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The 'Mole' in Antiquity

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literature testifies. But there is another point. From seaport to seaport water carriage might be preferred. But from inland site to inland site much will depend on the distances of these from the coast. The journeys to and from the sea will operate against navigation, especially if there is a dangerous headland to be negotiated and if there is cheap land carriage. A trader sending goods from the middle of Boeotia to Mycenae, Tegea, Sparta or Pylos, would not choose the long sea-route round Sunium to Epidaurus or Nauplia, with two land journeys added, but would take the cheap route overland. And I maintain that it would be cheap, extraordinarily so. The conditions as to cultivation and waste, forest and pasture, water and tracks, which I venture to assume for the Greece of the Pelopidae¹ obtained in the wilder parts of India till comparatively recent times,

made Aegean navigation 'easy' in the fair season. Of course, in a case in which there were alternative routes—as round the Euboean headlands or through the Euripus—the capes would always be avoided.

¹ There is not much on this point to be found in the books. But I do not think that the most liberal estimate of pre-Homeric civilisation will insist that the pressure of population had caused an absorption of cultivable land to such an extent that pasture and forest were not still abundant. Reference may be made on the subject of cultivation generally to Pöhlmann, *Die Feldgemeinschaft bei Homer*; Günther, *Der Ackerbau bei Homer*; Ridgeway in *J.H.S.* vi. 319 ff.; and the handbooks of Buchholz and Seymour. But they contain little that is useful for present purposes.

indeed within my own experience in the west. The carrying trade in such parts was in the hands of Vanjāris ('Forest-traversers') and other gipsy tribes, who owned large numbers of bullocks, buffaloes, ponies and asses. The cost of upkeep was practically nil, for one man sufficed to look after many animals, and feeding cost nothing or very little, as pasture in forest or other uncultivated ground was everywhere available, and it was free. And transit duties, levied by every blackmailer who had the opportunity, did not stop this traffic. For one thing, payment of such mail always ensured a certain amount of protection, and, for another, the levying cateran was careful not to kill trade by excessive demands on it. The 'fire-carriage' and the 'fire-ship' have killed or are killing it now, but anyone who has known intimately a bit of old India, and there are such bits still, or were forty years ago, is helped to understand, what puzzles so many, the existence of great trade-routes across Europe in prehistoric times, when conditions prevailed which at first sight would seem to render the safe transport of property impossible.

To sum up, the possession of Mycenae and Corinth, both of which the Cataloguer assigns to Agamemnon, gave that potentate command of two great trade-routes, and explains most satisfactorily his richness in gold.

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THE 'MOLE' IN ANTIQUITY.

THERE has been much discussion as to what *ἀσπῆλαξ*, *σπῆλαξ*, etc., mean in the various passages where these names occur. The early commentators—and with them Camus and Strack—were content to take them as meaning the common mole; and the question then often arose whether Aristotle and the rest were right in saying that the mole was blind. This difficulty was apparently disposed of when Paolo Savi showed (as had been alleged before) that the Tuscan moles (*T. caeca*) differed

and in particular that they were totally blind, with their eyes completely covered by skin ('Sopra la talpa cieca degli Antichi,' *Memorie scientifiche*, Pisa, 1828, p. 29; the two species are beautifully figured by Prince C. L. Bonaparte in his *Iconografia d. Fauna Italiana*, 1832-41). Savi's opinion that the classical allusions refer to *T. caeca* soon commended itself both to naturalists and to the commentators. Bell adopted it in his *British Quadrupeds* (2nd ed., 1874, p. 138), as Blasius had done in his

'Es erleidet keinen Zweifel dass Aristoteles ihn unter dem Namen Aspalax erwähnt.' Karsch, and Sundevall (*Thierarten des Aristoteles*, p. 58), took the same view without hesitation. After all there is but little difference between the two species, save in matters of degree. It has been asserted that even in *T. caeca* the tiny eyes are at least sometimes visible; and some naturalists even deny that it is anything more than a local race or variety of the common mole (Camerano, *Zool. Anzeiger*, viii., 1888, p. 295; *Mem. R. Accad. Sci. Torino* [2], xxxvii., 1886, p. 445).

