Transactions of the American Philological Association 123 (1993) 247-260

Ptolemy II and the Hunting of African Elephants

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The program of elephant hunting inaugurated by the Ptolemies has received mention in all histories of their reign and has been dealt with in more or less detail by a number of writers.[1] Yet nowhere do we find full awareness of how great an achievement it was or of who deserves the chief credit. The honors, I will show, are to be awarded to Philadelphus: it was he who put in place the complex and farflung organization the program required, solved difficult problems of recruitment, and promoted an essential new development in naval technology.[2]

The Battle of the Hydaspes in 326 B.C., in which Porus' army with its two hundred war elephants revealed how effective these behemoths could be on the battlefield, convinced Alexander and his generals of the desirability of such a military arm. Alexander soon built up an elephant corps for his own forces (Scullard 73-76), and Seleucus Nicator and Ptolemy Soter, once established on the throne, sought to do the same (cf. Tarn 94). There was at the time only one source of elephants, India. For Seleucus, whose realm stretched to India's border, importing the beasts presented no problem; for Soter off in Egypt it presented an insurmountable one.

In 321 B.C. Perdiccas, with a force that included the elephants left by Alexander, invaded Egypt, and lost both the campaign and his life; Soter without doubt took over the beasts and drivers that had survived (D.S. 18.33-36 and cf. Scullard 79-81). And in 312 B.C., after administering a drubbing to Demetrius at Gaza, he was able to add the forty-three that Demetrius had brought to the battle (D.S. 19.82.3-4, 84.4). But Soter's contingent was not

[1]Rostovtzeff 301-304; Witkowski 23-30; Kortenbeutel 27-28, 34-35, 37-38; Préaux 34-37; Fraser i 178-79 and nn. 354-75 offering exhaustive documentation; Scullard 126-37; Desanges 254, 256-57, 268, 273, 276-77, 293-98.

[2]Préaux 36 properly dwells on the enormous cost involved but does not mention the other factors necessary to the success of the project.

very great, certainly no match for the hundreds that Seleucus boasted.[3] Moreover, with the passing of the years, he must have lost a number through natural attrition. Only India could furnish replenishments, and that source was closed to him: the overland routes passed through Seleucid territory, and there was little and only indirect contact between Egypt and India by sea; besides, the ships that could transport elephants long distances over water were yet to be invented. Soter's successor, Ptolemy Philadelphus (282-246 B.C.), decided to tap a new source: he turned to the region south of Egypt, the habitat of the African elephant.

There are two types of elephant in Africa, the big Bush elephant and the smaller Forest elephant. Today the first is found scattered throughout sub-Sahara Africa and the second in a wide belt from Central Africa westwards to the Atlantic coast. In antiquity, however, both were to be found more or less throughout the continent, including the lands along the Red Sea and Gulf of Aden (Scullard 23-26). What Philadelphus' hunting parties went after were almost certainly Forest elephants. The proof is that ancient writers consistently describe the African elephants of the Ptolemaic armies as being smaller than the Indian, and this, though not true of the Bush elephant, is true of the Forest.[4]

Philadelphus' first step—at least the first we know of—was to dispatch, around 270 B.C., a leader named Satyros "on an investigation of the hunting of elephants" (Str. 16.769); Satyros was so successful that, on the west coast of the Red Sea, at about latitude 26° 30' N (some seventy nautical miles below the entrance to the Gulf of Suez), he founded Philotera as a base for hunting down elephants and shipping them out (Str. 16.769: cf. Scullard 126, Desanges 268). A few years later, between 270 and 264, a certain Eumedes "who had been sent out by Philadelphus for the hunting [of elephants]," founded Ptolemais Thêrôn ('Ptolemais of the Hunts') on the coast further south, somewhere between 19°

[3]The figures, though they vary, are consistently high. Plutarch (*Alex.* 62.2) states that Seleucus got 500 as a gift from Chandragupta, and Strabo (15.724) gives the same number. Seleucus went into the battle of Ipsus with either 480 (D.S. 20.113.4) or 400 (Plu. *Demetr.* 28.3). Cf. Scullard 97-98.

