

Notes on Thai Mammals

1. Talpidae (Insectivora)¹⁾

By

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Abstract *Euroscaptor klossi* THOMAS, a little known mole of Thailand, is re-described on a dead specimen from Mt. Doi Inthanon. Its pelvic and manual bones are described for the first time. Relationship of Asiatic moles is discussed.

Near the summit of Mt. Doi Inthanon in Northwest Thailand, at an altitude of 2,550 m, a dead specimen of a mole was picked up by Tsukané YAMASAKI, one of the members of the 1987 expedition made by the National Science Museum, Tokyo. As the Thai moles have not been examined in detail up to now, I have examined the specimen with some interest.

A Thai mole, *Euroscaptor klossi*, was first described by THOMAS (1929) on the basis of a specimen obtained by C. B. KLOSS and K. G. GAIRDNER at Hue Nya Pla, 10 miles northwest of Raheng, western Thailand. CHASEN (1940) described a new form, *malayana*, from the Malay States and placed it in the species *Talpa klossi* THOMAS, 1929, from Thailand, distinguishing the two races *klossi* and *malayana* by the fur colour alone. MILLER (1940) established a new genus, *Euroscaptor* (type species, *Talpa klossi*), mainly on the peculiarities of male genitalia, and placed in it *E. micrura* (HODGSON, 1841), *E. parvidens* (MILLER, 1940), *E. longirostris* (A. MILNE-EDWARDS, 1870) and *E. grandis*, MILLER, 1940. SCHWARZ (1948), on the other hand, revised the old-world moles of the genus *Talpa*, and regarded *Asioscaptor* STROGANOV, 1941, *Mogera* POMEL, 1848, *Scaptochirus* A. MILNE-EDWARDS, 1867, *Chiroscaptor* HEUDE, 1898, *Euroscaptor* MILLER, 1940, *Eoscalops* STROGANOV, 1941, and *Parascaptor* GILL, 1875, as synonyms of *Talpa* LINNAEUS. He treated *Euroscaptor klossi* and *E. k. malayana* as subspecies of *T. micrura* HODGSON, 1841 (type area; Nepal, central and northern Hills). EL-LERMAN and MORRISON-SCOTT (1951, 1966), YENBUTRA (1976), LEKAGUL and McNEELY (1977), CORBET (1978), and CORBET and HILL (1980) followed SCHWARZ's classification. STEIN (1960) examined variations of European Talpinae, and classified South-east Asian moles as follows:

