A Python (*Python sebae* Gmelin) for the King

The Third Century BC Herpetological Expedition to Aithiopia (Diodorus of Sicily 3.36–37)

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1. Introduction

Reference collections of reptiles and amphibians are a standard requirement of modern herpetology. They are based on principles and rules initiated in the eighteenth century under Linnaeus's system of classification and implemented with new techniques of preservation that have come into use progressively since about the same time[1]. Collecting reptiles and amphibians for scientific research, however, began well before the time of Linnaeus; in earlier periods, people concerned with such collections were often frustrated in their efforts due to both the limitations of taxidermy and the lack of preservatives. The French naturalist Pierre Belon du Mans (1517–1564) experienced these problems with the snakes he collected on his tour of the Eastern Mediterranean in 1547–1549, as a member of the embassy sent by King Francis I to the Near East[2]. Except for dried materials that entered the collections of natural curiosities (*mirabilia*) beginning in the sixteenth century[3], wild animals of all species, including reptiles and amphibians, had to be taken alive and kept captive in specific facilities or devices – for whatever purposes[4]. Indeed, in the remote past

* Acknowledgments: Parts of this paper were read on December 2, 1998, at the invitation of the Department of Classics of the University of Neuchâtel. I am grateful to Professor Paul Schubert and his colleagues for their welcome and to all in the audience who offered their useful queries and comments in the ensuing discussion.
I also wish to thank Prof. Kraig Adler (Cornell University) for the reference to Largen and Rasmussen's paper (n. 69), Prof. Pol-Pierre Gossiaux (University of Liège, Department of Anthropology) and Prof. Jacques Lambinon (University of Liège, Department of Botany) for their firsthand information on the traditional techniques of snake hunting in the Kivu Area and on the reeds of the Nile Valley respectively, and Mrs. Véronique Maes-Hustinx (University of Liège, Museum of Natural History) for the drawings of figures 1 and 2.
Unless otherwise stated, ancient sources are quoted from the texts published "with an English translation" in the "Loeb Classical Library" (London/Cambridge, Mass., William Heinemann and Harvard University Press).

1 F. J. Cole, *A History of Comparative Anatomy* (London 1944) 445–450; M. Ráček/W. Schoberwalter, *Mumia Viva. Kulturgeschichte der Human- und Animalpräparation* (Graz 1990) 68–88.

2 P. Belon du Mans, *Les observations de plusieurs singularitez et choses memorables trouvees en Grece, Asie, Judée, Arabie & autres pays estranges* (Paris 1588) 271, 296–297, 463.

3 Paula Findlen, *Possessing Nature. Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley 1994).

4 Liliane Bodson, "Living Reptiles in Captivity: A Historical Survey from the Origins to the End of the XVIII[th] Century", *Acta Zoologica et Pathologica Antverpiensia* 78 (1984) 15–32.

as nowadays, science was not the only or primary aim of confining animals[5]. In ancient Egypt, the worshippers of Sobek were induced by religious purposes to keep tamed crocodiles within the precincts of this god's sanctuaries, and to 'naturalize' these sacred reptiles by mummification when they died[6]. The ancient Greeks learnt by observing the specimens kept at the drug-sellers' that venomous spiders and snakes could live for a long time without food[7]. Grass-snakes were favourite pets in imperial Rome[8]. These and other similar examples relate to indigenous species only, mostly captured in close proximity to their particular uses. Egyptian and Asian reptiles were reported by Greek travellers from the sixth-fifth century BC, but there is no evidence so far that specimens of these animals were ever brought to Greece in antiquity, unlike some exotic birds and mammals[9]. Currently, the earliest record of African reptiles brought to Europe concerns the five crocodiles presented by Marcus Scaurus (along with a hippopotamus) to the Romans in 58 BC[10]. Judging from the specimens imported to Rome until the fall of the Empire[11], crocodiles seem to have been much appreciated there for public display. According to Lucan[12], a trade in cobras (*Naja haje*) developed between Egypt and Rome in the first century AD. Yet there is little doubt that, on the whole, the exotic reptiles taken to the European continent in antiquity through either Greece or Italy were limited in both species and number. As for specimens of giant snakes of African or Indian origin, none is reported to have reached the northern shores of the Mediterranean Sea at that period of time. Diodorus of Sicily's extensive account of a herpetological expedition organized in the third century BC is thus worth noting, not only because this unparalleled narrative provided the earliest extant record in the European tradition of such an undertaking, but also because it was directed to one of the African reptiles that gave "rise to so many fantastic tales of incredible power"[13]. As eighteenth-twentieth century stories of human-snake encounters shed light on the western attitude towards giant snakes in

5 Sally G. Kohlstedt, "Reflections of Zoo History", in: R. J. Hoage/W. A. Deiss (eds), *New Worlds, New Animals. From Menagerie to Zoological Park in the Nineteenth Century* (Baltimore/London 1996) 3–7; B. Mullan/G. Marvin, *Zoo Culture. The Book About Watching People Watch Animals* (Urbana/Chicago ²1999) 89–115.

6 L. Kákosy, "Krokodilskulte", in: W. Helck/E. Otto (eds), *Lexikon der Ägyptologie* III (Wiesbaden 1980) 801–811.

7 Aristotle, *Historia animalium* 7[8].594a22–25, following D. M. Balme's numbering of books; see his *Aristotle. History of Animals Books VII–X*, prepared for publication by A. Gotthelf, LCL 439 (Cambridge, Mass./London, Harvard University Press 1991) 30–31.

