

Taxonomic and distributional notes on some bats and rodents from Venezuela

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Summary. – We report new taxonomic and distributional data for five bats and three rodents of Venezuela, including the first records of *Molossops neglectus*, *Coendou melanurus* and *Oecomys rex*.

Résumé. – Ce travail concerne la taxonomie et la répartition géographique de 5 chauves-souris et de 3 rongeurs du Vénézuéla, et signale les premières captures de *Molossops neglectus*, *Coendou melanurus* et *Oecomys rex*.

INTRODUCTION

As result of recent mammal inventories in the Andes and southern Venezuela, we report new taxonomic and distributional data for some bats and rodents, including the first records of *Molossops neglectus*, *Coendou melanurus*, and *Oecomys rex*. Specimens examined are housed in the following collections: Museo de la Estación Biológica de Rancho Grande (EBRG), in Maracay; Colección de Vertebrados de la Universidad de los Andes (CVULA), in Mérida; and Museo de Historia Natural La Salle (MHNLS), in Caracas. Measurements are given in millimeters.

ACCOUNT OF SPECIES

Lichonycteris obscura Thomas, 1895

Specimens examined (2). – Estado Bolívar: Imataca Forest Reserve, Unit V, Km 50 road Tumeremo-Bochinche (8°00'N; 61°18'W), 180 m; one female (EBRG-17367). Left bank of

Rio Chorro Mocho, 80 Km SW San Francisco de la Paragua (6°42'N ; 64°14'W), 240 m ; one male (MHNLS-9105).

The geographical range of this bat, including *L. degener* as a synonym (Gardner 1976, Hill 1985, Handley pers. com.), is known by few specimens collected in an extensive area in Central America, Northern South America, east-central Peru, and the Amazon Basin of Brazil and Bolivia (Koopman 1982, Eisenberg 1989, Emmons and Feer 1990). The only previous record for Venezuela was one specimen from El Manaco, in the southern extreme of Bolivar State (Handley 1976). Some measurements of the female from Imataca and the male from La Paragua, netted in selectively logged and primary forests, respectively, are : forearm, 34.2, 32.4 ; total length of the skull, 18.9, 18.1 ; condylobasal length, 18.0, 17.3 ; postorbital constriction, 4.5, 4.0 ; breadth of braincase, 8.3, 8.1 ; mastoidal breadth, 8.3, -- ; maxillary tooththrow, 6.1, 5.4 ; breadth across upper molars, 4.4, 4.2.

Two color patterns occur in *Lichonycteris*. A dark brown pelage agrees with the taxon described by Thomas (1895) as *L. obscura*, whose known distribution extends from Guatemala to French Guiana and east-central Peru. On the other hand, specimens identified as *L. degener* are pale brown and have been collected in the Amazon Basin of Brazil and Bolivia, and the Guiana Shield. However, we do not know any locality where both color morphs are sympatric.

This apparently segregated distribution, and the similar morphology of specimens from the entire geographic range of the genus, could suggest two disjunct populations at a subspecific level (Handley pers. com.). Furthermore, variations in dental features between specimens from Venezuela make it difficult to use Miller's diagnosis of *L. degener* (Miller 1931) in a specific context, as was pointed out by Gardner (1976) and Hill (1985). The series from Venezuela agrees in the external and cranial characters with a topotype (USNM-460099) of *degener* from Para, Brazil.

Scleronycteris ega Thomas, 1912

Specimens examined (1). – Estado Amazonas : Caño Culebra, base of Cerro Duida (3°37'N ; 65°41'W), 190 m ; one female (MHNLS-9190).

This rare bat was known only by four specimens from the upper Orinoco drainage in Venezuela and the adjacent Brazilian Amazonas (Handley 1976, Koopman 1982, Emmons and Feer 1990). The female from Duida, netted in a lowland primary forest, is the fifth reported specimen and the second record for Venezuela. Some external and cranial measurements are : forearm, 33.7 ; total length of the skull, 22.2 ; condylobasal length, 21.5 ; postorbital constriction, 4.9 ; breadth of braincase, 8.9 ; length of maxillary tooththrow, 7.6 ; breadth across upper molars, 5.0 ; mastoidal breadth 8.8. These values are close to those published by Swanepoel and Genoways (1979) for two specimens from Venezuela and Brazil.

Sturnira tildae de la Torre, 1959

Specimens examined (4). – Estado Tachira : Uribante-Caparo Dam, 10 km SE Pregonero (7°57'N ; 71°39'W), 1100 m ; three females (MHNLS-8735, 8736, and CVULA-I-3545) and one male (MHNLS-8734)..

