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PRELIMINARY REPORT ON ECUADOREAN MAMMALS. NO.7

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This is the seventh short paper in a series of preliminary reports upon the mammals of Ecuador. The purpose of these papers is the description of new forms which are discovered as material is gradually accumulated from the field.

In a collection of mammals made near the Rio Curaray, in eastern Ecuador, by Olalla e Hijos for the American Museum, are two specimens of the interesting marsupial genus Glironia, the first to be received at any institution in this country; and, as far as I can ascertain, the only specimens taken since the type and one other recorded by Thomas in 1912.² These two specimens represent different species, one quite closely related to venusta Thomas, the other apparently quite distinct.

Glironia æquatorialis, new species

Type.—No. 71,395, Amer. Mus. Nat. Hist.; Q ad.; Boca de Lagarto Cocha, on the Rio Aguarico above its confluence with the Rio Napo, Ecuador; January 15, 1926; collectors, Olalla e Hijos. The type is a skin and skull; the skin is in fair condition, but the skull is broken in the basicranial region.

GENERAL CHARACTERS.—A medium-sized opossum, body about as large as Marmosa waterhousei; resembling G. venusta in size but differing in color; pelage rather close and woolly; tail densely haired to tip, naked along ventral mid-line for a little more than the distal half.

DESCRIPTION.—Upperparts between Brussels brown and cinnamon-brown; narrow area from nose to nape clear gray; anteorbital and supraorbital region black, a dark band extending well back of ear, becoming bone brown posteriorly; ears naked, blackish; hands and feet grayish; tail heavily haired above from base to tip, cylindrical, at base colored like back, but gradually darkened toward tip to become warm sepia; faint, almost imperceptible, sprinkling of whitish hairs near tip, no white tip as in venusta; underparts soiled buffy whitish, pelage slightly grayer at base;

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<sup>1</sup>Preliminary Reports on Ecuadorean Mammals appeared as follows:
Report No. 1, American Museum Novitates, No. 20, November 3, 1921.

"No. 2, "" No. 32, March 4, 1922.
"No. 3, "" No. 55, January 31, 1923.
"No. 4, "" No. 114, May 29, 1924.
"No. 5, "" No. 120, June 21, 1924.
"No. 6, "" No. 139, October 20, 1924.
                            No. 6, " " No. 1
Ann. Mag. Nat. Hist., (8) IX, p. 240, Feb.
Ann. Mag. Nat. Hist., (8) X, p. 47, July.
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underside of tail like upperside except for narrow, naked median area along terminal two-thirds; this differentiated median area continues as a narrow band of short hairs to within about an inch of the body, these short hairs more or less concealed by the normal pelage.

Skull essentially like that of *venusta*; supraorbital ledge with blunt postorbital process; nasals long, terminating proximally as a rounded V.

Measurements.—Taken from dried specimen: total length, 430 mm.; length of head and body, 205; tail vertebræ, 225; hind foot, c.u. (relaxed), 29.

For skull measurements see table, page 3.

Glironia criniger, new species

Type.—No. 71,394, Amer. Mus. Nat. Hist.; Q ad.; Junction of Rio Curaray with Rio Napo, Ecuador; December 5, 1925; collectors, Olalla e Hijos. The type is a skin and skull in good condition, fully adult but molars not greatly worn.

GENERAL CHARACTERS.—About the size of venusta and æquatorialis, but having tail entirely furred, above and below, except for a trace of ventral naked area on terminal inch; dentition not as heavy as in æquatorialis, and color lighter.

Description.—Color pattern essentially as in *æquatorialis*, but upperparts slightly lighter in shade, between wood-brown and snuff-brown; underparts soiled whitish, hairs unicolor from tip to root except along sides where they are light gray basally; underside of tail haired to tip, lacking the conspicuous naked area of *venusta* and *æquatorialis*, but with the concealed median stripe of short hair for about half the length of the tail; about one-third the distance from end of tail these median hairs become longer and merge insensibly into the normal pelage; terminal 40 mm. of tail, above and below, light colored, ivory yellow in some lights, but not in conspicuous contrast with rest of tail.

Skull differing from that of *æquatorialis* in slightly shorter nasals, truncate at proximal termination, less pronounced incipient postorbital processes on the supra-orbital ledge, and lighter molar dentition.

Measurements.—Taken from dried specimen: total length, 420 mm.; length of head and body, 200; tail vertebræ, 220; hind foot, c.u. (relaxed), 31.

For skull measurements see table, page 3.