8 Jocelyn M. C. Toynbee, *Animals in Roman Life and Art* (London 1973) 224.

9 Liliane Bodson, "Ancient Greek Views on the Exotic Animal", *Arctos* 32 (1998) 61–85.

10 Pliny the Elder, *Historia naturalis* 8.96.

11 Toynbee, Animals (n. 8) 219–220.

12 Lucan, *Civil War* 9.706–707.

13 C. H. Pope, *The Giant Snakes. The Natural History of the Boa constrictor, the Anaconda and the Largest Pythons* (London 1961) vii.

modern times[14], the Greek report evidences how they were perceived and valued in antiquity. By systematically weighing the herpetological contents of the source material against current herpetology[15], this paper will focus on the historical background, aims, organisation and results of the expedition with respect to its meaning for the history of early herpetology and of the human-snake relationship.

2. *Sources*

The story under review is documented by textual and iconographic evidence. Both raise questions regarding the history of literature and of art, which are outside the scope of this paper. Nevertheless, the origin and chronology of the main sources need to be briefly outlined for the sake of clarity.

2.1. Texts

First-hand reports by members of the expedition or by eyewitnesses of the resulting snake exhibition have not been preserved[16]. The earliest identified author of an account of the hunt was Agatharchides of Cnidus (second century BC). He included it in his *On the Red Sea*, written more than a century after the facts[17] and now lost to us, except for fragments. One of them alludes to what were, in all likelihood, his own sources of information. These were both official records and private accounts dating back to the third century BC, contemporary with, or close to, the events he reported, and give support to his general claim to truthfulness[18]. Agatharchides's work could still be read in the first century BC when Diodorus of Sicily wrote his monumental *Historical Library*. In the third book, mainly devoted to Africa, specifically Eastern Africa (known as Aithiopia in ancient Greek) and Northern Africa (known as Libya) minus Egypt (already described in his book 1), he included the account of the capture of a giant snake, recognized by modern scholarship as an excerpt from Agatharchides's *On the Red Sea*[19]. Agatharchides-Diodorus's narrative is thus the primary source and will be the only one thoroughly analysed here[20] since it proves

14 J. C. Murphy/R. W. Henderson, *Tales of Giant Snakes. A Historical Natural History of Anacondas and Pythons* (Malabar 1997) 2–3, 117.

15 Both first and second editions of Ch. R. S. Pitman's *A Guide to the Snakes of Uganda* (Kampala 1938) and *A Guide to the Snakes of Uganda*, revised edition (Codicote 1974) will be quoted since the second proves not to replace, but to complete the first as regards *Python sebae*.

16 W. Peremans/E. Van 't Dack, *Prosopographia ptolemaica*, II: *L'armée de terre et la police, n^os^ 1825–4983* (Louvain 1967) 449–450.

17 S. M. Burstein, *Agatharchides of Cnidus. On the Erythraean Sea*. Translated and edited by S. M. B. (London 1989) 13–18.

18 Burstein, *Agatharchides* (n. 17) 29–33.

19 J. Palm, *Über Sprache und Stil des Diodoros von Sizilien. Ein Beitrag zur Beleuchtung der hellenistischen Prosa* (Lund 1955) 26.

20 Quoted in C. H. Oldfather, *Diodorus of Sicily*, with an English Translation (London/Cambridge, Mass. 1935) with only few changes.

to be much more detailed than Strabo's (64 BC–AD 19) allusion[21] or Photius's (circa 820–891) excerpt[22]. Nonetheless, their writings, scattered through time and space as they are, confirm the lasting interest in that specific snake and in giant snakes in general.

2.2. Iconography

The upper level of the famous Nile mosaic of Palestrina, dated "later part of the second century BC"[23], shows Aithiopian mammals, birds, and reptiles[24] tracked by black hunters armed with bows and arrows. Although the model, meaning and degree of realism of this level have been much discussed, there is little room for doubt, if any, that it referred to hunting expeditions either conducted or inspired by the Ptolemies, particularly Ptolemy II, in the upper Nile valley and adjacent regions[25]. The ancient Greeks knew about the giant snakes in Aithiopia and regarded them as typical of the local fauna in quite the same way as they did about elephants, rhinoceros, baboons and other monkeys[26]. Two big snakes were represented on the mosaic. One is coiling around a rocky outcrop[27], the other (fig. 1)[28], in ambush on the Nile bank, has just caught a bird in its mouth. Burstein[29] considered the latter as a "probable depiction" of the snake eventually presented to Ptolemy II.

3. Historical context

3.1. The actors

The history of hunting and capturing African animals in the third century BC was dominated by Ptolemy II Philadelphus (fig. 2). As second king of Egypt (282–246 BC) after its conquest by Alexander the Great in 331, he walked in his father Ptolemy I's steps to further develop Alexandria not only as a political and economical capital, but also as a centre of intellectual and artistic life[30]. Two passions made him famous early in his lifetime: first, capturing elephants intended as war machines, since the Seleucid monopoly on the supply of Indian

21 Strabo 16.4.16 (C 775).
22 Photius *Library* 250.78, 455 b R. Henry (ed.) (*Photius. Bibliothèque*, text and translation, Paris 1974, vol. VII).
23 P. G. P. Meyboom, *The Nile Mosaic of Palestrina. Early Evidence of Egyptian Religion in Italy* (Leiden 1995) 19.
24 Meyboom, *The Nile Mosaic* (n. 23) 21–27, 111–128.
25 Meyboom, *The Nile Mosaic* (n. 23) 48–49.
26 Diod. 3.35.
27 Meyboom, *The Nile Mosaic* (n. 23) 26, section 7, fig. 14.
28 From Meyboom, *The Nile Mosaic* (n. 23) 21, section 1, fig. 9.
29 Burstein, *Agatharchides* (n. 17) 125, n. 2.
30 G. Hölbl, *Geschichte des Ptolemäerreiches. Politik, Ideologie und religiöse Kultur von Alexander dem Grossen bis zur römischen Eroberung* (Darmstadt 1994) 32–44, 54–57, 66–68.