[4]See Scullard 60-63. Commentators, aware only of the far better-known Bush elephant, thought that ancient writers, in reporting African elephants as being smaller than Indian, had made a mistake. Scullard argues convincingly that there is no need to assume a mistake: the Ptolemies must have used Forest elephants, which in any case were easier to catch and train. Most likely the Carthaginians used them as well, since the Egyptian elephant corps served as their model. Philadelphus may even have furnished them with their first Indian trainers; see Scullard 148-49. Their hunters did not have to go far: there were herds north of the Atlas Mountains (Scullard 25).

and 18° N.[5] Between the two settlements, at latitude 23° 54' N, Philadelphus established what was to become the chief Egyptian port on the Red Sea and a key one for the handling of elephants, Berenicê Troglodytica, and he built a road across the desert to connect it with Koptos, the nearest major port on the Nile (cf. Desanges 268-69, 271-72; Casson 1989: 94-96).

In seeking to hunt elephants in Africa,[6] Philadelphus was embarking on a major move, for behind the founding of his first bases lay a series of necessary preliminary steps that involved careful and extensive planning. Up to his time, India had been the only country where elephants were captured and trained for use in war. The indigenous peoples of Africa who lived in areas inhabited by elephants were well-versed in hunting and killing the beasts for food or ivory,[7] but taking them alive and unharmed was a totally different matter; Indians alone knew how to do that. A detailed description of their method has fortunately survived; it derives from the account of India drawn up by Megasthenes, the envoy of Seleucus I to the court of Chandragupta, and hence is based on firsthand experience. There were two fundamental requirements: a spacious corral and a body of trained elephants. The corral was created by digging a circular trench and heaping up the dirt excavated from it all around to form a wall; inside were placed three or four well-tamed females, and these would lure the wild elephants nearby into the enclosure.[8] In modern India the procedure still involves the same two features, a corral and body of trained elephants; the wild elephants, however, are not lured but driven into the corral.

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[5]Str. 16.770; cf. Scullard 128, Desanges 272-74. The evidence for the date comes from the Pithom Stele, where the foundation of the city is listed (lines 23-24) among the events occurring between the 16th and 21st regnal years (lines 16, 27); see Naville 20-21.

[6]In what follows I deal only with the hunts that were carried out along the coast. In the inscription that Cosmas Indicopleustes copied at Adulis (ii 58 [104b]=*OGIS* 54), Euergetes states (lines 9-14) that he campaigned in Asia with "Troglodytic and Ethiopic elephants, which both his father and himself were the first to hunt in these regions and to transport to Egypt and train for use in war." From this it would appear that the Ptolemies' parties hunted in the interior as well as along the coast. One area may have been around Meroe or the parts of Ethiopia dominated by Meroe, since the frequent appearance of the elephant in Meroitic art would indicate that the beasts were common there; cf. Shinnie 94, 100-101, 111, 127, and fig. 27 on p. 95 (relief picturing a king riding on an elephant). The Greek elephant hunters who left their names on the colossi at Abu Simbel (cf. Desanges 254; *PP* ii 4461-62 and vi 16224-25, 16241, 16245, 16250-51, 16257, 16276, 16306) may have been en route to or from there. However, little can be said about Ethiopia as a possible hunting ground of elephants for the Ptolemies' corps since we have no certain information other than Euergetes' statement.

[7]Agatharch. 53-55 (*GGM* i 145-47), D.S. 3.26-27, Str. 16.772, Plin., *N.H.* 8.26; cf. Scullard 128-30.

[8]Arr. *Indica* 13-14.3; cf. Scullard 56-57, where the passage is translated.

One way is to have a gang of scouts and beaters, whose number may run to a thousand, locate a herd, surround it, gradually press it ever nearer the enclosure, and eventually force it in, a process that can take weeks, even months (Scullard 58-59 based on Carrington 163-66). Another way is to have the rounding up and driving in done by a team mounted on trained elephants, sometimes fifty strong.[9] Once the wild elephants are inside the corral, tame elephants are ridden in to help separate out individual beasts and lead them away for the preliminary breaking-in process (Scullard 59, Carrington 165). No mention of a round-up appears in what survives of Megasthenes' account, but it must have been part of the procedure in some form. It does appear in the only evidence we have for the method of hunting elephants in Africa, a short passage in Pliny based on the writings of Juba II, who, like Megasthenes, boasted firsthand experience. "In previous times," states Pliny, "for the sake of [sc. capturing beasts] for taming, the kings [sc. the Ptolemies] used to drive them with cavalry into a man-made gorge."[10] This is precisely the way it is done in Africa today: a deep gorge leading to an enclosed valley is selected, and cavalry and spearmen drive the herds into it. Ropers on trained elephants then ride in to pick off young beasts and calves.[11]

This was the only known way to capture wild elephants, and the very first problem it presented for Philadelphus was the recruiting of the very special personnel it required and the supplying them with an adequate number of trained elephants and of horses who were accustomed to elephants. The elephants and mahouts with which the Ptolemaic corps began had been acquired by Soter some thirty years before Philadelphus ascended the throne; any still alive would hardly have been fit for active service.[12] It follows from the

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[9]*Grzimek's Animal Life Encyclopedia* 12, pp. 494-95. Aristotle was aware of the use of teams of tame elephants in hunting; see *HA* ix.1, 610[a]: "The hunting of elephants is done as follows. Mounting on some courageous tame elephants, they give chase etc."