In the character of semi-nakedness on the underside of the tail, *æquatorialis* resembles *venusta* of Thomas, but differs in the absence of a distinct white tip to the tail and apparently is somewhat browner in color of upperparts. *Criniger*, with the light colored tip to the tail, suggests *venusta*, but differs in the absence of the naked strip on the underside of the tail. Comparing the skulls of *æquatorialis* and *criniger* with the measurements of *venusta* as given by Thomas, seemingly the only differences worthy of comment are the narrower posterior expansion of the nasals of *venusta* and the shorter, narrower palate. *Venusta* is described as lacking any postorbital process on the supraorbital ridge, but both of these new forms have an incipient process, and it may be noted that the table of measurements shows a correspondingly greater

Greatest Length of	: .	34.6	35.1
Greatest Transverse Breadth of m ³	:	2.6	2.8
Combined Length of Three Anterior Molariform Teeth	7.	9.9	2
Breadth of Palate Between 6m lo Erners of m ³	11.5	11.8	12.2
. dtgn9.1 letela¶	23.5	25.5	26.5
Meight of Muzzle from 7 rotassel to aulosolA	7.	7.3	7.5
Breadth of Brain-case	18.	17.	17.5
Zygomatic Breadth		25.8	26.4
Greatest Breadth Across Supraorbital Ridges	9.3	10.6	11.
Interorbital Breadth	7.1	7.2	7.5
Posterior Breadth of Nasals	6.4	7.4	7.2
Nasals, Length by Middle Breadth	19.8 × 3.4	18.7 × 3.7	20. 3 × 8.
Condylo-basal Length	43.5	43.7	:
Greatest Length of Skull	:	44.1	:
	venusta ¹	criniger 71,394	æquatorialis 71,395

breadth across the supraorbital ridges (this assumes that the measurement published for *venusta* is for the greatest breadth across the ridges).

With such scanty material available, and the range of individual variation in the genus *Glironia* unknown, I have hesitated to describe two new forms from the same general geographical region. The Lagarto Cocha, judging from the little data derived from maps and from correspondence from the Olallas who collected there, must be very nearly identical faunally with the region about the mouth of the Rio Curaray. Nevertheless, the differences between the two specimens are not of the nature generally included by individual variation, the animals are the same sex, both females, and so nearly of the same age and date of collection that it seems very unlikely that additional material will bridge such variation.

Oryzomys auriventer nimbosus, new species

Type.—No. 67,337, Amer. Mus. Nat. Hist.; or ad.; San Antonio, on Rio Ulva, northeastern slope of Tunguragua, Ecuador, altitude 6700 feet; January 27, 1924; collector, G. H. H. Tate. The type is a skin and skull in good condition except for slight mutilation of left hind foot; molars show a moderate degree of wear.

GENERAL CHARACTERS.—Closely resembling typical auriventer, but pelage longer and softer; color less strongly ochraceous; a small, white gular spot present; skull slightly smaller, incisive foramina shorter, subcordate in shape.

Description.—Pelage about 13 mm. long on back as compared to 9 mm. in typical auriventer, soft and rather lax, everywhere blackish slate at base except for small pectoral area. Upperparts mixed Prout's brown and blackish; sides clearer, near cinnamon-brown; head and forelegs dusky; tail long, practically naked, clovebrown above, drab below; underparts clay-color, small throat-spot white to roots of hair: narrow stripe along outer side of forelegs cartridge-buff.

Skull not differing essentially from that of typical auriventer; interorbital region smooth, rounded, and without beading; zygomatic plate broad; incisive foramina short, broad posteriorly, narrowly cordate in shape.

Measurements.—Taken in the flesh: total length, 304 mm.; length of head and body, 140; tail vertebræ, 164; hind foot (c.u.), 34. Greatest length of skull, 35.5; condylo-incisive length, 32.5; length of nasals, 13.2; zygomatic breadth, 17.9; interorbital breadth, 6; breadth of braincase, 15.3; length of incisive foramina, 5; greatest breadth of incisive foramina, 2.8; length of upper molar series, 5.7; length of mandible, 22.9; length of mandible series, 6.1.

There are five specimens in the series from San Antonio, four fully adult and one nearly so. For comparison there is a series of thirteen typical auriventer from Palmera and Mera, practically topotypes. Nimbosus is smaller than auriventer and the constant differences of color pattern and shape and size of the incisive foramina, although not very great, warrant a subspecific separation. The subcordate shape of the

incisive foramina is matched in skulls of albigularis maerex and the presence of the white throat-spot is strongly suggestive of albigularis. It is not unlikely that auriventer will eventually stand as a subspecies of albigularis, since nimbosus is intermediate in many characters between typical albigularis and typical auriventer.

The longer, softer pelage of *nimbosus* is probably due to its cold, wet environment on the slopes of Tunguragua.

