he so trustworthy as some have been taught to believe that he is-notwithstanding the fact that he had been associated with many eminent men, as he himself tells us. says he, "philosophers gathered together at this particular time, as never before within one wall or one city: I refer to those who flourished in the time of Ariston and Arcesilaus." But I do not think that sufficient; what we need is a clear-cut judgment as to what teachers we should choose to follow. But he places Arcesilaus and Ariston at the head of the scholars who flourished in his day and generation; and Apelles is much in evidence with him, and so is Bion, of whom he says: "Bion was the first to drape philosophy in embroidered finery"; and yet he states that people frequently applied to Bion the words: "Such a [thigh] as Bion [shews] from out his rags." 1 Indeed, in these very statements Eratosthenes reveals a serious infirmity in his own judgment; and because of this infirmity, although he himself studied in Athens under Zeno of Citium, he makes

¹ The original allusion is to "the old man" Odysseus, Od. 18. 74.

των μέν εκείνον διαδεξαμένων ούδενος μέμνηται, τους δ' εκείνφ διενεχθέντας και ών διαδοχή ούδεμία σώζεται, τούτους ανθήσαι φησι κατά τὸν καιρον εκείνον. δηλοί δε και ή περί των άγαθων έκδοθείσα ὑπ' αὐτοῦ πραγματεία καὶ μελέται καὶ εί τι άλλο τοιούτο την άγωγην αὐτού διότι μέσος ην του τε βουλομένου φιλοσοφείν και του μή θαρρούντος εγγειρίζειν ξαυτόν είς την υπόσγεσιν ταύτην, άλλα μόνον μέγρι τοῦ δοκείν προϊόντος, ή καὶ παράβασίν τινα ταύτην ἀπὸ τῶν ἄλλων τῶν έγκυκλίων πεπορισμένου πρός διαγωγήν ή καί παιδιάν τρόπον δέ τινα καὶ ἐν τοῖς ἄλλοις ἔστι τοιοῦτος. ἀλλὰ ἐκεῖνα εἰάσθω· 1 πρὸς δὲ τὰ νῦν έπιχειρητέου, ὅσα δύναιτ' ἄν, ἐπανορθοῦν τὴν γεωγραφίαν, καὶ πρώτον ὅπερ ἀρτίως ὑπερεθέμεθα.

3. Ποιητὴν γὰρ ἔφη πάντα στοχάζεσθαι ψυχαγωγίας, οὐ διδασκαλίας. τοὐναντίον δ' οἱ παλαιοὶ φιλοσοφίαν τινὰ λέγουσι πρώτην τὴν ποιητικήν, εἰσάγουσαν εἰς τὸν βίον ἡμᾶς ἐκ νέων καὶ διδάσκουσαν ἤθη καὶ πάθη καὶ πράξεις μεθ' ἡδονῆς οἱ δ' ἡμέτεροι καὶ μόνον ποιητὴν ἔφασαν εἶναι τὸν σοφόν. διὰ τοῦτο καὶ τοὺς παῖδας αἱ τῶν Ἑλλήνων πόλεις πρώτιστα διὰ τῆς ποιητικῆς παιδεύουσιν, οὐ ψυχαγωγίας χάριν δήπουθεν C 16 ψιλῆς, ἀλλὰ σωφρονισμοῦ· ὅπου γε καὶ οἱ μουσικοὶ ψάλλειν καὶ λυρίζειν καὶ αὐλεῖν διδάσκοντες

1 εἰάσθω, Cobet, for ἐάσθω.

¹ The Greek word here used is significant. The parabasis formed a part of the Old Comedy, and was wholly incidental to the main action of the play.

GEOGRAPHY, 1. 2. 2-3

no mention of any of Zeno's successors, but speaks of those men who dissented from the teachings of Zeno and who failed to establish a school that lived after them as "flourishing" at that particular time. His treatise entitled On the Good, also, and his Studies in Declamation, and whatever else he wrote of this nature, go to show his tendency, namely, that of the man who is constantly vacillating between his desire to be a philosopher and his reluctance to devote himself entirely to this profession, and who therefore succeeds in advancing only far enough to have the appearance of being a philosopher; or of the man who has provided himself with this as a diversion 1 from his regular work, either for his pastime or even amusement; and in a sense Eratosthenes displays this tendency in his other writings, too. But let this pass; for my present purpose I must correct Eratosthenes' geography as far as possible; and first, on the point which I deferred a while ago.2

3. As I was saying, Eratosthenes contends that the aim of every poet is to entertain, not to instruct. The ancients assert, on the contrary, that poetry is a kind of elementary philosophy, which, taking us in our very boyhood, introduces us to the art of life and instructs us, with pleasure to ourselves, in character, emotions, and actions. And our School ³ goes still further and contends that the wise man alone is a poet. That is the reason why in Greece the various states educate the young, at the very beginning of their education, by means of poetry; not for the mere sake of entertainment, of course, but for the sake of moral discipline. Why, even the musicians, when they give instruction in singing, in

² Page 23. ³ See Introduction, page xvi.

μεταποιούνται της άρετης ταύτης παιδευτικοί γὰρ είναί φασι καὶ ἐπανορθωτικοὶ τῶν ἠθῶν. τα ὑτα δ' οὐ μόνον παρὰ τῶν Πυθαγορείων ἀκούειν έστὶ λεγόντων, άλλὰ καὶ 'Αριστόξενος οὕτως ἀποφαίνεται. καὶ "Ομηρος δὲ τοὺς ἀοιδοὺς σωφρονιστας είρηκε, καθάπερ τον της Κλυταιμνήστρας φύλακα,

ω πόλλ' ἐπέτελλεν 'Ατρείδης Τροίηνδε κιών είρυσθαι ἄκοιτιν, (Od, 3, 267)

τόν τε Αιγισθον οὐ πρότερον αὐτης περιγενέσθαι, πρίν ή

τὸν μὲν ἀοιδὸν ἄγων ἐς νῆσον ἐρήμην

κάλλιπεν

την δ' εθέλων εθέλουσαν ανήγαγεν δυδε δόμονδε. (Od. 3.270)

χωρίς δὲ τούτων ὁ Ἐρατοσθένης ἐαυτῷ μάχεται· μικρον γαρ προ της λεχθείσης αποφάσεως έναρχόμενος τοῦ περὶ τῆς γεωγραφίας λόγου φησὶν άπαντας κατ' άρχας φιλοτίμως έχειν είς το μέσον φέρειν την ύπερ των τοιούτων ίστορίαν. "Ομηρον γουν υπέρ τε των Αιθιόπων δσα επύθετο καταχωρίσαι είς την ποίησιν και περι των κατ' Αίγυπτον καὶ Λιβύην, τὰ δὲ δὴ κατὰ τὴν Ἑλλάδα καὶ τούς σύνεγγυς τόπους καὶ λίαν περιέργως έξενηνοχέναι, πολυτρήρωνα μέν την Θίσβην λέγοντα (Π. 2. 502), 'Αλίαρτον δὲ ποιήεντα (ib. 503), ἐσχατόωσαν δὲ 'Ανθηδόνα (ib. 508), Λίλαιαν δὲ πηγής έπι Κηφισσοίο (ib. 523), καὶ οὐδεμίαν προσθήκην κενώς ἀπορρίπτειν. πότερον οὖν ό ποιών ταθτα ψυχαγωγοθντι ἔοικεν ἡ διδάσκοντι;

GEOGRAPHY, 1. 2. 3

lyre-playing, or in flute-playing, lay claim to this virtue, for they maintain that these studies tend to discipline and correct the character. You may hear this contention made not merely by the Pythagoreans. but Aristoxenus also declares the same thing. Homer, too, has spoken of the bards as disciplinarians in morality, as when he says of the guardian of Clytaemnestra: "Whom the son of Atreus as he went to Troy strictly charged to keep watch over his wife"; and he adds that Aegisthus was unable to prevail over Clytaemnestra until "he carried the bard to a lonely isle and left him there—while as for her, he led her to his house, a willing lady with a willing lover." But, even apart from this, Eratosthenes contradicts himself; for shortly before the pronouncement above-mentioned, and at the very beginning of his treatise on geography, he says that from the earliest times all the poets have been eager to display their knowledge of geography; Homer, for instance, made a place in his poems for everything that he had learned about the Ethiopians and the inhabitants of Egypt and Libya, and that he has gone into superfluous detail in regard to Greece and the neighbouring countries, speaking of Thisbe as the "haunt of doves," Haliartus as "grassy," Anthedon as "on the uttermost borders," Lilaea as "by the springs of Cephisus"; and he adds that Homer never lets fall an inappropriate epithet. Well then, I ask, is the poet who makes use of these epithets like a person engaged in entertaining, or in

νη Δία, άλλα ταῦτα μέν οὕτως εἴρηκε, τὰ δ' ἔξω της αισθήσεως καὶ ούτος καὶ άλλοι τερατολογίας μυθικής πεπληρώκασιν. οὐκοῦν ἐχρήν οὕτως είπειν, ότι ποιητής πας τα μεν ψυχαγωγίας χάριν μόνον εκφέρει, τὰ δὲ διδασκαλίας δ δ' ἐπήνεγκεν, ότι ψυχαγωγίας μόνον, διδασκαλίας δ' ού, καὶ προσπεριεργάζεται τε, πυνθανόμενος τι συμβάλλεται προς άρετην ποιητού πολλών υπάρξαι τόπων έμπειρον ή στρατηγίας ή γεωργίας ή ρητορικής η οία δη περιποιείν αὐτώ τινες έβουλήθησαν: τὸ μεν οθν απαντα ζητείν περιποιείν αθτώ προεκπίπτοντος ἄν τις θείη τῆ φιλοτιμία, ὡς αν εἴ τις, φησὶν ὁ Ἱππαρχος, ᾿Αττικῆς εἰρεσιώνης καταρτώη² καὶ ἃ μη δύναται φέρειν μῆλα καὶ ὄγχνας, ούτως εκείνου παν μάθημα και πασαν τέχνην. τοῦτο μὲν δὴ ὀρθῶς ἃν λέγοις, ὧ Ἐρατόσθενες· ἐκεῖνα δ' οὐκ ὀρθῶς, ἀφαιρούμενος αὐτὸν τὴν τοσαύτην πολυμάθειαν καὶ τὴν ποιητικὴν γραώδη μυθολογίαν ἀποφαίνων, ή δέδοται πλάττειν, φής,3 δ αν αὐτη φαίνηται ψυχαγωγίας οἰκεῖον.

C 17 δ αν αὐτη φαίνηται ψυχαγωγίας οἰκείον. ἄρα γὰρ οὐδὲ τοῖς ἀκροωμένοις τῶν ποιητῶν οὐδὲν συμβάλλεται πρὸς ἀρετήν; λέγω δὲ τὸ πολλῶν ὑπάρξαι τόπων ἔμπειρον ἢ στρατηγίας ἢ γεωργίας ἡ ῥητορικης, ἄπερ ἡ ἀκρόασις, ὡς εἰκός, περιποιεῖ.

 $^{^1}$ προσπεριεργάζεταί τε, Toup, for προσεξεργάζεταί γε (προσεπεργάζεταί γε); Meineke (Vind. 239) approving, but not inserting.

 ² καταρτψη, Madvig, for κατηγοροίη; A. Vogel approving.
 ³ φήs, Groskurd, for φησίν; Forbiger following.

¹ The "eiresione" was an olive (or laurel) branch adorned with the first-fruits of a given land and carried around to the accompaniment of a song of thanksgiving and prayer.

GEOGRAPHY, 1. 2. 3

instructing? "The latter, of course," you reply; "but while these epithets have been used by him for purposes of instruction, everything beyond the range of observation has been filled, not only by Homer but by others also, with mythical marvels." Eratosthenes, then, should have said that "every poet writes partly for purposes of mere entertainment and partly for instruction"; but his words were "mere entertainment and not instruction." And Eratosthenes gives himself quite unnecessary pains when he asks how it adds to the excellence of the poet for him to be an expert in geography, or in generalship, or in agriculture, or in rhetoric, or in any kind of special knowledge with which some people have wished to invest him. Now the desire to endow Homer with all knowledge might be regarded as characteristic of a man whose zeal exceeds the proper limit, just as would be the case if a man-to use a comparison of Hipparchus—should hang apples and pears, or anything else that it cannot bear, on an Attic "eiresione"; so absurd would it be to endow Homer with all knowledge and with every art. You may be right, Eratosthenes, on that point, but you are wrong when you deny to Homer the possession of vast learning, and go on to declare that poetry is a fable-prating old wife, who has been permitted to "invent" (as you call it) whatever she suitable for purposes of entertainment. What, then? Is no contribution made, either, to the excellence of him who hears the poets recited-I again refer to the poet's being an expert in geography, or generalship, or agriculture, or rhetoric, in which subjects one's hearing of poetry naturally invests the poet with special knowledge?

4. 'Αλλὰ μὴν ταῦτά γε πάντα ὁ ποιητὴς 'Οδυσσεῖ προσῆψεν, ὃν τῶν πάντων μάλιστα ἀρετῆ πάση κοσμεῖ· οὖτος γὰρ αὐτῷ

πολλών ἀνθρώπων ἴδεν ἄστεα καὶ νόον ἔγνω, (Od. 1. 3)

οὖτός τε ό

είδως παντοίους τε δόλους καὶ μήδεα πυκνά. (Il. 3. 202)

οὖτος δ' ὁ "πτολίπορθος" ἀεὶ λεγόμενος καὶ τὸ Ἰλιον έλὼν

βουλή και μύθοισι και ήπεροπηίδι τέχνη· τούτου γ' έσπομένοιο και έκ πυρὸς αἰθομένοιο ἄμφω νοστήσαιμεν, (Π. 10. 246)

φησίν ό Διομήδης. καὶ μὴν ἐπί γε τῆ γεωργία σεμνύνεται καὶ γὰρ ἐν ἀμητῷ,

έν ποίη· δρέπανον μὲν ἐγὼν εὐκαμπὲς ἔχοιμι, καὶ δὲ σὰ τοῖον ἔχοις· (Od. 18. 368) καὶ ἐν ἀρότω,

τῷ κέ μ ἴδοις, εἰ ὧλκα διηνεκέα προταμοίμην. (Od. 18. 375)

καὶ οὐχ "Ομηρος μὲν οὕτω φρονεῖ περὶ τούτων, οὐχὶ δὲ πάντες οἱ πεπαιδευμένοι μάρτυρι χρῶνται τῷ ποιητῆ, ὡς ὀρθῶς λέγοντι, περὶ τοῦ τὴν τοιαύτην ἐμπειρίαν εἰς φρόνησιν συντείνειν μάλιστα.

5. Ἡ δὲ ἡητορικὴ φρόνησίς ἐστι δήπου περὶ λόγους ἡν ἐπιδείκνυται παρ' ὅλην τὴν ποίησιν Ὁδυσσεὺς ἐν τῆ Διαπείρα, ἐν ταῖς Λιταῖς, ἐν τῆ Πρεσβεία, ἐν ἡ φησίν (Π. 2; 9; 3)

GEOGRAPHY, 1. 2. 4-5

- 4. Assuredly Homer has attributed all knowledge of this kind, at least, to Odysseus, whom he adorns beyond his fellows with every kind of excellence; for his Odysseus "of many men the towns did see and minds did learn," and he is the man who "is skilled in all the ways of wile and cunning device." Odysseus is continually spoken of as "the sacker of cities" and as the capturer of Troy "by means of his counsels and his persuasiveness and his deceitful arts"; and Diomedes says of him: "But while he cometh with me, even out of burning fire might we both return." More than that, Odysseus prides himself on being a farmer. For instance, with regard to reaping he says: "In the deep grass might the match be, and might I have a crooked scythe, and thou another like it"; and with regard to ploughing: "Then shouldst thou see me, whether or no I would cut a clean furrow unbroken before me." And not only does Homer thus possess wisdom about these matters, but all enlightened men cite the poet as a witness whose words are true, to prove that practical experience of this kind contributes in the highest degree to wisdom.
- 5. Rhetoric is, to be sure, wisdom applied to discourse; and Odysseus displays this gift throughout the entire Iliad, in the Trial, in the Prayers, and in the Embassy, where Homer says: "But when

άλλ' ὅτε δὴ ὅπα τε μεγάλην ἐκ στήθεος εἵη καὶ ἔπεα νιφάδεσσιν ἐοικότα χειμερίησιν, οὐκ ἂν ἔπειτ' 'Οδυσῆt γ' ἐρίσσειε βροτὸς ἄλλος.
(Π. 3. 221)

τίς ἃν οὖν ὑπολάβοι τὸν δυνάμενον ποιητὴν εἰσάγειν ἡητορεύοντας ἐτέρους καὶ στρατηγοῦντας καὶ τὰ ἄλλα ἐπιδεικνυμένους τὰ τῆς ἀρετῆς ἔργα, αὐτὸν εἶναι τῶν φλυάρων ἔνα καὶ τῶν θαυματοποιῶν, γοητεύειν μόνον καὶ κολακεύειν τὸν ἀκροατὴν δυνάμενον, ἀφελεῖν δὲ μηδέν; προτέραν ὶ δ' οὐδ' ἀρετὴν ποιητοῦ λέγοιμεν ἂν ἡντινοῦν ἄλλην, ἡ τὴν μιμητικὴν τοῦ βίου διὰ λόγων. πῶς ἂν οὖν μιμοῖτο ἄπειρος ῶν τοῦ βίου καὶ ἄφρων; οὐ γὰρ οὕτω φαμὲν τὴν τῶν ποιητῶν ἀρετὴν ὡσεὶ ² τεκτόνων ἡ χαλκέων ἀλλ' ἐκείνη μὲν οὐδενὸς ἔχεται καλοῦ καὶ σεμνοῦ, ἡ δὲ ποιητοῦ συνέζευκται τῆ τοῦ ἀνθρώπου, καὶ οὐχ οἶόν τε ἀγαθὸν γενέσθαι ποιητήν, μὴ πρότερον γενηθέντα ἄνδρα ἀγαθόν.

6. Το δε δη και την ρητορικην άφαιρεισθαι τον ποιητην τελέως άφειδουντος ήμων έστι. τί γαρ ούτω ρητορικόν, ώς φράσις; τί δ' ούτω C 18 ποιητικόν; τίς δ' άμείνων Όμήρου φράσαι; νη Δία, άλλ' έτέρα φράσις η ποιητική. τῷ γε εἴδει, ώς και ἐν αὐτῆ τῆ ποιητικῆ ή τραγική και ἡ κωμική, καὶ ἐν τῆ πεζῆ ἡ ἰστορικη καὶ ἡ δικανική ἄρα γὰρ οὐδ' ὁ λόγος ἐστὶ γενικός, οῦ εἴδη

¹ προτέραν, Meineke, for πότερον; C. Müller approving.
² ώσεί, Corais, for ώs ή; Meineke following; C. Müller approving.

GEOGRAPHY, 1. 2. 5-6

he uttered his great voice from his chest, and words like unto the snowflakes of winter, then could no mortal man contend with Odysseus." Who, then, can assume that the poet who is capable of introducing other men in the rôle of orators, or of generals, or in other rôles that exhibit the accomplishments of the art of rhetoric, is himself but one of the buffoons or jugglers, capable only of bewitching and flattering his hearer but not of helping him? Nor can we assume that any excellence of a poet whatever is superior to that which enables him to imitate life through the means of speech. How, then, can a man imitate life if he has no experience of life and is a dolt? Of course we do not speak of the excellence of a poet in the same sense as we speak of that of a carpenter or a blacksmith; for their excellence depends upon no inherent nobility and dignity, whereas the excellence of a poet is inseparably associated with the excellence of the man himself, and it is impossible for one to become a good poet unless he has previously become a good man.

6. So, then, to deny the art of rhetoric to Homer is to disregard my position entirely. For what is so much a part of rhetoric as style¹? And what is so much a part of poetry? And who has surpassed Homer in style²? "Assuredly," you answer, "but the style of poetry is different from that of rhetoric." In species, yes; just as in poetry itself the style of tragedy differs from that of comedy, and in prose the style of history differs from that of forensic speech. Well then, would you assert that discourse is not a generic term, either, whose

¹ Phrasis. ² Phrazein.

ό ἔμμετρος καὶ ὁ πεζός; ἡ λόγος μέν, ἡητορικὸς δὲ λόγος οὐκ ἔστι γενικὸς καὶ φράσις καὶ ἀρετή λόγου: ώς δ' είπειν, ό πεζὸς λόγος, ὅ γε κατεσκευασμένος, μίμημα τοῦ ποιητικοῦ ἐστι. τιστα γάρ ή ποιητική κατασκευή παρήλθεν είς τὸ μέσον καὶ εὐδοκίμησεν είτα ἐκείνην μιμούμενοι, λύσαντες τὸ μέτρον, τάλλα δὲ φυλάξαντες τὰ ποιητικὰ συνέγραψαν οἱ περὶ Κάδμον καὶ Φερεκύδη καὶ Εκαταΐον είτα οἱ ὕστερον, ἀφαιρούντες ἀεί τι των τοιούτων, εἰς τὸ νῦν εἶδος κατήγαγον, ώς αν άπο ύψους τινός καθάπερ αν τις καλ την κωμφδίαν φαίη λαβείν την σύστασιν απὸ τῆς τραγωδίας, καὶ τοῦ κατ' αὐτὴν ύψους καταβιβασθείσαν είς τὸ λογοειδές νυνὶ καλούμενον, καὶ τὸ ἀείδειν δὲ ἀντὶ τοῦ φράζειν τιθέμενον παρά τοις πάλαι ταὐτὸ τοῦτο έκμαρτυρεί, διότι πηγή και άρχη φράσεως κατεσκευασμένης καὶ ρητορικής υπήρξεν ή ποιητική. αυτη γάρ προσεχρήσατο τῷ μέλει κατὰ τὰς ἐπιδείξεις τοῦτο δ' ην λόγος μεμελισμένος η ώδή,1 άφ' οῦ δὴ ραψωδίαν τ' ἔλεγον καὶ τραγωδίαν καὶ κωμωδίαν. ὥστ' ἐπειδὴ τὸ Φράζειν πρώτιστα ἐπὶ της ποιητικής έλέγετο φράσεως, αύτη δὲ μετ' ώδης ύπηρξε παρ' εκείνοις, τὸ ἀείδειν αὐτοῖς τὸ αὐτὸ τῷ φράζειν. 2 καταχρησαμένων δ' αὐτῶν θατέρω

 1 λόγος μεμελισμένος 1 φδή, 1 A. Miller, for φδή 1 λόγος μεμελισμένος.

 $[\]frac{2}{a}$ αῦτη δὲ μετ' φδῆς ὑπῆρξε παρ' ἐκείνοις, τὸ ἀείδειν αὐτοῖς τὸ αὐτὸ τῷ φράζειν, Spengel, for αὅτη δὲ μετ' φδῆς, τὸ ἀείδειν αὐτοῖς τὸ αὐτὸ τῷ φράζειν ὑπῆρξε παρ' ἐκείνοις; C. Müller approving.

GEOGRAPHY, 1. 2. 6

species are metrical discourse and prose discourse? Or, rather, is discourse, in its broadest sense, generic, while rhetorical discourse is not generic, and style is simply an excellence of discourse?—But prose discourse—I mean artistic prose—is, I may say, an imitation of poetic discourse; for poetry, as an art, first came upon the scene and was first to win approval. Then came Cadmus, Pherecydes, Hecataeus, and their followers, with prose writings in which they imitated the poetic art, abandoning the use of metre but in other respects preserving the qualities of poetry. Then subsequent writers took away, each in his turn, something of these qualities, and brought prose down to its present form, as from a sublime height. In the same way one might say that comedy took its structure from tragedy, but that it also has been degraded—from the sublime height of tragedy to its present "proselike" style, as it is called. And further, the fact that the ancients used the verb "sing" instead of the verb "tell" bears witness to this very thing, namely, that poetry was the source and origin of style, I mean ornate, or rhetorical, style. For when poetry was recited, it employed the assistance of song; this combination formed melodic discourse, or "ode"; and from "ode" they began to use the terms rhapsody, tragedy, and comedy. Therefore, since "tell" was first used in reference to poetic "style" 2 and since among the ancients this poetic style was accompanied by song, the term "sing" was to them equivalent to the term "tell"; and then after they had misused the former of these two terms by applying it to prose

¹ Phrazein. 2 Phrasis.

καὶ ἐπὶ τοῦ πεζοῦ λόγου, καὶ ἐπὶ θάτερον ἡ κατάχρησις διέβη. καὶ αὐτὸ δὲ τὸ πεζὸν λεχθῆναι τὸν ἄνευ τοῦ μέτρου λόγον ἐμφαίνει τὸν ἀπὸ ὕψους τινὸς καταβάντα καὶ ὀχήματος εἰς τοὕδαφος.

- 7. 'Αλλ' οὐδὲ τὰ σύνεγγυς μόνου, ὅσπερ Ἐρατοσθένης εἴρηκε, καὶ τὰ ἐν τοῖς "Ελλησιν, ἀλλὰ καὶ τῶν πόρρω πολλὰ λέγει καὶ δι' ἀκριβείας "Ομηρος καὶ μᾶλλόν γε τῶν ὕστερον μυθολογεῖται, οὐ πάντα τερατευόμενος, ἀλλὰ καὶ πρὸς ἐπιστήμην ἀλληγορῶν ἡ διασκευάζων ἡ δημαγωγῶν ἄλλα τε καὶ τὰ περὶ τὴν 'Οδυσσέως πλάνην περὶ ἡς πολλὰ διαμαρτάνει, τούς τ' ἐξηγητὰς φλυάρους ἀποφαίνων καὶ αὐτὸν τὸν ποιητήν περὶ ὧν ἄξιον εἰπεῖν διὰ πλειόνων.
- 8. Καὶ πρώτον ὅτι τοὺς μύθους ἀπεδέξαντο C 19 οὐχ οἱ ποιηταὶ μόνον, ἀλλὰ καὶ αἱ πόλεις πολὺ πρότερον καὶ οἱ νομοθέται τοῦ χρησίμου χάριν, βλέψαντες εἰς τὸ φυσικὸν πάθος τοῦ λογικοῦ ζώου· φιλειδήμων γὰρ ἄνθρωπος· 1 προοίμιον δὲ τούτου τὸ φιλόμυθον· ἐντεῦθεν οὖν ἄρχεται τὰ παιδία ἀκροᾶσθαι καὶ κοινωνεῖν λόγων ἐπὶ πλεῖον. αἴτιον δ', ὅτι καινολογία τίς ἐστιν ὁ μῦθος, οὐ τὰ καθεστηκότα φράζων, ἀλλ' ἔτερα παρὰ ταῦτα· ἡδὺ δὲ τὸ καινὸν καὶ δ μὴ πρότερον ἔγνω τις· τοῦτο δ' αὐτό ἐστι καὶ

¹ ανθρωπος, Meineke, for ανθρωπος; Cobet also independently.

discourse, the misuse passed over to the latter term also. And, furthermore, the very fact that non-metrical discourse was termed "pedestrian" indicates its descent from a height, or from a chariot,

to the ground.

7. Nor, indeed, is the statement of Eratosthenes true that Homer speaks only of places that are near by and in Greece; on the contrary, he speaks also of many places that are distant; and when Homer indulges in myths he is at least more accurate than the later writers, since he does not deal wholly in marvels, but for our instruction he also uses allegory, or revises myths, or curries popular favour, and particularly in his story of the wanderings of Odysseus; and Eratosthenes makes many mistakes when he speaks of these wanderings and declares that not only the commentators on Homer but also Homer himself are dealers in nonsense. But it is worth my while to examine these points more in detail.

8. In the first place, I remark that the poets were not alone in sanctioning myths, for long before the poets the states and the lawgivers had sanctioned them as a useful expedient, since they had an insight into the emotional nature of the reasoning animal; for man is eager to learn, and his fondness for tales is a prelude to this quality. It is fondness for tales, then, that induces children to give their attention to narratives and more and more to take part in them. The reason for this is that myth is a new language to them—a language that tells them, not of things as they are, but of a different set of things. And what is new is pleasing, and so is what one did not know before; and it is just this that makes men eager to

τὸ ποιοῦν Φιλειδήμονα. ὅταν δὲ προσή καὶ τὸ θαυμαστον και το τερατώδες, επιτείνει ήδον ήν, ήπερ έστι τοῦ μανθάνειν φίλτρον. κατ' άρχὰς μὲν οὖν ἀνάγκη τοιούτοις δελέασι χρησθαι, προϊούσης δὲ τῆς ἡλικίας ἐπὶ τὴν τῶν ὄντων μάθησιν ἄγειν, ήδη της διανοίας έρρωμένης καὶ μηκέτι δεομένης κολάκων. καὶ ιδιώτης δὲ πᾶς καὶ ἀπαίδευτος τρόπον τινὰ παῖς ἐστι φιλομυθεῖ τε ώσαύτως όμοίως δὲ καὶ ὁ πεπαιδευμένος μετρίως οὐδὲ γὰρ οὖτος ἰσχύει τῷ λογισμῷ, πρόσεστι δὲ καὶ τὸ ἐκ παιδὸς ἔθος. ἐπεὶ δ' οὐ μόνον ήδύ, άλλὰ καὶ φοβερὸν τὸ τερατώδες, άμφοτέρων έστι των είδων χρεία πρός τε τους παίδας καὶ τοὺς ἐν ἡλικία τοῖς τε γὰρ παισὶ προσφέρομεν τοὺς ήδεις μύθους είς προτροπήν, είς ἀποτροπὴν δὲ τοὺς φοβερούς. ή τε γὰρ Λάμια μῦθός ἐστι καὶ ἡ Γοργώ καὶ ὁ Ἐφιάλτης και ή Μορμολύκη, οί τε πολλοι τών τὰς πόλεις οἰκούντων εἰς μὲν προτροπὴν ἄγονται τοῖς ἡδέσι τῶν μύθων, ὅταν ἀκούωσι τῶν ποιητῶν ἀνδραγαθήματα μυθώδη διηγουμένων, οίον Ἡρακλέους άθλους ή Θησέως, ή τιμας παρά θεών νεμομένας. η νη Δία δρώσι γραφάς η ξόανα η πλάσματα τοιαύτην τινά περιπέτειαν υποσημαίνοντα μυθώδη είς ἀποτροπην δέ, ὅταν κολάσεις παρὰ θεών καὶ Φόβους καὶ ἀπειλάς ἡ διὰ λόγων ἡ διὰ τύπων ἀοράτων 1 τινών προσδέχωνται, ή καὶ

¹ ἀοράτων, Kramer, Meineke, for ἀόρων, above which aτ is written in A. See Classical Journal 1814, 113.

GEOGRAPHY, 1. 2. 8

But if you add thereto the marvellous and the portentous, you thereby increase the pleasure, and pleasure acts as a charm to incite to learning. At the beginning we must needs make use of such bait for children, but as the child advances in years we must guide him to the knowledge of facts, when once his intelligence has become strong and no longer needs to be coaxed. Now every illiterate and uneducated man is, in a sense, a child, and, like a child, he is fond of stories; and for that matter, so is the half-educated man, for his reasoning faculty has not been fully developed, and, besides, the mental habits of his childhood persist in him. Now since the portentous is not only pleasing, but fearinspiring as well, we can employ both kinds of myth for children, and for grown-up people too. case of children we employ the pleasing myths to spur them on, and the fear-inspiring myths to deter them; for instance, Lamia 1 is a myth, and so are the Gorgon, and Ephialtes,² and Mormolyce.³ Most of those who live in the cities are incited to emulation by the myths that are pleasing, when they hear the poets narrate mythical deeds of heroism, such as the Labours of Heracles or of Theseus, or hear of honours bestowed by gods, or, indeed, when they see paintings or primitive images or works of sculpture which suggest any similar happy issue of fortune in mythology; but they are deterred from evil courses when, either through descriptions or through typical representations of objects unseen, they learn of divine punishments, terrors, and threats—or even

² The giant whose eyes were put out by Apollo and

Heracles. ³ A female goblin,

¹ A familiar female goblin, devourer of children, in the ancient nursery-legends.

πιστεύωσι περιπεσείν τινας· οὐ γάρ ὄχλον νε1 γυναικών και παντός χυδαίου πλήθους έπαγαγείν λόγω δυνατὸν φιλοσόφω, καὶ προκαλέσασθαι 2 προς εὐσέβειαν καὶ οσιότητα καὶ πίστιν, ἀλλὰ δεί καὶ δεισιδαιμονίας τοῦτο δ' οὐκ ἄνευ μυθοποιίας καὶ τερατείας. κεραυνός γὰρ καὶ αίγις καὶ τρίαινα καὶ λαμπάδες καὶ δράκοντες καὶ θυρσόλογχα, τῶν θέῶν ὅπλα, μῦθοι καὶ πᾶσα θεολογία άρχαϊκή ταθτα δ' άπεδέξαντο οἱ τὰς πολιτείας καταστησάμενοι μορμολύκας τινάς πρός τούς νηπιόφρονας. τοιαύτης δε της μυθοποιίας ούσης καὶ καταστρεφούσης είς τὸ κοινωνικὸν καὶ τὸ πολιτικὸν τοῦ βίου σχημα καὶ τὴν τῶν ὅντων ίστορίαν, οἱ μὲν ἀρχαῖοι τὴν παιδικὴν ἀγωγὴν έφύλαξαν μέχρι τών τελείων ήλικιών, καὶ διὰ ποιητικής ίκανως σωφρονίζεσθαι πάσαν ήλικίαν ύπέλαβον χρόνοις δ' ύστερον ή της ίστορίας γραφή καὶ ή νῦν φιλοσοφία παρελήλυθεν εἰς μέσον. αὕτη μὲν οὖν πρὸς ὀλίγους, ἡ δὲ ποιητική δημωφελεστέρα καὶ θέατρα πληροῦν δυναμένη ή δε δή τοῦ 'Ομήρου ὑπερβαλλόντως. καὶ οἱ πρῶτοι δὲ ιστορικοί καὶ φυσικοί μυθογράφοι.

9. "Ατε δη προς το παιδευτικον είδος τους μύθους ἀναφέρων ο ποιητής εφρόντιζε πολύ μέρος τάληθους " εν δ' ετίθει" (Π. 18. 541) και ψευδος, το μεν ἀποδεχόμενος, τῷ δὲ δημαγωγών και στρα-

τηγών τὰ πλήθη.

1 γε, Meineke, for τε; C. Müller approving.

3 did, Cobet deletes, before deioidaimovlas.

Begins.

² προκαλέσασθαι, is retained against Meineke's προσκαλέσασθαι; A Miller and C. Müller approving.

⁴ εφρόντιζε, Cobet, from the margin of A, for εφρόντισε.

GEOGRAPHY, 1. 2. 8-9

when they merely believe that men have met with such experiences. For in dealing with a crowd of women, at least, or with any promiscuous mob, a philosopher cannot influence them by reason or exhort them to reverence, piety and faith; nay, there is need of religious fear also, and this cannot be aroused without myths and marvels. For thunderbolt, aegis, trident, torches, snakes, thyrsus-lances,arms of the gods—are myths, and so is the entire ancient theology. But the founders of states gave their sanction to these things as bugbears wherewith to scare the simple-minded. Now since this is the nature of mythology, and since it has come to have its place in the social and civil scheme of life as well as in the history of actual facts, the ancients clung to their system of education for children and applied it up to the age of maturity; and by means of poetry they believed that they could satisfactorily discipline every period of life. But now, after a long time, the writing of history and the present-day philosophy have come to the front. Philosophy, however, is for the few, whereas poetry is more useful to the people at large and can draw full houses—and this is exceptionally true of the poetry of Homer. And the early historians and physicists were also writers of myths.

9. Now inasmuch as Homer referred his myths to the province of education, he was wont to pay considerable attention to the truth. "And he mingled therein" a false element also, giving his sanction to the truth, but using the false to win the favour of the populace and to out-general the masses.

ώς δ' ὅτε τις χρυσὸν περιχεύεται ἀργύρφ ἀνήρ, (Od. 6. 232)

οῦτως ἐκεῖνος ταῖς ἀληθέσι περιπετείαις προσετίθει μῦθον, ἡδύνων καὶ κοσμῶν τὴν φράσιν πρὸς δὲ τὸ αὐτὸ τέλος τοῦ ἱστορικοῦ καὶ τοῦ τὰ ὄντα λέγοντος βλέπων. οὕτω δὴ τόν τε Ἰλιακὸν πόλεμον γεγονότα παραλαβὼν ἐκόσμησε ταῖς μυθοποιίαις, καὶ τὴν Ὀδυσσέως πλάνην ὡσαύτως ἐκ μηδενὸς δὲ ἀληθοῦς ἀνάπτειν κενὴν τερατολογίαν οὐχ Ὁμηρικόν. προσπίπτει γάρ, ὡς εἰκός, ὡς πιθανώτερον ἀν οὕτω τις ψεύδοιτο, εἰ καταμίσγοι τι καὶ αὐτῶν τῶν ἀληθινῶν· ὅπερ καὶ Πολύβιός φησι περὶ τῆς Ὀδυσσέως πλάνης ἐπιχειρῶν· τοιοῦτο δ' ἐστὶ καὶ τὸ

ἴσκε ψεύδεα πολλὰ λέγων ἐτύμοισιν ὁμοῖα· (Od. 19. 203)

οὐ γὰρ πάντα, ἀλλὰ πολλά, ἐπεὶ οὐδ' ἄν ἦν ἐτύμοισιν ὁμοῖα. ἔλαβεν οὖν παρὰ τῆς ἱστορίας τὰς ἀρχάς. καὶ γὰρ τὸν Αἰόλον³ δυναστεῦσαί φησι τῶν περὶ τὴν Λιπάραν νήσων, καὶ τῶν περὶ τὴν Αἰτνην Κύκλωπας καὶ Λαιστρυγόνας ἀξένους τινάς διὸ καὶ τὰ περὶ τὸν πορθμὸν ἀπροσπέλαστα εἶναι τοῖς τότε, καὶ τὴν Χάρυβδιν καὶ τὸ Σκύλλαιον ὑπὸ ληστῶν κατέχεσθαι. οὕτω δὲ καὶ τοὺς ἄλλους τῶν ὑπὸ Ὁμήρου λεγομένων ἐν ἄλλοις τόποις ἱστοροῦμενοῦτω δὲ καὶ τοὺς Κιμμερίους εἰδῶς οἰκοῦντας

προσετίθει, Corais, for προσεπετίθει; Cobet independently.
 On the passage οδτω δη... ἀληθινῶν, see R. Zimmermann,
 Hermes 23, 125.
 Alόλον, Meineke, for Αἴολον.

GEOGRAPHY, 1. 2. 9

"And as when some skilful man overlays gold upon silver," just so was Homer wont to add a mythical element to actual occurrences, thus giving flavour and adornment to his style; but he has the same end in view as the historian or the person who narrates facts. So, for instance, he took the Trojan war, an historical fact, and decked it out with his myths; and he did the same in the case of the wanderings of Odysseus; but to hang an empty story of marvels on something wholly untrue is not Homer's way of doing things. For it occurs to us at once, doubtless, that a man will lie more plausibly if he will mix in some actual truth, just as Polybius says, when he is discussing the wanderings of Odvsseus. This is what Homer himself means when he says of Odvsseus: "So he told many lies in the likeness of truth;" for Homer does not say "all" but "many" lies; since otherwise they would not have been "in the likeness of truth." Accordingly. he took the foundations of his stories from history. For instance, history says that Aeolus was once king over the islands about Lipara, and that the Cyclopes and the Laestrygonians, inhospitable peoples, were lords over the region about Aetna and Leontine; and that for this reason the region about the Strait might not be visited by men of that time, and that Charybdis and the Rock of Scylla were infested by brigands. And from history we learn that the rest of the peoples mentioned by Homer lived in other parts of the world. And, too, it was on the basis of Homer's actual knowledge that the Cimmerians lived

τὸν Κιμμερικὸν βόσπορον πρόσβορρον ταὶ ζοφώδη μετήγαγεν οἰκείως εἰς σκοτεινόν τινα τόπον τὸν καθ' 'Αιδην, χρήσιμον ὄντα πρὸς τὴν μυθοποιίαν τὴν ἐν τῷ πλάνη. ὅτι δ' οἶδεν αὐτούς, οἱ χρονογράφοι δηλοῦσιν, ἡ μικρὸν πρὸ αὐτοῦ τὴν τῶν Κιμμερίων ἔφοδον ἡ κατ' αὐτὸν ἀναγράφοντες.

10. 'Ωσαύτως 2 καὶ τοὺς Κόλγους είδως καὶ C 21 τὸν Ἰάσονος πλοῦν τὸν εἰς Αἶαν καὶ τὰ περὶ Κίρκης καλ Μηδείας μυθευόμενα καλ ιστορούμενα περί της φαρμακείας και της άλλης δμοιοτροπίας. συγγενείας τε έπλασε των ούτω διωκισμένων, της μέν έν τῷ μυχῷ τοῦ Πόντου, της δ' έν τη Ίταλία, καὶ ἐξωκεανισμὸν ἀμφοῖν, τάχα καὶ τοῦ 'Ιάσονος μέχρι της 'Ιταλίας πλανηθέντος δείκυυται γάρ τινα ⁸ καὶ περὶ τὰ Κεραύνια ὄρη καὶ περί του 'Αδρίαν καὶ ἐν τῷ Ποσειδωνιάτη κόλπω καὶ ταῖς πρὸ τῆς Τυρρηνίας νήσοις τῆς τῶν 'Αργοναυτών πλάνης σημεία. προσέδοσαν δέ τι καί αί Κυάνεαι, ἄσπερ Συμπληγάδας καλοῦσι πέτρας τινές, τραχὺν ποιοῦσαι τὸν διέκπλουν τὸν διὰ τοῦ Βυζαντιακοῦ στόματος ωστε παρά μέν την Αίαν ή Αἰαίη, παρὰ δὲ τὰς Συμπληγάδας αἱ Πλαγκταί,

¹ πρόσβορρον, Madvig, for πρός Βορράν.

² ώσαύτωs, the reading of the MSS., is retained by Kramer and Meineke: C. Müller approving.

³ σημεία after τινα, Meineke deletes, following suggestion of Müller-Dübner.

GEOGRAPHY, 1. 2. 9-10

about the Cimmerian Bosporus, a gloomy country in the north, that he transferred them, quite appropriately, to a certain gloomy region in the neighbourhood of Hades—a region that suited the purpose of his mythology in telling of the wanderings of Odysseus. The writers of chronicles make it plain that Homer knew the Cimmerians, in that they fix the date of the invasion of the Cimmerians either a short time before Homer, or else in Homer's own time.

10. And likewise it was on the basis of Homer's actual knowledge of the Colchians, of Jason's expedition to Aea, and of the stories of fact and fiction told about Circe and Medea regarding their use of magic potions and their general similarity of character, that he invented a blood-relationship between the two, although they lived so very far apart, the one in the remote recess of the Pontus. and the other in Italy, and also invented a residence for both of them out by Oceanus, though it may be that Jason wandered as far as Italy; for there are some indications that point to the wanderings of the Argonauts in the region of the Ceraunian Mountains,1 about the Adriatic Sea,2 in the Gulf of Poseidonia,⁸ and in the islands that lie off Tyrrhenia. And the Cyaneae also, which some call the Symplegades,5 furnished the poet an additional matter of fact, in that they made the passage through the mouth of the strait at Byzantium very difficult; so that when we compare the Aeaea of Circe with the Aea of Medea, and Homer's Planctae⁶ with the Symplegades,

¹ The Kimara Mountains in Albania.

² See 7. 5. 9.

³ Gulf of Salerno.

⁴ Dark Blue Rocks.

⁵ Clashing Rocks.

⁶ Wandering Rocks.

καλ ὁ δι' αὐτῶν πλοῦς τοῦ Ἰάσονος πιθανὸς ἐφάνη. παρά δὲ τὴν Σκύλλαν καὶ τὴν Χάρυβδιν ὁ διὰ τῶν σκοπέλων πλούς. άπλως δ' οι τότε το πέλαγος τὸ Ποντικὸν ὥσπερ ἄλλον τινὰ ἀκεανὸν ὑπελάμβανον, καὶ τοὺς πλέοντας ἐκεῖσε ὁμοίως έκτοπίζειν εδόκουν, ώσπερ τους έξω Στηλών επί πολύ προϊόντας καὶ γὰρ μέγιστον τῶν καθ' ήμας ενομίζετο, και δια τουτο κατ' εξοχήν ιδίως πόντον προσηγόρευον, ώς ποιητην "Ομηρον. Ισως οὖν καὶ διὰ τοῦτο μετήνεγκε τὰ ἐκ τοῦ Πόντου πρὸς τὸν ἀκεανὸν ὡς εὐπαράδεκτα διὰ τὴν κατέγουσαν δόξαν. οίμαι δὲ καὶ τῶν Σολύμων τὰ ἄκρα τοῦ Ταύρου τὰ περὶ τὴν Λυκίαν έως Πισιδίας κατεχόντων τὰ ὑψηλότατα, καὶ τὰς ἀπὸ της μεσημβρίας ύπερβολας επιφανεστάτας παρεγόντων τοις έντὸς τοῦ Ταύρου, καὶ μάλιστα τοις περὶ τὸν Πόντον, καθ' ὁμοιότητά τινα καὶ τούτους έξωκεανισθήναι φησί γαρ έπὶ τοῦ πλέοντος έν τή σχεδία,

τὸν δ' ἐξ Αἰθιόπων ἀνιῶν κρείων Ἐνοσίχθων τηλόθεν ἐκ Σολύμων ὀρέων ἴδεν. (Od. 5. 282)

τάχα δὲ καὶ τοὺς μονομμάτους Κύκλωπας ἐκ τῆς Σκυθικῆς ἱστορίας μετενήνοχε τοιούτους γάρ

¹ Draw a north and south line from the poet's point of observation (near the Black Sca) through the Solyman Mountains and through Egypt to the Ethiopians on Oceanus south of Egypt. Then draw a north and south line from Odysseus' point of observation (on his raft, west of Greece) to the Ethiopians living on Oceanus due south of the raft. Homer transfers the Solymi and their mountains from his own due-south line of vision to an analogous position on Odysseus' due-south line of vision. Just as these mountains,

GEOGRAPHY, 1. 2. 10

Jason's voyage through the Planctae was clearly plausible also; and so was Odysseus' passage between the Rocks, when we think of Scylla and Charybdis. Again, the men of Homer's day, in general, regarded the Pontic Sea as a kind of second Oceanus, and they thought that those who voyaged thither got beyond the limits of the inhabited world just as much as those who voyaged far beyond the pillars of Heracles; the Pontic Sea was thought to be the largest of the seas in our part of the world, and for that reason they applied to this particular sea the term "The Pontus," just as they spoke of Homer as "The Poet." Perhaps it was for that very reason that Homer transferred to Oceanus things that were true of the Pontus, in the belief that such a change would prove acceptable because of the prevailing notions in regard to the Pontus. And I think that since the Solymi occupied the loftiest peaks of the Taurus Range, I mean the peaks about Lycia as far as Pisidia, and since their country presented to people who lived north of the Taurus Range, and particularly to those who lived about the Pontus, the most conspicuous altitudes on the south-for this reason, on the strength of a certain similarity. of position, these people too were transferred to the position out by Oceanus; for in speaking of Odysseus sailing on his raft he says: "Now the lord, the shaker of the earth, on his way from the Ethiopians espied Odysseus from afar, from the mountains of the Solymi." 1 Perhaps Homer also borrowed his idea of the one-eyed Cyclopes from the history of Scythia;

to Homer, arose on the northern border of the Mediterranean, so to Odysseus they arose on the northern border of Oceanus. Strabo again refers to this on page 127.

τινας τοὺς 'Αριμασπούς φασιν, οὺς ἐν τοῖς 'Αριμασπείοις ἔπεσιν ἐνδέδωκεν 'Αριστέας ὁ Προκοννήσιος.

11. Δεῖ δὲ ταῦτα προϋποθέμενον σκοπεῖν, τί λέγουσιν οἱ φήσαντες περὶ Σικελίαν ἡ Ἰταλίαν γενέσθαι τῶ 'Οδυσσεῖ τὴν πλάνην καθ' "Ομηρον.1 έστι γὰρ ἀμφοτέρως τοῦτο δέξασθαι, καὶ βέλτιον καὶ χείρου. βέλτιον μέν, αν ούτω δέχηταί τις, ότι πεισθείς έκει την πλάνην τῷ 'Οδυσσεί γενέσθαι, λαβών άληθη ταύτην την υπόθεσιν ποιη-C 22 τικώς διεσκεύασε τοῦτο γὰρ οἰκείως ἄν λέγοιτο περὶ αὐτοῦ, καὶ οὐ μόνον γε περὶ Ἰταλίαν, άλλὰ καὶ μέχρι τῶν ἐσχάτων τῆς Ἰβηρίας ἐστὶν εύρεῖν ίχνη της εκείνου πλάνης και άλλων πλειόνων. χείρον δέ, ἐάν τις καὶ τὴν διασκευὴν ὡς ἱστορίαν δέχηται, ἐκείνου ἀκεανὸν καὶ "Αδην καὶ 'Ηλίου βόας καὶ παρὰ θεαῖς ξενίας καὶ μεταμορφώσεις καὶ μεγέθη Κυκλώπων καὶ Λαιστρυγόνων καὶ μορφήν Σκύλλης και διαστήματα πλοῦ και άλλα πλείω τοιαθτα τερατογραφοθντος φανερώς. οθτε δὲ πρὸς τοῦτον ἄξιον ἀντιλέγειν, οὕτω φανερῶς κατα νευδόμενον τοῦ ποιητοῦ, καθάπερ οὐδ', εἰ φαίη, τοῦτον τὸν τρόπον γενέσθαι τὸν εἰς τὴν ' Ιθάκην κατάπλουν τοῦ 'Οδυσσέως καὶ τὴν μνηστηροφονίαν καλ την έπι τοῦ ἀγροῦ συστάσαν μάχην τοις 'Ιθακησίοις πρός αὐτόν οὔτε πρός τον δεξάμενον οικείως προσπλέκεσθαι δίκαιον.

¹ ἡ μὴ γενέσθαι, Meineke deletes, after καθ "Ομηρον; Forbiger, Kramer, C. Müller approving.

GEOGRAPHY, 1. 2. 10-11

for it is reported that the Arimaspians are a oneeyed people—a people whom Aristeas of Proconnesus has made known in his Arimaspian Epic.

11. Having made these preliminary remarks, I must ask what people mean when they affirm that Homer places the wanderings of Odvsseus in the region of Sicily and Italy? It is possible to accept this view in two senses, one better and the other worse. The better is to assume that Homer was convinced that those regions were the scene of the wanderings of Odysseus, and that, taking this hypothesis as fact, he elaborated the story in poetic fashion. So much may be said with propriety about Homer; at any rate one may find traces of the wanderings of Odysseus, and of several others, not only in the region of Italy, but also as far as the extreme frontiers of Iberia. But the worse is to accept Homer's elaboration of the story as history also. because the poet is obviously indulging in marvels when he tells of Oceanus, Hades, cattle of Helius, entertainment by goddesses, metamorphoses, huge Cyclopes and huge Laestrygonians, Scylla's shape, distances traversed on the voyage, and many other things of a similar nature. But, on the one hand, it is not worth while to refute one who so obviously misinterprets the poet—any more than it would be if one should contend that the return of Odvsseus to Ithaca, the massacre of the suitors, and the fight which took place out in the country between the Ithacans and Odysseus, all happened precisely as described by the poet; nor, on the other hand, is it right to quarrel with the man who interprets Homer in a proper fashion.

12. 'Ο 'Ερατοσθένης δὲ πρὸς ἀμφοτέρας τὰς άποφάσεις ἀπήντηκεν οὐκ εὖ. πρὸς μὲν τὴν δευτεραν, ὅτι πειρᾶται διαβάλλειν φανερῶς ψευδη καὶ οὐκ ἄξια λόγου διὰ μακρών πρὸς δὲ τὴν προτέραν. ποιητήν τε απαντα αποφήνας φλύαρον, καλ μήτε τόπων εμπειρίαν μήτε τεχνών προς άρετην συντείνειν νομίσας των τε μύθων των μέν έν τόποις οὐ πεπλασμένοις πεφημισμένων, οίον έν Ἰλίω καὶ Ἰδη καὶ Πηλίω, τῶν δὲ ἐν πεπλασμένοις, καθάπερ έν οίς αί Γοργόνες ή ό Γηρυόνης, ταύτης φησί της ίδέας είναι καὶ τούς κατά την 'Οδυσσέως πλάνην λεγομένους, τούς δὲ μὴ πεπλάσθαι λέγοντας άλλ' ὑποκεῖσθαι ἐξ αὐτοῦ τοῦ μη συμφωνείν ελέγχεσθαι ψευδομένους τὰς γοῦν Σειρήνας τοὺς μὲν ἐπὶ τῆς Πελωριάδος καθιδρύειν, τούς δὲ ἐπὶ τῶν Σειρηνουσσῶν πλείους ἡ δισγιλίους διεχουσών σταδίους είναι δ' αὐτὰς σκόπελον τρικόρυφον διείργοντα τὸν Κυμαῖον 1 καὶ Ποσειδωνιάτην κόλπον. άλλ' οὐθ' ὁ ε σκόπελος οὐτός έστι τρικόρυφος, οὔθ' ὅλως κορυφοῦται πρὸς ύψος, άλλ' άγκών τις έκκειται μακρός καὶ στενός άπὸ τῶν κατὰ Συρρεντὸν ⁸ χωρίων ἐπὶ τὸν κατὰ Καπρίας πορθμόν, ἐπὶ θάτερα μὲν τῆς ὀρεινῆς τὸ τῶν Σειρήνων ἱερὸν ἔχων, ἐπὶ θάτερα δὲ πρὸς τῷ Ποσειδωνιάτη κόλπω νησίδια τρία προκείμενα έρημα πετρώδη, α καλούσι Σειρήνας έπ' αὐτώ

2 οὐθ' δ, Meineke, for οὐδὲ δ.
3 Συροεντόν Meineke, for Σύροεντον · C. Müller a.

¹ Κυμαΐον, Meineke, for Κύμαιον; C. Müller approving.

³ Συρρεντόν, Meineke, for Σύρρεντον; C. Müller approving.

GEOGRAPHY, 1. 2. 12

12. Eratosthenes, however, has taken issue with both these answers to my question, and in so doing he is wrong; he is wrong as regards the second answer, in that he attempts to misrepresent things that are obviously fictitious and that do not deserve protracted discussion; and he is wrong as regards the first, because he declares that all poets are dealers in absurdities and thinks their knowledge either of places or of arts does not conduce to virtue. Again, because Homer lays the scenes of his myths not only in non-fictitious places, such as Ilion, Mt. Ida, and Mt. Pelion, but also in fictitious places, such as those in which the Gorgons and Gervon dwell. Eratosthenes says that the places mentioned in the story of the wanderings of Odysseus, also, belong to the category of fiction, and that the persons who contend that they are not fictitious but have a foundation in fact, stand convicted of error by the very fact that they do not agree among themselves; at any rate, that some of them put the Sirens on Cape Pelorias,1 while others put them more than two thousand stadia distant on the Sirenussae, which is the name given to a three-peaked rock that separates the Gulf of Cumae 2 from the Gulf of Poseidonia.3 But neither does this rock have three peaks, nor does it run up into a peak at all; instead it is a sort of elbow that juts out, long and narrow, from the territory of Surrentum to the Strait of Capreae, with the sanctuary of the Sirens on one side of the hilly headland, while on the other side, looking towards the Gulf Poseidonia, lie three uninhabited rocky little islands, called the Sirens, and on the Strait of Capreae itself

¹ Cape Faro, Sicily. ² Bay of Naples.
³ Gulf of Salerno.

δὲ τῷ πορθμῷ τὸ ᾿Αθήναιον, ῷπερ ὁμωνυμεῖ καὶ ὁ ἀγκὼν αὐτός.

13. 'Αλλ' οὐδ' 1 εἰ μὴ συμφωνοῦσιν οἱ τὴν ίστορίαν των τόπων παραδιδόντες εὐθὺς ἐκβάλλειν δεί τὴν σύμπασαν ίστορίαν άλλ' ἔσθ' ὅτε καὶ πιστοῦσθαι τὸ καθόλου μᾶλλόν ἐστιν. οἶον λέγω, ζητουμένου, εί κατά Σικελίαν καὶ Ἰταλίαν ή πλάνη γέγονε, και εί αι Σειρήνες ενταθθά που C 23 λέγονται, ὁ μὲν φήσας ἐν τῆ Πελωριάδι πρὸς τον έν ταις Σειρηνούσσαις διαφωνεί, αμφότεροι δὲ πρὸς τὸν περί Σικελίαν καὶ Ἰταλίαν λέγοντα οὐ διαφωνοῦσιν, ἀλλὰ καὶ μείζω πίστιν παρέχουσιν, ότι, καίπερ μη τὸ αὐτὸ χωρίον φράζοντες, όμως οὐκ ἐκβεβήκεσάν γε τοῦ κατὰ τὴν Ἰταλίαν η Σικελίαν. ἐὰν δὲ προσθη τις, ὅτι ἐν Νεαπόλει Παρθενόπης δείκνυται μνήμα, μιᾶς τῶν Σειρήνων, **ἔτι πλείων προσεγένετο πίστις, καίτοι τρίτου** τινὸς λεχθέντος τούτου τοῦ τόπου. άλλ' ὅτι ἐν τούτω τω κόλπω, τω ύπο Ἐρατοσθένους λεχθέντι Κυμαίω, δυ ποιούσιν αί Σειρηνούσσαι, καὶ ή Νεάπολις ίδρυται, βεβαιοτέρως πιστεύομεν τὸ περί τούτους τούς τόπους γεγονέναι τὰς Σειρήνας οὕτε γάρ τὸν ποιητὴν ἀκριβῶς ἔκαστα πυθέσθαι, οὕθ' ήμεις παρ' εκείνου ζητουμεν το ακριβές ου μην οὐδ' οὕτως ἔχομεν ώς ὑπολαμβάνειν, καὶ μηδὲν ¹ οὐδ', Meineke, for οὕτ'.

¹ That is, Cape Minerva.

is situated the sanctuary of Athene, from which the elbow takes its name.¹

13. However, even if those who hand down to us our knowledge of the regions under consideration do not agree among themselves, we should not on that account set aside the entire body of that knowledge: indeed there are times when account as a whole is all the more to be accepted for this reason. For example, suppose the question is raised whether the wanderings took place in the regions of Sicily and Italy, and whether the Siren Rocks are anywhere thereabouts: the man who places the Siren Rocks on Cape Pelorias is in disagreement with the man who places them on the Sirenussae, but neither disagrees with the man who says that the Siren Rocks are placed in the neighbourhood of Sicily and Italy; nay, they even add to the credibility of the third witness, because, though they do not name the self-same spot for the Rocks, yet, at all events, they have not gone beyond the regions of Italy and Sicily for them. Then, if some one adds that a monument of Parthenope, one of the Sirens, is shown in Neapolis, we have still further proof, although a third site has been introduced into the discussion. Furthermore, the fact that Neapolis also lies on this gulf (called by Eratosthenes the gulf of Cumae), which is formed by the Sirenussae, induces us to believe all the more firmly that the Sirens were in the neighbourhood of these places; for we do not demand of the poet that he should have inquired accurately into every detail, nor do we in our School demand scientific accuracy in his statements; yet, even so, we surely are not entitled to assume that Homer composed the story of the

πεπυσμένον περί τής πλάνης, μήθ' ὅπου μήθ' ὅπως γεγένηται, ῥαΨωδεῖν.

14. Έρατοσθένης δε Ἡσίοδον μεν εἰκάζει πεπυσμένον περί της 'Οδυσσέως πλάνης, ότι κατά Σικελίαν καὶ Ἰταλίαν γεγένηται, πιστεύσαντα τῆ δόξη μη μόνον των ύφ' Όμηρου λεγομένων μεμνήσθαι, άλλα και Αίτνης και 'Ορτυγίας, του προς Συρακούσαις νησίου, καὶ Τυρρηνών "Ομηρον δέ μήτε είδεναι ταθτα, μήτε βούλεσθαι εν γνωρίμοις τόποις ποιείν την πλάνην. πότερον οὖν Αἴτνη μέν καὶ Τυρρηνία γνώριμα, Σκύλλαιον δὲ καὶ Χάρυβδις καὶ Κίρκαιον καὶ Σειρηνοῦσσαι οὐ πάνυ; ή καὶ Ἡσιόδω μὲν ἔπρεπε μή φλυαρείν, ἀλλὰ ταίς κατεχούσαις δόξαις ἀκολουθεῖν, 'Ομήρω δὲ "πᾶν, ο τι κέν 1 έπ' ἀκαιρίμαν γλώσσαν ἴη, κελαδείν;" χωρίς γάρ των λεχθέντων περί του τύπου της πρεπούσης 'Ομήρφ' μυθοποιίας, καὶ τὸ πληθος τῶν συγγραφέων τῶν ταὐτὰ θρυλούντων καὶ της κατά τούς τόπους ἐπιχωριαζούσης φήμης διδάσκειν δύναται, διότι ταῦτα οὐ ποιητῶν πλάσματά έστιν οὐδὲ συγγραφέων, ἀλλὰ γεγενημένων ίχνη καὶ προσώπων καὶ πράξεων.

15. Καὶ Πολύβιος δ' ὀρθῶς ὑπονοεῖ τὰ περὶ τῆς πλάνης. τὸν γὰρ Αἰόλον,² τὸν προσημάναντα ³ τοὺς ἔκπλους ἐν τοῖς κατὰ τὸν πορθμὸν τόποις ἀμφιδρόμοις οὖσι καὶ δυσέκπλοις διὰ τὰς παλιρ-

¹ κέν, Cobet, for ἄν; and γλῶσσαν (which Meineke inserts) for γλῶτταν, in keeping with the proverb attributed to Pindar. See Bergk's note on $Fr.\ Adesp.\ 86$ A.

GEOGRAPHY, 1. 2. 13-15

wanderings without any inquiry at all, either as to where or as to how they occurred.

14. But Eratosthenes conjectures that Hesiod learned by inquiry that the scene of the wanderings of Odysseus lay in the region of Sicily and Italy, and, adopting this belief, mentioned not only the places spoken of by Homer, but also Aetna, Ortygia the little island next to Syracuse), and Tyrrhenia; and yet he contends that Homer knew nothing about these places and had no intention of placing the wanderings in any known regions. Now were Aetna and Tyrrhenia well-known places, but Scyllaeum, Charybdis, Circaeum, and the Sirenussae wholly unknown? Or was it the proper thing for Hesiod not to talk nonsense and to follow prevailing opinions, but the proper thing for Homer to "give utterance to every thought that comes to his inopportune tongue"? For apart from what I have said concerning the type of myth which it was proper for Homer to employ, most of the writers who discuss the same topics that Homer discusses, and also most of the various local traditions, can teach us that these matters are not fictions of poets nor yet of prose writers, but are traces of real persons and events.

15. Polybius also entertains correct views in regard to the wanderings of Odysseus, for he says that Aeolus, the man who taught navigators how to steer a course in the regions of the Strait of Messina, whose waters are subject to a constant ebb and flow and are difficult to navigate on account of the

² Albaor, Meineke, for Aloaor.

³ προσημάναντα, A. Miller, for προσημαίνοντα.

ροίας, ταμίαν τε εἰρῆσθαι τῶν ἀνέμων καὶ Βασιλέα νενομίσθαι φησί και ικαθάπερ Δαναον μέν, τα ύδρεια τὰ ἐν ᾿Αργει παραδείξαντα, ᾿Ατρέα δέ, τοῦ ήλίου τον ύπεναντίον τῶ οὐρανῶ δρόμον, μάντεις τε και ιεροσκοπουμένους αποδείκνυσθαι βασιλέας. C 24 τούς θ' ἱερέας τῶν Αἰγυπτίων καὶ Χαλδαίους καὶ Μάγους, σοφία τινὶ διαφέροντας τῶν ἄλλων, ήγεμονίας και τιμής τυγχάνειν παρά τοις ποὸ ήμων ούτω δε και των θεων ένα έκαστον, των χρησίμων τινὸς εύρετην γενόμενον, τιμασθαι. ταῦτα δὲ προοικονομησάμενος οὐκ ἐᾶ τὸν Αἰόλον² έν μύθου σχήματι ἀκούεσθαι, οὐδ' ὅλην τὴν 'Οδυσσέως πλάνην άλλὰ μικρά μὲν προσμεμυθεῦσθαι καθάπερ καὶ τῷ Ἰλιακῷ πολέμῳ, τὸ δ' ὅλον περί Σικελίαν και τῷ ποιητή πεποιήσθαι και τοῖς άλλοις συγγραφεῦσιν, ὅσοι τὰ ἐπιχώρια ⁸ λέγουσι τὰ περὶ τὴν Ἰταλίαν καὶ Σικελίαν. οὐκ ἐπαινεῖ δὲ οὐδὲ τὴν τοιαύτην τοῦ Ἐρατοσθένους ἀπόφασιν, διότι φησί τότ' αν εύρειν τινα, που 'Οδυσσεύς πεπλάνηται, όταν εύρη τον σκυτέα τον συρράψαντα τὸν τῶν ἀνέμων ἀσκόν, καὶ τοῦτο δ' οικείως ειρήσθαι τοις συμβαίνουσι πεοί το Σκύλλαιον καὶ τὴν θήραν τῶν γαλεωτῶν τὸ ἐπὶ τῆς Σκύλλης

αὐτοῦ δ' ἰχθυάᾳ σκόπελον περιμαιμώωσα δελφῖνάς τε κύνας τε, καὶ εἴ ποθι μεῖζον ἔλησι κῆτος. (Od. 12. 95)

τοὺς γὰρ θύννους ἀγεληδὸν φερομένους παρὰ τὴν

¹ καί, Meineke inserts, before καθάπερ.

² Αἰόλον, Meineke, for Αἴολον.
³ τὰ ἐπιχώρια, Corais, for τὰ περιχώρια; Cobet τὰπιχώρια independently.

GEOGRAPHY, 1, 2, 15

reverse currents, has been called lord of the winds and regarded as their king; and just as Danaus, because he discovered the subterranean reservoirs of water in Argos, and Atreus, because he discovered that the sun revolves in a direction opposite to the movement of the heavens, both of them being seers and diviners, were appointed kings; and just as the priests of the Egyptians, the Chaldaeans, and the Magi, because they excelled their fellows in knowledge of some kind or other, attained to leadership and honour among the peoples before our times; so, says Polybius, each one of the gods came to honour because he discovered something useful to Having said this much by way of preamble, Polybius insists that we shall not interpret Aeolus as a myth, nor yet the wanderings of Odvsseus, as a whole; but that insignificant elements of myth have been added by the poet, just as had already been done in the case of the Trojan War, and that the scene of the whole story has been laid in the neighbourhood of Sicily by Homer as well as by all the other writers who deal with local matters pertaining to Italy and Sicily. Neither does Polybius approve of this sort of declaration from Eratosthenes: "You will find the scene of the wanderings of Odvsseus when you find the cobbler who sewed up the bag of the winds." And the description of Scylla by the poet, says Polybius, is in agreement with what takes place off the Scyllaean Rock and in the hunting of the "galeotae": "And there she fishes, swooping round the rock, for dolphins or for dog-fish, or whatso greater beast she may anywhere take." For when the tunny-fish, Polybius goes on to say, as they swim along in

Ίταλίαν, ἐπειδὰν ἐμπέσωσι καὶ κωλυθῶσι τῆς Σικελίας ἄψασθαι, περιπίπτειν τοῖς μείζοσι τῶν ζώων, οἰον δελφίνων καὶ κυνῶν καὶ ἄλλων κητωδῶν ἐκ δὲ τῆς θήρας αὐτῶν πιαίνεσθαι τοὺς γαλεώτας, οὖς καὶ ξιφίας λέγεσθαι καὶ κύνας φησί. συμβαίνειν γὰρ ταὐτὸν ἐνθάδε καὶ κατὰ τὰς ἀναβάσεις τοῦ Νείλου καὶ τῶν ἄλλων ὑδάτων, ὅπερ ἐπὶ πυρὸς καὶ ὅλης ἐμπιπραμένης ἀθροιζόμενα γὰρ τὰ θηρία φεύγειν τὸ πῦρ ἡ τὸ ὕδωρ, καὶ

βοράν γίνεσθαι τοῖς κρείττοσι.

16. Ταῦτα δ' εἰπων διηγεῖται των γαλεωτων θήραν, η συνίσταται περί το Σκύλλαιον σκοπός γάρ εφέστηκε κοινός ύφορμοῦσιν εν δικώποις σκαφιδίοις πολλοῖς, δύο καθ' έκαστον σκαφίδιον, καὶ ὁ μὲν ἐλαύνει, ὁ δ' ἐπὶ τῆς πρώρας ἔστηκε δόρυ έχων σημήναντος δε 1 τοῦ σκοποῦ τὴν ἐπιφάνειαν τοῦ γαλεώτου (φέρεται δὲ τὸ τρίτον μέρος ἔξαλον τὸ ζῷον) συνάψαντός τε² τοῦ σκάφους ὁ μὲν έπληξεν έκ χειρός, είτ' εξέσπασεν έκ τοῦ σώματος τὸ δόρυ χωρίς της ἐπιδορατίδος ἀγκιστρώδης τε γάρ έστι και χαλαρώς ενήρμοσται τῷ δόρατι επίτηδες, καλώδιον δ' έχει μακρον έξημμένον. τοῦτ' έπιχαλωσι τῷ τρωθέντι τέως, ἔως αν κάμη σφαδάζον καὶ ὑποφεῦγον τότε δ' Ελκουσιν ἐπὶ τὴν γην, η είς τὸ σκάφος ἀναλαμβάνουσιν, ἐὰν μη μέγα ή τελέως τὸ σῶμα. κᾶν ἐκπέση δὲ εἰς τὴν θάλατταν τὸ δόρυ, οὖκ ἀπόλωλεν ἔστι γὰρ πηκτὸν ἔκ τε δουὸς καὶ ἐλάτης, ὥστε βαπτιζομένου

² τε, Ä. Miller, for δέ.

¹ δέ, A. Miller inserts, as it is written in A "prima manu" above σημήναντος.

schools by the coast of Italy, meet with the current from the strait and are prevented from reaching Sicily, they fall a prey to the larger sea-animals, such as dolphins, dog-fish and cetaceans in general; and the "galeotae" (which are called both sword-fish and dog-fish) grow fat from the chase of the tunny-fish. Indeed, the same thing occurs here, and at the rise of the Nile and other rivers, as happens when there is a conflagration or a forest fire, namely, the assembled animals attempt to escape the fire or the flood and become prey of animals more powerful than themselves.

16. After making this statement Polybius goes on to describe the hunting of the "galeotae," which takes place off the Scyllaean Rock: one man on the look-out acts for all the fishermen, who lie in wait in many two-oared skiffs, two men in each skiff, one rowing and the other standing in the bow with his spear poised in hand. And when the man on the look-out signals the appearance of the "galeotes" (the creature swims along with a third of its body out of the water), and when the skiff draws near it, the man in the bow strikes the fish at close range, and then withdraws the spear-shaft, leaving the spear-head in the body of the fish; for the spear-head is barbed and loosely attached to the spear-shaft on purpose, and has a long line fastened to it. pay out this line to the wounded fish until he becomes tired out by his struggles and his attempts at escape; then they tow him to the shore, or take him aboard the skiff—unless he be of enormous size. If the spear-shaft fall into the water, it is not lost; for it is made of both oak and pine wood, so that τοῦ δρυίνου βάρει μετέωρον εἶναι τὸ λοιπὸν καὶ C 25 εὐανάληπτον. συμβαίνειν δέ ποτε καὶ τιτρώσκεσθαι διὰ τοῦ σκαφιδίου τὸν κωπηλάτην διὰ τὸ μέγεθος τοῦ ξίφους τῶν γαλεωτῶν καὶ τὸ τὴν ἀκμὴν τοῦ ξίφους ¹ συαγρώδη εἶναι καὶ δηκτηρίαν.² ἔκ τε δὴ τῶν τοιούτων εἰκάζοι τις ἄν, φησί, περὶ Σικελίαν γενέσθαι τὴν πλάνην κατὰ τὸν "Ομηρον, ὅτι τῷ Σκύλλη προσῆψε τὴν τοιαύτην θήραν, ἡ μάλιστ' ἐπιχώριός ἐστι τῷ Σκυλλαίφ· καὶ ἐκ τῶν περὶ τῆς Χαρύβδεως λεγομένων ὁμοίων τοῦς τοῦ πορθμοῦ πάθεσι. τὸ δὲ

τρὶς μὲν γάρ τ' ἀνίησιν, (Od. 12. 105)

ἀντὶ τοῦ δίς, γραφικὸν εἶναι άμάρτημα ἡ ίστορικόν.

17. Καὶ τὰ ἐν τῆ Μήνιγγι δὲ τοῖς περὶ τῶν Λωτοφάγων εἰρημένοις συμφωνεῖν. εἰ δέ τινα μὴ συμφωνεῖν, μεταβολὰς αἰτιᾶσθαι δεῖν ἡ ἄγνοιαν ἡ καὶ ποιητικὴν ἐξουσίαν, ἡ συνέστηκεν ἐξ ἱστορίας καὶ διαθέσεως καὶ μύθου. τῆς μὲν οὖν ἱστορίας ἀλήθειαν εἶναι τέλος, ὡς ἐν Νεῶν καταλόγω τὰ ἑκάστοις τόποις συμβεβηκότα λέγοντος τοῦ ποιητοῦ, τὴν μὲν πετρήεσσαν, τὴν δὲ ἐσχατόωσαν πόλιν, ἄλλην δὲ πολυτρήρωνα, τὴν δ' ἀγχίαλον τῆς δὲ διαθέσεως ἐνέργειαν εἶναι τὸ τέλος, ὡς ὅταν μαχομένους εἰσάγη· μύθου δὲ ἡδονὴν καὶ ἔκπλη-

¹ ξίφους, Sterrett, for ζώου.

² δηκτηρίαν, Madvig, for την θήραν; Sterrett following.

GEOGRAPHY, 1. 2. 16-17

although the oaken end sinks because of its weight. the rest stays afloat and is easily recovered. It sometimes happens, says Polybius, that the man who rows the skiff is wounded through the bottom of the boat because of the great size of the sword of the "galeotae" and because the edge of the sword is sharp and biting like the wild boar's tusk. So, from such facts as these, Polybius concludes, one may conjecture that the wanderings of Odysseus took place in the neighbourhood of Sicily according to Homer, inasmuch as Homer attributed to Scylla that sort of fish-hunting which is most characteristic of Scyllaeum; and also from Homer's statements in regard to Charybdis, which correspond to the behaviour of the waters of the Strait. But the use of the word "thrice" instead of "twice" in the statement "for thrice a day she spouts it forth" is either an error of a copyist or an error of fact.

17. Furthermore, the facts about Meninx, continues Polybius, agree with what Homer says about the Lotus-Eaters. But if there be some discrepancy we must ascribe it to the changes wrought by time, or to ignorance, or to poetic license—which is compounded of history, rhetorical composition, and myth. Now the aim of history is truth, as when in the Catalogue of Ships the poet mentions the topographical peculiarities of each place, saying of one city that it is "rocky," of another that it is "on the uttermost border," of another that it is "haunt of doves," and of still another that it is "by the sea"; the aim of rhetorical composition is vividness, as when Homer introduces men fighting; the aim of myth is to please and

¹ The Island of Jerba, off the northern coast of Africa.

ξιν. τὸ δὲ πάντα πλάττειν οὐ πιθανόν, οὐδ Όμηρικόν· τὴν γὰρ ἐκείνου ποίησιν φιλοσόφημα πάντας νομίζειν, οὐχ ὡς Ἐρατοσθένης φησί, κελεύων μὴ κρίνειν πρὸς τὴν διάνοιαν τὰ ποιήματα, μηδ ἱστορίαν ἀπ' αὐτῶν ζητεῖν. πιθανώτερόν τε τὸ

ἔνθεν δ' ἐννῆμαρ φερόμην ὀλοοῖς ἀνέμοισιν (Od. 9. 82)

έν βραχεῖ διαστήματι δέχεσθαι (οί γὰρ όλοοὶ οὐκ εὐθύδρομοι) ἡ ἐξωκεανίζειν, ὡς ἄν οὐρίων πνεόντων συνεχῶς. συνθεὶς δὲ τὸ διάστημα τὸ ἐκ Μαλεῶν ἐπὶ Στήλας σταδίων δισμυρίων καὶ δισχιλίων πεντακοσίων, εἰ, φησί, τοῦτο θείημεν ἐν ταῖς ἐννέα ἡμέραις διηνύσθαι ἰσοταχῶς, ἐκάστης ἄν ἡμέρας ὁ πλοῦς συμβαίνοι σταδίων δισχιλίων πεντακοσίων. τίς οὖν ἱστόρηκεν ἐκ Λυκίας ἡ 'Ρόδου δευτεραῖόν τινα ἀφιγμένον εἰς 'Αλεξάνδρειαν, ὄντος τοῦ διαστήματος σταδίων τετρακισχιλίων; πρὸς δὲ τοὺς ἐπιζητοῦντας, πῶς τρὶς εἰς Σικελίαν ἐλθὼν οὐδ' ἄπαξ διὰ τοῦ πορθμοῦ πέπλευκεν 'Οδυσσεύς, ἀπολογεῖται, διότι καὶ οἱ ὕστερον ἔφευγον ἄπαντες τὸν πλοῦν τοῦτον.

18. Τοιαῦτα μὲν εἴρηκεν. ἔστι δὲ τάλλα μὲν C 26 εὖ λεγόμενα· ὅταν δ' ἀνασκευάζη τὸν ἐξωκεανισμόν,¹ καὶ πρὸς ἀκριβῆ μέτρα τὸν τῶν ἡμερῶν πλοῦν ἀνάγη καὶ διαστήματα, ὑπερβολὴν οὐκ

¹ εξωκεανισμόν, the old reading, is retained for the εξωκεανιζόμενον of Kramer and Meineke; C. Müller approving.

GEOGRAPHY, 1. 2. 17-18

to excite amazement. But to invent a story outright is neither plausible nor like Homer; for everybody agrees that the poetry of Homer is a philosophic production-contrary to the opinion of Eratosthenes, who bids us not to judge the poems with reference to their thought, nor yet to seek for history in them. And Polybius says it is more plausible to interpret the poet's words, "Thence for nine whole days was I borne by baneful winds," as applying to a restricted area (for baneful winds do not maintain a straight course), than to place the incident out on Oceanus, as though the phrase had been "fair winds continually blowing." Now, if we reckon the distance from Cape Malea to the Pillars of Heracles at twenty-two thousand five hundred stadia, and if, says Polybius, we suppose that this distance was traversed at an even speed for those nine days, the distance covered each day would be two thousand five hundred stadia. where do we find it recorded that anyone ever arrived at Alexandria from Lycia or on the second day, though the distance is only four thousand stadia? And to those who ask the further question how it came about, if Odvsseus touched Sicily three times, that he never once sailed through the Strait, Polybius replies that it was for the same reason that all later navigators have avoided that passage.

18. Such are the words of Polybius, and what he says is in the main correct. But when he demolishes the argument that places the wanderings of Odysseus on Oceanus, and when he reduces the nine days' voyage and the distances covered thereon to exact measurements, he reaches the height of

ἀπολείπει τῆς ἀνομολογίας. ἄμα μὲν γὰρ παρατίθησι τὰ τοῦ ποιητοῦ ἔπη:

ἔνθεν δ' ἐννημαρ φερόμην ὀλοοῖς ἀνέμοισιν, (Od. 9. 82)

άμα δ' ἐπικρύπτεται· καὶ γὰρ ταῦτα τοῦ ποιητοῦ,

αὐτὰρ ἐπεὶ ποταμοῖο λίπεν ῥόον 'Ωκεανοῖο νηῦς, $(\textit{Od.} 12. \ 1)$

καὶ τὸ

νήσ φ ἐν ' Ω γυγίη, ὅθι τ' ὀμφαλός ἐστι θαλάσσης (Od. 1. 50)

καὶ ὅτι ἐνταῦθα οἰκεῖ Ἦτλαντος θυγάτηρ· καὶ τὸ περὶ τῶν Φαιάκων,

οἰκέομεν δ' ἀπάνευθε πολυκλύστφ ἐνὶ πόντφ ἔσχατοι· οὐ δέ τις ἄμμι βροτῶν ἐπιμίσγεται ἄλλος. (Od. 6. 204)

ταῦτα γὰρ πάντα φανερῶς ἐν τῷ ᾿Ατλαντικῷ πελάγει πλαττόμενα δηλοῦται.¹ ὁ δὲ ταῦτ᾽ ἐπικρυπτόμενος τὰ φανερῶς λεγόμενα ἀναιρεῖ. τοῦτο μὲν οὖν οὖκ εὖ· τὸ δὲ περὶ Σικελίαν καὶ Ἰταλίαν γεγονέναι τὴν πλάνην ὀρθῶς, καὶ ὑπὸ τῶν τοπικῶν τὰ² τοῦ ποιητοῦ βεβαιοῦται. ἐπεὶ τίς ἔπεισε ποιητὴς ἡ συγγραφεὺς Νεαπολίτας μὲν λέγειν μνῆμα Παρθενόπης τῆς Σειρῆνος, τοὺς δὲ ἐν Κύμη καὶ Δικαιαρχείᾳ³ καὶ Οὐεσουίῳ Πυριφλεγέθοντα καὶ ᾿Αχερουσίαν λίμνην καὶ νεκυομαντεῖον τὸ ἐν τῷ ᾿Αόρνῳ καὶ Βάϊον καὶ Μισηνὸν τῶν ᾿Οδυσσέως ἔταίρων τινάς; οὕτω δὲ καὶ τὰ

¹ δηλοῦται, Meineke, for δηλοῦνται.

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inconsistency. For at one moment he quotes the words of the poet: "Thence for nine whole days was I borne by baneful winds"; and at another moment he suppresses statements. For Homer says also: "Now after the ship had left the river-stream of Oceanus": and "In the island of Ogygia. where is the navel of the sea," going on to say that the daughter of Atlas lives there; and again, regarding the Phaeacians, "Far apart we live in the wash of the waves, the farthermost of men, and no other mortals are conversant with us." Now all these incidents are clearly indicated as being placed in fancy in the Atlantic Ocean; but Polybius by suppressing them destroys what the poet states in express terms. In so doing he is wrong; but he is right in placing the wanderings in the neighbourhood of Sicily and Italy; and the words of the poet are confirmed by the geographical terms of those regions. For what poet or prose writer ever persuaded the Neapolitans to name a monument after Parthenope the Siren, or the people of Cumae, of Dicaearchia, and of Vesuvius, to perpetuate the names of Pyriphlegethon, of the Acherusian Marsh, of the oracle of the dead at Lake Avernus, and of Baius and Misenus, two of the companions of Odysseus? The same question may be asked regarding Homer's stories of the

1 Puteoli.

² τῶν τοπικῶν τά, C. Müller inserts.

⁸ Δικαιαρχεία, Meineke, for Δικαιαρχία.

περί Σειρηνούσσας καὶ τὰ περί τὸν πορθμὸν καὶ Σκύλλαν καὶ Χάρυβδιν καὶ Αἰόλον ἄπερ οὔτ ἀκριβῶς ἐξετάζειν δεῖ οὔτ ἄρριζα καὶ ἀνέστια ἐᾶν, ἀληθείας μηδὲν προσαπτόμενα μηδ ἀφελείας ἱστορικῆς.

19. Καὶ αὐτὸς δὲ ὑπονοήσας τοῦτο ὁ Ἐρατοσθένης, ύπολάβοι τις ἄν, φησί, τὸν ποιητὴν βούλεσθαι μεν εν τοις προσεσπερίοις τόποις την πλάνην τῷ 'Οδυσσεῖ ποιεῖν, ἀποστήναι δ' ἀπὸ τῶν ὑποκειμένων, τὰ μὲν οὐκ ἀκριβῶς πεπυσμένον, τὰ δὲ οὐδὲ προελόμενον οὕτως, ἀλλ' ἐπὶ τὸ δεινότερον καὶ τὸ τερατωδέστερον εκαστα εξάγειν. τοῦτο μὲν αὐτὸ εὖ, τὸ δ' οὖ χάριν τοῦτ' ἐποίει κακῶς δεξάμενος οὐ γὰρ φλυαρίας, ἀλλ' ὡφελείας γάριν. ὥστε δίκαιός ἐστιν ὑπέχειν λόγον καὶ περί τούτου καὶ διότι φησί τὰ πόρρω τερατολογείσθαι μάλλον διά τὸ εὐκατάψευστον. πολλοστὸν γὰρ μέρος ἐστὶ τὰ πόρρω τερατολογούμενα των έν τη Έλλάδι καὶ έγγυς της Ελλάδος οία δή τὰ κατὰ τοὺς Ἡρακλέους ἄθλους καὶ Θησέως καὶ τὰ ἐν Κρήτη καὶ Σικελία μυθευόμενα καὶ ταῖς άλλαις νήσοις, καὶ τὰ περὶ τὸν Κιθαιρώνα καὶ Έλικωνα καὶ Παρνασσον καὶ Πήλιον καὶ τὴν C 27 'Αττικήν όλην καὶ Πελοπόννησον οὐδείς τε ἐκ τῶν μύθων ἄγνοιαν αἰτιᾶται τῶν μυθοποιῶν. ἔτι δέ, ἐπεὶ οὐ πάντα μυθεύουσιν, ἀλλὰ πλείω προσμυθεύουσι, καὶ μάλιστα "Ομηρος, ὁ ζητῶν τί οἱ 96

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Sirenussae, the Strait, Scylla, Charybdis, and Aeolus—stories which we should neither scrutinize rigorously, nor set aside as baseless and as without local setting, having no claim to truthfulness or to utility as history.

19. Eratosthenes himself had a suspicion of this. for he says one may suppose that the poet wished to place the wanderings of Odysseus in the far west, but abandoned his purpose, partly because of his lack of accurate information, and partly because he had even preferred not to be accurate but rather to develop each incident in the direction of the more awe-inspiring and the more marvellous. Now Eratosthenes interprets rightly what Homer actually did, but wrongly his motive in doing it; for Homer's object was not to indulge in empty talk, but to do useful service. It is therefore right that Eratosthenes should submit to examination both on this point and on his assertion that far distant places are made the scenes of Homer's marvellous stories because of the fact that it is safer to fabricate about them. For his stories of marvels whose scenes are laid in distant places are very few in number in comparison with those laid in Greece or in countries near Greece: as such I may mention the stories about the labours of Heracles and Theseus, and the myths whose scenes are laid in Crete and Sicily and in the other islands, and on Cithaeron, Helicon, Parnassus, Pelion, and in various places in Attica or in the Peloponnesus. No one accuses the myth-makers of ignorance because of the myths they create; furthermore, since the poets, and Homer in particular, do not narrate pure myths simply but more often use mythical elements as additions to fact, the man who investigates what

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παλαιοί προσμυθεύουσιν οὐ ζητεῖ, εἰ τὰ προσμυθευόμενα ὑπῆρξεν ἤ ἐστιν, ἀλλὰ καὶ μᾶλλον, οἰς προσμυθεύεται τόποις ἢ προσώποις, περὶ ἐκείνων ζητεῖ τάληθές οἰον τὴν Ὀδυσσέως πλά-

νην, εὶ γέγονε, καὶ ποῦ.

20. Τὸ δ' ὅλον οὐκ εὖ τὸ τὴν 'Ομήρου ποίησιν εἰς ἐν συνάγειν τἢ τῶν ἄλλων ποιητῶν καὶ μηδὲν αὐτῷ πρεσβεῖον ἀπονέμειν¹ εἰς τε τἄλλα καὶ εἰς αὐτὰ τὰ νῦν προκείμενα, τὰ τῆς γεωγραφίας. καὶ γὰρ εἰ μηδὲν ἄλλο, τόν γε Τριπτόλεμον τὸν Σοφοκλέους ἢ τὸν ἐν ταῖς Βάκχαις ταῖς Εὐριπίδου πρόλογον ἐπελθόντα καὶ παραβαλόντα τὴν 'Ομήρου περὶ τὰ τοιαῦτα ἐπιμέλειαν, ῥάδιον ἢν αἰσθέσθαι τὴν ἐπιπολαίαν τήνδε διαφοράν.² ὅπου γὰρ χρεία τάξεως ὧν μέμνηται τόπων, φυλάττει τὴν τάξιν "Ομηρος "ὁμοίως μὲν τῶν Ἑλληνικῶν, ὁμοίως δὲ τῶν ἄπωθεν.

*Οσσαν ἐπ' Οὐλύμπφ μέμασαν θέμεν, αὐτὰρ ἐπ' *Οσση Πήλιον εἰνοσίφυλλον. (Od. 11. 315)

"Ηρη δ' ἀξασα λίπεν ρίον Οὐλύμποιο, Πιερίην δ' ἐπιβᾶσα καὶ Ἡμαθίην ἐρατεινὴν σεύατ' ἐφ' ἱπποπόλων Θρηκῶν ὅρεα νιφόεντα· ἐξ Ἡθόω δ' ἐπὶ πόντον. (Il. 14. 225)

καὶ ἐν τῷ Καταλόγφ τὰς μὲν πόλεις οὐκ ἐφεξῆς

1 και μηδέν αὐτῷ πρεσβεῖον ἀπονέμειν, A. Miller transposes to this place from a position after γεωγραφίας.

^{*}Ομηρος, A. Miller inserts.

² ράδιον ἢν αἰσθέσθαι τὴν ἐπιπολαίαν τἡνδε διαφοράν, A. Miller, for ράδιον είναι θέσθαι τὴν ἐπιβολὴν ἢ τὴν διαφοράν; A. Vogel approving, but suggesting the omission of τήνδε.

GEOGRAPHY, 1. 2. 19-20

mythical additions the ancients make does not seek to discover whether the additions were once true or are true to-day, but rather seeks to discover the truth in regard to the places to which, or the persons to whom, these mythical elements are added; for instance, in regard to the wanderings of Odysseus, whether they took place and, if so, where.

20. Generally speaking, it is wrong to place the poetry of Homer on the same level with that of other poets, and to decline to rank him above them in any respect, and particularly in the subject that now occupies our attention, namely, geography. For if you did no more than go over the Triptolemus of Sophocles or the prologue to the Bacchae of Euripides, and then compare Homer's care with respect to geographical matters. it would be easy for you to perceive this difference. which lies on the surface. Indeed, wherever there is need of an orderly sequence in the places he mentions. Homer is careful to preserve that order, not only in regard to places in Greece, but equally in regard to those beyond the limits of Greece: "They strove to pile Ossa on Olympus, and on Ossa Pelion with the trembling forest leaves": "And Hera, rushing down, left the peak of Olympus, and touched on Pieria and pleasant Emathia, and sped over the snowy hills of the Thracian horsemen: and she went from Athos across the sea." In the Catalogue of Ships he does not, indeed, mention the cities in their order, for that was not necessary,

λέγει οὐ γὰρ ἀναγκαῖον τὰ δὲ ἔθνη ἐφεξῆς. όμοίως δὲ καὶ περὶ τῶν ἄπωθεν.

Κύπρου Φοινίκην τε καὶ Αίγυπτίους ἐπαληθεὶς Αἰθίοπάς θ' ἰκόμην καὶ Σιδονίους καὶ Ἐρεμβούς καὶ Λιβύην. (0d. 4. 83)

δπερ καὶ "Ιππαρχος ἐπισημαίνεται. ων τάξεως χρεία, δ΄ μεν τὸν Διόνυσον ἐπιόντα τὰ ἔθνη φράζων, δ΄ δε τὸν Τριπτόλεμον τὴν κατασπειρομένην γην, τὰ μὲν πολὺ διεστῶτα συνάπτουσιν έγγύς, τὰ δὲ συνεχή διασπῶσι

λιπών δὲ Λυδών τὰς πολυχρύσους γύας Φρυγών τε Περσών θ' ήλιοβλήτους πλάκας Βάκτριά τε τείχη, τήν τε δύσχειμον χθόνα Μήδων ἐπελθων 'Αραβίαν τ' εὐδαίμονα.

(Eur. Bacch. 13)

τοιαῦτα δὲ καὶ ὁ Τριπτόλεμος ποιεῖ. κάν τοῖς κλίμασι δὲ κάν τοῖς ἀνέμοις διαφαίνει τὸ πολυμαθές τὸ περὶ τὴν γεωγραφίαν "Ομηρος, ἐν ταῖς τοποθεσίαις λέγων αμα καὶ ταῦτα πολλαχοῦ.

C 28 αὐτὴ δὲ χθαμαλὴ πανυπερτάτη εἰν άλὶ κεῖται πρὸς ζόφον αἱ δέ τ' ἄνευθε πρὸς ἠῶ τ' ἠέλιόν τε. (Od. 9. 25)

δύω δέ τέ οἱ θύραι εἰσίν.

αί μεν πρός Βορέαν, αί δ' αὖ πρὸς Νότον.

(Od. 13, 109)

είτ' έπὶ δεξί ἴωσι πρὸς ἡῶ τ' ἡέλιόν τε, εἴτ' ἐπ' ἀριστερά τοί γε ποτὶ ζόφον. (Π. 12. 239)

Strabo does not mean to attribute to Homer a knowledge of "climata" in the technical sense as employed by Hipparchus (see footnote 2, page 22), but merely a knowledge of

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but he does mention the peoples in their order. And so in case of the peoples remote from Greece: "I roamed over Cyprus and Phoenicia and Egypt, and reached the Ethiopians and Sidonians and Erembians and Libya"; Hipparchus also noted this But Sophocles and Euripides, even where there is need of orderly sequence—the latter when he describes the visits of Dionysus to the various peoples, and the former when he tells of Triptolemus visiting the earth that is being sown with seed—both poets, I say, bring near together regions that are very widely separated, and separate those that are contiguous: "I have left behind me," says Dionysus, "the gold-bearing glades of Lydia and of Phrygia, and I have visited the sun-stricken plains of Persia, the walled towns of Bactria, the wintry land of the Medes, and Arabia the Blest." Triptolemus does the same sort of thing. Again, in the case of the "climata" and of the winds, Homer displays the breadth of his geographical knowledge; for in marking the sites of places he often touches upon both these points too: "Now Ithaca lies low, uppermost on the sea-line toward the darkness, but those others face the dawning and the sun"2; "Two gates there are, the one set toward the north wind. but the other toward the south"; "Whether they fare to the right, to the dawn and to the sun, or to the left, to darkness." In point of fact, Homer the general principle involved—the inclination of the earth's surface.

² Strabo would take this passage as referring to Ithaca's geographical position, not its topography. Thus "low" would mean "next to the mainland"; and "uppermost," "farthest up on the earth's surface." And "darkness," according to Strabo, means "north," not "south." See § 28 following; and 10, 2, 12.

καὶ μὴν τὴν ἄγνοιάν γε τῶν τοιούτων τελείαν ἡγεῖται σύγχυσιν τῶν ἀπάντων·

& φίλοι, οὐ γάρ τ' ἴδμεν, ὅπη ζόφος, οὐδ' ὅπη ήώς, οὐδ' ὅπη ἠέλιος. (Od. 10. 190)

κάνταῦθα δ' εἰπόντος εὖ τοῦ ποιητοῦ,

Βορέης καλ Ζέφυρος, τώ τε Θρήκηθεν ἄητον, (Il. 9. 5)

οὐκ εὖ δεξάμενος ὁ αὐτὸς συκοφαντεῖ, ὡς καθόλου λέγοντος, ὅτι ὁ Ζέφυρος ἐκ Θράκης πνεῖ, ἐκείνου λέγοντος οὐ καθόλου, ἀλλ' ὅταν κατὰ τὴν Θρακίαν θάλασσαν συμπέσωσι περί τὸν Μέλανα κόλπον αὐτοῦ τοῦ Αἰγαίου μέρος οὖσαν. στροφήν γάρ λαμβάνει πρός νότον άκρωτηριάζουσα ή Θράκη, καθ' α συνάπτει τη Μακεδονία. καὶ προπίπτουσα είς τὸ πέλαγος, τοὺς Ζεφύρους έντεθθεν πνέοντας αποφαίνει τοις εν Θάσω καλ Λήμνφ καὶ "Ιμβρφ καὶ Σαμοθράκη καὶ τῆ περὶ αὐτὰς θαλάττη, καθάπερ καὶ τῆ ᾿Αττικῆ ἀπὸ τῶν Σκειρωνίδων πετρῶν, ἀφ᾽ ὧν καὶ Σκείρωνες καλοῦνται οι Ζέφυροι, και μάλιστα οι ᾿Αργέσται. οὐκ ἐνόησε δὲ τοῦτο Ἐρατοσθένης, ὑπενόησε δ᾽ δμως. αὐτὸς γοῦν ἐξηγεῖται τὴν ἐπιστροφήν, ἡν λέγω, της χώρας ώς καθόλου οὖν δέχεται, εἶτ' άπειρίαν αἰτιᾶται τοῦ ποιητοῦ, ὡς τοῦ Ζεφύρου μεν άπο της έσπέρας πνέοντος και της 'Ιβηρίας της δε Θράκης εκείσε μη διατεινούσης. πότερον οὖν τὸν Ζέφυρον ἀγνοεῖ ἀπὸ ἐσπέρας πνέοντα;

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regards ignorance of these matters as tantamount to utter confusion in all particulars: "My friends, lo, we know not where is the place of darkness or of dawning, nor where the sun." In still another passage Homer is accurate when he speaks of "the north wind and the west wind that blow from Thrace "; but Eratosthenes puts a false interpretation upon these words and falsely accuses the poet, as though he were making the universal statement that the west wind blows from Thrace; whereas Homer is not speaking in a universal sense, but refers to the time when these two winds meet in the Gulf of Melas 1 upon the Thracian Sea, which is a part of the Aegean itself. For Thrace, running out into a promontory at the point where Thrace borders on Macedonia, takes a turn towards the south, and, thus projecting into the sea, gives the impression to the people in Thasos, Lemnos. Imbros. Samothrace, and on the sea that lies round about those islands, that the west winds actually blow from Thrace; precisely as, for Attica, they seem to come from the Scironian Rocks; and it is from these that the west winds, and particularly the north-west winds, get their name "Scirones." But Eratosthenes did not perceive this, though he suspected it; at any rate he himself describes the turn of the coast which I have mentioned. case, he interprets Homer's verse as a universal statement, and then charges the poet with ignorance, on the ground that, while the west wind blows from the west and from Iberia. Thrace does not extend so far west. Now is Homer really unaware that the west wind blows from the west? But Homer άλλ' όταν ούτω φη, φυλάττει την οἰκείαν αὐτοῦ τάξιν

σύν δ' Εὖρός τε Νότος τε πέσον Ζέφυρός τε δυσαής

καὶ Βορέης.

(Od. 5. 295)

η την Θράκην οὐκ οἰδε μὴ προπίπτουσαν πέρα 1 τῶν Παιονικῶν καὶ Θετταλικῶν ὀρῶν; ἀλλὰ καὶ ταύτην τὴν κατὰ τοὺς Θρᾶκας καὶ τὴν ἐφεξῆς ² εἰδῶς καὶ εὖ ³ κατονομάζων τήν τε παραλίαν καὶ τὴν μεσόγαιαν Μάγνητας μέν τινας καὶ Μαλιεῖς καὶ τοὺς ἐφεξῆς Ελληνας καταλέγει μέχρι Θεσπρωτῶν, ὁμοίως δὲ καὶ τοῦς Παίοσι τοὺς ὁμόρους Δόλοπας καὶ Σελλοὺς περὶ Δωδώνην μέχρις ᾿Αχελώου, Θρακῶν δ' οὐ μέμνηται περαιτέρω. εὐεπιφόρως δὲ ἔχει πρὸς τὴν ἐγγυτάτην καὶ γνωριμωτάτην ἑαυτῷ θάλατταν, ὡς καὶ ὅταν φῆ·

C 29 κινήθη δ' ἀγορὴ ὡς κύματα μακρὰ θαλάσσης πόντου Ἰκαρίοιο. (Π. 2. 144)

21. Είσὶ δέ τινες, οι φασιν είναι δύο τοὺς κυριωτάτους ἀνέμους, Βορέαν καὶ Νότον, τοὺς δὲ ἄλλους κατὰ μικρὰν ἔγκλισιν διαφέρειν· τὸν μὲν ἀπὸ θερινῶν ἀνατολῶν Εὖρον, χειμερινῶν δὲ ᾿Απηλιώτην· δύσεων δὲ θερινῶν μὲν Ζέφυρον, χειμερινῶν δὲ ᾿Αργέστην. τοῦ δὲ δύο εἶναι τοὺς ἀνέμους ποιοῦνται μάρτυρας Θρασυάλκην τε καὶ τὸν ποιητὴν αὐτὸν τῷ τὸν μὲν ᾿Αργέστην τῷ Νότφ προσνέμειν·

άργεστᾶο Νότοιο,

(Il. 11. 306)

πέρα, Cobet, for πέραν.
 κατὰ τοὺς Θρᾶκας καὶ τὴν ἐφεξῆς, A. Miller, for ἐφεξῆς κατὰ οᾶκας.
 εδ, T. G. Tucker, for οδ.

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keeps it in its own proper place when he says: "The east wind and the south wind clashed, and the stormy west and the north." Or is he unaware that Thrace does not extend westward beyond the mountains of Paeonia and Thessalv? But he knows and correctly names the Thracian country as well as the country contiguous to it, both the sea-coast and the interior: and while he lists Magnesians, Malians, and the Hellenes next after them as far as the Thesprotians, and likewise the Dolopians and Sellans about Dodona, next neighbours to the Paeonians, as far as Achelous, vet he mentions no Thracians further west. And besides, Homer has a special fondness for the sea that lies nearest his home and is bestknown to him, as is shown when he says: "And the assembly swaved like high waves of the Icarian deep."

21. There are some writers who say that there are only two principal winds, Boreas and Notus; and that the rest of the winds differ from these only by a slight variation of direction—Eurus blowing from the direction of summer sunrise, Apeliotes from the direction of winter sunrise, Apeliotes from the direction of summer sunset, Argestes from the direction of winter sunset. And to prove that there are only two winds they adduce the testimony of Thrasyalces and of Homer himself, on the ground that Homer assigns Argestes to Notus in the phrase "of Argestes Notus," and Zephyrus to

¹ North-east. ² South-east. ³ North-west. ⁴ South-west. ⁵ See 17. 1. 5.

τὸν δὲ Ζέφυρον τῷ Βορέ φ.

Βορέης καὶ Ζέφυρος, τώ τε Θρήκηθεν ἄητον. (R. 9. 5)

φησί δὲ Ποσειδώνιος, μηδένα οὕτως παραδεδωκέναι τοὺς ἀνέμους τῶν γνωρίμων περὶ ταῦτα, οἶον ᾿Αριστοτέλη, Τιμοσθένη, Βίωνα τὸν ἀστρολόγον ἀλλὰ τὸν μὲν ἀπὸ θερινῶν ἀνατολῶν Καικίαν, τὸν δὲ τούτφ κατὰ διάμετρον ἐναντίον Λίβα, ἀπὸ δύσεως ὅντα χειμερινῆς· πάλιν δὲ τὸν μὲν ἀπὸ χειμερινῆς ἀνατολῆς Εὖρον, τὸν δ΄ ἐναντίον ᾿Αργέστην· τοὺς δὲ μέσους ᾿Απηλιώτην καὶ Ζέφυρον. τὸν δὲ ποιητὴν δυσαῆ μὲν Ζέφυρον λέγειν τὸν ὑφ΄ ἡμῶν καλούμενον ᾿Αργέστην, λίγα δὲ πνέοντα Ζέφυρον τὸν ὑφ΄ ἡμῶν Ζέφυρον, ἀργέστην δὲ Νότον τὸν Λευκόνοτον· οὖτος γὰρ ὀλίγα τὰ νέφη ποιεῖ, τοῦ λοιποῦ Νότου ὀλεροῦ¹ πως ὄντος·

ώς δπότε Ζέφυρος νέφεα στυφελίξη ἀργεστᾶο Νότοιο, βαθείη λαίλαπι τύπτων.

 $(\Pi. 11. 305)$

τὸν γὰρ δυσαῆ Ζέφυρον νῦν λέγει, δς εἴωθε διασκιδνάναι τὰ ὑπὸ τοῦ Λευκονότου συναγόμενα ἀσθενῆ ὄντα, ἐπιθέτως τοῦ Νότου νῦν ἀργέστου λεγομένου. ταῦτα μὲν δὴ ἐν ἀρχῆ τοῦ πρώτου τῶν γεωγραφικῶν εἰρημένα τοιαύτην τινὰ τὴν ἐπανόρθωσιν ἔχει.

22. Ἐπιμένων δὲ τοῖς περὶ Ὁμήρου ψευδῶς ὑποληφθεῖσι καὶ ταῦτά φησιν, ὅτι οὐδὲ τὰ τοῦ Νείλου στόματα οἰδε πλείω ὄντα οὐδ' αὐτὸ τοὕνομα, Ἡσίοδος δὲ οἶδε μέμνηται γάρ. τὸ μὲν

1 δλεροῦ, Kramer suggests, for δλου Εύρου, but does not insert. Meineke inserts; C. Müller, A. Vogel approving.

GEOGRAPHY, 1. 2. 21-22

Boreas in the verse: "Boreas and Zephyrus that blow from Thrace." But Poseidonius says that none of the recognised authorities on these matters, such as Aristotle, Timosthenes, and Bion the astrologer, have taught any such doctrine about the winds; rather do they maintain that Caecias is the name of the wind that blows from the direction of summer sunrise, while Lips is the name of the wind that blows diametrically opposite to Caecias from the direction of winter sunset; and again, that Eurus is the name of the wind that blows from the direction of winter sunrise, while Argestes is its opposite; and that the winds that lie between these are Apeliotes and Zephyrus. They say further that when Homer speaks of "the boisterous Zephyrus" he means what we call Argestes; that Homer's "clear-blowing Zephyrus" is what we call Zephyrus, and that Homer's "Argestes Notus" is our Leuconotus; for Leuconotus causes very few clouds, while Notus proper is somewhat cloudy: "Even as when Zephyrus driveth the clouds of Argestes Notus, smiting with deep storm." Homer here means "the boisterous Zephyrus," which usually scatters the thin clouds assembled by Leuconotus; for in this passage "Argestes" is applied to "Notus" as an epithet. Such, then, are the corrections that must be made to the remarks of Eratosthenes at the beginning of the first chapter of his Geography.

22. But, persisting in his false assumptions, Eratosthenes says that Homer does not even know that there are several mouths of the Nile, nor yet does he know the real name of the river, though Hesiod knows, for he mentions it. Now, as to the

οὖν ὄνομα εἰκὸς μήπω λέγεσθαι κατ' αὐτόν τὰ δὲ στόματα εί μεν ην άφανη και ολίγοις γνώριμα, ότι πλείω και ούχ εν, δοίη τις αν μη πεπύσθαι αὐτόν εἰ δὲ τῶν κατ' Αἴγυπτον τὸ γνωριμώτατον καὶ παραδοξότατον καὶ μάλιστα πάντων μνήμης άξιον καὶ ἱστορίας ὁ ποταμὸς καὶ ἢν καὶ ἔστιν, ώς δ' αύτως αι άναβάσεις αὐτοῦ καὶ τὰ στόματα. τίς αν η τους αγγέλλοντας αυτώ ποταμον Αίγυ-C 30 πτον και χώραν και Θήβας Αίγυπτίας και Φάρον ύπολάβοι μη γνωρίζειν ταῦτα, ή γνωρίζοντας μη λέγειν, πλην εί μη διά το γνώριμον; ἔτι δ' άπιθανώτερου, εἰ τὴν μὲν Αἰθιοπίαν ἔλεγε καὶ Σιδονίους καὶ Ἐρεμβοὺς καὶ τὴν ἔξω θάλασσαν καὶ τὸ διχθὰ δεδάσθαι τοὺς Αἰθίοπας, τὰ δ' ἐγγὺς καὶ γνώριμα μὴ ἤδει. εἰ δὲ μὴ ἐμνήσθη τούτων, οὐ τοῦτο σημεῖον τοῦ ἀγνοεῖν (οὐδὲ γὰρ τῆς αὐτοῦ πατρίδος ἐμνήσθη οὐδὲ πολλῶν ἄλλων) ἀλλὰ μᾶλλον τὰ λίαν γνώριμα ὄντα φαίη τις ἃν δόξαι μη 2 άξια μνήμης είναι πρὸς τοὺς είδότας.

23. Οὐκ εὖ δὲ οὐδὲ τοῦτο προφέρουσιν αὐτῷ τὸ περὶ τῆς νήσου τῆς Φαρίας, ὅτι φησὶ πελαγίαν, ὡς κατ' ἄγνοιαν λέγοντι. τοὐναντίον γὰρ κἂν μαρτυρίῳ χρήσαιτό τις τούτῳ πρὸς τὸ μὴ ἀγνοεῖσθαι μηδὲν ὑπὸ τοῦ ποιητοῦ τῶν εἰρημένων

¹ ήδει, Jones inserts.

² τὰ λίαν γνώριμα ὄντα φαίη τις ὰν ζόξαι μή, Meineke, for τοῦ λίαν ἡ γνώριμα ὄντα φαίη δόξειν.

GEOGRAPHY, 1. 2. 22-23

name, it is likely that in Homer's time it was not vet in use; but as to the mouths, if the fact that there were several, and not one only, was unnoticed or known to only a few, one might grant that Homer had not heard of it. But if the river was then, as it still is, the best-known and most marvellous thing in Egypt and decidedly the most worthy of mention and of historical record-and the same applies to its inundations and its mouthswho could ever assume either that those who brought to Homer the story of the River "Aegyptus" and the country "Aegyptus," and Egyptian Thebes, and Pharos, did not know about these mouths, or that if they knew, did not tell about them-except for the reason that they were already well known? But it is more incredible still that he mentioned Ethiopia. Sidonians, Erembians, the sea beyond, and the fact that the Ethiopians are "sundered in twain," and vet did not know about what was near at hand and well known. The fact that he did not mention them is no sign that he did not know about themhe does not mention his own native country, either, nor many other things—but rather would one say that Homer thought the best-known facts were not worth mentioning to those who already knew them.

23. Equally unjust is the reproach they cast upon Homer in the matter of the island of Pharos, because he says that it is "in the open sea"—as though he said this in ignorance. On the contrary, one might use that statement as bearing witness to the fact that not one of the things which we have just been talking about regarding Egypt was un-

¹ The Atlantic Ocean.

άρτίως περί την Αίγυπτον. γνοίης δ' αν ούτως. άλαζων δη πας ο πλάνην αύτου διηγούμενος. τούτων δ' ην καὶ ὁ Μενέλαος, δς ἀναβεβηκώς μέγρις Αιθιόπων ἐπέπυστο τὰς ἀναβάσεις τοῦ Νείλου καλ την γουν, όσην επιφέρει τη γώρα, καλ τὸν πρὸ τῶν στομάτων πόρον, ὅσον ἤδη προσχώσας τη ηπείρω προστέθεικεν, ώστε εἰκότως ὑπὸ τοῦ Ἡροδότου καὶ τὴν ὅλην Αἴγυπτον τοῦ ποταμοῦ δῶρον λέγεσθαι κὰν εί μὴ 1 τὴν ὅλην, τήν νε ύπὸ τῷ Δέλτα, τὴν κάτω χώραν προσαγορευομένην. ίστόρησε δὲ καὶ τὴν Φάρον πελαγίαν οὖσαν τὸ παλαιόν προσεψεύσατο δὴ καὶ τὸ πελαγίαν είναι, καίπερ μηκέτι πελαγίαν οὖσαν. ό δὲ ταῦτα διασκευάζων ὁ ποιητὴς ἡν. ὥστ' ἐκ τούτων εἰκάζειν, ὅτι καὶ τὰς ἀναβάσεις ἤδει καὶ τὰ στόματα τοῦ Νείλου.

24. Ἡ δ' αὐτὴ άμαρτία καὶ περὶ τοῦ ἀγνοεῖν τὸν ἰσθμὸν τὸν μεταξὺ τοῦ Αἰγυπτίου πελάγους καὶ τοῦ ᾿Αραβίου κόλπου καὶ περὶ τοῦ ψευδῶς λέγεσθαι

Αἰθίοπας, τοὶ διχθὰ δεδαίαται ἔσχατοι ἀνδρῶν· (Od. 1. 23)

καὶ γὰρ τοῦτο ἐκείνου λέγοντος καλῶς, ἐπιτιμῶσιν οἱ ὕστερον οὐκ εὖ. τοσούτου γὰρ δεῖ τοῦτ' ἀληθὲς εἶναι, τὸ ἀγνοεῖν Ὁμηρον τὸν ἰσθμὸν τοῦτον, ὥστε ἐκεῖνον μέν φημι μὴ εἰδέναι μόνον, ἀλλὰ καὶ ἀποφαίνεσθαι ἄντικρυς, τοὺς δὲ γραμματικοὺς μηδὲ ¹τε, Corais deletes, after μή; Meineke following; C. Müller.

A. Miller, approving.

GEOGRAPHY, 1. 2. 23-24

known to the poet. You might convince yourself of it in the following way: Everybody who tells the story of his own travels is a braggart; to this class belonged Menelaus, who had ascended the Nile as far as Ethiopia, and had heard about the inundations of the Nile and the quantity of alluvial soil which the river deposits upon the country, and about the large extent of territory off its mouths which the river had already added to the continent by silting -so that Herodotus 1 was quite right in saving that the whole of Egypt is "a gift of the River Nile"; and even if this is not true of the whole of Egypt. it certainly is true of the part embraced by the Delta, which is called Lower Egypt; and Menelaus was told that the island of Pharos had been "in the open sea" in ancient times; so he falsely added that it was still "in the open sea," although it was no longer "in the open sea." However, it was the poet who elaborated this story, and therefore from it we may conjecture that Homer knew about the inundations of the Nile and about its mouths as well.

24. The same mistake is made by those who say that Homer is not acquainted with the isthmus that lies between the Egyptian Sea and the Arabian Gulf, and that he is in error when he speaks of "the Ethiopians that are sundered in twain, the farthermost of men." Men of later times are wrong when they censure Homer for saying that, for it is correct. Indeed, the reproach that Homer is ignorant of this isthmus is so far from being true, that I affirm not only that he knows about it, but that he describes it in express terms, and that the grammarians beginning with

¹ Herod, 2, 5,

λέγοντος εκείνου αἰσθάνεσθαι ἀπὸ ᾿Αριστάρχου ἀρξαμένους ¹ καὶ Κράτητος τῶν κορυφαίων εἰν τῆ ἐπιστήμη ταύτη. εἰπόντος γὰρ τοῦ ποιητοῦ·

Αἰθίοπας, τοὶ διχθὰ δεδαίαται ἔσχατοι ἀνδρῶν, (Od. 1. 23)

περὶ τοῦ ἐπιφερομένου ἔπους διαφέρονται, ὁ μὲν ᾿Αρίσταρχος γράφων,

οί μεν δυσομένου 'Υπερίονος, οί δ' ἀνιόντος, (Od. 1. 24)

ό δὲ Κράτης,

ημέν δυσομένου Ύπερίονος, ηδ' ἀνιόντος,

(Od. 1. 24)

C 31 οὐδὲν διαφέρον πρὸς τὴν ἐκατέρου ὑπόθεσιν οὕτως ἡ ἐκείνως γράφειν. ὁ μὲν γάρ, ἀκολουθῶν τοῖς μαθηματικῶς λέγεσθαι δοκοῦσι, τὴν διακεκαυμένην ζώνην κατέχεσθαί φησιν ὑπὸ τοῦ ἀκεανοῦ· παρ' ἐκάτερον δὲ ταύτης εἶναι τὴν εὔκρατον, τήν τε καθ' ἡμᾶς καὶ τὴν ἐπὶ θάτερον μέρος. ισπερ οὖν οἱ παρ' ἡμῖν Αἰθίοπες οὖτοι λέγονται οἱ πρὸς μεσημβρίαν κεκλιμένοι παρ' δλην τὴν οἰκουμένην ἔσχατοι τῶν ἄλλων παροικοῦντες τὸν ἀκεανόν, οὕτως οἴεται δεῖν καὶ πέραν τοῦ ἀκεανοῦ νοεῖσθαί τινας Αἰθίοπας ἐσχάτους τῶν ἄλλων τῶν ἐν τῆ ἑτέρα εὐκράτω, παροικοῦντας τὸν αὐτὸν τοῦτον ἀκεανόν· διττοὺς δὲ εἶναι καὶ διχθὰ δεδάσθαι ὑπὸ τοῦ ἀκεανοῦ. προσκεῖσθαι δὲ τὸ

ημέν δυσομένου Υπερίονος, ηδ' ανιόντος,

(Od. 1. 24)

ότι του Ζωδιακού κατά κορυφήν όντος άει τῷ ἐν

 $^{^1}$ ἀρξαμένους, H. Kallenberg inserts, after 'Αριστάρχου. It is inserted in the margin of q "secunda manu" after Κράτητος.