T. k. klossi THOMAS (Thailand, Tonkin)

T. k. malayana CHASEN (Malaya)

T. micrura HODGSON (Southern Himalayas, Nepal, Sikkim, Assam)

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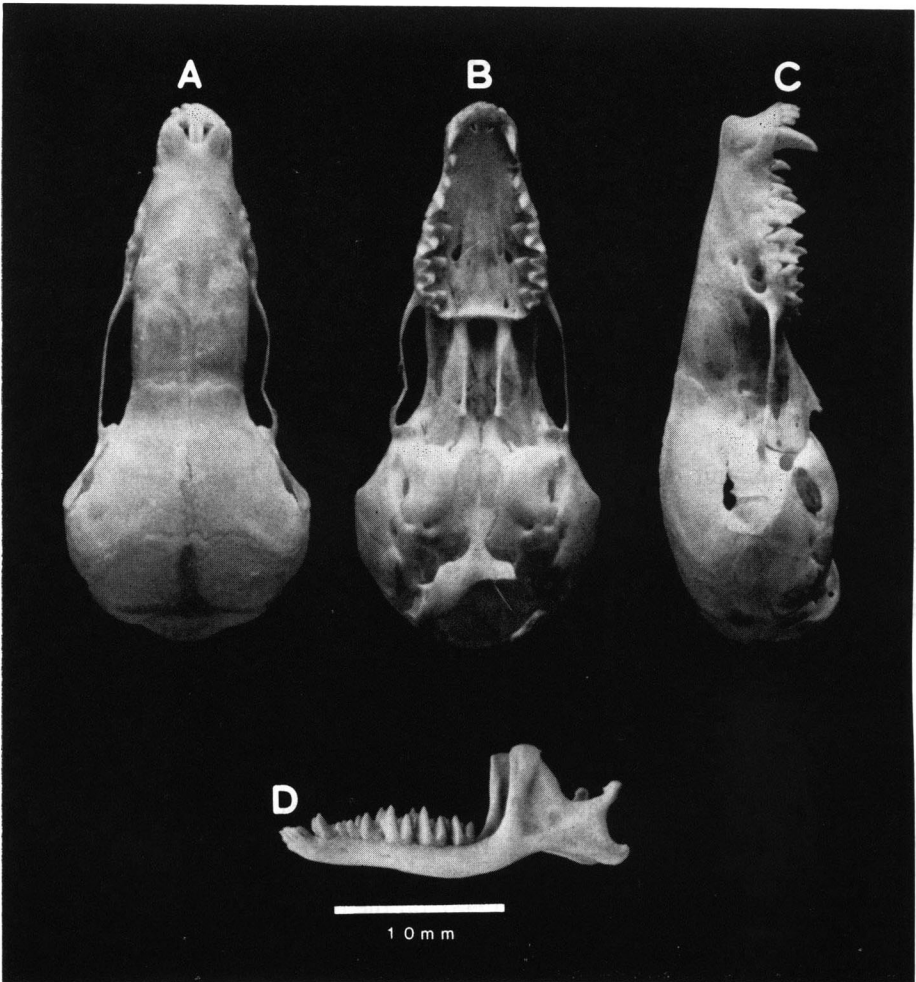


Fig. 1. *Euroscaptor klossi* (THOMAS, 1929), NSMT-M28453. — A, Dorsal aspect of cranium; B, ventral aspect of the same; C, lateral aspect of cranium; D, lateral aspect of mandible.

Parascaptor leucura BLYTH (Assam, Burma, to North Thailand and eastward into Yunnan).

Recently, CORBET and HILL (1986) distinguished six genera, *Talpa*, *Mogera*, *Parascaptor*, *Scaptochirus*, *Euroscaptor* and *Scaptonyx*, in Eurasian moles though they (1980) had previously placed all these in the grand genus *Talpa*, and regarded *E. klossi* as a race of *Euroscaptor micrura*.

I have examined a series of *Talpa micrura* from Darjeeling, Assam, Nepal and the Himalayas, *Talpa klossi* from Pahang, Malaya, and Kieng-Khouang, Laos, and *Talpa longirostris* from Szechuan in the collection of the British Museum (Natural History);

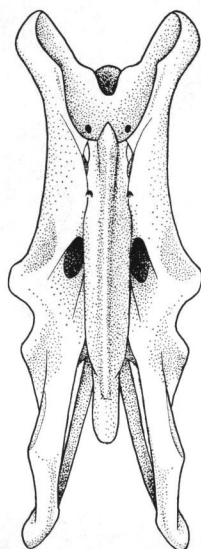


Fig. 2. Dorsal aspect of pelvis of *Euroscaptor klossi* (THOMAS, 1929), NSMT-M28453.

and the type specimen of *Talpa longirostris* (type locality: Moupin, Szechuan) in the Muséum National d'Histoire Naturelle, Paris. As a result of comparison between these series and the Thai specimen under consideration, I have come to the conclusion that "*Talpa*" *klossi* is a good species for the reasons described below.

***Euroscaptor klossi* (THOMAS, 1929)**

Talpa klossi THOMAS, 1929, Anns. Mag. nat. Hist., (10), **3**: 206. — CHASEN, 1940, Bull. Raffles Mus., **15**: 13. — STEIN, 1960, Mitt. zool. Mus. Berlin, **36**: 48.

Euroscaptor klossi: MILLER, 1940, J. Mamm., **21**: 443.