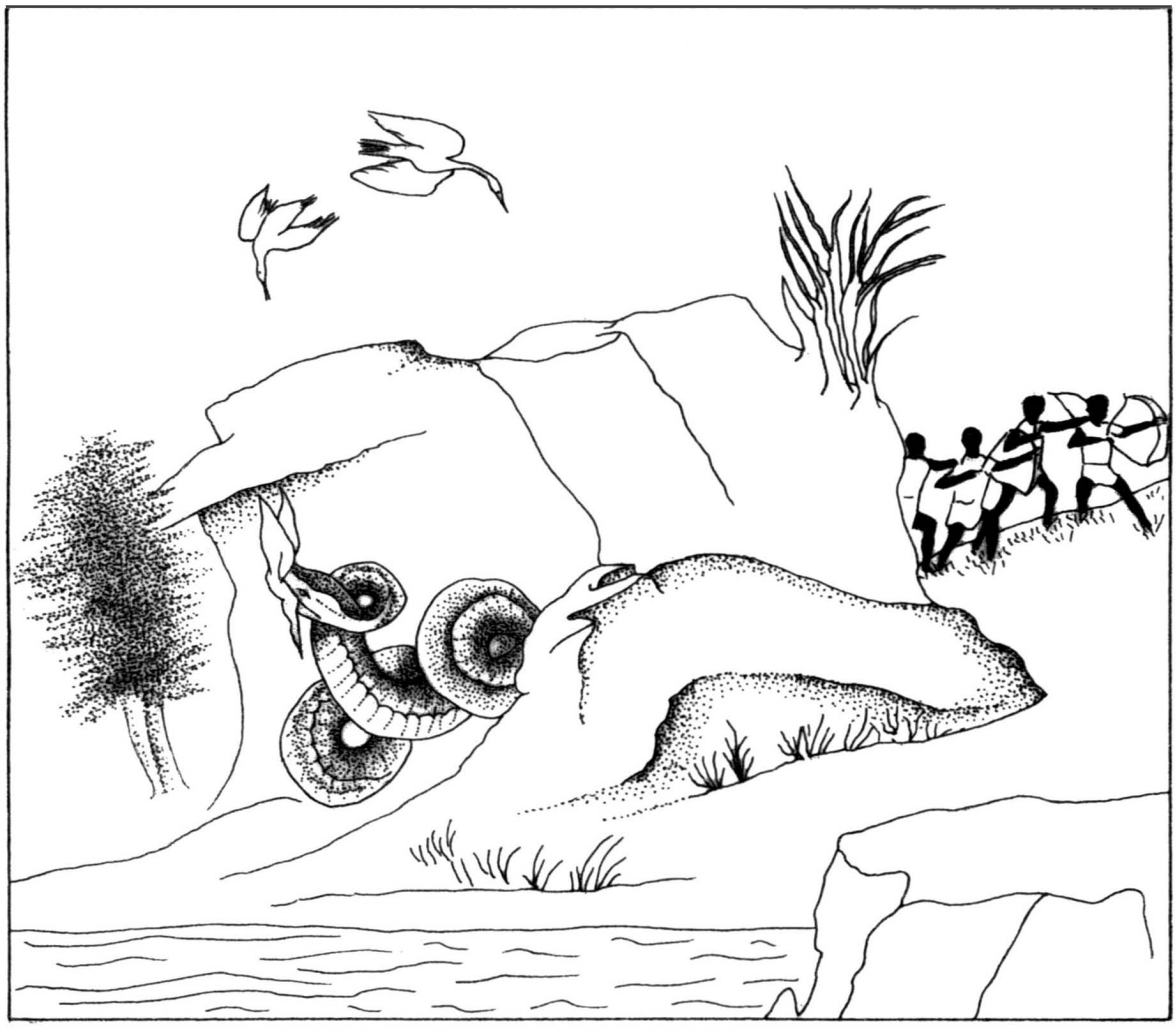

Fig. 1. Nile mosaic of Palestrina, end of second century BC (upper level, section 1).
From P. G. P. Meyboom, *The Nile Mosaic of Palestrina. Early Evidence of Egyptian Religion in Italy* (Leiden 1995) fig. 9.

elephants forced him after the first Syrian war (274–272), if not before[31], to rely upon Africa to maintain his contingent[32]; second, collecting both wild and domestic animals. The fragmentary nature of the evidence leaves undecided which of these activities, if either, was ever the most favoured by Ptolemy himself. In Burstein's opinion[33], Agatharchides "singled out Ptolemy II's interest in the exotic rather than military considerations as the main factor motivating his activities in the Sudan and along the Red Sea".

31 J. Desanges, "Les chasseurs d'éléphants d'Abou-Simbel", in: *Actes du quatre-vingt-douzième congrès national des Sociétés savantes. Strasbourg et Colmar 1967. Section d'archéologie* (Paris 1970) 38; L. Török, *The Kingdom of Kush. Handbook of the Napatan-Meroitic Civilization* (Leiden 1997) 395.

32 H. H. Scullard, *The Elephant in the Greek and Roman World* (London 1974) 123–125.

33 Burstein, *Agatharchides* (n. 17) 4, 42, n. 2.

Fig. 2. Ptolemy II (reign: 282–246 BC) and wife Arsinoë.
From Gisela M. A. Richter, *The Portraits of the Greeks* III (London 1965) fig. 1781.

The garden and outbuildings of the royal palaces[34] housed the collection of animals in what may be identified as one of the earliest known menageries[35] and, by all accounts, the most celebrated of the ancient ones[36]. Different in organization and aims from the Egyptian sacred enclosures[37] and from the Assyrian game parks[38], it was an archetype of later zoos in much the same way as the Ptolemies' library was for book collections[39]. Ptolemy II's animals were exhibited to the general public on special occasions such as the whole day procession (πομπή) of the second *Ptolemaieia* (Πτολεμαίεια), which took place at a date still open to discussion, some time between 280/79 and 271/70[40], and also displayed to foreign visitors as an outward sign of power and prestige[41].

