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- Parepius lewisi*, Bickh.
Carcinops quatuordecimstriata, Steph. Taipin.
Pachylomalus musculus, Mars. Horisha.
Paromalus niponicus, Lew. Horisha.
 — *oceanitis*, Mars. Kotosho.
 — *mendicus*, Lew. Arisan.
 — *viaticus*, Lew. Taihoku.
 — *vernalis*, Lew. Horisha.
 — *sauteri*, Bickh.
Dendrophilus xavieri, Mars. Taipin.
Tribalus punctillatus, Bickh.
 — *colombius*, Mars.
Cyrturus aenescens, Er. Kagi.
Anaglymma circularis, Mars. Kotosho.
Notodoma bullatum, Mars.
 — *formosum*, Bickh.
 — *fungorum*, Lew. Taipin.
Onthophilus ostreatus, Lew. Horisha.
Epiechinus, sp. n. Koshun.
Abracus bonzicus, Mars. Ritosan.
 — *indicus*, Lew.
Anapleus stigmaticus, Schm.
Bacanius niponicus, Lew.
Saprinus speciosus, Er. Taihoku.
 — *optabilis*, Mars. Koshun.
 — *quadriguttatus*, Fabr. Rokkiri.
 — *nitidulus*, Fabr. Taihoku.
 — *varians*, Schm. Koshun.
 — *sinæ*, Mars. Taipin.
Gnathoncus rotundatus, Kugel. Taihoku.

VII.—Notes on the Asiatic Bamboo-Rats (*Rhizomys*, etc.).

By OLDFIELD THOMAS.

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IN connection with the determination of a bamboo-rat obtained in Burma during the Bombay Natural History Society's Mammal Survey, I have examined all the specimens of this interesting group in the Museum, and now make some preliminary notes about them, with descriptions of new species.

The genus *Rhizomys*, as hitherto used, is evidently a composite one, and three groups are distinguishable from each other, typified respectively by the species *sinensis*, *sumatrensis*, and *badius*, the first being the type of *Rhizomys* *, the second

* Although both *sinensis* and *sumatrensis* were included in the genus *Rhizomys*, when first formed by Gray, the former is fixed as the genotype by the paragraph next before "*Rhizomys*" in the description: "The third genus described was founded on a glirine quadruped nearly allied to the Bamboo-Rat [*Mus sumatrensis*]"

of *Nyctocleptes*, and the third of a new genus now described. The chief characters of these three genera are as follows:—

1. NYCTOCLEPTES, Temm.

Size very large. Palm and sole-pads low, hardly raised above the general surface, granulated, the two posterior sole-pads conjoined. Mammæ 2—3=10.

Anteorbital foramina oval or circular. Posterior nares well open, often nearly as wide as high.

Set of incisors intermediate between that found in the other two genera. M^1 about the size of m^2 , not or rarely worn to a lower level.

Range. Burma, Malay Peninsula, and Sumatra.

Type. *Nyctocleptes sumatrensis* (*Nyctocleptes dekan*, Temm.). Other species *cinereus*, McCl. (including *erythro-genys*, Anders.), and *insularis*, sp. n. (*infra*).

2. RHIZOMYS, Gray.

Size rather less than in *Nyctocleptes*. Palm and sole-pads distinct, granulated, the two posterior sole-pads separated, though enlarged. Mammæ normally 1—3=8, though occasionally a minute anterior pectoral pair, not functional in any specimen examined, may be present.

Anteorbital foramina subtriangular. Posterior nares contracted, much higher than broad.

Incisors forming a segment of a comparatively small circle, their points directed backwards. M^1 decidedly smaller at all ages than m^2 , and worn in adults much below the level of the latter.

Range. Assam, Burma, and Siam to South China.

Type. *R. sinensis*, Gray. Other species, *vestitus*, M.-Edw., *davidi*, Thos., *pruinus*, Blyth, *latouchi* and *pannosus*, spp. nn. (*infra*).

3. CANNOMYS *, gen. nov.

Size comparatively small. Palm and sole-pads normal, well defined, not granulated. Mammæ 2—2=8.

Anteorbital foramina and posterior nares much as in *Rhizomys*.

* From *kávva*, cane or bamboo. While searching for a suitable name for this animal, I have noticed that the term *Myoryctes*, given to a fossil Madagascarian rodent by Dr. Forsyth Major (Geol. Mag. (5) v. p. 97, 1908), is preoccupied by Eberth (Zeitschr. Wiss. Zool. xii. p. 530, 1863) (*Myoryktes*, quoted as *Myoryctes* by Scudder, 'Nomenclator,' p. 204, 1882). I would suggest renaming the Malagasy genus *Majoria*, after its distinguished discoverer and describer.

