

JUBA II OF MAURETANIA

(ACTIVE C.27 BC–AD 23/4)

Selection of geographical testimonia and fragments

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To the memory of
 Simon J. W. Squires, classicist
 (1944–2023)

INTRODUCTION

Juba II of Mauretania (c.47 BC–AD 23/4) is the only author in these volumes—apart from Hanno (Chapter 4), if that text be genuine—whose first language was probably neither Greek nor Latin.¹ He was, however, both a Roman citizen and steeped in the Greek culture of the hellenistic kingdoms ruled by Macedonian dynasties during the last three centuries BC. He may have been personally acquainted with the historian and geographer Strabo;² at the least, he must have been aware of him.³ Juba's wide-ranging intellectual accomplishments include richly detailed accounts of the physical geography of North Africa and Arabia, including copious new observational data on hydrology, geology, and natural history which—as we are now learning from new research on the use of his work by Arabic and, via them, Latin scholars—were highly influential on the development of the natural sciences.

Juba (in Latin *Iuba*; in Greek *Iobas*) was the direct descendant of Numidian kings, including the Romans' enemy-turned-ally Masinissa (r. 202–148 BC) and their vanquished enemy Jugurtha (r. 118–105). He married Kleopatra Selene II, daughter of Kleopatra VII by Mark Antony; she was the last acknowledged descendant of the Ptolemaic dynasty until she and Juba had a son, significantly named Ptolemaios. After supporting Octavian, the future Augustus, at the battle of Actium (31) which ended the Roman civil wars, Juba, still a teenager, was made king of Numidia. When that was made into a Roman province he received as his kingdom Mauretania,⁴ lying further west and corresponding to northern Morocco and northern Algeria today, and running from the area of the strait of Gibraltar up to the province of Africa Proconsularis, including Carthage, to the east. The royal couple had their capital at Iol, which they renamed

¹ For a general outline, see Dueck 2012, 45.

² Roller 2003, 69; Dueck 2000, 88, however, implies that they did not coincide at Rome. Strabo 17. 3. 7, C828, says that Juba has recently died.

³ The point is discussed by Draycott 2010, 215–16.

⁴ The modern state of Mauritania (*sic*) lies further S and W than ancient Mauretania.

Caesarea (mod. *Cherchel*). An effective client king of Rome, he and his queen fostered Greek culture and architecture and promoted Mauretania's international trade, including the luxury commodities that feature often in the extracts below.⁵

Juba's considerable literary output, likewise, can be seen as part of the attempt to integrate the kingdom into Roman culture at the highest level through royal patronage, and to add lustre to its reputation. He deserves to be remembered as one of the greatest scholars of his age. As well as early books on Roman culture and history, a study of the Greek and Latin languages, a probable autobiography, and histories of painting and the theatre—fragments of the last are a valuable source for ancient comedy and music—he ventured into geography with a study of the voyage of Hanno of Carthage (2 below; Chapter 4 above) and important researches into Mesopotamia, the Arabian peninsula, and his own homeland in the wider context of Libyē (North Africa) as a whole.⁶ His late works *Libyka* (3–16, possibly 17–19) and *On Arabia*⁷ (20–40, possibly 17–19) were drawn upon (but rarely cited) by Strabo and frequently cited by Pliny the Elder as well as later authors, though the geographical fragments in the present chapter are nearly all from Pliny (and probably do not exhaust the material on Arabia which Pliny took from Juba without continually naming him).⁸ They were extensively based not only on expeditions that Juba commissioned but also on his own travels to Egypt and western Asia. He also relied extensively on earlier writers such as Agatharchides (Chapter 15 above) and Carthaginian authors to whom he had direct access, as well as eye-witness reports which allowed him to produce, among other things, the first detailed *periplous* of the Ocean coast of the Arabian peninsula (possibly in Latin). His most extended 'fragments' (20–3) are lengthy paraphrases by Pliny of parts of that work.

His conception of geography was a wide one—indeed, as with other writers in these volumes it is slightly misleading to call him a 'geographer' when his interests in these fragments embrace the origins of names (1, 8, 14, 16, 19, 21–3, 30, 38), geology and mineralogy (13–14, 18, 33–9), ethnography (6 §176, 20, 22–3), flora (2–3, 8, 12, 24–7, 29–30) including medicinal plants (31, 41–3), and fauna (4, 9–11, 15–17, 19, 32) including the now extinct North African elephant (9, 15).⁹

Unsurprisingly, his scholarly interests included the geography of North-West Africa, such as the Atlas mountains and the Nile (3–5, 16, 23, 41 §78); he was not alone in placing its source in that region.¹⁰ He is particularly keen to note islands (3–8,

⁵ On J., see Roller 2003; Roller 2008 (with English trans.); and generally Zucker 2008; Dueck 2012, 45; Roller 2015, 157–61.

⁶ Roller 2003, 261–4, identifies ten works by J. and lists all known 'fragments' (in a commendably wide sense of the term).

⁷ Its exact title is uncertain; possibly *Peri Arabias* (*On Arabia*), *Arabika* (*Arabian Matters*), *Peri Arabōn* (*On the Arabians*), or even *De Arabia* in Latin.

⁸ A point made by Roller 2008b commenting on various 'fragments'.

⁹ On the identity of the African elephant, see Charles 2020.

¹⁰ Silberman 1988, 318–19, on Mela 3. 96, says the view went back to the early writer Promathos of Samos and to Hdt. 2. 32–4. Roller 2003, 193–6, finds that the idea that the Nile rose here made sense; he offers several possible rivers, including the *Ziz* in Morocco (c.32° 16' N, 4° 30' W). For the evolution of this tradition, see also Merrills 2017, 44–8.

11–12, 20, 22–4, 26, 34, 36, 38–9), important for traders, including those of the eastern Atlantic such as the Canaries (3 §15, 8), which he did not, of course, discover—they, or the clouds over them, are visible from the mainland—but on whose names and fauna he reported in detail, though he did not necessarily visit them. He may not have devised their collective name, derived from the species of dogs (*canes* in Latin) found there, but he is at least responsible for its transmission, as he is for the name of the plant family *Euphorbiaceae*, the spurges (3, 41–3).

Juba is praised by Avienus in a striking passage of the *Ora maritima* (Chapter 32 below, lines 273–83) for his power, his pride in the Roman connexion, and his devotion to literature. His influence on other writers, notably Pliny (see the many extracts below), Plutarch, and Aelian—especially for matters other than geography—extended into the Middle Ages: medieval Latin authors (some still unpublished) cite him often, both from Pliny and from an Arabic version, for information on an astonishing range of plants and animals.¹¹ The fact that most of those citations refer to species not attested in the fragments below will allow us to extend the range of Juba's interests with some confidence.¹²

The passages below follow Roller's edition of testimonia and fragments,¹³ from which a selection has been re-translated. This is the first collection of extracts representing Juba's geographical work as such.

SELECTED FURTHER READING

Domínguez Monedero, A. J. (2017), 'Rex Iuba, monarca e intellectual helenístico, y la Hispania de Augusto', *Gerión*, 35: 61–85.

Draelants, I. M. C. (2000), 'Le dossier des livres sur les animaux et les plantes de Iorach: tradition occidentale et orientale', in I. M. C. Draelants (ed.), *Occident et Proche-Orient: contacts scientifiques au temps des Croisades* (Turnhout), 191–276.

Roller, D. W. (2003), *The World of Juba II and Kleopatra Selene: Royal Scholarship on Rome's African Frontier*. London.

*— (2018), 'Juba II of Mauretania (275)', in *BNJ*².

Zucker, A. (2008), 'Iouba II of Mauretania, C. Iulius (ca 20 BCE–24 CE)', *Encyclopedia of Ancient Natural Scientists*, 441–2. [Fuller than most *EANS* entries on geographers.]

¹¹ Sometimes under the name Iorach, a modification of 'Iobas'; see esp. the revelatory work of Draelants 2000; pp. 230–76 catalogue citations of Iorach, principally by Arnoldus Saxo, *De floribus rerum naturalium* (c.1225–60); see nn. on 4, 8–9, 17, 27, 29, and 40 below. The identification of Iorach with J. was suggested, but not published, by H. Prell in 1946 (Draelants 2000, 192 n. 2; 231).

