

ROBERT L. FOWLER

P. OXY. 4458: POSEIDONIOS

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Responding to a remark that the earliest occurrence of the word *μυθογράφος* appears to be in Polybios (3.91.7, 4.40.2), Leofranc Holford-Strevens drew my attention to the treatise attributed to Aristotle, known from a medieval Latin translation as *Liber de inundatione Nili* (fr. 248, p. 196 Rose = 695 Gigon), which calls Herodotos *fabularum scriptor*, i.e. (presumably) *μυθογράφος*;¹ he noted further that according to Rose the Greek original antedated Eratosthenes. Proklos on *Tim.* 37d = Aristotle fr. 246 = Eratosthenes fr. III B, 52 Berger, when compared with the parallel sources, is *prima facie* proof of this opinion. It runs: Ἐρατοσθένης δὲ οὐκέτι φησὶν οὐδὲ ζητεῖν χρῆναι αἰτίαν τῆς ἀλύξεως τοῦ Νείλου, καφῶς καὶ ἀφικομένων τινῶν εἰς τὰς τοῦ Νείλου πηγὰς καὶ τοὺς ὄμβρους τοὺς γινομένους ἑωρακότων, ὥστε κρατύνεσθαι τὴν Ἀριστοτέλους ἀπόδοσιν. Photios *Bibl.* 249² similarly remarks that the problem has been solved by observation, inasmuch as Aristotle sent Alexander to investigate; he quotes the lost Aristotelian treatise: διό φησιν ὡς “τοῦτο οὐκέτι πρόβλημά ἐστιν· ὥφθη γὰρ φανερώς” ὅτι ἐξ ὑετῶν ἀύξει. This corresponds to the Latin version (p. 197 Rose), at the point where, having refuted all false theories, the author concludes with the truth: *Nunc autem relinquetur sola causa dictorum. hanc causam dicendum, propter quod iam non problema videtur esse, in sensum enim venit, quemadmodum per se videntes facti a visis.* Compare Strabo 17.1.5 p. 789: οἱ μὲν οὖν ἀρχαῖοι τοχαμῶ τὸ πλέον, οἱ δ’ ὕστερον αὐτόπται γενηθέντες ἤσθοντο ὑπὸ ὄμβρων θερινῶν πληρούμενον τὸν Νεῖλον, τῆς Αἰθιοπίας τῆς ἄνω κλυζομένης; at 17.1.2 p. 786 this is quoted as Eratosthenes’ opinion.³ It is clear that the Greek of the *De inundatione Nili* is closely related to Eratosthenes’ discussion; the simplest explanation would be that the latter used the former, which would therefore contain the earliest occurrence of the word *μυθογράφος*. We shall ask later in this paper whether the simplest explanation is the correct one; the alternative is that the author of the *De inundatione Nili* drew heavily on Eratosthenes, whose comment that his view coincided with Aristotle’s gave the forger his lead. One way of reading Proklos is that Aristotle’s view, as reported by Eratosthenes, was the answer to a πρόβλημα or ζήτησις still needing empirical confirmation, whereas by the time of Eratosthenes himself and the Aristotelian treatise as quoted by Photios, there was no need for further investigation (οὐδὲ ζητεῖν χρῆναι ~ οὐκέτι πρόβλημά ἐστιν). On this view Eratosthenes found Aristotle’s theory in a work no longer surviving, not in the *Liber*. The doxography of the *Liber* came mostly from Eratosthenes (as the coincidences of wording quoted above imply), but the work was fathered upon Aristotle. But if this is the true relationship between these two sources, we would reasonably infer that Eratosthenes had already used the word *μυθογράφος* of Herodotos. In either case the usage antedates Polybios.

Some doubt might linger in that the forger, working at an unknown and possibly post-Polybian date, might have changed Eratosthenes’ exact wording; or again in that *μυθογράφος* is not the only Greek word that might lie behind *fabularum scriptor*. The recently published *P. Oxy. LXV 4458* (dated to the third century AD) sheds light on both these problems. In i 6–7, Herodotos is once again called a *μυθογράφος*, and it escaped the editor’s notice that col. i of the papyrus is word for word the Greek original of this very passage of the *Liber de inundatione Nili*; the identification has recently been made by Rainer Jakobi and Wolfgang Luppe.⁴ The papyrus as a whole, however, cannot come from this book, since col. ii contains a reference to the explorations of Ptolemy Philadelphos, and refers to Aristotle in

¹ In his certainly genuine works Aristotle calls Herodotos a *μυθολόγος* at *GA* 756b7. The *De inundatione Nili* is re-edited with translation and notes by D. Bonneau in *Études de Papyrologie* 9 (1971) 1–33; text available also as *FGrHist* 646 F 1.

² Photios and the Strabo passages quoted below are printed by Rose as fr. 246. *Frr.* 246–8 Rose = 686–95 Gigon.

³ Compare also p. 790, quoted below.