[10]*N.H.* 8.25: *Antea domitandi gratia, reges equitatu cogebant in convallem manu factam.* On Pliny's sources, see Scullard 208-209. Aelian also mentions the use of horses in hunting elephants (*N.A.* 7.6, where he refers to elephants "that get a great distance ahead of the horsemen pursuing them").

[11]Cf. Sikes 306: "The *chute* or *corral* method of trapping. . .has been used in Nubia until quite recent times. A deep gorge leading to an enclosed valley was selected in elephant country, and its upper end barricaded. Cavalry and spearmen drove herds of elephants into the gorge, crowding them towards the upper end. The narrow neck of the gorge would then be barricaded. Using trained elephants the ropers then rode in, as in the Kheddah system in India, roping the younger animals and calves by the feet."

[12]The elephant's lifetime is like that of humans; cf. Carrington 46. The animals Soter took over from Demetrius in 312, presumably adults in their twenties at least, by 270 would have been in their sixties.

success of Philadelphus' program that he had enough beasts to get started, so we must assume that the cows in the corps had borne a number of young over the years.[13] And we can assume that the mahouts had raised sons to whom they passed on their skills. These, however, would not have been enough even to get the hunting under way: Philadelphus not only needed additional mahouts for the elephants that would be captured,[14] but, more essential, he needed men who knew how to organize and lead round-up parties and men who knew how to break in wild elephants. He could get them only from India,[15] and they could come only by sea.[16] We know he had diplomatic contact with India, for Pliny (*H.N.* 6.58) mentions a certain Dionysius who represented him at India's court, the Ptolemaic counterpart of Seleucus' Megasthenes. Pliny says that Dionysius was sent to write a description of the land, but it could well be that he had the incidental assignment of recruiting elephant hunters and tamers. Clearly Philadelphus managed to bring to Egypt enough of them to get his program under way. And to the duties for which they had been hired, leading hunting parties and breaking in elephants, he no doubt added the task of teaching these skills to a body of his own subjects. This would have brought in its wake another recruiting problem: he had to locate interpreters,[17] speakers of Greek who also

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[13]It is said that elephants do not breed in captivity (see, e.g., Préaux 37 n. 2), but that is not true. They do, but breeding is slow, whether among the tame or the wild. A cow will normally breed once every three years and produce one calf, rarely twins; see Carrington 58. That is why it has always been easier and cheaper to hunt wild animals than depend on raising the young; cf. *Grzimek's Animal Life Encyclopedia* 12, p. 492.

[14]Cf. Carrington 172-73: "The first essential in elephant training is to assign to the animal a single mahout who will be entirely responsible for the job."

[15]India was so exclusively the source of mahouts that the Greek term for elephant-driver was *Indos*. See, e.g., Plb. 1.40.15 (251 B.C.) or App., *Hann.* 41 (211 B.C.), where the Carthaginians' mahouts are called *Indoi*, even though by this time they could well have been Carthaginian or Numidian; cf. Scullard 151, 237. Shinnie 101 asserts that "the African elephants used in warfare in Ptolemaic and Roman times were almost certainly trained by Meroites." There is no evidence whatsoever for this statement, and it is contradicted by what has just been cited as well as by evidence that in Philadelphus' day it was universal practice to give commands to elephants in Indian (see n. 17 below). Indeed, Török, in his comprehensive study of Meroe, emphasizes (271) that the use of war elephants at Meroe was most unlikely and suggests that the appearance of war elephants in Meroitic art was the result of borrowing from contemporary Egyptian representations.

[16]The Indian women and cattle that took part in Philadelphus' great procession (Ath. 5.201a, c) must have come by sea. They would have traveled on an Indian ship as far as Aden, and there transferred to a Greek vessel to continue up the Red Sea to Egypt; see Casson 1989: 11-12.

