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***Fotografía portada* / Cover photograph**
Slender–billed Schiffornis *Schiffornis stenorhyncha*, a newly split near–endemic species for Colombia proposed in a paper in this issue. Photograph taken at Santa Cecilia, Bolivar on 7th January 2010. Photo by Blanca Huertas and Thomas Donegan.

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Conservación Colombiana *es publicada gracias al apoyo de nuestros donantes:*

Rediscovery of the Santa Marta Toro *Santamartamys rufodorsalis* (Rodentia: Echimyidae), after 113 years, with notes on all three known records and the species' conservation needs in the Sierra Nevada de Santa Marta

Redescubrimiento del Toro de Santa Marta Santamartamys rufodorsalis *(Rodentia: Echimyidae), después de 113 años, con notas sobre los tres registros conocidos y conservación de la especie en la Sierra Nevada de Santa Marta*

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Abstract

A juvenile Santa Marta Toro *Santamartamys rufodorsalis* (Rodentia: Echimyidae) was observed at El Dorado Nature Reserve, Magdalena Department, Colombia on the night of 4th May, 2011. Identification of the individual was based on photographic records and morphological attributes described by Allen (1899) and Emmons (2005). This species was previously known only from the holotype collected in 1898 and another specimen with an uncertain collection date, both found in the Sierra Nevada de Santa Marta. This account represents the first known documented encounter of a live individual of the species in the wild and addresses its conservation needs. The species is recommended for an IUCN Red List status of Critically Endangered.

Resumen

Un juvenil del Toro de Santa Marta Santamartamys rufodorsalis *(Rodentia: Echimyidae) fue observado en la Reserva Natural El Dorado, Departamento del Magdalena, Colombia, en la noche del 4 de mayo de 2011. La identificación de este individuo se basó en registros fotográficos y en los atributos morfológicos descritos por Allen (1899) y Emmons (2005). Esta especie era conocía sólo por el holotipo colectado en 1898 y otro ejemplar sin fecha de colecta, ambos individuos capturados en la Sierra Nevada de Santa Marta. Este registro representa el primer encuentro documentado de un individuo vivo de la especie en la naturaleza. Recomendamos clasificar la especie dentro de la categoría En Peligro Crítico de la UICN.*

Introduction

The Santa Marta Toro or Red-crested Tree-Rat (*Santamartamys rufodorsalis*) was known only from the holotype, collected by H.H. Smith on 24 December, 1898, from 'Onaca, Santa Marta, Magdalena' (Allen 1899; AMNH M–14606) of unknown sex, and a second undated specimen lacks precise locality data. It was collected at some point prior to 1913 in 'Sierra Nevada de Santa Marta, Magdalena' and procured by M.A. Carriker, Jr (AMNH M–34392), also of unknown sex. It is not clear why there were no associated data with the second specimen, including more precise information regarding location and date. Carriker was known to be detailed in his notes on birds and mammals that he collected, and almost always provided more precise locality data, so the deficiency of data is unusual.

Although Carriker first arrived in Santa Marta in 1909, he only began collecting birds in the area from late May to August in 1911 (Ruthven 1922, Paynter 1997). The second specimen was accessioned to the American Museum of Natural History (AMNH) in 1913. We suspect that the specimen was either given to or purchased by Carriker due to the lack of precise information. In a personal account, Carriker indicated that, in 1898, all of the bird and mammal collections were carried out by local hunters whom H.H. Smith employed and any attached locality information may not have been accurate or even present (Ruthven 1922). Therefore, if Carriker did not collect the specimen directly, it is likely he would not have documented the associated data with the collection.

Recent field work supported by ProAves in the Sierra Nevada de Santa Marta, following the establishment of a nature reserve and research facilities in the region, has resulted in data drawing attention to an overlooked species of bird (Krabbe 2008), the discovery of a new species of owl (American Bird Conservancy 2007) and considerable information on the conservation of birds of the region (Fundación ProAves 2011). Here, we report on the first confirmed record of *S. rufodorsalis* in 113 years.

On 4 May 2011, Lizzie Noble and Simon McKeown, two volunteer researchers, and Lorenzo Mora, Eudis Bacca and Bertulfo Montero, all working with Fundación ProAves, observed and photographed a juvenile *Santamartamys rufodorsalis* (Figure 1) at approximately 21:30 hours local time, within the El Dorado Nature Reserve. The locality (11°06'02.93"N 74°04'19.36"W, altitude 1,958 m) was at the

entrance stairs to the El Dorado Eco–lodge restaurant, adjacent to montane rainforest, 7.4 km SE from and above Minca, Magdalena Department (Figure 2). The habitat around the lodge is primary and secondary mid–upper subtropical humid cloud forest.

Figure 1. Santa Marta Toro *Santamartamys rufodorsalis* observed on 4 May, 2011 at El Dorado Nature Reserve, Sierra Nevada de Santa Marta (© Fundación ProAves / Lizzie Noble)

The rodent was identified as *Santamartamys rufodorsalis* based on distinguishing morphological characteristics. These include the distinct coloring of the pelage and rufous around the neck. The specimen was clearly a juvenile in molt, indicated by the change from a grayish pelage to the adult bright red pelage, with the molt sequence starting in the

anterior region and moving backward, as is typical of rodents (Louise Emmons in litt. 2011). The individual had markedly large eyes (consistent with this nocturnal observation) and a long, heavily haired tail, uniquely marked with the basal three fifths black and terminal two–fifths white (Allen 1899). The sex of the species could not be identified from either the observation or the photographs.