⁴ *P. Oxy. 4458 col. I: Aristoteles redivivus*, *ZPE* 131 (2000) 15–18.

the third person. So we have to do here with someone else using the book. The papyrus' editor, the sadly deceased David Hughes, noted certain correspondences between col. ii and Strabo 17.1.5 p. 790; but he did not notice that Strabo in this place is quoting Poseidonios. The passage is fr. 222 Edelstein–Kidd = 63 Theiler = *FGrHist* 87 F 79. The correspondence is in fact extremely close, and column ii offers a first-person authorial statement (ἐβουλόμην line 21) which can hardly be imagined as the utterance of someone *else* using Poseidonios; it is therefore a safe conclusion that the papyrus is Poseidonios himself, discussing the flooding of the Nile and drawing on pseudo-Aristotle in col. i. Poseidonios got his μυθογράφος either directly from the *Liber* or from Eratosthenes; either way, the *Liber* antedates Poseidonios, and will be at least contemporary with Polybios. Whether Eratosthenes got his information from the *Liber*, or the other way around, must remain uncertain for the time being.

Let us have a closer look at the papyrus. Here is the text as printed by Dr. Hughes, with the parallel passages alongside and his apparatus below:

Col. i

].	
	[c. 5]...[c. 7]τελει	
	[c. 4]υ̣ϣυ[3–4]κει α̣ [υ̣ π[ε]ρι̣	
	[τούτ]ου γράφει, τοῖς βουλομέ-	
5	[νοι]ς ἔξεστιν μαθεῖν. ἔχει	
	[γὰρ ο]ὔτως· Ἡρόδοτος δὲ ὁ μυ-	
	[θογρ]άφος ἐν τῷ χειμῶνι	
	[φησι] τὸν ἥλιον κατὰ τὴν	
	[λιβύ]ην ποιεῖσθαι τὴν πο-	
10	[ρεία]ν ἠδ̣ [υ̣] τύχη(ι) φερό-	
	[μεν]ος ἐντεῦθεν ἀνάγειν	
	[τὸ ὑγρ]όν, περὶ δὲ τὰς θερι-	
	[νὰς τρ]οπὰς πρὸς τὴν ἄρ-	
	[κτον] ἰέναι. ἥκιςτα δὲ ταῦ-	
15	[τα λέγ]εται μεμελημέ-	
	[νω· ο]ὔτε γὰρ τὸν Ν(ε)ῖλον	
	[c. 3]τοῦτο ποιεῖν μόνον,	
	[όμοίω]ς γὰρ ἐξ ἀπάσης	
	[τῆς Λι]βύης αὐτὸς λέγει τὸν	
19a	[ἥλιον] ἔλκειν τὸ ὑγρόν, τό τε νομίζειν ὑπερ	
20	[c. 6] καὶ ὀτιοῦν μέροςεἶν
	[c. 7] . α̣ [1–2] . χ[] . [] .	τη.....
	
	

Col. i

3], , upper tip of oblique stroke, rising right, consistent with υ̣ α̣ [, a medium descender Possibly no letter lost in lacuna following 6], , terminal high in the line, consistent with υ̣ υ̣, trace of horizontal and foot of upright 10 An upright before η̣ η̣δ̣ better than η̣α̣ Following traces unclear 11], , tiny trace from right side of curved letter 14 Final trace a deep descender 19], , part of high curve and a lower trace, compatible with β̣

⁵ Emended by Rose.

Col. ii

(col. number and probably one line lost)

[. . .] [. . .] εν [. . .]
 προχειρίζε[ι
 5 ὄμβριον εστ[. . .]
 λον καὶ το[. . .] [. . .]
 τωσι ασηπτ[. . .]
 καὶ θολερὸν [. . .]
 καὶ θερμὸν π[. . .]
 10 τοῖς ἀφρὸν κα[. . .]
 γας ἐπικύρεται [. . .]
 δὲ τούτοις [. . .] λοῦ[. . .]
 τῶν τὸν Ἀρ[άβιον κόλπον]
 πλεόντων [μέχρι τῆς κιν-]
 15 ναμωμοφόρο[υ
 δὲ τῶν ἐπὶ τὴν [τῶν ἐ-]
 λεφάντων θήρ[αν ἐκ-]
 πεμπομένων[. . .]
 ρου[ς δὲ ὑπο[. . .]
 20 τοῦ Φιλαδέλφ[ου
 τὴν ἱστορίαν[. . .]
 νους ἐβουλομ[. . .]
 Ἄριστοτέλην οτ[. . .]
 [. . .] αὐτοῦ Θρακυκλ[. . .]
 [. . .] τῶν πάλαι σοφῶ[ν
 [. . .] τῆν γνώμην [. . .]
 ὁμολόγηκεν[. . .]
 [. . .] ρω δ' ἀνατιθεῖς[. . .]
 [. . .] ου[. . .] να[. . .] [. . .]
 [c. 8] . . . ἐξομ[. . .]