¹² To name only some of the more easily identified: (*plants, trees*) cedar, cypress, fig, mandragora, olive, plane, rose, vine; (*animals*) ant, antelope, bear, beaver, camel, crocodile, deer, dormouse, dragon, fox, hedgehog, horned serpent, hyena, ibex, lion, lizard, newt, panther, rhinoceros, salamander, scorpion, *seps* (a venomous snake), snake, tiger, viper, water-serpent, weasel, wolf; (*birds*) bee-eater, crane, crow, diver, eagle, kingfisher, kite (?), owl, partridge, peacock, pelican, quail, sparrow, swan, turtle-dove, vulture, plus the legendary phoenix; (*sea-creatures*) crab, dolphin, mullet, murena, ray, sea-monster, sea-serpent, whale; (*spices and perfumes*) balsam, cinnamon, nard. All from Draelants 2000, 234–75.

¹³ Roller 2008b.

A. ON ASSYRIA (?)

1 Pliny, *Natural History*, 6. xxx. 124: *The navigable Euphrates*

Nearchus and Onesicritus record that one can sail on the Euphrates to Babylon from the Persian sea for 412 miles.¹⁴ Those who wrote later, however, (*say it is*) 440 to Seleucia; Juba (*says that*) from Babylon to Charace (*i.e. Characene*) (*is*) 175½.

B. WANDERINGS OF HANNO

2 Athenaios 3. 25, 83a–c: *The citron fruit*

There is much investigation into this . . . as to whether there is mention of it among the old (*writers*). Aemilianus said that Iobas (*Juba*), king of the Maurousians, a very learned man, when mentioning the *kitrion* in his compositions *On Libyē*, stated that it was a Hesperic apple among the Libyans, from whom Herakles brought to Hellas the apples that are called golden on account of their appearance. . . . Looking at them, Demokritos said, ‘if Iobas says any of these things, say farewell to his Libyan books and even his *Wanderings of Hanno*; but I say this name does not exist among the old (*writers*), though the fact that the thing is said by Theophrastos in his *History of Plants* compels me to hear his observations about *kitria*.¹⁵

C. LIBYKA

3 Pliny, *Natural History*, 5. i. 14–16: *Forests of Mauretania*

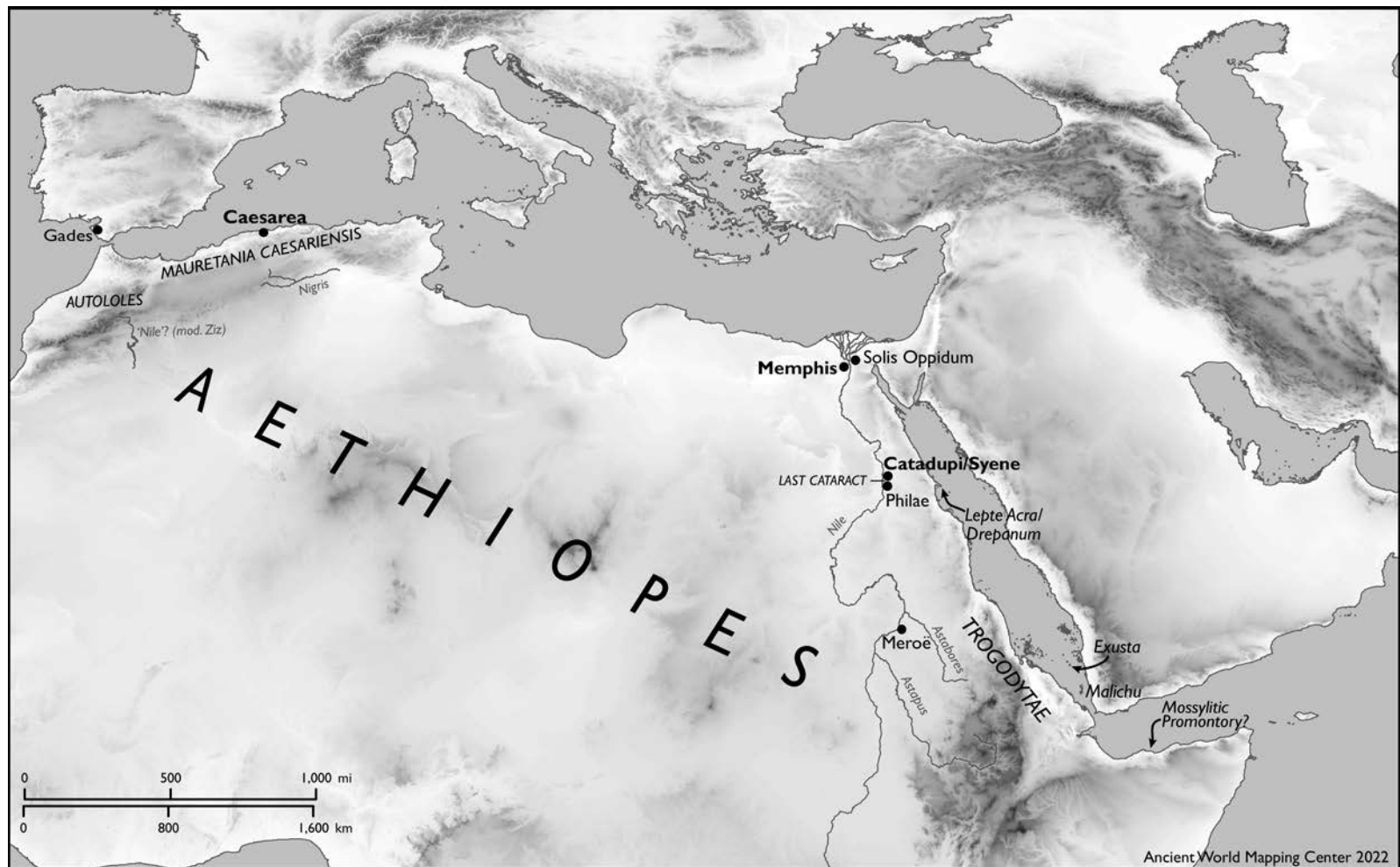
(14) Suetonius Paulinus, whom we saw when he was consul (*AD 66*), is the first among Roman generals to have passed through the whole of (*Mt*) Atlas; he also went a number of miles beyond.¹⁶ He has reported what others have about its height, and also that its roots were full of dense, tall forests of an unknown kind of tree, which was notable for its altitude and its shiny appearance, free of knots. It had leaves similar to the cypress, apart from the heaviness of their scent; they were covered in a fine down from which, with the application of skill, garments could be made like those from the silk-worm. The summit was covered in deep snow even in summer.

(15) . . . The people who inhabited the adjacent forests, which were packed with elephants, wild animals, and all kinds of serpents, were called the Canarii (*Dog-people*) because they had a common diet with the said animal, including portions of

¹⁴ On these explorers, see Introduction, §VI. 2. h.

¹⁵ This may be the first literary reference to the citron (*kitron* or *kitrion*) under the name familiar today (Roller 2008b, commentary on F6). Theophrastos, *HP* 1. 13. 4 and 4. 4. 2, mentions the citron (cf. Loeb trans.) but calls it ‘Median apple’, *mēlea Mēdikē*.

¹⁶ Reading *emensus, transgressus quoque* with Desanges. This took place after J.’s lifetime, so ‘what others have’ (next sentence) is the key phrase (Roller 2008b).



MAP 22.1. Juba II: regions and selected places covered in his works.

the innards of wild animals.¹⁷ (16) It is agreed that the neighbouring nation (*gens*) is that of the Aethiopes whom they call the Perorsi. Juba, father of Ptolemy, who was the first to exercise command over both Mauretania—more renowned for the distinction of his scholarship even than for his reign—has related similar things about the Atlas, as well as that there grows there a plant called Euphorbea, named after its finder, his physician.¹⁸ He commends its milk-like juice with exceptional praise for (*bringing*) clarity to the vision and (*for its power*) against serpents and all poisons, and devotes a special book to it.

