

NEW DISTRIBUTION RECORDS OF THE SILKY ANTEATER *Cyclopes didactylus* (PILOSA, CYCLOPEDIDAE) IN COASTAL NORTHEASTERN BRAZIL

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ABSTRACT: The silky anteater *Cyclopes didactylus* is one of the least studied xenarthrans. Its range extends from tropical Mexico south into Central and South America. The aim of this study was to determine the range of a historically isolated population of *C. didactylus* in coastal northeastern Brazil. Data on sightings, donations, and confiscations of *C. didactylus* were obtained from regional offices of the Instituto Brasileiro do Meio Ambiente e Recursos Renováveis (IBAMA). The silky anteater's area of distribution in the northeastern Atlantic forest seems to be larger than previously reported and includes the states of Rio Grande do Norte, Paraíba, Pernambuco, and Alagoas.

RESUMEN: Nuevos registros de distribución del serafín del platanar *Cyclopes didactylus* (Pilosa, Cyclopedidae) en el nordeste costero de Brasil. *Cyclopes didactylus* es uno de los xenartros menos estudiados. Su distribución abarca zonas tropicales de México, Centroamérica y Sudamérica. El objetivo de este estudio fue determinar la extensión de una población de *C. didactylus* aislada históricamente en la costa noreste de Brasil. Se obtuvo información sobre avistamientos, donaciones y decomisos de *C. didactylus* de las oficinas regionales del Instituto Brasileiro do Meio Ambiente e Recursos Renováveis (IBAMA). El área de distribución del serafín del platanar en la selva atlántica nordestina parece ser más amplia de lo conocido e incluye los estados de Rio Grande do Norte, Paraíba, Pernambuco y Alagoas.

Key words. Atlantic Forest. Pygmy anteater. Xenarthra

Palabras clave. Selva atlántica. Serafín del platanar. Xenarthra

The silky anteater *Cyclopes didactylus* (**Fig. 1**) is a small, poorly known xenarthran. With a body weight of approximately 300 grams, a body length of 35 cm and a tail length of 20 cm, it is the smallest extant anteater. Its exclusively arboreal and nocturnal habits may explain why it is one of the least studied xenarthrans. Although its wild populations are

affected by rapid deforestation and habitat loss all over its range, the species is currently listed as Least Concern (LC) by the International Union for the Conservation of Nature (IUCN, 2008).

The silky anteater's type locality, originally described as "Habitat in America australi", was limited by Thomas (1911) to Surinam. Its range



Fig. 1. Male silky anteater (*Cyclopes didactylus*) from Recife, Pernambuco, Brazil. Photograph by Flávia Miranda.

extends from tropical Mexico south into Central and South America. It is absent from El Salvador (Fonseca and Aguiar, 2004). In Costa Rica, it seems to be restricted to Cartago province (Cabrera, 1957). Within South America, its distribution west of the Andes is limited to Ecuador, Colombia, and possibly northwestern Peru (Wetzel, 1985). East of the Andes, it can be found in the forests of the Orinoco and Amazon basins. According to Wetzel (1985), its distribution ranges as far south as southeastern Bolivia, while Fonseca and Aguiar (2004) mention that the southernmost record is in Alto Beni, Bolivia. The silky anteater's low metabolic rate, low body temperature (around 33 °C), and reduced ability to thermoregulate limit its distribution to forests below 1500 m (McNab, 1985). The Andes therefore represent a significant barrier between northern and southern populations.