Strabo 17.1.5 p. 789. Οἱ μὲν οὖν ἀρχαῖοι στοχασμῶ
 τὸ πλεόν, οἱ δ' ὕστερον αὐτόπται γενηθέντες
 ἤεθοντο ὑπὸ ὄμβρων θερινῶν πληρούμενον τὸν
 Νεῖλον, τῆς Αἰθιοπίας τῆς ἄνω κλυζομένης, καὶ
 μάλιστα ἐν τοῖς ἐσχάτοις ὄρεσι, παυσαμένων δὲ τῶν
 ὄμβρων παυομένην κατ' ὀλίγον τὴν πλημμυρίδα·
 τοῦτο δ' ὑπῆρξε μάλιστα δῆλον τοῖς πλέουσι τὸν
 Ἀράβιον κόλπον μέχρι τῆς Κιναμωμοφόρου καὶ
 τοῖς ἐκπεμπομένοις ἐπὶ τὴν τῶν ἐλεφάντων θήραν,
 καὶ εἴ τινες ἄλλαι χρεῖαι παρῶζυνον ἐκεῖσε ἄνδρα
 προχειρίζεσθαι τοὺς τῆς Αἰγύπτου βασιλέας τοὺς
 Πτολεμαῖικούς. οὗτοι γὰρ ἐφρόντιζαν τῶν τοιούτων,
 διαφερόντως δ' ὁ Φιλάδελφος ἐπικληθεῖς,
 φιλιτορῶν καὶ διὰ τὴν ἀθένειαν τοῦ σώματος
 διαγωγὰς αἰετίνων καὶ τέρψεις ζητῶν καινοτέρας.
 οἱ πάλαι δὲ βασιλεῖς οὐ πάνυ ἐφρόντιζαν τῶν
 τοιούτων· καίπερ οἰκείοι σοφίας γεγονότες καὶ αὐτοὶ
 καὶ οἱ ἱερεῖς, μεθ' ὧν ἦν αὐτοῖς ὁ πλείων βίος· ὥστε
 καὶ θαυμάζειν ἄξιον καὶ διὰ τοῦτο καὶ διότι
 Cécawtris τὴν Αἰθιοπίαν ἐπῆλθεν ἅπασαν μέχρι
 τῆς Κιναμωμοφόρου, καὶ ὑπομνήματα τῆς
 στρατείας αὐτοῦ καὶ νῦν ἔτι δείκνυνται⁶ στηλαὶ καὶ
 ἐπιγραφαί. Καμβύσης τε τὴν Αἴγυπτον κατασχὼν
 προῆλθε καὶ μέχρι τῆς Μερῆς μετὰ τῶν
 Αἰγυπτίων· καὶ δὴ καὶ τούνομα τῆ τε νήσῳ καὶ τῆ
 πόλει τοῦτο παρ' ἐκείνου τεθῆναι φαίνεται, ἐκεῖ τῆς
 ἀδελφῆς ἀποθανούσης αὐτῷ Μερῆς· οἱ δὲ γυναῖκά
 φασι· τὴν ἐπωνυμίαν οὖν ἐχαρίσατο αὐτῇ τιμῶν τὴν
 ἄνθρωπον, θαυμαστὸν οὖν πῶς ἐκ τῶν τοιούτων
 ἀφορμῶν οὐ τελέως ἐναργῆς ἦν ἡ περὶ τῶν ὄμβρων
 ἱστορία τοῖς τότε, καὶ ταῦτα τῶν ἱερέων
 φιλοπραγμονέστερον ἀναφερόντων εἰς τὰ ἱερὰ
 γράμματα καὶ ἀποτιθεμένων, ὅσα μάθῃσιν περιττὴν
 ἐπιφαίνει. εἰ γὰρ ἄρα, τοῦτ' ἐχρῆν ζητεῖν ὅπερ καὶ
 νῦν ἔτι ζητεῖται, τί δὴ ποτε θέρους, χειμῶνος δὲ οὐ,
 καὶ ἐν τοῖς νοτιωτάτοις, ἐν δὲ τῇ Θηβαΐδι καὶ τῇ
 περὶ Συήνην οὐ συμπύπτουσιν ὄμβροι· τὸ δ' ὅτι ἐξ
 ὄμβρων αἰ ἀναβάσεις μὴ ζητεῖν, μηδὲ τοιούτων
 δεῖσθαι μαρτύρων οἷους Ποσειδώνιος εἶρηκε. φησὶ
 γὰρ Καλλιθένη (*FGrHist* 124 F 12b) λέγειν τὴν ἐκ
 τῶν ὄμβρων αἰτίαν τῶν θερινῶν παρὰ Ἄριστοτέλους
 λαβόντα, ἐκείνον δὲ παρὰ Θρακυάλκου τοῦ Θακίου
 (*Vors.* 35 A 1) – τῶν ἀρχαίων δὲ φυσικῶν εἰς οὗτος
 – ἐκείνον δὲ παρ' ἄλλου, τὸν δὲ παρ' Ὀμήρου
 διυπετέα φάσκοντος τὸν Νεῖλον “ἄψ δ' εἰς
 Αἰγύπτου διυπετέος ποταμοῦ”.

