

## ARISTIDES DID NOT READ STRABO: ETHIOPIAN RAINS IN THE *AIGYPTIOS*

*Abstract:* Aristides was one among the ancient writers who mistakenly rejected the theory that related the seasonal rains on the Ethiopian mountains to the origin of the Nilotic flood, a link that we know today to be closer to the truth than any other ancient theory. The Nile's two singularities drove Aristides to commit two severe methodological mistakes, which are particularly noticeable in an intellectual of his category: the hydric behavior of the current (apparently opposed to that of other rivers) and the spatial and temporal discrepancy between the atmospheric factors that caused the rising of the river and the perception of said rising in Egypt. Aristides' forceful rejection of this theory is one of the most interesting factors in the text and one that I shall use in order to define which elements in the *Aigyptios* are in fact correct and which are not.

### 1. ARISTIDES IN THE *AIGYPTIOS*

Before going into further detail, I must clarify that Egypt was not one of Aristides' preferred topics, nor was he particularly proficient on this country, despite the well-known fact that during his youth he lived there for one or two years. It seems that he arrived in Egypt in the spring of AD 141, when he was 24.<sup>1</sup> The *Discourse* 36 was written years later, between AD 147 and AD 149, or even as late as the 170s.<sup>2</sup> For reasons that will be expounded shortly, I am more inclined to support the later date. At any rate, this visit gave the sophist a good knowledge of Egypt. He travelled the length of the country thoroughly, even visiting some places more than once and entering Nubia, beyond the First Cataract.<sup>3</sup> It

<sup>1</sup> Behr (1968) 15-21 and 62-63, maintains that this visit lasted for a year, between May AD 141 and April 142; most specialists are, however, of the opinion that the visit lasted two years, until AD 142, and that this voyage was the culmination of his formative period; cf. Boulanger (1923) 124; Gascó & Ramírez de Verge (1987) 11-14; and Cortés Copete (1995) 25.

<sup>2</sup> The earlier date is proposed by Behr (1968) 19 n. 63, and *id.* (1981) 402. The second is advocated by Cortés Copete (1995) 27-28, and *id.* (1999) 11, on the basis of some of Boulanger's ideas (1923) 162, and also of some weighty arguments of his own. I will use the edition of Keil (Berlin 1898) and have relied on the translations of Behr (1981) and Cortés Copete (1999).

<sup>3</sup> Indeed, in §1 he says: "I travelled up to the land of Ethiopia and investigated Egypt itself four times in all and left nothing unexamined". It is likely that what he refers to as

appears that these travels were aided by Gaius Avidius Heliodorus, the prefect of Egypt during these years, who must have facilitated the necessary logistics and provided access to informants.<sup>4</sup> Among these informants, some individuals may be highlighted, including an administrative official serving in the southern frontier district (one ἐπίτροπος), who was temporarily replacing another (ὑπαρχος; cf. 36.55); some Egyptian, Nubian and “Ethiopian” guides and interpreters (ἐρμηνεῖς) who accompanied him on his travels and who, in some cases, were attached to the service of local temples (ἱερεῖς καὶ προφῆται, §1); and some Greek residents in Egypt, who are mentioned by name (for instance, Dion and Draucōn, cited in §10 and 33-34). During his stay, he must have collected notes on what he saw and what he was told, material that he largely lost over the years, which Aristides himself tells us with regret just before he wrote his *Agyptios* (see §1 and *Or.* 48.2-3). We must keep this in mind at all times, since it will be of assistance to understand some questions later on.

Our contentions with regard to the orator are not related to the degree of knowledge shown concerning the River Nile on its course through Egypt, which was quite extensive, but to some methodological contradictions and his deficient utilization of the sources he had at his disposal. These factors contribute — in our opinion — to reduce the quality of the work. This is particularly surprising, given his extensive and deep academic training and his experience, his intellectual stature (accredited in his work as a whole), and his prestige as a writer (which modern historiography has amply confirmed).

The somewhat ‘below standard’ nature of this *oratio* can be appreciated on different levels. Firstly, in this work Aelius Aristides abandoned his usual philosophic stance to turn into an epitomist, albeit a very highly qualified and original one. Secondly, the ‘relaxation’ of his usual stance drove him to approach the periodic flood of the Nile inflexibly and dogmatically (something uncommon for a philosopher). The flood of the Nile was still a matter of debate in Aristides’ time, but he closed his mind to any alternatives and to the logic of things. And thirdly, it appears to me that his evolution, as a person and as a sophist, between his early visit to Egypt and the composition of the *Agyptios* conditioned the

‘Ethiopia’ was in fact Nubia, that is, the territory between Philae and Pselcis, the southernmost garrison of his time (§1: ἐπειδὴ γὰρ καὶ μέχρι τῆς Αἰθιοπικῆς χώρας).

<sup>4</sup> Cf. Gascó & Ramírez de Verge (1987) 14.

conclusions at which he arrived in the text. It is as though this personal evolution had transformed the young philosopher who loved reason and logic as the only ways to find the truth of the world and the transcendent essence of life, into a mature, pious man who, as he grew older, started to blindly follow the decrees of the gods and to believe that everything relied on their sacred power. If this is true, it would further reinforce the argument that the *Aigyptios* was written rather late in his life.

This personal evolution is no trivial matter. Let us keep in mind that the declared aim of the text was to get to the reasons behind a natural, *physical* phenomenon:

The means of the Nile's rising and the cause of this phenomenon being contrary to other rivers in the matter of the seasons of the year (§1).<sup>5</sup>

Aristides expounded his reasons in a rhetorical and polemic manner:

I shall not tell you the cause through which this [*phenomenon of the rising*] happens, but that it does not happen through the reasons which each of them [*the authors who proposed them*] alleges (§2).

But the answer to his initial question was not, as we shall see presently, the sort that could be expected from an author of his worth, because the personal evolution to which we referred earlier made him reach an intangible and *transcendent* solution for what was a merely *physical* phenomenon.