4 Pliny, *Natural History*, 5. x. 51–5: *Source and course of the Nile*

(51) The Nile—rising from unknown springs, for it travels through deserts and torrid places over the unmeasurable distance of its length, and has been searched for only by unarmed rumour without the wars that have revealed all other lands—has its origin, as King Juba was able to ascertain, in a mountain of lower Mauretania not far from the Ocean, at first in a stagnant lake which they call Nilis. Fish are found there: the *alabetae*, *coracini*, and *siluri*. To furnish a proof (*that the Nile rises here*), a crocodile from this place, donated by him, is on show today at the shrine of Isis in Caesarea.¹⁹ Furthermore, it has been noted that in proportion as the snows and rains have filled up Mauretania, so the Nile rises.

(52) Pouring forth from this lake, it scorns flowing through sandy or rough places, and conceals itself for a journey of some days. Soon it bursts forth at a larger lake in (*the territory of*) the nation (*gens*) of the Masaesytes, who belong to Mauretania Caesariensis, and it surveys, as it were, the gathering of humans, using the same proofs in the form of animals (*as before*). Once more, embraced by the sands of the desert, it hides again for twenty days as far as the nearest Aethiopes and, when it once more becomes aware of a human it leaps out in a fountain, very probably the one they have named Nigris.

(53) From this point it divides Africa from Aethiopia, and even though it does not immediately support people it is stocked with wild animals and monsters. It cuts through the middle of the Aethiopes, and is here given the additional name of Astapus (*Sobat*), which in the language of those nations (*gentes*) signifies ‘water flowing forth from darkness’. It strews countless islands about, some of such vast size that, however great its speed, it still flies past them in a run of not less than five days. Round the most famous of these, Meroë, it is called Astabores in the left channel, that is, ‘branch of water coming from darkness’, but Astosapes on the right, which gives the meaning

¹⁷ So Rackham and Desanges; alternatively, with Winkler, they consume dogs as well as wild animals.

¹⁸ See nn. on 41–3.

¹⁹ The former Iol, J.’s capital of Mauretania. On the search for the source of the Nile, and the ancient belief that it arose in NW Africa, see chapter introduction, and Introduction, §III. 3. k. Draycott 2010 argues that by consecrating a crocodile at Caesarea Juba and his Ptolemaic queen were imitating sacred crocodiles at the temple of Sobek in Egypt. Kleopatra Selene may have used a crocodile as her symbol on coins (Draycott 2012). Arnoldus Saxo (see chapter introduction) cites Iorach (Juba) on crocodiles; see Draelants 2000, 267 no. 7 (comparing Pliny 8. xxxvii. 89).

'side'. Nor is it (*again*) the Nile before it reunites all of itself with the waters once more in harmony.

(54) Here, though, it is still named *Giris* as it was before, but also over its whole course it was the *Aegyptus* for Homer, for others the *Triton*. Presently it collides with islands. Hastened on by so many incitements, and finally enclosed by mountains, it is nowhere more furious and is carried along by the hurrying waters to the place in (*the territory of*) the *Aethiopes* which is named *Catadupi*. (*Here,*) at the last cataract,²⁰ between rocks that continually obstruct it, it is believed not (*merely*) to flow but to dash with a mighty crash.²¹ After that it is smooth, its waters tamed and its violence subdued, and it is rather tired by the (*long*) distance. It spills itself into the *Egyptian sea* by a fair number of mouths, but for several days, with great expansion, it spreads over the whole of *Egypt* and with its fertility it floods over the earth.

5 Pliny, *Natural History*, 5. x. 59: *The Nile's course in Egypt*

It (*the Nile*) begins to be under Egyptian jurisdiction where *Aethiopia* ends, at *Syene*. This is the name of a peninsula which has a circuit of 1,000 (*double*) paces (*1 mile*), where there is a fort on the *Arabian side* (*of the Nile*); opposite are the four islands of *Philae*, 600 (*miles*) from the division of the Nile, from which point on, as we have said, the area is called the *Delta*. This distance is given by *Artemidorus*, who says there are 250 towns in it; *Juba* (*gives*) 400 miles; *Aristocreon*²² 750 from *Elephantis* to the sea.

6 Pliny, *Natural History*, 6. xxxiv. 175–xxxv. 179: *The Erythraian sea (western Indian Ocean)*

(175) After the *Mossylitic promontory*,²³ *Juba* makes the *Atlantic sea* begin, to which one can sail, past his own *Mauretania*, as far as *Gades* with the *Corus* (*north-westerly wind*). One must not fail to mention the entirety of his opinion at this point.

From the promontory of the *Indians* that is to be called *Lepte Acra* (*'Narrow Cape' in Greek*), or by others *Drepanum* (*Sickle*), he proposes that by a direct course past *Exusta* (*Burnt I.*)²⁴ to the islands of *Malichu* is 1,500 miles; from there to the place they call *Scenei*²⁵ 225 miles; and from there to the *Adanu islands* 150.²⁶ Thus it is 1,875 miles to the open sea (*apertum mare*).

(176) The others have all believed that no sailing is possible because of the sun's heat. In fact, trade voyages themselves are also attacked from the islands by the *Arabs* called *Ascitae* (*'Wineskin Men' in Greek*) because they cover pairs of oxhide flasks with rafts and pursue piracy using poisoned arrows.

²⁰ i.e. the First Cataract in modern parlance (the most northerly), at *Aswan* (anc. *Syene*).

²¹ *non fluere . . . sed ruere*. Cf. the rhyme in 16.

²² *Aristokreon* (*BNJ* 667) is assumed to have been despatched by *Ptolemy II* to explore the Nile.

²³ As this cape, near the trading-place of *Mosylon*, is in the *Horn of Africa* (in mod. *Somalia*), *J.* is here claiming that the *Atlantic* extends all the way round *Libyē* to *Arabia*.

²⁴ Probably *Jabal al-Tair* in the S part of the (mod.) *Red Sea*, *Brodersen*.

²⁵ Or *Skeneos*, *Brodersen*; unidentified. ²⁶ Unidentified.

The same Juba records the nations of Trogodytae called Therothoae (*'Hunt-runners' in Greek*), who are named from their hunting—and are marvellously fast, like the Ichthyophagi (*Fish-eaters*) who can swim like sea creatures—(and) the Bangeni, Zangena, Thalibae, Saxinae, Sirechae, Deramae, and Domazenes. (177) Indeed, he says that the people living on the Nile from Syene onwards are not nations of Aethiopes but of Arabs, as far as Meroë. Furthermore, (*he says*) Solis Oppidum (*Sun's Town, i.e. Heliopolis*), which we said was not far from Memphis in the region of Egypt, has Arab founders. There are those who detach the further bank from Aethiopia and attach it to Africa. Leaving to each (*reader*) the judgement about how to understand this, we shall set out the towns on each side, in the order in which they are recorded, beginning from Syene.

xxxv. (178) First, on the side towards Arabia, is the nation of the Catadupi . . . (*list of places*) . . . So Bion relates.²⁷ (179) Juba says otherwise: the fortified town of Megatichos (*'Great Fort' in Greek*), between Egypt and Aethiopia, which the Arabs have called Mirsion. Then Tacompsos, Aramus, Sesamus, Pidema, Muda, Corambis beside a spring of bitumen, Amodata, Prosda, Parenta, Mania, Tessata, Gallae, Zoton, Grau Come (*'Old Woman's Hair' in Greek*), Emeum, the Pidibotae, the Endondacometae, the Nomads who live in tents, Cistaepe, Magadale, Parva (*Little*) Primis, Nups, Direlis, Patinga, Breves (*Short Men*), Magasneos, Egasmala, Cramda, Denna, Cadeum, Athena, Nabatta, Alana, Macua, Scammos, Gora on its island, from there Abale, Androcalis, Sere, Mallos, and Agoce.²⁸

7 Pliny, *Natural History*, 6. xxxvi. 201: *Islands off Mauretania*

Nor is there any more reliable report concerning the islands of Mauretania; it is only agreed that a few were found opposite the Autololes by Juba, in which he had established dyeing with Gaetulic purple.²⁹

8 Pliny, *Natural History*, 6. xxxvii. 202–5: *The Fortunate Islands*

(202) Some would believe that beyond these (*islands*) lie the Fortunatae (*Fortunate*) islands and certain others.³⁰ Together with their number, the same Sebosus has ascertained their distances: he records that Iunonia is 750 miles from Gades, and that at the same distance westwards from it lie Pluvialia (*Rainy I.*) and Capraria (*Goat I.*); and that in Pluvialia there is no water other than from the rain. At 250 miles from these, the Fortunatae lie against the left hand of Mauretania towards the eighth hour by the

²⁷ Bion is perhaps another explorer under the early Ptolemies.