34 P. M. Fraser, *Ptolemaic Alexandria* I (Oxford 1972) 14–15.

35 On this term, T. Veltre, "Menageries, Metaphors, and Meanings", in: R. J. Hoage/W. A. Deiss (eds), *New Worlds, New Animals. From Menagerie to Zoological Park in the Nineteenth Century* (Baltimore/London 1996) 19.

36 H. M. Hubbell, "Ptolemy's Zoo", *Class. J.* 31 (1935–1936) 68–76; G. Jennison, *Animals for Show and Pleasure in Ancient Rome* (Manchester 1937) 29–40.

37 See above, 1. Introduction.

38 J. K. Anderson, *Hunting in the Ancient World* (Berkeley 1985) 57–69.

39 R. Barnes, "Cloistered Bookworms in the Chicken-Coop of the Muses: The Ancient Library of Alexandria", in: R. MacLeod (ed.), *The Library of Alexandria Centre of Learning in the Ancient World* (London/New York 2000) 61–77; also see http://www.ulg.ac.be/facphl/services/cedopal/ALEXDOCT.htm.

40 E. E. Rice, *The Grand Procession of Ptolemy Philadelphus* (Oxford 1983) 5; Victoria Foertmeyer, "The Dating of the Pompe of Ptolemy II Philadelphus", *Historia* 37 (1988) 90–104; F. Coarelli, "La *pompè* di Tolomeo Filadelfo e il mosaico nilotico di Palestrina", *Ktema* 15 (1990) 233, 246; J. Köhler, *Pompai. Untersuchungen zur hellenistischen Festkultur* (Frankfurt a.M. 1996) 36.

41 Diod. 3.37.7.

The identity of those who decided "to hazard their lives and to capture one of the huge snakes and bring it alive to Ptolemy" is not disclosed in Agatharchides-Diodorus's account[42]. They were freelance professional hunters[43], most likely of both Greek and Egyptian origins, as were the royal teams of professional elephant hunters[44]. The cooperation of indigenous hunters, though theoretically possible[45], is so far undocumented and thus, remains problematic. The party was made up of "a considerable number"[46] of horsemen[47], archers[48], slingers, and trumpeters[49]. They had bold fighting hounds[50] and were equipped with the standard hunting tackle including nooses and ropes[51].

3.2. Chronology

As seen above (3.1), the giant snake was captured under Ptolemy II Philadelphus, ruler of Egypt between 282 and 246 BC. The exact date of the hunt is not stated in Agatharchides-Diodorus's account. However, several clues suggest that the expedition was not launched at the opening of the reign nor even in its early years. Indeed the hunters were said to plan to bring one of the huge snakes alive to Ptolemy in pondering

> (his) princely generosity in the matter of the rewards he gave (... for) animals which had never before been seen and were objects of amazement[52].

Their motivation implies that Ptolemy had already been involved in collecting animals for some time, so that the fame of his generosity towards purveyors had

42 Diod. 3.36.4.

43 Hélène Raïos-Chouliara, "La chasse et les animaux sauvages d'après les papyrus grecs", *Anagennesis. A Papyrological Journal* 1/1 (1980–1981) 50–52.

44 Peremans/Van 't Dack, *Prosopographia* (n. 16) 232–239.

45 F. M. Snowden, *Blacks in Antiquity: Ethiopians in the Greco-Roman Experience* (Cambridge, Mass. 1970) 128.

46 Diod. 3.36.4. Possibly several hundred men. A company of elephant hunters comprised 231 men in 223. T. Eide/T. Hägg/R. H. Pierce/L. Török (eds), *Fontes Historiae Nubiorum. Textual Sources for the History of the Middle Nile Region between the Eighth Century BC and the Sixth Century AD* II (Bergen 1996) no. 121.

47 Compare with Meyboom, *The Nile Mosaic* (n. 23) fig. 57 (painted frieze, Marissa, Israel, last quarter third cent. BC: "leopardess hunt").

48 Compare with Meyboom, *The Nile Mosaic* (n. 23) fig. 9 (= here fig. 1; see n. 28), 11, 12 (Nile mosaic of Palestrina).

49 Compare with Meyboom, *The Nile Mosaic* (n. 23) fig. 57 (painted frieze, Marissa: "leopardess hunt". See above, n. 47).

50 On the Aithiopian tribe of hound breeders: Diod. 3.31.1–3; Aelianus, *On Animals* 16.31. Compare with Meyboom, *The Nile Mosaic* (n. 23) fig. 12 (Nile mosaic of Palestrina); fig. 57 (painted frieze, Marissa: "leopardess hunt"; see above, n. 47).

51 Raïos-Chouliara, "La chasse" (n. 43) 55–57. See A. Carandini/Andreina Ricci/Mariette De Vos, *Filosofiana. La villa di Piazza Armerina. Immagine di un aristocratico romano al tempo di Costantino* (Palermo 1982) fig. 122: the capture of a rhinoceros.

52 Diod. 3.36.3–4.

spread out enough to inspire the hunters with a new project. Moreover, by the time of the prestigious parade of the decade 280–270, the royal menagerie sheltered rare Aithiopian animals such as a giraffe and a rhinoceros besides elephants, big cats, camelids, and several thousands of other animals less unusual except for their amount (equids, cattle, hounds, birds) gathered from all over the known world. Callixenus of Rhodes (third century BC) listed them in his report of the festivities excerpted by Athenaeus around 200 AD[53]. In addition to many offering- and tribute-bearers, he also mentioned women following the cart in which stood a statue of the god Dionysos, some of them "crowned with snakes", others "holding snakes"[54], but referred in no way to giant snakes of remarkable size. Should Ptolemy's most famous reptile have been in Alexandria around 280, two reasons at least would have justified it to be enrolled in the procession: its naturalistic uniqueness and its symbolic value with respect to the dionysiac theme of the pageant. Notwithstanding the methodological limitations of the argument e silentio, one may provisionally, yet rather confidently, conclude that Ptolemy's giant snake was brought to Alexandria after the celebration of the *Ptolemaieia*.