Aristides' diminished ability can best be appreciated in the way he deals with (and rejects) the old theory that claimed that the flood of the Nile was caused by the etesian winds and the torrential rains that they brought.<sup>6</sup> Aristides' forceful rejection of this theory is one of the most interesting factors in the text and one that I shall use in order to define which elements in the *Aigyptios* are in fact correct and which are not, trying thus to avoid committing flippant generalisations.

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Aristides was the Graeco-Roman author who paid the most attention, and in a more systematic way, to the phenomenon of the rising of the

<sup>5</sup> That is, to rise out of proportion during the summer, under a merciless sun and in the absence of any rain. Herodotus had asked himself the same question seven centuries before (2.19.6).

<sup>6</sup> In the ancient nomenclature, the etesian winds (from ἔτος, "year") were seasonal, dry north winds attracted by the low-pressure zones of continental Africa; these winds pushed large cloud formations and were the cause of abundant rains.

Nile. The title of his oration, in fact, could well have been substituted by *On the Flood of the Nile*, because the whole text revolves around this topic. In this regard, the work ranges between ‘strange’ and ‘eccentric’ in comparison with his other works.<sup>7</sup> The work is similarly devoid of parallels in the whole of Classical literature, with the only possible exception being Aristotle’s *De inundatione Nili*, at least judging by the Latin version that has been preserved (which undoubtedly is a mere summary of the lost original).<sup>8</sup> Indeed, many authors wrote extensive commentaries on the issue, but not monographically, as Aristotle or Aelius Aristides did, but rather within the framework of general miscellaneous works which included lengthy descriptions of Egypt and its civilisation.

Modern historiography has not paid detailed attention to the *Aigyptios*, especially concerning the reasons that drove Aristides to reject in such blunt terms the only ancient theory that actually got close to the real reason behind the annual rising of the Nile. Instead, modern historians have focused on other works that are considered more in line with his general approach, for example those dealing with religion, politics or magic, which were some of his pet-themes. This oration is, however, intrinsically interesting at least in as far as it reveals the degree of knowledge in circulation during the second century on the topic of the Nile flood (§85-125). This was a topic that had engaged the interest of generations of scholars from all fields.

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The already noted polemic formulation of the *oratio* allowed Aristides to insert his own opinions and arguments while explaining the position of previous authors; indeed, he indulged in lengthy, and occasionally harsh, refutations. As a rule, none of these previous authors are cited by name. They are only referred to generically and impersonally (“those that say...”, “some who are of the opinion...”, etc.). The only exceptions were Ephorus of Cyme (sixth century BC) and Euthymenes of Massalia

<sup>7</sup> Indeed, Boulanger (1923) 161 deemed this oration a “pseudo-scientific” work on the phenomenon of the rising of the Nile, and in this regard a work far removed from the core of his production.

<sup>8</sup> Indeed, the essay is known from a 13th-century Latin translation, the *Liber de inundatione Nili*, which declares Aristotle’s authorship; ed. Rose (1886), frag. 248, 191-197; ed. and trans. by Bonneau (1971) 1-33, and more recently by Blazek (2008) 221-264. The essay tried to account for the origins of the Nile flood, and critically reviewed all the theories that had been put forward by Aristotle’s time.

(sixth-fifth century BC), who are explicitly cited alongside their theories,<sup>9</sup> and Herodotus, who is not only cited in reference to his sun-based theory, but also to other topics.

It seems clear that Aristides read the second book of Herodotus' *Histories* (dedicated exclusively to Egypt) with care during his youth. In fact, at the beginning of the *oratio*, after a brief introduction, Aristides sets himself the initial task of "remembering some of the hypothesis already refuted by Herodotus" (§3), as though declaring that the historian had been his guide and inspiration through the *Aigyptios*. Despite the acerbity displayed in his criticism of the theories of Ephorus, Euthymenes, and even Herodotus (a criticism which sometimes borders on derision), maybe it is more advisable to understand these attacks in the context of the praise that Aristides dedicates to the Greek historian every now and then:

I have not gone into this issue out of enmity or in order to condemn Herodotus ... but out of love for Egypt, which he was the first to inspire. In everything else, he is also beloved to me (§57).<sup>10</sup>

Herodotus was the main source of Aristides' *Or.* 36, its guide and inspiration; as we shall see later, it was a thoroughly unsound choice.

Aristides' arguments were based on personal experience, but also on second-hand reports. The latter category included both the written works of other ancient authors and the oral testimonies offered *in situ* by a number of personal informants. Also, the internal order and coherence of the work reveals the orator's proficiency and experience. Aristides

<sup>9</sup> The former claimed that the flood was caused by the porosity of the soil in Libya and Arabia, through which the Nile filtered in order to flood Egypt (§64-84); the latter believed that the Nilotic flood was fed from an outer ocean and fresh water (§85-96). Aristides seems to admit that he knew of Euthymenes' theory through Ephorus (cf. §85: "is it is true what Ephorus says that you [*Euthymenes*] believe...").

<sup>10</sup> Other similar comments may be found in §41: "his opinion cannot be discarded as a whole [*of Herodotus*], neither he deserves to be totally refuted"; §46: "he had the most beautiful words of pray for Egypt and the Nile... And he was not always mistaken"; §54: "his statements are not always totally wrong"... Sometimes Aristides even claims to adopt Herodotus' style (§48 and 63). In contrast, some of the comments made against Ephorus, Euthymenes and Herodotus are quite sharp: Herodotus is accused of conveying mendacities (§46 and 57); Ephorus is said to have made a fool of himself by exposing his theory (§64), and his hypotheses were nothing but nonsense (§67); and Euthymenes becomes the target of hurtful sarcasm (§85-96: "But I think that it is better to leave such tales and fables [*of Euthymenes*] to nurses to tell their children whenever it is bed-time, a fresh-water sea, and hippopotami, and the sea flowing into the river, and all such sleeping potions" (§96).

himself claims to have tackled the topic with a clear plan in mind, aiming to avoiding unnecessary digression and sticking to the important factors (§48 and 55), being concise in his examination of every issue (§1), warding off hearsays (§50), etc.; whenever he diverted from this preconceived plan, as well as when he borrowed some literary feature from Herodotus, he even warns the reader about this (§48).