[17]An anecdote in Aelian (*N.A.* 11.25) graphically reveals how Indian was the accepted language for the training of elephants in Philadelphus' day. The ancedote concerns "an elephant calf that was given as a gift to Ptolemy II, the one whom they also call Philadelphus. It was

knew the dialects of his Indian personnel.[18] And, lastly, he had to recruit the hunting parties themselves. The commanders he drew from his staff of army officers,[19] and the rank and file he got from among his Greek-speaking Egyptian subjects; at least the scant evidence we have indicates that this is what his successors did, and the presumption is he did the same.[20] The size of the parties, to judge from the equally scant and late evidence we have, may not have been small; one that was sent out in 223 B.C. totaled 231 men. To collect such numbers for what would unquestionably be a lonely and not very pleasant tour of duty, he used the time-honored technique of offering high pay.[21]

On top of the problem of recruiting, there was yet another involving port and naval engineering. The captured elephants had to be brought back to Egypt by ship up the Red Sea. This meant that the settlements founded to serve the hunting, which in the nature of the case were located in remote places along an uninhabited coast, had to have docks and ramps that would be able to support beasts weighing up to some four tons.[22] Thus each pioneering party he sent out must have included not only hunters, both on foot and mounted, and trained elephants with the personnel to handle them, but also engineers to lay out the massive port structures needed, axemen to cut down the timbers for building

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trained on the Greek language and understood those who spoke it. Before the example of this beast, it had been believed that elephants comprehended only the language of Indians."

[18]If they came from northern India they would speak one of the Prakrit languages, which belong to the Indo-European family (Hesychius, for example, lists the word ἀγγόρπης· ᾧ ἐλέφαντας τύπτουσι σιδήρῳ, whose first element ἀγγ- may well be from Skt. *anka* 'crook' (cf. R. Goossens, *AntCl* 12 [1943] 52) and thus point to a borrowing from northern speakers). If they came from southern India they would speak one of the totally different Dravidian languages such as Tamil or Malayalam.

[19]For a list of attested commanders of elephant hunting expeditions, see *PP* ii 4419-28. Two, Lichas and Charimortos, appear in inscriptions that identify each as a general (στρατηγός); see Fraser ii 308, nn. 370-74, where the evidence is presented in full. The inscriptions date from the reign of Philopator. The names of Philadelphus' commanders occur only in Strabo (16.769, 771: Satyros and Eumedes, possibly Eumenes and Koraos), who lists them with no indication of title; they too could well have been generals.

[20]*W.Chr.*452 (224 B.C.), discussed below.

[21]*W.Chr.* 451 (223 B.C.) is an order to a banker to supply a lump sum for three months' pay for 231 hunters "setting out with Peitholaos"; the latter (*PP* ii 4423) is doubtless to be identified with the Pytholaos who named after himself a site on the northern coast of Somalia (Str. 16.774 and cf. Fraser ii 307). The sum reveals that the men received 20 drachmas a month. This was princely: a very highly paid clerk received only 13.5 dr. per month (see *P.Col.Zen.* 1.45 and introd.). Huntsmen on an estate in the Fayum could receive as little as 2.5 (*P.Cair.Zen.* iv 59747.12-13).

[22]A male Bush elephant can weigh 2600 kg while in his teens and double that when adult; see Sikes 183. The Forest elephant, of course, is somewhat lighter.

them, and carpenters[23] to do the work. Moreover, the ships that brought men and elephants to and from the site had to be a newly invented type, one specially designed for the transport of such beasts. Philadelphus' naval architects, designers of the mightiest war galleys afloat at the time,[24] would have had no trouble meeting this challenge. They produced the ἐλεφαντηγός 'elephant-carrier.'[25] No description of it has survived, but from the accounts of its use we can deduce two important features. One is that it was not a galley but a sailing ship;[26] this means that it had to be designed from scratch, since the only possible models, the cavalry transports that had long been used by Greek armies, were galleys, and galleys are significantly different in shape and proportions.[27] The other is that, since it had to operate in waters that were shallow, not over three fathoms deep (D.S. 3.40.3), it had a relatively shallow draft, over six feet but at most eighteen and probably considerably less.[28] The decision to make the ἐλεφαντηγοί sailing ships is understandable: the Red Sea, unlike the Mediterranean where the Greek cavalry transports operated, is not afflicted by calms; its winds are steady, and, that being the case, there was no need to use oar-powered ships and put up with their disadvantages—their restrictive dimensions, their sacrifice of much valuable space to rowers' benches, the steep cost of multiple oarsmen. The winds blow prevailingly from the north, thereby ensuring a fair voyage southbound; however, between October and May southerlies prevail from the mouth of the Red Sea up to latitude 20° N, thus assuring during these months an equally fair northbound voyage at least that far (cf. Casson 1989: 284).