²⁸ The spelling of names follows Desanges.

²⁹ These purple-processing stations may be those on *Mogador I.* at *Essaouira* in Morocco, rather than those in the Canaries (for which see 8). On purple-processing in this region, and on J.'s involvement, see among other studies López Pardo and Mederos Martín 2008; Álvarez Delgado, Mederos Martín, and Escribano Cobo 2015; Mederos Martín and Escribano Cobo 2015.

³⁰ Here identified with the *Canary Is.*, the Fortunate Islands or Blessed Isles were a *topos* of ancient legend. J. was the first writer to describe them. This passage may lie behind a citation of 'Iuba' by David de Dinant (C12/C13) for the *Insulae Beatorum* (Isles of the Blest); see Draelants 2000, 234 at 'B'.

sun. They are called, (*first*) Inwallis for its roundness,³¹ (*second*) Planasia from its (*level*) appearance; and the tallness of the trees attains 140 feet.

(203) Juba discovered this about the Fortunates: they also lie towards the south and by the sunset: 625 miles from the Purpurarii (*Islands*), that is, if one were to sail 250 beyond (*i.e. north of*) west and then 375 eastwards. The first (*he says*) is called Ombrios (*Rainy*) and has no traces of buildings; it has a pool in the mountains, and trees like fennel from which liquid is expressed: from the black ones bitter, from the paler ones pleasant to drink.

(204) The second island is named Iunonia. On it is only a small shrine built of stone. Not far from it is a smaller (*island*) of the same name; then Capraria, packed with great lizards. Within sight of these is Ninguaria, which received this name from the endless snow; a cloudy island.

(205) Very close to it is Canaria, so called from the multitude of dogs (*canes*) of enormous size, two of which were brought to Juba. (*He says*) traces of buildings are seen there. While all (*the islands*) are well supplied with fruits and with birds of all kinds, this last is also supplied with palm-groves that produce *caryotae* (*nut-shaped dates*), and with pine cones; there is also plenty of honey; even papyrus and the *silurus* (*catfish*) grow in the rivers. They (*the islands*) are infested with sea-monsters that are continually washed up and go rotten.

9 Pliny, *Natural History*, 8. iv. 7: *North African elephants*

They themselves (*the elephants*) know that the prize for which they are sought is only in their weapons, which Juba called horns but Herodotus, so much earlier, as well as common custom, more accurately call teeth.³²

10 Pliny, *Natural History*, 8. xlv. 107: *The mantichora*

The *mantichora* in Aethiopia, too, imitates the speech of men; the authority for this is Juba.³³

11 Pliny, *Natural History*, 10. lxi. 126–7: *The Diomedean birds*

(126) Nor shall I fail to mention the Diomedean birds.³⁴ Juba calls them *cataractae* (*divers*), and records that they have teeth and eyes of a fiery colour while the rest of them is white. These birds always have two leaders: one leads the procession, the other drives it (*from behind*). (*He says*) they excavate trenches with their beak, strew twigs over them and cover them with the earth they previously removed, and in these they rear their young. Each trench has double openings: the eastward by which they are to go out to feed, the westward by which they are to return. To empty their bowels they

³¹ Possibly we should read Nivalis, 'snowy' (Brodersen ad loc.).

³² J. is the main written source for the now extinct North African elephant (Roller 2008b, commentary). Cf. 15. Arnoldus Saxo (see chapter introduction) cites Iorach (Juba) on elephants; see Draelants 2000, 242–3 no. 13 (comparing Pliny 8. xii. 34).

³³ If not a creature of fantasy, the *mantichora* may be based on a tiger (Roller 2008b).

³⁴ Arnoldus Saxo (see chapter introduction) cites Iorach (Juba) on a bird called the *dyameda*; see Draelants 2000, 257 no. 11.

always fly up and into the wind. (127) These birds are seen only in one place in all the world: in the island which we called notable for Diomedes' tomb and shrine, facing the shore of Apulia. They are similar to *fulicae* (coots). They harry barbarian visitors with their cry but fawn upon Greeks alone with admirable judgement, as if paying tribute in this way to the nation of Diomedes. His temple they wash clean and purify each day with their throat full (*of water*) and with wetted wings;³⁵ whence comes the story that Diomedes' companions were turned into the likeness of these birds.

12 Pliny, *Natural History*, 13. lii. 142: *Corals on the Trogydytic islands*

Juba records that around the islands of the Trogydytae there is a shrub in the depths that is called Isis' Hair, similar to coral without the leaves; and that when it is cut off, its colour changes to black and it turns hard; when it falls, it is broken. (*He records*) another which is called Charitōn Blepharon (*Graces' Eyelid*), efficacious in matters of love; women (*he says*) make bracelets and necklaces out of it. (*He says*) it realizes when it is being caught and turns as hard as horn, even blunting a blade of iron; but if the attack has caught it by surprise, it is transformed into stone.

13 Pliny, *Natural History*, 37. xviii. 69: *Emeralds from Aithiopia*

After these (*sc. emeralds from Cyprus*), the Aethiopic are praised; they are twenty-five days' journey from Coptus, for which Juba is the authority. They are intensely green but not commonly pure or consistent in colour.

14 Pliny, *Natural History*, 37. xxxv. 114: *Green stones from Aithiopia*

India produces these (*green*) stones and also *nilius*, which is inferior (*to chrysoprase*) by reason of its limited brightness, deceptive when one looks at it. Sudines³⁶ says it also occurs in the river Siberus in Attica, but is the colour of smoky, or sometimes of honey-coloured, topaz. Juba records that it is produced in Aethiopia on the banks of the river which we call the Nile and takes its name from that.

15 Philostratos, *Life of Apollonios* 2. 13: *Elephants' tusks*

This Iobas (*Juba*) thinks that (*elephants'*) teeth are horns, from the fact that they grow from the place where the temples are and are in no way sharpened one upon the other but stay as they grew and do not fall out and regrow as teeth do. But I do not accept this account.³⁷

³⁵ Cf. the similar story of Achilles' Isle in Arrian 21. 4. Juba was surely aware of the importance of the Homeric hero Diomedes for Greek cults in colonial settings (cf. Ps.-Skylax §16; *Nik.* 432–3; Artemidoros 73; Poseidonios 40; Dion. Peri. 483), and seized an opportunity of extending Homeric geography to his own domains.

³⁶ Possibly the author cited several times by Pliny, incl. at 18 below, for the qualities of various pearls including those from Mauretania. The stone is identified as the blue sapphire by Roller 2008b ad loc., citing Healy 1999, 268.

³⁷ Cf. 9.

16 Ammianus Marcellinus 22. 15. 8: *Source and course of the Nile; its mouths*

But King Juba, relying on the text of Punic books,³⁸ declares that it (*the Nile*) rises from a particular mountain which is located in Mauretania and looks over the Ocean. This, he says, is proclaimed by the following indications: that similar fish, plants, and water-monsters (*to those in the Nile*) grow in its marshes. (9) But the Nile, wandering across parts of Aethiopia, and after the variety of names with which several nations have endowed it as it travels the world has been discarded,³⁹ swelling (?) with the richest flood, comes to the cataracts—that is, rugged crags—from which it throws itself rather than flows.⁴⁰ For this reason necessity compelled the neighbouring Ati, their sense of hearing reduced by the continuous crashing, to change their home for quieter parts.

(10) Wandering more smoothly from there, it is discharged through seven mouths, all of which individually present the utility and appearance of continuous rivers, aided by no outside waters within Egypt. Besides the numerous rivers deviating from the originating channel and falling into its nearly comparable (*channels*), seven are navigable with waves forming in them. The old (*writers*) endowed them with the appellations set out below: Heracleotic, Sebennytic, Bolbitic, Pathmitic, Mendesian, Tanitic, and Pelusiac.

D. FROM LIBYKA OR ON ARABIA

17 Pliny, Natural History, 8. xiii. 35: *Giant snakes in Aithiopia*

Aethiopia gives birth to ones (*sc. snakes*) that are the equal of the Indian ones,⁴¹ each 20 cubits in length. This only is surprising: why Juba believed they were crested. The Aethiopes among whom most of them are born are called Asachaei. They tell that in the coastal parts (*of their land*) groups of four and five of them, weaving themselves together after the manner of hurdles, set sail by raising up their heads and are borne by the waves to the better pastures of Arabia.

