

# First record of *Nasua nasua* (Linnaeus, 1766) (Mammalia: Carnivora: Procyonidae) for the Zulia state, western Venezuela

David A. Prieto-Torres<sup>1,2\*</sup>, Olga L. Herrera-Trujillo<sup>3</sup> and Arnaldo Ferrer-Pérez<sup>3</sup>

1 Eje BioCiencias, Centro de Modelado Científico de la Universidad del Zulia (CMC), Facultad Experimental de Ciencias. Maracaibo, Venezuela

2 Red de Biología Evolutiva, Instituto de Ecología, A.C., Laboratorio de Biogeografía. Xalapa, Veracruz, México

3 Museo de Historia Natural La Salle (MHNLS), Fundación La Salle de Ciencias Naturales (FLASA). Caracas, Venezuela

\* Corresponding author. E-mail: [dprieto@cmc.org.ve](mailto:dprieto@cmc.org.ve)

**Abstract:** We report a new record for the South American coati, *Nasua nasua* (Linnaeus, 1766), based on a specimen from Sierra de Perijá, Zulia state, western Venezuela. This specimen represents the first record of the species for the state, increasing to 192 the number of mammals reported for Zulia. It also extends the species distribution in about 245 km northwest from the nearest known locality in Venezuela, and about 80 km from the nearest locality in Colombia.

**Key words:** mammals, South American coati, distribution extension, Sierra de Perijá

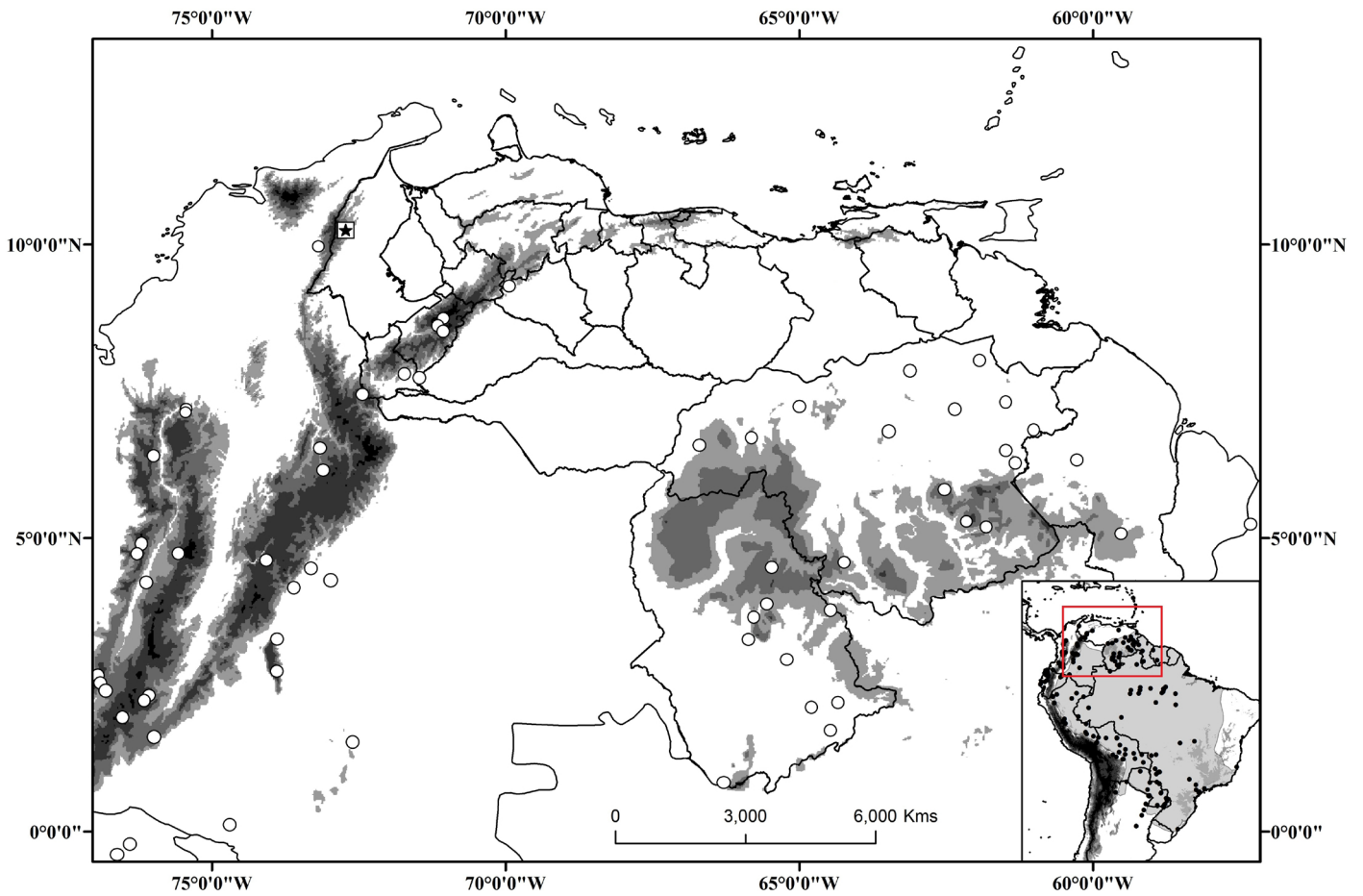
*Nasua* Storr, 1780 includes two species: the white-nosed coati, *N. narica* (Linnaeus, 1766), occurring from southern United States to Mexico and Central America; and the South American coati, *N. nasua* (Linnaeus, 1766), broadly distributed in South America, from Colombia and Venezuela southward to Uruguay and northern Argentina (Eisenberg 1989; Decker 1991; Gompper and Decker 1998). In Ecuador and Colombia, the South American coati occurs in the eastern and western slopes of the Andes at elevations of up to 2,500 m (Morales-Martínez et al. 2015), but the species was introduced in Chile in 1935 (Pine et al. 1979; Colwell 1989; Gompper and Decker 1998). *Nasua nasua* lives in forested habitats, including deciduous, evergreen, gallery, and cloud forests, as well as the Chaco and savannas (Redford and Stearman 1993; Beisiegel 2001).