Incisors forming a segment of a large circle, their points thrown strongly forwards. Molars decreasing in size backwards, the first decidedly larger than the second, its grinding-surface not worn lower than that of the latter.

Range. Nepal to Southern Siam, not extending into China.

Type. *Cannomys badius* (*Rhizomys badius*, Hodgs.). Other species *castaneus*, Blyth, and *minor*, Gray.

Descriptions of new species :—

Nyctocleptes insularis, sp. n.

General characters as in *N. sumatrensis*, but size markedly smaller; two adult male skulls measure 75 and 76 mm. in condylo-basal length, and two females 71 mm., while in the Malaccan form these measurements are at least 81 and 78 respectively, and often much more. Crests less developed throughout in specimens of corresponding age, and, as a consequence, the occipital plane is distinctly lower.

Colour very light, though some specimens of the mainland form are similar. Flanks and shoulders whitish; an ill-defined darker line down crown and nape, and the posterior back darker. One specimen in four with a slight tendency to the reddening of the cheeks often found in *sumatrensis*, and still more marked in the more northern *cinereus*.

External dimensions of a male in spirit :—

Head and body 320 mm.; tail 130; hind foot 57·5; ear 17.

Skull-dimensions of male and female, the second the type : condylo-basal length 76, 71; condylo-incisive length 77, 72·5; zygomatic breadth 56, 52; nasals 26·7 × 11, 23 × 11; breadth across frontals anteriorly 21·2; 23·5; intertemporal breadth 12, 12·5; height of crown from alveolus of *m*³ 27·7, 27; occipital plane, height from basion 25, 24 breadth 33·5, 33·5; palatal foramina 7, 6·6; width of posterior nares 5·4, 6; upper molar series (crowns) 14·2, 13·5.

Hab. Deli, Sumatra. Type from Padang Brahrang.

Type. Adult female. B.M. no. 99. 8. 21. 5. Collected and presented by Theo. C. Barclay, Esq. Four specimens examined.

Whatever Hardwicke's meaning was in attaching the name *sumatrensis* to an animal which he only knew from a drawing of a Malaccan specimen, it is quite clear that there is no escape from the use of that term for the peninsular form, and now that the Sumatran representative of the genus proves to be different it must have another name.

The three forms *N. cinereus*, *sumatrensis*, and *insularis*

form a series decreasing in size southwards with a gradual lightening of colour and disappearance of the red on the cheeks. Whether they will prove to be sharply separable from each other, or intergrade, there is as yet not enough material to decide.

Rhizomys latouchei, sp. n.

Size slightly greater than in *R. sinensis* and *pruinus*. Fur soft; hairs of back about 20 mm. in length. Colour of the most pronounced "*pruinus*" character, dark smoky grey profusely grizzled with the white ends to the longer hairs. Under surface rather paler. Top of muzzle darker. Area round mouth greyish white. Hands and feet brown, fingers whiter. Tail blackish, apparently without lighter tip. Mammary, functional, 1—3=8, but there is in addition a minute anterior pectoral pair which have obviously never been used.

Skull heavily built, more so than in *sinensis* and *pruinus*. Nasals evenly narrowing backwards. Anteorbital foramina rounded, less triangular than in the other *Rhizomys*, and more resembling those of *Nyctoleptes*. Interorbital region broad, its edges square, slightly converging backwards, continuous with the parietal ridges; the latter remain separate throughout, at least 5 mm. apart, and do not form a median sagittal crest. Occipital plane comparatively low, more nearly vertical than in other species. Breadth of posterior narial opening about half its height.

Molars rather light. M^1 distinctly worn down below the line of m^2 .

Dimensions of the type:—

(No external measurements available.)

Skull: condylo-basal length 69 mm.; condylo-incisive length 67.5; zygomatic breadth 50; mesial height of zygoma 9; nasals 26×9 ; anteorbital foramen 5.1×5 ; greatest breadth on frontals 19.5; interorbital breadth 13.2; height of crown from alveolus of m^3 27; occipital plane, height from basion 21.5, breadth 32; palatal foramina 7.3 ; upper molar series (crowns) 13.5.

Hab. Swatow, Quangtung, China. "In hills."

Type. Adult female. B.M. no. 92. 2. 1. 27. Collected February 1889, and presented by J. de La Touche, Esq.

While the skin of this species is indistinguishable from that of *R. pruinus*, the skull has some resemblance to that of *Nyctoleptes* by its thick build, rounded anteorbital foramina, and broad unstricted interorbital region.

