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## NEW ASIATIC MAMMALS<sup>1</sup>

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In the course of identifying the small mammals collected by the Asiatic Expeditions of The American Museum of Natural History in recent years, the following new forms have been found, which seem worthy of description.

### Soricidæ

#### *Crocidura lar*, new species

TYPE.—Male, skin only, No. 59940, American Museum of Natural History, from Tsagan Nor, Mongolia. August 3, 1922. Third Asiatic Expedition.

DESCRIPTION.—A very small, pale species, with relatively short tail.

Upper surface of body and tail a very pale grayish brown, about "wood brown" of Ridgway (1912), the hairs dark slaty at their bases, then minutely ringed with gray, and tipped with pale brown. The gray rings showing through give a minutely grizzled effect and heighten the pallor of the upper side. Under surface of snout and tail, the entire chin and the backs of fore and hind feet white to the roots of the hairs. The rest of the under side of the body has the hairs slaty gray at the base tipped with white, so that the entire belly looks dull white. The tail is well clothed with short hair forming a small pencil, and is rather sharply bicolor; it has the numerous scattered bristles projecting conspicuously throughout its length.

SKULL.—Unfortunately the skull cannot now be found.

MEASUREMENTS.—The collector's measurements are: head and body, 60 mm.; tail, 29; hind foot, 12; ear, 8.

The discovery of a species of this genus in the Gobi Desert far beyond its previously known northward range in this part of Asia is very interesting. That the species is rare there is evident from the fact that with much trapping no other specimens were secured. This individual was caught in one of the tents into which it came one night. Although the skull is not available for study, the species seems so distinct in its pale desert coloration, small size, and short tail, scarcely twice the length of the hind foot, that I have no hesitation in naming it.

<sup>1</sup>Publications of the Asiatic Expeditions of The American Museum of Natural History. Contribution No. 80.

**Rhinolophidæ****Rhinolophus blythi parvus**, new subspecies

TYPE.—Adult, skin and skull, No. 58465, American Museum of Natural History, from Nodoo, island of Hainan, China. December 8, 1922. Clifford H. Pope, collector; Third Asiatic Expedition.

DESCRIPTION.—Structurally like *R. b. szechwanus* of western China and *R. b. calidus* of southeastern China, but differing from both in its rich russet or darker brown coloring.

Color above in the red phase, nearly "russet" (Ridgway). The individual hairs over the back are pale ochraceous at their bases, deepening to a distinct russet tip about 2 mm. in length. Scattered among these are hairs with minute blackish tips, producing a darkening of the surface. On the sides of the head and on the neck, chest and mid-ventral area, the color is clearer, brighter russet; the throat is paler, pinkish buff. In the axillar area, ventrally, is a well-defined dusky area. Specimens in the brown phase are Mars brown, paling to the roots of the hairs, above; below, drab washed with chestnut at the sides.

SKULL.—The cochleæ are very large, nearly meeting in the midline so that the basioccipital is very much narrowed. There is a well-defined sagittal crest, branching anteriorly to form a ridge over each orbit, with a slight depression between. The first small upper premolar stands quite in the tooth row; while in the lower jaw the minute middle premolar of the type specimen stands in the row, but in other specimens may be partly external to it.

MEASUREMENTS.—In the type the forearm measures 36.3 mm.; third metacarpal, 27; fourth metacarpal, 28; fifth metacarpal, 27.6; tibia, 13.5; foot, 7.

The skull measures: greatest length, 16.5; basal length, 13.3; palatal length, 5.4; palatal bridge, 1.7; zygomatic width, 7.5; mastoid width, 7.7; width outside molars, 5.7; upper cheek teeth (canine to last molar), 5.7; lower cheek teeth (canine to last molar), 6.0.

Among the specimens secured, a bright, tawny phase is the more common, while a deep-brownish phase is also represented. In its brighter, more intense coloring it forms a marked contrast to the dull, gray-colored *R. b. szechwanus* in which the bases of the dorsal hairs are whitish, their tips drab, the belly drab. In *R. b. calidus* of eastern China the color becomes slightly more buffy but in this race from Hainan it is strikingly redder, even to the bases of the hairs. A series of over fifteen skins collected by Mr. Clifford H. Pope shows much uniformity of tint; but the dull-colored, grayish immature specimens are about as bright as adults of *R. b. calidus*.