GEOGRAPHY, 1. 2. 24

Aristarchus and Crates, the leading lights in the science of criticism, even though Homer speaks of it, do not perceive that he does. The poet says: "the Ethiopians that are sundered in twain, the farthermost of men." About the next verse there is a difference of opinion, Aristarchus writing: "abiding some where Hyperion sets, and some where he rises "; but Crates: "abiding both where Hyperion sets and where he rises." Yet so far as the question at issue is concerned, it makes no difference whether you write the verse one way or the other. Crates, following the mere form of mathematical demonstration, says that the torrid "occupied" 1 by Oceanus and that on both sides of this zone are the temperate zones, the one being on our side, while the other is on the other side of Now, just as these Ethiopians on our side of Oceanus, who face the south throughout the whole length of the inhabited world, are called the most remote of the one group of peoples, since they dwell on the shores of Oceanus, so too, Crates thinks, we must conceive that on the other side of Oceanus also there are certain Ethiopians, the most remote of the other group of peoples in the temperate zone, since they dwell on the shores of this same Oceanus; and that they are in two groups and are "sundered in twain" by Oceanus. Homer adds the words, "abiding both where Hyperion sets and where he rises," because, inasmuch as the celestial zodiac always lies in the zenith above its corresponding

¹ For the purposes of demonstration Crates identified the limits of Oceanus with those of the torrid zone, an assumption which was not strictly true.

τῆ γῆ Ζωδιακῷ, τούτου δ' οὐκ ἐκβαίνοντος ἔξω τῆς Αἰθιόπων ἀμφοῦν τῆ λοξώσει, ἀνάγκη καὶ τὴν πάροδον τοῦ ἡλίου πᾶσαν ἐν τῷ πλάτει τούτῷ νοεῖσθαι, καὶ τὰς ἀνατολὰς καὶ τὰς δύσεις συμβαίνειν ἐνταῦθα ἄλλας ἄλλοις καὶ κατ' ἄλλα ἡ ἄλλα σημεῖα. εἴρηκε μὲν οὕτως, ἀστρονομικώτερον νομίσας ἡν δὲ καὶ ἀπλούστερον εἰπεῖν αὐτὸ σώζοντα τὸ οὕτω διηρῆσθαι δίχα τοὺς Αἰθίοπας, ὡς εἴρηται ὅτι ἀφ' ἡλίου ἀνιόντος μέχρι δύσεως ἐφ' ἐκάτερα παρήκουσι ¹ τῷ ἀκεανῷ Αἰθίοπες. τί οὖν διαφέρει πρὸς τὸν νοῦν τοῦτον ἡ οὕτως εἰπεῖν, ὥσπερ αὐτὸς γράφει, ἡ ὡς ᾿Αρίσταρχος,

οί μὲν δυσομένου Ὑπερίονος, οἱ δ' ἀνιόντος; (Od. 1. 24)

καὶ γὰρ τοῦτ' ἐστι καὶ πρὸς δύσιν καὶ πρὸς ἀνατολὴν ἐφ' ἔκάτερα τοῦ ἀκεανοῦ οἰκεῖν. ὁ δ' ᾿Αρίσταρχος ταύτην μὲν ἐκβάλλει τὴν ὑπόθεσιν, δίχα δὲ μεμερισμένους οἴεται λέγεσθαι τοὺς καθ' ἡμᾶς Αἰθίοπας, τοὺς τοῖς "Ελλησι πρὸς μεσημβρίαν ἐσχάτους. τούτους δὲ μὴ μεμερίσθαι δίχα, ἄστε εἶναι δύο Αἰθιοπίας, τὴν μὲν πρὸς ἀνατολήν, τὴν δὲ πρὸς δύσιν ἀλλὰ μίαν μόνην, τὴν πρὸς μεσημβρίαν κειμένην τοῖς "Ελλησιν, ίδρυμένην δὲ κατ' Αἴγυπτον. τοῦτο δὲ ἀγνοοῦντα τὸν ποιητήν, ὥσπερ καὶ τὰ ἄλλα ὅσα εἴρηκεν 'Απολλό-

¹ παρήκουσι, the reading of AChi MSS., Madvig apparently prefers to παροικοῦσι.

GEOGRAPHY, 1. 2. 24

terrestrial zodiac and inasmuch as the latter does not by reason of its obliquity 1 extend outside the territory of the two Ethiopias, we must conceive that the entire revolution of the sun takes place within the width of this celestial zone, and that his risings and his settings take place herein, appearing differently to different peoples, and now in this sign and now in that. Such, then, is the explanation of Crates, who conceives of the matter rather as an astronomer; but he might have put it more simply still saving his point that this was the sense in which the Ethiopians are "sundered in twain," as Homer has stated-namely, by declaring that the Ethiopians stretch along both shores of Oceanus from the rising to the setting of the sun. What difference, I sav. does it make with respect to this thought whether we read the verse as Crates writes it. or as Aristarchus does-"abiding some where Hyperion sets and some where he rises"? For this, too, means that Ethiopians live on both sides of Oceanus. both towards the west and towards the east. But Aristarchus rejects this hypothesis of Crates, and thinks that the people referred to as divided "in twain" are the Ethiopians in our part of the world, namely, those that to the Greeks are most remote on the south; but he thinks these are not so divided "in twain" that there are two Ethiopias. the one lying towards the east and the other towards the west, but that there is just one, the one that lies south of the Greeks and is situated along Egypt; and he thinks that the poet, ignorant of this fact, just as he was ignorant of those other matters which

¹ Compare "the obliquity of the ecliptic"—which is now about 23½°.

δωρος εν τῷ περὶ Νεῶν καταλόγου δευτέρῳ, καταψεύσασθαι τῶν τόπων τὰ μὴ ὅντα.

25. Πρὸς μὲν οὖν Κράτητα μακροῦ λόγου δεῖ, καὶ ἴσως οὐδὲν ὅντος πρὸς τὰ νῦν. ᾿Αριστάρχου δὲ τοῦτο μὲν ἐπαινοῦμεν,¹ διότι τὴν Κρατήτειον ἀφεὶς ὑπόθεσιν, δεχομένην πολλὰς ἐνστάσεις, περὶ τῆς καθ' ἡμᾶς Αἰθιοπίας ὑπονοεῖ γεγονέναι τὸν λόγον· τὰ δ' ἄλλα ἐπισκοπῶμεν. καὶ πρῶτον ὅτι καὶ αὐτὸς μικρολογεῖται μάτην περὶ τῆς γραφῆς. καὶ γὰρ ᾶν ὁποτέρως² γράφηται, δύ-C 32 ναται ἐφαρμόττειν τοῖς νοήμασιν αὐτοῦ. τί γὰρ διαφέρει λέγειν ἡ οὕτως, "δύο εἰσὶ καθ' ἡμᾶς Αἰθίοπες, οἱ μὲν πρὸς ἀνατολάς, οἱ δὲ πρὸς δύσεις," ἡ οὕτως, "καὶ γὰρ πρὸς ἀνατολὰς καὶ πρὸς δύσεις"; ἔπειθ' ὅτι ψευδοῦς προτσταται δόγματος. φέρε γὰρ τὸν ποιητὴν ἀγνοεῖν μὲν τὸν ἰσθμόν, τῆς δὲ κατ' Αἴγυπτον Αἰθιοπίας μεμνῆσθαι, ὅταν φῆ·

Aiθίοπας, τοὶ διχθὰ δεδαίαται· (Od. 1. 23)

πως οὖν; οὐ διχθὰ δεδαίαται οὕτως, ἀλλ' ἀγνοων οὕτως εἴρηκεν ὁ ποιητής ; πότερ' οὐδ' ἡ Αἴγυπτος, οὐδ' οἱ Αἰγύπτιοι ἀπὸ τοῦ Δέλτα ἀρξάμενοι μέχρι πρὸς Συήνην ὑπὸ τοῦ Νείλου δίχα διήρηνται,

οί μὲν δυσομένου Ύπερίονος, οί δ' ἀνιόντος ; $(\textit{Od.} \ 1. \ 24)$

τί δ' ἄλλο ἡ Αἴγυπτός ἐστι πλὴν ἢ 8 ποταμία, 4 ἢν ἐπικλύζει τὸ ὕδωρ; αὕτη δ' ἐφ' ἑκάτερα τοῦ

¹ ἐπαινοῦμεν, Cobet, for ἐπαινῶμεν.

 ² ὁποτέρωs, Corais, for ὡs ἐτέρωs; C. Müller approving.
 ³ πλην ή, Corais, for πλην ή; Groskurd, Forbiger following.

GEOGRAPHY, 1. 2. 24-25

Apollodorus has mentioned in the second book of his work entitled "On the Catalogue of Ships," told what was not true about the regions in question.

25. To reply to Crates would require a long discourse, which would perhaps be irrelevant to my present purpose. As for Aristarchus, I approve of him in this, that he rejects the hypothesis of Crates, which is open to many objections, and inclines to the view that the words of Homer have reference to our Ethiopia. But let us examine Aristarchus on the other points; and, in the first place, take the fact that he too indulges in a petty and fruitless discussion of the text. For if the verse be written in either of the two ways, it can fit his thought on the subject. For what difference does it make whether we say: "On our side of Oceanus there are two groups of Ethiopians, some in the east and some in the west," or, "both in the east and in the west"? In the second place, take the fact that Aristarchus champions a false doctrine. Well, let us suppose that the poet is ignorant of the existence of the isthmus, but is referring to the Ethiopia on the confines of Egypt when he speaks of "Ethiopians that are sundered in twain." What then? Are they not thus "sundered in twain"? And did the poet make that statement in ignorance? Is not Egypt also, are not the Egyptians also, from the Delta up to Syene, "sundered in twain" by the Nile, "some where Hyperion sets and some where he rises"? What is Egypt but a river valley, which the water floods? And this valley

⁴ νῆσος, after ποταμία, Kramer wishes to delete; Meineke deletes; Forbiger following; C. Müller approving.

ποταμοῦ κείται πρὸς ἀνατολὴν καὶ δύσιν. ἀλλά μὴν ή Αἰθιοπία ἐπ' εὐθείας ἐστὶ τῆ Αἰγύπτω καὶ παραπλησίως έγει πρός τε τὸν Νεῖλον καὶ τὴν άλλην φύσιν των τόπων. και γαρ αυτη στενή τέ έστι καὶ μακρά καὶ ἐπίκλυστος. τὰ δ' ἔξω τῆς έπικλύστου έρημά τε καὶ ἄνυδρα καὶ σπανίως οικείσθαι δυνάμενα, τὰ μὲν πρὸς ἔω, τὰ δὲ πρὸς δύσιν κεκλιμένα. πως οὖν οὐχὶ καὶ δίχα διήρηται; ή τοις μέν την 'Ασίαν άπο της Λιβύης διαιρούσιν άξιόλογον τοῦθ' ὅριον ἐφάνη ὁ Νεῖλος, μῆκος μεν ανατείνων επί την μεσημβρίαν πλειόνων ή μυρίων σταδίων, πλάτος δέ, ώστε καὶ νήσους άπολαμβάνειν μυριάνδρους, ών μεγίστη ή Μερόη, τὸ βασίλειον καὶ μητρόπολις τῶν Αἰθιόπων. αὐτὴν δὲ τὴν Αἰθιοπίαν οὐχ ίκανὸς ἢν διαιρεῖν δίγα; καὶ μὴν οί γε ἐπιτιμῶντες τοῖς τὰς ἡπείρους τῶ ποταμῶ διαιροῦσι τῶν ἐγκλημάτων τοῦτο μέγιστον προφέρουσιν αὐτοῖς, ὅτι τὴν Αἴγυπτον . καὶ τὴν Αἰθιοπίαν διασπώσι καὶ ποιοῦσι τὸ μέν τι μέρος έκατέρας αὐτῶν Λιβυκόν, τὸ δ' 'Ασιατικόν ή εί μη βούλονται τοῦτο ή οὐ διαιροῦσι τὰς ήπείρους, ή οὐ τῷ ποταμῷ.

26. Χωρὶς δὲ τούτων ἐστὶ καὶ ἄλλως διαιρεῖν τὴν Αἰθιοπίαν. πάντες γὰρ οἱ παραπλεύσαντες τῷ ἀκεανῷ τὴν Λιβύην, οἴ τε ἀπὸ τῆς Ἐρυθρᾶς καὶ οἱ ἀπὸ τῶν Στηλῶν, μέχρι ποσοῦ προελθόντες

GEOGRAPHY, 1. 2. 25-26

lies on both sides of the river, toward the east and toward the west. But Ethiopia lies directly beyond Egypt and it is analogous to Egypt in its relation both to the Nile and the other physical characteristics of the regions in question. For it, too, is narrow, long, and subject to inundations; and its parts that lie beyond the territory subject to inundations are desert, without water, and habitable only in spots, both on the east and on the west. Of course, then, Ethiopia also is "sundered in twain." Or, again, did the Nile seem important enough for those who were drawing a boundary-line between Asia and Libya to serve as that boundary-line (since in length it stretches toward the south for more than ten thousand stadia, and is of such width that it contains islands with many thousands of inhabitants, the largest of which is Meroë, the residence of the King and the metropolis of the Ethiopians) and vet was not important enough to "sunder" Éthiopia itself "in twain"? And furthermore, the critics of the men who make the River Nile the boundary-line between the continents bring this against them as their most serious charge, that they dismember . Egypt and Ethiopia, and that they reckon one part of each country to Libya and one part to Asia; or that, if they do not wish such dismemberment, then either they do not divide the continents at all, or else do not make the river the boundary-line.

26. But Ethiopia may be divided in still another way, quite apart from this. For all those who have made coasting-voyages on the ocean along the shores of Libya, whether they started from the Red Sea or from the Pillars of Heracles, always turned back, after they had advanced a certain distance, because

είτα ανέστρεψαν ύπὸ πολλών αποριών κωλυόμενοι, ώστε καλ πίστιν κατέλιπον τοις πολλοίς. ώς το μεταξύ διείργοιτο ισθμώ και μήν σύρρους ή πᾶσα 'Ατλαντική θάλασσα, καὶ μάλιστα ή κατά μεσημβρίαν. ἄπαντες δὲ οὖτοι τὰ τελευταία χωρία, έφ' à πλέοντες ήλθον, Αίθιοπικά προση-C 33 γόρευσαν καὶ ἀπήγγειλαν οῦτως. τί οὖν ἄλογον, εί και "Ομηρος ύπο τοιαύτης ακοής αγθείς δίγα διήρει, τους μεν προς ανατολήν λέγων, τους δε προς δύσιν, των μεταξύ ου γινωσκομένων, είτε είσιν είτε μη είσιν; άλλα μην και άλλην τινα ίστορίαν εἴρηκεν παλαιὰν Ἐφορος, ή οὐκ ἄλογον έντυχείν καὶ "Ομηρον. λέγεσθαι γάρ φησιν ύπὸ τῶν Ταρτησσίων Αἰθίοπας την Λιβύην ἐπελθόντας μέχρι Δύρεως 1 τοὺς μὲν αὐτοῦ μεῖναι, τοὺς δὲ καὶτης παραλίας κατασχείν πολλήν τεκμαίρεται δ' έκ τούτου καὶ "Ομηρον εἰπεῖν ούτως.

Αἰθίοπας, τοὶ διχθὰ δεδαίαται ἔσχατοι ἀνδρῶν. (Od. 1. 23)

27. Ταῦτά τε² δὴ πρὸς τὸν ᾿Αρίσταρχον λέγοι ἄν τις καὶ πρὸς τοὺς ἀκολουθοῦντας αὐτῷ, καὶ ἄλλα τούτων ἐπιεικέστερα, ἀφ᾽ ὧν τὴν πολλὴν ἄγνοιαν ἀφαιρήσεται τοῦ ποιητοῦ· φημὶ γὰρ κατὰ τὴν τῶν ἀρχαίων Ἑλλήνων δόξαν, ὥσπερ τὰ πρὸς βορρῶν μέρη τὰ γνώριμα ἐνὶ ὀνόματι Σκύθας ἐκάλουν ἡ Νομάδας, ὡς "Ομηρος, ὕστερον δὲ καὶ τῶν πρὸς ἑσπέραν γνωσθέντων Κελτοὶ καὶ

¹ Δύρεωs, C. Müller, for δύσεωs.

 $^{^2}$ $\tau\epsilon$, Corais, for $\delta\epsilon$; Meineke following; C. Müller approving.

GEOGRAPHY, 1. 2. 26-27

they were hindered by many perplexing circumstances, and consequently they left in the minds of most people the conviction that the intervening space was blocked by an isthmus; and yet the whole Atlantic Ocean is one unbroken body of water, and this is particularly true of the Southern Atlantic. All those voyagers have spoken of the last districts to which they came in their voyagings as Ethiopic territory and have so reported them. then, lies the absurdity, if Homer, too, was misled by a report of this character and divided the Ethiopians into two groups, placing the one group in the east and the other in the west, since it was not known whether the intervening people really existed or not? Furthermore, Ephorus mentions still another ancient tradition, and it is not unreasonable to believe that Homer also had heard it. Ephorus says the Tartessians report that Ethiopians overran Libya as far as Dyris, and that some of them stayed in Dyris, while others occupied a great part of the sea-board; and he conjectures it was from this circumstance that Homer spoke as he did: "Ethiopians that are sundered in twain, the farthermost of men."

27. These arguments one might urge in reply to Aristarchus and his followers, and also others still more convincing, and thus set the poet free from the charge of gross ignorance. I maintain, for example, that in accordance with the opinion of the ancient Greeks—just as they embraced the inhabitants of the known countries of the north under the single designation "Scythians" (or "Nomads," to use Homer's term) and just as later, when the inhabitants of the west also were discovered, they were called

¹ The barbarian name for the Atlas mountains. See 17. 3. 2.

Ί βηρες ἡ μικτῶς Κελτίβηρες καὶ Κελτοσκύθαι προσηγορεύοντο, ὑφ' ἐν ὄνομα τῶν καθ' ἔκαστα ἐθνῶν ταττομένων διὰ τὴν ἄγνοιαν, οὕτω τὰ μεσημβρινὰ πάντα Αἰθιοπίαν καλεῖσθαι τὰ πρὸς ἀκεανῷ. μαρτυρεῖ δὲ τὰ τοιαῦτα. ὅ τε γὰρ Αἰσχύλος ἐν Προμηθεῖ τῷ λυομένῳ φησὶν οὕτω·

φοινικόπεδόν τ' ερυθρᾶς ίερον χεῦμα θαλάσσης, χαλκομάραυγόν¹ τε παρ' 'Ωκεανῷ λίμναν παντοτρόφον Αἰθιόπων, ἵν' ὁ παντόπτας "Ηλιος αἰεὶ χρῶτ' ἀθάνατον κάματόν θ' ἵππων θερμαῖς ὕδατος μαλακοῦ προχοαῖς ἀναπαύει.

(fr. 192, Nauck)

παρ' όλον γὰρ τὸ μεσημβρινὸν κλίμα τοῦ ἀκεανοῦ ταύτην πρὸς τὸν ἥλιον ἴσχοντος τὴν χρείαν καὶ τὴν σχέσιν, παρ' όλον καὶ τοὺς Αἰθίοπας τάττων φαίνεται. ὅ τ΄ Εὐριπίδης ἐν² τῷ Φαέθοντι τὴν Κλυμένην δοθ ῆναί φησι

Μέροπι τησδ' ἄνακτι γης, ην έκ τεθρίππων άρμάτων πρώτην χθόνα "Ηλιος ἀνίσχων χρυσέα βάλλει φλογί καλοῦσι δ' αὐτην γείτονες μελάμβροτοι "Εω φαεννὰς 'Ηλίου θ' ἱπποστάσεις. (fr. 771)

νῦν μὲν δὴ κοινὰς ποιεῖται τὰς ἱπποστάσεις τῆ τε Ἡοῖ καὶ τῷ Ἡλίῳ, ἐν δὲ τοῖς ἐξῆς πλησίον αὐτάς φησιν εἶναι τῆ οἰκήσει τοῦ Μέροπος· καὶ ὅλη γε C 34 τῆ δραματουργία τοῦτο παραπέπλεκται, οὐ δή που τῆς κατ' Αἶγυπτον ἴδιον ὄν, μᾶλλον δὲ τῆς

GEOGRAPHY, 1, 2, 27

"Celts" and "Iberians," or by the compound words "Celtiberians" and "Celtiscythians," the several peoples being classed under one name through ignorance of the facts—I maintain, I say, that just so, in accordance with the opinion of the ancient Greeks, all the countries in the south which lie on Oceanus were called "Ethiopia." And there is the following testimony to this statement. Aeschylus, in his Prometheus Unbound, speaks thus: "The sacred flood of the Red Sea with its bed of scarlet sands, and the mere on the shore of Oceanus that dazzles with its gleam of brass and furnishes all nourishment to Ethiopians, where the Sun, who sees all things, gives rest to his tired steeds and refreshes his immortal body in warm outpourings of soft water." Oceanus renders this service and maintains this relation to the sun along the whole southern belt, Aeschylus obviously places the Ethiopians also along this whole belt. And Euripides, in his Phaëthon, says that Clymene was given "to Merops, the king of this country which is the first country that the Sun, as he rises in his chariot and four, strikes with his golden flame. And the swarthy men who dwell upon the confines of that country call it the bright stables of Dawn and Sun." In this passage Euripides assigns the stables jointly to Dawn and Sun, but in what immediately follows he says that these stables are near to the dwelling of Merops, and indeed this is woven into the whole structure of the play, not, I am sure, because it is a peculiarity of the Ethiopia which lies next to Egypt, but rather

 ¹ χαλκομάραυγον, G. Herrmann, for χαλκοκέραυνον.
 2 ἐν, Meineke, for ἐπί.

παρ' δλον τὸ μεσημβρινὸν κλίμα διηκούσης

παραλίας.

28. Μηνύει δὲ καὶ Ἐφορος τὴν παλαιὰν περὶ τῆς Αἰθιοπίας δόξαν, ὅς φησιν ἐν τῷ περὶ τῆς Εὐρώπης λόγῳ, τῶν περὶ τὸν οὐρανὸν καὶ τὴν γῆν τόπων εἰς τέτταρα μέρη διηρημένων, τὸ πρὸς τὸν ἀπηλιώτην Ἰνδοὺς ἔχειν, πρὸς νότον δὲ Αἰθίοπας, πρὸς δύσιν δὲ Κελτούς, πρὸς δὲ βορρᾶν ἄνεμον Σκύθας. προστίθησι δ', ὅτι μείζων ἡ Αἰθιοπία καὶ ἡ Σκυθία· δοκεῖ γάρ, φησί, τὸ τῶν Αἰθιόπων ἔθνος παρατείνειν ἀπ' ἀνατολῶν χειμερινῶν μέχρι δυσμῶν, ἡ Σκυθία δ' ἀντίκειται τούτῳ, ὅτι δ' ὁ ποιητὴς ὁμόλογος τούτοις, καὶ ἐκ τῶνδε δῆλον, ὅτι ἡ μὲν Ἰθάκη κεῖται

"πρὸς ζόφον" (ὅπερ ἐστὶ πρὸς ἄρκτον) " ai δέ τ' ἄνευθε πρὸς ἠῶ τ' ἠέλιόν τε," (Od. 9. 26)

όλον τὸ νότιον πλευρὸν οὕτω λέγων· καὶ ἔτι, ὅταν φῆ·

εἴτ' ἐπὶ δεξί' ἴωσι πρὸς ἠῶ τ' ἠέλιόν τε, εἴτ' ἐπ' ἀριστερά τοί γε ποτὶ ζόφον ἠερόεντα. (Il. 12. 239)

καὶ πάλιν

ὦ φίλοι, οὐ γάρ τ' ἴδμεν, ὅπη ζόφος, οὐδ' ὅπη ἀώς,

οὐδ' ὅπη ἠέλιος φαεσίμβροτος εἶσ' ὑπὸ γαῖαν, οὐδ' ὅπη ἀννεῖται. (Od. 10. 190)

περὶ ὧν λέγεται καὶ ἐν τοῖς περὶ τῆς Ἰθάκης λόγοις σαφέστερον. ὅταν οὖν φῆ·

Ζεὺς γὰρ ἐς 'Ωκεανὸν μετ' ἀμύμονας Αἰθιοπῆας χθιζὸς ἔβη, (Il. 1. 423)

GEOGRAPHY, 1. 2. 27-28

because it is a peculiarity of the sea-board that stretches along the entire southern belt.

28. Ephorus, too, discloses the ancient belief in regard to Ethiopia, for in his treatise On Europe he says that if we divide the regions of the heavens and of the earth into four parts, the Indians will occupy that part from which Apeliotes blows, the Ethiopians the part from which Notus blows, the Celts the part on the west, and the Scythians the part from which the north wind blows. And he adds that Ethiopia and Scythia are the larger regions; for it is thought, he says, that the nation of the Ethiopians stretches from the winter sunrise to sunset.2 and that Scythia lies directly opposite in the north. That Homer is in agreement with this view is also clear from his assertion that Ithaca lies "toward the darkness"that is, of course, toward the north-" but those others face the dawning and the sun"; by which he means the whole country on the southern side. And again this is clear when he says: "Whether they fare to the right, to the dawn and to the sun, or to the left, to mist and darkness"; and from this passage too: "My friends, lo, now we know not where is the place of darkness or of dawning, nor where the sun that gives light to men goes beneath the earth, nor where he rises." But about all these passages I shall speak more fully in my account of Ithaca.3 And so, when Homer says, "For Zeus went vesterday to Oceanus, unto the noble Ethiopians," we

On the winds, see page 105.

² That is, on the due east and west line drawn from the south-east point of the sky to the south-west point.

³ See 10. 2. 11 f.

κοινότερον δεκτέον καὶ τὸν ὠκεανὸν τὸν καθ' ὅλον τὸ μεσημβρινὸν κλίμα τεταμένον καὶ τοὺς Αἰθίοπας· ῷ γὰρ ᾶν τόπφ τοῦδε τοῦ κλίματος προσβάλης τὴν διάνοιαν, καὶ ἐπὶ τῷ ὠκεανῷ ἔση καὶ ἐπὶ τῆ Αἰθιοπία. οὕτω δὲ λέγει καὶ τὸ

τὸν δ' ἐξ Αἰθιόπων ἀνιὼν τηλόθεν ἐκ Σολύμων ὀρέων ἴδεν, (Od. 5. 282)

ἴσον τῷ ἀπὸ μεσημβρινῶν τόπων, Σολύμους λέγων οὐ τοὺς ἐν τἢ Πισιδία, ἀλλ', ὡς ἔφην πρότερον, πλάσας¹ τινὰς ὁμωνύμους, τοὺς ἀναλόγως ἔχοντας πρός τε τὸν πλέοντα ἐν τἢ σχεδία καὶ τοὺς ἐκεῖ μεσημβρινούς, ὡς ὰν Αἰθίοπας, ὡς οἱ Πισιδικοὶ πρός τε τὸν Πόντον καὶ τοὺς ὑπὲρ τῆς Αἰγύπτου Αἰθίοπας. οὕτω δὲ καὶ τὸν περὶ τῶν γεράνων λόγον κοινὸν ποιούμενός φησιν

αί τ' ἐπεὶ οὖν χειμῶνα φύγον καὶ ἀθέσφατον ὄμβρον,

κλαγγή ταί γε πέτονται ἐπ' 'Ωκεανοῖο ροάων, ἀνδράσι Πυγμαίοισι φόνον καὶ κήρα φέρουσαι. (Il. 3. 4)

οὐ γὰρ ἐν μὲν τοῖς κατὰ τὴν Ἑλλάδα τόποις ὁρᾶται φερομένη ἡ γέρανος ἐπὶ τὴν μεσημβρίαν, ἐν δὲ τοῖς κατὰ τὴν Ἰταλίαν ἡ Ἰβηρίαν οὐδαμῶς ἡ τοῖς κατὰ τὴν Κασπίαν καὶ Βακτριανήν. κατὰ πᾶσαν οὖν τὴν μεσημβρινὴν παραλίαν τοῦ ἀκεανοῦ παρατείνοντος, ἐφ᾽ ἄπασαν δὲ καὶ χειμοφυγούντων, δέχεσθαι δεῖ καὶ τοὺς Πυγμαίους μεμυθευμένους κατὰ πᾶσαν. εἰ δ᾽ οἱ ὕστερον ἐπὶ

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¹ πλάσας, A. Miller, for πλάσαι.

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must understand both words in a more general sense, "Oceanus" meaning the body of water that extends along the entire southern belt, and the "Ethiopians" meaning the people along the same extent; for upon whatever point of this belt you fix your attention, vou will be both on Oceanus and in Ethiopia. And this is the meaning also of the words: "On his way from the Ethiopians he espied Odysseus from afar, from the mountains of the Solvmi"—which is equivalent to saying "from the regions of the south"; for he does not mean the Solvmi in Pisidia, but, as I said before, he invents a people of the same name whom he depicts as occupying the same position relatively to the sailor on his raft and the people to the south of him (who would be the Ethiopians) as the Pisidians occupy relatively to the Pontus and to the Ethiopians that lie beyond Egypt. And in like manner Homer puts his assertion about the cranes in general terms: "When they flee from the coming of winter and sudden rain, and fly with clamour toward the streams of Oceanus, bearing slaughter and doom to the Pygmy men." For it is not the case that the crane is seen migrating toward the south only in Greek lands, and never in Italy or Iberia, or in the regions of the Caspian Sea and Bactriana. Since, then, Oceanus stretches along the entire southern sea-board, and since the cranes migrate in winter to this entire sea-board, we must admit that the Pygmies also are placed by mythology along the entire extent of that sea-board. And if

¹ See page 77 and footnote.

τοὺς κατ' Αἴγυπτον Αἰθίοπας1 μόνους μετήγαγον καὶ τὸν περί τῶν Πυγμαίων λόγον, οὐδὲν ἄν εἴη πρὸς τὰ πάλαι. καὶ γὰρ 'Αχαιούς καὶ 'Αργείους ού πάντας μεν νύν φαμεν τούς στρατεύσαντας έπλ "Ιλιον, "Ομηρος δέ καλεί πάντας. παραπλήσιον δέ έστιν δ λέγω καὶ περὶ τῶν δίχα διηρημένων Αιθιόπων, ὅτι δεῖ δέχεσθαι τοὺς παρ' ὅλην διατείνοντας την ωκεανίτιν αφ' ηλίου ανιόντος μέγρι ήλίου δυομένου. οί γαρ ούτω λεγόμενοι Αιθίοπες δίχα διήρηνται φυσικώς τῷ 'Αραβίω κόλπω, ώς αν μεσημβρινοῦ κύκλου τμήματι άξιολόγω, ποταμοῦ δίκην ἐν μήκει σχεδόν τι καὶ πεντακισχιλίων σταδίων επί τοις μυρίοις, πλάτει δ' οὐ πολύ των χιλίων μείζονι τῷ μεγίστω πρόσεστι δὲ τῷ μήκει καλ τὸ τὸν μυχὸν τοῦδε τοῦ κόλπου διέχειν τῆς κατά Πηλούσιον θαλάσσης τριών ή τεττάρων ήμερων όδόν, ην επέχει ό ίσθμός. καθάπερ οθν οί χαριέστεροι των διαιρούντων την 'Ασίαν άπὸ της Λιβύης δρον ευφυέστερον ηγουνται τουτον των ήπείρων αμφοίν τον κόλπον, ή τον Νείλον (τὸν μὲν γὰρ διήκειν παρ' ὀλίγον παντελώς ἀπὸ θαλάττης έπι θάλατταν, τὸν δὲ Νεῖλον πολλαπλάσιον ἀπὸ τοῦ ἀκεανοῦ διέγειν, ὥστε μὴ διαιρείν την 'Ασίαν πάσαν ἀπό της Λιβύης). τοῦτον ὑπολαμβάνω τὸν τρόπον κάγω τὰ μεσημ-Βρινά μέρη πάντα καθ' δλην την οἰκουμένην δίγα διηρησθαι νομίσαι τὸν ποιητὴν τῶ κόλπω τούτω.2 πῶς οὖν ἠγνόει τὸν ἰσθμόν, δν οὖτος ποιεῖ πρὸς τὸ Αἰγύπτιον πέλαγος:

¹ υστερον επί τους κατ' Αίγυπτον Αίθίσπας, Madvig, for υστερον τους Αίθίσπας επί τους κατ' Αίγυπτον.

² τούτφ, is omitted in the Dübner edition without an apparent reason.

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men of later generations restricted the story about the Pygmies to the Ethiopians next to Egypt alone, that would have no bearing on the facts in ancient For nowadays we do not use the terms "Achaeans" and "Argives" of all who took part in the expedition against Troy, though Homer so uses Now what I contend in the case of the Ethiopians that are "sundered in twain" is similar to this, namely, that we must interpret "Ethiopians" as meaning that the Ethiopians extend along the whole sea-board of Oceanus from the rising to the setting sun. For the Ethiopians that are spoken of in this sense are "sundered in twain" naturally by the Arabian Gulf (and this would constitute a considerable part of a meridian circle) as by a river, being in length almost fifteen thousand stadia, and in width not much more than one thousand stadia. I mean at its greatest width; and to the length we must add the distance by which the head of this gulf is separated from the sea at Pelusium, a journey of three or four days—the space occupied by the isthmus. Now, just as the abler of the geographers who separate Asia from Libya regard this gulf as a more natural boundary-line between the two continents than the Nile (for they say the gulf lacks but very little of stretching from sea to sea, whereas the Nile is separated from Oceanus by many times that distance, so that it does not separate Asia as a whole from Libya), in the same way I also assume that the poet considered that the southern regions as a whole throughout the inhabited world were "sundered in twain" by this gulf. How, then, can the poet have been ignorant of the isthmus which the gulf forms with the Egyptian 1 Sea?

¹ Mediterranean.

29. Καὶ γὰρ δὴ καὶ τελέως ἄλογον, εἰ τὰς μὲν Αίγυπτίους Θήβας ήδει σαφώς, αὶ διέγουσι τῆς καθ' ήμας θαλάττης σταδίους μικρον απολείποντας ἀπὸ τῶν τετρακισχιλίων, τὸν δὲ μυγὸν τοῦ ᾿Αραβίου κόλπου μὴ ἦδει, μηδὲ τὸν ἰσθμὸν τὸν κατ᾽ αὐτόν, πλάτος ἔχοντα οὐ πλειόνων ἢ γιλίων σταδίων. πολύ δ' άν άλογώτερον δόξειεν, εί τὸν μεν Νείλον ήδει δμωνύμως τη τοσαύτη γώρα λεγόμενον, την δ' αιτίαν μη έώρα τούτου. μάλιστα γὰρ ἂν προσπίπτοι τὸ ἡηθὲν ὑφ' Ἡρο-C 36 δότου, διότι δῶρον ἡν ἡ χώρα τοῦ ποταμοῦ καὶ διὰ τοῦτο ήξιοῦτο τοῦ αὐτοῦ ὀνόματος. ἄλλως τε των παρ' έκάστοις ιδίων ταῦτ' έστι γνωριμώτατα, α και παραδοξίαν έχει τινά, και έν τῷ φανερῷ πασιν έστί τοιοῦτον δ' έστὶ καὶ ή τοῦ Νείλου ανάβασις καὶ ή πρόσχωσις τοῦ πελάγους. καθάπερ οι προσαχθέντες πρὸς τὴν Αἴγυπτον οὐδὲν πρότερον ἱστοροῦσι περὶ τῆς χώρας, ἡ τὴν τοῦ Νείλου φύσιν, διὰ τὸ τοὺς ἐπιχωρίους μήτε καινότερα τούτων λέγειν έχειν προς άνδρας ξένους, μήτ' ἐπιφανέστερα περὶ τῶν παρ' αὐτοῖς (τῷ γὰρ ίστορήσαντι περί του ποταμού κατάδηλος και ή γώρα γίνεται πάσα, όποία τίς έστιν), ούτω καὶ οί πόρρωθεν ακούοντες οὐδεν πρότερον ίστοροῦσι τούτου. προστίθει οὖν τούτφ καὶ τὸ φιλείδημον τοῦ ποιητοῦ καὶ τὸ φιλέκδημον, ὅπερ αὐτῷ μαρτυροῦσιν ὅσοι τὸν βίον ἀναγράφουσι, καὶ ἐξ αὐτῶν δὲ λαμβάνεται τῶν ποιημάτων πολλά παραδείγματα του τοιούτου. ούτος μεν ούν εκ πλεόνων έλέγγεται καὶ είδως καὶ λέγων ρητώς

¹ τετρακισχιλίων, Gosselin, for πεντακισχιλίων; Groskurd, Forbiger following; C. Müller approving.

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29. And indeed it is in the highest degree unreasonable that the poet had accurate knowledge about Thebes in Egypt, which is distant from the Mediterranean Sea but a trifle less than four thousand stadia, and yet had no knowledge about the head of the Arabian Gulf, or about the adjoining isthmus, whose width is not more than one thousand stadia; but it would seem to be much more unreasonable that he knew the Nile bore the same name as the vast country Aegyptus and vet did not see the reason therefor; for the thought which has been expressed by Herodotus 1 would occur to one at once, namely, that the country was "a gift of the river" and laid claim for this reason to the same name as the river.2 Moreover, those peculiarities of each several country which are in some way marvellous are most widely known, and manifest to everybody; such is the case with the rising of the Nile as also the silting up of the sea. And just as those who visit Egypt learn no fact concerning the country before they learn the nature of the Nile, because the natives cannot tell foreigners anything more novel or more remarkable about their country than these particulars (for the nature of the entire country becomes quite clear to one who has learned about the river), so also those who hear about the country at a distance learn this fact before anything else. To all this we must add the poet's fondness for knowledge and for travel, to which all who have written on his life bear witness; and one may find many illustrations of such a predilection in the poems themselves. And so it is proved, on many grounds, that Homer both knows and expressly says what is to be said, and that he

¹ Herod. 2. 5. ² Compare 15. 1. 16.

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τὰ ρητὰ καὶ σιγῶν τὰ λίαν ἐκφανῆ ἡ ἐπιθέτως λέγων.

30. Θαυμάζειν δε δεί των Αίγυπτίων και Σύρων, πρὸς οὺς νῦν ἡμῖν ὁ λόγος, εἰ μηδ' ἐκείνου λέγοντος τὰ παρ' αὐτοῖς ἐπιχώρια συνιᾶσιν, ἀλλὰ καὶ ἄγνοιαν αἰτιῶνται, ή αὐτοὺς ἐνόχους δείκνυσιν ό λόγος. άπλως δὲ τὸ μὴ λέγειν οὐ τοῦ μὴ εἰδέναι σημείον έστιν οὐδε γάρ τὰς τροπάς τοῦ Εὐρίπου λέγει, οὐδὲ τὰς Θερμοπύλας, οὐδ' ἄλλα πλείω τῶν γνωρίμων παρά τοῖς "Ελλησιν, οὐ μὴν ἡγνόει γε, άλλα και λέγει, οὐ δοκεί δὲ τοίς ἐθελοκω-Φοῦσιν ώστε εκείνους αἰτιατέον, ὁ ποιητης τοίνυν διιπετέας καλεί τους ποταμούς, ου τους γειμάρρους μόνους, άλλα και πάντας κοινώς, ότι πληρούνται πάντες ἀπὸ τῶν ὀμβρίων ὑδάτων ἀλλὰ τὸ κοινὸν ἐπὶ τῶν κατ' ἐξοχὴν ἴδιον γίνεται. άλλως γαρ αν τον χειμάρρουν ακούοι τις διιπετή καὶ ἄλλως τὸν ἀέναον ἐνταῦθα δὲ διπλασιάζει πως ή έξογή. καὶ καθάπερ εἰσί τινες ὑπερβολαὶ έπὶ ὑπερβολαίς, ὡς τὸ κουφότερον είναι φελλοῦ σκιάς, δειλότερον δε λαγώ Φρυγός, ελάττω δ' έχειν γην τὸν ἀγρὸν ἐπιστολης Λακωνικης ούτως έξοχη έπι έξοχη συντρέχει έπι του διιπετή τον Νείλον λέγεσθαι. ὁ μὲν γὰρ χειμάρρους ὑπερ-

² Aristarchus and Crates, respectively.

¹ Compare 1. 2. 3.

³ That is, "heaven-fed" in the former case is used in the literal sense of the Greek word, "heaven-fallen," and applies

keeps silent about what is too obvious to mention, or else alludes to it by an epithet.¹

30. But I must express my amazement at the Egyptians and Syrians, 2 against whom I am directing this argument, that they do not understand Homer even when he tells them about matters in their own countries, and yet actually accuse him of ignorance -a charge to which my argument shows that they themselves are subject. In general, silence is no sign of ignorance; for neither does Homer mention the refluent currents of the Euripus, nor Thermopylae, nor vet other things in Greece that are well-known, though assuredly he was not ignorant of them. However, Homer also speaks of things well-known, though those who are wilfully deaf do not think so; and therefore the fault of ignorance is theirs. Now the poet calls the rivers "heavenfed "-not merely the winter torrents, but all rivers alike—because they are all replenished by the rains. But the general epithet becomes particular when applied to things in relation to their pre-eminence. For one would interpret "heaven-fed" in one way of the winter torrent and in quite another way of the ever-flowing stream; and in the latter case the pre-eminence is, one may say, twofold.3 And just as there are cases of hyperbole on hyperbole for example, "lighter than the shadow of a cork," "more timid than a Phrygian 4 hare," "to own a farm smaller than a Laconian letter "-just so there is a parallel case of pre-eminence on pre-eminence when the Nile is spoken of as being "heaven-fed." For while the winter torrent surpasses the other specifically to precipitate descent; in the latter case the epithet has reference to volume and duration. ⁴ The Phrygian slave was a proverbial coward.

βέβληται τοὺς ἄλλους ποταμοὺς τῷ διιπετής είναι ὁ δὲ Νείλος καὶ τοὺς χειμάρρους ἐπὶ τοσοῦτον πληρούμενος καὶ πλήθους καὶ γρόνου. ώστ' έπει και γνώριμον ήν τὸ πάθος τοῦ πόταμοῦ C 37 τ $\hat{\varphi}$ ποιητ $\hat{\eta}$, $\mathring{\omega}$ σπερ 1 παραμεμυθήμεθα, καὶ κέχρηται τῷ ἐπιθέτῷ τούτῷ κατ' αὐτοῦ, οὐκ ἄλλως δεκτέον η ώς ειρήκαμεν. το δε πλείοσι στόμασιν έκδιδόναι κοινον και πλειόνων, ώστ' ούκ άξιον μνήμης υπέλαβε, και ταυτα πρός ειδότας καθάπερ οὐδ' 'Αλκαῖος, καίτοι φήσας ἀφῖχθαι καὶ αὐτὸς εἰς Αἴγυπτον. αἱ δὲ προσχώσεις καὶ ἐκ των αναβάσεων μεν δύνανται υπονοείσθαι. και έξ ων δὲ εἶπε περὶ τῆς Φάρου. ὁ γὰρ ἱστορων αὐτῷ περὶ τῆς Φάρου, μᾶλλον δὲ ἡ κοινὴ φήμη, διότι μέν τότε τοσούτον άπειχεν άπὸ τῆς ἡπείρου, ἐφ' 2 οσον φησί, δρόμον νεώς ήμερήσιον, οὐκ ᾶν εἴη διατεθρυλημένη έπὶ τοσοῦτον έψευσμένως. ὅτι δ' ή ἀνάβασις καὶ αἱ προσχώσεις τοιαῦταί τινες, κοινότερον πεπύσθαι είκος ην έξ ων συνθείς ό ποιητής, ότι πλέον ή τότε ἀφειστήκει της γης ή νησος κατά την Μενελάου παρουσίαν, προσέθηκε παρ' έαυτοῦ πολλαπλάσιον διάστημα τοῦ μυθώδους χάριν. αἱ δὲ μυθοποιίαι οὐκ ἀγνοίας 3 σημεία δήπου, οὐδὲ τὰ περὶ τοῦ Πρωτέως καὶ

² ἐφ', Capps inserts.

⁵ γάρ, after οὐδέ, Groskurd deletes; Forbiger following;

C. Müller approving.

¹ ∞σπερ, A. Miller, for ωs; A. Vogel approving.

³ χάριν, Corais deletes, after àγνοίας; Meineke, Forbiger, following; C. Müller approving.

⁴ σημεία, is retained, against the σημείον of Corais and Meineke. γάρ, after σημεία, Groskurd deletes; Forbiger following; C. Müller approving.

rivers in respect of being "heaven-fed," the Nile. when at its flood, surpasses even the winter torrents to just that extent, not only in the amount of its flood but also in the duration thereof. so, since the behaviour of the river was known to the poet, as I have urged in my argument, and since he has applied this epithet to it, we cannot interpret it in any other way than that which I have pointed out. But the fact that the Nile empties its waters through several mouths is a peculiarity it shares with several other rivers, and therefore Homer did not think it worthy of mention. particularly in addressing people who knew the fact; just as Alcaeus does not mention those mouths, either, although he affirms that he too visited Egypt. But the matter of the silting may be inferred not only from the risings of the river but also from what Homer says about Pharos. For the man who told Homer about Pharos-or rather, I should say, the common report that it was so and so far from the mainland—this report, I say, would not have got abroad falsified to such an extent as the distance which Homer gives, namely, a day's run for a ship; but as for the rising and silting, it is reasonable to suppose that the poet learned as a matter of common knowledge that they were such and such; and concluding from these facts that at the time of the visit of Menelaus the island was more distant from the mainland than it was in his own times, he added a distance many times as great on his own responsibility for the sake of the fabulous element. Moreover, the fabulous creations are not, I take it, a sign of ignorance—not even those stories about Proteus and the Pygmies.

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τῶν Πυγμαίων, οὐδ' αἱ τῶν φαρμάκων δυνάμεις, οὐδ' εἴ τι ἄλλο τοιοῦτον οἱ ποιηταὶ πλάττουσι· οὐ γὰρ κατ' ἄγνοιαν τῶν τοπικῶν λέγεται, ἀλλ' ἡδονῆς καὶ τέρψεως χάριν. πῶς οὖν καὶ ἄνυδρον οὖσαν φησὶν ὕδωρ ἔχειν;

ἐν δὲ λιμὴν εὔορμος, ὅθεν τ' ἀπὸ νῆας ἐἔσας ἐς πόντον βάλλουσιν ἀφυσσάμενοι μέλαν ὕδωρ. (Od. 4. 358)

άλλ' οὔτε τὸ ὑδρεῖον ἐκλιπεῖν ἀδύνατον, οὔτε τὴν ὑδρείαν ἐκ τῆς νήσου γενέσθαι φησίν, ἀλλὰ τὴν ἀναγωγὴν μόνην διὰ τὴν τοῦ λιμένος ἀρετήν, τὸ δ' ὕδωρ ἐκ τῆς περαίας ἀρύσασθαι παρῆν, ἐξομολογουμένου πως τοῦ ποιητοῦ δι' ἐμφάσεως, ὅτι πελαγίαν εἶπεν οὐ πρὸς ἀλήθειαν, ἀλλὰ πρὸς ὑπερβολὴν καὶ μυθοποιίαν.

31. Έπεὶ δὲ καὶ τὰ περὶ τῆς πλάνης τῆς Μενελάου λεχθέντα συνηγορεῖν δοκεῖ τῆ ἀγνοία τῆ περὶ τοὺς τόπους ἐκείνους, βέλτιον ἴσως ἐστί, τὰ ἐν τοῖς ἔπεσι τούτοις ζητούμενα προεκθεμένους ἄμα ταῦτά τε διαστεῖλαι καὶ περὶ τοῦ ποιητοῦ ἀπολογήσασθαι καθαρώτερον. φησὶ δὴ πρὸς Τηλέμαχον ὁ Μενέλαος θαυμάσαντα τὸν τῶν βασιλείων κόσμον·

η γὰρ πολλὰ παθών καὶ πόλλ' ἐπαληθεὶς ηγαγόμην ἐν νηυσί, καὶ ὀγδοάτω ἔτει ἢλθον, Κύπρον Φοινίκην τε καὶ Αἰγυπτίους ἐπαληθείς, Αἰθίοπάς θ' ἰκόμην καὶ Σιδονίους καὶ Ἐρεμβοὺς καὶ Λιβύην. (Od. 4. 81)

C 38 ζητοῦσι δέ, πρὸς τίνας ἢλθεν Αἰθίοπας, πλέων

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nor the potent effects of magic potions, nor any other such inventions of the poets: for these stories are told, not in ignorance of geography, but in order to give pleasure and enjoyment. How does it come, then, that Homer says that Pharos has water, when it is without water: "And therein is a good haven, whence men launch the well-proportioned ships into the deep when they have drawn a store of black water"? Now, in the first place, it is not impossible that the source of the water has dried up; and, in the second place, Homer does not say that the water came from the island, but merely that the launching of the ships took place thence—on account of the excellence of the harbour: but the water itself may have been drawn from the opposite mainland, since, in a way, the poet by implication confesses that, when he applied the term "in the open sea" to Pharos, he did not use it in a literal sense, but as an hyperbolical or mythical statement.

31. Now, since it is thought that Homer's account of the wanderings of Menelaus, also, argues for ignorance of those countries on his part, it is perhaps better to make a preliminary statement of the questions called forth by those poems, and then at once to separate these questions and thus speak more clearly in defence of the poet. Menelaus says, then, to Telemachus, who has marvelled at the decorations of the palace: "Yea, after many a woe and wanderings manifold, I brought my wealth home in ships, and in the eighth year came hither. I roamed over Cyprus and Phoenicia and Egypt, and came to Ethiopians, Sidonians, Erembians, and to Libya." Now they ask to what Ethiopians he came in thus

έξ Αλγύπτου οὔτε γάρ ἐν τῆ καθ' ἡμᾶς θαλάττη οἰκοῦσί τινες Αἰθίοπες, οὔτε τοῦ Νείλου τοὺς καταράκτας ην διελθείν ναυσί τίνες τε οί Σιδόνιοι οὐ γὰρ οί γε ἐν Φοινίκη οὐ γὰρ ᾶν τὸ γένος προθείς το είδος επήνεγκε τίνες τε οί Έρεμβοί; καινὸν γὰρ τὸ ὄνομα. 'Αριστόνικος μὲν οὖν ὁ καθ' ἡμᾶς γραμματικὸς ἐν τοῖς περὶ τῆς Μενελάου πλάνης πολλών αναγέγραφεν ανδοών άποφάσεις περί εκάστου των εκκειμένων κεφαλαίων ήμιν δ' άρκέσει καν έπιτέμνοντες λέγωμεν. οί μεν δη πλευσαι φήσαντες είς την Αιθιοπίαν, οί μεν περίπλουν δια των Γαδείρων μέχρι της 'Ινδικής εἰσάγουσιν, ἄμα καὶ τὸν χρόνον τή πλάνη συνοικειούντες, όν φησιν, ότι ογδοάτω έτει ηλθον οί δὲ διὰ τοῦ ἰσθμοῦ τοῦ κατὰ τὸν ᾿Αράβιον κόλπον οι δε δια των διωρύγων τινός. ούτε δ' ό περίπλους αναγκαίος, δυ Κράτης εἰσάγει, οὐχ ώς ἀδύνατος εἴη ἀν² (καὶ γὰρ ἡ Ὀδυσσέως πλάνη ὰν ἦν³ ἀδύνατος), ἀλλ' ὅτι οὕτε πρὸς τὰς ὑποθέσεις τὰς μαθηματικὰς χρήσιμος, οὕτε πρὸς τὸν χρόνον της πλάνης. καὶ γὰρ ἀκούσιοι διατριβαὶ κατέσχον αὐτὸν ὑπὸ δυσπλοίας, φήσαντος ὅτι άπὸ εξήκοντα νεών πέντε ελείφθησαν αὐτώ, καὶ έκούσιοι χρηματισμοῦ χάριν φησί γάρ ὁ Νέστωρ

ως ό μεν ενθα πολύν βίστον καὶ χρυσον άγείρων ηλάτο ξύν νηυσί· (Od. 3. 301)

Κύπρου Φοινίκην τε καὶ Αἰγυπτίους ἐπαληθείς. (Od. 4. 83)

3 αν ήν, B. Niese inserts, before αδύνατος.

¹ διὰ τῶν, Madvig, for τῶν διά; A. Vogel approving.
² ϵῖη ἄν, Sterrett, for ϵἶναι, adapting the suggestion in Madvig's conjecture.

sailing from Egypt (for no Ethiopians live in the Mediterranean Sea, nor was it possible for ships to pass the cataracts of the Nile); and who the Sidonians are (for they are certainly not those that live in Phoenicia, since he would not have put the genus first and then brought in the species); and who the Erembians are (for that is a new name). Now Aristonicus, the grammarian of our own generation, in his book On the Wanderings of Menelaus, has recorded opinions of many men on each one of the points set forth; but for me it will be sufficient to speak briefly on these questions. Of those who sav that Menelaus "sailed" to Ethiopia, some propose a coasting-voyage by Gades as far as India. making his wanderings correspond exactly to the time which Homer gives: "In the eighth year I came back": but others propose that he sailed across the isthmus that lies at the head of the Arabian Gulf, while still others propose that he sailed through one of the canals of the Nile. the first place, Crates' theory of a coasting-voyage is unnecessary—not that such a voyage would be impossible (for the wanderings of Odysseus would have been impossible), but because it serves no purpose either as regards Crates' mathematical hypotheses or as regards the time consumed in the wanderings. For Menelaus was detained against his will because of the difficulties of sailing (he himself says that out of sixty ships only five were left to him), and he also made intentional stops for the sake of trafficking. For Nestor says: "Thus Menelaus, gathering much substance and gold, was wandering there with his ships"; [to which Menelaus adds:] "having roamed over Cyprus and Phoenicia and Egypt." Again, the

ο τε διὰ τοῦ ἰσθμοῦ πλοῦς ἡ τῶν διωρύγων λεγόμενος μεν ήκούετο αν εν μύθου σχήματι, μή λεγόμενος δὲ περιττῶς καὶ ἀπιθάνως εἰσάγοιτο ἄν. ἀπιθάνως δὲ λέγω, ὅτι πρὸ τῶν Τρωικῶν οὐδεμία διώρυξ τον δε επιχειρήσαντα ποιήσαι Σέσωστριν ἀποστήναί φασι, μετεωροτέραν ὑπο-λαβόντα τὴν τῆς θαλάσσης ἐπιφάνειαν. ἀλλὰ μην οὐδ' ὁ ἰσθμὸς ην πλόϊμος άλλ' εἰκάζει ὁ Ερατοσθένης οὐκ εὖ. μη γάρ πω τὸ ἔκρηγμα τὸ κατά τὰς Στήλας γεγονέναι νομίζει ὅστε ἐνταῦθα¹ συνάπτειν την είσω θάλασσαν τη έκτος 2 καί καλύπτειν τὸν ἰσθμὸν μετεωροτέραν οὖσαν, τοῦ δ' έκρήγματος γενομένου ταπεινωθήναι καὶ ἀνακαλύψαι την γην την κατά τὸ Κάσιον καὶ τὸ Πηλούσιον μέχρι της Έρυθρας. τίνα οὖν ἔχομεν ίστορίαν περί τοῦ ἐκρήγματος τούτου, διότι πρὸ C 39 τῶν Τρωικῶν οὖπω ὑπῆρχεν; ἴσως δ' ὁ ποιητὴς άμα μεν τον 'Οδυσσέα ταυτη διεκπλέοντα είς τον ώκεανὸν πεποίηκεν, ώς ήδη ἐκρήγματος γεγονότος, ἄμα δὲ εἰς τὴν Ἐρυθρὰν τὸν Μενέλαον ἐκ τῆς Αἰγύπτου ναυστολεί, ώς οὔπω γεγονότος. ἀλλά καὶ τὸν Πρωτέα εἰσάγει λέγοντα αὐτῶ.

> άλλά σ' ές 'Ηλύσιον πεδίον καὶ πείρατα γαίης (Od. 4.563)άθάνατοι πέμψουσι.

1 Groskurd inserts μή before συνάπτειν (Kramer, Meineke, Forbiger, Dübner-Müller following), thus referring ἐνταῦθα to the Pillars; A. Vogel shows that ἐνταῦθα refers to the Isthmus and that uh is wrong.

² Groskurd writes την έσω θάλασσαν τῆ ἐκτὸς for την ἔξω θάλασσαν τῆ ἐντός; Dübner-Müller, Forbiger following. Meineke, too, follows except that he writes είσω for έσω; A. Vogel approving.

voyage through the isthmus or one of the canals would, if Homer mentioned such a vovage, be interpreted as a kind of fiction; but since he does not mention such a voyage it would be gratuitous and absurd for one to propose it. It would be absurd, I repeat, since before the Trojan War there was no canal: and the person who undertook to build one-I mean Sesostris 1—is said to have abandoned the undertaking because he supposed the level of the Mediterranean Sea was too high. Furthermore, the isthmus was not navigable either, and Eratosthenes' conjecture is wrong. For he thinks that the breaking of the channel at the Pillars of Heracles had not vet taken place and that in consequence the Mediterranean Sea, since it was of a higher level, joined the exterior sea at the isthmus and covered it, but after the breaking of the channel took place at the Pillars, the Mediterranean Sea was lowered and thus exposed the land about Casium and Pelusium, as far as the Red Sea. Now what historical information have we regarding this break at the Pillars to the effect that it did not yet exist before the Trojan But perhaps—you will say—the poet has represented Odysseus as sailing through the strait at the Pillars into the ocean (as though a channel were already in existence) at the same time that he conveys Menelaus by ship from Egypt into the Red Sea (as though a channel were not yet in existence)! Furthermore, Homer brings in Proteus as saving to Menelaus: "Nay, the deathless gods will convey thee to the Elysian Plain and to the end of the

¹ See 17. 1. 25; also Herodotus, 2. 158, and 4. 39.

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ποία οὖν; καὶ ὅτι ἐσπέριόν τινα λέγει τόπον τοῦτον ἔσχατον, ὁ Ζέφυρος παρατεθεὶς δηλοῖ·

άλλ' αλεί Ζεφύροιο λιγὺ πνείοντος ἀήτας 'Ωκεανὸς ἀνίησι. (Od. 4. 567)

ταῦτα γὰρ αἰνίγματος πλήρη.

32. Εί δ' οὖν καὶ σύρρουν ποτὲ ὑπάρξαντα τὸν ἰσθμὸν τοῦτον ὁ ποιητὴς ἱστορήκει, πόσφ μείζονα ἂν ἔχοιμεν πίστιν τοῦ τοὺς Αἰθίοπας διχθὰ διηρῆσθαι, πορθμῷ τηλικούτω διειργομένους; τίς δὲ καὶ χρηματισμὸς παρὰ τῶν ἔξω καὶ κατὰ τὸν ἀκεανὸν Αἰθιόπων; ἄμα μὲν γὰρ θαυμάζουσι τοῦ κόσμου τῶν βασιλείων οἱ περὶ Τηλέμαχον τὸ πλῆθος, ὅ ἐστι

χρυσοῦ τ' ἢλέκτρου τε καὶ ἀργύρου ἢδ' ἐλέφαντος. (Od. 4. 73)

τούτων δ' οὐδενὸς πλην ἐλέφαντος εὐπορία παρ' ἐκείνοις ἐστίν, ἀπορωτάτοις τῶν ἀπάντων οὖσι τοῖς πλείστοις καὶ νομάσι. νὴ Δία, ἀλλ' ἡ 'Αραβία προσην καὶ τὰ μέχρι τῆς 'Ινδικης' τούτων δ' ἡ μὲν εὐδαίμων κέκληται μόνη τῶν ἀπασῶν, τὴν δέ, εἰ καὶ μὴ ὀνομαστὶ καλοῦσιν οὕτως,¹ ὑπολαμβάνουσί γε καὶ ἱστοροῦσιν, ὡς εὐδαιμονεστάτην τὴν μὲν οὖν 'Ινδικὴν οὐκ οἶδεν "Ομηρος, εἰδὼς δὲ ἐμέμνητο ἄν'² τὴν δ' 'Αραβίαν, ἡν εὐδαίμονα προσαγορεύουσιν οἱ νῦν,³ τότε δ' οὐκ ἡν πλουσία, ἀλλὰ καὶ αὐτὴ ἄπορος καὶ ἡ πολλὴ αὐτῆς

¹ καλοῦσιν οῦτως, with a comma after οῦτως, A. Miller, for καλοῦσιν, οῦτως; A. Vogel approving.

² Keelhoff deletes εἰδων δὲ ἐμέμνητο ἄν as a marginal gloss.
³ Meineke, Cobet delete Groskurd's οίδε μέν (which Kramer, Dübner-Müller, Forbiger follow) after οἱ νῦν.

GEOGRAPHY, 1. 2. 31-32

earth." What end of the earth, pray? Why, the citing of "Zephyrus" shows that he means by this remote region a place somewhere in the west: "But always Oceanus sendeth forth the breezes of the clear-blowing Zephyrus." Really, these matters are

full of puzzling questions.

32. If, however, the poet had heard that this isthmus was once submerged, should we not have all the greater reason for believing that the Ethiopians. since they were separated by so great a strait, were really "sundered in twain"? And how could Menelaus have gotten treasures from the remote Ethiopians who lived along Oceanus? For at the moment when they marvelled at the ornaments themselves in the palace of Menelaus, Telemachus and his companions marvelled at the great quantity of them-"of gold and of amber and of silver and of ivory"; but with the exception of ivory, there is no great store of any of these things among those people, most of whom are the poorest of all peoples and are wandering shepherds. "Very true," you say; "but Arabia and the regions as far as India belonged to them; and though Arabia alone of all these countries has the name 'Blest,' India is supposed and reported to be in the highest degree blest, even though people do not so call it by name." Now as to India, Homer did not know of it (for had he known of it, he would have mentioned it); but he did know the Arabia which is to-day called "Blest." In his time, however, it was not rich, and not only was the country itself without resources but most of it was occupied by

¹ That is, Arabia Felix, east of the Red Sea. Strabo defines it in 16. 3. 1.

σκηνιτών ανδρών ολίγη δ' ή αρωματοφόρος, δι' ην και τοῦτο τοῦνομα εὕρετο η χώρα διὰ τὸ και τον φόρτον είναι τον τοιούτον έν τοις παρ' ήμιν σπάνιον καὶ τίμιον. νυνὶ μεν οὖν εὐποροῦσι καὶ πλουτούσι διά τὸ καὶ τὴν ἐμπορίαν είναι πυκνὴν καὶ δαψιλή, τότε δ' οὐκ εἰκός. αὐτῶν δὲ χάριν των αρωμάτων έμπορω μεν και καμηλίτη γένοιτ' άν τις έκ των τοιούτων φορτίων εὐπορία Μενελάφ δε λαφύρων ή δωρεων έδει παρά βασιλέων καὶ δυναστών, εχόντων τε α δώσουσι και βουλομένων διδόναι διὰ τὴν ἐπιφάνειαν αὐτοῦ καὶ εὔκλειαν. οί μεν οθν Αίγύπτιοι και οί πλησίον Αιθίοπες καὶ "Αραβες οὐθ' οῦτω τελέως ἄβιοι, οὐτ' ἀνήκοοι της τῶν ᾿Ατρειδῶν δόξης, καὶ μάλιστα διὰ τὴν κατόρθωσιν τοῦ Ἰλιακοῦ πολέμου, ὥστ' ἐλπὶς ἡν της έξ αὐτῶν ώφελείας καθάπερ ἐπὶ τοῦ θώρακος τοῦ 'Αγαμέμνονος λέγεται.

τόν ποτέ οἱ Κινύρης δῶκε ξεινήϊον εἶναι· πεύθετο γὰρ Κύπρονδε μέγα κλέος. (Π. 11. 20)

καὶ δὴ καὶ τὸν πλείω χρόνον τῆς πλάνης λεκτέον μὲν ἐν τοῖς κατὰ Φοινίκην καὶ Συρίαν καὶ Αἴγυπτον καὶ Λιβύην γενέσθαι καὶ τὰ περὶ Κύπρον χωρία καὶ ὅλως τὴν καθ' ἡμᾶς παραλίαν καὶ τὰς νήσους· καὶ γὰρ ξένια παρὰ τούτοις καὶ τὸ βία καὶ τὸ ἐκ λεηλασίας πορίσασθαι, καὶ μάλιστα παρὰ τῶν συμμαχησάντων τοῖς Τρωσίν, ἐντεῦθεν ἢν. οἱ δ' ἐκτὸς καὶ πόρρω βάρβαροι

¹ The Troglodytes on the western side of the Arabian Gulf (1. 1. 3). ² See 16. 2. 21. ³ See 16. 2. 1.

dwellers in tents. The part of Arabia that produces the spices is small; and it is from this small territory that the country got the name of "Blest," because such merchandise is rare in our part of the world and costly. To-day, to be sure, the Arabs are well to do and even rich, because their trade is extensive and abundant, but it is not likely to have been so in Homer's time. So far as the mere spices are concerned, a merchant or camel-driver might attain to some sort of wealth by trafficking in them, whereas Menelaus needed booty or presents from kings or dynasts who had not only the means to give, but also the good-will to make him presents because of his distinction and fame. The Egyptians. however, and the neighbouring Ethiopians and Arabs, were not wholly destitute of the means of livelihood, as were the other Ethiopians, nor wholly ignorant of the fame of the sons of Atreus, particularly in view of the successful issue of the Trojan War, and hence Menelaus might hope for profit from them. Compare what Homer says of the breastplate of Agamemnon: "The breastplate that in time past Cinvras gave him for a guest-gift; for afar in Cyprus did Cinyras hear the mighty tale." Furthermore, we must assert that Menelaus' time in his wanderings was spent mostly in the regions about Phoenicia,² Syria,³ Egypt, and Libva, and in the countries round Cyprus, and, generally speaking, along the Mediterranean sea-board and among the islands. For Menelaus might procure guest-gifts among these peoples and also enrich himself from them by violence and robbery, and more particularly from those who had been allies of the Trojans. But the barbarians that lived outside these regions or at a distance could

οὐδεμίαν τοιαύτην ὑπηγόρευον ἐλπίδα. εἰς οὖν την Αίθιοπίαν ἀφιχθαι λέγεται ὁ Μενέλαος, οὐγ ότι εἰς τὴν Αἰθιοπίαν τῷ όντι ἀφικτο, ἀλλ' ότι 1 μέγρι των δρων των προς Αίνύπτω, τάνα μέν γαρ και πλησιαίτεροι ήσαν ταις Θήβαις οι τότε όροι, άλλα και οι νυν πλησίον είσιν, οι κατά Συήνην και τὰς Φίλας ών ή μεν της Αιγύπτου έστίν, αί δὲ Φίλαι κοινή κατοικία τῶν Αἰθιόπων καὶ τῶν Αἰγυπτίων. ὁ οὖν εἰς Θήβας ἀφιγμένος εί και μέγρι των δρων άφικτο ή και περαιτέρω των Αιθιόπων, και ταυτα τη βασιλική ξενία γρώμενος, οὐδὲν ἄλογον, οὕτω δὲ καὶ Κυκλώπων είς γαιαν ἀφιχθαί φησιν ὁ Ὀδυσσεύς, μέχρι τοῦ σπηλαίου προεληλυθώς ἀπὸ θαλάττης ἐπ' ἐσγατιας γαρ ίδρυσθαί που λέγει. και είς Αιολίαν δέ καὶ Λαιστρυγόνας καὶ τοὺς ἄλλους, ὅπου ποτὲ καὶ καθωρμίσατο, ἐκεῖσέ φησιν ἀφῖχθαι. καὶ ὁ Μενέλαος οὖν οὕτως εἰς Αἰθιοπίαν ἡκεν, οὕτω δὲ καὶ εἰς Λιβύην, ὅτι προσέσχε τόποις τισίν ἀφ' οδ καὶ ὁ κατὰ τὴν ᾿Αρδανίδα ² λιμὴν τὴν ὑπέρ Παραιτονίου Μενέλαος καλείται.

33. Εἰ δὲ Φοίνικας εἰπὼν ὀνομάζει καὶ Σιδονίους, τὴν μητρόπολιν αὐτῶν, σχήματι συνήθει χρῆται, ὡς

Τρῶάς τε καὶ "Εκτορα νηυσὶ πέλασσε: (Il. 13. 1)

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i eis τὴν Αἰθιοπίαν τῷ ὅντι ἀφῖκτο, ἀλλ' ὅτι, Casaubon inserts;
 Forbiger, Sterrett, following; Kramer approving.
 ᾿Αρδανίδα, Kramer, for ᾿Αρδανίαν.

GEOGRAPHY, 1. 2. 32-33

prompt in him no such expectations. Now Homer says that Menelaus "came to" Ethiopia, not meaning that [he really came into Ethiopia, but that] he reached its frontier next to Egypt. For perhaps at that time the frontier was still nearer Thebes 1 (though to-day it is quite near)—I mean the frontier that runs by Svene and Philae. Of these towns the former belongs to Egypt, but Philae is inhabited alike by Ethiopians and Egyptians. cordingly, when Menelaus came to Thebes, it need not cause surprise if he also came as far as the frontier of the Ethiopians or even farther, especially since he was enjoying the hospitality of the king of Thebes.² And it is in the same sense that Odysseus says he "came to" the country of the Cyclopes, although he did not get any further away from the sea than the cave; for he says that the cave lay "on the edge" s of the country, I believe; and again in referring to the country of Aeolus, to the Laestrygonians and the rest—wherever, I say, he so much as came to anchor, he says he "came to" the country. It is in this sense, therefore, that Menelaus "came to" 4 Ethiopia and in this sense to Libya, too, namely, that he "touched at" certain points; and it is from his having touched there that the harbour at Ardanis above Paraetonium 5 is called "Menelaus."

33. Now if Homer, in speaking of the Phoenicians, mentions Sidonians also, who occupy the Phoenician metropolis, he is but employing a familiar figure of speech, as when he says: "Now Zeus, when he had brought the Trojans and Hector to the ships"; and,

¹ See 17. 1. 46. ² Od. 4. 126. ³ Od. 9. 182. ⁴ Od. 4. 84. ⁵ Now, Baretoun.

καὶ

οὐ γὰρ ἔτ' Οἰνῆος μεγαλήτορος υίϵες ἦσαν, οὐδ' ἄρ' ἔτ' αὐτὸς ἔην, θάνε δὲ ξανθὸς Μελέαγρος: (Il. 2. 641)

καὶ "Ίδην δ' ἵκανεν" καὶ "Γάργαρον·" ($\it Π.8.47$) καὶ "οὶ δ' Εὔβοιαν ἔχον" καὶ "Χαλκίδα τ' Εἰρέτριάν τε·" ($\it Il.~2.~536$).

καὶ Σαπφώ·

ή σε Κύπρος ή Πάφος ή πάνορμος.1

καίτοι καὶ ἄλλο τι ἦν τὸ ποιῆσαν, καίπερ ἤδη μνησθέντα τῆς Φοινίκης, ἰδίως πάλιν καὶ τὴν Σιδόνα συγκαταλέξαι. πρὸς μὲν γὰρ τὸ τὰ ἐφεξῆς ἔθνη καταλέξαι ἱκανῶς εἶχεν οὕτως εἰπεῖν,

Κύπρου Φοινίκην τε καὶ Αἰγυπτίους ἐπαληθεὶς Αἰθίοπάς θ' ἰκόμην· (Od. 4. 83)

C 41 ἵνα δ' ἐμφήνη καὶ τὴν παρὰ τοῖς Σιδονίοις ἀποδημίαν, καλῶς εἶχεν εἴτ' ἀναλαβεῖν εἴτε καὶ παραλαβεῖν, ἡν ἐπὶ πλέον γενομένην ἐμφαίνει² διὰ τῶν ἐπαίνων τῆς παρ' αὐτοῖς εὐτεχνίας καὶ τοῦ τὴν Ἑλένην προεξενῶσθαι τοῖς ἀνθρώποις μετὰ 'Αλεξάνδρου· διόπερ παρὰ τῷ 'Αλεξάνδρῷ πολλὰ τοιαῦτα ἀποκείμενα λέγει·

> ἔνθ' ἔσαν οἱ πέπλοι παμποίκιλοι, ἔργα γυναικῶν Σιδονίων, ἃς αὐτὸς ᾿Αλέξανδρος θεοειδὴς ἥγαγε Σιδονίηθεν τὴν ὁδόν, ῆν Ἑλένην περ ἀνήγαγε· (Il. 6. 289)

¹ ή πάνορμος, Casaubon, for ἡ Πάνορμος; Corais, Groskurd, following.

"For the sons of great-hearted Oeneus were no more, neither did he still live, and the golden-haired Meleager was dead"; and, "So fared he to Ida" and "to Gargaros"; and, "But they possessed Euboea" and "Chalcis and Eretria"; and likewise Sappho, in the verse: "Either Cyprus or Paphos of the spacious harbour holds thee." And yet there was another reason which induced Homer, although he had already mentioned Phoenicia, to repeat Phoenicia in a special way—that is, to add Sidon to the list. For merely to list the peoples in their proper order it was quite enough to say: "I roamed over Cyprus and Phoenicia and Egypt, and came to Ethiopia." But in order to suggest also the sojourn of Menelaus among the Sidonians, it was proper for Homer to repeat as he did, or even add still more than that; and he suggests that this sojourn was of long duration by his praise of their skill in the arts and of the hospitality formerly extended to Helen and Paris by these same people. That is why he speaks of many Sidonian works of art stored up in the house of Paris—"where were her embroidered robes, the work of Sidonian women, whom godlike Alexandros himself brought from Sidon, that journey wherein he brought back Helen to his home"; and in the

² The reading of the MSS. is: ἀποδημίαν τὴν ἐπὶ πλέον γενομένην ἐμφαίνει διὰ τῶν ἐπαίνων τῆς παρ' αὐτοῖς εὐτυχίας, καλῶς εἰχεν εἴτ' ἀναλαβεῖν εἴτε καὶ παραλαβεῖν εὐτεχνίας καί. As a result of the conjectures of Casaubon and Corais it appears in the editions of Kramer and Dübner as: ἀποδημίαν τὴν ἐπὶ πλέον γενομένην, καλῶς εἰχεν εἴτ' ἀναλαβεῖν εἴτε καὶ παραλαβεῖν ἐμφαίνει [δὲ] διὰ τῶν ἐπαίνων τῆς παρ' αὐτοῖς εὐτυχίας [καὶ] εὐτεχνίας καί. Spengel, Meineke, C. Müller, Cobet, delete εὐτεχνίας [καί], and with this as a basis Madvig reads as given in the text above.

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καὶ παρὰ τῷ Μενελάφ· λέγει γὰρ πρὸς Τηλέμαχον,

δώσω τοι κρητήρα τετυγμένον· ἀργύρεος δὲ ἐστὶν ἄπας, χρυσῷ δ' ἐπὶ χείλεα κεκράανται. ἔργον δ' Ἡφαίστοιο· πόρεν δέ ἑ Φαίδιμος¹ ἤρως Σιδονίων βασιλεύς, ὅθ' ἐὸς δόμος ἀμφεκάλυψε κεῖσέ με νοστήσαντα. (Οd. 4. 615; Οd. 15. 115)

δεῖ δὲ δέξασθαι πρὸς ὑπερβολὴν εἰρημένον τὸ Ἡφαίστου ἔργον, ὡς λέγεται ᾿Αθηνᾶς ἔργα τὰ καλὰ καὶ Χαρίτων καὶ Μουσῶν. ἐπεὶ ὅτι γε οἱ ἄνδρες ἦσαν καλλίτεχνοι, δηλοῖ τὸν κρατῆρα ἐπαινῶν, δν ὁ Εὔνεως ἔδωκεν ἀντὶ Λυκάονος φησὶ γάρ,

κάλλει ἐνίκα πᾶσαν ἐπ' αἶαν πολλόν· ἐπεὶ Σιδόνες πολυδαίδαλοι εὖ ἤσκησαν, Φοίνικες δ' ἄγον ἄνδρες. (Il. 23. 742)

34. Περὶ δὲ τῶν Ἐρεμβῶν πολλὰ μὲν εἴρηται, πιθανώτατοι δ' εἰσὶν οἱ νομίζοντες τοὺς Ἄραβας λέγεσθαι. Ζήνων δ' ὁ ἡμέτερος καὶ γράφει οὕτως·

Αἰθίοπάς θ' ἱκόμην καὶ Σιδονίους "Αραβάς τε. (Od. 4. 84)

την μέν οὖν γραφην οὐκ ἀνάγκη κινεῖν, παλαιὰν οὖσαν· αἰτιᾶσθαι δὲ βέλτιον την τοῦ ὀνόματος μετάπτωσιν, πολλην καὶ ἐπιπολαίαν οὖσαν ἐν πᾶσι τοῖς ἔθνεσιν. ἀμέλει δὲ καὶ ποιοῦσί τινες παραγραμματίζοντες. ἄριστα δ' ἃν δόξειεν εἰπεῖν ὁ Ποσειδώνιος, κἀνταῦθα ἀπὸ τῆς τῶν ἐθνῶν συγγενείας καὶ κοινότητος ἐτυμολογῶν. τὸ γὰρ

1 Φαίδιμος, Sterrett, for φαίδιμος.

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house of Menelaus too, for Menelaus says to "I will give thee a mixing-bowl Telemachus: beautifully wrought; it is all of silver, and the lips thereof are finished with gold, the work of Hephaestus; and the hero Phaedimus, the king of the Sidonians. gave it me, when his house sheltered me on my coming thither." But the expression "the work of Hephaestus" must be regarded as a case of hyperbole. just as beautiful things are spoken of as "works of Athene," or of the Graces, or of the Muses. Homer makes it clear that the Sidonians were makers of beautiful works of art, by the praise he bestows on the bowl which Euneos gave as a ransom for Lycaon: his words are: "In beauty it was far the best in all the earth, for artificers of Sidon wrought it cunningly, and men of the Phoenicians brought it."

34. Much has been said about the Erembians; but those men are most likely to be correct who believe that Homer meant the Arabians. Our Zeno¹ even writes the text accordingly: "And I came to the Ethiopians and Sidonians and Arabians." However, it is not necessary to change the reading, for it is old. It is better to lay the confusion to the change of their name, for such change is frequent and noticeable among all nations, than to change the reading—as in fact some do when they emend by changing certain letters. But it would seem that the view of Poseidonius is best, for here he derives an etymology of the words from the kinship of the peoples and their common characteristics.

¹ See Introduction, page xvi.

τῶν 'Αρμενίων ἔθνος καὶ τὸ τῶν Σύρων καὶ 'Αρά-Βων πολλην δμοφυλίαν εμφαίνει, κατά τε την διάλεκτον και τούς βίους και τούς τῶν σωμάτων χαρακτήρας, καὶ μάλιστα καθὸ πλησιόχωροί εἰσι. δηλοί δ' η Μεσοποταμία έκ των τριών συνεστώσα τούτων έθνων μάλιστα γαρ έν τούτοις ή δμοιότης διαφαίνεται. εί δέ τις παρά τὰ κλίματα γίνεται διαφορά τοις προσβόρροις έπι πλέον πρός τους μεσημβρινούς και τούτοις πρός μέσους τούς Σύρους, άλλ' επικρατεί γε το κοινόν. και οί 'Ασσύριοι δὲ καὶ οἱ 'Αριανοὶ καὶ οἱ 'Αραμμαῖοι² παραπλησίως πως έχουσι καὶ πρὸς τούτους καὶ προς άλληλους. εἰκάζει γε δη καὶ τὰς τῶν ἐθνῶν τούτων κατονομασίας εμφερείς άλλήλαις είναι. τοὺς γὰρ ὑφ' ἡμῶν Σύρους καλουμένους ὑπ' αὐτῶν των Σύρων 'Αριμαίους καὶ 'Αραμμαίους καλεισθαι τούτω δ' ἐοικέναι τοὺς 'Αρμενίους καὶ τοὺς ''Αραβας καὶ 'Ερεμβούς, τάχα τῶν πάλαι 'Ελλήνων ούτω καλούντων τοὺς Αραβας, αμα καὶ τοῦ ετύμου συνεργούντος πρός τούτο. άπὸ γὰρ τού είς την έραν εμβαίνειν τους Ερεμβούς ετυμολογούσιν ούτως οι πολλοί, ους μεταλαβόντες οι υστερον έπὶ τὸ σαφέστερον Τρωγλοδύτας ἐκάλεσαν οὐτοι δέ εἰσιν 'Αράβων οἱ ἐπὶ θάτερον μέρος τοῦ 'Αραβίου κόλπου κεκλιμένοι, τὸ πρὸς Αἰγύπτω καὶ Αίθιοπία. τούτων δ' είκὸς μεμνησθαι τὸν ποιητην και πρός τούτους ἀφιχθαι λέγειν τον Μενέλαον, καθ' δυ τρόπου είρηται καλ πρὸς τοὺς

³ 'Αριμαίουs, Groskurd, for 'Αρμενίουs.

Σόρους, A. Miller, for δρους; A. Vogel approving.
 Several MSS., including A, have και οι 'Αρμένιοι after 'Αριανοί. Groskurd reads 'Αραμαΐοι. For this Sterrett reads 'Αραμμαΐοι, which has MS. authority.

For the nation of the Armenians and that of the Syrians and Arabians betray a close affinity, not only in their language, but in their mode of life and in their bodily build, and particularly wherever they live as close Mesopotamia, which is inhabited by neighbours. these three nations, gives proof of this, for in the case of these nations the similarity is particularly And if, comparing the differences of noticeable. latitude, there does exist a greater difference between the northern and the southern people of Mesopotamia than between these two peoples and the Syrians in the centre, still the common characteristics prevail. And, too, the Assyrians, the Arians, and the Arammaeans display a certain likeness both to those just mentioned and to each other. Indeed, Poseidonius conjectures that the names of these nations also are akin; for, says he, the people whom we call Syrians are by the Syrians themselves called Arimaeans and Arammaeans; and there is a resemblance between this name and those of the Armenians, the Arabians and the Erembians, since perhaps the ancient Greeks gave the name of Erembians to the Arabians, and since the very etymology of the word "Erembian" contributes to this result. Most scholars, indeed, derive the name "Erembian" from eran embainein,1 a name which later peoples changed to "Troglodytes2" for the sake of greater clearness. Troglodytes are that tribe of Arabians who live on the side of the Arabian Gulf next to Egypt and Ethiopia. It was natural for the poet to mention these Erembians and to say that Menelaus "came to" them, in the same sense in which he says that Menelaus "came to" the Ethiopians (for they too

¹ To go into the earth. ² Cave-dwellers.

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Αἰθίοπας· τῆ γὰρ Θηβαίδι καὶ οὖτοι πλησιάζουσιν· ὅμως¹ οὐκ ἐργασίας οὐδὲ χρηματισμοῦ χάριν τούτων ὀνομαζομένων (οὐ πολὺ γὰρ ἢν τοῦτο), ἀλλὰ τοῦ μήκους τῆς ἀποδημίας καὶ τοῦ ἐνδόξου· ἔνδοξον γὰρ τοσοῦτον ἐκτοπίσαι. τοιοῦτον δὲ καὶ τὸ

πολλών ἀνθρώπων ἴδεν ἄστεα, καὶ νόον ἔγνω· (Od.~1.~3)

καὶ τὸ

η γὰρ πολλὰ παθὼν καὶ πόλλ' ἐπαληθεὶς ηγαγόμην. (Od. 4. 81)

'Ησίοδος δ' ἐν Καταλόγφ φησὶ

καὶ κούρην 'Αράβοιο, τὸν Έρμάων ἀκάκητα γείνατο καὶ Θρονίη, κούρη Βήλοιο ἄνακτος.

fr. 23 (45)

οὕτω δὲ καὶ Στησίχορος λέγει. εἰκάζειν οὖν ἐστιν, ὅτι ἀπὸ τούτου καὶ ἡ χώρα ᾿Αραβία ἤδη τότε ἀνομάζετο· κατὰ δὲ τοὺς ἤρωας τυχὸν ἴσως οὕπω.

35. Οἱ δὲ πλάττοντες Ἐρεμβοὺς ἴδιόν τι ἔθνος Αἰθιοπικὸν καὶ ἄλλο Κηφήνων καὶ τρίτον Πυγμαίων καὶ ἄλλα μυρία ἦττον ἃν πιστεύοιντο, πρὸς τῷ μὴ ἀξιοπίστῷ καὶ σύγχυσίν τινα ἐμφαίνοντες τοῦ μυθικοῦ καὶ ἱστορικοῦ σχήματος. ὅμοιοι δ' εἰσὶ τούτοις καὶ οἱ Σιδονίους ἐν τῆ κατὰ Πέρσας θαλάττη διηγούμενοι, ἡ ἄλλοθί που τοῦ ἀκεανοῦ, καὶ τὴν τοῦ Μενελάου πλάνην ἐξωκεανίζοντες· ὁμοίως δὲ καὶ τοὺς Φοίνικας. τῆς δ' ἀπιστίας αἴτιον οὐκ ἐλάχιστόν ἐστι τὸ ἐναντιοῦσθαι ἀλλήλοις τοὺς λέγοντας· οἱ μὲν γὰρ καὶ

¹ δμωs, Corais, for δμοίωs.

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are near the territory of Thebes); however, they were mentioned not on account of their handicraft nor yet on account of the profit Menelaus made among them (for that could not amount to much), but on account of the length of his sojourn among them and the fame of having visited them; for it was a famous thing to have travelled so far abroad. This is the meaning of: "Many were the men whose towns he saw and whose mind he learnt"; and of: "Yea, and after many woes and wanderings manifold, I brought [my wealth home in ships]." Hesiod in his Catalogue speaks of "the daughter of Arabus, the son of guileless Hermaon 1 and of Thronia the daughter of king Belus." And Stesichorus says the same thing. Therefore, we may conjecture that at the time of Hesiod and Stesichorus the country was already called Arabia from this "Arabus," although it may be that it was not vet so called in the times of the heroes.

35. Those scholars who invent the explanation that the Erembians are some particular Ethiopian tribe, or, again, a tribe of Cephenians, or thirdly, a tribe of Pygmies—or a host of other tribes—are less deserving of credence, since in addition to the incredibility of their theories they betray a tendency to confound myth and history. Like them are the writers who tell of Sidonians on the Persian Gulf, or somewhere else on Oceanus, and who place the wanderings of Menelaus, and likewise place the Phoenicians, out in Oceanus. And not the least reason for not believing them is the fact that they contradict one another. For some of them say that

τούς Σιδονίους τούς καθ' ήμας αποίκους είναι των έν τῷ ἀκεανῷ φασι, προστιθέντες καὶ διὰ τί Φοίνικες εκαλούντο, ὅτι καὶ ἡ θάλαττα ερυθρά. οί δ' ἐκείνους τούτων. εἰσὶ δ' οὶ καὶ τὴν Αἰθιο-C 43 πίαν είς την καθ' ήμας Φοινίκην μετάγουσι, καὶ τὰ περὶ τὴν ᾿Ανδρομέδαν ἐν Ἰόπη συμβηναί φασιν' οὐ δήπου κατ' ἄγνοιαν τοπικὴν καὶ τούτων λεγομένων, άλλ' έν μύθου μᾶλλον σχήματι καθάπερ καὶ τῶν παρ' Ἡσιόδω καὶ τοῖς ἄλλοις ἃ προφέρει ὁ ᾿Απολλόδωρος, οὐδ' ¹ δν τρόπον παρατίθησι τοις 'Ομήρου ταυτα είδώς. τὰ μὲν γὰρ 'Ομήρου, τὰ περί τὸν Πόντον καὶ τὴν Αίγυπτον, παρατίθησιν άγνοιαν αιτιώμενος, ώς λέγειν μεν τὰ ὄντα βουλομένου, μὴ λέγοντος δὲ τὰ ὄντα, άλλὰ τὰ μὴ ὄντα ὡς ὄντα κατ' ἄγνοιαν. Ἡσιόδου δ' οὐκ ἄν τις αἰτιάσαιτο ἄγνοιαν, Ἡμίκυνας λέγοντος καὶ Μακροκεφάλους καὶ Πυγμαίους. οὐδὲ γὰρ αὐτοῦ ὑμήρου ταῦτα μυθεύοντος, ὧν είσι καὶ οὖτοι οἱ Πυγμαῖοι, οὐδ' ᾿Αλκμᾶνος Στεγανόποδας ἱστοροῦντος, οὐδ' ᾿Αισχύλου Κυνοκεφάλους και Στερνοφθάλμους και Μονομμάτους. όπου γε οὐδὲ τοις πεζη συγγράφουσιν ἐν ἱστορίας σχήματι προσέχομεν περί πολλών, κάν μη έξομολογώνται την μυθογραφίαν. φαίνεται γάρ εύθύς, ότι μύθους παραπλέκουσιν έκόντες, οὐκ

¹ οὐδ', Corais, for οὔθ'; Meineke following.

¹ Phoen means "red."

² For example, by Sophocles or Euripides.

³ These quotations are from works now lost, though Aeschylus refers to certain one-eyed men in *Prometheus* 804 also.

even the Sidonians who are our neighbours are colonists from the Sidonians on Oceanus, and they actually add the reason why our Sidonians are called Phoenicians, namely, because the colour of the Persian Gulf is "red"; but others hold that the Sidonians on Oceanus are colonists from our Phoenicia. And there are some who transfer Ethiopia also to our Phoenicia, and who say that the adventure of Andromeda took place in Joppa, though the story is surely not told in ignorance of its local setting 2 but rather in the guise of myth; and the same is true of the stories that Apollodorus cites from Hesiod and the other poets without even realising in what way he is comparing them with the stories in Homer. For he compares what Homer says about the Pontus and Egypt and charges him with ignorance, on the ground that, though he wanted to tell the truth, he did not do so, but in his ignorance stated as true what was not true. Yet no one could charge Hesiod with ignorance when he speaks of "men who are half-dog," of "long-headed men" and of "Pygmies"; no more should one charge Homer with ignorance when he tells these mythical stories of his, one of which is that of these very Pygmies; nor Alcman when he tells about "web-footed men"; nor Aeschylus when he speaks of "dog-headed men," or of "men with eyes in their breasts," or of "one-eyed men"; since, at all events, we do not pay much attention to prose writers, either, when they compose stories on many subjects in the guise of history, even if they do not expressly acknowledge that they are dealing in myths. For it is self-evident that they are weaving in myths intentionally, not through

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άγνοία τῶν ὅντων, ἀλλὰ πλάσει τῶν ἀδυνάτων τερατείας καὶ τέρψεως χάριν· δοκοῦσι δὲ κατ' ἄγνοιαν, ὅτι μάλιστα καὶ πιθανῶς τὰ τοιαῦτα μυθεύρυσι περὶ τῶν ἀδήλων καὶ τῶν ἀγνοουμένων. Θεόπομπος δὲ ἐξομολογεῖται φήσας ὅτι καὶ μύθους ἐν ταῖς ἱστορίαις ἐρεῖ, κρεῖττον ἡ ὡς 'Ηρόδοτος καὶ Κτησίας καὶ 'Ελλάνικος καὶ οἱ τὰ 'Ινδικὰ συγγράψαντες.

36. Περὶ δὲ τῶν τοῦ ἀκεανοῦ παθῶν εἴρηται μὲν ἐν μύθου σχήματι· καὶ γὰρ τούτου στοχά-ζεσθαι δεῖ τὸν ποιητήν. ἀπὸ γὰρ τῶν ἀμπώτεων καὶ τῶν πλημμυρίδων ἡ Χάρυβδις αὐτῷ μεμύθευται, οὐδ' αὐτὴ παντάπασιν 'Ομήρου πλάσμα οὖσα, ἀλλ' ἀπὸ τῶν ἱστορουμένων περὶ τὸν Σικελικὸν πορθμὸν διεσκευασμένη. εἰ δὲ δὶς τῆς παλιρροίας γινομένης καθ' ἐκάστην ἡμέραν καὶ νύκτα ἐκεῖνος τρὶς εἴρηκε,

τρὶς μὲν γάρ τ' ἀνίησιν ἐπ' ἤματι, τρὶς δ' ἀναροιβδεῖ, (Od. 12. 105)

λέγοιτ' αν καὶ οὕτως· οὐ γὰρ κατ' ἄγνοιαν τῆς ἱστορίας ὑποληπτέον λέγεσθαι τοῦτο, ἀλλὰ τραγωδίας χάριν καὶ φόβου, ον ἡ Κίρκη πολὸν τοῖς λόγοις προστίθησιν ἀποτροπῆς χάριν, ὥστε καὶ τὸ ψεῦδος παραμίγνυσθαι. ἐν αὐτοῖς γοῦν τοῖς ἔπεσι τούτοις εἴρηκε μὲν οὕτως ἡ Κίρκη·

τρὶς μὲν γάρ τ' ἀνίησιν ἐπ' ἤματι, τρὶς δ' ἀναροιβδεί

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ignorance of the facts, but through an intentional invention of the impossible, to gratify the taste for the marvellous and the entertaining. But they give the impression of doing this through ignorance, because by preference and with an air of plausibility they tell such tales about the unfamiliar and the unknown. Theopompus expressly acknowledges the practice when he says that he intends to narrate myths too in his History—a better way than that of Herodotus, Ctesias, Hellanicus, and the authors of the Histories of India.¹

36. What Homer says about the behaviour of Oceanus is set forth in the guise of a myth (this too is a thing the poet must aim at); for he borrowed the myth of Charybdis from the ebb and flow of the tides; though even Charvbdis herself is not wholly an invention of Homer, for she was dressed up by him in accordance with what had been told him about the Strait of Sicily. And suppose that by the words, "For thrice a day she spouts it forth, and thrice a day she sucks it down," Homer does affirm that the refluent tide comes in three times within the course of each day and night (although it comes in but twice), he might be permitted to express it in this way; for we must not suppose that he used these words in ignorance of the facts, but for the sake of the tragic effect and of the emotion of fear upon which Circe plays largely in what she says to Odysseus in order to terrify him; and for that reason she mingled the false with the true. At any rate, in these very lines Circe has said: "For thrice a day she spouts it forth and thrice a day she sucks it

¹ Deïmachus, Megasthenes, Onesicritus, Nearchus and others. See 2. 1. 9.

δεινόν· μη σύ γε κείθι τύχοις, ὅτε ροιβδήσειε· οὐ γάρ κεν ρύσαιτό σ' ὑπὲκ κακοῦ οὐδ' Ἐνοσίχθων. (Od. 12. 105)

καὶ μὴν παρέτυχέ τε τῆ ἀναρροιβδήσει ὁ Ὀδυσσεὺς καὶ οὐκ ἀπώλετο, ὧς φησιν αὐτός·

C 44 ή μεν ἀνερροίβδησε θαλάσσης άλμυρον ὕδωρ·
 αὐτὰρ ἐγώ, ποτὶ μακρον ἐρινεον ὑψόσ' ἀερθείς,
 τῷ προσφὸς ἐχόμην, ὡς νυκτερίς. (Od. 12. 431)

είτα περιμείνας τὰ ναυάγια καὶ λαβόμενος πάλιν αὐτῶν σώζεται, ὥστ' ἐψεύσατο ἡ Κίρκη. ὡς οὖν τοῦτο, κἀκεῖνο τὸ "τρὶς μὲν γάρ τ' ἀνίησιν ἐπ' ἤματι" ἀντὶ τοῦ δίς, ἄμα καὶ τῆς ὑπερβολῆς τῆς τοιαύτης συνήθους πᾶσιν οὔσης, τρισμακαρίους καὶ τρισαθλίους λεγόντων καὶ ὁ ποιητής.

τρισμάκαρες Δαναοί, (Od. 5. 306)

καὶ

ἀσπασίη τρίλλιστος, (Π. 8. 488)

καὶ

τριχθά τε καὶ τετραχθά. (Il. 3. 363)

ἴσως δ' ἄν τις καὶ ἀπὸ τῆς ὥρας τεκμήραιτο, ὅτι ὑπαινίττεταί πως τὸ ἀληθές· μᾶλλον γὰρ ἐφαρμόττει τῷ δὶς γενέσθαι τὴν παλίρροιαν κατὰ τὸν συνάμφω χρόνον, τὸν ἐξ ἡμέρας καὶ νυκτός, ἡ τῷ τρίς, τὸ ² τοσοῦτον χρόνον μεῖναι τὰ ναυάγια ὑποβρύχια, ὀψὲ δὲ ἀναβληθῆναι ποθοῦντι καὶ συνεχῶς προσισχομένω τοῖς κλάδοις·

νωλεμέως δ' εχόμην, ὄφρ' εξεμέσειεν οπίσσω ίστον καὶ τρόπιν αὖτις, ἐελδομένφ δέ μοι ἦλθον³ ὄψ'· ἦμος δ' ⁴ ἐπὶ δόρπον ἀνὴρ ἀγορῆθεν ἀνέστη,

¹ έφαρμόττει, Corais following kno, for έφαρμόττοι.

down-a terrible sight! Never mayest thou be there when she sucks the water, for none might save thee from thy bane, not even the Earth-Shaker." Yet Odvsseus later on was present when she "sucked it down," and he did not perish; as he himself says: "Now she had sucked down the salt sea-water, but I was swung up on high to a tall fig-tree, whereto I clung like a bat." Then waiting for the pieces of wreckage and laving hold of them again, he saved himself on them; and so Circe lied. And as she lied in this statement, so she lied in that other statement, "for thrice a day she spouts it forth," instead of "twice a day," although it is true, at the same time, that this kind of hyperbole is familiar to everybody—as, for instance, when we say "thrice-blessed" and "thrice-wretched." The poet himself says: "Thrice-blessed those Danaans": and again: "Welcome, thrice-prayed for"; and yet again: "Into three, yea, into four pieces." Perhaps one might infer also from the time involved that Homer is, in a way, hinting at the truth; for the fact that the pieces of wreckage remained so long engulfed and were only tardily cast up for Odysseus, who was longing for them and constantly clinging to the limbs of the tree, better suits the assumption that the refluent tide came in twice, rather than thrice, during the twofold period, consisting of a day and a night: "Steadfastly I clung," he says, "till she should vomit forth mast and keel again; and late they came to my desire. At the hour when a man rises up from the assembly and goes to supper,

³ ħλθον, Sterrett, for ħλθεν. ⁴ δ', Sterrett, for τ'.

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 $^{^2}$ τδ before τοσοῦτον, Corais inserts, following g; Madvig independently.

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κρίνων νείκεα πολλά δικαζομένων αἰζηῶν, καὶ τότε δή μοι δοῦρα Χαρύβδιος ἐξεφαάνθη. (Od. 12, 437)

πάντα γὰρ ταῦτα χρόνου τινὸς ἔμφασιν ἀξιολόγου δίδωσι, καὶ μάλιστα τὸ τὴν ἑσπέραν ἐπιτεῖναι, μὴ κοινῶς εἰπόντα, ἡνίκα ὁ δικαστὴς ἀνίσταται, ἀλλ' ἡνίκα κρίνων νείκεα πολλά, ὥστε βραδῦναι πλέον τι. καὶ ἄλλως δὲ οὐ πιθανὴν ὰν ὑπέτεινε τῷ ναυαγῷ τὴν ἀπαλλαγήν, εἰ, πρὶν ἀποσπασθῆναι πολύ,¹ αὐτίκα εἰς τοὐπίσω παλίρρους μετέπιπτεν.

37. 'Απολλόδωρος δὲ ἐπιτιμᾳ Καλλιμάχῳ, συνηγορῶν τοῖς περὶ τὸν 'Ερατοσθένη, διότι, καίπερ γραμματικὸς ἄν, παρὰ τὴν 'Ομηρικὴν ὑπόθεσιν καὶ τὸν ἐξωκεανισμὸν τῶν τόπων, περὶ οῦς τὴν πλάνην φράζει, Γαῦδον καὶ Κόρκυραν ὀνομάζει. ἀλλ' εἰ μὲν μηδαμοῦ γέγονεν ἡ πλάνη, ἀλλ' ὅλον πλάσμα ἐστὶν 'Ομήρου τοῦτο, ὀρθὴ ἡ ἐπιτίμησις· ἤ, εἰ γέγονε μέν, περὶ ἄλλους δὲ τόπους, ἔδει² λέγειν εὐθὺς καὶ περὶ τίνας, ἐπανορθούμενον ἄμα τὴν ἄγνοιαν. μήτε δὲ ὅλου πλάσματος εἶναι πιθανῶς λεγομένου, καθάπερ ἐπεδείκνυμεν, μήτ' ἄλλων τόπων κατὰ πίστιν μείζω δεικνυμένων, ἀπολύοιτ' ἃν τῆς αἰτίας ὁ Καλλίμαχος.

καί, Corais deletes, before αὐτίκα; Groskurd, Forbiger, following.
 έδει, Corais, for δεῖ.

¹ That is, three times a day.

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the arbiter of many quarrels of the young men that plead their cases, at that hour the timbers came forth to view from out Charybdis." All this gives the impression of a considerable lapse of time, and particularly the fact that the poet prolongs the time to the evening, for he does not merely say in general terms, "at the hour when the judge rises up," but he adds "arbiter of many quarrels"; hence he had been detained somewhat longer than usual. And another consideration: the means of escape which the poet offers the shipwrecked Odysseus would not be plausible, if each time, before he was carried far away by the tide, he was immediately thrown back by the refluent tide.¹

37. Apollodorus, agreeing with Eratosthenes and his school, censures Callimachus, because, though a scholar, Callimachus names Gaudos 2 and Corcyra as scenes of the wanderings of Odysseus, in defiance of Homer's fundamental plan, which is to transfer to Oceanus the regions in which he describes the wanderings as taking place. But if the wanderings never took place anywhere, and if this is wholly a fiction of Homer's, then Apollodorus' censure is just. Or if the wanderings did take place, but in other regions, then Apollodorus should have said so at the outset and should have told in what regions they took place, thus at once correcting the ignorant But since the story cannot view of Callimachus. with plausibility be called wholly a fiction, as I have shown above,3 and since no other places are pointed out that have a greater claim to our credence, Callimachus might be absolved from censure.

² The island of Gozo, south of Sicily, which Callimachus makes the Isle of Calypso.

³ 1. 2. 9 ff.

38. Οὐδ' ὁ Σκήψιος δὲ Δημήτριος εὖ, ἀλλὰ καὶ τῷ ᾿Απολλοδώρω τῶν άμαρτιῶν ἐνίων αἴτιος έκεινος κατέστη. προς γάρ Νεάνθη τον Κυζικηνον φιλοτιμοτέρως αντιλέγων, είπόντα ὅτι οἱ ᾿Αργοναθται πλέοντες είς Φασιν τον υφ' 'Ομήρου καί τῶν ἄλλων ὁμολογούμενον πλοῦν, ίδρύσαντο τὰ της Ίδαίας μητρός ίερα περί Κύζικον, άρχήν φησι μηδ' είδεναι την είς Φασιν αποδημίαν τοῦ 'Ίασονος "Ομηρον. τοῦτο δ' οὐ μόνον τοῖς ὑφ' 'Ομήρου λεγομένοις μάχεται, ἀλλὰ καὶ τοῖς ὑπ' αὐτοῦ. Φησὶ γὰρ τὸν ᾿Αχιλλέα Λέσβον μὲν πορθήσαι καὶ ἄλλα χωρία, Λήμνου δ' ἀποσχέσθαι καὶ τῶν πλησίον νήσων διὰ τὴν πρὸς Ἰάσονα καὶ τον υίον Εύνεων συγγένειαν τον 1 τότε την νησον κατέγοντα. πως ουν ο ποιητής τουτο μεν ήδει, διότι συγγενείς ή όμοεθνείς ή γείτονες ή όπωσοῦν οἰκεῖοι ὑπῆρχον ὅ τε ᾿Αχιλλεὺς καὶ ὁ Ἰάσων (ὅπερ οὐδαμόθεν ἄλλοθεν, ἀλλ' ἐκ τοῦ Θετταλοὺς άμφοτέρους είναι συνέβαινε, και τὸν μὲν Ἰώλκιον, τὸν δ' ἐκ τῆς Φθιώτιδος ᾿Αχαιίδος ὑπάρχειν), τοῦτο δ' ἠγνόει, πόθεν ἐπῆλθε² τῷ Ἰάσονι, Θετταλφ και Ἰωλκίφ υπάρχοντι, εν μεν τή πατρίδι μηδεμίαν καταλιπεῖν διαδογήν, Λήμνου δὲ καταστήσαι κύριον τὸν υίον; καὶ Πελίαν μὲν ήδει καὶ τὰς Πελιάδας καὶ τὴν Αλκηστιν 3 τὴν άρίστην αὐτῶν, καὶ τὸν υίὸν αὐτῆς

Εὔμηλον, τὸν ὑπ' ᾿Αδμήτφ τέκε δῖα γυναικῶν Ἦλκηστις, Πελίαο θυγατρῶν εἶδος ἀρίστη·
(Il. 2. 714)

1 τόν, H. Kallenberg inserts, before τότε.

 ² ἐπῆλθε, Cobet, for ἦλθε; Bernadakis, A. Vogel, approving.
 ³ την ᾿Αλκηστιν, Kramer inserts.

38. Nor is Demetrius of Scepsis right; on the contrary, he is the cause of some of the mistakes of For in his excessive eagerness to refute the statement of Neanthes of Cyzicus that the Argonauts erected the sanctuary of the Idaean Mother 1 in the neighbourhood of Cyzicus when they were sailing to Phasis 2 on the voyage which is admitted by Homer and other writers, Demetrius says that Homer knew absolutely nothing about the voyage of Jason to Phasis. Now this is opposed not only to Homer's statements but to the statements made by Demetrius himself. For Demetrius says that Achilles sacked Lesbos and other places, but spared Lemnos and the islands adjacent thereto on account of his kinship with Jason and with Jason's son Euneos who at that time possessed the island of Now how comes it that the poet knew this, namely, that Achilles and Jason were kinsmen or fellow-countrymen, or neighbours, or friends in some way or other (a relationship that could not be due to any other fact than that both men were Thessalians, and that one was born in Iolcus and the other in Achaean Phthiotis), and yet did not know what had put it into the head of Jason, a Thessalian and an Iolcan, to leave no successor on the throne of of his native country, but to establish his son as lord of Lemnos? And did he know about Pelias and the daughters of Pelias, and about Alcestis, the noblest of them, and about her son "Eumelus, whom Alcestis, fair among women, bare to Admetus. Alcestis that was most beauteous to look upon of the daughters of Pelias," and yet, as regards the

¹ Cybele. See 10. 3. 12-13.

² See 11. 2. 16-18.

τῶν δὲ περὶ τὸν Ἰάσονα συμβάντων καὶ τὴν 'Αργώ καὶ τοὺς 'Αργοναύτας, τῶν μὲν ὁμολογουμένων παρά πασιν ανήκοος ήν, έν δὲ τῷ ωκεανῷ τὸν παρ' Αἰήτου πλοῦν ἔπλαττεν, ἀρχὴν μηδεμίαν έξ ίστορίας λαβών:

39. Ω_S μέν γὰρ ἄπαντες λέγουσιν, ὅ τε $\frac{1}{2}$ ἐξ ἀργης πλούς ό 2 ἐπὶ Φᾶσιν ἔχει πιθανόν τι, τοῦ Πελίου στείλαντος, καὶ ή ἐπάνοδος καὶ ή ἐν τῶ παράπλω υήσων όσηδη επικράτεια και νη Δία ή επι πλέον γενηθείσα πλάνη, καθάπερ καὶ τῷ 'Οδυσσεί καὶ τῶ Μενελάω, ἐκ τῶν ἔτι νῦν δεικνυμένων καὶ πεπιστευμένων, έτι δέ 3 έκ της Όμηρου Φωνης. ή τε γάρ Αλα δείκνυται περί Φάσιν πόλις καί ο Αλήτης πεπίστευται βασιλεύσαι της Κολγίδος. καὶ ἔστι τοῖς ἐκεῖ τοῦτ' ἐπιχώριον τοὔνομα. ή τε Μήδεια φαρμακὶς ἱστορεῖται, καὶ ὁ πλοῦτος τῆς έκει χώρας έκ των χρυσείων και άργυρείων και σιδηρείων και χαλκείων 4 δικαίαν τινα ύπαγορεύει πρόφασιν της στρατείας, καθ' ην και Φρίξος πρότερον έστειλε τον πλούν τούτον και έστιν ύπομνήματα της άμφοιν στρατείας, τό τε Φρίξειον τὸ ἐν τοῖς μεθορίοις τῆς τε Κολχίδος καὶ τῆς 'Ιβηρίας, καὶ τὰ 'Ιασόνεια, ἃ πολλαγοῦ καὶ τῆς 'Αρμενίας καὶ τῆς Μηδίας καὶ τῶν πλησιογώρων C 46 αὐταῖς τόπων δείκνυται. καὶ μὴν καὶ περὶ

Madvig approving.

² δ, H. Kallenberg inserts, before ἐπὶ Φᾶσιν.

8 έτι δέ, Madvig, for ἐστίν.

¹ δ τε έξ άρχης πλούς, Corais, for δτι έξ άρχης δ πλούς;

^{*} σιδηρείων και χαλκείων δικαίαν, A. Miller, for σιδηρείων και δικαίαν; A. Vogel approving.

adventures of Jason and the Argo and the Argonauts, had never heard of the things that are agreed upon by everybody, but invented the voyage away from Aeëtes' country and placed it on Oceanus, with-

out any foundation for his story in history?

39. For, as all admit, the original voyage to Phasis ordered by Pelias, the return voyage, and the occupation, however considerable, of islands on the coasting-voyage thither, contain an element of plausibility, as do also, I am sure, the wanderings which carried Jason still further—just as there is an element of plausibility in the wanderings of both Odvsseus and Menelaus—as evidenced by things still to this day pointed out and believed in, and by the words of Homer as well. example, the city of Aea is still shown on the Phasis, and Aeëtes is believed to have ruled over Colchis, and the name Aeëtes 1 is still locally current among the people of that region. Again, Medea the sorceress is a historical person; and the wealth of the regions about Colchis, which is derived from the mines of gold, silver, iron, and copper, suggests a reasonable motive for the expedition, a motive which induced Phrixus also to undertake this voyage at an earlier date. Moreover, memorials of both expeditions still exist: the sanctuary of Phrixus,2 situated on the confines of Colchis and Iberia, and the sanctuaries of Jason, which are pointed out in many places in Armenia and Media and in the countries adjacent thereto. More than that, it is

See Xenophon, Anab. 5. 6. 37.

On this sanctuary and Iberia (east of Colchis) see 11. 2. 18.

¹ Aeëtes was a patronym of a dynasty of Colchian kings.

Σινώπην καὶ τὴν ταύτη ¹ παραλίαν καὶ τὴν Προποντίδα καὶ τὸν Ἑλλήσποντον μέχρι τῶν κατὰ τὴν Λῆμνον τόπων λέγεται πολλὰ τεκμήρια τῆς τε Ἰάσονος στρατείας καὶ τῆς Φρίξου τῆς δ' Ἰάσονος καὶ τῶν ἐπιδιωξάντων Κόλχων καὶ μέχρι τῆς Κρήτης καὶ τῆς Ἰταλίας καὶ τοῦ ᾿Αδρίου, ὧν ἔνια καὶ ὁ Καλλίμαχος ἐπισημαίνεται, τοτὲ μὲν

Αἰγλήτην 'Ανάφην τε Λακωνίδι γείτονα Θήρη λέγων ἐν ἐλεγείᾳ, ἦς ἡ ἀρχή·²

'Αρχμενος, ως ήρωες ἀπ' Αἰήταο Κυταίου, αὐτις ες ἀρχαίην επλεον Αίμονίην

τοτὲ δὲ περὶ τῶν Κόλχων,

οί μὲν ἐπ' Ἰλλυριοῖο³ πόρου σχάσσαντες ἐρετμὰ λᾶα πάρα ξανθῆς Ἡρμονίης τάφιον ⁴

ἄστυρον ἐκτίσσαντο, τό κεν⁵ Φυγάδων τις ἐνίσποι Γραικός, ἀτὰρ κείνων γλῶσσ' ὀνόμηνε Πόλας.

τινες δε και τον Ίστρον αναπλευσαί φασι μέχρι πολλου τους περί τον Ίασονα, οι δε και μέχρι του Άδριου· οι μεν κατά άγνοιαν των τόπων, οι δε και ποταμον Ίστρον εκ του μεγάλου Ίστρου την αρχην έχοντα εκβάλλειν εις τον Άδριαν φασί· τάλλα δε ουκ απιθάνως ουδ' απίστως λέγοντες.

40. Τοιαύταις δή τισιν ἀφορμαῖς ὁ ποιητὴς χρησάμενος τὰ μὲν ὁμολογεῖ τοῖς ἱστορουμένοις,

'Ιλλυριοΐο, Meineke, for 'Ιλλυρικοΐο; C. Müller approving.

 ¹ ταύτη, Meineke (Vind. 4), for ταύτης; A. Vogel approving.
 2 ἐν ἐλεγείᾳ, ἡς ἡ ἀρχή·, Meineke (Vind. 5) inserts, after λέγων; Forbiger, C. Müller, Tardieu, following.

 ⁴ τάφιον, Bentley, for ὅφιος; Meineke following.
 ⁵ τό κεν, Corais, for τὸ μέν; Meineke following.
 ⁶ τἄλλα, Groskurd, for τά; Forbiger approving.

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said that there are many evidences of the expeditions of Jason and of Phrixus in the neighbourhood of Sinope and the adjacent sea-board and also about the Propontis and the Hellespont as far as the regions about Lemnos. And there are traces of the expedition of Jason, and of the Colchians who pursued him, as far as Crete and Italy and the Adriatic Sea, some of which Callimachus notes when he says, "Aegletes 1 and Anaphe hard by Laconian Thera.2" in an elegy whose opening words are, "At the outset I shall sing how the heroes sailed back from the kingdom of Aeëtes of Cytaea to ancient Haemonia.8" In another place Callimachus speaks about the Colchians, who "stayed their oars in the Sea of Illyria beside the tomb-stone of blonde Harmonia, and there built a little city, which a Greek would call 'the city of the exiles,' but which their language has named Polae.4" Some say that Jason and his companions even sailed up the Ister 5 a considerable distance, while others say that he ascended as far as the Adriatic Sea: the former make their statement in ignorance of these regions, whereas the latter make the assertion that a river Ister branches off from the great Ister and empties into the Adriatic Sea; but apart from this, what they say is neither improbable nor incredible.

