
**NEW RECORDS FOR THE NORTHERN NAKED-TAILED
ARMADILLO *Cabassous centralis* (CINGULATA:
DASYPODIDAE) IN TROPICAL DRY FORESTS OF
THE DEPARTMENT OF SUCRE, COLOMBIAN CARIBBEAN**

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Abstract: The Northern naked-tailed armadillo *Cabassous centralis* is distributed from México to Ecuador (0-3 000 m asl) in numerous habitats from dry forests to subparamo, tolerating some habitat modification and mixed landscapes including agriculture. Despite its wide range, there is still little known about the species' ecology, based on a few confirmed records, and it is underrepresented in collections. Here we present the first confirmed records for the species in the Sucre Department of Colombia, through a photograph and a track recorded as part of an intensive field sampling effort. These new records provide insights into the species' ecology, rarity, presence, and potential tolerance to moderate disturbance.

Keywords: Armadillo, Cingulata, Coraza, Cola de Trapo, Montes de María, Sucre.

Palabras clave: Armadillo Zopilote, Cingulata, Coraza, Cola de Trapo, Montes de María, Sucre.

The Northern Naked-Tailed Armadillo *Cabassous centralis* (Miller, 1899), locally known in the Caribbean region of Colombia as Cola de Trapo or Mohan, is a member of the Cingulata order and Dasypodidae family. It is distributed from Chiapas, México, through Central America, to western Colombia, north-western Ecuador and north-western Venezuela (Gardner, 2005; Tirira, 2007), occurring from sea level to around 3 000 m asl (Superina and Abba; 2009). The species had been recorded to inhabit dry to moderately moist, deciduous and semi-deciduous forests, at forest edges in rocky terrain, dry savanna (Reid 1997, Genoways and Timm, 2003), tropical moist montane forests and subparamo (Genoways and Timm, 2003, Díaz-N. and Sánchez-Giraldo 2008) and in secondary forest habitat tolerating a moderate mix of forest and agricultural land (Superina and Abba; 2009). In Colombia, the species is distributed throughout the Caribbean coast, the inter-Andean valleys of Cauca and possibly Magdalena rivers, and the Andes. It has been recorded specifically in the departments of Antioquia (Wetzel, 1980), Magdalena (Allen, 1904, Bangs, 1900), Cesar (Wetzel, 1980), Caldas (Isagen, 2005), Quindío, Tolima and Valle del Cauca (Alberico *et al.*, 2000), and more recently, a new elevation record in Antioquia (Díaz-N and Sánchez-Giraldo, 2008). Most of these records are located in the central and eastern mountain ranges of Colombian Andes (Alberico, 2006; Díaz-N and Sánchez-Giraldo, 2008) with the only confirmed records from the Caribbean region in Cesar and Magdalena

departments. However, given the large estimated distribution of this species, this small number of records likely does not represent the complete range of this species at national level.

This species is currently considered globally as Data Deficient (DD) by the IUCN Red List of Threatened Species (Superina y Abba, 2009), but it is considered Near Threatened (NT) in Colombia since 2004, when the species was nationally assessed (Alberico, 2006). There are few known conservation measures for the species related with its presence in protected areas (Superina and Abba, 2009). This species has been recorded in a small number of protected areas and likely occurs in others within its range; there are few specific conservation actions that have been taken for this species, such as its inclusion in CITES Appendix III for Costa Rica.

The department (province) of Sucre is located in the Caribbean region of Colombia and it is composed of the flooded plains of the Magdalena, Cauca and San Jorge rivers, a mountain range (known as Serranía de San Jacinto or Montes de María) and a large extension of savanna (Aguilera, 2005). It includes five physiographic sub-regions related with its geomorphology and it is composed mainly by dry forests, wetlands and isolated savannas all of these present on each sub-region (Balaguera-Reina *et al.*, 2010). The landscape of the department is heavily influenced by human activities, with a long history of human use, settlements and landscape transformation. It currently retains only 12 % (61,632 ha) of its original

natural forest cover (dry forests), with 14 land use types dominated by pastures representing 67.84 % of the department's area (approximately 350,000 ha; Balaguera-Reina *et al.*, 2010). Montes de María is a mountain range shared with the department of Bolívar, representing the most important forest patch in the department of Sucre. Within the Montes de María, the southern portion is known as Serranía de Coraza, which encompasses the Reserva Forestal Protectora Serranía de Coraza y Montes de María, under the jurisdiction of Colosó, Chalán, and Toluviejo municipalities and the Colosó Primatological Research Station. The reserve covers 6,653 ha with an elevation range of 200 to 560 m asl; it is considered to be one of the most important forest remnants in the Caribbean and the last refuge for a large number of endangered and/or endemic species (Savage *et al.*, 1996, Vasquez y Serrano, 2009). Also, the research station was intensively used for primate research during the 70s and 80s, but it was later abandoned because of social conflicts and violence (Vasquez and Serrano, 2009); however, there is still some research being undertaken and the station and area is actively protected and managed by the regional environmental authority, CARSUCRE, with the support of local universities and NGOs.