His first-hand knowledge and the internal organisation of the discourse, however, did not save him from making some mistakes about the issue at hand (the Nilotic flood).

Several factors played a role in this, not all of which are solely imputable to the author. They had also had a negative effect on previous authors, and were to do the same to later ones. Featuring very prominently among these factors is the imperfect knowledge that the ancients had of the stretch of the River Nile that ran across Higher Nubia and up the deep and distant 'Ethiopia' referred to by Graeco-Roman authors in very ambiguous terms:<sup>11</sup> the length of the river was unknown, as was the exact location of its sources;<sup>12</sup> and the accepted *topos* was that *Aethiopia* was a vast, remote, inaccessible, unknown and sun-scorched region.<sup>13</sup>

These factors barred many authors from correctly appraising the region on which their attention should have been focusing in their search

<sup>11</sup> This term was used to allude to the current territory of Sudan and Ethiopia and beyond. But some authors erroneously identified the limits of this land as near the Egyptian frontier, for example, Pliny (5.59): "[*the Nile*] it first comes within the territory of Egypt at the Ethiopian frontier".

<sup>12</sup> Aristides said: "where it began its rise has escaped inquiry" (§122); similarly, he claims to have been told by an Ethiopian informer "that he could not refer the river back to any ultimate source from which and through which, in respect to springs, it flowed... And so far we [*the intellectual Greeks, the ancient men*] have not found them [*the sources of the Nile*]" (§56-57); and again: "But when it is agreed about the Nile that even now its source and southern limit have not been discovered, how is it possible to seek its cause [πόθεν αὖξεται] or to say where it arises?" (§39). This same idea had already been expressed by Seneca: "if we could know where the sources of the river [*the Nile*] are, we could also know the reasons behind the flood" (*Nat. Quaest.* 4a.2.3: *Unde crescere incipiat si comprehendi posset, causae quoque incrementi inuenirentur*), and more laconically by Pliny: *Nilus incertis ortus fontibus* (5.51). As late as the 4th century, Ammianus Marcellinus, who had the benefit of over a millennium of speculation and research to draw from, stressed that the issue had never been, and never would be, resolved: "The origin of the sources of the Nile (so at least I am wont to think) will be unknown also to future ages as it has been up to the present... the poets' tales and dissenting geographers give varying accounts of this unknown subject" (22.15.4). Aristotle had reached that same conclusion eight centuries earlier (*De inund. Nil.* 8).

<sup>13</sup> Cf. Hdt. 2.22.3 and 31.6; Diod. 1.32.1; Pomponius Mela, *Chor.* 1.50.

for the origins of the Nilotic flood. The distance between the higher course of the river where the rains took place, on the Ethiopian plateau, and Egypt (which was no less than 3,200 km), and the three-month lapse between these rains and the arrival of this huge amount of water in Egypt (March and June, respectively), account for this circumstance. In summary, the ancients never had a certain knowledge of the river's lake source (Lake Tana), and even less of the White Nile (due to the vast swamp of Sudd, in southern Sudan, which was an impassable obstacle in Antiquity), and in addition maintained the generalised theory that *Aethiopia* was a sun-scorched region. The distance and the seasonal difference made the link between the rains in the Ethiopian mountains and the vast annual avenue of Nilotic water a difficult connection to make.

It is fair, however, to stress that this link featured in the hypotheses set forth by some ancient authors before the change of era. These authors were somewhat better informed about the real features and geographical limits of *Aethiopia*. For example, they knew — or correctly speculated — that the region included a mountainous zone to the east, that this region annually went through a wet season that abundantly filled the water courses which were dry for the most part of the year, and that these same water courses ended up joining the Nile. Furthermore, a late Egyptian source assumed this theory to be correct (Athanasius, *Vita Antonii* 31-32):

For [*the demons*] having seen that there has been much rain in the regions of Ethiopia, and knowing that they are the cause of the flood of the river before the water has come to Egypt they run on and announce it. And this men could have told, if they had as great power of running as the demons.<sup>14</sup>

Yet after the turn of the era, there were many authors who did not believe this theory, supporting alternative hypotheses which were completely erroneous, including Aelius Aristides.

It must also be taken into consideration that the most reliable reports on the farther ends of this mountainous Ethiopian region — beyond Meroe and the Sixth Cataract — were collected in the course of the military and commercial expeditions launched by some kings of the Lagid

<sup>14</sup> *Videntur videntes enim pluvias multas factas in terra Aethiopiae, scientes quia ex ipsis pluviis abundantia fluminis fit, antequam aqua venit in Aegypto, antecedentes dicunt aquam futuram. Hoc autem fecissent homines, si tantam in currendo habuissent virtutem ut ipsi* (ed. G.J.M. Bartelink [SC] 1994).

dynasty — especially Ptolemy II Philadelphus — and some Roman emperors — especially Augustus and Nero.<sup>15</sup> These expeditions included adventurers and scholars of all kinds (physicists, geographers, ethnographers, naturalists, historians, and epitomists) and some of their descriptions, along with the official reports and the oral testimonies of a number of expedition members, ended up being deposited in the Library in Alexandria under the title *Aethiopika*. This material inspired some third and second-century BC authors, such as the geographer Eratosthenes of Cyrene and the ethnographer Agatharchides of Cnidus, among many other lesser authors. These authors, on their part, inspired other Greek and Roman authors in the first century BC and beyond, including Strabo, Pomponius Mela and Pliny. Some of these authors made good use of this material, applying true reports about the region beyond Meroe and the location of the Ethiopian mountains, but Aristides, who was fully reliant in his only source, Herodotus, was not among them, as we shall see forthwith.