Talpa micrura: SCHWARZ, 1948, Proc. zool. Soc. Lond., **118**: 42. — ELLERMAN & MORRISON-SCOTT, 1951, Checklist of Palaearctic and Indian Mamm. 1758 to 1946, **40**; 1966, *ibid.*, **40**. — CORBET, 1978, Mamm. Palaearctic Reg., **33**. — CORBET & HILL, 1980, World List Mamm. Species, **33**. — YENBUTRA, 1976, List Mamm. Thailand, **2**.

Euroscaptor micrura: CORBET & HILL, 1986, World List Mamm. Species, **38**.

NSMT-M 28453, unknown sex as posterior body was broken, subadult, collected 3 September 1987, by Dr. Tsukané YAMASAKI. Dimensions of the specimen, measured on skeleton, in mm):— Head and body 122.5, tail 16.5, hind foot cum unguis 16.0, hind foot sine unguis 14.0, manus cum unguis 19.0, manus sine unguis 14.0, breadth of manus 11.0, length of dorsal hair ± 7 , greatest length of skull 31.40, condylobasal length without i 30.30, zygomatic width 10.30, interorbital constriction 6.40, width of rostrum 4.45, breadth of braincase 14.5, depth of braincase 8.75, length of auditory bulla 4.69, M2-M2 7.4, C-C 4.0, upper tooth row 11.65, mandible (-i) 18.90, c-m3 9.30, lower tooth row 11.15.