40. Accordingly, it is by availing himself of some such basis of fact that Homer tells his story, agreeing in some respects with matters of history,

^{1 &}quot;The radiant one," epithet of Apollo. To save the Argonauts he caused the island of Anaphe, now Nanfi, to rise from the sea. The Argonauts erected a temple there to "Apollo Aegletes." 2 In Cyrene. See 8. 3. 19.

προσμυθεύει δὲ τούτοις, ἔθος τι φυλάττων καὶ κοινὸν καὶ ἴδιον. ὁμολογεῖ μέν, ὅταν τὸν ¹ Αἰήτην ὀνομάζη, καὶ τὸν Ἰάσονα καὶ τὴν ᾿Αργὰ λέγη, καὶ παρὰ τὴν Αἰαν ² τὴν Αἰαίην πλάττη, καὶ τὸν Εὔνεων ἐν Λήμνφ καθιδρύη, καὶ ποιῆ τῷ ᾿Αχιλλεῖ φίλην τὴν νῆσον, καὶ παρὰ τὴν Μήδειαν τὴν Κίρκην φαρμακίδα ποιῆ

αὐτοκασιγνήτην ὀλοόφρονος Αἰήταο·

(Od. 10. 137)

προσμυθοποιεί δὲ τὸν ἐξωκεανισμὸν τὸν κατὰ τὴν πλάνην συμβάντα τὴν ἀπ' ἐκείνου τοῦ πλοῦ. ἐπεὶ κἀκείνο, ὑποκειμένων μὲν τούτων, εὖ λέγεται,

'Αργώ πασιμέλουσα,

(Od. 12, 70)

ώς ἐν γνωρίμοις τόποις καὶ εὐανδροῦσι τῆς ναυστολίας γενομένης· εἰ δ', ὅσπερ ὁ Σκήψιός φησι παραλαβών μάρτυρα Μίμνερμον, δς ἐν τῷ ἀκεανῷ ποιήσας τὴν οἴκησιν τοῦ Αἰήτου πρὸς ταῖς ἀνατολαῖς ἐκτὸς πεμφθῆναί φησιν ὑπὸ τοῦ Πελίου τὸν Ἰάσονα καὶ κομίσαι τὸ δέρος, οὕτ' ἀν ἡ ἐπὶ τὸ δέρος ἐκεῖσε πομπὴ πιθανῶς λέγοιτο εἰς ἀγνῶτας καὶ ἀφανεῖς τόπους οὖσα,³ οὕθ' ὁ δι' ἐρήμων καὶ ἀοίκων καὶ καθ' ἡμᾶς τοσοῦτον ἐκτετοπισμένων πλοῦς οὕτ' ἔνδοξος οὔτε πασιμέλων.

C 47 (οὐδέ κοτ' ἄν μέγα κῶας ἀνήγαγεν αὐτὸς Ἰήσων ἐξ Αἴης, τελέσας ἀλγινόεσσαν ὁδόν,

¹ τόν, Corais inserts, before Αἰήτην.

 ² την Alau, Corais inserts before την Αιαίην (or τον Αιητην);
 Kramer, Forbiger, Meineke, following.
 ³ οδσα, B. Niese inserts, after τόπους.

¹⁷⁰

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but adding to them an element of myth, thus adhering to a custom that is not only his own but one common to poets. He agrees with history when he uses the name of "Aeëtes," when he tells of Jason and the Argo, when, with "Aea" in mind, he invents "Aeaea," 2 when he establishes Euneos in Lemnos, when he makes the island of Lemnos beloved of Achilles, and when, with Medea in mind, he makes the sorceress Circe "own sister to the baleful Aeëtes." But he adds an element of myth when he transfers to Oceanus the wanderings that follow the voyage to Aeëtes' country. For if the facts above-mentioned be assumed, then the words. "the Argo that is in all men's minds." are also properly used, inasmuch as the expedition is supposed to have taken place in well-known and populous regions. But if the facts were as Demetrius of Scepsis maintains, on the authority of Mimnermus (Mimnermus places the home of Aeëtes in Oceanus, outside the inhabited world in the east, and affirms that Jason was sent thither by Pelias and brought back the fleece), then, in the first place, the expedition thither in quest of the fleece would not sound plausible (since it was directed to unknown and obscure countries), and in the second place, the voyage through regions desolate and uninhabited and so out-of-the-way from our part of the world would be neither famous nor "in all men's minds." Mimnermus says: "Never would Jason himself have brought back the great fleece from Aea, accomplishing his mind-racking journey and fulfilling the

¹ Od. 12. 70.

² Od. 11. 70; 12. 3. Homer's "Aeaea" (home of Circe) was an invention based upon "Aea," which he actually knew. Strabo alludes to the same thing in 1. 2. 10.

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ύβριστή Πελίη τελέων χαλεπηρές ἄεθλον, οὐδ' ὰν ἐπ' ᾿Ωκεανοῦ καλὸν ἵκοντο ῥόον· καλ ὑποβάς.

Αἰήταο πόλιν, τόθι τ' ἀκέος 'Ηελίοιο ἀκτίνες χρυσέφ κείαται ἐν θαλάμφ 'Ωκεανοῦ παρὰ χείλεσ', ἵν' ῷχετο θεῖος Ἰήσων.)¹

III

1. Οὐδὲ τοῦτ' εὖ 'Ερατοσθένης, ὅτι ἀνδρῶν οὐκ ἀξίων μνήμης ἐπὶ πλέον μέμνηται, τὰ μὲν ἔλέγχων, τὰ δὲ πιστεύων καὶ μάρτυσι χρώμενος αὐτοῖς, οἷον Δαμάστη καὶ τοιούτοις ἄλλοις. καὶ γὰρ εἴ τι λέγουσιν ἀληθές, οὐ μάρτυσί γε ἐκείνοις χρηστέον περὶ αὐτοῦ, οὐδὲ πιστευτέον διὰ τοῦτο· ἀλλ' ἐπὶ τῶν ἀξιολόγων ἀνδρῶν μόνων τῷ τοιούτῳ τρόπῳ χρηστέον, οῖ πολλὰ μὲν εἰρήκασιν εὖ, πολλὰ δὲ καὶ παραλελοίπασιν ἡ οὐχ ἱκανῶς ἔξεῦπον, οὐδὲν δ' ἐψευσμένως. ὁ δὲ Δαμάστη χρώμενος μάρτυρι οὐδὲν διαφέρει τοῦ καλοῦντος μάρτυρα τὸν Βεργαῖον ἡ τὸν Μεσσήνιον Εὐήμερον καὶ τοὺς ἄλλους, οῦς αὐτὸς εἴρηκε διαβάλλων τὴν φλυαρίαν. καὶ τούτου δ' ἔνα τῶν λήρων αὐτὸς λέγει, τὸν μὲν

¹ These lines are regarded as a marginal note by Kramer, Meineke, C. Müller.

¹ Since Antiphanes of Berga, in Thrace, was the typical romancer, "Bergaean" became a proverbial epithet for writers of his type. It is not known whether Euhemerus was from Messene in Sicily, or from Messene in the Peloponnesus. He made extensive journeys by order of Cassander, "ing of Macedonia (316-297 B.C.). In his work on "Sacred

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difficult task for insolent Pelias, nor would they have come even to the fair stream of Oceanus"; and further on he says: "To the city of Aeëtes, where the rays of the swift Sun lie in a chamber of gold beside the lips of Oceanus, whither glorious Jason went."

III .

1. Eratosthenes is wrong on this point too, that he makes mention at too great length of men who do not deserve mention, censuring them in some things, while in other things he believes them and uses them as authorities-for instance, Damastes and others of his type. For even if there is an element of truth in what they say, we should not on that account use them as authorities, or believe them, either: on the contrary, we should use in such a way only men of repute-men who have been right on many points, and who, though they have omitted many things, or treated them inadequately, have said nothing with false intent. But to use Damastes as an authority is no whit better than to cite as authorities the "Bergaean"—or rather the Messenian—Euhemerus 1 and the other writers whom Eratosthenes himself cites, in order to ridicule their absurdities. Eratosthenes himself tells us one of the absurd stories of Damastes, who assumes that the

History" he gave a fanciful account of his travels, and, on the basis of various inscriptions which he said he saw, attempted to rationalize the whole system of Greek mythology.

'Αράβιον κόλπον λίμνην ὑπολαμβάνοντος εἶναι, Διότιμον δὲ τὸν Στρομβίχου πρεσβείας 'Αθηναίων ἀφηγούμενον διὰ τοῦ Κύδνου ἀναπλεῦσαι ἐκ τῆς Κιλικίας ἐπὶ τὸν Χοάσπην ποταμόν, δς παρὰ τὰ Σοῦσα ῥεῖ, καὶ ἀφικέσθαι τεσσαρακοσταῖον εἰς Σοῦσα· ταῦτα δ' αὐτῷ διηγήσασθαι αὐτὸν τὸν Διότιμον. εἶτα θαυμάζειν ' εἰ τὸν Εὐφράτην καὶ τὸν Τίγριν ἦν δυνατὸν διακόψαντα τὸν Κύδνον εἰς

τὸν Χοάσπην ἐκβαλεῖν.

2. Ο υ μόνον δε ταῦτ' ἄν τις επισημήναιτο, άλλ' ότι καὶ περὶ τῶν πόντων 2 οὐδὲ καθ' ἐαυτόν πω γνώριμα είναι φήσας 3 τὰ καθ' εκαστα ἀκριβολογούμενα, καὶ κελεύσας ἡμῖν μὴ ῥαδίως τοῖς τυχοῦσι πιστεύειν, καὶ τὰς αἰτίας διὰ μακρών αποδούς, δι' ας οὐδενὶ 4 πιστευτέον μυθολογοῦντι περί των κατά του Πόντου και του 'Αδρίαυ. αὐτὸς ἐπίστευσε τοῖς τυχοῦσι. τοιγάρτοι τὸν μὲν 'Ισσικὸν κόλπον ἐπίστευσεν ἑωθινώτατον τῆς καθ' ήμας θαλάττης σημείον, τοῦ κατα Διοσκουριάδα την εν τω του Πόντου μυχώ σχεδόν τι καλ τρισχιλίοις σταδίοις έωθινωτέρου όντος καὶ κατ' αὐτον ἐκ τοῦ σταδιασμοῦ οὖ φησι τοῦ τε 'Αδρίου και τὰ άρκτικὰ και τὰ ἔσχατα διεξιών οὐδενὸς ἀπέχεται μυθώδους. πεπίστευκε δὲ καὶ περὶ τῶν ἔξω στηλῶν Ἡρακλείων πολλοῖς μυθώδεσι, Κέρνην τε νήσον και άλλους τόπους

² πόντων, Kramer conjectures, for τόπων; C. Müller, Forbiger, Tardieu, following.

φήσας, A. Miller, for φησί; A. Vogel approving.

¹ On θαυμάζειν see H. Berger (Die geog. Frag. des Erat., p. 44) and C. Frick (Bursian's Jahresb. 1880, p. 552).

^{*} οὐδενί, A. Miller, for οὐδέ; and μυθολογούντι, for μεθ' δ λέγει δτι, for which Siebenkees' οδον appears in the editions.

Arabian Gulf is a lake, and that Diotimus, the son of Strombichus, sailed, at the head of an embassy of the Athenians, from Cilicia up the Cydnus River to the Choaspes River, which flows by Susa, and reached Susa on the fortieth day; and Eratosthenes says that Damastes was told all this by Diotimus himself. And then, Eratosthenes adds, Damastes wonders whether it was really possible for the Cydnus River to cut across the Euphrates and the

Tigris and to empty into the Choaspes.

2. Not only might one disapprove of Eratosthenes for telling such a story, but also for this reason: after admitting that the exact details about the seas were not yet known even in his own time, and although he bids us not to be too ready to accept the authority of people at haphazard, and although he gives at length the reasons why we should believe no one who writes mythical tales about the regions along the Euxine and the Adriatic, yet he himself accepted the authority of people at haphazard. example, he believed that the Gulf of Issus is the most easterly point of the Mediterranean; whereas the point at Dioscurias in the extreme corner of the Euxine Sea is farther east by almost three thousand stadia, even according to Eratosthenes himself, if we follow the reckoning by stadia which he gives. And when he describes the northernmost and extreme parts of the Adriatic Sea there is nothing fabulous about them from which he holds aloof. And he has also given credence to many fables about the regions beyond the Pillars of Heracles, mentioning an island named Cerne and other countries which are

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C 48 ονομάζων τους μηδαμού νυνι δεικνυμένους, περί ών μνησθησόμεθα καὶ ύστερον. είπών τε τούς άρχαιοτάτους πλείν μέν 1 κατά ληστείαν ή έμπορίαν, μη πελαγίζειν δέ, άλλα παρά γην, καθάπερ τὸν Ἰάσονα, ὅνπερ καὶ μέχρι τῆς ᾿Αρμενίας καὶ Μηδίας ἐκ τῶν Κόλχων στρατεῦσαι ἀφέντα τὰς ναῦς, ὕστερόν φησι τὸ παλαιὸν οὔτε τὸν Εὔξεινον θαρρείν τινα πλείν, ούτε παρά Λιβύην καὶ Συρίαν καὶ Κιλικίαν. εἰ μὲν οὖν τοὺς πάλαι τοὺς πρὸ της ημετέρας λέγει μνήμης, οὐδὲν έμολ μέλει περί έκείνων λέγειν, ουτ' εί ἔπλεον, ουτ' εί μή. εί δὲ περί των μνημονευομένων, ούκ αν όκνήσαι τις είπειν ώς οι παλαιοί μακροτέρας όδους φανούνται καὶ κατὰ γῆν καὶ κατὰ θάλατταν τελέσαντες τῶν ύστερον, εί χρη προσέχειν τοις λεγομένοις οίον Διόνυσος καὶ Ἡρακλης καὶ αὐτὸς ὁ Ἰάσων, ἔτι δ' οί ύπὸ τοῦ ποιητοῦ λεγόμενοι, 'Οδυσσεὺς καὶ Μενέλαος. καὶ Θησέα δὲ καὶ Πειρίθουν μακράς είκός έστι στρατείας ύπομείναντας καταλιπείν δόξαν περί έαυτῶν ὡς εἰς "Αιδου καταβάντας, τοὺς δὲ Διοσκούρους ἐπιμελητὰς τῆς θαλάσσης λεγθῆναι καὶ σωτήρας τῶν πλεόντων. ή τε Μίνω θαλαττοκρατία θρυλείται καὶ ή Φοινίκων ναυτιλία, οι και τὰ ἔξω τῶν Ἡρακλείων στηλῶν ἐπῆλθον καὶ πόλεις ἔκτισαν κάκεῖ καὶ περὶ τὰ μέσα τῆς Λιβύης παραλίας μικρον των Τρωικών υστερον. Αἰνείαν δὲ καὶ 'Αντήνορα καὶ 'Ενετοὺς καὶ άπλῶς

 $^{^1}$ μέν, Bernhardy, Groskurd, B. Niese, for καί; Forbiger, A. Vogel, approving.

GEOGRAPHY, 1. 3. 2

nowhere pointed out to-day-matters about which I shall speak later on. And although Eratosthenes has said that the earliest Greeks made voyages for the sake of piracy or of commerce, not, indeed, in the open sea, but along the coast—as did Jason, who actually abandoned his ships and, starting from the Colchians, penetrated as far as Armenia and Media -he says later on that in ancient times no one had the courage to sail on the Euxine Sea, or along Libva, Syria, or Cilicia. Now if by "the ancients he means those who lived in the times of which we of to-day have no records, then I am in no wise concerned to speak about them, as to whether they made voyages or not. But if he means men who are mentioned in history, then one would not hesitate to affirm that the ancients will be shown to have made longer journeys, both by land and by sea, than have men of a later time, if we are to heed what tradition tells us: for instance, Dionysus, and Heracles, and Jason himself; and, again, Odysseus and Menelaus, whose stories are narrated by the poet. And again, it is doubtless because Theseus and Pirithous had the hardihood to make such long journeys as they made that they left behind them the reputation of having gone down to Hades, and that the Dioscuri were called "guardians of the sea" and "saviours of sailors." Again, the maritime supremacy of Minos is far-famed, and so are the voyages of the Phoenicians, who, a short time after the Trojan War, explored the regions beyond the Pillars of Heracles and founded cities both there and in the central parts of the Libyan sea-board. As to Aeneas, Antenor, and the Enetians, and, in a word,

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τοὺς ἐκ τοῦ Τρωικοῦ πολέμου πλανηθέντας εἰς πᾶσαν τὴν οἰκουμένην ἄξιον μὴ τῶν παλαιῶν ἀνθρώπων νομίσαι; συνέβη γὰρ δὴ τοῖς τότε Ελλησιν ὁμοίως καὶ τοῖς βαρβάροις διὰ τὸν τῆς στρατείας χρόνον ἀποβαλεῖν τά τε ἐν οἴκῳ καὶ τῆς στρατεία πορισθέντα· ὅστε μετὰ τὴν τοῦ Ἰλίου καταστροφὴν τούς τε νικήσαντας ἐπὶ ληστείαν τραπέσθαι διὰ τὰς ἀπορίας, καὶ πολύ μᾶλλον τοὺς ἡττηθέντας καὶ περιγενομένους ἐκ τοῦ πολέμου. καὶ δὴ καὶ πόλεις ὑπὸ τούτων πλεῖσται κτισθῆναι λέγονται κατὰ πᾶσαν τὴν ἔξω τῆς Ἑλλάδος παραλίαν, ἔστι δ' ὅπου καὶ τὴν μεσόγαιαν.

3. Εἰπὼν δὲ καὶ αὐτός, ὁπόσον προὔβη τὰ τῆς οἰκουμένης εἰς γνῶσιν τοῖς μετ' ᾿Αλέξανδρον καὶ κατ' αὐτὸν ἤδη, μεταβέβηκεν ἐπὶ τὸν περὶ τοῦ σχήματος λόγον, οὐχὶ περὶ τοῦ τῆς οἰκουμένης, ὅπερ ἦν οἰκειότερον τῷ περὶ αὐτῆς λόγῳ, ἀλλὰ τοῦ τῆς συμπάσης γῆς δεῖ μὲν γὰρ καὶ τούτου μνησθῆναι, μὴ ἀτάκτως δέ. εἰπὼν οὖν, ὅτι σφαιροειδὴς ἡ σύμπασα, οὐχ ὡς ἐκ τόρνου δέ, ἀλλ' ἔχει τινὰς ἀνωμαλίας, ἐπιφέρει τὸ πλῆθος τῶν ἐν μέρει μετασχηματισμῶν αὐτῆς, οῦ συμβαίνουσιν ἔκ τε ὕδατος καὶ πυρὸς καὶ σεισμῶν καὶ ἀναφυσημάτων καὶ ἄλλων τοιούτων, οὐδ' ἐνταῦθα τὴν τάξιν φυλάττων. τὸ μὲν γὰρ σφαιροειδὲς περὶ ὅλην τὴν γῆν ἀπὸ τῆς τοῦ ὅλου ἔξεως συμβαίνει, οἱ δὲ τοιοῦτοι μετασχηματισμοὶ τὴν

¹ See note 2, page 40.

GEOGRAPHY, 1. 3. 2-3

the survivors of the Trojan War that wandered forth into the whole inhabited world—is it proper not to reckon them among the men of ancient times? For it came about that, on account of the length of the campaign, the Greeks of that time, and the barbarians as well, lost both what they had at home and what they had acquired by the campaign; and so, after the destruction of Troy, not only did the victors turn to piracy because of their poverty, but still more the vanquished who survived the war. And, indeed, it is said that a great many cities were founded by them along the whole sea-coast outside of Greece, and in some places in the interior also.

3. Now after Eratosthenes has himself told what great advances in the knowledge of the inhabited world had been made not only by those who came after Alexander but by those of Alexander's own times, he passes to his discussion of the shape of the world, not indeed of the inhabited world-which would have been more appropriate to his discussion of that subject—but of the earth as a whole; of course, one must discuss that point too, but not out of its proper place. And so, after he has stated that the earth as a whole is spheroidal 1-not spheroidal indeed as though turned by a sphere-lathe, but that it has certain irregularities of surface—he proceeds to enumerate the large number of its successive changes in shape—changes which take place as the result of the action of water, fire, earthquakes, volcanic eruptions, and other similar agencies; and here too he does not preserve the proper order. For the spheroidal shape that characterises the earth as a whole results from the constitution of the universe, but such changes as Eratosthenes mentions do

μέν όλην γην οὐδεν εξαλλάττουσιν (εν γάρ τοις μεγάλοις εναφανίζεται τὰ οὕτω μικρά), τῆς δὲ οίκουμένης διαθέσεις έτέρας καὶ έτέρας τινάς άπεργάζονται, καὶ τὰς προσεχεῖς αἰτίας ἄλλας

καὶ ἄλλας ἔγουσι.

4. Μάλιστα δέ φησι ζήτησιν παρασχείν, πῶς έν δισχιλίοις καὶ τρισχιλίοις ἀπὸ θαλάττης σταδίοις κατά την μεσόγαιαν δράται πολλαγοῦ κόγχων καὶ ὀστρέων καὶ χηραμύδων πλήθος καὶ λιμνοθάλατται, καθάπερ φησὶ περὶ τὸ ἰερὸν τοῦ $^\prime$ Αμμωνος καὶ τὴν ἐπ $^\prime$ αὐτὸ 1 ὁδὸν τρισχιλίων σταδίων οὖσαν· πολλην γὰρ εἶναι χύσιν ὀστρέων, ἄλας τε καὶ νῦν ἔτι εὐρίσκεσθαι πολλούς, ἀναφυσήματά τε θαλάττης είς ύψος ἀναβάλλειν, πρὸς φ καὶ ναυάγια θαλαττίων πλοίων δείκνυσθαι. . ἃ ἔφασαν διά του ² χάσματος ἐκβεβράσθαι, καὶ έπὶ στυλιδίων ἀνακεῖσθαι δελφῖνας ἐπιγραφὴν έχοντας Κυρηναίων θεωρών. ταθτα δ' είπων την Στράτωνος επαινεί δόξαν του φυσικού, καὶ ετι Εάνθου τοῦ Λυδοῦ. τοῦ μὲν Εάνθου λέγοντος ἐπὶ Αρταξέρξου γενέσθαι μέγαν αὐχμόν, ὅστ' ἐκλιπείν ποταμούς και λίμνας και φρέατα αὐτόν τε ίδειν 3 πολλαχή πρόσω ἀπὸ της θαλάττης λίθους τε κογχυλιώδεις 4 καὶ ὄστρακα 5 κτενώδεα καὶ χηραμύδων τυπώματα καὶ λιμνοθάλατταν 6 ἐν Αρμενίοις και Ματιηνοίς και έν Φρυγία τη κάτω,

2 did tov, Corais, for did toû.

³ iδεῖν, Corais on the authority of ghno, for εἰδέναι; Cobet independently; Bernadakis, A. Vogel, approving.

¹ ἐπ' αὐτό, A. Miller, for ἐπ' αὐτῷ, and Cascorbi's ἐπ' αὐτοῦ.

¹ λίθους τε κυγχυλιώδεις, the old reading of the editors on the authority of B is retained by Corais, for the Albor Te Kal κογχυλιώδη of 1A; Kramer, Meineke, Müller-Dübner, following, but omitting the ral.

not in any particular alter the earth as a whole (changes so insignificant are lost in great bodies), though they do produce conditions in the inhabited world that are different at one time from what they are at another, and the immediate causes which produce them are different at different times.

4. Eratosthenes says further that this question in particular has presented a problem: how does it come about that large quantities of mussel-shells. oyster-shells, scallop-shells, and also salt-marshes are found in many places in the interior at a distance of two thousand or three thousand stadia from the seafor instance (to quote Eratosthenes) in the neighbourhood of the temple of Ammon and along the road, three thousand stadia in length, that leads to it? At that place, he says, there is a large deposit of oyster-shells, and many beds of salt are still to be found there, and jets of salt-water rise to some height; besides that, they show pieces of wreckage from seafaring ships which the natives said had been cast up through a certain chasm, and on small columns dolphins are dedicated that bear the inscription: "Of Sacred Ambassadors of Cyrene." Then he goes on to praise the opinion of Strato, the physicist, and also that of Xanthus of Lydia. In the first place he praises the opinion of Xanthus, who savs that in the reign of Artaxerxes there was so great a drought that the rivers, lakes, and wells dried up; that far from the sea, in Armenia, Matiene, and Lower Phrygia, he himself had often seen, in many places, stones in the shape of a bivalve, shells of the pecten order, impressions of scallop-shells, and a

⁵ ὅστρακα, Madvig, for τά.

⁶ λιμνοθάλατταν, Meineke, for λιμνοθάλασσαν.

ών ένεκα πείθεσθαι τὰ πεδία ποτε θάλατταν γενέσθαι. τοῦ δὲ Στράτωνος ἔτι μᾶλλον άπτομένου της αιτιολογίας, ότι φησίν οιεσθαι τον Εύξεινον μη έχειν πρότερον το κατά Βυζάντιον στόμα, τους δέ ποταμούς βιάσασθαι και ανοίξαι τους είς αυτον εμβάλλοντας, είτ' εκπεσείν το ύδωρ είς την Προποντίδα καὶ τὸν Ἑλλήσποντον. τὸ δ' αὐτὸ συμβηναι καὶ περὶ τὴν καθ' ἡμᾶς θάλατταν καὶ γὰρ ἐνταῦθα τὸν κατὰ Στήλας έκραγήναι πόρον, πληρωθείσης ύπὸ τῶν ποταμῶν της θαλάττης, κατά δὲ τὴν ἔκρυσιν ἀνακαλυφθήναι τὰ τεναγώδη πρότερον. Φέρει δ' αἰτίαν, πρώτον μεν ότι της έξω θαλάττης και της έντος τούδαφος ετερόν εστιν, επειθ' στι καὶ νῦν ετι ταινία τις υφαλος διατέτακεν άπὸ της Ευρώπης έπὶ την C 50 Λιβύην, ώς αν μη μιας ούσης πρότερον της τε έντὸς καὶ τῆς ἐκτός. καὶ βραχύτατα μὲν είναι τὰ περί του Πόντου, το δε Κρητικου και Σικελικου καὶ Σαρδώον πέλαγος σφόδρα βαθέα. των γάρ ποταμών πλείστων καὶ μεγίστων δεόντων άπδ της άρκτου καὶ της άνατολης, έκεινα μὲν ιλύος πληροῦσθαι, τὰ ἄλλα δὲ μένειν βαθέα. διὸ καὶ γλυκυτάτην είναι την Ποντικήν θάλατταν, τάς τ' έκρύσεις γίνεσθαι είς οθς έγκέκλιται τόπους τά έδάφη. δοκείν δὲ κᾶν χωσθηναι τὸν Πόντον δλον είς ύστερον, αν μένωσιν αι επιρρύσεις τοιαθται. καὶ γὰρ νῦν ἤδη τεναγίζειν τὰ ἐν ἀριστερά τοῦ Πόντου, τόν τε Σαλμυδησσον και τα καλούμενα

¹ Western side. ² See 7. 6. 1.

GEOGRAPHY, 1. 3. 4

salt-marsh, and therefore was persuaded that these plains were once sea. Then Eratosthenes praises the opinion of Strato, who goes still further into the question of causes, because Strato says he believes the Euxine Sea formerly did not have its outlet at Byzantium, but the rivers which empty into the Euxine forced and opened a passage, and then the water was discharged into the Propontis and the Hellespont. The same thing, Strato says, happened in the Mediterranean basin also: for in this case the passage at the Pillars was broken through when the sea had been filled by the rivers, and at the time of the outrush of the water the places that had hitherto been covered with shoal-waters were left dry. Strato proposes as a cause of this, first, that the beds of the Atlantic and the Mediterranean are on different levels, and, secondly, that at the Pillars even at the present day a submarine ridge stretches across from Europe to Libya, indicating that the Mediterranean and the Atlantic could not have been one and the same formerly. The seas of the Pontus region, Strato continues, are very shallow, whereas the Cretan, the Sicilian, and the Sardinian Seas are very deep; for since the rivers that flow from the north and east are very numerous and very large, the seas there are being filled with mud, while the others remain deep; and herein also is the reason why the Pontus is sweetest, and why its outflow takes place in the direction of the inclination of its bed. further says it is his opinion that the whole Euxine Sea will be silted up at some future period, if such inpourings continue; for even now the regions on the left side 1 of the Pontus are already covered with shoal waters; for instance, Salmydessus,2 and

Στήθη ύπὸ τῶν ναυτικῶν τὰ περὶ τὸν Ἰστρον καὶ την Σκυθών έρημίαν. τάχα δὲ¹ καὶ τὸ τοῦ Αμμωνος ίερον πρότερον έπι τής θαλάττης ον έκρύσεως γενομένης νῦν ἐν τῆ μεσογαία κεῖσθαι. εἰκάζει τε τὸ μαντείον εὐλόγως ἐπὶ τοσοῦτον γενέσθαι ἐπιφανές τε καὶ γνώριμον ἐπὶ θαλάττη ὄν τόν τε έπὶ πολὸ οὕτως ἐκτοπισμὸν ἀπὸ τῆς θαλάττης ούκ εὔλογον ποιείν τὴν νῦν οὖσαν ἐπιφάνειαν καὶ δόξαν τήν τε Αίγυπτον τὸ παλαιὸν θαλάττη κλύζεσθαι μέγρι των έλων των περί το Πηλούσιον. καὶ τὸ Κάσιον όρος καὶ τὴν Σιρβωνίδα λίμνην έτι γοῦν καὶ νῦν κατὰ τὴν Αἴγυπτον τῆς άλμυρίδος ορυττομένης υφάμμους και κογγυλιώδεις ευρίσκεσθαι τοὺς βόθρους, ὡς ἂν τεθάλαττωμένης τῆς χώρας και τοῦ τόπου παντὸς τοῦ περί τὸ Κάσιον καί τὰ Γέρρα καλούμενα τεναγίζοντος, ὥστε συνάπτειν τῷ τῆς Ἐρυθρᾶς κόλπω ἐνδούσης δὲ της θαλάττης ἀνακαλυφθηναι, μείναι δὲ την Σιοβωνίδα λίμνην, εἶτ' ἐκραγῆναι καὶ ταύτην, ώστε ελώδη γενέσθαι. ώς δ' αύτως και της καλουμένης Μοίριδος 2 λίμνης τους αιγιαλούς αίγιαλοις θαλάττης μάλλον ή ποταμού προσεοιτὸ μὲν οὖν ἐπικλύζεσθαί ποτε πολύ μέρος τῶν ἡπείρων ἐπὶ καιρούς τινας καὶ πάλιν ἀνακαλύπτεσθαι δοίη τις άν ώς δ' αυτως καὶ τὸ τοῖς έδάφεσιν ἀνώμαλον είναι τὴν γῆν ἄπασαν τὴν νῦν ύφαλον, καθάπερ γε νη Δία καὶ την έξαλον, έν ή οἰκοῦμεν, τοσαύτας 4 δεχομένην, ὅσας αὐτὸς

² καλουμένης Molριδος, Corais, for 'Αλμυρίδος.

τε, Meineke deletes, after τοσαύτας; A. Miller approving.

¹ δέ, Corais, for δή.

³ αἰγιαλοῖς, Corais inserts, after αἰγιαλούς; Meineke following; C. Müller, A. Vogel, approving.

GEOGRAPHY, 1. 3. 4

the land at the mouth of the Ister, which sailors call "the Breasts," and the desert of Scythia1; perhaps too the temple of Ammon was formerly on the sea, but is now situated in the interior because there has been an outpouring of the sea. Strato conjectures that the oracle of Ammon with good reason became so distinguished and so well-known as it is if it was situated on the sea, and that its present position so very far from the sea gives no reasonable explanation of its present distinction and fame; and that in ancient times Egypt was covered by the sea as far as the bogs about Pelusium. Mt. Casius, and Lake Sirbonis; at all events, even to-day, when the salt-lands in Egypt are dug up, the excavations are found to contain sand and fossil-shells, as though the country had been submerged beneath the sea and the whole region round Mt. Casius and the so-called Gerrha had once been covered with shoal water so that it connected with the Gulf of the Red Sea; and when the sea retired, these regions were left bare, except that the Lake Sirbonis remained: then the lake also broke through to the sea, and thus became a bog. In the same way, Strato adds, the beaches of the so-called Lake Moeris² more nearly resemble sea-beaches than river-banks. Now one may admit that a great part of the continents was once covered by water for certain periods and was then left bare again; and in the same way one may admit also that the whole surface of the earth now submerged is uneven, at the bottom of the sea, just as we might admit, of course, that the part of the earth above water, on which we live, is subject to all the changes mentioned by

¹ See 7. 4. 5. ² Birket-el-Kerun. See 17. 1. 35.

Έρατοσθένης είρηκε μεταβολάς. ὥστε πρός γε τὸν Ξάνθου λόγον οὐδὲν ἂν ἔχοι τις προσφέρειν ἄτοπον.

5. Πρὸς δὲ τὸν Στράτωνα λέγοιτ' ἄν, ὅτι πολλών αιτίων όντων άφεις ταῦτα τὰ μη όντα πρώτην γαρ αιτίαν φησίν, ὅτι τῆς έντὸς θαλάττης καὶ τῆς ἐκτὸς οὐ ταὐτὸν τὸ ἔδαφος καὶ ὁ βυθός. πρὸς γὰρ τὸ μετεωρίζεσθαι ταύτην καὶ ταπεινοῦσθαι καὶ ἐπικλύζειν τόπους τινὰς καὶ άναγωρείν άπ' αὐτῶν οὐ τοῦτό ἐστιν αἴτιον, τὸ1 άλλα και άλλα έδάφη τὰ μὲν ταπεινότερα είναι τὰ δὲ ὑψηλότερα, ἀλλὰ τὸ αὐτὰ τὰ ² ἐδάφη ποτὲ μεν μετεωρίζεσθαι, ποτε δ' αὖ ταπεινοῦσθαι και συνεξαίρειν ή συνενδιδόναι τὸ πέλαγος εξαρθνέ μεν γαρ επικλύσαι αν, ταπεινωθεν δε αναδράμοι αν είς την αρχαίαν κατάστασιν. εί γαρ³ ούτω, δεήσει πλεονασμώ της θαλάττης αἰφνιδίω γενομένω την επίκλυσιν συμβαίνειν, καθάπερ εν ταις πλημμυρίσιν ή ταις αναβάσεσι των ποταμών, τοτέ μεν ἐπενεχθέντος ἐτέρωθεν, τοτὲ δ' αὐξηθέντος τοῦ ὕδατος. ἀλλ' οῦθ' αἱ αὐξήσεις ἀθρόαι καὶ αἰφνίδιοι οἰδαίνονται, οὐθ' αἱ πλημμυρίδες τοσούτον επιμένουσι χρόνον, οὐδ' ἄτακτοί εἰσιν, ούτε κατά την ημετέραν επικλύζουσι θάλατταν, οὐδ' ὅπου ἔτυνε. λοιπὸν οὖν αἰτιᾶσθαι τὸ ἔδαφος

² αὐτὰ τά, Sterrett, for τὰ αὐτά.

3 Sterrett deletes the οὐχ inserted by Kramer before οὕτω;

Meineke, C. Müller, Forbiger, following Kramer.

¹ τ6, Corais inserts, before άλλα καὶ άλλα; Meineke following; C. Müller approving.

⁴ ἐν ταῖς πλημμυρίσιν, omitted by the type-setters in the edition of Kramer, and left uncorrected in the edition of Meineke.
5 οἰδαίνονται, C. Müller, for δύνανται.

Eratosthenes himself; and therefore, so far as the argument of Xanthes is concerned, one cannot bring

against it any charge of absurdity.

5. Against Strato, however, one might urge that, although there are many real causes of these changes, he overlooks them and suggests causes that do not exist; for he says their primary cause is that the beds of the Mediterranean Sea and of the Atlantic Ocean are not on the same level, and that their depth is not the same. But I reply that the cause of the rising and the falling of the sea, of its inundation of certain tracts of country, and of its subsequent retirement from them, is not to be sought for in the varying levels of the beds of the sea, in that some are lower and others higher, but in the fact that the beds of the sea themselves sometimes rise, and, on the other hand, sometimes sink, and in the fact that the sea rises or recedes along with its beds; for when the sea is lifted up, it will overflow, and when it is lowered, it will subside to its former level. Indeed, if what Strato says is true, then the overflow will necessarily follow every sudden increase in the volume of the sea; for instance, at every high tide of the sea or whenever the rivers are at their flood in the one case the water having been brought in from other parts of the sea, in the other case the volume of water having been increased. But neither do the increases from the rivers come on all at the same time and suddenly and thus cause a swelling of the sea, nor do the tides persist long enough to do so (they are not irregular, either), nor do they cause inundations either on the Mediterranean Sea or anywhere else. Therefore, it remains for us to find the cause in the floor of the sea, either that which under-

η τὸ τη θαλάττη ὑποκείμενον ή τὸ ἐπικλυζόμενον. μάλλον δὲ τὸ ὕφαλον. πολύ γὰρ εὐκινητότερον καλ μεταβολάς θάττους δέξασθαι δυνάμενον τὸ ένυγρον και γάρ το πνευματικόν το πάντων των τοιούτων αἴτιον πλέον ἐνταῦθα. ἀλλ', ὡς ἔφην, τῶν τοιούτων ἀπεργαστικόν ἐστι παθῶν τὸ αὐτά τὰ 1 ἐδάφη ποτὲ μέν ἐξαίρεσθαι ποτὲ δὲ ὑφίζησιν λαμβάνειν, οὐ τὸ τὰ μὲν είναι ὑψηλὰ τὰ δὲ ήττον ό δὲ τοῦτο λαμβάνει, νομίζων ὅπερ ἐπὶ τῶν ποταμών συμβαίνει, τοῦτο καὶ ἐπὶ τῆς θαλάττης ἀπαντᾶν, τὸ ἀπὸ τῶν μετεώρων τόπων είναι τὴν ρύσιν. οὐδὲ γὰρ ᾶν τοῦ κατὰ Βυζάντιον ροῦ τὸ έδαφος ήτιατο, λέγων ύψηλότερον το τοῦ Εὐξείνου ή τὸ της Προποντίδος καὶ τοῦ ἐξης πελάγους, ἄμα καὶ αἰτίαν προστιθείς ἀπὸ γὰρ τῆς ἰλύος τῆς άπὸ τῶν ποταμῶν καταφερομένης πληροῦσθαι τὸν βυθὸν καὶ βραχὺν γίνεσθαι, διὰ τοῦτο δὲ καὶ δείν είς τὰ ἐκτός. Τὸν δ' αὐτὸν λόγον καὶ ἐπὶ τὴν ήμετέραν θάλατταν σύμπασαν μεταφέρει πρὸς τὴν ἐκτός, ὡς καὶ ταύτης μετεωρότερον τοὔδαφος ποιούσης τοῦ ὑποκειμένου τῷ ᾿Ατλαντικῷ πελάγει· καὶ γὰρ αὕτη ἐκ πολλῶν ποταμῶν πληροῦται, καὶ τὴν ὑποστάθμην τῆς ἰλύος δέχεται τὴν ἀνάλογον. έχρην οὖν καὶ τὸν εἴσρουν ὅμοιον γίνεσθαι τῷ κατὰ Βυζάντιον τὸν κατὰ Στήλας καὶ τὴν Κάλπην. άλλὰ τοῦτο μὲν ἐω ἐροῦσι γὰρ κάκεῖ

¹ αυτά τά, Sterrett restores, the reading of the MSS., against the τὰ αυτά of Corais and subsequent editors.

¹ The Rock of Gibraltar. See 3. 5. 5.

² That is, the current of the Mediterranean should be toward the Atlantic just as that of the Euxine is toward 188

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lies the sea or that which is temporarily flooded, but preferably the submarine floor. For the floor that is saturated with water is far more easily moved and is liable to undergo more sudden changes; for the airelement, which is the ultimate cause of all such occurrences, is greater there. But, as I have said, the immediate cause of such occurrences is that the beds of the sea themselves are sometimes elevated and sometimes undergo a settling process, and not that some of the beds are high, while others are less Strato, however, assumes this, believing that what happens in the case of rivers occurs also in the case of the sea, namely, that the flow is away from the high places; otherwise, he would not have suggested that the bed is the cause of the current at Byzantium, saying that the bed of the Euxine is higher than that of the Propontis and the sea next after the Propontis, and at the same time adding the reason, namely, that the deeps of the Euxine are being filled up by the mud which is carried down from the rivers, and are becoming shallow, and that, on this account, the current is outward. He applies the same reasoning to the Mediterranean Sea as a whole as compared with the Atlantic Ocean, since, in his opinion, the Mediterranean Sea is making its bed higher than that which lies beneath the Atlantic Ocean; for the Mediterranean Sea, too, is being filled up with silt from many rivers, and is receiving a deposit of mud similar to that of the Euxine Sea. It should also be true, then, that the inflow at the Pillars and Calpe 1 is similar to the inflow at Byzantium.² But I pass this point by, for people

the Aegean, and the amount of the two inflows should be proportional to the deposits received.

STRABO

τοῦτο συμβαίνειν, περισπάσθαι δὲ ὑπὸ τῶν ἀμπώτεων καὶ τῶν πλημμυρίδων καὶ ἐπικρύπτεσθαι.

- 6. Ἐκείνο δὲ πυνθάνομαι, τί ἐκώλυε, πρὶν ανεωγέναι τὸ στόμα τὸ κατὰ Βυζάντιον, ταπεινότερον ον τὸ τοῦ Εὐξείνου ἔδαφος τοῦ τῆς Προ-C 52 ποντίδος καὶ τῆς έξης θαλάττης πληρωθήναι ύπὸ τῶν ποταμῶν, εἴτε θάλατταν οὖσαν καὶ πρότερον είτε λίμνην μείζω της Μαιώτιδος; εί γὰρ τοῦτο συγγωροῖτο, προσερήσομαι καὶ τοῦτο. άρά γε ή επιφάνεια τοῦ ὕδατος εκείνου καὶ τοῦ της Προποντίδος ούχ ούτως είχεν, ώστε, μέχρι μεν ή αὐτὴ ήν, μη βιάζεσθαι πρὸς ἔκρυσιν διὰ την έξ ίσης αντέρεισιν καὶ θλίψιν, ἐπειδη δὲ ύπερεπόλασεν ή εντός, βιάσασθαι καὶ ἀπερασαι τὸ πλεονάζον ἐκ δὲ τούτου γενέσθαι σύρρουν τὸ έξω πέλαγος τω έντός, και την αυτην έπιφάνειαν έκείνω λαβείν, είτε θαλαττίω είτε λιμναίω μέν πρότερον όντι, θαλαττίω δὲ ὕστερον, διὰ τὴν μίξιν καὶ τὴν ἐπικράτειαν; εἰ γὰρ καὶ τοῦτο δώσουσιν, ή μεν εκρυσις οὐκ ἂν κωλύοιτο ή νῦν, οὐκ ἀπὸ ύπερτέρου δὲ ἐδάφους οὐδὲ ἐπικλινοῦς, ὅπερ ἡΕίου Στράτων.
 - 7. Ταῦτα δὲ δεῖ μεταφέρειν καὶ ἐπὶ τὴν ὅλην τὴν καθ' ἡμᾶς θάλατταν καὶ τὴν ἐκτός, μὴ ἐν τοῖς ἐδάφεσι καὶ ταῖς ἐπικλίσεσιν αὐτῶν τὴν αἰτίαν τοῦ ἔκρου τιθεμένους, ἀλλ' ἐν τοῖς ποταμοῖς· ἐπεὶ

¹ 8eî, Corais inserts; Groskurd, Meineke, Forbiger, Dübner-Müller, following; A. Vogel, L. Kayser, approving. 190

GEOGRAPHY, 1. 3. 5-7

will say that the same thing does occur here, but that the inflow is lost in the ebb and flow of the tides and thus escapes observation.

- 6. But what I wish to learn is this: supposing the bed of the Euxine Sea was lower 1 than that of the Propontis and of the sea next after the Propontis before the opening of the outlet at Byzantium, what was there to prevent the Euxine from being filled up by the rivers, whether it was previously a sea or merely a lake greater than Lake Maeotis? If this point be conceded, then I shall go on to ask this question too: Is it not true that the water-levels of the Euxine and the Propontis were such that, so long as they remained the same, there could be no straining for an outflow, for the reason that resistance and pressure were equal, but that, as soon as the inner sea reached a higher level, it set up a strain and discharged its excess water? And is not this the reason why the outer sea became confluent with the inner sea and why it assumed the same level as the inner searegardless of whether the latter was originally a sea or once a lake and later a sea-simply because of its mingling with the inner sea and prevailing over it? For if this point be granted as well as the first, the outflow that now takes place would go on just the same, but it would not be away from a higher sea-bed, or from a sloping one, as Strato contended.
- 7. Now we must apply these principles to the whole of the Mediterranean Sea and to the Atlantic Ocean, finding the cause of the outflow not in their beds, nor in the sloping of their beds, but in the rivers. For according to Strato and

¹ Strabo has assumed (§ 4 preceding) that the bed was higher.

ούκ ἀπίθανον κατ' αὐτούς, οὐδ' εἰ τὴν ὅλην θάλατταν τὴν ἡμετέραν λίμνην πρότερον είναι συνέβαινε, πληρουμένην ύπο των ποταμών, έπιπολάσασαν εκπεσείν έξω διὰ τῶν κατὰ Στήλας στενών, ώς εκ καταράκτου επαυξομένην δ' άεὶ καὶ μᾶλλον ἐκείνην 1 την θάλατταν σύρρουν νενέσθαι ύπ' αὐτης τῷ χρόνω καὶ συνδραμεῖν εἰς μίαν ἐπιφάνειαν, ἐκθαλάττωθ ηναι δὲ ταύτην 2 διὰ την επικράτειαν. οὐ φυσικὸν δ' δλως τὸ 3 τοῖς ποταμοίς εἰκάζειν τὴν θάλατταν οἱ μὲν γὰρ φέρονται κατά επικλινές ρείθρον, ή δε άκλινής έστηκεν. οί δὲ πορθμοὶ ῥευματίζονται κατ' ἄλλον τρόπον, οὐ διὰ τὸ τὴν ἰλὺν τὴν ἐκ τῶν ποταμῶν προσχούν τὸν τοῦ πελάγους βυθόν. πρόσχωσις περί αὐτὰ συνίσταται τὰ στόματα τῶν ποταμῶν, οίον περὶ μὲν τὰ τοῦ Ἱστρου τὰ λενόμενα Στήθη καὶ ή Σκυθών ἐρημία καὶ Σαλμυδησσός, καὶ ἄλλων γειμάρρων συνεργούντων πρὸς τοῦτο, περὶ δὲ τὰ τοῦ Φάσιδος ἡ Κολχική παραλία, δίαμμος καὶ ταπεινή καὶ μαλακή οὖσα, περί δὲ τὸν Θερμώδοντα καὶ τὸν Ἰριν ὅλη Θεμίσκυρα, τὸ τῶν ᾿Αμαζόνων πεδίον, καὶ τῆς Σιδηνῆς τὸ πλέον οῦτω δὲ καὶ ἐπὶ τῶν ἄλλων. ἄπαντες γάρ μιμούνται τὸν Νεΐλον, έξηπειρούντες τὸν πρὸ αὐτῶν πόρον, οἱ μὲν μᾶλλον, οἱ δὲ ἦττον ἦττον μεν οι μη πολλην καταφέροντες την ίλύν, μάλλον δε οι πολλήν τε και μαλακόγειον χώραν επιόντες καὶ χειμάρρους δεχόμενοι πολλούς, ών έστι καὶ

1 ἐκείνην, Forbiger inserts.

3 τό, Corais, for οὕτε; Groskurd, Meineke, Forbiger, following; C. Müller approving.

² ταύτην, Forbiger inserts; improving on Groskurd's ἐκείνην.

GEOGRAPHY, 1. 3. 7

Eratosthenes, it is not improbable that our whole Mediterranean Sea (even granting that in former times it was a lake) became flooded by the rivers. overflowed, and poured its waters out through the narrows at the Pillars as over a waterfall; and that the Atlantic Ocean, swollen ever more and more, was finally made confluent by it, and united with it on one sea-level; and that thus the Mediterranean basin was turned into a sea because the Atlantic prevailed over it. It is wholly contrary to physical science, however, to liken the sea to rivers; for the rivers are carried down a sloping course, whereas But the current through the the sea has no slope. straits is accounted for by another principle, and is not due to the fact that the mud carried down by the rivers silts up the deeps of the sea. For this silting up occurs only at the very mouths of the rivers, as for example the so-called "Breasts" at the mouth of the Ister, the Scythian desert, and Salmydessuswhere other violent streams also contribute to this result: and, at the mouths of the Phasis, the Colchian seaboard, which is sandy, low-lying and soft; and, at the mouths of the Thermodon and the Iris, the whole of Themiscyra, that plain of the Amazons, and the most of Sidene. The same is true of the other rivers also; for they all imitate the Nile in that they keep converting the channel just in front of them into land, some to a greater and others to a less extent; to a less extent those that do not bring down much mud, but to a greater extent those that flow for a great distance through a country with a soft soil and have many torrents as tributaries.

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¹ On page 181 Strabo has referred to Strato as "the physicist."

STRABO

ό Πύραμος ό τη Κιλικία πολύ μέρος προσθείς, έφ' οῦ καὶ λόγιον ἐκπέπτωκέ τι τοιοῦτον

C 53 ἔσσεται ἐσσομένοις, ὅτε Πύραμος ἀργυροδίνης 1 ή ιόνα προχόων 2 ἱερὴν ἐς Κύπρον ἵκηται.

έκ μέσων γὰρ τῶν τῆς Καταονίας πεδίων ἐνεχθεὶς πλωτὸς καὶ διεκπαισάμενος διὰ τῶν τοῦ Ταύρου στενῶν εἰς τὴν Κιλικίαν ἐκδίδωσιν εἰς τὸν πρὸ

ταύτης τε καὶ της Κύπρου πόρου.

8. Αἴτιον δὲ τοῦ μὴ φθάνειν τὴν χοῦν εἰς τὸ πέλαγος προϊοῦσαν τὴν ὑπὸ τῶν ποταμῶν καταφερομένην τὸ τὴν θάλατταν ἀνακόπτειν αὐτὴν εἰς τοὐπίσω, παλιρροοῦσαν φύσει. ἔοικε γὰρ τοῖς ζώοις, καὶ καθάπερ ἐκεῖνα συνεχῶς ἀναπνεῖ τε καὶ ἐκπνεῖ, τὸν αὐτὸν τρόπον καὶ αὐτὴ ἐξ αὐτῆς τε καὶ εἰς ἑαυτὴν συνεχῶς παλινδρομικήν τινα κινουμένη κίνησιν. δῆλον³ δὲ τῷ ἐπὶ τοῦ αἰγιαλοῦ ἑστῶτι κατὰ τὴν κυμάτωσιν ἄμα γὰρ κλύζονται οἱ πόδες καὶ γυμνοῦνται καὶ πάλιν κλύζονται, καὶ τοῦτο συνεχῶς. τῷ δὲ κλύδωνι καὶ κῦμα ἐπιτρέχει, ὅ,⁴ κᾶν γαληνότατον ἢ, ἐπιφερόμενον ἔχει τινὰ βίαν πλείω, καὶ ἀπορρίπτει πᾶν τὸ ἀλλότριον εἰς τὴν γῆν,

πολλον δὲ παρὲξ ἄλα φῦκος ἔχευε. (Il. 9. 7) μᾶλλον μὲν οὖν ἐν ἀνέμφ συμβαίνει τοῦτο, ἀλλὰ

Forbiger, following; C. Müller, L. Kayser, approving.

δ. Casaubon inserts, after ἐπιτρέχει; Groskurd, Meineke,

Forbiger, following; Corais, C. Müller, approving.

 ¹ ἀργυροδίνης, Meineke, for εὐρυοδίνης; C. Müller, L. Kayser, approving.
 ² προχόων, Sterrett, for προχέων.
 ⁸ δῆλον, Casaubon, for δηλοῖ; Siebenkees, Corais, Meineke,

GEOGRAPHY, 1. 3. 7-8

latter class belongs the Pyramus, which has added much land to Cilicia, and it is to this fact that the following oracle refers: "Men that are yet to be will experience this at the time when the Pyramus of the silvery eddies shall silt up its sacred sea-beach and come to Cyprus." The Pyramus, making its course as a navigable stream from the midst of the plains of Cataonia, and then breaking a passage for itself into Cilicia through the gorges of the Taurus Mountains, empties into the strait that lies between Cilicia and Cyprus.

8. Now the reason why the alluvium brought down by the rivers does not reach the open sea in its forward course 1 is that the sea, which is naturally refluent, drives it back again; for the sea is like animated beings, and, just as they inhale and exhale their breath unremittingly, so in like manner the sea too is subject to a certain recurrent motion that proceeds from itself and returns to itself unremittingly. This is apparent to any one who stands on the beach at the time when the waves break; for no sooner are one's feet washed than they are left bare by the waves, and then again they are washed, and this goes on unremittingly. And close upon the wash comes a wave also, which, however gentle it may be, possesses a certain increase of power as it rushes in, and casts all foreign matter out upon the land-"and casteth much tangle out along the sea." Now while this takes place to a greater extent when there is wind, yet it occurs

¹ It has to prepare the way for itself gradually. The following illustration concerning the action of the waves does not mean that the alluvium cannot eventually build its way over the whole bottom of the sea—a possibility admitted by Strabo in § 9.

STRABO

καὶ ἐν νηνεμία καὶ ἐν ἀπογαίοις πνεύμασιν· οὐδὲν γὰρ ἦττον ἐπὶ γῆν φέρεται τὸ κῦμα ὑπεναντίως τῷ ἀνέμω, ὡς ἀν ἰδίαν τινὰ τῆς θαλάττης κίνησιν συγκινούμενον αὐτῆ. Τοιοῦτον δὲ καὶ τὸ

ἀμφὶ δέ τ' ἄκρας

κυρτὸν ἐὸν κορυφούται, ἀποπτύει δ' ἁλος ἄχνην $(Il.\ 4.\ 425)$

καὶ τὸ

ηϊόνες βοόωσιν έρευγομένης άλδος έξω. (Il. 17. 265)

9. 'Η μὲν οὖν ἔφοδος τοῦ κύματος ἔχει τινὰ βίαν, ὅστ' ἀπωθεῖσθαι τὸ ἀλλότριον. καὶ δὴ καὶ κάθαρσίν τινα τῆς θαλάττης ταύτην φασί, καθ' ἢν καὶ τὰ νεκρὰ σώματα καὶ τὰ ναυάγια εἰς γῆν ἐκκυμαίνεται. ἡ δ' ² ἀναχώρησις οὐκ ἔχει τοσαύτὴν βίαν, ὅστε νεκρὸν ἡ ξύλον ἡ τὸ κουφότατον, φελλόν, ὑπὸ τοῦ κύματος εἰς γῆν ἀναβληθέντα ἐκ τῶν πλησίον αὐτῆς τόπων εἰς τὸ πέλαγος προπεσεῖν ὑπολειφθέντα ὑπὸ τοῦ κύματος.³ οὕτω δὴ καὶ τὴν χοῦν καὶ τὸ σὺν αὐτῆ τεθολωμένον ὕδωρ ἐκκυμαίνεσθαι συμβαίνει, καὶ τοῦ βάρους ἄμα συνεργοῦντος, ὥστε θᾶττον κατενεχθῆναι πρὸς τὴν γῆν κάτω, πρὶν εἰς τὸ πρόσω πελαγίσαι. καὶ γὰρ ἡ τοῦ ποταμοῦ βία παύεται, μικρὸν προελθοῦσα τοῦ στόματος. οὕτω μὲν οὖν ἐνδέ-

² δ , Meineke, for τ .

¹ The words Toιοῦτον... άλδε $\xi\xi\omega$ are deleted by Meineke on the ground that they prove the contrary of what the writer desires; C. Müller approving.

The MSS. have &στε νεκρόν... ὑπὸ τοῦ κύματος εἰς γῆν ἀναβληθῆναι, οὕτω δὲ καὶ τῶν πλησίον αὐτῆς τόπων εἰς τὸ πέλαγος προσπεσεῖν ὑποληφθέντων ὑπὸ τοῦ κύματος, without meaning. Attempts at a reconstitution of the passage have been made

GEOGRAPHY, 1. 3. 8-9

both when there is a calm and when the winds blow from the land; for the wave is carried to the land none the less even against the wind, as though it were subject, along with the sea itself, to the sea's own motion. This is what Homer means when he says: "And goeth with arching crest about the promontories, and speweth the foaming brine afar," and "The shores cry aloud as the salt sea belches forth."

9. Accordingly, the onset of the wave has a power sufficient to expel foreign matter. They call this, in fact, a "purging 1" of the sea—a process by which dead bodies and bits of wreckage are cast out upon the land by the waves. But the ebb has not power sufficient to draw back into the deep sea a corpse, or a stick of wood, or even that lightest of substances, a cork (when once they have been cast by the wave upon the land) from the places on the shore that are near the sea, where they have been stranded by the waves. And so it comes about that both the silt and the water fouled by it are cast out by the waves, the weight of the silt cooperating with the wave, so that the silt is precipitated to the bottom near the land before it can be carried forward into the deep sea; in fact, even the force of the river ceases just a short distance beyond the mouth. So, then, it is possible

¹ Catharsis: commonly used of (1) the purification of the soul by sacrifice, or (2) the purging effect of tragedy upon the emotions, or (3) as a medical term for various bodily discharges.

by Kramer, Groskurd, Meineke, C. Müller, A. Miller, Madvig, and A. Vogel. That by A. Vogel has been adopted and placed into the text above. But none is really satisfactory.

χεται προσχωσθήναι το πέλαγος παν, από των αίγιαλων αρξάμενον, αν συνεχείς έχη τας έκ των ποταμων επιρρύσεις. Τοῦτο δ' αν συμβαίη, καν τοῦ Σαρδονίου πελάγους βαθύτερον υποθώμεθα C 54 τον Πόντον, ὅπερ λέγεται των ἀναμετρηθέντων βαθύτατον, χιλίων που ὀργυιων, ως Ποσειδωνιός

φησι.

10. Την μέν οθν τοιαύτην αιτιολογίαν ήττον άν τις ἀποδέξαιτο μάλλον δ' ἀπὸ τῶν φανερωτέρων καὶ τῶν καθ' ἡμέραν τρόπον τινὰ ὁρωμένων άναπτέον τὸν λόγον. καὶ γὰρ κατακλυσμοί...1 καὶ σεισμοί καὶ ἀναφυσήματα καὶ ἀνοιδήσεις 2 τῆς ύφάλου γης μετεωρίζουσι και την θάλατταν. αί δε συνιζήσεις ταπεινούσιν αὐτήν. οὐ γὰρ μύδροι μέν ανενεχθήναι δύνανται και μικραί νήσοι, μεγάλαι δ' οὐ· οὐδὲ νῆσοι μέν, ἤπειροι δ' οὐ. ομοίως δε καὶ συνιζήσεις καὶ μικραὶ καὶ μεγάλαι γένοιντ' ἄν, εἴπερ καὶ χάσματα καὶ καταπόσεις γωρίων καὶ κατοικιών, ώς έπὶ Βούρας τε καὶ Βιζώνης καὶ ἄλλων πλειόνων, ὑπὸ σεισμοῦ νενέσθαι φασί: καὶ τὴν Σικελίαν οὐδέν τι μᾶλλον ἀπορρώγα της Ἰταλίας εἰκάζοι τις ἄν, ἡ ἀναβληθείσαν ύπὸ τοῦ Αἰτναίου πυρὸς ἐκ βυθοῦ συμμείναι ώσαύτως δὲ καὶ τὰς Λιπαραίων νήσους καὶ Πιθηκούσσας.

² ἀνοιδήσεις, Meineke, for ἀποιδήσεις; Forbiger, C. Müller, A. Miller, Tozer, following.

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¹ A. Miller points out that something has fallen out after or before κατακλυσμοί, because it is absurd to say κατακλυσμοί... μετεωρίζουσι καὶ τὴν θάλατταν, and the statement contradicts the argument of the paragraph above.

GEOGRAPHY, 1. 3. 9-10

for the sea, beginning at its beaches, to be entirely silted up, if it receives the inflow from the rivers uninterruptedly. And this would be the result even if we assume that the Euxine Sea is deeper than the Sea of Sardinia, which is said to be the deepest of all the seas that have been sounded—about one thousand fathoms, as Poseidonius states.

10. However, one might be rather disinclined to accept such an explanation, and so it is necessary for me to bring my discussion into closer connection with things that are more apparent to the senses and that, so to speak, are seen every day. Now deluges [as we have seen, are caused by upheavals of the bed of the seal; and earthquakes, volcanic eruptions, and upheavals of the submarine ground raise the sea, whereas the settling of the bed of the sea lowers the sea. For it cannot be that burning masses may be raised aloft, and small islands, but not large islands; nor yet that islands may thus appear, but not continents. And in a similar way settlings in the bed of the sea, both great ones and small, may also occur, if it be true, as people say, that yawning abysses and engulfments of districts and villages have been caused by earthquakes—as happened in the case of Bura and Bizone and several other places; and as for Sicily, one might conjecture that it is not so much a piece broken away from Italy as that it was cast up from the deeps by the fire of Aetna and remained there 1; and the same is true both of the Lipari Islands and the Pithecussae.

¹ But compare 6. 1. 6, where Strabo discusses this subject again and leaves a different impression.

STRABO

11. 'Ο δ' ούτως ήδύς έστιν, ώστε καὶ μαθηματικός ὢν οὐδὲ τὴν 'Αρχιμήδους βεβαιοί δόξαν, ότι φησίν έκείνος έν τοίς περί των όχουμένων, παντὸς ὑγροῦ καθεστηκότος καὶ μένοντος τὴν έπιφάνειαν σφαιρικήν είναι, σφαίρας ταὐτὸ κέντρον έχούσης τη γη. ταύτην γάρ την δόξαν ἀποδέγονται πάντες οἱ μαθημάτων πως άψάμενοι. ἐκεῖνος δὲ τὴν ἐντὸς θάλατταν, καίπεο μίαν οθσαν, ως φησιν, οθ νομίζει υπό μίαν έπιφάνειαν τετάχθαι, άλλ' οὐδ' έν 1 τοῖς σύνεγγυς τόποις. καὶ μάρτυράς γε τῆς τοιαύτης ἀμαθίας ἀργιτέκτονας ἄνδρας ποιείται, καίτοι ² τῶν μαθηματικών και την άρχιτεκτονικην μέρος της μαθηματικής ἀποφηναμένων. φησί γὰρ καί Δημήτριον διακόπτειν έπιχειρησαι τον των Πελοποννησίων ισθμον προς το παρασχείν διάπλουν τοις στόλοις, κωλυθήναι δ' ύπο των άργιτεκτόνων άναμετρησάντων καὶ άπαγγειλάντων μετεωροτέραν την έν τω Κορινθιακώ κόλπω θάλατταν της κατά Κεγχρεάς είναι, ώστε, εί διακόψειε τὸ μεταξύ χωρίον, επικλυσθήναι αν απαντα τον περί Αίγιναν πόρον καὶ αὐτὴν τὴν 3 Αίγιναν καὶ 4 τὰς πλησίον νήσους, καὶ μηδὲ τὸν διάπλουν αν γενέσθαι χρήσιμον. διὰ δὲ τοῦτο καὶ τοὺς εὐρί-

² καίτοι, Corais. for καί, following B and t.

¹ èv, Corais inserts.

³ την, Cobet inserts, before Αἴγιναν (Corais reads καὶ τὴν Αἴγιναν, omitting αὐτήν, as in editions before Kramer).

⁴ αὐτάs, before τάs, Kramer prefers to delete; Meineke deletes; C. Müller approving.

GEOGRAPHY, 1. 3. 11

11. But Eratosthenes is so simple that, although he is a mathematician, he will not even confirm the doctrine of Archimedes, who, in his treatise On Floating Bodies says that the surface of every liquid body at rest and in equilibrium is spherical, the sphere having the same centre as the earth 1—a doctrine that is accepted by every one who has studied mathematics at all. And so, although Eratosthenes himself admits that the Mediterranean Sea is one continuous sea, yet he does not believe that it has been brought under a law of one continuous surface, even in places that lie close to-And as authorities for such an ignorant opinion as this he summons engineers, although the mathematicians have declared that engineering is a branch of mathematics. For he says that Demetrius, too, attempted to cut through the Isthmus of Corinth in order to provide a passage for his fleets, but was prevented by the engineers, after they had taken measurements and reported to him that the sea in the Corinthian Gulf was higher than at Cenchreae, so that, if he should cut through the intervening land, the whole strait about Aegina, Aegina itself, and the neighbouring islands would be submerged, and the canal would not be useful, either. And Eratosthenes says that this is the reason why the narrow straits have

¹ Chapter 1, Theorem 2: "Of every liquid body perfectly at rest, the surface is spheroidal and has the same centre as the earth." Archimedes says "spheroidal," and not "spherical" as Strabo quotes him; but Archimedes used his term in the literal and not the geometrical sense, and the term is equivalent to "spherical" when it is applied to "a liquid body perfectly at rest." Compare the use of "spheroidal" by Strabo himself on page 41.

πους ροώδεις είναι, μάλιστα δε τον κατά Σικελίαν πορθμόν, δυ φησιν δμοιοπαθείν ταίς κατά τὸν ώκεανὸν πλημμυρίσι τε καὶ άμπώτεσι δὶς 1 γὰρ μεταβάλλειν τον ρουν έκάστης ήμέρας και νυκτός, καὶ 2 καθάπερ τὸν ὠκεανὸν δὶς μεν πλημμυρείν, C 55 δὶς δὲ ἀναχωρεῖν. τῆ μὲν οὖν πλημμυρίδι ὁμο-λογεῖν τὸν ἐκ τοῦ Τυρρηνικοῦ πελάγους εἰς τὸ Σικελικον καταφερόμενον ώς αν έκ μετεωροτέρας ἐπιφανείας, δν δὴ καὶ κατιόντα ὀνομάζεσθαι, ομολογείν δ' ότι και κατά τον αὐτον καιρον άρχεταί τε καὶ παύεται καθ' δυ αι πλημμυρίδες. άρχεται μεν γάρ περί την άνατολην της σελήνης καὶ τὴν δύσιν, λήγει δ' ὅταν συνάπτη τῆ μεσουρανήσει έκατέρα, τη τε ύπερ γης και τη ύπο γης. τη δε 3 άμπώτει τον εναντίον, δν 4 εξιόντα καλεισθαι, ταίς μεσουρανήσεσι της σελήνης αμφοτέραις συναρχόμενον, καθάπερ αι άμπώτεις, ταις δε συνάψεσι ταις πρός τὰς ἀνατολὰς καὶ δύσεις παυόμενον.

12. Περὶ μὲν οὖν τῶν πλημμυρίδων καὶ τῶν ἀμπώτεων εἰρήκασιν ἰκανῶς Ποσειδώνιός τε καὶ ᾿Αθηνόδωρος περὶ δὲ τῆς τῶν πορθμῶν παλιρροίας, ἐχόντων καὶ αὐτῶν φυσικώτερον λόγον ἡ ⁶ κατὰ τὴν νῦν ὑπόθεσιν, τοσοῦτον εἰπεῖν ἀπόχρη, ὅτι οὕθ' τἔς τρόπος τοῦ ῥοώδεις εἶναι τοὺς

 $^{^{1}}$ τε, Meineke deletes, before γάρ; C. Müller approving.

² καί, Corais inserts, before καθάπερ.

³ δέ, Corais, for τε; Groskurd, following; C. Müller approving.
4 δν, Corais inserts; all following.

δ συναρχόμενον, Madvig, for εναρχόμενον.

⁶ ή, Corais inserts, before κατά, and punctuates after ὑπόθεσιν; Meineke following; C. Müller approving.
7 οὐθ, Corais, for οὐδέ; Meineke, C. Müller, approving.

GEOGRAPHY, 1. 3. 11-12

strong currents, and in particular the strait off Sicily, which, he declares, behaves in a manner similar to the flow and the ebb of the ocean; for the current changes twice within the course of every day and night, and like the ocean, it floods twice a day and falls twice a day. Now corresponding to the flood-tide, he continues, is the current that runs down from the Tyrrhenian Sea to the Sicilian Sea as though from a higher waterlevel—and indeed this is called the "descending" current—and this current corresponds to the floodtides in that it begins and ends at the same time that they do, that is, it begins at the time of the rising and the setting of the moon, and it stops when the moon attains either meridian, namely, the meridian above the earth or that below the earth; on the other hand, corresponding to the ebb-tide is the return-current—and this is called the "ascending" current—which begins when the moon attains either meridian, just as the ebbs do, and stops when the moon attains the points of her rising and setting.

12. Now Poseidonius and Athenodorus have satisfactorily treated the question of the flow and ebb of the tides; but concerning the refluent currents of straits, which also involve a discussion that goes deeper into natural science than comports with the purpose of the present work, it is sufficient to say that neither does one principle account for the straits' having currents, the principle by which

πορθμούς, δ γε κατ' είδος οὐ γὰρ αν ὁ μὲν Σικελικός δὶς ἐκάστης ἡμέρας μετέβαλλεν, ώς ούτός φησιν, ό δὲ Χαλκιδικός ἐπτάκις, ό δὲ κατὰ Βυζάντιον οὐδὲ μετέβαλλεν, ἀλλὰ διετέλει τὸν έκρουν μόνον έχων τὸν ἐκ τοῦ Ποντικοῦ πελάγους είς την Προποντίδα, ώς δὲ "Ιππαργος ίστορεί, καὶ μονάς ποτε έποιείτο ουτ' εί τρόπος είς είη, ταύτην άν έγοι την αιτίαν, ήν φησιν ό Ἐρατοσθένης, ότι ή ἐφ' ἐκάτερα θάλαττα ἄλλην καὶ ἄλλην ἐπιφάνειαν έχει οὐδὲ γὰρ ἐπὶ τῶν ποταμῶν τοῦτο γένοιτ' αν, εί μη καταράκτας έγοιεν έγοντες δὲ ού παλιρροούσιν, άλλ' έπὶ τὸ ταπεινότερον άεὶ φέρονται. καὶ τοῦτο δὲ συμβαίνει διὰ τὸ κεκλιμένον είναι τὸ ρεθμα καὶ τὴν ἐπιφάνειαν αὐτοθ. πελάγους δε τίς αν φαίη κεκλιμένην επιφάνειαν: καὶ μάλιστα κατὰ τὰς σφαιροποιούσας ὑποθέσεις τὰ τέτταρα σώματα, ἃ δὴ καὶ στοιχεῖά φαμεν. ωστ' οὐγ ὅτι παλιρροοῦντας, ἀλλ' οὐδὲ καθεστῶτας καὶ μένοντας, συρροίας μεν έν αὐτοῖς οὕσης, μη μιας δε επιφανείας, άλλα της μεν ύψηλοτέρας, της δε ταπεινοτέρας.1 ου γάρ ωσπερ ή γη κατά έξιν έσχημάτισται στερεά οθσα, ώστε καλ κοιλάδας έχειν συμμενούσας καὶ ἀναστήματα, οὕτω καὶ τὸ ὕδωρ, ἀλλ' αὐτη τη κατὰ τὸ βάρος ῥοπη την

¹ The editors transfer ωστ οὐχ... ταπεινοτέραs to a position before πελάγουs. Jones follows both reading and order of the MSS.

GEOGRAPHY, 1. 3. 12

they are classified as straits (for if that were the case, the Strait of Sicily would not be changing its current twice a day, as Eratosthenes says it does, but the strait of Chalcis seven times a day, while the strait at Byzantium makes no change at all but continues to have its outflow only from the Pontus into the Propontis, and, as Hipparchus reports. even stands still sometimes), nor, if one principle should account for the currents, would the cause be what Eratosthenes alleges it to be namely, that the two seas on the sides of a strait have different levels. Indeed this would not be the case with the rivers either, except when they have cataracts; but since they have cataracts, they are not refluent, but run continuously toward the lower level. And this, too, results on account of the fact that the stream and its surface are inclined. But who would say that a sea-surface is inclined? And particularly in view of the hypotheses by which the four bodies (which, of course, we also call "elements" 1) are made spheres. And so not only is a strait not refluent, but it is also not subject to standing still without any current at all, since, although there is a confluence therein of two seas, yet there is not merely one level, but two of them, one higher, the other lower. The case of the water, indeed, is not the same as that of the earth, which, being solid in character, has taken shape accordingly; and therefore it has hollows that keep their shape, and elevations as well; but the water, through the mere

¹ A Pythagorean doctrine: "The bodies of the four elements" (water, earth, air, and fire) "are spherical, fire only excepted, whose figure is conical" (Plutarch, De Placitis Philosophorum 1. 14).

δχησιν ἐπὶ τῆς γῆς ποιεῖται, καὶ τοιαύτην λαμβάνει τὴν ἐπιφάνειαν, οἵαν ὁ ᾿Αρχιμήδης φησίν.

13. Ἐπιφέρει δὲ τοῖς περὶ τοῦ Αμμωνος καὶ της Αιγύπτου δηθείσιν, ότι δοκοίη και το Κάσιον όρος περικλύζεσθαι θαλάττη, καὶ πάντα τὸν τόπον, όπου νθν τὰ καλούμενα Γέρρα καθ' έκαστα,1 τεναγίζειν συνάπτοντα τῶ τῆς Ἐρυθρᾶς κόλπω, συνελθούσης δὲ τῆς θαλάττης ἀποκαλυφθηναι. τὸ δὴ τεναγίζειν τὸν λεγθέντα τόπον συνάπτοντα C 56 τῷ τῆς Ἐρυθρᾶς κόλπω, ἀμφίβολόν ἐστιν· ἐπειδὴ τὸ συνάπτειν σημαίνει καὶ τὸ σύνεγγυς καὶ τὸ ψαύειν, ὥστε, εἰ ὕδατα εἴη, σύρρουν εἶναι θάτερον θατέρω. ἐγὼ μὲν οὖν δέχομαι² τὸ συνεγγίζειν τὰ τενάγη τῆ Ἐρυθρῷ θαλάττη, ἔως άκμην εκέκλειστο τὰ κατὰ τὰς Στήλας στενά, έκραγέντων δὲ τὴν ἀναγώρησιν γενέσθαι, ταπεινωθείσης της ημετέρας θαλάττης διὰ την κατὰ τὰς Στήλας έκρυσιν. "Ιππαρχος δε εκδεξάμενος το συνάπτειν ταὐτὸν τῷ σύρρουν γενέσθαι τὴν ἡμετέραν θάλατταν τη Ἐρυθρά διὰ την πλήρωσιν, αἰτιᾶται τί δή ποτε οὐχὶ τῆ κατὰ τὰς Στήλας έκρύσει μεθισταμένη έκεισε ή καθ' ήμας θάλαττα συμμεθίστα καὶ τὴν σύρρουν αὐτῆ γενομένην τὴν

¹ τέ, after ἔκαστα, Corais omits; so Meineke.

² καί, Corais deletes, after δέχομαι; A. Miller approving.

¹ A little town in Egypt between Pelusium and Mt. Casius; not the Arabian Gerrha.

GEOGRAPHY, 1. 3. 12-13

influence of gravity, rides upon the earth and assumes the sort of surface which Archimedes says it does.

13. Eratosthenes adds to what he has said about Ammon and Egypt his opinion that Mt. Casius was once washed by the sea, and also that all the region where the so-called Gerrha¹ now is, was in every part covered with shoal-water since it was connected with the gulf of the Red Sea, and that it became uncovered when the seas 2 came together. Now it is ambiguous to say that the region mentioned was covered with shoal-water since it was connected with the gulf of the Red Sea, for "to be connected with" means either "to come near to" or "to touch"; so that, if we were referring to bodies of water, the phrase would mean, in the latter sense, that one body of water is confluent with another. My interpretation, however, is that the shoal-waters "came near to" the Red Sea as long as the narrows at the Pillars of Heracles were still closed, and that after the narrows had been broken through, the retirement of the shoal-water took place because the level of the Mediterranean Sea had been lowered by the outflow at the Pillars. But Hipparchus, interpreting the phrase "to be connected with" to be the same thing as "to become confluent with," that is, that our Mediterranean Sea "became confluent with" the Red Sea because of its being filled up with water, finds fault by asking why in the world it is that, at the time when our Mediterranean Sea, because of the outflow of its waters at the Pillars. underwent its change in that direction, it did not also cause the Red Sea, which had become confluent

² The Atlantic and the Mediterranean.

Έρυθράν, καὶ ἐν τῆ αὐτῆ διέμεινεν ἐπιφανεία, μή ταπεινουμένη και γάρ κατ' αὐτὸν 'Εράτοσθένη την έκτὸς θάλατταν ἄπασαν σύρρουν είναι, ώστε καὶ τὴν έσπέριον καὶ τὴν Ἐρυθρὰν θάλατταν μίαν είναι, τοῦτο δ' εἰπων ἐπιφέρει τὸ ἄκόλουθον, τὸ τὸ αὐτὸ ὕψος ἔχειν τήν τε ἔξω Στηλών θάλατταν καὶ τὴν Ερυθράν καὶ ἔτι τὴν

ταύτη γεγουυίαν σύρρουν.
14. 'Αλλ' οὐτ' εἰρηκέναι τοῦτό φησιν 'Ερατοσθένης, τὸ σύρρουν γεγονέναι κατὰ τὴν πλήρωσιν τῆ Ἐρυθρᾳ, ἀλλὰ συνεγγίσαι μόνον, οὕτ ἀκολουθεῖν τῆ μιᾳ καὶ συνεχεῖ θαλάττη τὸ αὐτὸ ύψος έχειν και την αυτην επιφάνειαν, ώσπερ οὐδὲ τὴν καθ' ἡμᾶς, καὶ νὴ Δία τὴν κατὰ τὸ Λέχαιον και την περί Κεγχρεάς. ὅπερ και αὐτὸς δ "Ιππαρχος ἐπισημαίνεται ἐν τῷ πρὸς αὐτὸν λόγω είδως οθν την δόξαν αὐτοθ τοιαύτην ιδία τι ποὸς αὐτὸν λεγέτω, καὶ μὴ ἐξ ἐτοίμου λαμβανέτω, ως άρα ο φήσας μίαν είναι την έξω θάλατταν σύμφησι καὶ ὅτι μία ἐστὶν αὐτῆς ἡ επιφάνεια.

15. Ψευδή δ' είναι φήσας την έπὶ τοῖς δελφίσιν επιγραφην Κυρηναίων θεωρών αιτίαν αποδίδωσιν οὐ πιθανήν, ὅτι ἡ μὲν τῆς Κυρήνης κτίσις ἐν χρόνοις φέρεται μνημονευομένοις, το δε μαντείον ούδεις μεμνηται έπι θαλάττη ποτε ύπάρξαν. τί

¹ That is, the gulfs of Corinth and Aegina, west and east, respectively, of the Isthmus of Corinth.

² That is at the oracle of Ammon. See page 181. ³ The dolphin was to the Greeks the symbol of a seaport town. It would seem to us that the ambassadors from Cyrene set up the dolphin as a symbol of their own town,

GEOGRAPHY, 1. 3. 13-15

with it, to make the same change, and why in the world the Red Sea continued at the same level instead of being lowered with the Mediterranean? For, says he, even according to Eratosthenes himself the whole exterior sea is confluent, and consequently the western sea and the Red Sea form one sea. After saying this, Hipparchus adds his corollary: that the Sea outside the Pillars, the Red Sea, and the Mediterranean Sea, too, which has become confluent with the Red Sea, all have the same level.

- 14. But Eratosthenes replies to this that he has not said that the confluence with the Red Sea took place at the time the Mediterranean Sea had become filled, but merely that the Mediterranean Sea had come near to it; and, besides, that it does not follow from the notion of one continuous sea that it has the same height and the same level—just as the Mediterranean has not, and as most assuredly its waters at Lechaeum and those about Cenchreae 1 have not. This very point Hipparchus himself makes in his book against Eratosthenes; since, then, he knows that such is the opinion of Eratosthenes, let him give some argument of his own against Eratosthenes, and let him not assume off-hand that, forsooth, if a man says the exterior sea is one, he at the same time affirms also that its level is everywhere the same.
- 15. Again, when Hipparchus says that the inscription on the dolphins, made by sacred ambassadors of Cyrene, is false, he gives an unconvincing reason when he says that although the founding of Cyrene falls within historical times, yet no historian has recorded that the oracle was ever situated on a sea. 3

and that it had no bearing on the question whether or not the oracle of Ammon was once on the seashore. γαρ εί μηδείς μεν ίστορεί, έκ δε των τεκμηρίων, έξ ων εικάζομεν παράλιον ποτε τον τόπον γενέσθαι, οί τε δελφίνες ανετέθησαν και ή έπιγραφή εγένετο ύπο Κυρηναίων θεωρών; συγχωρήσας δέ τῶ μετεωρισμῶ τοῦ ἐδάφους συμμετεωρισθεῖσαν και την θάλατταν επικλύσαι τους μέχρι του μαντείου τόπους, πλέον τι από θαλάττης διέχοντας των τρισχιλίων σταδίων, οὐ συγχωρεί τὸν μέχρι τοσούτου μετεωρισμόν, ώστε καί τὴν Φάρον δλην καλυφθήναι και τὰ πολλὰ τής Αἰγύπτου, ὥσπερ οὐχ ἱκανοῦ ὄντος τοῦ τοσούτου ύνους και ταῦτα ἐπικλύσαι. φήσας δέ, εἴπερ έπεπλήρωτο έπι τοσοῦτον ή καθ' ήμας θάλαττα πρὶν τὸ ἔκρηγμα τὸ κατὰ Στήλας γενέσθαι, ἐφ' οσον είρηκεν ο Έρατοσθένης, χρήναι καὶ την Λιβύην πᾶσαν καὶ τῆς Εὐρώπης τὰ πολλά καὶ 'Ασίας κεκαλύφθαι πρότερον, έπιφέρει, διότι καὶ ὁ Πόντος τῷ ᾿Αδρία σύρρους αν υπηρξε κατά τινας τόπους, ατε δη του Ιστρου άπὸ τῶν κατὰ τὸν Πόντον τόπων σχιζομένου καὶ ρέουτος εἰς ἐκατέραν τὴν θάλατταν διὰ τὴν θέσιν τῆς χώρας. ἀλλ' οὔτ' ἀπὸ τῶν κατὰ τὸν Πόντον μερών ὁ Ἰστρος τὰς ἀρχὰς ἔχει, ἀλλὰ τἀναντία άπο των ύπερ του 'Αδρίου ορών, ουτ' εις έκατέραν την θάλατταν ρεί, άλλ' είς του Πόντον μόνον, σχίζεταί τε πρός αὐτοῖς μόνον τοῖς στόμασι. κοινήν δέ τινα των προ αύτου τισιν άγνοιαν ταύτην ηγνόηκεν, υπολαβούσιν είναι τινα όμώυυμον τῶ "Ιστρω ποταμὸν ἐκβάλλοντα εἰς τὸν 'Αδρίαν ἀπεσγισμένον αὐτοῦ, ἀφ' οὐ καὶ τὸ γένος

¹ τι, T. G. Tucker, for #.

GEOGRAPHY, 1. 3. 15

Well, what if no historian does record the fact, and yet, according to the evidence on which we base the conjecture that the region was once coast-land, the dolphins were in fact dedicated and the inscription was engraved by sacred ambassadors of Cyrene? Again, although Hipparchus has admitted that, along with the elevation of the bed of the sea, the sea itself was elevated, and that it inundated the country as far as the oracle, a distance of somewhat more than three thousand stadia from the sea, he does not admit the elevation of the sea to such a point that both the whole island of Pharos and the greater part of Egypt were covered—just as though so high an elevation of the sea were not sufficient to inundate these districts too! And again, after saying that if, before the outbreak of the waters at the Pillars took place, the Mediterranean Sea was really filled to such an extent as Eratosthenes has stated, the whole of Libya and the greater part of Europe and Asia must first have been covered, he adds thereto that the Pontus would then have been confluent with the Adriatic in some places, for the reason that the Ister,1 as he supposes, branches off from the Pontus regions and thus flows into both seas, on account of the lie of the But neither does the Ister rise in the Pontus regions (on the contrary, it rises in the mountains above the Adriatic), nor does it flow into both seas, but into the Pontus alone, and it branches off near its mouths only. However, this mistake of Hipparchus is shared with him by some of his predecessors, who supposed that there was a river of the same name as the Ister, which branched off from it and emptied into the Adriatic, and that the tribe

¹ The Danube.

16. Προς δε την άθαυμαστίαν των τοιούτων μετα-Βολών, οίας έφαμεν αίτίας είναι των έπικλύσεων καὶ τῶν τοιούτων παθῶν, οἶα εἴρηται τὰ κατὰ τὴν Σικελίαν καὶ τὰς Αἰόλου νήσους καὶ Πιθηκούσσας, άξιον παραθείναι καὶ άλλα πλείω των έν έτέροις τόποις όντων η γενομένων όμοίων τούτοις. αθρόα γὰρ τὰ τοιαῦτα παραδείγματα πρὸ ὀφθαλμῶν τεθέντα παύσει την έκπληξιν. νυνί δε το άηθες 2 ταράττει την αίσθησιν και δείκνυσιν απειρίαν των φύσει συμβαινόντων και τοῦ βίου παντός, οίον εί τις λέγοι τὰ 3 περί Θήραν καὶ Θηρασίαν νήσους ίδρυμένας εν τῷ μεταξὺ πόρφ Κρήτης καὶ τῆς Κυρηναίας, ων ή Θήρα μητρόπολίς έστι της Κυρήνης, καὶ τὴν Αίγυπτον καὶ πολλά μέρη τοιαθτα της Έλλάδος. ἀνὰ μέσον γὰρ Θήρας καὶ Θηρασίας εκπεσούσαι φλόγες εκ τού πελάγους εφ' ημέρας τέτταρας. δστε πασαν ζείν και φλέγεσθαι την θάλατταν, ανεφύσησαν κατ' ολίγον έξαιρομένην ώς αν δργανικώς και συντιθεμένην έκ μύδρων νησον επέγουσαν δώδεκα σταδίων την περίμετρον.

² νυνί δὲ τὸ ἄηθες, Xylander, for νῦν εἰ δὲ τὸ ἀληθές; editors following.

4 τέτταρας, Meineke, for τέσσαρας.

¹ Ιστρων, Meineke, for Ιστρον.

³ 7d, Groskurd, for 7ds; Kramer, Forbiger, Meineke, following.

GEOGRAPHY, 1. 3. 15-16

of Istrians, through whose territory this Ister flows, got their appellation from it, and that it was by this route that Jason made his return voyage from the land of the Colchians.

16. Now, in order to promote the virtue of not marvelling 1 at such changes as I have declared to be responsible for deluges and for such operations of nature as I have spoken of 2 in the case of Sicily. the islands of Aeolus, and the Pithecussae, it is worth while to set forth still other instances of things similar thereto that exist, or else have taken place, in other regions. For if a large number of such instances are placed in view, they will put a stop to one's amazement. But, as it is, the unfamiliar thing disturbs the senses and shews one's ignorance of natural occurrences and of the conditions of life generally; for instance, suppose one should tell the story of Thera and Therasia (islands situated in the roadstead between Crete and Cyrenaea, the first of which, Thera, is the mother-city of Cyrene), and of Egypt, and of many such places in Greece. midway between Thera and Therasia fires broke forth from the sea and continued for four days, so that the whole sea boiled and blazed, and the fires cast up an island which was gradually elevated as though by levers and consisted of burning masses an island with a stretch of twelve stadia in circum-

¹ Compare Horace's "Nil admirari" (*Epist.* 6). Also 1. 3. 21 (below); and Cicero, *De Finibus* 5. 8. 23 and 5. 29. 87. The Stoic philosophers attached great importance to the virtue of "marvelling at nothing." Strabo's present purpose is, by heaping up instances of marvellous occurrences, to promote that virtue in the student of geography, and thus to remove doubt and encourage the scientific spirit.

² Page 199.

μετά δὲ τὴν παῦλαν τοῦ πάθους ἐθάρρησαν πρώτοι 'Ρόδιοι θαλαττοκρατούντες έπιπροσπλεύσαι τω τόπω, και Ποσειδώνος 'Ασφαλίου C 58 ίερον ίδρύσασθαι κατά την νησον. εν δε τη Φοινίκη φησί Ποσειδώνιος γενομένου σεισμοῦ καταποθήναι πόλιν ίδρυμένην ύπερ Σιδόνος, καλ αὐτης δὲ Σιδόνος σχεδόν τι τὰ δύο μέρη πεσείν, άλλ' οὐκ ἀθρόως, ώστε μη πολύν φθόρον ἀνθρώπων γενέσθαι, τὸ δ' αὐτὸ πάθος καὶ ἐπὶ τὴν Συρίαν όλην διέτεινε, μετρίως δέ πως. διέβη δε καὶ επί τινας νήσους τάς τε Κυκλάδας καὶ τὴν Εύβοιαν, ώστε της 'Αρεθούσης (έστι δ' ἐν Χαλκίδι κρήνη) τας πηγάς αποτυφλωθήναι, συχναίς δ' ήμέραις ύστερον αναβλύσαι κατ' άλλο στόμιον, μη παύεσθαι δε σειομένην την νήσον κατά μέρη πρίν η χάσμα γης ἀνοιχθεν εν τῷ Ληλάντω πεδίω πηλού διαπύρου ποταμον έξήμεσε.

17. Πολλών δὲ συναγωγὰς ποιησαμένων τοιαύτας, ἀρκέσει τὰ ὑπὸ τοῦ Σκηψίου Δημητρίου συνηγμένα οἰκείως παρατεθέντα. μνησθείς γὰρ τῶν ἐπῶν τούτων,

κρουνω δ' ἵκανον καλλιρρόω, ἔνθα τε πηγαὶ δοιαὶ ἀναίσσουσι Σκαμάνδρου δινήεντος.

 $\dot{\eta}$ μèν γάρ θ ' ὕδατι λιαρ $\hat{\varphi}$,

ή δ' επέρη θέρεϊ προρέει εἰκυῖα χαλάζη,

(Il. 22.147)

οὐκ ἐᾳ θαυμάζειν, εἰ νῦν ἡ μὲν τοῦ ψυχροῦ ὕδατος μένει πηγή, ἡ δὲ τοῦ θερμοῦ οὐχ ὁρᾶται. δεῖν γάρ φησιν αἰτιᾶσθαι τὴν ἔκθλιψιν τοῦ 214

GEOGRAPHY, 1. 3. 16-17

ference. After the cessation of the eruption, the Rhodians, at the time of their maritime supremacy, were first to venture upon the scene and to erect on the island a temple in honour of Poseidon Asphalios.1 And in Phoenicia, says Poseidonius, on the occasion of an earthquake, a city situated above Sidon was swallowed up, and nearly two-thirds of Sidon itself was engulfed too, but not all at once, so that no considerable destruction of human life took place. The same operation of nature extended also over the whole of Syria, but with rather moderate force; and it also passed over to certain islands, both the Cyclades and Euboea, with the result that the fountains of Arethusa (a spring in Chalcis) were stopped up, though after many days they gushed up at another mouth, and the island did not cease from being shaken in some part or other until a chasm in the earth opened in the Lelantine Plain and vomited forth a river of fiery lava.

17. Though many writers have made collections of such instances, those collected by Demetrius of Scepsis will suffice since they are appropriately cited. For example, he mentions these verses of Homer: "And they came to the two fair-flowing springs, where two fountains rise of deep-eddying Scamander; the one floweth with warm water, while the other in summer floweth forth like hail"; and then he does not allow us to marvel if at the present time the spring of cold water is still there, whereas the one of hot water is no longer visible. For, says he, we must lay the cause to the shutting off of the hot

¹ Poseidon, "Securer" of travel by sea, and of the foundations of the earth.

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θερμοῦ ὕδατος. μιμνήσκεται δὲ πρὸς ταῦτα τῶν ύπὸ Δημοκλέους λεγομένων, σεισμούς τινας μεγάλους τούς μέν πάλαι περί Λυδίαν γενομένους καὶ Ἰωνίαν μέγρι της Τρωάδος ίστοροῦντος, ύφ' ών και κώμαι κατεπόθησαν και Σίπυλος κατεστράφη, κατά την Ταντάλου βασιλείαν. καὶ έξ έλων λίμναι έγένοντο, την δὲ Τροίαν ἐπέκλυσε κῦμα. ἡ δὲ Φάρος ἡ κατ' Αἴγυπτον ἡν ποτε πελαγία, νῦν δὲ τρόπον τινὰ γερρόνησος γέγονεν ώς δ' αΰτως καὶ Τύρος καὶ Κλαζομεναί. Αίγύπτω, περί Πηλούσιον και το Κάσιον όρος μετεωρισθέν τὸ πέλαγος ἐπέκλυσε τὴν γῆν καὶ υήσον εποίησε τὸ όρος, ώστε πλωτήν γενέσθαι την παρά το Κάσιον όδον την ές Φοινίκην. οὐδεν οὖν θαυμαστόν, οὐδ' εἴ ποτε διαστάς ὁ ἰσθμὸς ἡ ίζημα λαβών ὁ διείργων τὸ Αἰγύπτιον πέλαγος άπὸ τῆς Ἐρυθρᾶς θαλάττης ἀποφανεῖ πορθμόν, καὶ σύρρουν ποιήσει τὴν ἐκτὸς θάλατταν τῆ 1 έντός, καθάπερ έπὶ τοῦ κατὰ τὰς Ἡρακλέους στήλας πορθμού συνέβη, είρηται δὲ περὶ τῶν τοιούτων τινα και έν αρχαίς της πραγματείας, α δεί συμφέρειν είς εν και την πίστιν ισγυράν κατασκευάζειν των τε της φύσεως έργων καὶ των άλλως γινομένων μεταβολών.

18. Τόν τε Πειραιᾶ νησιάζοντα πρότερον καὶ C 59 πέραν τῆς ἀκτῆς κείμενον οὕτως φασὶν ὀνομα-

 $^{^1}$ $\tau \hat{\eta},$ Corais, for $\tau \hat{\eta}s,$ before $\ell \nu \tau \delta s$; Meineke following; C. Müller approving.

GEOGRAPHY, 1. 3. 17-18

water.1 And he recalls on this point the words of Democles, who records certain great earthquakes, some of which long ago took place about Lydia and Ionia as far north as the Troad, and by their action not only were villages swallowed up, but Mt. Sipylus was shattered—in the reign of Tantalus. And lakes arose from swamps, and a tidal wave submerged the Troad. Again, the Egyptian Pharos was once an island of the sea, but now it has become, in a sense, a peninsula; and the same is true of Tyre and Clazomenae. And when I was residing in Alexandria, in Egypt, the sea about Pelusium and Mt. Casius rose and flooded the country and made an island of the mountain, so that the road by Mt. Casius into Phoenicia became navigable. Hence it is nothing to marvel at even if, at some time, the isthmus should be parted asunder or else undergo a settling process-I mean the isthmus that separates the Egyptian Sea from the Red Sea-and thus disclose a strait and make the outer sea confluent with the inner.2 just as happened in the case of the strait at the Pillars of Heracles. I have already said something about such things at the beginning of this treatise 3; and all these instances must needs contribute to one result, namely, to fix strong our belief in the works of nature and also in the changes that are being brought to pass by other agencies.

18. And as for the Peiraeus, it was because the Peiraeus was formerly an island and lay "over against 4" the mainland, they say, that it got the

See 13. 1. 43, where Strabo again refers to these springs.
 Compare the Suez Canal.
 1. 3. 4.
 Peran.

σθηναι ύπεναντίως δ' ή Λευκάς Κορινθίων τον ίσθμον διακοψάντων νήσος γέγονεν, άκτη προτερον οὖσα· περὶ ταύτης γάρ φασι λέγειν τὸν Λαέρτην,

οίος Νήρικον 1 είλον εϋκτίμενον πτολίεθρον, άκτην ήπείροιο. (Od. 24, 377)

ένταθθα μέν δη διακοπαί χειρότμητοι γεγόνασιν, άλλαχόθι δὲ προσχώσεις ἡ γεφυρώσεις, καθάπερ έπλ της πρός Συρακούσαις νήσου νθν μέν γέφυρά έστιν ή συνάπτουσα αυτήν πρός την ήπειρον. πρότερον δε χώμα, ως φησιν Ίβυκος, λογαίου λίθου, δυ καλεί ἐκλεκτὸυ. Βοῦρα δὲ καὶ Ἑλίκη, ή μεν ύπο χάσματος, ή δ' ύπο κύματος ήφανίσθη. περί Μεθώνην δὲ τὴν ἐν τῷ Ερμιονικῷ κόλπφ δρος 2 έπταστάδιον τὸ ύψος ἀνεβλήθη γενηθέντος άναφυσήματος φλογώδους, μεθ' ήμέραν μέν άπρόσιτον ύπὸ τοῦ θερμοῦ καὶ τῆς θειώδους όδμης, νύκτωρ δ' 8 έκλάμπον πόρρω καὶ θερμαίνον, ώστε ζείν την θάλατταν έπὶ σταδίους πέντε, θολεράν δ' είναι καὶ ἐπὶ είκοσι σταδίους. προσχωσθήναι δὲ πέτραις ἀπορρώξι πύργων οὐκ έλάττοσιν, ύπο δε της Κοπαίδος λίμνης ή τε

ing: C. Müller approving.

¹ Nhoikov, Corais, for Nhoitov; C, the Epitome, and modern editors also

 ² δρος, Kramer adds, from the Epitome; Groskurd, Meineke, Müller-Dübner, following.
 ³ εὐῶδες, before ἐκλάμπον, Corais deletes; Meineke follow-

GEOGRAPHY, 1. 3. 18

name it has; but contrariwise Leucas, since the Corinthians cut a canal through the isthmus, has become an island, although it was formerly a head-Indeed, it is with reference to Leucas, they sav. that Laertes remarks: "As I was when I took Nericus, the well-built castle on the headland of the continent." Here, then, a partition cut by hand has been made; in other places man has built moles or bridges-just as, in the case of the island next to Syracuse, there is at the present time a bridge which connects it with the mainland, whereas formerly there was a mole, as Ibycus says, built of selected stones, which he calls stones "nicked out." 1 Then there are Bura and Helice; Bura disappeared in a chasm of the earth, and Helice was wiped out by a wave from the sea.² And about Methone in the Hermionic Gulf⁸ a mountain seven stadia in height was cast up in consequence of a fiery eruption, and this mountain was unapproachable by day on account of the heat and the smell of sulphur, while at night it shone to a great distance and was so hot that the sea boiled for five stadia and was turbid even for twenty stadia, and was heaped up with massive broken-off rocks no smaller than towers. And again, by Lake Copaïs 4 both Arne and Mideia

Ibycus says: "picked out by mortal hands."
 Both were in Achaia. The earthquake took place

^{*} We should have expected Strabo to say "Saronic" Gulf. The form which he elsewhere gives to the Hermionic Gulf (see 8. 6. 1), making it reach as far north as Aegina and Epidaurian territory, is strange indeed; but in accordance with his definition Methone comes within the Hermionic Gulf.

⁴ In Boeotia (Lake Topolia).

"Αρνη κατεπόθη καὶ Μίδεια, ας ωνόμακεν ό ποιητης εν τῷ Καταλόγω.

οί τε πολυστάφυλον "Αρνην έχον, οί τε Μίδειαν. $(Il.\ 2.\ 507)$

καὶ ὑπὸ τῆς Βιστονίδος δὲ καὶ τῆς νῦν ᾿Αφνίτιδος λίμνης ἐοίκασι κατακεκλύσθαι πόλεις τινὲς Θρακῶν· οἱ δὲ καὶ Τρηρῶν, ὡς συνοίκων τοῖς Θραξὶν ὄντων. καὶ ἡ πρότερον δὲ ᾿Αρτεμίτα λεγομένη μία τῶν Ἐχινάδων νήσων ἡπειρος γέγονε· καὶ ἄλλας δὲ τῶν περὶ τὸν ᾿Αχελῶον νησίδων τὸ αὐτὸ πάθος φασὶ παθεῖν ἐκ τῆς ὑπὸ τοῦ ποταμοῦ προσχώσεως τοῦ πελάγους, συγχοῦνται δὲ καὶ αἱ λοιπαί, ὡς Ἡρόδοτός ¹ φησι. καὶ Αἰτωλικαὶ δέ τινες ἄκραι εἰσὶ νησίζουσαι πρότερον, καὶ ἡ ᾿Αστερία ἤλλακται, ἡν ᾿Αστερίδα φησὶν ὁ ποιητής·

ἔστι δέ τις νῆσος μέσση άλλ πετρήεσσα, 'Αστερίς, οὐ μεγάλη, λιμένες δ' ἐνὶ ναύλοχοι αὐτῆ ἀμφίδυμοι· (Od. 4. 844)

νυνὶ δὲ οὐδ' ἀγκυροβόλιον εὐφυὲς ἔχει. ἔν τε τῆ Ἰθάκη οὐδέν ἐστιν ἄντρον τοιοῦτον, οὐδὲ Νυμφαῖον, οἶόν φησιν "Ομηρος· βέλτιον δὲ αἰτιᾶσθαι μεταβολὴν ἡ ἄγνοιαν ἡ κατάψευσιν τῶν τόπων κατὰ τὸ μυθῶδες. τοῦτο μὲν δὴ ἀσαφὲς ον C 60 ἐῶ ἐν κοινῷ σκοπεῖν.

¹ 'Ηρόδοτος, Corais, for 'Ησίοδος; Meineke, Forbiger, Tozer, Tardieu, following.

GEOGRAPHY, 1. 3. 18

were swallowed up, places which have been named by Homer in the Catalogue of Ships: "And they that possess Arne rich in vinevards, and they that possess Mideia." And by Lake Bistonis 1 and by the lake which they now call Aphnitis 2 certain cities of Thracians appear to have been overwhelmed; and some say cities of Trerans also, thinking they were neighbours of the Thracians. And, too, one of the Echinades Islands, which used to be called Artemita, has become part of the continent; and they say that still others of the little islands about the mouth of the Achelous have suffered the same change from the silting up of the sea by the river; and the rest of them too, as Herodotus 3 says, are in process of fusion with the continent. Again, there are certain Aetolian promontories which were formerly islands: and Asteria has been changed, which the poet calls Asteris: "Now there is a rocky isle in the mid-sea,4 Asteris, a little isle; and there is a harbour therein with a double entrance, where ships may lie at anchor." But at the present time it has not even a Further, in Ithaca there is no good anchorage. cave, neither grotto of the Nymphs, such as Homer describes: but it is better to ascribe the cause to physical change rather than to Homer's ignorance or to a false account of the places to suit the fabulous element in his poetry. Since this matter, however, is uncertain. I leave it to the public to investigate.

¹ In Thrace (Lake Lagos).

4 Asteris lay "midway between Ithaca and rugged Samos," says Homer; but scholars have been unable to identify it.

² The other name was Dascylitis (see 13. 1. 9). It was in Bithynia; and according to the best authority, it was not the lake now called Maniyas or that called Abullonia, but a third lake which has disappeared.

⁸ 2. 10.

19. Ἡ δὲ ἀντισσα νησος ην πρότερον, ώς Μυρσίλος φησί της δε Λέσβου καλουμένης πρότερον Ίσσης, καὶ τὴν νῆσον Αντισσαν καλεισθαι συνέβη· νῦν δὲ τῆς Λέσβου πόλις ἐστίν. οί δὲ καὶ τὴν Λέσβον τῆς Ἰδης ἀπερρωγέναι πεπιστεύκασι, καθάπερ την Προχύτην και την Πιθηκοῦσσαν τοῦ Μισηνοῦ, τὰς δέ Καπρέας τοῦ 'Αθηναίου, την Σικελίαν δε της 'Ρηγίνης, την 'Οσσαν δὲ τοῦ 'Ολύμπου. γεγόνασι δὲ καὶ περὶ ταῦτα τοιαῦται μεταβολαί. καὶ ὁ Λάδων δὲ ὁ έν 'Αρκαδία έπέσχε ποτέ τὸ ρεθμα. Δοθρις δέ τὰς Ῥάγας τὰς κατὰ Μηδίαν ωνομάσθαι φησίν ύπὸ σεισμών ραγείσης της περί τὰς Κασπίους πύλας γης, ώστε ανατραπηναι πόλεις συχνάς καλ κώμας καλ ποταμούς ποικίλας μεταβολάς δέξασθαι. Ίων δὲ περί τῆς Εὐβοίας φησίν ἐν 'Ομφάλη Σατύροις

Εὐβοτδα μὲν γῆν λεπτὸς Εὐρίπου κλύδων Βοιωτίας ἐχώρισ', ἀκτὴν ἐκτεμὼν προβλῆτα πορθμῷ. (fr. 18, Nauck)

20. Δημήτριος δ' ὁ Καλλατιανὸς τοὺς καθ' ὅλην τὴν Ἑλλάδα γενομένους ποτὲ σεισμοὺς διηγούμενος τῶν τε Λιχάδων νήσων καὶ τοῦ Κηναίου τὰ πολλὰ καταδῦναί φησι, τά τε θερμὰ τὰ ἐν Αἰδηψῷ καὶ Θερμοπύλαις ἐπὶ τρεῖς ἡμέρας ἐπισχεθέντα πάλιν ῥυῆναι, τὰ δ' ἐν Αἰδηψῷ καὶ καθ' ἐτέρας ἀναρραγῆναι πηγάς· 'Ωρεοῦ δὲ τὸ πρὸς θαλάττη τεῖχος καὶ τῶν οἰκιῶν περὶ ἐπτα-

¹ That is, the island opposite Issa (Lesbos) was called Antissa (Anti-Issa).

² See 8. 8. 4.

GEOGRAPHY, 1. 3. 19-20

19. Antissa was formerly an island, as Myrsilus says; and since Lesbos was formerly called Issa, it came about that this island was called Antissa 1: but now Antissa is a city of Lesbos. And some believe that Lesbos itself is a fragment broken off from Mt. Ida, just as Prochyta and Pithecussa from Misenum, Capri from the Promontory of Athene, Sicily from the district of Rhegium, and Ossa from Olympus. And it is a fact that changes of this sort have also occurred in the neighbourhood of these places. And, again, the River Ladon in Arcadia once ceased to flow.2 Duris says that Rhagae in Media has received its name because the earth about the Caspian Gates had been "rent" by earthquakes to such an extent that numerous cities and villages were destroyed, and the rivers underwent changes of various kinds. Ion says of Euboea in his satyrdrama Omphale: "The slender wave of Euripus hath separated the land of Euboea from Boeotia, in that by means of a strait it hath cut a projecting headland away."

20. Demetrius of Callatis, in his account of all the earthquakes that have ever occurred throughout all Greece, says that the greater part of the Lichades Islands ⁴ and of Cenaeum ⁵ was engulfed; the hot springs at Aedepsus ⁶ and Thermopylae, after having ceased to flow for three days, began to flow afresh, and those at Aedepsus broke forth also at another source; at Oreus ⁷ the wall next to the sea and about

⁴ Between Euboea and Locris.

The root of the verb here used is rhag.

⁵ A promontory in north-western Euboea, opposite Locris.

A city in north-western Euboea.
 A city in north-eastern Euboea.

κοσίας συμπεσείν, Έγίνου τε καὶ Φαλάρων καὶ Ήρακλείας της Τραγίνος, τών μεν πολύ μέρος πεσείν, Φαλάρων δὲ καὶ ἐξ ἐδάφους ἀνατραπηναι 1 τὸ κτίσμα. παραπλήσια δὲ συμβῆναι καὶ Λαμιεῦσι καὶ Λαρισαίοις καὶ Σκάρφειαν δ' ἐκ θεμελίων ἀναρριφήναι, καὶ καταδύναι σώματα γιλίων καὶ έπτακοσίων οὐκ ἐλάττω, Θρονίους δ΄ ὑπὲρ ημισυ τούτων κυμά τε έξαρθεν τριγή, το μέν πρὸς Τάρφην 2 ένεχθηναι καὶ Θρόνιον, τὸ δὲ πρὸς Θεομοπύλας, άλλο δὲ εἰς τὸ πεδίον εως τοῦ Φωκικοῦ Δαφνούντος. πηγάς τε ποταμών ξηρανθηναι πρὸς ημέρας τινάς, τὸν δὲ Σπερχειὸν άλλάξαι τὸ ρείθρον καὶ ποιήσαι πλωτάς τὰς όδούς, τὸν δὲ Βοάγριον κατ' ἄλλης ἐνεγθῆναι φάραγγος, καὶ 'Αλόπης δὲ καὶ Κύνου καὶ 'Οποῦντος πολλά καταβλαβήναι μέρη, Οίον δὲ τὸ ὑπερκείμενον Φρούριον πᾶν ἀνατραπηναι, Ἐλατείας δὲ τοῦ τείχους καταρραγήναι μέρος, περί δὲ *Αλπωνου 8 θεσμοφορίων δυτων πέντε καὶ εἴκοσι παρθένους ἀναδραμούσας είς πύργον τῶν έλλιμενίων κατά θέαν, πεσόντος τοῦ πύργου, πεσείν καλ αὐτὰς εἰς τὴν θάλατταν. λέγουσι δὲ καὶ τῆς C 61 'Αταλάντης της πρὸς Εὐβοία τὰ μέσα, ρήγματος γενομένου, διάπλουν δέξασθαι μεταξύ, καὶ τῶν πεδίων ένια καὶ μέγρι εϊκοσι σταδίων έπικλυ-

² Τάρφην, Groskurd, for Σκάρφην; Meineke, Forbiger, Tozer,

following; C. Müller approving.

¹ ἀνατραπηναι, Meineke restores, for Kramer's ἀναστραφηναι; Tozer following; C. Müller approving.

³ Αλπωνον, Corais, for Αγωνον; editors following.

GEOGRAPHY, 1. 3. 20

seven hundred of the houses collapsed; 1 and as for Echinus and Phalara and Heracleia in Trachis, not only was a considerable portion of them thrown down, but the settlement of Phalara was overturned, ground and all. And, says he, something quite similar happened to the people of Lamia and of Larissa; and Scarphia, also, was flung up, foundations and all, and no fewer than seventeen hundred human beings were engulfed, and over half as many Thronians; again, a triple-headed wave rose up, one part of which was carried in the direction of Tarphe and Thronium, another part to Thermopylae, and the rest into the plain as far as Daphnus in Phocis; fountains of rivers were dried up for a number of days, and the Sphercheius changed its course and made the roadways navigable, and the Boagrius was carried down a different ravine, and also many sections of Alope, Cynus, and Opus were seriously damaged, and Oeum, the castle above Opus, was laid in utter ruin, and a part of the wall of Elateia was broken down, and at Alponus, during the celebration of the Thesmophoria, twenty-five girls ran up into one of the towers at the harbour to get a view, the tower fell, and they themselves fell with it into the sea. And they say, also, of the Atalanta near Euboea that its middle portions, because they had been rent asunder, got a ship-canal through the rent, and that some of the plains were overflowed even as far as twenty stadia, and

¹ The places subsequently named in this paragraph—except Atalanta—are all on the mainland of Greece, more or less in proximity to the Euboean Sea.

σθήναι, καὶ τριήρη τινὰ ἐκ τῶν νεωρίων ἐξαρ-

θείσαν 1 ύπερπεσείν τοῦ τείχους.

21. Προστιθέασι δὲ καὶ τὰς ἐκ τῶν μεταστάσεων μεταβολάς έπὶ πλέον τὴν ἀθαυμαστίαν ήμιν κατασκευάζειν έθέλοντες, ην ύμνει Δημόκριτος καὶ οἱ ἄλλοι φιλόσοφοι πάντες παράκειται γὰρ τῷ ἀθαμβεῖ καὶ ἀταράγω ανεκπλήκτω οίον 'Ιβήρων μεν των έσπερίων είς τοὺς ὑπὲρ τοῦ Πόντου καὶ τῆς Κολχίδος τόπους μετωκισμένων (οθς δ 'Αράξης, ως φησιν 'Απολλόδωρος, ἀπὸ τῆς 'Αρμενίας ὁρίζει, Κῦρος δε μάλλον και τὰ ὄρη τὰ Μοσχικά), Αίγυπτίων δ' είς τε Αἰθίοπας καὶ Κόλχους, Ένετῶν δ' ἐκ Παφλαγονίας έπι τὸν ᾿Αδρίαν. ἄπερ και ἐπι των Ελληνικών έθνων συνέβη, Ἰώνων καὶ Δωριέων καὶ 'Αγαιών καὶ Αἰολέων καὶ Αἰνιάνες οί νθν Αιτωλοίς δμοροι περί το Δώτιον ώκουν καὶ τὴν 'Οσσαν μετὰ Περραιβών καὶ αὐτοὶ δὲ Περραιβοί μετανάσται τινές. πλήρης δέ έστι τῶν τοιούτων παραδειγμάτων ἡ νῦν ἐνεστῶσα πραγματεία. τινά μέν οὖν καὶ πρόχειρα τοῖς πολλοίς έστιν 2 αί δε των Καρών και Τρηρών καὶ Τεύκρων μεταναστάσεις καὶ Γαλατῶν, ὁμοῦ δὲ καὶ τῶν ἡγεμόνων οἱ ἐπὶ πολὺ ἐκτοπισμοί. Μάδυός τε τοῦ Σκυθικοῦ καὶ Τεαρκὼ τοῦ Αἰθίοπος καὶ Κώβου τοῦ Τρηρὸς καὶ Σεσώστριος καὶ

² ἐστιν, Meineke, for εἰσιν.

¹ εξαρθείσαν, Madvig, for εξαιρεθείσαν; Tozer following.

¹ Diodorus (12. 59) says that Atalanta was once a peninsula and that it was broken away from the mainland by an earthquake, though he does not refer to the occurrence

GEOGRAPHY, 1. 3. 20-21

that a trireme was lifted out of the docks and cast over the wall.1

21. Writers also add the changes resulting from the migrations of peoples, wishing to develop in us, to a still greater extent, that virtue of not marvelling at things (a virtue which is lauded by Democritus and all the other philosophers; for they put it in a class with freedom from dread and from perturbability and from terror).2 For instance: the migration of Western Iberians 8 to the regions beyond the Pontus and Colchis (regions which are separated from Armenia by the Araxes according to Apollodorus, but rather by the River Cyrus and the Moschican Mountains); and the migration of Egyptians to Ethiopia and Colchis: and that of Enetians 4 from Paphlagonia to the Adriatic. is what took place in the case of the Greek tribes also-Ionians, Dorians, Achaeans, and Aeolians; and the Aenianians that are now neighbours of the Aetolians used to live about Dotium and Mt. Ossa among the Perrhaebians; and, too, the Perrhaebians themselves are emigrants. And the present treatise is full of such instances. A number of them, to be sure, are matters even of ready knowledge to most people, but the emigrations of the Carians, Trerans. Teucrians, and Galatians, and likewise also the expeditions of the princes to lands far remote (I refer to Madys the Scythian, Tearko the Ethiopian, Cobus the Treran, Sesostris and Psammitichus the

mentioned by Strabo. Both apparently have in mind the earthquake of 426 B.C.

² See § 16 above, and the footnote.

4 Compare "Venetians"; and see 5. 1. 4.

³ That is, "Western" as distinguished from the new, or "Eastern," Iberia beyond the Pontus.