## 2. THE THEORY OF THE ETHIOPIAN RAINS IN THE *AIGYPTIOS*

Aristides was one among the ancient writers who mistakenly rejected the theory that related the seasonal rains on the Ethiopian mountains to the origin of the Nilotic flood (see the lengthy refutation in §19-40), a link that we know today to be closer to the truth than any other ancient theory.<sup>16</sup> Diodorus Siculus (1.38-41) and Strabo (17.1.5) knew about it and amply inform us about the inspiration behind the idea and its transmission channels (that is, the authors who adopted it and conveyed it in their works), and they also explained it in more detail and more convincingly than anyone else.

<sup>15</sup> Cf. Raschke (1978) 644-650 and nn. 916-919; Török (1997) 69-73, 417-419 and 451-455, and *id.* (2009) 427-530.

<sup>16</sup> Let us remember that ancient man attributed the rising of the Nile to a multiplicity of factors, more or less logical, including torrential rains (Democritus of Abdera, Eudoxus of Cnidus, Aristotle and Agatharchides of Cnidus), the melting of the snow (Anaxagoras of Clazomenae), the influence of the sun (Enopides of Chios and Herodotus), the exudation of subterranean water and alluvial torrents (Ephorus), the winds that slowed down the current of the Nile (Thales of Miletos), the Ocean which surrounds the Earth (Euthymenes of Massalia), or the climatic zones (the priests of Memphis and Nikagoras of Cyprus). See comments in Rehm (1936) col. 571-590, and especially in Bonneau (1964) 135-214.



Following the comments of both authors, we know that the hypothesis accounted for three consecutive atmospheric phenomena that resulted in the torrential rains. These, explained in modern terms, would be as follows:

- (a) the melting of the snow in remote areas of the world, which results in the condensation of water in the form of clouds;
- (b) these clouds are pushed by seasonal dry winds (*etesian*) towards the mountains of Aethiopia;
- (c) the clouds ‘collide’ against the mountains and discharge a large amount of rain, which subsequently swells the river.

Specifically, the Sicilian historian said the following:

Democritus of Abdera says that it is not the regions of the south that are covered with snow, as Euripides and Anaxagoras have asserted, but only those of the north, and that is evident to everyone. The great quantities of heaped-up snow in the northern regions still remain frozen until about the time of the winter solstice, but when in summer its solid masses are broken up by the heat, a great melting sets up, and this brings about the formation of many thick clouds in the higher altitudes, since the vapour rises upwards in large quantities. These clouds are then driven by the etesian winds until they strike the highest mountains in the whole earth, which, he says, are those of Ethiopia; then by their violent impact upon these peaks, lofty as they are, they cause torrential rains which swell the river, to the greatest extent at the season of the etesian winds (Diod. 1.39.1-3; transl. C.H. Oldfather, Loeb ed., 1968).

After his refutation of Democritus (“credit must not be given to what he said”, *ibid.* 5), he added:

The nearest approach to the truth has been made by Agatharchides of Cnidus. His explanation is as follows: every year continuous rains fall in the mountains of the Ethiopia from the summer solstice to the autumnal equinox; and so it is entirely reasonable that the Nile should diminish in the winter when it derives its natural supply of water solely from sources, but should increase its volume in the summer on account of the rains which pour into it. And just because no one up to this time has been able to set forth the causes of the origin of the flood waters, it is not proper, he urges, that his personal explanation be rejected (*ibid.* 41.4-6; transl. Oldfather).

On his part, Strabo seemed to have plentiful information about the region where these rains took place:

Now the ancients depended mostly on conjecture, but the men of later times, having become eyewitnesses, perceived that the Nile was filled

by summer rains [οἱ ὄμβροι θερινοί], when Upper Aethiopia [Αἰθιοπίας ἄνω] was flooded, and particularly in the region of its farthermost mountains [μάλιστα ἐν τοῖς ἐσχάτοις ὄρεσι], and that when the rains ceased the inundation gradually ceased [παυσαμένων δὲ τῶν ὄμβρων παυομένην κατ' ὀλίγον τὴν πλημμυρίδα] (17.1.5; transl. H.L. Jones, Loeb ed., 1932).<sup>17</sup>

Strabo expressed himself as being surprised that in his days the fact that these rains caused the swelling of the Nile had been forgotten and that research was still being invested in the matter:

Why in the world rains fall in summer but not in winter, and in the southernmost parts [of “Aethiopia”] but not in Thebais and the country round Syene (*ibid.*).

With regard to the source of the theory, Strabo had some disperse reports, which pointed towards Thrasyalces of Thasos.<sup>18</sup> On his part, as previously noted, Diodorus Siculus erroneously related the theory to Democritus of Abdera (fifth century BC) and Agatharchides of Cnidus (second century BC), who as we already know supported the theory and transmitted it; indeed, the former must have completed or developed it personally to some degree. It is possible that the true source of the theory was the physicist Thrasyalces, the last author in Strabo's line of filiation. According to Strabo, after Thrasyalces, “many writers” had referred to the idea, especially “two who have (each) composed in our times a treatise of the Nile, Eudoros and Ariston” (17.1.5).<sup>19</sup> In any case, the theory had already been accepted by earlier authors such as Democritus and Aristotle (*De inund. Nil.* 12), a little later by Callisthenes (Strab.

<sup>17</sup> In Antiquity, when the ‘mountains’ of Ethiopia were alluded to — as Strabo does here — we may be sure that they were referring to the highlands in the Abyssinian plateau, that is, the Ethiopian mountain massif, which could be seen from both the region of Meroe (halfway between the fifth and the sixth cataracts, to the eastern shore of the Nile) and the coast of the Red Sea (referred to as *mare Erythreum* or *sinus Arabicus* in the Roman sources).

<sup>18</sup> 17.1.5: “[*Posidonius mentions*] that it was Callisthenes who states that the summer rains are the cause of the risings [of the Nile], though Callisthenes took the assertion from Aristotle, and Aristotle from Thrasyalces the Thasian (one of the early physicists), and Thrasyalces from someone else, and he from Homer.” About Thrasyalces of Thasos we only know what Strabo tells us, that he was an old physicist (τῶν ἀρχαίων δὲ φυσικῶν εἷς οὗτος) who lived before Aristotle's time.