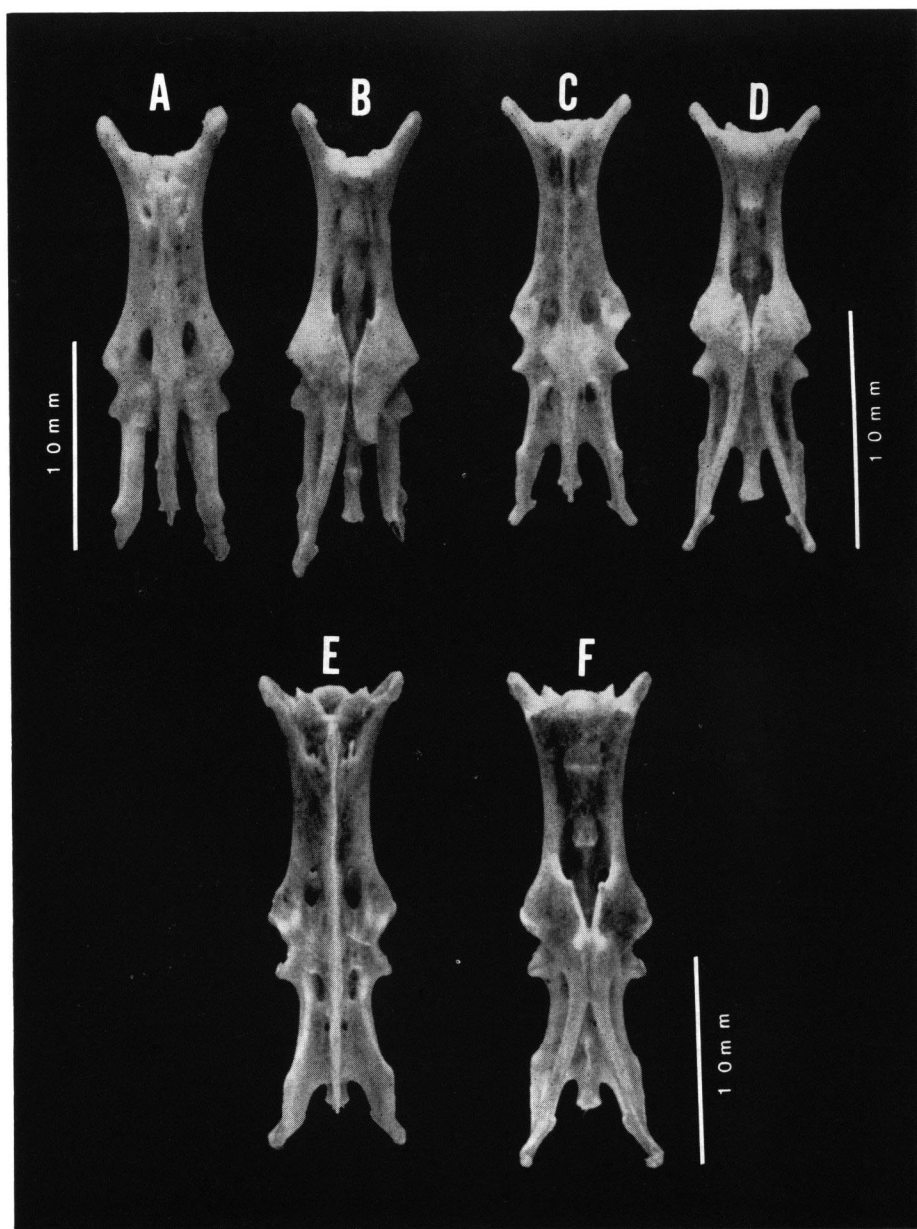


Fig. 3. Pelves of *Euroscaptor klossi*, NSMT-M28453, unknown sex, Thailand (A-B), *E. mizura*, NSMT-M26693, ♂, Kawamata-mura, Fukushima Prefecture (C-D) and *Mogera minor*, NSMT-M14114, ♀, alt. 1,500 m, Mt. Fuji (E-F). A, C and E, dorsal aspects; B, D and F, ventral aspects.



Fig. 4. Pelves of *Mogera wogura*, NSMT-M7597, ♂, Setagaya-ku, Tokyo (A-B), *M. tokudae*, NSMT-M25847, ♂, Niibo-mura, Sado Island (C-D) and *M. kobae*, NSMT-M27982, ♀, Tanabe City, Wakayama Prefecture (E-F). A, C and E, dorsal aspects; B, D and F, ventral aspects.

Characters:— Fur short, very dense, velvety, slate-black, washed by brown, similar above and beneath, with dark greyish brown bases; length of dorsal hairs about 7.0 mm. Tail length 16.5 mm, measured by tail vertebrae, as long as hind foot, number of tail vertebrae 9, while, that of *Talpa micrura* is only 5.0 mm and completely concealed by the fur. Skull slender, especially rostrum conical, braincase narrow and circular in ventral view. Auditory bulla much swollen, semicircular, projecting below surrounding bones on all sides, its aperture elongate, the length occupying 61.8% of the greatest length of bulla. The hamulars short, turned slightly outwards; mesopterygoid space much narrower posteriorly than anteriorly, basioccipital space narrow and very deep. Ante-orbital foramen moderately large, lachrymal foramen above ante-orbital foramen circular; rostrum narrower and somewhat lower than interorbital region, its width being 65% of interorbital constriction (Fig. 1).

Dental formula = $I3/3 \cdot C1/1 \cdot PM4/4 \cdot M3/3 = 44$.

Upper incisors simple, chisel-shaped, the middle pair a little larger than the intermediate, the outer one the smallest. Upper canines slender, without posterior basal cusp; first and third upper premolars two-rooted, similar in size, while the second upper premolar one-rooted, and the fourth premolar larger than the other three, three-rooted and with large internal basal cusp. Upper molars with their crowns much wider externally than internally, each completely divided into two unequal sections by a deep longitudinal groove passing between protocone and bases of paracone and metacone (Fig. 1).

