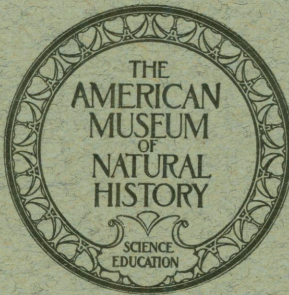


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PRELIMINARY REPORT ON ECUADOREAN MAMMALS. No. 1

By H. E. ANTHONY



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Field work done by The American Museum of Natural History in Ecuador in 1920 and 1921 has resulted in the acquisition of more than 900 mammals, to which was added, by purchase and as gifts from Mr. Ludovic Soderstrom of Quito, more than 600 mammals, making a collection which aggregates about 1550 specimens. Using this collection as a nucleus, it is planned to send out additional expeditions¹ and eventually to issue a report in full on the Mammals of Ecuador. From time to time preliminary reports will be published in order to place on record any forms new to science. The following is the first of these reports.

Ichthyomys tweedii, new species

TYPE.—No. 47798, Amer. Mus. Nat. Hist., ♂; Portovelo, Prov. del Oro, Ecuador; altitude, 2000 ft.; July 16, 1920; collector, H. E. Anthony. The type is a skin with skeleton.

GENERAL CHARACTERS.—A very large species, differing from the known forms of *Ichthyomys* in size and in cranial characters.

DESCRIPTION.—

Color above, a mixture of black, gray, and buff, the general impression being a grizzled brown; below, white, the plumbeous under-fur showing through to a slight extent; pelage throughout of two types of hair, the long, hard hairs and the soft, short under-fur; tail practically unicolor, slate black, rather densely haired.

Skull heavily built and strong, much larger than the skull of *soderstromi* or of *stolzmanni*; malar apparently absent; nasals tapering to a point posteriorly; rostrum very broad; a marked interorbital construction; zygomatic root of squamosal strongly developed; dentition essentially as in other species of *Ichthyomys*.

MEASUREMENTS.—Taken in the flesh: total length, 317 mm.; tail vertebrae, 150; hind foot, 36. See table on page 4 for measurements of skull.

Tweedii is so distinct from the other species of *Ichthyomys* that it may be advisable to erect for it a new subgenus. As only one specimen was taken, I have been loath to do this, since some of the characters may be, in part, individual. The Portovelo specimen is so much larger that it is not approached by the largest of a series of seven typical *soderstromi* from near Quito, while the size of the skull may be readily noted from the table of measurements.

¹A party whose members left New York in June and July, 1921, is now in Ecuador.

The wide rostrum, and rather flaring zygomatic arches, differentiate *tweedii* from either *soderstromi*, *stolzmanni* or *hydrobates*, while the areas for muscle attachment upon the frontals and parietals are so well marked as to indicate an animal of much greater strength. In the character of the heavy rostrum, *tweedii* is nearer to *stolzmanni* and *hydrobates* than it is to *soderstromi*, since the latter has the slenderest rostrum of the group.

The type specimen was brought in to me by a boy who caught it near his mother's house, near the banks of the Rio Amarillo. Although traps were set out for *Ichthyomys* in every suitable locality throughout the work in southern Ecuador, no additional specimens were secured. It is rather significant to note the low elevation at which this animal was taken, only 2000 feet above sea-level, as compared with the elevations at which the other species have been found, about 9000 feet in Peru and northern Ecuador, about 4000 feet in Merida, Venezuela.

I take pleasure in naming this fine species in honor of Mr. A. M. Tweedy, the resident manager of the mine at Portovelo, who extended to the Museum's expedition all the assistance it lay in his power to give.

NEUSTICOMYS, new genus

GENOTYPE.—*Neusticomys monticolus*, new species.

GENERAL CHARACTERS.—Allied to *Ichthyomys*, *Rheomys*, and *Anatomys*, from each of which it differs in the greatly reduced hallux and in the character of the dentition.