The captured beasts had ahead of them a sea journey of a week at a minimum to as much as a month, depending upon how distant was the hunting

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[23]Cf. Bernand 9bis (= *PP* viii 4430a): Δωρίων τέκτων τῶν μετ' Εὐμήδου ἀναζεύξας ἐπὶ τὴν θήραν τῶν ἐλεφάντων καὶ ἐσώθην εἰς Αἴγυπτον.

[24]A "twenty" and two "thirties"; see Casson 1986: 139-40.

[25]The term appears in Agatharch. 83, and *W.Chr.* 452.22, 26.

[26]See D.S. 3.40.4-5, where the risks run by the elephant-carriers are contrasted with those run by galleys: the elephant-carriers' risks are greater since the vessels sit deeper in the water and since they operate under sail alone. Rostovtzeff 304 and Wilcken (*W.Chr.* 452, introd.) overlooked this statement in taking the elephant-carriers to be galleys.

[27]On the Greek horse-transports, see Casson 1986: 93-94; Morrison-Coates 1986: 226-28.

[28]Diodorus' statement (3.40.5) that, when an elephant-carrier runs aground, "the crew is unable to go over the side (sc. to shove it loose) because the depth is greater than a man's height, and, when they try to help the vessel by using boat poles, . . .and accomplish nothing, etc.," sets the minimum draft, while his mention of the depths encountered (3.40.3) sets the maximum; however, if the men were able to use boat poles, the maximum was very likely a good deal less than eighteen feet.

ground they came from.[29] Obviously beasts fresh from the wild could hardly be coaxed up a gangplank onto a ship, much less be kept restrained once aboard; they needed a certain amount of preliminary training first, and the bases had to be equipped to provide this. Thus each hunting port must have had a wide range of facilities and accommodations: corrals for keeping the tame elephants needed for the hunting and initial breaking-in, corrals for the captured elephants, areas for training them, sheds for storing the enormous amounts of food all these animals required,[30] and housing for the hunters, handlers, mahouts, tamers, and various others including a body of soldiers.[31] And all the facilities had to be ready, all the personnel on hand, an ἐλεφαντηγός alongside the dock emptied of the tame beasts it had brought down, before a party could leave camp and start a hunt. The Pithom stele, for example, which sings Philadelphus' praises for establishing Ptolemais Thêrôn, states proudly that the founder (the name is lost; presumably it was Eumedes) "caught elephants in great number for the king, and he brought them...on his transports over the sea" (Naville 21, line 24). The stele does not bother to mention that the transports first had to be designed, and that ramps and docks for them had to be put in place, before they returned carrying the captured "elephants...over the sea."

Another statement in the stele reveals indirectly one more problem that had to be overcome, the supplying of provisions. The founder, we are told, "made there fields and cultivated them with ploughs and cattle" (Naville 21, line 24). The site Eumedes had selected luckily permitted the growing of food. That was not always the case; some bases had to import it.[32]

Since it was Philadelphus who launched the planting of bases such as Ptolemais Thêrôn, it follows that it was he who took all the steps described

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[29]From Ptolemais Thêrôn, not too far down the Red Sea, to Berenicê, 4000 stades at 500 stades a day (see Casson 1989: 278, 280), would have taken some 8 days; from the ports furthest away, those near Cape Guardafui, would have required some 30 (Casson 285-87). Vessels on coasting voyages normally did not sail at night (Casson 278), so the ἐλεφαντηγοί could have put in at the various bases they passed and perhaps taken advantage of the opportunity to exercise the elephants. Diodorus refers (3.40.5) to sailing at night; it could well have been limited to the stretches he is describing where, because of rocks or shallows, there would have been no safe place to anchor.

[30]Cf. Scullard 20: elephants in captivity eat 100 lbs of hay daily plus some oats and vegetables.

[31]The Pithom Stele states that the founder of Ptolemais Thêrôn had soldiers with him (Naville 21, line 24), and Strabo reports (16.770) that one of his first acts was to build some defence works—but adds that he avoided hostilities by cultivating good relations with the locals.