In Venezuela, this species has been reported from only two regions: the south of Orinoco, with elevations ranging from 35 to 2,550 m; and in the Andes, at elevations of up to 1,100 m (Linares 1998). Herein, we report the first record of *Nasua nasua* for the Zulia state, western Venezuela. The source for this record is a museum specimen found during examination of museum

collections for the project *Biodiversidad y Conservación en el Estado Zulia: Identificación de áreas prioritarias para maximizar la protección de especies*, which aims to review and update the list of mammals from Zulia.

In the mammal collection of the Museo de Historia Natural La Salle (MHNLS) we found a voucher of *N. nasua* (total length [TL] = 870 mm) (MHNLS M-282; Table 1) that was collected in February 1953 at Mashirampe hill, Sierra de Perijá, Zulia state, Venezuela (10°13'59.8" N, 072°43'58.8" W; 2,100 m of elevation; Figure 1). This specimen (Figure 2) is preserved as skin and skull. Its identification as *Nasua nasua* is based on the keys and descriptions provided by Decker (1991), Gompper and Decker (1998), Linares (1998) and Morales-Martínez et al. (2015). We obtained external and cranial measurements using a plastic tape measure (metric) and a dial caliper (accuracy of 0.05 mm), respectively. Measurements followed Andrade-Ponce et al. (2015). The specimen examined in this study has the external and cranial measurements within the range or very close to the means reported in the literature for *N. nasua* (Table 1).

The South American coati can be distinguished from the white-nosed coati by the following set of characters (Decker 1991; Gompper and Decker 1998; Andrade-Ponce et al. 2015; Morales-Martínez et al. 2015): brown or gray pelage on the muzzle, hairs on the nape, and a long and slender ringed-tail (nonprehensile); ears are short and round; sides of the nasal bones converge posteriorly rather than being parallel; and postorbital processes of the jugal bone present (Decker 1991; Gompper and Decker 1998). The species also has an elongated rostrum, which finishes in a flexible rhinarium that protrudes beyond the end of the lower mandible. Canines are blade-like, and the premolars and molars have comparatively high crowns with sharp cusps. The South American coati can be distinguished from the the mountain coati—*Nasuella*



**Figure 1.** Distribution previously known (white dots) of *Nasua nasua* in Venezuela and Colombia, and new locality record in Zulia state (square with black star).