Ψαμμιτίχου τῶν Αἰγυπτίων καὶ Περσῶν τῶν ἀπὸ Κύρου μέχρι Ξέρξου οὐχ ὁμοίως ἐν ἐτοίμω πᾶσίν είσιν. οί τε Κιμμέριοι οθς καλ Τρήρας ονομάζουσιν, ή εκείνων τι έθνος, πολλάκις επέδραμον τά δεξιὰ μέρη τοῦ Πόντου καὶ τὰ συνεχή αὐτοῖς, τοτέ μέν έπι Παφλαγόνας, τοτέ δέ και Φρύγας έμβαλόντες, ήνίκα Μίδαν αίμα ταύρου πιόντα φασίν ἀπελθεῖν εἰς τὸ χρεών. Λύγδαμις δὲ τοὺς αύτοῦ ἄγων μέχρι Λυδίας καὶ Ἰωνίας ήλασε καὶ Σάρδεις είλεν, έν Κιλικία δὲ διεφθάρη. πολλάκις δὲ καὶ οἱ Κιμμέριοι καὶ οἱ Τρῆρες ἐποιήσαντο τὰς τοιαύτας ἐφόδους· τοὺς δὲ Τρῆρας καὶ Κῶβον ύπὸ Μάδυος τὸ τελευταῖον ἐξελαθῆναί φασι τοῦ των Σκυθών 1 βασιλέως, ταύτα μεν ειρήσθω πρὸς ἄπασαν κοινή τὴν περίοδον τής γής έγοντα οικείαν ιστορίαν.

22. Ἐπάνιμεν δ' ἐπὶ τὰ ἑξῆς, ἀφ' ὧν παρέβημεν.
τοῦ γὰρ Ἡροδότου μηδένας Ὑπερβορείους εἶναι
φήσαντος, μηδὲ γὰρ Ὑπερνοτίους, γελοίαν² φησὶν
C 62 εἶναι τὴν ἀπόδειξιν καὶ ὁμοίαν ὁ Ἐρατοσθένης
τῷ σοφίσματι τούτῳ, εἴ τις λέγοι μηδένας εἶναι
ἐπιχαιρεκάκους, μηδὲ γὰρ ἐπιχαιραγάθους· κατὰ
τύχην τε εἶναι καὶ Ὑπερνοτίους· κατὰ γοῦν τὴν
Αἰθιοπίαν μὴ πνεῖν Νότον, ἀλλὰ³ κατωτέρω.

¹ Σκυθῶν, Penzel, Larcher, for Κιμμερίων; Groskurd, Meineke, Forbiger, following; Kramer, C. Müller, approving.

γελοίαν, Tyrwhitt, for λέγοι ἄν; editors following.
 The old reading without και is restored by Kramer, Meineke, C. Müller.

GEOGRAPHY, 1. 3. 21-22

Egyptians, and to Persians from Cyrus to Xerxes) are not likewise matters of off-hand knowledge to everybody. And those Cimmerians whom they also call Trerans (or some tribe or other of the Cimmerians) often overran the countries on the right of the Pontus and those adjacent to them, at one time having invaded Paphlagonia, and at another time Phrygia even, at which time Midas drank bull's blood, they say, and thus went to his doom. Lygdamis. however, at the head of his own soldiers. marched as far as Lydia and Ionia and captured Sardes, but lost his life in Cilicia. Oftentimes both Cimmerians and Trerans made such invasions as these; but they say that the Trerans and Cobus were finally driven out by Madys, the king of the Scythians. Let these illustrations be given here. inasmuch as they involve matters of fact which have a bearing upon the entire compass of the world in general.

22. I now return to the points next in order, whence I digressed.² First, as for the statement of Herodotus ³ that there are no Hyperboreans ⁴ because there are also no Hypernotians.⁵ Eratosthenes says the argument presented is absurd and like the following quibble: suppose some one should say "There are none who rejoice over the ills of others because there are also none who rejoice over the blessings of others." And, adds Eratosthenes, it so happens that there are also Hypernotians—at all events, Notus does not blow in Ethiopia, but farther north. But it

¹ King of the Cimmerians.

• People beyond Notus (South Wind).

² At § 16 Strabo digressed from the order of discussion pursued by Eratosthenes. ³ Herod. 4. 36.
⁴ People who live beyond Boreas (North Wind).

θαυμαστὸν δ', εἰ, καθ' ἔκαστον κλίμα πνέοντος ἀνέμου, καὶ πανταχοῦ τοῦ ἀπὸ μεσημβρίας Νότου προσαγορευομένου, ἔστι τις οἴκησις ἐν ἢ τοῦτο μὴ συμβαίνει. τοὐναντίον γὰρ οὐ μόνον Αἰθιοπία ἔχοι ἀν τὸν καθ' ἡμᾶς Νότον, ἀλλὰ καὶ ἡ ἀνωτέρω πᾶσα μέχρι τοῦ ἰσημερινοῦ. εἰ δ' ἄρα, τοῦ Ἡροδότου τοῦτ' ἐχρῆν αἰτιᾶσθαι, ὅτι τοὺς Ὑπερβορείους τούτους ὑπέλαβε λέγεσθαι, παρ' οἰς ὁ Βορέας οὐ πνεῖ. καὶ γὰρ εἰ οἱ ποιηταὶ μυθικώτερον οὕτω φασίν, οῖ γ' ἐξηγούμενοι τὸ ὑγιὲς ἀν ἀκούσαιεν, Ὑπερβορείους τοὺς βορειοτάτους λέγεσθαι.¹ ὅρος δὲ τῶν μὲν βορείων ὁ πόλος, τῶν δὲ νοτίων ὁ ἰσημερινός· καὶ τῶν ἀνέμων δ' ὁ αὐτὸς ὅρος.

23. Έξης δε λέγει προς τους φανερως πεπλασμένα και ἀδύνατα λέγοντας, τὰ μεν ἐν μύθου σχήματι, τὰ δ' ιστορίας, περὶ ὧν οὐκ ἄξιον μεμνησθαι· οὐδ' ἐκείνον ἐχρην ἐν ὑποθέσει τοιαύτη φλυάρους ἐπισκοπεῖν. ἡ μεν οὖν πρώτη διέξοδος αὐτῷ τῶν ὑπομνημάτων τοιαύτη.

IV

 Έν δὲ τῆ δευτέρα πειράται διόρθωσίν τινα ποιεῖσθαι τῆς γεωγραφίας, καὶ τὰς ἐαυτοῦ λέγει

 $^{^{1}}$ φασί, after λέγεσθαι, Groskurd deletes; editors following. 230

GEOGRAPHY, 1. 3. 22-4. 1

is a marvellous thing if, although winds blow in every latitude, and although the wind that blows from the south is everywhere called Notus, there is any inhabited place where this is not the case. For, on the contrary, not only might Ethiopia have the same Notus as we have, but even the whole country up to the equator. However that may be, this charge should be laid against Herodotus, that he assumed that by "Hyperboreans" those peoples were meant in whose countries Boreas does not blow. For even if the poets do speak thus, rather mythically, those, at least, who expound the poets should give ear to sound doctrine, namely, that by "Hyperboreans" were meant merely the most northerly 1 peoples. And as for limits, that of the northerly 1 peoples is the north pole, while that of the southerly 2 peoples is the equator; and the winds too have the same limits.

23. Next in order, Eratosthenes proceeds to reply to those whose stories are plainly fictitious and impossible, some of which are in the form of myths, and others in the form of history—persons whom it is not worth while to mention; neither should he, when treating a subject of this kind, have paid heed to persons who talk nonsense. Such, then, is Eratosthenes' course of argument in the First Book of his Commentaries.

IV

1. In his Second Book Eratosthenes undertakes a revision of the principles of geography; and he declares his own assumptions, to which, in turn, if

¹ Literally, "borean." ² Literally, "notian."

ύπολή νεις πρὸς ας πάλιν, εί ἔστι τις ἐπανόρθωσις, πειρατέον προσφέρειν. τὸ μὲν οὖν τὰς μαθηματικάς ὑποθέσεις εἰσάγειν 1 καὶ φυσικάς εὖ λέγεται, καὶ ὅτι εἰ σφαιροειδὴς ἡ γῆ, καθάπερ καὶ ό κόσμος, περιοικείται, και τὰ ἄλλα τὰ τοιαῦτα. εί δὲ τηλικαύτη, ἡλίκην αὐτὸς εἴρηκεν. όμολογούσιν οι ύστερον, οὐδ' επαινούσι την άναμέτρησιν δμως δὲ πρὸς τὴν σημείωσιν τῶν κατά τὰς οἰκήσεις ἐκάστας φαινομένων προσγρηται τοις διαστήμασιν εκείνοις "Ιππαργος επί τοῦ διὰ Μερόης καὶ Αλεξανδρείας καὶ Βορυσθένους μεσημβρινού, μικρον παραλλάττειν φήσας παρά την αλήθειαν. και περί του σχήματος δ' έν τοις έξης διὰ πλειόνων καταδεικνύς δότι σφαιροειδής καὶ ή γη σὺν τη ύγρα φύσει καὶ ὁ οὐρανός, άλλοτριολογείν αν δόξειεν άρκει γαρ το έπλ μικρόν.

Έξης δὲ τὸ πλάτος της οἰκουμένης ἀφορίζων φησὶν ἀπὸ μὲν Μερόης ἐπὶ τοῦ δι' αὐτης μεσημβ-C 63 ρινοῦ μέχρι 'Αλεξανδρείας εἰναι μυρίους, ἐνθένδε εἰς τὸν 'Ελλήσποντον περὶ ὀκτακισχιλίους ἑκατόν, εἰτ' εἰς Βορυσθένη πεντακισχιλίους, εἰτ' ἐπὶ τὸν κύκλον τὸν διὰ Θούλης (ῆν φησι Πυθέας ἀπὸ μὲν της Βρεττανικης ἔξ ἡμερῶν πλοῦν ἀπέχειν πρὸς ἄρκτον, ἐγγὺς δ' εἰναι τῆς πεπηγυίας θαλάττης)

¹ elσάγειν, Corais, for ἄγειν; editors following.

² oùð', Casaubon, for ðé; editors following.

³ καταδεικνύς, T. G. Tucker, for (καl) δεικνύς.

 $^{^{1}}$ 252,000 stadia in circumference at the equator. See 2.5.7

² The Dnieper; Strabo means, as usual, the mouth of the river.

GEOGRAPHY, 1. 4. 1-2

there is any further revision to be made. I must undertake to supply it. Now his introduction of the principles of mathematics and physics into the subject is a commendable thing: also his remark that if the earth is spheroidal, just as the universe is. it is inhabited all the way round; and his other remarks of this nature. But as to the question whether the earth is as large as he has said. later writers do not agree with him; neither do they approve his measurement of the earth.1 when Hipparchus plots the celestial phenomena for the several inhabited places, he uses, in addition. those intervals measured by Eratosthenes on the meridian through Meroë and Alexandria and the Borysthenes,² after saying that they deviate but slightly from the truth. And, too, in Eratosthenes' subsequent discussion about the shape of the earth. when he demonstrates at greater length that not only the earth with its liquid constituent is spheroidal but the heavens also, he would seem to be talking about things that are foreign to his subject; for a brief statement is sufficient.3

2. Next, in determining the breadth of the inhabited world, Eratosthenes says that, beginning at Meroë and measuring on the meridian that runs through Meroë, it is ten thousand stadia to Alexandria; and thence to the Hellespont about eight thousand one hundred; then to the Borysthenes five thousand; then to the parallel circle that runs through Thule (which Pytheas says is a six days' sail north of Britain, and is near the frozen sea)

³ Strabo means that the hypotheses of physics and astronomy should be accepted at once by geographers. Compare 2. 5. 2.

άλλους ώς μυρίους χιλίους πεντακοσίους. εάν οὖν έτι προσθώμεν ὑπὲρ τὴν Μερόην άλλους τρισχιλίους τετρακοσίους, ἵνα τὴν τῶν Αἰγυπτίων νῆσον ἔχωμεν καὶ τὴν Κινναμωμοφόρον καὶ τὴν Ταπροβάνην, ἔσεσθαι σταδίους τρισμυρίους ὀκτα-

κισχιλίους.

3. Τὰ μὲν οὖν ἄλλα διαστήματα δεδόσθω αὐτῶ· ώμολόγηται γὰρ ἱκανῶς τὸ δ' ἀπὸ τοῦ Βορυσθένους έπὶ τὸν διὰ Θούλης κύκλον τίς αν δοίη νοῦν ἔχων; ὅ τε γὰρ ἰστορῶν τὴν Θούλην Πυθέας ανήρ ψευδίστατος έξήτασται, και οι την Βρεττανικήν καὶ ' Ιέρνην ἰδόντες οὐδὲν περὶ τῆς Θούλης λέγουσιν, άλλας νήσους λέγοντες μικράς περί την Βρεττανικήν. αὐτή τε ή Βρεττανική τὸ μῆκος ζσως πώς έστι τη Κελτική παρεκτεταμένη, των πεντακισχιλίων σταδίων ου μείζων, και τοις άκροις τοις αντικειμένοις αφοριζομένη. αντίκειται γαρ άλλήλοις τά τε έφα άκρα τοις έψοις και τά έσπέρια τοις έσπερίοις, και τά γε έφα έγγυς άλληλων έστι μέχρις έπόψεως, τό τε Κάντιον και αί τοῦ 'Ρήνου ἐκβολαί, ὁ δὲ πλειόνων ἡ δισμυρίων τὸ μῆκος ἀποφαίνει τῆς νήσου, καὶ τὸ Κάντιον ήμερων τινων πλούν ἀπέγειν της Κελτικής φησι καὶ τὰ περὶ τοὺς 'Ωστιμίους δὲ καὶ τὰ πέραν τοῦ Υρήνου τὰ μέχρι Σκυθῶν πάντα κατέ√ευσται τῶν τόπων. ὅστις οὖν περὶ τῶν γνωρίζομένων

1 καί, Kramer inserts; editors following.

¹ Strabo elsewhere speaks of this island as "the island of the fugitive Egyptians." See 2. 5. 14 (and note), 16. 4. 8, and 17. 1. 2; also Pliny, Nat. Hist. 6. 35.

GEOGRAPHY, 1. 4. 2-3

about eleven thousand five hundred more. Accordingly, if we add three thousand four hundred stadia more to the south of Meroë, in order to embrace the Island of the Egyptians, the Cinnamon-producing country, and Taprobane, we shall have thirty-eight thousand stadia.

3. However, with one exception, let all the distances of Eratosthenes be granted him-for they are sufficiently agreed upon; but what man of sense could grant his distance from the Borysthenes to the parallel of Thule? For not only has the man who tells about Thule, Pytheas, been found, upon scrutiny, to be an arch-falsifier, but the men who have seen Britain and Ierne³ do not mention Thule, though they speak of other islands, small ones, about Britain; and Britain itself stretches alongside of Celtica4 with a length about equal thereto, being not greater in length than five thousand stadia, and its limits are defined by the extremities of Celtica which lie opposite its own. For the eastern extremity of the one country lies opposite the eastern extremity of the other, and the western extremity of the one opposite the western of the other; and their eastern extremities, at all events, are near enough to each other for a person to see across from one to the other —I mean Cantium 5 and the mouths of the Rhine. But Pytheas declares that the length of Britain is more than twenty thousand stadia, and that Cantium is several days' sail from Celtica; and in his account both of the Ostimians and of what is beyond the Rhine as far as Scythia he has in every case falsified the regions. However, any man who has told such

² Ceylon.

³ Ireland. ⁵ Kent.

⁴ France, roughly.

τόπων τοσαθτα έψευσται, σχολή γ' αν περί των άγνοουμένων παρά πασιν άληθεύειν δύναιτο.

4. Τὸν δὲ διὰ τοῦ Βορυσθένους παράλληλον τὸν αὐτὸν είναι τῷ διὰ τῆς Βρεττανικῆς εἰκάζουσιν "Ιππαργός τε καὶ ἄλλοι ἐκ τοῦ τὸν αὐτὸν εἶναι τὸν διὰ Βυζαντίου τῷ διὰ Μασσαλίας δυ γὰρ λόγου είρηκε Πυθέας 1 τοῦ ἐν Μασσαλία γνώμονος πρὸς την σκιάν, τὸν αὐτὸν καὶ "Ιππαρχος κατὰ τὸν ομώνυμον καιρον εύρειν εν τω Βυζαντίω φησίν. έκ Μασσαλίας δε είς μέσην την Βρεττανικήν οὐ πλέον των πεντακισχιλίων έστι σταδίων. άλλά μην έκ μέσης της Βρεττανικής ου πλέον των τετρακισχιλίων προελθών ευροις 2 αν οικήσιμον άλλως πως (τοῦτο δ' αν είη τὸ περὶ τὴν Ἰέρνην), ώστε τὰ ἐπέκεινα, εἰς ὰ ἐκτοπίζει τὴν Θούλην, οὐκέτ' οἰκήσιμα. τίνι δ' αν καὶ στοχασμῷ λέγοι τὸ ἀπὸ τοῦ διὰ Θούλης ἔως τοῦ διὰ Βορυσθένους μυρίων καὶ χιλίων πεντακοσίων, οὐχ ὁρῶ.

5. Διαμαρτών δε τοῦ πλάτους ηνάγκασται καὶ τοῦ μήκους ἀστοχεῖν. ὅτι μὲν γὰρ πλέον ἡ διπλάσιον τὸ γνώριμον μηκός ἐστι τοῦ γνωρίμου πλάτους, όμολογοῦσι καὶ οἱ ὕστερον καὶ τῶν παλαιών 3 οί γαριέστατοι λέγω δὲ τὸ 4 ἀπὸ τών άκρων της Ἰνδικης έπὶ τὰ άκρα της Ἰβηρίας τοῦ ἀπ' 5 Αἰθιόπων εως τοῦ κατὰ Ἰέρνην κύκλου.

1 Πυθέας, Spengel inserts; Meineke, Forbiger, following; C. Müller approving.

² εύροις, Corais, for εύροι; Groskurd, Meineke, Forbiger. following; C. Müller approving.

* παλαιών, Corais, for ἄλλων; Groskurd, Meineke, Forbiger, Tardieu, following; C. Müller approving.

⁴ τό, Xylander inserts, before ἀπό; Meineke following; Kramer, Č. Müller, approving.

5 àπ', Meineke inserts.

GEOGRAPHY, 1. 4. 3-5

great falsehoods about the known regions would hardly, I imagine, be able to tell the truth about

places that are not known to anybody.

4. The parallel through the mouth of the Borysthenes is conjectured by Hipparchus and others to be the same as that through Britain, from the fact that the parallel through Byzantium is the same as that through Massilia 1: for as to the relation of the dial-index to the shadow, which Pytheas has given for Massilia, this same relation Hipparchus says he observed at Byzantium, at the same time of the year as that mentioned by Pytheas. But it is not more than five thousand stadia from Massilia to the centre of Britain. Furthermore, if you were to proceed not more than four thousand stadia north from the centre of Britain you would find a region that is inhabitable only after a fashion (which region would be in the neighbourhood of Ierne); and so, as for the regions farther on, far out where Eratosthenes places Thule, you would find places no longer habit-But by what guesswork Eratosthenes could say that the distance from the parallel through Thule to that through the mouth of the Borysthenes is eleven thousand five hundred stadia. I do not see.

5. And since he entirely missed the breadth of the inhabited world, he has necessarily failed to guess its length also. For, in the first place, that the known length is more than double the known breadth is agreed to by the later writers as well as by the most accomplished of the early writers (I mean the distance from the extremities of India to the extremities of Iberia, double that from Ethiopia up to the parallel that runs by Ierne). Again, after

¹ Marseilles.

δρίσας δὲ τὸ λεχθὲν πλάτος, τὸ ἀπὸ τῶν ἐσχάτων Αιθιόπων μέχρι τοῦ διὰ Θούλης ἐκτείνει πλέον η δεί τὸ μηκος, ίνα ποιήση πλέον η διπλάσιον τοῦ λεχθέντος πλάτους. Φησί γοῦν 1 τὸ μεν τῆς 'Ινδικής μέχρι τοῦ 'Ινδοῦ ποταμοῦ τὸ στενότατον σταδίων μυρίων έξακισχιλίων το γάρ έπὶ τὰ άκρωτήρια τείνον τρισγιλίοις είναι μείζον το δε ένθεν έπὶ Κασπίους πύλας μυρίων τετρακισχιλίων, είτ' έπλ του Ευφράτην μυρίων, ἐπλ δὲ τον Νείλον ἀπο τοῦ Εὐφοάτου πεντακισχιλίων, ἄλλους δὲ χιλίους καὶ τριακοσίους ² μέχρι Κανωβικοῦ στόματος, είτα μέχρι της Καρχηδόνος μυρίους τρισχιλίους πεντακοσίους, είτα μέχρι Στηλών οκτακισχιλίους τοὐλάχιστον ὑπεραίρειν δὴ τῶν ἐπτὰ μυριάδων όκτακοσίοις. 3 δείν δε έτι προσθείναι το έκτος 'Ηρακλείων στηλών κύρτωμα της Ευρώπης, άντικείμενον μέν τοις Ίβηρσι, προπεπτωκός δέ πρός την έσπέραν, οὐκ έλαττον σταδίων τρισχιλίων, καὶ τὰ ἀκρωτήρια τά τε ἄλλα καὶ τὸ 'Ωστιμίων, δ καλεῖται Κάβαιον, καὶ τὰς κατὰ τοῦτο νήσους, ών την ἐσχάτην Οὐξισάμην φησὶ Πυθέας ἀπέχειν ήμερῶν τριῶν πλοῦν. ταῦτα δ' είπων τὰ τέλευταια οὐδεν προς το μηκος συντείνοντα προσέθηκε τὰ περὶ τῶν ἀκρωτηρίων καὶ τῶν 'Ωστιμίων καὶ τῆς Οὐξισάμης καὶ ὧν φησι νήσων (ταῦτα γὰρ πάντα προσάρκτιά ἐστι καὶ Κελτικά, οὐκ Ἰβηρικά, μᾶλλον δὲ Πυθέου πλάσματα.) προστίθησί τε τοις είρημένοις του μήκους

¹ γοῦν, A. Miller, for δ' οδν.

² τριακοσίουs, Gosselin, for πεντακοσίουs.

³ дктакоо loss, Sterrett restores, the reading before Kramer.

GEOGRAPHY, 1.4.5

Eratosthenes has determined the said breadth, namely, that from extreme Ethiopia up to the parallel of Thule, he extends the length beyond the due measure, in order to make the length more than double the aforesaid breadth. At all events he says that the narrowest part of India up to the river Indus measures sixteen thousand stadia (for the part of India that extends to its capes will increase this length by three thousand stadia); and the distance thence to the Caspian Gates, fourteen thousand; then, to the Euphrates, ten thousand, and from the Euphrates to the Nile five thousand, and on to its Canobic mouth thirteen hundred more; then, to Carthage, thirteen thousand five hundred; then, to the Pillars, at least eight thousand; there is, accordingly, he says, an excess of eight hundred stadia over seventy thousand stadia. We must still add, he says, the bulge of Europe outside the Pillars, which lies over against Iberia and leans westward, reaching not less than three thousand stadia: we must also add all the capes, but in particular that of the Ostimians, called Cabaeum, and the islands about it—the outermost of which, Uxisame,2 Pytheas says, is a three days' sail distant. And after mentioning these last places. though all of them in their stretch add nothing to the length of the inhabited world, he has added the regions in the neighbourhood of the capes, of the Ostimians, of Uxisame, and of all the islands he (In fact, these places all lie towards the north and belong to Celtica, not to Iberia-or rather they are inventions of Pytheas.) And he adds to the

¹ Or Gabaeum (Ptol. 2. 8. 1); apparently Pointe du Raz. ² Ushant (Ouessant); the Axanthos of Pliny, Nat. Hist. 4. 16 (30).

διαστήμασιν ἄλλους σταδίους δισχιλίους μὲν πρὸς τῆ δύσει, δισχιλίους δὲ πρὸς τῆ ἀνατολῆ, ἵνα σώση τὸ μὴ 1 πλέον ἡ ἡμισυ τοῦ μήκους τὸ πλάτος.

- 6. Παραμυθούμενος δ' ἐπὶ πλέον, ὅτι κατὰ φύσιν ἐστὶ τὸ ἀπὸ ἀνατολῆς ἐπὶ δύσιν διάστημα μεῖζον λέγειν, κατὰ φύσιν φησὶν εἶναι ἀπὸ τῆς ἔω πρὸς τὴν ἐσπέραν μακροτέραν εἶναι τὴν οἰκουμένην, καί², καθάπερ εἰρήκαμεν, ὡς οὶ μαθηματικοί, φησί, κύκλον συνάπτειν, συμβάλλουσαν αὐτὴν ἑαυτῆ· ὥστ', εἰ μὴ τὸ μέγεθος τοῦ ᾿Ατλαντικοῦ πελάγους ἐκώλυε, κὰν πλεῖν ἡμᾶς ἐκ τῆς Ἰβηρίας εἰς τὴν Ἰνδικὴν διὰ τοῦ αὐτοῦ παραλλήλου τὸ C 65 λοιπὸν μέρος παρὰ τὸ λεχθὲν διάστημα ὑπὲρ τὸ τρίτον μέρος δν τοῦ ὅλου κύκλου· εἶπερ ὁ δί ᾿Αθηνῶν ³ ἐλάττων ἐστὶν εἴκοσι μυριάδων, ὅπου πεποιήμεθα τὸν εἰρημένον σταδιασμὸν ἀπὸ τῆς Ἰνδικῆς εἰς τὴν Ἰβηρίαν. οὐδὲ ταῦτα οὖν εὐ λέγει. οὖτος γὰρ ὁ λόγος ⁴ περὶ μὲν τῆς εὐκράτου καὶ
 - 1 μή, Kramer inserts; Forbiger following.

² καί, Jones inserts.

* The old reading was διὰ Θινῶν; but AC have Θηνῶν. Kramer rightly reads as above. (cf. readings of MSS. on 1.4.6, 2.1.1, 2.1.2, 2.1.5, and 2.1.24.)

⁴ τά, after λόγος, Corais deletes; Meineke following.

² Eratosthenes means by "the aforesaid distance" his

length of the inhabited world, 77,800 stadia.

¹ The inhabited world is thought of as an arc, which, when produced, completes a circle. Even Aristotle had discussed the question whether the inhabited world, in its length, could be connected by an arc of latitude drawn from Spain westward to India (Meteor. 2. 5. 13).

GEOGRAPHY, 1.4.5-6

aforesaid length-distances still other stadia, namely, two thousand on the west, and two thousand on the east, in order to keep the breadth from being more than half the length.

- 6. Again, attempting still further to appease us by saying that it is "in accordance with nature" to call the distance from east to west greater, he says it is "in accordance with nature" that from the east to the west the inhabited world is longer, and, "just as I have already stated in the manner of the mathematicians," he says, "it forms a complete circle, itself meeting itself; so that, if the immensity of the Atlantic Sea did not prevent, we could sail from Iberia to India along one and the same parallel over the remainder of the circle, that is, the remainder when you have subtracted the aforesaid distance 2, which is more than a third of the whole circle—if it be true that the circle that runs through Athens, along which I have made the said reckoning of stadia from India to Iberia, is less than two hundred thousand stadia in circuit." 3 However. Eratosthenes is not happy in this statement, either; for although this argument might be used in the
- ³ It has been assumed by various scholars that Eratosthenes' parallel of latitude, above referred to, ran 25,450 stadia north of the equator, which would be at 36° 21′ 25½″. In this case the circumference of this parallel works out to be 202,945 stadia—if we count 700 stadia to the degree, following Eratosthenes' method. But Strabo fails to quote Eratosthenes on one section of the distance (from the equator to the southern limit of the inhabited world), and the 25,450 is reached only by a computation based on a statement of Ptolemy (Mathematica Syntaxis 1. 10), wherein Ptolemy refers to Eratosthenes' estimate of the distance between the tropics. That estimate was inaccurate and so is this; but even in his round numbers Eratosthenes is usually close to the truth.

καθ' ήμᾶς ζώνης λέγοιτ' αν κατὰ τοὺς μαθηματικούς, ής μέρος ή οἰκουμένη ἐστί, περὶ δὲ τῆς οἰκουμένης—καλοῦμεν γὰρ οἰκουμένην ἢν οἰκοῦμεν καὶ γνωρίζομεν· ἐνδέχεται δὲ ἐν τῆ αὐτῆ εὐκράτω ζώνη καὶ δύο οἰκουμένας εἰναι ἡ καὶ πλείους,¹ καὶ μάλιστα ἐγγὺς τοῦ δι' ᾿Αθηνῶν κύκλου τοῦ διὰ τοῦ ᾿Ατλαντικοῦ πελάγους γραφομένου. πάλιν δὲ ἐπιμένων τῆ περὶ τοῦ σφαιροειδῆ τὴν γῆν εἶναι ἀποδείξει τῆς αὐτῆς ἐπιτιμήσεως αν τυγχάνοι. ὡς δ' αὕτως καὶ πρὸς τὸν "Ομηρον οὐ παύεται περὶ τῶν αὐτῶν διαφερόμενος.

7. Έξης δὲ περὶ τῶν ἠπείρων εἰπὼν γεγονέναι πολὺν λόγον, καὶ τοὺς μὲν τοῖς ποταμοῖς διαιρεῖν αὐτάς, τῷ τε Νείλω καὶ τῷ Τανάῖδι, νήσους ἀποφαίνοντας, τοὺς δὲ τοῖς ἰσθμοῖς, τῷ τε μεταξὺ τῆς Κασπίας καὶ τῆς Ποντικῆς θαλάσσης καὶ τῷ μεταξὺ τῆς Ἐρυθρᾶς καὶ τοῦ Ἐκρήγματος, τούτους δὲ χερρονήσους αὐτὰς λέγειν, οὐχ ὁρᾶν φησι, πῶς ἄν εἰς πρᾶγμά τι² καταστρέφοι ἡ ζήτησις αὕτη, ἀλλὰ μόνον ἔριν διαιτώντων μᾶλλον κατὰ Δημόκριτον εἰναι. μὴ ὄντων γὰρ ἀκριβῶν ὅρων καθάπερ Κολυττοῦ καὶ Μελίτης, οἶον στηλῶν ἡ περιβόλων, τοῦτο μὲν ἔχειν φάναι ἡμᾶς, ὅτι τουτὶ μέν ἐστι Κολυττός, τουτὶ δὲ Μελίτη, τοὺς ὅρους δὲ μὴ ἔχειν εἰπεῖν. διὸ καὶ συμβαίνειν κρίσεις πολλάκις

² πράγμά τι, Cobet, for πράγματα; A. Miller apparently approving.

¹ εi, Corais deletes, before καi; Kramer, C. Müller suspecting; Meineke following.

GEOGRAPHY, 1. 4. 6-7

treatment of the temperate zone (that is, our zone) from the point of view of mathematics (since the inhabited world is a fraction of the temperate zone), yet in the treatment of the inhabited world—why! we call "inhabited" the world which we inhabit and know; though it may be that in this same temperate zone there are actually two inhabited worlds, or even more, and particularly in the proximity of the parallel through Athens that is drawn across the Atlantic Sea. And again, by dwelling on his demonstration of the spheroidal shape of the earth he might meet with the same criticism as before. And in the same way also he does not cease to quarrel with Homer about the very same things.

7. Next, after saying that there has been much discussion about the continents, and that some divide them by the rivers (the Nile and the Tanaïs). declaring them to be islands, while others divide them by the isthmuses (the isthmus between the Caspian and the Pontic Seas, and the isthmus between the Red Sea and the Ecregma 1), and that the latter call the continents peninsulas, Eratosthenes then says that he does not see how this investigation can end in any practical result, but that it belongs only to persons who choose to live on a diet of disputation, after the manner of Democritus; for if there be no accurate boundaries take the case of Colyttus and Melite 2-of stone posts, for example, or enclosures, we can say only this, "This is Colyttus," and "That is Melite," but we should not be able to point out the boundaries; and this is the reason also why disputes often arise

¹ Literally, the "Outbreak"; the outlet of Lake Sirbonis into the Mediterranean.

² Attic demes, or townships.

περί χωρίων τινών, καθάπερ 'Αργείοις μέν καί Λακεδαιμονίοις περί Θυρέας, 'Αθηναίοις δὲ καί Βοιωτοίς περί 'Ωρωπού. άλλως τε τούς "Ελληνας τὰς τρεῖς ἡπείρους ὀνομάσαι, οὐκ εἰς τὴν οἰκουμένην ἀποβλέψαντας, άλλ' είς τε την σφετέραν καὶ τὴν ἀπαντικρὺ τὴν Καρικήν, ἐφ' ἡ νῦν Ἰωνες καὶ οἱ έξης χρόνω δὲ ἐπὶ πλέον προϊόντας ἀεὶ καὶ πλειόνων γνωριζομένων χωρῶν εἰς τοῦτο καταστρέψαι την διαίρεσιν. πότερον οὐν οί πρώτοι διορίσαντες τὰς τρεῖς, ἵνα ἀπὸ τῶν έσχάτων ἄρξωμαι διαιτών τὴν ἔριν μὴ κατά Δημόκριτον, άλλὰ κατ' αὐτόν, οὖτοι ἦσαν οί πρώτοι την σφετέραν από της αντικειμένης της των Καρων διορίσαι ζητούντες; ή ούτοι μεν την Έλλάδα ἐπενόουν μόνην καὶ τὴν Καρίαν καὶ ολίγην την συνεχή, ούτε δ' Ευρώπην ούτε 'Ασίαν C 66 ώσαύτως οὔτε Λιβύην, οἱ δὲ λοιποὶ ἐπιόντες όση ην ίκανη ύπογράψαι την της οἰκουμένης έπίνοιαν, οὖτοί εἰσιν οἱ εἰς τρία διαιροῦντες; πῶς οὖν οὐ τῆς οἰκουμένης ἐποιοῦντο διαίρεσιν; τίς δὲ τρία μέρη λέγων καὶ καλῶν ἤπειρον ἕκαστον τῶν μερών οὐ προσεπινοεί τὸ ὅλον, οὖ τὸν μερισμὸν ποιείται; εί δ' έπινοεί μέν μη την οἰκουμένην, μέρους δέ τινος αὐτῆς τὸν μερισμὸν ποιοίτο, τίνος αν τις μέρους της οἰκουμένης μέρος είπε την

¹ δση . . . ὑπογράψαι, Corais, for δσην ίκανοὶ ἐπιγράψαι; Groskurd, Forbiger, Meineke, following.

GEOGRAPHY, 1.4.7

concerning districts, such as the dispute between the Argives and the Lacedaemonians about Thyrea. and between the Athenians and the Boeotians about Oropus: and the Greeks named the three continents wrongly, because they did not look out upon the whole inhabited world, but merely upon their own country and that which lay directly opposite, namely, Caria, where Ionians and their immediate neighbours now live; but in time, ever advancing still further and becoming acquainted with more and more countries, they have finally brought their division of the continents to what it now is. The question, then, is whether the "first men" who divided the three continents by boundaries (to begin with Eratosthenes' last points, dieting upon disputation, not after the manner of Democritus, but after that of Eratosthenes) were those "first men" who sought to divide by boundaries their own country from that of the Carians, which lay opposite; or, did the latter have a notion merely of Greece, and of Caria and a bit of territory that is contiguous thereto, without having, in like manner, a notion of Europe or Asia, or of Libya, whereas the men of subsequent times, travelling over what was enough of the earth to suggest the notion of the inhabited world—are these the men, I say, who made the division into three parts? How, pray, could they have failed to make a division? who, when speaking of three parts and calling each of the parts a continent, does not at the same time have a notion of the integer of which he makes his division into parts? But suppose he does not have a notion of the inhabited world, but should make his division of some part of it-of what part of the inhabited world, I ask, would anyone have said Asia 'Ασίαν ή τὴν Εὐρώπην ή ὅλως ήπειρον; ταῦτα

γάρ είρηται παχυμερώς.

- 8. *Ετι δὲ παχυμερέστερον τὸ φήσαντα μὴ ὁρᾶν, είς τί πραγματικον καταστρέφει το τους δρους ζητείν, παραθείναι τὸν Κολυττὸν καὶ τὴν Μελίτην. είτ' είς τάναντία περιτρέπεσθαι. εί γάρ οί περί Θυρεών καὶ 'Ωρωποῦ πόλεμοι διὰ τὰς τῶν ὅρων άγνοίας ἀπέβησαν, είς πραγματικόν τι καταστρέφον τὸ διαχωρίζειν τὰς χώρας ἡ τοῦτο λέγει, ώς έπι μεν των γωρίων, και νη Δία των καθ' εκαστα έθνων πραγματικόν το διορίζειν άκριβώς, έπὶ δὲ τῶν ἡπείρων περιττόν; καίτοι οὐδὲ ἐνταῦθα ἦττον οὐδέν γένοιτο γὰρ ᾶν καὶ ἐπὶ τούτων ήγεμόσι μεγάλοις αμφισβήτησις, τω μέν έχοντι την 'Ασίαν, τω δε την Λιβύην, οποτέρου δή 1 έστιν ή Αίγυπτος δηλονότι ή κάτω λεγομένη της Αιγύπτου χώρα. καν εάση ε δέ τις τοῦτο διὰ τὸ σπάνιον, ἄλλως φατέον διαιρεῖσθαι τὰς ἡπείρους κατὰ μέγαν διορισμον καὶ πρὸς τὴν οικουμένην όλην αναφερόμενον καθ' δυ οὐδὲ τούτου Φροντιστέον, εί οί τοῖς ποταμοῖς διορίσαντες ἀπολείπουσί τινα χωρία ἀδιόριστα, τῶν ποταμών μη μέχρι τοῦ ώκεανοῦ διηκόντων, μηδέ 3 νήσους ώς άληθως άπολειπόντων τὰς ἡπείρους.
- 9. Έπὶ τέλει δὲ τοῦ ὑπομνήματος οὐκ ἐπαινέσας τοὺς δίχα διαιροῦντας ἄπαν τὸ τῶν ἀνθρω-

1 δή, Meineke, for δ'.

² καν ἐἀση, for κατάνας, Paetz; Forbiger, Meineke, following.
³ μηδέ, for τὰς μὲν δή, Corais; Groskurd, Meineke, Forbiger, following; Kramer, C. Müller, suspecting.

GEOGRAPHY, 1. 4. 7-9

was a part, or Europe, or a continent in general?— Indeed these points of his have been crudely stated.

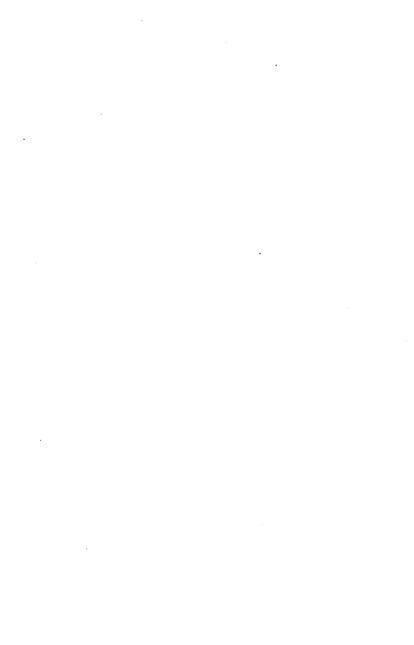
- 8. Still cruder is it, after he has said that he does not see what practical result there can be to the investigation of the boundaries, to cite Colvttus and Melite, and then turn round to the opposite side of the question. For if the wars about Thyrea and Oropus resulted through ignorance of the boundaries. then the separation of countries by boundaries is a thing that results in something practical. Or does Eratosthenes mean this, that in the case of the districts and, of course, of the several nations it is practical to divide them by accurate boundaries, whereas in case of the continents it is superfluous? And yet, I answer, not even here is it any the less practical; for there might arise also in case of the continents a controversy between great rulers, for example, one ruler who held Asia and another who held Libva, as to which one of them really owned Egypt, that is to say, the so-called "Lower" country of Egypt. Moreover, if anyone dismisses this example on account of its rarity, at all events it must be said that the continents are divided according to a process of grand division which also has relation to the whole inhabited world. In following that principle of division we must not worry about this point, either, namely, that those who have made the rivers the dividing lines leave certain districts without dividing lines, because the rivers do not reach all the way to the ocean and so do not really leave the continents as islands.
- 9. Now, towards the end of his treatise—after withholding praise from those who divide the whole multitude of mankind into two groups, namely,

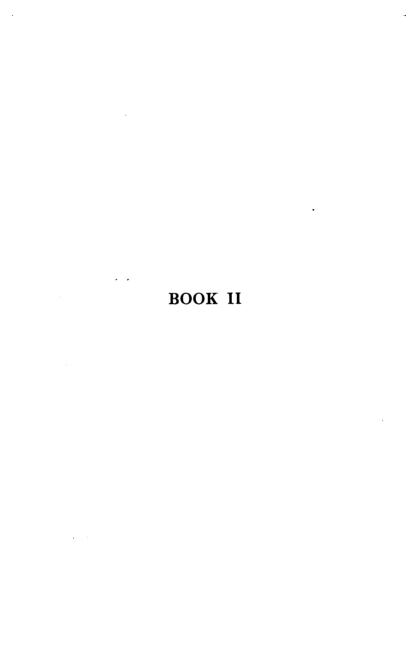
πων πλήθος είς τε "Ελληνας καὶ βαρβάρους, καὶ τούς 'Αλεξάνδρω παραινούντας τοίς μεν "Ελλησιν ώς φίλοις γρησθαι, τοις δὲ βαρβάροις ώς πολεμίοις, βέλτιον είναί φησιν άρετη καὶ κακία διαιρείν ταῦτα. πολλούς γάρ καὶ τῶν Ἑλλήνων είναι κακούς και των βαρβάρων άστείους, καθάπερ Ίνδοὺς καὶ ᾿Αριανούς, ἔτι δὲ Ὑρωμαίους καὶ Καρχηδονίους, ούτω θαυμαστώς πολιτευομένους. διόπερ τον 'Αλέξανδρον, άμελήσαντα των παραινούντων, δσους οδόν τ' ην αποδέχεσθαι των C 67 εὐδοκίμων ἀνδρῶν καὶ εὐεργετεῖν ὥσπερ δί άλλο τι των ούτω διελόντων, τούς μεν έν ψόγω τούς δ' ἐν ἐπαίνω τιθεμένων, ἡ διότι τοῖς μὲν έπικρατεί τὸ νόμιμον καὶ τὸ πολιτικὸν 1 καὶ τὸ παιδείας καὶ λόγων οἰκεῖον, τοῖς δὲ τάναντία. καὶ ὁ ᾿Αλέξανδρος οὖν, οὐκ ἀμελήσας τῶν παραινούντων άλλ' άποδεξάμενος την γνώμην, τὰ ακόλουθα, οὐ τὰ ἐναντία, ἐποίει, πρὸς τὴν διάνοιαν σκοπών την των έπεσταλκότων.

 1 καl το πολιτικόν, omitted by Kramer, and also by Meineke, Dübner-Müller, and Tardieu.

GEOGRAPHY, 1. 4. 9

Greeks and Barbarians, and also from those who advised Alexander to treat the Greeks as friends but the Barbarians as enemies—Eratosthenes goes on to say that it would be better to make such divisions according to good qualities and bad qualities; for not only are many of the Greeks bad, but many of the Barbarians are refined—Indians and Arians, for example, and, further, Romans and Carthaginians, who carry on their governments so admirably. this, he says, is the reason why Alexander, disregarding his advisers, welcomed as many as he could of the men of fair repute and did them favours-just as if those who have made such a division, placing some people in the category of censure, others in that of praise, did so for any other reason than that in some people there prevail the law-abiding and the political instinct, and the qualities associated with education and powers of speech, whereas in other people the opposite characteristics prevail! And so Alexander, not disregarding his advisers, but rather accepting their opinion, did what was consistent with, not contrary to, their advice; for he had regard to the real intent of those who gave him counsel.





1. Έν δὲ τῷ τρίτφ τῶν γεωγραφικῶν καθιστάμενος του της οικουμένης πίνακα γραμμή τινι διαιρεί δίχα ἀπὸ δύσεως ἐπ' ἀνατολὴν παραλλήλφ τῆ ἐσημέρινῆ γραμμῆ. πέρατα δ' αὐτῆς τίθησι πρὸς δύσει μὲν τὰς Ἡρακλείους στήλας, ἐπ' άνατολή δὲ τὰ ἄκρα καὶ ἔσχατα ὅρη τῶν ἀφοριζόντων όρων την προς άρκτον της Ίνδικης πλευράν. γράφει δὲ τὴν γραμμὴν ἀπὸ Στηλῶν διά τε τοῦ Σικελικοῦ πορθμοῦ καὶ τῶν μεσημβρινῶν άκρων της τε Πελοποννήσου καλ της 'Αττικης, καὶ μέχρι τῆς 'Ροδίας καὶ τοῦ 'Ισσικοῦ κόλπου. μέχρι μέν δη δεύρο διά της θαλάττης φησίν είναι την λεχθείσαν γραμμην και των παρακειμένων ηπείρων (καὶ γὰρ αὐτὴν ὅλην τὴν καθ ἡμᾶς θάλατταν ούτως έπι μηκος τετάσθαι μέχρι της C 68 Κιλικίας), είτα ἐπ' εὐθείας πως ἐκβάλλεσθαι παρ' δλην την όρεινην του Ταύρου μέχρι της 'Ινδικής· τὸν γὰρ Ταῦρον ἐπ' εὐθείας τῆ ἀπὸ Στηλῶν θαλάττη τεταμένον δίχα τὴν 'Ασίαν διαιρείν όλην επί μηκος, το μέν αὐτης μέρος βόρειον ποιούντα, τὸ δὲ νότιον ὥσθ' ὁμοίως καὶ . αὐτὸν ἐπὶ τοῦ δι' ᾿Αθηνῶν¹ ἱδρῦσθαι παραλλήλου και την άπο Στηλών μέχρι δεύρο θάλατταν.

¹ δι' 'Αθηνῶν, Kramer, for διά Θινῶν; see note 3, page 240.

BOOK II

I

1. In the Third Book of his Geography Eratosthenes, in establishing the map of the inhabited world, divides it into two parts by a line drawn from west to east, parallel to the equatorial line; and as ends of this line he takes, on the west, the Pillars of Heracles, on the east, the capes and most remote peaks of the mountain-chain that forms the northern boundary of India. He draws the line from the Pillars through the Strait of Sicily and also through the southern capes both of the Peloponnesus and of Attica, and as far as Rhodes and the Gulf of Issus. Up to this point, then, he says, the said line runs through the sea and the adjacent continents (and indeed our whole Mediterranean Sea itself extends, lengthwise, along this line as far as Cilicia); then the line is produced in an approximately straight course along the whole Taurus Range as far as India, for the Taurus stretches in a straight course with the sea that begins at the Pillars, and divides all Asia lengthwise into two parts, thus making one part of it northern, the other southern: so that in like manner both the Taurus and the Sea from the Pillars up to the Taurus lie on the parallel of Athens.

- 2. Ταῦτα δ' εἰπων οἴεται δεῖν διορθώσαι τὸν άργαῖον γεωγραφικὸν πίνακα. πολύ γάρ ἐπὶ τὰς άρκτους παραλλάττειν τὰ έωθινὰ μέρη τῶν ὀρῶν κατ' αὐτόν, συνεπισπασθαι δε και την Ίνδικην άρκτικωτέραν ή δεί 1 γινομένην. πίστιν δε τούτου φέρει μίαν μεν τοιαύτην, ὅτι τὰ τῆς Ἰνδικῆς ἄκρα τὰ μεσημβοινώτατα όμολογοῦσι πολλοὶ τοῖς κατὰ Μερόην ανταίρειν τόποις, από τε των αέρων καί τῶν οὐρανίων τεκμαιρόμενοι, ἐντεῦθεν δ' ἐπὶ τὰ Βορειότατα της Ἰνδικης τὰ πρὸς τοῖς Καυκασίοις όρεσι Πατροκλής, ο μάλιστα πιστεύεσθαι δίκαιος διά τε τὸ ἀξίωμα καὶ διὰ τὸ μὴ ἰδιώτης είναι τῶν γεωγραφικῶν, φησὶ σταδίους μυρίους καὶ πεντακισχιλίους άλλά μην και το άπο Μερόης έπὶ τὸν δί' 'Αθηνῶν παράλληλον τοσοῦτόν πώς έστιν, ώστε της Ίνδικης τὰ προσάρκτια μέρη συνάπτοντα τοις Καυκασίοις ὄρεσιν είς τουτον τελευτάν τὸν κύκλον.
- 3. ᾿Αλλην δὲ πίστιν φέρει τοιαύτην, ὅτι τὸ ἀπὸ τοῦ Ἰσσικοῦ κόλπου διάστημα ἐπὶ τὴν θάλατταν τὴν Ποντικὴν τρισχιλίων πώς ἐστι σταδίων πρὸς ἄρκτον ἰόντι καὶ τοὺς περὶ ᾿Αμισὸν ἢ Σινώπην τόπους, ὅσον καὶ τὸ πλάτος τῶν ὀρῶν λέγεται ἐκ δὲ ᾿Αμισοῦ πρὸς τὴν ἰσημερινὴν ἀνατολὴν φερομένφ πρῶτον μὲν ἡ Κολχίς ἐστιν, ἔπειτα ἡ ἐπὶ τὴν Ὑρκανίαν θάλατταν ὑπέρθεσις καὶ ἡ ἐφεξῆς ἡ ἐπὶ Βάκτρα καὶ τοὺς ἐπέκεινα Σκύθας

¹ ἡ δεῖ, Groskurd, for ἤδη.

¹ The Greek word meaning "rise opposite to", which Strabo often uses (following Eratosthenes), apparently contains the idea of "direction up towards the equator."

GEOGRAPHY, 2. I. 2-3

- 2. After Eratosthenes has said that, he thinks he must needs make a complete revision of the early geographical map; for, according to it, he says, the eastern portions of the mountains deviate considerably towards the north, and India itself is drawn up along with it, and comes to occupy a more northerly position than it should. As proof of this he offers, first, an argument to this effect: the most southerly capes of India rise opposite to 1 the regions about Meroë, as many writers agree, who judge both from the climatic conditions and from the celestial phenomena; and from the capes on to the most northerly regions of India at the Caucasus Mountains. Patrocles (the man who has particular right to our confidence, both on account of his worthiness of character and on account of his being no layman in geographical matters) says the distance is fifteen thousand stadia; but, to be sure, the distance from Meroë to the parallel of Athens is about that distance; and therefore the northerly parts of India, since they join the Caucasus Mountains, 2 come to an end in this parallel.
- 3. Another proof which he offers is to this effect: the distance from the Gulf of Issus to the Pontic Sea is about three thousand stadia, if you go towards the north and the regions round about Amisus and Sinope, a distance as great as that which is also assigned to the breadth of the mountains; and from Amisus, if you bear towards the equinoctial sunrise, you come first to Colchis; and then you come to the passage which takes you over to the Hyrcanian 3 Sea, and to the road next in order that leads to Bactra

³ Caspian.

² The Indian Caucasus, now Hindu Kush.

όδὸς δεξιὰ ἔχοντι τὰ ὅρη· αὕτη δ' ἡ γραμμὴ διὰ ᾿Αμισοῦ πρὸς δύσιν ἐκβαλλομένη διὰ τὴς Προποντίδος ἐστὶ καὶ τοῦ Ἑλλησπόντου. ἀπὸ δὲ Μερόης ἐπὶ τὸν Ἑλλήσποντον οὐ πλείους εἰσι τῶν μυρίων καὶ ὀκτακισχιλίων σταδίων, ὅσοι καὶ ἀπὸ τοῦ μεσημβρινοῦ πλευροῦ τῆς Ἰνδικῆς πρὸς τὰ περὶ τοὺς Βακτρίους μέρη, προστεθέντων τρισχιλίων τοῖς μυρίοις καὶ πεντακισχιλίοις, ὧν οἱ μὲν τοῦ πλάτους ἦσαν τῶν ὀρῶν, οἱ δὲ τῆς Ἰνδικῆς.

4. Πρός δὲ τὴν ἀπόφασιν ταύτην ὁ «Ιππαρχος ἀντιλέγει διαβάλλων τὰς πίστεις» οὕτε γὰρ Πατροκλέα πιστὸν εἶναι, δυεῖν ἀντιμαρτυρούντων C 69 αὐτῷ Δηιμάχου τε καὶ Μεγασθένους, οῖ καθ' οῦς μὲν τόπους δισμυρίων εἶναι σταδίων τὸ διάστημά φασι τὸ ἀπὸ τῆς κατὰ μεσημβρίαν θαλάττης, καθ' οῦς δὲ καὶ τρισμυρίων τούτους γε δὴ τοιαῦτα λέγειν, καὶ τοὺς ἀρχαίους πίνακας τούτοις ὁμολογεῖν. ἀπίθανον δή που νομίζει τὸ μόνῳ δεῖν πιστεύειν Πατροκλεῖ, παρέντας τοὺς τοσοῦτον ἀντιμαρτυροῦντας αὐτῷ, καὶ διορθοῦσθαι παρ' αὐτὸ τοῦτο τοὺς ἀρχαίους πίνακας, ἀλλὰ μὴ ἐᾶν οὕτως, ἔως ἄν τι πιστότερον περὶ αὐτῶν γνῶμεν.

5. Ο λιαι δη πολλάς έχειν εὐθύνας τοῦτον τον λόγον. πρῶτον μὲν ὅτι πολλαῖς μαρτυρίαις ἐκείνου χρησαμένου, μιᾳ φησι τῆ Πατροκλέους αὐτὸν χρῆσθαι. τίνες οὖν ἢσαν οἱ φάσκοντες τὰ μεσημβρινὰ ἄκρα τῆς Ἰνδικῆς ἀνταίρειν τοῖς κατὰ Μερόην; τίνες δ' οἱ τὸ ἀπὸ Μερόης διάστημα μέχρι τοῦ δι' ᾿Αθηνῶν παραλλήλου τοσοῦτον

GEOGRAPHY, 2. 1. 3-5

and to the Scythians on beyond, keeping the mountains on your right; and this line, if produced through Amisus westwards, runs through the Propontis and the Hellespont; and from Meroë to the Hellespont is not more than eighteen thousand stadia, a distance as great as that from the southern side of India to the parts round about the Bactrians, if we added three thousand stadia to the fifteen thousand, some of which belonged to the breadth of the mountains, the others to that of India.

4. As for this declaration of Eratosthenes, Hipparchus contradicts it by throwing discredit on the proofs. In the first place, says he, Patrocles is not trustworthy, since two men bear testimony against him, both Demachus and Megasthenes, who say that in some places the distance from the southern sea is twenty thousand stadia and in other places even thirty thousand; so these two men, at least, make such a statement, and the early maps agree with them. It is an incredible thing, of course, he thinks, that we have to trust Patrocles alone, in disregard of those whose testimony is so strong against him, and to correct the early maps throughout as regards the very point at issue, instead of leaving them as they are until we have more trust-

5. Now I think this reasoning of Hipparchus is open to censure on many grounds. In the first place, although Eratosthenes used many testimonies, he says that Eratosthenes uses only one—that of Patrocles. Who, pray, were the men that affirmed that the southern capes of India rose opposite to the regions of Meroë? And who the men that said the distance from Meroë up to the parallel of Athens

worthy information about them.

λέγοντες; τίνες δὲ πάλιν οἱ τὸ τῶν ὀρῶν πλάτος, ἡ οἱ τὸ ἀπὸ τῆς Κιλικίας ἐπὶ τὴν ᾿Αμισὸν τὸ αὐτὸ τούτῳ λέγοντες; τίνες δὲ οἱ τὸ ἀπὸ ᾿Αμισοῦ διὰ Κόλχων καὶ τῆς Ὑρκανίας μέχρι Βακτρίων καὶ τῶν ἐπέκεινα εἰς τὴν ἑφαν θάλατταν καθηκόντων ἐπ' εὐθείας τε εἶναι λέγοντες καὶ ἐπ' ἰσημερινὰς ἀνατολὰς καὶ παρὰ τὰ ὅρη ἐν δεξιᾳ ἔχοντι αὐτά; ἡ πάλιν τὸ ἐπὶ τὴν δύσιν ἐπ' εὐθείας ταύτῃ τῆ γραμμῆ, διότι ἐπὶ τὴν Προποντίδα ἐστὶ καὶ τὸν Ἑλλήσποντον; ταῦτα γὰρ ὁ Ἐρατοσθένης λαμβάνει πάντα ὡς καὶ ἐκμαρτυρούμενα ὑπὸ τῶν ἐν τοῖς τόποις γενομένων, ἐντετυχηκὼς ὑπομνήμασι πολλοῖς, ὧν εὐπόρει βιβλιοθήκην ἔχων τηλικαύτην ἡλίκην αὐτὸς Ἦπαρχός ψησι.

6. Και αὐτὴ δὲ ἡ τοῦ Πατροκλέους πίστις ἐκ πολλῶν μαρτυριῶν σύγκειται, τῶν βασιλέων τῶν πεπιστευκότων αὐτῷ τηλικαύτην ἀρχήν, τῶν ἐπακολουθησάντων αὐτῷ, τῶν ἀντιδοξούντων, ὧν αὐτὸς ὁ «Ιππαρχος κατονομάζει· οἱ γὰρ κατ' ἐκείνων ἔλεγχοι πίστεις τῶν ὑπὸ τούτου λεγομένων εἰσίν. οὐδὲ τοῦτο δὲ ἀπίθανον τοῦ Πατροκλέους, ὅτι ψησὶ τοὺς ᾿Αλεξάνδρφ συστρατεύσαντας ἐπιδρομάδην ἱστορῆσαι ἔκαστα, αὐτὸν δὲ ᾿Αλέξανδρον ἀκριβῶσαι, ἀναγραψάντων τὴν ὅλην χώραν τῶν ἐμπειροτάτων αὐτῷ· τὴν δ᾽ ἀναγραφὴν αὐτῷ

¹ παρά, Corais, for περί; Groskurd, Forbiger, Meineke following.

GEOGRAPHY, 2. 1. 5-6

was such a distance? And who, again, the men that gave the breadth of the Taurus Mountains, or the men that called the distance from Cilicia to the Amisus the same as that of this breadth? said as regards the distance from Amisus, through Colchis and Hyrcania up to Bactria and through the regions beyond Bactria which reach down to the eastern sea, that it was in a straight line and toward the equinoctial east and that it was alongside the mountains which you keep on your right hand? Or, again, as regards the distance towards the west in a straight course with this line, that it was towards the Proportis and the Hellesport? Why, Eratosthenes takes all these as matters actually established by the testimony of the men who had been in the regions, for he has read many historical treatiseswith which he was well supplied if he had a library as large as Hipparchus savs it was.1

6. Further, the trustworthiness of Patrocles, itself, rests upon many testimonies; I refer to the Kings²² who had entrusted to him such an important office; to the men who followed him, to the men who oppose him, whom Hipparchus himself names; for the tests to which those men are subjected are but proofs of the statements of Patrocles. Neither does this statement of Patrocles lack plausibility, namely, that those who made the expedition with Alexander acquired only cursory information about everything, but Alexander himself made accurate investigations, since the men best acquainted with the country had described the whole of it for him; and this description was later presented to

¹ The library at Alexandria.

² Seleucus I. and Antiochus I.

δοθηναί φησιν ύστερον ύπὸ Εενοκλέους τοῦ γαζοφύλακος.

- 7. Έτι φησίν ὁ "Ιππαρχος ἐν τῷ δευτέρω ὑπομνήματι αὐτὸν τὸν Ἐρατοσθένη διαβάλλειν τὴν τοῦ Πατροκλέους πίστιν ἐκ τῆς πρὸς Μεγασθένη διαφωνίας περί τοῦ μήκους της Ίνδικης τοῦ κατά τὸ βόρειον πλευρόν, τοῦ μὲν Μεγασθένους λέγοντος σταδίων μυρίων έξακισχιλίων, τοῦ δὲ Πατροκλέους γιλίοις λείπειν φαμένου ἀπὸ γάρ τινος αναγραφής σταθμών δρμηθέντα τοίς μέν C 70 ἀπιστεῖν διὰ τὴν διαφωνίαν, ἐκείνη δὲ προσέχειν. εί οθυ διά την διαφωνίαν ένταθθα άπιστος ό Πατροκλής, καίτοι παρά χιλίους σταδίους τής διαφοράς ούσης, πόσω χρη μάλλον απιστείν εν οίς παρά οκτακισγιλίους ή διαφορά έστι, πρός δύο καὶ ταῦτα ἄνδρας συμφωνοῦντας ἀλλήλοις, τών μεν λεγόντων τὸ της Ἰνδικης πλάτος δισμυρίων σταδίων, τοῦ δὲ μυρίων καὶ δισχιλίων;
 - 8. Έροῦμεν δ΄ ὅτι οὐ ψιλὴν τὴν διαφωνίαν ἢτιάσατο, ἀλλὰ συγκρίνων πρὸς τὴν ὁμολογίαν καὶ τὴν ἀξιοπιστίαν τῆς ἀναγραφῆς τῶν σταθμῶν. οὐ θαυμαστὸν δέ, εἰ πιστοῦ γίνεταί τι πιστότερον, καὶ εἰ τῷ αὐτῷ ἐν ἑτέροις μὲν πιστεύομεν, ἐν ἑτέροις δ΄ ἀπιστοῦμεν, ὅταν παρά τινος τεθἢ τι βεβαιότερον. γελοῖόν τε τὸ τὴν παρὰ πολὺ διαφωνίαν ἀπιστοτέρους ποιεῖν νομίσαι τοὺς

GEOGRAPHY, 2. 1. 6-8

Patrocles (so Patrocles says) by Xenocles, Alexander's treasurer.

- 7. Hipparchus further says, in his Second Book, that Eratosthenes himself throws discredit on the trustworthiness of Patrocles, in consequence of Patrocles' disagreement with Megasthenes about the length of India on its northern side, which Megasthenes calls sixteen thousand stadia, whereas Patrocles affirms that it is a thousand short of that; for, having started from a certain "Itinerary" as basis, Eratosthenes distrusts both of them on account of their disagreement and holds to the "Itinerary." If, then, says Hipparchus, Patrocles is untrustworthy on account of the disagreement at that point, although the discrepancy is only a matter of a thousand stadia. how much more should we distrust him where the discrepancy is a matter of eight thousand stadia, as against two men, and that, too, men who agree with one another; for both of them call the breadth of India twenty thousand stadia, whereas Patrocles calls it twelve thousand?
- 8. My answer will be that it was not the bare disagreement with Megasthenes that Eratosthenes found fault with, but he found fault when he compared their disagreement with the harmony and trustworthiness of the "Itinerary." Yet we should not be surprised if one thing proves to be more trustworthy than another trustworthy thing, and if we trust the same man in some things, but distrust him in others, whenever greater certainty has been established from some other source. Again, it is ridiculous to think that the amount by which the authorities disagree makes the parties to the disagreement less trustworthy. Why, on

διαφωνούντας τοὐναντίον γὰρ ἐν τῷ παρὰ μικρὸν συμβαίνειν τοῦτο μᾶλλον ἔοικε, παρὰ μικρὸν γὰρ ἡ πλάνη συμβαίνει μᾶλλον, οὐ τοῖς τυχοῦσι μόνον, ἀλλὰ καὶ τοῖς πλέον τι τῶν ἐτέρων φρονοῦσιν ἐν δὲ τοῖς παρὰ πολὺ ὁ μὲν τυχὼν ἀμάρτοι ἄν, ὁ δ' ἐπιστημονικώτερος ἡττον ᾶν τοῦτο πάθοι διὸ καὶ πιστεύεται θᾶττον.

9. Απαντες μέν τοίνυν οι περί της Ἰνδικης γράψαντες ώς έπὶ τὸ πολύ ψευδολόγοι γεγόνασι, καθ ύπερβολην δε Δηίμαγος τὰ δε δεύτερα λέγει Μεγασθένης 'Ονησίκριτος δὲ καὶ Νέαρχος καὶ άλλοι τοιούτοι παραψελλίζοντες ήδη καὶ ήμιν δ' ὑπῆρξεν ἐπὶ πλέον κατιδεῖν ταῦτα, ὑπομνηματιζομένοις τὰς 'Αλεξάνδρου πράξεις διαφερόντως δ' ἀπιστεῖν ἄξιον Δηιμάχω τε καὶ Μεγασθένει. οδτοι γάρ είσιν οί τοὺς Ἐνωτοκοίτας καὶ τοὺς 'Αστόμους καὶ 'Αρρινας ίστοροῦντες, Μονοφθάλμους τε καὶ Μακροσκελεῖς καὶ 'Οπισθοδακτύλους' άνεκαίνισαν δέ καὶ τὴν 'Ομηρικὴν τῶν Πυγμαίων γερανομαχίαν, τρισπιθάμους εἰπόντες. οὖτοι δὲ καὶ τοὺς χρυσωρύγους μύρμηκας καὶ Πάνας σφηνοκεφάλους ὄφεις τε καὶ βοῦς καὶ ελάφους σύν κέρασι καταπίνοντας περί ών έτερος τὸν έτερον έλέγγει, ὅπερ καὶ Ἐρατοσθένης φησίν.

¹ Which formed a part of Strabo's *Historical Sketches* (see footnote on page 46). Both Onesicritus and Nearchus accom-262

GEOGRAPHY, 2. 1. 8-9

the contrary, this is more likely to be the case where the matter of disagreement is slight; for if the matter of disagreement is but slight, error is more likely to result, not merely among ordinary writers, but even among writers who are somewhat superior to the other class; but where the matters of disagreement are considerable, though the ordinary man would go astray, the more scientific man would be less likely to do so, and for that reason he is more

quickly trusted.

9. However, all who have written about India have proved themselves, for the most part, fabricators, but preëminently so Deimachus; the next in order is Megasthenes; and then, Onesicritus, and Nearchus, and other such writers, who begin to speak the truth, though with faltering voice. I, too, had the privilege of noting this fact extensively when I was writing the "Deeds of Alexander." 1 But especially do Deïmachus and Megasthenes deserve to be distrusted. For they are the persons who tell us about the "men that sleep in their ears," and the "men without mouths," and "men without noses"; and about "men with one eye," "men with long legs," "men with fingers turned backward"; and they revived, also, the Homeric story of the battle between the cranes and the "pygmies," who, they said, were three spans tall. These men also tell about the ants that mine gold and Pans with wedge-shaped heads; and about snakes that swallow oxen and stags, horns and all: and in these matters the one refutes the other, as is stated by Eratosthenes also. For although they

panied Alexander. Strabo alludes to his own stay at the Alexandrian Library.

ἐπέμφθησαν μὲν γὰρ εἰς τὰ Παλίμβοθρα, ὁ μὲν Μεγασθένης πρὸς Σανδρόκοττον, ὁ δὲ Δηίμαχος πρὸς ᾿Αλλιτροχάδην τὸν ἐκείνου υίον, κατὰ πρεσβείαν ὑπομνήματα δὲ τῆς ἀποδημίας κατέλιπον τοιαῦτα, ὑφ᾽ ἦς δή ποτε αἰτίας προαχθέντες. Πατροκλῆς δὲ ἤκιστα τοιοῦτος καὶ οἱ ἄλλοι δὲ μάρτυρες οὐκ ἀπίθανοι, οἶς κέχρηται ὁ Ἐρατοσθένης.

10. Εἰ γὰρ ὁ διὰ Ὑρόδου καὶ Βυζαντίου μεσημβρινὸς ὀρθῶς εἴληπται, καὶ ὁ διὰ τῆς Κιλικίας καὶ ᾿Αμισοῦ ὀρθῶς αν εἴη εἰλημμένος φαίνεται γὰρ τὸ παράλληλον ἐκ πολλῶν, ὅταν μηδετέρωσε ¹

C 71 σύμπτωσις ἀπελέγχηται.

11. "Ο τε έξ 'Αμισοῦ πλοῦς ἐπὶ τὴν Κολχίδα ὅτι ἐστὶν ἐπὶ ἰσημερινὴν ἀνατολήν, καὶ τοῖς ἀνέμοις ἐλέγχεται καὶ ὥραις καὶ καρποῖς καὶ ταῖς ἀνατολαῖς αὐταῖς ὡς δ' αὕτως καὶ ἡ ἐπὶ τὴν Κασπίαν ὑπέρβασις καὶ ἡ ἐφεξῆς ὁδὸς μέχρι Βάκτρων. πολλαχοῦ γὰρ ἡ ἐνάργεια καὶ τὸ ἐκ πάντων συμφωνούμενον ὀργάνου πιστότερόν ἐστιν ἐπεὶ καὶ ὁ αὐτὸς "Ιππαρχος τὴν ἀπὸ Στηλῶν μέχρι τῆς Κιλικίας γραμμήν, ὅτι ἐστὶν ἐπὸ εὐθείας καὶ ὅτι ἐπὶ ἰσημερινὴν ἀνατολήν, οὐ πᾶσαν

¹ μηδετέρωσε, A. Miller, for μηδετέρως ή.

¹ Scholars have agreed that something has fallen out of the manuscripts; but the assumption is unnecessary. Strabo here recurs to "the second argument" of Eratosthenes, which was introduced as far back as § 3, and the connection is not at once apparent; but he has just referred to the credibility of "the other witnesses," and, clearly, it was

GEOGRAPHY, 2. 1. 9-11

were sent on an ambassadorial mission to Palimbothra (Megasthenes to Sandrocottus, Deïmachus to Allitrochades the son of Sandrocottus), still, as memoirs of their stay abroad, they have left behind such writings as these, being prompted to do so by—I know not what cause! Patrocles, however, is by no means that sort of man. And also the other witnesses whom Eratosthenes has used are not lacking in credibility.

10. For instance, if the meridian through Rhodes and Byzantium has been correctly drawn, then that through Cilicia and Amisus will have been correctly drawn too; for from many considerations the parallel relation of lines is obvious whenever it is proved by test that there is no meeting in either

direction.2

11. Again, that the voyage from Amisus to Colchis lies in the direction of the equinoctial east 3 is proved by the winds, by the seasons, by the crops, and by the risings of the sun themselves; and thus, in the same way, both the pass that leads over to the Caspian Sea and the road from there on to Bactra. For in many cases the way things appear to the sight and the agreement of all the testimony are more trustworthy than an instrument. Indeed, even the same Hipparchus, in taking the line from the Pillars on to Cilicia to be in a straight course and to be in the direction of the equinoctial east, did

upon "the other witnesses" that Eratosthenes based that "second argument," as is indicated in § 5. Strabo then proceeds, in § 10, to illustrate the credibility of those witnesses by defending Eratosthenes on points wherein they were involved.

³ An echo from Greek geometry.

That is, due east. 4 Compare § 35 (below).

όργανικώς καὶ γεωμετρικώς ἔλαβεν, ἀλλ' ὅλην τὴν άπὸ Στηλών μέχρι πορθμοῦ τοῖς πλέουσιν ἐπίστευσεν, ώστ' οὐδ' ἐκεῖνο¹ εὖ λέγει τὸ² "ἐπειδὴ οὐκ ἔγομεν λέγειν οὔθ' ἡμέρας μεγίστης πρὸς τὴν Βραγυτάτην λόγον οὖτε γνώμονος πρὸς σκιὰν ἐπὶ τη παρωρεία τη ἀπὸ Κιλικίας μέχρι 3 Ἰνδων, οὐδ' εί ἐπὶ παραλλήλου γραμμής ἐστιν ή λόξωσις, έχομεν εἰπεῖν, ἀλλ' ἐᾶν ἀδιόρθωτον, λοξὴν φυλάξαντες, ώς οι άρχαιοι πίνακες παρέχουσι 4." πρώτον μεν γαρ το μη έχειν είπειν ταὐτόν ἐστι τῷ ἐπέχειν, ὁ δ' ἐπέχων οὐδ' ἐτέρωσε ῥέπει, ἐαν δὲ κελεύων, ώς οἱ ἀρχαῖοι, ἐκεῖσε ῥέπει. μᾶλλον δ' αν τακόλουθον εφύλαττεν, εί συνεβούλευε μηδέ γεωγραφείν όλως οὐδε γάρ των άλλων όρων τάς θέσεις, οίον "Αλπεων καὶ τῶν Πυρηναίων καὶ τῶν Θρακίων καὶ Ἰλλυρικών καὶ Γερμανικών, οὕτως έγομεν είπειν. τίς δ' αν ήγήσαιτο πιστοτερους τῶν ὕστερον τοὺς παλαιοὺς τοσαῦτα πλημμελήσαντας περὶ τὴν πινακογραφίαν, ὅσα ε \tilde{v} 5 διαβέβληκεν 'Ερατοσθένης, ών οὐδενὶ ἀντείρηκεν "Ιππαρχος;

12. Καὶ τὰ έξης δὲ πλήρη μεγάλων ἀποριῶν ἐστιν. ὅρα γάρ, εἰ τοῦτο μὲν μὴ κινοίη τις τὸ τὰ

² εὖ λέγει τό, Xylander, for εὐλογεῖτο; Meineke following.

3 μέχρι, Meineke, for μέχρις.

⁵ εδ, Corais, for οὐ; editors following.

¹ ἐκεῖνο, Scaliger, for ἐκεῖνος; Corais, Meineke, Dübner-Müller, Groskurd, Forbiger, following.

^{*} παρέχουσι, Kramer, for περιέχουσι; Meineke, Forbiger, Tardieu, following.

GEOGRAPHY, 2. I. II-I2

not depend wholly on instruments and geometrical calculations, but for the whole line from the Pillars on to the Strait 1 he trusted the sailors. So that this statement of his is not good, either, where he says: "Since we cannot tell either the relation of the longest day to the shortest, or of gnomon to shadow, along the mountain-side that runs from Cilicia on to India, neither can we say whether the slant of the mountains lies in a parallel line.2 but we must leave the line uncorrected, keeping it aslant as the early maps give it." For, in the first place, "cannot tell" is the same thing as to withhold opinion, and the man who withholds opinion also inclines to neither side; but when Hipparchus bids us leave the line as the ancients give it, he inclines to that side. Rather would he be "keeping" the consistent course, if he also advised us not to treat geography at all; for we "cannot tell" in that way 3 the positions of the other mountains, either-for instance, the Alps, the Pyrenees, and the Thracian, the Illyrian, and the German Mountains. But who would think the early geographers more trustworthy than those of later times, since in their map-drawing the ancients made all those blunders that Eratosthenes has rightly accused them of and not one of these blunders has been objected to by Hipparchus?

12. Again, the next remarks of Hipparchus are full of great difficulties. For example, see how many absurdities would arise if one should not disallow the

¹ Of Sicily.

² That is, whether the line of these mountains, which in the early maps makes an acute angle to the north with a parallel of latitude, should lie on a parallel. Compare § 2 (above).

³ That is, by instruments and geometrical calculations.

άκρα της Ίνδικης τὰ μεσημβρινά ἀνταίρειν τοῖς κατὰ Μερόην, μηδὲ τὸ διάστημα τὸ ἀπὸ Μερόης έπὶ τὸ στόμα τὸ κατὰ τὸ Βυζάντιον, ὅτι ἐστὶ περὶ μυρίους σταδίους καὶ ὀκτακισχιλίους, ποιοίη δὲ τρισμυρίων τὸ ἀπὸ τῶν μεσημβρινῶν Ἰνδῶν μέχρι των δρών, δσα αν συμβαίη άτοπα. πρώτον μέν γάρ είπερ ὁ αὐτός ἐστι παράλληλος ὁ διὰ Βυζαντίου τῷ διὰ Μασσαλίας (καθάπερ εζρηκεν "Ιππαρχος πιστεύσας Πυθέα), ὁ δ' αὐτὸς καλ μεσημβρινός έστιν ο διά Βυζαντίου τω διά Βορυσθένους, ὅπερ καὶ αὐτὸ δοκιμάζει ὁ "Ιππαρχος, δοκιμάζει δὲ καὶ τὸ ἀπὸ Βυζαντίου διάστημα ἐπὶ τον Βορυσθένη σταδίους είναι τρισγιλίους έπτακοσίους, τοσούτοι αν είεν και οι από Μασσαλίας έπὶ τὸν διὰ Βορυσθένους παράλληλον, ὅς νε διὰ της Κελτικής παρωκεανίτιδος αν είη τοσούτους νάρ πως διελθόντες συνάπτουσι τῶ ὡκεανῶ.

13. Πάλιν δ' έπεὶ τὴν Κινναμωμοφόρον ἐσχάτην ἴσμεν οἰκουμένην πρὸς μεσημβρίαν, καὶ καθ' Ἰππαρχον αὐτὸν ὁ δι' αὐτῆς παράλληλος ἀρχὴ τῆς εὐκράτου καὶ τῆς οἰκουμένης ἐστί, καὶ διέχει τοῦ ἰσημερινοῦ περὶ ὀκτακισχιλίους καὶ ὀκτακοσίους σταδίους ἐπεὶ οὖν φησιν ἀπὸ τοῦ ἰσημερινοῦ τὸν διὰ Βορυσθένους διέχειν τρισμυρίους καὶ τετρακισχιλίους σταδίους, εἶεν ἃν λοιποὶ οἱ ἀπὸ τοῦ ὁρίζοντος τὴν διακεκαυμένην

¹ See footnote on page 254.

GEOGRAPHY, 2. 1. 12-13

statement that the southern capes of India rise opposite to 1 the regions of Meroë, or the statement that the distance from Meroë to the mouth of the strait at Byzantium is about eighteen thousand stadia. but vet should make the distance from Southern India to the mountains thirty thousand stadia. Why, · in the first place, if it be true that the parallel which runs through Byzantium is the same as that which runs through Massilia (as Hipparchus has stated, on the authority of Pytheas), and that the meridian which runs through Byzantium is the same as that through the Borysthenes (which very thing, also, Hipparchus approves), and if he also approves the statement that the distance from Byzantium to the Borvsthenes is three thousand seven hundred stadia, then this last number would be the number of stadia from Massilia to the parallel that runs through the Borysthenes 2; which parallel, of course, would run through the sea-coast of Celtica, for on going about this number of stadia through Celtica you reach the ocean.8

13. Again, since the Cinnamon-producing Country is the most remote inhabited country towards the south, as we know, and since, according to Hipparchus himself, the parallel that runs through it is the beginning of the temperate zone and of the inhabited world, and is distant from the equator about eight thousand eight hundred stadia; and further, since, as Hipparchus says, the parallel through the Borysthenes is thirty-four thousand stadia distant from the equator, there would remain twenty-

3 That is, going toward the north.

Strabo frequently refers to the mouth of the Borysthenes as merely "Borysthenes."

καὶ τὴν εὔκρατον εἰς τὸν διὰ Βορυσθένους καὶ τῆς Κελτικῆς παρωκεανίτιδος στάδιοι δισμύριοι πεντακισχίλιοι διακόσιοι. ὁ δέ γε ἀπὸ τῆς Κελτικῆς πρὸς ἄρκτον πλοῦς ἔσχατος λέγεται παρὰ τοῖς νῦν ὁ ἐπὶ τὴν Ἰέρνην, ἐπέκεινα μὲν οὖσαν τῆς Βρεττανικῆς, ἀθλίως δὲ διὰ ψῦχος οἰκουμένην, ὅστε τὰ ἐπέκεινα νομίζειν ἀοίκητα. οὐ πλέον δὲ τῆς Κελτικῆς τὴν Ἰέρνην διέχειν φασὶ τῶν πεντακισχιλίων, ὅστε περὶ τρισμυρίους εἶεν ἄν ἡ μικρῷ πλείους οἱ πάντες οἱ τὸ πλάτος τῆς οἰκουμένης ἀφορίζοντες.

14. Φέρε δη την άνταίρουσαν τη Κινναμωμοφόρω καὶ ἐπὶ τοῦ αὐτοῦ παραλλήλου πρὸς ἔω κειμένην ύποβωμεν. αύτη δ' έστλν ή περλ την Ταπροβάνην ή δὲ Ταπροβάνη πεπίστευται σφόδρα, ότι της Ἰνδικής πρόκειται πελαγία μεγάλη νήσος πρὸς νότον μηκύνεται δὲ ἐπὶ τὴν Αίθιοπίαν πλέον ή πεντακισχιλίους σταδίους, ως φασιν, έξ ης και έλέφαντα κομίζεσθαι πολύν είς τὰ τῶν Ἰνδῶν ἐμπόρια καὶ χελώνεια 1 καὶ άλλον φόρτον. ταύτη δη τῆ νήσφ πλάτος προστεθέν τὸ ἀνάλογον τῶ μήκει καὶ δίαρμα τὸ ἐπ' αὐτὴν ἐκ της 'Ινδικης των μέν τρισχιλίων σταδίων ούκ αν έλαττον ποιήσειε διάστημα, δσον ην τὸ ἀπὸ τοῦ δρου της οἰκουμένης εἰς Μερόην, εἴπερ μέλλει τὰ άκρα της 'Ινδικης ανταίρειν τη Μερόη πιθανώτερον δ' έστὶ καὶ πλείους τῶν τρισχιλίων τιθέναι. εί δή τοῦτο προσθείη τις τοῖς τρισμυρίοις, οίς φησιν

¹ χελώνεια, Meineke, for χελώνια.

GEOGRAPHY, 2. 1. 13-14

five thousand two hundred stadia for the distance from the parallel that divides the torrid from the temperate zone to the parallel that runs through the Borysthenes and the sea-coast of Celtica. And yet the voyage from Celtica to the north is nowadays called the remotest voyage to the north; I mean the voyage to Ierne, which island not only lies beyond Britain but is such a wretched place to live in on account of the cold that the regions on beyond are regarded as uninhabitable. And Ierne is not farther from Celtica, they say, than five thousand stadia; so that about thirty thousand stadia all told, or perhaps a few more, would represent the breadth of the inhabited world.

14. Well, then, let us pass on to the country that rises opposite to the Cinnamon-producing Country and lies toward the east on the same parallel. This is the region about Taprobane.2 We have strong assurance that Taprobane is a large island in the open sea, which lies off India to the south. stretches lengthwise in the direction of Ethiopia for more than five thousand stadia, as they say; and from it, they say, much ivory is brought to the markets of India. and also tortoise-shell and other merchandise. Now if we assign to this island a breadth that is proportional to its length, and if we add thereto the expanse of the sea between it and India the sum would be a distance of not less than three thousand stadia—as much as the distance from the border of the inhabited world to Meroë-that is, if the capes of India are to rise opposite to Meroë; but it is more plausible to set down still more than three thousand stadia. So if you should add these three thousand

¹ Ireland. ² Ceylon.

ό Δηίμαγος μέγρι της είς Βακτρίους καὶ Σογδι-

ανούς ύπερθέσεως, εκπέσοι αν πάντα ταῦτα τα έθνη της οἰκουμένης καὶ της εὐκράτου. τίς αν οὖν θαροήσειε ταθτα λένειν, ἀκούων καὶ τῶν πάλαι καλ των νύν την ευκρασίαν καλ την εύκαρπίαν λεγόντων πρώτον μέν την τών προσβόρρων 'Ινδών, έπειτα δε και την εν τη Υρκανία και τη 'Αρία καὶ ἐφεξῆς τῆ τε Μαργιανή καὶ τή Βακτριανή; ἄπασαι γὰρ αὖται προσεχεῖς μέν εἰσι C 73 τη βορείω πλευρά του Ταύρου καὶ ή γε Βακτριανή καὶ πλησιάζει τη είς Ἰνδοὺς ὑπερθέσει, τοσαύτη δ' εὐδαιμονία κέχρηνται, ώστε πάμπολύ τι ἀπέχειν της ἀοικήτου. ἐν μέν γε τη Υρκανία την άμπελον μετρητην οίνου φέρειν φασί, την δὲ συκῆν μεδίμνους ἐξήκοντα, τὸν δὲ σῖτον ἐκ τοῦ ἐκπεσόντος καρποῦ τῆς καλάμης πάλιν φύεσθαι, έν δὲ τοῖς δένδρεσι σμηνουργεῖσθαι καὶ τῶν φύλλων ἀπορρεῖν μέλι, ὅπερ γίνεσθαι μέν καὶ τῆς Μηδίας ἐν τῆ Ματιανῆ καὶ τῆς 'Αρμενίας έν τη Σακασηνή και τή 'Αραξηνή. άλλ' ἐνταῦθα μὲν οὐκ ἐπ' ἴσης θαυμαστόν. είπερ είσι νοτιώτεραι της Υρκανίας, και εύκρασία διαφέρουσαι της άλλης χώρας έκει δε μάλλον. έν δὲ τῆ Μαργιανή τὸν πυθμένα φασίν εύρίσκεσθαι της άμπέλου πολλάκις δυείν άνδρων όργυιαίς περιληπτόν, τὸν δὲ βότρυν δίπηχυν. παραπλησίαν δὲ λέγουσι καὶ τὴν 'Αρίαν, εὐοινία

GEOGRAPHY, 2. I. 14

stadia to the thirty thousand stadia which Deïmachus gives as the distance to the pass that leads over to Bactriana and Sogdiana, then all these peoples would fall outside the inhabited world and the temperate zone. Who, pray, would venture to maintain this, when he hears men of both ancient and modern times telling about the mild climate and the fertility, first of Northern India, and then of Hyrcania and Aria, and, next in order, of Margiana and Bactriana? For, although all these countries lie next to the northern side of the Taurus Range, and although Bactriana, at least, lies close to the pass that leads over to India, still they enjoy such a happy lot that they must be a very long way off from the uninhabitable part of the earth. Hyrcania, at any rate, they say that the vine produces one metretes 1 of wine, the fig-tree sixty medimni² of figs, the wheat grows again from the waste seed of the stubble-field, bees have their hives in the trees, and honey drips from the leaves; and this is also true of Matiana, a province of Media, and of Sacasene and of Araxene, districts of Armenia. But in the case of the latter districts this is not equally amazing, if it be true that they lie further south than Hyrcania, and are superior to the rest of the country in mildness of climate; but in the case of Hyrcania it is more amazing. And in Margiana, they say, it is oftentimes found that the trunk of the grape-vine can be encircled only by the outstretched arms of two men, and that the cluster of grapes is two cubits long. And they say that Aria also is similar, but that it even excels in good

¹ A little less than nine gallons.

² The medimnus was about a bushel and a half.

δὲ καὶ ὑπερβάλλειν, ἐν ἡ γε καὶ εἰς τριγονίαν ¹ παραμένειν ἐν ἀπιττώτοις ἄγγεσι τὸν οἶνον πάμφορον δ' εἶναι καὶ τὴν Βακτριανὴν πλὴν ἐλαίου, πλησίον τῆ 'Αρία παρακειμένην.

15. Εί δὲ καὶ ψυχρά μέρη τῶν τόπων τούτων έστίν, ὅσα ὑψηλὰ καὶ ὀρεινά, οὐδὲν δεῖ θαυμάζειν καὶ γὰρ ἐν τοῖς μεσημβρινοῖς κλίμασι τὰ ὄρη Ψυγρά ἐστι, καὶ καθόλου τὰ μετέωρα ἐδάφη, κᾶν πεδία ή, της γουν Καππαδοκίας τὰ πρὸς τῶ Εὐξείνω πολύ βορειότερά έστι των πρὸς τω Ταύρω άλλ' ή μεν Βαγαδαονία, πεδίον εξαίσιον μεταξύ πίπτον τοῦ τε 'Αργαίου όρους καὶ τοῦ Ταύρου, σπάνιον εί πού τι τῶν καρπίμων δένδρων φύοι, καίπερ νοτιώτερον της Ποντικής θαλάττης σταδίοις τρισγιλίοις, τὰ δὲ τῆς Σινώπης προάστεια καὶ τῆς 'Αμισοῦ καὶ τῆς Φαναροίας τὸ πλέον έλαιόφυτά έστι. καὶ τὸν λΕον δὲ τὸν ὁρίζοντα την Βακτριανην άπο της Σογδιανης ούτω φασίν εύπλουν είναι, ώστε τον Ίνδικον φόρτον ύπερκομισθέντα είς αὐτὸν ραδίως είς την Υρκανίαν κατάγεσθαι και τους έφεξης τόπους μέχρι του Πόντου διὰ τῶν ποταμῶν.

16. Τίν' αν οὖν τοιαύτην εὕροις εὐδαιμονίαν περὶ Βορυσθένη καὶ τὴν Κελτικὴν τὴν παρωκεανῖτιν, ὅπου μηδὲ φύεται ἄμπελος ἡ μὴ τελεσφορεῖ; ἐν δὲ τοῖς νοτιωτέροις τούτων καὶ

¹ Βαγαδαονία, Casaubon, for Βαγαδανία; Corais following; W. M. Ramsay approving.

¹ τριγονίαν, Cobet, for τριγένειαν; Bernadakis, Cascorbi, approving.

GEOGRAPHY, 2. 1. 14-16

vintage, since there, at all events, the wine actually keeps for three generations in unpitched casks; and that Bactriana, too, which lies on the border of Aria,

produces everything except olive-oil.

15. But if all the parts of these regions that are high and mountainous are also cold, we should not be amazed; for even in the southern latitudes the mountains are cold, and in general all high-lying lands, even if they be plateaux, are cold. At any rate, in Cappadocia the regions next to the Euxine are much farther north than those next to the Taurus; but Bagadaonia, an enormous plain which falls between the Argaeus Mountain 1 and the Taurus Range, only scantily (if anywhere) produces fruittrees, although it is three thousand stadia farther south than the Pontic Sea, whereas the suburbs of Sinope and Amisus and the greater part of Phanaroea are planted with olive-trees. further, the River Oxus, which divides Bactriana from Sogdiana, is so easily navigable, they say, that the Indian merchandise packed over the mountains to it is easily brought down to the Hyrcanian Sea, and thence, on the rivers, to the successive regions beyond as far as the Pontus.2

16. Now what comparable blessings of nature can you find round about the Borysthenes or in the part of Celtica that lies on the ocean, where the grape either does not grow at all, or else does not bear fruit? In the more southern districts of these

¹ In Cappadocia; now Mt. Erdjias.

² According to this statement the Oxus, which now empties into the Aral Lake, flowed into the Caspian Sea. Thence, by the Kur and other rivers, the merchandise was carried to western points. See 11. 7. 3.

ἐπιθαλαττιδίοις 1 καὶ τοῖς κατὰ Βόσπορον τελεσφορεῖ, ἐν μικροκαρπία δέ, καὶ τοῦ χειμῶνος κατορύττεται. οἱ δὲ πάγοι παρ' αὐτοῖς τοιοῦτοί τινές εἰσιν ἐπὶ τῷ στόματι τῆς λίμνης τῆς Μαιώτιδος, ὥστ' ἐν χωρίφ, ἐν ῷ χειμῶνος ὁ τοῦ Μιθριδάτου στρατηγὸς ἐνίκησε τοὺς βαρβάρους ἱππομαχῶν ἐπὶ τῷ πάγῳ, τοὺς αὐτοὺς κατα-C 74 ναυμαχῆσαι θέρους, λυθέντος τοῦ πάγου. ὁ δ' Ἐρατοσθένης καὶ τοὐπίγραμμα προφέρεται τὸ ἐν τῷ ᾿Ασκληπιείφ τῷ Παντικαπαιέων ἐπὶ τῆ ῥαγείση χαλκῆ ὑδρία διὰ τὸν πάγον.

εἴ τις ἄρ' ἀνθρώπων μὴ πείθεται οἶα παρ' ἡμῖν γίγνεται, εἰς τήνδε γνώτω ἰδὼν ὑδρίαν. ἡν οὐχ ὡς ἀνάθημα θεοῦ καλόν, ἀλλ' ἐπίδειγμα χειμῶνος μεγάλου θῆχ' ἱερεὺς Στρατίος.²

ὅπου οὖν οὐδὲ τοῖς ἐν Βοσπόρφ συγκριτέον τὰ ἐν τοῖς διαριθμηθεῖσι τόποις, ἀλλ' οὐδὲ τοῖς ἐν 'Αμισῷ καὶ Σινώπη (καὶ γὰρ ἐκείνων εὐκρατοτέρους ὰν εἴποι τις), σχολῆ γ' ὰν παραβάλλοιντο τοῖς κατὰ Βορυσθένη καὶ τοῖς ἐσχάτοις Κελτοῖς. μόλις γὰρ ὰν ταὐτοκλινεῖς εἰεν τοῖς κατ' 'Αμισὸν καὶ Σινώπην καὶ Βυζάντιον καὶ Μασσαλίαν, οῖ τοῦ Βορυσθένους καὶ τῶν Κελτῶν ὡμολόγηνται νοτιώτεροι σταδίοις τρισχιλίοις καὶ ἔπτακοσίοις.

 ¹ ἐπιθαλαττιδίοις, Friedemann, for ἐπιθαλαττίοις or ἐπιθαλαττιαίοις; Meineke following; Kramer, C. Müller, approving.
 2 Στρατίος, Meineke, for Στράτιος.

¹ That is, to keep them from freezing. See 7. 3. 18. 276

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countries, both on the Mediterranean Sea and in the regions about the Bosporus, the vine does bear fruit, but the grapes are small, and the vines are buried during the winter. The frosts are so severe at the mouth of Lake Maeotis that, at a certain spot where, in winter time, Mithridates' general conquered the barbarians in a cavalry engagement fought on the ice, he afterwards, in summer time, when the ice had melted, defeated the same barbarians in a naval engagement.² And Eratosthenes brings forward, also, the following epigram from the temple of Asclepius at Panticapaeum, which was inscribed on the bronze water-jar that had been burst by freezing: "If any man is incredulous in regard to what happens in our country, let him look at this water-jar and know the truth: which, not as a fair offering unto God but as an illustration of our severe winters, has been dedicated by Stratius the priest." Since, therefore, the climatic conditions in the Asiatic regions that I have enumerated are not to be compared even with those at the Bosporus, nav. not even with those at Amisus and Sinope (which places one would call milder in climate than the regions at the Bosporus). those Asiatic regions could hardly be thrown on the same parallel with those about Borysthenes and with the country of the northernmost Celts. In fact, the Asiatic regions could hardly be in the same latitude as the regions about Amisus, Sinope, Byzantium, and Massilia, which are conceded to be thirty-seven hundred stadia farther south than the Borysthenes and the Celts.

² Strabo refers to battles fought on the Strait of Yenikale, or Kerch, by Neoptolemus, the general of Mithridates the Great (Eupator). Compare 7. 3. 18.

3 Now Kerch, at the mouth of the Sea of Azov.

17. Οί δέ γε περί Δηίμαγον τοῖς τρισμυρίοις έὰν προσλάβωσι τὸ ἐπὶ τὴν Ταπροβάνην καὶ τοὺς δρους της διακεκαυμένης, οθς σύκ έλάττους των τετρακισχιλίων θετέον, έκτοπιοῦσι τά τε Βάκτοα καὶ τὴν ᾿Αρίαν εἰς τοὺς ἀπέχοντας τόπους τῆς διακεκαυμένης σταδίους τρισμυρίους καὶ τετρακισγιλίους, όσους ἀπὸ τοῦ ἰσημερινοῦ ἐπὶ Βορυσθένη φησίν είναι ὁ "Ιππαρχος. έκπεσοθνται άρα είς τούς βορειοτέρους τοῦ Βορυσθένους καὶ τῆς Κελτικής σταδίοις οκτακισχιλίοις και οκτακοσίοις, όσοις νοτιώτερος έστιν ο ίσημερινός τοῦ ορίζοντος κύκλου την διακεκαυμένην και την ευκρατον, δυ φαμεν δια της Κινναμωμοφόρου 1 μάλιστα γράφεσθαι. ήμεις δέ γε ἐπεδείκνυμεν μέχρι της Ίέρνης μόλις οἰκήσιμα ὄντα τὰ ὑπὲρ τὴν Κελτικήν, ἄπερ οὐ πλείω τῶν πεντακισχιλίων ἐστίν· ούτος δ' αποφαίνει ο λόγος της Ίέρνης έτι βορειότερον είναι τινα κύκλον οικήσιμον σταδίοις τρισγιλίοις όκτακοσίοις. έσται 2 δε Βάκτρα καὶ τοῦ στόματος τῆς Κασπίας θαλάττης, εἴτε Υρκανίας, πάμπολύ τι άρκτικώτερα, ὅπερ τοῦ μυχοῦ τῆς Κασπίας καὶ τῶν ᾿Αρμενιακῶν καὶ Μηδικών όρων διέχει περί έξακισχιλίους σταδίους, καὶ δοκεῖ αὐτῆς τῆς 8 παραλίας μέχρι τῆς Ἰνδικῆς άρκτικώτερου είναι σημείου και περίπλουν έχειν

^{1 &#}x27;Ινδικήs, before μαλιστα, is discarded by the various editors.

² ξσται, Kramer, for ἐστί; Forbiger, Meineke, following.
³ αὐτῆς τῆς, Groskurd, for τῆς αὐτῆς; Meineke, Forbiger, following; L. Kayser approving.

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17. Now if Deïmachus and his followers add to the thirty thousand stadia the distance to Taprobane and to the boundary of the torrid zone, which must be put at not less than four thousand stadia,1 they will thus be placing both Bactra and Aria outside the inhabited world in the regions that are thirtyfour thousand stadia from the torrid zone—the number of stadia Hipparchus gives as the distance from the equator to the Borysthenes. And so Bactra and Aria will be thrown outside into the regions that are eight thousand eight hundred stadia farther north than the Borysthenes and Celtica—the number of stadia by which the equator is south of the circle that divides the torrid zone from the temperate; and this circle we say is drawn, in a general way, through the Cinnamon-producing Country. myself was pointing out that the regions beyond Celtica as far as Ierne were scarcely habitable, and that this distance is not more than five thousand stadia²: but this argument of Deïmachus declares that there is a habitable parallel of latitude three thousand eight hundred stadia still farther north than Ierne! Thus Bactra will be a very considerable distance farther north than even the mouth of the Caspian (or Hyrcanian) Sea; and this mouth 3 is about six thousand stadia distant from the inmost part of the Caspian Sea and from the Armenian and Median mountains (and it seems to be a more northerly point than the coast-line itself that runs thence to India; and to offer a practicable route of

¹ In § 14 Strabo said "not less than 3,000 stadia."

^{° § 13.}

³ Strabo thought that the Caspian Sea opened into "the northern sea."

άπὸ τῆς Ἰνδικῆς δυνατόν, ὥς φησιν ὁ τῶν τόπων ήγησάμενος τούτων Πατροκλής. έτι τοίνυν ή Βακτριανή γίλια στάδια έπὶ τὴν ἄρκτον ἐκτείνεται τὰ δὲ τῶν Σκυθῶν ἔθνη 1 πολύ μείζω ταύτης ἐπέκεινα χώραν νέμεται, καὶ τελευτά πρὸς C 75 την βόρειον θάλατταν, νομαδικώς μέν, ζώντα δ' όμως. πως οθν, είπερ και αυτά τὰ Βάκτρα ήδη της οἰκουμένης ἐκπίπτει, εἴη ἃν τὸ διάστημα τοῦτο ἀπὸ τοῦ Καυκάσου μέχρι της βορείας θαλάττης τη διὰ Βάκτρων ὀλίγω πλειόνων ἡ τετρακισχιλίων; ταθτα δη προστεθέντα τω άπο της 'Ιέρνης έπὶ τὰ βόρεια σταδιασμώ ποιεί τὸ πᾶν διὰ τῆς ἀοικήτου διάστημα έπλ τοῦ διὰ τῆς Ἰέρνης σταδιασμοῦ σταδίων έπτακισγιλίων καὶ οκτακοσίων εἰ δὲ έάσειέ τις τους τετρακισχιλίους σταδίους, αυτά γε τὰ πρὸς τῷ Καυκάσφ μέρη τῆς Βακτριανῆς έσται βορειότερα της Ίέρνης σταδίοις τρισχιλίοις καὶ ὀκτακοσίοις, τῆς δὲ Κελτικῆς καὶ τοῦ Βορυσθένους οκτακισχιλίοις και οκτακοσίοις.

18. Φησὶ δέ γε ὁ Ἰππαρχος κατὰ τὸν Βορυσθένη καὶ τὴν Κελτικὴν ἐν ὅλαις ταῖς θεριναῖς νυξὶ παραυγάζεσθαι τὸ φῶς τοῦ ἡλίου περιῖστάμενον ἀπὸ τῆς δύσεως ἐπὶ τὴν ἀνατολήν, ταῖς δὲ

¹ ξθνη, Kramer suggests, after Σκυθών; Meineke following.

¹ That is, beyond the mouth of the Caspian into the uninhabited world. This whole argument against Deïmachus and his school is a reductio ad absurdum.

² And thus, according to Strabo, they really reach no farther, approximately, than the mouth of the Caspian.

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circumnavigation from India, according to Patrocles, who was once governor of these regions). Accordingly, Bactriana stretches out still farther 1 for a thousand stadia toward the north. But the Scythian tribes inhabit a much larger country than Bactriana, on beyond it, and they end at the northern sea 2; who, though it be as nomads, still manage to live. How, then, if even Bactra itself is now thrown outside of the inhabited world, could this distance from the Caucasus up to the northern sea, measured on the meridian line through Bactra, be slightly more than four thousand stadia³? If these stadia, then, be added to the stadia-reckoning from Ierne to the northern regions,4 they make the total distance through the uninhabitable region, on the stadia-reckoning made through Ierne, seven thousand eight hundred stadia. But if one should leave out the four thousand stadia, at least the very parts of Bactriana that are next to the Caucasus 5 will be farther north than Ierne by three thousand eight hundred stadia, and farther north than Celtica and the Borysthenes by eight thousand eight hundred stadia.

18.6 Hipparchus says, at all events, that at the Borysthenes and Celtica, throughout the nights in summer-time, the light of the sun shines dimly, moving round from the west to the east, and at

⁴ That is, the 3,800 stadia above-mentioned.

² The figure of 4,000 is quoted from Deïmachus and his school. Strabo continues to meet them upon their own ground with his favourite form of argument.

⁵ Hence, not the Armenian Caucasus. The mountains from Ariana on were also called Caucasus (11. 8. 1.).

⁶ In connection with this paragraph, read 2. 5. 34-43. Strabo finds another "absurdity" (compare § 12).

γειμεριναίς τροπαίς τὸ πλείστον μετεωρίζεσθαι τον ήλιον επὶ πήγεις εννέα εν δε τοις ἀπέγουσι τής Μασσαλίας έξακισχιλίοις καὶ τριακοσίοις (οθς εκείνος μεν έτι Κελτούς υπολαμβάνει, ενώ δ' οίμαι Βρεττανούς είναι, βορειοτέρους της Κελτικής σταδίοις δισχιλίοις πεντακοσίοις) πολύ μάλλον τοῦτο συμβαίνειν ἐν δὲ ταῖς χειμεριναίς ήμέραις ο ήλιος μετεωρίζεται πήχεις έξ. τέτταρας δ' έν τοις ἀπέχουσι Μασσαλίας ένακισχιλίους 1 σταδίους καὶ έκατόν, έλάττους δέ τῶν τριῶν ἐν τοῖς ἐπέκεινα, οῖ ² κατὰ τὸν ἡμέτερον λόγον πολύ αν είεν αρκτικώτεροι της 'Ιέρνης. ούτος δὲ Πυθέα πιστεύων κατά τὰ νοτιώτερα 3 τῆς Βρεττανικής την οικησιν ταύτην τίθησι, καί φησιν είναι την μακροτάτην ένταθθα ημέραν ώρων ισημερινών δέκα εννέα, οκτωκαίδεκα δέ. δπου τέτταρας ο ήλιος μετεωρίζεται πήχεις ούς φησιν άπέγειν της Μασσαλίας έννακισχιλίους καὶ έκατὸν σταδίους. ὥσθ' οἱ νοτιώτατοι τῶν Βρεττανῶν Βορειότεροι τούτων είσίν. ήτοι οὖν ἐπὶ τοῦ αὐτοῦ

approving.

² καί, Penzel deletes, before κατά; Du Theil, Groskurd,

Meineke, Forbiger, Tardieu, following.

² At 6,300 stadia north of Marseilles.

¹ ἐνακισχιλίουs, Meineke, for ἐννακισχιλίουs; A. Jacob

³ νοτιώτερα, as A. Jacob proves, must not be changed to άρκτικώτερα (as has been done since Du Theil's time), since the argument is rigorously correct and in keeping with of ports. τατοι των Βρεττανών below. T. G. Tucker suggests τανώτερα.

¹ The astronomical cubit was two degrees.

^{3 &}quot;This inhabited country" of Hipparchus means the 282

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the winter solstice the sun ascends at most only nine cubits 1; but that among the people who are six thousand three hundred stadia distant from Massilia (people who live two thousand five hundred stadia north of Celtica, whom Hipparchus assumes still to be Celts, though I think they are Britons) this phenomenon is much more marked; and on the winter days there 2 the sun ascends only six cubits, and only four cubits among the people who are distant from Massilia nine thousand one hundred stadia: and less than three cubits among the people who live on beyond (who, according to my argument, would be much farther north than Ierne). Hipparchus, trusting Pytheas, puts this inhabited country in the regions that are farther south than Britain,³ and says that the longest day there has nineteen equinoctial hours,4 but that the longest day has eighteen hours where the sun ascends only four cubits; and these people,5 he says, are distant from Massilia nine thousand and one hundred stadia: and hence the most southerly of the Britons are more northerly than these people. Accordingly,

country that is beyond 9,100 stadia north of Marseilles. To Strabo, this country is uninhabited.

4 The solar day is not constant; and so the ancients, being dependent upon the sun-dial, took as a unit the hour computed at the time of an equinox. Hence "equinoctial

hour"—a term not used in modern astronomy.

⁵ That is, at 9,100 stadia north of Marseilles. By comparing this and other passages in Strabo we find that Hipparchus' data were: Borysthenes, 9 cubits, 16 hours; 6,300 stadia north of Byzantium (or Marseilles, which Hipparchus placed in the same latitude as Byzantium), 6 cubits, 17 hours; 9,100 stadia north of Byzantium (or Marseilles), 4 cubits, 18 hours; the "inhabited country" on beyond, less than 3 cubits, 19 hours.

παραλλήλου είσι τοις προς τω Καυκάσω Βακτρίοις ή έπί τινος πλησιάζοντος είρηται γάρ ότι κατά τούς περί Δηίμαγον συμβήσεται βορειοτέρους είναι της 'Ιέρνης τούς πρός τω Καυκάσω Βακτρίους σταδίοις τρισχιλίοις οκτακοσίοις προστεθέντων δὲ τούτων τοις ἀπὸ Μασσαλίας εἰς 'Ιέρνην, γίνονται μύριοι δισγίλιοι πεντακόσιοι. τίς οθν ίστόρηκεν έν τοις έκει τόποις, λέγω δέ τοίς περί Βάκτρα, τοῦτο τὸ μῆκος τῶν μεγίστων ήμερων ή τὸ ἔξαρμα τοῦ ἡλίου τὸ κατὰ τὰς μεσουρανήσεις έν ταις χειμεριναις τροπαις; όφθαλμοφανή γὰρ πάντα ταῦτα καὶ ἱδιώτη καὶ οὐ δεόμενα μαθηματικής σημειώσεως, ώστε συνέγραψαν αν πολλοί και τών παλαιών τών τά Περσικά ίστορούντων καὶ τῶν ὕστερον μέχρι καὶ είς ήμας. πως δ' αν ή λεγθείσα εὐδαιμονία των τόπων ώμολογείτο 2 τοίς τοιούτοις έν τῷ οὐρανῷ φαινομένοις; εκ δε των είρημένων δήλον, ώς καί σοφως αντιλέγει προς την απόδειξιν, ως ίσοδυναμούντων των ζητουμένων λαμβάνοντος πρός τὸ ἀποδείξαι τὸ ζητούμενον.

19. Πάλιν δ' ἐκείνου τὸν Δηίμαχον ἰδιώτην ἐνδείξασθαι βουλομένου καὶ ἄπειρον τῶν τοιού-

² ώμολογείτο, A. Jacob, for ώμολόγητο.

¹ καί, Corais inserts; Groskurd, Meineke, Forbiger, Tardieu, following.

³ The fallacy is that of "begging the question" (petitio principii). On the question of the most northerly latitude of the inhabited world, Eratosthenes and Hipparchus are

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they are either on the same parallel as the Bactrians that live near the Caucasus or on some parallel close to it; for, as I have stated, according to Deïmachus and his followers our result will be that the Bactrians that live near the Caucasus are more northerly than Ierne by three thousand eight hundred stadia; and if these stadia be added to those from Massilia to Ierne, we get twelve thousand five hundred stadia. Now who has ever reported in these regions (I mean the regions about Bactra) such a length of the longest days, or such a meridian height of the sun at the winter solstice? Why, all such phenomena are obvious to the eye even of a layman and do not require mathematical notation; so that many men, both of the early writers of Persian history and of their successors on down to our own times, could have compiled Again, how could the above-mentioned 1 happy lot of these regions be conceded to those regions that have such celestial phenomena?² And so from what I have said it is clear how very cleverly Hipparchus contradicts the demonstration of Eratosthenes on the ground that the latter (although their objects of inquiry are in effect equivalent) were taking the object of inquiry for granted as an aid to his demonstration thereof!8

19. And so, again, where Eratosthenes wishes to show that Deimachus is a layman and inexperienced

both wrong in that they place the limit too far north, Strabo thinks. Among other things, they both assume in their reckonings that Marseilles is as far north as Byzantium (Strabo places Marseilles much farther south). Hence the ironical remark, that only with poor grace could Hipparchus meet the demonstration of Eratosthenes by accusing him of begging the question.

των οἴεσθαι γὰρ τὴν Ἰνδικὴν μεταξύ κεῖσθαι τῆς τε φθινοπωρινής ισημερίας και τών τροπών τών γειμερινών, Μεγασθένει τε αντιλέγειν φήσαντι έν τοίς νοτίοις μέρεσι της Ίνδικης τάς τε άρκτους ἀποκούπτεσθαι καὶ τὰς σκιὰς ἀντιπίπτειν μηδέτερον γάρ τούτων μηδαμού της 'Ινδικής συμβαίνειν ταθτα δή φάσκοντος άμαθως λέγεσθαι τό τε γαρ την φθινοπωρινήν της εαρινής διαφέρειν οίεσθαι κατά την διάστασιν την προς τας τροπάς - άμαθές, τοῦ τε κύκλου τοῦ αὐτοῦ ὄντος καὶ τῆς άνατολής του τε διαστήματος του έπι της γης τροπικοῦ ἀπὸ τοῦ ἰσημερινοῦ, ὧν μεταξὺ τίθησι την Ίνδικην εκείνος, δειχθέντος εν τη αναμετρήσει πολύ έλάττονος των δισμυρίων σταδίων, συμβήναι αν και κατ' αυτον έκεινον, όπερ αυτος νομίζει, ούχ δ έκεινος δυείν μέν γάρ ή και τριών μυριάδων οὖσαν τὴν Ἰνδικὴν οὐδὲ πεσεῖν μεταξὺ τοσούτου διαστήματος, ὅσην δ' αὐτὸς εἴρηκε, πεσείν ἄν της δ' αὐτης άγνοίτις είναι καὶ τὸ μηδαμοῦ τῆς Ἰνδικῆς ἀποκρύπτεσθαι Φάσκειν τὰς άρκτους μηδέ τὰς σκιὰς ἀντιπίπτειν, ὅτε γε καὶ πεντακισχιλίους προελθόντι άπ' 'Αλεξανδρείας εὐθὺς συμβαίνειν ἄρχεται. ταῦτα δὴ εἰπόντα,1

¹ εἰπόντα, Corais, Du Theil, for εἰπύντας.

¹ Strabo's "winter tropic" and "summer tropic" correspond roughly to the tropic of Capricorn and the tropic of Cancer. The former was placed at 24°, at Syene.

Cancer. The former was placed at 24°, at Syene.

That is, to the south as well as to the north—which would be true of all points in the torrid zone.

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in such matters. For he says Deïmachus thinks that India lies between the autumnal equinox and the winter tropic, and contradicts the statement of Megasthenes that, in the southern parts of India, the Bears set and the shadows fall in the opposite directions,2 asserting that neither phenomenon takes place anywhere in India; and so, says Eratosthenes, when Deimachus asserts this, he speaks ignorantly, since it is mere ignorance to think that the autumnal equinox differs from the vernal equinox in distance from the tropic, because both the circle 3 and the rising of the sun are the same at the equinoxes; and, since the distance between the terrestrial tropic and the equator, between which Deimachus places India, has been shown in the measurement of the earth to be much less than twenty thousand stadia,4 the result would be, even according to Deïmachus himself, precisely what Eratosthenes thinks, and not what Dermachus thinks; for if India be twenty, or as much as thirty, thousand stadia in breadth it could not even fall within such a space.⁵ But if India has the breadth which Eratosthenes himself has given it, then it would fall therein; and that it is also a mark of the same ignorance for Deïmachus to assert that in no part of India do the Bears set or the shadows fall in the opposite directions, since, at any rate, if you proceed only five thousand stadia south from Alexandria the phenomena begin at once to take place.

³ The circle in which they each lie is that of the (celestial) equator.

⁵ Between the tropic and the equator.

⁴ Counting 700 stadia to the degree, Eratosthenes' measurement of the earth being 252,000 stadia, the tropic at 24° would be 16,800 stadia from the equator.

εὐθύνει πάλιν οὐκ εὖ ὁ "Ιππαρχος, πρῶτον ἀντὶ ¹
τοῦ χειμερινοῦ τροπικοῦ τὸν θερινὸν δεξάμενος,
εἰτ' οὐκ οἰόμενος δεῖν μάρτυρι χρῆσθαι τῶν μαθηματικῶν ἀναστρολογήτῳ ἀνθρώπῳ, ὥσπερ τοῦ
'Ερατοσθένους προηγουμένως τὴν ἐκείνου μαρτυρίαν ἐγκρίνοντος, ἀλλ' οὐ κοινῷ τινι ἔθει χρωμένου πρὸς τοὺς ματαιολογοῦντας. εἷς γάρ τις
τῶν πρὸς τοὺς ματαίως ἀντιλέγοντας ἐλέγχων
ἐστίν, ὅταν αὐτὴν τὴν ἐκείνων ἀπόφασιν, ὁποία
ποτέ ἐστι, δείξωμεν ἡμῖν συνηγοροῦσαν.

20. Νυνλ.μέν οθν ύποθέμενοι τὰ νοτιώτατα τῆς Ίνδικής ανταίρειν τοῖς κατα Μερόην, ὅπερ εἰρήκασι πολλοί καὶ πεπιστεύκασιν, ἐπεδείξαμεν τὰ C 77 συμβαίνοντα άτοπα. ἐπεὶ δὲ ὁ Ίππαρχος, οὐδὲν άντειπων τη ύποθέσει ταύτη νυνί, μετά ταθτα έν τῷ δευτέρφ ὑπομνήματι οὐ συγχωρεί, σκεπτέον καὶ τοῦτον τὸν λόγον. Φησὶ τοίνυν, ἀνταιρόντων άλλήλοις των 2 έπι του αυτού παραλλήλου κειμένων, ἐπειδὰν τὸ μεταξὺ ἢ μέγα διάστημα, μὴ δύνασθαι γνωσθήναι αὐτὸ τοῦτο, ὅτι εἰσὶν ἐπὶ τοῦ αὐτοῦ παραλλήλου οἱ τόποι, ἄνευ τῆς τῶν κλιμάτων συγκρίσεως της κατά θάτερον των τόπων.3 τὸ μὲν οὖν κατὰ Μερόην κλίμα Φίλωνά τε τὸν συγγράψαντα τὸν εἰς Αἰθιοπίαν πλοῦν ἱστορεῖν, ότι προ πέντε και τεσσαράκοντα ήμερων της θερινής τροπής κατά κορυφήν γίνεται ὁ ήλιος, λέγειν δὲ καὶ τοὺς λόγους τοῦ γνώμονος πρός τε

³ τῶν τόπων, Corais, for τὸν τόπον, on the authority of n.