[32]See the discussion of *W.Chr.* 452 below.

above that were the indispensable preliminaries. Even if he had begun the program on a modest scale, intending merely to test the waters as it were, he still had to take all these steps; there was no other way of capturing wild elephants, whether a handful or a hundred. For some reason, however, the credit has consistently been awarded not to him but to his son Euergetes (246-222) or even his grandson Philopator (222-205). Rostovtzeff, the first to discuss in detail the Ptolemies' hunting program, asserted that it was Euergetes who "zuerst ein beständiges Strategenkommando in der Jagdgegend schafft,...in diesen Gegenden eine beständige militärische Besatzung schafft...und einen regelmässigen Wechsel einheimischer Jagdkompagnien einführt. Auch ein regelmässiger Schiffsverkehr wird dauernd organisiert."[33] Later Fraser transferred the major credit to Euergetes' son: "In the reigns of Philadelphus and Euergetes the organization of these elephant expeditions seems to have been casual, but in the reign of Philopator it was apparently systematized."[34] But elephant hunting, and the training of the beasts captured, as has been described above, by its very nature could never be casual; it had to be systematized from the start, and the program owed its start to Philadelphus. His successors may well have increased the scale, but the setting of the many and various elements in place had to be his contribution.

Ptolemais Thêrôn, as noted earlier, was the second hunting base founded, at a point somewhat less than two-thirds down the Red Sea. The planting of bases gradually advanced to the Straits of Bab el Mandeb at the mouth and then along the north coast of Somalia to its easternmost tip at Cape Guardafui. Philadelphus was responsible for the initial stages; Euergetes, who "was ambitious about the hunting of the elephants of this region" (D.S. 3.18.4), kept up the

[33]Rostovtzeff 302; cf. Kortenbeutel 35, Desanges 297. The evidence Rostovtzeff offers is that the place-names cited by Strabo in the description of the coast before and beyond the Straits of Bab el Mandeb were named after leaders of hunting expeditions, and that several of these can be dated to the reigns of Euergetes and Philopator. That is true—but the places are later establishments, and all the steps that Rostovtzeff attributes to Euergetes necessarily had been taken, as shown above, by the time of the founding of the first bases, and these were undeniably the work of Philadelphus.

[34]Fraser i 179, repeated by Scullard 136. Fraser adds that Philopator took this action "no doubt as a result of the battle of Raphia in 217 in which Philopator's African elephants suffered considerable losses against the Indian ones of Antiochus." He presumably bases this on Polybius' statement (5.86.6) that, of Philopator's elephants, "sixteen died and most of the rest were captured." As Scullard has shown (142), these words of Polybius do not at all accord with his description of the battle which, along with other evidence, makes it seem that Philopator emerged from the fighting not with a loss of elephants but a considerable gain.

pace; the farthest bases were set up under Philopator.[35] The commanders of the pioneering parties dubbed the places where they set up their camps with their own names, and a succession of such names marks the steady progress down the coast: the Hunting-ground of Pythangelos, the Elephant-hunt of Lichas, Cape Peitholaos, Pythangelos Harbor.[36] Though only the last is specifically identified as a marine facility, the others must have been such as well.

We must not assume that these bases were all in operation at the same time. The reason for the continuous advance southward very likely was the gradual exhaustion of each hunting ground. From the outset the hunting parties had to work their way some distance inland, since the coastal areas, where the bases were established, were by their nature too arid to serve as a habitat for elephants. There would come a time when all the herds within easy reach had been caught, and to go after more would require round-ups too deep in the hinterland to make them worthwhile;[37] it was easier to pick up stakes and choose a virgin spot further along where elephants were still to be found nearer the coast. The old base, if it served no use other than the hunts, would be closed down, and the personnel and tame elephants and anything that could be salvaged—palisades from the corrals, timbers from the docks and ramps, etc.—would be transferred to the new. Thus most likely only the furthest bases were active at any one time; the others were either abandoned or converted to commercial use.

When Philadelphus first set the program in motion, elephants must have been shipped in both directions: from Egypt there went south the tame beasts

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[35]Cf. Kortenbeutel 27-28; Fraser ii 306-307 n. 368; Desanges 274-79, 292-99 (the fullest account). No bases were planted beyond Cape Guardafui, for it marked the end of geographical knowledge in the time of the Ptolemies (Str. 16.774, citing Artemidorus who wrote ca. 100 B.C.). Ptolemy Philometor (180-145 B.C.) had elephants in his army, so hunting must have gone on as late as his reign (cf. Scullard 189); presumably he used the bases west of Cape Guardafui.

