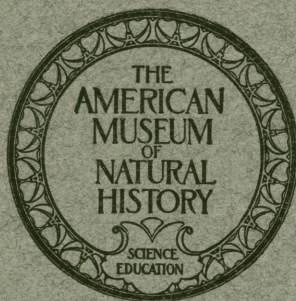


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PRELIMINARY REPORT ON ECUADOREAN MAMMALS. No. 2

By H. E. ANTHONY



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This is the second paper based upon the collection of Ecuadorean mammals made in 1920 and 1921.¹ The mammals of this expedition, some 1550 specimens, are being studied with the intention of publishing a detailed report at some future time. Additional material is being acquired in the meantime, since it is part of the plan to carry on systematic field work in this republic. Whenever new species come to light, preliminary reports, such as the present paper, will appear.

Phyllotis fruticicolus, new species

TYPE.—No. 47674, Amer. Mus. Nat. Hist.; ♂; Guachanamá, southern Ecuador; altitude, 9050 ft.; October 9, 1920; collector, H. E. Anthony. The type is a skin and skull, the latter with the sutures of the parietal region opened, but the elements have not been lost.

GENERAL CHARACTERS.—Resembling *haggardi* superficially, but differing from it in the characters of longer tail, smaller ears, grayer appearance and shorter nasals.

DESCRIPTION.—

Color above a mixture of warm buff and blackish, the general effect being decidedly grayish, the blackish coming from the dark-colored bases of the hairs, the buff strongest along the sides and about the head; below, soiled white, the hairs slate-colored at base. Ears small for the genus, colored like back without any conspicuous areas of buff or black hairs; hands and feet white; tail bicolor to match body coloring.

Skull rather lightly built; nasals very short, with median depression; interorbital constriction greatest midway of frontals, margins smooth and unbeaded.

MEASUREMENTS.—Taken in the flesh: total length, 193 mm.; tail vertebrae, 102; hind foot, 24. Greatest length of skull, 24.7 (25.3)²; length of nasals, 8.9 (10.3); zygomatic breadth, 12.4 (13.5); interorbital breadth, 3.9 (4.2); breadth of braincase, 11.8 (12.5); length of upper molar series, 4.2 (4).

The type of *fruticicolus* is a young adult, with the molar crowns showing only moderate wear, so it is possible that older specimens might show more highly colored pelage. In color the Guachanamá specimen may be closely matched by selected specimens from a large series of topotypical *haggardi*, but the new species is well characterized by the notice-

¹See 'Preliminary Report on Ecuadorean Mammals. No. 1,' by H. E. Anthony, American Museum Novitates, No. 20, November 3, 1921.

²Measurements in parentheses are those of No. 46835, *Phyllotis haggardi* from Mt. Pichincha, 12,000 ft. altitude.

ably shorter nasals and the longer tail. The ear of *fruticicolus* is smaller and less conspicuous than the ear of *haggardi*, although the series of the latter would appear to show that there is considerable individual variation in the size of the ear of *haggardi*.

The type is one of a series of three specimens, all collected at Guachanamá, on a rocky hillside overgrown with tough shrubbery.

***Microsciurus sabanillæ*, new species**

TYPE.—No. 60464, Amer. Mus. Nat. Hist.; ♀ ad.; Sabanilla, Prov. de Loja, Ecuador; altitude, 5700 feet; November 18, 1920; collector, H. E. Anthony. The type is a skin with skeleton.

GENERAL CHARACTERS.—A large species, apparently related to *avunculus*, practically unicolor above, with ochraceous underparts and lacking a postauricular spot.

DESCRIPTION.—

Color, above, between dark olive (Ridgway) and mummy brown, depending on how skin is held to the light; below, near ochraceous tawny; top of head lightly washed with ochraceous buff, but not conspicuously so; ears clothed interiorly with short hairs slightly darker in tone than the ochraceous buff of the crown; no postauricular patches; orbital ring scarcely discernible; forearms and hind limbs like back; hands like back, feet washed with same color as hairs on ears; tail, above, very similar to back, but hairs tipped with clay color, below noticeably darker than color of rest of underparts.

Skull large and characterized by long nasals and long palate, the latter extending considerably beyond plane of last molars posteriorly.

MEASUREMENTS.—Taken in the flesh: total length, 280 mm.; tail vertebræ, 146; hind foot, (c.u.), 41. Skull, greatest length, 37.8; zygomatic breadth, 22.3; length of nasals, 11.7; interorbital breadth, 13.1; breadth of braincase, 19; length of palate, 16.5; length of upper molar series (exclusive of small pm.), 6.1.