3.3. Geographical location and capture ground

The starting point of the expedition was not specified by Agatharchides-Diodorus nor any later author. It originated presumably in Alexandria, which was the final destination[55] and the most favourable spot, in all likelihood, to witness Ptolemy's "princely generosity"[56]. The capture took place in the land called by the ancient Greeks "Aithiopia" (literally "the land of the Burnt-face people"), a vast territory now broadly covered by most of Sudan and the northern part of modern Ethiopia (fig. 3). At the time of the capture, the fauna now confined to tropical Africa still ranged to the so-called "island of Meroe" (Butana) and even further north up to the fifth cataract[57]. Nor is the location of the capture ground stated in the narrative and it may not be identified otherwise than tentatively. But there are enough indications for disregarding the vague "marshes of the upper Nile valley" once admitted by Jennison[58] and Toynbee[59]. Indeed, in his description of the island of Meroe, Diodorus[60] referred to

53 Callixenus of Rhodes 627 F 2 Jacoby (= Athenaeus, *Deipnosophists* 5.197C–203B).

54 Callixenus of Rhodes 627 F 2.28 Jacoby, p. 169 (= Athenaeus 5.198E). The Greek term *ophis* used in both occurrences means "snake, serpent" in the general sense and does not allow further identification at any taxonomic level. Liliane Bodson, "Les Grecs et leurs serpents. Premiers résultats de l'étude taxonomique des sources anciennes", *L'Antiquité classique* 50 (1981) 57–78.

55 Diod. 3.36.4.

56 Diod. 3.36.4.

57 Pliny the Elder, *Nat. Hist.* 6.180–186.

58 Jennison, *Animals* (n. 36) 29.

59 Toynbee, *Animals* (n. 8) 223.

60 Diod. 3.10.5.

Fig. 3. The Nile Valley.
From Sylvia Hochfield/Elizabeth Riefstahl (eds), *Africa* I. *Antiquity. The Arts of Ancient Nubia and the Sudan, The Essays* (Brooklyn, N.Y. 1978) map 1.

> the country of the wild beasts where the serpents marvellous for their size and multitude attack the elephants at water-holes[61],

an area also considered by Strabo[62] who defined it as

> a refuge for the animals fleeing from the hotter and more arid regions to those that are watery and marshy.

Diodorus furthermore added[63]

> the serpents of such great size avoid the level part of the country and continually make their homes at the foot of mountains in ravines which are suitable to their length and in deep caves[64].

This, and his reference to the location of the Aithiopian tribes specialized in hunting elephants[65], likely point to the Atbara valley or its tributaries[66]. Burstein[67] thought of "the mountains of western Ethiopia". Be that as it may, *Python sebae* has always been ubiquitous in Africa, south of the arid region, at altitudes lower than 2,250 m[68]. It was still "plentiful in Sudan, vicinity Blue Nile and White Nile and tributaries" in the 1970s[69]. As for the Nile mosaic of Palestrina, Meyboom[70] rightly observed that "the rocky landscape in the upper part resembles that of lower Nubia" instead of the expected savanna of upper Nubia where most of the depicted species lived. Nevertheless, whatever the artist's model, the landscapes shown in sections 1 and 9 fit Diodorus's discussion of the giant snakes' habitat to some extent, though superficially.

The sought after specimen was found while lying in ambush near a pool or water hole[71], used by wild animals as a watering spot and suited to the snake's specific needs[72].

> Here it maintained for most of the time its coiled body motionless, but at the appearance of an animal which came down to the spot to quench its thirst it would suddenly uncoil itself, seize the animal in its jaws, and so entwine in its coil the body of the creature which had come into view that it could in no wise escape its doom[73].

61 Greek: συστάσεις τῶν ὑδάτων, literally: "where the waters concentrate". Compare with H. E. Hurst, *The Nile. A General Account of the River and the Utilization of its Water* (London 1952) 37 [on Blue Nile].
62 Strabo 17.2.2 (C 822).
63 Diod. 3.10.6.
64 Compare Murphy/Henderson, *Tales* (n. 14) 19.
65 Diod. 3.26–27.
66 Hurst, *The Nile* (n. 61) 87–101.
67 Burstein, *Agatharchides* (n. 17) 127, n. 1.
68 Pitman, *A Guide* 1974 (n. 15) 68.
69 Pitman, *A Guide* 1974 (n. 15) 68. The latest data on the distribution of *Python sebae* in modern Ethiopia, are found in M. J. Largen/J. B. Rasmussen, "Catalogue of the snakes of Ethiopia (Reptilia Serpentes), including identification keys", *Tropical Zoology* 6 (1993) 327–328 and map 8 (p. 410).
70 Meyboom, *The Nile Mosaic* (n. 23) 49–50.
71 Diod. 3.36.5 (compare with 3.10.5, quoted above 3.3, n. 61).
72 See below 3.4.
73 Diod. 3.36.5.