But there is another and a very different animal which has also been identified with ἀσπάλαξ, though on hitherto insufficient grounds—the little blind-rat, *Spalax typhlus*. This is a little burrowing rodent, somewhat larger than a mole and looking like a small marmot, widely distributed from Poland to Northern Africa, and occurring in Greece and Asia Minor though not in Italy. It is totally blind, and it burrows and makes 'runs' just as a mole does, frequenting fertile and cultivated soils. But it differs from the mole in one striking feature: it is a vegetarian, living on roots and especially bulbous roots, whereas the moles live on a diet of insects and worms, principally the latter. By this simple criterion we learn that, in Theophrastus at least, the blind-rat is meant for certain. Speaking (*H.P.* vii., 11, 3) of the sweet roots of φάσγανον, the corn-flag (*Gladiolus segetum*), he tells us that πολλὰς δὲ εὗρισκονσιν ἐν ταῖς σκαλοπιαῖς· χαίρει γὰρ καὶ συλλέγει τὸ ζῶον.

We have not a great deal of information about the habits of this animal;¹ but we shall find enough for our purpose, and very much to the point, in a paper by Dr. John Anderson (*Proc. Zool. Soc.*, 1892, p. 472) on its occurrence in Egypt. An Arab pointed out to him its burrows and little hillocks by the side of a barley-field, in a meadow

abounding in asphodels and hyacinths. They began to excavate the labyrinth of runs, and 'in following one of them to the depth just mentioned (eighteen inches) we came upon a domical chamber full of bulbs.'²... they reached the number of sixty-eight. Adjoining this chamber was another, quite empty, which the Arabs said was the sleeping apartment,' etc. There need, I think, be no doubt whatever that Theophrastus was speaking of this very animal, even in spite of the fact that some old texts give a different (and now discredited) reading. (Gaza, for instance, rendered the passage 'permultas juxta eam scolopendras reperit'; but Gesner, according to J. G. Schneider, detected the error, and proposed to read παρὰ ταῖς σκαλοπιαῖς, 'circa terrae cumulos a talpa excitatos': which rendering Schneider in his turn altered to 'cubilia talparum subterranea.') Bochart (*Hieroz.* i. p. 1023) quotes Syriac and Arabic writers to precisely the same effect: e.g., a certain 'Agricultura Persica apud Abembitarem,'—'Alchold, animal caecum sub terra arborum radices comedens, quodque cepae et porri odore ita delectatur ut eo allectum exeat a latibulo suo'—where *Alchold* is the Hebrew *choled*, the 'mole' of *Levit.* xi. 19, 30. (May the same Semitic word perhaps lurk in the Hesychian λωτ· ἀσπάλαξ?) The Egyptian σπάλαξ of Horapollon (ii. 63) can have been no other than this same creature; and Otto Keller tells us that it appears, among other Egyptian animals, on a Pompeian fresco in the Naples Museum.

The question then remains whether this animal, so clearly designated by Theophrastus, was also indicated by the other ancient writers. As for Aristotle, O. Keller (*Ant. Thierwelt*, i. p. 23) is very clear to the contrary: 'Dass A. selbst unter ἀσπάλαξ den Syrischen Blindmoll verstanden habe, wie man schon gemeint hat, ist durchaus unwahrscheinlich.' On the other hand, both

¹ Cf. Rzacynski, *Auctuarium Hist. Nat. Poloniae*, 1745, p. 326; Gùldenstädt, in *Nov. Comm. Ac. Sci. Petrop.*, xiv. 1770, pp. 409-440; Pallas, *Zoographia Rosso-asiatica*, i. p. 159, 1811; and especially G. A. Olivier, *Voy. dans l'Empire Othoman*, etc., iv. pp. 198-209, An 12 (1793-94).

² Cf. Olivier, p. 208; 'Il est très friand . . . d'un colchique à fleurs blanches, très-nombreuses, qui fleurit au premier printemps . . . Il se nourrit également de la racine de presque tous les végétaux qui croissent spontanément ou qui sont cultivés dans les lieux où il est établi.'

Schneider and also Aubert and Wimmer lean to the view that the Aristotelian ἀσπάλαξ was the blind-rat. Aubert and Wimmer do so on the ground that, while nothing was known to them of true moles in Greece (save only that Bory de St. Vincent had seen 'mole-hills' of some sort or other in the Morea), Erhard (*Fauna d. Cycladen*, p. 21) had found *Spalax typhlus* (τυφλοποντικός) in the Cyclades, and Wagner (Schreber's *Säugethiere*, Suppl. iii. p. 362) reported it from Greece itself.¹ Heldreich (*F. de la Grèce*, 1878), who identifies ἀσπάλαξ with *Talpa caeca*, declares that this animal (also called τυφλοποντικός) does occur in Greece, though not abundantly, at least in Attica; but Heldreich is not always to be depended on, and Mr. Oldfield Thomas (of the British Museum) tells me (while this paper is passing through the press) that 'we have no evidence that moles occur in Greece,' and that he does not 'believe they are found anywhere in the Balkan peninsula.' At best, however, the geographical evidence does not carry us very far, considering how little the Greek fauna has been explored, and considering also the fact that the older naturalists—Aristotle, Theophrastus, and the rest—dealt with a much wider range of country than continental Greece.