Two observations of the individual were made. The initial observation was made at 21:30 hours, and a second brief sighting in the same location was made approximately two hours later. During this period, the animal is believed to have remained at the top of a wooden hand–rail. Characteristics of the individual's mobility and temperament were noted during these periods. The individual was able to easily climb a vertical wooden surface, as it scaled the hand–rail with dexterity and ease. It was fairly unperturbed by human presence at close proximity. It settled less than one meter from the observers, curling up with no obvious sign of agitation and moved away from the group of onlookers only once, returning almost immediately. It showed signs of curiosity, sniffing a dead invertebrate *en route*, but exhibited no vocal activity in either observation.

Comparison with the original description and taxonomic history

The species was originally described as *Diplomys rufodorsalis* Allen, 1899, but was subsequently assigned to the monotypic genus *Santamartamys* due to differences in its teeth from those of typical *Diplomys* (Emmons 2005). *S. rufodorsalis* is a medium sized arboreal rodent whose geographical distribution is reported to be restricted to the Sierra Nevada de Santa Marta region, in humid forests from sea level up to 2,000 meters (Emmons 2005). Consistent with this record, descriptions of the specimens state that the eyes are large and the coat is long and smooth, with the back bright red fading to yellowish or orange tones on the flanks and the underparts are grey. They have short, bare ears with an irregular edge, which makes them appear damaged. Between the ears is a crest of long hair of the same color as the back. Behind the ears, is an almost completely brown tuft that emerges from the internal edge. The tail is longer than the body and the head, robust and densely haired, with a brown base, after which it becomes darker for three–fifths and ends with a white segment for the final two–fifths. (Allen 1899, Emmons 2005).

Conservation issues

The Sierra Nevada de Santa Marta is an isolated mountain range independent of the Andean mountain range, containing the highest coastal peak in the world rising to over 5,700 m (18,700 feet) from sea–level in just 47km. Its geographical isolation combined with geological and climatic conditions has created high levels of both biodiversity and endemism.

The majority of the upper elevations (above 2,000 m) of the Sierra Nevada de Santa Marta are protected by the 946,000 acre Sierra Nevada de Santa Marta National Natural Park and an overlapping and even greater area of indigenous territories (1.36 million acres). However, despite the national park protection, the Sierra Nevada continues to face mounting threats from uncontrolled agricultural activities, rapid deforestation and unsustainable resource use, which has led to a reduction in primary forest areas and habitat degradation (Primack *et al*. 2001, Fundación ProAves 2011). As a result, the Sierra Nevada de Santa Marta has been recognized as one of the world's most important conservation priorities for saving highly threatened and endemic species (Ricketts *et al*. 2005, American Bird Conservancy 2005).

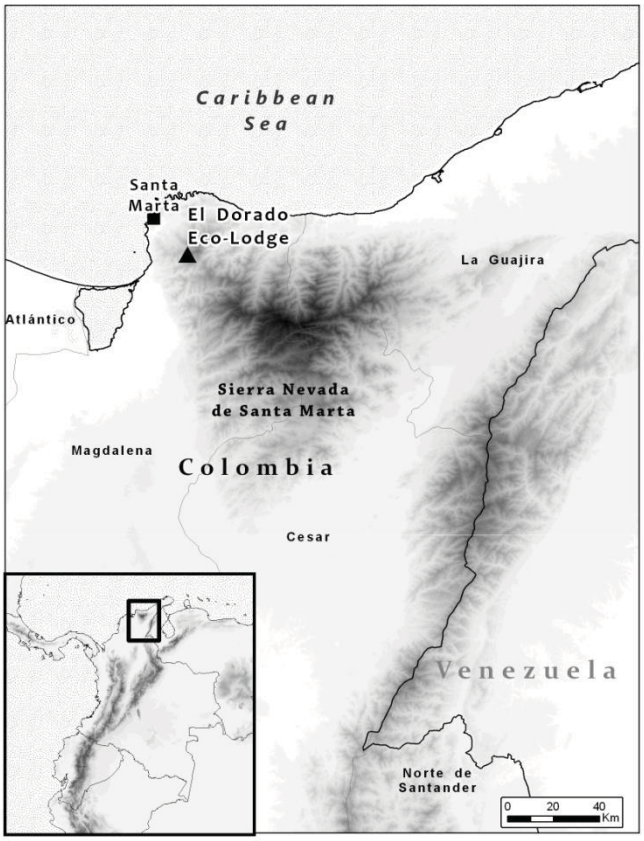

Figure 2. A map of the Sierra Nevada de Santa Marta and surrounds, including the locality of the El Dorado Eco-Lodge, where the Santa Marta Toro was observed.

Santamartamys rufodorsalis is classified as Data Deficient on the IUCN Red List of Threatened Species (Delgado & Gómez–Laverde 2008), since there is almost nothing known about its natural history, ecology and population. The natural habitat of *S. rufodorsalis* is thought to be restricted to humid forests up to 2,000 m (Emmons 2005), which coincides with the principle zone of agricultural activity in the northwest slopes of the Sierra Nevada de Santa Marta mountain range (Tribin *et al.* 1999).

We would recommend *S. rufodorsalis* for IUCN Red List Critically Endangered (CR) status based on criteria B1ab(i,ii,iii) – certainly as the Extent of Occurrence (EOO) is less than 100 km^2 (estimated the EOO at 45 km^2 and Area of Occupancy (AOO) at <10 km^2), which is severely fragmented forest with its habitat being cleared at a rapid pace. The population level is likely to be low based on a conservative interpretation of its range and abundance (< 250 individuals) and the most important known refuge for the species is the 1,900 acre El Dorado Nature Reserve and its surrounding fragmented forests. The presence of feral and semi–domestic cats in the subtropical forests where the species occurs is also of concern for the species' survival.

There are a number of urgent conservation priorities for the species, which include: population surveys to establish its current status, information on the species' natural history and habitat preferences, and delineation of its distribution elsewhere in the Sierra Nevada de Santa Marta.

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