

Article XXIX.—MAMMALS FROM SHEN-SI PROVINCE, CHINA.

BY J. A. ALLEN.

A small collection of mammals from Mount Tai-pai, Shen-si Province, China, recently acquired by the Museum through Mr. Alan Owston of Yokohama, contains several species of interest. It comprises 55 specimens, representing 16 species, some of which appear to be undescribed. The material is rather poorly prepared, the skulls having been left in the skins, and when removed were found to be more or less mutilated, some of them lacking the whole of the postorbital portion. The collection is of interest as coming from a hitherto unexplored locality, the Tai-pa-shiang mountains, on the western border of Shen-si, which are said to reach an altitude of about 11,000 feet. The specimens are mostly labeled simply "Tai-pa-shiang," with the sex of the specimen and date of collection, but a few are labeled as from "Yumonko, foot of Tai-pa-shiang," and others are marked "Si-Tai-pa-shiang." In no case is the altitude indicated.

1. *Budorcas taxicolor tibetanus* Milne-Edwards.—A horn of an adult and skins and skulls of two very young animals, Tai-pa-shiang, August 16 and October 25. The two specimens are respectively male and female, and differ much in color, the male having the body, except the ventral surface and the dorsal stripe, pale yellowish, the dorsal stripe, the ventral surface and limbs dark dull reddish brown; top of nose and edge of ears blackish. The other has the body nearly white, with the underparts and limbs dark brown; the dorsal stripe is dark brown only over the shoulders, and black mixed with white on the top of the neck and posterior two-thirds of the dorsal line; black hairs are also appearing on the limbs. Both specimens are in the first pelage of the young, but the older one (female) is apparently beginning to acquire the adult pelage, to which the black hairs of the dorsal stripe and limbs pertain.

2. *Næmorhedus*¹ *griseus* Milne-Edwards.—Two skins and skulls of very young males, Si-Tai-pa-shiang, July 29 and November 18, 1905. In

¹ *Næmorhedus* H. Smith, 1827; type *Antelope goral* Hardwick, by restriction of J. E. Gray (Ann. and Mag., XVIII, Oct. 1846, p. 232). After having gone over the ground carefully, I agree with Pocock (Ann. and Mag. Nat. Hist. (8), I, Feb., 1908, pp. 183-188) that the proper generic name of the Gorals is *Næmorhedus* H. Smith (syn., *Kemas* Ogilby and *Urotragus* Gray), and that the proper generic name of the Serows is *Capricornus* Ogilby, although Lydekker (P. Z. S., 1908, Pt. iv, April, 1909, p. 941) prefers not to follow his friend Pocock.

the younger specimens the milk premolars are still in place; in the other p^{1-2} and m^1 are just through the gum.

3. ***Capreolus bedfordi* Thomas.**—An old female (teeth greatly worn) in summer pelage, and two young in spotted coat, Tai-pa-shiang, July 17, 27, and August 3. In the old female the hairs of the whole median dorsal region are black tipped with red, the black more or less visible at the surface; nose with a broad black band as in *C. capreolus*.

4. ***Lepus swinhoei filchneri* Matschie.**—Seventeen specimens, Tai-pa shiang (about half are labeled as from Yumonko), May 22 (one specimen), July 29–August 5, and November 5–16. They appear to represent a paler form than the type of *L. swinhoei* Thomas,¹ from Chefoo, with a shorter rostrum, judging by Thomas's measurements of the skull and Swinhoe's² description of the external characters. They are provisionally referred to *Lepus filchneri* Matschie,³ based on specimens taken at Hing-an-fu, a little to the northeastward from Tai-pa-shiang, in southern Shen-si.

The average measurements of 12 adult skulls (all of which unfortunately lack the occipital region) indicate a skull of the same zygomatic and inter-orbital width as the type skull of *swinhoei*, but with more tapering and shorter nasals and shorter rostrum. Thus the nasals average 4.5 mm. shorter on the outer border and 1 mm. narrower at the front border, while the diastema and palatine foramina average each 2 mm. shorter, and the distance from the postorbital notch to the tip of the nasals is 5 mm. less. It is impossible to make a proper statement of the color difference in the absence of specimens of the type form of *swinhoei* for comparison. The general effect of the ground color of the dorsal surface, in the same (fall) pelage as the type of *swinhoei*, is pale grayish fulvous instead of "clay-color" or, as later stated, "ochraceous buff." Furthermore, it is hardly probable that a form of hare should be the same at the extreme eastern end of the Chefoo Peninsula and at Tai-pa-shiang and the region adjacent, 1200 miles to the westward in the interior of the continent.