[36]Str. 16.773-74. These three men also set up stelae and altars that bore their names; see Str. 16.774. There are several geographical features and places in the same area bearing the names of other men, also presumably expedition leaders; see Kortenbeutel 27-28, Fraser i 178-79. However, ony for these three is there certain evidence connecting them with elephant-hunting expeditions. Strabo includes Chariomortos, known from Polybius (18.55.1-2), among those with stelae and altars bearing their names, and he too is securely attested as a commander of elephants hunts (*OGIS* 86=*SB* 5.8771; cf. n. 19 above). Pythangelos, Lichas, and Peitholaos were active udner Euergetes and Philopator (*PP* ii 4422, 4423, 4425), Chariomortos under Philopator (*PP* ii 4428).

[37]The *Periplus Maris Erythraei*, written in the mid-first A.D., notes (4) that elephants were hunted for ivory in the upland regions back of Adulis but only "on rare occasions are seen along the shore around Adulis itself" (cf. Casson 1989: 53).

required for the hunting and the initial training, and from the bases there went north the new, partially broken in elephants. Subsequently, tame beasts for a new base could be transferred from the nearest base in operation. The port in Egypt out of which the ἐλεφαντηγοί operated was Berenicê Troglodytica.[38] There was good reason for this: sailing through the waters beyond involved a battle against the prevailing northerlies (cf. Casson 1989: 97); it spared men and beasts much hardship to disembark at Berenicê, march over the road that Philadelphus had made to Koptos, and there get aboard rivercraft to sail easily and smoothly down the Nile to the ultimate destination in Lower Egypt.

There is a unique papyrus document (*W.Chr.* 452 with *BL* i 375, vii 160) that graphically illustrates the sort of problems the hunting bases, isolated and remote, had to cope with. It is a fragment of a letter sent from Egypt in November/December of 224 B.C. by a hunter named Manrês to his fellow townsmen who are still on duty at the base, fifteen of whom he lists by name. The letter was discovered in the Fayum; presumably one of the recipients brought it back with him to their home town there. Manrês' name is Egyptian and so are the fifteen he lists,[39] but he writes in Greek. Manrês urges them not to be downhearted: the time left for them to stay there is short, for the relief detachment is being prepared and the hunters who are to go out there with the commander have already been selected; he reports that they can expect a shipment of grain on freighters from Heroönpolis and that the ἐλεφαντηγός in Berenicê is finished; he asks what has happened to the price of grain at the base "since the ἐλεφαντηγός sank."

The men, thus, were Greek-speaking Egyptians who signed up for a given period, at the end of which they expected to be relieved; at the time of Manrês' letter, their relief was obviously overdue. There is no clue in the surviving portion of the letter to what base they were at; it very likely was one of the furthest out, for by this time elephant hunts had been going on for half a century. Being so very far from home was no doubt one reason for the men's low spirits. Another was that the ἐλεφαντηγός which served their base had sunk; to judge from Manrês query about the price of grain, it had been carrying provisions—this base had to import food—and Manrês clearly suspects that the failure of the grain aboard to arrive produced a rise in price.

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[38]In *W.Chr.* 452 (discussed below), mention is made (lines 22-23) of the building of an ἐλεφαντηγός in Berenicê.

[39]The one possible exception is a name (line 5) that Wilcken read as Ἱέρωνι. Witkowski 1913: 23 questions this and more cautiously reads Ι.ρανι (omitted from *BL* and the entry in *PP* [ii 4478]).

But Manrês has some reassuring news to pass along. For one, arrangements had been made to send out grain, presumably to replace what had been lost; it will arrive by ordinary merchantmen from Heroönpolis (he thereby alerts his correspondents to the likelihood that it will take longer than the usual shipments coming out of Berenicê; Heroönpolis lay at the head of the Red Sea).[40] For another, a new ἐλεφαντηγός was being readied at Berenicê.

The elephants' passage through Egypt after landing at Berenicê can be traced, at least in bare outline, thanks to a few haphazard references in miscellaneous papyrus documents. A record of mail handled at one of the royal postal stations, dated ca. 255 B.C. and thus in Philadelphus' reign, includes "one roll for Demetrius in charge of the supply of elephants in the Thebaid" (*W.Chr.* 435.78-80); this official, it would appear, was responsible for the elephants as long as they were in his area, that is, from the time they left the ἐλεφαντηγός at Berenicê to the time they embarked on rivercraft to go down the Nile.