<sup>19</sup> Eudoros and Ariston are only known from Strabo's reference. According to the geographer, these authors were his contemporaries and also the authors of a highly respected work on the Nile. Ariston was also reputed to be a “peripatetic philosopher”.

17.1.5), nephew and disciple of Aristotle, and a little later still by Agatharchides.

Due to the prestige and credibility of all these authors and also due to the comments of Diodorus and Strabo, the theory was known in the Roman period, as illustrated by Pomponius Mela (*Chor.* 1.53), Pliny (5.55), Seneca (*Nat. Quaest.* 4a.2.26), Lucan (*De bell. civ.* 10.240 and ff), Aelius Aristides (§19-40), Solinus (32.9), Ammianus Marcellinus (22.15.5-6) and *Vita Antonii* (31-32), amongst others. As previously noted, Aristides did not make explicit mention of any of these authors, but attributed the theory, generically and somewhat ironically, to “the distinguished persons (τοὺς χαρίεντας) that developed them” and claimed that it was “advocated by many” (§19).

Knowing a theory, or reproducing it, however, does not necessarily entail being in agreement with it. Some of the authors listed above, including Aristides, rejected it with extensive and convoluted arguments. Diodorus Siculus himself, as previously seen, rejected Democritus’ idea (see 1.39.1-5 *supra*) while keenly accepting Agatharchides’ (1.41.4-6), which is contradictory, since both were referring to what was, in essence, the same theory.

On the other hand, Diodorus gave due importance to a hypothesis defended by the “philosophers of Memphis”, that is, the Egyptian priests, which is important to our discussion. This hypothesis was based on three premises:

- (a) The river swells in the summer because the climate of the region where it begins, the antipodes, is the opposite to that here (that is, when it rains in one, it stays dry in the other, and when it is summer in one, it is winter in the other, etc.).
- (b) The geographical and temporal difference between the atmospheric phenomena that take place at the source of the river and the swelling of the river in Egypt is so great that the relationship between both phenomena is not easy to establish.
- (c) Similarly, the geographical distance between both areas is so vast that to access the source of the Nile is impossible, and the theory cannot, therefore, be verified.

Certain of the wise men in Memphis have undertaken to advance an explanation of the flooding, which is incapable of disproof rather than credible, and yet it is accepted by many. They divide the earth into three parts, and say that one part is that which forms our inhabited world, that the second is exactly opposed to these regions in its

seasons, and that the third lies between these two but is uninhabited by reason of the heat. Now if the Nile rose in the winter, it would be clear that it was receiving its additional waters from our zone because of the heavy rains which fall with us in that season especially; but since, on the contrary, its flood occurs in the summer, it is probable that in the regions opposite to us the winter storms are being produced and that the surplus waters of those distant regions flow into our inhabited world. And it is for this reason that no man can journey to the sources of the Nile [*and verify the theory*], because the river flows from the opposite zone through the uninhabited one [*that is, an inaccessible distance*] (Diod. 1.40.1-4; transl. Oldfather).

The reader will have observed that the priest's explanation was trying to find a *sui generis* explanation for the chronological and geographical difference that we have been alluding to. The general belief in Ptolemaic Egypt was that the clouds and the rains that caused the swelling of the Nile took place in remote regions very far away from the areas where this annual rising was first perceptible in Egypt, which also explained that this connection between rains and flood was not evident, perceptible or verifiable; we could say that the link was known, but could not be seen. At any rate, it does not seem that Aristides knew of this hypothesis.

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In contrast, we have already noted that he knew the theory which Strabo associated with Thrasyalces:

They [*those who defended it*] say that it rains in the southern regions whenever the Etesian winds occur and that the rain clouds are driven from us [*Greece or further to the North even*] down to there and burst, and that the Nile flooded by the rain with good reason is greater in summer than in winter (§19).<sup>20</sup>

<sup>20</sup> The full text is: Οἱ φασιν ὕειν περὶ τοὺς ἄνω τόπους, ὅταν ὤσιν ἐτησίαι, καὶ τὰ νέφη παρ' ἡμῶν ἐλαυνόμενα ἐκεῖ καταρρήγνυσθαι, ἐκ δὲ τῶν ὄμβρων τὸν Νεῖλον πληρούμενον εἰκότως μεῖζω τοῦ θέρους ἢ τοῦ χειμῶνος εἶναι. Behr (1981) 197, translates the περὶ τοὺς ἄνω τόπους in the first line as "in the southern regions". Cortés Copete (1999) 24, however, suggests "in Upper Egypt", which implies that Aristides was referring to a specific region *within Egypt*, which is a rather risky implication, or that the sophist was making a gross geographical mistake (that is, bringing the borders of the *Aethiopia* mentioned in the theory in contact with Upper Egypt). In any case, a few lines further down, Behr (1981) 197, fills a gap in the text with "Upper Egypt": ὁ γὰρ Νεῖλος, ἥνικ' ἂν αὐτῷ ὥραϊον ᾖ, κατέρχεται <τῆς Αἰγύπτου> τὰ ὑψηλά (§20); and Cortés Copete (1999) 25, more prudent this time, with the expression "the upper regions", following Keil (1958) 270, lin. 21: <τῆς γῆς> τὰ ὑψηλά (more about this below).

He knew about the theory, that is for sure, but he did not get it from Strabo (see the reasons below, in the main body of the text and note 22).

Thereafter, Aristides proceeded to expound his objections (§20-37), arguing more or less forcefully, and repeatedly, that the swelling of “the Nile does not rise because of the rain”, or that “the origin [*of the flooding*] cannot in any rest with the rains” (§23 and 27, a claim that is again set out in §29, 31, 32, 35, 101 and 102). These objections were, in essence, as follows, in the philosopher’s own terms:

- (1) The river rises and falls slowly and almost imperceptibly over the course of four months, in contrast with other rivers, which do not stay high throughout the winter, but only when it rains, and then go down again when the rain ceases. That is, they oscillate constantly over the winter, depending on rainfall (§20-29).
- (2) The Nile traverses vast desert regions, which means that the torrents formed by rainfall are speedily absorbed by the sand before they have the chance to reach the river (§30).
- (3) If it were true that rains take place in the region of Meroe, and that these rains are responsible for the flooding of the Nile, the inhabitants of the region would know about it, but Ethiopians insist, in fact, that none of these two things are true (§31).
- (4) Even if it rained in these regions, this would have no effect on the volume of the river, in the same way that rain in Lower Egypt does not cause the river to rise (§32).
- (5) Those clouds which, allegedly, are brought from the north by the etesian winds, are never to be seen above Upper Egypt (§33-35).