3.4. Targeted prey and capture

Ranging likely in the Atbara basin or similar environment of Aithiopia, spending much time in or close to water, feeding upon mammals and birds that were suffocated by constriction, "long, slender and sluggish in nature"; all these characters identify the snake unmistakably as an African rock python (*Python sebae*), indeed the largest of the African snakes[74]. A puzzling feature of Agatharchides-Diodorus's otherwise accurate description concerns the size of the snake said to be "thirty cubits long" (c. 45 feet or 13.2 metres). Overestimating the length of snakes is a well-known phenomenon in the herpetological literature, whatever the species considered, but especially for giant snakes. It makes many of the nineteenth-early twentieth century records useless for scientific herpetology, since they relied upon rough approximations, unverified hearsay or even obviously intended exaggerations[75]. The maximum length of *P. sebae* recorded by Pope[76] and Pitman[77] does not exceed 32 feet (9.81 m). Later authors kept to lower figures (between 3 and 7.5 m)[78]. Yet the ancient record is not to be dismissed. First, the reported size is compatible with biological requirements. "Though I know of no snake alive or dead that has at all approached it, one cannot say that this (size) is impossible", stated Jennison[79], director of Manchester Zoological Garden in the 1930s. Second, Diodorus's criticism of the sizes up to 100 cubits (about 45 m) alleged by boastful writers[80] demonstrates his attention to the matter of snake length, already much discussed in antiquity, and further enhances the validity of his data on this particular point[81]. Third, other specimens of rock pythons were brought to Alexandria. Of those that arrived in this town under Ptolemy II, two were respectively 13 and 14 cubits long, that is 19.5 feet (c. 5.85 m) and 21 feet (c. 6.3 m)[82]. Should the snake intended for the king have been of similar size, it would have neither come up to the hunters' expectations nor ultimately become the main attraction it proved to be in the royal zoo. By ancient standards also, a 13.2 m long rock python was a rare capture. Unlike the modern hunters' rifles and other devices, the ancient techniques of hunting made it possible for an African rock python living in a place with few predators and plenty of food resources "(to) survive long enough to attain"[83] the reported

74 Pope, *The Giant Snakes* (n. 13) 157–158; Pitman, *A Guide* 1974 (n. 15) 68–70; Murphy/Henderson, *Tales* (n. 14) 18, 50–54, 71–72.

75 Pitman, *A Guide* 1938 (n. 15) 11; Murphy/Henderson, *Tales* (n. 14) 23–56.

76 Pope, *The Giant Snakes* (n. 13) 158.

77 Pitman, *A Guide* 1974 (n. 15) 69.

78 T. R. Halliday/K. Adler (eds), *The Encyclopedia of Reptiles and Amphibians* (New York 1986) 119 (pythons in general); Chr. Matthison, *The Encyclopedia of Snakes* (New York 1995) 20 (*Python sebae*).

79 Jennison, *Animals* (n. 36) 36.

80 Diod. 3.36.1; 37.9.

81 Compare Pitman, *A Guide* 1938 (n. 15) 11.

82 Aelianus, *On Animals* 16.39.

83 Halliday/Adler, *The Encyclopedia* (n. 78) 116.

dimensions. Although unparalleled in modern and contemporary literature, Agatharchides-Diodorus's figure is to be taken at face-value and registered as the earliest reliable record of maximum size for *Python sebae*.

> Since the beast was long and slender and sluggish in nature, hoping that they could master it with nooses and ropes, they approached it with confidence the first time, having ready to hand everything which they might need[84].

Little is known about the ancient methods of snake hunting, even regarding those of the Egyptian Psylli and of the Italian Marsi praised for their skills in catching venomous snake species. Whatever the hunters' former experience in python capture, they soon understood that this one would not be successfully conducted through a standard approach[85]. The role of nooses and ropes, which were the usual devices of mammal hunts in antiquity[86], is confirmed by the traditional techniques reported as used until recently against giant snakes in Africa (Kivu, early 1970s)[87], India[88] and South America[89]. In particular, ropes fixed to the tail prevent lashing. This was apparently the ancient hunters' aim since they "casted the nooses about its tail", unless they had been too frightened to first turn to the head, as they should have been better advised to do[90].

> The beast, the moment the rope touched its body, whirled about with so mighty a hissing as to frighten them (= the hunters) out of their wits, and raising itself into the air above the head of the foremost man it seized him in its mouth and ate his flesh while he still lived, and the second it caught from a distance with a coil as he fled, drew him to itself, and winding itself about him began squeezing his belly with its tightening bond[91].

Verified records, even though in limited number, confirm the African rock python's ability to kill and prey upon human beings[92]. The smaller the human victim's size, the greater the snake's chance of handling him or her[93]. Yet, admittedly "a python in excess of five metres could probably engulf a human being"[94]. A 13.2 m long python would a fortiori succeed in swallowing a panic-stricken man. Thus the exceptional dimensions of Ptolemy's python substan-

84 Diod. 3.36.5.
85 Diod. 3.37.1.
86 For instance, Katherine M. D. Dunbabin, *The Mosaics of Roman North Africa. Studies in Iconography and Patronage* (Oxford 1978) pl. XIV, fig. 29 (Hunt mosaic, Hippo Regius, early 4th cent. AD?: onager hunt); pl. XVIII, fig. 40 (Mosaic of Months, Bordj-Djedid, 5th cent. AD?: deer hunt); Carandini et al., *Filosofiana* (n. 51) fig. 122.
87 Prof. P.-P. Gossiaux, pers. comm.; in Uganda: Pitman, *A Guide* 1938 (n. 15) 57.
88 Pope, *The Giant Snakes* (n. 13) 223–225.
89 Murphy/Henderson, *Tales* (n. 14) dust cover.
90 Pitman, *A Guide* 1938 (n. 15) 50.
91 Diod. 3.36.7.
92 Pitman, *A Guide* 1974 (n. 15) 69; Branch/Haacke quoted by Murphy/Henderson, *Tales* (n. 14) 150.
93 Murphy/Henderson, *Tales* (n. 14) 164.
94 Branch/Haacke, quoted by Henderson/Murphy, *Tales* (n. 14) 93; Haacke, *ibidem* 150.

tiate Agatharchides-Diodorus's account of the reptile's defensive response[95], apart from the assault against the foremost man. A snake's reaction to intended attack or accidental threat by humans is not to be confused with feeding. In the former case, the python "usually endeavours to escape"[96]. When it does not, it often inflicts fierce and damaging bites[97]. In the latter case, provided that the prey is a human being, the python will incidentally knock him or her out with a blow as strong as "a sledge-hammer"[98] and start swallowing at once, without wrapping coils around its prey[99]. There is room for doubt that the reported python, assailed as it was, would have set about feeding, all the more so since the prey was quite unusual. Conversely, in relation to the snake's size and weight, violent bites were most likely. These bites could easily be mistaken by the surviving hunters for a grip prior to ingestion, given that they, "stricken with terror, sought their safety in flight" without waiting for more. The survivors' understandable misinterpretation of the two different behaviours added further dramatization to the oral and the ensuing written narratives.