Schneider (*in Arist. H.A.*, vol. iii. p. 234) arrives at the same result as Aubert and Wimmer by a very different argument, drawn from Suidas s.v. ἀσπάλαξ: . . . ἔχει γὰρ ὀδόντας μιαιωτάτους, καὶ ῥύγχος ὥσπερ γαλῆς, καὶ πόδας ὡς ἄρκτου. He holds that the epithet μιαιώτατος could not apply to the minute teeth of the mole: 'Igitur merito genus aliud intelligi suspicari oportebat, quod in Syria demum repertum descripsit Gallus Olivier [*i.e.* *Spalax typhlus*] in Itinerario et cum Aristotelico comparavit nomine graeco appellatum.' Schneider's argument and conclusion were probably sound enough, for, vague though the epithet may be,

yet μιαιώτατος might be applied not inaptly to the long incisor teeth of the little rodent, which inflict severe wounds, and of which I find, in Beddard's *Mammals* (p. 482), 'the lower incisors are more developed [even] than in other rodents.' Neither Aubert and Wimmer, nor Schneider, nor yet Otto Keller, say a word about the really important and crucial point, the vegetarian, bulb-collecting habits of the blind-rat, as opposed to the mole's diet of worms.

The teeth are briefly referred to by Aristotle, e.g. *H.A.* iv. 8, 533a 15, where he says that πόροι lead past the orbits, τελευτώντες εἰς τοὺς ἄνω χαυλιόδοντας;² with which passage cf. *Ael.* xi. 37, χαυλιόδοντα δὲ, τὰ ὑποφαίνοντα ἔξω τοὺς ὀδόντας, ὧς ὁ ἄγριος, σπάλαξ. Here Schneider (*ad loc. Ael.*) says, '*Talpa* habet etiam versio latina. Mihi vero novum atque inauditum accidit talpam respectu dentium exsertorum cum apro comparari. Videndum an olim λάταξ lectum fuerit.' But Schneider had not heard of *Spalax* when he edited his *Aelian* in 1784. Blasius (*op. cit.* p. 402) would seem to have been influenced by the same argument, when he says that in this passage 'Aristoteles hat die Blindmaus mit dem Namen Aspalax bezeichnet.'

Again, while Aristotle's general statement that the mole has eyes (*de. An.* iii. 1, 425a 11, φαίνεται γὰρ καὶ ἡ σπάλαξ ὑπὸ τὸ δέρμα ἔχουσα ὀφθαλμούς, with which cf. Plin. *H.N.* xi. 32, Galen iv. 160 K) might refer to either animal, his more elaborate description of the subcutaneous eyes in *H.A.* iv. 8, 533a, cannot well apply to the tiny bead-like eyes of the mole, but may very possibly turn out to be an intelligible description of the somewhat larger eyes of *Spalax*.

There is one remarkable passage in the *De Mirab.* 176, 847b 3, ἐν Αἰτωλοῖς φασὶν ὁρᾶν τοὺς ἀσπάλακας ἀμυδρῶς, καὶ οὐδὲ σιτεῖσθαι γῆν ἀλλ' ἀκριδας. Here the allusion to a diet of insects

¹ Mr. Oldfield Thomas tells me that specimens have been sent home lately, by officers of the R.A.M.C., from Salonika. Recent writers distinguish many species of *Spalax*, two of which are recorded from Greece (cf. *B.M. Cat. of Mammals of W. Europe*, 1912, pp. 887, 1000).