Thomasomys erro, new species

Type.—No. 68,195, Amer. Mus. Nat. Hist.; 3 ad.; upper slopes of Mt. Sumaco, exact altitude unknown, but probably 8000–9000 feet, at head of the Rio Suno, a tributary of the Rio Napo, eastern Ecuador; June 10, 1924; collectors, Olalla e Hijos. The type is a skin in fair condition and a skull somewhat broken in occipital and basioccipital regions; molars not much worn.

GENERAL CHARACTERS.—A good-sized, dark-colored species, bearing a close superficial resemblance to *cinereiventer*, but with exceedingly narrow and straightedged zygomatic plate; tail longer than length of head and body.

Description.—Pelage long and lax, quite soft, about 12 mm. long on back, everywhere plumbeous black at base and colored only on extreme tip.

Color above, a mixture of isabella-color and fuscous, the fuscous predominating on crown of head and back, the isabella-color clearer on sides; underparts washed with cream-buff; tail long, thinly haired, hair-brown above and below; metapodials thinly clothed with hairs bister in color.

Skull with zygomatic plate very straight-edged anteriorly and unusually narrow; rostrum long and slender; braincase well inflated but depressed, rather globose; incisive foramina large, but lacking considerable of reaching plane of first cheekteeth; interpretrygoid fossa broadly U-shaped; bullæ normal in size and character.

Measurements.—Taken from dry skin: total length, 330 mm.; length of head and body, 152; tail vertebræ, 178; hind foot (c.u.), 30. Skull, greatest length, 32 (approximate); length of nasals, 12.2; zygomatic breadth, 15.2; interorbital breadth, 15.9; breadth of zygomatic plate, 1.7 (2.2 in cinereiventer dispar); length of incisive foramina, 5.2; length of upper molar toothrow, 5.1; length of mandible, 19.5; length of mandibular toothrow, 5.3.

Thomasomus erro displays the narrowest zygomatic plate seen in the genus. T. cinereiventer dispar has a relatively narrow plate compared with the other forms of the genus, but the plate of erro is only a little more than two-thirds as wide as that of dispar. Aside from the narrow zygomatic plate, erro bears such a close resemblance to the forms of cinereiventer that there seems little doubt that this new species is most closely related to that group. The type locality, Mt. Sumaco, is a more or less detached area of subtropical and humid temperate zones which has derived its fauna from the eastern Andes of northern Ecuador. T. cinereiventer dispar occurs in the eastern Andes of southern Colombia.

T. erro may have been evolved from cinereiventer stock through long isolation on this outlying spur from the eastern Andes. There is no very good evidence of close affiliation with the dark rhoadsi which is distributed across northern Ecuador as far east as the eastern Andes and which might be expected to occur on Mt. Sumaco.

Eptesicus chiralensis, new species

TYPE.—No. 47,219, Amer. Mus. Nat. Hist.; & ad.; El Chiral, Western Andes, 5350 feet, Provincia del Oro, Ecuador; August 1, 1920; collector, H. E. Anthony. The type is a skin and skull in good condition.

GENERAL CHARACTERS.—A small to medium-sized species resembling andinus Allen, but smaller and lighter colored.

Description.—Pelage above, everywhere bone-brown to Vandyke brown, the hairs rather darker at the base but almost unicolor; below, basally clove-brown, tips of hairs buffy brown; membranes blackish; ear of moderate size, tragus tall and notched at base; forearm 41 mm.

Skull not markedly different from that of andinus; basisphenoid region without pits or marked sculpturing; dentition normal.

Measurements.—Taken in the flesh: total length, 97 mm.; length of head and body, 59; tail vertebræ, 38; hind foot, 10; forearm, 41. Skull, greatest length, 15.6; zygomatic breadth, 10.3; interorbital breadth, 4.2; breadth of braincase, 7.6; length of toothrow, c-m³, 5.9; length of mandible, 12.

At first glance the series of *chiralensis*, of which there are three, appears to be *andinus*, or at most a subspecies of *andinus*. There is, however, a larger *Eptesicus* in the collection from El Chiral which probably represents *andinus*, and the difference in size between this specimen and *chiralensis*, too great to be an individual difference and unbridged by intermediates (5 mm. difference in length of forearm), prevents me from making the new form a subspecies of *andinus*.

In the skulls of andinus available,—3 from Colombia, 5 from Ecuador,—the basisphenoid region shows shallow grooves or, in the case of the type, well-developed pits, a character not shown by the series of chiralensis. This feature, it must be noted, is rather variable, as shown by the series of andinus, and may not be of diagnostic importance.

The characters which separate chiralensis from andinus are the length of forearm (39.9–41.4 as against 43.4–47 in andinus), the lack of basisphenoid pits, and slightly smaller skull. The size of the forearm in conjunction with the dark color differentiates chiralensis from all the other South American Eptesicus.