However, the hunters

> did not give up their attempt to capture the beast, the favour expected of the king and his reward outweighing the dangers which they had come to know full well as the result of their experiment[100].

The snake's unusual size, weight (on the basis of the figures listed by Pitman[101], it might weigh up to some 90 to 100 kg or so), height of coils[102] and violent reactions[103] drove the hunters to specific tactics.

> By ingenuity and craft they did subdue that which was by force well-nigh invincible, devising a kind of contrivance like the following: They fashioned a circular thing woven of rush closely set together, in general shape resembling a fisherman's creel and in size and capacity capable of holding the bulk of the beast[104].

95 On hissing, see Pope, *The Giant Snakes* (n. 13) 179; Pitman, *A Guide* 1974 (n. 15) 46.

96 Pitman, *A Guide* 1938 (n. 15) 18.

97 Pitman, *A Guide* 1938 (n. 15) 18; *A Guide* 1974 (n. 15) 70; Pope, *The Giant Snakes* (n. 13) 182; Kingsley quoted by Murphy/Henderson, *Tales* (n. 14) 133; Root, *ibidem* 138; Branch, *ibidem* 151; J. G. Walls, *The Living Pythons. A Complete Guide to the Pythons of the World* (Neptune City, N.J.) 169 (potential snake hobbyists are duly warned: "They [= African Rock Pythons] are strong constrictors, have large front teenth, and are vicious biters. ... bad tempers", in addition to "their large size") and below, n. 103.

98 Loveridge quoted by Pitman, *A Guide* 1938 (n. 15) 59; *A Guide* 1974 (n. 15) 48; Branch quoted by Murphy/Henderson, *Tales* (n. 14) 151.

99 C. Dedet, *La mémoire du fleuve. L'Afrique aventureuse de Jean Michonet* (Paris 1984) 319.

100 Diod. 3.37.1.

101 Pitman, *A Guide* 1974 (n. 15) 68.

102 Diod. 3.36.6.

103 Compare Walls, *The Living Pythons* (n. 97) 169–170 ("some specimens never tame down and may spend much of their time attacking passing people and even pets through the glass and mesh of the cage").

104 Diod. 3.37.1.

The circular device was woven not of reeds (Greek: κάλαμος) as translated by Oldfather[105] and Burstein[106], but of rush (Greek: σχοῖνος). The material, though it may not be identified to the species, belonged in all likelihood to the modern genus *Scirpus* or *Schoenoplectus* (*Cyperaceae*) or to the genus *Iuncus* (*Juncaceae*), both found in Egypt[107], Sudan[108] and Ethiopia[109]. Plants of these genera were used in the Nile valley for basket traps and fish creels since the earliest times[110].

They also

> reconnoitred its hole and observed the time when it went forth to feed and returned again, so soon as it had set out to prey upon the other animals as was its custom[111].

The period of time devoted to this preliminary field work, although its duration may not be figured out, lasted for a while depending on the snake's success in hunting and its metabolic rate.

From then, operations went on as follows[112]:

> They stopped the opening of its old hole with large stones and earth, and digging an underground cavity near its lair they set the woven net in it and placed the mouth of the net opposite the opening, so that it was in this way all ready for the beast to enter. Against the return of the animal they had made ready archers and slingers and many horsemen, as well as trumpeters and all the other apparatus needed, and as the beast drew near it raised its neck in air higher than the horsemen.
>
> Now the company of men who had assembled for the hunt did not dare to draw near it, being warned by the mishaps which had befallen them on the former occasion, but shooting at it from afar, and with many hands aiming at a single target, and a large one at that, they kept hitting it, and when the horsemen appeared and the multitude of bold fighting-dogs, and then again when the trumpets blared, they got the animal terrified.
>
> Consequently, when it retreated to its accustomed lair, they closed in upon it, but only so far as not to arouse it still more. And when it came near the opening which had been stopped up, the whole throng, acting together, raised a mighty din with their arms and thus increased its confusion and fear because of the crowds which put in their appearance and of the trumpets. But the beast could not find the opening and so, terrified at the advance of the hunters, fled for refuge into the mouth of the net which had been prepared near by.
>
> And when the woven net began to be filled up as the snake uncoiled itself, some of the hunters anticipated its movements by leaping forward, and before the snake could turn about to face the entrance, they closed and fastened with ropes the mouth, which was long and had been shrewdly

105 Oldfather, *Diodorus* (n. 20) 189.
106 Burstein, *Agatharchides* (n. 17) 129.
107 V. and G. Täckholm/M. Drar, *Flora of Egypt* II (Cairo 1941, reprint: Koenigstein 1973) 3–31, 449–482.
108 F. W. Andrews, *The Flowering Plants of the Sudan* III (Arbroath 1956) 326, 364–368.
109 K. A. Lye, "Juncaceae; Cyperaceae", in: Sue Edwards/Sebsebe Demissew/Inga Hedberg (eds), *Flora of Ethiopia and Eritrea*, 6. *Hydrocharitaceae to Arecaceae* (Addis Ababa/Uppsala 1997) 386–389, 397–403.
110 As regards Egypt, see D. J. Brewer/Renée F. Friedman, *Fish and Fishing in Ancient Egypt* (Warminster 1989) 32–37.
111 Diod. 3.37.2.
112 Diod. 3.37.2–6.