18 Pliny, Natural History, 9. lvi. 115: *Varieties of pearls*

In our sea they (*pearls*) used to be found more often around the Thracian Bosphoros: small red ones in shells that they call *myës* ('*mice*' in Greek). But in Acarnania grows the one that is called the *pina*, by which it is evident that they do not grow in just one variety of shell: for Juba also records that the Arabian ones have a shell that is like an

³⁸ A vital element in building a picture of J.'s intellectual achievement: the proof that he used books in Punic language, perhaps preserved from the destruction of Carthage in 146.

³⁹ Several words in this sentence are uncertain.

⁴⁰ *ruit potius quam fluit*. Cf. the rhyme in 4 §54. Ammianus, however, includes information not found in the Pliny passage.

⁴¹ The information about crested snakes has become tangled with Pliny's discussion of elephants in the preceding passage (Roller 2008b ad loc.). Cf. 19 for other giant snakes. Arnoldus Saxo (see chapter introduction) cites Iorach (Juba) for many kinds of snakes; see Draelants 2000, 268–75 *passim* (comparing Pliny 8. viii. 25; xli. 99; etc.).

incised comb, that it is hairy like a hedgehog, and that there is a singleton within the flesh, similar to a hailstone. Shells of this variety are not brought to us. And neither are the ones I praised found in Acarnania, the giant ones, rough and marble-coloured. Better ones (*are found*) around Actium, but these too are small; also in the coastal parts of Mauretania. Alexander Polyhistor and Sudines believe that they age and that their colour is dissipated.

19 Pliny, *Natural History*, 31. xv. 18: *Strange waters in Aithiopia*

Juba (*says that*) among the Trogodytae lies Lacus Insanus (*Crazy Lake*), so named from its noxious power. Thrice daily (*he says*) it turns bitter and salty, then sweet again. It swarms with serpents, each 20 cubits long.⁴² The same author (*says that*) in Arabia a spring bursts forth with such force that no heavy object, if thrust in, is not spat out again.

E. ON ARABIA

20 Pliny, *Natural History*, 6. xxvi. 96–100: *The voyage of Onesikritos and Nearchos, as told by Juba*⁴³

(96) But before we pursue these matters one at a time, it is fitting that those things should be disclosed which Onesicritus related after sailing in Alexander's fleet from India into the inland parts of Persis, which have very recently been narrated by Juba; and then that sea-route journey (*navigatio*) that was discovered in those years and is used today. The sea journey 'route description' (*navigatio*) by Onesicritus and Nearchus contains neither the names of the stations nor the distances. First, it is not made sufficiently clear where Xylinepolis (*Wooden City*), founded by Alexander,⁴⁴ from which they made their start, was located or which river it adjoins.

(97) The following things worthy of remembering are, however, related. The town of Arbis (*Hab?*), which was founded by Nearchus during the sea journey to the river Arbis and capable of accommodating ships; opposite it, an island 70 stades away. Alexandria (*Khandawari?*), founded by Leonnatus by order of Alexander, in the confines of this nation. Argenuos, with a salubrious harbour. The river Tonberus (*Hingol?*), which is navigable; around it the Pasirae (*Ormara?*).⁴⁵ Then the Ichthyophagi, over so lengthy a stretch that they sailed past them for a duration of 20 days. An island named Solis (*Island of the Sun*), the same being (*called*) Nympharum Cubile (*Nymphs' Bed*;

⁴² Cf. the 20-cubit snakes (?) at 17.

⁴³ J. does not appear to have used Nearchos' account directly, unlike Arrian in his much fuller *Indike*, §§20–43, but to have relied on that of Onesikritos (André and Filiozat 1980, 126).

⁴⁴ Somewhere in the area of the mouths of the Indus. See Roller 2008b ad loc. for this and the other identifications in this passage.

⁴⁵ We are passing the coast of Pakistan here.

Astalu?), <always> coloured red, on which there is no creature that does not die, for unknown reasons.

(98) The nation of the Ori. The river Hyctanis river in Carmania, which has harbours and is productive of gold. From this place on, they observed that the Septentriones (*Ursa Major*) had first become visible, nor could Arcturus be spotted every night, or for the whole night. (*Juba says*) the Achaemenidae had possessed it all the way from that point; and that veins of copper, iron, arsenic, and cinnabar were worked. Next is the promontory of Carmania from which the crossing to the opposite shore and the nation of the Macae in Arabia is 50 miles wide. Three islands, among which only Oracta (*Tavilah?*)⁴⁶ is settled and has water; (*it is*) 25 miles from the mainland.

(99) Next four islands in the gulf, opposite Persis; in the area of these, sea-hydras, each 20 cubits long, swam up and terrified the fleet. The island of Athotadrus; also the Gauratae, in which (*lives*) the nation of the Gyani. The river Hyperis in the middle of the Persian gulf, capable of accommodating cargo ships.⁴⁷ The river Sitioganus, by which Pasargadae is reached in 7 days' sailing. The navigable river Phrstimus. An island without a name. The river Granis, which accommodates ships of middling size, flows through Susiane; its right bank is inhabited by the Mountain Dexi, who process bitumen. The river Zarotis, with an entrance that is difficult except for the skilful. Two small islands, and from there one sails shallow water similar to a marsh, but one gets through via particular channels.

(100) The mouth of the Euphrates. The lake which the Eulaeus and the Tigris form near Charace (*Charax*). Then via the Tigris⁴⁸ to Susa; there they found Alexander keeping a holiday in the seventh month since he had diverted from them at Patale, and the third month of their voyage. Such was the voyage of Alexander's fleet.

21 Pliny, *Natural History*, 6. xxxi. 136–41: *Topography and history of Characene in Arabia*

(136) The part of it (*Elymaïs*) that is particularly inaccessible is called Characene after the town in Arabia that marks the end of those kingdoms. We shall speak of it after first setting out the opinion of Marcus Agrippa.⁴⁹

(137) For he has related that Media, Parthia, and Persis are demarcated on the east by the Indus, on the west by the Tigris, on the north by the Caucasian Taurus, and on the south by the Rubrum Mare,⁵⁰ and have a length of 1,320 miles and a breadth of 840; furthermore, that Mesopotamia proper is enclosed on the east by the Tigris, on the

⁴⁶ On the Straits of *Hormuz*, the entrance to the Arabian gulf.

⁴⁷ This section reveals the influence of J.'s commercial awareness, modifying the original data of Alexander's captains (Roller 2008b, ad loc.).

⁴⁸ i.e. Pasitigris (*Karun?*), a different river.

⁴⁹ An indication that Pliny had consulted the map or gazetteer of the Roman empire prepared by Agrippa: see Introduction, §V. 4.

⁵⁰ Lit. 'red sea', equivalent to 'Erythraian sea', i.e. NW Indian Ocean plus modern Red Sea.

west by the Euphrates, on the north by the Taurus, and on the south by the Persian sea, and is 800 miles in length and 360 in breadth.

(138) Charax is the innermost town in the Persian gulf;⁵¹ from it the Arabia named Eudaemon (*Fortunate*) extends. It is a settlement on a manmade hill of 2 miles' breadth, between the Tigris on the right and the Eulaeus on the left, where they flow into one another. It was first founded by Alexander the Great, its settlers brought from the royal city of Durine which ceased to exist at that time. Leaving invalided soldiers there, he had given orders that it be called Alexandria, and had created a Pellaeon district, (*named*) after his fatherland, reserved for Macedonians.

(139) The rivers captured this town. Later Antiochus (*III*), the fifth of the (*Seleukid*) kings, restored it and called it by his own name. When it was again destroyed, Spasosines son of Sagdodonacus, king of the neighbouring Arabs, whom Juba mistakenly records as a satrap of Antiochus,⁵² restored it with ramparts opposite one another and gave it his own name, the adjacent area being fortified⁵³ for 6 miles' length and slightly less in width. Formerly it was 10 stades from the shore—the Porticus Vipsania⁵⁴ actually makes it a coastal place, though Juba relates 50 miles.