DESCRIPTION.—Size small, fur very soft and close, with scattering of longer, outer hairs; hind foot least specialized of the group for aquatic life, hallux not extending beyond tubercle at base of adjacent digit; skull smooth and typically cricetine, without upturned nasals, incisors showing little specialization; infraorbital foramen large; supraorbital foramina laterally placed; palatal foramina very long, extending from molar toothrow almost to incisors; molars essentially as in *Ichthyomys* but last lower molar with single cusp instead of two.

Neusticomys monticolus, new species

TYPE.—No. 46574, Amer. Mus. Nat. Hist., ♀ ad.; Nono Farm, "San Francisco," near Quito, Ecuador; February 16, 1916; collector, Ludovic Soderstrom. The type is a skin, in excellent condition, and a skull.

GENERAL CHARACTERS.—Superficially most like *Rheomys* in color, character of fur, and size, but with greatly reduced hallux; noticeable external ear, naked median line from nostrils to upper lip, and very soft fur.

DESCRIPTION.—

Color above, uniform clove-brown (Ridgway), the hairs blackish plumbeous at the base; below, lighter with irregular washing of pale smoke-gray along the median area and a small ivory-yellow pectoral spot; feet soiled whitish; tail above and below like back but with a faint sprinkling of whitish hairs, especially along under surface.

Skull compressed, with broad flat braincase, smooth, without ridges on frontals or parietals, a scarcely perceptible depression at base of nasals, but plane of nasals continuous with that of frontal area; rostrum slender; zygomatic arch threadlike or incomplete; infraorbital foramina very large; palatal foramina very large and filling almost entire space between first molars and incisors, broadest medially; conspicuous peglike process on maxillary roots of zygomata just external to molar series; incisors of piercing type but not highly specialized as in *Ichthyomys*; upper molars not differing appreciably from those of *Ichthyomys*; coronoid process long, slender, falciform; lower molars somewhat different in pattern from those of *Ichthyomys* and *Rheomys*, anterior cusp of first molar broader, last molar with only one functional cusp, the posterior cusp being vestigial.

MEASUREMENTS.—Taken from the dried skin; total length, 204 mm.; tail vertebrae, 111; hind foot, 25.

This most interesting specimen is one of a collection of mammals obtained from Mr. Ludovic Soderstrom, who commented especially upon it when he gave it to me, expressing the opinion that it was not *Ichthyomys soderstromi*. This was quite evident when the specimen was compared with a good series of *Ichthyomys*, fourteen specimens representing four species, and *Rheomys*, one specimen. That it should prove to be an unknown genus is rather surprising, but, since it cannot be definitely referred to one of the existing genera, I find it necessary to erect a fourth genus of the *Ichthyomys* group.

From any of the species of *Ichthyomys*, *Neusticomys monticolus* may be readily distinguished by its much smaller size and less advanced specialization for swimming. The feet and toes of this new form are only weakly fringed with hairs, while the foot of *Ichthyomys* is a most obvious swimming structure. From *Rheomys*, which genus has not been taken south of Panama, to my knowledge, *Neusticomys* can be told by its greatly reduced hallux and by its single cusped last lower molar. *Anatomy's leander*, described from the Quito region by Thomas,¹ is much larger, lacks the external ear, which in *Neusticomys* is proportionally larger than in *Ichthyomys* and actually as large, has "muzzle set on in a peculiar manner," while the superior outline of the skull of *Neusticomys* is almost a straight line. A second specimen of *Anatomy's* recorded by Lönnberg² who confirms the type description, proves that the peculiarities of the type specimen are not fortuitous or individual. Although I have not seen *Anatomy's*, I feel *Neusticomys* can have so little in common with this genus, that I have not hesitated to describe it as a new.

Apparently, *Neusticomys* is the least specialized of the *Ichthyomys* group.

¹1906, Ann. and Mag. Nat. Hist., (7) XVII, p. 86, January.

²1921, Archiv. für Zool., XIV, No. 4, p. 37.