Aristides concluded: “Thus the situation of the Nile [*to say the genesis of the flood*] seems to be more divine and special [θειότερον καὶ ἰδιώτερον] than suits the case of other rivers and stream” (§37). The adjective θειότερον preceded the final conclusions of the orator (see *infra*).

These objections are based on the behaviour of Mediterranean rivers, which can be expressed by the formula: CLOUDS + RAIN = FLOOD. This is an essential factor for the issue currently under consideration. Aristides, therefore, summarised his rejection in four points which can, in fact, be synthesised in just one: the time-discrepancy between the *arrival* of the etesian winds and the *visibility* of the Nilotic flood:

After I have offered four general proofs that neither rain clouds nor the etesian winds cause the stream to rise, I shall conclude my discussion on this heading. The first is that often the river rises even before

the etesian winds occur. The second that it rises when they have not occurred at all. The third and fourth, which are consistent with this, that the river is not at its maximum whenever the strongest etesian winds descend and stir up the most clouds, and in turn that it is not at its minimum, whenever the breezes are light (§40; transl. Behr, 1981).

We could say that, formally, the refutation is impeccable, but that the arguments used to support it weaken it enormously. Aristides is thus presented as yet another Classical thinker who could not come to terms with the two major features of the River Nile: the hydric behaviour of the current (apparently opposed to that of other rivers) and the spatial and temporal discrepancy between the atmospheric factors that caused the rising of the river and the perception of said rising in Egypt (caused by something as simple as the great length of the Blue Nile). Aristides' rejection, therefore, was rooted in an imperfect understanding of the arguments used by those authors who were in favour of the theory that Strabo attributed to Thrasyalces (including Democritus, Aristotle, Callisthenes, Agatharchides, and Strabo himself).

In any case, the Nile's two singularities drove Aristides to commit two severe methodological mistakes, which are particularly noticeable in an intellectual of his category. The first was common: since it could not be confirmed that the rains in Upper Egypt, Nubia or 'Ethiopia' caused the swelling of the Nile, the theory must be wrong (as though the causes of the rising of the river had to be necessarily in front of everyone's eyes). The second mistake was his own, and is in my opinion more serious because it contradicted his own methodological warning that if this river was different to all other rivers, it had to be analysed along different parameters: "for we certainly should not refer to other rivers and form our judgments on the basis of the same phenomena", he concluded in a lapidary way (§22: οὐ γὰρ δήπου ἅμα μὲν εἰς τοὺς ἄλλους ποταμοὺς ἀναφέρειν δεῖ καὶ τοῖς αὐτοῖς τεκμαίρεσθαι). There were two elements that differentiated this river from all others, and Aristides knew these well: its great length and the unknown location of its sources. In other words, despite his experience and proficiency, Aristides made the same error that he accused other authors of making: he judged the behaviour of the Nile with other Mediterranean rivers as a reference and thus ignored the Nile's defining features.

Other considerations contributed to aggravate these mistakes even further.

With regard to the first mistake, we must now stress that, at the beginning of his refutation, Aristides explained that Thrasyalces' theory claimed that the rain in the high regions occurred after the etesian winds had brought rain-heavy clouds from the north (§19). Afterwards, he clarifies the identity of one of these "high regions" that he was making reference to:

Further in Lower Egypt there is often noticeable rain [ἔτι τοίνυν καὶ τὰ κάτω τῆς Αἰγύπτου λαμπρῶς πολλάκις ὕεται] — in Upper Egypt often only a drop now and again over the year [ψακάδι μὲν γάρ καὶ <τὰ> ἄνω Αἰγύπτου πολλάκις ὥς ἐν χρόνοις], but in the region by the sea rain is normally heavy- and even this rain does not cause any apparent increase in the Nile. Yet how is it likely that the rains in [Lower] Egypt, however great, do not disturb the Nile, but their water is subject to the same phenomenon at that discharged into the sea, to be expended without a trace (§32; transl. Behr, 1981).

It could be that Aristides was merely referring to the phenomenon in itself, meaning that in Lower Egypt the rain had little effect on the volume of the river and none whatsoever in Upper Egypt. I believe, however, that he was, in reality, referring to something else. Later on, Aristides relates a personal anecdote, according to which a personal friend of his called Draucon had spent three years in the region of the First Cataract without spotting a single summer-cloud (§34), as though this proved that it never rained in Upper Egypt and that the theory was, consequently, wrong. But this not only applied to Upper Egypt. Beyond this region, he said, "you find sand on both sides of the Nile..., so that if it rained, it was in any case unlikely for streams of water to occur, since the sand would absorb the rain" (§30). And even beyond there, he continued, in "Ethiopia" or the region of Meroe, "it never rained" (§31), as the inhabitants of the country could confirm. The closing remark was: "everybody knows that its source [*of the Nile*] and southern limit have not been discovered" (§39). In other words, Aristides seems to have reached the conclusion that *since rain never came in Upper Egypt and Ethiopia, which were, in addition, desert countries, and since the sources of the Nile were unknown, the theory could not possibly be correct*. How could a theory that no one had been able to confirm along the course of the river be true? This was the question he asked himself (§39).

However, Aristides, pursuing his own sources of information (essentially, the ἐπίτροπος mentioned in §55), declared that the stretch of the

Nile between the First Cataract and Meroe could take months to travel.<sup>21</sup> More importantly, he adds:

But beyond Meroe [*by the south*], I do not remember the distance, he said [*an Ethiopian guide*] that the stream was not single, but that there were two streams, one of which had an earth-like colour, and the other a colour close to air; but when these combined and joined, this Nile of ours was born" (§56).