In pattern of coloration *sabanillæ* comes logically within the group of species characterized by *similis*. The uniform coloration above, without any black dorsal region or crown and with no conspicuous white or buffy areas on or behind the ears, sufficiently distinguishes this new species from the other *Microsciurus* already known from the Oriente of Ecuador, *napi* and *avunculus*, and from other members of the genus outside of the *similis* group. It is much larger than any species related to *similis* and in this respect more nearly resembles *avunculus*. The type locality of *avunculus* is given as Gualaquiza, altitude 2500 feet, while *sabanillæ* was taken in forest at an elevation of 5700 feet, which fact may account for the seemingly strange occurrence of two distinct forms so close together, since Sabanilla is on the Rio Zamora not very far distant from Gualaquiza. Thomas,¹ in the type description of *avunculus*, com-

¹1914, Ann. Mag. Nat. Hist., (8) XIII, p. 574.

pares it to *napi* which in turn is "quite like *peruanus*." Lacking specimens of both *avunculus* and *napi*, I have turned to the type of *peruanus*, which I find to be very different from *sabanillæ*, not only in the possession of white auricular patches but in cranial characters as well, since the new species has proportionally much longer nasals and longer palate.

***Marmosa perplexa*, new species**

TYPE.—No. 47188, Amer. Mus. Nat. Hist.; ♀ ad.; Punta Santa Ana, Prov. de Loja, Ecuador; altitude 3650 feet; December 21, 1920; collector, H. E. Anthony. The type is a skin and skull, the posterior part of the skull being broken. The type locality is on the trail from Zaruma to Loja and is in the interandean region, on Pacific drainage.

GENERAL CHARACTERS.—Of fairly large size, resembling a small specimen of *cinerea*, but with fur extending only a short distance onto base of tail; skull short and broad with noticeable frontal depression.

DESCRIPTION.—

Color above, Saccardo's umber (Ridgway), the hairs slaty at base; below, chamois, with light ochraceous-buff wash on pectoral region, everywhere the hairs slaty at base; orbital ring blackish, not very extensive; crown slightly lighter than dorsal region, hands and feet proximally dusky, distally soiled whitish; tail brownish above, noticeably lighter in color, faintly mottled with small, indistinct, blotches of white.

Skull rather short and broad, with heavy zygomata; a faintly developed supra-orbital bead but no supraorbital process; a marked depression in frontal area at nasal suture; first tooth of upper molar series well developed, second noticeably larger than third.

MEASUREMENTS.—Taken in the flesh: total length, 305 mm.; tail vertebræ, 178; hind foot, 22. Skull, zygomatic breadth, 19.4; least interorbital breadth, 6.2; nasals, 14×5; length of palate, to gnathion, 19; length upper toothrow, C-M⁴, 14.8; length M¹-M⁴, 7.7.

This murine opossum shows characters that would place its relationships with the *cinerea* group, were it not for the peculiarly depressed frontal region and the lack of a postorbital process, which condition is not noted in skulls of *cinerea*, *waterhousii* and *phaea*, the only species which *perplexa* appears to resemble. Skulls of *klagesi* from Venezuela show a little of the depressed frontal condition, but *klagesi* has nothing to do with *perplexa* in any other character. The material on hand for comparison is rather inadequate and consequently it is difficult to say with certainty to just what group this new species belongs.

***Marmosa oroensis*, new species**

TYPE.—No. 47180, Amer. Mus. Nat. Hist.; ♂ ad.; Portovelo, Prov. del Oro, Ecuador; altitude 2,000 feet; September 2, 1920; collector, H. E. Anthony. The type is a skin with skull.

GENERAL CHARACTERS.—A light-colored form, similar externally to *simonsi*, but with the smooth interorbital region of *fuscata* or *madescens*.

DESCRIPTION.—

Above, between drab and wood-brown, the hairs with slate-colored bases; below, ivory-yellow over entire throat and chest and medially to root of tail, the hairs unicolor to base; along sides of abdomen the light-colored hairs are slaty at base; orbital spot narrow but extending almost to end of nose, area between orbital spots above, slightly lighter in color than back; ears about like back in color; wrists and ankles dusky; hands and feet yellowish white; tail above, very similar to back in color, below distinctly lighter from base to tip.