In the dark or brownish phase this race resembles the two others mentioned, but is a much darker brown. The immature individuals of the series are similar, and it is possible that these brown adults are in reality not fully mature.

***Rhinolophus lanosus spurcus*, new subspecies**

TYPE.—Adult male, skin and skull, No. 58444, American Museum of Natural History, from Nodoo, island of Hainan, China. December 4, 1922. Clifford H. Pope, collector; Third Asiatic Expedition.

DESCRIPTION.—A large, woolly-haired species with the external proportions as in typical *R. lanosus* of Fukien, China, but the skull much larger and the fur more sooty brown.

Andersen described *R. lanosus* as a member of the *philippinensis* group, with the base of the central nose-leaf forming wing-like lateral expansions. The fur is long and woolly, somewhat wavy, of a dull chocolate-brown above and below, tipped minutely with gray, giving a slightly frosted effect. In *R. lanosus* from Fukien, the color is a slightly richer brown.

SKULL.—The skull is decidedly larger than that of *R. lanosus*. The supraorbital ridges in both meet to form a prominent sagittal crest and cut off anteriorly a triangular depression between the orbits. The parietal area shows a curious pitting of the surface of the bone. The upper small premolar is quite in the tooth row but the lower one is partly external, so that it separates the two larger premolars, whereas in the Fukien race it is smaller and more to the exterior, allowing the two large premolars to meet.

MEASUREMENTS.—No collector's measurements accompany the specimens. The forearm measures 70 and 71 mm. in the type and a second male respectively. Third metacarpal of type, 44.7 mm.; fourth metacarpal, 53.2; fifth metacarpal, 54.2; tibia, 36; foot, 18.

The skull measurements of the type follow and, in parenthesis after each, those of an adult male from Fukien: greatest length, occiput to front of canine, 31.3 (28.4); foramen magnum to front of canine, 25.2 (23.0); palatal notch to front of canine, 9.6 (9.2); zygomatic width, 15.5 (13.2); mastoid width, 13.5 (12.8); width across molars, 10.4 (10.3); palatal bridge, 5.0 (4.8); upper cheek teeth, 11.3 (10.7); lower cheek teeth, canine to back of last molar, 12.0 (11.1); mandible from condyle to base of incisors, 21.5 (20.0).

This large woolly-haired species was originally described from Fukien Province, China, whence a small series was later obtained by Dr. Roy Chapman Andrews and Rev. H. R. Caldwell. The skull measurements of the type of *R. lanosus* agree almost exactly with those of a male from Yenping, Fukien, and are thus considerably smaller than those of the Hainan specimens, although the external dimensions are practically the same. Mr. Clifford H. Pope, who secured these bats, writes that they are rare. The first one was found in a prospector's shaft in woods. This tunnel was about fifteen feet deep, slanting, and not completely dark. A second bat was started but not secured in another similar shaft. A third was taken in another tunnel in woods. In each case the solitary bat was the only inhabitant of the cave and hung from roots in the ceiling.

**Hipposideridæ*****Cælops sinicus*, new species**

TYPE.—Adult female, skin No. 84893, and skull No. 84388, American Museum of Natural History, from a cave two miles northeast of Wanhsien, Szechwan, China. February 26, 1926. Collected by Walter Granger; Third Asiatic Expedition.

DESCRIPTION.—Related to *Cælops frithii* Blyth but smaller with a different coloring, and without a space between lower outer incisor and canine.

The pelage is long, dense and woolly, about 11 mm. in length on the back. The hairs, instead of being "shining brown" above and below, with pale bases, as described in *C. frithii* from Bengal, are blackish for the proximal two-thirds, with the terminal third indistinctly brown, nearly "sepia" of Ridgway (1912). The lower surfaces are similarly blackish at the bases of the hairs, then minutely brownish, tipped with gray, producing an indistinctly tricolor effect on close inspection. The membranes and the large translucent ears are smoke-gray.