MEASUREMENTS OF SKULLS OF DIFFERENT MEMBERS OF THE *Ichthyomys* GROUP

	GREATEST LENGTH	LENGTH OF NASALS	ZYGOMATIC BREADTH	BREADTH OF BRAINCASE	BREADTH OF ROSTRUM, AT MAXILLARY SUTURES	INTERORBITAL BREADTH	PALATAL FORAMINA	ALVEOLAR LENGTH OF UPPER MOLAR SERIES	DIASTEMA	LENGTH, PALATE TO INCISORS	GREATEST LENGTH OF MANDIBLE	LENGTH OF MANDIBULAR MOLAR SERIES
<i>Neusticomys monticolus</i> 46574 type	26	9.4	12.4	12.5	4.4	4.8	4.7×2.3	4.3	6	10.8	15.8	4.4
<i>Rheomys raptor</i> ¹ 179026	25.2	10.3	13.2	12.2	4.3	4.8	4.6×1.9	4.2	6.2	11.3	16	4.1
<i>Anatomys leander</i> ² <i>Ichthyomys tweedii</i>	27.5	9	14.8	13.8		3.9	4.9×2.3	4.6	6.7	11.2		
47798 type	35.3	12.5	18.8	15	7.5	4.3	6.4×2	5	9.3	16	25	4.5
<i>Ichthyomys soderstromi</i> 46730	31	11.5	15.5	14	6	4.8	5.8×1.9	4.5	8.3	14	21.5	4.5
46732	31.7	11.6	16.1	13.5	5.5	4.9	6 ×1.9	4.2	8.7	13.8	21.5	4.5
<i>Ichthyomys stolamanni</i> 10109	32	9.3	15.7	13.9	6	4.7	6.1×2.3	3.9	8.3	14.4	21	4
<i>Ichthyomys hydrobates</i> 24354	32.8	10.5	15.5	14	6	4.4	6.6×2	4.5	8.5	15	22	4

¹Kindly loaned by U. S. N. M., Biol. Surv. Mammal Coll.

²Measurements taken from Thomas, *loc. cit.*

Blarina montivaga, new species

TYPE.—No. 47200, Amer. Mus. Nat. Hist., ♀ ad.; Bestion, Prov. del Azuay, Ecuador; altitude 10,000 ft; January 15, 1921; collector, H. E. Anthony. The type is a skin with skeleton, the teeth not showing any great amount of wear.

GENERAL CHARACTERS.—Resembling *equatoris* of Thomas,¹ but differing conspicuously in color.

DESCRIPTION.—

Color above, everywhere approximating a dark mouse-gray (Ridgway); below, mouse-gray; no area of demarcation along sides where color of upper parts merges into that of lower parts; tail agreeing in color with body.

Skull slightly larger than that of *equatoris*, with third unicuspid noticeably larger; dentition very lightly pigmented.

MEASUREMENTS.—Taken in the flesh: total length, 112 mm.; tail vertebræ, 31; hind foot, 15. Skull, greatest length, 22 mm. (20)²; mastoid breadth, 10.5 (9.7); length entire upper tooththrow, 9.7 (8.7).

Montivaga may be easily distinguished from all other known *Blarina* from South America on the basis of color alone, being much grayer than the dark brown or blackish pelages, of *squamipes*, *meridensis*, *thomasi*, *equatoris*, or *osgoodi*.³ A series of five, all collected at the type locality, are very uniform in coloration.

The new species has a hairy foot, showing very little of the squamation which characterises *squamipes*, and, to a certain extent, *equatoris*. The teeth of *montivaga* are almost entirely white, displaying but slight pigmentation, a character which appears to be fairly conspicuous in *squamipes*, *thomasi*, *equatoris*, and *osgoodi*.

Anoura geoffroyi antricola, new subspecies

TYPE.—No. 47282, Amer. Mus. Nat. Hist., ♀ ad.; Loja, Ecuador; altitude 9000 ft.; October 30, 1920; collector, H. E. Anthony. The type is a skin with skull.

GENERAL CHARACTERS.—Similar to *geoffroyi geoffroyi* in size but noticeably darker in coloration, less brown.