> devised with such swiftness of operation in mind; then they hauled out the woven net and putting rollers under it drew it up into the air.
> But the beast, enclosed as it was in a straitened place, kept sending forth an unnatural and terrible hissing and tried to pull down with its teeth the rush which enveloped it, and by twisting itself in every direction created the expectation in the minds of the men who were carrying it that it would leap out of the contrivance which enveloped it. Consequently, in terror, they set the snake down on the ground, and by jabbing it about the tail they diverted the attention of the beast from its work of tearing with its teeth to its sensation of pain in the parts which hurt.

To the best of my knowledge, the effects produced on giant snakes by trumpet blaring are still to be verified. Quite likely, they increased the python's disturbance due to its sensitivity to air vibration[113]. Once trapped, the snake tried, the report said, "to pull down with its teeth the rush which enveloped it". Snake teeth are not shaped to perform such movements as canids or felids would. But, as seen above, biting is a usual part of the giant snakes' self-defence behaviour. Even snake species of much smaller size have proved capable of tearing cloth bags to pieces just by struggling. In the end, the forceful bites and efforts of the 13.2 m long python might well get the better of the trap. By all means, they justified the hunters' anxiety, notwithstanding the inappropriate wording of the sentence.

As announced by Diodorus[114], the narrative comes rapidly to the end, after the "detailed description of the capture". The journey to Alexandria went off in all probability partly overland, partly by boat[115], over a distance that was fairly long, though impossible to calculate (as the crow flies, some 2,000 km separate the modern Khartoum and Alexandria).

> When they had brought the snake to Alexandria, they presented it to the king, an astonishing sight which those cannot credit who have merely heard the tale. And by depriving the beast of its food, they wore down its spirit and little by little tamed it, so that the tameness of it became a thing of wonder.
> As for Ptolemy, he distributed among the hunters the merited rewards, and kept and fed the snake, which had now been tamed and afforded the greatest and most astonishing sight for the strangers who visited his kingdom[116].

"The python makes an interesting and intelligent pet and soon becomes quite tame"[117], without being starved. Yet deprivation of food, commonly used in antiquity to break in wild and domestic mammals, was extended to the captive snake. Relying on his experience as zoo director, Jennison[118] supposed that "perhaps the effects of weakness were mistaken for tameness". The ancient peoples' expertise in conditioning animals to captivity, and the Greeks' long ex-

113 P. H. Hartline, "Physiological Basis for Detection of Sound and Vibration in Snakes", *Journal of Experimental Biology* 54 (1971) 349–371.
114 Diod. 3.36.2.
115 Desanges, "Les chasseurs" (n. 31).
116 Diod. 3.37.7–8.
117 Pitman, *A Guide* 1938 (n. 15) 58.
118 Jennison, *Animals* (n. 36) 36.

perience in keeping tame snakes, refute rather than support his opinion. The python's natural adaptability was likely stimulated by the deprivation of food. Contrasting with its initial aggressiveness in the field and possibly again during its first public presentations[119], its tameness insistently reported by Agatharchides-Diodorus accounted for the fact that it became "a thing of wonder", "the greatest and most astonishing sight" as much as, if not more than, its exceptional size.

Judging from the impressive number of animal species gathered by Ptolemy II, modern scholars once favoured the idea that he had launched a programme of zoological research[120] paralleling his programme in literature[121]. This hypothesis, attractive as it sounds, remains unconfirmed. Nevertheless, the king's interest in collecting rare and exotic animals undoubtedly fostered empirical observations and enlarged both information and interest in zoological matters. Capturing animals required a practical knowledge of their way of life. Maintaining them in long-lasting captivity was made possible only by their keepers' wide expertise[122]. Finally, the presentation of rare animals such as the python to the general public and to private guests did not only confer further prestige on Ptolemy II or provide his visitors with entertainment. It also had an educational function clearly perceived and underlined by the ancient historians[123].

4. Conclusion

The third century BC expedition to Aithiopia was first and mainly inspired by personal profit. For its lack of scientific purpose, it proves nonetheless to generate meaningful empirical information. Besides its princely and transient benefits, the capture of a super-giant rock python resulted in detailed natural history data on *Python sebae* in the field and in captivity. They concern its size and general morphology, feeding habits, ecology, zoogeography, defensive behaviour, tameness, and longevity, and yet correspond with striking accuracy to the basic knowledge currently admitted on *P. sebae*. Questionable statements, such as the supposed ingestion of the foremost hunter or the attempted pulling down of the rush contrivance, resulted from inappropiate extrapolation or clumsy wording rather than from deliberate exaggeration or fiction. When compared with the "many fantastic tales" reported on giant snakes in general, Agatharchides-Diodorus's account sounds remarkably self-restrained and reliable. Obviously derived from the hunters' and keepers' firsthand experiences, it

119 Cf. Pitman, *A Guide* 1938 (n. 15) 59.

120 H. Pitt, "Zoologischer Garten", in: W. Helck/E. Otto (eds), *Lexikon der Ägyptologie* VI (Wiesbaden 1986) 1422.

121 Fraser, *Ptolemaic Alexandria* I–III (n. 34).

122 Jennison, *Animals* (n. 36) 41.

123 Agatharchides, fragment 80a Burstein (n. 17); Diod. 3.36.3. Compare Murphy/Henderson, *Tales* (n. 14) 177–184.

further confirms Agatharchides's declaration of dependability[124] and provides a memorable insight into the natural and anthropological views expressed on *Python sebae* in the early European tradition on African herpetofauna.

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124 Above, n. 18.