Abstract: *Microsciurus santanderensis* (Hernández-Camacho, 1957) is a sciurid commonly called the Santander dwarf squirrel. *M. santanderensis* is a small tree squirrel with orange and black mixed fur and is 1 of 4 species in the genus *Microsciurus*. Endemic to Colombia, South America, in forests at elevations up to 3,800 m, *M. santanderensis* is listed as “Data Deficient” by the International Union for Conservation of Nature and Natural Resources, and more research is needed to determine its conservation needs.

**Key words:** Colombia, endemic, rodent, Santander dwarf squirrel, South America

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**Nomenclatural Notes.** *Microsciurus santanderensis*, the Santander dwarf squirrel, was originally included as a subspecies of *Sciurus pucheranii* (Andean squirrel), but is now recognized as a separate species (Hernández-Camacho 1957; Cabrera 1960); however, the generic affinity and monophyly remain questionable (de Vivo and Carmignotto 2015). The type specimen is housed in the Instituto de Ciencias Naturales, Universidad Nacional de Colombia (ICN # 416—Ramírez-Chaves 2011).

*Microsciurus* is derived from the Greek, mikros, meaning small, skia, meaning shadow, and oura, meaning tail (Gotch 1996). The specific epithet refers to the department of Santander in Colombia where the type specimen was collected. The English common name for *M. santanderensis* is the Santander dwarf squirrel (Wilson and Cole 2000; Wilson and Reeder 2005). Spanish common names for *M. santanderensis* are ardita pioja, ardilla pioja (Hernández-Camacho 1957) and ardilla pioja or racibana (Pérez-Torres and Correa Q. 1997; Donegan et al. 2004).

**Diagnosis**

The distribution of *Microsciurus santanderensis* overlaps to an unknown extent with those of *M. alfari*, *M. flaviventer*, *M. mimulus*, *Sciurus granatensis* (red-tailed squirrel), and the Andean squirrel, so sympatry among these species is possible in...
portions of their ranges. *M. santanderensis* lacks the white subauricular spots of *M. alfari* and the pale yellow postauricular patch of *M. flaviventer*, and is longer in total length (272–308 mm) than either *M. alfari* (228–240 mm) or *M. mimulus* (235–268 mm—Eisenberg 1989; Thorington et al. 2012). *M. santanderensis*, besides lacking the distinctive red pelage and tail, is shorter in total length than the red-tailed squirrel (340–565 mm—Thorington et al. 2012). *M. santanderensis* is shorter in total length than the Andean squirrel (324–341 mm), and sympatry between these 2 species may be restricted to higher elevations (2,200–3,500 m—Leonard et al. 2009; Thorington et al. 2012).

**GENERAL CHARACTERS**

*Microsciurus santanderensis* is a small tree squirrel (Fig. 1; Hernández-Camacho 1957). Total length (mm) is 272–308, tail length 136–152, hind foot length 42–45, and ear length 15–18 (n = 5—Hernández-Camacho 1960). Females are slightly larger than males (Hayssen 2008).

*Microsciurus santanderensis* has an ochraceous-orange (all color descriptions follow Hernández-Camacho 1957) dorsal and lateral pelage mixed with black, and a black middorsal line. The pelage of upperparts is relatively short, with 5–6 mm middorsal hairs. The forearms are similar in color to the sides of the body, gradually becoming lighter forward, and light pinkish-cinnamon near the toes. The venter is pinkish buff. Postauricular spots are absent, but subauricular spots are light ochraceous-buff. The ears are covered inside by short orangish hairs. The back of the crown has a large blackish spot. The rostrum and orbital ring are pinkish-cinnamon. The forehead is ochraceous-orange, finely mixed.

**Fig. 1.**—Ventral, lateral, and dorsal views of a prepared specimen of *Microsciurus santanderensis* (male from La Albania, Mesa de Los Caballeros, Santander, Colombia; Colección de Mamíferos Alberto Cadena García, ICN [Instituto de Ciencias Naturales, Colombia] # 416). Photographs by E. Rudas Burgos and H. Agudelo Zamora used with permission.

**Fig. 2.**—Dorsal, ventral, and lateral views of skull and lateral view of mandible of *Microsciurus santanderensis* (male from Puerto Wilches, Sabana de Torres, Santander, Colombia; Museo de Historia Natural, UIS-M [Universidad Industrial de Santander, Colombia] specimen # 035). Greatest length of skull is 36.06 mm. Photograph by J. G. Moreno-Patiño used with permission.
with black. The cheeks are a dirty ochraceous-buff. The chin is washed with dirty ochraceous-yellow, with light buff borders around lips. The feet are covered with short and dense cinnamon hairs, becoming pinkish-cinnamon around the toes. The heels are cadmium yellow coloration. M. santanderensis has moderately short ears, and, in proportion to its body, a long and relatively narrow tail, tipped with pure white hairs. The ventral side of the tail is buff and mixed with black. The mystacial vibrissae are black and up to 39–43 mm in length, supraorbital and genal vibrissae are black, and the mandibular vibrissae are short and whitish (Fig. 1; Hernández-Camacho 1957; Hernández-Camacho 1960).

Cranial measurements (mm) from the holotype (Fig. 2) were: nasal length, 10; interorbital breadth, 13.3; palatal length, 18.5; palatilar length, 15.8; diastema, 9.3; distal breadth of rostrum, 6.7; and maxillary toothrow length, 7.85 (Hernández-Camacho 1957).

**DISTRIBUTION**

*Microsciurus santanderensis* is endemic to Colombia, South America, and occurs in the rainforests between the Magdalena River and the western slopes of the Cordillera Oriental (Hernández-Camacho 1960; Rodríguez-Mahecha et al. 2006; Kprowski and Roth 2008; de Vivo and Carmignotto 2015) within the Caribbean and Andean zones (Fig. 3; Alberico et al. 2000; Alberico and Rojas-Dias 2002). *M. santanderensis* is reported from the departments of Antioquia, Bolivar, César, Córdoba, and Santander in forests from 100–1,000 m and 2,700–3,800 m in elevation (Hernández-Camacho 1960; Alberico et al. 2000; Alberico and Rojas-Dias 2002; Institute of Natural Sciences, Faculty of Science, National University of Colombia 2004; Thorington et al. 2012); *M. santanderensis* was absent in the most recent survey in Antioquia (Cuartas and Muñóz-Arango 2003). The species has been confused with the Andean squirrel; thus, the distribution of *M. santanderensis* is poorly known (Thorington et al. 2012; de Vivo and Carmignotto 2015).

**FORM AND FUNCTION**

The skull of *Microsciurus santanderensis* is similar to that of the Andean squirrel but has a slightly longer rostrum. Incisors are ochraceous-orange (Hernández-Camacho 1957). The dental formula is: i 1/1, c 0/0, p 2/1, m 3/3, total 22 (Pérez-Torres and Correa Q. 1997). The anterior premolar (PM3) is absent (Hernández-Camacho 1957).

**ECOLOGY**

Little is known about the ecology of *Microsciurus santanderensis*, other than its distribution in humid forests in the low to mid elevations in the Cordillera de La Paz, Colombia (de Vivo and Carmignotto 2015). *M. santanderensis* is arboreal and diurnal (Thorington et al. 2012), and is often associated with oak.
Microsciurus santanderensis is currently listed as “Data Deficient” by the International Union for Conservation of Nature and Natural Resources (Koprowski and Roth 2008). Major threats to this species are unknown, and further research is needed to determine its conservation needs.

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LITERATURE CITED


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