The previously known distribution of *S. tildae* includes the eastern portion of the Coastal Range of Venezuela, Trinidad, the Guiana Shield, the Amazon basin, and other

are&s in southern Brazil (Koopman 1982, Marinkelle and Cadena 1971, Eisenberg 1990). The new specimens, collected in secondary vegetation, extend the geographic range of this South American bat to the Venezuelan Andes, where it probably inhabits both lowland and mountane forests.

The morphological features of the series from Táchira agree with specimens of *S. tildae* reported by Gardner (1988) in the Venezuelan Amazonas. In addition, they closely correspond to descriptions of *S. tildae* from Trinidad and Colombia (de la Torre 1959, Marinkelle and Cadena 1971), including the type series. However, according to external and cranial measurements, the Andean specimens are smaller (Table 1).

TABLE 1. - External and cranial measurements of *Sturnira tildae* from Tachira State (Andes of Venezuela), the venezuelan Amazonas (Serranía de la Neblina-Gardner, 1988), Colombia and Trinidad (Marinkelle and Cadena, 1971). Data are : n (range)/mean. H = holotype and P = paratype.

Measurement	Venezuela		Colombia	Trinidad	
	Andes	Amazonas		H	P
Length of forearm	4 (45.1-47.0) 46.1	18 (45.3-49.5) 47.1	120 (43.6-53.4) 47.5	54.8	54.
Total length of skull	4 (22.3-23.5) 22.9	18 (24.0-25.6) 24.7	100 (22.4-25.4) 23.8	23.9	23.
Condylabasal length	4 (21.0-21.5) 21.4	18 (21.4-23.0) 22.3	100 (21.3-23.8) 22.4	21.7	21.
Zygomatic breadth	4 (14.0-14.6) 14.3	18 (14.3-15.1) 14.7	100 (13.8-15.7) 14.8	14.1	13.
Postorbital constriction	4 (6.1-6.3) 6.1	18 (5.8-6.6) 6.3	100 (6.0-7.4) 6.7	6.6	6.
Breadth of braincase	4 (10.7-11.2) 11.0	18 (10.6-11.4) 11.0	---	---	---
Mastoidal breadth	4 (12.4-13.0) 12.7	18 (12.5-13.6) 13.1	---	---	---
C-H ²	4 (6.3-6.8) 6.6	18 (6.6-7.3) 7.0	100 (6.7-7.6) 7.2	7.1	7.
H ² -H ³	4 (8.0-8.1) 8.0	18 (8.1-8.7) 8.4	100 (8.0-9.2) 8.5	8.3	8.

Eptesicus andinus J.A. Allen, 1914

Specimens examined (5). - Estado Bolívar: Imataca Forest Reserve, Unit V, Km 50 road Tumeremo-Bochinche (8°00'N; 61°18'W), 180 m; two males (EBRG-17368 and 17369) and three females (EBRG-17370, 17371 and CVULA-1-3546).

Several authors have discussed the validity of the name *E. andinus* proposed by Allen (1914) for the largest, long-haired and blackish form of the medium-sized *Eptesicus* group (Davis 1965 and 1966), which has been considered a synonym of *E. brasiliensis* (see Koopman 1982, Eisenberg 1989). This is a controversial issue which could only be resolved by a revision of specimens from sympatric populations.

Recent collections in lowland rain forests of the Venezuelan Guiana Shield allowed us to identify three sympatric forms of *Eptesicus* which agree with the descriptions of Davis (1966) and Williams (1978) for *E. furinalis*, *E. brasiliensis* and *E. andinus*. We use this sample to establish the taxonomic status of *E. andinus* and to confirm its presence in lowland forests of the Guiana Shield, as was recently reported by Brosset and Charles-Dominique (1990) who collected one specimen in French Guiana.

Some external and cranial measurements of the specimens from Imataca, collected in gaps of primary and selectively logged forests, are summarized in Table 2. In addition to the larger size of the series assigned to the *E. andinus* group, their morphological features agree with those pointed out by Allen (1914), Davis (1965 and 1966), and Brosset and Charles-Dominique (1990), including the longer and blackish fur. These characters contrast with the smaller size and the shorter brownish pelage of sympatric specimens identify as *E. brasiliensis* and *E. furinalis* (Table 2).

Based on these criteria, we have assigned the name *E. andinus* to the large blackish population that inhabits lowland forests in the Venezuelan Guiana. This species has a broad geographical and altitudinal distribution, including highlands of the northern and central Andes, and lowlands of the Guiana Shield. However, populations from the latter region may represent an undescribed subspecies.