The chromatic reference confirms that his (well-informed) witness was pointing to a spot on the course of the river that was many hundreds of miles south of Syene, beyond the Sixth Cataract. On the basis of this same information — or on the basis of a subsequent deduction on the part of Aristides — the philosopher knew that the Nile “went on well” beyond Syene (§52: πολλῶν γὰρ μηνῶν ἀνάπλουν ὑπὲρ τὸν τόπον ἔτι ὁ Νεῖλος γιγνώσκεται), and also that “the region south of this point [*from Syene*] is much greater than that toward the sea” (*ibid.* 53: ἀλλὰ πολὺ πλείων ὁ ἄνω τόπος αὐτόθεν ἥπερ ὁ πρὸς θάλλατταν). That is, he had enough information to conclude that the length of the river was gigantic and unfathomable. He might not have known where the sources were, but he was well aware that the length of the river was totally out of proportion in comparison with other rivers.<sup>22</sup>

So far, Aristides has exhibited his deductive ability and also that he had some reliable information. However, the data that he had must have made him reach a different conclusion, and he gave Thrasyalces’ theory, which was further developed by Democritus and which he knew well, a chance: if the rains did not take place in the known parts of the river, between Upper Egypt and the region beyond Meroe, maybe this was because they took place in the *remote*, and *unknown*, sources of the

<sup>21</sup> The loss of the notes taken during his early travels or a poor understanding of the information provided by his old informant (or his poor memory), drove Aristides to make grave mistakes in this section. He said, for instance, that this well-known part of the river included 36 cataracts and took between 4 and 6 months to traverse, when the truth is that there are only six cataracts and the region can be traversed in two months, as pointed out by Behr (1981) 406 n. 76, and Cortés Copete (1999) 41 n. 55.

<sup>22</sup> In any case, it is clear that Aristides did not know the hydronyms of the region of Meroe, which Diodorus, Strabo, Mela and Pliny did know (also Heliodorus, *Aeth.* 10.5.1, at a later date), because his informant must have not known himself or, simply, did not tell him. This is the main reason behind my conclusion that Aristides did not read any of these authors when he wrote *Or.* 36. If he had, he would have known that his Ethiopian informer was referring to the *Astapo* (White Nile) and *Astaboras* (Blue Nile) which converge in current Khartoum to form the Nile, which enters Egypt several hundred miles downstream; see this in further detail in Aja Sanchez (2015) 86-93.



river. In conclusion, the uncertainty that surrounded the matter and the paucity of evidence recommended a less blunt rejection of the theory (or at least, a more thorough analysis, because there was more information available if he had looked for it). Instead, Aristides stubbornly maintained that it did not rain in the 'known' parts of the river, *ergo*, the theory must have been mistaken.

\* \* \*

With regard to the second methodological mistake, the situation is even worse. After openly claiming that he could not find the region where the supposed rains took place (which, in itself, was reason enough to discard the theory) the mistakes start piling up on one another. In my opinion, the most severe of these mistakes (since it went against his own declared principles) is the conclusion that even if the rains were the cause of the flood, *the Nile must behave like any other river, rising when it rains*: "For in our very comparison in another way [*to say in other rivers*] we make the Nile dissimilar and we combine the two greatest paradoxes: having assumed that it is dissimilar to the other rivers, we try to show that it is similar; and again now assuming that it is similar, we prove that its nature is dissimilar" (§24); and the logical result: "but the situation of the Nile is in every way in danger, of being special and entirely different from other rivers" (§114).

Aristides' philosophical education drove him to adopt a solid and original analytical perspective, which could be enunciated as follows: if this river is different from all the others, its analysis will also require different parameters to those used in analyses of other rivers. That is, he was outlining a classic methodological mistake where the examination of the Nile and its flood was concerned. The distorting element was the extreme length of the Blue Nile and the lack of knowledge as to the precise position of its sources, which were, in the best of cases, presumed, but never proven, to be in some remote and mountainous region of 'Aethiopia'. Had he applied his own premises (as presented in §24 and 114), he would have had no other choice but to study the origin of the rising of the Nile from a specific and unique point of view.

Quite simply, Aristides made the same methodological error that many of his colleagues had made before him and would make thereafter: trying to understand the Nile on the basis of the hydric cycle of the known Mediterranean rivers. In order to support his ideas, Aristides brandished a large number of arguments: if rain was the cause, the rising

should also take place in the winter and, furthermore, the high water-levels could not be maintained for so many months; the etesian winds have no effect on the volume of the river; the behaviour of the Nile is the opposite to that of other rivers, etc. The paradox here is that, of course, the Nile rises for exactly the same reason as any river. In the case of the Nile, however, this was hidden away from everyone's observation because it happened thousands of kilometres from Egypt and several months before the flood could be noticed in Egypt. Furthermore, the region where these rains fell was green, lush and extremely mountainous, not sun-scorched. But then, nobody knew this.

All of this predisposed Aristides against all theories which insinuated that rain could be the factor behind the swelling of the Nile, for example those saying that "just as our rivers increase from rain in winter, so the Nile increase from rain in summer" (§21: ὅτι φασὶν ὥσπερ τοὺς παρ' ἡμῖν ποταμοὺς ἐκ τῶν ὄμβρων τοῦ χειμῶνος αὐξέσθαι οὕτω τὸν Νεῖλον τοῦ ζέρου ἐκ τῶν ὄμβρων). Another idea that he rejected, and that he could well have connected with the previous one, was that proposed by those who "they say that it rains around Meroe" (§31); he never took this seriously because, according to him, or his informants and Herodotus, the Ethiopians claim that in their country it does not rain. Another report (no doubt, based on Democritus' theory) said that the river started in "secret regions of the oikumene", where nobody lived to see it (§32).

