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## BATS FROM CHIMANTÁ-TEPUÍ, VENEZUELA

### WITH REMARKS ON *CHOERONISCUS*

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The 1953 Venezuela Botanical Expedition of Chicago Natural History Museum explored the base and summit of the table mountain Chimantá-tepuí. The expedition was in charge of Dr. Julian A. Steyermark, Curator of the Phanerogamic Herbarium. During the first month he was accompanied by Mr. Charles Griffin, who made a small but most interesting collection of five species of bats. These were taken on the west side of Chimantá-tepuí at 1,300 feet (Camp 1) and 3,900 feet (Camp 3).

#### *Rhynchiscus naso* Prince zu Wied

*Vespertilio naso* Prince zu Wied, 1820, Reise Bras., 1: 251 (footnote).

A series of seven females, including two juveniles, was taken at Camp 1. The forearms of the adults measure from 37.5 to 40.4 mm.

#### *Anoura geoffroyi geoffroyi* Gray

*Anoura geoffroyi* Gray, 1838, Mag. Zool. Bot., 2: 490.

This genus appears to have been recorded but once from Venezuela, when a male was taken in Merida (Sanborn, 1933). Mr. Griffin collected a male and female at Camp 3 on April 9. The forearms measure 42.6 and 44.3 mm. in length, the latter measurement slightly larger than the maximum known in the subspecies.

#### *Lionycteris spurrelli* Thomas

*Lionycteris spurrelli* Thomas, 1913, Ann. Mag. Nat. Hist., (8), 12: 270—  
Colombia; Sanborn, 1941, Field Mus. Nat. Hist., Zool. Ser., 27: 376  
—British Guiana.

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One female, collected at Camp 3, represents the third record and fourth known specimen of this bat. It is dull brown in color and the hairs are nearly uniform from base to tip.

### **Artibeus jamaicensis jamaicensis** Leach

*Artibeus Jamaicensis* Leach, 1821, Trans. Linn. Soc. London, 13, pt. 1, p. 75  
—Jamaica.

A male was taken at Camp 1 in a bat net. Its forearm measures 58.5 mm.

### **Choeroniscus** sp.

The expedition collected a series of eight (two males and six females) of this genus. They were found roosting on the under side of a fallen tree that lay over a stream flowing through a deep gully or ditch. All the specimens are preserved in alcohol.

In color they are close to Blackish Brown No. 3 (Ridgway) above. The tips of the hairs are almost black, the bases close to Mummy Brown. The under parts are lighter, being more brownish and less black.

The males are much smaller than the females. The forearms are 34.6–35.0 mm. as against 36.8–37.5 mm., and the skull length and the length of the tooth row are also shorter.

This series has been compared with specimens of *C. godmani* only, a species that is smaller and in which there is no great difference in size between the sexes. The color in *godmani* is a little lighter. The female type of *intermedia* from Trinidad has an upper tooth row length of 7.7 mm.—a millimeter shorter than in the Venezuela females. This measurement in the male type of *inca* from south-eastern Peru is 7.8 mm., or almost equal to that of the male from Venezuela. Two specimens from Kartabo, British Guiana, a female in alcohol with the skull removed and cleaned, and an unsexed skull only, lent by the American Museum of Natural History, are about the size of the Venezuelan series.

The teeth appear to be subject to changes; for example, one female from Venezuela has an extra molar on one side of the lower jaw, half the size of the other molars. One male has two lower middle molars, pressed together, with only the opposite ends of each tooth erupted above the jaw bone. A very old female has lost half the teeth on one side above and below.

There is so little comparative material available and so much information lacking about the known species that the naming of



another does not seem justifiable at this time. The notes on this series are given as a matter of record. It is believed that the specimens may prove to be *C. inca* from southeastern Peru.

We wish to thank Mr. George G. Goodwin for the loan of specimens in the American Museum of Natural History.

*Measurements.*—(Male and 2 females): forearm 34.1, 36.8, 37.1 mm.; tibia 13.0, 13.3, 13.6, calcar 7.1, 6.9, 6.0; tail 9.0, 7.9, 9.5; third finger, metacarpal 35.6, 36.6, 37.6, first phalanx 12.8, 14.0, 13.4, second phalanx 16.7, 18.2, 17.7; fourth finger, metacarpal 32.9, 34.2, 34.0, first phalanx 8.5, 9.2, 9.1, second phalanx 11.3, 13.1, 11.8; fifth finger 30.8, 32.5, 30.5, first phalanx 7.5, 8.2, 8.3, second phalanx 10.8, 12.4, 12.2; nose leaf 3.4 x 5.5, 3.7 x 6.0, 3.6 x 5.7. Skull (male and 3 females): greatest length 22.9, 24.0, 24.5, 24.5; condylo-basal length 22.1, 22.9, 23.6, 23.6; palatal length 14.6, 15.0, 15.9, 15.8; interorbital width 3.8, 3.6, 3.4, 3.4; mastoid width 8.5, 8.8, 8.6, 8.9; width of brain case 8.5, 9.0, 8.9, 8.9; upper tooth row C-M3' 7.9, 8.9, 8.7, 8.8; width across base of canines 3.6, 3.8, 3.9, 3.9; width across last molars 4.4, 4.8, 4.6, 4.7; length of teeth (1 female) PM3 1.1, PM4 0.9, M1 0.9, M2 0.9, pm1 1.2, m1 1.2.