From its locality it might have been supposed to be

R. sinensis, which has not been rediscovered since its capture near Canton by Reeves nearly 90 years ago; but the skull differs in too many important characters for this to be the case. The anteorbital foramina, the non-development of a sagittal crest or intertemporal waist, the height of the zygomatic bone, and the slant of the occipital plane are all so different that the identity of the two is quite impossible.

I have named this fine animal in honour of its donor, to whom the National Collection is indebted for so many valuable Chinese mammals.

Rhizomys pannosus, sp. n.

R. pruinus group. Mammæ 1—3=8.

Size about as in *R. sinensis*. Fur thin, poor, and rather harsh. General colour near "Verona brown," varying towards greyish brown; the long hairs, as in *pruinus*, brown with white ends, but, owing to their lesser number, there is not the strong hoary effect present in that species. Under surface sparsely haired, almost naked, its thin covering greyish brown. Head rather darker than back. Hands and feet nearly naked, greyish brown. Tail naked, blackish. Mammæ 1—3=8: this number quite clear and definite in two adult females.

Skull short, stout, very heavily built, the crown higher and more convex above than in *pruinus*. Occipital plane not so strongly slanted as in the latter. Sagittal crest developed the whole length of the parietals in the male, but in the female the muscular ridges do not meet except on the posterior third of the parietals, the space between them anteriorly about 4 mm. in breadth. Nasals slightly exceeding the premaxillary processes behind. Anteorbital foramina subtriangular, neither so rounded as in *Nyctocleptes* nor so angular as in *vestitus* and its allies. Zygomata very high mesially. Posterior narial opening medium, neither so open as in *sumatrensis* nor so contracted as in *vestitus*. Incisors not thrown forwards, about as in *pruinus*. Molars rather narrower and lighter than in *pruinus*, the difference especially perceptible in youth. First upper molar smaller and worn lower than the second.

Dimensions of the type (measured on the skin):—

Head and body 320 mm.; tail 120; hind foot (wet) 46.

Skull: condylo-basal length 64.2; condylo-incisive length 64; zygomatic breadth 47; nasals 25×9.5 ; anteorbital foramen 6.8×5 ; breadth between outer corners of the two foramina 23; mesial height of zygoma 9; intertemporal breadth 10.5; height of crown from alveolus of m^3 28.5; occipital plane, height from basion 22.5, breadth 30.7;

palatal foramina 7.5; width of posterior nares 4; upper molar series (crowns) 12.5.

Another, older, female skull has an approximate condylo-basal length of 69 mm., with intertemporal diameter 12 mm.

Hab. Chantabun, S. Siam.

Type. Adult female. B.M. no. 7. 1. 1. 163. Collected by M. Henri Mouhot. Tomes Collection. Three adult and two young specimens, all collected by Mouhot.

This species is distinguishable from its allies, the other members of the *pruinosis* group, by its thin fur, browner colour, and the height and convexity of its brain-case.

VIII.—On Bats of the Genus *Promops*.

By OLDFIELD THOMAS.

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THE genus *Promops*, as restricted by Miller *, contained at the time the latter wrote only two species—*P. nasutus*, Spix, from the Rio São Francisco, Brazil, and *P. fosteri*, Thos., from Paraguay. When describing *P. fosteri*, I took as representing *P. nasutus* the large species so named by Dobson, but Mr. Miller has suggested to me that it is the Paraguayan bat which is the real *nasutus*, and that I should have described the larger form as new.

Since that time a certain amount of additional material has come into the Museum, and I have now examined it with a view to clearing up the confusion on the subject.

The most important specimen is one collected by A. Robert in 1903 at Lamarão, Bahia, a locality so near the Rio São Francisco that the specimen, which agrees sufficiently closely with Peters's description and figure of Spix's type, may be taken as representing the real *Promops nasutus*.

Peters's measurements of the skull are a little inconsistent *inter se*, so that some must be erroneous, but the majority of them, and the excellent figure, agree nearly with Mr. Robert's specimen, which is, as Mr. Miller suggested, a comparatively small form, widely different from the *Molossus nasutus* of Dobson, but yet not quite the same as *P. fosteri*.

A study of the whole series indicates that six forms of *Promops* may be distinguished, two large ones from opposite ends of the range of the genus and four small ones from Brazil, Paraguay, and Argentina. They are mostly distinguished by size, so that, taking an exact measurement

* "Families and Genera of Bats," U.S. Nat. Mus. Bulletin 57, p. 259 (1907).