(140) But envoys from the Arabs, and our traders coming from there, assert that it is now 120 (*miles*) from the shore. Nor is there any place where the lands have progressed, borne on by rivers, in greater quantity or more swiftly. More amazing is that they are not beaten back by the surge of the sea, though it advances well beyond this point.

(141) It does not escape me that it was in this place that Isidorus⁵⁵ was born, the latest authority on the territory of the Earth, whom the divine Augustus had sent ahead to the East to research everything fully when his elder son was due to go to Armenia to manage the business with the Parthians and the Arabians.⁵⁶ Nor have I forgotten that, at the opening of this work, it was my view that each author is most diligent regarding his own territory. In this passage, however, my resolve is to follow the Roman forces and King Juba in the books he wrote to the same Gaius Caesar concerning the same Arabian expedition.

22 Pliny, *Natural History*, 6. xxxii. 149–56: *The coasts of the Arabian peninsula*

(149) It is Juba who records that beyond this⁵⁷ the sea voyage (*of Arabia*) on that side is unknown because of reefs, though he omits to mention the town of the Omani called

⁵¹ J. produced the first full account of the entire coast of the Arabian peninsula, including the Ocean-facing shore (Roller 2008b, ad loc.). Charax (now in SE Iraq) was the starting-point of his circuit, and home city of Isidoros (Ch. 23 above), probably named at §141 below.

⁵² In fact, Hyspaosines (the correct form of his name) was a client ruler under Antiochos IV (r. 175–164), seceding later (Roller 2008b, F 1).

⁵³ Or perhaps 'built up'.

⁵⁴ i.e. Agrippa's survey, displayed at Rome in a colonnade named after him.

⁵⁵ The MSS have 'Dionysius' here; Brodersen prints 'Isidorus'.

⁵⁶ Gaius Caesar's expedition began in AD 1; he died in AD 4 (Brodersen 1996, 225).

⁵⁷ J.'s circuit—probably not an eye-witness account—has reached the vicinity of Tylos (*Bahrain*); but many of the place-names appear to have been rendered unidentifiable by being turned into Latin and in the course of MS transmission (Roller 2008b, F 30–3).

Batrasaves, as well as Omana, which earlier writers made a notable harbour in Carmania; also Homna and Attana, which our businessmen say are the most renowned towns in the Persian sea. Past the river Canis, Juba says, is a mountain that looks as if it is burned; the nations of the Epimaranitae; not far beyond are the Ichthyophagi; an uninhabited island; the nations of the Bathymi; the Ebylthaei mountains; the island of Omoemus; the harbour of Mochorbae; the islands of Etaxalos and Inchobruche; (150) the nation of the Cadaei; many islands without names, but also the renowned ones of Isura and Rhinnea, and one very close by on which there are stone pillars with unknown scripts; the harbour of Coboea; the uninhabited Bragae islands; the nation of the Taludaei; the region of Dabanegoris; Mount Orsa with a harbour; the bay of Duatas; many islands; Mt Tricoryphus (*Three Heads*); the region of Chardaleon; the islands of Solanades and Cachina, and those of the Ichthyophagi; then the Clari; the shore of Mamaeum, where there are gold mines; the region of Canauna; the nations of the Apitami and Casani; the island of Devade, the spring of Coralis; the Carphati; the islands of Alaea and Amnamethus; the nation of the Darae; (151) the islands of Chelonitis (*Turtle I.*), many others of the Ichthyophagi, the uninhabited Odanda, Basa, and many of the Sabaei; the rivers Thanar and Amnum; the Doric islands; the springs of Daulotos and Dora; the islands of Pteros, Labatanis, Coboris, and Sambra-chate and a town of the same name on the mainland; to the south many islands, the greatest being Camari; the river of Musecros; the harbour of Laupas; the Sabaei (*called*) Scenitae (*Tent-dwellers*); many islands; their trading-place Acila, from which one sails to India; (152) the region of Amithoscatta; Damnia; the greater and lesser Mizi; Drymatina; and the Macae, whose promontory is opposite Carmania at a distance of 50† miles.⁵⁸

An amazing thing is reported there: that Numenius, put in charge of Mesena by King Antiochus,⁵⁹ won a battle with his fleet on the same day that, when the tide turned, he was fighting against the Persians again with his cavalry, and set up twin trophies in the same place to Jupiter and Neptune.

(153) Opposite on the open sea is the island of Ogyris, famous as the burial place of King Erythras;⁶⁰ it is 125 miles from the mainland and has a circuit of 112½.⁶¹ The next one in the Azanian sea is no less famous: Dioscorides's (*Island; Socotra*), at a distance of 280 (*miles*) from the tip of the promontory of Syagros.

The other people on the mainland, continuing to the south, are the Autaridae, 8 days' journey into the mountains; the nations of the Larendani and Catabani; the Gebbanitae with numerous towns, though the largest are Nagia and Thomna with sixty-five temples; this is a mark of its size.

⁵⁸ We have reached the Straits of *Hormuz*.

⁵⁹ One of the four Seleukid kings of that name.

⁶⁰ The supposed eponym of the Erythraian sea; cf. Eratosthenes 87 §5; Agatharchides 4ab, 5a; Artem. 100.

⁶¹ Cf. Erat. 87.

(154) (*Next is*) a promontory from which it is 50 (*miles*) to the mainland of the Trogodytae;⁶² the Thoani, Actaei, Chatramotitae, Tonabaei, Antiadalaiei, Lexianae, Agraei, Cerbani, and Sabaei, who are the most famous of the Arabs on account of frankincense; these nations extend to the sea on both sides. The towns on the Red coast are Merme, Marma, Corolia, and Sabbathae; inland are the towns of Nascus, Cardava, Carnus, and the one to which they bring down their cargoes of aromatics, Thomala. (155) One division of them is the Atramitae, whose chief town is Sabota (*Shabwa?*), which contains sixty temples within its walls; but the royal capital of them all is Marelibata (*Marib?*). They occupy 94 (*miles of the coast*),⁶³ packed with perfume-bearing islands. Adjoining the Atramitae in the interior are the Minaei. Also living on the sea are the Aelamitae with a town of the same name. Contiguous with them are the Chaculatae and the town of Sibi, which the Greeks called Apate (*Deceit*); the Arsi, Codani, and Vadaei with a large town; the Barasasaei and Lechieni; the island of Sygaros, which dogs are unable to alight upon and so, having disembarked around the shores, they die from wandering about.

(156) (*Next is*) a deep gulf in which (*live*) the Laeanitae, who have given their name to it. Their royal capital is Agra, and (*they have*) Laeana (*Aqaba*), or as others have it Aelana, in the bay; for our own writers have written the name of the gulf (*of Aqaba*) as Laeaniticus, others as Aelaniticus, Artemidorus as Alaeniticus, Juba as Leaniticus. The circuit of Arabia from Charax to Laeana is related as 4,765 miles;⁶⁴ Juba thinks it is not much less than 4,000. It is broadest at the north, between the towns of Heroöpolis (*Heroes' Town*) and Charace (*i.e. Charax*).

23 Pliny, *Natural History*, 6. xxxiii. 165–70: *From the gulf of Aqaba along the west coast of the Red Sea*

(165) After the Laeanitic gulf there is the other gulf that the Arabians call Aea, on which is the town of Heroön (*Hero Shrine*); there, too, was Kambyses' Town between the Neloi and the Marchadae, the sick men in his army being brought there. (*Then*) the nation of the Tyri; the harbour of the Danei. The plan to drive a navigable channel through from here to the Nile in the area where it runs into the aforementioned Delta, across the interval of 62½ miles lying between the river and the Red Sea, was first devised by Sesostris king of Egypt, later by Darius of the Persians,⁶⁵ next in sequence by Ptolemy (*II*), who also made a ditch with a breadth of 100 feet and a depth of 30 over a distance of 37½⁶⁶ miles up to Fontes Amari (*Bitter Springs*). (166) Beyond that, the fear of flooding discouraged (*him*), once it was understood that the Red Sea was 3 cubits higher than the land of Egypt. Some do not refer to this as the reason rather than the fear that the water of the Nile, which alone supplies drinkable water, would be corrupted by letting the sea in.

⁶² J. has progressed rapidly to the general area of Yemen. ⁶³ 96 Loeb, probably a misprint.

⁶⁴ Presumably in Agrippa's survey. So Mayhoof, Brodersen; 4,665 Rackham.