⁶ δείκνυνται Casaubonus; S. Radt (whom I thank for information on this passage of Strabo) points out that the MSS are right: ὑπομνήματα is predicate.

Col. ii

2], , an upright 6 Slight space after $\tau\omega\alpha\iota$ 7 λ corr. from ρ in original hand v. [, foot of deep upright 11], , foot of right-hand stroke of α or λ ϕ is blotted 21 Initial traces very faint; perhaps ϵ before v 22 η corr. from v 24 A tiny spot after ϕ 28 After $\nu\alpha$, third trace α or λ , followed possibly by a deep descender

To take col. i first, the correspondence between the two versions does not begin until line 6 of the Greek. As we already inferred from the content of col. ii, the papyrus is not Aristotle but someone drawing on Aristotle within the context of a somewhat differently arranged treatise; this is another indication of that relationship. Jakobi and Luppe indeed supplemented [Ἀριστο]τέλει in line 2, but many other words have that ending and the supplement seems less than certain, however probable in view of γράφει in line 4. Even if correct it does not afford proof of the treatise's authenticity, since already Eratosthenes, on one view, was deceived.⁷

In what follows the Latin helps to clear up several problems, as Jakobi and Luppe have seen. In line 10 they rightly read $\eta\delta\epsilon\grave{\alpha}[v]$ τύχη(ι) φερόμενος. The traces on the papyrus, which I examined together with Dirk Obbink, are compatible. The syntax has somewhat defeated our 13th-century translator, unless his copy was corrupt; so has the vocabulary (πορείαν translated as *habundanciam*). The result is nonsense.⁸ At the beginning of line 17 ἔδει should obviously be supplemented (so again Jakobi and Luppe). After line 19, the Greek scribe inserted some omitted material; the insertion spills out into the intercolumnar space and runs down for several lines. These traces are exceptionally difficult to read, but with the help of the Latin (and a better microscope) more can be recovered than was evident to Hughes. After ὑπερ the first letter appears to be β; Hughes' ειν is reasonable enough, with a tightly ligatured ει. The supplement ὑπερβαίνειν is thus suggested, corresponding to *supervenire* (an odd use of the word in Latin; the translator is following the Greek closely). The next word in the Latin, *habitabili*, would be some form of ἡ οἰκουμένη in Greek, and τῆς οἰκουμένης does indeed seem to be in the papyrus, divided οἴκου | μένης; the με is particularly good, the νη is tolerably clear under maximum magnification, and the other traces are compatible.

τὴν οἰκουμένην, naturally assumed by Jakobi and Luppe, was definitely not written, and this is a great oddity, for ὑπερβαίνειν is always used with an accusative.⁹ Nor does there seem to be any other example of its use to describe the sun's passing, though 'go beyond, transgress' as the verb's basic sense leads easily to 'cross over' (frequently of people crossing mountains, rivers, etc.) and thence to 'pass over' (cf. e.g. Ar. *Eccl.* 96, of stepping over a seated person, no object expressed, or Apollod. *Bibl.* 1.82, of Phrixos and Helle crossing land and sea on the ram, objects in the accusative). It is in fact difficult to find any verb beginning ὑπερ- used in this sense with the sun. ὑπεριέναι would be one's first expectation, in view of Hyperion; but the verb ὑπέριμι does not seem to exist. Helpfully, Xenophanes seems to play on this sense and this word in fr. 31 Diels-Kranz, ἥελιός θ' ὑπεριέμενος γαίαν τ' ἐπιθάλων; though γαίαν presumably serves as object for both verb and participle in this line, in his gloss Herakleitos says ὑπεριέμενον ἀεὶ τῆς γῆς, showing that a genitive is possible (was it in the line before?). To describe the sun's general progress verbs such as ἰέναι, φέρεσθαι or ὀδεύειν are used (the two expressions in our papyrus, i 9 ff., are typical); Hypereides 6.5 says τὴν οἰκουμένην ἐπέρχεται. Herodotos 2.25 uses διεξιέναι to describe its progress through a particular region. Of compounds of βαίνω, ἀναβαίνειν occurs in Kallimachos fr. 407.16 = Ar. fr. 531 R³, and μεταβαίνειν is used of the sun's movement through the zodiac at Arist. *Probl.* 912a. The papyrus undoubtedly presents us with the genitive, and the Latin translation virtually guarantees its veracity (though not impossible, it would be a

⁷ For an assessment of what this papyrus contributes to this problem see at the end of the paper.

⁸ Jakobi and Luppe propose emending *non enim ait* to *hic enim ait* (supposing a misread abbreviation) and *abundantiam* to *ambulationem*; Kassel *apud eosdem* more elegantly suggests that the translator mistook πορ(ε)ία for εὑπορίαν. *nisi si* remains intractable, so that on any reading the translator was at least partly defeated.

