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NEW RECORD OF THE RUFOUS DOG-FACED BAT *MOLOSSOPS NEGLECTUS* (CHIROPTERA, MOLOSSIDAE) IN COLOMBIA

NUEVO REGISTRO DEL MURCIÉLAGO RUFO CARA DE PERRO *MOLOSSOPS NEGLECTUS* (CHIROPTERA: MOLOSSIDAE) EN COLOMBIA

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ABSTRACT. The bat *Molossops neglectus* has been recorded in few localities of its distribution. We document the finding of one individual of this species in a urban area in the southern part of the municipality of Santiago de Cali, Colombia. *Molossops neglectus* was record previously in Puerto Leguizamo (Department of Putumayo) and it had not been collected since more than 40 years ago in the country. This record extends the known distribution of the species for at least 450 km to the northwestern in Colombia, being the first record for an interandine valley in the country and the westernmost for the species.

RESUMEN. El murciélago *Molossops neglectus* ha sido registrado en pocas localidades a lo largo de su distribución. Se documenta el hallazgo de un individuo de la especie en un área urbana al sur del municipio Santiago de Cali, Colombia. *M. neglectus* había sido registrado previamente en Puerto Leguízamo (departamento Putumayo) y no había sido colectado hace más de 40 años en el país. Este registro extiende la distribución conocida de la especie al menos 450 km al noroccidente en Colombia, siendo el primero para un valle interandino en el país y el más occidental para la especie.

Bat species of the genus *Molossops* Peters, 1866 (Chiroptera, Molossidae) are restricted to South America and are distinguished from other molossids by a relatively large tragus (at least half the size of antitragus), a short and wide antitragus, elongated and pointed ears that have a flexible fold where they are attached to the head, and a single pair of incisors in the mandible (Gregorin & Taddei 2002; Eger 2008). *Molossops* includes two species: the dwarf dog-faced bat *M. temminckii* Burmeister, 1854, which is relatively common and occurs in Colombia, Venezuela, and Guyana in the north to Ecuador, Peru, Bolivia, Paraguay, Argentina, Uruguay, and Brazil in the south (Simmons 2005; Eger 2008); and the rufous dog-faced bat *M. neglectus* Williams and Genoways, 1980, which is considered rare and occurs disjunctively in northern South America (Guyana, Suriname and Venezuela), in the Amazon basin (southern Colombia and northern Peru), and in southern Brazil and northern Argentina (Lim & Engstrom 2001; Gregorin *et al*. 2004; Barquez *et al*. 2011).

Molossops neglectus is distinguished from its congener by its dark brown dorsal fur, slightly darker belly and being proportionately larger in its external size (forearm larger than 36 mm in *M. neglectus* and less than 33 mm in *M. temminckii*) as well as cranial measurements (total length of skull larger than 16 mm in *M. neglectus* and less than 15 mm in *M. temminckii*; Gregorin & Taddei 2002; Gregorin *et al*. 2004; Eger 2008). Occurrence records indicate that *M. neglectus* lives mainly within the Amazon rainforest in northern South America, and the semi-deciduous forest of northern Argentina and southern Brazil

(Gregorin *et al.* 2004). In Colombia it is known by a specimen collected in 1968 in Puerto Leguízamo, Putumayo Department (Amazon basin), near the border with Peru (Lim & Engstrom 2001).

On August 10th 2012 an adult male *M. neglectus* (positive epididymis, testicle 6.5 mm) was captured at the "Estación Experimental de Biología", on the campus of the Universidad del Valle, Cali municipality, Valle del Cauca department, Colombia (3°22'34'' N, 76°31'58' W', 1000 m; Figure 1). The capture was made at approximately 18:30 hours, using mist nets (12 x 3 m) located 1 m above the ground in an open area during a survey whose objective was the capture of birds for studies of reproductive biology. The specimen was collected and preserved as a skin, skull and partial skeleton, and housed in the collection of mammals at the Department of Biology, Universidad of Valle (UV-13984; Figure 2). Other molossid species occurring sympatrically with *M. neglectus* in this locality are *Molossus molossus* Pallas, 1766, *M. pretiosus* Miller, 1902, *Tadarida brasiliensis* I. Geoffroy St. Hilaire, 1824, *Eumops auripendulus* Shaw, 1800 and *E. glaucinus* Wagner, 1843.

The external and cranial measurements (in mm) and weight (g) of the specimen were taken following Freeman (1981) and are compared with the range reported by Lim & Engstrom (2001) for the species (Table 1). Detailed pictures of skull were taken in the Laboratory of Images of the Biology Department, Universidad del Valle (Figures 3 and 4). *M. neglectus* exhibits sexual dimorphism, with males considerably larger than females (Ascorra *et al*. 1991); our specimen (UV-13984, an adult male) is no exception to this, and most of its measurements are slightly larger than those recorded for the species.