⁶⁵ Necho tried to construct a canal to the Red Sea (*Hdt.* 2. 158); Darius succeeded (*cf.* 4. 39, 4. 42).

⁶⁶ Rackham adopts the variant reading 34½.

Nevertheless, the whole journey is often made by land from the Egyptian sea. It is threefold: one (*route*) from Pelusium through the sands, on which the way cannot be found unless the fixed reeds guide one, as the wind immediately obscures the tracks. (167) The second is beyond Mt Casius, which after 60 miles returns to the Pelusiatic Way; the Arabs called Antaei live beside it. The third is from Gerrhum, which they call Agipsus, via those same Arabs; it is 9 (?)⁶⁷ miles closer, but a rough way with mountains, and without water supplies.

All these routes lead to Arsinoë, founded under his sister's name by Ptolemy (*II*) Philadelphus on the gulf of Carandra. It was he that first opened up Trogydytice. He named the river that flows past Arsinoë the Ptolemaeus.

(168) Soon after lies the small town of Aenum; others write 'Philoterias' instead. Then there are the Asaraei, who are wild Arabs produced by intermarriage with the Trogydytae. Then the islands of Sapirine and Scytala; soon desert lands up to Myos Hormos (*Mussel Anchorage*), where the spring of Tatnos lies; Mount Aeas; the island of Iambe; many harbours; the town of Berenice, bearing the name of Philadelphus' mother, to which the journey from Coptos, mentioned above, leads; then the Arabs (*called*) Autaei and Gebadaei.

(169) Then Trogydytice, which ancient writers called Midoë and others Midioë; Mount Pentadactylos (*Five Fingers*); the islands of Stenae Thyrae (*Narrow Gates*), of which there are several;⁶⁸ the Halonesi (*Salt Is.*), at least as many; Cardamine; Topazos, which gave its name to the gemstone.⁶⁹ Then a bay packed with islands; of these, those called Maraeos' (*Islands*) are well-watered while those called Eraton's (*Islands*) are thirsty; the prefects of the kings were once here. Inland are the Candaei, whom they call Ophiophagi (*Snake-eaters*) and who are used to feeding on serpents; for no other region is so productive of those.⁷⁰

(170) In this district Juba, who appears to have gone into these matters most diligently, omitted—unless it is a fault in the copies (*of his work*)—the other Berenice which is surnamed Panchrysos (*All-golden*), and a third which (*is surnamed*) Epi Dirēs (*On the Neck; Ras Siyyan?*), notable for its situation, for it is located on a long neck (*of land*) that runs far out where the jaws of the Red Sea are 7½ miles from Arabia.⁷¹

24 Pliny, *Natural History*, 12. xxi. 38–xxii. 39: *Silk from Bahrain*

(38) . . . On a rather lofty height of the same island (*Tylos; Bahrain*) are trees that bear wool in a different way from those of the Seres. These have infertile leaves, which, but for the fact of being smaller, might have been thought to belong to vines. They bear gourds about as big as an apple which, at the point of ripeness, break to reveal balls

⁶⁷ Desanges 2008, 3 and 50–1, prints IX for the LX of the MSS (which would only make sense if translated as 'shorter than 60 miles').

⁶⁸ Desanges emends *Deirae* to *Thyrae*.

⁶⁹ Cf. 34, 36, and 38 below; Agatharch. 84abc.

⁷⁰ Names in this passage follow the spelling in Desanges 2008.

⁷¹ At *Djibouti*; the mouth of the Red Sea is in fact c.16 mi (c.26 km) wide today. The figure of 7½ miles is from Timosthenes 15 (cf. Erat. 104; Artem. 113).

of wool from which people make garments of costly linen.⁷² (39) They call the tree *gossypinus*, and the island of Tylus Minor (*Lesser Tylos*), which is 10 miles away, is more productive of them. xxii. Juba (*says*) that around the fruit are quantities of wool, and that these linen fabrics are more excellent than the Indian kind. There is (*he says*), however, a tree in Arabia called the *cynas* from which they make garments, with a leaf similar to a palm-tree.⁷³

25 Pliny, *Natural History*, 12. xxxi. 56: *Frankincense from Arabia*

King Juba, in those volumes which he wrote to Gaius Caesar, son of Augustus, who was passionate about the reputation of Arabia, recorded that it (*the frankincense tree*) had a twisted stem with branches very much those of the Pontic maple, and discharged juice in the manner of the almond; and that such trees were present in Carmania, and had been cultivated in Egypt by the efforts of the ruling Ptolemies.⁷⁴

26 Pliny, *Natural History*, 12. xxxii. 60: *Frankincense from Arabian islands*

Certain people think that a better sort (*of frankincense tree*) is produced in the islands. Juba denies that it is produced in the islands.

27 Pliny, *Natural History*, 12. xxxiv. 67: *Myrrh*

Others say that the bark (*of the myrrh tree*), which is smooth and similar to the arbutus, is rough and thorny, its leaf like that of the olive-tree but more wrinkled and prickly; Juba (*says it is like*) the *olusatrum* (*black cabbage*).⁷⁵

28 Pliny, *Natural History*, 12. xxxviii. 78–xl. 80: *The perfume trade*

(78) Arabia itself, amazingly, searches for perfumes from abroad and goes to people elsewhere for them. . . . (80) They have opened Carra (*Carrhae*) for these trades, because there is a market-day there. They all used to make for Gabba from there, by a journey of twenty days, and for Syria Palaestina. Afterwards it began to be Charace (*i.e. Charax*) that they made for and the kingdom of the Parthians, for this purpose; Juba is the authority for this.

29 Pliny, *Natural History*, 13. vii. 34: *Palm-trees*

In Arabia, too, palm-trees are recorded as being mildly sweet, although Juba esteems above all others the one in the land of the Scenitae (*Tent-dwelling*) Arabs that they call *dabla*.⁷⁶

⁷² Probably a variety of silk, now unknown (Roller 2008b, F 62). ⁷³ Unidentified.

⁷⁴ J.'s emphasis on frankincense and other luxury products (cf. 24, 26–8) reflects his interest in commerce, though his own kingdom was at the other end of Africa. Arnoldus Saxo (see chapter introduction) cites Iorach (Juba) on myrrh; see Draelants 2000, 240–1 no. 9.

⁷⁵ The myrrh tree grows over a wider area than Arabia (Roller 2008b, F 27).

⁷⁶ Unidentified. Arnoldus Saxo (see chapter introduction) cites Iorach (Juba) on palm-trees; see Draelants 2000, 237–8 no. 4.

30 Pliny, *Natural History*, 15. xxviii. 99: *The arbutus*

The fruit (*of the wild strawberry*, ‘unedo’)⁷⁷ is unregarded, given that its name comes from the evidence that only one can be eaten (*unum edendi*). The Greeks, however, call it by the two following names: *comaron* and *memaecylon*. By this it appears that there is also that number of varieties. Among ourselves it is called by another name, *arbutus*. Juba is the authority (*for the information*) that in Arabia they have a height of 50 cubits each.⁷⁸

31 Pliny, *Natural History*, 25. v. 14: *A magical plant*

And Juba records that in Arabia a man was brought back to life by a herb.⁷⁹

32 Pliny, *Natural History*, 32. iv. 10: *Creatures of Arabia*

Juba, in those volumes about Arabia which he wrote to Gaius Caesar, son of Augustus, records that its mussels have a capacity of three *heminae*;⁸⁰ that a sea-monster with a length of 600 feet and a breadth of 360 entered a river in Arabia, and that traders did business in its fat;⁸¹ and that camels in that location are anointed with the grease of every fish in order to drive gadflies away from them by the smell.

33 Pliny, *Natural History*, 33. xl. 118: *Cinnabar from Carmania*

Juba records that *minium* (*cinnabar*)⁸² is produced in Carmania too; Timagenes (*says*) in Aethiopia too.

34 Pliny, *Natural History*, 35. xxii. 39: *Minerals from Topazos I.*

Juba records that *sandaraca* (*realgar*)⁸³ and ochre are produced on the island of Topazos in the Red Sea.

35 Pliny, *Natural History*, 36. xvi. 163: *Translucent stone from Arabia*

In Arabia, too, there is a strong stone, translucent after the manner of glass, which they use in place of ‘mirror-stones’;⁸⁴ Juba is the authority for this.