Skull long and slender, with smooth interorbital region, no beading or postorbital processes.

MEASUREMENTS.—Taken in the flesh: total length, 294 mm.; tail vertebrae, 170; hind foot, 20. Skull, greatest length, 35.1; zygomatic breadth, 16.7; interorbital breadth, 6; nasals, 15.9×4; palate, to gnathion, 19.0; upper toothrow, C-M⁴, 13.8; length, M¹-M⁴, 6.7.

M. oroensis is somewhat like *simonsi* superficially, although it does not have quite as long pelage nor such light-colored feet and nose. Cranially the two forms have little in common since the skull of *simonsi* has marked postorbital processes. It is much lighter in color throughout than *madescens* although in cranial characters these two species are somewhat similar. It may well be that *oroensis* should stand as a subspecies of *sobrina* Thomas which is said to be related to *fuscata*. The Portovelo specimen is quite like *fuscata* in skull characters but differs from it sufficiently in external details to be distinct, while from *sobrina* it may be differentiated by the greater extent of the light-colored underparts and by the much lighter tone of the upperparts. Unfortunately, there are no available specimens of *sobrina* for actual comparison.

Apparently *oroensis* is the opossum of the semi-zerophytic tropical zone, for animals taken in the same general region but at higher elevation and in the forest are the related *celicæ*.¹

***Marmosa celicæ*, new species**

TYPE.—No. 47182, Amer. Mus. Nat. Hist.; ♂ ad.; Celica, Prov. de Loja, Ecuador; altitude, 6900 feet; September 28, 1920; collector, H. E. Anthony. The type is a skin with skull which is broken posteriorly.

GENERAL CHARACTERS.—Most like *sobrina* and *oroensis* but differing, from the former in having tail bicolor for its full length as well as in smaller size, from the latter in darker coloration and slightly different interorbital region.

DESCRIPTION.—

Color, above, near sepia with hairs slaty at base; below ivory-yellow medially, the widest area at chest, hairs unicolor to base, encroaching hairs of sides and flanks

¹See the following description.

light-tipped with slate-colored base; orbital rings extending almost to end of nose; area above included between orbital rings only slightly lighter in color than dorsal region; hands and feet dusky above, distally whitish; tail like back above, distinctly lighter below throughout entire length.

Skull like that of *oroensis* but having faint postorbital swellings of the frontal elements which appear to foreshadow postorbital processes.

MEASUREMENTS.—Taken in the flesh: total length, 278 mm.; tail vertebrae, 157; hind foot, 20. Skull, interorbital breadth across postorbital swellings, 6.8; least interorbital breadth, 5.8; nasals, 15.5×3.6 ; palate, to gnathion, 18.5; length upper toothrow, C-M⁴, 13.5; M¹-M⁴, 6.5.

M. celicæ is very closely related to *oroensis* but can be distinguished by its darker color above, its much more restricted yellow underparts and its swollen frontals. Skulls of two females show some of this swelling but not to the same degree as seen in the skull of the male (type). From *sobrina* this new form differs in having a distinctly bicolor tail as well as a somewhat smaller skull. The acquisition of more material is necessary to determine the degree of relationship between *celicæ* and *oroensis* which I suspect may prove to be subspecific, or perhaps both may be best treated as subspecies of *sobrina*.

M. celicæ was taken at Celica and Alamor near the Peruvian border and at Salvias, in the forest near the headwaters of the Rio Amarillo. The altitudinal range as established by these records is from 3500 feet to 6900 feet, all three localities in forest.

***Marmosa bombascaræ*, new species**

TYPE.—No. 47186, Amer. Mus. Nat. Hist.; ♀ ad.; Zamora (junction of Rio Bombascaro with Rio Zamora), Prov. de Loja, Ecuador; November 24, 1920; collector, H. E. Anthony. A skin in fair condition (eaten about tail and feet by ants while in trap), with skull.

GENERAL CHARACTERS.—Most like *musicola*, but larger and lacking postorbital processes on the supraorbital border, but with well-developed beading.

DESCRIPTION.—

Color above, intermediate between cinnamon and russet, the hairs slate-colored at base; below ochraceous buff, the hairs of the median area unicolor to the base, elsewhere slaty; orbital area black, small subtriangular area between orbital rings noticeably lighter than the rest of upperparts; hands dusky, feet soiled whitish; tail brownish, only slightly lighter below, no white tip.