Pelvis markedly different from those of Japanese moles, *Euroscaptor mizura*, *E. ohtai*, *Mogera wogura*, *M. minor*, *M. kobeeae*, and *M. tokudae*, but similar to that of *Talpa europaea*, without lesser sciatic foramen (Figs. 3–4), or the anterior upper portion of pubis is free from sacrum bone and the pubic symphysis is short. Length from

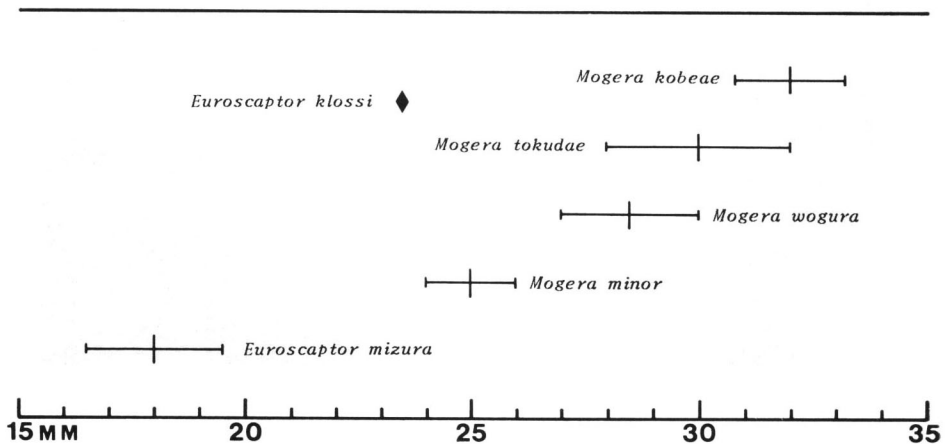


Fig. 5. Comparison of *Mogera* and *Euroscaptor* species in the measurements (in mm) of the length of pelvis. Horizontal lines indicate the range of $M \pm 2 SD$; vertical lines indicate the mean values.

crest of ilium to spine of pubis 23.1 mm (Fig. 2), and from crest of ilium to the middle of acetabulum 14.0 mm. Acetabulum very large and deep; horizontal rami of pubis nearly parallel. Each manual bone larger than those of *E. mizura* and *E. ohtai*, but smaller than those of *Mogera* and *Talpa*, and the arrangement of bones similar to that in *Mogera*, *Talpa* and *Euroscaptor*.

Remarks. The pelvis of *Euroscaptor klossi* is very similar to that of *Talpa europaea*, but differs in size and shape from those of Japanese moles. The total length of pelvis in the Thai specimen examined is not contained in $M \pm 2SD$ of those of *E. mizura* (N=3, from Fukushima and Yamanashi Prefs.), *M. wogura* (N=9, from Tokyo), *M. minor* (N=9, from Yamanashi Pref.), *M. kobeae* (N=9, from Shizuoka Pref.) and *M. tokudae* (N=9, from Sado Is.) (Fig. 5). These Japanese moles have larger and lesser sciatic foramina on their pelvis, but *E. klossi* does not have the latter one. Although I have been studying variations of the shape and size of pelvis in Japanese moles, the above characters are stable without exception. However, the size and shape of larger and lesser sciatic foramina of pelvis differ from species to species among Japanese moles. The characters seem to be indicative of the evolutionary trend at species level.

CORBET and HILL (1986) recognized three species in the genus *Euroscaptor*, *E. longirostris*, *E. micrura* (including *klossi*) and *E. mizura*. Japanese pigmy moles (*E. ohtai* and *mizura*) are much smaller and different from the other Eurasian moles in many respects. The tail length of the Thai specimen examined is larger than that of *E. micrura*, though the upper premolar of the latter species is only one-rooted as in *E. klossi*. *E. longirostris* from China is larger than *klossi* and *micrura*, that is, mean value of the length from the upper canine to the last upper molar is $M \pm SD = 11.51 \pm 0.31$ mm (N=8) in *longirostris* from Szechuan, 10.0 mm in the specimen of *klossi*, and 11.52 mm in the type specimen of *longirostris* according to my measurement. Besides, *longirostris* has two-rooted upper second premolar.

Thus, *Euroscaptor klossi* from Thailand is quite different from *E. longirostris* and *E. micrura*.

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