¹ ἀντί, Corais, Penzel, Pätz, for ἀπό; Groskurd, Meineke, Forbiger, Kärcher, Tardieu, following; C. Müller approving.
² τῶν, Casaubon inserts, before ἐπί; Corais, Groskurd, Meineke, Forbiger, following; C. Müller, L. Kayser, approving.

GEOGRAPHÝ, 2. 1. 19-20

So Hipparchus is again not right in correcting Eratosthenes on that statement, because, in the first place, he interprets Deïmachus as saying "the summer tropic" instead of "the winter tropic," and because, in the second place, he thinks we should not use as a source of evidence on mathematics a man who is unversed in astronomy—just as if Eratosthenes were reckoning in the evidence of Deïmachus above that of other men and not merely following a common custom used in replying to men that talk foolishness. For one way of refuting men who contradict foolishly is to shew that the very declaration they make, whatever it

may be, pleads our case.

20. Up to this point, then, having taken as hypothesis that the most southerly regions of India rise opposite the regions about Meroë—which many have stated and believed—I have pointed out the absurdities that result from this hypothesis. But since Hipparchus up to this point offers no objection to this hypothesis, and yet later on, in his Second Book, will not concede it, I must consider his argument on this matter, too. Well, then, he says: If only the regions that lie on the same parallel rise opposite each other, then, whenever the intervening distance is great, we cannot know this very thing, namely, that the regions in question are on the same parallel, without the comparison of the "climata1" as observed at the other of the two places; now as for the "clima" at Meroë, Philo, who wrote an account of his voyage to Ethiopia, reports that the sun is in the zenith forty-five days before the summer solstice and tells also the relations of the gnomon to the shadows

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¹ See footnote 2, page 22.

τάς τροπικάς σκιάς και τάς ισημερινάς, αὐτόν τε 'Ερατοσθένη συμφωνείν έγγιστα τῶ Φίλωνι, τὸ δ' έν τη Ἰνδική κλίμα μηδένα ίστορείν, μηδ' αὐτὸν Έρατοσθένη. εί δὲ δὴ καὶ αἱ ἄρκτοι ἐκεῖ ἀμφότεραι, ως οιονται, αποκρύπτονται, πιστεύοντες τοις περί Νέαρχον, μη δυνατον είναι έπι ταὐτοῦ παραλλήλου κείσθαι τήν τε Μερόην 1 καὶ τὰ ἄκρα της 'Ινδικης. εί μεν τοίνυν περί των άρκτων άμφοτέρων, ότι ἀποκρύπτονται, συναποφαίνεται τοις είπουσιν 'Ερατοσθένης, πώς περί του έν τη Ίνδική κλίματος οὐδεὶς ἀποφαίνεται, οὐδ' αὐτὸς 'Ερατοσθένης; οὖτος γὰρ ὁ λόγος περὶ τοῦ κλίματός έστιν. εί δ' οὐ συναποφαίνεται, ἀπηλλάχθω της αιτίας. οὐ συναποφαίνεται δέ γε, άλλὰ τοῦ Δηιμάχου φήσαντος μηδαμοῦ τῆς Ἰνδικῆς μήτ' ἀποκρύπτεσθαι τὰς ἄρκτους μήτ' ἀντιπίπτειν τὰς σκιάς, ἄπερ ὑπείληφεν ὁ Μεγασθένης, άπειρίαν αὐτοῦ καταγιγνώσκει, τὸ συμπεπλεγμένον νομίζων ψεύδος, έν ώ όμολογουμένως καλ κατ' αὐτὸν τὸν Τππαρχον τό γε μὴ ἀντιπίπτειν τὰς σκιὰς ψεῦδος ἐμπέπλεκται. καὶ γὰρ εἰ μὴ τη Μερόη ἀνταίρει, της γε Συήνης νοτιώτερα είναι τὰ ἄκρα τῆς Ἰνδικῆς συγχωρῶν φαίνεται.

21. Καὶ ἐν τοῖς ἑξῆς δὲ περὶ τῶν αὐτῶν ἐπιχειρῶν ἡ ταὐτὰ λέγει τοῖς ἐξελεγχθεῖσιν ὑφ' ἡμῶν, ἡ
λήμμασι προσχρῆται ψευδέσιν, ἡ ἐπιφέρει τὸ μἡ
ἀκολουθοῦν. οὔτε γὰρ τῷ ἀπὸ Βαβυλῶνος εἰς

¹ ταῦτα, Corais deletes, before καί; Meineke following.

GEOGRAPHY, 2. 1. 20-21

both in the solstices and the equinoxes, and Eratosthenes agrees very closely with Philo; whereas nobody reports the "clima" in India, not even Eratosthenes himself; however, if it is really true that in India the Bears set (both of them, as they think, relying on Nearchus and his followers), then it is impossible that Meroë and the capes of India lie on the same parallel. Now if Eratosthenes joins those who have already so stated in reporting that both Bears do set, how can it be that nobody reports about the "clima" in India, not even Eratosthenes himself? For this statement concerns the "clima." But if Eratosthenes does not join them in the report, let him be free from the accusation. No, he does not join them in the report; nay, because Deimachus said that the Bears do not set and the shadows do not fall in the opposite direction anywhere in India (as Megasthenes assumed), Eratosthenes convicts him of inexperience, regarding as falsehood the combined statement, wherein by the acknowledgement of Hipparchus himself the false statement that the shadows do not fall in the opposite direction is combined with that about the Bears. For even if the southern capes of India do not rise opposite to Meroë, Hipparchus clearly concedes that they are at least farther south than Svene.1

21. In what follows, also, Hipparchus, in attempting proofs on the same questions, either states again the same things that I have already disproved, or employs additional false assumptions, or appends conclusions that do not follow. In the first place, take the state-

¹ 5,000 stadia directly north of Meroë. To one travelling north from the equator the Lesser Bear is first wholly visible at Meroë, according to Hipparchus (2. 5. 35).

Θάψακον είναι σταδίους τετρακισχιλίους ὀκτακοσίους, ἐντεῦθεν δὲ πρὸς τὴν ἄρκτον ἐπὶ τὰ ᾿Αρμένια ὅρη δισχιλίους ἑκατόν, ἀκολουθεῖ τὸ ἀπὸ Βαβυλῶνος ἐπὶ τοῦ δι᾽ αὐτῆς μεσημβρινοῦ ἐπὶ τὰ ἀρκτικὰ ὅρη πλείους είναι τῶν ἑξακισχιλίων οὔτε τὸ ἀπὸ Θαψάκου ἐπὶ τὰ ὅρη δισχιλίων καὶ ἑκατόν φησιν Ἐρατοσθένης, ἀλλ᾽ είναι τι λοιπὸν ἀκαταμέτρητον, ὥσθ᾽ ἡ ἑξῆς ἔφοδος ἐκ μὴ διδομένου λήμματος οὐκ ἀν ἐπεραίνετο. οὔτ᾽ ἀπεφήνατο οὐδαμοῦ Ἐρατοσθένης τὴν Θάψακον τῆς Βαβυλῶνος πρὸς ἄρκτους κεῖσθαι πλείοσιν ἡ τετρακισχιλίοις καὶ πεντακοσίοις σταδίοις.

22. Έξης δὲ συνηγορῶν ἔτι τοῖς ἀρχαίοις πίναξιν οὐ τὰ λεγόμενα ὑπὸ τοῦ Ἐρατοσθένους προφέρεται περὶ τῆς τρίτης σφραγίδος, ἀλλ' ἑαυτῷ
κεχαρισμένως πλάττει τὴν ἀπόφασιν πρὸς ἀνατροπὴν εὐφυῆ. ὁ μὲν γὰρ ἀκολουθῶν τῆ θέσει τῆ
προειρημένη τοῦ τε Ταύρου καὶ τῆς ἀπὸ Στηλῶν
θαλάττης, διελῶν τῆ γραμμῆ ταύτη τὴν οἰκουμένην δίχα, καὶ καλέσας τὸ μὲν βόρειον μέρος, τὸ
δὲ νότιον, πειρᾶται τούτων ἐκάτερον τέμνειν πάλιν
εἰς τὰ δυνατὰ μέρη· καλεῖ δὲ ταῦτα σφραγίδας
καὶ δὴ τοῦ νοτίου μέρους πρώτην εἰπῶν σφραγίδα
τὴν Ἰνδικήν, δευτέραν δὲ τὴν ᾿Αριανήν, ἐχούσας
τι εὐπερίγραφον, ἴσχυσεν ἀμφοτέρων ἀποδοῦναι

¹ See footnote, page 306.

² That is, which he charges to Eratosthenes.

GEOGRAPHY, 2. 1. 21-22

ment of Eratosthenes that the distance from Babylon to Thapsacus is four thousand eight hundred stadia, and thence northwards to the Armenian Mountains two thousand one hundred: it does not follow from this that the distance from Babylon measured on the meridian through it to the northern mountains is more than six thousand stadia. Secondly, Eratosthenes does not say that the distance from Thapsacus to the mountains is two thousand one hundred stadia. but that there is a remainder of that distance which has not been measured; and hence the ensuing attack, made from an assumption not granted, could not result in a valid conclusion. And, thirdly, Eratosthenes has nowhere declared that Thapsacus lies north of Babylon more than four thousand five hundred stadia.

22. Next, still pleading for the early maps, Hipparchus does not produce the words of Eratosthenes in regard to the Third Section, but for his own gratification invents his statement,2 making it easy to overthrow. For Eratosthenes, pursuing his aforementioned thesis about the Taurus and the Mediterranean Sea, beginning at the Pillars,3 divides the inhabited world by means of this line into two divisions, and calls them respectively the Northern Division and the Southern Division, and then attempts to cut each of these divisions again into such sections as are possible; and he calls these sections "Sphragides." And so, after calling India Section First of the Southern Division, and Ariana Section Second, since they had contours easy to sketch, he was able to represent not only length and breadth of

^{3 2, 1, 1,}

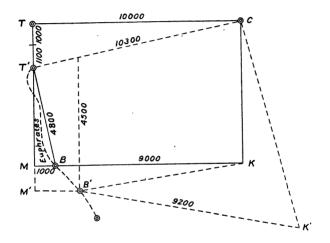
⁴ See paragraph 35 following and footnote.

καὶ μῆκος καὶ πλάτος, τρόπον δέ τινα καὶ σγῆμα ώς αν γεωμετρικός. την μεν γαρ Ίνδικην ρομ-Βοειδή φησι διὰ τὸ τῶν πλευρῶν τὰς μὲν θαλάττη κλύζεσθαι τη τε νοτίω και τη έώα, μη πάνυ κολπώδεις ήόνας 1 ποιούση, τὰς δὲ λοιπάς, τὴν μεν τῷ ὄρει, τὴν δὲ τῷ ποταμῷ, κάνταῦθα τοῦ εὐθυγράμμου σχήματος ὑπό τι σωζομένου τὴν δ' Αριανήν όρων τάς γε τρείς πλευράς έχουσαν εὐφυείς πρὸς τὸ ἀποτελέσαι παραλληλόγραμμον σχήμα, την δ' έσπέριον οὐκ έχων σημείοις άφορίσαι διὰ τὸ ἐπαλλάττειν ἀλλήλοις τὰ ἔθνη, γραμμή τινι δμως δηλοί τή ἀπὸ Κασπίων πυλών έπλ τὰ ἄκρα τῆς Καρμανίας τελευτώση τὰ συνάπτοντα πρός τὸν Περσικὸν κόλπον. έσπέριον μὲν οὖν καλεῖ τοῦτο τὸ πλευρόν, έῷον δὲ τὸ παρὰ τὸν Ἰνδόν, παράλληλα δ' οὐ λέγει, οὐδὲ τὰ λοιπά, τό τε τῷ ὄρει γραφόμενον καὶ τὸ τῆ θαλάττη, άλλὰ μόνον τὸ μὲν βόρειον, τὸ δὲ νότιον.

23. Ούτω δ' όλοσχερεί τινι τύπω την δευτέραν άποδιδούς σφραγίδα, πολύ ταύτης όλοσχερέστερου ἀποδίδωσι τὴν τρίτην σφραγίδα κατὰ πλείους αιτίας. πρώτην μέν την λεχθείσαν, ότι οὐκ εὐκρινῶς ἀφώρισται ἡ ἀπὸ Κασπίων πυλών ἐπὶ Καρμανίαν, ήτις κοινή έστι τη τρίτη πρός την δευτέραν σφραγίδα πλευρά έπειθ ότι είς την 1 Hovas, Meineke, for hidras.

Strabo discusses this point again in 15. 1. 11.
 The Taurus.
 Indus.

In §§ 23-29 Strabo shews that Hipparchus applies the figures of Eratosthenes to rectangular dimensions (TCKM), placing Thapsacus at T, Caspian Gates at C, the point on the Carmanian frontiers at K, Babylon at B, and so on; and that



the dotted lines, including the Euphrates, represent what Eratosthenes meant in his rough estimates. Of course it is easy to show the impossibility of Eratosthenes' figures in their mutual relations if they be applied as Hipparchus applied them.

GEOGRAPHY, 2. 1. 22-23

both sections, but, after a fashion, shape also, as would a geometrician. In the first place, India, he says, is rhomboidal, because, of its four sides, two are washed by seas (the southern and the eastern seas) which form shores without very deep gulfs; and because the remaining sides [are marked], one by the mountain 2 and the other by the river. 3 and because on these two sides, also, the rectilinear figure is fairly well preserved. Secondly, Ariana. Although he sees that it has at least three sides wellsuited to the formation of the figure of a parallelogram, and although he cannot mark off the western side by mathematical points, on account of the fact that the tribes there alternate with one another,4 yet he represents that side by a sort of line 5 that begins at the Caspian Gates and ends at the capes of Carmania that are next to the Persian Gulf. Accordingly, he calls this side "western" and the side along the Indus "eastern," but he does not call them parallel; neither does he call the other two sides parallel, namely, the one marked by the mountain, and the one marked by the sea, but he merely calls them "the northern" and "the southern" sides.

23. And so, though he represents the Second Section merely by a rough outline, he represents the Third Section much more roughly than the Second—and for several reasons. First is the reason already mentioned, namely, because the side beginning at the Caspian Gates and running to Carmania (the side common to the Second and Third Sections) has not been determined distinctly:

⁴ That is, they merge confusedly with one another across the imaginary line representing the common boundary between Section Second and Section Third.

⁵ In mathematics, a dotted line.

⁶ See figure and note on page 296.

νότιον πλευράν ὁ Περσικὸς ἐμπίπτει κόλπος, ὅπερ καὶ αὐτός φησιν, ώστ' ηνάγκασται την έκ Βαβυλώνος λαβείν γραμμήν, ώς αν εύθειάν τινα δια Σούσων καὶ Περσεπόλεως μέγρι των δρων της C 79 Καρμανίας και της Περσίδος, ή δυνατός ήν εύρειν μεμετρημένην όδόν, σταδίων ούσαν την δλην μικρώ πλειόνων ή εννακισχιλίων ήν νότιον μεν καλεί πλευράν, παράλληλον δ' οὐ λέγει τῆ βορείφ. δηλον δ' ότι οὐδ' ὁ Εὐφράτης, ῷ τὸ έσπέριον αφορίζει πλευρόν, σύνεγγύς έστιν εὐθεία γραμμή, άλλ' άπὸ τῶν ὀρῶν ἐπὶ τὴν μεσημβρίαν ρυείς, είτ' επιστρέφει προς εω και πάλιν προς νότον μέχρι της είς θάλατταν ἐκβολης. δηλοῖ δὲ τὸ μὴ εὐθύπορον τοῦ ποταμοῦ, φράζων τὸ σχήμα της Μεσοποταμίας, δ ποιούσι συμπίπτοντες είς εν δ τε Τίγρις και ο Ευφράτης, ύπηρεσίω παραπλήσιον, ώς φησι. καὶ μὴν τὸ ἀπὸ Θαψάκου μέχρι της 'Αρμενίας οὐδὲ πᾶν μεμετρημένον έχει τὸ έσπέριον πλευρον το άφοριζόμενον ύπὸ τοῦ Εὐφράτου, ἀλλά φησι τὸ πρὸς τῆ 'Αρμενία μέρος καὶ τοῖς ἀρκτικοῖς ὅρεσι μὴ ἔχειν είπειν τη πόσον έστι δια το αμέτρητον είναι. δια δη ταθτα πάντα τυπωδώς φησιν ἀποδιδόναι την τρίτην μερίδα· καὶ γὰρ καὶ τὰ διαστήματά ² φησιν έκ πολλών συναγαγείν ³ τών τούς σταθμούς πραγματευσαμένων ων τινας και ανεπιγράφους

² &, Siebenkees, Du Theil, delete, before φησιν; Groskurd,

Meineke, Forbiger, following.

 $^{^{1}}$ εἰπεῖν, Meineke inserts, after ἔχειν; Corais, Kramer, had already suggested it.

 ³ συναγαγεῖν, Corais, for συνάγειν; Meineke following.
 ⁴ δυ, Corais inserts, before τινάς; Groskurd, Meineke, Forbiger, following; C. Müller approving.

GEOGRAPHY, 2. 1. 23

secondly, because the Persian Gulf breaks into the southern side, as Eratosthenes himself says, and therefore he has been forced to take the line beginning at Babylon as though it were a straight line running through Susa and Persepolis to the frontiers of Carmania and Persis, on which he was able to find a measured highway, which was slightly more than nine thousand stadia long, all told. side Eratosthenes calls "southern," but he does not call it parallel to the northern side. Again, it is clear that the Euphrates, by which he marks off the western side, is nowhere near a straight line; but after flowing from the mountains towards the south. it then turns eastward, and then southward again to the point where it empties into the sea. Eratosthenes makes clear the river's lack of straightness when he indicates the shape of Mesopotamia, which results from the confluence of the Tigris and the Euphrates—"like a galley," as he says. And besides, as regards the stretch from Thapsacus to Armenia-Eratosthenes does not even know, as a distance that has been wholly measured, the western side that is marked off by the Euphrates; nay, he says he does not know how great is the stretch next to Armenia and the northern mountains, from the fact that it is unmeasured. For all these reasons, therefore, he says he represents the Third Section only in rough outline; indeed, he says that he collected even the distances from many writers who had worked out the itineraries—some of which he speaks of as actually

καλεί. ἀγνωμονείν δὴ δόξειεν αν ὁ «Ιππαρχος πρὸς τὴν τοιαυτὴν ὁλοσχέρειαν γεωμετρικῶς ἀντιλέγων, ἐν ἢ χάριν εἰδέναι δεῖ τοῖς καὶ ὁπωσοῦν ἀπαγγείλασιν ἡμῖν τὴν τῶν τόπων φύσιν. ὅταν δὲ δὴ μηδ' ἐξ ὧν ἐκεῖνος λέγει λαμβάνη τὰς γεωμετρικὰς ὑποθέσεις, ἀλλ' ἑαυτῷ πλάσας, ἐκφανέστερον αν τὸ φιλότιμον καταμηνύοιτο.

24. Ο μεν δη ουτως φησι την τρίτην μερίδα τυπωδώς ἀποδίδοσθαι μυρίων σταδίων ἀπὸ Κασπίων πυλών ἐπὶ τὸν Εὐφράτην, κατὰ μέρος δὲ διαιρών, ώς αναγεγραμμένην εύρε την μέτρησιν, ούτω τίθησιν, ξμπαλιν την άρχην άπο του Εύ-Φράτου ποιησάμενος καὶ τῆς κατὰ Θάψακον διαβάσεως αὐτοῦ. μέχρι μὲν δὴ τοῦ Τίγριδος, όπου 'Αλέξανδρος διέβη, σταδίους δισχιλίους καλ τετρακοσίους γράφει έντεθθεν δ' έπλ τούς έξης τόπους διὰ Γαυγαμήλων καὶ τοῦ Λύκου καὶ 'Αρβήλων καὶ 'Εκβατάνων, ή Δαρείος ἐκ τῶν Γαυγαμήλων έφυγε μέχρι Κασπίων πυλών, τούς μυρίους ἐκπληροῖ, τριακοσίοις μόνον πλεονάσας. τὸ μὲν δὴ βόρειον πλευρὸν οὕτω καταμετρεῖ, οὐ παράλληλον τοις όρεσι θείς, οὐδὲ τῆ διὰ Στηλών καὶ 'Αθηνῶν καὶ 'Ρόδου γραμμῆ: ή γὰρ Θάψακος πολύ των δρών ἀφέστηκε, συμπίπτει δὲ καὶ τὸ όρος καὶ ή ἀπὸ Θαψάκου όδὸς ἐπὶ τὰς Κασπίους πύλας. καὶ τά γε προσάρκτια μέρη τοῦ δρου ταῦτ' ἐστίν.

without titles. So, then, Hipparchus would seem to be acting unfairly when he contradicts with geometrical accuracy a mere rough outline of this nature, instead of being grateful, as we should be, to all those who have reported to us in any way at all the physiography of the regions. But when Hipparchus does not even take his geometrical hypotheses from what Eratosthenes says, but fabricates on his own account, he betrays his spirit of jealousy still more obviously.

24. Now Eratosthenes says that it is only thus, "in a rough-outline way," that he has represented the Third Section, with its length of ten thousand stadia from the Caspian Gates to the Euphrates. And then, in making subdivisions of this length, he sets down the measurements just as he found them already assigned by others, after beginning in the inverse order at the Euphrates and its passage at Thapsacus. Accordingly, for the distance from the Euphrates to the Tigris, at the point where Alexander crossed it, he lays off two thousand four hundred stadia; thence to the several places in succession, through Gaugamela, the Lycus, Arbela, and Ecbatana (the route by which Darius fled from Gaugamela to the Caspian Gates) he fills out the ten thousand stadia. and has a surplus of only three hundred stadia. This, then, is the way he measures the northern side, not having first put it parallel with the mountains, or with the line that runs through the Pillars, Athens, and Rhodes. For Thapsacus lies at a considerable distance from the mountains, and the mountainrange and the highway from Thapsacus meet at the Caspian Gates.—And these are the northern portions of the boundary of the Third Section.

C 80 25. 'Αποδοὺς δὲ τὸ βόρειον οὕτω πλευρόν, τὸ δὲ νότιον, φησί, παρὰ μὲν τὴν θάλατταν οὐκ ἔστι λαβεῖν διὰ τὸ τὸν Περσικὸν ἐμπίπτειν κόλπον, ἀπὸ Βαβυλῶνος δὲ διὰ Σούσων καὶ Περσεπόλεως ἔως ¹ τῶν ὁρίων τῆς τε Περσίδος καὶ τῆς Καρμανίας σταδίους εἶναι ἐννακισχιλίους καὶ διακοσίους, νότιον μὲν λέγων, παράλληλον δ' οὐ λέγων τῷ βορείφ τὸ νότιον. τὴν δὲ διαφωνίαν τοῦ μήκους φησὶ συμβαίνειν τοῦ τε βορείου τεθέντος πλευροῦ καὶ τοῦ νοτίου, διὰ τὸ τὸν Εὐφράτην μέχρι τινὸς πρὸς μεσημβρίαν ῥυέντα

πρὸς τὴν ἔω πολὺ ἐγκλίνειν.

26. Των δε πλαγίων πλευρών την έσπερίαν λέγει πρώτον ην όποία τίς έστιν, είτε μία είτε δύο, ἐν μέσφ πάρεστι σκοπείν. ἀπὸ γὰρ τῆς κατὰ Θάψακόν φησι διαβάσεως παρὰ τὸν Εὐφράτην είς μεν Βαβυλώνα σταδίους είναι τετρακισγιλίους οκτακοσίους, εντεύθεν δ' επί τὰς εκβολάς τοῦ Εὐφράτου καὶ πόλιν Τερηδόνα τρισχιλίους. τὰ δ' ἀπό Θαψάκου πρὸς τὰς ἄρκτους μέχρι μὲν τῶν ᾿Αρμενίων πυλῶν καταμεμετρησθαι και είναι ώς χιλίους έκατόν, τους δε διά Γορδυαίων καλ 'Αρμενίων μηκέτι· διὸ δὴ παραλείπειν αὐτούς. τοῦ δὲ πρὸς ἔω πλευροῦ τὸ μὲν διὰ τῆς Περσικῆς κατὰ μήκος ἀπὸ τής Ἐρυθρᾶς ὡς ἐπὶ Μηδίαν καὶ τας άρκτους οὐκ έλαττον είναι δοκεί των όκτακισχιλίων, άπὸ δέ τινων άκρωτηρίων καὶ ὑπὲρ τούς έννακισχιλίους, τὸ δὲ λοιπὸν διὰ τῆς Παραιτακηνής καί Μηδίας έπι Κασπίους πύλας ώς

¹ εως, Cobet, for καί (for which Groskurd substitutes μέχρι; Meineke, Dübner-Müller, Forbiger, following); Bernadakis approving.

GEOGRAPHY, 2. 1. 25-26

25. After having thus represented the northern side, Eratosthenes says it is not possible to take the southern side as along the sea, because the Persian Gulf breaks into it; but, says he, from Babylon through Susa and Persepolis to the frontiers of Persis and Carmania, it is nine thousand two hundred stadia—and this he calls "southern side," but he does not call the southern side parallel to the northern. As to the difference in the lengths of the estimated northern and southern sides, he says it results from the fact that the Euphrates, after having flowed southwards to a certain point, makes a considerable bend towards the east.

26. Of the two transverse sides Eratosthenes speaks of the western first; and what the nature of this side is, whether it is one line or two, is a matter open to consideration. For from the passage at Thapsacus, he says, along the Euphrates to Babylon. it is four thousand eight hundred stadia, and thence to the outlet of the Euphrates and the city of Teredon, three thousand; but as regards the distances from Thapsacus northward, the stadia have been measured up to the Armenian Gates and amount to about one thousand one hundred: whereas the stadia through Gordvene and Armenia are still unmeasured, and so for this reason he leaves them out of consideration. But of the side on the east, that part which runs through Persis lengthwise from the Red Sea, approximately toward Media and the north, is, he thinks, no less than eight thousand stadia (though, if reckoned from certain promontories, even above nine thousand stadia); and the remaining part, through Paraetacene 1 and Media to the Caspian

¹ For the position of Paraetacene see 15. 3. 12.

τρισχιλίων· τὸν δὲ Τίγριν ποταμὸν καὶ τὸν Εὐφράτην ῥέοντας ἐκ τῆς ᾿Αρμενίας πρὸς μεσημβρίαν, ἐπειδὰν παραμείψωνται τὰ τῶν Γορδυαίων ὅρη, κύκλον μέγαν περιβαλομένους καὶ ἐμπεριλαβόντας χώραν πολλὴν τὴν Μεσοποταμίαν ἐπιστρέφειν πρὸς χειμερινὴν ἀνατολὴν καὶ τὴν μεσημβρίαν, πλέον δὲ τὸν Εὐφράτην· γενόμενον δὲ τοῦτον ἔγγιον ἀεὶ τοῦ Τίγριδος κατὰ τὸ Σεμιράμιδος διατείχισμα καὶ κώμην καλουμένην Ὠπιν, διασχόντα ταύτης ὅσον διακοσίους σταδίους, καὶ ρυέντα διὰ Βαβυλῶνος ἐκπίπτειν εἰς τὸν Περσικὸν κόλπον. γίνεται δή, φησί, τὸ σχῆμα τῆς Μεσοποταμίας καὶ Βαβυλωνίας ὑπηρεσίφ παραπλήσιον. ὁ μὲν δὴ Ἐρατοσθένης τοιαῦτ' εἴρηκε.

τινα άμαρτήματα ποιεί, περί ὧν ἐπισκεψόμεθα, ἃ δὲ Ἰππαρχος προφέρει αὐτῷ, οὐ πάνυ. σκοπῶμεν δ' ἃ λέγει. βουλόμενος γὰρ βεβαιοῦν τὸ ἐξ ἀρχῆς, ὅτι οὐ μεταθετέον τὴν Ἰνδικὴν ἐπὶ τὰ νοτιώτερα, ὥσπερ Ἐρατοσθένης ἀξιοῖ, σαφὲς ἃν γενέσθαι C 81 τοῦτο μάλιστά φησιν ἐξ ὧν αὐτὸς ἐκεῖνος προφέρεται· τὴν γὰρ τρίτην μερίδα κατὰ τὴν βόρειον πλευρὰν εἰπόντα ἀφορίζεσθαι ὑπὸ τῆς ἀπὸ Κασπίων πυλῶν ἐπὶ τὸν Εὐφράτην γραμμῆς σταδίων μυρίων οὕσης, μετὰ ταῦτα ἐπιφέρειν ὅτι τὸ νότιον πλευρὸν τὸ ἀπὸ Βαβυλῶνος εἰς τοὺς ὅρους τῆς Καρμανίας μικρῷ πλειόνων ἐστὶν ἡ ἐννακισγιλίων, τὸ δὲ πρὸς δύσει πλευρὸν ἀπὸ

GEOGRAPHY, 2. 1. 26-27

Gates, about three thousand stadia. The Tigris and the Euphrates, he says, flow from Armenia southwards; and then, as soon as they pass the mountains of Gordvene, they describe a great circle and enclose a considerable territory, Mesopotamia; and then they turn toward the winter rising of the sun 1 and the south, but more so the Euphrates; and the Euphrates, after becoming ever nearer to the Tigris in the neighbourhood of the Wall of Semiramis and village called Opis (from which village Euphrates was distant only about two hundred stadia), and, after flowing through Babylon, empties into the Persian Gulf. "So it comes to pass," he says, "that the shape of Mesopotamia and Babylonia is like that of a galley." Such, then, are the statements which Eratosthenes has made.

27. Now, as regards the Third Section, although there are certain other errors which Eratosthenes makes—and I shall discuss these—still he does not err at all in the matters for which Hipparchus reproaches him. Let us see what Hipparchus says. In his desire to establish his initial statement, namely, that we must not shift India farther to the south, as Eratosthenes requires, he says it will be particularly obvious from Eratosthenes' own utterances that we must not do so; for after first saying that the Third Section is marked off on its northern side by the line drawn from the Caspian Gates to the Euphrates, a distance of ten thousand stadia, Eratosthenes adds, later on, that the southern side, which runs from Babylon to the frontiers of Carmania, is slightly more than nine thousand stadia in length, and the side on the west from Thapsacus along the

¹ See footnote 2, page 105.

Θαψάκου παρὰ τὸν Εὐφράτην ἐστὶν εἰς Βαβυλῶνα τετρακισχίλιοι ὀκτακόσιοι στάδιοι, καὶ ἑξῆς ἐπὶ τὰς ἐκβολὰς τρισχίλιοι, τὰ δὲ πρὸς ἄρκτον ἀπὸ Θαψάκου, τὸ μὲν ἀπομεμέτρηται μέχρι χιλίων ἐκατόν, τὸ λοιπὸν δ' οὐκέτι. ἐπεὶ τοίνυν, φησί, τὸ μὲν βόρειόν ἐστι πλευρὸν τῆς τρίτης μερίδος ὡς μυρίων, ἡ δὲ τούτφ παράλληλος ἀπὸ Βαβυλῶνος εὐθεῖα μέχρι ἀνατολικοῦ πλευροῦ συνελογίσθη μικρῷ πλειόνων ἡ ἐννακισχιλίων, δῆλον ὅτι ἡ Βαβυλῶν οὐ πολλῷ πλείοσιν ἡ χιλίοις ἐστὶν ἀνατολικωτέρα τῆς κατὰ Θάψακον διαβάσεως.

28. 'Εροῦμεν δ' ὅτι, εἰ μὲν ἐπὶ τῆς αὐτῆς μεσημβρινῆς εὐθείας ἐπ' ἀκριβὲς ἐλαμβάνοντο αἵ τε Κάσπιοι πύλαι καὶ οἱ ὅροι τῶν Καρμανίων καὶ Περσῶν, πρὸς ὀρθάς τε ἤγοντο ἀπὸ τῆς λεχθείσης μεσημβρινῆς εὐθείας ἥ τε ἐπὶ Θάψακον καὶ ἡ ἐπὶ Βαβυλῶνα, συνέβαινεν ἄν τοῦτο. ἡ γὰρ προσεκβαλλομένη τῆ διὰ Βαβυλῶνος μέχρι τῆς διὰ Θαψάκου εὐθείας μεσημβρινῆς, ἴση ἀν ἤν πρὸς αἴσθησιν ἡ πάρισός γε τῆ ἀπὸ Κασπίων πυλῶν εἰς Θάψακον ὥστε τῆ ὑπεροχῆ ἐγίνετ' ἀν ἀνατολικωτέρα ἡ Βαβυλῶν τῆς Θαψάκου τῆς ἐκ τῶν Καρμανίων ὅρων εἰς Βάβυλῶνα. ἀλλ' οὕτε

¹ Of course Hipparchus' argument is sound if his hypotheses be granted. Hipparchus assumes that Eratosthenes' figures refer to latitudinal and longitudinal distances; and by drawing a rectangle whose sides are formed by meridians through Thapsacus and the Caspian Gates, respectively, and by parallels of latitude through Thapsacus and the Caspian Gates, and through Babylon, he easily convicts Eratosthenes of inconsistency. That is, by a reductio ad absurdum, he forces Eratosthenes' Babylon much farther west than

GEOGRAPHY, 2. 1. 27-28

Euphrates to Babylon is four thousand eight hundred stadia, and, next, from Babylon to the outlet of the Euphrates is three thousand stadia, and as for the distances north of Thapsacus, one of them has been measured off as far as one thousand one hundred stadia, while the remainder is still unmeasured. Then, says Hipparchus, since the northern side of the Third Section is about ten thousand stadia, and since the line parallel thereto, straight from Babylon to the eastern side, was reckoned by Eratosthenes at slightly more than nine thousand stadia, it is clear that Babylon is not much more than a thousand stadia farther east than the passage at Thapsacus.¹

28. My reply will be: If, with geometrical precision, we took the Caspian Gates and the frontiers of Carmania and Persis as upon the same straight meridian, and if we drew the line to Thapsacus and the line to Babylon at right angles with the said straight meridian, then that conclusion of Hipparchus would be valid. Indeed, the line through Babylon,² if further produced as far as the straight meridian through Thapsacus, would, to the eye, be equal—or at all events approximately equal—to the line from the Caspian Gates to Thapsacus; and hence Babylon would come to be farther east than Thapsacus by as much as the line from the Caspian Gates to Thapsacus exceeds the line from the Carmanian frontiers to Babylon! But, in the first

Eratosthenes meant it to be (cp. § 36 below on this point). Strabo proceeds to show the fallacy of Hipparchus' reasoning, and even to show that Hipparchus might have proved, on the same premises, still greater absurdity on the part of Eratosthenes.

² That is, the line drawn perpendicular to the meridian that passes through the Carmanian frontier.

την διορίζουσαν γραμμην έσπέριον πλευρον της 'Αριανης ἐπὶ μεσημβρινοῦ κειμένην εἴρηκεν 'Ερατοσθένης, οὐδὲ τὴν ἀπὸ Κασπίων πυλῶν ἐπὶ Θάψακον πρὸς ὀρθὰς τῆ διὰ τῶν Κασπίων πυλῶν μεσημβρινῆ, ἀλλὰ μᾶλλον τὴν τῷ ὄρει γραφομένην, πρὸς ὴν ἡ ἐπὶ Θάψακον γωνίαν ποιεῖ ἀπὸ τοῦ αὐτοῦ σημείου κατηγμένη, ἀφ' οῦ καὶ ἡ τοῦ ὄρους γραμμή· οὕθ' ἡ ἐπὶ Βαβυλῶνα ἠγμένη ἀπὸ τῆς Καρμανίας παράλληλος εἴρηται τῆ ἐπὶ Θάψακον ἠγμένη· οὐδ' εἰ παράλληλος ἡν, μὴ πρὸς ὀρθὰς δὲ τῆ διὰ Κασπίων πυλῶν μεσημβρινῆ, οὐδὲν ἀν ἐγίνετο πλέον πρὸς συλλογισμόν.

29. 'Ο δε ταῦτα λαβών εξ ετοίμου καὶ δείξας, ώς οίεται, διότι ή Βαβυλών κατά Έρατοσθένη Θαψάκου ανατολικωτέρα έστὶ μικρῷ πλείοσιν ή C 82 γιλίοις σταδίοις, πάλιν άλλως πλάττει λημμα έαυτω προς την έξης απόδειξιν, καί φησιν, έαν έννοηθή ἀπὸ Θαψάκου ἐπὶ μεσημβρίαν εὐθεῖα άγομένη καὶ ἀπὸ Βαβυλώνος ἐπὶ ταύτην κάθετος, τρίγωνον όρθογώνιον έσεσθαι, συνεστηκός έκ τε της ἀπὸ Θαψάκου ἐπὶ Βαβυλώνα τεινούσης πλευράς και της ἀπὸ Βαβυλώνος καθέτου ἐπὶ την διά Θαψάκου μεσημβρινήν γραμμήν ήγμένης καὶ αὐτης της διὰ Θαψάκου μεσημβρινης. τούτου δὲ τοῦ τριγώνου τὴν μὲν ὑποτείνουσαν τἢ ὀρθἢ τὴν άπὸ Θαψάκου εἰς Βαβυλώνα τίθησιν, ήν φησι τετρακισχιλίων οκτακοσίων είναι την δ' έκ Βαβυλώνος είς την διά Θαψάκου μεσημβρινήν γραμμήν

GEOGRAPHY, 2. 1. 28-29

place, Eratosthenes has not spoken of the line that bounds a western side of Ariana as lying on a meridian; nor yet of the line from the Caspian Gates to Thapsacus as at right angles with the meridian line through the Caspian Gates, but rather of the line marked by the mountain-range, with which line the line to Thapsacus forms an acute angle, since the latter has been drawn down ¹ from the same point as that from which the mountain-line has been drawn. In the second place, Eratosthenes has not called the line drawn to Babylon from Carmania parallel to the line drawn to Thapsacus; and even if it were parallel, but not at right angles with the meridian line through the Caspian Gates, no advantage would accrue to the argument of Hipparchus.

29. But after making these assumptions off-hand, and after showing, as he thinks, that Babylon, according to Eratosthenes, is farther east than Thapsacus by slightly more than a thousand stadia, Hipparchus again idly fabricates an assumption for use in his subsequent argument; and, he says, if we conceive a straight line drawn from Thapsacus towards the south and a line perpendicular to it from Babylon, we will have a right-angled triangle, composed of the side that extends from Thapsacus to Babylon, of the perpendicular drawn from Babylon to the meridian line through Thapsacus, and of the meridian itself through Thapsacus. Of this triangle he makes the line from Thapsacus to Babylon the hypotenuse, which he says is four thousand eight hundred stadia; and the perpendicular from Babylon to the meridian line through Thapsacus, slightly more than a thousand stadia—

¹ That is, with a divergence toward the south.

κάθετον μικρώ πλειόνων ή γιλίων, δσων ήν ή ύπερονη της έπι Θάψακον προς την μέχρι Βαβυλώνος. έκ δὲ τούτων καὶ τὴν λοιπὴν τῶν περὶ τὴν ὀρθὴν συλλογίζεται πολλαπλάσιον οὖσαν τῆς λεγθείσης καθέτου. προστίθησι δὲ ταύτη τὴν ἀπὸ Θαψάκου πρὸς ἄρκτον ἐκβαλλομένην μέχρι τῶν ᾿Αρμενίων ορών. ής τὸ μὲν ἔφη μεμετρήσθαι Ἐρατοσθένης καὶ είναι γιλίων έκατόν, τὸ δ' ἀμέτρητον ἐᾶ. ούτος δ' έπι τουλάχιστον υποτίθεται χιλίων, ώστε τὸ συνάμφω δισχιλίων καὶ έκατὸν γίγνεσθαι· δ προσθείς τη έπ' εὐθείας πλευρά τοῦ τριγώνου μέχρι της καθέτου της έκ Βαβυλώνος πολλών γιλιάδων λογίζεται διάστημα τὸ ἀπὸ τῶν ᾿Αρμενίων ὀρών καὶ τοῦ δι' Αθηνών παραλλήλου μέγρι της έκ Βαβυλώνος καθέτου, ήτις έπλ τοῦ διὰ Βαβυλώνος παραλλήλου ίδρυται, τὸ δέ γε άπὸ τοῦ δι' ᾿Αθηνῶν παραλλήλου ἐπὶ τὸν διὰ Βαβυλώνος δείκνυσιν οὐ μείζον δν σταδίων δισχιλίων τετρακοσίων, ύποτεθέντος του μεσημβρινου παντός τοσούτων σταδίων, δσων Ἐρατοσθένης φησίν. εί δὲ τοῦτο, οὐκ αν ην τὰ ὄρη τὰ ᾿Αρμένια καλ τὰ τοῦ Ταύρου ἐπλ τοῦ δι' 'Αθηνῶν παραλλήλου, ώς 'Ερατοσθένης, άλλά πολλαίς γιλιάσι σταδίων άρκτικώτερα κατ' αὐτὸν ἐκεῖνον. ἐνταῦθα δὴ πρὸς

¹ From the Caspian Gates.

² From the Carmanian frontier.

GEOGRAPHY, 2. 1. 29

the amount by which the line to Thapsacus 1 exceeded the line up to Babylon 2; and then from these sums he figures the other of the two lines which form the right angle to be many times longer than the said perpendicular. And he adds to that line the line produced northwards from Thapsacus up to the Armenian mountains, one part of which Eratosthenes said had been measured and was one thousand one hundred stadia, but the other part he leaves out of consideration as unmeasured. Hipparchus assumes for the latter part a thousand stadia at the least, so that the sum of the two parts amounts to two thousand one hundred stadia; and adding this sum to his straight-line side 3 of the triangle, which is drawn to meet its perpendicular from Babylon, Hipparchus computes a distance of several thousand stadia, namely, that from the Armenian Mountains, or the parallel that runs through Athens, to the perpendicular from Babylon -which perpendicular he lays on the parallel that runs through Babylon. At any rate, he points out that the distance from the parallel through Athens to that through Babylon is not more than two thousand four hundred stadia, if it be assumed that the whole meridian is the number of stadia in length that Eratosthenes says; and if this is so. then the mountains of Armenia and those of the Taurus could not lie on the parallel that runs through Athens, as Eratosthenes says they do, but many thousand stadia farther north, according to Eratosthenes' own statements. At this point,

⁸ In § 26 Strabo indicates clearly that Eratosthenes did not say the western side was one straight line. But Hipparchus took this for granted.

τω τοις ανεσκευασμένοις λήμμασι προσγρήσθαι πρὸς τὴν τοῦ ὀρθογωνίου τριγώνου τάξιν, καὶ τοῦτο λαμβάνει τὸ μὴ διδόμενον, τὸ τὴν ὑποτεί-νουσαν τῆ ορθῆ γωνία τὴν ἀπὸ Θαψάκου γραμμὴν εὐθεῖαν εἶναι μέχρι Βαβυλώνος ἐν σταδίοις τετρακισχιλίοις οκτακοσίοις. παρά τε γαρ τον Ευφράτην φησίν είναι την όδον ταύτην ό Έρατοσθένης, καὶ τὴν Μεσοποταμίαν σὺν τῆ Βαβυλωνία μεγάλω κύκλω περιέγεσθαι λέγων ὑπό τε τοῦ Εὐφράτου καὶ τοῦ Τίγριδος, τὸ πλέον 1 τῆς περιοχῆς ὑπὸ τοῦ Εὐφράτου συμβαίνειν φησίν ωσθ ή ἀπὸ Θα-C 83 Ψάκου είς Βαβυλώνα εὐθεῖα οὔτ' ἃν παρὰ τὸν Εὐφράτην είη, οὔτ' ᾶν τοσούτων σταδίων οὐδ' έγγυς. ανατέτραπται οθν ο συλλογισμός καὶ μὴν εξρηταί γε, ότι ούχ οξόν τε δυείν δεδομένων γραμμών ἀπὸ τῶν Κασπίων πυλών κατάνεσθαι την μεν επί Θάψακον, την δ' επί τα των 'Αρμενίων δοη τὰ κατάλληλα τῆ Θαψάκφ, ἀπέχοντα τῆς Θαψάκου τοὐλάγιστον κατ' αὐτὸν τὸν "Ιππαργον δισγιλίους καὶ έκατὸν σταδίους, ἀμφοτέρας παραλλήλους είναι καὶ ἀλλήλαις καὶ τῆ διὰ Βαβυλώνος, ην νότιον πλευράν Έρατοσθένης εκάλεσεν, εκείνος μέν οθν οθκ έχων καταμεμετρημένην είπειν την παρὰ τὰ ὄρη δοδόν, τὴν ἀπὸ Θαψάκου ἐπὶ Κασπίους πύλας ταύτην είπε, και προσέθηκε τὸ ώς τυπωδώς είπειν άλλως τε τώ βουλομένω τὸ μηκος είπειν της μετά την Αριανήν μέχρι Εύ-Φράτου χώρας οὐ πολὺ διέφερε ταύτην ἡ ἐκείνην καταμετρείν. ο δ' ώς παραλλήλους ύπακούων

δέ, Madvig deletes, after πλέον.
 δ΄, before ἀπό, Jones deletes.

then, in addition to making further use of his now demolished assumptions for the construction of his right-angled triangle, he also assumes this point that is not granted, namely, that the hypotenuse the straight line from Thapsacus to Babylon—is within four thousand eight hundred stadia. For Eratosthenes not only says that this route is along the Euphrates, but when he tells us that Mesopotamia, including Babylonia, is circumscribed by a great circle, by the Euphrates and the Tigris. he asserts that the greater part of the circumference is described by the Euphrates: consequently, the straight line from Thansacus to Babylon could neither follow the course of the Euphrates, nor be, even approximately, so many stadia in length. So his argument is overthrown. And besides, I have already stated that, if we grant that two lines are drawn from the Caspian Gates, one to Thapsacus, the other to that part of the Armenian Mountains that corresponds in position to Thapsacus (which, according to Hipparchus himself, is distant from Thansacus at the least two thousand one hundred stadia), it is impossible for both these lines to be parallel either to each other or to the line through Babylon, which Eratosthenes called "southern side." Now because Eratosthenes could not speak of the route along the mountain-range as measured, he spoke of only the route from Thapsacus to the Caspian Gates as measured, and he added the words "roughly speaking"; moreover, since he only wished to tell the length of the country between Ariana and the Euphrates, it did not make much difference whether he measured one route or the other. But Hipparchus, when he tacitly assumes

λέγεσθαι τελέως αν δόξειε καταγινώσκειν παιδικήν άμαθίαν τάνθρώπου. ταθτα μέν οθν έαν δεί ώς παιδικά.

30. "Α δ' ἄν τις αἰτιάσαιτο τοῦ Ἐρατοσθένους τοιαῦτα ἐστί. καθάπερ γὰρ ἡ κατὰ μέλος τομὴ της άλλως κατά μέρος διαφέρει (διότι ή μέν καί τὰ μέρη λαμβάνει περιγραφήν έχοντα φυσικήν, άρθρώσει τινὶ καὶ τύπω σημειώδει, καθ' δ καὶ τοῦτο εἴρηται,

> τον δε δια μελεϊστί ταμών, $(Od. 9, 291, \Pi, 24, 409)$

ή δ' οὐδὲν ἔχει τοιοῦτον), χρώμεθα δ' οἰκείως έκατέρα, τὸν καιρὸν καὶ τὴν χρείαν σκοποῦντες, ούτως έπι των γεωγραφικών δεί μεν τομάς ποιείσθαι των μερών, τὰ καθ' έκαστα ἐπιόντας. μιμεῖσθαι δὲ τὰς κατὰ μέλος τομὰς μᾶλλον ἡ τάς ώς έτυχε. τὸ γάρ σημειώδες και τὸ εὐπεριόριστον εκείθεν λαβείν έστιν, οδ χρείαν έχει δ γεωγράφος, εὐπεριόριστον δέ, ὅταν ἡ ποταμοῖς η δρεσιν η θαλάττη δυνατον ή, και έθνει δε ή έθνεσι καὶ μεγέθει ποσῷ καὶ σχήματι, ὅπου τοῦτο δυνατόν, πανταγού δὲ ἀντὶ τοῦ γεωμετρικώς τὸ άπλως καὶ όλοσχερως ίκανόν. μέγεθος μέν οὖν ίκανόν έστιν, αν τὸ μέγιστον είπης μηκος καλ πλάτος, ώς της οἰκουμένης έπτὰ μυριάδων εί τύχοι μήκος, πλάτος δ' έλαττον ή ήμισυ μικρώ τοῦ μήκους σχήμα δ', αν των γεωμετρικών τινι σχημάτων εἰκάσης, ώς τὴν Σικελίαν τριγώνω, ἢ 314

that the lines are spoken of by Eratosthenes as parallel, would seem to charge the man with utterly childish ignorance. Therefore, I must dismiss these arguments of his as childish.

30. But the charges which one might bring against Eratosthenes are such as follow. Just as, in surgery, amputation at the joints differs from unnatural piecemeal amputation (because the former takes off only the parts that have a natural configuration, following some articulation of joints or a significant outlinethe meaning in which Homer says, "and having cut him up limb by limb"—whereas the latter follows no such course), and just as it is proper for us to use each kind of operation if we have regard to the proper time and the proper use of each, just so, in the case of geography, we must indeed make sections of the parts when we go over them in detail, but we must imitate the limb-by-limb amputations rather than the haphazard amputations. For only thus it is possible to take off the member that is significant and welldefined, the only kind of member that the geographer has any use for. Now a country is well-defined when it is possible to define it by rivers or mountains or sea; and also by a tribe or tribes, by a size of such and such proportions, and by shape where this is possible. But in every case, in lieu of a geometrical definition, a simple and roughly outlined definition So, as regards a country's size, it is is sufficient. sufficient if you state its greatest length and breadth (of the inhabited world, for example, a length of perhaps seventy thousand stadia, a breadth slightly less than half the length); and as regards shape, if you liken a country to one of the geometrical figures (Sicily, for example, to a triangle), or to one of the

τῶν ἄλλων γνωρίμων τινὶ σχημάτων, οἶον τὴν Ἰβηρίαν βύρση, τὴν Πελοπόννησον πλατάνου C 84 φύλλφ· ὅσφ δ᾽ ἃν μεῖζον ἢ τὸ τεμνόμενον, τοσῷδε καὶ ὁλοσχερεστέρας πρέποι ἂν ποιεῖσθαι

τὰς τομάς.

31. Ἡ μὲν οὖν οἰκουμένη δίχα διήρηται τῷ τε Ταύρω καὶ τῆ ἐπὶ Στήλας θαλάττη καλώς. καὶ τοῦ νοτίου μέρους, ή μεν Ἰνδική περιώρισται πολλοίς καὶ γὰρ όρει καὶ ποταμῶ καὶ θαλάττη καλ ένλ ονόματι, ώς αν ένος έθνους ώστε καλ τετράπλευρος ὀρθώς λέγεται καὶ ρομβοειδής. ή δ' 'Αριανή ήττον μεν το εύπερίγραφον έχει δια τὸ τὴν ἐσπερίαν πλευρὰν συγκεγύσθαι, διώρισται δ' όμως ταίς τε τρισί πλευραίς, ώς αν εὐθείαις, καί τῷ ὀνόματι, ὡς ἀν ἐνὸς ἔθνους. ἡ δὲ τρίτη σφραγίς τελέως ἀπερίγραφός ἐστιν, οὕτω 2 γε άφορισθείσα ή τε γάρ κοινή πλευρά αὐτή τε καί τη Αριανή συγκέχυται, ώς προείρηται, καὶ ή νότιος πλευρά άργότατα είληπται ούτε γάρ περιγράφει την σφραγίδα, διὰ μέσης τε αὐτης βαδίζουσα, καὶ πολλὰ μέρη ἀπολείπουσα πρὸς νότον, ούτε μήκος υπογράφει τὸ μέγιστου τὸ προσάρκτιον πλευρον μείζον οὐθ' ὁ Εὐφράτης έσπέριον έστι πλευρον, οὐδ' εἰ ἐπ' εὐθείας ῥέοι, των ἄκρων αὐτοῦ μή ἐπὶ τοῦ αὐτοῦ μεσημβρινοῦ κειμένων. τί γαρ μαλλον έσπέριον ή νότιον; χωρίς δὲ τούτων, ὀλίγης οὐσης τῆς ἐπὶ θάλατταν λοιπής την Κιλίκιον και την Συριακήν, το μη μέγρι δεύρο προάγειν δείν την σφραγίδα ού πι-

1 αν, Paetz, Groskurd, for έθνος.

² οὐτω, Spengel, for οὐπω; Meineke following; C. Müller approving.

GEOGRAPHY, 2. 1. 30-31

other well-known figures (for instance, Iberia to an oxhide, the Peloponnesus to a leaf of a plane-tree). And the greater the territory you cut into sections, the more rough may be the sections you make.

31. Now the inhabited world has been happily divided by Eratosthenes into two parts by means of the Taurus Range and the sea that stretches to the Pillars. And in the Southern Division: India, indeed, has been well-defined in many ways, by a mountain, a river, a sea, and by a single term, as of a single ethnical group--so that Eratosthenes rightly calls it four-sided and rhomboidal. Ariana, however, has a contour that is less easy to trace because its western side is confused, but still it is defined by the three sides, which are approximately straight lines, and also by the term Ariana, as of a single ethnical group. But the Third Section is wholly untraceable, at all events as defined by Eratosthenes. For, in the first place, the side common to it and Ariana is confused, as I have previously stated. And the southern side has been taken very inaccurately; for neither does it trace a boundary of this section, since it runs through its very centre and leaves out many districts in the south, nor does it represent the section's greatest length (for the northern side is longer), nor does the Euphrates form its western side (it would not do so even if its course lay in a straight line), since its extremities do not lie on the same meridian. In fact, how can this side be called western rather And, quite apart from these than southern? objections, since the distance that remains between this line and the Cilician and Syrian Sea is slight, there is no convincing reason why the section should

See § 22, above.

θανόν, της τε Σεμιράμιδος και του Νίνου Σύρων λεγομένων, ών της μέν ή Βαβυλών κτίσμα καί βασίλειον, τοῦ δὲ Νίνος, ώς αν μητρόπολις της Συρίας, καὶ τῆς διαλέκτου δὲ μέγρι νῦν διαμενούσης της αυτης τοίς τε έκτὸς του Ευφράτου και τοίς $\dot{\epsilon}$ ντός. τὸ $\dot{\delta}$ $\dot{\epsilon}$ $\dot{\epsilon}$ $\dot{\epsilon}$ νταῦθα μέντοι τοιούτω μερισμώ διασπάν έθνος γνωριμώτατον καὶ τὰ μέρη συνάπτειν τοις άλλοεθνέσιν ηκιστα αν πρέποι. οὐδὲ γαρ ύπο μεγέθους απηναγκάσθαι λέγοι αν καί γαρ το μέχρι θαλάττης ου μήν πω αν εξισάζοιτο τη 'Ινδικη, άλλ' οὐδὲ τη 'Αριανη, προσλαβὸν καὶ τὸ μέχρι τῶν ὅρων τῆς εὐδαίμονος ᾿Αραβίας καὶ της Αιγύπτου ωστε πολύ κρείττον ην μέχρι δεῦρο προελθεῖν, της τρίτης εἰπόντα σφραγίδος τοσαύτη προσθήκη τη μέχρι της Συριακής θαλάττης τὸ μὲν νότιον πλευρὸν οὐχ ὅσπερ ἐκεῖνος είπεν έγον, οὐδ' ἐπ' εὐθείας, ἀλλ' ἀπὸ τῆς Καρμανίας εὐθὺς τὴν δεξιὰν παραλίαν εἰσπλέοντι παρά ε του Περσικου κόλπου μέχρι της έκβολης τοῦ Εὐφράτου, καὶ μετὰ ταῦτα τοῖς ὁρίοις τῆς Μεσήνης και της Βαβυλωνίας συνάπτον, ήπερ έστιν άρχη τοῦ ἰσθμοῦ τοῦ διορίζοντος την εὐδαί-C 85 μονα 'Αραβίαν ἀπὸ τῆς ἄλλης ἡπείρου, εἶτ' έφεξης αὐτὸν τοῦτον διεξιόν, διηκόν τε μέχρι τοῦ μυγοῦ τοῦ ᾿Αραβίου κόλπου καὶ Πηλουσίου, καὶ έτι τοῦ Κανωβικοῦ στόματος τοῦ Νείλου τοῦτο

1 τ6, Corais, for τd, before ἐνταῦθα; Meineke following.

 ² δέ, Madvig inserts, after Corais' τό.
 3 παρά, Siebenkees and Corais, for γάρ, after εἰσπλέοντι, following ο.

not be extended thereto, both because Semiramis and Ninus are called Syrians (Babylon was founded and made the royal residence by Semiramis, and Nineveh by Ninus, this showing that Nineveh was the capital of Syria) and because up to the present moment even the language of the people on both sides of the Euphrates is the same. However, to rend asunder so famous a nation by such a line of cleavage in this region, and to join the parts thus dissevered to the parts that belong to other tribes, would be wholly improper. Neither, indeed, could Eratosthenes allege that he was forced to do this by considerations of size; for the addition of the territory that extends up to the sea 1 would still not make the size of the section equal to that of India, nor, for that matter, to that of Ariana, not even if it were increased by the territory that extends up to the confines of Arabia Felix and Egypt. Therefore it would have been much better to extend the Third Section to these limits, and thus, by adding so small a territory that extends to the Syrian Sea, to define the southern side of the Third Section as running. not as Eratosthenes defined it, nor yet as in a straight line, but as following the coast-line that is on your right hand as you sail from Carmania into and along the Persian Gulf up to the mouth of the Euphrates, and then as following the frontiers of Mesene and Babylonia, which form the beginning of the Isthmus that separates Arabia Felix from the rest of the continent; then, next, as crossing this Isthmus itself, and as reaching to the recess of the Arabian Gulf and to Pelusium and even beyond to the Canobic mouth of the Nile. So much for

¹ The Mediterranean.

μèν τὸ νότιον πλευρόν, τὸ δὲ λοιπὸν ἐσπέριον τὴν ἀπὸ τοῦ Κανωβικοῦ στόματος μέχρι τῆς Κιλικίας παραλίαν.

32. Τετάρτη δ' αν είη σφραγίς ή συνεστώσα έκ τε της εὐδαίμονος 'Αραβίας καὶ τοῦ 'Αραβίου κόλπου καὶ τῆς Αἰγύπτου πάσης καὶ τῆς Αἰθιοταύτης δὲ τῆς μερίδος μῆκος μὲν ἔσται τὸ άφοριζόμενον ύπὸ δυείν μεσημβρινών ὁ μὲν γὰρ γράφεται διὰ τοῦ δυσμικωτάτου σημείου τοῦ ἐπ' αὐτῆς, ὁ δὲ διὰ τοῦ ἐωθινωτάτου πλάτος δὲ τὸ μεταξύ δυείν παραλλήλων, ὧν ὁ μὲν γράφεται διὰ τοῦ βορειοτάτου σημείου, ὁ δὲ διὰ τοῦ νοτιωτάτου. έπὶ γὰρ τῶν ἀνωμάλων σχημάτων, ἐφ' ὧν πλευραῖς οὐ δυνατὸν ἀφορίσαι πλάτος καὶ μῆκος, οὕτω τὸ μέγεθος άφοριστέον. καθόλου δε νοητέον, ότι ούγ ώσαύτως λέγεται μήκος καὶ πλάτος ἐπὶ ὅλου κάὶ μέρους άλλ' έφ' δλου μέν το μείζον διάστημα καλείται μήκος, τὸ δ' ἔλαττον πλάτος, ἐπὶ μέρους δὲ μῆκος μὲν τὸ παράλληλον τῷ τοῦ ὅλου μήκει τμημα έκείνου, όπότερον αν ή μείζον, καν τὸ ληφθέν διάστημα έν τῷ πλάτει μεῖζον ή τοῦ ληφθέντος έν τῶ μήκει διαστήματος. διὸ καὶ τῆς οίκουμένης ἀπ' ἀνατολης ἐπὶ δύσιν μηκυνομένης. άπὸ δὲ ἄρκτων ἐπὶ νότον πλατυνομένης, καὶ τοῦ μεν μήκους έπὶ παραλλήλου τινός τῷ ἰσημερινῷ γραφομένου, τοῦ δὲ πλάτους ἐπὶ μεσημβρινοῦ, δεί και των μερών λαμβάνεσθαι μήκη μέν τά παράλληλα τῷ μήκει τμήματα αὐτῆς, πλάτη δὲ τὰ τῶ πλάτει. οὕτω γὰρ ἂν ἄμεινον ὑπογράφοιτο

GEOGRAPHY, 2. 1. 31-32

southern side; the remaining, or western, side would be the coast-line from the Canobic mouth of the Nile up to Cilicia.

32. The Fourth Section would be the one composed of Arabia Felix, the Arabian Gulf, all Egypt, and Ethiopia. Of this section, the length will be the space bounded by two meridian lines, of which lines the one is drawn through the most western point on the section and the other through the most eastern point. Its breadth will be the space between two parallels of latitude, of which the one is drawn through the most northern point, and the other through the most southern point; for in the case of irregular figures whose length and breadth it is impossible to determine by sides, we must in this way determine their size. And, in general, we must assume that "length" and "breadth" are not employed in the same sense of a whole as of a part. On the contrary, in case of a whole the greater called "length," and the lesser, "breadth"; but, in case of a part, we call "length" any section of a part that is parallel to the length of the whole—no matter which of the two dimensions is the greater, and no matter if the distance taken in the breadth be greater than the distance taken in the Therefore, since the inhabited stretches lengthwise from east to west and breadthwise from north to south, and since its length is drawn on a line parallel to the equator and its breadth on a meridian line, we must also, in case of the parts, take as "lengths" all the sections that are parallel to the length of the inhabited world, and as "breadths" all the sections that are parallel to its breadth. For by this method we can better indicate,

πρώτον μεν το μέγεθος της οἰκουμένης όλης, έπειτα καὶ ή διάθεσις καὶ τὸ σγήμα τῶν μερῶν, καθ' à μεν ἀπολείπειν, καθ' à δε πλεονάζειν φαινομένων τη τοιαύτη παραθέσει.

33. 'Ερατοσθένης δὲ τὸ μὲν τῆς οἰκουμένης λαμβάνει μῆκος ἐπὶ τῆς διὰ Στηλῶν καὶ Κασπίων πυλών καὶ Καυκάσου γραμμής, ώς αν εὐθείας, τὸ δὲ τῆς τρίτης μερίδος ἐπὶ τῆς διὰ Κασπίων πυλών καὶ Θαψάκου, τὸ δὲ τῆς τετάρτης ἐπὶ τῆς διὰ Θαψάκου καὶ Ἡρώων πόλεως μέχρι τῆς μεταξὸ των στομάτων του Νείλου, ην ανάγκη καταστρέφειν είς τοὺς περί Κάνωβον καὶ 'Αλεξάνδρειαν τόπους ενταθθα γάρ έστι τὸ έσγατον στόμα τὸ καλούμενον Κανωβικόν τε καὶ Ἡρακλεωτικόν. είτ' οὖν ἐπ' εὐθείας ἀλλήλοις τὰ μήκη τίθησιν, είθ' ώς αν γωνίαν ποιούντα κατά Θάψακον, άλλ' ότι νε οὐ παράλληλον οὐδέτερον τῷ τῆς οἰκουμένης μήκει, φανερόν έστιν έξ αὐτῶν ὧν εἴρηκεν C 86 αὐτός. τὸ μὲν γὰρ τῆς οἰκουμένης μῆκος διὰ τοῦ Ταύρου γράφει καὶ τῆς ἐπ' εὐθείας μέχρι Στηλῶν θαλάττης κατά γραμμήν την διά τοῦ Καυκάσου καὶ 'Ρόδου καὶ 'Αθηνών, ἀπὸ δὲ 'Ρόδου εἰς 'Αλεξάνδρειαν κατά τὸν δι' αὐτῶν μεσημβρινὸν οὐ πολύ ελάττους των τετρακισχιλίων φησίν είναι σταδίων ωστε τοσούτον καὶ οἱ παράλληλοι διέγοιεν αν άλλήλων ο τε δια 'Ρόδου και ό δι' 'Αλεξανδρείας. ὁ δ' αὐτός πώς ἐστι τούτω ὁ διὰ της 'Ηρώων πόλεως, ή νοτιώτερός γε τούτου.

firstly, the size of the inhabited world as a whole, and, secondly, the position and the shape of its parts; because, by such comparison, it will be clear in what respects the parts are deficient and in what respects they are excessive in size.

33. Now Eratosthenes takes the length of the inhabited world on the line that runs through the Pillars, the Caspian Gates, and the Caucasus, as though on a straight line; and the length of his Third Section on the line that runs through the Caspian Gates and Thapsacus; and the length of his Fourth Section on the line that runs through Thansacus and Heroönpolis to the region between the mouths of the Nile—a line which must needs come to an end in the regions near Canobus and Alexandria; for the last mouth of the Nile, called the Canobic or Heracleotic mouth, is situated at that point. Now whether he places these two lengths on a straight line with each other, or as though they formed an angle at Thapsacus, it is at any rate clear from his own words that he does not make either line parallel to the length of the inhabited world. For he draws the length of the inhabited world through the Taurus Range and the Mediterranean Sea straight to the Pillars on a line that passes through the Caucasus, Rhodes, and Athens; and he says that the distance from Rhodes to Alexandria on the meridian that passes through those places is not much less than four thousand stadia; so that also the parallels of latitude of Rhodes and Alexandria would be just this distance apart. But the parallel of latitude of Heroönpolis is approximately the same as that of Alexandria, or, at any rate, more to the south than the latter; and hence the line that intersects

ἄσθ' ἡ συμπίπτουσα γραμμὴ τούτφ τε 1 τῷ παραλλήλφ καὶ τῷ διὰ 'Ρόδου καὶ Κασπίων πυλῶν, εἴτ' εὐθεῖα εἴτε κεκλασμένη, οὐκ ἄν εἴη παράλληλος οὐδετέρα. οὐκ εὖ γοῦν λαμβάνεται τὰ μήκη· οὐκ εὖ δὲ οὐδὲ αἱ διαβόρειοι λαμβάνονται μερίδες.

34. 'Αλλ' έπὶ τὸν "Ιππαρχον πρότερον έπανιόντες τὰ έξης ίδωμεν. πάλιν γὰρ πλάσας έαυτώ λήμματα γεωμετρικώς ανασκευάζει τὰ ὑπ' ἐκείνου τυπωδώς λεγόμενα. Φησί γάρ αὐτὸν λέγειν τὸ έκ Βαβυλώνος είς μεν Κασπίους πύλας διάστημα σταδίων έξακισχιλίων έπτακοσίων, είς δέ τούς όρους της Καρμανίας και Περσίδος πλειόνων η ενακισχιλίων, δπερ επί γραμμής κείται πρός ισημερινάς άνατολάς εὐθείας άγομένης γίνεσθαι δε ταύτην κάθετον επί την κοινην πλευράν της τε δευτέρας και της τρίτης σφραγίδος, ώστε κατ' αὐτὸν συνίστασθαι τρίγωνον ὀρθογώνιον, ὀρθὴν έχον την πρός τοις δροις της Καρμανίας, καί την υποτείνουσαν είναι ελάττω μιας των περί την δοθην έγουσών δείν οὖν την Περσίδα της δευτέρας ποιείν σφραγίδος. πρός ταῦτα εξρηται, ότι ούθ' ή έκ Βαβυλώνος είς την Καρμανίαν έπὶ παραλλήλου λαμβάνεται, οὔθ' ή διορίζουσα εὐθεῖα τὰς σφραγίδας μεσημβρινή εἴρηται. ωστ' οὐδεν εἴρηται πρὸς αὐτόν. οὐδε τὸ ἐπι-

¹ τε, Meineke, for γε.

² ἐνακισχιλίων, Meineke, for ἐννακιτχιλίων.

GEOGRAPHY, 2. 1. 33-34

both the parallel of latitude of Heroönpolis and that of Rhodes and the Caspian Gates, whether it be a straight line or a broken line, cannot be parallel to either. Accordingly, the lengths are not well taken by Eratosthenes. And, for that matter, the sections that stretch through the north are not well taken by him.¹

34. But let us first return to Hipparchus and see what he says next. Again fabricating assumptions on his own account he proceeds with geometrical precision to demolish what are merely the rough estimates of Eratosthenes. He says that Eratosthenes calls the distance from Babylon to the Caspian Gates six thousand seven hundred stadia, and to the frontiers of Carmania and Persis more than nine thousand stadia on a line drawn straight to the equinoctial east, and that this line comes to be perpendicular to the side that is common to the Second and the Third Sections, and that, therefore, according to Eratosthenes, a right-angled triangle is formed whose right angle lies on the frontiers of Carmania and whose hypotenuse is shorter than one of the sides that enclose the right angle 2; accordingly, adds Hipparchus, Eratosthenes has to make Persis a part of his Second Section! Now I have already stated in reply to this that Eratosthenes neither takes the distance from Babylon to Carmania on a parallel, nor has he spoken of the straight line that separates the two sections as a meridian line; and so in this argument Hipparchus has made no point against Eratosthenes. Neither is his subsequent conclusion

² See the figure and the note on page 328.

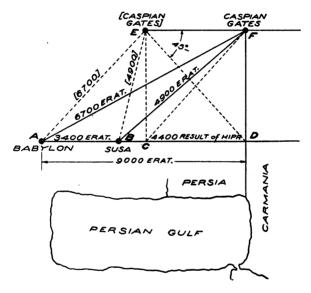
¹ That is, the sections that stretch north of the Taurus Range.

φερόμενον εὖ· εἴρηκότος γὰρ ἀπὸ Κασπίων πυλών είς μεν Βαβυλώνα τους λεγθέντας, είς δε Σοῦσα σταδίους εἶναι τετρακισχιλίους ενακοσίους.1 άπὸ δὲ Βαβυλῶνος τρισχιλίους τετρακοσίους, πάλιν άπὸ τῶν αὐτῶν ὁρμηθεὶς ὑποθέσεων ἀμβλυγώνιον τρίγωνον συνίστασθαί φησι πρός τε ταίς Κασπίοις πύλαις καλ Σούσοις καλ Βαβυλώνι, την άμβλειαν γωνίαν έχου πρός Σούσοις, τὰ δὲ τῶν πλευρῶν μήκη τὰ ἐκκείμενα εἶτ' ἐπιλογίζεται, διότι συμβήσεται κατά τὰς ὑποθέσεις ταύτας την διά Κασπίων πυλών μεσημβρινήν γραμμην έπι τοῦ διὰ Βαβυλώνος και Σούσων παραλλήλου δυσμικωτέραν έχειν την κοινην τομην της κοινης τομης του αυτού παραλλήλου καί της ἀπὸ Κασπίων πυλών καθηκούσης εὐθείας έπλ τούς δρους τούς της Καρμανίας καλ της Περσίδος πλείοσι των τετρακισγιλίων και τετρακοσίων σχεδον δή τι προς την δια Κασπίων πυλῶν μεσημβρινὴν γραμμὴν ἡμίσειαν ὀρθῆς ποιείν γωνίαν τὴν διὰ Κασπίων πυλῶν καὶ τῶν όρων της τε Καρμανίας καὶ της Περσίδος, καὶ νεύειν αὐτὴν ἐπὶ τὰ μέσα τῆς τε μεσημβρίας καὶ τῆς ἰσημερινῆς ἀνατολῆς ταύτη δ' είναι παράλληλον τὸν Ἰνδὸν ποταμόν, ώστε καὶ τοῦτον άπὸ τῶν ὀρῶν οὐκ ἐπὶ μεσημβρίαν ῥεῖν, ὡς Φησιν Έρατοσθένης, άλλὰ μεταξὺ ταύτης καὶ τῆς ίσημερινής άνατολής, καθάπερ έν τοῖς άρχαίοις πίναξι καταγέγραπται. τίς οὖν συγχωρήσει τὸ νῦν συσταθέν τρίγωνον ἀμβλυγώνιον είναι, μὴ

1 evakorious, Meineke, for evvakorious.



Taking advantage of the rather loose estimates of Eratosthenes, and aided by false assumptions, Hipparchus again follows the process of reductio ad absurdum by applying the figures of Eratosthenes to latitudinal and longitudinal distances. Thus, Hipparchus forces Eratosthenes' Caspian Gates to be 4,400 stadia to the west of its real position; and hence Persis would fall into the Second Section. However,



Eratosthenes' line from Babylon to Carmania, Strabo means, would not be the line AD, but a line drawn from A and diverging considerably to the south from AD. Of course, if Hipparchus' assumptions be granted, the Indus would have to be parallel to ED, and it would make an angle with the parallel EF of slightly more than 45°, though the Indus should really run about due south.

correct. For because Eratosthenes had given the distance from the Caspian Gates to Babylon as the said six thousand seven hundred stadia, and the distance from the Caspian Gates to Susa as four thousand nine hundred stadia, and the distance from Babylon to Susa as three thousand four hundred stadia, Hipparchus, again starting from the same hypotheses, says that an obtuse-angled triangle is formed, with its vertices at the Caspian Gates, Susa and Babylon, having its obtuse angle at Susa, and having as the lengths of its sides the distances set forth by Eratosthenes. Then he draws his conclusion, namely, that it will follow according to these hypotheses that the meridian line that runs through the Caspian Gates will intersect the parallel that runs through Babylon and Susa at a point further west than the intersection of the same parallel with the straight line that runs from the Caspian Gates to the frontiers of Carmania and Persis by more than four thousand four hundred stadia; and so the line that runs through the Caspian Gates to the frontiers of Carmania and Persis will form almost a half of a right angle with the meridian line that runs through the Caspian Gates and will lean in a direction midway between the south and equinoctial east; and that the Indus River will be parallel to this line, and that consequently this river, also, does not flow south from the mountains as Eratosthenes says it does, but between the south and the equinoctial east, precisely as it is laid down on the early maps. Who, pray, will concede that the triangle now formed by Hipparchus is obtuse-angled without also conceding that the triangle that συγγωρών δρθογώνιον είναι τὸ περιέγον αὐτό: τίς δ' έπὶ παραλλήλου κειμένην την ἀπὸ Βαβυλώνος είς Σούσα μίαν τών την αμβλείαν περιεχουσών, τὴν ὅλην μὴ συγχωρών τὴν μέχρι Καρμανίας: τίς δὲ τῶ Ἰνδῶ παράλληλον τὴν ἀπὸ Κασπίων πυλών ἐπὶ τοὺς ὅρους τῆς Καρμανίας; ών γωρίς κενός αν είη ο συλλογισμός. δε τούτων κάκεῖνος εἴοηκεν ρομβοειδές ὅτι έστι τὸ σχημα της Ἰνδικης καὶ καθάπερ ή έωθινη πλευρά παρέσπασται πολύ προς εω, καί μάλιστα τῷ ἐσγάτω ἀκρωτηρίω, δ καὶ πρὸς μεσημβρίαν προπίπτει πλέον παρά την άλλην ηιόνα, ούτω καὶ ή παρὰ τὸν Ἰνδὸν πλευρά.

35. Πάντα δὲ ταῦτα λέγει γεωμετρικῶς, ἐλέγχων οὐ πιθανῶς. ταῦτα δὲ καὶ αὐτὸς ἑαυτῷ ἐπενέγκας ἀπολύεται, φήσας, εἰ μὲν παρὰ μικρὰ διαστήματα ὑπῆρχεν ὁ ἔλεγχος, συγγνῶναι αν ἤν ἐπειδὴ δὲ παρὰ χιλιάδας σταδίων φαίνεται διαπίπτων, οὐκ εἶναι συγγνωστά· καίτοι ἐκεῖνόν γε καὶ παρὰ τετρακοσίους σταδίους αἰσθητὰ ἀποφαίνεσθαι τὰ παραλλάγματα, ὡς ἐπὶ τοῦ δι' Αθηνῶν παραλλήλου καὶ τοῦ διὰ 'Ρόδου. ἔστι δὲ τὸ πρὸς αἴσθησιν οὐχ ἀπλοῦν, ἀλλὰ τὸ μὲν ἐν πλάτει μείζονι, τὸ δ' ἐν ἔλάττονι. μείζονι μέν, ἄν αὐτῶ τῷ ὀφθαλμῷ πιστεύωμεν ἡ καρποῖς ἡ

¹ If the line EB (p. 328) be produced to Eratosthenes' Susa (on his line drawn from A to Carmania), we shall then have a right-angled triangle AEB' that comprehends the obtuse-angled triangle AEB.

comprehends it is right-angled? And who will concede that one of the sides which enclose the obtuse angle (the line from Babylon to Susa) lies on a parallel of latitude, without also conceding that the whole line on to Carmania does? And who will concede that the line drawn from the Caspian Gates to the frontiers of Carmania is parallel to the Indus? Yet without these concessions the argument of Hipparchus would be void. And it is without these concessions that Eratosthenes has made his statement that the shape of India is rhomboidal; and just as its eastern side has been stretched considerably eastwards (particularly at its extreme cape, which, as compared with the rest of the sea-board, is also thrown farther southwards, so, too, the side along the Indus has been stretched considerably eastwards.

35. In all these arguments Hipparchus speaks as a geometrician, though his test of Eratosthenes is not convincing. And though he prescribed the principles of geometry for himself, he absolves himself from them by saying that if the test showed errors amounting to only small distances, he could overlook them; but since Eratosthenes' errors clearly amount to thousands of stadia, they cannot be overlooked 2; and yet, continues Hipparchus, Eratosthenes himself declares that differences of latitude are observable even within an extent of four hundred stadia; for example, between the parallels of Athens and Rhodes. Now the practice of observing differences of latitude is not confined to a single method, but one method is used where the difference is greater, another where it is lesser; where it is greater, if we rely on the evidence of the eye itself, or of the crops,

² Compare § 40, following.

κράσεσιν άέρων πρὸς τὴν τῶν κλιμάτων κρίσιν. έλάττονι δ', αν δι' ὀργάνων γνωμονικών ή διοπτρικῶν. ὁ μὲν οὖν δι' 'Αθηνῶν παράλληλος γνωμονικώς ληφθείς και ό διὰ 'Ρόδου και Καρίας, εἰκότως ἐν σταδίοις τοσούτοις αἰσθητὴν ἐποίησε την διαφοράν, ο δ' έν πλάτει μέν τρισχιλίων σταδίων, μήκει δὲ καὶ τετρακισμυρίων όρους, πελάγους δε τρισμυρίων λαμβάνων την άπο δύσεως ἐπ' ἰσημερινὰς ἀνατολὰς γραμμήν, καὶ τὰ C 88 εφ' εκάτερον το μέρος τὰ μεν νότια ονομάζων, τὰ δὲ βόρεια, καὶ ταῦτα πλινθία καλῶν καὶ σφραγίδας, νοείσθω πώς καὶ ταῦτα λέγει καὶ πλευρά τὰ μὲν ἀρκτικά, τὰ δὲ νότια, καὶ πῶς τὰ μεν εσπέρια, τὰ δε εωθινά καὶ τὸ μεν παρά πολύ διαμαρτανόμενον παρορών ύπεχέτω λόγον (δίκαιον γάρ), τὸ δὲ παρὰ μικρὸν οὐδὲ παριδών ἐλεγκτέος έστίν. Ενταθθα δ' οὐδετέρως αὐτῶ προσάγεταί τις έλεγχος. οὔτε γὰρ τῶν ἐν τοσούτω πλάτει γεωμετρική τις δύναιτ' αν είναι 1 ἀπόδειξις οὐτ'

¹ εἶναι, Casaubon inserts, after δύναιτ' ἄν; Siebenkees, Corais, Meineke, Forbiger, following; L. Kayser approving.

¹ It was a common device of Eratosthenes and other ancient geographers to visualize countries and sections by comparing them to well-known objects—for example, Spain to an oxhide, the Peloponnesus to a plane-leaf, Sardinia to a human foot-print. In this case the Greek words "plinthia" ("tiles") and "sphragides" ("seals," "gems") are used in a general sense as convenient terms for sections which presented, respectively, tile-shaped and seal-shaped appearances. (In 2. 1. 22, however, Strabo attributes only the latter word to

or of the temperature of the atmosphere, in our judgment of the "climata"; but where it is lesser, we observe the difference by the aid of sun-dials and dioptrical instruments. Accordingly, the taking of the parallel of Athens and that of Rhodes and Caria with the sun-dial showed perceptibly (as is natural when the distance is so many stadia) the difference in latitude. But when the geographer, in dealing with a breadth of three thousand stadia and with a length of forty thousand stadia of mountain plus thirty thousand stadia of sea, takes his line from west to equinoctial east, and names the two divisions thus made the Southern Division and Northern Division. and calls their parts "plinthia" or "sphragides," we should bear in mind what he means by these terms, and also by the terms "sides that are northern" and "that are southern," and again, "sides that are western" and "that are eastern." And if he fails to notice that which amounts to a very great error, let him be called to account therefor (for that is just); but as regards that which amounts only to a slight error. even if he has failed to notice it, he is not to be condemned. Here, however, no case is made out against Eratosthenes on either ground. For no geometrical proof would be possible where the cases involve so great a breadth of latitude; nor does

Eratosthenes; and, furthermore, this is the word he himself often employs in the same sense.) Eratosthenes meant to convey by "sphragides" the notion of irregular quadrilaterals (as shows 15. 1. 11); but in his more specific description of a given section—India, for example—he refers to it as "rhomboidal," and, in the case of the Second Section, he refers to "three of its sides" as "fitting into a parallelogram" (see 2. 1. 22).

έν οίς έπιχειρεί γεωμετρείν, όμολογουμένοις χρήται λήμμασιν, άλλ' έαυτῷ πλάσας.

36. Βέλτιον δὲ περὶ τῆς τέταρτης λέγει μερίδος. προστίθησι δὲ καὶ τὸ 1 τοῦ φιλαιτίου καὶ τοῦ μένοντος έπλ των αὐτων ὑποθέσεων ἡ των παραπλησίων. τοῦτο μὲν γὰρ ὀρθῶς ἐπιτιμᾶ, διότι μηκος ονομάζει της μερίδος ταύτης την άπο Θαψάκου μέχρις Αἰγύπτου γραμμήν, ὥσπερ εἴ τις παραλληλογράμμου την διάμετρον μήκος αὐτοῦ φαίη. οὐ γὰρ ἐπὶ τοῦ αὐτοῦ παραλλήλου κείται ή τε Θάψακος καὶ ή της Αιγύπτου παραλία, άλλ' ἐπὶ διεστώτων πολὺ άλλήλων ἐν δὲ τῷ μεταξύ διαγώνιός πως άγεται καὶ λοξή ή άπὸ Θαψάκου είς Αίγυπτον. τὸ δὲ θαυμάζειν, πῶς έθάρρησεν είπειν έξακισχιλίων σταδίων τὸ ἀπὸ Πηλουσίου είς Θάψακον, πλειόνων όντων ή όκτακισχιλίων, οὐκ ὀρθῶς. λαβὼν γὰρ δι' ἀποδείξεως μέν. ὅτι ὁ διὰ Πηλουσίου παράλληλος τοῦ διὰ Βαβυλώνος πλείοσιν ή δισχιλίοις καὶ πεντακοσίοις σταδίοις νοτιώτερός έστι, κατ' Έρατοσθένη δὲ (ὡς οἴεται), διότι τοῦ διὰ Βαβυλῶνος ὁ διὰ τῆς Θαψάκου ἀρκτικώτερος τετρακισγιλίοις

¹ τό, Casaubon inserts, after καί; Siebenkees, Corais, Meineke, following; C. Müller approving.

^{1 &}quot;Lemma," the Greek word here used, is, according to Proclus, a proposition previously proved, or hereafter to be proved; it is, therefore, for any proposition in hand, an assumption which requires confirmation.

GEOGRAPHY, 2. 1. 35-36

Hipparchus, even where he attempts geometrical proof, use admitted assumptions, but rather fabrications which he has made for his own use.

36. Hipparchus discusses Eratosthenes' Fourth Section better; though here, too, he displays his propensity for fault-finding and his persistent adherence to the same, of nearly the same, assumptions. He is correct in censuring Eratosthenes for this. namely, for calling the line from Thansacus to Egypt the length of this section—which is as if one should call the diagonal of a parallelogram its length. For Thansacus and the coast-line of Egypt do not lie on the same parallel of latitude, but on parallels that are far apart from each other; and between these two parallels the line from Thapsacus to Egypt is drawn somewhat diagonally and obliquely. But when he expresses surprise that Eratosthenes had the boldness to estimate the distance from Pelusium to Thapsacus at six thousand stadia. whereas the distance is more than eight thousand, he is incorrect. For having taken it as demonstrated that the parallel that runs through Pelusium is more than two thousand five hundred stadia farther south than the parallel that runs through Babylon,2 and then saying—on the authority of Eratosthenes, as he thinks-that the parallel through Thapsacus is four thousand eight hundred stadia farther north than the parallel through Babylon, he says that the distance between Pelusium and Thapsacus amounts

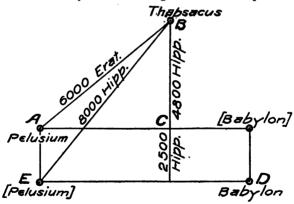
² Both Eratosthenes and Strabo gave Pelusium a higher latitude than Babylon.

οκτακοσίοις, συμπίπτειν φησὶ πλείους τῶν ὀκτακισχιλίων. πῶς οὖν κατ' Ἐρατοσθένη δείκνυται ἡ τοσαύτη ἀπόστασις τοῦ διὰ Βαβυλῶνος παραλλήλου ἀπὸ τοῦ διὰ Θαψάκου, ζητῶ. ὅτι μὲν γὰρ ἀπὸ Θαψάκου ἐπὶ Βαβυλῶνα τοσοῦτόν ἐστιν, εἴρηκεν ἐκεῖνος· ὅτι δὲ καὶ ἀπὸ τοῦ δι' ἑκατέρου παραλλήλου ἐπὶ τὸν διὰ θατέρου, οὐκ εἴρηκεν· οὐδὲ γάρ, ὅτι ἐπὶ ταὐτοῦ μεσημβρινοῦ ἐστιν ἡ Θάψακος καὶ ἡ Βαβυλών. τἀναντία γὰρ αὐτὸς ὁ «Ιππαρχος ἔδειξε κατ' Ἐρατοσθένη πλείοσιν ἡ δισχιλίοις σταδίοις συμβαίνειν ἀνατολικωτέραν εἶναι τὴν Βαβυλῶνα τῆς Θαψάκου. ἡμεῖς τε παρετίθεμεν¹ τὰς Ἐρατοσθένους ἀποφάσεις, ἐν αῖς τὸν Τίγριν καὶ τὸν Εὐφράτην ἐγκυκλοῦσθαι

 $^{^1}$ παρετίθεμεν, Corais, for παρατίθεμεν; Meineke, Tardieu, following.

¹ On the assumptions of Hipparchus, Eratosthenes' Thapsacus is made to lie at a latitude 7,300 stadia north of Pelusium (see figure, p. 337); and hence, computing the hypotenuse of the right-angled triangle for the distance between the two places, we get approximately 8,500 stadia. Hipparchus' argument is, as usual, a reductio ad abeurdum, and his fallacy again lies, Strabo means, in his applying Eratosthenes' estimates to parallels of latitude and to meridians.

to more than eight thousand stadia. I ask, then. how is it shown on the authority of Eratosthenes that the distance of the parallel through Babylon from the parallel through Thapsacus is as great as that? Eratosthenes has stated, indeed, that the distance from Thansacus to Babylon is four thousand eight hundred stadia: but he has not further stated that this distance is measured from the parallel through the one place to the parallel through the other: neither indeed has he stated that Thansacus and Babylon are on the same meridian. On the contrary, Hipparchus himself pointed out that, according to Eratosthenes, Babylon is more than two thousand stadia farther east than Thapsacus.2 And I have just cited the statements of Eratosthenes wherein he says that the Tigris and the Euphrates



 $^{^2}$ Compare §§ 27-29 (above), where Hipparchus, by his usual form of argument, forces Eratosthenes' Babylon to be 1,000 stadia farther west.

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τήν τε Μεσοποταμίαν καὶ τὴν Βαβυλωνίαν, καὶ τὸ πλέον γε τῆς ἐγκυκλώσεως τὸν Εὐφράτην C 89 ποιείν ἀπὸ γὰρ τῶν ἄρκτων ἐπὶ μεσημβρίαν ουέντα επιστρέφειν προς τας ανατολάς, εκπίπτειν δε επι μεσημβρίαν. ή μεν οθν επι μεσημβρίαν άπὸ τῶν ἄρκτων όδὸς ὡς ᾶν μεσημβρινοῦ τινός έστιν, ή δ' έπὶ τὰς ἀνατολὰς ἐπιστροφή καὶ ἐπὶ την Βαβυλώνα έκνευσίς τέ έστιν άπὸ τοῦ μεσημβρινού και οὐκ ἐπ' εὐθείας διὰ τὴν ἡηθείσαν ἐγκύκλωσιν. την δέ γε όδον εξρηκε τετρακισγιλίων καὶ ὀκτακοσίων σταδίων τὴν ἐπὶ Βαβυλῶνα ἀπὸ Θαψάκου παρά τὸν Εὐφράτην προσθείς, καθάπερ έπίτηδες, του μή τινα εὐθεῖαν αὐτὴν δέξασθαι καὶ μέτρον τοῦ μεταξύ δυείν παραλλήλων διαστήματος. μη διδομένου δε τούτου, κενόν έστι και τὸ έφεξης δείκνυσθαι δοκούν, ότι συνισταμένου δρθογωνίου τριγώνου πρός τε Πηλουσίω καὶ Θαψάκω καὶ τῆ τομῆ τοῦ τε διὰ Θαψάκου παραλλήλου καὶ τοῦ διὰ Πηλουσίου μεσημβρινοῦ, μία τῶν περί την όρθην, η έπι του μεσημβρινού, μείζων έσται της ύπο την ορθήν, της άπο Θαψάκου είς Πηλούσιον. κενὸν δὲ καὶ τὸ συνάπτον τούτω, ἀπὸ μὴ συγχωρουμένου λήμματος κατασκευαζόμενον. οὐ γάρ δη δίδοται τὸ ἀπὸ Βαβυλώνος ἐπὶ τον δια Κασπίων πυλών μεσημβρινον είναι διάστημα τετρακισχιλίων οκτακοσίων. ελήλεγκται

² The Greek verb here used corresponds to the noun

¹ In the figure on p. 337 draw a parallel of latitude through B (Thapsacus) and a meridian through A (Pelusium), and let them intersect at a point C'. Then AC' (=BC=4,800 stadia) becomes greater than AB (6,000 stadia)—that is, Eratosthenes' estimates lead to this result, says Hipparchus.

encircle Mesopotamia and Babylonia, and that the Euphrates does the greater part of the encircling, in that, after flowing from the north towards the south. it turns towards the east, and finally empties southwards. Now its southward course from the north lies approximately on some meridian, but its bend to the east and to Babylon is not only a deviation from the meridian but it is also not on a straight line, owing to the said encircling. It is true that Eratosthenes has stated the route to Babylon from Thapsacus to be four thousand eight hundred stadia long, though he added, as on purpose, "following the course of the Euphrates," in order that no one might interpret it as a straight line or as a measure of the distance between two parallels. If this assumption of Hipparchus be not granted, futile also is his subsequent proposition which has only the appearance of being proven. namely, that if a right-angled triangle be constructed with vertices at Pelusium, Thapsacus, and the point of intersection of the parallel of Thapsacus with the meridian of Pelusium, then one of the sides of the right angle, namely, that on the meridian, is greater than the hypotenuse, that is, the line from Thapsacus to Pelusium. Futile also is the proposition that he links with this proposition, because it is fabricated 2 from something that is not conceded. For surely Eratosthenes has not granted the assumption that the distance from Babylon to the meridian that runs through the Caspian Gates is a matter of four thousand eight hundred stadia.

which, in the formal divisions of a proposition, constitutes that division which, says Proclus, "adds what is wanting to the data for the purpose of finding out what is sought."

γὰρ ὑφ' ἡμῶν ἐκ τῶν μὴ συγχωρουμένων ὑπ' Ἐρατοσθένους κατεσκευακότα τοῦτο τὸν "Ιππαρχον" ἴνα δ' ἀνίσχυρον ἢ τὸ ὑπὸ ἐκείνου διδόμενον, λαβὼν τὸ εἶναι πλείους ἢ ἐννακισχιλίους ἐκ Βαβυλῶνος ἐπὶ τὴν ἐκ Κασπίων πυλῶν οὕτως ἀγομένην γραμμήν, ὡς ἐκεῖνος εἴρηκεν, ἐπὶ τοὺς ὅρους τῆς Καρμανίας, ἐδείκνυε τὸ αὐτό.

37. Οὐ τοῦτο οὖν λεκτέον πρὸς τὸν Ἐρατοσθένη, ἀλλ' ὅτι τῶν ἐν πλάτει λεγομένων καὶ μεγεθῶν καὶ σχημάτων εἶναί τι δεῖ μέτρον, καὶ ὅπου μὲν μᾶλλον, ὅπου δὲ ἔλαττον συγχωρητέον. ληφθέντος γὰρ τοῦ τῶν ὀρῶν πλάτους τῶν ἐπὶ τὰς ἰσημερινὰς ἀνατολὰς ἐκτεινομένων τρισχιλίων σταδίων, ὁμοίως δὲ καὶ τοῦ τῆς θαλάττης τῆς μέχρι Στηλῶν, μᾶλλον ἄν τις συγχωρήσειεν ὡς ἐπὶ μιᾶς γραμμῆς ἐξετάζεσθαι τὰς παραλλήλους ἐκείνης ἐν τῷ αὐτῷ πλάτει ἀγομένας ἡ τὰς συμπιπτούσας, καὶ τῶν συμπιπτουσῶν τὰς ἐν αὐτῷ ἐκείνω τῷ πλάτει τὴν σύμπτωσιν ἐχούσας ἡ τὰς

¹ Strabo refers to the false conclusion in § 34.

² Strabo had in the main accepted Eratosthenes' map together with his treatise thereon, inadequate though they were. He objected to Hipparchus' criticism based upon false assumptions and geometrical tests applied to specific cases. He argues in this paragraph that the map requires a "metron," or standard of measure, by means of which, as a sort of sliding scale, we may make proportional concessions or allowances in the matter of linear directions and geometrical magnitudes. Practically applied, this "metron" would

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have proved that Hipparchus has fabricated this assumption from data that are not conceded by Eratosthenes; but in order to invalidate what Eratosthenes does grant, Hipparchus took as granted that the distance from Babylon to the line drawn from the Caspian Gates to the confines of Carmania just as Eratosthenes has proposed to draw it is more than nine thousand stadia, and then proceeded to

show the same thing.1

37. That, therefore, is not the criticism that should be made against Eratosthenes,² but rather the criticism that his roughly-sketched magnitudes and figures require some standard of measure, and that more concession has to be made in one case, less in another. For example, if the breadth of the mountain-range that stretches toward the equinoctial east, and likewise the breadth of the sea that stretches up to the Pillars, be taken as three thousand stadia, one would more readily agree to regard as lying on a single line ³ the parallels of that line drawn within the same breadth than he would the lines that intersect therein ⁴; and, of the intersecting lines, those that intersect without.

save us from such a mistake as placing the Caspian Gates and the mouth of the Nile on the same parallel of latitude, and again from such a mistake as estimating the actual distance between these two points to be the same as the longitudinal distance. Furthermore, Strabo shows by parallelograms that the actual distance between any two points, A and B, does not grow less in the same proportion as does their difference of longitude.

4 See the figure and the note on pages 342 and 343.

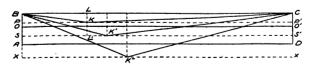
³ That is, an assumed line drawn east and west through the length of the strip—a strip approximately 70,000 stadia in length.

έκτός ώσαύτως καὶ τὰς διισταμένας μέγρι τοῦ μη έκβαίνειν τοῦ πλάτους ή τὰς ἐκβαινούσας, καὶ τας εν μείζονι μήκει μαλλον ή τας εν ελάττονι. καὶ γὰρ ἡ ἀνισότης τῶν μηκῶν συγκρύπτοιτ' αν C 90 μαλλον και ή ανομοιότης των σχημάτων οίον έν τῶ πλάτει τοῦ Ταύρου παντὸς καὶ τῆς μέγρι Στηλών θαλάττης, υποκειμένων τρισχιλίων σταδίων, νοείται έν τι παραλληλόγραμμον χωρίον, τὸ περιγράφον τό τε όρος άπαν καὶ τὴν λεγθείσαν θάλατταν, ἐὰν οὖν διέλης εἰς πλείω παραλληλόγραμμα τὸ μῆκος, καὶ τὴν διάμετρον ὅλου τε τούτου λάβης και των μερων, ράον αν ή του δλου διάμετρος ή αὐτη λογισθείη, παράλληλός τε καὶ ίση, τη κατά τὸ μηκος πλευρά ήπερ ή ἐν τοῖς μέρεσι καὶ ὅσω γ' αν ἔλαττον ή τὸ παραλληλόγραμμον τὸ ληφθεν εν μέρει, τοσῶδε μᾶλλον τοῦτ' αν συμβαίνοι. ή τε γαρ λοξοτης της διαμέτρου ήττον απελέγγεται καὶ ή ανισότης τοῦ μήκους έν τοις μεγάλοις, ώστ' οὐδ' αν οκνήσειας ἐπ' αὐτῶν την διάμετρον είπειν μηκος του σχήματος. έαν οὖν τὴν διάμετρον λοξώσης μᾶλλον, ώστε ἐκ-

¹ Müller and Tardieu rightly regard Meineke's deletion of παράλληλός τε καὶ ἴση after λογισθείη as unwarranted.

Let ABCD be assumed strip; let OO' be assumed east and west line; let PP' and SS' be parallel to OO'; let BK and KC (or BK' and K'C) be lines that intersect within, and BK'' and K''C lines that intersect without. It is easier to consider PP' as coincident with OO' than BK + KC (as \odot to PK + KP') as coincident with OO', and easier BK + KC than BK'' + K''C.

Likewise, also, one would more readily agree to regard as lying on a single line those lines that extend within the limits of said breadth and do not reach beyond than those that reach beyond: and those lines that extend within greater lengths than those in lesser. For in such cases the inequality of the lengths and the dissimilarity of the figures would be more likely to escape notice; for instance, in the case of the breadth of the entire Taurus Range, and of the Sea up to the Pillars, if three thousand stadia be taken as hypothesis for the breadth, we can assume one single parallelogram which traces the boundary both of the entire Range and of the said Now if you divide a parallelogram lengthwise into several small parallelograms, and take the diagonal both of this whole and of its parts, then the diagonal of the whole might more easily be counted the same as (that is, both parallel and equal to) the long side than could the diagonal of any one of the small parallelograms as compared with the corresponding long side; and the smaller the parallelogram taken as a part, the more would this be true. For both the obliquity of the diagonal and the inequality of its length as compared with the long side are less easily detected in large parallelograms; so that you might not even hesitate in their case to call the diagonal the length of the figure. If, however, you make the diagonal more oblique, so that it falls exterior to both of the sides.



πεσείν έξω των πλευρών έκατέρας ή τής γε έτέρας, οὐκ αν ὁμοίως ἔτι ταῦτα συμβαίνοι τοιοῦτον δή τι λέγω το μέτρον των έν πλάτει λενομένων. ὁ δ' ἀπὸ τῶν Κασπίων πυλῶν τὴν μεν δι' αὐτῶν τῶν ὀρῶν λαμβάνων. ὡς αν ἐπὶ ταύτου παραλλήλου μέγρι Στηλών άγομένην, την δ' ἀπονεύουσαν είς Θάντακον εὐθὺς ἔξω πολύ τῶν ορών, καὶ πάλιν ἐκ Θαψάκου προσεκβάλλων άλλην μέχρις Αιγύπτου τοσούτον επιλαμβάνουσαν πλάτος, είτα τῷ μήκει τῷ ταύτης καταμετρών τὸ τοῦ χωρίου μῆκος, διαμέτρω τετραγώνου καταμετρείν αν δόξειε το του τετραγώνου μήκος. ὅταν δὲ μηδὲ διάμετρος ή, ἀλλὰ κεκλασμένη ή γραμμή, πολύ μαλλον αν δόξειε πλημμελείν κεκλασμένη γάρ έστιν ή ἀπὸ Κασπίων πυλών διὰ Θαψάκου πρὸς τὸν Νεῖλον ἀγομένη. πρὸς μὲν Ἐρατοσθένη ταῦτα.

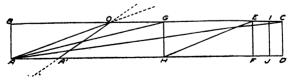
38. Προς δε τον "Ιππαρχον κάκεινο, στι έχρην, ώς κατηγορίαν πεποίηται των υπ' εκείνου λεχθέντων, ούτω και επανόρθωσίν τινα ποιήσασθαι των ήμαρτημένων όπερ ήμεις ποιούμεν. εκείνος δ' εί καί που τούτου πεφρόντικε, κελεύει ήμας τοις άρχαίοις πίναξι προσέχειν, δεομένοις παμπόλλω τινὶ μείζονος επανορθώσεως, ή δ Έρα-

¹ A'O represents a line which falls exterior to BG and AH, and AO a line which falls exterior to BG. Let ABCD be the large parallelogram; then the small parallelograms are ABGH, HGCD, FECD, JICD—and so on indefinitely.

GEOGRAPHY, 2. 1. 37-38

or at least to one of them, this would no longer, in like manner, be the case. This is substantially what I mean by a standard of measurement for roughly-sketched magnitudes. But when Eratosthenes, beginning at the Caspian Gates, takes not only the line which runs through the mountains themselves, but also the line which at once diverges considerably from the mountains into Thapsacus, as though both were drawn to the Pillars on the same parallel, and when, again, he still further produces his line, on from Thansacus to Egypt, thus taking in all this additional breadth, and then measures the length of his figure by the length of this line, he would seem to be measuring the length of his rectangle by a diagonal of a rectangle. And whenever his line is not even a diagonal but a broken line, much more he would seem to err. is a broken line that is drawn from the Caspian Gates through Thapsacus to the Nile. So much may be said against Eratosthenes.

38. But against Hipparchus this too may be urged, that, as he criticised the statements of Eratosthenes, so also he should have made some sort of correction of Eratosthenes' errors—the thing that I am doing. But Hipparchus—if he has really ever taken thought of this matter—bids us to give heed to the old maps, although they need much more correction than the



τοσθένους πίναξ προσδείται, καὶ τὸ ἐπιφερόμενον δ' επιγείρημα της αυτης έγεται μογθηρίας. λαμ-Βάνει γὰρ ἐν λήμματι τὸ ἐκ τῶν μὴ διδομένων κατασκευασθέν, ώς ηλέγξαμεν ήμεις, ότι Θαψάκου Βαβυλών ανατολικωτέρα έστιν ου πλείοσιν ή γιλίοις σταδίοις ώστ' εί και πάνυ συνάγεται τὸ πλείοσιν ή δισγιλίοις καὶ τετρακοσίοις σταδίοις άνατολικωτέραν αὐτὴν είναι ἐκ τῶν λεγομένων ύπο τοῦ Ἐρατοσθένους, ὅτι ἐπὶ τὴν τοῦ Τίγριδος διάβασιν, ή 'Αλέξανδρος διέβη, άπὸ Θαψάκου έστι σύντομος σταδίων δισχιλίων τετρακοσίων, C 91 ὁ δὲ Τίγρις καὶ ὁ Εὐφράτης ἐγκυκλωσάμενοι τὴν Μεσοποταμίαν, τέως μεν επ' ανατολάς φέρονται, είτ' επιστρέφουσι πρός νότον και πλησιάζουσι τότε άλλήλοις τε άμα και Βαβυλώνι, οὐδεν άτοπον συμβαίνει τῷ λόγφ.

39. Πλημμελεί δὲ καὶ ἐν τῷ ἐξῆς ἐπιχειρήματι, ἐν ῷ συνάγειν βούλεται, ὅτι τὴν ἀπὸ Θαψάκου ἐπὶ Κασπίους πύλας ὁδόν, ἢν μυρίων σταδίων Ἐρατοσθένης εἴρηκεν, οὐκ ἐπ' εὐθείας ἀναμεμετρημένην ὡς ἐπ' εὐθείας παραδίδωσι, τῆς εὐθείας πολὺ ἐλάττονος οὕσης. ἡ δ' ἔφοδός ἐστιν αὐτῷ τοιαύτη. φησὶν εἶναι καὶ κατ' Ἐρατοσθένη τὸν αὐτὸν μεσημβρινὸν τόν τε διὰ τοῦ Κανωβικοῦ στόματος καὶ τὸν διὰ Κυανέων, διέχειν δὲ τοῦτον τοῦ διὰ Θαψάκου ἑξακισχιλίους τριακοσίους

¹ Hipparchus' reductio ad absurdum again fails, Strabo says. First, he has attributed to Eratosthenes a result (1,000 stadia) not based upon Eratosthenes' statements; 346

map of Eratosthenes still needs. And his subsequent effort suffers from the same flaw. For, as I have shown by test, he takes as an admitted assumption what he has fabricated from data not granted by Eratosthenes, namely, that Babylon is not more than one thousand stadia farther east than Thapsacus; hence, if even a perfect inference is drawn by Hipparchus to the effect that Babylon is not more than two thousand four hundred stadia farther east than Thansacus, from Eratosthenes' statement that there is a short route of two thousand four hundred stadia from Thansacus to the Tigris River where Alexander crossed—vet if Eratosthenes also states that the Tigris and the Euphrates, after encircling Mesopotamia for a time, flow east, then turn toward the south, and finally draw near to each other and to Babylon, he has proved no absurdity in Eratosthenes statement.1

39. Hipparchus is also wrong in his next effort, in which he wishes to draw the inference that Eratosthenes gives the highway from Thapsacus to the Caspian Gates—a highway the length of which Eratosthenes has estimated at ten thousand stadia—as measured in a straight line, although it was not so measured, the straight line being much shorter. The attack he makes against Eratosthenes is to this effect: According to Eratosthenes himself the meridian through the Canobic mouth of the Nile and that through the Cyanean Rocks² are one and the same, and this meridian is six thousand three hundred stadia distant from the meridian through secondly, he has drawn a false inference from an estimate that Eratosthenes did make (2,400 stadia), as Eratosthenes'

description of the circuit of the Tigris and Euphrates shows.

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σταδίους, τὰς δὲ Κυανέας τοῦ Κασπίου ὄρους έξακισχιλίους έξακοσίους, δ κείται κατά την ύπέρθεσιν την έπὶ τὸ Κάσπιον πέλαγος Κολχίδος, ώστε παρά τριακοσίους σταδίους τὸ ίσον είναι διάστημα ἀπὸ τοῦ διὰ Κυανέων μεσημβρινοῦ ἐπί τε Θάψακον καὶ ἐπὶ τὸ Κάσπιον. τρόπον δή τινα έπὶ τοῦ αὐτοῦ μεσημβρινοῦ κεῖσθαι τήν τε Θάψακον καὶ τὸ Κάσπιον, τούτω δ' άκολουθείν τὸ ἀφεστάναι ἴσον τὰς Κασπίους πύλας Θαψάκου τε καὶ τοῦ Κασπίου τοῦ δὲ Κασπίου 1 πολύ έλάττους άφεστάναι τῶν μυρίων. οσους φησίν ἀφεστάναι Ἐρατοσθένης τῆς Θαψάκου· της Θαψάκου 2 ἄρα πολύ έλάττους ή μυρίους άφεστάναι τοὺς ἐπ' εὐθείας κυκλοπορίαν ἄρα είναι τούς μυρίους, οθς 3 λογίζεται έκεινος έπ' εὐθείας ἀπὸ Κασπίων πυλών εἰς Θάψακον. ἐροῦμεν δὲ πρὸς αὐτόν, ὅτι τοῦ Ἐρατοσθένους ἐν πλάτει λαμβάνοντος τὰς εὐθείας, ὅπερ οἰκείον έστι γεωγραφίας, εν πλάτει δε και τας μεσημβρινάς καὶ τὰς ἐπὶ ἰσημερινήν ἀνατολήν, ἐκείνος γεωμετρικώς αὐτὸν εὐθύνει, καὶ ὡς αν δι' ὀργάνων λάβοι τις τούτων έκαστον οὐδὲ αὐτὸς δι' ὀργάνων,

² τῆς Θαψάκου, Spengel inserts, before ἄρα; Meineke, Forbiger, following; C. Müller, H. Berger, approving.
³ οῦς, Siebenkees inserts, from Tyrwhitt's conjecture;

Forbiger, Meineke, following.

¹ τοῦ δὲ Κασπίου, Spengel inserts, before πολύ; Meineke, Forbiger, following; C. Müller, H. Berger, approving.

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Thapsacus; and the Cyanean Rocks are six thousand six hundred stadia distant from Mt. Caspius, which lies at the mountain-pass that leads over from Colchis to the Caspian Sea; and hence the distance from the meridian through the Cyanean Rocks to Thapsacus is within three hundred stadia of being equal to the distance thence to Mt. Caspius; so then. practically speaking, both Thansacus and Mt. Caspius lie on the same meridian. From this it follows, says Hipparchus, that the Caspian Gates are equidistant from Thapsacus and from Mt. Caspius; but the Caspian Gates are at a much less distance from Mt. Caspius than the ten thousand stadia which Eratostheres says is the distance between the Caspian Gates and Thapsacus; therefore the Caspian Gates are at a much less distance from Thapsacus than the ten thousand stadia that are measured on a straight line; and therefore it is a roundabout way that measures the ten thousand stadia which Eratosthenes reckons on a straight line from the Caspian Gates to Thapsacus.¹ Now my reply to Hipparchus will be that, although Eratosthenes takes his straight lines only roughly, as is proper to do in geography, and roughly, too, his meridians and his lines to the equinoctial east, Hipparchus puts him to a geometrical test-just as if every one of these lines had been taken with the aid of instruments.2 Neither does Hipparchus himself take everything by the aid of instruments, but it is rather by conjecture that he

¹ Even though Hipparchus takes Eratosthenes' distances as longitudinal, the error of the latter is quite obvious; and it is now obvious also that Strabo is inclined to protect Eratosthenes wherever he can.

² That is, instruments of observation—the sun-dial, for instance.

άλλα μαλλον στοχασμώ λαμβάνων και το πρός ορθάς καὶ τὸ παραλλήλους. Εν μεν δὴ τοῦθ' άμάρτημα έτερον δε το μηδε τὰ κείμενα παρ' έκείνω διαστήματα τίθεσθαι ύπ' αὐτοῦ, μηδὲ πρὸς έκεινα τὸν έλεγχον προσάγεσθαι, άλλὰ πρὸς τὰ ὑπ' αὐτοῦ πλαττόμενα. διόπερ πρώτον μὲν έκείνου τὸ ἀπὸ τοῦ στόματος ἐπὶ Φᾶσιν εἰπόντος σταδίων οκτακισχιλίων, καὶ προσθέντος τοὺς εἰς Διοσκουριάδα ενθένδε έξακοσίους, την δ' από Διοσκουριάδος είς τὸ Κάσπιον ὑπέρθεσιν ἡμερῶν πέντε. ήτις κατ' αὐτὸν "Ιππαρχον εἰκάζεται λέγεσθαι δσον χιλίων σταδίων, ώστε την σύμπασαν κατ' Ἐρατοσθένη κεφαλαιοῦσθαι ἐνακισχιλίων 1 έξακοσίων, αὐτὸς συντέτμηκε καί φησιν έκ μεν Κυανέων είς Φασιν πεντακισχιλίους έξακοσίους, είς δὲ Κάσπιον ενθένδε ἄλλους χιλίους. ώστ' οὐ κατ' Ἐρατοσθένη συμβαίνοι ἃν ἐπὶ τοῦ αὐτοῦ πως μεσημβρινοῦ τό τε Κάσπιον είναι καὶ την Θάψακον, άλλα κατ' αὐτόν. Φέρε δ' οὖν κατ' Έρατοσθένη πως ούν τούτω έπεται το την άπο τοῦ Κασπίου ἐπὶ Κασπίους πύλας ἴσην είναι τη ἀπὸ Θαψάκου ἐπὶ τὸ αὐτὸ σημεῖον;

40. Ἐν δὲ τῷ δευτέρῳ ὑπομνήματι ἀναλαβὼν πάλιν τὴν αὐτὴν ζήτησιν τὴν περὶ τῶν ὅρων τῶν κατὰ τὸν Ταῦρον, περὶ ὧν ἱκανῶς εἰρήκαμεν, μεταβαίνει πρὸς τὰ βόρεια μέρη τῆς οἰκουμένης·

¹ ἐνακισχιλίων, Sterrett, for ἐννακισχιλίων.

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takes the relations of both "perpendicular" and "parallel." This, then, is one of Hipparchus' mis-Another mistake is this, that he does not even put down the distances that are found in Eratosthenes or apply his test to them, but to those that are fabricated by himself. So, for instance, though Eratosthenes first estimated the distance from the outlet 1 to Phasis 2 at eight thousand stadia and added to this the six hundred stadia thence to Dioscurias, and then estimated at a five days' journey the pass that leads over to Mt. Caspius (which, according to Hipparchus himself, is conjectured to mean about one thousand stadia), so that the total distance, according to Eratosthenes, amounts to nine thousand six hundred stadia, Hipparchus has made a short cut to his result, and says that from the Cyanean Rocks to Phasis the distance is five thousand six hundred stadia, and thence to Mt. Caspius, another thousand stadia. Therefore the statement that Mt. Caspius and Thapsacus are virtually situated on the same meridian could not be based on the authority of Eratosthenes, but on that of Hipparchus himself. Well, suppose it were on the authority of Eratosthenes. How, pray, can it follow therefrom that the line from Mt. Caspius to the Caspian Gates is equal in length to the line from Thansacus to the same point?

40. In his Second Book, Hipparchus again takes up the same question of Eratosthenes' division of the inhabited world along the line of the Taurus Range, about which I have already said enough; then he passes to a discussion of the Northern

¹ Of the Euxine.

² A town at the mouth of the Phasis River.

STRABO

είτ' ἐκτίθεται τὰ λεχθέντα ὑπὸ τοῦ Ἐρατοσθένους περί των μετά τον Πόντον τόπων, ότι φησί τρείς άκρας ἀπὸ τῶν ἄρκτων καθήκειν μίαν μέν, ἐφὸ ής ή Πελοπόννησος, δευτέραν δὲ τὴν Ἰταλικήν, τρίτην δὲ τὴν Λιγυστικήν, ὑφ' ὧν κόλπους ἀπολαμβάνεσθαι τόν τε 'Αδριατικόν καὶ τὸν Τυρρηνικόν, ταθτα δ' ἐκθέμενος καθόλου πειράται τὰ καθ' εκαστα περί αὐτῶν λεγόμενα ἐλέγχειν γεωμετρικώς μάλλον ή γεωγραφικώς. έστι δέ τοσούτον των άμαρτανομένων έν αύτοις ύπο τού Έρατοσθένους τὸ πλήθος, καὶ ὑπὸ Τιμοσθένους τοῦ τοὺς λιμένας συγγράψαντος (δν ἐπαινεῖ μὲν έκεινος μάλιστα των άλλων, διαφωνών δ' έλέγγεται πρός αὐτὸν πλείστα), ὥστ' οὐκ ἄξιον ήγουμαι διαιτάν ουτ' έκείνους, έπι τοσούτον διαμαρτάνοντας των δυτων, ούτε τον "Ιππαρχον. καλ γάρ ούτος τὰ μὲν παραλείπει τῶν ἡμαρτημένων, τὰ δ' οὐκ ἐπανορθοῖ, ἀλλ' ἐλέγχει μόνον, ὅτι Ψευδώς ή μαχομένως είρηται. αἰτιάσαιτο μεν γάρ καὶ τοῦτ' αν ἴσως τις, ὅτι φησὶν ἄκρας τρεῖς τῆς Εὐρώπης, μίαν μεν τιθείς την εφ' ής ή Πελοπόννησος έχει γάρ τι πολυσχιδές. καὶ γὰρ τὸ Σούνιον άκρωτηριάζει όμοίως τη Λακωνική, οὐ πολύ ήττον μεσημβρινον 1 ου των Μαλεων, καὶ κόλπον ἀπολαμβάνον ἀξιόλογον. καὶ ἡ Θρακία Χερρόνησος ἀπολαμβάνει πρὸς τὸ Σούνιον τόν

¹ μεσημβρινόν, Madvig, for μεσημβρινώτερον.