² These πόροι were doubtless the large nerves passing through the sub-orbital foramina, on their way to the muzzle. My note *ad loc.* in the Oxford translation of *H.A.* is wrong; for χαυλιόδοντες are not necessarily 'eye-teeth', but may quite well apply to the tusk-like incisors of *Spalax*.

might suggest that the mole itself was referred to, and was for once distinguished from the ordinary and better known *ἀσπάλαξ*; but description and text are alike unsatisfactory. As for the Boeotian 'moles,' whose skins came to the Athenian market (Ar. *Ach.* 887, Schol. Antig. 11, cf. also Plin. viii. 226), there is nothing in the story to tell us to which species they belonged. The curious account in *H.A.* viii. 28, 605b, and elsewhere of the haunts of the Boeotian moles, may not improbably be accounted for by the known predilections of *Spalax* (cf. Olivier, p. 208, 'Il évite toujours les endroits pierreux, et ceux qui peuvent facilement être inondés.') Lastly, it may be that Seneca (*Q.N.* iii. 16, 5) associates and distinguishes the two animals, 'pleraque ex his caeca, ut *talpae* et *subterranei mures*, quibus deest lumen, quia super-vacuum est.'

The vegetarian diet is alluded to, and therefore the blind-rat is clearly meant, in Opp. *Cyn.* ii. 612, οὐ μὲν θῆν οὐδ' ἀσπαλάκων αὐτόχθονα φύλα | ποιοφάγων, ἀλαῶν, μέλλειν ἐθέλουσιν αἰοδαί; and also in the fragment of Stesimbrotus (sometimes ascribed to Stesichorus) in Suidas, ὑπὸ τῆς γῆς τυφλωθῆναι, διὰ τὸ φθεῖρειν τοὺς κάρπους. The legend is expanded by Oppian (*l.c.*), ἀλλ' οὐδ' ὥς Φαέθων χόλον εὔνασεν, ἀλλὰ μὲν αἶψα | ἀσπαλάκων ποίησε γένος μὴ πρόσθεν ἔοντων | τούνεκα νῦν ἀλαόν τε μένει καὶ λάβρον ἐδωδαῖς; and a remark of Seyffarth's, quoted in Leemann's *Horapollo*, would suggest that the myth had an Egyptian origin.

There are plenty other references to the destructiveness of *talpae*, or *ἀσπάλακες*. They eat chestnuts, according to Columella (iv. 33); roots according to Timotheus (40); and were destructive to *cardueta*, i.e. fields of artichokes, according to Palladius (iv. 9, 4). Cf. also Simocatta, in *Epistolis* (cit. Bochart), τί δῆτα περὶ τῶν ἀσπαλάκων λέξαιμι; φοβερὸν γὰρ τῷ γεωργῷ τὸ κακὸν, καὶ δυσανταγώνιστον τὸ πολέμιον; also Hieron. in *Isai.* 2, 19, 'Talpa est

animal absque oculis, quod semper terram fodit et humum egerit, et radices subter comedens frugibus noxium est.' In the Talmud it is regarded as so destructive that it may be killed even on days of festival (Lewysohn, *Zool. d. Talmud*, 1858, p. 102). Indeed, one is even tempted to wonder whether the lasting persecution of the mole (which robs us of nothing) may be due all the while to the evil reputation of the pre-daceous, root-devouring animal with which it was anciently confused.

The mole's dwelling is mentioned by Aristotle (*H.A.* 1, 9, 488a 21); and here again the brief reference might apply to either animal, for the mole makes an underground nest for its young. But the mole's nest is an obscure and imperfect structure compared with the elaborate domicile of the blind-rat: it is only a little hollow, with a few leaves and straws for a bed. Was Virgil describing in the *Georgics* (i. 83) what he had himself seen of the Italian moles, 'aut oculis capti fodere cubilia talpae,' or was he handing on an older story of the more elaborate *cubilia* of the blind-rat?

A final word as to the name *ἀσπάλαξ* and its origin. We may safely take it that *ἀσπάλαξ*, *σπάλαξ*, *σφάλαξ*, *σκάλοψ*, are all the same word, and mean the same thing; and it is at least probable that *ἀσπάλαξ* or *σπάλαξ* was not only the commoner but also the older form (cf. e.g. *Et. M.* σκάλοψ, ὁ σπάλαξ λέγεται παρὰ Ἀττικοῖς, ὡς λέγει Νικοκλῆς; cf. also Schol. Ar. *Ach.*, σκάλοπας· μύας τινὰς, ὡς φάμεν σπάλακας). But the old derivation, σκάλοψ, ἀπὸ τῷ σκάλλειν, ἢ σκαλεῖν, a *fodiendo*, is more than doubtful, though it is upheld both by Curtius and by Corssen. I suggest that the root (quasi *slapax*) lies in the Russian слѣпой (*sljep-oie*), blind; and as a matter of fact, according to Pallas and others, the Russian name of the animal is *slapax* (*slapétz*, or *sljepétz*), literally the 'blind man.'

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