**Figure 2.** Male of *Nasua nasua* from Zulia (MHNS M-282). A: Dorsal and lateral views of skin (including tail). B: Dorsal, ventral and lateral views of skull.

**Table 1.** Selected measurements (mm) of *Nasua nasua* at Sierra de Perijá (Zulia state), Venezuela and Colombia.

Variables	Present study, MHNS M-282	Venezuela	Colombia (Andrade-Ponce et al. 2015)
Condylbasal length	109.0	102.2–125.5 (111.8)	96.1–126.1 (111.3)
Breadth of braincase	45.7	40.4–45.7 (42.4)	41.6–45.3 (42.4)
Interorbital minimum width	25.5	20.6–27.9 (24.5)	19.8–28.6 (25.1)
Postorbital breadth	26.6	20.3–28.9 (23.9)	21.8–27.7 (24.3)
Rostral breadth	12.4	11.56–24.6 (19.4)	15.3–24.4 (19.1)
Zygomatic breadth	57.3	49.6–70.3 (60.6)	49.9–73.1 (63.1)
Total length	870.0	750.0–1330.0 (928.1)	770.0–942.0 (873.2)
Tail length	370.0	300.0–470.0 (392.1)	370.0–430.0 (376.8)
Hind foot length	67.0	62.0–100.0 (85.1)	75.0–90.0 (82.8)
Ear length	53.0	22.0–65.0 (38.2)	30.0–41.0 (37.0)

See Appendix 1 for specimens examined from Colombia and Venezuela.

*olivacea* (Gray, 1865)—by its longer tail (*N. olivacea* has a shorter tail relative to the total body length).

The localities available for *N. nasua* (Figure 1) indicate a disjunct distribution in Venezuela, with two populations, one in the Andes, northwest of the country; and other in the Orinoco region, in the southeast (Linares 1998). The specimen reported here represents the first record of the species from Zulia and increases to 192 the number of mammals reported for the state (Prieto-Torres et al. in prep.). This is the northernmost record for the species in the Andes (Sierra de Perijá), extending its geographic distribution in ca. 80 km from the nearest known locality in Colombia (Corredor-Carrillo and Muñoz-Saba 2007; Muñoz-Saba 2007), and ca. 245 km northwest from the nearest locality in Venezuela (Figure 1). Based on the assumption that this record should not be the only locality on the eastern slope of the Sierra de Perijá for *N. nasua*, we support the idea that more wildlife inventories are needed to assess the species and communities of mammals in the region (Wilson et al. 1996; Prieto-Torres et al. 2011). Although the Sierra de Perijá offers great potential from a taxonomic view and is considered as an important endemic center for biodiversity, there has been less wildlife research in the eastern slope than in nearby mountain systems, such as the Cordillera de Mérida and the Cordillera de la Costa in Venezuela, or the Sierra de Santa Marta in Colombia (Soriano et al. 1990; Vilorio and Calchi 1993; Prieto-Torres et al. 2011).

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#### **Appendix 1**

Specimens examined are deposited at the Museo de Historia Natural La Salle (MHNLS), Museo de Biología de la Universidad Central de Venezuela (MBUCV), Estación biológica Rancho Grande (EBRG), and Instituto de Ciencias Naturales de la Universidad

Nacional de Colombia (ICN).

VENEZUELA ( $n = 25$ : 10 males, 7 females, 8 undetermined): Amazonas state (EBRG 4455, 4474, 21043; MBUCV 1392; MHNLS 3554), Bolívar state (EBRG 802, 1087, 1088, 1089, 1090, 1485, 1623, 1646, 1706, 3179, 3215, 17466; MBUCV 5047, D-88; MHNLS 4624;), Táchira state (MHNLS 380), Trujillo state (MHNLS 3754), Zulia state (MHNLS 282). Unspecified locality (MBUCV D-11, D-12).

COLOMBIA ( $n = 11$ : 5 males, 6 undetermined): Amazonas department (ICN 11523), Antioquia department (ICN 15846), Boyacá department (ICN 151), Caldas department (ICN 16734), Caqueta department (6493), Meta department (ICN 733, 15973), Putamayo department (ICN 4375), Vaupés department (ICN 4432, 3724). Unspecified locality (ICN 14930).