Skull heavily built, with conspicuous supraorbital bead, wide flaring zygomatics and no postorbital process on the supraorbital border.

MEASUREMENTS.—Taken in the flesh: total length, 313 mm., tail vertebrae, 187, hind foot, 21. Skull, greatest length, 34.5; zygomatic breadth, 19.3; interorbital breadth, 6.5; nasals 15×4.3 ; length of palate, to gnathion, 19.2; length of upper toothrow, C-M⁴, 13.4; length, M¹-M⁴, 7.

M. bombascaræ appears to be closely related to *musicola* Osgood. Superficially it is best characterized by its soft, lax fur of moderate length, the strongly yellow underparts, and the tail without any white. The type skin, that of a female, has the inguinal area suffused with vinaceous as is also the case with a female of *musicola*. But for the differences in cranial characters, I should have made *bombascaræ* a subspecies of *musicola*. However, the skull of the new species is so distinct in size and the detailed structure of the interorbital area, that the relationship calls for full specific separation.

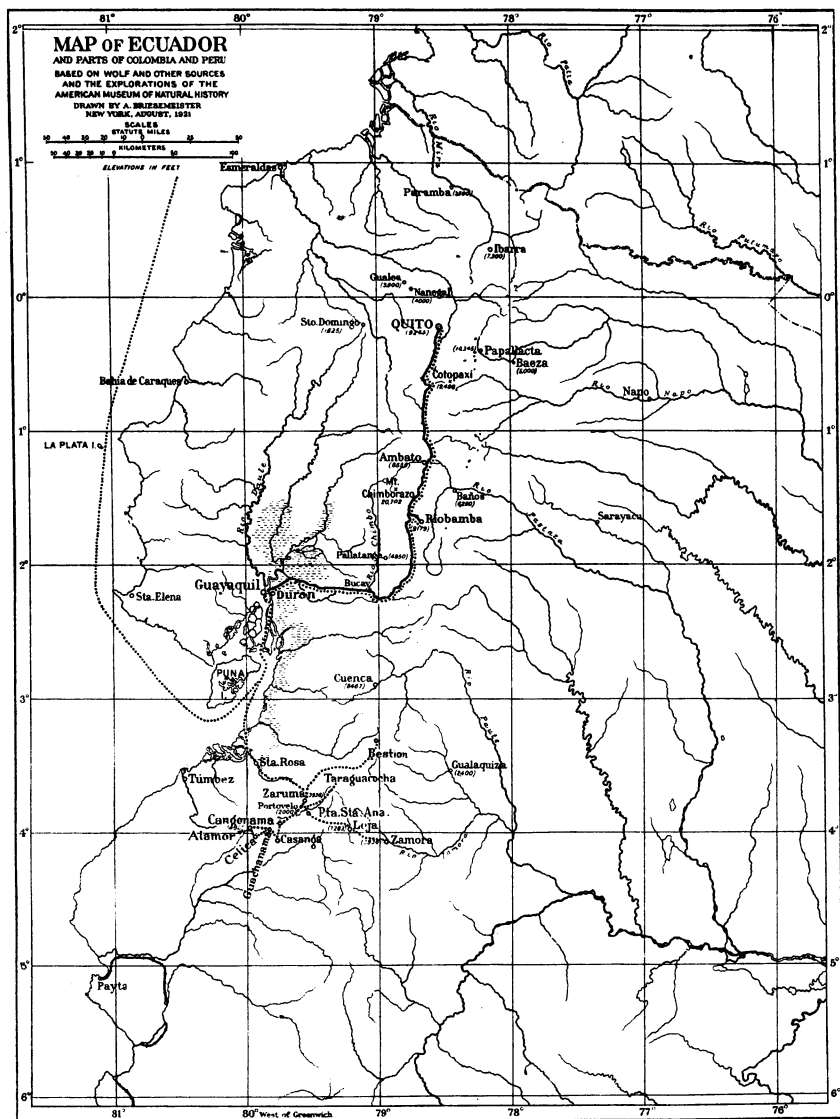


FIG. 1. Map to show route of the expedition to Ecuador, June 1920 to March 1921, indicated by dotted line. The principal collecting stations and type localities mentioned in this paper are also shown.

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FRANK E. LUTZ, Editor

Issued, as occasion requires, for the publication of preliminary announcements, descriptions of new forms, and similar matters.

The articles are numbered serially but paged independently. An index will be provided for each 300 (approximately) pages.