DESCRIPTION.—Above, hairs clove-brown (Ridgway), lighter colored at the base, except on rump where hairs are almost unicolor, the lightest colored basal area being on the shoulders where the color is pale olive-buff; below, hair brown, darker at the base on abdominal region, unicolor on throat; membranes blackish.

MEASUREMENTS.—Taken in the flesh: total length, 81 mm.; hind foot, 13.5. Greatest length of skull, 26 (*geoffroyi*, 24.5; *apolinari*, 25.5); breadth of braincase, 10 (10; 9.5); least breadth of rostrum, 4 (4.5; 4); length of palate, to gnathion, 14.5 (13.5; 14); length of upper molar series, 8.5 (7.5; 8.25).

¹1912, Ann. Mag. Nat. Hist., (8) IX, p. 409.

²Measurements in parentheses are of No. 46683, *Blarina equatoris*, from the slopes of Pichincha.

³Dr. Witmer Stone, of the Academy of Natural Sciences of Philadelphia, has kindly loaned me specimens of *osgoodi*, which I rather suspect must stand as a synonym of *equatoris*, described in 1912 by Thomas, who had specimens from the same slopes whence came the type of *osgoodi*. More material is needed to settle this point.

A large series of this form were taken, both as skins and as specimens in alcohol, and twenty-four skins afford an excellent opportunity to note the extent of individual variation. The entire series agrees with the type in dark coloration and no one of them approaches specimens of typical *geoffroyi* from Trinidad and Merida. In coloration the Ecuador series more nearly resembles *Anoura geoffroyi apolinari* (Allen), which was described as a *Glossophaga*¹ but which upon an examination of the skull I find to be an *Anoura* subspecifically distinct from *geoffroyi*. However, they lack the warmer shade of brown seen in *apolinari*.

***Cænolestes caniventer*, new species**

TYPE.—No. 47174, Amer. Mus. Nat. Hist., ♂ ad.; El Chiral, Western Andes; altitude, 5350 ft.; Prov. del Oro, Ecuador; August 2, 1920; collector, H. E. Anthony. The type is a skin and skeleton.

GENERAL CHARACTERS.—Resembling *fuliginosus* but less brownish above and decidedly lighter colored below; larger in size.

DESCRIPTION.—

Color, above, fuscus black (Ridgway) in effect, the pelage made up of dark hairs and a sprinkling of buffy tipped hairs, the color of all the hairs plumbeous at the base; below, much lighter than above, the tips of the hairs varying from cream-color to soiled whitish with a darker pectoral area approaching in color the hairs of the upper parts; hands and feet light brown; tail but little lighter below than above, brown.

Skull essentially like that of *obscurus* or *fuliginosus* but apparently larger.

MEASUREMENTS.—Taken in the flesh; total length, 256; tail vertebræ, 127; hind foot, 26.5. Greatest length of skull, 33.5; length of nasals, 16; zygomatic breadth, 16.3; mastoid breadth, 11.5; length of upper toothrow, I-M⁴, 17.6

Through the kindness of Dr. Stone, I have before me the two specimens of *Cænolestes fuliginosus* collected by Rhoads on Mt. Pichincha, both females, the trunks of which are preserved in alcohol. I have had the skull of one of these carcasses cleaned for examination. I also have for comparison a skin, without skull, from Papallacta, Ecuador, donated by Mr. Soderstrom of Quito, which I have determined to be *fuliginosus*; and, finally, a specimen of *obscurus*, male, skin and skull, from the Plains of Bogotá. I have sufficient material to be certain that the southern Ecuador *Cænolestes* is a distinct species, the most obvious character of separation being that of color, but in addition the new species is apparently larger. Because there is considerable difference in size shown by the series of *caniventer*, coupled with the fact that the males are noticeably larger than the females, it is not safe at present to be positive that the apparent size difference is the true one.

However, *caniventer* differs more radically in color from either *obscurus* or *fuliginosus* than do the latter from one another.

¹1916, J. A. Allen, Bull. Amer. Mus. Nat. Hist., XXXV, p. 86.

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FRANK E. LUTZ, Editor

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