Of the present series, 7 specimens were taken in November (Nov. 5–16) and are thus in fresh fall pelage, while 7 are in worn summer pelage, having been taken in May (one example) and July 29–August 5 (six examples); the other three are young, one-eighth to about one-third grown. Six of the November specimens present little variation in color, the seventh being markedly paler in general ground color and on the pectoral collar. The summer specimens are in exceedingly worn pelage, from which the profuse black tips of the hairs seen in the fresh pelage have nearly disappeared, the

¹ Ann. and Mag. Nat. Hist. (6), XIII, April, 1894, p. 364.

² Proc. Zool. Soc. London, 1870, pp. 449, 450.

³ Expedition Filchner nach China und Tibet, Bd. X, T. i, 1908, pp. 217–219.

dorsal surface being only indistinctly punctated with black. The young are similar in coloration to the summer adults, but with much shorter and finer fur.

A prominent feature of the fresh fall pelage is the presence along the sides of the body of scattered long bristly white hairs, which project 30–35 mm. beyond the rest of the pelage, and thus are conspicuous by their length, whitish color and abundance.

It is possible that the Tai-pa-shiang specimens are different from those from the valley of the Hang-hiang River, and are thus not strictly referable to *L. filchneri*. In fact, I at first distinguished them from *L. swinhoei* as *L. swinhoei brevinasus* subsp. nov., with No. 27528, ♀ ad., as the type, but later suppressed the supposed new form on discovering that Matschie had already given a name to a geographically near form.

Since the above was written Mr. Oldfield Thomas has described ¹ a pale form of *Lepus swinhoei* from the Ordos Desert, northern Shen-si, as *L. s. subluteus*. This paler desert form can hardly be the same as that from the mountains of southwestern Shen-si. Mr. Thomas thinks "there is no doubt *L. filchneri* should be referred to *L. swinhoei*," and gives the range of *L. swinhoei* as "from Chefoo and Nanking westwards to southern Shen-si."

5. ***Ochotona cansus* Lyon.**—Represented by 10 specimens (skins with fragmentary skulls) taken May 11, 29, June 4, 5, 17, July 1, September 26, 28.

Five specimens, collected May 11–June 5, in worn pelage, are distinctly rufescent above and superficially white below without any tinge of fulvous, or any fulvous lateral band bordering the ventral surface. Another June specimen (June 4) is in mixed pelage, having acquired to a large extent the post-breeding dress; a specimen taken June 17, and another taken July 1, have nearly completed the change, as have the two September specimens. These show a little rufous on the top of the head, but not elsewhere, the general coloration above being a pale yellowish brown slightly varied with black-tipped hairs, and the ventral surface is yellowish white, strongest and tending to rufous on the median line. The sides of the neck in front of the shoulders are dull rusty fulvous, with a tendency to its extension posteriorly to the sides of the rump, which doubtless later, in full winter coat, is a feature of the coloration, as already well shown in one of the September specimens.

The specimens are provisionally referred to *Ochotona cansus* Lyon, based on a single specimen collected at Taoches, Kan-su, with which some of the specimens closely agree. The imperfect condition of the skulls renders difficult the satisfactory determination of the species, while the wide range of seasonal variation in color shown by the present series further complicates the problem.

¹ Proc. Zool. Soc. London, 1908, 979, 980 (April, 1909).

6. **Micromys pygmæus** (*Milne-Edwards*).—One specimen, male (skull very much broken), foot of Si-Tai-pa-shiang.

7. **Myotalpa rufescens** sp. nov.

Type, No. 27549, ♀ ad., foot of Tai-pa-shiang, Shen-si, China, July 24, 1905; coll. A. Owston.