We next pick up the trail in the Fayum, where there are hints of their presence. A fragment of a letter found in the area and dated ca. 250 B.C. contains the tantalizing words "sailed to Hiera Nêsos with the elephants" (*BGU* 10.1913.2-3). There were two villages of that name in the Fayum, one in the northern part and one in the southern (Calderini-Daris, s.v.). The northern lay not too far from an arm of the Bahr Yussuf—was it the site of a staging area to which elephants were brought by barge up the canal? There was good reason for putting one there: from it the beasts could be walked to their next stop, which was Memphis, thereby sparing them any more days in cramped shipboard quarters as well as providing them with some needed exercise.[41]

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[40]Wilcken, in his introduction to the document, argues that the shortage of grain came about because grain was carried on ordinary sailing ships and, since these proceeded "nur unter dem Schutz der militärisch bewachten Elephantenschiffe," delivery was thrown off schedule by the loss of the elephant-carrier that would have done the escorting. As Witkowski 24-29 was quick to point out, the elephant-carriers were sailing ships and thus could hardly serve as military guard-ships, which were necessarily galleys. It surely was the sinking of the elephant-carrier that caused the shortage. The elephant-carriers, sailing vessels with a sizable cargo capacity, were available to haul out to the bases whatever these required; there was no reason to employ other ships, except when special circumstances demanded. We can only guess why, in this instance, Heroönpolis was the source of the replacement grain; very possibly because supplies and the ships to carry them happened to be available there.

[41]Another hint of the presence of elephants in the Fayum is *P.Mich.Zen.* 115, from Philadelphia and dated 3rd B.C.; it is a fragment that mentions payment εἰς τὸν ἐλέφαντα ψα̣[. Perhaps ψάλιον is to be restored, i.e., the payment was for "a chain for the elephant."

The evidence for Memphis as a base for elephants is in a letter (*P.Petr.* II 20 col. iv), dated 218 B.C.,[42] that refers to the commandeering of a merchant galley moored at Ptolemais Hormos, the Fayum's port on the Nile, by a local official on the grounds that "there was need of it for the voyage downstream to deliver hay to the elephants at Memphis."[43] The reference has been taken as evidence that Memphis was where the chief stables were located,[44] and they very well could have been there, since it was a more useful location than Alexandria. The basic reason for the Ptolemies' elephant corps was as counterweight to the Seleucids'. Thus, if it was to see action, the locale would almost certainly be at or beyond Egypt's eastern border, and marching the beasts there from Memphis over the desert would be shorter and easier than from Alexandria across the full width of the delta with its network of waterways.[45]

To sum up. The Ptolemies' program of capturing and training African elephants for their elephant corps was an extraordinary achievement. It involved the setting up, in remote and primitive areas, of bases fitted with elaborate facilities and the staffing of them with personnel that included many who had to be recruited and specially trained for their jobs. It involved as well launching a fleet of boats of new design to bring the captured beasts back to Egypt. Within Egypt itself it involved the establishment of staging areas and of permanent stables; there seem to have been staging areas around Koptos and in the Fayum, and the stables may have been in Memphis. All had to be in place when the hunting first got under way; the credit thus goes to the founder of the program, Ptolemy Philadelphus.

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[42]The date is given merely as "Phaophi 17, fifth year," but the names of the writer and the addressee, Theophilos and Herakleides, occur together in an archive dated 224-217 B.C., which makes it the fifth year of Philopator (218-217); see *P.Sorb.* 1.44 introd. and R. Bagnall in *Ancient Society* 3 (1972) 118.

[43]Lines 7-8: χρείαν αὐτοῦ εἶναι πρὸς τῆι καταγωγῆι ὥστε ἀπάγειν χορτὸν τοῖς ἐν Μέμφει ἐλέφασιν, in the reading of an improved text, based on a re-study by W. Clarysse and P. Verdult and published by Verdult in *P.Erasm.* II, p. 138 (this reference was kindly brought to my attention by W. Clarysse).

[44]Rostovtzeff 301; Scullard 133. The precise date of the letter is 2 December 218—in other words, just half a year before the Battle of Raphia took place (22 June 217), in which the elephant corps on both sides played a significant role. I deal with the possible connection of the letter with the preparations for the battle in a separate article.

[45]Some elephants at least were kept on hand at Alexandria, e.g., those that took part in the great procession that Philadelphus put on there (Scullard 124-25) or those that Ptolemy V (Epiphanes) sent in 196 B.C. to surround the house of the powerful courtier Scopas who was suspected of attempting a *coup d'état* (Plb. 18.36.7; cf. Scullard 137).

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