TABLE 2. — External and cranial measurements of sympatric specimens of *Eptesicus* from the Venezuelan lowland Guiana Shield (Bolívar State : Reserva Forestal de Imataca). Data are : n (range)/mean.

Measurement	<i>E. furinalis</i> *	<i>E. brasiliensis</i> **	<i>E. andinus</i>
Length of forearm	2 (30.7-39.3) 34.0	3 (42.3-44.4) 43.1	5 (47.4-49.1) 48.3
Total length of skull	2 (15.7-16.2) 16.0	3 (16.4-16.9) 16.7	5 (17.2-17.9) 17.5
Condylbasal length	2 (14.7-14.8) 14.7	3 (15.6-16.0) 15.8	5 (16.2-17.0) 16.6
Zygomatic breadth	2 (10.5-11.2) 10.9	3 (10.6-11.2) 11.0	5 (11.7-12.1) 12.0
Postorbital constriction	2 (4.2-4.3) 4.3	3 (4.1-4.3) 4.2	5 (4.0-4.4) 4.2
Breadth of braincase	2 (7.3) 7.3	3 (7.2-7.8) 7.5	5 (7.7-8.0) 7.8
Mastoid breadth	2 (8.0) 8.0	3 (8.3-8.4) 8.4	5 (8.6-9.2) 9.0
C-M ³	2 (5.6-6.1) 5.9	3 (6.0-6.2) 6.1	5 (6.5-6.8) 6.7
M ³ -M ⁴	2 (6.5-6.8) 6.7	3 (6.7-7.1) 6.9	5 (7.3-7.6) 7.4
Mandible length	2 (11.4-11.9) 11.8	3 (12.5-12.6) 12.5	4 (13.5-14.1) 13.8
C-M ₁	2 (5.9-6.6) 6.3	3 (6.3-6.6) 6.5	5 (7.1-7.3) 7.2

*EBRG-17375 and 17376

**EBRG-17377, 17378, and 17379.

Molossops neglectus Williams and Genoways, 1980

Specimens examined (4). — Estado Bolívar : Imataca Forest Reserve, Unit V, Km 50 road Tumeremo-Bochinche (8°00'N ; 61°18'W), 180 m ; one male (EBRG-17372) and three females (EBRG-17373, 17374 and CVULA-1-3547).

The distributional status of this rarely collected molossid was recently summarized by Ascorra *et al.* (1991). The seven known specimens have a disjunct distribution in a broad geographical range : the holotype (female) from Surinam (Williams and Genoways 1980) ; two females and two males from the Amazonas of Peru, one male from northeastern Brazil, and one male collected in an unknown locality. The series from Imataca, netted 3-4 m above ground in gaps of logged forests, represents the first

records of *M. neglectus* for Venezuela and gives new information on the biology of this rare species.

Their morphological features agree with those described by Williams and Genoways (1980) and Ascorra *et al.* (1991), including the remarkable sexual dimorphism (Table 3), with males being larger than females.

TABLE 3. — External and cranial measurements of specimens of *Molossops neglectus* from the Guiana Region of Venezuela (Bolívar State: Reserva Forestal de Imataca) and Suriname (holotype). Data are: n (range)/mean.

Measurement	Venezuela		Suriname*
	male	females	female holotype
Length of forearm	38.0	3(36.2-36.6) 36.4	35.1
Total length of skull	18.0	3(15.8-16.6) 16.2	17.1
Condylobasal length	16.3	3(15.2-15.8) 15.5	15.4
Lacrimal breadth	9.0	3(7.1-8.1) 7.6	7.5
Postorbital constriction	4.5	3(4.5) 4.5	4.1
Zygomatic breadth	12.4	2(10.7-11.1) 10.9	11.0
Breadth of braincase	8.9	3(8.1-8.4) 8.2	8.8
Mastoidal breadth	11.3	3(9.7-10.3) 10.0	10.0
C-M ³	7.1	3(6.5-6.7) 6.6	6.3
M ³ -M ¹	8.4	3(7.7-7.8) 7.8	7.7

*Williams and Genoways (1980).

Coendou melanurus (Wagner, 1842)

Specimens examined (2). — Estado Bolívar: Imataca Forest Reserve, Unit V, Km 50 road Tumeremo-Bochinche (8°00'N; 61°18'W), 180 m; one adult female (EBRG-17469) and one young male (EBRG-17470).

According to recent literature, the taxonomic nomenclature and geographical distribution of the South American hairy dwarf porcupines (we follow Handley and Pine 1992, using *Coendou* instead of *Sphiggurus*) remains insufficiently clarified. The available information showed the occurrence of only one species in Venezuela (*C. pruinosus*), with a distribution that embraces both lowland and montane rain forests of the Andes, the Maracaibo Lake Basin, and the Coastal Range.