⁹ Some very dubious instances with the genitive are given by LSJ, all easily emended or competing with a v.l. in the manuscripts. Extensive searching through the TLG disk revealed nothing.

little too much to assume that the Latin translator's copy of the text also happened to be corrupt).¹⁰ ὑπέρ + gen. in a spatial sense is common from Homer on; Plato in the *Timaios* (38c) and Aristotle four times in the *Topics* (131b, 142b) use ὑπὲρ γῆς with reference to the sun's journey, so that ὑπὲρ γῆς βαίνειν would be an acceptable expression. To look at it from another angle, ὑπερβαίνειν plus the accusative denotes 'cross over', 'go beyond', which is not quite the sense required when the whole of the earth is in view.¹¹ We may accept ὑπερβαίνειν + gen. as an *addendum lexicis*.

After οἰκουμένης, there is probably no more ink on that line. The Latin continues *solem*, but the traces of the last line, though indecipherable, do not at all suggest τὸν ἥλιον or αὐτὸν. In line 20, Bonneau (p. 14) translated the Latin "imaginer que le soleil domine la zone habitable de façon différente selon les lieux est une sottise", and this is indeed what the author must mean to say for the argument's sake. If Bonneau's instinct was sound, one may suggest that the original text had [ἐτέρως]¹² καθ' ὁτιοῦν μέρος. Though καὶ is certain, the excellent correspondence of Latin to Greek thus far might warrant emendation to καθ'. Given the uncertainty about the last word(s) of the interlinear addition, however, some doubt must attach to this suggestion. In the gap at the beginning of the next line, εὔθηθε is perhaps not too short.¹³ Thereafter the thread is lost.¹⁴

In col. ii Strabo is our guide. He says that according to Poseidonios, Kallisthenes got his information from Aristotle, who got it from Thrasyalkes, who got it from 'another' (emendation is tempting; Θαλοῦ Müller, but Thales' theory as reported elsewhere was different (see below); Ἀλκαίου Jacoby), who got it from Homer. The sequence appears to be identical in the papyrus especially if Hughes is right to supply 'Ομ]ήρω(ι) δ' ἀνατιθεῖς in 27.¹⁵ This cannot be coincidence. Accordingly we expect to find Kallisthenes mentioned just before Aristotle, and indeed εἶνος was already deciphered by Hughes in 21. He reckoned only one more letter at the beginning of the line, but there are sufficient traces for two; the line-beginnings start drifting to the left at this point in the column. Accordingly we may divide Καλλι]χθένους (again, the traces are compatible, the crossbar of θ being tolerably clear). The context (as we infer from Strabo) having to do with sources, the obvious supplement is λαβὼν] | ²⁰δὲ τὴν ἱστορίαν [παρὰ Καλλι]χθένους.¹⁶ If this is correct, there are few infinitives that can fill the gap after ἐβουλόμην, give an appropriate sense, and accord with the traces:

λαβὼν]
20 δὲ τὴν ἱστορίαν [παρὰ Καλλι-
χθένους ἐβουλόμ[ην μηνῦσαι¹⁷

¹⁰ Jakobi's and Luppe's emendation *habitabile* is therefore to be resisted.

¹¹ Contrast Herakleitos *Vors.* 22 B 94 = fr. 52 Marcovich Ἥλιος γὰρ οὐχ ὑπερβήσεται μέτρα· εἰ δὲ μή, Ἐρινύες μιν Δίκης ἐπίκουροι ἐξευρήσουσιν. Another pun from the master punster?

¹² Suppl. Obbink.

¹³ Scornfully used of erroneous views by e.g. Hdt. 2.45; frequently in Aristotle, sometimes with articular infinitive, e.g. *Mete.* 365a (τό τε . . . νομίζειν . . . εὔθηθε; *Metaph.* 1062b τὸ . . . προσέχειν . . . εὔθηθε; *Top.* 104b τὸ . . . φροντίζειν εὔθηθε; [*Phgn.*] 806b τὸ . . . πιστεύειν εὔθηθε, in each case with the adjective at the end of the clause). Jakobi and Luppe suggest as an alternative ἀνόητον.

¹⁴ The Latin continues *ubique gnomones umbram ad meridiem faciunt et non hoc differunt, sed per maiorem aut minorem facere umbram. Libiam totam amphithalassam esse aiunt, tamquam iste modus quidem causae impossibilis*. The first sentence is somewhat elliptic, but appears to argue that the only difference in the sun's behaviour at different points of the globe, the length of the shadow at noon (which is in any case the same along any given latitude), is not pertinent; the second sentence argues that the sun would also, on Herodotos' view, necessarily evaporate the oceans surrounding Libya (so Bonneau). Jakobi and Luppe plausibly suggest supplementing in line 21 παν[ταχ[ο]ῦ [δ(ε) ο]ἰ | [γνώμονες κτῆαν πρὸς τὴν μεσημβρίαν ποιοῦσιν.