Aristides would have done well to evaluate the question flexibly and according to the information that he possessed, analysing them from the perspective of a philosopher, not an epitomist: the Nile cannot be compared with other rivers.

### 3. ARISTIDES' CONCLUSIONS, AND OURS

The culmination of this concatenation of errors appears at the end of the *oratio*. Neither Aristides' proficiency as a thinker nor the internal coherence of the discourse helped him to avoid reaching a mistaken conclusion:

The fact that this land alone of all, like an animal, is affected in two ways by the river, so that sometimes it is terrestrial and forms its own habitat, and again it lives in the water, to what should we attribute this, if not to the great wisdom and providence of the god [τῇ μεγάλῃ]

σοφία καὶ προνοία τοῦ θεοῦ = *Serapis, or Zeus*], who, in a land where rain is least likely, has brought in the Nile as a kind of imitator of himself and to be like rain for the people here, and again has withdrawn it in a season when it was going to be most opportune for mankind and it was going to provide for the land a crop not only not less than sufficient but even remarkable in its abundance? This I conceive is the only cause why the Nile flows through Egypt and the regions there, and indeed is greatest in summer (§123; transl. Behr, 1981).

That is a fine literary and philosophical paradox. The competent orator, pushing aside the rational and systematic critical spirit that he had maintained throughout the *Aigyptios*, concluded that divine intervention was the cause behind the rising of the Nile. Let us remember the θεϊότερον from the beginning of the discourse — §39 — that already preluded this result. By adopting this position, Aristides adhered to the opinion that the Egyptians had been holding for millennia, and which the Christians would also embrace shortly afterwards.<sup>23</sup>

Aristides' previous comments support, in my opinion, a late date for the composition of *Oratio* 36, around the 170s. We assume that the philosopher, divorced at this stage from the disciplined rationality of his early years and overtaken by the religious and transcendent ideas expounded in his *Sacred Tales*, was bent in this late period on disregarding physical and rational theories as insufficient and nonsensical:

Each author has expounded his own nonsense. But it seems to me that each of them has tried to defend one hypothesis, and so far from the truth were they, so aware of their lies, that they have contradicted their own premises, like an archer shooting in the dark (§100).

All [*of those whom I have discredited in this work*] contradict one another as though they knew nothing about the art of reasoning ... they merely use conjecture [*about the causes of the flooding*], but none of them knows anything for certain (§102).

<sup>23</sup> It is easy to find a written trail for this opinion, from both the Egyptian and the Christian point of view; cf. Aja Sanchez (2015) 121-128 and 141-178 (Egyptian) and 384-386 (Christian). With regard to the Christian perspective, it can be found in the ecclesiastical historians Eusebius of Caesarea (*Vit. Const.* 4.25.2-3: "only to God, the giver of all goodness, should men attribute such benefactions [*the swelling of the Nile*]") and the scholastic Socrates (*HE* 1.18.3: "the facts prove that it is no religious practice that brings about the rising of the river, but the will of providence"), the biography of the Egyptian *apa* Shenoute, written by his disciple Besa, and the *Chronographia* of the Byzantine monk Theophanes. In the end, it seemed that Egyptians, Greeks, Romans and Christians left the origins of a *natural* and *physical* phenomenon, which most of them never really understood, in the hands of providence.

Nobody has found the truth, but all of them tried to offer an explanation (§103).

Confronted with this, he concludes that the causes of the swelling of the Nile rest with an almighty divinity:

I, as a person that could attribute everything to Zeus, also could say that the Nile comes from the heavens and is the work of Zeus (§104). What is there not to wonder about the Nile? Is not all of it an accumulation of miracles? (§119).

When the divine law determines that the river must grow, then [...] these sands and the cavities in the earth [...] are no obstacle (§120).

Based on this analysis, it would appear as though most of the *Aigyptios* (§1-100) was inspired by his early readings and direct observation of the River Nile in Egypt, while the later part (§100-125) was composed with no regard to this physical approach to the flood, in an attempt to transcend it and sublimate it. It is as though the *oratio* was written by two different authors, two different versions of Aristides.

\* \* \*

In conclusion, it is my impression that, having travelled little beyond the First Cataract and lacking good informants on the topic of the flooding, the author fully relied on Herodotus' statement that the Ethiopians of Meroe knew nothing about the rising of the river: "Beyond this [*Meroe*] no one has clear information to declare; for all that country is desolate because of the heat" (2.31.6). Aristides himself confirmed this fact: "[*my Ethiopian informer*] told me that no Ethiopian knew the full course of the river to the south" (§56).

One thing is, at any rate, clear: Aristides never consulted Diodorus Siculus' work, where the arguments of Democritus, Agatharchides and the philosophers of Memphis were clearly laid out, and the same deduction can be applied to the work of Strabo, which would have seemed an obvious author for Aristides to consult; and this was a work which could have given him the key to solving the mystery: "the Nile was filled by summer rains, when Upper Aethiopia was flooded, and particularly in the region of its farthest mountains, and that when the rains ceased the inundation gradually ceased" (17.1.5). Had he read this statement, the sharp mind of the orator would have properly understood the problem involved with the Nilotic flood: the sources of the river were too far away not only to be known, but also for the rising of the water level to be appreciated in Egypt immediately after the rains.

The Nile and its rising along its course through Egypt was one thing, and the features of the river south of Nubia were another. People in classical antiquity were perfectly acquainted with the former, and close to not at all with the latter. This posed a huge obstacle to the adequate understanding of the origins of the Nilotic flood. Those who proposed and defended the hypothesis of the winds and the seasonal rains did so from an abstract, theoretical perspective, without the possibility of verification or experimentation.

All of this is a further example that, in opposition to modern times, sources were not a priority in the composition of scientific works, and were also of little relevance with regards the selection, citation and use of literary references. This raises a few questions concerning the transmission of knowledge in Graeco-Roman antiquity, or what authors knew about what had been written before them. Aristides (like other Classical authors) could have accessed important previous works that could have improved his understanding, some of which were not too distant in time to him, but he nevertheless gave preference to an author who wrote six centuries in the past.

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