36 Pliny, *Natural History*, 37. ix. 24: *Rock-crystal stones from Red Sea islands*

Juba is the authority (*for the information*) that in a certain island in the Red Sea, lying off Arabia, a type (*of rock crystal*) is produced which is called Necron (*Dead*),⁸⁵ as well as on the neighbouring one that bears the gemstone topaz. A cubit-sized piece was excavated by Pythagoras, Ptolemy’s prefect.

⁷⁷ It is, however, unrelated to the cultivated strawberry (König 1981, 310).

⁷⁸ An error, or an exaggeration (Roller 2008b, F 68).

⁷⁹ Once again, J. is no doubt relying on second-hand information about Arabia.

⁸⁰ Nearly a litre, and unlikely (Roller 2008b, F 3).

⁸¹ Possibly a reference to whaling, though the size is impossible (Roller 2008b, F3).

⁸² A red pigment. ⁸³ Another red dye, also medicinal.

⁸⁴ Probably translucent onyx-marble, thin slabs of which created light within a building. Which stone from Arabia was the substitute for these is uncertain (König 2007, 196–7).

⁸⁵ Unidentified.

37 Pliny, *Natural History*, 37. xviii. 73: *Emeralds*

Juba is the authority (*for the information*) that the *smaragdus* they call *chlora* (*green*) is inserted into the decoration of buildings in Arabia, and likewise the stone which the Egyptians call *alabastritēs*; but several (*authors*) close to our own day (*say that*) Laconian ones are dug up in (*Mount*) Taÿgetos, similar to those of Media; and others in Sicily.⁸⁶

38 Pliny, *Natural History*, 37. xxxii. 107–8: *Topaz (peridotite) from a Red Sea island* (107) Even now, exceptional fame attaches to topaz; it is one of the green variety (*of stones*).⁸⁷ When it was first found, it was preferred to all other (*stones*). It occurs on an island in Arabia which used to be called Cytis (*St John's I.?*), to which Trogodyte pirates had put in, tired out by hunger and the weather; while excavating for plants and roots, they dug up topaz. This is the opinion of Archelaus. (108) Juba records that the island of Topazus in the Red Sea is 300 stades from the mainland, and that it is cloud-covered and accordingly has been the object of searches by sailors on many occasions. (*He says*) it gained its name for that reason, for *topazin* in the tongue of the Trogodytae has the sense of 'seeking'.⁸⁸ From this (*he says*) it was first brought to Queen Berenice—who was the mother of the Ptolemy who succeeded (*the first one*)—by the king's prefect, Philo, and pleased the king wonderfully; wherefore a statue of Arsinoë, Ptolemy's wife, 4 cubits high, was made (*from it*) and dedicated in the sanctuary that was surnamed the Arsinoëum.

39 Aelian, *On the Nature of Animals*, 15. 8: *Pearls from different seas*

Now the best (*pearl*) is the Indic and that from the Erythraian sea.⁸⁹ It is also found in the western Ocean, where the island of Brettanike lies, and appears to be somewhat more gold-like, also with a duller and darker shine.⁹⁰ Iobas (*Juba*) says it is also found in the strait by the Bosporos and this one is outclassed by the Bretannic (*sic*) and in no way compares to the Indian or Erythraian in its origin. The inland sort is not said to have its own nature but to be a progeny of crystal, since it is constituted not from the frosts but by mining.

40 Hesychios s.v. Terebinthos: *A city (or a plant?)*

Terebinthos: a city. Iobas (*Juba*).⁹¹

⁸⁶ *alabastritēs* may be a type of onyx (Roller 2008b, F74). *Smaragdus*, usually 'emerald', also refers to semi-precious stones such as the variegated green Laconian marble mentioned here, known by the Latin name *lapis Lacedaemonius*, which was used to decorate Roman buildings. It was (and is) found not in Mt Taÿgetos but at Krokeai in the foothills of Mt Parnon, across the Eurotas valley to the E (see e.g. Warren 1992).

⁸⁷ Probably peridot (Eichholz 1962, 250 n.; 'a green semi-precious variety of forsterite (olivine)', COD¹²), which occurs on *St John's I*. What we call topaz today is '1 a precious stone, typically colourless, yellow, or pale blue, consisting of a fluorine containing aluminium silicate. 2 a dark yellow colour' (COD¹²).

⁸⁸ In fact, *topazein* is simply the infinitive of the Greek verb 'seek', 'guess'.

⁸⁹ *PME* §59. ⁹⁰ Tacitus, *Agricola* (from after Juba's time), 12.

⁹¹ Roller 2008b, F 45, suggests that this may have been a reference not to a place but to the 'Indian terebinth' or pistachio, which would reflect J.'s interest in luxury trade. Arnoldus Saxo (see chapter introduction) cites Iorach (Juba) on the terebinth; see Draelants 2000, 238 no. 5.

F. ON EUPHORBION

41 Pliny, *Natural History*, 25. xxxviii. 77–9: *Discovery of euphorbia*

(77) In the days of our fathers, King Juba found (*a plant*) which he named Euphorbea after the name of his doctor.⁹² That man was the brother of Musa, by whom, as we have noted, the divine Augustus was saved. These brothers introduced the practice of constricting the body with plenty of cold (*water*) on leaving the bath; earlier it was not the custom to wash except in warm, just as we likewise find in Homer. (78) But Juba's book on this plant is also extant and is an enthusiastic celebration. He found it on Mount Atlas, having the appearance of a thyrsus and leaves like an acanthus. Its power is so great that the juice is removed at a distance after it is cut with a pike; it is received in receptacles made from the stomach of a young goat. What flows down has the appearance of milk; when it dries and has congealed, it looks like frankincense. Those that collect it see more clearly. It is efficacious against serpents, a cut being made on the crown of the head irrespective of where the bite is, and the medication applied there. (79) The Gaetuli who collect it adulterate it with milk because of its unpleasant taste, but it can be identified by applying fire: for by the fact of being impure it has a smell that is found disgusting. Far inferior to this juice is the one that is produced in Gallia from the *chamelaea* plant, which bears a seed (*like that*) of the kermes oak (*Quercus coccifera*). When broken, it is like gum resin, and after even a slight taste it keeps the mouth feeling burnt, more so after an interval, until the throat goes dry as well.⁹³

42 Pedanios Dioskorides, *On Medical Material*, 3. 82. 1–2: *Processing of euphorbia*

Euphorbion:⁹⁴ this is a Libyan tree similar to fennel, growing in Autololia by Mauretania. It is full of the most bitter juice, which the people here collect fearfully because of the intense inflammation. At any rate, they tie round the tree the washed bellies of sheep, and split the stem with javelins from a distance. Straightaway, as if from a vessel, a large quantity of juice pours out into the bellies and also squirts out in a spray onto the ground. (2) There are two kinds of juice. The first is translucent like *sarkokolla*⁹⁵ and about the size of vetch (*seeds*); the other is full of particles and compacted. It is adulterated with *sarkokolla* and gum mixed together. Choose the translucent, bitter sort; but it is difficult to test by being tasted, because as soon as the tongue is caught⁹⁶ the inflammation persists for quite a long time, so that everything

⁹² In 3 §15 Pliny credits Euphorbos himself with the discovery. Roller 2008b, F 7, cites a suggestion that the particular plant in question was the Canary Island spurge (*Euphorbia canariensis*), now a symbol of *Gran Canaria*; it is toxic, like other Euphorbiaceae.

⁹³ Cf. 3 §15.

⁹⁴ Beck 2005, 220, translates the name as 'spurge' and identifies it as *Euphorbia resinifera* Berg.

⁹⁵ A Persian gum. Arnoldus Saxo (see chapter introduction) cites Iorach (Juba) on gum (*gummi*); see Draelants 2000, 240–1 no. 9.

⁹⁶ Lit. 'bitten'.

brought into contact with it seems to be *euphorbion*. But its discovery was attested by Iobas (*Juba*) king of Libyē.

43 Galen, *On Compound Drugs according to Places*, 9, p. 271: *Nature of euphorbia juice*

It (*euphorbion*) is the juice of a certain acanthus-like plant that grows in the land of the Maurousioi, very hot in its action. A small booklet has been written about it by Iobas (*Juba*) who held the kingship of the Maurousioi.