

Article XIII.—MAMMALS COLLECTED IN THE DUTCH EAST INDIES BY MR. ROY C. ANDREWS ON THE CRUISE OF THE 'ALBATROSS' IN 1909.

BY J. A. ALLEN.

Through the courtesy of the U. S. Fish Commission, Mr. Roy C. Andrews, Assistant Curator of Mammalogy, American Museum of Natural History, was appointed to join the scientific staff of the U. S. Fish Commission steamer 'Albatross' on its cruise in the Indian Archipelago in 1909, to collect natural history material in the interest of the American Museum. Mr. Andrews left New York August 25, and joined the 'Albatross' at Manila October 10. The opportunities for collecting land animals proved to be infrequent and of short duration, varying from a few hours to two or three days, while the steamer was coaling at the various ports visited. Notwithstanding this handicap Mr. Andrews obtained about 50 specimens of mammals, including skeletons of several species of monkeys, etc., an important collection of birds numbering about 425 specimens, and much anthropological material.

The principal localities at which mammals were collected are: Mindoro, Philippine Islands; Tawao and Sebattik Island, British North Borneo; Limbé Strait, Northeast Celebes; Garontalo Gulf, North Celebes; Buton Island, Southeast Celebes; Bouru Island, Molucca Islands.

I also include in this paper (by permission) the description of a new squirrel from Borneo, collected by Mr. C. William Beebe, Curator of Birds, New York Zoölogical Society, on the Kuser Asiatic Expedition, and an apparently undescribed squirrel from Formosa, recently acquired by purchase.

1. **Phalanger ursinus** *Temminck*.

One specimen, adult male, skin and skeleton, Limbé Strait, Northeast Celebes, Nov. 12, 1909.

2. **Sus celebensis** *Müller & Schlegel*.

Adult male, skin and skeleton, Limbé Strait, Northeast Celebes, Nov. 12, 1909.

3. **Bubalus mindorensis** *Heude*.

Adult male, skin and skeleton, near mouth of Bongalon River, Mindoro, Philippine Islands. This specimen was collected for the Museum on Mr. Andrews's order after he left the Philippines.

4. **Tragulus borneanus** *Miller*.

Young male (about half grown), skin and skeleton, Sebattik Island, British North Borneo. November 3, 1909.

5. *Mus rajah* Thomas.

Two specimens Sebattik Island, British North Borneo, November 3, 1909.

6. *Mus mindorensis* Thomas.

One specimen, Calapan, Mindoro, Philippine Islands, Oct. 19, 1909.

7. *Mus neglectus* Jentink.

Two specimens, Sebattik Island, British North Borneo. These probably represent an insular form of the *neglectus* group. Tail unicolor dark brown and naked.

8. *Mus andrewsi* sp. nov.

Type, No. 32193, ♂ ad., Buton Island, Celebes, Dec. 13, 1909; coll. Roy C. Andrews, for whom the species is named.

Fur long and soft, without spines. General color of the whole dorsal region cinnamon rufous finely grizzled with black-tipped and white-tipped hairs, the former prevailing, the hairs being grayish plumbeous at base darkening to blackish and broadly ringed subapically with pale rufous, and for the most part tipped narrowly with black, mixed with many wholly black-tipped hairs and a few light-tipped hairs; sides of the body similar in color to the back but much lighter; ventral surface whitish gray, the hairs darker but still light gray basally; top of head to nose like the back or slightly lighter; limbs like the sides of the body; feet flesh-colored, scantily clothed with short glistening white hairs; ears large, naked, much longer than broad, dark brown above and on sides, flesh color below and all around at the extreme tip.

Total length (type), 260; head and body, 147; tail, 113, hind foot, 38. Skull, total length, 42; zygomatic breadth, 20; breadth of braincase, 15; length of nasals, 17; greatest breadth of nasals, 6; length of palate, 17.2; diastema, 11; upper tooththrow, 7.6.