¹⁵ Hughes also noted that the discrepancy Thrasyalkes – Thrasykles does not signify.

¹⁶ Of δὲ are visible two strokes descending at the appropriate angles and the top half of a round letter.

¹⁷ 'to report what Aristotle says'. The verb in this sense is used by Strabo immediately after he despatches Kallisthenes: ἄλλ' ἐὼ ταῦτα πολλῶν εἰρηκότων ὧν ἀρκέσει δύο μηνῦσαι τοὺς ποιήσαντας καθ' ἡμᾶς τὸ περὶ τοῦ Νείλου βιβλίον.

καὶ Ἀριτοτέλην ὅτι λέγει
περὶ αὐτοῦ,¹⁸ Θρασυκλή τε
ἐνὰ τῶν πάλαι κοφῶ[ν ὅς τήν-
25 δε [τ]ήν γνώμην Κ[αλλισθένης]¹⁹
συνομολόγηκεν, ἔτι δὲ Θαλήν·
Ὀμήρω(ι) δ' ἀνατιθεῖς²⁰

The reconstruction in lines 25 f. allows one to infer, as Strabo evidently did, that the others are mentioned because they were identified by Kallisthenes as his sources. Now the implication of ἐβουλόμην in 21 is probably that Poseidonios wanted to cite all these people, but with the exception of Homer could not, either because the works were not available or they did not contain the views attributed to them.²¹ An alternative interpretation would be that he has already cited them, and is here explaining why (that might in turn imply that he thought the *Liber de inundatione Nili* was indeed by Aristotle); yet another reading is that ἐβουλόμην is epistolary, and he cited them in what follows. But Strabo's report of Poseidonios seems rather to imply that they were not cited; the stress is on what Poseidonios and Kallisthenes said, not on what Kallisthenes' authorities said. Thus the first reading is probably correct. That might imply in turn that Poseidonios did not regard the *Liber de inundatione Nili* as Aristotelian, since he has just cited it – unless he got the text from Eratosthenes, and was unaware of its ancestry.²²

Poseidonios was in fact familiar with the works of Thrasyalkes since he disputes his classification of the winds at fr. 137a Edelstein–Kidd = 5 Theiler. In this passage (quoted by Strabo 1.2.21) Poseidonios points out that Thrasyalkes' view is contradicted by Aristotle, Timosthenes, and Bion. In other words, he went checking, as he did also in our passage. This doxographical bent is in fact characteristic of Poseidonios (see Kidd on T 101–2), and may be taken as support for the view that our papyrus is indeed by him. As he did in fact have access to the works of Thrasyalkes, we infer (cf. above on ἐβουλόμην) that he could not find therein the opinion imputed to him by Kallisthenes; quite possibly Thrasyalkes' actual opinion on the Nile's flooding was given in the very passage on the winds that Poseidonios quotes at fr. 137a.

At the end of line 26, if Strabo is a reliable guide, another name was read; ἄλλοc in Strabo certainly looks corrupt (unless he substituted it for a name he could not decipher). I have inserted Thales *exempli gratia*, but as already intimated Thales (*Vors.* 11 A 16) did not share this view of the flooding of the Nile.²³ According to Aetios *Doxogr. Gr.* 384 ff. = *FGrHist* 647 F 2, Diodoros 1.38.1 ff. and others, he blamed the etesian winds, which he thought opposed the natural flow of the river, causing it to overflow its banks (Herodotos 2.20 probably refers to him as well). Theories of the flood are listed and discussed, apart from Herodotos, principally by Strabo, Diodoros and Aetios ll.cc., Seneca *NQ* IV A 2.16 ff.

Εὐδωρόν τε καὶ Ἀρίτωνα τὸν ἐκ τῶν περιπάτων (*FGrHist* 649/50). μηνῶσαι plus an indirect question at e.g. Ar. *Ach.* 206, Pl. *Ap.* 24d; Lucian *Pseudol.* 19 offers ἐμήνυεν ὅτι τοῦνομα τῷ δράματι. More usual verbs for 'cite' are παρατίθεσθαι and παρέχεσθαι, sometimes also προφέρειν and ἐπάγεσθαι, but these are too long in either present or aorist tense, unless the ending spilled over onto the next line; but καὶ seems necessary for the sense. At the beginning of line 22, mostly illegible traces; the vertical representing ι is perhaps visible.

¹⁸ περὶ rather than περὶ, and similarly in 24, though the traces are in both cases indecipherable. αὐτοῦ in the sense of 'the subject' (cf. e.g. Plato *Euthphr.* 8b, *Chrm.* 158e, *Prt.* 361c, etc.).

¹⁹ The vertical of Κ[is visible. At the beginning of the next line, συγ is tolerably clear. At the beginning of lines 24–6 it is difficult to distinguish dirt from ink and it is not impossible that more letters are lurking to the left, which would invalidate the details of the reconstruction given here: but the leftward drift of the lines would be quite extreme in that case.

