

# Oryx

## The mystery of a tiny porcupine in the Colombian Andes

By María M. Torres Martínez, 17th November 2020

The impressive valleys, volcanoes, fauna and flora of the mountains of South America drew the attention of naturalists such as Alexander von Humboldt, who was fascinated by the landscapes and wildlife he found there. Yet despite centuries of exploration and research, these ecosystems remain full of undiscovered and hidden species.

The Andes extend from Venezuela through to southern Colombia, and reach the continent's southernmost point at Tierra del Fuego. In Colombia, the Andes lie in three main mountain chains: the eastern, central, and western Cordilleras. The mountainous terrain and the region's biogeography are major contributors to Colombia's high biodiversity; the country ranks sixth in the world for mammal diversity and first for birds and orchids.



Left: The tiny porcupine *Coendou vestitus* on a branch. This spiny rodent is found in canopies in the Eastern cordillera of the Andes. Photo: Sergio Chaparro. Right: View of the Eastern cordillera from the Central cordillera. This is the home of this unusual porcupine. Photo: Héctor Ramírez-Chaves.

Unfortunately, with only c. 25% of their original vegetation cover remaining and alarming deforestation rates, the Andes are a highly threatened ecosystem. A small area of this ecosystem is home to one of the least known neotropical rodent species: the brown hairy dwarf porcupine *Coendou vestitus*.

This porcupine is one of 15 species of neotropical porcupines, and the only species endemic to Colombia's eastern Cordillera. This tiny species has soft hair, bristles and quills. Like other South American porcupines, it is probably nocturnal, lives in the forest canopy and feeds on fruit and leaf buds. Little is known about this rodent other than the sparse and isolated records obtained over the last century. This lack of information has limited our ability to assess its current conservation status and to develop strategies to help conserve it. Globally, this species is categorized as Data Deficient on the IUCN Red List, but at nationally in Colombia it is categorized as Vulnerable, given the threats to its habitat.



Photo 4: High-Andean forest of the Eastern Cordillera (Cordillera Oriental) of Colombia. Photo: María M. Torres Martínez

Our [article](#) presents an assessment of the conservation status of this little-known species. Using data collected through literature reviews, museum collections, and other sources, including photographic records, we compiled all the available information to update our knowledge of the species' distribution range and to assess its conservation status. We also evaluated how much of the porcupine's range overlaps with existing protected areas in Colombia and included information on the deforestation rate of this part of the country.

We found that the species was not recorded from 1925 to 2006, despite its supposed distribution including areas that have historically been visited by researchers, demonstrating the rarity of the species. All of the six localities in which we were able to confirm the presence of the species lie in

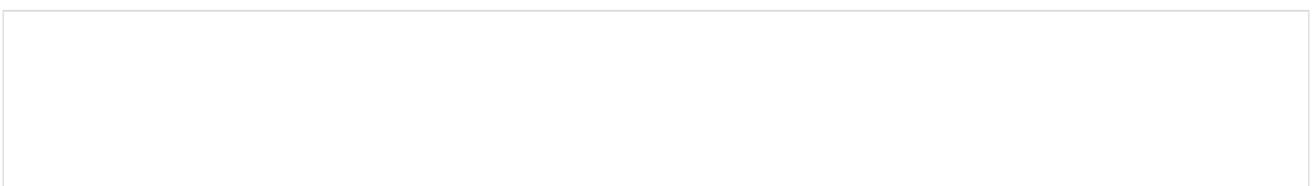
highly threatened Andean forests. These confirmed localities are from museum voucher specimens dated 1925–2006 and photographic records in 2012, 2018 and 2019. This porcupine also has a restricted distribution of c. 3,323 km<sup>2</sup>, the total population is believed to be small, and it occurs only in tropical moist broadleaf forest. Most of the locations where it was recorded are outside protected areas.



Landscape of the locality of Villa de Leyva where the last voucher specimen was found. Photo: María M. Torres Martínez

The recent sightings, following c. 80 years without any records of the species, together with evidence collated from museums and the scientific literature, lead us to conclude that *C. vestitus* should be categorized as Endangered on the IUCN Red List. We are advocating the inclusion of this species as a priority in future local conservation management programmes. The conservation of this curious, tiny mammal would also help to protect the tropical moist broadleaf forest that is its habitat, and our improved knowledge of this species is a motivation to search for other little-known species that inhabit the mysterious Cordilleras of Colombia.

The article [Assessment of the rarity and conservation status of the Colombian endemic brown hairy dwarf porcupine \*Coendou vestitus\*](#) is available in *Oryx—The International Journal of Conservation*.





### María M. Torres Martínez

María M. Torres-Martínez is PhD student at the Ecology and Conservation Graduate Program in the Federal University of Paraná in Brazil. She is interested in mammal population and community ecology with an emphasis on distribution and conservation of threatened species. Her research focuses on Andean ecosystems and is currently focused on understanding the ecological determinants of the distribution of Neotropical porcupines and the implications for conservation.