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Division: and then he sets forth what Eratosthenes said about the countries that lie next after the Pontus, namely, that three promontories jut down from the north: one promontory, on which is the Peloponnesus; a second, the Italian; and a third the Ligurian; and that these three promontories enclose both the Adriatic and the Tyrrhenian After setting forth these statements of Eratosthenes in a general way, Hipparchus undertakes to test each several statement about the promontories, yet on the principles of geometry rather than those of geography. But so great is the multitude of mistakes made in case of these promontories by Eratosthenes, and by Timosthenes who wrote on The Harbours (whom Eratosthenes praises beyond all the rest, though we find him disagreeing with Timosthenes on most points), that I consider it unfitting to pass judgment either upon those men, since they both stray so very far from the facts, or upon Hipparchus. For even Hipparchus passes by some of their mistakes in silence, while yet others he does not correct, but merely shows by test that they were made falsely or captiously. We might perhaps find fault with Eratosthenes on this point too, namely, because he says "three promontories" of Europe, putting down as "one promontory" that on which is the Peloponnesus; for it is split, so to speak, into a number of promontories; for example, Sunium is a promontory just as much as is Laconia, since it reaches almost as far south as Maleae and embraces a gulf of considerable size. And the Thracian Cherronese and the promontory of Sunium cut off, between them, not only the gulf of Melas 1 but

¹ The Gulf of Saros.

τε Μέλανα κόλπον καὶ τοὺς ἐφεξῆς τοὺς Μακεδονικούς. εἰ δ' οὖν παρείημεν τοῦτο, καὶ τῶν διαστημάτων τὰ πλεῖστα φανερῶς ψευδογρα-Φούμενα έλέγχει την άπειρίαν τῶν τόπων ὑπερ-Βάλλουσαν καὶ οὐ δεομένην γεωμετρικῶν ἐλέγχων, άλλα φανερών και αυτόθεν εκμαρτυρείσθαι δύναμένων οίου ότι έξ Ἐπιδάμνου προς του Θερμαίου κόλπον ή ὑπέρβασίς ἐστι πλειόνων ἡ δισχιλίων σταδίων ο δ' ένακοσίων φησίν έκ δε 'Αλεξανδρείας είς Καρχηδόνα ύπερ μυρίους και τρισ-χιλίους, οὐ πλείους ὄντας των ενακισχιλίων² είπερ έπι του αυτου μεσημβρινου έστι κατά τοῦτον τη μεν 'Αλεξανδρεία Καρία και 'Ρόδος, τη δε Καρχηδόνι ο Πορθμός. πάντες γαρ όμολογοῦσι μὴ πλειόνων είναι τὸν ἐκ Καρίας ἐπὶ Πορθμον πλούν σταδίων ἡ ἐνακισχιλίων. δ τε μεσημβρινός έν μεγάλω μέν τινί διαστήματι λαμβανόμενος δοθείη αν δ αὐτὸς είναι τῷ τοσοῦτον δυσμικωτέρω 4 προς τον έωθινώτερον όσον ή Καρχηδών έστι τοῦ Πορθμοῦ πρὸς δύσει μᾶλλον, έν δὲ τετρακισχιλίοις 5 σταδίοις έχει καταφανή τὸν έλεγχον. ὁ δὲ καὶ τὴν Ῥώμην τιθεὶς ἐπὶ ταὐτοῦ μεσημβρινοῦ τὴν τοσοῦτον καὶ Καρχηδόνος δυσμικωτέραν, ύπερβολην ούκ απολείπει της των τόπων ἀπειρίας καὶ τούτων καὶ τῶν ἐφεξῆς πρὸς δύσιν μέχρι Στηλών.

¹ ἐνακοσίων, Meineke, for ἐννακοσίων.

² ἐνακισχιλίων, Sterrett, for ἐννακισχιλίων. ³ ἐνακισχιλίων, Meineke, for ἐννακισχιλίων.

⁴ Kramer, Müller-Dübner, and Meineke delete τφ before τοσοῦτον and read δυσμικώτερος with some of the MSS. But the MSS. also support δυσμικωτέρφ. Capps, quite independently, suggested the above reading.

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also all the Macedonian Gulfs that come after Melas. However, if we should pass over this objection, still. the most of the distances, which are obviously wrong, prove that Eratosthenes' ignorance of these regions is surpassing and that his ignorance requires no geometrical proofs, but only such proofs as are obvious and can be attested forthwith: for instance. that the pass from Epidamnus that leads over to the Thermaic Gulf is more than two thousand stadia. though Eratosthenes says it is nine hundred; and that the distance from Alexandria to Carthage is more than thirteen thousand stadia, though it is not more than nine thousand—if Caria and Rhodes lie, as Eratosthenes says, on the same meridian as Alexandria, and the Strait of Sicily on the same meridian as Carthage. In fact, all agree that the voyage from Caria to the Strait of Sicily is not more than nine thousand stadia; and though, when there is some considerable distance between two places, the meridian taken for the more easterly place might be granted to be the same as the meridian which is no farther west therefrom than Carthage is west of the Strait of Sicily, yet when we are concerned with a matter of four thousand stadia the error is selfevident. And when Eratosthenes actually places Rome—which is so much farther west of the Strait of Sicily than even Carthage is-on the same meridian with Carthage, his ignorance both of these regions and of the successive regions toward the west as far as the Pillars can reach no higher extreme.

⁵ τετρακισχιλίοιs, Bréquigny, for τρισχιλίοιs; all editors or translators following or approving.

STRABO

41. Ίππάρχω μεν οὖν μὴ γεωγραφοῦντι, ἀλλ' έξετάζοντι τὰ λεγθέντα ἐν τῆ γεωγραφία τῆ 'Ερατοσθένους, οἰκεῖον ἢν ἐπὶ πλέον τὰ καθ' έκαστα εὐθύνειν ήμεις δ', έν οίς μεν κατορθοί. τὸ πλέον δ' ἔτι ὅπου καὶ πλημμελεῖ, τὸν καθ' έκαστα οἰκεῖον λόγον ωήθημεν δεῖν προσάγειν, τὰ μὲν ἐπανορθοῦντες, ὑπὲρ ὧν δ' ἀπολυόμενοι τὰς ἐπιφερομένας αἰτίας ὑπὸ τοῦ Ἱππάργου, καὶ αὐτὸν τὸν "Ιππαρχον συνεξετάζομεν, ὅπου τι φιλαιτίως εξρηκεν. Εν δε τούτοις δρώντες ήδη τον μεν τελέως παραπαίοντα, τὸν δὲ δικαίως ἐπικαλοῦντα, άρκειν ύπολαμβάνομεν, αν έν αὐτη τη γεωγραφία τὰ ὄντα λέγοντες ἐπανορθῶμεν αὐτόν. ἐφ' ὧν γαρ συνεγή και επιπολάζοντά εστι τα αμαρτανόμενα, κρείττον μηδε μεμνήσθαι, πλην εί σπάνιόν τι και καθόλου. ὅπερ πειρασόμεθα ποιείν ἐν τοίς καὶ νῦν δ' εἰρήσθω, ὅτι καὶ καθ' ἕκαστα. Τιμοσθένης και Έρατοσθένης και οί έτι τούτων πρότεροι τελέως ήγνόουν τά τε Ἰβηρικά καὶ τὰ Κελτικά, μυρίφ δὲ μᾶλλον τὰ Γερμανικά καὶ τὰ Βρεττανικά, ώς δ' αύτως τὰ τῶν Γετῶν καὶ Βασταρνών. ἐπὶ πολὺ δ' ἀγνοίας ἐτύγχανον άφιγμένοι και των κατ' Ίταλίαν και τὸν 'Αδρίαν καλ τὸν Πόντον καλ τῶν ἐφεξῆς προσαρκτίων μερών εί και τὰ τοιαῦτα ἴσως φιλαίτια. τοῦ γὰρ Έρατοσθένους έπὶ τῶν πόρρω διεστηκότων τὰ παραδεδομένα φάσκοντος έρειν διαστήματα, μή διισχυριζομένου δέ, καὶ λέγοντος ώς παρέλαβε, 356

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41. Now it would have been proper for Hipparchus, if he were not writing a work on Geography but merely a review of what Eratosthenes had said in his Geography, to go further than he did in setting right in detail the mistakes of Eratosthenes; but as for me. I have thought it right to introduce in detail the appropriate discussion both in regard to the points in which Eratosthenes is right and, still more so, in regard to those in which he is wrong; and I have not merely corrected his mistakes, but where I have acquitted him of the charges brought by Hipparchus, I have also criticised Hipparchus himself, whenever he has said anything in a censorious spirit. But since in these instances I see at a glance that Eratosthenes goes entirely astray and that Hipparchus accuses him justly, I assume that it is sufficient if I correct Eratosthenes by merely stating the facts in the course of my Geography itself. Indeed, where the errors are continuous and lie on the surface, it is better not to mention them at all, except rarely and in a general way; and this is what I shall try to do in my detailed account. However, let it be said at this moment that Timosthenes and Eratosthenes and the still earlier geographers were completely ignorant of Iberia and Celtica; and vastly more ignorant of Germany and Britain, and likewise of the countries of the Getans and the Bastarnians; and they were to a considerable extent ignorant of Italy, the Adriatic Sea, the Pontus, and the regions beyond them on the north; though perhaps such statements are censorious. For since Eratosthenes asserts that where it is a question of very remote regions he will give merely the traditional distances without vouching for them, and admits that he got

προστιθέντος δ' ἔστιν ὅπου τὰ ἐπ' εὐθείας μᾶλλον καὶ ήττον, οὐ δεῖ προσάγειν τὸν ἀκριβή ἔλεγγον C 94 τοις μη δμολογουμένοις προς άλληλα διαστήμασιν όπερ ποιείν πειράται ό "Ιππαργος έν τε τοις πρότερον λεχθείσι καὶ ἐν οίς τὰ περὶ τὴν Υρκανίαν μέγρι Βακτρίων καὶ τῶν ἐπέκεινα έθνων εκτίθεται διαστήματα, καὶ έτι τὰ ἀπὸ Κολχίδος ἐπὶ τὴν Υρκανίαν θάλατταν. οὐ γὰρ όμοίως επί τε τούτων εξεταστέον αὐτὸν καὶ επὶ των κατά την ηπειρωτιν παραλίαν 1 και τούς άλλους τούς ούτω γνωρίμους τόπους άλλ' οὐδ' έπὶ τούτων γεωμετρικώς, ὅπερ ἔφην, ἀλλὰ γεωγραφικώς μάλλον. αἰτιασάμενος δ' οὖν τινα τών Αιθιοπικών έπι τέλει τοῦ δευτέρου ὑπομνήματος των προς την Έρατοσθένους γεωγραφίαν πεποιημένων, εν τῷ τρίτφ φησὶ τὴν μεν πλείω θεωρίαν έσεσθαι μαθηματικήν, έπὶ ποσὸν δὲ καὶ γεωγραφικήν οὐδ' ἐπὶ ποσὸν μέντοι δοκεῖ μοι ποιήσασθαι γεωγραφικήν, άλλὰ πᾶσαν μαθηματικήν, διδόντος καὶ τοῦ Ἐρατοσθένους τὴν τοιαύτην πρόφασιν. πολλαχοῦ γὰρ ἐκπίπτει πρὸς τὸ έπιστημονικώτερον της προκειμένης ίστορίας, έκπεσών δε οὐκ ἀκριβεῖς, ἀλλ' ὁλοσχερεῖς ποιεῖται τὰς ἀποφάσεις, τρόπον τινὰ ἐν μὲν τοῖς γεωγραφικοίς μαθηματικός, εν δε τοίς μαθηματικοίς γεωγραφικός ών, ώστε πρός άμφω δίδωσιν άφορ-

¹ παραλίαν, Groskurd, for πάλιν; Meineke following. 2 - 8

GEOGRAPHY, 2. 1. 41

them by tradition,—though at times he adds the words "in a line more or less straight"—it is not fair to apply the rigorous test 1 to those distances which do not agree with each other. That is precisely what Hipparchus tries to do, not only in the cases mentioned above but also where he sets forth the distances round about Hyrcania up to Bactria and to the tribes on beyond, and, besides, the distances from Colchis to the Hyrcanian Sea. Indeed. in the case of the geography of the remote countries. we should not scrutinize him in the same way as we do in that of the continental sea-board and of the other regions that are as well known; nay, not even in case of the nearer regions ought we to apply the geometrical test, as I was saying, but rather the geographical. Now toward the end of his Second Book, which he has written in refutation of the Geography of Eratosthenes, Hipparchus finds fault with some of the statements of Eratosthenes about Ethiopia, and then says that in his Third Book the greater part of his speculation will be mathematical, but "to some extent" geographical also. It seems to me, however, that he did not make his theory geographical even "to some extent," but wholly mathematical—though Eratosthenes himself gives Hipparchus a good excuse for so doing. For frequently Eratosthenes digresses into discussions too scientific for the subject he is dealing with, but, after he digresses, the declarations he makes are not rigorously accurate but only vague, since, so to speak, he is a mathematician among geographers, and yet a geographer among mathematicians; and consequently on both sides he offers his opponents occasions for

¹ That is, of geometry.

STRABO

μάς τοις ἀντιλέγουσιν εν δε τούτω τω ὑπομνήματι καὶ δικαίας καὶ οὖτος καὶ ὁ Τιμοσθένης, ὥστ' οὐδ' ἡμιν καταλείπεται συνεπισκοπειν, ἀλλ' ἀρκεισθαι τοις ὑπὸ τοῦ Ἱππάρχου λεχθεισιν.

П

1. "Ιδωμεν δὲ καὶ Ποσειδώνιον, ἄ φησιν ἐν τοῖς περὶ ὠκεανοῦ· δοκεῖ γὰρ ἐν αὐτοῖς τὰ πολλὰ γεωγραφεῖν, τὰ μὲν οἰκείως, τὰ δὲ μαθηματικώτερον. οὐκ ἄτοπον οὖν ἔνια καὶ τῶν ὑπὸ τούτου λεγομένων διαιτῆσαι, τὰ μὲν νῦν, τὰ δ' ἐν τοῖς καθ' ἔκαστα, ὡς ὰν ὑποπίπτη, μέτρου τινὸς ἐχομένους. ἔστιν οὖν τι τῶν πρὸς γεωγραφίαν οἰκείων τὸ τὴν γῆν ὅλην ὑποθέσθαι σφαιροειδῆ, καθάπερ καὶ τὸν κόσμον, καὶ τὰ ἄλλα παραδέξασθαι τὰ ἀκόλουθα τῆ ὑποθέσει ταύτη· τούτων δ' ἐστὶ καὶ τὸ πεντάζωνον αὐτὴν εἶναι.

2. Φησί δη δ Ποσειδώνιος της είς πέντε ζώνας διαιρέσεως άρχηγον γενέσθαι Παρμενίδην άλλ' εκείνον μεν σχεδόν τι διπλασίαν άποφαίνειν το πλάτος την διακεκαυμένην, υπερπίπτουσαν

¹ The words τῆs μεταξὸ τῶν τροπικῶν after διακεκαυμένην are omitted by Kramer and succeeding editors.

¹ That is, some such standard as Strabo himself has defined in 2. 1. 37. ² See footnote 2 on p. 40.

That is, double the breadth assigned to the torrid zone by Poseidonius and Strabo—namely, 2 × 17,600 stadia

³ But, according to Plutarch, Thales and Pythagoras had divided the heavens into five zones, and Pythagoras had divided the earth into five corresponding zones (*De Placitis Philosophorum* 2. 12 and 3. 14).

GEOGRAPHY, 2. 1. 41-2. 2

contradiction; and the occasions which both he and Timosthenes offer Hipparchus in this Third Book are so just that it remains for me not even to join my observations to those of Hipparchus, but merely to content myself with what Hipparchus has said about them.

H

- 1. Now let us see what Poseidonius has to say in his treatise on Oceanus. For in it he seems to deal mainly with geography, treating it partly from the point of view of geography properly so called, and partly from a more mathematical point of view. And so it will not be out of place for me to pass judgment upon a few of Poseidonius' statements, some of them now, and others in my discussion of the individual countries, as occasion offers, always observing a kind of standard.¹ Now it is one of the things proper to geography to take as an hypothesis that the earth as a whole is spheroidal,²—just as we do in the case of the universe—and accept all the conclusions that follow this hypothesis, one of which is that the earth has five zones.
- 2. Poseidonius, then, says that Parmenides was the originator of the division into five zones, but that Parmenides represents the torrid zone as almost double its real breadth, inasmuch as it falls beyond

^{=35,200;} and thus the torrid zone would reach to 25° 8′ 344″ (counting 700 stadia to the degree). Thus the difference between Aristotle and Parmenides is not great, if we assume that the former places the tropics at about 24°. The reading of the manuscripts (see critical note on opposite page) makes Parmenides say that the torrid zone is double the zone between the tropics, but it is inconceivable that he did so.

έκατέρων των τροπικών είς τὸ έκτὸς καὶ πρὸς ταῖς εὐκράτοις 'Αριστοτέλη δὲ αὐτὴν καλείν τὴν μεταξύ τῶν τροπικῶν, τὰς δὲ μεταξύ τῶν τροπικων 1 και των αρκτικών ευκράτους. αμφοτέροις C 95 δ έπιτιμα δικαίως. διακεκαυμένην γαρ λέγεσθαι τὸ ἀοίκητον διὰ καθμα τῆς δὲ μεταξὺ τῶν τρο- π ικών π λέον $\mathring{\eta}$ το $\mathring{\eta}$ μισυ το \mathring{v} π λάτους ο \mathring{v} κ 2 οικήσιμόν έστιν έκ των ύπερ Αιγύπτου στοχαζομένοις Αιθιόπων, είπερ το μεν ήμισυ τοῦ παντός πλάτους ἐστίν, δ διαιρεί ἐφ' ἐκάτερα ὁ ἰσημερινός. τούτου δε το μεν άπο της Συήνης, ηπερ έστιν όριον τοῦ θερινοῦ τροπικοῦ, εἰς Μερόην εἰσὶ πεντακισχίλιοι το δ' ένθένδε έως τοῦ τῆς Κινναμωμοφόρου παραλλήλου, δσπερ έστιν άρχη της διακεκαυμένης, τρισχίλιοι. τοῦτο μεν οὖν τὸ διάστημα πᾶν ἐστι μετρητόν, πλεῖταί τε γὰρ καὶ ὁδεύεται τὸ δ' έξης, μέχρι τοῦ ἰσημερινοῦ, λόγω 3 δείκνυται κατά την ύπ' Ερατοσθένους γενομένην αναμέτρησιν της γης, ὅτι ἐστὶ σταδίων οκτακισχιλίων οκτακοσίων δυ δη λόγου έχει τὰ μύρια έξακισγιλία ὀκτακόσια τρὸς

² οὐκ, Kramer inserts, before οἰκήσιμον; Forbiger, C. Müller,

Tardieu, following.

H. Berger, approving.
 ⁴ ἐξακισχίλια ὀκτακόσια, Kramer, for τρισχίλια; Meineke, Forbiger, Tardieu, C. Müller, following.

¹ τὰς δὲ μεταξὺ τῶν τροπικῶν, Casaubon inserts; all editors following.

³ ἰσημερινοῦ, λόγφ δείκνυται, Corais, for ἰσημερινοῦ λέγφ, δείκνυται; Groskurd, Meineke, Tardieu, following; C. Müller,

De Meteorologicis 2. 5.

² Poseidonius insists on taking literally the Greek word διακεκαυμένην, "scorched."

GEOGRAPHY, 2. 2. 2

both the tropics and extends into the two temperate zones, while Aristotle 1 calls "torrid" the region between the tropics, and "temperate" the regions between the tropics and the "arctic circles." But Poseidonius censures both systems, and with justice. for by "torrid," 2 he says, is meant only the region that is uninhabitable on account of heat; and, of the zone between the tropics, more than half is uninhabitable if we may base a conjecture upon the Ethiopians who live south of Egypt—if it be true. first, that each division of the torrid zone made by the equator is half the whole breadth of that zone's and, secondly, that, of this half, the part that reaches to Meroë from Syene (which is a point on the boundary line of the summer tropic 4) is five thousand stadia in breadth, and the part from Meroë to the parallel of the Cinnamon-producing Country, on which parallel the torrid zone begins, is three thousand stadia in breadth. Now the whole of these two parts can be measured, for they are traversed both by water and by land; but the rest of the distance, up to the equator, is shown by calculation based upon the measurement which Eratosthenes made of the earth 5 to be eight thousand eight hundred stadia. Accordingly, as is the ratio of the sixteen thousand eight hundred stadia 6 to the eight thousand eight

⁶ The distance between the northern tropic and the equator.

³ Strabo proceeds to give a definite estimate of the inhabited and uninhabited portions of the torrid zone north of the equator. But, for the division of the zone south of the equator, he can only assume that a similar estimate applies. By so assuming he reaches a conclusion for the whole zone, in the form of a ratio.

⁴ The north and south temperate zones had also the name of summer and winter zones; and hence the summer tropic is the northern tropic.

⁵ 252,000 stadia.

STRABO

οκτακισχίλια οκτακόσια, τοῦτον αν έχοι τὸ μεταξύ των τροπικών διάστημα πρὸς τὸ τῆς διακεκαυμένης πλάτος, κάν των νεωτέρων δὲ αναμετρήσεων είσαγηται ή έλαγίστην ποιούσα την γην, οίαν ο Ποσειδώνιος έγκρίνει περί οκτωκαίδεκα μυριάδας οὖσαν, περὶ ημισύ που ἀποφαίνει τὴν διακεκαυμένην της μεταξύ των τροπικών, ή μικρώ τοῦ ἡμίσους μείζονα τσην δε καὶ τὴν αὐτὴν ούδαμώς, τοίς τε άρκτικοίς, ούτε παρά πάσιν οὖσιν, οὔτε τοῖς αὐτοῖς πανταχοῦ, τίς αν διορίζοι τὰς εὐκράτους, αίπερ εἰσὶν ἀμετάπτωτοι; τὸ μὲν οὖν μὴ παρὰ πᾶσιν είναι τοὺς ἀρκτικούς, οὐδὲν αν είη πρὸς τὸν έλεγγον δεί γαρ παρά τοίς την εύκρατον οἰκοῦσιν είναι πᾶσι, πρὸς οὕσπερ καὶ λέγεται μόνους εὔκρατος. τὸ δὲ μὴ πανταχοῦ τὸν αὐτὸν τρόπον, ἀλλὰ μεταπίπτειν, καλῶς $\epsilon l \lambda \eta \pi \tau a \iota$.

3. Αὐτὸς δὲ διαιρῶν εἰς τὰς ζώνας, πέντε μέν φησιν εἶναι χρησίμους πρὸς τὰ οὐράνια. τούτων δὲ περισκίους δύο τὰς ὑπὸ τοῖς πόλοις μέχρι τῶν ἐχόντων τοὺς τροπικοὺς ἀρκτικούς, ἐτεροσκίους δὲ

¹ That is, 16,800: 8,800:: 33,600: 17,600. The ratio is 21:11, and the breadth of the torrid zone 17,600 stadia (compare 2. 1. 13).

The Greeks in general used the term "arctic circle" of a celestial circle, and not of a terrestrial circle as we do today. Our arctic circle is fixed; theirs varied according to the standpoint of the observer. Their arctic circle was drawn on the celestial sphere parallel to the equator and tangent to the observer's horizon, and it therefore separated the circumpolar stars that are always above the horizon from the stars that rise and set with respect to his horizon. Since

GEOGRAPHY, 2. 2. 2-3

hundred stadia, so would be the ratio of the distance between the two tropics to the breadth of the torrid And if, of the more recent measurements of the earth, the one which makes the earth smallest in circumference be introduced-I mean that of Poseidonius, who estimates its circumference at about one hundred and eighty thousand stadia—this measurement, I say, renders the breadth of the torrid zone somewhere about half the space between the tropics, or slightly more than half, but in no wise equal to, or the same as, that space. And again, Poseidonius asks how one could determine the limits of the temperate zones, which are non-variable, by means of the "arctic circles," which are neither visible among all men nor the same everywhere. Now the fact that the "arctic circles" are not visible to all could be of no aid to his refutation of Aristotle, because the "arctic circles" must be visible to all who live in the temperate zone, with reference to whom alone the term "temperate" is in fact used. But his point that the "arctic circles" are not everywhere visible in the same way, but are subject to variations, has been well taken.2

3. When Poseidonius himself divides the earth into the zones,³ he says that five of them are useful with reference to the celestial phenomena; of these five, two—those that lie beneath the poles and extend to the regions that have the tropics as arctic

the altitude of the celestial pole is always the same as the latitude of the observer, the arctic circles would become zero for him at the equator; and, again, he would have no arctic circles if stationed south of the equator, nor would he have any antarctic circles if stationed north of the equator. Strabo insists that the boundaries of the temperate zones shall be fixed, not variable.

8 Seven.

τὰς ἐφεξης ταύταις δύο μέχρι τῶν ὑπὸ τοῖς τροπικοίς οἰκούντων, ἀμφίσκιον δὲ τὴν μεταξύ τῶν τροπικῶν. πρὸς δὲ τὰ ἀνθρώπεια ταύτας τε καὶ δύο ἄλλας στενὰς τὰς ὑπὸ τοῖς τροπικοῖς, καθ' ας ημισύ πως μηνός κατα κορυφήν έστιν ό ήλιος, δίγα διαιρουμένας ύπὸ τῶν τροπικῶν. έγειν γάρ τι ίδιον τὰς ζώνας ταύτας, αὐχμηράς τε ίδίως καὶ ἀμμώδεις ὑπαρχούσας καὶ ἀφόρους πλην σιλφίου καλ πυρωδών τινων καρπών συγκεκαυμένων, όρη γαρ μη είναι πλησίον, ώστε τα νέφη προσπίπτοντα όμβρους ποιείν, μηδέ δη ποταμοίς C 96 διαρρείσθαι. διόπερ οὐλότριχας καὶ οὐλόκερως καὶ προχείλους καὶ πλατύρρινας γεννασθαι τὰ γὰρ ἄκρα αὐτῶν συστρέφεσθαι καὶ τοὺς ἰχθυοφάγους δὲ κατὰ ταύτας τὰς ζώνας οἰκεῖν. ὅτι δὲ ταῦτ' ἴδια τῶν ζωνῶν τούτων δηλοῦν Φησι τὸ τοὺς νοτιωτέρους αὐτῶν ἔχειν τὸ περιέχον εὐκρατότερον καὶ τὴν γῆν καρπιμωτέραν καὶ εὐυδροτέραν.

Ш

1. Πολύβιος δὲ ποιεῖ ζώνας ἔξ· δύο μὲν τὰς τοῖς ἀρκτικοῖς ὑποπιπτούσας, δύο δὲ τὰς μεταξὺ τούτων τε καὶ τῶν τροπικῶν, καὶ δύο τὰς μεταξὺ

¹ That is, the frigid zones, where the shadows describe an oval in the summer-time.

² That is, the temperate zones, where the shadows are 366

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circles—are "periscian1"; and the two that come next and extend to the people who live beneath the tropics are "heteroscian²"; and the zone between the tropics, "amphiscian,". But for purposes of human interest there are, in addition to these five zones, two other narrow ones that lie beneath the tropics and are divided into two parts by the tropics; these have the sun directly overhead for about half a month each year. These two zones, he says, have a certain peculiarity, in that they are parched in the literal sense of the word, are sandy, and produce nothing except silphium and some pungent fruits that are withered by the heat; for those regions have in their neighbourhood no mountains against which the clouds may break and produce rain, nor indeed are they coursed by rivers; and for this reason they produce creatures with woolly hair, crumpled horns, protruding lips, and flat noses (for their extremities are contorted by the heat); and the "fish-eaters" also live in these zones. Poseidonius says it is clear that these things are peculiar to those zones from the fact that the people who live farther south than they do have a more temperate atmosphere, and also a more fruitful, and a better-watered, country.

III

1. Polybus makes six zones: two that fall beneath the arctic circles, two between the arctic circles and the tropics, and two between the tropics and the

thrown in opposite directions at noon; the shadow in the northern zone falling north and in the southern falling south.

3 That is, the torrid zone, where the shadow for any point at noon is north part of the year and south part of the year.

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τούτων καὶ τοῦ ἰσημερινοῦ. ἡ μὲν οὖν εἰς πέντε διαίρεσις δοκεί μοι καὶ φυσικώς άμα καὶ γεωγραφικώς εἰρησθαι. φυσικώς μέν, ὅτι καὶ πρὸς τὰ οὐράνια καὶ πρὸς τὴν τοῦ περιέχοντος κρᾶσιν. πρὸς μὲν τὰ οὐράνια, ὅτι τοῖς περισκίοις καὶ τοῖς έτεροσκίοις 1 καὶ τοῖς ἀμφισκίοις, οὕτως ἃν ἄριστα διοριζομένοις, συνδιορίζεται καλ τὰ περλ την θέαν τῶν ἄστρων, δλοσχερεῖ τινι μερισμῷ λαμβάνοντα την έξάλλαξιν προς δε την του περιέχοντος κράσιν, ὅτι τῆς τούτου κράσεως πρὸς τὸν ἥλιον κρινομένης διαφοραί τρείς είσιν αί γενικώταται καὶ συντείνουσαι πρός τε τὰς τῶν ζώων καὶ φυτών συστάσεις καὶ τών ἄλλων ἡμισυστάσεις 2 των ύπὸ τω ἀέρι καὶ ἐν αὐτω ἐκείνω, ὑπερβολή θάλπους καὶ ἔλλειψις καὶ μεσότης. αὕτη δὲ τῷ είς τὰς ζώνας μερισμφ λαμβάνει τὴν οἰκείαν διάκρισιν αί τε γάρ κατεψυγμέναι δύο την έλλειψιν τοῦ θάλπους ὑπαγορεύουσιν, εἰς μίαν τοῦ περιέχοντος φύσιν συναγόμεναι, αί τε εὔκρατοι παραπλησίως είς μίαν την μεσότητα άγονται, είς δὲ τὴν λοιπὴν ἡ λοιπὴ μία καὶ διακεκαυμένη. ότι δὲ καὶ γεωγραφικός ἐστιν ὁ μερισμός, δηλον.

² ἡμισυστάσεις, Madvig, for ἡμισυσταλεῖς; A. Vogel, Sterrett, approving.

Sterrett, approving

¹ και τοῖς ἐτεροσκίοις, Groskurd inserts, after περισκίοις; Meineke, Forbiger, Tardieu, following; Gosselin, Kramer, C. Müller, approving, but not inserting.

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equator. However, the division into five zones seems to me to be in harmony with physics as well as geography; with physics, in relation both to the celestial phenomena and to the temperature of the atmosphere; in relation to the celestial phenomena, because, by means of the "periscian" and the "heteroscian" and the "amphiscian" regions (the best way to determine the zones), the appearance of the constellations to our sight is at the same time determined; for thus, by a kind of rough-outline division,2 the constellations receive their proper variations; and in relation to the temperature of the atmosphere, because the temperature of the atmosphere, being judged with reference to the sun, is subject to three very broad differences—namely, excess of heat, lack of heat, and moderate heat, which have a strong bearing on the organisations of animals and plants, and the semi-organisations 3 of everything else beneath the air or in the air itself. And the temperature of the atmosphere receives its proper determination by this division of the earth into five zones: for the two frigid zones imply the absence of heat, agreeing in the possession of one characteristic temperature; and in like manner the two temperate zones agree in one temperature, that of moderate heat; while the one remaining is consistent in having the remaining characteristic, in that it is one and torrid in temperature. And it is clear that this division is in harmony with geography.

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¹ See 2. 2. 3, and footnotes.

² Strabo, like Pythagoras, has in mind celestial zones corresponding to his terrestrial zones. The former would not be so accurate as the latter, but they would afford a consistent basis for astronomical observation.

⁸ Seeds, for example.

ζητεί γὰρ ή γεωγραφία τη έτέρα 1 των εὐκράτων άφορίσαι τὸ οἰκούμενον ὑφ' ἡμῶν τμῆμα πρὸς δύσει μεν οὖν καὶ ἀνατολη θάλαττά ἐστιν ἡ περατοῦσα, πρὸς δὲ τὰ νότια καὶ τὰ βόρεια ὁ ἀήρ, ὁ μεν μέσος εύκρατος ών και φυτοίς και ζώοις, ό δ' έφ' έκάτερα δύσκρατος ύπερβολή και έλλείψει τοῦ θάλπους. εἰς δὲ τὰς τρεῖς διαφοράς ταύτας έδέησε της είς πέντε ζώνας διαιρέσεως, τω γάρ ισημερινώ τμηθείσα δίγα ή σφαίρα της γης είς τε τὸ βόρειον ἡμισφαίριον, ἐν ιν ἡμεῖς ἐσμεν, καὶ τὸ νότιον, ὑπέγραψε τὰς τρεῖς διαφοράς τὰ μὲν γαρ προς τω ισημερινώ και τη διακεκαυμένη ζώνη διὰ καθμα ἀοίκητά ἐστι, τὰ δὲ πρὸς τῷ πόλω διὰ ψύχος, τὰ δὲ μέσα τὰ εὔκρατα καὶ τὰ οἰκήσιμα. ό δε τὰς ὑπὸ τοῖς τροπικοῖς προστιθεὶς οὐκ ἀνὰ λόγον ταις πέντε ταύτας 2 προστίθησιν, οὐδ' δμοία κεχρημένος ⁸ διαφορά, άλλ' ώς αν εί και ταίς έθνικαις διαφοραίς απέφαινε ζώνας, άλλην μέν την Αιθιοπικήν. άλλην δε την Σκυθικήν καί Κελτικήν, τρίτην δε την ανα μέσον.

2. Ὁ δὲ Πολύβιος τοῦτο μὲν οὐκ εὖ, τὸ ποιεῖν τινας ζώνας τοῖς ἀρκτικοῖς διοριζομένας, δύο μὲν τὰς ὑποπιπτούσας αὐτοῖς, δύο δὲ τὰς μεταξὺ τούτων καὶ τῶν τροπικῶν εἴρηται γὰρ ὅτι τοῖς μεταπίπτουσι σημείοις οὐχ ὁριστέον τὰ ἀμετάπτωτα. οὐδὲ τοῖς τροπικοῖς δὲ τῆς διακεκαυ-

¹ τη έτέρα, Madvig, for της έτέρας.

² ταύταs, Corais, for ταύταιs; Meineke following.

³ κεχρημένος, Corais, for κεχρημένας.

GEOGRAPHY, 2. 3. 1-2

For geography seeks to define by boundaries that section of the earth which we inhabit by means of the one of the two temperate zones. Now on the west and on the east it is the sea that fixes its limits, but on the south and the north the nature of the air: for the air that is between these limits is well-tempered both for plants and for animals, while the air on both sides of these limits is harsh-tempered, because of excess of heat or lack of heat. It was necessary to divide the earth into five zones corresponding to these three differences of temperature; indeed, the cutting of the sphere of the earth by the equator into two hemispheres, the northern hemisphere in which we live, and the southern hemisphere, suggested the three differences of temperature. For the regions on the equator and in the torrid zone are uninhabitable because of the heat, and those near the pole are uninhabitable because of the cold; but it is the intermediate regions that are well-tempered and But when he adds the two zones inhabitable. beneath the tropics, Poseidonius does not follow the analogy of the five zones, nor yet does he employ a like criterion; but he was apparently representing zones by the ethnical criteria also, for he calls one of them the "Ethiopic zone," another the "Scythico-Celtic zone," and a third the "intermediate zone."

2. Polybius is not right in this, namely, in that he defines some of his zones by means of the arctic circles: two that fall under the arctic circles themselves, and two between the arctic circles and the tropics; for, as I have already said, non-variables must not be defined by points that are variable. And we must also not employ the tropics as boundaries of the

¹ See page 365, and footnote 2.

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μένης δροις γρηστέον καὶ γάρ τοῦτ' εἴρηται. τὴν διακεκαυμένην μέντοι δίγα διαιρών πρὸς οὐ φαύλην έπίνοιαν φαίνεται κεκινημένος, πρὸς ην καὶ όλην δίγα διαιρούμεν εὐφυώς την γην είς τε τὸ βόρειον ήμισφαίριον καὶ τὸ νότιον τῷ ἰσημερινῷ. δήλον γαρ ότι, εί 1 διαιρείται κατά ταύτην την τομήν καὶ ή διακεκαυμένη, καὶ ποιεί τινα ἐπιτηδειότητα ώστε καὶ τὸ ἡμισφαίριον ἐκάτερον ἐξ ὅλων συνετάχθαι τριών ζωνών όμοιοειδών τών εν θατέρφ. ή μεν ούν τοιαύτη τομή δέχεται την είς εξ ζώνας διαίρεσιν, ή δ' έτέρα οὐ πάνυ. εί γοῦν τῷ διὰ τῶν πόλων δίγα τέμνοις την γην, ουκ αν εικότως έκάτερον των ημισφαιρίων, τό τε έσπέριον και τὸ ανατολικόν, τέμνοις είς ζώνας έξ, αλλα ή είς πέντε άρκοῦσα αν είη τὸ γαρ δμοιοπαθές των τμημάτων άμφοτέρων της διακεκαυμένης, α ποιεί ό ισημερινός, και τὸ συγκεισθαι περιττήν και περίεργον αποφαίνει την τομήν, δμοιοειδών μέν οὐσῶν καὶ τῶν εὐκράτων καὶ τῶν κατεψυγμένων, άλλ' οὐ συγκειμένων οὕτως οὖν καὶ τὴν ὅλην γῆν έκ των τοιούτων ήμισφαιρίων έπινοουμένην άρκούντως αν είς πέντε διαιροίης. εί δ', ώσπερ Έρατοσθένης φησίν, ή ὑποπίπτουσα τῷ ἰσημερινῷ έστιν εύκρατος, καθάπερ και Πολύβιος όμοδοξεί (προστίθησι δ' ούτος καὶ διότι ύψηλοτάτη ἐστί· διόπερ καὶ κατομβρεῖται, τῶν βορείων νεφῶν κατά τους έτησίας έκει τοις άναστήμασι προσπιπ-

¹ γάρ, δτι, εἰ διαιρεῖται, Madvig, for γὰρ δτι διαιρεῖται.

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torrid zone; this, too, I have already said. However, when he divides the torrid zone into two parts, it is clearly no foolish notion that has moved him to do so; for it is by this notion that we very suitably use the equator to divide the whole earth into two parts, namely, the northern and the southern hemispheres. For it is clear that, if the torrid zone as well is divided according to this method of partition. Polybius reaches a convenient result; that is, each of the two hemispheres is composed of three whole zones, each of which is like in form to its corresponding zone in the other hemisphere. Now a partition of this kind admits of the division into six zones; but the other partition does not altogether admit of it. At all events, if you should cut the earth into two parts by means of the circle that runs through the poles, you could not reasonably divide each of the two hemispheres, the western and the eastern, into six zones, but the division into five zones would be sufficient; for the homogeneousness of the two sections of the torrid zone that are made by the equator, and the fact that they are contiguous to each, other, render their partition useless and superfluous, while the two temperate and the two frigid zones are. indeed, alike in form respectively, though they are not contiguous. So, therefore, if you conceive of the whole earth as composed of hemispheres of this kind it will be sufficient to divide it into five zones. if the country that lies under the equator is temperate, as Eratosthenes says it is (an opinion with which Polybius agrees, though he adds this, that it is the highest part of the earth, and for that reason is subject to rains, because at the season of the Etesian Winds the clouds from the north strike in great

τόντων πλείστων), πολύ κρείττον τρίτην εὔκρατον ταύτην ποιείν στενήν τινα, ή τὰς ὑπὸ τοίς τροπικοίς εἰσάνειν. συνηγορεί δὲ τούτοις καὶ τὰ τοιαθτα, ών μέμνηται καὶ Ποσειδώνιος, τὸ ἐκεῖ τὰς μεταστάσεις ὀξυτέρας είναι τὰς είς τὰ πλάγια, ώς δ' αύτως καὶ τὰς ἀπ' ἀνατολης ἐπὶ δύσιν τοῦ ήλίου δξύτεραι γάρ αί κατά μεγίστου κύκλου τῶν ὁμοταχῶν κινήσεων.

3. Ἐνίσταται δ' ὁ Ποσειδώνιος τῶ Πολυβίω. διότι φησί την ύπο τῷ ἰσημερινῷ οἴκησιν ύψηλοτάτην οὐδεν γὰρ είναι κατὰ τὴν σφαιρικὴν C 98 επιφάνειαν ύψος δια την δμαλότητα, οὐδε δη ορεινήν είναι την ύπο τώ ισημερινώ, άλλα μαλλον πεδιάδα ἰσόπεδόν πως τῆ ἐπιφανεία τῆς θαλάττης. τούς δὲ πληροῦντας τὸν Νεῖλον ὅμβρους ἐκ τῶν Αίθιοπικών δρών συμβαίνειν, ταύτα δ' είπων ένταθθα έν άλλοις συγχωρεί, φήσας ύπονοείν όρη είναι τὰ ὑπὸ τῷ ἰσημερινῷ, πρὸς ἃ έκατέρωθεν ἀπὸ τῶν εὐκράτων ἀμφοῖν προσπίπτοντα τὰ νέφη ποιείν τοὺς ὅμβρους. αὕτη μὲν οὖν ἡ ἀνομολογία φανερά· άλλὰ καὶ δοθέντος τοῦ ὀρεινὴν είναι την ύπο τω ισημερινώ, άλλη τις άνακύπτειν αν δόξειεν οί γαρ αὐτοὶ σύρρουν Φασίν είναι τὸν

¹ τήν, Kramer suspects and Meineke deletes, before εδκρατον.

That is, the circumstances just quoted from Polybius.
 That is, the equator and adjacent circles of latitude. Strabo means simply that the sun passes more rapidly with 374

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numbers against the mountain peaks in that region), it would be much better to regard it as a third temperate zone, although a narrow one, than to introduce the two zones beneath the tropics. in accord with these circumstances 1 are the following (which Poseidonius has already mentioned), namely, that in those regions the oblique motion of the sun is more rapid, and in the same way its daily motion from east to west; for when revolutions are accomplished within the same period of time, those

on the greatest circles 2 are the more rapid.

3. But Poseidonius objects to the statement of Polybius that the inhabited region under the equator is the highest. For says Poseidonius, there can be no high point on a spherical surface, because the surface of a sphere is uniform all round; and indeed the country under the equator is not mountainous, but rather is it a plain that is approximately on a level with the surface of the sea; and the rains that flood the Nile come together from the mountains of Ethiopia. But although Poseidonius thus expresses himself in this passage, he concedes the view of Polybius in other passages, saying he suspects that there are mountains beneath the equator and that the clouds from the two temperate zones strike against those mountains on both sides and cause the rains. Now here the lack of consistency is obvious; but even if it be admitted that the country beneath the equator is mountainous, another inconsistency, as it seems, would arise: for these same men assert that the ocean is one continuous stream round the earth. How, pray,

respect to points in this third temperate zone than in the new torrid zone on either side of that zone; hence a temperate climate on and near the equator.

ώκεανόν. πῶς οὖν ὄρη κατὰ μέσον ίδρύουσιν αὐτόν, πλὴν εἰ νήσους τινὰς βούλονται λέγειν; ὅπως δὲ δή ποτε τοῦτ' ἔχει, τῆς γεωγραφικῆς μερίδος ἔξω πίπτει· δοτέον δ' ἴσως τῷ προθεμένῳ τὴν περὶ ὠκεανοῦ πραγματείαν ταῦτ' ἔξετάζειν.

4. Μνησθείς δε τών περιπλεύσαι λεγομένων την Λιβύην Ἡρόδοτον μεν οἴεσθαί φησιν ὑπὸ Νεκώ 1 πεμφθέντας τινάς τελέσαι τὸν περίπλουν 'Ηρακλείδην δε τον Ποντικον εν διαλόγω ποιείν άφιγμένον παρά Γέλωνα² μάγον τινά περιπλεῦσαι φάσκοντα. ἀμάρτυρα δὲ ταῦτ' εἶναι φήσας καὶ Εὔδοξόν τινα Κυζικηνὸν θεωρὸν καὶ σπουδοφόρου τοῦ τῶν Κορείων ἀγῶνος ἐλθεῖν εἰς Αίγυπτον ίστορει κατά τὸν δεύτερον Εὐεργέτην συσταθήναι δὲ καὶ τῷ βασιλεῖ καὶ τοῖς περὶ αὐτόν, καὶ μάλιστα κατὰ τοὺς ἀνάπλους τοῦ Νείλου θαυμαστικών όντα τών τοπικών ίδιωμάτων αμα καὶ οὐκ ἀπαίδευτον, τυνεῖν δή τινα Ίνδον κομισθέντα ώς τον βασιλέα ύπο τῶν φυλάκων τοῦ ᾿Αραβίου μυχοῦ, λεγόντων εύρειν ήμιθανή καταχθέντα μόνον έν νηί, τίς δ' είη καὶ πόθεν, άγνοεῖν, μὴ συνιέντας τὴν διάλεκτον του δε παραδούναι τοις διδάξουσιν ελληνίζειν. ἐκμαθόντα δὲ διηγήσασθαι, διότι ἐκ τῆς

² Γέλωνα, Corais, for Γέλωνι Meineke approving.

¹ All scholars agree that Strabo or Poseidonius made a mistake in giving the name of Darius here. It was Neco who ordered the circumnavigation of Africa, while Darius ordered that of Arabia. (Herod. 4. 42).

GEOGRAPHY, 2. 3. 3-4

can they place mountains in the centre of the ocean—unless by "mountains" they refer to certain islands? But however this may be, it falls outside the province of geography; and perhaps we should give over these matters for examination to some one who proposes to write a treatise on the ocean.

4. In giving the names of those who are said to have circumnavigated Libya Poseidonius says that Herodotus believes that certain men commissioned by Neco accomplished the circumnavigation of Libya; and adds that Heracleides of Pontus in one of his Dialogues makes a certain Magus who had come to the court of Gelo assert that he had circumnavigated Libya. And, after stating that these reports are unsupported by testimony, he tells the story of a certain Eudoxus of Cyzicus, a sacred ambassador and peace herald at the festival of Persephone. Eudoxus, the story goes, came to Egypt in the reign of Euergetes the Second 1; and he became associated with the king and the king's ministers, and particularly in connection with the voyages up the Nile; for he was a man inclined to admire the peculiarities of regions and was also not uninformed about them. Now it so happened, the story continues, that a certain Indian was brought to the king by the coast-guards of the recess of the Arabian Gulf, who said that they had found him half-dead and alone on a stranded ship, but that they did not know who he was or where he came from, since they did not understand his language; and the king gave the Indian into the charge of men who would teach him Greek and when the Indian had learnt Greek, he related that on his voyage from India he by a

Ptolemy Physicon, who reigned B.C. 146-117.

Ἰνδικῆς πλέων περιπέσοι πλάνη καὶ σωθείη δεῦρο, τοὺς σύμπλους ἀποβαλὼν λιμῷ· ὑποληφθέντα δὲ ὑποσχέσθαι τὸν εἰς Ἰνδοὺς πλοῦν ἡγήσασθαι τοῖς ὑπὸ τοῦ βασιλέως προχειρισθεῖσι τούτων δὲ γενέσθαι καὶ¹ τὸν Εὔδοξον.

Πλεύσαντα δή μετά δώρων ἐπανελθεῖν ἀντιφορτισάμενον ἀρώματα καὶ λίθους πολυτελείς, ὧν τοὺς μεν καταφέρουσιν οί ποταμοί μετά των ψήφων. τούς δ' ορυκτούς ευρίσκουσι, πεπηγότας έξ ύγρου, C 99 καθάπερ τὰ κρυστάλλινα παρ' ἡμίν· διαψευσθήναι δὲ τῶν ἐλπίδων ἀφελέσθαι γὰρ αὐτὸν άπαντα τὸν φόρτον τὸν Εὐεργέτην. τελευτήσαντος δ' ἐκείνου τὸν βίον, Κλεοπάτραν τὴν γυναϊκα διαδέξασθαι την άρχην πάλιν οὖν καλ ύπο ταύτης πεμφθήναι τον Εύδοξον μετά μείζονος παρασκευής. ἐπανιόντα δ' ἀνέμοις παρενεχθήναι ύπερ την Αιθιοπίαν προσφερόμενον δέ τισι τόποις εξοικειοῦσθαι τοὺς ἀνθρώπους μεταδόσει σιτίων τε καὶ οἴνου καὶ παλαθίδων, ὧν ἐκείνοις οὐ μετην, ἀντὶ δὲ τούτων ὑδρείας τε τυγχάνειν καὶ καθοδηγίας, ἀπογράφεσθαί τε τῶν ἡημάτων ένια. ευρόντα δ' ακρόπρφρον ξύλινον εκ ναυαγίου ίππον έχον εγγεγλυμμένον, πυθόμενον ώς από της έσπέρας πλεόντων τινών είη το ναυάγιον τοῦτο, κομίζειν αὐτὸ ἀναστρέψαντα πρὸς τὸν οἰκεῖον πλοῦν. σωθέντα δ' εἰς Αἴγυπτον, οὐκέτι της Κλεοπάτρας ηγουμένης, άλλὰ τοῦ παιδός,

1 καί, Meineke proposes to insert, after γενέσθαι.

GEOGRAPHY, 2. 3. 4

strange mischance 1 mistook his course and reached Egypt in safety, but only after having lost all his companions by starvation; and when his story was doubted, he promised to act as guide on the trip to India for the men who had been previously selected by the King; and of this party Eudoxus, also, became a member.

So Eudoxus sailed away with presents; and he returned with a cargo of perfumes and precious stones (some of which the rivers bring down with the sands, while others are found by digging, being solidified from a liquid state, just as our crystals are). But Eudoxus was wholly deceived in his expectations, for Euergetes took from him his entire cargo. And after the death of Euergetes, his wife, Cleopatra, succeeded him on the throne; and so Eudoxus was again sent out, by her also, and this time with a larger outfit. But on his return voyage he was driven out of his course by the winds to the south of Ethiopia, and being driven to certain places he conciliated the people by sharing with them bread, wine, and dried figs (for they had no share of such things), and in return therefor he received a supply of fresh water and the guidance of pilots, and he also made a list of some of their words. And he found an end of a wooden prow that had come from a wrecked ship and had a horse carved on it; and when he learned that this piece of wreckage belonged to some voyagers who had been sailing from the west, he took it with him when he turned back upon his homeward voyage. And when he arrived safely in Egypt, inasmuch as Cleopatra no longer reigned but

¹ In § 5 following Strabo makes sport of this "strange mischance."

ἀφαιρεθηναι πάλιν πάντα· φωραθηναι γὰρ νενοσφισμένον πολλά. τὸ δ' ἀκρόπρφρον προφέροντα εἰς ¹ τὸ ἐμπόριον, δεικνύναι τοῖς ναυκλήροις, γνῶναι δὲ Γαδειριτῶν ὄν· τούτων γὰρ τοὺς μὲν ἐμπόρους μεγάλα στέλλειν πλοῖα, τοὺς δὲ πένητας μικρά, ὰ καλεῖν ἵππους, ἀπὸ τῶν ἐν ταῖς πρώραις ἐπισήμων· τούτοις ² δὲ πλεῖν μέχρι τοῦ Λίξου ποταμοῦ περὶ τὴν Μαυρουσίαν ἀλιευομένους· ἀλλὰ τῶν δὴ ναυκλήρων τινὰς γνωρίσαι τὸ ἀκρόπρφρον ἐνὸς τῶν ἀπὸ τοῦ Λίξου ποταμοῦ πορρώτερον πλευσάντων καὶ μὴ σωθέντων ὑπάρ-ξαν.

Έκ δὲ τούτου συμβαλόντα τὸν Εὔδοξον ὡς δυνατὸς εἴη ὁ περίπλους ὁ Λιβυκός, πορευθέντα οἴκαδε τὴν οὐσίαν ἐνθέμενον πᾶσαν ἐξορμῆσαι. καὶ πρῶτον μὲν εἰς Δικαιαρχείαν,³ εἶτ' εἰς Μασσαλίαν ἔλθεῖν, καὶ τὴν ἑξῆς παραλίαν μέχρι Γαδείρων, πανταχοῦ δὲ διακωδωνίζοντα ταῦτα καὶ χρηματιζόμενον κατασκευάσασθαι πλοῖον μέγα καὶ ἐφόλκια δύο λέμβοις λῃστρικοῖς ὅμοια, ἐμβιβάσαι τε μουσικὰ παιδισκάρια καὶ ἰατροὺς καὶ ἄλλους τεχνίτας, ἔπειτα πλεῖν ἐπὶ τὴν Ἰνδικὴν μετέωρον ζεφύροις συνεχέσι. καμνόντων δὲ τῷ πλῷ τῶν συνόντων, ἄκοντα ἐπουρίσαι πρὸς γῆν, δεδοικότα τὰς πλημμυρίδας καὶ τὰς ἀμπώτεις. καὶ δὴ καὶ συμβῆναι ὅπερ ἐδεδίει καθίσαι γὰρ τὸ

¹ els, Meineke, for es.

² τούτοιs, Casaubon, for τούτουs; Siebenkees, Corais, Meineke, following.

³ Δικαίαρχείαν, Meineke, for Δικαιαρχίαν; C. Müller approving.

⁴ ἐμβιβάσαι τε, Meineke, for ἐμβιβάσασθαι; Forbiger following, L. Kayser approving.

GEOGRAPHY, 2. 3. 4

her son in her stead, he was again deprived of everything, for it was discovered that he had stolen much property. But he brought the figure-head to the market-place and showed it to the shipmasters, and learned from them that it was a figure-head from Gades; for he was told that whereas the merchants of Gades fit out large ships, the poor men fit out small ships which they call "horses" from the devices on the prows of their ships, and that they sail with these small ships on fishing voyages around the coast of Maurusia as far as the river Lixus; but some of the shipmasters, indeed, recognized the figure-head as having belonged to one of the ships that had sailed rather too far beyond the Lixus River and had not returned home safely.

And from the above-mentioned fact Eudoxus conjectured that the circumnavigation of Libva was possible, went home, placed all his property on a ship, and put out to sea. First he put in at Dicaearchia, then at Massilia, and then at the successive points along the coast until he came to Gades; and everywhere noisily proclaiming his scheme and making money by trafficking, he built a great ship and also two tow-boats like those used by pirates; and he put music-girls on board, and physicians, and other artisans, and finally set sail on the high sea on the way to India, favoured by constant western breezes. But since his companions became tired of the voyage, he sailed with a fair wind towards the land; though he did it against his will, for he feared the ebb and flow of the tides. indeed, what he feared actually came to pass: the πλοίον, ήσυχή δέ, ὥστε μηδ' ἀθροῦν διαλυθήναι, ἀλλὰ φθήναι τὰ φορτία σωθέντα εἰς γήν καὶ τῶν ξύλων τὰ πλεῖστα· ἐξ ὧν τρίτον λέμβον συμπηξάμενον πεντηκοντόρφ πάρισον πλεῖν, ἔως ἀνθρώποις συνέμιξε τὰ αὐτὰ ἡήματα φθεγγομένοις, C 100 ἄπερ πρότερον ἀπεγέγραπτο· ἄμα δὲ τοῦτό γε γνῶναι, ὅτι τε οἱ ἐνταῦθα ἄνθρωποι ὁμοεθνεῖς εἶεν τοῖς Αἰθίοψιν ἐκείνοις, καὶ ὅτι ὁμοροῖεν τῆ Βόγου βασιλεία.

> 'Αφέντα δη τον έπι 'Ινδούς πλοῦν αναστρέφειν έν δὲ τῷ παράπλφ νῆσον εὔυδρον καὶ εὔδενδρον ἐρήμην ίδόντα σημειώσασθαι. σωθέντα δὲ εἰς τὴν Μαυρουσίαν, διαθέμενον τούς λέμβους πεζή κομισθήναι πρὸς τὸν Βόγον καὶ συμβουλεύειν αὐτῷ τὴν ναυστολίαν ἐπανελέσθαι ταύτην, ἰσχῦσαι δ' εἰς τάναντία τούς φίλους ύποτείνοντας φόβον, μη συμβή την χώραν εὐεπιβούλευτον γενέσθαι, δειχθείσης παρόδου τοις έξωθεν επιστρατεύειν εθέλουσιν. δ' ἐπύθετο λόγφ μὲν πεμπόμενον ἐαυτὸν ἐπὶ τὴν άναδειχθείσαν ναυστολίαν, έργω δ' έκτεθησόμενον είς έρήμην τινά νησον, φυγείν είς την 'Ρωμαίων έπικράτειαν, κάκειθεν είς την 'Ιβηρίαν διάραι. πάλιν δὲ κατασκευασάμενον στρογγύλον πλοίον καὶ μακρὸν πεντηκόντορον, ώστε τῷ μὲν πελαγίζειν, τῷ δὲ πειρᾶσθαι τῆς γῆς, ἐνθέμενον γεωργικὰ έργαλεία και σπέρματα και οικοδόμους δρμήσαι πρός του αὐτου περίπλουν διανοούμενου, εί

¹ ἀπεγέγραπτο, Corais, for ἀπογέγραπται; Meineke following.

GEOGRAPHY, 2. 3. 4

ship ran aground,—though so gently that it was not broken up all at once, and they succeeded in bringing safely to land the cargo and also most of the ship's timbers; and from these timbers he constructed a third boat about as large as a ship of fifty oars; and he continued his voyage, until he came to people who spoke the same words that he had made a list of on the former occasion; and forthwith he learnt this, at least, that the men in that region belonged to the same nation as those other Ethiopians, and also that they were neighbours to the kingdom of Bogus.

Accordingly, he abandoned the voyage to India and turned back; and on the voyage along the coast, he espied and made note of an island that was wellwatered and well-wooded but uninhabited. when he reached Maurusia safely he disposed of his boats, travelled on foot to the court of Bogus, and advised him to take up this expedition on his own account: but the friends of Bogus prevailed to the contrary, inspiring in him the fear that Maurusia might in consequence be easily exposed to hostile intrigue if the way thither had once been pointed out to outsiders who wished to attack it. And when Eudoxus heard that he was being sent out, ostensibly, on the expedition as proposed by him, but in reality was going to be placed out on some desert island, he fled to the territory that was under Roman dominion. and thence crossed over to Iberia. And again he built a round ship and a long ship of fifty oars, his purpose being to keep to the open sea with his long ship and to explore the coast with the round ship. He put on board agricultural implements, seeds, and carpenters, and again set out with a view to the same circumnavigation; his intention being, in case the

βραδυνοιτο ὁ πλοῦς, ἐνδιαχειμάσαι τῆ προεσκεμμένη νήσφ, καὶ σπείραντα καὶ ἀνελόμενον τοὺς καρποὺς τελέσαι τὸν ἐγνωσμένον ἐξ ἀρχῆς πλοῦν.

5. Έγω μεν οὖν, φησί, μέχρι δεῦρο της. περὶ τὸν Εὕδοξον ἱστορίας ἤκω τί δ' ὕστερον συνέβη, τοὺς ἐκ Γαδείρων καὶ τῆς Ἰβηρίας εἰκὸς εἰδέναι. ἐκ πάντων δὴ τοὑτων φησὶ δείκνυσθαι, διότι ἡ οἰκουμένη κύκλω περιρρεῖται τῷ ὠκεανῷ٠

οὐ γάρ μιν δεσμὸς περιβάλλεται ἢπείροιο, ἀλλ' ἐς ἀπειρεσίην κέχυται· τό μιν οὕτι μιαίνει. (Müller, fr. iii. 281).

θαυμαστός δή κατά πάντα έστιν ό Ποσειδώνιος. τὸν μὲν τοῦ μάγου περίπλουν, δν Ἡρακλείδης είπεν, αμάρτυρον νομίσας, και αὐτῶν τῶν ὑπὸ Νεκώ πεμφθέντων, δν Ἡρόδοτος ἱστορεῖ, τὸ δὲ Βεργαίον διήγημα τοῦτο ἐν πίστεως μέρει τιθείς, είθ' ὑπ' αὐτοῦ πεπλασμένον, εἴτ' ἄλλων πλασάντων πιστευθέν. τίς γαρ ή πρώτον μέν της κατά τον Ἰνδον περιπετείας; ο γαρ Αράβιος κόλπος ποταμού δίκην στενός έστι καὶ μακρὸς πεντακισχιλίους έπὶ τοῖς 2 μυρίοις που σταδίους μέχρι τοῦ στόματος, καὶ τούτου στενού παντάπασιν όντος ούκ είκος δ' οὖτ' ἔξω που τὸν πλοῦν ἔχοντας εἰς τὸν κόλπον παρωσθήναι τοὺς Ἰνδοὺς κατὰ πλάνην (τὰ γὰρ στενα από του στόματος δηλώσειν έμελλε την πλάνην), οὐτ' εἰς τὸν κόλπον ἐπίτηδες καταχθεῖσιν έτι πλάνης ήν πρόφασις και ανέμων αστάτων.

¹ δεῦρο, Meineke inserts, after μέχρι; C. Müller approving. ² τοῖs, Cascorbi inserts, before μυρίοιs; following the usage of Strabo. C. Frick cites.

GEOGRAPHY, 2. 3. 4-5

voyage should be delayed, to spend the winter on the island he had previously observed, to sow the seed, reap the harvest therefrom, and then finish the voyage which he had decided upon at the outset.

5. "Now I." says Poseidonius. "have traced the story of Eudoxus to this point, but what happened afterwards probably the people of Gades and Iberia know." So from all these indications he says it is shown that the ocean flows in a circle round the inhabited world: "For him no fetters of continent encompass: but he pours forth his waters boundlessly. and nothing ever sullies their purity." 1 Now Poseidonius is a wonderful fellow in all this: for although he considers as unsupported by testimony the story of the voyage of the Magus, which Heracleides told, and of the voyage even of the emissaries of Neco, of which Herodotus gives an account, he puts down as real evidence this Bergaean² story, though he either invented it himself or accepted it from others who were its inventors. For. in the first place, what plausibility is there in the "strange mischance" which the Indian tells about? Why, the Arabian Gulf is like a river in its narrowness, and it is about fifteen thousand stadia long up to its mouth, which, in its turn, is narrow throughout its entire length; and so it is not likely that the Indians who were voyaging outside this gulf were pushed out of their course into it by mistake (for its narrowness at its mouth would have shown their mistake), nor, if they sailed into the gulf on purpose, did they any longer have the excuse that they mistook their course or encountered inconstant

¹ The authorship of these verses is unknown.

² See footnote, p. 172.

C 101 λιμώ τε πώς περιείδον απαντας απολλυμένους 1 σφας πλην ένός; περιγενόμενός τε πως ίκανος ην μόνος κατευθύνειν τὸ πλοίον οὐ μικρὸν ὄν, τά γε τηλικαῦτα πελάγη διαίρειν δυνάμενον; τίς δ' ή όξυμάθεια της διαλέκτου, ἀφ' ης ίκανὸς ην πείσαι τον βασιλέα, ώς δυνάμενος τοῦ πλοῦ καθηγήσασθαι: τίς δ' ή σπάνις τω Εὐεργέτη των τοιούτων καθηγεμόνων, ήδη γνωριζομένης ύπὸ πολλών της ταύτη θαλάττης; ὁ δὲ δὴ σπονδοφόρος καὶ θεωρός των Κυζικηνών πως άφεις την πόλιν είς Ἰνδούς ἔπλει; πῶς δὲ ἐπιστεύθη τηλικαύτην χρείαν; πως δ' έπανιων άφαιρεθείς πάντα παρά την έλπίδα και άτιμωθεις έτι μείζονα έπιστεύθη παρασκευήν δώρων; έπανιων δέ καί παρενεχθείς είς την Αίθιοπίαν, τίνος χάριν ή τας διαλέκτους ἀπεγράφετο, ή τὸ ἀκρόπρφρον ἐπυνθάνετο της άλιάδος πόθεν έκπέσοι: τὸ γὰρ μαθείν ότι ἀπὸ δύσεως πλεόντων ἢν ναυάγιον, οὐδενὸς έμελλεν ὑπάρξειν σημείον, ἐπεὶ καὶ αὐτὸς ἔμελλεν άπὸ δύσεως πλείν κατά την ἐπάνοδον. ἐλθων δ' οὖν εἰς 'Αλεξάνδρειαν, φωραθεὶς ώς νενοσφισμένος πολλά, πῶς οὐκ ἐκολάσθη, ἀλλὰ καὶ περιήει τους ναυκλήρους διαπυνθανόμενος, δεικνύς αμα τὸ ἀκρόπρφρου; ὁ δὲ γνωρίσας οὐχὶ θαυμα-

¹ ἀπολλυμένους, Xylander, for ἀπολομένους; all editors, except Kramer, following; C. Müller approving.

GEOGRAPHY, 2. 3. 5

And how can it be that they permitted all their number to die of starvation with the exception of one man? And if he survived, how could he single-handed have guided the ship, which was not a small one, since at all events it could sail over open seas of so great extent? And how strange his speedy mastery of the Greek language, which enabled him to convince the king that he was competent to act as pilot of the expedition? how strange Euergetes' scarcity of competent pilots. since the sea in that region was already known by many men? And as for that peace herald and sacred ambassador of the people of Cyzicus, how came he to abandon his native city and go sailing to India? And how did he come to be entrusted with so great an office? And although on his return everything was taken away from him, contrary to his expectation, and he was in disgrace, how did he come to be entrusted with a still greater equipment of presents? And when he returned from this second voyage and was driven out of his course to Ethiopia, why did he write down those lists of words, and why did he enquire from what source the beak of that fishingsmack had been cast ashore? For the discovery that this bit of wreckage had belonged to men who sailed from the west could have signified nothing, since he himself was to sail from the west on his homeward vovage. And so, again, upon his return to Alexandria, when it was discovered that he had stolen much property, how is it that he was not punished, and that he even went about interviewing shipmasters, at the same time showing them the figure-head of the ship? And wasn't the man that recognized the figure-head a wonderful fellow? And

στός: ὁ δὲ πιστεύσας οὐ θαυμασιώτερος, καὶ κατ' έλπίδα τοιαύτην έπανιών είς την οίκείαν. καὶ μετοικισμον ἐκείθεν ποιησάμενος είς τὰ ἔξω Στηλών: \dot{a} λλ' \dot{o} νδ' $\dot{\epsilon}$ Εην \dot{a} \dot{a} νευ προστάνματος έξ 'Αλεξανδρείας ἀνάγεσθαι, καὶ ταῦτα νενοσφισμένφ βασιλικά χρήματα. οὐδέ γε λαθεῖν έκπλεύσαντα ένεδέχετο, τοσαύτη φρουρά κεκλεισμένου τοῦ λιμένος καὶ τῶν ἄλλων ἐξόδων, όσην και νυν έτι διαμένουσαν έγνωμεν ήμεις έπιδημούντες τη 'Αλεξανδρεία πολύν χρόνον, καίτοι τὰ νῦν πολὺ ἀνεῖται, 'Ρωμαίων ἐγόντων· αί βασιλικαὶ δὲ φρουραὶ πολύ ήσαν πικρότεραι. έπειδή δὲ καὶ ἀπηρεν είς τὰ Γάδειρα καὶ ναυπηγησάμενος έπλει βασιλικώς, και 2 διαλυθέντος αὐτώ τοῦ πλοίου, πῶς μὲν ἐναυπηγήσατο τρίτον λέμβον έν τη έρημω: πως δὲ πλέων πάλιν καὶ εύρων τούς έσπερίους Αιθίοπας τοῖς έφοις όμογλώττους οὐκ ώρέχθη διανύσαι τὸν έξης πλοῦν, οὕτω χαῦνος ων πρός το φιλέκδημον, μικρον έχειν έλπίσας λοιπον το άγνωστον, άλλ' άφεις ταῦτα της διά Βόνου ναυστολίας ἐπεθύμησε: πῶς δ' ἔγνω τὴν C 102 λάθρα κατ' αὐτοῦ συνισταμένην ἐπιβουλήν; τί δὲ τοῦτ' ἢν τῷ Βόγω πλεονέκτημα, ὁ τἀνθρώπου άφανισμός, έξον άλλως αποπέμψασθαι; γνούς

ἐξῆν, Cobet, for ἐξὸν ῆν.
 καί, is retained against Corais and Meineke, who delete it.

GEOGRAPHY, 2.3.5

wasn't the man that believed him a still more wonderful fellow—the man who on the strength of a hope of that sort returned to his home land, and then changed his home to the regions beyond the Pillars? But it would not even have been permitted him to put to sea from Alexandria without a passport, least of all after he had stolen property belonging to the king. Neither could be have sailed out of the harbour secretly, since not only the harbour, but also all the other ways of issue from the city had always been kept closed under just as strong guard as I know is still kept up to this day (for I have lived a long time in Alexandria)—though at the present time, under Roman control, the watch is considerably relaxed: but under the kings, the guards were much more And, again, when Eudoxus had sailed away to Gades, and in royal style had built himself ships and continued on his voyage, after his vessel had been wrecked, how could he have built a third boat in the desert? And how is it, when once more he put out to sea and found that those western Ethiopians spoke the same language as the eastern Ethiopians, that he was not eager to accomplish the rest of his voyage (inasmuch as he was so foolish in his eagerness for travels abroad, and since he had a good hope that the unexplored remainder of his voyage was but small)—but instead gave up all this and conceived a longing for the expedition that was to be carried out through the aid of Bogus? And how did he come to learn about the plot that was secretly framed against And what advantage could this have been to Bogus — I mean his causing the disappearance of the man when he might have dismissed him in other But even if the man learned about the plot,

δὲ τὴν ἐπιβουλὴν πῶς ἔφθη φυγὼν εἰς ἀσφαλεῖς τόπους; ἔκαστον γὰρ τῶν τοιούτων οὐκ ἀδύνατον μέν, ἀλλὰ χαλεπὸν καὶ σπανίως γινόμενον μετὰ τύχης τινός· τῷ δ΄ εὐτυχεῖν ἀεὶ συνέβαινεν, εἰς κινδύνους καθισταμένῳ συνεχεῖς. πῶς δ΄ οὐκ ἔδεισεν ἀποδρὰς τὸν Βόγον πλεῖν πάλιν παρὰ τὴν Λιβύην σὺν παρασκευῆ δυναμένη συνοικίσαι νῆσον;

Οὐ πολὺ οὖν ἀπολείπεται ταῦτα τῶν Πυθέου καὶ Εὐημέρου καὶ 'Αντιφάνους ψευσμάτων. ἀλλ' ἐκείνοις μὲν συγγνώμη, τοῦτ' αὐτὸ ἐπιτηδεύουσιν, ὅσπερ τοῖς θαυματοποιοῖς· τῷ δ' ἀποδεικτικῷ καὶ φιλοσόφῳ, σχεδὸν δέ τι καὶ περὶ πρωτείων ἀγωνιζομένῳ, τίς ἃν συγγνοίη; ταῦτα μὲν οὖν οὐκ εὖ.

6. Τὸ δὲ ἐξαίρεσθαι τὴν γῆν ποτε καὶ ἰζήματα λαμβάνειν καὶ μεταβολὰς τὰς ἐκ τῶν σεισμῶν καὶ τῶν ἄλλων τῶν παραπλησίων, ὅσα διηριθμησάμεθα καὶ ἡμεῖς, ὀρθῶς κεῖται παρ' αὐτῷ πρὸς δ καὶ τὸ τοῦ Πλάτωνος εὖ παρατίθησιν, ὅτι ἐνδέχεται καὶ μὴ πλάσμα εἶναι τὸ περὶ τῆς νήσου τῆς ᾿Ατλαντίδος, περὶ ῆς ἐκεῖνος ἱστορῆσαι Σόλωνά φησι πεπυσμένον παρὰ τῶν Αἰγυπτίων ἱερέων, ὡς ὑπάρχουσά ποτε ἀφανισθείη, τὸ μέγεθος οὐκ ἐλάττων ἡπείρου· καὶ τοῦτο οἴεται βέλτιον εἶναι

² In Plato, one of the Egyptian priests is credited with

¹ The only direct reference extant in Plato to the truth or falsity of the story is made by Socrates to Critias: "And what other narrative" (but the Atlantis story) "has the very great advantage of being a fact and not a fiction?" (Timeeus 26 E.)

GEOGRAPHY, 2. 3. 5-6

how could he have made his escape to places of safety? For, although there is nothing impossible in any escapes of that sort, yet every one of them is difficult and rarely made even with a streak of luck; but Eudoxus is always attended by good luck, although he is placed in jeopardies one after another. And, again, after he had escaped from Bogus, why was he not afraid to sail once more along the coast of Libya when he had an outfit large enough to colonize an island?

Now, really, all this does not fall far short of the fabrications of Pytheas, Euhemerus and Antiphanes. Those men, however, we can pardon for their fabrications—since they follow precisely this as their business—just as we pardon jugglers; but who could pardon Poseidonius, master of demonstration and philosopher, whom we may almost call the claimant for first honours. So much, at least, is not well

done by Poseidonius.

6. On the other hand, he correctly sets down in his work the fact that the earth sometimes rises and undergoes settling processes, and undergoes changes that result from earthquakes and the other similar agencies, all of which I too have enumerated above. And on this point he does well to cite the statement of Plato that it is possible that the story about the island of Atlantis is not a fiction.1 Concerning Atlantis Plato relates that Solon, after having made inquiry of the Egyptian priests, reported that Atlantis did once exist, but disappeared—an island no smaller in size than a continent 2; and Poseidonius thinks saying to Solon that Atlantis was larger than Libya and Asia put together, and that, as a result of violent earthquakes and floods, it sank beneath the sea in a single day and night (see Timaeus 24-25, and Critias 108 E, 113 c).

λέγειν ή διότι ό πλάσας αὐτὴν ἠφάνισεν, ώς ό ποιητής τὸ τῶν ᾿Αχαιῶν τεῖχος. εἰκάζει δὲ καὶ την των Κίμβρων και των συγγενών έξανάστασιν έκ της οἰκείας γενέσθαι κατά θαλάττης ἔφοδον. άθρόαν συμβάσαν. ὑπονοεί δὲ τὸ τῆς οἰκουμένης μηκος έπτά που μυριάδων σταδίων υπάρχον ημισυ είναι τοῦ ὅλου κύκλου, καθ' δυ εἴληπται, $\delta \sigma \tau \epsilon$, $\delta \eta \sigma i \nu$, $\delta \pi \delta$ $\tau \eta \epsilon$ $\delta \psi \sigma \epsilon \omega \epsilon \epsilon \vartheta \theta \upsilon \pi \lambda \delta \omega \nu^{1} \epsilon \nu$ τοσαύταις μυριάσιν έλθοις 2 αν είς 'Ινδούς.

7. Ἐπιγειρήσας δὲ αἰτιᾶσθαι τοὺς οὕτω τὰς ήπείρους διορίσαντας, άλλα μη παραλλήλοις τισί τω ισημερινώ, δι' ων έμελλον εξαλλάξεις δείκυυσθαι ζώων τε καὶ φυτῶν καὶ ἀέρων, τῶν μὲν τῆ κατεψυγμένη συναπτόντων, των δέ τη διακεκαυμένη, ώστε οίονεί ζώνας είναι τὰς ηπείρους. άνασκευάζει πάλιν καὶ ἐν ἀναλύσει δίκης γίνεται, έπαινών πάλιν την ούσαν διαίρεσιν, θετικήν ποιούμενος την ζήτησιν πρός οὐδεν χρήσιμον. αί γάρ τοιαθται διατάξεις οὐκ ἐκ προνοίας γίνονται, καθάπερ οὐδὲ αἱ κατὰ τὰ ἔθνη διαφοραί, οὐδὲ C 103 αἱ διάλεκτοι, ἀλλὰ κατὰ ἐπίπτωσιν καὶ συντυχίαν καὶ τέχναι δὲ καὶ δυνάμεις καὶ ἐπιτη-

ξλοις, Corais, for ξλθοι; Cobet independently; Bernadakis, C. Müller, A. Vogel, approving.
 3 χρήσιμον, Cobet, for χρησίμως.

¹ εὐθυπλοῶν, Cobet, for Εὔρφ πλέων; Bernadakis, A. Vogel, approving.

⁴ δέ. Corais, for τε: Meineke following.

GEOGRAPHY, 2. 3. 6-7

that it is better to put the matter in that way than to say of Atlantis: "Its inventor caused it to disappear, just as did the Poet the wall of the Achaeans." And Poseidonius also conjectures that the migration of the Cimbrians and their kinsfolk from their native country occurred as the result of an inundation of the sea that came on all of a sudden. And he suspects that the length of the inhabited world, being about seventy thousand stadia, is half of the entire circle on which it has been taken, so that, says he, if you sail from the west in a straight course you will reach India within the seventy thousand stadia.

7. Then, after an attempt to find fault with those who divided the inhabited world into continents in the way they did,2 instead of by certain circles parallel to the equator (through means of which they could have indicated variations in animals, plants, and climates, because some of these belong peculiarly to the frigid zone and others to the torrid zone), so that the continents would be practically zones, Poseidonius again revises his own plea and withdraws his indictment, in that he again approves of the prevailing division into three continents, and thus he makes the question a mere matter of argument with no useful end in view. For such a distribution of animals, plants, and climates as exists is not the result of design—just as the differences of race, or of language, are not, either-but rather of accident and chance. And again, as regards the various arts and faculties and institutions of mankind, most of them,

¹ That is, Solon avoided the historical consequences of his fiction by sinking Atlantis, just as Homer did by making Poseidon and Apollo sweep away with a flood the wall built by the Achaeans in front of their ships (see *Iliad* 7. 433, 441, and 12. 1-33).

² See pp. 119 and 129.

δεύσεις, ἀρξάντων τινών, κρατοῦσιν αἱ πλείους έν όποιωοῦν κλίματι ἔστι δέ τι καὶ παρά τά κλίματα, ώστε τὰ μὲν φύσει ἐστὶν ἐπιχώριά τισι, τὰ δ' ἔθει καὶ ἀσκήσει. οὐ γὰρ φύσει 'Αθηναίοι μέν φιλόλογοι, Λακεδαιμόνιοι δ' ου, καὶ οἱ ἔτι ἐγγυτέρω Θηβαῖοι, ἀλλὰ μᾶλλον ἔθει. ούτως οὐδὲ Βαβυλώνιοι φιλόσοφοι φύσει καλ Αίγύπτιοι, άλλ' ἀσκήσει καὶ ἔθει καὶ ἵππων τε καὶ βοῶν ἀρετὰς καὶ ἄλλων ζώων, οὐ τόποι μόνον, άλλα και ασκήσεις ποιούσιν ο δε συγχεί ταύτα. έπαινων δε την τοιαύτην διαίρεσιν των ηπείρων. οία νῦν ἐστι, παραδείγματι χρήται τῷ τοὺς Ἰνδοὺς των Αιθιόπων διαφέρειν των έν τη Λιβύη. εὐερνεστέρους γὰρ είναι καὶ ήττον έψεσθαι τή ξηρασία τοῦ περιέχοντος διὸ καὶ "Ομηρον πάντας λέγοντα Αίθίοπας δίγα διελεῖν,

οί μεν δυσομένου Υπερίονος, οί δ' ἀνιόντος· (Od. 1. 24)

Κράτητα δ',¹ εἰσάγοντα τὴν ἐτέραν οἰκουμένην, ἢν οἰκ οἰδεν Όμηρος, δουλεύειν ὑποθέσει· καὶ ἔδει, φησί, μεταγράφειν οὕτως.

ημέν ἀπερχομένου Υπερίονος,

οίον ἀπὸ τοῦ μεσημβρινοῦ περικλίνοντος.

8. Πρώτον μέν οὖν οἱ πρὸς Αἰγύπτφ Αἰθίοπες

¹ Κράτητα δέ, Casaubon inserts; Corais, Groskurd, Meineke, Forbiger, Tardieu, following; Kramer, C. Müller, approving.
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when once men have made a beginning, flourish in any latitude whatsoever and in certain instances even in spite of the latitude; so that some local characteristics of a people come by nature, others by training and habit. For instance, it was not by nature that the Athenians were fond of letters, whereas the Lacedaemonians, and also the Thebans, who are still closer to the Athenians, were not so; but rather by So, also, the Babylonians and the Egyptians are philosophers, not by nature, but by training and habit. And further, the excellent qualities of horses, cattle, and other animals, are the result, not merely of locality, but of training also. But Poseidonius confounds all this. And when he approves of such a division into three continents as is now accepted, he uses as an illustration the fact that the Indians differ from the Ethiopians of Libva, for the Indians are better developed physically and less parched by the dryness of the atmosphere. And, says he, that is the reason why Homer, in speaking of the Ethopians as a whole, divides them into two groups, "some where Hyperion sets and some where he rises." But, says Poseidonius, Crates, in introducing into the discussion the question of a second inhabited world. about which Homer knows nothing, is a slave to a hypothesis,1 and, says Poseidonius, the passage in Homer should have been emended to read: "both where Hyperion departs," meaning where he declines from the meridian.

8. Now, in the first place, the Ethiopians that border on Egypt are themselves, also, divided into

¹ That is, his hypothesis that one division of the Ethiopians lived south of the equator, on the other side of Oceanus (see pp. 117 ff.).

καὶ αὐτοὶ δίγα διαιροῦνται· οἱ μὲν γὰρ ἐν τῆ 'Ασία εἰσίν, οἱ δ' ἐν τῆ Λιβύη, οὐδὲν διαφέροντες άλλήλων. ἔπειθ' "Ομηρος οὐ διὰ τοῦτο διαιρεί τοὺς Αἰθίοπας, ὅτι τοὺς Ἰνδοὺς ἤδει τοιούτους τινας τοις σώμασιν (οὐδε γαρ αρχήν είδεναι τους Ίνδοὺς εἰκὸς "Ομηρον, ὅπου γε οὐδ' ὁ Εὐεργέτης κατά τὸν Εὐδόξειον μῦθον ἤδει τὰ κατὰ τὴν Ίνδικήν, οὐδὲ τὸν πλοῦν τὸν ἐπ' αὐτήν), ἀλλὰ μαλλον κατά την λεχθείσαν υφ' ήμων πρότερον διαίρεσιν. ἐκεῖ δὲ καὶ περὶ τῆς γραφῆς τῆς Κρατητείου διητήσαμεν, ὅτι οὐδὲν διαφέρει, οὕτως ή ἐκείνως γράφειν ὁ δὲ τοῦτο μὲν διαφέρειν φησί, κρείττον δ' ούτως είναι μεταθείναι "ήμεν άπερχομένου." τί οὖν διαφέρει τοῦτο τοῦ " ημεν δυσομένου"; παν γαρ τὸ τμημα τὸ ἀπὸ τοῦ μεσημβρινοῦ ἐπὶ δύσιν δύσις καλεῖται, καθάπερ καὶ τὸ τοῦ δρίζοντος ημικύκλιον ὅπερ καὶ Αρατος ἐπισημαίνεται.

ἡχί περ ἄκραι μίσγονται δύσιές τε καὶ ἀντολαὶ ἀλλήλησιν. (Arat. Phaen. 61)

εὶ δ' ἐπὶ τῆς Κρατητείου γραφῆς οὕτω βέλτιον, φήσει τις καὶ ἐπὶ τῆς 'Αρισταρχείου δεῖν.

Τοσαῦτα καὶ πρὸς Ποσειδώνιον· πολλὰ γὰρ καὶ C 104 ἐν τοῖς καθ' ἔκαστα τυγχάνει τῆς προσηκούσης διαίτης, ὅσα γεωγραφικά· ὅσα δὲ φυσικώτερα, ἐπισκεπτέον ἐν ἄλλοις, ἡ οὐδὲ φροντιστέον· πολὺ

¹ ή, Corais deletes, before δτι; Meineke, Tardieu, following; C. Müller approving.

GEOGRAPHY, 2, 3, 8

two groups; for some of them live in Asia, others in Libya, though they differ in no respect from each And, in the second place, Homer divides the Ethiopians into two groups, not for this reason, namely, because he knew that the Indians were physically similar to the Ethiopians (for Homer probably did not know of the Indians at all, in view of the fact that even Euergetes himself, according to that story of Eudoxus, knew nothing about India, nor the voyage that leads thither), but rather on the basis of the division of which I have spoken above.2 And in speaking on that subject I also expressed my opinion in regard to the reading proposed by Crates, namely, that it makes no difference whether we read the passage one way or the other 3; but Poseidonius says it does make a difference, and that it is better to emend the passage to read "both where Hyperion departs." Now wherein does this differ from "both where Hyperion sets"? For the whole segment of the circle from the meridian to the setting is called "the setting," 4 just as the semi-circle of the horizon is so called. This is what Aratus means when he says: "There where the extremities of the west and of the east join with each other." And if the passage is better as Crates reads it, then one may say that it must also be better as Aristarchus reads it.

So much for Poseidonius. For in my detailed discussions many of his views will meet with fitting criticism, so far as they relate to geography; but so far as they relate to physics, I must inspect them elsewhere or else not consider them at all. For in

¹ See pp. 119 ff. and 129.

² See p. 129. ³
⁴ That is, the west. ⁸ See p. 117.

γάρ έστι τὸ αἰτιολογικὸν παρὰ αὐτῷ καὶ τὸ 'Αριστοτελίζον, ὅπερ ἐκκλίνουσιν οἱ ἡμέτεροι διὰ τὴν ἐπίκρυψιν τῶν αἰτιῶν.

IV

- 1. Πολύβιος δὲ τὴν Εὐρώπην χωρογραφῶν τοὺς μεν άργαίους έαν φησι, τούς δ' έκείνους έλέγγοντας έξετάζειν Δικαίαρχόν τε καὶ Ἐρατοσθένη, τον τελευταίον πραγματευσάμενον περί γεωγραφίας, καὶ Πυθέαν, ὑφ' οὖ παρακρουσθηναι πολλούς, όλην μεν την Βρεττανικήν την εμβατον έπελθείν φάσκοντος, την δέ περίμετρον πλειόνων ή τεττάρων μυριάδων ἀποδόντος της νήσου, προσιστορήσαντος δὲ καὶ τὰ περὶ τῆς Θούλης καὶ τῶν τόπων ἐκείνων ἐν οίς οὔτε γη καθ' αῦτὴν ὑπηρχεν έτι ούτε θάλαττα ούτ' ἀήρ, ἀλλὰ σύγκριμά τι ἐκ τούτων πλεύμονι θαλαττίω ἐοικός, ἐν ὧ φησι τὴν γην και την θάλατταν αιωρείσθαι και τα σύμπαντα, καὶ τοῦτον ώς αν δεσμον είναι των δλων, μήτε πορευτον μήτε πλωτον υπάργοντα το μέν οὖν τῶ πλεύμονι ἐοικὸς αὐτὸς ἐωρακέναι, τάλλα δὲ λέγειν ἐξ ἀκοῆς. ταῦτα μὲν τὰ τοῦ Πυθέου, καλ διότι έπανελθών ένθένδε πασαν έπέλθοι την παρωκεανίτιν της Ευρώπης από Γαδείρων έως Τανάϊδος.
- 2. Φησὶ δ' οὖν ὁ Πολύβιος ἄπιστον καὶ αὐτὸ τοῦτο, πῶς ἰδιώτη ἀνθρώπω καὶ πένητι τὰ τοσ-

¹ τήν, A. Jacob inserts, before ἐμβατόν.

GEOGRAPHY, 2. 3. 8-4. 2

Poseidonius there is much inquiry into causes and much imitating of Aristotle—precisely what our school 1 avoids, on account of the obscurity of the causes.

IV

- 1. Polybius, in his account of the geography of Europe, says he passes over the ancient geographers but examines the men who criticise them, namely, Dicaearchus, and Eratosthenes, who has written the most recent treatise on Geography; and Pytheas, by whom many have been misled; for after asserting that he travelled over the whole of Britain that was accessible Pytheas reported that the coast-line of the island was more than forty thousand stadia, and added his story about Thule and about those regions in which there was no longer either land properly so-called, or sea, or air, but a kind of substance concreted from all these elements, resembling a sea-lungs 2—a thing in which, he says, the earth, the sea, and all the elements are held in suspension; and this is a sort of bond to hold all together, which vou can neither walk nor sail upon. Now, as for this thing that resembles the sea-lungs, he says that he saw it himself, but that all the rest he tells from hearsay. That, then, is the narrative of Pytheas, and to it he adds that on his return from those regions he visited the whole coast-line of Europe from Gades to the Tanaïs.
- 2. Now Polybius says that, in the first place, it is incredible that a private individual—and a poor

² An acaleph of the ctenophora.

¹ That is, the Stoic school of philosophy. Compare the same Greek phrase on p. 55; and "our Zeno," p. 151.

αῦτα διαστήματα πλωτά καὶ πορευτά γένοιτο. τον δ' Έρατοσθένη διαπορήσαντα, εί χρη πιστεύειν τούτοις, όμως περί τε της Βρεττανικής πεπιστευκέναι καὶ τῶν κατὰ Γάδειρα καὶ τὴν 'Ιβηρίαν. πολύ δέ φησι βέλτιον τῷ Μεσσηνίω πιστεύειν ή τούτω. ὁ μέντοι γε εἰς μίαν γώραν την Παγγαίαν λέγει πλεύσαι δ δε καλ μέγρι τῶν τοῦ κόσμου περάτων κατωπτευκέναι τὴν προσάρκτιον της Ευρώπης πάσαν, ην ούδ' αν τω Έρμη πιστεύσαι τις λέγοντι. Ἐρατοσθένη δὲ τον μεν Ευήμερον Βεργαίον καλείν, Πυθέα δε πιστεύειν, καλ ταῦτα μηδε Δικαιάρχου πιστεύσαντος. τὸ μὲν οὖν μηδὲ Δικαιάρχου πιστεύσαντος, γελοίον ωσπερ ἐκείνω κανόνι χρήσασθαι προσήκου, καθ' ού τοσούτους έλέγγους αὐτὸς προφέρεται 'Ερατοσθένους δὲ εἴρηται ή περὶ τὰ έσπέρια καὶ τὰ άρκτικὰ τῆς Εὐρώπης ἄγνοια. άλλ' ἐκείνω μὲν καὶ Δικαιάρχω συγγνώμη, τοῖς μη κατιδούσι τους τόπους έκείνους. Πολυβίω δέ καὶ Ποσειδωνίω τίς αν συγγνοίη; άλλα μην Πολύβιός γέ έστιν ο λαοδογματικάς καλών άποφάσεις, ας ποιούνται περί των έν τούτοις τοίς τόποις διαστημάτων καὶ ἐν ἄλλοις πολλοῖς, ἀλλ' C 105 οὐδ' ἐν οίς ἐκείνους ἐλέγχει καθαρεύων. τοῦ γοῦν Δικαιάρχου μυρίους μεν είπόντος τούς έπι Στήλας

¹ That is, Hermes in his capacity as god of travel.

GEOGRAPHY, 2. 4. 2

man too-could have travelled such distances by sea and by land; and that, though Eratosthenes was wholly at a loss whether he should believe these stories, nevertheless he has believed Pytheas' account of Britain, and of the regions about Gades. and of Iberia; but he says it is far better to believe Euhemerus, the Messenian, than Pytheas. Euhemerus, at all events, asserts that he sailed only to one country, Panchaea, whereas Pytheas asserts that he explored in person the whole northern region of Europe as far as the ends of the world—an assertion which no man would believe, not even if Hermes 1 made it. And as for Eratosthenes-adds Poseidonius -though he calls Euhemerus a Bergaean,2 he believes Pytheas, and that, too, though not even Dicaearchus believed him. Now that last remark, "though not even Dicaearchus believed him," is ridiculous; as if it were fitting for Eratosthenes to use as a standard the man against whom he himself directs so many criticisms. And I have already stated that Eratosthenes was ignorant concerning the western and northern parts of Europe. while we must pardon Eratosthenes and Dicaearchus, because they had not seen those regions with their own eyes, yet who could pardon Polybius and Poseidonius? Nay, it is precisely Polybius who characterises as "popular notions" the statements made by Eratosthenes and Dicaearchus in regard to the distances in those regions and many other regions, though he does not keep himself free from the error even where he criticises them. At any rate, when Dicaearchus estimates the distance from

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² That is, like Antiphanes, the notorious romancer of Berge, in Thrace; see p. 173, and footnote.

άπὸ της Πελοπουνήσου σταδίους, πλείους δὲ τούτων τους έπι τον 'Αδρίαν μέχρι του μυχού, του δ' έπι Στήλας τὸ μέχρι τοῦ Πορθμοῦ τρισχιλίους άποδόντος, ώς γίνεσθαι τὸ λοιπὸν έπτακισχιλίους τὸ ἀπὸ Πορθμοῦ μέχρι Στηλών τοὺς μὲν τρισχιλίους έαν φησιν, είτ' εὖ λαμβάνονται είτε μή, τους δ' έπτακισγιλίους οὐδετέρως, οὐδὲ τὴν παραλίαν έκμετροῦντι, οὔτε τὴν διὰ μέσου τοῦ πελάγους. την μέν γάρ παραλίαν ἐοικέναι μάλιστ' άμβλεία γωνία, βεβηκυία ἐπί τε τοῦ Πορθμοῦ καλ τῶν Στηλῶν, κορυφὴν δ' ἐχούση Νάρβωνα· ώστε συνίστασθαι τρίγωνον βάσιν έχον την διά τοῦ πελάγους εὐθεῖαν, πλευράς δὲ τὰς τὴν γωνίαν ποιούσας την λεχθείσαν, ών ή μεν άπο τοῦ Πορθμοῦ μέχρι Νάρβωνος μυρίων έστι και πλειόνων ή διακοσίων έπὶ τοῖς χιλίοις, ή δὲ λοιπή μικρώ 1 έλαττόνων ή οκτακισχιλίων και μήν πλείστον μεν διάστημα από της Ευρώπης επί την Λιβύην όμολογείσθαι κατά τὸ Τυρρηνικὸν πέλαγος σταδίων οὐ πλειόνων ή τρισγιλίων, κατά τὸ Σαρδόνιον 2 δε λαμβάνειν συναγωγήν. άλλ' έστω. φησί, καὶ ἐκεῖνο τρισχιλίων, προειλήφθω δ' ἐπὶ τούτοις δισγιλίων σταδίων τὸ τοῦ κόλπου βάθος τοῦ κατὰ Νάρβωνα, ὡς ἃν κάθετος ἀπὸ τῆς κορυφης ἐπὶ την βάσιν τοῦ ἀμβλυγωνίου δηλον οὖν,

¹ λοιπόν, Corais suspects, after μικρῷ; Groskurd deletes; Meineke, Forbiger, Tardieu, following; C. Müller approving.
2 Σαρδόνιον, Meineke, for Σαρδώνιον.

¹ That is, the altitude of the triangle drawn from the vertex at Narbo to the base line; thus an allowance of 402

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the Peloponnesus to the Pillars at ten thousand stadia. and from the Peloponnesus to the recess of the Adriatic Sea at more than this, and when, of the distance to the Pillars, he reckons the part up to the Strait of Sicily at three thousand stadia, so that the remaining distance—the part from the Strait to the Pillars—becomes seven thousand stadia. Polybius says that he will let pass the question whether the estimate of three thousand is correctly taken or not, but, as for the seven thousand stadia, he cannot let the estimate pass from either of two points of view, namely, whether you take the measure of the coast-line or of the line drawn through the middle of the open sea. For, says he, the coast-line is very nearly like an obtuse angle, whose sides run respectively to the Strait and to the Pillars, and with Narbo as vertex; hence a triangle is formed with a base that runs straight through the open sea and with sides that form the said angle, of which sides the one from the Strait to Narbo measures more than eleven thousand two hundred stadia, the other a little less than eight thousand stadia; and, besides, it is agreed that the maximum distance from Europe to Libya across the Tyrrhenian Sea is not more than three thousand stadia, whereas the distance is reduced if measured across the However, let it be granted, says Sardinian Sea. Polybius, that the latter distance is also three thousand stadia, but let it be further assumed as a prior condition that the depth of the gulf opposite Narbo is two thousand stadia, the depth being, as it were, a perpendicular let fall from the vertex upon the base of the obtuse-angled triangle 1; then, says

1,000 stadia is made for the remaining distance to Libya, measured on the produced altitude.

φησίν, ἐκ τῆς παιδικῆς μετρήσεως, ὅτι ἡ σύμπασα παραλία ἡ ἀπὸ τοῦ Πορθμοῦ ἐπὶ Στήλας ἔγγιστα ὑπερέχει τῆς διὰ τοῦ πελάγους εὐθείας πεντακοσίοις σταδίοις. προστεθέντων δὲ τῶν ἀπὸ τῆς Πελοπουνήσου ἐπὶ τὸν Πορθμὸν τρισχιλίων, οἱ σύμπαντες ἔσονται στάδιοι, αὐτοὶ σἱ ἐπ' εὐθείας, πλείους ἡ διπλάσιοι ὧν Δικαίαρχος εἶπε· πλείους δὲ τούτων τοὺς ἐπὶ τὸν μυχὸν τὸν ᾿Αδριατικὸν δεήσει, φησί, τιθέναι κατ' ἐκεῖνον.

3. 'Αλλ' & φίλε Πολύβιε, φαίη τις ἄν, ὅσπερ τούτου τοῦ ψεύσματος ἐναργῆ παρίστησι τὸν ἔλεγχον ἡ πεῖρα ἐξ αὐτῶν, ὧν εἴρηκας αὐτός, εἰς μὲν Λευκάδα ἐκ Πελοποννήσου ἐπτακοσίους, ἐντεῦθεν δὲ τοὺς ἴσους εἰς Κόρκυραν, καὶ πάλιν ἐντεῦθεν εἰς τὰ Κεραύνια τοὺς ἴσους, καὶ ἐν δεξιᾳ εἰς τὴν 'Ιαπυδίαν,¹ ἀπὸ δὲ τῶν Κεραυνίων, τὴν 'Ιλλυρικὴν παραλίαν σταδίων ἐξακισχιλίων ἐκατὸν πεντήκοντα: οὕτως κἀκεῖνα ψεύσματά ἐστιν ἀμφότερα, καὶ δ Δικαίαρχος εἶπε, τὸ ἀπὸ Πορθμοῦ ἐπὶ Στήλας εἶναι σταδίων ἑπτακισχιλίων, καὶ δ σὺ δοκεῖς ἀποδεῖξαι. ὁμολογοῦσι γὰρ οἱ πλεῖστοι λέγοντες τὸ διὰ πελάγους μυρίων εἶναι καὶ δισχιλίων, συμφωνεῖ δὲ τοῦτο καὶ

¹ Ἰαπυδίαν, Jones, for Ἰαπυγίαν; Müller-Dübner suggest Ἰαποδίαν; see Groskurd's critical note on 6. 3. 10 (vol. i. p. 502).

¹ By computation the actual result is 436 stadia.

² By computation the actual result is 21,764 stadia.

³ That is, more than 21,764 stadia; for Dicaearchus had reckoned the recess of the Adriatic to be farther away from the Peloponnesus than the Pillars were.

GEOGRAPHY, 2. 4. 2-3

Polybius, it is clear from the principles of elementary geometry that the total length of the coast-line from the Strait to the Pillars exceeds the length of the straight line through the open sea by very nearly five hundred 1 stadia. And if to this we added the three thousand stadia from the Peloponnesus to the Strait, the sum total of the stadia, merely those measured on a straight line, will be more than double 2 the estimate given by Dicaearchus. And, according to Dicaearchus, says Polybius, it will be necessary to put the distance from the Peloponnesus to the recess of the Adriatic at more than this sum.⁸

3. But, my dear Polybius, one might reply, just as the test based upon your own words makes evident the error of these false reckonings, namely, "from the Peloponnesus to Leucas, seven hundred stadia; from Leucas to Corcyra the same; and, again, from Corcyra to the Ceraunian Mountains the same; and the Illyrian coast-line to Iapydia on your right hand side,4 if you measure from the Ceraunian Mountains. six thousand one hundred and fifty stadia," so also those other reckonings are both false-both that made by Dicaearchus when he makes the distance from the Strait of Sicily to the Pillars seven thousand stadia, and that which you think you have demonstrated; for most men agree in saying that the distance measured straight across the Sea is twelve thousand stadia, and this estimate agrees with the

⁴ Polybius thus characterises the distance from the Ceraunian Mountains to the head of the Adriatic Gulf—apparently disregarding the Istrian coast, just as does Strabo in 6.3. 10. Iapydia was the name both of the country and the chief city of the Iapydes. Strabo thinks Polybius' estimate is too large,

τη αποφάσει τη περί του μήκους της οἰκουμένης. μάλιστα γὰρ εἶναί φασι μυριάδων ἐπτά· τούτου δὲ τὸ ἐσπέριον τμήμα τὸ ἀπὸ τοῦ Ἰσσικοῦ κόλπου μέχρι των ἄκρων της 'Ιβηρίας, ἄπερ δυσμικώτατά1 έστι. μικρον απολείπειν των τρισμυρίων. συντιθέασι δ' ούτως άπὸ μὲν τοῦ Ἰσσικοῦ κόλπου μέχρι της 'Ροδίας πεντακισχιλίους ενθένδ' επί Σαλμώνιον της Κρήτης, ὅπερ ἐστὶ τὸ ἑῷον ἄκρον, χιλίους αὐτης δὲ της Κρήτης μηκος πλείους ή δισχιλίους έπλ Κριού μέτωπον έντεύθεν δ' έπλ Πάχυνον της Σικελίας τετρακισχιλίους καὶ πεντακοσίους, από Παχύνου δὲ ἐπὶ Πορθμὸν πλείους η γιλίους είτα τὸ δίαρμα τὸ ἐπὶ Στήλας ἀπὸ Πορθμού μυρίους δισχιλίους 3 άπο Στηλών δε έπλ τὰ τελευταία τοῦ Ἱεροῦ ἀκρωτηρίου τῆς Ἰβηρίας περί τρισγιλίους. καὶ ἡ κάθετος δὲ οὐ καλῶς είληπται, είπερ ή μεν Νάρβων έπὶ τοῦ αὐτοῦ παραλλήλου σχεδόν τι ίδρυται τώ διά Μασσαλίας, αθτη τε τῷ διὰ Βυζαντίου, καθάπερ καὶ "Ιππαργος πείθεται, ή δε δια του πελάγους επί τοῦ αὐτοῦ ἐστι τῷ διὰ Πορθμοῦ καὶ τῆς 'Ροδίας, άπὸ δὲ τῆς 'Ροδίας εἰς Βυζάντιον ὡς αν ἐπὶ τοῦ αύτοῦ μεσημβρινοῦ κειμένων άμφοῖν περί πεντακισγιλίους 4 ελρήκασι σταδίους τοσούτοι γάρ αν είεν και οι της ειρημένης καθέτου. ἐπει δὲ και

δυσμικώτατα, Corais, for δυσμικώτερα; editors following.
 καί, Meineke deletes, before ἀπό; C. Müller approving.
 δισχιλίουs, Gosselin, for τρισχιλίουs; editors following.

δες Madvig deletes, before εἰρήκασι, and punctuates as in the text.

GEOGRAPHY, 2.4.3

opinion rendered in regard to the length of the inhabited world. For they say that this length is about seventy thousand stadia, and that the western section thereof, that is, from the Gulf of Issus to the capes of Iberia, which are the most westerly points. is a little less than thirty thousand stadia. arrive at this result in the following way: From the Gulf of Issus to Rhodes the distance is five thousand stadia; thence to Salmonium, which is the eastern Cape of Crete, one thousand stadia; and the length of Crete itself, from Salmonium to Criumetopon, more than two thousand stadia; thence, from Criumetopon to Pachynum in Sicily, four thousand five hundred stadia; and from Pachynum to the Strait of Sicily more than one thousand stadia; then, the seapassage from the Strait of Sicily to the Pillars, twelve thousand stadia; and from the Pillars to the extreme end of the Sacred Cape 2 of Iberia, about three thousand stadia. And Polybius has not taken even his perpendicular properly, if it be true that Narbo is situated approximately on the same parallel as that which runs through Massilia and (as Hipparchus also believes) Massilia on the same as that through Byzantium, and that the line which runs through the open Sea is on the same parallel as that through the Strait and Rhodes, and that the distance from Rhodes to Byzantium has been estimated at about five thousand stadia on the assumption that both places lie on the same meridian; for the perpendicular in question would also be five thousand stadia in length.⁸ But when they say that the longest passage

¹ 1. 4. 5. ² Cape St. Vincent. ³ For "parallels comprehended between parallels are equal."

τὸ μέγιστον δίαρμα τοῦ πελάγους τούτου τὸ ἀπὸ της Ευρώπης έπι την Λιβύην πεντακισχιλίων που σταδίων λέγουσιν άπο τοῦ μυχοῦ τοῦ Γαλατικοῦ κόλπου, δοκεί μοι πεπλανημένως λέγεσθαι τοῦτο, ἡ πολύ τὴν Λιβύην κατὰ τοῦτο τὸ μέρος προνεύειν 1 έπλ την άρκτον καλ συνάπτειν τῷ διὰ των Στηλών παραλλήλω, και τούτο οὐκ λένεται. τὸ πλησίου τῆς Σαρδόνος τὴν λεχθεῖσαν κάθετον τελευταν ου γαρ παραπλήσιον, άλλα πολύ δυσμικώτερόν έστι 2 το δίαρμα τούτο της Σαρδόνος, όλον σχεδόν τι ἀπολαμβάνον ἐν τῶ μεταξύ πρὸς τῷ Σαρδονίω τὸ Λιγυστικὸν πέλαγος. καὶ τῆς παραλίας δὲ τὰ μήκη πεπλεόνασται. πλην ούκ έπι τοσοῦτόν νε.

4. Έξης δε τὰ τοῦ Ἐρατοσθένους ἐπανορθοῖ, τὰ μεν ευ, τα δε χείρον λέγων ή εκείνος. Εξ 'Ιθάκης μέν γάρ είς Κόρκυραν τριακοσίους είπόντος, πλείους φησίν είναι των έννακοσίων έξ Έπιδάμνου δε είς Θεσσαλονίκειαν εννακοσίους άποδόντος, πλείους τῶν δισχιλίων φησί ταῦτα μὲν εὖ. ἀπὸ δὲ Μασσαλίας ἐπὶ Στήλας λέγοντος έπτακισχιλίους, ἀπὸ δὲ Πυρήνης έξακισχιλίους, αὐτὸς λέγει χειρον πλείους ή ἐννακισχιλίους τοὺς ἀπὸ Μασσαλίας, ἀπὸ δὲ Πυρήνης μικρον ελάττους η οκτακισχιλίους εγγυτέρω γαρ της αληθείας έκεινος είρηκεν. οι γάρ νυν όμολογουσιν, εί τις τας των όδων ανωμαλίας υποτέμνοιτο, μη μείζω των έξακισχιλίων σταδίων είναι το μηκος την C 107 σύμπασαν Ίβηρίαν ἀπὸ Πυρήνης ἔως τῆς ἐσπε-

> 1 προνεύειν, Cascorbi, for προσνεύειν; A. Vogel, C. Frick, approving. έστι, Madvig, for elvai.

GEOGRAPHY, 2.4.3-4

across this sea from Europe to Libya, reckoned from the head of the Galatic Gulf, is approximately five thousand stadia, it seems to me that they make an erroneous statement, or else that in that region Libya projects far to the north and reaches the parallel that runs through the Pillars. And Polybius is again not right when he says that the perpendicular in question ends near Sardinia; for the line of this sea-passage is nowhere near Sardinia, but much farther west, leaving between it and Sardinia not only the Sardinian Sea, but almost the whole of the Ligurian Sea as well. And Polybius has exaggerated the length of the seaboard also, only in a lesser degree.

4. Next in order, Polybius proceeds to correct the

errors of Eratosthenes; sometimes rightly, but sometimes he is even more in error than Eratosthenes. For instance, when Eratosthenes estimates the distance from Ithaca to Corcyra at three hundred stadia. Polybius says it is more than nine hundred; when Eratosthenes gives the distance from Epidamnus to Thessalonica as nine hundred stadia. Polybius says more than two thousand; and in these cases Polybius is right. But when Eratosthenes says the distance from Massilia to the Pillars is seven thousand stadia and from the Pyrenees to the Pillars six thousand stadia, Polybius himself makes a greater error in giving the distance from Massilia as more than nine thousand stadia and that from the Pyrenees a little less than eight thousand stadia; for Eratosthenes' estimates are nearer the truth. Indeed, modern authorities agree that if one cut off

an allowance for the irregular windings of the roads, the whole of Iberia is not more than six thousand stadia in length from the Pyrenees to its western ρίου πλευρας. ὁ δ' αὐτὸν τὸν Τάγον ποταμὸν ὀκτακισχιλίων τίθησι τὸ μῆκος ἀπὸ τῆς πηγῆς μέχρι τῶν ἐκβολῶν, οὐ δή που τὸ σὺν τοῖς σκολιώμασιν (οὐ γὰρ γεωγραφικὸν τοῦτο), ἀλλ' ἐπ' εὐθείας λέγων, καίτοι γε ἀπὸ Πυρήνης αἱ τοῦ Τάγου πηγαὶ πλέον διέχουσιν ἡ χιλίους σταδίους. πάλιν δὲ τοῦτο μὲν ὀρθῶς ἀποφαίνεται, ὅτι ἀγνοεῖ τὰ Ἰβηρικὰ ὁ Ἐρατοσθένης, καὶ διότι περὶ αὐτῆς ἔσθ' ὅπου τὰ μαχόμενα ἀποφαίνεται: ὅς γε μέχρι Γαδείρων ὑπὸ Γαλατῶν περιοικεῖσθαι φήσας τὰ ἔξωθεν αὐτῆς, εἴ γε τὰ πρὸς δύσιν τῆς Εὐρώπης μέχρι Γαδείρων ἔχουσιν ἐκεῖνοι, τούτων ἐκλαθόμενος κατὰ τὴν τῆς Ἰβηρίας περίοδον τῶν Γαλατῶν οὐδαμοῦ μέμνηται.

5. Τό τε μήκος τής Εὐρώπης ὅτι ἔλαττόν ἐστι τοῦ συνάμφω τής τε Λιβύης καὶ τής ᾿Ασίας ἐκθείς, οὐκ ὀρθῶς τὴν σύγκρισιν ποιεῖται· τὸ μὲν γὰρ στόμα τὸ κατὰ Στήλας φησίν, ὅτι κατὰ τὴν ἰσημερινὴν δύσιν ἐστίν, ὁ δὲ Τάναῖς ῥεῖ ἀπὸ θερινής ἀνατολής· ἐλαττοῦται δὴ τοῦ συνάμφω μήκους τῷ μεταξὺ τής θερινής ἀνατολής καὶ τής ἰσημερινής· τοῦτο γὰρ ἡ ᾿Ασία προλαμβάνει πρὸς τὴν ἰσημερινὴν ἀνατολὴν τοῦ πρὸς τὰς ἄρκτους ἡμικυκλίου. γωρὶς γὰρ τοῦ περισκελοῦς ἐν πράγ-

¹ The Don.

² Polybius' abstruse comparison of the length of Europe with that of Libya and Asia combined is not extant, but his general method is clear enough. Draw a line (PP') parallel to the equator from the Pillars to the eastern coast of India—that is, at about 36½° latitude. On this line as a chord describe a semicircle which will have for diameter a line (OO') drawn on the equator. From some point (A) west of Asia on the chord (Strabo says in § 7 below that this point is a variable) draw a line to the outlet (T) of the Tanaïs River; produce this line in a north-easterly direction along the

GEOGRAPHY, 2.4.4-5

side. But Polybius reckons the river Tagus alone at eight thousand stadia in length from its source to its mouth-without reckoning in the windings of the river, of course (for this is a thing geography does not do)-but estimating the distance on a straight line. And yet from the Pyrenees the sources of the Tagus are more than one thousand stadia distant. On the other hand, Polybius is right when he asserts that Eratosthenes is ignorant of the geography of Iberia, that is, for the reason that he sometimes makes conflicting statements; at any rate, after he has said that the exterior coast of Iberia as far as Gades is inhabited by Gauls-if they really hold the western regions of Europe as far as Gades—he forgets that statement and nowhere mentions the Gauls in his description of Iberia.

5. Again, when Polybius sets forth that the length of Europe is less than the combined length of Iberia and Asia, he does not make his comparison correctly. The outlet at the Pillars, he says, is in the equinoctial west, whereas the Tanaïs¹ flows from the summer rising of the sun, and therefore Europe is less in length than the combined length of Libya and Asia by the space between the summer sunrise and the equinoctial sunrise; for Asia has a prior claim to this space of the northern semicircle that lies toward the equinoctial sunrise.² Indeed, apart

course of the river to the source (T') of it (but the source is unexplored); then produce the river line (TT') to the circumference at S, which may represent the summer rising. Drop a perpendicular (T'B) upon the chord PP'. Then we have a segment (BT'SP') of the semicircle, which belongs to Asia (but we are compelled to fix T' and B inaccurately, inasmuch as the source of the Tanais was unexplored). According to Polybius, Europe is less in length than Libya and Asia combined by the line BP' (which is a variable).

μασιν εὐαποδότοις καὶ ψεῦδός ἐστι τὸ ἀπὸ θερινῆς ἀνατολῆς τὸν Τάναῖν ρεῖν ἄπαντες γὰρ οἱ ἔμπειροι τῶν τόπων ἀπὸ τῶν ἄρκτων ρεῖν φασιν εἰς τὴν Μαιῶτιν, ὥστε τὰ στόματα τοῦ ποταμοῦ καὶ τὸ τῆς Μαιῶτιδος καὶ αὐτὸν τὸν ποταμόν, ἐφ' ὅσον γνώριμός ἐστιν, ἐπὶ τοῦ αὐτοῦ μεσημβρινοῦ κεῖσθαι.

6. Οὐκ ἄξιοι δὲ λόγου οἵτινες 1 εἶπον ἀπὸ των κατά τον Ιστρον τόπων αὐτον τὰς ἀρχὰς έγειν καὶ ἀπὸ τῆς ἐσπέρας, οὐκ ἐνθυμηθέντες ὡς μεταξύ ὁ Τύρας καὶ Βορυσθένης καὶ "Υπανις, μεγάλοι ποταμοί, δέουσιν είς τον Πόντον, δ μέν τῷ Ἰστρω παράλληλος, οἱ δὲ τῷ Τανάϊδι οὕτε δὲ τοῦ Τύρα τῶν πηγῶν κατωπτευμένων, οὕτε τοῦ Βορυσθένους, οὖτε² τοῦ Ὑπάνιος, πολὺ \hat{a} ν εἴη άγνωστότερα τὰ ἐκείνων ἀρκτικώτερα ὅσθ' ὁ δι' έκείνων άγων τον Τάναιν, είτ' έπιστρέφων άπ' αὐτῶν ἐπὶ τὴν Μαιῶτιν³ (αἱ γὰρ ἐκβολαὶ φανερῶς έν τοις προσαρκτίοις μέρεσι της λίμνης δείκνυνται, καλ τούτοις τοις έωθινωτάτοις), πλαστός άν τις είη και ἀπέραντος λόγος. ώς δ' αυτως ἀπέραντος καλ ο διά του Καυκάσου προς άρκτον φήσας ρείν, είτ' επιστρέφειν είς την Μαιώτιν είρηται γάρ καὶ τοῦτο. ἀπὸ μέντοι τῆς ἀνατολῆς οὐδεὶς εἴρηκε την δύσιν και γαρ εί έρρει ουτως, ούκ αν ύπεν-

² οὔτε... οὔτε, Corais, for οὐδέ... οὐδέ; Meineke following;

C. Müller approving.

¹ οδτινες είπου for τινές είπου οι μέν; so lno; Siebenkees, Corais, following.