General color rufescent brown (cinnamon-rufous of Ridgway), the hairs being dusky slate conspicuously tipped with cinnamon rufous, both above and below, but most strongly on the dorsal surface. Nose with a truncated V-shaped spot of buffy white, 8 mm. long on the median line, 8 mm. wide on the front border and 5 mm. wide on the posterior border; rest of front of head to behind the eyes grayish brown, the orbital region clear gray and the crown darker with a rufescent tinge; upper surface of fore and hind feet well clothed, silvery grayish white, passing into darker proximally; tail well clothed, brownish white; middle claw of fore feet longest, the second intermediate between third and fourth; on the hind feet third and fourth claws longest and subequal.

Length of head and body in skin, 186 mm.; tail vertebræ, 33; hind foot (s. u.), 25, (c. u., 32); third claw of fore foot, 13. The skull is too imperfect for full measurements, it lacking the occipital portion and the greater part of palatal region. Diastema, 13.5; length of palatine foramina, 18; interorbital constriction, 7.3; lower jaw, length (incisive border to condyle), 31; height at angle, 20; lower tooththrow, 11.

This species bears a general resemblance in external characters to *M. cansus* Lyon, from Taocheo, Kan-su, northwestern China, but is darker and more rufescent, and has the feet and tail more heavily haired. There are important cranial and color differences that seem to separate the present form from all those previously described. The rostrum is broad, and the nasals uniformly broaden apically, as in *M. fontanieri* as figured by Milne-Edwards,¹ from which, however, the nasals differ in greater posterior extension and deep posterior emargination, the latter feature being as shown in Milne-Edwards's figure of his *Siphneus myospalax* (*l. c.*, pl. viii, fig. 5). In the present species, however, the nasals extend to a point slightly beyond the posterior border of the infraorbital foramen, as is not the case in any of the other species. From *M. cansus* it further differs in the form of the first upper molar, in which the inner loops are relatively much smaller than in *M. cansus*.

8. **Sciurotamias owstoni** sp. nov.

Type, No. 27545, ♀ ad., Tai-pa-shiang Mountains, Shen-si, China, Oct. 8, 1905; coll. A. Owston.

Whole top of head mixed fulvous and dusky, fulvous prevailing; nape and shoulders mixed gray and dusky, pale yellowish gray prevailing, producing a rather

¹ Recherches Mammifères, pll. vii.

conspicuous gray mantle; posterior two-thirds of dorsal region rusty-fulvous and dusky, the rusty-fulvous strongly prevailing; flanks paler fulvous grizzled with dusky, passing gradually into the strong yellowish buff of the whole ventral surface; eye-ring broad, well-defined, pale yellowish white; an indistinct fulvous band from side of nose to ear; below this an ill-defined blackish cheek-stripe; ears moderate, nearly naked, grayish posteriorly, inner surface dull fulvous; a large postauricular spot of white, the hairs soft and fluffy; tail above mixed fulvous, black and white, the hairs being fulvous for the basal two-thirds, then broadly ringed with black and conspicuously tipped with white; lower surface of tail pale fulvous, with a submarginal band of black and an outer fringe of white; feet finely varied with pale fulvous and dusky, giving a grizzled yellowish gray brown effect. The pelage is rather short, the under fur plumbeous, the shorter hairs black basally and tipped with fulvous, mixed sparingly with coarser longer hairs wholly black, which add a grizzled effect to the surface coloration; pelage of the ventral surface and inside of limbs plumbeous at base, broadly tipped with yellowish, varying in different specimens from pale yellow to ochraceous.

Measurements from a well-made skin: head and body, 175 mm.; tail vertebræ, 145; tail to end of hairs, 200; hind foot (s. u.), 47 (c. u., 50). The skulls are all imperfect, lacking the occipital region. The skull of the type measures: tip of nasals to parieto-occipital suture, 52; zygomatic breadth, 30; interorbital breadth, 13; postorbital breadth, 15; length of nasals, 17; palatal length, 27; upper tooththrow, 9.

Represented by six specimens, all from the type locality, Tai-pa-shiang, Shensi Province, China.

Sciurotamias owstoni is allied to *S. davidianus*, type of the genus *Sciurotamias*, from the mountains near Peking, but is much more richly colored throughout. (Compared with a Peking specimen in the U. S. National Museum, which is very much grayer and less fulvous.)

9. *Eutamias albogularis* sp. nov.