Sporadic sightings in northeastern Brazil (Fonseca et al., 1996) suggest the existence of an isolated population in the coastal Atlantic

forest. The IUCN/SSC Anteater, Sloth and Armadillo Specialist Group lists Pernambuco as the only state in coastal northeastern Brazil where silky anteaters occur (Fonseca and Aguiar, 2004). However, according to Wetzel (1985), their distribution in northeastern Brazil ranges from the coast of Pernambuco to Alagoas. Gardner (2007) mentions museum specimens from Paraíba, Pernambuco and Alagoas. Because all specimens listed by Wetzel (1985) and Gardner (2007) are over 50—and some even more than 100—years old, we considered it necessary to verify the presence of *C. didactylus* in coastal northeastern Brazil and update its area of distribution. A questionnaire aiming at obtaining data on sightings, donations, and confiscations of silky anteaters over the past five years was sent by fax or email to the regional offices of the Instituto Brasileiro do Meio Ambiente e Recursos Renováveis (IBAMA) of the states of Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe, and Bahia. All offices responded to the survey. In addition, personal or telephone interviews were performed with state officers of IBAMA.

Analysis of the collected information revealed that the current area of distribution of *C. didactylus* in coastal northeastern Brazil varies from the range described in the scientific literature (Fig. 2). Silky anteaters have been reported from Rio Grande do Norte, where some specimens were received by IBAMA in the Natal area (5° 50' S, 35° 10' W). Several specimens have been confiscated by or voluntarily handed over to the authorities in Paraíba (7° 10' S, 35° 00' W); most of these animals were directed to IBAMA and João Pessoa Zoo. Reports were also obtained of silky anteaters that have been voluntarily handed over to the authorities in the Atlantic forest of Pernambuco; the individuals originated from different areas, such as Recife (8° 00' S, 34° 50' W) and Igarassú (7° 50' S, 34° 50' W). IBAMA Alagoas receives an important number of silky anteaters due to the large area of this state and its conservation areas. The main sites of origin informed by



Fig. 2. Distribution of the silky anteater (*Cyclopes didactylus*) in coastal northeastern Brazil. Hatched area: range according to IUCN (2008). Dotted area: range according to this study. Numbers indicate distribution records reported in this study. 1. Natal; 2. João Pessoa; 3. Recife; 4. Igarassú; 5. Boca da Mata; 6. Marechal Deodoro; 7. Murici; 8. Maceió.

the authorities were Boca da Mata (9° 40' S, 36° 15' W), Marechal Deodoro (9° 50' S, 35° 50' W), Murici (9° 25' S, 35° 60' W), and the capital city Maceió (9° 40' S, 35° 45' W). No silky anteater was received by IBAMA Ceará over the past years, and no individuals have been reported from the states of Bahia and Sergipe. The number of *C. didactylus* received per year by IBAMA, averaged over all northeastern states, was two individuals/year. These animals were usually released in Atlantic forest patches.

The silky anteater's area of distribution in the northeastern Atlantic forest seems to be larger than reported by Wetzel (1982, 1985) and Fonseca and Aguiar (2004) and includes the states of Rio Grande do Norte, Paraíba, Pernambuco, and Alagoas. This population probably remained separated from the Amazonian populations since the Pleistocene, when the Atlantic and Amazonian forests retracted and were replaced by the xeric Caatinga (Tabarelli et al., 2006). As a

consequence, the coastal northeastern population may be sufficiently differentiated at the genetic level to represent a separate Evolutionary Significant Unit (ESU sensu Moritz, 1994).

Once abundant, the Atlantic forest of northeastern Brazil currently represents one of the most degraded areas of the biome. Deforestation for sugar cane and soybean monocultures has decimated and fragmented suitable habitat for innumerable species, some of which are threatened with extinction (Tabarelli et al., 2006). The current area of the coastal Atlantic forest fragments in the range states of *C. didactylus* amounts to approximately 3000 km² (Campanili and Prochnow, 2006), which represents no more than 5% of its original extent (Galindo-Leal and De Gusmão Câmara, 2003). Genetic analyses are in progress to evaluate whether the population described here is indeed a separate ESU (Miranda et al., 2009). If so, and in view that deforestation of its natural habitat has not halted, it is probable that these silky anteaters should be classified as endangered and require special protection to ensure their long-term survival.

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