During intensive sampling with camera traps (912 trap-nights in 16 locations) and transects (33.03 km in two transects covering the main forest patch) in the Colosó Primatological Research Station within the Serranía de Coraza, Montes de

María region, an individual of *Cabassous centralis* was photographed at 9° 32' 10.2" N and 75° 20' 58.2" W (Figure1), at approximately 351 m asl on January 17, 2011 at 09:45 h (Figure2). The location had a slope of 30 °, with 70 % canopy cover and a mean canopy height of 13-16 m, and understory cover was approximately 5 %. The site was 320 m from the nearest body of water and 180 m from the forest edge, but there is low human presence in the closest transformed area. Also, a track was observed at 9° 31' 59.8" N and 75° 20' 57.6" W (Figure1) at approximately 217 m asl on September 26, 2010 at 15:45 h. Despite the presence of the Nine-banded Armadillo *Dasypus novemcinctus* in the area, and that is not usually clearly differentiated by local people, the tracks of both species were clearly identified based on a reference collection, been the number of toes in the forefeet tracks different on both species (five toes for *C. centralis*, four for *D. novemcinctus*), and the third claw for *C. centralis* remarkably larger (Cuarón, 2005, Mendoza Durán, 2005). The exact location had a slope of 5 °, with 80 % canopy cover and a mean canopy height of 17-20 m. The site was located on the eastern plain of the Quebrada Sereno on a small creek's sandy bank. The specific study area is considered as a heavily fragmented where the only important natural cover dry forest patch is the site where the sampling was performed. These observations were recorded as part of an ongoing project implemented by Fundación Herencia Ambiental Caribe, CARSUCRE and ProCAT Colombia with the aim of

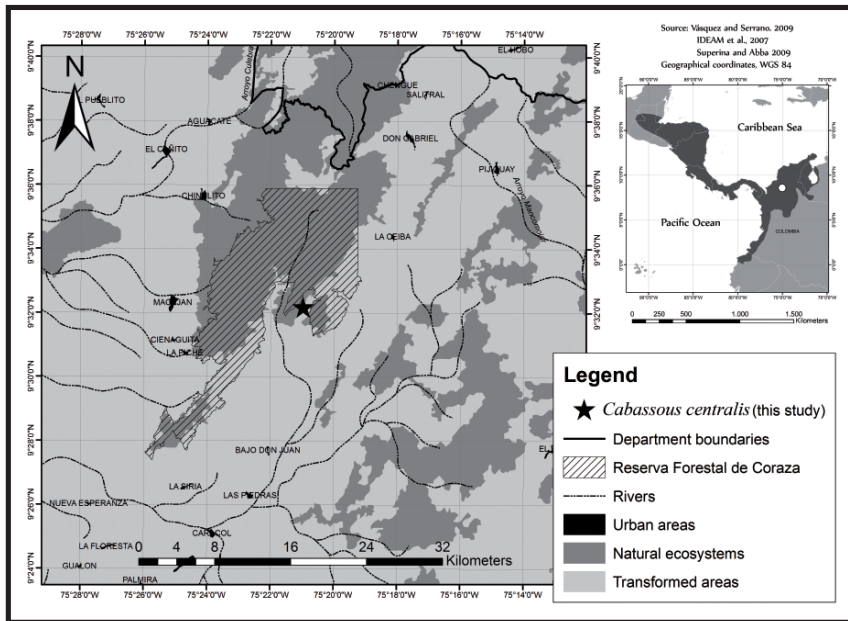


Figure 1. Map of the new location records of *Cabassous centralis* for the department of Sucre, Colombia, and global distribution of the species indicating the study area (due to scale issues, both records are located close enough to be represented by the same indicator).

collecting baseline data on mammals in the department as a basis for regional conservation planning.

There are no confirmed records for this species in the region among the known localities, and it has been considered "potentially present" in the Magdalena River valley (Díaz-N and Sánchez-Giraldo, 2008). Previous field work in the area had failed to record the species (Galván-Guevara and Silva, 2010); however, it was thought to be in the area, despite the lack of confirmed observations (Galván-Guevara *et al.*, 2009). This new location

report increases the number of known and confirmed localities for the species in Colombia and adds new information on the extent of the range in the country and a new confirmed conservation measure due to its presence in a protected area, the Serranía de Coraza Forestry Reserve and Colosó Primatological Research Station. It is also an important record since it represents a confirmed locality in a heavily fragmented area, potentially indicating that it may have some tolerance of disturbance and be present on a broader range of habitats than previously known,



Figure2. Photographic record of *Cabassous centralis* in a dry forest patch in the Montes de María, department of Sucre, Colombian Caribbean.

confirming previous alleged information (Superina and Abba, 2009); nevertheless, even that still the species occupies a fragmented area it is present within the forested and best preserved site in the region.

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