Type, No. 27565, ♂ ad., Tai-pa-shiang, Shen-si, China, July 13, 1905; coll. A. Owston.

With five broad black dorsal stripes. The median black stripe extends from between the ears to the base of the tail, 8-10 mm. wide over the mid-dorsal region, narrower and less strongly defined toward either end; inner lateral black stripe nearly as wide as the median but shorter, extending from front of shoulders to loins; outer lateral stripe also broad and black but much shorter; the light bands between the dark stripes are gray anteriorly and more or less fulvous or pale rufous posteriorly; the outer light stripe broader and lighter than the inner ones. Three stripes on each side of the head dusky mixed with pale rusty. Top of nose with a small spot of blackish; top of head pale rufous, varied with black-tipped hairs; a faint superciliary streak of dusky; line through and enclosing eye pale buffy white, divided behind the eye by a short dusky stripe; below this a broad cheek-stripe of mixed dusky and rufous, extending from the side of the nose to below the ear; sides of head below the cheek-stripe cream buff, continued faintly posteriorly to front of shoulder; top of shoulders nearly to middle of back gray; posterior part of back, rump and

outer surface of hind limbs yellowish rufous; flanks and outer surface of fore limbs pale grayish, the basal portion of the fur plumbeous; upper surface of tail grizzled black and white, fulvous beneath the surface, and broadly fringed with white; upper surface of fore and hind feet duller and yellower than lower median area of tail; ears externally dusky toward the base, apical third whitish; inner surface dusky gray basally, varied with fulvous apically, with a very narrow whitish border on the posterior margin; an indistinct postauricular grayish patch, whitish in half-grown specimens.

Head and body (of type, from skin), 160 mm.; tail vertebræ, 120; ear, 15; hind foot (s. u.), 33. The skulls are too imperfect for measurement.

Represented by six specimens, all from Tai-pa-shiang, taken May 29, July 10–13, and Oct. 10. Four are adult, and two are one-third to half grown. The October specimen is brighter and richer colored than the May and July examples, the rufous of the lower back and the yellow of the ventral surface being much deeper and the gray of the scapular region less clear.

Eutamias albovarius agrees in general features with *E. orientalis* (Bonhote), from the upper Ussuri River, Siberia, but it differs from that form in having the whole ventral surface pale yellow instead of clear white, the lower back stronger ferrugineous, and five distinct dorsal stripes instead of three. It needs no comparison with either *E. asiaticus* (Gmelin) or *E. senescens* Miller.

10. *Citellus mongolicus* subsp. nov.?—An adult female, "Foot of Tai-pa-shiang," Nov. 18. While referable to the *C. mongolicus* group, it differs from it somewhat in coloration, and is doubtless separable, but the specimen lacks part of the tail and is otherwise unsatisfactory as the basis of a new name.

11. *Felis* sp.—One specimen (skin only, with imperfect tail), Tai-pa-shiang, August.

12. *Lutra lutra* (Linnæus). One specimen (skin only), female, Yumonko, Tai-pa-shiang, October 2. (Probably the *Lutra hanensis* Matschie).

13. *Lutreola moupinensis* (Milne-Edwards).—Two specimens, Yumonko, foot of Tai-pa-shiang, November.

14. *Lutreola davidiana* (Milne-Edwards). One specimen, male, Si-Tai-pa-shiang, Nov. 18.

15. *Meles leucurus* Hodgson.—An old female, skin and skull, Yumonko, Tai-pa-shiang.

16. *Vulpes lineiventer* Swinhoe.—An adult female, skin and skull, Yumonko, Tai-pa-shiang, August 8.

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ERRATA.

Page 151, line 12, for **thompsoni** read **thomsoni**, and for THOMPSON read THOMSON.

" 201, legend of Fig. 23, for dorsal read lateral.

" 339, lines 2 and 14, for Papagon read Papahag.

" 340, line 1, for Sablon read Soblon.

" 341, " 14, for Santa Cruz Laguna read Santa Cruz, Laguna.

" 341, " 15, for Ramblon read Romblon.

" 342, " 7, for Ramblon read Romblon.

" 342, lines 17 and 19, for Santa Cruz Laguna read Santa Cruz, Laguna.

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