Article IV.—DESCRIPTIONS OF THREE NEW SQUIR-RELS FROM SOUTH AMERICA.

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Recent study shows that tropical North America has a wonderful variety of Tree Squirrels, and when Northern South America has been more thoroughly explored, it will doubtless prove to be equally rich in these interesting mammals. Through the courtesy of Mr. F. W. True, Executive Curator, U. S. National Museum, and Dr. J. A. Allen, Curator of Mammals in the American Museum of Natural History, New York, the series of tropical American squirrels from the collections in their charge were recently placed in my hands for examination. Among the specimens from South America are three which appear to be undescribed. One of these, S. isthmius, a very distinct species of Microsciurus, is represented by two specimens taken many years ago during explorations on the Isthmus of Darien by Lieut. Michler, U. S. A. The other two, S. similis and S. caucensis, are from a collection recently obtained by the American Museum from the upper Cauca River, Colombia, and I am especially indebted to Dr. Allen for the privilege of describing them. S. caucensis is very interesting on account of its close external resemblance to Microsciurus, while in reality, as shown by its skull, it belongs to the subgenus Guerlinguetus. All measurements in this paper are in millimetres.

Sciurus (Microsciurus) isthmius, sp. nov.

DARIEN SQUIRREL.

Type, No. 388984 U. S. National Museum. Collected on the Truando River, Colombia, by. A. Schott.

Distribution.—Humid tropical forests of Truando River. Known only from the type locality.

Specific characters.—Size about the same as S. alfari, but color very different. Upper parts yellowish brown; neck and breast dark rufous; abdomen dark reddish brown. Ears short, rounded, well haired, more yellowish than back. Tail rounded. Pelage thin and dorsal hairs comparatively coarse.

¹ The Truando River is a tributary on the west side of the Rio Atrato at the extreme southeast end of the Isthmus of Darien, Colombia.

Color.—Entire upperparts, including feet, uniform grizzled, dark yellowish brown; ears yellowish brown, much paler than crown; sides of nose and chin dingy brown with suffusion of dull rufous; under side of neck and breast dingy ferruginous, shading posteriorly into dark reddish brown lightly washed with rufous; tail above grizzled rusty brown and black, hairs indistinctly tipped with pale yellowish; tail below similar but median area more rusty rufous; hairs on back black with broad subterminal rings of yellowish brown.

Variation.—A topotype of this species (No. 3403 U. S. Nat. Museum) is like the type except that the crown is thinly washed with blackish, and the underparts are brighter ferruginous with a heavier wash of this color over the abdomen.

Measurements of type, from dried skin.—Length of body, 150; tail, imperfect; hind foot, 37.

Cranial characters.—Premolars \(\frac{a}{2}\). Skull (See Fig. 1), including rostrum, decidedly broader and more massive than in either S. alfari or S. peruanus; the vertical part of jugal narrower than in alfari but broader than in peruanus, and



Fig. 1. Sciurus isthmius. Natural size, type, No. 37344, U. S. Nat. Mus.

the upper molar series the same length as in the last named species; the nasals more rounded posteriorly and the lower jaw more massive than in either of the two species named. The skull of the type measures: Palatal length, 15; interorbital breadth, 16; length of upper molar series, 6.5.

Specimens examined. -- Two; both from type locality.

General Notes.—Unfortunately the tails are imperfect on both of the known specimens of this squirrel. The broad skull and comparatively coarse pelage of upperparts serve to readily distinguish this species from S. alfari, S. peruanus, and S. similis.

Sciurus (Microsciurus) similis, sp. nov.

RUFOUS-BREASTED SQUIRREL.

Type, No. 14210, 8 ad., American Museum of Natural History, N. Y. Collected near Cali, Cauca Valley, Colombia (alt. 6000 ft.), November 8, 1898, by J. H. Batty.

Distribution.—Known only from the type locality.

Specific characters.—In size and color of upperparts similar to S. alfari, but under side of neck, breast, and inside of fore legs deep ferruginous, and rest of underparts dark brown thinly washed with rufous. Ears short, rounded, thickly haired. Tail narrow and rounded. Pelage thick and soft.

Color.—Entire upperparts dark brown finely grizzled with dull rusty; top of nose, sides of head, neck, outside of fore legs and all of feet more yellowish than back; no ring around eyes; ears like adjacent parts of head; chin dingy rusty; throat, breast, and inside of fore legs deep ferruginous; rest of underparts dingy brown, with a thin wash of dull rufous; tail above black, thinly washed with dark rufous, with dark rufous basal color showing through; tail below, median area grizzled dark rusty rufous with indistinct border of black and very thin edge of rufous. Hairs on back black with narrow subterminal and sometimes median rings of dark buffy mixed with hairs entirely black.

Measurements of type, from dried skin.—Total length, 245; tail vertebræ, 98; hind foot, 34.

Cranial characters.—S. similis undoubtedly has two upper premolars like other species of *Microsciurus*, but unfortunately the type is without a skull as, by some error, the skull sent in with the type skin by the collector belongs to the much larger and very different species S. caucensis.

Specimens examined.—One; from the type locality.

General Notes.—Sciurus similis in size and general appearance resembles S. alfari, from which it may be readily distinguished by the dark ferruginous chest and dark brown abdomen. The head is not brighter ferruginous than the back, and there is no ring around eyes.

Sciurus (Guerlinguetus) caucensis, sp. nov.

CAUCA VALLEY SQUIRREL.

Type, No. 14208, & ad., American Museum of Natural History, N. Y. Collected on the Lima River, upper Cauca Valley, Colombia (alt. 6000 feet), August 10, 1898, by J. H. Batty.

Distribution.—Known only from the type locality.

Specific characters.—About half the size of S. astuans hoffmanni. Upperparts dark brown finely grizzled with rusty; underparts reddish buffy, most intense on neck and breast and paler elsewhere. Ears short, rounded, thickly haired. Tail slender, rather flattened, thinly washed with white. Pelage thick and soft.

Color.—Upperparts finely grizzled, dark rusty brown with a narrow blackish brown dorsal line beginning on crown; eyes with a narrow ring of rusty buffy; ears like top of head; cheeks paler, more grayish brown; top of nose, sides of neck, outside of fore legs, with fore and hind feet, more rusty red than back, lower edge of flanks and outside of hind legs more thinly washed with same;

chin dingy fulvous; throat and middle of chest reddish buffy, becoming paler posteriorly over middle of belly and inside of thighs; inside of fore legs and sides of belly dingy grayish brown with a thin wash of pale buffy; tail above black with a thin wash of grayish white; lower surface grizzled dark dingy rusty with poorly defined black border and thin grayish white edge. Hairs on back black with dark rusty subterminal rings mixed with hairs entirely black.

Variation.—The two specimens examined are almost identical in color, the only difference being the slightly greater intensity of the buffy and rufous shades in the type.

Measurements.—Average of two specimens from type locality; Total length, 312; tail vertebræ, 145.5; hind foot, 42.5.

Cranial characters: Premolars \(\frac{1}{2}\). The skull is almost precisely intermediate in general shape between that of S. hoffmanni, representing the subgenus Guerlinguetus, and that of S. alfari, representing the subgenus Microsciurus, but the absence of the extra premolar leads me to place it in the former group. The skull of the type measures: Basal length, 34; palatal length, 17; interorbital breadth, 14; length of upper molar series, 7.

Specimens examined.—Two; both from type locality.

General Notes.—In the style of coloration and the rather short and hairy ears, S. caucensis shows much similarity to the species of Microsciurus, but the absence of the first upper premolar, and the more depressed, slenderer skull, show that it really belongs to the subgenus Guerlinguetus.