A second specimen has practically the same external measurements, but is a much younger adult, as shown by the skull, the teeth being wholly unworn, and the skull less heavily ossified and much smaller, the total length being 39 mm. as against 42 mm. in the type, in which the teeth are greatly worn.

This species has many points of resemblance to *Mus luzonensis* Thomas, not only in coloration and proportions but in cranial characters. The type shows a tendency to albinism through the presence of scattered white hairs and one or two small bunches of white hairs on the back, and an irregular submedian line of wholly white hairs on the ventral surface.

9. *Mus buruensis* sp. nov.

Type, No. 31296, ♂ ad., Bouru Island, Molucca Islands, Dec. 11, 1909; coll. Roy C. Andrews.

Pelage short, soft, and somewhat glossy, mixed abundantly with spiny hairs over the middle of the back.

General color above pale rufous brown strongly varied with black, which is the prevailing tone of the mid-dorsal region, varying to rufous from the loins posteriorly, where the pelage is longer, softer, and spineless; top of the head like the back; sides paler, passing gradually into the silvery gray of the ventral surface, where the hairs are dark gray at base and broadly tipped with whitish, with a faint wash of pale rufous over the pectoral region; outer surface of the limbs like the adjoining region, inner surface grayish white like the ventral surface; fore feet edged with flesh color with a dusky line down the middle extending nearly to the end of the toes; hind feet rusty blackish with the edges silvery gray, the hairs short and glistening; ears dark brown, nearly naked; tail slightly longer than the head and body, wholly dark brown, sparsely haired apically and tipped with a slight pencil of black hairs.

Total length, 210; head and body, 95; tail, 115; hind foot, 26. The skull is imperfect, lacking the occipital portion. Length from tip of nasals to frontoparietal suture, 21.5; length of nasals, 12; greatest breadth of nasals, 4; interorbital breadth, 5.5; breadth of braincase, 13; palatal length, 14; length of upper toothrow, 6; diastema, 8.

This species should be compared with *Mus musschenbroekii* Jentik, from Menado, Celebes, which it resembles in coloration and in the character of the spinous pelage, but from which it differs in much smaller size and relatively much longer tail. The single specimen (type) is a fully adult male, in good condition except that it lacks the occipital portion of the skull.

10. ***Sciurus rufoniger pluto*** (*Gray*).

Two specimens: female, Tawao, British North Borneo, Jan. 2, 1910; male, Sebattik Island, British North Borneo, Jan. 3, 1910.

11. ***Pteropus alecto*** *Temminck*.

Seven specimens — 2 skins, 5 alcoholics. Buka Island, Gulf of Gorontalo, Celebes, Nov. 20, 1909.

"Found hanging on trees in great numbers, estimated at about 20,000."
— R. C. A.

12. ***Nasalis larvatus*** (*Wurmb*).

A young female, Sebattik Island, Northeast Borneo, Jan. 10, 1910.

13. ***Cynopithecus niger*** (*Desmarest*).

Eight specimens, Limbé Strait, Northeast Celebes, Nov. 12, 1909, as follows: 1 skin with complete skeleton, 2 skins with skulls, 2 skins without skulls (killed by sailors and skulls destroyed), and 3 skulls with head skins only.

14. ***Magus ochreatus*** (*Gilby*).

Five specimens, 1 adult male, 3 adult females, 1 female half-grown, Burton Island, Southeast Celebes, Dec. 13, 1909.

The following external measurements were taken:

No.	30613,	♂,	total length	530;	tail	vertebræ,	35.
"	30612,	♀,	"	450;	"	"	35.
"	30611,	♀,	"	475;	"	"	28.
"	30610,	♀,	"	440;	"	"	45.
"	30614,	♀,	"	250;	"	"	20.

"All were killed out of a single tree. There were two others which, although badly wounded, escaped." — R. C. A.

No. 30611 is albinistic, the general coloration being much lighter than in the others, the top of the head and neck posteriorly to the shoulders being nearly white, with whitish areas on the fore arms and sides of the body.