South of the Orinoco River, the only previous records of this group of porcupines were from observations, with no specimens to establish specific taxonomic identification (Tate 1939, Gardner 1989, Ochoa and Gorzula 1992). Therefore, our specimens confirm the occurrence of the hairy dwarf porcupines in Southern Venezuela and represent the first record of *C. melanurus* in that country. The distribution of this rare species had been documented by a few specimens collected in Suriname, Guyana, and the Amazon Basin in Brazil (Handley pers. com.).

The Venezuelan specimens, a lactating female and a young male, were collected together in a 25 cm diameter hollow dead tree in primary forest. A 50 cm layer of porcupine fecal pellets was found in the bottom of the hole, indicating a relatively long term use of this den site. One specimen of the bat *Phylloderma stenops* was collected in the same hole. No additional specimens of *C. melanurus* were recorded at Imataca despite 550 hours of nightly and daily transect observations.

The following external features distinguish *C. melanurus* from other hairy dwarf porcupines recorded in northern South America (*C. prinosus* and *C. vestitus*): larger size (total length and weight near 770 and 1550 gr, respectively); tail long (3/4 of head-body length); general appearance blackish, including tail and feet; dorsal hairs relatively more scattered, with a whitish basal band; dorsal color pattern extending on to the tail about 1/3 of its length (1/2 of the tail length in the other species); ventral fur with a tufted pattern.

Some cranial measurements (see Handley and Pine 1992, for measurement criteria) of the female of *C. melanurus* from Venezuela, in addition to those of one adult female from Amapa, Brazil (USNM-394732), respectively, are: length of zygoma, 37.7, 32.2; height of zygoma, 7.8, 6.8; rostral height, 21.7, 22.4; rostral length, 20.7, 20.5; orbital-premaxillary length, 29.2, 28.5; nasal length, 23.0, 25.6; nasal breadth, 19.3, 19.0; M¹-M³ length, 15.7, 17.3.

Cavia aperea Allen, 1911

Specimens examined (1). – Estado Tachira: 12 Km SE San Cristobal (7°40'N; 72°10'W); one young female (CVULA-1-0049).

Little information has been published on the distribution and taxonomy of *Cavia* in northern South America (Allen 1911, Thomas 1917, Cabrera 1961, Ojasti 1964). In this region, the name *C. aperea* is assigned to wild populations (Husson 1978, Williams *et al.* 1983). In Venezuela, its distributional range has been documented by a small number of specimens and localities from lowland and highland savannas in Southern Guyana (Bolivar State) and the Coastal Mountain Range of Monagas and Carabobo (Ojasti 1964, Handley 1976). With the new record the distribution of this rodent is extended to the Venezuelan Andes, where it probably is an important component of some grassland ecosystems.

External and cranial measurements of the female from Tachira are: body length, 255; hind foot, 44; ear, 15; total length of the skull, 57.9; basilar length, 47.0; zygomatic breadth, 33.1; nasal length, 17.8. Several differentiated taxa of *Cavia* could be present in the northern portion of its geographical range. However, the taxonomic status of the genus needs revision.

Oecomys rex Thomas, 1910

Specimens examined (2). – Estado Bolivar: Imataca Forest Reserve, Unit V, Km 50 road Tumeremo-Bochinche (8°00'N; 61°18'W), 180 m; one adult female (EBRG-17456) and one adult female (EBRG-17457).

The known geographic range of *O. rex*, summarized by Musser and Carleton (in press), included the Guianas and NE Brazil (north of the Amazon). Our specimens represent the first record of this rodent for Venezuela.

In the Imataca Forest Reserve, *O. rex* inhabits primary and secondary forests where it was found sympatric with *O. concolor*, *O. paricola* and *O. bicolor* (see Musser

and Carleton in press, for taxonomic nomenclature). This arboreal rat seems to be an uncommon component of the small mammal community at understory levels. However, according to its external and cranial morphology (including short and broad hind feet, and skull with strongly developed supraorbital ridges), it could be more associated with canopy levels, showing specific arboreal behavior and preferences for hard fruits or seeds.

The male and female were trapped 2-3 m above ground, on dense tangles near natural gaps. Some cranial measurements, respectively, are : Total length of skull, 35.6, 32.3 ; condyloincisive length, 32.5, 28.8 ; zygomatic breadth, 19.1, 17.9 ; postorbital constriction, 7.5, 5.7 ; braincase breadth, 14.4, 13.7 ; maxillary toothrow, 5.2, 5.5.

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