In the structure of its remarkable nose-leaves, the specimen agrees closely with *C. frithii* as figured by Dobson. The horseshoe and the median erect process posterior to the nostrils are thickly clothed with short stiff hairs, while longer hairs arising from the sides of the nose-leaves behind the horseshoe form a well-defined fringe. On each side are six longer, shining hairs, probably sensory, one from back of the anterior edge of the main leaf of the horseshoe, three along its lateral edge, and two erect hairs from the face of the raised ridge behind the nostrils.

The wing in this genus is peculiar in the shortness of the third finger and the length of the fifth. The thumb has a very long metacarpal and short phalanx (7: 1.6 mm.), the former wholly involved in the propatagium; the second digit has no phalanges, and its metacarpal is minutely longer than the combined metacarpal and first phalanx of the third digit. The latter is the longest digit due to the great length of its second phalanx, for its metacarpal and first phalanx are less than those of the fourth or the fifth digits. The fourth finger is shorter than the third or fifth. The wing membrane arises from the metatarsus at the base of the toes. The calcaneum is well developed, as long as the toes, and serves to spread the interfemoral membrane which is deeply emarginate to within about 6 mm. of the body in the dried skin, and has its free border thinly fringed with short hairs.

SKULL.—The skull, compared with that of *Hipposideros gentilis*, is remarkable for its delicate structure, with a nearly globular brain-case and very narrow inter-orbital constriction, to which the sharp sagittal crest is confined. The frontal shield is nearly flat, its dorsal surface inclined at a sharp angle to the plane of the tooth row, and its anterior swellings but little raised above the general level on each side. The peculiar prolongation of the premaxillæ and maxillæ combine to give the skull a profile that tapers nearly to a point in front.

The upper canine is noticeably compressed, with a prominent secondary cusp, projecting about half-way on the posterior cutting edge. The anterior small upper premolar is distinctly crowded to the outer side of the tooth row, but the second premolar does not quite reach the base of the canine. In the lower jaw the outer incisor abuts closely against the canine instead of being separated by a space as in *C. frithii*, and in height barely exceeds the cingulum of the canine. The anterior lower premolar is slightly to the outer side of the tooth row. All the lower cheek teeth are much compressed and blade-like.

MEASUREMENTS.—The collector's measurements are: head and body, about 38 mm.; ear, 16; spread of wings, 232. The forearm measures 35.5 mm.; thumb, metacarpal, 7; phalanx, 1.6; second finger, metacarpal, 35 (the bone is slightly bowed in the skin); third finger, metacarpal, 26.3; first phalanx, 7; second phalanx (across the chord of the bone as bent in drying), 22; fourth finger, metacarpal, 28.6; first phalanx, 9.0; second phalanx, 10.2; fifth finger, metacarpal, 30.5; first phalanx, 10.1; second phalanx, 12.0; tibia, 16.4; hind foot, 8; calcar, 5.

Skull: greatest length, 17.0; basal length, 13.5; condyle to front of canine, 15.1; palatal length, 6.2; median length of premaxillaries, 4.0; zygomatic width, 7.8; mastoid width, 8.2; interorbital constriction, 1.8; width of frontal shield, 3.9; width outside molars, 5.8; front of canine to back of last upper molar, 6.4; lower tooth row, incisor to back of last molar, 6.8.

Of this rare genus there is at present recognized but two species, *Cælops frithii*, of Bengal and Java and *C. robinsoni* of Pahang, a slightly smaller replica of it. The single individual on which the new species is based extends the known range of the genus well into China. While its relationship to the Indian species may eventually prove to be closer than indicated, its smaller size and different style of coloring seem to proclaim its specific distinctness. The highly modified upper canines with their strong forward projection, prominent secondary cusp, and compressed cutting edge, the deeply emarginate tail membrane, the peculiar nose-leaves and enlarged ears may indicate some unusual feeding habit. In contrast to its relatives *Hipposideros*, *Cælops* seems to be solitary in habits. The specimen described was secured by Mr. Walter Granger from a "warm-air" cave, in which it was evidently hibernating.