 $^{^3}$ ἄγων τὸν Τάναϊν, εἰτ' ἐπιστρέφων ἀπ' αὐτῶν ἐπὶ τὴν Μαιῶτιν, Storrett, for ἄγων ἐπὶ τὴν Μαιῶτιν τὸν Τάναϊν, εἶτ' ἐπιστρέφων ἐπ' αὐτήν.

GEOGRAPHY, 2. 4. 5-6

from the abstruseness which characterises Polybius when he is discussing matters that are easy of explanation, his statement that the Tanaïs flows from the summer rising of the sun is also false; for all who are acquainted with those regions say that the Tanaïs flows from the north into Lake Maeotis, and in such wise that the mouth of the river, the mouth of Lake Maeotis, and the course of the Tanaïs itself, so far as it has been explored, all lie on the same meridian.

6. Unworthy of mention are those writers who have stated that the Tanaïs rises in the regions on the Ister 1 and flows from the west, because they have not reflected that the Tyras,2 the Borysthenes.8 and the Hypanis,4 all large rivers, flow between those two rivers into the Pontus, one of them parallel to the Ister and the others parallel to the Tanaïs. And since neither the sources of the Tyras, nor of the Borysthenes, nor of the Hypanis, have been explored, the regions that are farther north than they would be far less known; and therefore the argument that conducts the Tanaïs through those regions and then makes it turn from them to the Maeotis Lake (for the mouths of the Tanaïs are obviously to be seen in the most northerly parts of the Lake, which are also the most easterly parts)—such an argument, I say, would be false and inconclusive. Equally inconclusive is the argument that the Tanaïs flows through the Caucasus towards the north and then turns and flows into Lake Maeotis; for this statement has also been made. However, no one has stated that the Tanaïs flows from the east; for if it flowed from the east the more accomplished geographers would not

¹ The Danube.

² The Dniester.

³ The Dnieper.

C 108 αντίως τῷ Νείλφ καὶ τρόπον τινὰ κατὰ διάμετρον ρείν αὐτὸν ἀπεφαίνοντο οι χαριέστεροι, ώς αν έπι ταύτου μεσημβρινού ή παρακειμένου τινός της δύσεως ούσης έκατέρω ποταμώ.

7. "Η τε τοῦ μήκους τῆς οἰκουμένης μέτρησις κατά παραλλήλου τῷ ἐσημερινῷ ἐστιν, ἐπειδή καὶ αὐτὴ ἐπὶ μῆκος οὕτως ἐκτέταται ι ιστε καὶ των ηπείρων εκάστης ούτω δει λαμβάνειν τὸ μηκος μεταξύ μεσημβρινών δυείν κείμενον. τά τε μέτρα τῶν μηκῶν σταδιασμοί εἰσιν, οθς θηρεύομεν η δι' αὐτῶν ἐκείνων ἰόντες η τῶν παραλλήλων όδων ή πόρων. ό δὲ τοῦτον ἀφεὶς τὸν τρόπον καινὸν εἰσάγει τὸ μεταξύ τῆς τε θερινῆς άνατολής καὶ τής ἰσημερινής τμήμά τι¹ τοῦ ἀρκτικοῦ ημικυκλίου. πρὸς δὲ τὰ ἀμετάπτωτα οὐδεὶς κανόσι καλ μέτροις χρήται τοίς μεταπτώτοις οὐδὲ τοις κατ' ἄλλην καὶ ἄλλην σχέσιν λεγομένοις πρὸς τὰ καθ' αύτὰ καὶ ἀδιάφορα.2 τὸ μὲν οὖν μηκος άμετάπτωτον καὶ καθ' αύτὸ λέγεται. άνατολή δ' ισημερινή και δύσις, ώς δ' αυτως θερινή τε καὶ γειμερινή, οὐ καθ' αύτήν, ἀλλὰ πρὸς ἡμᾶς. ήμῶν δ' ἄλλοτ' ἄλλη μεταχωρούντων, ἄλλοτ' άλλοι τόποι καὶ δύσεών είσι καὶ ἀνατολών ἰσημερινών τε καλ τροπικών, τὸ δὲ μῆκος μένει ταὐτὸν της ηπείρου. Τάναϊν μέν οὖν καὶ Νεῖλον οὐκ

² ἀδιάφορα, Kramer, for διαφοράν (οὐκ ἔχοντα?); A. Vogel approving.

¹ τμημάτι, Tyrwhitt, for τμήματι; Müller-Dübner, Meineke, following.

GEOGRAPHY, 2.4.6-7

be asserting that it flows in a direction contrary to, and in a sense diametrically opposed to, that of the Nile—meaning that the courses of the two rivers are on the same meridian or else on meridians that lie close to each other.¹

7. The measurement of the length of the inhabited world is made along a line parallel to the equator, because the inhabited world, in its length, stretches in the same way the equator does; and in the same way, therefore, we must take as the length of each of the continents the space that lies between two Again, the measure employed for these lengths is that by stadia; and we seek to discover the number of the stadia either by travelling through the continents themselves, or else along the roads or waterways parallel to them. But Polybius abandons this method and introduces something new, namely, a certain segment of the northern semicircle, which lies between the summer sunrise and the equinoctial sunrise. But no one employs rules and measures that are variable for things that are non-variable, nor reckonings that are made relative to one position or another for things that are absolute and unchanging. Now while the term "length" is non-variable and absolute, "equinoctial rising" and "setting" and, in the same way, "summer sunrise" and "winter sunrise," are not absolute, but relative to our individual positions; and if we shift our position to different points, the positions of sunset and sunrise, whether equinoctial or solstitial, are different, but the length of the continent remains the same. Therefore, while it is not out of place to make the Tanaïs and the Nile limits of continents, it is some-

¹ Compare 11. 2. 2.

άτοπον πέρας ποιείσθαι, θερινήν δ' ανατολήν ή ίσημερινην καινόν.

8. Προπεπτωκυίας δὲ τῆς Εὐρώπης ἄκραις πλείοσι, βέλτιον μεν ούτος εξρηκεν περί αὐτων Έρατοσθένους, ούπω δὲ ίκανῶς. ἐκεῖνος μὲν γὰρ τρείς έφη, την έπι τας Στήλας καθήκουσαν, έφ' ής ή Ίβηρία, καὶ τὴν ἐπὶ τὸν Πορθμόν, ἐφ' ής ή 'Ιταλία, καὶ τρίτην τὴν κατὰ Μαλέας, ἐφ' ἦς τὰ μεταξύ τοῦ 'Αδρίου καὶ τοῦ Εὐξείνου πάντ' έθνη καλ τοῦ Τανάϊδος. οὖτος δὲ τὰς μὲν δύο τὰς πρώτας όμοίως ἐκτίθεται, τρίτην δὲ τὴν κατὰ Μαλέας καὶ Σούνιον, ἐφ' ἡς ἡ Ἑλλὰς πᾶσα καὶ ή Ἰλλυρίς καὶ τῆς Θράκης τινά, τετάρτην δὲ τὴν κατά Θρακίαν χερρόνησον, έφ' ής τὰ κατά Σηστόν καὶ 'Αβυδον στενά, ἔχουσι δ' αὐτὴν Θρᾶκες. πέμπτην δὲ τὴν κατά τὸν Κιμμερικὸν βόσπορον καὶ τὸ στόμα τῆς Μαιώτιδος. τὰς μὲν οὖν δύο τὰς πρώτας δοτέον άπλοῖς γάρ τισι περιλαμβάνονται κόλποις, ή μεν τῷ μεταξύ τῆς Κάλπης καὶ τοῦ Ἱεροῦ ἀκρωτηρίου, ἐν ῷ τὰ Γάδειρα, καὶ τῷ μεταξὺ Στηλών καὶ τῆς Σικελίας πελάγει ή δὲ τούτφ τε καὶ τῷ ᾿Αδρία, καίτοι ή γε C 109 των Ίαπύγων ἄκρα παρεμπίπτουσα καὶ τὴν Ίταλίαν δικόρυφον ποιοῦσα ἔχει τινα ἀντέμφασιν αί λοιπαί δ' έτι έναργέστερον ποικίλαι καί πολυμερείς οὖσαι ζητοῦσιν ἄλλην διαίρεσιν. ὡς δ' αυτως έχει και ή είς εξ διαίρεσις την όμοίαν 416

GEOGRAPHY, 2.4.7-8

thing new to use the summer, or the equinoctial, sunrise for this purpose.

8. Since Europe runs out into several promontories. Polvbius' account of them is better than that of Eratosthenes, but it is still inadequate. For Eratosthenes spoke of only three promontories: 1 first, the promontory that juts down to the Pillars, on which is Iberia; secondly, that to the Strait of Sicily, on which is Italy; and, thirdly, that which ends at Cape Malea, on which are all the nations that dwell between the Adriatic, the Euxine, and the Tanaïs. But Polybius explains the first two promontories in the same way and then makes a third of the promontory which ends at Cape Malea and Sunium, on which are all Greece, and Illyria, and certain parts of Thrace, and a fourth of the Thracian Chersonese, where the strait between Sestus and Abydus is, inhabited by Thracians; and still a fifth of the promontory in the region of the Cimmerian Bosporus and of the mouth of Lake Macotis. Now we must grant the first two, because they are encompassed by simple gulfs: one of them, by the gulf that lies between Calpe and the Sacred Cape (the gulf on which Gades is situated) and also by that portion of the sea that lies between the Pillars and Sicily; the other, by the last-mentioned sea and the Adriaticalthough, of course, the promontory of Iapygia, since it thrusts itself forward on the side and thus makes Italy have two crests, presents a sort of contradiction to my statement; but the remaining three promontories, which still more clearly are complex and composed of many members, require further division. Likewise, also, the division of Europe into six parts

ένστασιν ἀκολούθως ταῖς ἄκραις διειλημμένη. ποιησόμεθα δ' ἡμεῖς ἐν τοῖς καθ' ἔκαστα τὴν προσήκουσαν ἐπανόρθωσιν καὶ τούτων καὶ τῶν ἄλλων, ὅσα ἔν τε τῷ Εὐρώπη διημάρτηται καὶ ἐν τῷ τῆς Λιβύης περιοδείᾳ. νῦν δ' ἀρκέσει ταῦτα λεχθέντα πρὸς τοὺς πρὸ ἡμῶν, ὅσους ῷήθημεν ἰκανοὺς εἶναι παρατεθέντας ἐκμαρτυρεῖν ἡμῖν, ὅτι δικαίως προειλόμεθα καὶ αὐτοὶ τὸ αὐτὸ τοῦτο ἔργον, τοσαύτης ἐπανορθώσεως καὶ προσθήκης δεόμενον.

V

1. Έπει δὲ τοῖς πρὸς ἐκείνους λόγοις συνεχής ἐστιν ἡ ἐγχείρησις τῆς ἡμετέρας ὑποσχέσεως, λαβόντες ἀρχὴν ἑτέραν λέγωμεν ὅτι δεῖ τὸν χωρογραφεῖν ἐπιχειροῦντα πολλὰ τῶν φυσικῶς τε καὶ μαθηματικῶς λεγομένων ὑποθέσθαι, καὶ πρὸς τὴν ἐκείνων ὑπόνοιάν τε καὶ πίστιν τὰ ἐξῆς πραγματεύεσθαι. εἴρηται γὰρ ὅτι οὐδ΄ οἰκοδόμος, οὐδ΄ ἀρχιτέκτων οἰκίαν ἡ πόλιν ἱδρῦσαι καλῶς οἶός τε γένοιτ' ἄν, ἀπρονοήτως ἔχων κλιμάτων τε καὶ τῶν κατὰ τὸν οὐρανὸν καὶ σχημάτων τε καὶ μεγεθῶν καὶ θάλπους καὶ ψύχους καὶ ἄλλων τοιούτων, μή τί γε τὴν ὅλην οἰκουμένην τοποθετῶν. αὐτὸ γὰρ τὸ εἰς ἐπίπεδον γράφειν ἐπιφάνειαν μίαν καὶ τὴν αὐτὴν τά τε Ἰβηρικὰ

¹ TE Rai, Groskurd, for TE; Forbiger following.

GEOGRAPHY, 2. 4. 8-5. 1

is open to similar objection, since it has been made in accordance with the promontories. However, in my detailed account I shall make the suitable corrections, not only of these mistakes, but also of all the other serious mistakes that Polybius has made, both in the matter of Europe and in his circuit of Libya. But, for the present, I shall rest satisfied with what I have here said in criticism of my predecessors—that is, of so many of them as I have thought would, if cited, make enough witnesses to prove that I too am justified in having undertaken to treat this same subject, since it stands in need of so much correction and addition.

v

1. Since the taking in hand of my proposed task naturally follows the criticisms of my predecessors, let me make a second beginning by saving that the person who attempts to write an account of the countries of the earth must take many of the physical and mathematical principles as hypotheses and elaborate his whole treatise with reference to their intent and authority. For, as I have already said, 1 no architect or engineer would be competent even to fix the site of a house or a city properly if he had no conception beforehand of "climata" and of the celestial phenomena, and of geometrical figures and magnitudes and heat and cold and other such things-much less a person who would fix positions for the whole of the inhabited world. For the mere drawing on one and the same plane surface of Iberia and India and the

καὶ τὰ Ἰνδικὰ καὶ τὰ μέσα τούτων, καὶ μηδὲν ήττον δύσεις καὶ ἀνατολὰς ἀφορίζειν καὶ μεσουρανήσεις, ώς αν κοινάς πασι, τῷ μὲν προεπινοή_ σαντι την τοῦ οὐρανοῦ διάθεσίν τε καὶ κίνησιν. καὶ λαβόντι ὅτι σφαιρικὴ μέν ἐστιν ἡ κατ' ἀλήθειαν της γης επιφάνεια, πλάττεται δε νῦν επίπεδος πρός την όψιν, γεωγραφικήν έχει την παράδοσιν, τῷ δ' ἄλλως, οὐ γεωγραφικήν. γάρ, ὥσπερ διὰ πεδίων ἰοῦσι μεγάλων, οἶον τῶν Βαβυλωνίων, ή διὰ πελάγους παρίσταται τὰ πρόσω πάντα καὶ τὰ κατόπιν καὶ ἐκ πλαγίων έπίπεδα, και οὐδεμίαν ἀντέμφασιν παρέχει πρὸς τὰ οὐράνια καὶ τὰς τοῦ ἡλίου κινήσεις καὶ σγέσεις πρὸς ήμᾶς καὶ τῶν ἄλλων ἄστρων, οὕτω καὶ γεωγραφούσιν παρίστασθαι άελ δεί τὰ δμοια. ό μεν γάρ πελαγίζων η διοδεύων δια χώρας πεδιάδος κοιναίς τισι φαντασίαις άνεται, καθ' ας καὶ ο απαίδευτος και ο πολιτικός ένεργει ταυτά, απειρος ῶν τῶν οὐρανίων, καὶ τὰς πρὸς ταῦτα ἀντεμ-C 110 φάσεις άγνοῶν. ἀνατέλλοντα μὲν γὰρ ὁρᾶ ήλιον καὶ δύνοντα καὶ μεσουρανοῦντα, τίνα δὲ τρόπον, οὐκ ἐπισκοπεῖ· οὐδὲ γὰρ χρήσιμον αὐτῷ πρὸς τὸ προκείμενον, ώσπερ οὐδὲ τὸ παράλληλον έστάναι

 $^{^1}$ ή, Corais, for καί before δδεύων; Meineke following; C. Müller approving.

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countries that lie between them and, in spite of its being a plane surface, the plotting of the sun's position at its settings, risings, and in meridian, as though these positions were fixed for all the people of the world—merely this exercise gives to the man who has previously conceived of the arrangement and movement of the celestial bodies and grasped the fact that the true surface of the earth is spherical but that it is depicted for the moment as a plane surface for the convenience of the eye-merely this exercise, I say, gives to that man instruction that is truly geographical, but to the man not thus qualified it does not. Indeed, the case is not the same with us when we are dealing with geography as it is when we are travelling over great plains (those of Babylonia, for example) or over the sea: then all that is in front of us and behind us and on either side of us is presented to our minds as a plane surface and offers no varying aspects with reference to the celestial bodies or the movements or the positions of the sun and the other stars relatively to us; but when we are dealing with geography the like parts must never present themselves to our minds in that way. The sailor on the open sea, or the man who travels through a level country, is guided by certain popular notions (and these notions impel not only the uneducated man but the man of affairs as well to act in the self-same way), because he is unfamiliar with the heavenly bodies and ignorant of the varying aspects of things with reference to For he sees the sun rise, pass the meridian, and set, but how it comes about he does not consider: for, indeed, such knowledge is not useful to him with reference to the task before him, any more than it is useful for him to know whether or not his τῷ παρεστῶ δοξεῖ δὲ 1 τ΄ οἱ ἐπιχώρι ματα. ὁ δ φεῖ, οὐδὲ πιτῶν λεγομ στῆ καὶ στὴν γῆν ἔφασι, καὶ τοιαύτην. προενθυμ ἀκόλουθ παραδιδ νοντας, ἔχουσιν

2. Τ΄ περὶ τ μετρής τοῖς ἀ δὲ φυ φασὶι

1 ξπι δόξει δ΄ 2 αύτ Meinck

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that the (Aretai) a

GEOGRAPHY, 2. 5. 1-2

body stands parallel to that of his neighbour. But perhaps he does consider these matters, and yet holds opinions opposed to the principles of mathematics—just as the natives of any given place do; for a man's place occasions such blunders. But the geographer does not write for the native of any particular place, nor yet does he write for the man of affairs of the kind who has paid no attention to the mathematical sciences properly so-called; nor, to be sure, does he write for the harvest-hand or the ditchdigger, but for the man who can be persuaded that the earth as a whole is such as the mathematicians represent it to be, and also all that relates to such an hypothesis. And the geographer urges upon his students that they first master those principles and then consider the subsequent problems; for, he declares, he will speak only of the results which follow from those principles; and hence his students will the more unerringly make the application of his teachings if they listen as mathematicians; but he refuses to teach geography to persons not thus qualified.

2. Now as for the matters which he regards as fundamental principles of his science, the geographer must rely upon the geometricians who have measured the earth as a whole; and in their turn the geometricians must rely upon the astronomers; and again the astronomers upon the physicists. Physics is a kind of Arete; and by Aretai they mean those sciences that postulate nothing but depend upon themselves, and contain within themselves their own

logic; and that they regarded all three as the expedient arts for the exercise of philosophy in the acquirement of knowledge—which is wisdom.

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σας τάς τε άργας και τας περί τούτων πίστεις. τὰ μὲν οὖν παρὰ τῶν φυσικῶν δεικνύμενα τοιαῦτά έστι σφαιροειδής μεν ο κόσμος καὶ ο οὐρανός, ή ροπη δ' επι το μέσον των βαρέων περι τουτό τε . συνεστώσα ή γή σφαιροειδώς όμόκεντρος τώ μέν ούρανω μένει και αύτη και ο δι' αύτης άξων και τοῦ οὐρανοῦ μέσου τεταμένος, ὁ δ' οὐρανὸς περιφέρεται περί τε αὐτὴν καὶ περὶ τὸν ἄξονα ἀπ' άνατολής έπι δύσιν, σύν αὐτῶ δὲ οἱ ἀπλανεῖς άστέρες όμοταγείς τω πόλω. οἱ μὲν οὖν ἀπλανείς άστέρες κατά παραλλήλων φέρονται κύκλων παράλληλοι δ' είσι γνωριμώτατοι δ τε ίσημερινός καὶ οί τροπικοὶ δύο καὶ οί ἀρκτικοί οί δὲ πλάνητες ἀστέρες καὶ ήλιος καὶ σελήνη κατὰ λοξών τινων, των τεταγμένων έν τω ζωδιακώ. τούτοις δὲ πιστεύσαντες ἡ πᾶσιν ἡ τισιν οἱ ἀστρονομικοὶ τὰ έξης πραγματεύονται, κινήσεις καὶ περιόδους καλ ἐκλείψεις καλ μεγέθη καλ ἀποστάσεις καλ άλλα μυρία ώς δ' αύτως οι την γην όλην άναμετρούντες γεωμέτραι προστίθενται ταις των φυσικών και τών ἀστρονομικών δόξαις, ταις δέ τῶν γεωμετρῶν πάλιν οἱ γεωγράφοι.

C 111 3. Πεντάζωνον μεν γαρ υποθέσθαι δει τον ουρανόν, πεντάζωνον δε και την γην, όμωνύμους δε και τας ζώνας τας κάτω ταις ἄνω τας δ' αιτίας εἰρήκαμεν της εἰς τας ζώνας διαιρέσεως. διορίζοιντο δ' αν αι ζωναι κύκλοις παραλλήλοις τωρισημερινώς γραφομένοις εκατέρωθεν αὐτοῦ, δυσί

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principles as well as the proofs thereof. Now what we are taught by the physicists is as follows: The universe and the heavens are sphere-shaped. tendency of the bodies that have weight is towards the centre. And, having taken its position about this centre, the earth is spherically concentric with the heavens, and it is motionless as is also the axis through it, which axis extends also through the centre of the heavens. The heavens revolve round both the earth and its axis from east to west: and along with the heavens revolve the fixed stars, with the same rapidity as the vault of the heavens. Now the fixed stars move along parallel circles, and the best known parallel circles are the equator, the two tropics, and the arctic circles; whereas the planets and the sun and the moon move along certain oblique circles whose positions lie in the zodiac. Now the astronomers first accept these principles, either in whole or in part, and then work out the subsequent problems, namely, the movements of the heavenly bodies, their revolutions, their eclipses, their sizes, their respective distances, and a host of other things. And, in the same way, the geometricians, in measuring the earth as a whole, adhere to the doctrines of the physicists and the astronomers, and, in their turn, the geographers adhere to those of the geometricians.

3. Thus we must take as an hypothesis that the heavens have five zones, and that the earth also has five zones, and that the terrestrial zones have the same names as the celestial zones (I have already stated the reasons for this division into zones 1). The limits of the zones can be defined by circles drawn on both sides of the equator and parallel to it,

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μέν τοις ἀπολαμβάνουσι την διακεκαυμένην, δυσλ δέ τοις μετά τούτους, οί πρός μέν τη διακεκαυμένη τὰς εὐκράτους δύο ποιοῦσι, πρὸς δὲ ταῖς εὐκράτοις τὰς κατεψυγμένας. ὑποπίπτει δ' ἐκάστω τῶν οὐρανίων κύκλων ὁ ἐπὶ γῆς ὁμώνυμος αὐτῷ, καὶ ἡ ζώνη δε ωσαύτως τη ζώνη. εὐκράτους μεν οὖν φασι τὰς οἰκεῖσθαι δυναμένας, ἀοικήτους δὲ τὰς άλλας, την μέν διά καθμα, τάς δέ διά ψθγος. τὸν δ' αὐτὸν τρόπον καὶ περὶ τῶν τροπικῶν καὶ των άρκτικων, παρ' οίς είσιν άρκτικοί, διορίζουσιν όμωνύμους 1 τοις ἄνω τους έπι γης ποιούντες, και τούς έκάστοις ύποπίπτοντας. τοῦ δ' ἰσημερινοῦ δίγα τέμνοντος τὸν ὅλον οὐρανόν, καὶ τὴν γῆν ανάγκη διαιρείσθαι ύπὸ τοῦ ἐν αὐτῆ ἰσημερινοῦ. καλείται δὲ τῶν ἡμισφαιρίων ἐκάτερον τῶν τε οὐρανίων καὶ τῶν ἐπὶ γῆς τὸ μὲν βόρειον, τὸ δὲ νότιον ούτως δε και της διακεκαυμένης ύπο τοῦ αὐτοῦ κύκλου δίγα διαιρουμένης τὸ μὲν ἔσται βόρειον αὐτης μέρος, τὸ δὲ νότιον. δηλον δ' ὅτι καὶ τῶν εὐκράτων ζωνῶν ἡ μὲν ἔσται βόρειος, ἡ δε νότιος, όμωνύμως τω ήμισφαιρίω εν ω έστι. καλείται δε βόρειον μεν ήμισφαίριον το την εύκρατον εκείνην περιέχον εν ή άπο της ανατολής βλέποντι ἐπὶ τὴν δύσιν ἐν δεξια μέν ἐστιν ὁ πόλος, εν άριστερά δ' ό ίσημερινός, ή εν ώ πρός

¹ δμωνύμους, Corais, for δμωνύμως; Groskurd following.

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namely, by two circles which enclose the torrid zone. and by two others, following upon these, which form the two temperate zones next to the torrid zone and the two frigid zones next to the temperate zones. Beneath each of the celestial circles falls the corresponding terrestrial circle which bears the same name: and, in like manner, beneath the celestial zone, the terrestrial zone. Now they call "temperate" the zones that can be inhabited; the others they call uninhabitable, the one on account of the heat, and the other two on account of the cold. They proceed in the same manner with reference to the tropic and the arctic circles (that is, in countries that admit of arctic circles 1): they define their limits by giving the terrestrial circles the same names as the celestial—and thus they define all the terrestrial circles that fall beneath the several celestial circles. Since the eelestial equator cuts the whole heavens in two, the earth also must of necessity be cut in two by the terrestrial equator. Of the two hemispheres-I refer to the two celestial as well as the two terrestrial hemispheres - one is called "the northern hemisphere "and the other "the southern hemisphere"; so also, since the torrid zone is cut in two by the same circle, the one part of it will be the northern and the other the southern. It is clear that, of the temperate zones also, the one will be northern and the other southern, each bearing the name of the hemisphere in which it lies. That hemisphere is called "northern hemisphere" which contains that temperate zone in which, as you look from the east to the west, the pole is on your right hand and the equator on your left, or in which, as you look towards

¹ See 2. 2. 2 and footnote.

μεσημβρίαν βλέπουσιν ἐν δεξιᾳ μέν ἐστι δύσις, ἐν ἀριστερᾳ δ' ἀνατολή, νότιον δὲ τὸ ἐναντίως ἔχον· ὥστε δῆλον ὅτι ἡμεῖς ἐσμεν ἐν θατέρῳ τῶν ἡμισφαιρίων, καὶ τῷ βορείῳ γε, ἐν ἀμφοτέροις δ' οὐχ οἶόν τε.

μέσσφ γὰρ μεγάλοι ποταμοί, μένα πρώτα, (Od. 11. 157)

ἔπειτα ή διακεκαυμένη. οὔτε δὲ ὠκεανὸς ἐν μέσφ τῆς καθ' ἡμᾶς οἰκουμένης ἐστὶ τέμνων ὅλην, οὔτ' οὖν διακεκαυμένον χωρίον· οὐδὲ δὴ μέρος αὐτῆς εὐρίσκεται τοῖς κλίμασι ὑπεναντίως ἔχον τοῖς λεγθεῖσιν ἐν τῆ βορείω εὐκράτῶ.

λεχθείσιν έν τἢ βορείφ εύκράτῷ. 4. Λαβὼν οὖν ταῦθ' ὁ γεωμέτρης, προσχρησά-

μενος τοις γνωμονικοις καὶ τοις άλλοις τοις ύπο τοῦ ἀστρονομικοῦ δεικνυμένοις, ἐν οις οι τε παράλληλοι τῷ ἰσημερινῷ εὐρίσκονται οι καθ' ἐκάστην τὴν οἰκησιν καὶ οι πρὸς ὀρθὰς τέμνοντες τούτους, γραφόμενοι δὲ διὰ τῶν πόλων, καταμετρεῖ τὴν μὲν οἰκήσιμον ἐμβατεύων, τὴν δ' ἄλλην ἐκ τοῦ λόγου τῶν ἀποστάσεων. οὕτω δ' ἄν εὑρίσκοι, πόσον ἀν C 112 εἰη τὸ ἀπὸ τοῦ ἰσημερινοῦ μέχρι πόλου, ὅπερ ἐστὶ τεταρτημόριον τοῦ μεγίστου κύκλου τῆς γῆς ἔχων δὲ τοῦτο ἔχει καὶ τὸ τετραπλάσιον αὐτοῦ, τοῦτο δ' ἔστιν ἡ περίμετρος τῆς γῆς. ὥσπερ οὖν ὁ μὲν τὴν γῆν ἀναμετρῶν παρὰ τοῦ ἀστρονομοῦντος ἔλαβε τὰς ἀρχάς, ὁ δὲ ἀστρονόμος παρὰ τοῦ φυσικοῦ, τὸν αὐτὸν τρόπον χρὴ καὶ τὸν γεωγράφον

¹ The words τοῖς γνωμονικοῖς καὶ τοῖς ἄλλοις were omitted by Kramer and Meineke without comment.

GEOGRAPHY, 2.5.3-4

the south, the west is on your right hand and the east on your left; and that hemisphere is called "southern hemisphere," in which the opposite is true; and hence it is clear that we are in one of the two hemispheres (that is, of course, in the northern), and that it is impossible for us to be in both. "Between them are great rivers; first, Oceanus", and then the torrid zone. But neither is there an Oceanus in the centre of our whole inhabited world, cleaving the whole of it, nor, to be sure, is there a torrid spot in it; nor yet, indeed, is there a portion of it to be found whose "climata" are opposite to the "climata" which I have given for the northern temperate zone.²

4. By accepting these principles, then, and also by making use of the sun-dial and the other helps given him by the astronomer—by means of which are found, for the several inhabited localities, both the circles that are parallel to the equator and the circles that cut the former at right angles, the latter being drawn through the poles — the geometrician can measure the inhabited portion of the earth by visiting it and the rest of the earth by his calculation of the intervals. In this way he can find the distance from the equator to the pole, which is a fourth part of the earth's largest circle; and when he has this distance, he multiplies it by four; and this is the circumference of the earth. Accordingly, just as the man who measures the earth gets his principles from the astronomer and the astronomer his from the physicist, so, too, the geographer must in the

¹ See footnote 2, page 22.

² If such were the case, such a portion would have to fall within the southern hemisphere.

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παρὰ τοῦ ἀναμεμετρηκότος ὅλην τὴν γῆν ὁρμηθέντα, πιστεύσαντα τούτφ καὶ οἶς ἐπίστευσεν οὖτος, πρῶτον μὲν ἐκθέσθαι τὴν οἰκουμένην καθ' ἡμᾶς, πόση τις καὶ ποία τὸ σχῆμα καὶ τὴν φύσιν οἵα ἐστὶ καὶ πῶς ἔχουσα πρὸς τὴν ὅλην γῆν ἔδιον γὰρ τοῦ γεωγράφου τοῦτο· ἔπειτα περὶ τῶν καθ' ἔκαστα τῶν τε κατὰ γῆν καὶ τῶν κατὰ θάλαττὰν ποιήσασθαι τὸν προσήκοντα λόγον, παρασημαινόμενον ὅσα μὴ ἰκανῶς εἴρηται τοῖς πρὸ ἡμῶν τοῖς μάλιστα πεπιστευμένοις ἀρίστοις γεγονέναι περὶ ταῦτα.

5. Υποκείσθω δη σφαιροειδης ή γη σύν τη θαλάττη, καὶ μίαν καὶ τὴν αὐτὴν ἐπιφάνειαν ἴσχουσα τοῖς πελάγεσι. συγκρύπτοιτο γὰρ ἂν τὸ ἐξέχον της γης ἐν τῷ τοσούτῳ μεγέθει μικρὸν δν καὶ λανθάνειν δυνάμενον, ὥστε τὸ σφαιροειδὲς ἐπὶ τούτων οὐχ ὡς ἂν ἐκ τόρνου φαμέν, οὐδ' ὡς ὁ γεωμέτρης πρὸς λόγον, ἀλλὰ πρὸς αἴσθησιν, καὶ ταύτην παχυτέραν. νοείσθω δὴ πεντάζωνος, καὶ ὁ ἰσημερινὸς τεταγμένος ἐν αὐτῆ κύκλος, καὶ ἄλλος τούτῳ παράλληλος, ὁρίζων τὴν κατεψυγμένην ἐν τῷ βορείῳ ἡμισφαιρίῳ, καὶ διὰ τῶν πόλων τις τεμνων τούτους πρὸς ὀρθάς. τοῦ δὴ βορείου ἡμισφαιρίου δύο περιέχοντος τεταρτημόρια τῆς γῆς, ὰ ποιεῖ ὁ ἰσημερινὸς πρὸς τὸν διὰ τῶν πόλων, ἐν

¹ kal, Groskurd inserts, before µlav.

GEOGRAPHY, 2. 5. 4-5

same way first take his point of departure from the man who has measured the earth as a whole, having confidence in him and in those in whom he, in his turn, had confidence, and then explain, in the first instance, our inhabited world—its size, shape, and character, and its relations to the earth as a whole; for this is the peculiar task of the geographer. Then, secondly, he must discuss in a fitting manner the several parts of the inhabited world, both land and sea, noting in passing wherein the subject has been treated inadequately by those of our predecessors whom we have believed to be the best authorities on these matters.

5. Now let us take as hypothesis that the earth together with the sea is sphere-shaped and that the surface of the earth is one and the same with that of the high seas; for the elevations on the earth's surface would disappear from consideration, because they are small in comparison with the great size of the earth and admit of being overlooked; and so we use "sphere-shaped" for figures of this kind, not as though they were turned on a lathe, nor yet as the geometrician uses the sphere for demonstration, but as an aid to our conception of the earth—and that. too, a rather rough conception. Now let us conceive of a sphere with five zones, and let the equator be drawn as a circle upon that sphere, and let a second circle be drawn parallel thereto, bounding the frigid zone in the northern hemisphere, and let a third circle be drawn through the poles, cutting the other two circles at right angles. Then, since the northern hemisphere contains two-fourths of the earth, which are formed by the equator with the circle that passes through the poles, a quadrilateral area is

έκατέρω τούτων ἀπολαμβάνεται τετράπλευρον χωρίον, οὖ ή μὲν βόρειος πλευρά ήμισυ τοῦ πρὸς τῶ πόλω παραλλήλου ἐστίν, ἡ δὲ νότιος τοῦ ἰσημερινοῦ ήμισυ, αί δὲ λοιπαὶ πλευραὶ τμήματά είσι τοῦ διὰ τῶν πόλων, ἀντικείμενα ἀλλήλοις. ἴσα τὸ μῆκος, ἐν θατέρω δὴ τῶν τετραπλεύρων τούτων (όποτέρω δ' οὐδεν αν διαφέρειν δόξειεν) ίδρῦσθαί φαμεν την καθ' ημάς οἰκουμένην, περίκλυστον θαλάττη καὶ ἐοικυῖαν νήσω εἰρηται γὰρ ότι καὶ τη αἰσθήσει καὶ τῶ λόγω δείκνυται τοῦτο. εὶ δ' ἀπιστεῖ τις τῷ λόγω τούτω, διαφέροι ἂν πρὸς τὴν γεωγραφίαν οὐδὲν νῆσον ποιείν, ἡ ὅπερ έκ της πείρας ελάβομεν, τούτω συγγωρείν, ότι καὶ ἀπὸ τῆς ἠοῦς ἐκατέρωθεν περίπλους ἐστὶ καὶ άπὸ της έσπέρας, πλην ολίγων των μέσων χωρίων. ταθτα δ' οὐ διαφέρει θαλάττη περατοθσθαι ή γή ἀοικήτω ο γὰρ γεωγραφών ζητεί τὰ γνώριμα μέρη της οἰκουμένης εἰπεῖν, τὰ δ' ἄγνωστα ἐᾶ, C 113 καθάπερ και τὰ έξω αὐτης. ἀρκέσει δ' ἐπιζεύξασιν εὐθεῖαν γραμμὴν ἐπὶ τὰ ὕστατα σημεῖα τοῦ έκατέρωθεν παράπλου τὸ πᾶν ἐκπληρῶσαι σγῆμα

της λεγομένης νήσου.
6. Προκείσθω δη ή μεν νησος εν τῷ λεχθέντι τετραπλεύρω. δεῖ δε λαβεῖν τὸ μέγεθος αὐτης

1 δή, Spengel, for δέ; Meineke following.

¹ See page 17.

² That is, one could circumnavigate the inhabited world by setting out in any one of four ways—either north or south,

GEOGRAPHY, 2. 5. 5-6

cut off in each of the two fourths. The northern side of the quadrilateral is half of the parallel next to the pole; the southern side is half of the equator; and the two remaining sides are segments of the circle that runs through the poles, these segments lving opposite to each other and being equal in Now in one of these two quadrilaterals (it would seem to make no difference in which one) we say that our inhabited world lies, washed on all sides by the sea and like an island; for, as I have already said above,1 the evidence of our senses and of reason prove this. But if anyone disbelieves the evidence of reason, it would make no difference, from the point of view of the geographer, whether we make the inhabited world an island, or merely admit what experience has taught us, namely, that it is possible to sail round the inhabited world on both sides, from the east as well as from the west,2 with the exception of a few intermediate stretches. And, as to these stretches, it makes no difference whether they are bounded by sea or by uninhabited land; for the geographer undertakes to describe the known parts of the inhabited world, but he leaves out of consideration the unknown parts of it-just as he does what is outside of it. And it will suffice to fill out and complete the outline of what we term "the island" by joining with a straight line the extreme points reached on the coasting-voyages made on both sides of the inhabited world.

6. So let us presuppose that the island lies in the aforesaid quadrilateral. We must then take as its

from either the Pillars or the eastern coast of India—were it not for the few intermediate stretches that prevent it. Compare page 17.

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τὸ φαινόμενον, ἀφελόντας ἀπὸ μὲν τοῦ ὅλου μεγέθους της γης το ημισφαίριον το καθ' ημας, άπο δε τούτου το ημισυ, άπο δ' αθ τούτου πάλιν το τετράπλευρον, έν ώ δη την οἰκουμένην κεῖσθαί φαμεν. ἀνάλογον δὲ καὶ περὶ τοῦ σχήματος ύπολαβείν δεί, τὸ φαινόμενον τοίς υποκειμένοις $\dot{\epsilon}$ φαρμόττοντα. \dot{a} λλ' $\dot{\epsilon}$ πειδη το \dot{a} 1 μεταξύ το \dot{a} 0 ισημερινοῦ καὶ τοῦ ληφθέντος παραλλήλου τούτω πρὸς τῷ πόλφ τμημα τοῦ βορείου ἡμισφαιρίου σπόνδυλός έστι τὸ σχημα, ὁ δὲ διὰ τοῦ πόλου δίχα τέμνων τὸ ἡμισφαίριον δίχα τέμνει καὶ τὸν σπόνδυλον καὶ ποιεί τὸ τετράπλευρον, έσται δηλονότι σπονδύλου ἐπιφανείας ήμισυ τὸ τετράπλευρον ῷ ἐπίκειται τὸ ᾿Ατλαντικὸν πέλαγος· ή δ' οἰκουμένη χλαμυδοειδής έν τούτω νήσος, έλάττων 2 ή ήμισυ τοῦ τετραπλεύρου μέρος οὖσα. φανερον δε τοῦτο ἔκ τε γεωμετρίας καὶ τοῦ πλήθους της περικεχυμένης θαλάττης, καλυπτούσης τὰ ἄκρα τῶν ἡπείρων ἐκατέρωθεν καὶ συναγούσης είς μύουρον ⁸ σχήμα, καὶ τρίτου τοῦ μήκους καὶ

² ἐλάττων, Casaubon, for ἔλαττον; Siebenkees, Corais, following.

³ μύουρον, Meineke restores, the reading before Kramer; C. Müller approving.

 $^{^{1}}$ τδ...τμημα, Kramer, for τοῦ...τμηματος; editors following.

¹ Strabo has assumed that the earth is sphere-shaped and that the inhabited world is an island within a certain spherical quadrilateral. Then, after conforming the inhabited world to the limits of the quadrilateral, which represents only the obvious, or apparent, size and shape, he proceeds by argument to define more accurately both the size and the shape within the limits of the quadrilateral.

GEOGRAPHY, 2.5.6

size the figure that is obvious to our senses, which is obtained by abstracting from the entire size of the earth our hemisphere, then from this area its half, and in turn from this half the quadrilateral in which we say the inhabited world lies; and it is by an analogous process that we must form our conception of the shape of the island, accommodating the obvious shape to our hypotheses.1 But since the segment of the northern hemisphere that lies between the equator and the circle drawn parallel to it next to the pole is a spinning-whorl 2 in shape, and since the circle that passes through the pole, by cutting the northern hemisphere in two, also cuts the spinningwhorl in two and thus forms the quadrilateral, it will be clear that the quadrilateral in which the Atlantic Sea lies is half of a spinning-whorl's surface; and that the inhabited world is a chlamys-shaped 8 island in this quadrilateral, since it is less in size than half of the quadrilateral. This latter fact is clear from geometry, and also from the great extent of the enveloping sea which covers the extremities of the continents both in the east and west and contracts them to a tapering shape; and, in the third place, it

² Approximately a truncated cone.

³ That is, mantle-shaped—a common designation for the shape of the inhabited world in Strabo's time. The skirt of the chlamys was circular; and the collar was cut in a straight line, or else in a circle with a larger radius and a shorter arc than the skirt. If the comparison be fairly accurate, then according to Strabo's description of the inhabited world we must think of the ends of the chlamys (which represent the eastern and western extremities of the inhabited world) as tapering, and so much so that a line joining the corners of the skirt passes through the middle of the chlamys. (See Tarbell, Classical Philology, vol. i. page 283.)

πλάτους τοῦ μεγίστου ἀν τὸ μὲν ἐπτὰ μυριάδων σταδίων ἐστίν, ὡς ἐπὶ τὸ πολὺ περατούμενον θαλάττη μηκέτι πλεῖσθαι δυναμένη διὰ τὸ μέγεθος καὶ τὴν ἐρημίαν, τὸ δ ἔλαττον τριῶν μυριάδων ὁριζόμενον τῷ ἀοικήτῳ διὰ θάλπος ἢ Ψῦχος. αὐτὸ γὰρ τὸ διὰ θάλπος ἀοίκητον τοῦ τετραπλεύρου, πλάτος μὲν ἔχον ὀκτακισχιλίων καὶ ὀκτακοσίων σταδίων, μῆκος δὲ τὸ μέγιστον μυριάδων δώδεκα καὶ ἐξακισχιλίων, ὅσον ἐστὶν ἡμισυ τοῦ ἰσημερινοῦ, [μεῖζόν ἐστι τοῦ ἡμίσους τῆς οἰκουμένης, καὶ ἔτι] πλέον ὰν εἴη τὸ λοιπόν.

7. Τούτοις δὲ συνφδά πώς ἐστι καὶ τὰ ὑπὸ Ἱππάρχου λεγόμενα· φησὶ γὰρ ἐκεῖνος, ὑποθέμενος τὸ μέγεθος τῆς γῆς ὅπερ εἶπεν Ἐρατοσθένης, ἐντεῦθεν δεῖν ποιεῖσθαι τὴν τῆς οἰκουμένης ἀφαίρεσιν· οὐ γὰρ πολὸ διοίσειν πρὸς τὰ φαινόμενα τῶν οὐρανίων καθ' ἐκάστην τὴν οἴκησιν οὕτως ἔχειν τὴν ἀναμέτρησιν, ἢ ὡς οἱ ὕστερον ἀποδεδώκασιν. ὄντος δὴ κατ' Ἐρατοσθένη τοῦ ἰσημερινοῦ κύκλου σταδίων μυριάδων πέντε καὶ εἴκοσι καὶ δισχιλίων, τὸ τεταρτημόριον εἴη ἃν ἑξ

¹ The words in brackets are inserted by Groskurd; Kramer, C. Müller, Tardieu, approving.

¹ The large quadrilateral in question is composed of (1) the inhabited world, (2) a strip one half the width of the torrid zone and 180° long, and (3) "the remainder." "The remainder" consists of two small quadrilaterals, one of which is east, the other west, of the inhabited world. By actual computation the strip of the torrid zone is more than half of the inhabited world, and "the remainder" is still more. Therefore the inhabited world covers less than half of the large quadrilateral in question. To illustrate the argument, draw a figure on a sphere as follows: Let AB be 180° of the

GEOGRAPHY, 2. 5. 6-7

is clear from the maximum length and breadth. Now the length of the inhabited world is seventy thousand stadia, being for the most part limited by a sea which still cannot be navigated because of its vastness and desolation; the breadth is less than thirty thousand stadia, being bounded by the regions that are uninhabitable on account either of heat or cold. For merely the part of the quadrilateral that is uninhabitable on account of the heat—since it has a breadth of eight thousand eight hundred stadia and a maximum length of one hundred and twenty six thousand stadia, that is, half the length of the equator—is more than half the inhabited world, and the remainder of the quadrilateral would be still more than that.¹

7. In essential accord with all this are the views of Hipparchus. He says that, having taken as hypothesis the measurement of the earth as stated by Eratosthenes, he must then abstract the inhabited world from the earth in his discussion; for it will not make much difference with respect to the celestial phenomena for the several inhabited places whether the measurement followed is that of Eratosthenes or that given by the later geographers. Since, then, according to Eratosthenes, the equator measures two hundred and fifty two thousand stadia, the fourth

equator; let CD be 180° of the parallel through the northern limit of the inhabited world; join A and C, and B and D; and then draw an arc of 180° parallel to the equator at 8,800 stadia north of the equator, and also two meridian-arcs from CD to AB through the eastern and western limits, respectively, of the inhabited world. Thus we have the large quadrilateral ACDB, and, within it, four small quadrilaterals, which constitute the three divisions above-mentioned.

μυριάδες και τρισχίλιοι τοῦτο δέ έστι τὸ ἀπὸ . τοῦ ἰσημερινοῦ ἐπί τὸν πόλον πεντεκαίδεκα έξηκοντάδων, οίων έστιν ο ισημερινός έξήκοντα. δ' άπὸ τοῦ ἰσημερινοῦ ἐπὶ τὸν θερινὸν τροπικὸν C 114 τεττάρων ούτος δ' έστιν ο δια Συήνης γραφόμενος παράλληλος, συλλογίζεται δη τὰ καθ' έκαστα διαστήματα έκ των φαινομένων μέτρων τον μέν γάρ τροπικον κατά Συήνην κείσθαι συμ-Βαίνει, διότι ένταῦθα κατά τὰς θερινάς τροπάς άσκιός έστιν ο γνώμων μέσης ήμέρας, ο δε διά της Συήνης μεσημβρινός γράφεται μάλιστα διά της του Νείλου ρύσεως ἀπὸ Μερόης ἔως 'Αλεξανδρείας στάδιοι δ' είσλυ ούτοι περλ μυρίους κατά μέσον δὲ τὸ διάστημα τὴν Συήνην ἱδρῦσθαι συμ-Βαίνει, ώστ' εντεύθεν επί Μερόην πεντακισγίλιοι προιόντι δ' επ' εὐθείας όσον τρισχιλίους σταδίους έπὶ μεσημβρίαν, οὐκέτ' οἰκήσιμα τάλλά έστι διά καθμα ώστε τὸν διὰ τούτων τῶν τόπων παράλληλον, τὸν αὐτὸν ὄντα τῷ διὰ τῆς Κινναμωμοφόρου, πέρας καὶ ἀρχὴν δεῖ τίθεσθαι τῆς καθ' ήμας οίκουμένης πρός μεσημβρίαν. ἐπεὶ οὖν πεντακισχίλιοι μέν είσιν οι άπο Συήνης είς Μερόην, άλλοι δὲ προσγεγόνασι τρισχίλιοι, εἶεν άν οι πάντες έπι τους δρους της οικουμένης οκτακισγίλιοι. ἐπὶ δέ γε τὸν ἰσημερινὸν ἀπὸ Συήνης μύριοι έξακισχίλιοι ὀκτακόσιοι (τοσοῦτοι γάρ είσιν οἱ τῶν τεττάρων ἐξηκοντάδων, τε-

 $^{^1}$ Eratosthenes divided the circumference of the earth into sixty intervals, one interval being equal to 6°. Hipparchus 4.38

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part of it would be sixty three thousand stadia; and this is the distance from the equator to the pole. namely, fifteen sixtieths of the sixty intervals into which the equator is divided. 1 And the distance from the equator to the summer tropic is four sixtieths; and the summer tropic is the parallel drawn through Svene. Now the several distances are computed from the standard measures that are obvious to our senses. The summer tropic, for instance, must pass through Svene, because there. at the time of the summer solstice, the index of the sun-dial does not cast a shadow at noon. meridian through Svene is drawn approximately along the course of the Nile from Meroë to Alexandria, and this distance is about ten thousand stadia; and Syene must lie in the centre of that distance; so that the distance from Svene to Meroë is five thousand stadia. And when you have proceeded about three thousand stadia in a straight line south of Meroë, the country is no longer inhabitable on account of the heat, and therefore the parallel through these regions, being the same as that through the Cinnamon-producing Country, must be put down as the limit and the beginning of our inhabited world on the South. Since, then, the distance from Svene to Meroë is five thousand stadia, to which we have added the other three thousand stadia, the total distance from Syene to the confines of the inhabited world would be eight thousand stadia. But the distance from Svene to the equator is sixteen thousand eight hundred stadia (for that is what the four sixtieths amounts to, since each sixtieth is estimated at four thousand two

seems to have been the first to divide the earth into three hundred and sixty degrees.

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θείσης εκάστης τετρακισγιλίων καὶ διακοσίων), ώστε λοιποί είεν αν από των δρων της οίκουμένης έπι τον ισημερινον οκτακισχίλιοι οκτακόσιοι, ἀπὸ δὲ ᾿Αλεξανδρείας δισμύριοι χίλιοι οκτακόσιοι. πάλιν δ' ἀπὸ τῆς 'Αλεξανδρείας ἐπ' εὐθείας τῆ δύσει τοῦ Νείλου πάντες ὁμολογοῦσι τον έπι 'Ρόδον πλούν κάντεύθεν δε τον της Καρίας παραπλούν καὶ Ἰωνίας μέγρι της Τρωάδος καὶ Βυζαντίου καὶ Βορυσθένους. λαβόντες οὖν τὰ διαστήματα γνώριμα καὶ πλεόμενα σκοποῦσι τὰ ὑπὲρ τοῦ Βορυσθένους ἐπ' εὐθείας ταύτη τῆ γραμμή μέχρι τίνος οἰκήσιμά ἐστι, καὶ περατοῦται τὰ προσάρκτια μέρη τῆς οἰκουμένης. οίκουσι δ' ύπερ του Βορυσθένους υστατοι των γνωρίμων Σκυθών 'Ρωξολανοί, νοτιώτεροι όντες τῶν ὑπὲρ τῆς Βρεττανικῆς ἐσχάτων γνωριζομένων ήδη δε τάπεκεινα δια ψύχος ἀοίκητά εστι νοτιώτεροι δε τούτων και οι ύπερ της Μαιώτιδος Σαυρομάται καὶ Σκύθαι μέχρι τῶν ἐώων Σκυθῶν.

8. 'Ο μεν οὖν Μασσαλιώτης Πυθέας τὰ περὶ Θούλην τὴν βορειοτάτην τῶν Βρεττανίδων ὕστατα λέγει, παρ' οἶς ὁ αὐτός ἐστι τῷ ἀρκτικῷ ὁ θερινὸς τροπικὸς κύκλος παρὰ δὲ τῶν ἄλλων οὐδὲν ἱστορῶ, οὖθ' ὅτι Θούλη νῆσος ἔστι τις, οὖτ' εἰ τὰ μέχρι δεῦρο οἰκήσιμά ἐστιν, ὅπου ὁ θερινὸς

¹ περατοῦται, Madvig, for περατοῖ.

¹ That is, at Thule the variable arctic circle has the fixed value of the summer tropic. Hence, according to Pytheas, the latitude of Thule would be the complement of that of

GEOGRAPHY, 2. 5. 7-8

hundred stadia), and therefore we should have eight thousand eight hundred stadia left as the distance from the confines of the inhabited world to the equator, and from Alexandria twenty-one thousand eight hundred. Again, all agree that the route by sea from Alexandria to Rhodes is in a straight line with the course of the Nile, as also the route thence along the coast of Caria and Ionia to the Troad, Byzantium, and the Borysthenes. Taking, therefore, the distances that are already known and sailed over, geographers inquire as to the regions beyond the Borysthenes that lie in a straight course with this line—as to how far they are inhabitable, and how far the northern parts of the inhabited world have their boundaries. Now the Roxolanians, the most remote of the known Scythians, live beyond the Borysthenes, though they are farther south than the most remote peoples of whom we have knowledge north of Britain; and the regions beyond the Roxolanians become at once uninhabitable because of the cold; and farther south than the Roxolanians are the Sarmatians who dwell beyond Lake Maeotis, and also the Scythians as far as the Eastern Scythians.

8. Now Pytheas of Massilia tells us that Thule, the most northerly of the Britannic Islands, is farthest north, and that there the circle of the summer tropic is the same as the arctic circle. But from the other writers I learn nothing on the subject—neither that there exists a certain island by the name of Thule, nor whether the northern regions are inhabitable up to the point where the summer tropic becomes the

the terrestrial tropic. Assuming that Pytheas placed the latter at 24° (as did Eratosthenes and Strabo), he placed Thule at 66°.

τροπικὸς ἀρκτικὸς γίνεται. νομίζω δὲ πολὺ εἶναι νοτιώτερον τούτου τό τῆς οἰκουμένης πέρας τὸ προσάρκτιον οί γαρ νθν ίστοροθντες περαιτέρω C 115 της 'Ιέρνης ούδεν έχουσι λέγειν, η προς άρκτον πρόκειται της Βρεττανικής πλησίου, ανρίων τελέως ανθρώπων και κακώς οικούντων διά ψύγος, ωστ' ενταθθα νομίζω τὸ πέρας είναι θετέον. τοῦ δὲ παραλλήλου τοῦ διὰ Βυζαντίου διὰ Μασσαλίας πως ιόντος, ως φησιν Ίππαργος πιστεύσας Πυθέα (φησί γαρ έν Βυζαντίω τον αὐτον είναι λόγον τοῦ γνώμονος πρὸς τὴν σκιάν, δν είπεν ὁ Πυθέας ἐν Μασσαλία), τοῦ δὲ διὰ Βορυσθένους ἀπὸ τούτου διέχοντος περί τρισχιλίους καὶ ὀκτακοσίους, εἴη αν ἐκ τοῦ διαστήματος τοῦ ἀπὸ Μασσαλίας ἐπὶ τὴν Βρεττανικήν ένταθθά που πίπτων ο διὰ τοῦ Βορυσθένους κύκλος. πανταχοῦ ἀλλαχοῦ ² δὲ παρακρουόμενος τους ανθρώπους ὁ Πυθέας κανταῦθά που διέψευσται. τὸ μὲν γὰρ τὴν ἀπὸ Στηλῶν γραμμὴν ἐπὶ τούς περί του Πορθμον και 'Αθήνας και 'Ρόδον τόπους έπλ τοῦ αὐτοῦ παραλλήλου κεῖσθαι ώμολόγηται παρά πολλών ομολογείται δε ότι καὶ διά μέσου πως τοῦ πελάγους ἐστὶν ἡ ἀπὸ Στηλῶν έπὶ τὸν Πορθμόν. οί τε 3 πλέοντές φασι 4 τὸ μέγιστον δίαρμα ἀπὸ τῆς Κελτικῆς ἐπὶ τἡν Λιβύην είναι τὸ ἀπὸ τοῦ Γαλατικοῦ κόλπου σταδίων πεντακισχιλίων, τοῦτο δ' εἶναι καὶ τὸ μέγιστον πλάτος τοῦ πελάγους, ώστ' είη ἂν τὸ ἀπὸ τῆς λεχθείσης

4 φασι, Madvig inserts, after πλέοντες.

¹ τούτου, Β. Niese, for τοῦτο; Α. Vogel approving. 2 ἀλλαχοῦ, Α. Jacob, for πολλαχοῦ.

³ of τε, A. Jacob, for oi δε, reporting that of τε is the reading of A, B, and C.

GEOGRAPHY, 2.5.8

arctic circle. But in my opinion the northern limit of the inhabited world is much farther to the south than where the summer tropic becomes the arctic circle. For modern scientific writers are not able to speak of any country north of Ierne, which lies to the north of Britain and near thereto, and is the home of men who are complete savages and lead a miserable existence because of the cold; and therefore, in my opinion, the northern limit of our inhabited world is to be placed there. But if the parallel through Byzantium passes approximately through Massilia, as Hipparchus says on the testimony of Pytheas (Hipparchus says, namely, that in Byzantium the relation of the index to the shadow is the same as that which Pytheas gave for Massilia), and if the parallel through the mouth of the Borysthenes is about three thousand eight hundred stadia distant from that parallel, then, in view of the distance from Massilia to Britain,1 the circle drawn through the mouth of the Borysthenes would fall somewhere in Britain. Pytheas, who misleads people everywhere else, is, I think, wholly in error here too; for it has been admitted by many writers that all the line drawn from the Pillars to the regions of the Strait of Sicily and of Athens, and of Rhodes, lies on the same parallel; and it is admitted that the part of that line from the Pillars to the strait runs approximately through the middle of the sea. And further, sailors say that the longest passage from Celtica to Libya, namely, that from the Galatic Gulf, is five thousand stadia, and that this is also the greatest width of the Mediterranean sea, and therefore the distance from

¹ That is, 3,700 stadia.

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γραμμής έπι τον μυχον του κόλπου σταδίων δισγιλίων πεντακοσίων, έπὶ δὲ Μασσαλίαν έλαττόνων νοτιωτέρα γάρ ἐστιν ἡ Μασσαλία τοῦ μυγοῦ τοῦ κόλπου. τὸ δέ γε ἀπὸ τῆς Ροδίας ἐπὶ τὸ Βυζάντιον ἐστι τετρακισχιλίων που καὶ ἐννακοσίων σταδίων, ώστε πολύ άρκτικώτερος αν είη ο δια Βυζαντίου τοῦ διὰ Μασσαλίας. τὸ δ' ἐκεῖθεν ἐπὶ την Βρεττανικην δύναται συμφωνείν τῷ ἀπὸ Βυζαντίου έπι Βορυσθένη το δ' έκειθεν έπι την Ίέρνην οὐκέτι γνώριμον, πόσον ἄν τις θείη, οὐδ' εἰ περαιτέρω ἔτι οἰκήσιμά ἐστιν, οὐδὲ δεῖ Φροντίζειν τοῖς έπάνω λεχθεῖσι προσέχοντας. πρός τε γὰρ ἐπιστήμην άρκεῖ τὸ λαβεῖν, ὅτι,² καθάπερ ἐπὶ τῶν νοτίων μερών, ύπερ Μερόης μέχρι τρισχιλίων σταδίων προελθόντι της οικησίμου τίθεσθαι πέρας 3 προσηκεν (ούχ ώς αν τούτου ακριβεστάτου πέρατος όντος, άλλ' έγγύς γε τάκριβοῦς), οὕτω κάκεῖ τοὺς ύπερ της Βρεττανικής ού πλείους τούτων θετέον ή μικρώ πλείους, οίον τετρακισχιλίους. πρός τε τὰς ήγεμονικάς χρείας οὐδεν αν είη πλεονέκτημα τάς τοιαύτας γνωρίζειν χώρας καὶ τοὺς ἐνοικοῦντας, καὶ μάλιστα εἰ νήσους οἰκοῖεν τοιαύτας, αὶ μήτε λυπείν μήτ' ώφελείν ήμας δύνανται μηδέν διά τὸ άνεπίπλεκτον. καὶ γὰρ τὴν Βρεττανικὴν ἔχειν δυνάμενοι 'Ρωμαίοι κατεφρόνησαν, δρώντες ότι ούτε φόβος έξ αὐτῶν οὐδὲ είς ἐστιν (οὐ γὰρ

³ πέραs, Corais inserts; editors following.

προσέχοντας, Corais conjectures; editors following.
 Groskurd transposes ὅτι from a position before ὑπέρ to a position before καθάπερ.

GEOGRAPHY, 2.5.8

the line in question to the head of the gulf would be two thousand five hundred stadia and less than that to Massilia; for Massilia is farther south than the head of the gulf. But the distance from Rhodes to Byzantium is about four thousand nine hundred stadia, and therefore the parallel through Byzantium would be much farther north than that through And the distance from Massilia to Britain may possibly correspond to that from Byzantium to the mouth of the Borysthenes; but the distance that should be set down for the stretch from Britain to Ierne is no longer a known quantity, nor is it known whether there are still inhabitable regions farther on, nor need we concern ourselves about the question if we give heed to what has been said above. For, so far as science is concerned, it is sufficient to assume that, just as it was appropriate in the case of the southern regions to fix a limit of the habitable world by proceeding three thousand stadia south of Meroë (not indeed as though this were a very accurate limit, but as one that at least approximates accuracy), so in this case too we must reckon not more than three thousand stadia north of Britain, or only a little more, say, four thousand stadia. And for governmental purposes there would be no advantage in knowing such countries and their inhabitants, and particularly if the people live in islands which are of such a nature that they can neither injure nor benefit us in any way because of their isolation. For although they could have held even Britain, the Romans scorned to do so, because they saw that there was nothing at all to fear from the Britains (for they are not strong enough to cross

C 116 ἰσχύουσι τοσοῦτον, ὥστ' ἐπιδιαβαίνειν ἡμῖν), οὔτ' ἀφέλεια τοσαύτη τις, εἰ κατάσχοιεν. πλέον γὰρ δὴ ¹ ἐκ τῶν τελῶν δοκεῖ προσφέρεσθαι νῦν, ἢ ὁ φόρος δύναιτ' ἂν ² συντελεῖν, ἀφαιρουμένης τῆς εἰς τὸ στρατιωτικὸν δαπάνης τὸ φρουρῆσον καὶ φορολογῆσον τὴν νῆσον· πολὺ δ' ἂν ἔτι γένοιτο ³ τὸ ἄχρηστον ἐπὶ τῶν ἄλλων τῶν περὶ ταύτην νήσων.

9. Εί δὲ προστεθείη τῷ ἀπὸ τῆς Ῥοδίας μέχρι Βορυσθένους διαστήματι τὸ ἀπὸ Βορυσθένους ἐπὶ τὰς ἄρκτους τῶν τετρακισγιλίων σταδίων διάστημα, γίνεται τὸ πᾶν μύριοι δισχίλιοι έπτακόσιοι στάδιοι, τὸ δ' ἀπὸ τῆς 'Ροδίας ἐπὶ τὸ νότιον πέρας έστὶ τῆς οἰκουμένης μύριοι έξακισχίλιοι έξακόσιοι, ώστε τὸ σύμπαν πλάτος τῆς οἰκουμένης είη αν έλαττον των τρισμυρίων άπο νότου πρὸς ἄρκτον. τὸ δέ γε μῆκος περὶ ἐπτὰ μυριάδας λέγεται, τοῦτο δ' ἐστίν ἀπὸ δύσεως ἐπὶ τὰς ἀνατολάς τὸ ἀπὸ τῶν ἄκρων τῆς Ἰβηρίας ἐπὶ τὰ ἄκρα της Ίνδικης, τὸ μὲν όδοις, τὸ δὲ ταις ναυτιλίαις άναμεμετρημένον. ὅτι δ' ἐντὸς τοῦ λεχθέντος τετραπλεύρου τὸ μῆκός ἐστι τοῦτο, ἐκ τοῦ λόγου τῶν παραλλήλων πρὸς τὸν ἰσημερινὸν δήλον, ὥστε πλέον ή διπλάσιον έστι τοῦ πλάτους τὸ μηκος. λέγεται δὲ καὶ χλαμυδοειδές πως τὸ σχήμα. πολλή γὰρ συναγωγή τοῦ πλάτους πρὸς τοῖς άκροις ευρίσκεται, καὶ μάλιστα τοῖς έσπερίοις, τὰ καθ' έκαστα ἐπιόντων ἡμῶν.

10. Νυνί μεν οὖν ἐπιγεγράφαμεν ἐπὶ σφαιρικῆς

¹ δή, A. Jacob, for αν.

² δύναιτ' άν, Cobet, for δύναται.

³ έτι γένοιτο, Corais, for έπιγένοιτο.
4 τῶν, Kramer suspects, after παραλλήλων; Meineke deletes.

GEOGRAPHY, 2. 5. 8-10

over and attack us), and that no corresponding advantage was to be gained by taking and holding their country. For it seems that at present more revenue is derived from the duty on their commerce than the tribute could bring in, if we deduct the expense involved in the maintenance of an army for the purpose of guarding the island and collecting the tribute; and the unprofitableness of an occupation would be still greater in the case of the other islands about Britain.

- 9. Now if to the distance from Rhodes to the mouth of the Borysthenes we add the distance of four thousand stadia from the mouth of the Borvsthenes to the northern regions, the sum total amounts to twelve thousand seven hundred stadia, but the distance from Rhodes to the southern limit of the inhabited world is sixteen thousand six hundred stadia, and therefore the total breadth of the inhabited world would be less than thirty thousand stadia from south to north. Its length, however, is estimated at about seventy thousand stadia; and this is, from west to east, the distance from the capes of Iberia to the capes of India, measured partly by land journeys and partly by sea voyages. And that this length falls within the quadrilateral mentioned above is clear from the relation of the parallels to the equator; hence the length of the inhabited world is more than double its breadth. Its shape is described as about like that of a chlamys; for when we visit the several regions of the inhabited world, we discover a considerable contraction in its width at its extremities, and particularly at its western extremities.
 - 10. We have now traced on a spherical surface the

έπιφανείας το χωρίον έν φ φαμεν ίδρῦσθαι την οἰκουμένην καὶ δεῖ τὸν ἐγγυτάτω διὰ τῶν χειροκμήτων σχημάτων μιμούμενον την άλήθειαν ποιή-σαντα σφαιραν την γην, καθάπερ την Κρατήτειον, έπὶ ταύτης ἀπολαβόντα τὸ τετράπλευρον, ἐντὸς τούτου τιθέναι τὸν πίνακα τῆς γεωγραφίας. ἀλλ' έπειδη μεγάλης δεί σφαίρας, ώστε πολλοστημόριου αυτής υπάρχου το λεχθευ τμήμα ικαυου γενέσθαι δέξασθαι σαφώς τα προσήκουτα μέρη της οικουμένης, και την οικείαν παρασχείν όψιν τοις επιβλέπουσι, τῷ μεν δυναμένω κατάσκευάσασθαι τηλικαύτην ούτω ποιείν βέλτιον έστω δέ μη μείω δέκα ποδών έχουσα την διάμετρον τω δέ μη δυναμένω τηλικαύτην ή μη πολλώ ταύτης ένδεεστέραν εν επιπέδω καταγραπτέον πίνακι τοὐλάχιστον έπτὰ ποδών. διοίσει γὰρ μικρόν, ἐὰν άντι των κύκλων, των τε παραλλήλων και των μεσημβρινών, οίς τά τε κλίματα καὶ τοὺς ἀνέμους διασαφούμεν και τὰς ἄλλας διαφοράς και τὰς σχέσεις των της γης μερών πρὸς ἄλληλά τε καί τὰ οὐράνια, εὐθείας γράφωμεν, τῶν μὲν παραλλήλων παραλλήλους, των δε ορθών προς εκείνους C 117 ὀρθάς, της διανοίας ραδίως μεταφέρειν δυναμένης τὸ ὑπὸ της ὄψεως ἐν ἐπιπέδω θεωρούμενον ἐπιφανεία σχημα και μέγεθος έπι την περιφερή τε καὶ σφαιρικήν. ἀνάλογον δὲ καὶ περὶ τῶν λοξῶν κύκλων και εὐθειῶν φαμέν. εἰ δ' οἱ μεσημβρινοὶ οί παρ' έκάστοις διὰ τοῦ πόλου γραφόμενοι πάντες συννεύουσιν εν τη σφαίρα πρὸς εν σημείον, άλλ'

¹ σχημάτων, Corais, for οἰκημάτων; Groskurd, Meineke, Tardieu, following; C. Müller approving.

GEOGRAPHY, 2, 5, 10

area in which we say the inhabited world is situated 1; and the man who would most closely approximate the truth by constructed figures must needs make for the earth a globe like that of Crates, and lay off on it the quadrilateral, and within the quadrilateral put down the map of the inhabited world. But since there is need of a large globe, so that the section in question (being a small fraction of the globe) may be large enough to receive distinctly the appropriate parts of the inhabited world and to present the proper appearance to observers, it is better for him to construct a globe of adequate size, if he can do so; and let it be no less than ten feet in diameter. if he cannot construct a globe of adequate size or not much smaller, he should sketch his map on a plane surface of at least seven feet.2 For it will make only a slight difference if we draw straight lines to represent the circles, that is, the parallels and meridians, by means of which we clearly indicate the "climata," the winds and the other differences, and also the positions of the parts of the earth with reference both to each other and to the heavenly bodies—drawing parallel lines for the parallels and perpendicular lines for the circles perpendicular to the parallels, for our imagination can easily transfer to the globular and spherical surface the figure or magnitude seen by the eye on a plane surface. the same applies also, we say, to the oblique circles and their corresponding straight lines. the several meridians drawn through the pole all converge on the sphere toward one point, yet on our

1 That is, the quadrilateral.

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² In length apparently; thus the scale would suit 70,000 stadia, the length of the inhabited world.

έν τῷ ἐπιπέδῳ γε οὐ διοίσει πίνακι τὰς εὐθείας μικρὰ ¹ συννευούσας ποιεῖν μόνον τὰς μεσημβρινάς. οὐδὲ γὰρ πολλαχοῦ τοῦτ' ἀναγκαῖον, οὐδ' ἐκφανής ἐστιν ὥσπερ ἡ περιφέρεια οὕτω καὶ ἡ σύννευσις, μεταφερομένων τῶν γραμμῶν εἰς τὸν πίνακα τὸν ἐπίπεδον καὶ γραφομένων εὐθειῶν.

11. Καὶ δὴ καὶ τὸν έξης λόγον ώς ἐν ἐπιπέδω πίνακι της γραφης γινομένης εκθήσομεν. ερούμεν δη ην² μὲν ἐπελθόντες αὐτοὶ της γης καὶ θαλάττης, περί ής δὲ πιστεύσαντες τοῖς εἰποῦσιν ή γράψασιν. ἐπήλθομεν δὲ ἐπὶ δύσιν μὲν ἀπὸ τῆς Αρμενίας μέχρι τῶν κατὰ Σαρδόνα τόπων τῆς Τυρρηνίας, έπὶ μεσημβρίαν δὲ ἀπὸ τοῦ Εὐξείνου μέχρι τῶν τῆς Αἰθιοπίας ὅρων οὐδὲ τῶν ἄλλων δε οὐδε είς αν εύρεθείη των γεωγραφησάντων πολύ τι ήμων μαλλον έπεληλυθώς των λεχθέντων διαστημάτων, άλλ' οἱ πλεονάσαντες περὶ τὰ δυσμικὰ μέρη των πρὸς ταις άνατολαις οὐ τοσοῦτον ή ψαντο, οί δὲ περὶ τάναντία τῶν ἐσπερίων ὑστέρησαν. όμοίως δ' έχει καὶ περὶ τῶν πρὸς νότον καὶ τὰς άρκτους. το μέντοι πλέον κάκείνοι και ήμεις άκοη παραλαβόντες συντίθεμεν και τὸ 3 σχημα και τὸ μέγεθος καὶ τὴν ἄλλην φύσιν, ὁποία καὶ ὁπόση, τὸν αὐτὸν τρόπον ὄνπερ ἡ διάνοια ἐκ τῶν αἰσθητῶν συντίθησι τὰ νοητά· σχημα γὰρ καὶ χρόαν καὶ μέγεθος μήλου και όδμην και άφην και χυμον άπαγγέλλουσιν αι αισθήσεις, εκ δε τούτων συντίθησιν ή διάνοια την τοῦ μήλου νόησιν καὶ αὐτῶν δὲ τῶν

¹ μικρά, Madvig, for μικράs.

² ην, Capps, for την.

τε, Kramer suspects, before σχημα; Meineke deletes.
 συντίθησι, Casaubon, for τίθησι; editors following.

GEOGRAPHY, 2. 5. 10-11

plane-surface chart it will not be a matter of importance merely to make the straight meridian lines converge slightly 1; for there is no necessity for this in many cases, nor are the converging straight lines, when the lines of the sphere are transferred to the plane chart and drawn as straight lines, as easily understood as are the curved lines on the sphere.

11. And so in what I have to say hereafter I shall assume that our drawing has been made on a plane chart. Now I shall tell what part of the land and sea I have myself visited and concerning what part I have trusted to accounts given by others by word of mouth or in writing. I have travelled westward from Armenia as far as the regions of Tyrrhenia² opposite Sardinia, and southward from the Euxine Sea as far as the frontiers of Ethiopia. And you could not find another person among the writers on geography who has travelled over much more of the distances just mentioned than I; indeed, those who have travelled more than I in the western regions have not covered as much ground in the east, and those who have travelled more in the eastern countries are behind me in the western; and the same holds true in regard to the regions towards the south and north. However, the greater part of our material both they and I receive by hearsay and then form our ideas of shape and size and also other characteristics, qualitative and quantitative, precisely as the mind forms its ideas from sense impressions—for our senses report the shape, colour, and size of an apple, and also its smell, feel, and flavour; and from all this the mind forms the concept of apple. So, too, even

¹ That is, in view of the fact that no attempt is made to indicate curvature. ² Tuscany.

μεγάλων σχημάτων τὰ μέρη μὲν αἴσθησις ὁρᾳ, τὸ δ' ὅλον ἐκ τῶν ὁραθέντων ἡ διάνοια συντίθησιν. οὕτω δὲ καὶ οἱ φιλομαθεῖς ἄνδρες, ὥσπερ αἰσθητηρίοις πιστεύσαντες τοῖς ἰδοῦσιν καὶ πλανηθεῖσιν οῦς ἔτυχε τόπους, ἄλλοις κατ' ἄλλα μέρη τῆς γῆς, συντιθέασιν εἰς ἐν διάγραμμα τὴν τῆς ὅλης οἰκουμένης ὄψιν. ἐπεὶ καὶ οἱ στρατηγοὶ πάντα μὲν αὐτοὶ πράττουσιν, οὐ πανταχοῦ δὲ πάρεισιν, ἀλλὰ πλεῖστα κατορθοῦσι δὶ ἐτέρων, ἀγγέλοις πιστεύοντες καὶ πρὸς τὴν ἀκοὴν διαπέμποντες οἰκείως τὰ προστάγματα. ὁ δ' ἀξιῶν μόνους εἰδέναι τοὺς ἰδόντας ἀναιρεῖ τὸ τῆς ἀκοῆς κριτήριον, ἤτις πρὸς ἐπιστήμην ὀφθαλμοῦ πολὺ κρείττων ἐστί.

12. Μάλιστα δ' οἱ νῦν ἄμεινον ἔχοιεν ἄν τι λέγειν περὶ τῶν κατὰ Βρεττανοὺς καὶ Γερμανοὺς C 118 καὶ τοὺς περὶ τὸν Ἱστρον τούς τε ἐντὸς καὶ τοὺς ἐκτός, Γέτας τε καὶ Τυρεγέτας καὶ Βαστάρνας, ἔτι δὲ τοὺς περὶ τὸν Καύκασον, οἶον ᾿Αλβανοὺς καὶ Ἡβηρας. ἀπήγγελται δ' ἡμῖν καὶ ὑπὸ τῶν τὰ Παρθικὰ συγγραψάντων, τῶν περὶ ᾿Απολλόδωρον τὸν ᾿Αρτεμιτηνόν, ὰ πολλῶν ἐκεῖνοι μᾶλλον ἀφώρισαν, τὰ περὶ τὴν Ὑρκανίαν καὶ τὴν Βακτριανήν. τῶν τε Ὑρμαίων καὶ εἰς τὴν εὐδαίμονα ᾿Αραβίαν ἐμβαλόντων μετὰ στρατιᾶς νεωστί, ἡς ἡγεῖτο ἀνὴρ φίλος ἡμῖν καὶ ἐταῖρος Αἴλιος Γάλλος, καὶ τῶν ἐκ τῆς ᾿Αλεξανδρείας ἐμπόρων στό-

GEOGRAPHY, 2. 5. 11-12

in the case of large figures, while the senses perceive only the parts, the mind forms a concept of the whole from what the senses have perceived. And men who are eager to learn proceed in just that way: they trust as organs of sense those who have seen or wandered over any region, no matter what, some in this and some in that part of the earth, and they form in one diagram their mental image of the whole inhabited world. Why, generals, too, though they do everything themselves, are not present everywhere, but they carry out successfully most of their measures through others, trusting the reports of messengers and sending their orders around in conformity with the reports they hear. And he who claims that only those have knowledge who have actually seen abolishes the criterion of the sense of hearing, though this sense is much more important than sight for the purposes of science.

12. In particular the writers of the present time can give a better account 1 of the Britons, the Germans, the peoples both north and south of the Ister, the Getans, the Tyregetans, the Bastarnians, and, furthermore, the peoples in the regions of the Caucasus, such as the Albanians and the Iberians. 2 Information has been given us also concerning Hyrcania and Bactriana by the writers of Parthian histories (Apollodorus of Artemita and his school), in which they marked off those countries more definitely than many other writers. Again, since the Romans have recently invaded Arabia Felix with an army, of which Aelius Gallus, my friend and companion, was the commander, and since the merchants

¹ That is, better than their predecessors. Compare 1. 2. 1.

² The "Eastern Iberians." See page 227.

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λοις 1 ήδη πλεόντων διὰ τοῦ Νείλου καὶ τοῦ 'Αραβίου κόλπου μέχρι τῆς 'Ινδικῆς, 2 πολὺ μᾶλλον καὶ ταῦτα ἔγνωσται τοῖς νῦν ἡ τοῖς πρὸ ἡμῶν. ὅτε γοῦν Γάλλος ἐπῆρχε τῆς Αἰγύπτου, συνόντες αὐτῷ καὶ συναναβάντες μέχρι Συήνης καὶ τῶν Αἰθιοπικῶν ὅρων ἱστοροῦμεν ὅτι καὶ ἐκατὸν καὶ εἴκοσι νῆες πλέοιεν ἐκ Μυὸς ὅρμου πρὸς τὴν 'Ινδικήν, πρότερον ἐπὶ τῶν Πτολεμαϊκῶν βασιλέων ὀλίγων παντάπασι θαρρούντων πλεῖν καὶ τὸν 'Ινδικὸν ἐμπορεύεσθαι φόρτον.

13. Τὰ μὲν οὖν πρῶτα καὶ κυριώτατα καὶ πρὸς ἐπιστήμην καὶ πρὸς τὰς χρείας τὰς πολιτικὰς ταῦτα, σχήμα καὶ μέγεθος εἰπεῖν ὡς ἀπλούστατα ἐγχειρεῖν τὸ πῖπτον εἰς τὸν γεωγραφικὸν πίνακα, συμπαραδηλοῦντα καὶ τὸ ποῖόν τι καὶ πόστον μέρος τῆς ὅλης γῆς ἐστι· τοῦτο μὲν γὰρ οἰκεῖον τῷ γεωγράφῳ. τὸ δὲ καὶ περὶ ὅλης ἀκριβολογεῖσθαι τῆς γῆς καὶ περὶ τοῦ σπονδύλου παντὸς ῆς ἐλέγομεν ³ ζώνης ἄλλης τινὸς ἐπιστήμης ἐστίν, οἶον εἰ περιοικεῖται καὶ κατὰ θάτερον τεταρτημόριον ὁ σπόνδυλος· καὶ γὰρ εἰ οὕτως ἔχει, οὐχ ὑπὸ τούτων γε οἰκεῖται τῶν παρ' ἡμῖν, ἀλλ' ἐκείνην ἄλλην οἰκουμένην θετέον, ὅπερ ἐστὶ πιθανόν. ἡμῖν δὲ τὰ ἐν αὐτῆ ταύτη ⁴ λεκτέον.

14. Έστι δή τι χλαμυδοειδές σχήμα τής γής τής οἰκουμένης, οὖ τὸ μὲν πλάτος ὑπογράφει τὸ

¹ στόλοιs, Tyrwhitt, for στόλοs; editors following.

² ä, before πολύ, Paetz deletes; editors following.

ἐλέγομεν, Corais, for λέγωμεν.
 ταύτη, Tyrwhitt, for ταῦτα; editors following.

GEOGRAPHY, 2. 5. 12-14

of Alexandria are already sailing with fleets by way of the Nile and of the Arabian Gulf as far as India, these regions also have become far better known to us of to-day than to our predecessors. At any rate, when Gallus was prefect of Egypt, I accompanied him and ascended the Nile as far as Syene and the frontiers of Ethiopia, and I learned that as many as one hundred and twenty vessels were sailing from Myos Hormos to India, whereas formerly, under the Ptolemies, only a very few ventured to undertake the voyage and to carry on traffic in Indian merchandise.

- 13. Now my first and most important concern, both for the purposes of science and for the needs of the state, is this—to try to give, in the simplest possible way, the shape and size of that part of the earth which falls within our map, indicating at the same time what the nature of that part is and what portion it is of the whole earth; for this is the task proper of the geographer. But to give an accurate account of the whole earth and of the whole "spinningwhorl" of the zone of which I was speaking is the function of another science—for instance, take the question whether the "spinning-whorl" is inhabited in its other fourth also. And, indeed, if it is inhabited, it is not inhabited by men such as exist in our fourth. and we should have to regard it as another inhabited world-which is a plausible theory. It is mine, however, to describe what is in this our own inhabited world.
- 14. As I have said, the shape of the inhabited world is somewhat like a chlamys, whose greatest breadth is represented by the line that runs through

μέγιστον ή διὰ τοῦ Νείλου γραμμή, λαβοῦσα τὴν άρχην ἀπὸ τοῦ διὰ της Κινναμωμοφόρου παραλλήλου και της των Αιγυπτίων των φυγάδων νήσου μέχρι τοῦ διὰ τῆς Ἰέρνης παραλλήλου, τὸ δὲ μῆκος ή ταύτη πρὸς ὀρθὰς ἀπὸ τῆς ἐσπέρας διὰ Στηλών καὶ τοῦ Σικελικοῦ πορθμοῦ μέχρι της 'Ροδίας καὶ τοῦ 'Ισσικοῦ κόλπου, παρὰ τὸν Ταῦρον ἰρῦσα τὸν διεζωκότα τὴν ᾿Ασίαν καὶ καταστρέφοντα έπι την έφαν θάλατταν μεταξύ Ίνδων και των ύπερ της Βακτριανής Σκυθων. δεί δη νοησαι παραλληλόγραμμόν τι, έν ώ τὸ γλαμυδοειδές σχήμα εγγέγραπται ούτως, ώστε τὸ μῆκος τῷ μήκει ὁμολογεῖν καὶ ἴσον εἶναι τὸ μέγιστον, καὶ τὸ πλάτος τῶ πλάτει. τὸ μὲν δὴ γλαμυδοειδές σχήμα οἰκουμένη ἐστί τὸ δὲ πλάτος δρίζεσθαι έφαμεν αὐτης ταῖς ἐσχάταις πα-C 119 ραλλήλοις πλευραίς, ταίς διοριζούσαις τὸ οἰκήσιμον αὐτῆς καὶ τὸ ἀοίκητον ἐφ' ἐκάτερα. αὖται δ' ήσαν πρὸς άρκτοις μὲν ή διὰ τῆς Ἰέρνης, πρὸς δὲ τῆ διακεκαυμένη ή διὰ τῆς Κινναμωμοφόρου αὖται δὴ προσεκβαλλόμεναι ἐπί τε τὰς ἀνατολὰς καὶ ἐπὶ τὰς δύσεις μέχρι τῶν ἀνταιρόντων μερῶν της οἰκουμένης ποιήσουσί τι παραλληλόγραμμον πρός τὰς ἐπιζευγνυούσας διὰ τῶν ἄκρων αὐτάς. ότι μεν οθν εν τούτω εστίν ή οίκουμένη, φανερον έκ του μήτε τὸ πλάτος αὐτης τὸ μέγιστον έξω πίπτειν αὐτοῦ μήτε τὸ μῆκος ὅτι δ' αὐτῆς

¹ The Sembritae, who revolted from Psammetichus in the seventh century B.C. and fled to an island of the Nile, north 456

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the Nile, a line that begins at the parallel that runs through the Cinnamon-producing Country and the island of the fugitive Egyptians, and ends at the parallel through Ierne; its length is represented by that line drawn perpendicular thereto which runs from the west through the Pillars and the Strait of Sicily to Rhodes and the Gulf of Issus, passes along the Taurus Range, which girdles Asia, and ends at the Eastern Sea between India and the country of those Scythians who live beyond Bactriana. cordingly, we must conceive of a parallelogram in which the chlamys-shaped figure is inscribed in such a way that the greatest length of the chlamys coincides with, and is equal to, the greatest length of the parallelogram, and likewise its greatest breadth and the breadth of the parallelogram. Now this chlamys-shaped figure is the inhabited world; and, as I said, its breadth is fixed by the parallelogram's outermost lines, which separate its inhabited and its uninhabited territory in both directions.2 And these sides were: in the north, the parallel through Ierne: in the torrid region, the parallel through the Cinnamon-producing Country; hence these lines, if produced both east and west as far as those parts of the inhabited world that "rise opposite to " them, will form a parallelogram with the meridian-lines that unite them at their extremities. Now, that the inhabited world is situated in this parallelogram is clear from the fact that neither its greatest breadth nor its greatest length falls outside thereof; and

² North and south.

of Meroë. See Strabo 16. 4. 8. and 17. 1. 2. Herodotus speaks of them as "voluntary deserters" (2. 30).

³ That is, that "lie on the same parallel." See page 254.

χλαμυδοειδές τὸ σχημά έστιν, έκ τοῦ τὰ ἄκρα μυουρίζειν τὰ τοῦ μήκους έκατέρωθεν, κλυζόμενα ύπο 1 της θαλάττης, και άφαιρείν του πλάτους. τοῦτο δὲ δηλον ἐκ τῶν περιπλευσάντων τά τε έφα μέρη και τὰ δυσμικὰ έκατέρωθεν. της τε γαρ Ίνδικης νοτιωτέραν πολύ την Ταπροβάνην καλουμένην νησον αποφαίνουσιν, οἰκουμένην ἔτι, καὶ ἀνταίρουσαν τῆ τῶν Αἰγυπτίων νήσω καὶ τῆ τὸ κιννάμωμον φερούση γῆ τὴν γὰρ κρᾶσιν τῶν άέρων παραπλησίαν είναι της τε μετά τούς Ινδούς Σκυθίας της υστάτης άρκτικώτερά έστι τὰ κατὰ τὸ στόμα τῆς Υρκανίας θαλάττης καὶ έτι μάλλον τὰ κατὰ τὴν Ἰέρνην. ὁμοίως δὲ καὶ περί της έξω Στηλών λέγεται δυσμικώτατον μέν γὰρ σημείου τής οἰκουμένης τὸ τῶν Ἰβήρων ἀκρωτήριου, δ καλοῦσιν Ἱερόν κεῖται δὲ κατὰ την γραμμήν πως 2 την διά Γαδείρων τε καί Στηλών καὶ τοῦ Σικελικοῦ πορθμοῦ καὶ τῆς 'Ροδίας. συμφωνείν γαρ και τα ώροσκοπεία και τους ανέμους φασί τους έκατέρωσε φορούς και τά μήκη τῶν μεγίστων ἡμερῶν τε καὶ νυκτῶν ἔστι γὰρ τεσσαρεσκαίδεκα ώρων ισημερινών καὶ ἡμίσους 3 ή μεγίστη των ήμερων τε και νυκτων. έν τε τη παραλία τη κατά Γάδειρα Καβείρους 4 ποτέ ορασθαι. Ποσειδώνιος δ' έκ τινος ύψηλης οἰκίας έν πόλει διεχούση των τόπων τούτων όσον τετρα-

C. Müller approving.
 ² πρόs, Pletho, Corais, delete, before τήν; Meineke

following.

¹ ὑπό, Corais, for δ' ἀπό; Meineke, Forbiger, following;

³ καὶ ἡμίσους, Groskurd inserts, from a suggestion by Gosselin; all subsequent editors and translators following. ⁴ Καβείρουs, Meineke, for καὶ "Ίβηρας; Forbiger, Tardieu, following; A. Vogel, C. Müller, Tozer, approving.

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that its shape is like a chlamys is apparent from the fact that the extremities of its length, being washed away by the sea, taper off on both sides 1 and thus diminish its width there; and this is apparent from the reports of those who have sailed around the eastern and western parts in both directions.2 For these navigators declare that the island called Taprobane is considerably south of India, inhabited nevertheless, and that it "rises opposite to" the Island of the Egyptians and the Cinnamon-bearing Country; and that, indeed, the temperature of the atmosphere is much the same as that of these latter places; and the regions about the outlet of the Hyrcanian Sea are farther north than outermost Scythia beyond India, and the regions about Ierne are farther north still. A similar report is also made concerning the country outside the Pillars. namely, the promontory of Iberia which they call the Sacred Cape is the most westerly point of the inhabited world; and this cape lies approximately on the line that passes through Gades, the Pillars, the Strait of Sicily, and Rhodes. At all these points, they say, the shadows cast by the sun-dial agree, and the winds that blow in either direction come from the same direction,3 and the lengths of the longest days and nights are the same; for the longest day and the longest night have fourteen and a half equinoctial hours. Again, the constellation of the Cabeiri is sometimes seen along the coast near Gades. And Poseidonius says that from a tall house in a city about four hundred stadia distant from these regions

² That is, north and south.

¹ See note on Chlamys, § 6 (preceding).

³ Strabo is referring to the periodic winds.

κοσίους σταδίους, φησὶν ἰδεῖν ἀστέρα, δν τεκμαίρεσθαι τὸν Κάνωβον αὐτὸν ἐκ τοῦ τε τοὺς¹ μικρὸν ἐκ τῆς Ἰβηρίας προελθόντας ἐπὶ τὴν μεσημβρίαν ὁμολογεῖν ἀφορᾶν αὐτόν, καὶ ἐκ τῆς ἱστορίας τῆς ἐν Κνίδῳ· τὴν γὰρ Εὐδόξου σκοπὴν οὐ πολὺ τῶν οἰκήσεων ὑψηλοτέραν εἶναι, λέγεσθαι δ' ὅτι ἐντεῦθεν ἐκεῖνος ἀφεώρα τὸν Κάνωβον ἀστέρα, εἶναι δ' ἐπὶ τοῦ 'Ροδιακοῦ κλίματος τὴν Κνίδον, ἐφ' οὖ καὶ τὰ Γάδειρα καὶ ἡ ταύτη παραλία.

15. Ἐντεῦθεν δὲ πρὸς μὲν τὰ νότια μέρη πλέουσιν ή Λιβύη κείται ταύτης δὲ τὰ δυσμικώτατα μικρώ των Γαδείρων πρόκειται μάλλον, είτ' άκραν ποιήσαντα στενην άναχωρεί προς εω και νότον, C 120 και πλατύνεται κατ' όλίγον, έως αν τοις έσπερίοις Αιθίοψι συνάψη, ούτοι δ' ύπόκεινται των περί Καργηδόνα τόπων υστατοι, συνάπτοντες τη διά της Κινναμωμοφόρου γραμμή. είς δε τάναντία πλέουσιν ἀπὸ τοῦ Ἱεροῦ ἀκρωτηρίου μέχρι τῶν 'Αρτάβρων καλουμένων δ πλους έστι προς άρκτον, έν δεξιά έχουσι την Λυσιτανίαν είτ' ὁ λοιπὸς πρὸς τω πᾶς ἀμβλεῖαν γωνίαν ποιῶν μέγρι τῶν της Πυρήνης ἄκρων των τελευτώντων είς τὸν ώκεανόν. τούτοις δὲ τὰ ἐσπέρια τῆς Βρεττανικῆς άντίκεινται πρὸς ἄρκτον, δμοίως δὲ καὶ ταῖς 'Αρτάβροις ἀντίκεινται πρὸς ἄρκτον αἱ Καττιτερίδες καλούμεναι νήσοι πελάγιαι κατά τὸ Βρεττανικόν πως κλίμα ίδρυμέναι. ὥστε δήλον έφ' όσον συνάγεται τὰ ἄκρα τῆς οἰκουμένης κατὰ 1 τοῦ τε τούς, Corais, for τούτου τε: Groskurd, Forbiger, following.

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he saw a star which he judged to be Canopus itself, so judging from the fact that those who had proceeded but a short distance south of Iberia were in agreement that they saw Canopus, and also from scientific observations made at Cnidus; for, says he, the observatory of Eudoxus at Cnidus is not much higher than the dwelling-houses, and from there, it is said, Eudoxus saw the star Canopus; and, adds Poseidonius, Cnidus lies on the parallel of Rhodes, on which lie both Gades and the coastline thereabouts.

15. Now as you sail to the regions of the south you come to Libya; of this country the westernmost coast extends only slightly beyond Gades; then this coast, forming a narrow promontory, recedes towards the southeast and gradually broadens out to the point where it reaches the land of the Western Ethiopians. They are the most remote people south of the territory of Carthage, and they reach the parallel that runs through the Cinnamon-producing Country. But if you sail in the opposite direction from the Sacred Cape until you come to the people called Artabrians, your voyage is northward, and you have Lusitania on your right hand. Then all the rest of your voyage is eastward, thus making an obtuse angle to your former course, until you reach the headlands of the Pyrenees that abut on the The westerly parts of Britain lie opposite these headlands towards the north; and in like manner the islands called Cassiterides, 1 situated in the open sea approximately in the latitude of Britain. lie opposite to, and north of, the Artabrians. Therefore it is clear how greatly the east and west ends of

^{1 &}quot;Tin Islands"; now Scilly.

μήκος ύπὸ τοῦ περικεχυμένου πελάγους εἰς στενόν.

- 16. Τοιούτου δὲ ὄντος τοῦ καθόλου σχήματος, γρήσιμον φαίνεται δύο λαβείν εύθείας, αξ τέμνουσαι πρὸς ὀρθὰς ἀλλήλας, ἡ μὲν διὰ τοῦ μήκους ήξει τοῦ μεγίστου παντός, ή δε δια τοῦ πλάτους. καὶ ή μὲν τῶν παραλλήλων ἔσται μία, ἡ δὲ τῶν έπειτα ταύταις παραλλήλους μεσημβρινών· έπινοοῦντας ἐφ' ἐκάτερα διαιρεῖν κατὰ ταύτας τὴν γην και την θάλατταν, ή χρώμενοι τυγχάνομεν. καὶ γὰρ τὸ σχημα μᾶλλον ἃν καταφανές γένοιτο, όποιον ειρήκαμεν, κατά τὸ μέγεθος τῶν γραμμῶν, άλλα καὶ άλλα μέτρα έχουσῶν, τῶν τε τοῦ μήκους καὶ τοῦ πλάτους, καὶ τὰ κλίματα ἀποδηλωθήσεται βέλτιον, τά τε έωθινα και τα έσπέρια, ώς δ' αύτως τὰ νότια καὶ τὰ βόρεια. ἐπεὶ δὲ διὰ γνωρίμων τόπων λαμβάνεσθαι δει τὰς εὐθείας ταύτας, αὶ μὲν ἐλήφθησαν ἤδη, λέγω δὲ τὰς μέσας δύο, τήν τε τοῦ μήκους καὶ τοῦ πλάτους, τὰς λεχθείσας πρότερον, αί δ' ἄλλαι ραδίως γνωρίζοιντ' αν δια τούτων τρόπου γάρ τινα στοιχείοις γρώμενοι τούτοις τὰ παράλληλα μέρη συνεχόμεθα καὶ τὰς ἄλλας σχέσεις τῶν οἰκήσεων τάς τ' έπὶ γῆς καὶ πρὸς τὰ οὐράνια.
- 17. Πλεῖστον δ' ἡ θάλαττα γεωγραφεῖ καὶ σχηματίζει τὴν γῆν, κόλπους ἀπεργαζομένη καὶ

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the inhabited world have been narrowed down by

the surrounding sea.

16. Such being the general shape of the inhabited world, it is clearly helpful to assume two straight lines that intersect each other at right angles, one of which will run through the entire greatest length and the other through the entire greatest breadth of the inhabited world; and the first line will be one of the parallels, and the second line one of the meridians; then it will be helpful to conceive of lines parallel to these two lines on either side of them and by them to divide the land and the sea with which we happen to be conversant. For thereby the shape of the inhabited world will prove more clearly to be such as I have described it, being judged by the extent of the lines, which lines are of different measurements, both those of the length and those of the breadth; and thereby too the "climata" will be better represented, both in the east and in the west, and likewise in the south and in the north. But since these straight lines must be drawn through known places, two of them have already been so drawn, I mean the two central lines mentioned above, the one representing the length and the other the breadth; and the other lines will be easily found by the help of these two. For by using these lines as "elements," so to speak, we can correlate the regions that are parallel, and the other positions, both geographical and astronomical, of inhabited places.

17. It is the sea more than anything else that defines the contours of the land and gives it its

¹ Or, as we would say, "axes of co-ordinates." (Strabo has in mind something similar to our system of co-ordinates in analytical geometry.)

πελάγη καὶ πορθμούς, ὁμοίως δὲ ἰσθμούς καὶ χερ-

ρονήσους καὶ ἄκρας προσλαμβάνουσι δὲ ταύτη καὶ οί ποταμοὶ καὶ τὰ ὄρη. διὰ γὰρ τῶν τοιούτων ήπειροί τε καὶ έθνη καὶ πόλεων θέσεις εὐφυείς ένενοήθησαν καὶ τάλλα ποικίλματα, ὅσων μεστός έστιν ο χωρογραφικός πίναξ. έν δε τούτοις και τὸ τῶν νήσων πληθός ἐστι κατεσπαρμένον ἔν τε τοῖς πελάγεσι καὶ κατὰ τὴν παραλίαν πᾶσαν, ἄλλων δ' 1 άλλας άρετάς τε καὶ κακίας καὶ τὰς ἀπ' C 121 αὐτῶν χρείας ἐπιδεικνυμένων ἡ δυσχρηστίας, τας μέν φύσει, τας δε έκ κατασκευής, τας φύσει δεί λέγειν διαμένουσι γάρ, αί δ' ἐπίθετοι δέγονται μεταβολάς. και τούτων δὲ τὰς πλείω χρόνον συμμένειν δυναμένας εμφανιστέον, η 2 μη πολύ μέν, άλλως δ' επιφάνειαν μεν εχούσας τινά καὶ δόξαν, η πρός του ύστερου χρόνου παραμένουσα τρόπου τινα συμφυή τοις τόποις ποιεί και μηκέτι οθσαν κατασκευήν ωστε δήλον ότι δεί και τούτων μεμνήσθαι. περί πολλών γάρ έστι πόλεων τοῦτ' είπειν, όπερ είπε Δημοσθένης έπι των περί "Ολυνθον, ας ούτως ήφανίσθαι φησίν, ώστε μηδ" εὶ πώποτε ωκήθησαν γνωναι ἄν τινα ἐπελθόντα. άλλ' όμως καὶ εἰς τούτους τοὺς τόπους καὶ εἰς άλλους ἀφικνοῦνται ἄσμενοι, τά γ' ἴχνη ποθοῦντες ίδειν των ούτω διωνομασμένων έργων, καθάπερ καὶ τοὺς τάφους τῶν ἐνδόξων ἀνδρῶν. οὕτω δὲ καὶ νο-

¹ δ', Corais inserts, after ἄλλων; generally followed.
2 ή, Corais inserts; Groskurd, Kramer, Forbiger, following.

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shape, by forming gulfs, deep seas, straits, and likewise isthmuses, peninsulas, and promontories; but both the rivers and the mountains assist the seas herein. It is through such natural features that we gain a clear conception of continents, nations, favourable positions of cities, and all the other diversified details with which our geographical map is filled. And among these details are the multitude of islands scattered both in the open seas and along the whole seaboard. And since different places exhibit different good and bad attributes, as also the advantages and inconveniences that result therefrom, some due to nature and others resulting from human design, the geographer should mention those that are due to nature; for they are permanent, whereas the adventitious attributes undergo changes. And also of the latter attributes he should indicate such as can persist for a long time, or else such as can not persist for long and yet somehow possess a certain distinction and fame, which, by enduring to later times, make a work of man, even when it no longer exists. a kind of natural attribute of a place; hence it is clear that these latter attributes must also be men-Indeed, it is possible to say concerning many cities what Demosthenes said 1 of Olynthus and the cities round about it,2 which have so completely disappeared, he says, that a visitor could not know even whether they had ever been founded. nevertheless men like to visit these places as well as others, because they are eager to see at least the traces of deeds so widely famed, just as they like to visit the tombs of illustrious men. So, also, I have mentioned

¹ Philippics 3. 117.

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² Methone, Apollonia, and thirty-two other cities.

μίμων καὶ πολιτειῶν μεμνήμεθα τῶν μηκέτι οὐσῶν, ἐνταῦθα καὶ τῆς ἀφελείας προκαλουμένης τὸν αὐτὸν τρόπον ὅνπερ καὶ ἐπὶ τῶν πράξεων ἢ γὰρ ζήλου χάριν, ἢ ἀποτροπῆς τῶν τοιούτων.

18. Λέγομεν δ' αναλαβόντες από της ποώτης ύποτυπώσεως, ὅτι ἡ καθ' ἡμᾶς οἰκουμένη γη περίρρυτος οὖσα δέχεται κόλπους εἰς έαυτὴν ἀπὸ τῆς έξω θαλάττης κατά τὸν ὠκεανὸν πολλούς, μεγίστους δὲ τέτταρας ων δ μὲν βόρειος Κασπία καλείται θάλαττα, οί δ' Υρκανίαν προσαγορεύουσιν ό δὲ Περσικὸς καὶ ᾿Αράβιος ἀπὸ τῆς νοτίας άναχέονται θαλάττης, ὁ μὲν τῆς Κασπίας κατ' άντικρύ μάλιστα, δ δὲ τῆς Ποντικῆς τέταρτον, δοπερ πολύ τούτους ύπερβέβληται κατά τὸ μέγεθος, ή ἐντὸς καὶ καθ' ἡμᾶς λεγομένη θάλαττα ἀπεργάζεται, τὴν μὲν ἀρχὴν ἀπὸ τῆς ἐσπέρας λαμβάνουσα καὶ τοῦ κατὰ τὰς Ἡρακλείους στήλας πορθμού, μηκυνομένη δ' είς τὸ πρὸς εω μέρος έν άλλω καὶ άλλω πλάτει, μετὰ δὲ ταῦτα σχιζομένη και τελευτώσα είς δύο κόλπους πελαγίους. τον μεν εν αριστερά, ονπερ Εύξεινον πόντον προσαγορεύομεν, τον δ΄ έτερον τον συγκείμενον έκ τε τοῦ Αἰγυπτίου πελάγους καὶ τοῦ Παμφυλίου καὶ τοῦ Ἰσσικοῦ. ἄπαντες δ' οἱ λεχθέντες κόλποι της έξω θαλάττης στενον έχουσι τον είσπλουν, μάλλον μεν ο τε 'Αράβίος και κατά Στήλας, ήττον δ' οί λοιποί. ή δὲ περικλείουσα αὐτοὺς γῆ τριχῆ νενέμηται, καθάπερ είρηται. ή μεν οθν Εθρώπη πολυσχημονεστάτη πασων έστιν, ή δε Λιβύη τάναντία πέπονθεν, ή δε 'Ασία μέσην πως άμφοιν έχει

¹ καὶ ἄλλφ, Casaubon conjectures; editors following.

customs and constitutions that no longer exist, for the reason that utility urges me in their case just as it does in the case of deeds of action; that is, either to incite emulation or else avoidance of this or that.

18. I now resume my first sketch of the inhabited world and say that our inhabited world, being girt by the sea, admits into itself from the exterior sea along the ocean many gulfs, of which four are very Of these four gulfs the northern one is called the Caspian Sea (though some call it the Hyrcanian Sea); the Persian Gulf and the Arabian Gulf pour inland from the Southern Sea, the one about opposite the Caspian Sea and the other about opposite the Pontus; and the fourth, which far exceeds the others in size, is formed by the sea which is called the Interior Sea, or Our Sea; it takes its beginning in the west at the strait at the Pillars of Heracles, and extends lengthwise towards the regions of the east, but with varying breadth, and finally divides itself and ends in two sea-like gulfs, the one on the left hand, which we call the Euxine Pontus, and the other consisting of the Egyptian, the Pamphylian, and the Issican Seas. All these aforesaid gulfs have narrow inlets from the Exterior Sea, particularly the Arabian Gulf and that at the Pillars, whereas the others are not so narrow. The land that surrounds these gulfs is divided into three parts, as I have said. Now Europe has the most irregular shape of all three; Libya has the most regular shape; while Asia occupies a sort of middle

- C 122 την διάθεσιν απασαι δ' έκ της έντος παραλίας έχουσι την αιτίαν τοῦ τε πολυσχήμονος καὶ τοῦ μή, ή δ' ἐκτὸς πλὴν τῶν λεχθέντων κόλπων άπλη και χλαμυδοειδής έστιν, ώς είπον, τὰς δ' άλλας έν μικρώ διαφοράς έατέον οὐδεν γάρ έν τοις μεγάλοις τὸ μικρόν. ἔτι δ' ἐπεὶ κατὰ τὴν γεωγραφικήν ίστορίαν οὐ σχήματα μόνον ζητοῦμεν καὶ μεγέθη τόπων, άλλὰ καὶ σχέσεις πρὸς άλληλα αὐτῶν, ὥσπερ ἔφαμεν, καὶ ἐνταῦθα τὸ ποικίλον ἡ έντὸς παραλία παρέχεται μάλλον ή ή έκτός. πολύ δ' έστὶ καὶ τὸ γνώριμον καὶ τὸ εὔκρατον καὶ τὸ πόλεσι καὶ ἔθνεσιν εὐνομουμένοις συνοικούμενον μαλλον ενταύθα ή εκεί. ποθούμεν τε είδεναι ταθτα, εν οίς πλείους παραδίδονται πράξεις καί πολιτείαι και τέχναι και τάλλα, δσα είς φρόνησιν συνεργεί, αί τε χρείαι συνάγουσιν ήμας πρός έκεινα, ών εν εφικτφ αι επιπλοκαί και κοινωνίαι. ταῦτα δ' ἐστὶν ὅσα οἰκεῖται, μᾶλλον δ' οἰκεῖται καλώς, πρὸς ἄπαντα δὲ τὰ τοιαῦτα, ὡς ἔφην, ἡ παρ' ήμιν θάλαττα πλεονέκτημα έχει μέγα καί δη καὶ ἔνθεν ἀρκτέον της περιηγήσεως.
 - 19. Εἴρηται δὲ ὅτι ἀρχὴ τοῦδε τοῦ κόλπου ἐστὶν ὁ κατὰ τὰς Στήλας πορθμός· τὸ δὲ στενότατον τούτου περὶ ἑβδομήκοντα σταδίους λέγεται· παραπλεύσαντι δὲ τὸν στενωπὸν ἑκατὸν καὶ εἴκοσι σταδίων ὄντα διάστασιν λαμβάνουσιν αί 468

GEOGRAPHY, 2. 5. 18-19

position between the other two in this respect. And the cause of their irregularity or their lack of it lies in the coastline of the Interior Sea, whereas the coastline of the Exterior Sea, with the exception of that of the aforesaid gulfs, is regular and, as I have said, like a chlamys; but I must leave out of view the other slight irregularities, for a little thing is nothing when we are dealing with great things. And further, since in the study of geography we inquire not merely into the shapes and dimensions of countries, but also, as I have said, into their positions with reference to each other, herein, too, the coastline of the Interior Sea offers for our consideration more varied detail than that of the Exterior Sea. And far greater in extent here than there is the known portion, and the temperate portion, and the inhabited by well-governed cities and Again, we wish to know about those parts of the world where tradition places more deeds of action, political constitutions, arts, and everything else that contributes to practical wisdom; and our needs draw us to those places with which commercial and social intercourse is attainable; and these are the places that are under government, or rather under good government. Now, as I have said, our Interior Sea has a great advantage in all these respects; and so with it I must begin my description.

19. I have already stated that the strait at the Pillars forms the beginning to this gulf; and the narrowest part of the strait is said to be about seventy stadia; but after you sail through the narrows, which are one hundred and twenty stadia in length, the coasts take a divergent course all at

ηιόνες άθρόαν, ή δ' εν άριστερά μάλλον είτ' όψις μεγάλου φαίνεται πελάγους. δρίζεται δ' έκ μεν του δεξιού πλευρού τη Λιβυκή παραλία μέχρι Καρχηδόνος, ἐκ δὲ θατέρου τῆ τε Ἰβηρική καὶ τή Κελτική κατὰ Νάρβωνα καὶ Μασσαλίαν, και μετά ταῦτα τῆ Λιγυστικῆ, τελευταία δὲ τῆ Ἰταλικῆ μέχρι τοῦ Σικελικοῦ πορθμοῦ. τὸ δε έφον του πελάγους πλευρον ή Σικελία έστλ καὶ οἱ ἐκατέρωθεν αὐτῆς πορθμοί ὁ μὲν πρὸς τῆ Ίταλία επταστάδιος, ὁ δὲ πρὸς τῆ Καρχηδόνι χιλίων καὶ πεντακοσίων σταδίων. ἡ δ' ἀπὸ¹ τῶν Στηλῶν ἐπὶ τὸ ἐπταστάδιον γραμμὴ μέρος μέν έστι της έπι 'Ρόδον και τὸν Ταῦρον, μέσον δέ πως τέμνει τὸ λεχθὲν πέλαγος λέγεται δὲ σταδίων μυρίων καλ δισχιλίων τοῦτο μέν δη τὸ μηκος τοῦ πελάγους, πλάτος δὲ τὸ μεγίστον ὅσον πεντακισγιλίων σταδίων τὸ ἀπὸ τοῦ Γαλατικοῦ κόλπου μεταξύ Μασσαλίας και Νάρβωνος έπι την κατ' άντικού Λιβύην, καλούσι δέ το προς τη Λιβύη παν μέρος της θαλάττης ταύτης Λιβυκον πέλαγος, τὸ δὲ πρὸς τῆ κατ' ἀντικρὺ γῆ τὸ μὲν Ίβηρικόν, τὸ δὲ Λιγυστικόν, τὸ δὲ Σαρδόνιον. τελευταίον δὲ μέχρι τῆς Σικελίας τὸ Τυρρηνικόν. νησοι δ' είσιν έν μεν τη παραλία τη κατά τὸ Τυρρηνικον πέλαγος μέχρι της Λιγυστικής συχναί, C 123 μέγισται δὲ Σαρδώ καὶ Κύρνος μετά γε την Σικελίαν αυτη δε και των άλλων εστι μεγίστη τῶν καθ' ἡμᾶς καὶ ἀρίστη. πολὺ δὲ τούτων

> 1 της, Kramer suspects, before των Στηλών; Meineke deletes; C. Müller approving.

² Σαρδόνιον, Corais, for Σαρδώνιον; Meineke following;

C. Müller approving.

GEOGRAPHY, 2. 5. 19

once, though the one on the left diverges more; and then the gulf assumes the aspect of a great sea. is bounded on the right side by the coastline of Libya as far as Carthage, and on the other side, first, by Iberia and also by Celtica in the regions of Narbo and Massilia, and next by Liguria, and finally by Italy as far as the Strait of Sicily. The eastern side of this sea is formed by Sicily and the straits on either side of Sicily; the one between Italy and Sicily is seven stadia in width and the one between Sicily and Carthage is fifteen hundred stadia. the line from the Pillars to the seven-stadia strait is a part of the line to Rhodes and the Taurus Range: it cuts the aforesaid sea approximately in the middle; and it is said to be twelve thousand stadia in length. This, then, is the length of the sea, while its greatest breadth is as much as five thousand stadia, the distance from the Galatic Gulf between Massilia and Narbo to the opposite coast of Libya. The entire portion of this sea along the coast of Libya they call the Libyan Sea, and the portion that lies along the opposite coast they call, in order, the Iberian Sea, the Ligurian Sea, the Sardinian Sea, and finally, to Sicily, the Tyrrhenian Sea. There are numerous islands along the coast of the Tyrrhenian Sea as far as Liguria, and largest of all are Sardinia and Corsica, except Sicily; but Sicily is the largest and best of all the islands in our part of the world, λειπόμεναι πελάγιαι μὲν Πανδατερία τε καὶ Ποντία, πρόσγειοι δὲ Αἰθαλία τε καὶ Πλανασία καὶ Πιθηκοῦσσα καὶ Προχύτη καὶ Καπρίαι καὶ Λευκωσία καὶ ἄλλαι τοιαῦται. ἐπὶ θάτερα δὲ τῆς Λιγυστικῆς αἱ πρὸ τῆς λοιπῆς ἠιόνος μέχρι Στηλῶν οὐ πολλαί, ὧν εἰσιν αἴ τε Γυμνήσιαι καὶ Ἔβυσος· οὐ πολλαὶ δ' οὐδ' αἱ πρὸ τῆς Λιβύης καὶ τῆς Σικελίας, ὧν εἰσι Κόσσουρά τε καὶ Αἰγίμουρος καὶ αἱ Λιπαραίων νῆσοι, ἃς

Αίόλου τινές προσαγορεύουσι.

20. Μετὰ δὲ τὴν Σικελίαν καὶ τοὺς ἐκατέρωθεν πορθμούς ἄλλα πελάγη συνάπτει τό τε πρό τῶν Σύρτεων και της Κυρηναίας και αὐται αι Σύρτεις καὶ τὸ Αὐσόνιον μὲν πάλαι, νῦν δὲ καλούμενον Σικελικόν, σύρρουν εκείνω και συνεχές. τὸ μεν οὖν πρὸ τῶν Σύρτεων καὶ τῆς Κυρηναίας καλείται Λιβυκόν, τελευτά δ' είς το Αίγύπτιον πέλαγος. τῶν δὲ Σύρτεων ἡ μὲν ἐλάττων ἐστὶν ὅσον χιλίων καλ έξακοσίων σταδίων την περίμετρον πρόκεινται δ' έφ' έκάτερα τοῦ στόματος νῆσοι Μῆνίγξ τε καὶ Κέρκινα τῆς δὲ μεγάλης Σύρτεώς φησιν Έρατοσθένης του κύκλου είναι πευτακισχιλίων, τὸ δὲ βάθος χιλίων ὀκτακοσίων ἀφ' Ἑσπερίδων είς Αὐτόμαλά καὶ τὸ τῆς Κυρηναίας μεθόριον πρὸς τὴν ἄλλην τὴν ταύτη Λιβύην ἄλλοι δὲ τὸν περίπλουν τετρακισχιλίων σταδίων είπον, τὸ δὲ βάθος χιλίων πεντακοσίων, δσον καὶ τὸ πλάτος τοῦ στόματος. τὸ δὲ Σικελικὸν πέλαγος πρὸ τῆς Σικελίας έστι και της Ίταλίας έπι το προς έω

¹ Πανδατερία, Meineke, for Πανδαρία.