#### REMARKS ON CHOERONISCUS

The genus *Choeroniscus* with *minor* as the genotype was founded by Oldfield Thomas in 1928 for the species *minor*, *intermedia*, *godmani*, and *inca*, which had previously been in the genus *Choeronycteris*. In *Choeroniscus* the skull is of normal shape with the muzzle shorter than the brain case, and the cusps of the lower premolars are subequal.

There have been recorded but 18 specimens of *Choeroniscus*; *minor* 5; *intermedia* 3; *godmani* 9, and *inca* 1. The known range of the genus includes Guatemala, Honduras, Costa Rica (*godmani*); Trinidad (*intermedia*); Dutch Guiana, Ecuador, Ríos Jurua and Tapajos, Amazonas, Brazil (*minor*); and Department of Cuzco, Peru (*inca*). The species are much alike in size, with forearms of 32.4 to 36.1 mm. They are similar in color, all being described above as "dark brown" (*minor*), snuff brown (*intermedia*), "dull uniform brown" and "uniform Mummy Brown" (*godmani*), and "the usual dark brown" (*inca*). In all, the bases of the hairs above are lighter and the under parts of the body lighter.

Our knowledge of the genus and its species is far from complete, but the species are undoubtedly very closely related. Thomas has suggested that *intermedia* may be the same as *minor*.

**Choeroniscus Thomas**

*Choeroniscus* Thomas, 1928, Ann. Mag. Nat. Hist., (10), 1: 120; Sanborn, 1943, Field Mus. Nat. Hist., Zool. Ser., 24: 272, 274 (external characters).

**Choeroniscus minor Peters**

*Choeronycteris minor* Peters, 1868, Monatsber. Akad. Wiss. Berlin, 1868: 366—Dutch Guiana; Dobson, 1878, Cat. Chirop., p. 511, pl. 27, figs. 6, 6a (teeth)—Brazil (Río Cupari, Río Tapajos, Province of Aveiro); Festa, 1906, Boll. Mus. Zool. Anat. Comp. Torino, 21, no. 524, p. 5—Ecuador; Lima, 1926, Rev. Mus. Paulista, 14: 76—Brazil (Río Jurua; meas.); Cunha Vieira, 1942, Arq. Zool. Est. São Paulo, 3: 322 (Lima specimen).

*Measurements.*—Forearm 34.0 mm. (Peters); 1.35 inches=34.5 mm. (Dobson); male 34.0 mm. (Lima). No skull measurements appear to have been published.

**Choeroniscus intermedia Allen and Chapman**

*Choeronycteris intermedia* Allen and Chapman, 1893, Bull. Amer. Mus. Nat. Hist., 5: 207—Princetown, Trinidad; Thomas, 1912, Ann. Mag. Nat. Hist., (8), 10: 404 (may equal *minor* Dobson); Vesey-Fitzgerald, 1936, Trop. Agr., 13: 161—Trinidad; Goodwin, 1953, Bull. Amer. Mus. Nat. Hist., 102: 248 (type meas.).

*Measurements.*—Forearm: male 33.5 mm., female 34.5 (Allen and Chapman), 36.0 (Goodwin). Skull: greatest length 22.5; greatest breadth 8.4; length of maxillary tooth row 7.7 (Goodwin).

**Choeroniscus godmani Thomas**

*Choeronycteris minor* Dobson, 1880, Rep. British Asso., p. 28—Guatemala.

*Choeronycteris Godmani* Thomas, 1903, Ann. Mag. Nat. Hist., (7), 1: 288—Guatemala.

*Choeroniscus godmani* Thomas, 1928, Ann. Mag. Nat. Hist., (10), 11: 122; Goodwin, 1942, Bull. Amer. Mus. Nat. Hist., 79: 129—Honduras; 1946, Bull. Amer. Mus. Nat. Hist., 87: 312—Costa Rica.

*Measurements.*—Forearm (8 specimens) 32.5–35.0 mm. Skull (2 specimens, male and female): greatest length 19.8–21.0 mm., condylo-basal length 19.3–20.3; palatal length 12.0–12.3; interorbital width 3.7–3.9; mastoid width 8.0–8.4; width of brain case 7.9; length of upper tooth row (7 specimens) 6.9–7.5.

*Specimens examined.*—HONDURAS: La Flor Archaga, 2 males; Cantoral, 1 male. COSTA RICA: San José, 2 males, 2 females, 1 no sex. All lent by the American Museum of Natural History.

**Choeroniscus inca Thomas**

*Choeronycteris inca* Thomas, 1912, Ann. Mag. Nat. Hist., (8), 10: 404—Peru.

*Choeroniscus inca* Thomas, 1928, Ann. Mag. Nat. Hist., (10), 1: 122.

*Measurements of male type* (after Thomas).—Forearm 33.0 mm. Skull: greatest breadth (brain case?) 8.0 mm.; interorbital breadth 4.0; front of canine to back of M3 7.8; length of P3 0.8, P4 0.9, M1 1.1, M2 1.1, p4 0.9, m1 1.0.

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