15. *Pithecus philippinensis* (Is. Geoffroy).

One young male, Calapan, Mindoro, Philippine Islands, Oct. 19, 1909.

16. *Pithecus mandibularis* Elliot.

Four specimens: Sebattik Island, British North Borneo, Jan. 4, 1910, 3 females, one an old adult, the others young; Tewao, British North Borneo, Jan. 2, 1910, young male.

New Squirrels from Borneo and Formosa.

Sciurus beebei sp. nov.

Type, No. 32624, ♀ ad. (original number Bo. 40), 10 miles south of Kuching, Sarawak, Borneo, June 26, 1910; coll. of Mr. C. William Beebe, for whom the species is named.

Upperparts uniform olive gray from nose to base of tail, including flanks; the hairs individually are plumbeous for the basal two-thirds, then narrowly annulated with fulvous and black — usually with two rings of fulvous and two of black, the tips of the hairs being either fulvous or black; ventral surface from lower throat to base of tail banded longitudinally with broad stripes of black and white, as follows: a median band of black about 10 mm. wide, with a broad band of white on either side of about the same width, and an outer band of black on either side, each about 8 mm. wide, all of equal length and approximately equal width; proximal half of the tail all around uniform with the back, or slightly more fulvous, the apical half black, varied with fulvous-tipped hairs at the extreme tip; limbs uniform with the upper surface, becoming gradually blackish on the feet and especially on the toes; ears small, rounded, pale rusty apically on the inner surface and blackish on the outer surface; no postocular spot; nose rather more fulvous than top of head.

Collector's measurements: Length, $17\frac{1}{2}$ in. (445 mm.); tail, 8 in. (204 mm.); ear, 8×14 mm. (dry skin); hind foot, 48. The skull is unfortunately lacking.

This squirrel strikingly resembles the colored figure of *Sciurus quinquestriatus* Anderson (P. Z. S., 1871, pl. x), but this colored figure does not agree well with the accompanying description, nor with two specimens collected by Mr. Beebe in Upper Burma, not far from the type locality of *S. quinquestriatus*, — a remote and very different region climatically from the coast of southern Sarawak, Borneo.

***Tamiops sauteri* sp. nov.**

Type, No. 31621, ♂, Chip Chip, Northern Formosa, November, 1908.

With three broad black dorsal stripes, the median one extending from the shoulders to the base of the tail, the outer ones shorter and broader, extending only from behind the shoulders to the hips; inner pair of light stripes nearly concolor with the general coloration of the nape and shoulders; outer pair of light stripes fulvous, paler than the corresponding stripes in *Tamiops leucotis* (Temm.) from the Malay Peninsula; general color of the upper parts mixed pale fulvous and gray, more gray on the nape and more strongly fulvous on the head; ears black, tufted with white; face markings as in *T. mccllellandii hainanus*; under parts fulvous gray; tail mixed black and ochraceous.

Head and body (in a well-made skin), 127 mm.; tail vertebræ, about 90.

Based on two skins from Chip Chip, northern Formosa, received with a good series of *T. mccllellandii formosanus* (Bonhote) from the same locality, collected also in November. *T. sauteri* differs from the latter in being smaller, with the upper parts much grayer and less fulvous, and in having three broad black dorsal stripes instead of only one. Named for Mr. H. Sauter, through whom the specimens were obtained.

The same collection also contained five specimens of *Heterosciurus*, two of which represent *H. taiwanensis taiwanensis* (Bonhote), one his *H. t. roberti*, while the other two approach his *H. t. centralis* in being chestnut below with a narrow median line of gray, instead of a "narrow strip of chestnut running from the inner side of each fore limb to the inner side of each corresponding hind limb." The two gray-bellied specimens are from Teraso, the other three from Chip Chip. Irregular blotches of dull chestnut on the ventral surface of one of the Teraso specimens, and the narrow gray median ventral line in two from Chip Chip seem to indicate intergradation between all three forms (all from Formosa), as implied by Mr. Bonhote's form of nomenclature.