²⁰ Of η a vertical is visible.

²¹ The traces of 28 ff. are too feeble to permit supplement. Before γ in 28, probably alpha (apex and tip of the right descender visible). In 29 π[α]ρ[ε]ξ Ὀμήρου had occurred to me but the traces exclude it: after the hole there are two verticals and a horizontal, most compatible with τι.

²² See further below.

²³ Of course, the false or fraudulent imputation could be Kallisthenes'.

But Poseidonios goes on to say immediately that he has taken his information from *Kallisthenes*.²⁷ As the preceding lines are not from Kallisthenes (who could not, in any case, have cited an incident from the reign of Ptolemy Philadelphos), but from Eratosthenes, line 20 must refer back to a part of the work before column one. The general structure thus becomes clear. Before the papyrus begins Poseidonios had based his discussion on Kallisthenes. This section was concluded firmly with ἔχει γὰρ οὕτως.²⁸ He then went on to refute Herodotos' aberrant view, and to cite further evidence from Eratosthenes. He had wanted to cite even more sources, but was unable to do so. Strabo saw no need.

The question of who (according to this doxographical tradition, if not in fact) first went far enough south to see the cause of the floods for themselves bears further investigation. John Lydus says (4.107 = *FGrHist* 124 F 12a) that Kallisthenes claimed to have gone there. Some doubt, however, attaches to this statement. Jacoby, following P. Corssen,²⁹ argued that Kallisthenes could not have made this claim because the information about the flooding of the Nile is quoted from book 4 of the *Hellenika* (published ca. 340?), which must have come from the account of the Persian expedition against Egypt of 374/3, not Alexander's. Furthermore, the *Anonymus Florentinus* reports Kallisthenes' view as γνώμη not ὄψις. Though it is not impossible that the inquisitive Alexander either undertook or dispatched an expedition,³⁰ doubts remain, if John Lydus' attribution to the *Hellenika* is right, about how Kallisthenes managed, while still on campaign, to produce a second edition of the *Hellenika* before his execution in 327. It is, finally, odd that Poseidonios casts his discussion as he does if Kallisthenes had claimed to have been there himself. Jacoby suggests that the confusion is John Lydus', who recalled Kallisthenes' principal fame as ὁ συστρατευόμενος Ἀλεξάνδρῳ. Another possibility is that Kallisthenes did in fact make his claim in the *Deeds of Alexander*, triumphantly producing the evidence to confirm the theory advanced in the *Hellenika*. But then it is odd that Poseidonios failed to consult or cite the later book. On balance, therefore, it seems probable that Kallisthenes did not make the statement John Lydus (that is, Seneca) foisted upon him. We may assume therefore that Poseidonios is here quoting Kallisthenes' *Hellenika* in its first and only edition. The assumption is strengthened when we note that John Lydus reports Kallisthenes' authority Thrasyalkes in the sentence before he cites the *Hellenika*; this is where he learned the philosopher's view, and it is this passage both he and Poseidonios used.

Agatharchides, as we saw, claimed that Philadelphos' men got there first, and this is the general thrust of Strabo's report. Strabo's information comes from Eratosthenes. The *Liber de inundatione Nili*, by contrast, gave the palm to Alexander. If Eratosthenes knew this work, we seem to have a contradiction. But as Eratosthenes' own words do not survive, we cannot be sure how he cast his discussion. As quoted by Proklos (quoted at the start of this paper), he presented his view as a confirmation of Aristotle's. (If my supplement in ii 10 is right, τούτοις in 11 means effectively 'Aristotle's view'.) He might have said, as Agatharchides says about Eratosthenes himself, that Aristotle's information did not quite suffice to clinch the matter;³¹ or he might have regarded the report about Alexander with a certain skepticism, and perhaps he entertained some doubts about the authorship

²⁷ The supplement [Ἐρατο]στράτου is of course possible in line 20, but that would be to give up the compelling link with the sequence of sources in Strabo.

²⁸ That this expression looks backwards rather than forwards is shown by the lack of asyndeton in the following sentence. Contrast e.g. Isoc. *De Pac.* 28, *Antid.* 52, Dem. 13.11, 14.2, *Phil.* 4.22, Arist. *APo.* 81b 23. In what precedes]τέλει might conceal Ἀριστο]τέλει, as already mentioned, but there is not enough of the context surviving to tell whether this would lend support to one or other of the hypotheses mooted here.

²⁹ Das angebliche Werk des Olynthiers Kallisthenes über Alexander den Grossen, *Philologus* 74 (n.F. 28) (1917) 1–57 at 17 ff.

³⁰ Stanley M. Burstein, Alexander, Callisthenes, and the Sources of the Nile, *GRBS* 17 (1976) 135–46 at 142 ff. gives some reasons for thinking that he did. Note that Aristoboulos *FGrHist* 139 F 35 apud Strab. 15.1.19, discussing the similar behaviour of Indian rivers and the Nile, appears to take for granted that the southern rains caused the flood (and records the northern limit of the monsoon): did he report an expedition?