² al τε Γυμνήσιαι, Du Theil, Kramer, for ή τε Γυμνησία.

³ ουδ' ai, Corais, for οὐδέ; Meineke following.

GEOGRAPHY, 2. 5. 19-20

Far behind these in size are Pandateria and Pontia, which lie in the open sea, and, lying near the land, Aethalia, Planasia, Pithecussa, Prochyta, Capreae, Leucosia, and others like them. But on the other side of the Ligurian Sea the islands off the rest of the coast up to the Pillars are not numerous, among which are the Gymnesiae and Ebysus; and those off the coasts of Libya and Sicily are not numerous, either, among which are Cossura, Aegimurus, and the Liparian Islands, which some call the Islands of Aeolus.

20. Beyond Sicily and the straits on both sides of it other seas join with the former sea. The first is the sea in front of the Syrtes and Cyrenaea and the two Syrtes themselves, and the second is the sea formerly called the Ausonian Sea, but now the Sicilian Sea, which is confluent with and a continuation of the first sea. Now the sea in front of the Syrtes and Cyrenaea is called the Libyan Sea, and it ends at the Egyptian Sea. Of the Syrtes, the lesser is about one thousand six hundred stadia in circumference; and the islands Meninx and Cercina lie at either side of its mouth. As for the Greater Syrtes, Eratosthenes says that its circuit is five thousand stadia, and its breadth eighteen hundred stadia, reckoning from the Hesperides to Automala and to the common boundary between Cyrenaea and the rest of Libya in that region; but others have estimated its circuit at four thousand stadia, and its breadth at fifteen hundred stadia, as much as the breadth of its mouth is. The Sicilian Sea lies in front of Sicily and Italy toward the regions of the

μέρος καλ ἔτι τοῦ μεταξὺ πόρου τῆς τε 'Ρηγίνης μέχρι Λοκρών, και της Μεσσηνίας μέχρι Συρακουσῶν καὶ Παγύνου. αὔξεται δ' ἐπί μὲν τὸ πρὸς ἔω μέρος μέχρι τῶν ἄκρων τῆς Κρήτης, καὶ την Πελοπόννησον δε περικλύζει την πλείστην, καὶ πληροί τὸν Κορινθιακὸν καλούμενον κόλπον. πρὸς ἄρκτους δὲ ἐπί τε ἄκραν Ἰαπυγίαν καὶ τὸ στόμα τοῦ Ἰονίου κόλπου, καὶ τῆς ἸΗπείρου τὰ νότια μέρη μέχρι τοῦ Αμβρακικοῦ κόλπου καὶ της συνεχούς παραλίας της ποιούσης τον Κορινθιακον κόλπον προς την Πελοπόννησον. δ δ' Ιόνιος κόλπος μέρος έστὶ τοῦ νῦν ᾿Αδρίου λεγομένου. τούτου δε την μεν εν δεξιά πλευράν ή Ίλλυρίς ποιεί, τὴν δ΄ εὐώνυμον ἡ Ἰταλία μέχρι τοῦ μυχοῦ τοῦ κατὰ 'Ακυληίαν. ἔστι δὲ πρὸς ἄρκτον ἄμα καὶ πρὸς τὴν ἐσπέραν ἀνέχων στενὸς καὶ μακρός, μήκος μέν όσον έξακισχιλίων σταδίων, πλάτος δέ τὸ μέγιστον διακοσίων ἐπὶ τοῖς χιλίοις. νῆσοι δέ είσιν ένταθθα συχναί μέν αί πρό της Ίλλυρίδος, C 124 αί τε 'Αψυρτίδες καὶ Κυρικτική καὶ Λιβυρνίδες. έτι δ' Ίσσα καὶ Τραγούριον καὶ ή Μέλαινα Κόρκυρα καὶ Φάρος πρὸ τῆς Ἰταλίας δὲ αἱ Διομήδειοι. τοῦ Σικελίκοῦ δὲ τὸ ἐπὶ Κρήτην ἀπὸ Παχύνου τετρακισχιλίων καὶ πεντακοσίων σταδίων φασί τοσοῦτον δὲ καὶ τὸ ἐπὶ Ταίναρον τῆς Λακωνικής το δε απο άκρας Ίαπυγίας έπι τον μυχον του Κορινθιακού κόλπου των μέν δρισχιλίων έστιν έλαττον, τὸ δ' ἀπὸ Ἰαπυγίας εἰς την Λιβύην πλέον των τετρακισχιλίων έστί. νήσοι δ' είσιν ένταθθα ή τε Κόρκυρα και Σύβοτα πρὸ τῆς Ἡπειρώτιδος, καὶ ἐφεξῆς πρὸ τοῦ Κοριν-

GEOGRAPHY, 2. 5. 20

east, and, besides, in front of the strait that lies between them-in front of the territory of Rhegium as far as Locri, and of the territory of Messina as far as Syracuse and Pachynum. Toward the regions of the east it stretches on to the headlands of Crete, and its waters also wash round most of the Peloponnesus and fill what is called the Gulf of Corinth. On the north it stretches to the Iapygian Cape and the mouth of the Ionian Gulf and to the southern parts of Epirus as far as the Ambracian Gulf and the coast that adjoins it and, with the Peloponnesus, forms the Corinthian Gulf. But the Ionian Gulf is part of what is now called the Adriatic Sea. The right side of this sea is formed by Illyria, and the left by Italy up to its head at Aquileia. It reaches up towards the north-west in a narrow and long course; and its length is about six thousand stadia, while its greatest breadth is twelve hundred stadia. There are numerous islands in this sea: off the Illyrian coast the Apsyrtides, and Cyrictica, and the Liburnides, and also Issa, Tragurium, Black Corcyra, and Pharus; and off the Italian coast the Diomedeae. The stretch of the Sicilian Sea from Pachynum to Crete, they say, measures four thousand five hundred stadia, and just as much the stretch to Taenarum in Laconia; and the stretch from the Iapygian Cape to the head of the Gulf of Corinth is less than three thousand stadia, while that from Iapygia to Libya is more than four thousand. The islands of this sea are: Corcyra and Sybota off the coast of Epirus; and next to

θιακοῦ κόλπου Κεφαλληνία καὶ Ἰθάκη καὶ Ζά-

κυνθος καὶ Ἐχινάδες. 21. Τῷ δὲ Σικελικῷ συνάπτει τὸ Κρητικὸν πέλαγος καὶ τὸ Σαρωνικὸν καὶ τὸ Μυρτῶον, δ μεταξύ της Κρήτης έστι και της 'Αργείας και της Αττικής, πλάτος έχου το μέγιστου το άπο τής Αττικής δσον γιλίων και διακοσίων σταδίων, μηκος δ' έλαττον η διπλάσιον. Εν τούτω δε νησοι Κύθηρά τε καὶ Καλαυρία καὶ αἱ περὶ Αἰγιναν καὶ Σαλαμίνα και των Κυκλάδων τινές. συνεγές τὸ Αἰγαιόν ἐστιν ἤδη σὺν τῷ Μέλανι κόλπω καὶ τῶ Ἑλλησπόντω, καὶ τὸ Ἰκάριον καὶ Καρπάθιον μέχρι της 'Ρόδου καὶ Κρήτης καὶ Καρπάθου 1 και των πρώτων μερών της 'Ασίας. έν & αί τε Κυκλάδες 2 νησοι είσι και αι Σποράδες καὶ αὶ προκείμεναι τῆς Καρίας καὶ Ἰωνίας καὶ Αἰολίδος μέχρι τῆς Τρωάδος, λέγω δὲ Κῶ καὶ Σάμον καὶ Χίον καὶ Λέσβον καὶ Τένεδον. ώς δ' αυτως αι προκείμεναι της Έλλάδος μέχρι της Μακεδονίας και της δμόρου Θράκης Ευβοιά τε καὶ Σκύρος καὶ Πεπάρηθος καὶ Λήμνος καὶ Θάσος καὶ Ἰμβρος καὶ Σαμοθράκη καὶ ἄλλαι πλείους, περί ών έν τοις καθ' έκαστα δηλώσομεν. έστι δὲ τὸ μῆκος τῆς θαλάττης ταύτης περί τετρακισχιλίους ή μικρώ πλείους, τὸ δὲ πλάτος περὶ δισχιλίους. περιέχεται δε ύπο των λεχθέντων μερών της 'Ασίας και της άπο Σουνίου μέχρι Θερμαίου κόλπου πρὸς ἄρκτον ἐχούσης τὸν πλοῦν

¹ Καρπάθου, Tzschucke, for Κύπρου; Groskurd, Forbiger, following.

² The MSS. have: μερών. Της δ' 'Ασίας αξ τε Κυκλάδες. Pletho deletes the 8' before 'Aolas, and inserts &v & before αί τε Κυκλάδες.

GEOGRAPHY, 2. 5. 20-21

them, off the Gulf of Corinth, Cephallenia, Ithaca,

Zacynthus, and the Echinades.

21. Adjoining the Sicilian Sea are the Cretan, the Saronic, and the Myrtoan Seas. The Myrtoan Sea is between Crete, Argeia 1 and Attica; its greatest breadth, measured from Attica, is about one thousand two hundred stadia, and its length is less than double its breadth. In this sea are the islands of Cvthera. Calauria, Aegina and its neighbouring isles, Salamis, and some of the Cyclades. Next beyond the Myrtoan Sea comes immediately the Aegean Sea, with the Gulf of Melas and the Hellespont; and also the Icarian and Carpathian Seas, extending to Rhodes, Crete, Carpathus, and the first regions of Asia. In the Aegean are the Cyclades,2 the Sporades, and the islands that lie off Caria, Ionia, and Aeolis up to the Troad —I mean Cos, Samos, Chios, Lesbos, and Tenedos; so also those that lie off Greece as far as Macedonia and Thrace the next country beyond Macedonianamely, Euboea, Scyros, Peparethos, Lemnos, Thasos, Imbros, Samothrace, and a number of others, concerning which I shall speak in my detailed description. The length of this sea is about four thousand stadia or slightly more, and its breadth is about two thousand stadia. It is surrounded by the aforesaid regions of Asia, and by the coast-line from Sunium to the Thermaic Gulf as you sail towards the north,

1 Argolis.

² Strabo has just said that "some of the Cyclades" belong to the Myrtoan Sea. He elsewhere places "many of the Sporades" in the Carpathian Sea (10.5.14); and Samos, Cos, and others in the Icarian Sea (10.5.13). He now, apparently, makes the Aegean comprehend all these islands and many others besides. But the text is corrupt.

παραλίας καὶ τῶν Μακεδονικῶν κόλπων μέχρι

της Θρακίας χερρονήσου.

22. Κατά δὲ ταύτην ἐστὶ τὸ ἐπταστάδιον τὸ κατά Σηστόν καὶ "Αβυδον, δι' οῦ τὸ Αἰγαῖον καὶ ὁ Έλλήσποντος ἐκδίδωσι πρὸς ἄρκτον εἰς ἄλλο πέλαγος, δ καλοῦσι Προποντίδα, κάκεῖνο εἰς ἄλλο, τὸν Εὔξεινον προσαγορευόμενον πόντον. ἔστι δὲ διθάλαττος τρόπου τινὰ ούτος κατὰ μέσου γάρ πως άκραι δύο προπίπτουσιν, ή μεν έκ της Ευρώπης και των βορείων μερών, ή δ' έκ της 'Ασίας έναντία ταύτη, συνάγουσαι τὸν μεταξύ πόρον καί ποιούσαι δύο πελάνη μεγάλα το μεν ούν της Εὐρώπης ἀκρωτήριον καλείται Κριού μέτωπον, τὸ C 125 δὲ τῆς ᾿Ασίας Κάραμβις, διέγοντα ἀλλήλων περὶ δισγιλίους 1 σταδίους καὶ πεντακοσίους. τὸ μέν οὖν πρὸς ἐσπέραν πέλαγος μῆκός ἐστιν ἀπὸ Βυζαντίου μέχρι των έκβολων του Βορυσθένους σταδίων τρισγιλίων οκτακοσίων, πλάτος δε δισχιλίων οκτακοσίων.2 εν τούτω δ' ή Λευκή νησός έστι τὸ δ' έφόν έστι παράμηκες, εἰς στενὸν τελευτών μυχὸν τὸν κατὰ Διοσκουριάδα, ἐπὶ πεντακισχιλίους ή μικρώ πλείους σταδίους, τὸ δὲ πλάτος περί τρισχιλίους ή δε περίμετρος τοῦ σύμπαντος πελάγους έστι δισμυρίων που καί πεντακισγιλίων σταδίων. εἰκάζουσι δέ τινες τὸ σχημα της περιμέτρου ταύτης έντεταμένω Σκυθικώ

² δετακοσίων, C. Müller proposes to insert, after δισχιλίων 478

¹ C. Müller shews that δισχιλίους must not be changed to χιλίους, with most editors.

GEOGRAPHY, 2. 5. 21-22

and by the Macedonian Gulfs up to the Thracian Chersonese.

22. Along this Chersonese lies the strait, seven stadia in length, between Sestus and Abydus, through which the Aegean Sea and the Hellespont empty northwards into another sea which they call the Propontis; and the Propontis empties into another sea termed the "Euxine" Pontus. This latter is a double sea, so to speak: for two promontories jut out at about the middle of it, one from Europe and the northern parts, and the other, opposite to it, from Asia, thus contracting the passage between them and forming two large seas. The promontory of Europe is called Criumetopon,2 and that of Asia, Carambis 8; and they are about two thousand five hundred stadia distant from each other. Now the western sea has a length of three thousand eight hundred stadia, reckoning from Byzantium to the mouths of the Borysthenes, and a breadth of two thousand eight hundred stadia; in this sea the island of Leuce is situated. The eastern sea is oblong and ends in a narrow head at Dioscurias; it has a length of five thousand stadia or a little more, and a breadth of about three thousand stadia. The circumference of the whole sea is approximately twentyfive thousand stadia. Some compare the shape of this circumference to that of a bent Scythian bow,4

¹ On the term "Euxine" see 7. 3. 6.

Cape Karadje, in Crimea.
 Cape Kerembe, in Paphlagonia.

⁴ The Scythian bow consisted of a central bar of elastic wood to whose ends were fitted the curved horns of an ibex or goat, the horns being tipped with metal and joined by a bow-string of ox-hide or sheep's-hide. At the junction of the bar with each horn the curvature of the horn was concave but, at the tip, the horn had a convex curvature.

τόξφ, τὴν μὲν νευρὰν ἐξομοιοῦντες τοῖς δεξιοῖς καλουμένοις μέρεσι τοῦ Πόντου (ταῦτα δ' ἐστὶν ὁ παράπλους ὁ ἀπὸ τοῦ στόματος μέχρι τοῦ μυχοῦ τοῦ κατὰ Διοσκουριάδα· πλὴν γὰρ τῆς Καράμβιος ἥ γε ἄλλη πᾶσα ἠιὼν μικρὰς ἔχει εἰσοχάς ¹ τε καὶ ἐξοχάς, ὥστ' εὐθεία ἐοικέναι), τὴν δὲ λοιπὴν τῷ κέρατι τοῦ τόξου διττὴν ἔχοντι τὴν ἐπιστροφήν, τὴν μὲν ἄνω περιφερεστέραν, τὴν δὲ κάτω εὐθυτέραν· οὕτω δὲ κἀκείνην ἀπεργάζεσθαι δύο κόλπους, ὧν ὁ ἐσπέριος πολὺ θατέρου περιφερέστερός ἐστιν.

23. Υπέρκειται δὲ τοῦ ἐωθινοῦ κόλπου πρὸς ἄρκτον ἡ Μαιῶτις λίμνη, τὴν περίμετρον ἔχουσα ἐννακισχιλίων σταδίων ἡ καὶ μικρῷ πλεόνων ἐκδίδωσι δ' αὕτη μὲν εἰς Πόντον κατὰ τὸν Κιμμερικὸν καλούμενον Βόσπορον, οῦτος δὲ κατὰ τὸν Θράκιον εἰς τὴν Προποντίδα· τὸ γὰρ Βυζαντιακὸν στόμα οὕτω καλοῦσι Θράκιον Βόσπορον, δ τετραστάδιόν ἐστιν. ἡ δὲ Προποντὶς χιλίων καὶ πεντακοσίων λέγεται τὸ μῆκος σταδίων τὸ ἀπὸ τῆς Τρωάδος ἐπὶ τὸ Βυζάντιον· πάρισον δέ πώς ἐστι καὶ τὸ πλάτος. ἐνταῦθα δ' ἡ τῶν Κυζικηνῶν ἵδρυται νῆσος καὶ τὰ περὶ αὐτὴν νησία.

24. Τοιαύτη μεν ή προς άρκτον τοῦ Αἰγαίου πελάγους ἀνάχυσις καὶ τοσαύτη, πάλιν δ' ἀπὸ τῆς 'Ροδίας ή τὸ Αἰγύπτιον πέλαγος ποιοῦσα καὶ τὸ Παμφύλιον καὶ τὸ Ἰσσικὸν ἐπὶ μὲν τὴν ἔω καὶ τῆς Κιλικίας κατὰ Ἰσσὸν ἐκτείνεται μέχρι καὶ πεντακισχιλίων σταδίων παρά τε Λυκίαν καὶ Παμφυλίαν καὶ τὴν Κιλίκων παραλίαν πᾶσαν. ἐντεῦθεν δὲ Συρία τε καὶ Φοινίκη καὶ Αἴγυπτος

¹ elooxás, Meineke, for eooxás.

GEOGRAPHY, 2. 5. 22-24

likening the bow-string to the regions on what is called the right-hand side of the Pontus (that is, the ship-course along the coast from the outlet to the head at Dioscurias; for with the exception of the promontory of Carambis the whole shore has but small recesses and projections, so that it is like a straight line; and the rest they liken to the horn of the bow with its double curve, the upper curve being rounded off, while the lower curve is straighter; and thus they say the left coast forms two gulfs, of which the western is much more rounded than the other.

23. North of the eastern gulf lies Lake Maeotis, which has a circumference of nine thousand stadia or even a little more. It empties into the Pontus at what is called the Cimmerian Bosporus, and the Pontus empties into the Propontis at the Thracian Bosporus; for they give the name of Thracian Bosporus to the outlet at Byzantium, which is four stadia. The Propontis is said to be fifteen hundred stadia long, reckoning from the Troad to Byzantium; and its breadth is approximately the same. In it lie the island of Cyzicus and the little islands in its neighbourhood.

24. Such, then, is the nature and such the size of the arm of the Aegean Sea that extends towards the north. Again: the arm that begins at Rhodes and forms the Egyptian, the Pamphylian, and the Issican Seas, stretches towards the east as far as Issus in Cilicia for a distance of five thousand stadia along Lycia, Pamphylia, and the whole coastline of Cilicia. Thence, Syria, Phoenicia, and Egypt encircle the sea

¹ That is, in breadth; but compare 7. 6. 1.

έγκυκλοί πρὸς νότον τὴν θάλατταν καὶ πρὸς δύσιν έως 'Αλεξανδρείας. έν δὲ τῷ Ίσσικῷ κόλπφ καὶ τῶ Παμφυλίω κεῖσθαι συμβαίνει τὴν Κύπρον. συνάπτουσαν τῷ Αἰγυπτίῳ πελάγει. ἔστι δ' ἀπὸ 'Ρόδου δίαρμα είς 'Αλεξάνδρειαν βορέα τετρακισχιλίων που σταδίων, δ δε περίπλους διπλάσιος. δ δ' Έρατοσθένης ταύτην μεν των ναυτικών είναί φησι την υπόληψιν περί του διάρματος του πελάγους, τῶν μὲν οὕτω λεγόντων, τῶν δὲ καὶ C 126 πεντακισχιλίους ούκ όκνούντων είπειν, αὐτὸς δὲ διά των σκιοθηρικών γνωμόνων άνευρείν τρισγιλίους έπτακοσίους πεντήκοντα. τούτου δη τοῦ πελάγους τὸ πρὸς τῆ Κιλικία καὶ Παμφυλία καὶ τοῦ Ποντικοῦ τὰ καλούμενα δεξιὰ μέρη καὶ ἡ Προπουτίς και ή έφεξης παραλία μέχρι Παμφυλίας ποιεί τινα χερρόνησον μεγάλην καὶ μέγαν ταύτης ἰσθμὸν τὸν ἀπὸ τῆς πρὸς Ταρσῷ θαλάττης έπὶ πόλιν 'Αμισον καὶ τὸ τῶν 'Αμαζόνων πεδίον την Θεμίσκυραν. ή γαρ έντος της γραμμής ταύτης χώρα μέχρι Καρίας καὶ Ἰωνίας καὶ τῶν ἐντὸς Αλυος νεμομένων έθνῶν περίκλυστος ἄπασά έστιν ύπὸ τοῦ Αἰγαίου καὶ τῶν ἐκατέρωθεν λεχθέντων της θαλάττης μερών και δη και καλουμέν 'Ασίαν ταύτην ίδίως καὶ δμωνύμως τῆ ὅλη.

25. Συλλήβδην δ' εἰπεῖν, τῆς καθ' ἡμᾶς θαλάττης νοτιώτατον μέν ἐστι σημεῖον ὁ τῆς μεγάλης Σύρτεως μυχός, καὶ μετὰ τοῦτον ἡ κατ' Αἴγυπτον 'Αλεξάνδρεια καὶ τοῦ Νείλου προχοαί, βορειότατον δὲ τὸ τοῦ Βορυσθένους στόμα· εἰ δὲ καὶ τὴν Μαιῶτιν προστιθείη τῷ πελάγει τις (καὶ γάρ ἐστιν ὡς ἀν μέρος), τὸ τοῦ Τανάϊδος· δυσ-

GEOGRAPHY, 2. 5. 24-25

on the south and west as far as Alexandria. And Cyprus must lie both in the Issican and the Pamphylian Gulfs, since it borders on the Egyptian Sea. The sea-passage from Rhodes to Alexandria is, with the north wind, approximately four thousand stadia, while the coasting-voyage is double that distance. Eratosthenes says that this is merely the assumption made by navigators in regard to the length of the sea-passage, some saying it is four thousand stadia, others not hesitating to say it is even five thousand stadia, but that he himself, by means of the shadowcatching sun-dial, has discovered it to be three thousand seven hundred and fifty stadia. Now the part of this sea that is next to Cilicia and Pamphylia, and the side called the right-hand side of the Pontic Sea, and the Propontis, and the sea-board next beyond as far as Pamphylia, form a great peninsula and a great isthmus belonging thereto that stretches from the sea at Tarsus to the city of Amisus, and to Themiscyra, the Plain of the Amazons. For the country within this line, as far as Caria and Ionia and the peoples that live on this side of the Halys River, is all washed by the Aegean or else by the above-mentioned parts thereof on both sides of the peninsula. And indeed we call this peninsula by the special name of Asia, the same name that is given to the whole continent.

25. In short, the head of the Greater Syrtis is the most southerly point of our Mediterranean Sea, and next to this are Alexandria in Egypt and the mouths of the Nile; the most northerly point is the mouth of the Borysthenes, though if we add Lake Maeotis to the sea (and indeed it is a part of it, in a sense) the mouth of the Tanaïs is the most northerly point;

μικώτατον δὲ ὁ κατὰ τὰς Στήλας πορθμός, ἐωθινώτατον δ' ὁ λεχθεὶς μυχὸς κατὰ Διοσκουριάδα·
Ἐρατοσθένης δ' οὐκ εὖ τὸν Ἰσσικὸν κόλπον φησίν.
ὁ μὲν γὰρ ἐπὶ τοῦ αὐτοῦ μεσημβρινοῦ ἴδρυται, ἐφ'
οὖπερ ἢ τε ᾿Αμισὸς καὶ Θεμίσκυρα· εἰ δὲ βούλει,
πρόσλαβε καὶ τὴν Σιδήνην μέχρι Φαρνακείας.
ἀπὸ δὲ τούτων τῶν μερῶν πρὸς ἔω πλοῦς ἐστι
πλειόνων ἢ τρισχιλίων που σταδίων εἰς Διοσκουριάδα, ὡς ἔσται μᾶλλον ἐκ τῆς ἐν μέρει περιοδείας
φανερόν. ἡ μὲν δὴ καθ' ἡμᾶς θάλαττα τοιαύτη
τις.

26. Υπογραπτέον δὲ καὶ τὰς περιεγούσας αὐτὴν γᾶς, ἀρχὴν λαβοῦσιν ἀπὸ τῶν αὐτῶν μερῶν, άφ' ώνπερ και την θάλατταν ύπεγράψαμεν. είσπλέουσι τοίνυν τὸν κατὰ Στήλας πορθμὸν έν δεξιά μέν έστιν ή Λιβύη μέχρι της του Νείλου ρύσεως, εν αριστερά δε αντίπορθμος ή Ευρώπη μέγρι τοῦ Τανάϊδος τελευτῶσι δ' ἀμφότεραι περί την 'Ασίαν. άρκτέον δ' άπὸ της Εὐρώπης, ὅτι πολυσγήμων τε καὶ πρὸς ἀρετὴν ἀνδρῶν εὐφυεστάτη καὶ πολιτειών, καὶ ταῖς ἄλλαις πλείστον μεταδεδωκυία των οἰκείων ἀγαθων ἐπειδὴ σύμπασα οἰκήσιμός ἐστι πλην ὀλίγης της διὰ ψύχος ἀοικήτου. αὕτη δ' ὁμορεῖ τοῖς Αμαξοίκοις τοῖς περί του Τάναϊν καί την Μαιώτιν καί του Βορυσθένη. της δ' οἰκησίμου τὸ μεν δυσγείμερον καλ τὸ ὀρεινὸν μοχθηρώς οἰκεῖται τῆ φύσει, ἐπιμελητὰς δὲ λαβόντα ἀγαθούς καὶ τὰ Φαύλως οἰκούμενα

the most westerly point is the strait at the Pillars; and the most easterly point is the above-mentioned head of the Pontus at Dioscurias; and Eratosthenes is wrong in saying that the Issican Gulf is the most easterly, for it lies on the same meridian with Amisus and Themiscyra—or, if you like, you may add in the territory of Sidene on to Pharnacia. From these regions the voyage to Dioscurias is, I might say, more than three thousand stadia eastward, as will become clearer when I describe that region in detail.¹ Such, then, is the nature of our Mediterranean Sea.

26. I must also give a general description of the countries that surround this sea, beginning at the same points at which I began to describe the sea Now as you sail into the strait at the Pillars. Libya lies on your right hand as far as the stream of the Nile, and on your left hand across the strait lies Europe as far as the Tanaïs. And both Europe and Libya end at Asia. But I must begin with Europe, because it is both varied in form and admirably adapted by nature for the development of excellence in men and governments, and also because it has contributed most of its own store of good things to the other continents; for the whole of it is inhabitable with the exception of a small region that is uninhabited on account of the cold. inhabited part borders on the country of the Wagon-Dwellers in the region of the Tanaïs, Lake Maeotis, and the Borysthenes. Of the inhabitable part of Europe, the cold mountainous regions furnish by nature only a wretched existence to their inhabitants. yet even the regions of poverty and piracy become

¹ Compare 12, 3, 17.

C 127 καὶ ληστρικώς ήμεροῦται καθάπερ οἱ "Ελληνες, όρη καλ πέτρας κατέχοντες, ῷκουν καλῶς διὰ πρόνοιαν την περί τὰ πολιτικά και τὰς τέχνας καὶ την άλλην σύνεσιν την περί βίον. 'Ρωμαιοί τε πολλά έθνη παραλαβόντες κατά 1 την φύσιν άνήμερα διὰ τοὺς τόπους ή τραχεῖς ὄντας ή άλιμένους ή ψυχρούς ή ἀπ' ἄλλης αἰτίας δυσοικήτους πολλοίς τούς τε άνεπιπλέκτους άλλήλοις ἐπέπλεξαν καὶ τοὺς ἀγριωτέρους πολιτικώς ζῆν έδίδαξαν. όσον δ' έστιν αὐτής έν όμαλῷ καί εὐκράτω τὴν φύσιν ἔχει συνεργὸν πρὸς ταῦτα, έπειδη το μέν έν τη εὐδαίμονι χώρα παν έστιν εἰρηνικόν, τὸ δ' ἐν τῆ λυπρᾶ μάχιμον καὶ ἀνδρικόν, καὶ δέχεταί τινας παρ' άλλήλων εὐεργεσίας τὰ γένη ταῦτα· τὰ μὲν γὰρ ἐπικουρεῖ τοῖς ὅπλοις, τὰ δὲ καρποῖς καὶ τέχναις καὶ ἡθοποιίαις. Φανεραὶ δὲ καὶ αἱ ἐξ ἀλλήλων βλάβαι, μὴ ἐπικουρούντων έχει δέ τι πλεονέκτημα ή βία τῶν τὰ ὅπλα ἐχόντων, πλην εί τῷ πλήθει κρατοῖτο. ὑπάρχει δή τι καλ πρὸς τοῦτο εὐφυὲς τῆ ἡπείρω ταύτη. ὅλη γὰρ διαπεποίκιλται πεδίοις τε καὶ όρεσιν, ώστε πανταχοῦ καὶ τὸ γεωργικὸν καὶ 2 πολιτικὸν καὶ τὸ μάγιμον παρακείσθαι πλέον δ' είναι θάτερον, τὸ της ειρήνης οικείον, ώσθ' όλων επικρατεί τούτο,

κατά, Tyrwhitt, for καὶ ἄ; Madvig also independently.
 τό, Madvig deletes, before πολιτικόν.

civilised as soon as they get good administrators. Take the case of the Greeks: though occupying mountains and rocks, they used to live happily. because they took forethought for good government, for the arts, and in general for the science of living. The Romans, too, took over many nations that were naturally savage owing to the regions they inhabited, because those regions were either rocky or without harbours or cold or for some other reason ill-suited to habitation by many, and thus not only brought into communication with each other peoples who had been isolated, but also taught the more savage how to live under forms of government. all of Europe that is level and has a temperate climate has nature to cooperate with her toward these results; for while in a country that is blessed by nature everything tends to peace, in a disagreeable country everything tends to make men warlike and courageous; and so both kinds of country receive benefits from each other, for the latter helps with arms, the former with products of the soil, with arts, and with character-building. the harm that they receive from each other, if they are not mutually helpful, is also apparent; and the might of those who are accustomed to carry arms will have some advantage unless it be controlled by the majority. However, this continent has a natural advantage to meet this condition also; for the whole of it is diversified with plains and mountains, so that throughout its entire extent the agricultural and civilised element dwells side by side with the warlike element; but of the two elements the one that is peace-loving is more numerous and therefore keeps control over the whole body; and the leading

προσλαμβανόντων καὶ τῶν ἡγεμόνων, Ἑλλήνων μὲν πρότερον, Μακεδόνων δὲ καὶ Ῥωμαίων ὕστερον. διὰ τοῦτο δὲ καὶ πρὸς εἰρήνην ὶ καὶ πρὸς πόλεμον αὐταρκεστάτη ἐστί· καὶ γὰρ τὸ μάχιμον πλῆθος ἄφθονον ἔχει καὶ τὸ ἐργαζόμενον τὴν γῆν καὶ τὸ τὰς πόλεις συνέχον. διαφέρει δὲ καὶ ταύτη, διότι τοὺς καρποὺς ἐκφέρει τοὺς ἀρίστους καὶ τοὺς ἀναγκαίους τῷ βίφ καὶ μέταλλα ὅσα χρήσιμα, θυώματα δὲ καὶ λίθους πολυτελεῖς ἔξωθεν μέτεισιν, ὧν τοῖς σπανιζομένοις οὐδὲν χείρων ὁ βίος ἐστὶν ἢ τοῖς εὐπορουμένοις. ὡς δ' αὕτως βοσκημάτων μὲν πολλῶν ἀφθονίαν παρέχει, θηρίων δὲ σπάνιν. τοιαύτη μὲν ἡ ἤπειρος αὕτη καθόλου τὴν φύσιν ἐστί.

27. Κατὰ μέρος δ' ἐστὶ πρώτη πασῶν ἀπὸ τῆς ἐσπέρας ἡ Ἰβηρία, βύρση βοεία παραπλησία, τῶν ὡς ἄν τραχηλιμαίων μερῶν ὑπερπιπτόντων εἰς τὴν συνεχῆ Κελτικήν ταῦτα δ' ἐστὶ τὰ πρὸς ἔω, καὶ τούτοις ἐναποτέμνεται τὸ πλευρὸν ἑῷον² ὅρος ἡ καλουμένη Πυρήνη. ἡ δ' ἄλλη πᾶσά³ ἐστι περίρρυτος τῆ θαλάττη, τὸ μὲν νότιον τῆ καθ' ἡμᾶς μέχρι Στηλῶν τὰ δὲ λοιπὰ τῆ ᾿Ατλαντικῆ C 128 μέχρι τῶν βορείων ἄκρων τῆς Πυρήνης. μῆκος δὲ τῆς χώρας ταύτης ἐστὶ περὶ ἑξακισχιλίους σταδίους τὸ μέγιστον, πλάτος δὲ πεντακισχιλίους.

28. Μετὰ δὲ ταύτην ἐστὶν ἡ Κελτικὴ πρὸς ἔω μέχρι ποταμοῦ Ὑρήνου, τὸ μὲν βόρειον πλευ-

Dübner, following.

³ ἡ δ' ἄλλη πῶσα, Pletho, Siebenkees, Corais, following ypr, for αὔτη.

yp, ioi

The words καὶ πρὸς εἰρήνην are unintentionally omitted by Kramer; also by Meineke, Müller-Dübner, Tozer, Tardieu. ² έφον, Groskurd inserts; Kramer, Forbiger, Müller-Dübner, following.

nations, too-formerly the Greeks and later the Macedonians and the Romans-have taken hold and And for this reason Europe is most independent of other countries as regards both peace and war; for the warlike population which she possesses is abundant and also that which tills her soils and holds her cities secure. She excels also in this respect, that she produces the fruits that are best and that are necessary for life, and all the useful metals, while she imports from abroad spices and precious stones—things that make the life of persons who have only a scarcity of them fully as happy as that of persons who have them in abundance. So. also, Europe offers an abundance of various kinds of cattle, but a scarcity of wild animals. Such, in a general way, is the nature of this continent.

27. If, however, we look at the separate parts of it, the first of all its countries, beginning from the west, is Iberia, which in shape is like an ox-hide, whose "neck" parts, so to speak, fall over into the neighbouring Celtica; and these are the parts that lie towards the east, and within these parts the eastern side of Iberia is cut off by a mountain, the so-called Pyrenees, but all the rest is surrounded by the sea; on the south, as far as the Pillars, it is surrounded by our Sea, and on the other side, as far as the northern headlands of the Pyrenees, by the Atlantic. The greatest length of this country is about six thousand stadia; and breadth, five thousand.

28. Next to Iberia towards the east lies Celtica, which extends to the River Rhine. On its northern

ρον τῶ Βρεττανικῶ κλυζομένη πορθμῶ παντί· άντιπαρήκει γαρ αὐτῆ παράλληλος ἡ νῆσος αὕτη πασα πάση, μηκος όσου πευτακισχιλίους επέχουσα· το δ' έωθινον τῷ 'Ρήνῷ ποταμῷ περι-γραφομένη, παράλληλον ἔχοντι τὸ ρεῦμα τῆ Πυρήνη τὸ δὲ νότιον τὸ μὲν ταῖς "Αλπεσι τὸ ἀπὸ τοῦ Τήνου, τὸ δ' αὐτῆ τῆ καθ' ἡμᾶς θαλάττη, καθ' δ χωρίον ο καλούμενος Γαλατικός κόλπος άναγεῖται, καὶ ἐν αὐτῶ Μασσαλία τε καὶ Νάρβων ίδρυνται πόλεις επιφανέσταται. αντίκειται δε τώ κόλπω τούτω κατ' ἀποστροφὴν ἔτερος κόλπος όμωνύμως αὐτῷ καλούμενος Γαλατικός, βλέπων πρὸς τὰς ἄρκτους καὶ τὴν Βρεττανικήν ἐνταῦθα δέ καὶ στενότατον λαμβάνει τὸ πλάτος ή Κελτική. συνάγεται γαρ είς ισθμον έλαττόνων μέν ή τρισγιλίων σταδίων, πλειόνων δ' ή δισχιλίων. μεταξύ δέ έστι ράχις όρεινη προς όρθας τη Πυρήνη, τὸ καλούμενον Κέμμενον δρος τελευτά δὲ τοῦτο εἰς μεσαίτατα τὰ Κελτῶν πεδία. τῶν δὲ $^{\mathsf{L}}$ Αλπεων, $\overset{\mathsf{L}}{\mathsf{a}}$ έστιν ὄρη σφόδρα ύ ψ ηλ $\overset{\mathsf{L}}{\mathsf{a}}$ ποιοῦντ $\overset{\mathsf{L}}{\mathsf{a}}$ περιφερή γραμμήν, τὸ μεν κυρτον έστραπται πρὸς τὰ λεχθέντα τῶν Κελτῶν πεδία καὶ τὸ Κέμμένον όρος, τὸ δὲ κοίλον πρὸς τὴν Λιγυστικὴν καὶ την Ίταλίαν. έθνη δε κατέχει πολλά το όρος τοῦτο Κελτικά πλην των Λιγύων οὐτοι δ' έτεροεθνείς μέν είσι, παραπλήσιοι δὲ τοῖς βίοις νέμονται δὲ μέρος τῶν Αλπεων τὸ συνάπτον τοῖς Απευνίνοις όρεσι, μέρος δέ τι καλ τῶν 'Απευνίνων όρων κατέχουσι. ταθτα δ' έστλυ όρεινη ράχις διά

¹ ποιούντα, Corais, for ποιούντων; Forbiger, Meineke, Müller-Dübner, following.

GEOGRAPHY, 2. 5. 28

side it is washed by the whole British Channel (for the whole island of Britain lies over against and parallel to the whole of Celtica and stretches lengthwise about five thousand stadia); on its eastern side it is bounded by the River Rhine, whose stream runs parallel to the Pyrenees; and on its southern side it is bounded, on the stretch that begins at the Rhine, by the Alps, and by our sea itself in the region where the so-called Galatic Gulf 1 widens out—the region in which Massilia and Narbo are situated, very famous cities. Opposite this gulf, and facing in the opposite direction, lies another gulf² that is also called Galatic Gulf; and it looks toward the north and Britain; and it is between these two gulfs that Celtica has its least breadth; for it is contracted into an isthmus of less than three thousand, but more than two thousand, stadia. Between these two gulfs a mountain range, the so-called Cemmenus Mountain,³ runs at right angles to the Pyrenees and comes to an end in the very centre of the plains of Celtica. As for the Alps (which are extremely high mountains that form the arc of a circle), their convex side is turned towards the plains of Celtica just mentioned and the Cemmenus Mountain, while their concave side is turned toward Liguria and Italy. Many tribes occupy these mountains, all Celtic except the Ligurians; but while these Ligurians belong to a different race, still they are similar to the Celts in their modes of life. They live in the part of the Alps that joins the Apennines, and they occupy a part of the Apennines also. The Apennines form a mountain range running through the

Gulf of Lyon. Gulf of Gascogne. Cevennes.

του μήκους όλου της Ίταλίας διαπεφυκυία ἀπὸ τῶν ἄρκτων ἐπὶ μεσημβρίαν, τελευτῶσα δ' ἐπὶ

τὸν Σικελικὸν πορθμόν.

29. Τῆς δ' Ἰταλίας ἐστὶ τὰ μὲν πρῶτα μέρη τὰ ὑποπίπτοντα ταῖς "Αλπεσι πεδία μέχρι τοῦ μυχοῦ τοῦ 'Αδρίου καὶ τῶν πλησίον τόπων, τὰ δ' ἔξῆς ἄκρα στενὴ καὶ μακρὰ χερρονησιά-ζουσα, δι' ἡς, ὡς εἶπον, ἐπὶ μῆκος τέταται τὸ 'Απέννινον ὅρος ὅσον ἐπτακισχιλίων σταδίων,¹ πλάτος δ' ἀνώμαλον. ποιεῖ δὲ τὴν Ἰταλίαν χερρόνησον τό τε Τυρρηνικὸν πέλαγος ἀρξάμενον ἀπὸ τοῦ Λιγυστικοῦ καὶ τὸ Αὐσόνιον καὶ ὁ 'Αδρίας.
30. Μετὰ δὲ τὴν Ἰταλίαν καὶ τὴν Κελτικὴν

τὰ πρὸς ἔω λοιπά ἐστι τῆς Εὐρώπης, ἃ δίχα τέμνεται τῷ Ιστρφ ποταμῷ. Φέρεται δ' οὐτος άπὸ της έσπέρας έπι την έω και τον Εύξεινον πόντον, εν άριστερά λιπών τήν τε Γερμανίαν όλην αρξαμένην από τοῦ Υρήνου καὶ τὸ Γετικον παν καί τὸ τῶν Τυρεγετῶν καὶ Βασταρνῶν καὶ Σαυρο-C 129 ματών μέχρι Τανάϊδος ποταμού καὶ τῆς Μαιώτιδος λίμνης, εν δεξιά δε τήν τε Θράκην απασαν και την 'Ιλλυρίδα, λοιπην δέ και τελευταίαν την Έλλάδα. πρόκεινται δε νήσοι της Ευρώπης, ας έφαμεν, έξω μεν Στηλών Γάδειρά τε και Καττιτερίδες και Βρεττανικαί, έντος δε Στηλών αί τε Γυμνήσιαι καὶ ἄλλα νησίδια Φοινίκων καὶ τὰ τῶν Μασσαλιωτῶν καὶ Λιγύων καὶ αἱ πρὸ τῆς Ίταλίας μέχρι των Αιόλου νήσων καὶ τῆς Σικελίας, όσαι τε περί την Ήπειρωτιν και Έλλάδα και μέχρι Μακεδονίας καὶ τῆς Θρακίας χερρονήσου.

 $^{^{1}}$ σταδίων, Pletho inserts, after ξπτακισχιλίων; following gp.

GEOGRAPHY, 2. 5. 28-30

whole length of Italy from the north to the south and ending at the Strait of Sicily.

29. The first parts of Italy are the plains that lie at the foot of the Alps and extend as far as the head of the Adriatic and the regions near it, but the rest of Italy is a narrow and long promontory in the form of a peninsula, through which, as I have said, the Apennines extend lengthwise for about seven thousand stadia, but with varying breadth. that make Italy a peninsula are the Tyrrhenian (which begins at the Ligurian Sea), the Ausonian,

and the Adriatic.

30. After Italy and Celtica come the remaining, or eastern, countries of Europe, which are cut in two by the River Ister. This river flows from the west towards the east and the Euxine Sea; it leaves on its left the whole of Germany (which begins at the Rhine), all the country of the Getans, and the country of the Tyregetans, Bastarnians, and Sarmatians as far as the River Tanaïs and Lake Macotis; and it leaves on its right the whole of Thrace, Illyria, and, lastly and finally, Greece. The islands which I have already mentioned 1 lie off Europe; outside the Pillars: Gades, the Cassiterides, and the Britannic islands; and inside the Pillars: the Gymnesiae and other little islands 2 of the Phoenicians,8 and those off Massilia and Liguria, and the islands off Italy up to the Islands of Aeolus and to Sicily, and all the islands round about Epirus and Greece and as far as Macedonia and the Thracian Chersonese.

§§ 19-21 (above).

² That is, the Pityussae, which, with the Gymnesiae, form the Balearic Isles.

See 3. 5. 1. the Balearic Isles.

31. 'Απὸ δὲ τοῦ Τανάϊδος καὶ τῆς Μαιώτιδος της 'Ασίας έστι τὰ μεν 1 έντος τοῦ Ταύρου συνεχή, τούτοις δ' έξης τὰ ἐκτός. διαιρουμένης γαρ αὐτης ὑπὸ ὄρους τοῦ Ταύρου δίχα, δια-τείνοντος ἀπὸ των ἄκρων της Παμφυλίας ἐπὶ την έώαν θάλατταν κατ' Ίνδους και τους ταύτη Σκύθας, τὸ μὲν πρὸς τὰς ἄρκτους νενευκὸς τῆς ηπείρου μέρος καλουσιν οί "Ελληνες έντος του Ταύρου, τὸ δὲ πρὸς μεσημβρίαν ἐκτός· τὰ δὴ συνεχῆ τῆ Μαιώτιδι καὶ τῷ Τανάϊδι μέρη τὰ έντὸς τοῦ Ταύρου ἐστί. τούτων δὲ τὰ πρῶτα μέρη τὰ μεταξύ της Κασπίας θαλάττης έστι και τοῦ Εὐξείνου πόντου, τη μεν έπι τον Τάναϊν και τον ωκεανον τελευτώντα τόν τε έξω και τον της Υρκανίας θαλάττης, τη δ' ἐπὶ τὸν ἰσθμόν, καθ' δ έγγυτάτω έστιν άπο του μυγού του Πόντου έπὶ τὴν Κασπίαν. ἔπειτα τὰ ἐντὸς τοῦ Ταύρου τὰ ὑπὲρ τῆς Ὑρκανίας μέχρι πρὸς τὴν κατὰ 'Ινδούς και Σκύθας τούς ταύτη θάλατταν και τὸ Ἰμάϊον ὅρος. ταῦτα δ' ἔχουσι τὰ μὲν οἱ Μαιῶται Σαυρομάται ³ καὶ οἱ μεταξὺ τῆς Ὑρκανίας καὶ τοῦ Πόντου μέχρι τοῦ Καυκάσου καὶ 'Ιβήρων καὶ 'Αλβανῶν Σαυρομάται καὶ Σκύθαι καὶ "Αχαιοὶ καὶ Ζυγοὶ καὶ Ἡνίοχοι, τὰ δ' ὑπὲρ της Υρκανίας θαλάττης Σκύθαι καὶ Υρκανοὶ καὶ Παρθυαίοι και Βάκτριοι και Σογδιανοί και τάλλα τὰ ὑπερκείμενα μέρη τῶν Ἰνδῶν πρὸς ἄρκτον. πρός νότον δέ της Υρκανίας θαλάττης έκ μέρους

¹ μέν, Jones inserts.

² ταύτη, Capps, for πρός την αὐτήν.

³ Groskurd defends the old reading Μαιῶται Σαυρομάται, and deletes the comma after 'Αλβανῶν'; Forbiger approving.

GEOGRAPHY, 2. 5. 31

31. After the Tanaïs and Lake Maeotis come the regions of Asia—the Cis-Tauran regions which are contiguous to the Tanaïs and Lake Maeotis, and following upon these regions come the Trans-Tauran regions. For since Asia is divided in two by the Taurus Range, which stretches from the capes of Pamphylia to the eastern sea at India and farther Scythia, the Greeks gave the name of Cis-Tauran to that part of the continent which looks towards the north, and the name of Trans-Tauran to that part which looks towards the south; accordingly, the parts of Asia that are contiguous to lake Maeotis and the Tanaïs belong to the Cis-Tauran regions. first of these regions are those that lie between the Caspian Sea and the Euxine Pontus, and they come to an end, in one direction, at the Tanaïs and the ocean, that is, both at the exterior ocean and at that part of it which forms the Hyrcanian Sea, and, in the other direction, at the isthmus, at the point where the distance from the head of the Pontus to the Caspian Sea is least. Then come those Cis-Tauran regions that are north of Hyrcania, which reach all the way to the sea at India and farther Scythia, and to Mt. Imaeus. These regions are inhabited, partly, by the Maeotic Sarmatians, and by the Sarmatians that dwell between the Hyrcanian Sea and the Pontus as far as the Caucasus and the countries of the Iberians and the Albanians, and by Scythians, Achaeans, Zygians, and Heniochians; and, partly, beyond the Hyrcanian Sea, by Scythians, Hyrcanians, Parthians, Bactrians, Sogdianians, and also by the inhabitants of the regions that lie beyond India on the north. And to the south of the Hyrcanian Sea, in part, and of the whole of the

καὶ τοῦ ἰσθμοῦ παντὸς μεταξὺ ταύτης καὶ τοῦ Πόντου τῆς τε ᾿Αρμενίας ἡ πλείστη κεῖται καὶ Κολχὶς καὶ Καππαδοκία σύμπασα μέχρι τοῦ Εὐξείνου πόντου καὶ τῶν Τιβαρανικῶν ἐθνῶν, ἔτι δὲ ἡ ἐντὸς Ἅλνος χώρα λεγομένη, περιέχουσα πρὸς μὲν τῷ Πόντῷ καὶ τῆ Προποντίδι Παφλαγόνας τε καὶ Βιθυνοὺς καὶ Μυσοὺς καὶ τὴν ἐφ΄ Ἑλλησπόντῷ λεγομένην Φρυγίαν, ἡς ἐστι καὶ ἡ Τρωάς, πρὸς δὲ τῷ Αἰγαίῷ καὶ τῆ ἐφεξῆς θαλάττη τήν τε Αἰολίδα καὶ τὴν Ἰωνίαν καὶ Καρίαν καὶ Λυκίαν, ἐν δὲ τῆ μεσογαίᾳ τήν τε Φρυγίαν, C 130 ἡς ἐστι μέρος ἥ τε τῶν Γαλλογραικῶν λεγομένη Γαλατία καὶ ἡ Ἐπίκτητος, καὶ Λυκάονας καὶ Λυδούς.

32. 'Εφεξής δὲ τοῖς ἐντὸς τοῦ Ταύρου οἵ τε τὰ ὅρη κατέχοντες Παροπαμισάδαι καὶ τὰ Παρθυαίων τε καὶ Μήδων καὶ 'Αρμενίων καὶ¹ Κιλίκων ἔθνη καὶ Κατάονες² καὶ Πισίδαι. μετὰ δὲ τοὺς ὀρείους ἐστὶ τὰ ἐκτὸς τοῦ Ταύρου. πρώτη δ' ἐστὶ τούτων ἡ Ἰνδική, ἔθνος μέγιστον τῶν πάντων καὶ εὐδαιμονέστατον, τελευτῶν πρός τε τὴν ἐφαν θάλατταν καὶ τὴν νοτίαν τῆς 'Ατλαντικῆς. ἐν δὲ τῆ νοτία ταύτη θαλάττη πρόκειται τῆς Ἰνδικῆς νῆσος οὐκ ἐλάττων τῆς Βρεττανικῆς ἡ Ταπροβάνη· μετὰ δὲ τὴν Ἰνδικὴν ἐπὶ τὰ ἐσπέρια νεύουσιν, ἐν δεξιᾳ δ' ἔχουσι τὰ ὅρη χώρα ἐστὶ συχνή, φαύλως οἰκουμένη διὰ λυπρότητα ὑπ' ἀνθρώπων τελέως βαρβάρων, οὐχ ὁμοεθνῶν καλοῦσι δ' 'Αριανούς, ἀπὸ τῶν ὀρῶν διατείνοντας

τd, after καί, Pletho deletes; editors following.
 Κατάονες, Siebenkees, for Λυκάονες; usually followed.

GEOGRAPHY, 2. 5. 31-32

isthmus between this sea and the Pontus lie the greater part of Armenia, Colchis, the whole of Cappadocia up to the Euxine and to the Tibaranian tribes, and also the so-called Cis-Halys country, which embraces, first, next to the Pontus and to the Propontis, Paphlagonia, Bithynia, Mysia, the so-called "Phrygia on the Hellespont" (of which the Troad is a part); and, secondly, next to the Aegean and to the sea that forms its continuation, Aeolis, Ionia, Caria, Lycia; and, thirdly, in the interior, Phrygia (of which both the so-called "Galatia of the Gallo-Grecians" and "Phrygia Epictetus 1" form a part),

Lycaonia, and Lydia.

32. Following immediately upon the Cis-Tauran peoples come the peoples that inhabit the mountains2: the Paropamisadae, the tribes of the Parthians, of the Medes, of the Armenians, and of the Cilicians, and the Cataonians and the Pisidians. the mountaineers come the Trans-Tauran regions. The first of them is India,3 which is the greatest of all nations and the happiest in lot, a nation whose confines reach both to the eastern sea and to the southern sea of the Atlantic. In this southern sea, off the coast of India, lies an island, Taprobane,4 which is not less than Britain. Then, if we turn from India toward the western regions and keep the mountains on our right, we come to a vast country, which, owing to the poverty of the soil, furnishes only a wretched livelihood to men who are wholly barbarians and belong to different races. this country Aria, and it extends from the mountains

^{1 &}quot;Phrygia-Annex"; the name given to lesser Phrygia by the Kings of Pergamus.

2 Compare 11. 1. 4.

For the full description of India, see 15. 1. 1 ff.

⁴ Ceylon.

μέχρι Γεδρωσίας καὶ Καρμανίας. έξης δέ είσι πρός μεν τη θαλάττη Πέρσαι καὶ Σούσιοι καὶ Βαβυλώνιοι, καθήκοντες έπι την κατά Πέρσας θάλατταν καὶ τὰ περιοικοῦντα τούτους έθνη $μικρά· πρὸς δὲ τοῖς ὅρεσιν <math>η^1$ ἐν αὐτοῖς τοῖς όρεσι Παρθυαΐοι καλ Μ $\hat{\eta}$ δοι καλ Άρμένιοι καλ τὰ τούτοις πρόσχωρα ἔθνη καὶ ἡ Μεσοποταμία. μετὰ δὲ τὴν Μεσοποταμίαν τὰ ἐντὸς Εὐφράτου· ταῦτα δ' ἐστὶν ἥ τε εὐδαίμων 'Αραβία πᾶσα, ἀφοριζομένη τῷ τε 'Αραβίφ κόλπφ παντὶ καὶ τῷ Περσικῷ, καὶ ὅσην οἱ Σκηνῖται καὶ οἱ Φύλαρχοι κατέχουσιν οἱ ἐπὶ τὸν Εὐφράτην καθήκοντες και την Συρίαν είθ' οι πέραν τοῦ ᾿Αραβίου κόλπου μέχρι Νείλου, Αιθίοπές τε και "Αραβες. και οι μετ αυτούς Αιγύπτιοι και Σύροι και Κίλικες οί τε άλλοι καὶ οἱ Τραχειῶται λεγόμενοι, τελευταίοι δὲ Πάμφυλοι.

33. Μετὰ δὲ τὴν 'Ασίαν ἐστὶν ἡ Λιβύη, συνεχὴς οὖσα τῆ τε Αἰγύπτω καὶ τῆ Αἰθιοπία, τὴν μὲν καθ' ἡμᾶς ἠιόνα ἐπ' εὐθείας ἔχουσα, σχεδόν τι μέχρι Στηλῶν ἀπὸ 'Αλεξανδρείας ἀρξαμένην, πλὴν τῶν Σύρτεων καὶ εἴ πού τις ἄλλη κόλπων ἐπιστροφὴ μετρία καὶ τῶν τούτους² ποιούντων ἀκρωτηρίων ἐξοχή· τὴν δὲ παρωκεανῖτιν ἀπὸ τῆς Αἰθιοπίας μέχρι τινός, ὡς ᾶν παράλληλον οὖσαν τῆ προτέρα, μετὰ δὲ ταῦτα συναγομένην ἀπὸ τῶν νοτίων μερῶν εἰς ὀξεῖαν ἄκραν, μικρὸν ἔξω Στηλῶν προπεπτωκυῖαν καὶ ποιοῦσαν τραπέζιόν πως

¹ ň, the reading of C, for oi; so Groskurd, Kramer, Müller-Dübner, and Meineke.

² τούτους (namely κόλπους), Casaubon, for ταύτη; Du Theil, Tardieu, following; Groskurd approving.

GEOGRAPHY, 2, 5, 32-33

as far as Gedrosia and Carmania. Next after Aria. toward the sea, are Persia, Susiana, Babylonia (countries which reach down to the Persian Sea,1) and the small tribes that dwell on the frontiers of those countries; while the peoples who live near the mountains or in the mountains themselves are the Parthians, the Medes, the Armenians and the tribes adjoining them, and the Mesopotamians. Mesopotamia come the countries this side of the Euphrates. These are: the whole of Arabia Felix (which is bounded by the whole extent of the Arabian Gulf and by the Persian Gulf), and all the country occupied by the Tent-Dwellers and by the Sheikh-governed tribes (which reaches to the Euphrates and Syria). Then come the peoples who live on the other side of the Arabian Gulf and as far as the Nile, namely, the Ethiopians and the Arabs, and the Egyptians who live next to them, and the Syrians, and the Cilicians (including the so-called "Trachiotae 2"), and finally the Pamphylians.

33. After Asia comes Libya, which is a continuation of Egypt and Ethiopia. Its shore that lies opposite to us runs in a straight line almost to the Pillars, beginning at Alexandria, except for the Syrtes and perhaps other moderate bends of gulfs and projections of the promontories that form these gulfs; but its coastline on the ocean from Ethiopia to a certain point is approximately parallel to the former line, and then it draws in on the south and forms a sharp promontory, which projects slightly outside the Pillars and thus gives to Libya approximately

¹ That is, the Persian Gulf.

² That is, the inhabitants of "Rugged Cilicia." Compare 12, 6, 1.

τὸ σχημα. ἔστι δ', ὥσπερ οἵ τε ἄλλοι δηλοῦσι και δη και Γναίος Πείσων ηγεμών γενόμενος της χώρας διηγείτο ήμιν, ἐοικυία παρδαλή κατάστικτος γάρ έστιν οἰκήσεσι περιεχομέναις ἀνύδρω καλ έρήμω γη καλούσι τε τὰς τοιαύτας οἰκήσεις Αὐάσεις οἱ Αἰγύπτιοι. τοιαύτη δὲ οὖσα ἔχει τινας άλλας διαφοράς τριχή διαιρουμένας της C 131 μεν γάρ καθ' ήμας παραλίας εὐδαίμων ἐστὶν ή πλείστη σφόδρα, καὶ μάλιστα ή Κυρηναία καὶ ή περί Καργηδόνα μέγρι Μαυρουσίων και των Ήρακλείων στηλών οίκειται δε μετρίως και ή παρωκεανίτις, ή δε μέση φαύλως ή τὸ σίλφιον φέρουσα, έρημος ή πλείστη και τραγεία και άμμώδης. τὸ δ' αὐτὸ πέπονθε καὶ ή ἐπ' εὐθείας ταύτη διά τε της Αίθιοπίας διήκουσα της τε Τρωγλοδυτικής και τής 'Αραβίας και τής Γεδρωσίας τής τῶν Ἰνθυοφάνων, νέμεται δ' ἔθνη τὴν Λιβύην τὰ πλεῖστα ἄγνωστα οὐ πολλὴν γὰρ ἐφοδεύεσθαι συμβαίνει στρατοπέδοις οὐδ' άλλοφύλοις άνδράσιν, οί δ' ἐπιχώριοι καὶ ὀλίγοι παρ' ἡμᾶς ἀφικνοῦνται πόρρωθεν, καὶ οὐ πιστὰ οὐδὲ πάντα λέγουσιν δμως δ' οὖν τὰ λεγόμενα τοιαῦτά ἐστι. τούς μεν μεσημβρινωτάτους Αίθίοπας προσαγορεύουσι, τοὺς δ' ὑπὸ τούτοις τοὺς πλείστους Γαράμαντας καὶ Φαρουσίους καὶ Νιγρίτας, τοὺς δ' έτι ύπὸ τούτοις Γαιτούλους, τοὺς δὲ τῆς θαλάττης έγγυς ή και άπτομένους αυτής προς Αιγύπτω μέν Μαρμαρίδας μέχρι της Κυρηναίας, ύπερ δέ ταύτης καὶ τῶν Σύρτεων Ψύλλους καὶ Νασαμῶνας

GEOGRAPHY, 2. 5. 33

the shape of a trapezium. And Libva is-as the others show, and indeed as Cnaeus Piso, who was once the prefect of that country, told me-like a leopard's skin; for it is spotted with inhabited places that are surrounded by waterless and desert land. The Egyptians call such inhabited places "auases." 1 But though Libya is thus peculiar, it has some other peculiarities, which give it a threefold division. the first place, most of its coastline that lies opposite to us is extremely fertile, and especially Cyrenaea and the country about Carthage up to Maurusia and to the Pillars of Heracles; secondly, even its coastline on the ocean affords only moderate sustenance: and thirdly, its interior region, which produces silphium, affords only a wretched sustenance, being, for the most part, a rocky and sandy desert; and the same is also true of the straight prolongation of this region through Ethiopia, the Troglodyte Country, Arabia, and Gedrosia where the Fish-Eaters live. The most of the peoples of Libva are unknown to us; for not much of it is visited by armies, nor yet by men of outside tribes; and not only do very few of the natives from far inland ever visit us, but what they tell is not trustworthy or complete either. still the following is based on what they say. They call the most southerly peoples Ethiopians; those who live next north of the Ethiopians they call, in the main, Garamantians, Pharusians, and Nigritans; those who live still north of these latter, Gaetulans; those who live near the sea, or even on the seacoast, next to Egypt and as far as Cyrenaea, Marmaridans; while they call those beyond Cyrenaea and the Syrtes, Psyllians, Nasamonians, and certain of the Gaetulans,

¹ That is, "oases."

καὶ τῶν Γαιτούλων τινάς, εἶτ' 'Ασβύστας καὶ Βυζακίους μέχρι της Καρχηδονίας. πολλή δ' έστιν ή Καργηδονία συνάπτουσι δ' οι Νομάδες αὐτη τούτων δε τοὺς γνωριμωτάτους τοὺς μεν Μασυλιείς, τούς δὲ Μασαισυλίους προσαγορεύουσιν ύστατοι δ' είσὶ Μαυρούσιοι. πασα δ' ή άπὸ Καρχηδόνος μέχρι Στηλών έστιν εὐδαίμων, θηριοτρόφος δέ, ώσπερ καὶ ή μεσόγαια πασα. ούκ ἀπεικὸς δη ι και Νομάδας λεχθηναί τινας αὐτῶν, οὐ δυναμένους γεωργεῖν διὰ τὸ πληθος των θηρίων τὸ παλαιόν οἱ δὲ νῦν ἄμα τῆ ἐμπειρία της θήρας διαφέροντες, καλ των 'Ρωμαίων προσλαμβανόντων πρός τοῦτο διὰ τὴν σπουδὴν την περί τὰς θηριομαχίας, ἀμφοτέρων περιγίγνονται καὶ τῶν θηρίων καὶ τῆς γεωργίας. τοσαῦτα καὶ περὶ τῶν ἡπείρων λέγομεν.

34. Λοιπον είπειν περί των κλιμάτων, ὅπερ καὶ αὐτὸ ἔχει καθολικὴν ὑποτύπωσιν, ὁρμηθεισιν ἐκ τῶν γραμμῶν ἐκείνων, ἃ στοιχεια ἐκαλέσαμεν, λέγω δὲ τῆς τε τὸ μῆκος ἀφοριζούσης τὸ μέγιστον καὶ τῆς τὸ πλάτος, μάλιστα δὲ τῆς τὸ πλάτος. τοις μὲν οὖν ἀστρονομικοις ἐπὶ πλέον τοῦτο ποιητέον, καθάπερ "Ιππαρχος ἐποίησεν. ἀνέγραψε γάρ, ὡς αὐτός φησι, τὰς γιγνομένας ἐν τοις οὐρανίοις διαφορὰς καθ' ἔκαστον τῆς γῆς τόπον C 132 τῶν ἐν τῷ καθ' ἡμᾶς τεταρτημορίφ τεταγμένων, λέγω δὲ τῶν ἀπὸ τοῦ ἰσημερινοῦ μέχρι τοῦ βορείου πόλου. τοις δὲ γεωγραφοῦσιν οὕτε τῶν

¹ δή, Jones, for δέ.

GEOGRAPHY, 2. 5. 33-34

and then Asbystians and Byzacians, whose territory reaches to that of Carthage. The territory of Carthage is large, and beyond it comes that of the Nomads 1: the best known of these are called, some of them, Masylians, and others Masaesylians. last of all come the Maurusians. The whole country from Carthage to the Pillars is fertile, though full of wild beasts, as is also the whole of the interior of Libva. So it is not unlikely that some of these peoples were also called Nomads for the reason that in early times they were not able to cultivate the soil on account of the multitude of wild animals. But the Nomads of to-day not only excel in the skill of hunting (and the Romans take a hand in this with them because of their fondness for fights with wild animals), but they have mastered farming as well as This, then, is what I have to say about the chase. the continents.

34. It remains for me to speak about the "climata" (which is likewise a subject that involves only a general sketch), taking my beginning at those lines which I have called "elements 2"—I mean the two lines that mark off the greatest length and breadth of the inhabited world, but more particularly the breadth-line. Astronomers, of course, must treat this subject more at length, just as Hipparchus has treated it. For, as he himself says, he recorded the different aspects of the celestial bodies for all the different regions of the earth that are found in our Fourth 3—I mean the regions between the equator and the north pole. The geographer, however, need not busy himself with what lies outside of our

¹ Numidians. ² See 2. 5. 16.

⁸ See 2. 5. 5.

έξω της καθ' ήμας οἰκουμένης φροντιστέον, οὖτ' ἐν αὐτοῖς τοῖς της οἰκουμένης μέρεσι τὰς τοιαύτας καὶ τοσαύτας διαφοράς παραδεκτέον τῷ πολιτικῷ περισκελεῖς γάρ εἰσιν. ἀλλ' άρκει τὰς σημειώδεις και άπλουστέρας ἐκθέσθαι των ύπ' αὐτοῦ λεχθεισων, ὑποθεμένοις, ώσπερ έκεινος, είναι το μέγεθος της γης σταδίων είκοσι πέντε μυριάδων και δισχιλίων, ώς και Έρατοσθένης ἀποδίδωσιν· οὐ μεγάλη γὰρ παρὰ τοῦτ' ἔσται διαφορά πρὸς τὰ φαινόμενα ἐν τοῖς μεταξύ τῶν οἰκήσεων διαστήμασιν. εἰ δή τις εἰς τριακόσια έξήκοντα τμήματα τέμοι τὸν μέγιστον της γης κύκλον, έσται έπτακοσίων σταδίων έκαστον των τμημάτων τούτω δη χρηται μέτρω προς τὰ διαστήματα τὰ 1 ἐν τῷ λεχθέντι διὰ Μερόης μεσημβρινώ λαμβάνεσθαι μέλλοντα. ἐκείνος μέν δη ἄρχεται ἀπὸ των ἐν τῷ ἰσημερινῷ οἰκούντων, καὶ λοιπὸν ἀεὶ δι' έπτακοσίων σταδίων τὰς ἐφεξῆς οικήσεις έπιων κατά τον λεχθέντα μεσημβρινον πειράται λέγειν τὰ παρ' ἐκάστοις φαινόμενα ήμιν δ' οὐκ ἐντεῦθεν ἀρκτέον. καὶ γὰρ εἰ οἰκήσιμα ταθτά έστιν, ώσπερ οἴονταί τινες, ιδία γέ τις οίκουμένη αυτη έστί, δια μέσης της αοικήτου δια καθμα στενή τεταμένη, οὐκ οὖσα μέρος τής καθ' ήμας οικουμένης ὁ δὲ γεωγράφος ἐπισκοπεί ταύτην μόνην την καθ' ήμας οἰκουμένην. αυτη δ' άφορίζεται πέρασι νοτίω μεν τω διά της Κινναμωμοφόρου παραλλήλω, βορείω δε τω δια 'Ιέρνης. ούτε δε τας τοσαύτας οἰκήσεις επιτέον, όσας υπα-

 ¹ τd, Corais inserts, after διαστήματα; Meineke following;
 Müller approving.

inhabited world; and even in the case of the parts of the inhabited world the man of affairs need not be taught the nature and number of the different aspects of the celestial bodies, because this is dry reading for But it will be sufficient for me to set forth the significant and simplest differences noted by Hipparchus, taking as a hypothesis, just as he does, that the magnitude of the earth is two hundred and fifty-two thousand stadia, the figure rendered by Eratosthenes For the variation from this reckoning will not be large, so far as the celestial phenomena are concerned, in the distances between the inhabited If, then, we cut the greatest circle of the earth into three hundred and sixty sections, each of these sections will have seven hundred stadia. it is this that Hipparchus uses as a measure for the distances to be fixed on the aforesaid meridian through So he begins with the inhabitants of the equator, and after that, proceeding along the said meridian to the inhabited places, one after another. with an interval each time of seven hundred stadia. he tries to give the celestial phenomena for each place; but for me the equator is not the place to For if these regions are inhabitable, as some think, they constitute a peculiar kind of inhabited country, stretching as a narrow strip through the centre of the country that is uninhabitable on account of the heat, and not forming a part of our inhabited But the geographer takes into his purview only this our inhabited world; and its limits are marked off on the south by the parallel through the Cinnamon-producing Country and on the north by the parallel through Ierne; and, keeping in mind the scope of my geography, I am neither required to γορεύει τὸ λεχθὲν μεταξὺ διάστημα, οὔτε πάντα τὰ φαινόμενα θετέον, μεμνημένοις τοῦ γεωγρα-φικοῦ σχήματος. ἀρκτέον δ', ὥσπερ "Ιππαρχος,

ἀπὸ τῶν νοτίων μερῶν.

35. Φησί δή τοις οίκουσιν έπι τώ διά τής Κινναμωμοφόρου παραλλήλω, δη ἀπέχει της Μερόης τρισχιλίους σταδίους πρός νότον, τούτου δ' δ ισημερινδς οκτακισχιλίους και οκτακοσίους, είναι την οίκησιν εγγυτάτω μέσην τοῦ τε ισημερινοῦ καὶ τοῦ θερινοῦ τροπικοῦ τοῦ κατά Συήνην. άπέχειν γάρ την Συήνην πεντακισγιλίους της Μερόης παρά δε τούτοις πρώτοις την μικράν άρκτον όλην έν τω άρκτικώ περιέχεσθαι και άει φαίνεσθαι τὸν γὰρ ἐπ' ἄκρας τῆς οὐρᾶς λαμπρὸν ἀστέρα, νοτιώτατον ὄντα, ἐπ' αὐτοῦ ἱδρῦσθαι τοῦ άρκτικοῦ κύκλου, ώστ' ἐφάπτεσθαι τοῦ ὁρίζοντος. τῷ δὲ λεχθέντι μεσημβρινῷ παράλληλός πως παράκειται εωθεν ο Αράβιος κόλπος τούτου δ' έκ βασις είς τὸ έξω πέλαγος ή Κινναμωμοφόρος έστίν, έφ' ής ή των έλεφάντων γέγονε θήρα τὸ παλαιών. ἐκπίπτει δ' ὁ παράλληλος οὖτος τῆ μεν έπι τούς νοτιωτέρους μικρον τής Ταπροβάνης η έπι τους έσχάτους οικούντας, τη δ' έπι τά νοτιώτατα της Λιβύης.

36. Τοις δε κατά Μερόην και Πτολεμαίδα την

¹ The arctic circle as referred to by Strabo was a variable celestial circle, and may be represented by a system of concentric circles, each one of which is tangent to the horizon of the observer and has for its centre the visible celestial pole and for its radius the altitude of that pole above the horizon. At the equator, of course, the observer has no arctic circles—that is, they are non-existent for him at that point. As he proceeds toward the north pole his arctic circle expands, so

GEOGRAPHY, 2. 5. 34-36

enumerate all the many inhabited places that the said intervening distance suggests to me, nor to fix all the celestial phenomena; but I must begin with

the southern parts, as Hipparchus does.

35. Now Hipparchus says that the people who live on the parallel that runs through the Cinnamonproducing Country (this parallel is three thousand stadia south of Meroë and from it the equator is distant eight thousand eight hundred stadia), have their home very nearly midway between the equator and the summer tropic which passes through Svene; for Svene is five thousand stadia distant from Meroë. The Cinnamon-producing people are the first to whom the Little Bear is wholly inside the arctic circle and always visible; for the bright star at the tip of the tail, the most southerly in the constellation, is situated on the very circumference of the arctic circle, so that it touches the horizon. The Arabian Gulf lies approximately parallel to the meridian in question, to the east of it; and where this gulf pours outside into the exterior sea is the Cinnamonproducing Country, where in ancient times they used to hunt the elephant. But this parallel 2 passes outside the inhabited world, running, on the one side, to the south of Taprobane, or else to its farthermost inhabitants, and, on the other side, to the most southerly regions of Libva.

36. In the regions of Meroë, and of the Ptolemaïs

that at the Cinnamon-producing Country the Little Bear is comprehended within his circle, and at Syene almost the whole of the Great Bear, and so on. The same general principle would apply to observations made by an observer in a journey from the equator to the south pole.

² That is, through the Cinnamon-producing Country.

3 That is, on the east.

έν τη Τρωγλοδυτική ή μεγίστη ήμέρα ώρων ίσημερινών έστι τρισκαίδεκα έστι δ' αυτη ή οίκησις μέση πως τοῦ τε ἰσημερινοῦ καὶ τοῦ δι' 'Αλεξανδρείας παρά χιλίους καὶ ὀκτακοσίους τοὺς πλεονάζοντας πρός τῷ ἰσημερινῷ· διήκει δ' ὁ διὰ Μερόης παράλληλος τη μεν δι' άγνωρίστων μερών, τη δε διὰ τῶν ἄκρων τῆς Ἰνδικῆς. ἐν δὲ Συήνη καὶ Βερενίκη τη έν τω 'Αραβίω κόλπω καὶ τη Τρωγλοδυτική κατά θερινάς τροπάς δ ήλιος κορυφής γίγνεται, ή δὲ μακροτάτη ήμέρα ώρῶν ισημερινών έστι τρισκαίδεκα και ήμιωρίου, έν δέ τῷ ἀρκτικῷ φαίνεται καὶ ἡ μεγάλη ἄρκτος ὅλη σγεδόν τι πλην των σκελών και του άκρου της ούρας και ένος των έν τῷ πλινθίω ἀστέρων. διὰ Συήνης παράλληλος τη μέν διὰ της 'Ιγθυοφάγων των κατά την Γεδρωσίαν και της Ίνδικής διήκει, τη δε δια των νοτιωτέρων Κυρήνης πεντακισχιλίοις σταδίοις παρά μικρόν.

37. "Απασι δὲ τοῖς μεταξὺ κειμένοις τοῦ τε τροπικοῦ καὶ τοῦ ἰσημερινοῦ κύκλου μεταπίπτουσιν αἱ σκιαὶ ἐφ' ἐκάτερα, πρός τε ἄρκτους καὶ μεσημβρίαν, τοῖς δ' ἀπὸ Συήνης καὶ ¹ τοῦ θερινοῦ τροπικοῦ πρὸς ἄρκτους πίπτουσιν αἱ σκιαὶ κατὰ μεσημβρίαν καλοῦνται δ' οἱ μὲν ἀμφίσκιοι, οἱ δ' ἐτερόσκιοι. ἔστι δέ τις καὶ ἄλλη διαφορὰ τοῖς ὑπὸ τῷ τροπικῷ, ἡν προείπομεν ἐν τῷ περὶ τῶν ζωνῶν λόγῳ, αὐτὴ γάρ ἐστιν ἡ γῆ δίαμμος ²

¹ καί, Madvig, for ἐκ after Συήνης.
² αὐτὴ γάρ ἐστιν ἡ γῆ δίαμμος, Madvig, for αὐτή τε γάρ ἐστιν ἡ δίαμμος.

GEOGRAPHY, 2. 5. 36-37

in the country of the Troglodytes, the longest day has thirteen equinoctial 1 hours; and this inhabited country is approximately midway between the equator and the parallel that runs through Alexandria (the stretch to the equator being eighteen hundred stadia more 2). And the parallel through Meroë passes, on the one side, through unknown regions, and, on the other, through the capes of India. At Syene, at Berenice on the Arabian Gulf, and in the country of the Troglodytes, the sun stands in the zenith at the time of the summer solstice, and the longest day has thirteen and one half equinoctial hours; and almost the whole of the Great Bear is also visible in the arctic circle, with the exception of the legs, the tip of the tail, and one of the stars in the square. And the parallel through Syene passes, on the one side, through the country of the Fish-Eaters in Gedrosia, and through India, and, on the other side, through the regions that are almost five thousand stadia south of Cyrene.

37. In all the regions that lie between the tropic and the equator the shadows fall in both directions, that is, toward the north and toward the south; but, beginning at the regions of Syene and the summer tropic, the shadows fall toward the north at noon; and the inhabitants of the former region are called Amphiscians, and of the latter, Heteroscians. There is still another distinctive characteristic of the regions beneath the tropic, which I have mentioned before in speaking of the zones, anamely, the soil itself is very

¹ On the "equinoctial hour," see footnote 4, page 283.

² That is, the distance from Meroë to the equator is 11,800 stadia, and to Alexandria, 10,000.

³ See § 43 (following), and also 2. 2. 3.

^{4 2. 2. 3.}

και σιλφιοφόρος και ξηρά, τῶν νοτιωτέρων μερῶν

εὐύδρων τε και εὐκάρπων ὄντων.

- 38. Έν δὲ τοῖς τοῦ δι' 'Αλεξανδρείας καὶ Κυρήνης νοτιωτέροις όσον τετρακοσίοις σταδίοις, οπου ή μεγίστη ήμέρα ώρων έστιν ισημερινών δεκατεττάρων, κατά κορυφην γίνεται ο άρκτοῦρος, μικρου εκκλίνων προς νότον. εν δε τη 'Αλεξανδρεία ό γνώμων λόγον έχει πρὸς τὴν ἰσημερινὴν σκιάν, ον έχει τὰ πέντε προς τρία. Καρχηδόνος δὲ νοτιώτεροί είσι χιλίοις καὶ τριακοσίοις σταδίοις, είπερ εν Καρχηδόνι ο γνώμων λόγον έχει προς την ἰσημερινὴν σκιάν, δυ ἔχει τὰ ἕνδεκα πρὸς τὰ ἐπτά. διήκει δ' ὁ παράλληλος οὖτος τἢ μὲν διὰ Κυρήνης καὶ τῶν νοτιωτέρων Καρχηδόνος ἐνακοσίοις σταδίοις, μέχρι Μαυρουσίας μέσης, τή δὲ δι' Αἰγύπτου καὶ Κοίλης Συρίας καὶ τῆς ἄνω C 134 Συρίας καὶ Βαβυλωνίας 2 καὶ Σουσιάδος, Περσίδος, Καρμανίας, Γεδρωσίας της άνω μέχρι της Ίνδικής.
 - 39. Έν δὲ τοῖς περὶ Πτολεμαΐδα τὴν ἐν τῆ Φοινίκη καὶ Σιδῶνα ³ καὶ Τύρον ἡ μεγίστη ἡμέρα ἐστὶν ὡρῶν ἰσημερινῶν δεκατεττάρων καὶ τετάρτου· βορειότεροι δ' εἰσὶν οὖτοι 'Αλεξανδρείας μὲν ὡς χιλίοις έξακοσίοις σταδίοις, Καρχηδόνος δὲ ὡς

1 τρία, Gosselin, for έπτά; editors following.

⁸ Σιδῶνα, Meineke, for Σιδόνα; C. Müller approving.

² Βαβυλωνίας, Gosselin, for Βαβυλῶνος; Meineke, Groskurd, following; C. Müller approving.

¹ Computation on the basis of this ratio gives Alexandria's latitude as 30° 57′ 50″, and its distance from the equator as 21,675 stadia. Of course figures based on such a ratio are only approximate. Hipparchus gives 21,800. Let a vertical

sandy, silphium-producing, and dry, whereas the regions to the south of it are well-watered and very fruitful.

- 38. In the region approximately four hundred stadia farther south than the parallel through Alexandria and Cyrene, where the longest day has fourteen equinoctial hours. Arcturus stands in the zenith, though he declines a little toward the south. At Alexandria the relation of the index of the sundial to the shadow on the day of the equinox is as five to three.1 But the region in question is thirteen hundred stadia farther south than Carthage—if it be true that at Carthage the relation of the index to the shadow on the day of the equinox is as eleven to seven.2 But our parallel through Alexandria passes, in one direction, through Cyrene and the regions nine hundred stadia south of Carthage and central Maurusia, and, in the other direction, it passes through Egypt, Coelesyria, Upper Syria, Babylonia, Susiana, Persia, Carmania, Upper Gedrosia, and India.3
- 39. At the Ptolemais in Phoenicia, at Sidon, and at Tyre, and the regions thereabouts, the longest day has fourteen and one quarter equinoctial hours; and these regions are about sixteen hundred stadia farther north than Alexandria and about seven hundred stadia line AB represent the index. Then let BC be the horizontal shadow. The angle BAC is the latitude of the point B and

may be solved by trigonometry.

The latitude of Carthage, therefore, would be 32° 28′ 16″, which corresponds to a distance of 22,730 stadia from the

equator.

To fix a parallel of latitude by the countries through which it runs seems loose indeed, but Strabo not infrequently does so. On Coelesyria see 16. 2. 16; 16. 2. 21; and 16. 3. 1. By Upper Syria Strabo must mean Assyria.

έπτακοσίοις. ἐν δὲ τῆ Πελοποννήσφ καὶ περὶ τὰ μέσα τῆς 'Ροδίας καὶ περὶ Ξάνθον τῆς Λυκίας ἡ τὰ μικρῷ νοτιώτερα καὶ ἔτι τὰ Συρακουσίων νοτιώτερα τετρακοσίοις σταδίοις, ἐνταῦθα ἡ μεγίστη ἡμέρα ἐστὶν ὡρῶν ἰσημερινῶν δεκατεττάρων καὶ ἡμίσους· ἀπέχουσι δ' οἱ τόποι οὖτοι 'Αλεξανδρείας μὲν τρισχιλίους ἐξακοσίους τετταράκοντα, διήκει δ' ὁ παράλληλος οὖτος κατ' 'Ερατοσθένη διὰ Καρίας, Λυκαονίας, Καταονίας, Μηδίας, Κασπίων πυλῶν, 'Ινδῶν τῶν κατὰ Καύκασον.

40. Έν δὲ τοῖς περὶ ᾿Αλεξάνδρειαν μέρεσι τῆς Τρωάδος, κατ ᾿Αμφίπολιν καὶ ᾿Απολλωνίαν τὴν ἐν Ἡπείρω καὶ τοὺς Ὑρώμης μὲν νοτιωτέρους, βορειοτέρους δὲ Νεαπόλεως ἡ μεγίστη ἡμέρα ἐστὶν ὡρῶν ἰσημερινῶν δεκαπέντε· ἀπέχει δὲ ὁ παράλληλος οὖτος τοῦ μὲν δι ᾿Αλεξανδρείας τῆς πρὸς Αἰγύπτω ὡς ἐπτακισχιλίους σταδίους πρὸς ἄρκτον, τοῦ δ᾽ ἰσημερινοῦ ὑπὲρ δισμυρίους ὀκτακισχιλίους ὀκτακοσίους, τοῦ δὲ διὰ Ὑρόδου τρισχιλίους τετρακοσίους, πρὸς νότον δὲ Βυζαντίου καὶ Νικαίας καὶ τῶν περὶ Μασσαλίαν χιλίους πεντακοσίους, μικρὸν δ᾽ ἀρκτικώτερός ἐστιν ὁ διὰ Λυσιμαχείας,¹ ὅν φησιν Ἐρατοσθένης διὰ Μυσίας εἰναι καὶ Παφλαγονίας καὶ τῶν περὶ Σινώπην καὶ Ὑρκανίαν καὶ Βάκτρα.

41. 'Εν δὲ τοῖς περὶ τὸ Βυζάντιον ἡ μεγίστη ἡμέρα ὡρῶν ἐστιν ἰσημερινῶν δεκαπέντε καὶ τετάρτου, ὁ δὲ γνώμων πρὸς τὴν σκιὰν λόγον ἔχει ἐν τἢ θερινἢ τροπἢ, δν τὰ ἑκατὸν εἴκοσι πρὸς τετταράκοντα δύο, λείποντα πέμπτω. ἀπέχουσι

 $^{^1}$ Λυσιμαχείαs, Meineke, for Λυσιμαχίαs; C. Müller approving.

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δ΄ οἱ τόποι οὖτοι τοῦ διὰ μέσης τῆς 'Ροδίας περὶ τετρακισχιλίους καὶ ἐννακοσίους, τοῦ δ΄ ἰσημερινοῦ ὡς τρισμυρίους τριακοσίους. εἰσπλεύσασι δ΄ εἰς τὸν Πόντον καὶ προελθοῦσιν ἐπὶ τὰς ἄρκτους ὅσον χιλίους καὶ τετρακοσίους ἡ μεγίστη ἡμέρα γίνεται ὡρῶν ἰσημερινῶν δεκαπέντε καὶ ἡμίσους ἀπέχουσι δ΄ οἱ τόποι οὖτοι ἴσον ἀπό τε τοῦ πόλου καὶ τοῦ ἰσημερινοῦ κύκλου, καὶ ὁ ἀρκτικὸς κύκλος κατὰ κορυφὴν αὐτοῖς ἐστιν, ἐφ΄ οὖ κεῖται ὅ τ΄ ἐν τῷ τραχήλῳ τῆς Κασσιεπείας καὶ ὁ ἐν τῷ δεξιῷ ἀγκῶνι τοῦ Περσέως μικρῷ βορειότερος ὤν.

42. Έν τε τοις ἀπέγουσι Βυζαντίου πρός άρκτον δσον τρισχιλίους οκτακοσίους ή μεγίστη ήμέρα ἐστὶν ὡρῶν ἰσημερινῶν δεκαέξι ἡ οὖν δὴ C 135 Κασσιέπεια έν τῷ ἀρκτικῷ φέρεται. εἰσὶ δ' οἰ τόποι οὖτοι περὶ Βορυσθένη καὶ τῆς Μαιώτιδος τὰ νότια ἀπέχουσι δὲ τοῦ ἰσημερινοῦ περὶ τρισμυρίους τετρακισχιλίους έκατόν. δ δὲ κατά τὰς άρκτους τόπος του δρίζοντος εν δλαις σχεδόν τι ταις θεριναις νυξι παραυγάζεται ύπο του ήλίου άπὸ δύσεως έως καὶ ἀνατολης ἀντιπεριισταμένου τοῦ φωτός ό γὰρ θερινός τροπικός ἀπέχει ἀπό τοῦ ὁρίζοντος, ἐνὸς ζωδίου ήμισυ καὶ δωδέκατον. τοσούτον ούν και ο ήλιος αφίσταται του ορίζοντος κατὰ τὸ μεσονύκτιον. καὶ παρ' ἡμῖν δὲ τοσοῦτον τοῦ ὁρίζοντος ἀποσχών πρὸ τοῦ ὅρθρου καὶ μετὰ τὴν ἐσπέραν ἤδη καταυγάζει τὸν περὶ τὴν ἀνατολην ή την δύσιν άέρα. ἐν δὲ ταῖς χειμεριναῖς ό ήλιος τὸ πλεῖστον μετεωρίζεται πήχεις ἐννέα.

GEOGRAPHY, 2. 5. 41-42

hundred stadia distant from the parallel through the centre of Rhodes and about thirty thousand three hundred stadia distant from the equator. If you sail into the Pontus and proceed about fourteen hundred stadia toward the north, the longest day becomes fifteen and one half equinoctial hours. These regions are equidistant from the pole and from the equator, and there the arctic circle is in the zenith; and the star on the neck of Cassiopeia lies on the arctic circle, while the star on the right elbow of Perseus is a little north of it.

42. In the regions about three thousand eight hundred stadia north of Byzantium 2 the longest day has sixteen equinoctial hours; and therefore Cassiopeia moves within the arctic circle. These are the regions about the Borysthenes and the southern parts of Lake Maeotis, and they are thirty-four thousand one hundred stadia distant from the equator. There the northern part of the horizon is dimly illumined by the sun throughout almost the entire night in the summer-time, the sun's light making a reverse movement from west back to east.8 For the summer tropic is seven-twelfths of a zodiacal sign 4 distant from the horizon; and accordingly the sun at midnight is just that distance below the And in our own regions also, when the sun is so far as that from the horizon before sunrise and after sunset, it illumines the skies in the east and in the west. And in those regions in the winter-days the sun attains an elevation of at most nine cubits.5

¹ That is, a latitude of 43° 17′ 9″.

Which corresponds to 48° 42′ 51″. Compare 2. 1. 18.

⁴ That is, seven-twelfths of 30°, or 17° 30'.

The astronomical cubit of the ancients was two degrees.

φησὶ δ' Ἐρατοσθένης τούτους τῆς Μερόης διέχειν μικρῷ πλείους ἡ δισμυρίους τρισχιλίους, διὰ γὰρ Ἑλλησπόντου εἶναι μυρίους ὀκτακισχιλίους, εἶτα πεντακισχιλίους εἰς Βορυσθένη. ἐν δὲ τοῖς ἀπέχουσι τοῦ Βυζαντίου σταδίους περὶ ἑξακισχιλίους τριακοσίους, βορειοτέροις οὖσι τῆς Μαιώτιδος, κατὰ τὰς χειμερινὰς ἡμέρας μετεωρίζεται τὸ πλεῖστον ὁ ἡλιος ἐπὶ πήχεις ἔξ, ἡ δὲ μεγίστη ἡμέρα ἐστὶν ὡρῶν ἰσημερινῶν δεκαεπτά.

43. Τὰ δ' ἐπέκεινα, ἤδη πλησιάζοντα τῆ ἀοική-

τφ διὰ ψῦχος, οὐκέτι χρήσιμα τῷ γεωγράφο ἐστίν. ὁ δὲ βουλόμενος καὶ ταῦτα μαθεῖν καὶ ὅσα ἄλλα τῶν οὐρανίων "Ιππαρχος μὲν εἴρηκεν, ἡμεῖς δὲ παραλείπομεν διὰ τὸ τρανότερα εἶναι τῆς νῦν προκειμένης πραγματείας, παρ' ἐκείνου λαμβανέτω. τρανότερα δ' ἐστὶ καὶ τὰ περὶ τῶν περισκίων καὶ ἀμφισκίων καὶ ἐτεροσκίων, ἄ φησι Ποσειδώνιος. ὅμως γε καὶ τούτων τό γε τοσοῦτον ἐπιμνηστέον, ὥστε τὴν ἐπίνοιαν διασαφῆσαι, καὶ πῆ χρήσιμον πρὸς τὴν γεωγραφίαν, καὶ πῆ ἄχρηστον. ἐπεὶ δὲ περὶ τῶν ἀφ' ἡλίου σκιῶν ὁ λόγος ἐστίν, ὁ δ' ἤλιος πρὸς αἴσθησιν κατὰ παραλλήλου φέρεται, καθ' οῦ καὶ ὁ κόσμος, παρ' οῖς καθ' ἑκάστην κόσμου περιστροφὴν ἡμέρα γίνεται καὶ ἐκάστην κόσμου περιστροφὴν ἡμέρα γίνεται καὶ

νύξ, ὅτε μὲν ὑπὲρ γῆς τοῦ ἡλίου φερομένου, ὅτε δ'
ὑπὸ γῆν, παρὰ τούτοις οἵ τε ἀμφίσκιοι ἐπινοοῦν-

ται καὶ οἱ ἐτερόσκιοι. ἀμφίσκιοι μέν, ὅσοι κατὰ
¹ πραγματείας, Jones, for γραμματείας.

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Eratosthenes says that these regions are a little more than twenty-three thousand stadia from Meroë, since the distance from Meroë to the parallel through the Hellespont is eighteen thousand stadia, and thence to the Borysthenes, five thousand. In the regions about six thousand three hundred stadia distant from Byzantium 1 north of Lake Maeotis, in the winter-days, the sun attains an elevation of at most six cubits, and there the longest day has seventeen

equinoctial hours.

43. Since the regions beyond already lie near territory rendered uninhabitable by the cold, they are without value to the geographer. But if any one wishes to learn about these regions also, and about all the other astronomical matters that are treated by Hipparchus, but omitted by me as being already too clearly treated to be discussed in the present treatise, let him get them from Hipparchus. And what Poseidonius says about the Periscians and Amphiscians and Heteroscians 2 is too clear to be repeated here; nevertheless, I must mention these terms at sufficient length to explain the idea and to show wherein it is useful for geography and wherein useless. Now since the point in question concerns the shadows cast by the sun, and since, on the evidence of our senses, the sun moves along a circle parallel to the revolution of the universe, it follows that, wherever each revolution of the universe produces a day and a night (because at one time the sun moves beneath the earth and at another time above the earth), the people are thought of as either Amphiscians or Heteroscians,—as Amphiscians, all

¹ Corresponding to 52° 17′ 9″.

μέσον ήμέρας τοτε μεν έπι τάδε πιπτούσας έγουσι τας σκιάς, όταν ό ήλιος από μεσημβρίας τω γνώμονι προσπίπτη τῷ ὀρθῷ πρὸς τὸ ὑποκείμενον έπίπεδου, τοτέ δ' είς τουναντίου, όταν ό ήλιος είς τούναντίον περιστή τοῦτο δὲ συμβέβηκε μόνοις τοίς μεταξύ των τροπικών οἰκοῦσιν. έτερόσκιοι δ' όσοις ή έπι την άρκτον άει πίπτουσιν, ώσπερ ήμιν. ἡ ἐπὶ τὰ νότια, ὥσπερ τοῖς ἐν τῆ ἐτέρα C 136 εὐκράτω ζώνη οἰκοῦσι. τοῦτο δὲ συμβαίνει πᾶσι τοῖς ἐλάττονα ἔχουσι τοῦ τροπικοῦ τὸν ἀρκτικόν. όταν δὲ τὸν αὐτὸν ἡ μείζονα, ἀρχὴ τῶν περισκίων έστὶ μέχρι τῶν οἰκούντων ὑπὸ τῷ πόλω. τοῦ γὰρ ήλίου καθ' όλην την του κόσμου περιστροφην ύπερ γης φερομένου, δηλονότι και ή σκια κύκλω περιενεχθήσεται περί τον γνώμονα. καθ' δ δή καί περισκίους αὐτοὺς ἐκάλεσεν, οὐδὲν ὄντας πρὸς τὴν γεωγραφίαν ου γάρ έστιν οικήσιμα ταθτα τὰ μέρη διὰ ψύγος, ώσπερ ἐν τοῖς πρὸς Πυθέαν λόγοις εἰρήκαμεν. ὥστ' οὐδὲ τοῦ μεγέθους τῆς αοικήτου ταύτης φροντιστέον έκ τοῦ λαβείν ὅτι οί έχοντες άρκτικον τον τροπικον ύποπεπτώκασι τῷ γραφομένω κύκλω ὑπὸ τοῦ πόλου τοῦ ζωδιακοῦ

² From 66° to 90°.

 $^{^{1}}$ From the equator to 66° every man is either Amphiscian or Heteroscian.

³ Strabo places the tropic of Cancer at 24° (4/60 or 24/360 of the greatest circle); and he places the beginning of the frigid zone at 66°. The radius of the tropic, therefore, is constant, and is 66°, while the radius of the arctic circle

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whose shadows at noon sometimes fall toward the north, namely, when the sun strikes from the south the index (which is perpendicular to the horizontal surface beneath), and, at other times, fall in the opposite direction, namely, when the sun revolves round to the opposite side (this is the result for only those who live between the tropics), but as Heteroscians, all whose shadows either always fall toward the north, as is the case with us, or always toward the south, as is the case with the inhabitants of the other temperate zone. And this is the result for every man whose arctic circle is smaller than the tropic circle.1 But wherever the arctic circle is the same as, or larger than, the tropic,2 there the Periscians begin and they extend to the people who live beneath the pole. For since, in those regions, the sun moves above the earth throughout the whole revolution of the universe, it is clear that the shadow will move in a circle round the index of the sun-dial; and that is the reason why Poseidonius called them Periscians, although they are non-existent so far as geography is concerned; for all those regions are uninhabitable on account of the cold, as I have already stated in my criticism of Pytheas. Therefore I need not concern myself, either, with the extent of this uninhabited region, apart from assuming that those regions which have the tropicarctic circle 3 lie beneath the circle described by

is a variable, and is 66° only when the observer stands at the beginning of the frigid zone. Accordingly, when the observer is within the frigid zone the radius is greater than 66°, and less than 66° when he is this side of it. By "the tropic-arctic circle" Strabo refers to the case where the arctic circle becomes equal to the tropic circle, namely, at latitude 66°.

κατὰ τὴν τοῦ κόσμου περιστροφήν, ὑποκειμένου τοῦ μεταξὺ διαστήματος τοῦ τε ἰσημερινοῦ καὶ τοῦ τροπικοῦ τεττάρων ἑξηκοστῶν τοῦ μεγίστου κύκλου.

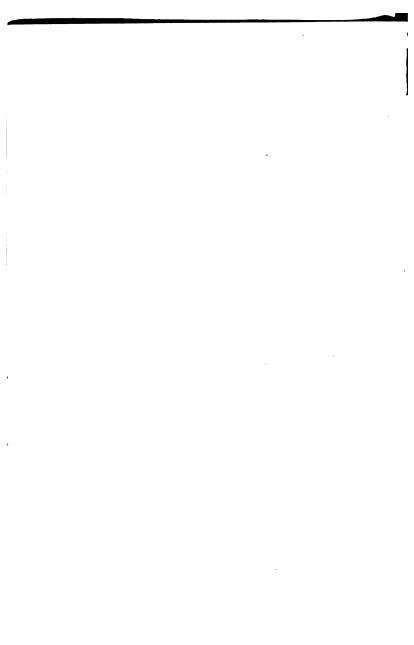
¹ That is, the pole of the ecliptic, which daily appears to describe a circle in the heavens about the pole of the equator.

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the pole of the zodiac 1 in the diurnal revolution of the universe—that is, on the hypothesis that the distance between the equator and the tropic is four-sixtieths of the greatest circle.

The projection of this circle upon the earth marks off the frigid zone, and is practically what we mean to-day by the term "arctic circle,"





Aea, a city of Medea, compared with the Aeaea of Circe, 75

Aeolus, 73, 85; mythical king of the Aeolian Islands and ruler of the winds, residing on the isle now called Stromboli

Aelius Gallus, 453; Roman prefect of Egypt about 25 B.O. and per-sonal friend of Strabo

Aeschylus, 123, 157; the tragic poet, 525-456 B.C.

Agamemnon, 35; commander-in-chief of the Greek forces in the Trojan War

Albis (Elbe), the, 51
Alcaeus of Mitylene in Lesbos (fl. about 600 B.C.), 135; the famous lyric poet

Aleman of Sardis (fl. about 625 B.C.). 157: the founder of Doric lyric poetry

Alexander the Great (356–323 B.C.), 49, 249, 259, 347

Amisus (Samsun), 255, town on the southern coast of the Euxine

Ammon, the temple of, in Egypt,

Anaximander of Miletus (b. 610 B.C.) 3; an Ionian philosopher, and pupil of Thales. He introduced the gnomon into Greece, and was said to have been the inventor of geographical maps, 23

Andromeda, 157; daughter of Cepheus, king of Ethiopia; her story was made the subject of tragedies (now lost) by Sophocles and Euripides

Antiphanes of Berga in Thrace (fl. not later than the third century B.C.), 391; traveller, and typical romancer. "Bergaean" became a proverbial epithet for romancers

a proverblat epither for romances, Apelles (fi. about 330 B.O.), 53; the most famous of Greek painters Apollodorus of Artemita (fi. apparently about the middle of the first century B.O.), 453; author of a history of Parthia

Apollodorus of Athens (fl. about 140 B.O.), 117, 157, 163, 227; grammarian, pupil of Aristarchus, and prolific writer on various subjects

Arabian Gulf (Red Sea), the Ethiopians "sundered in twain"

by, 129 Aratus of Soli in Cilicia (b. about 1315 B.C.), 11, 397; the astro-nomical poet, of whose works there remain two short poems and some recently discovered fragments

Arcesilaus of Pitane in Aeolis (b. about 316 B.C.), 53; founder of the Middle Academy of Philosophy

Archimedes of Syracuse (287–212 B.C.), 201; the great mathematician and inventor. Nine of his treatises are extant

Aristarchus of Samothrace (fl. about 155 B.C.), 113, 397; grammarian and critic, and librarian at Alexandria

¹ A complete index will appear in the last volume.

Aristeas of Proconnesus, 79; an epic poet, author of the Arimaspian Epic; all accounts of him are uncertain

Ariston of Chios (fl. about 260 B.C.) a Stoic philosopher, and pupil of Zeno

Aristonicus of Alexandria, 139; grammarian and contemporary of Strabo

Aristotle of Stagira (384-322 B.C.),

prince of ancient philosophers; on the winds, 107, the zones, 363 Aristoxenus of Tarentum (fl. about 330 B.C.), 57; pupil of Aristotle, philosopher, musician, and author of Elements of Harmony, of which three incomplete books are pre-

served Artabrians, the, 461; a district at the north-western corner of Spain Asteria (the Homeric Asteris), 221; a small island between Ithaca

and Cephallenia

Atalanta (now Talanta), 225; an between Euboea island

Athenodorus of Canana near Tarsus (about 74 B.C.-A.D. 7), 19; pupil of Poseidonius, friend of Strabo, learned scientist; none of his works are extant. On the tides, 203

Atlantic Ocean, not divided by isthmuses into two seas, 17, 121 Atreus, father of Agamemnon, discovered that the sun and heavens moved in contrary directions, 87 Axius (Vardar), the, 21

B

Bear, the Great, 11, 45, 509; the

Little, 507 ion. "the astrologer." 107. whom is meant, probably, Bion of Abdera, a philosopher and mathematician who flourished about 400 B.C.

Bion, the philosopher, 53, born near the mouth of the Dnieper River and flourished about 250 B.C. He was long at the court of Antigonus Gonatas in Macedonia

Bistonis (Lagos), Lake, 221, in Thrace

Bizone, 199, on the Thracian coast of the Euxine, identical with the Kavarna of to-day Boagrius, the, 225; a torrent near

Thronium in Locris

Bogus (Bocchus), 383, King of Maurusia in Libya about 110 B.C.

Boreas, the north wind, 105 Borysthenes (Dnieper), the, 235, 413; Strabo often refers to the mouth of the Borysthenes simply

as Borysthenes Bosporus, the Cimmerian, 21, 75; the Strait of Yenikale

Britain, its position and length, 235 Bura, 199, 219; a town on the Corinthian Gulf

C

Cadmus of Miletus (fl. about 550 B.C.), 65; probably the earliest Greek prose-writer. A work On the Foundation of Miletus, in four

books, was attributed to him Callimachus of Cyrene (fl. about 250 B.C.), 163, 169; Greek poet and grammarian, librarian at Alexandria, cataloguer of the library, and said to have written about 800 works, in prose and verse. Only 6 hymns, 64 epigrams and some fragments are extant

Calpe, 189, the Rock of Gibraltar Celts, campaign of the Romans

against the, 37

Ceraunian Mountains (the Kimara Mountains in Albania), 75 Chersonese, the Thracian, 353; the

Chersonese, the Thracian, 333; the Gallipoli peninsula
Choaspes (Kerah); a river emptying into the Tigris, 175
Cimbrians, the, a Teutonic tribe, who, before their appearance in Roman history (118 B.O.), lived on the North Sea (in Jutland, apparently), but later migrated on account of an inundation, 393

Clazomenae, an important city on the Gulf of Smyrna; once an

island, 217

Cleopatra, 379, wife of Ptolemy Euergetes II, king of Egypt, 146-117 B.C.

Clytaemnestra, wife of Agamemnon,

Cnaeus Piso, 501; fought against Caesar in Libya (46 B.C.), and later (23 B.C.) was raised to the consulship Cobus, the Treran chief, 227

Copais (Topolia), Lake, 219, in Boeotia

Corcyra (Corfu), island of, 163 Corinth, an attempt to cut through

the Isthmus of, 201

Crates of Mallus in Cilicia (fl. about 150 B.C.), 11; a Stoic philosopher, author of a commentary on Homer, and the leading exponent of the allegorical theory Concerning the tides, exegesis. his misunderstanding οŧ 15; Homer, 113; his theory of Menelaus' wanderings, 139; his

globe and map, 449 Ctesias of Cnidus in Caria (fl. in the fifth century R.C.), 159; historian, physician to Artaxerxes, and author of a Persian History

in 23 books

Cumae, Gulf of, (Bay of Naples), 81 Cyaneae ("Dark Blue Rocks"), two isles near the mouth of the Bosporus, 75, 349; also called Symplegades ("Clashing Rocks") Cyrus (Kur), 227; a large river in

Asiatic Russia, emptying into the Caspian Sea

D

Damastes of Sigeum, 173; Greek historian, contemporary of Herodotus, and discredited by Strabo. His works are lost

Danaüs, discoverer of the reservoirs

of Argos, 87

Darius Codomannus, King of Persia, 301; defeated by Alexander near Gaugamela in 331 B.C. ("the battle of Arbela")

Delmachus, 257, ambassador of Antiochus Soter (reigned 281– 262 B.C.) to Allitrochades, King of Palimbothra in India. He wrote a work on India, which was thoroughly distrusted by Strabo

because of its fabulous stories Demetrius of Callatis (fl. about 200 B.O.), 223; historian, and author of a work on the geography and ethnography of the Euxine regions

Demetrius Poliorcetes (334–283 B.C.) 201; son of Antigonus the king of Asia: a noted engineer.

general, and admiral

Demetrius of Scepsis (fl. about 150 B.c.), 165, 215; grammarian, and author of a historical and geographical work, in 30 books, on the Trojan allies

Democles of Pygela in Lydia (fourth or fifth century B.C.), 217; a cataloguer of earthquakes, of,

whom little is known

Democritus of Abdera (b. about 460 B.C.), 3, 227, 245; a cele-brated philosopher, traveller, and lecturer

Demosthenes (about 383-322 B.C.), 465: the great Athenian orator

Dicaearchia (Puteoli), 95 Dicaearchus of Messene in Sicily (fl. about 320 B.C.), 3, 399; a peripatetic philosopher and pupil of Aristotle, historian, and geographer. Besides other works he wrote a *Periegesis*, and he was the first to measure the altitude of mountains, a subject upon which he wrote a treatise

Dioscuri (Castor and Pollux), 177 Duris of Samos (fl. about 350 B.C.), 223; author of a number of historical works, of which only fragments remain. Among them was a History of Greece and Macedon Dyris, the Atlas Mountains, 121

E

Echinus (now Echino), 225; a town in Thessaly near the sea

Ephialtes, the traitor at Thermo-pylae, 35 Ephorus of Cyme in Aeolis, 3, 121, 125; a pupil of Isocrates, and

author of a history dating from the Dorian Invasion to 340 B.C., the year of his death

Epidamnus, 355, 409, now Durazzo, on the coast of Albania

Eratosthenes of Cyrene (about 276–194 B.C.), 3, 49; the learned mathematician and geographer, writer on philosophy, and for years librarian at Alexandria. His opinion of Homer, 93; con-cerning currents of straits, 201; the dimensions of the inhabited world, 237, 437; his map, 253; the size of the earth, 505

Ethiopians, the, "sundered in twain," 109, 119, 397 Eudoxus of Cnidus (fl. about 366

B.C.), 3, 461; an astronomer, who also wrote a geographical work, to which Strabo frequently refers Eudoxus of Cyzicus (fl. about venturer. His voyages about Libya were described at length by

Poseidonius, and discussed by Strabo, 377 Euhemerus of Messene (fl. about

310 B.C.), 173, 391, 401; author of a work on Sacred History, which was discredited by Strabo Euripides (480-406 B.C.), 99, 123;

the tragic poet
Euripus, the narrow strait between
Bocotia and Euboea, 133
Euxine (Black) Sea, 21; its bed
higher than that of the Propontis, 189

Gades (now Cadiz), 381 Galatic Gulf (Gulf of Lyon), 409 Gaudos (Gozo), 163; an island

south of Sicily Gelo, 377, who became tyrant of Gela in 491 B.C., of Syracuse in 485 B.C., and, later, lord of all Sicily. He died in the year 478 B.C.

Germans, campaign of the Romans against the, 37 Gerrha, 185, 207; a town in Egypt between Pelusium and Mt. Casius

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Hecataeus of Miletus (b. about 540 B.C.), 3, 23, 65; a historian and geographer. His geographical work was called *Pertegesis*, which embodied about all the Greeks of his time knew on the subject

Hellanicus of Lesbos (fl. about 430 B.C.), 159; the first scientific chronicler among the Greeks, and author of a number of works, among them histories of Troy and

Persia

Heracleia Trachinia, 225: a town in Thessaly about eight miles from Thermopylae and three

miles from the sea

Heracleides of Pontus (b. about 380 B.C.); pupil of Plato and Aristotle, philosopher, and author of numerous works on a variety subjects, including certain Dialogues mentioned by Strabo.

Heracleitus of Ephesus (about 535-475 B.C.), 11; the founder of metaphysics, and called the "Dark Philosopher" because of the obscurity of his writings

Herodotus (about 484-425 B.C.), the "Father of History"; concerning the Nile, 111, 131; narrator of myths, 159; the sitting process, 221; the Hyperboreans, 200, the characteristics of the state of the 229; the circumnavigation of Libya, 377

Hesiod of Ascra in Bocotia (fl. in the eighth century B.C.), 85; the father of Greek didactic poetry. The extant works under his name are Works and Days, Theogony, and the Shield of Heracles. Con-cerning the Nile, 107; his mythical stories, 157

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h

Hesperides, 473; a city of Cyrenaica in Libya, renamed Berenice by Ptolemy III, now called Bengazi

Hipparchus of Nicaea in Bithynia (fl. about 150 B.C.), 5; the famous astronomer. He made the discovery of the precession of the equinoxes, was the first to divide

the inhabited world into zones of latitude ("climata"), and invented a method of fixing terrestrial positions by circles of longitude and latitude. On the tides, 19; the inhabited world, 269, 487; the "climata," 505

Homer, the great epic poet; philosopher, 3; founder of the science of geography, 5, 23; his conception of Oceanus, 13; his wide knowledge, 59; his use of myth, 67, 71, 75, 159

Hypanis (Bog), the, 413

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Ierne (Ireland), 237, 279, 443 Ister (Danube), the, 21, 169, 211, 413

Jason, 21, 39, 167; leader of the Argonautic expedition, who went to Colchis in quest of the golden fleece

Lapithae, the, 29; a mythical race of Thessaly, akin to the Centaurs Lelantine Plain, 215, in Euboea, between the cities of Eretria and Chalcis

Leonidas, 37, the hero of Thermopylae (480 B.C.)

Madys, the Scythian chief, 227, who overran portions of Asia Minor. conquering Cyaxares in 623 B.C. Macotis (Sea of Azov), the, 51, 277,

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Malea, a promontory on the S.E. coast of Laconia, 93
Massilia (Marseilles), 237, 283

Maurusia (Morocco, approximately),

Megasthenes, 257, ambassador of Seleucus Nicator (reigned 312– 281 B.C.) to Sandrocottus, king of Palimbothra in India. He wrote a historical and geographi-cal work on India, which was discredited by Strabo because of its fabulous stories

Melas (Saros), Gulf of, 103

Meninx (now Isle of Jerba), home of

the Lotus-Eaters, 91
Meroë, 119, 233, 255, 439; metropolis of the Ethiopians, on the Nile

Midas, ancient king of Phrygia, 229 Mimnermus of Colophon (fl. about 625 B.C.), 171; the Greek elegiac poet

Minos, 177, ancient king of Crete Mithridates Eupator, 277, king of Pontus (120–63 B.O.), and most formidable enemy of the Romans in the East

Moeris (Birket-el-Kerun), Lake, 185 Myrsilus of Lesbos, 223; a historical writer of uncertain date

Narbo (Narbonne), 403 Neanthes of Cyzicus (fl. in the third century B.C.), 165; a voluminous writer on historical subjects. though only a few fragments of his works are extant

Neapolis (Naples), 83 Nearchus, 263; an admiral of Alexander the Great; in 325 B.C. he made a voyage with his fleet from the mouth of the Indus to the Persian Gulf. An abstract of his voyage is contained in the Indica of Arrian. Strabo discredited his work

Neco, 377, king of Egypt, who be-

gan his reign in 612 B.O.

Nile, the, and its mouths, 107;
boundary-line between Asia and Libys, 119, 243; the silting process at its mouth, 193
Notus, the south wind, 105, 229

Olynthus, 465; a Greek city near the head of the Gulf of Torone. It was destroyed and its inhabitants sold as slaves by Philip of Macedon in 347 B.C.

Onesicritus, 263; wrote a biography of Alexander the Great, including a description of Asiatic Countries traversed by Alexander, particularly India. He accom-

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panied the admiral Nearchus on a voyage from the Indus to the Persian Gulf. His work was discredited by Strabo

Panchaea, 401; a fabulous land which Euhemerus professed to have visited

Parmenides of Elea in Italy (b. about 510 B.C.), 361; philosopher and poet; and author of a didactic poem On Nature, of which only fragments remain

Parthenope, one of the sirens,

momument of, 83

Parthians, campaign of the Romans against the, 37; spread of the empire of, 49

Patrocles (about 312-261 B.C.), 255; Macedonian general under Seleu-cus I and Antiochus I; explorer, and author of geographical treatises (now lost). He regarded the Caspian Sea as a gulf of the "Northern Ocean." Strabo had the utmost faith in his state-

Peiraeus, the most important harbour of Athens; once an island,

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Pelorias (Faro), Cape, 81
Pelorus, the pilot who was put to
_ death_by the Carthaginians, 35 Peneus (Salambria), the, 21

Phalara, 225; now Stillida, on the

Maliac Gulf Pharos, 109, 135, 217, an island off Alexandria, which Alexander

united by a mole to the coast
Phasis, 167, 193, river, and town, at
the eastern end of the Euxine

Pherecydes of Syros (fl. about theologian, author of a work concerning nature and the gods, and possibly the earliest prosewriter

Phrixus, 167; the mythical son-in-law of Aeëtes the king of Colchis Pillars of Heracles, the Straits of

Gibrattar, 19, 119, 141
Plato (427-847 B.C.), 391; the great Athenian philosopher
Polemon of Troas (fi-about 200 B.C.),

53; among other works he wrote one on Athens. His works, now lost, were of great value to later times, being rich in information for travellers and students of art

and archaeology Polybius of Megalopolis in Arcadia (b. about 204 B.C.), 3, 73, 85, 367, 399; of his Histories in 40 books only the first five have come down to us in complete form. geographical treatise, referred to by Geminus, is thought to be identical with the 34th book of the Histories, of which only a few fragments remain

Pontus (see Euxine), the, 75, 77 Poseidonia (Salerno), Gulf of, 75, 81 Poseidonius of Apamea in Syria (b. about 130 B.C.), 3; the author of a history in 52 books, now lost. His researches in geography and astronomy were of the greatest value to Strabo and other scientific writers. Concerning the tides. the winds, 107; the silting Erembians the 151; process, 199 the tides. Oceanus and the zones, 361

Psammitichus, king of Egypt, 227; one of the Psammitichi of the

sixth and seventh centuries, B.C.
Ptolemy Euergetes II (Physon),
379, 397; king of Egypt 146117 B.C.

Pygmies, geographical position of, 127

Pytheas of Massilia (Marsellles), 233, 391, 399; navigator, and author of a geographical treatise (now lost). He was the first, apparently, to give definite in-formation on Western Europe and especially the British Islands. Though pronounced by Strabo as unworthy of belief, he is now regarded with greater favour. His date is uncertain, but he flour-ished at some time before 285 B.C.

Romans, campaigns of the against the Parthians, Germans, and Celts, 37; spread of the empire of, 49

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Sacred Cape (St. Vincent), of Iberia, 407

Salganeus, the pilot who was exe-cuted by the Persians, 35

Salmydessus, 193; the coast of Thrace to the north of the Bosporus

Sappho of Lesbos (fl. about 600 B.C.) 149; Greek poetess, and con-temporary of Alcaeus

Scironian Rocks (Derveni Bouno), 103; large rocks on the eastern coast of Megaris

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