This record is noteworthy because it is geographically isolated from the species' known distribution range and represents the only observation in the west of the Andes. Similarly, disjunct distribution patterns have been reported for other molossids such as *Cynomops abrasus* and *Molossops temminckii* (Alberico & Naranjo 1982; Eger 2008), indicating the Andes mountain range is not a geographic barrier for some species of the group. Despite the slightly larger size of the specimen captured compared with other *M. neglectus*, we are reluctant to assign it to an undescribed taxon; there are few morphometric data on

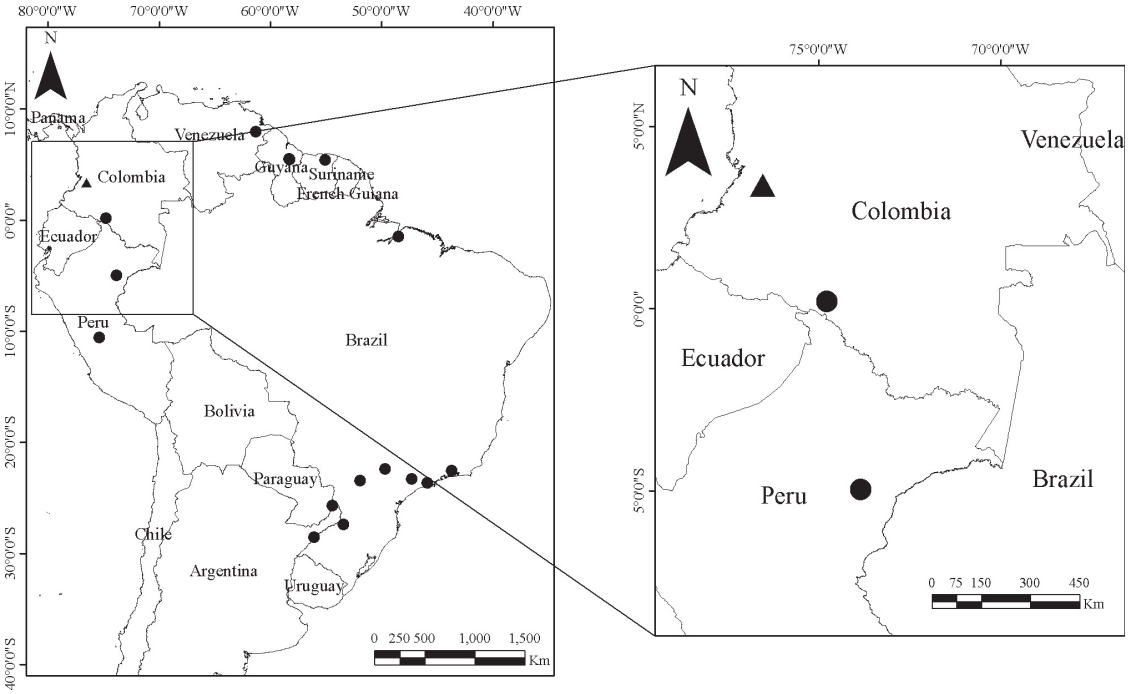

Figure 1. Map showing the known localities of *Molossops neglectus* in South America (left), indicating in detail the new record (right). Historical records are represented by circles (Gregorin *et al*. 2004) while the triangle indicates the new record.

Figure 2. An adult male of *Molossops neglectus* collected on the campus of the Universidad del Valle, Cali municipality, Valle del Cauca department, Colombia (Photo by Jorge H. Velandia-Perilla).

Table 1. External and cranial measurements (in mm) and mass (in grams) of a male of *Molossops neglectus* (UV – 13984) and range reported for the species (Lim & Engstrom 2001).

	UV-13984	Lower range	Upper range
Total length	102	85	101
Length of tail	35	30	36
Length of hind foot	10	8	10
Length of ear	16	13	15
Length of forearm	39.0	36.0	39.0
Greatest length of skull	20.8	16.7	19.6
Zygomatic breadth	13.7	10.4	12.0
Postorbital constriction	5.1	4.0	4.4
Length of maxillary toothrow	7.5	6.4	7.3
Breadth across upper molars	8.8	7.5	8.4
Mass	20	9	16

the species and its true size range is unknown. We here assign it tentatively to *M. neglectus* and anticipate that further surveys will provide the additional morphological and molecular data needed to perform a more in-depth analysis of the identity of this group.

The species has been recorded in primary and secondary forests (Gregorin *et al*. 2004). Its presence on the campus of the Universidad del Valle, a wooded area of approximately 100 ha located in an urban matrix in southern Cali, supports previous observations that the species is tolerant of disturbance (Gazarini & Bernardi 2007). This is the second report of the species for Colombia, and represents an extension of its known range by at least 450 km to the northwest (Figure 1).

The rufous dog-faced bat was previously known from humid regions such as the Amazon forests and the Atlantic coast forests in Brazil. In contrast, the vegetation at our

Figure 3. Frontal, lateral, dorsal and ventral view of the skull of *Molossops neglectus* (UV-13984) collected on the campus of the Universidad del Valle, Cali municipality, Valle del Cauca department, Colombia (Photos by Daniela Arenas-Viveros).

Figure 4. Frontal, dorsal and lateral view of the mandibles of *Molossops neglectus* (UV-13984) collected on the campus of the Universidad del Valle, Cali municipality, Valle del Cauca department, Colombia (Photos by Daniela Arenas-Viveros).

site consists of the dry forest typical of the Cauca Valley with extended periods of drought. Therefore, this record demonstrates that the species' distribution covers various ecosystems; it also represents an extension of habitat for *M*. *neglectus*, and a large increase in the area and potential ecosystem used by it. It is likely that the species is distributed along the Rio Cauca basin and even further north. This record emphasizes the need for an increase in the species' representation in collections in order to understand better its distribution.

Bats have been caught on the campus of the Universidad del Valle from the 1980s as part of the courses "Mammalogy" and "Natural History of Vertebrates", and with this record the presence of 12 species is confirmed. The absence of previous records of the species in this area is probably due to the difficulty of capturing insectivorous bats with ground-level mist nets, since molossids fly higher. It is essential that the use of mist nets is complemented by other methods (e.g. harp traps, active search of roosts, echolocation call recordings) in further studies to detect species difficult to capture with nets. This record highlights the necessity of further research on a poorly known bat species.

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