³¹ Here perhaps belongs the report in Lucan BC 10.272 ff. of a baffled attempt by Alexander to find the sources of the Nile.

of the pamphlet, but as its results accorded with his own, he was happy to say ‘thus Aristotle’s opinion is confirmed’. One notes that for Strabo Eratosthenes, not Aristotle, was the decisive authority, which would be odd if Eratosthenes had unequivocally said that Aristotle had cited eye-witness evidence. Conversely, it is possible that Eratosthenes did not know the *Liber*; this too would explain Strabo’s silence, and we may infer that if he himself knew the *Liber*, he regarded it as forged. The same may be said of Agatharchides who, as we saw, ignored the report about Alexander. Finally, Poseidonios: if he knew the book directly, he is doubly guilty of the fault with which Strabo taxes him of ignoring eye-witness evidence. Furthermore, to assume that Poseidonios in col. i of the papyrus follows the *Liber* directly is to posit a rather rapid changing of sources in the space of two columns, from Kallisthenes to Aristotle to Eratosthenes and then on to Kallisthenes’ sources. But sinning twice and rapid rehearsal of sources are neither of them a greatly improbable happening, and one must set against these arguments the extremely close verbal correspondence of the Greek and Latin – less likely if filtered through an intermediary. The question remains open.

It remains to ask whether any of this casts further light on the authorship of the *Liber*. It seems very doubtful that it was Aristotle himself. In the first place, the notion that he sent Alexander to do his research for him belongs more to the world of biographical invention than historical fact.³² In the second place, we have found reason to think that Poseidonios in this papyrus distinguished Aristotle from the author of the *Liber*, though it is also possible that he did not know the book at all (but that in itself could be significant, as, according to the reconstruction proposed above of col. ii, he actively looked for it among the philosopher’s works). Thirdly, we have just seen that Strabo and Agatharchides both appear to have ignored the book. Indeed, if the account of the relationship between Eratosthenes and the *Liber* deemed less obvious at the outset of this paper is correct, viz. that the *Liber* took its doxography from Eratosthenes, I know of no argument that might place its date. It remains the simpler hypothesis that Eratosthenes drew upon the *Liber*, and a slight argument in favour of this view is that the original of the *Liber*, if late and derivative, contains a remarkable amount of unique material. If the *Liber* antedates Eratosthenes, there are few possible candidates among known figures for its author. Kallisthenes himself seems unlikely, for if he forged this pamphlet to lend the authority of Aristotle and the empirical observation of Alexander to his own view as expressed in the *Hellenika*, one must ask why he apparently said nothing about it in the *Deeds of Alexander*, and why his name is not mentioned in any of the witnesses to the *Liber*. The old suggestion of Theophrastos remains a strong possibility.³³

To sum up the main conclusions of this paper, tentative as some of them must remain in view of the usual uncertainties of source-criticism:

1. P. Oxy. 4458 comes from the unknown work in which Poseidonios discussed the causes of the flooding of the Nile. His principal source was the fourth book of Kallisthenes’ *Hellenika*.
2. In col. ii of this papyrus Poseidonios reports, from Eratosthenes, the researches sponsored by Ptolemy Philadelphos which confirmed the theory that floods resulted from the rain clouds brought to the mountains of Ethiopia by the etesian winds.
3. Eratosthenes held this theory to be Aristotle’s, and it is indeed found in the *Liber de inundatione Nili*, ascribed to the philosopher. The Greek original of this book is quoted in the first column of our papyrus.
4. It is therefore possible that Poseidonios knew this passage of the *Liber* only from Eratosthenes; but even so there is reason to think he did not regard the book as Aristotelian (if he even knew it), as he was

³² It is of a piece with the report in the vulgate *Lives* that Aristotle accompanied Alexander on his conquests collecting data for his Πολιτεῖαι. Compare also Kallisthenes 124 T 3 (Aristotle asks that Kallisthenes send Babylonian τηρήσει) and Pliny *NH* 8.17.44 (Alexander and Aristotle collaborate in biological research), discussed with suitable skepticism by James S. Romm, *AJP* 110 (1989) 566–75.

³³ For the most recent discussion of the attribution of the *Liber* see R. W. Sharples, *Theophrastus of Eresus. Sources for his Life, Writings, Thought and Influence*. Commentary Vol. 3.1 *Sources on Physics* (Texts 137–223) (Leiden etc. 1998)197 n. 571.

unable to verify Kallisthenes' reference to Aristotle. He was also unable to verify Kallisthenes' references to Thrasyalkes and (?) Thales.

5. The *Liber* most probably antedates Eratosthenes.

6. The original of the *Liber* as quoted in column i contains the earliest use of the word μυθογράφος and a new expression for the passage of the sun overhead, ὑπερβαίνειν τῆς οἰκουμένης.

University of Bristol

Robert L. Fowler