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SHORT-COMMUNICATION

First records of Todd's Nightjar (*Setopagis heterura*) for Brazil

Thiago V. V. Costa[1,3], Douglas F. Stotz[2], Karlla V. C. Barbosa[1] and Luís Fábio Silveira[1]

[1] Museu de Zoologia da Universidade de São Paulo, Caixa Postal 42494, CEP 04218-970, São Paulo, SP, Brazil.
[2] Field Museum of Natural History, 1400 S. Lake Shore Dr., Chicago, Il 60605, USA.
[3] Corresponding author: tvvcosta@usp.br

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ABSTRACT: *Setopagis heterura* is a poorly known nightjar that occurs in grasslands and forest edges in central-north Venezuela, northern Colombia and western Guyana. We report here a remarkable southward range extension for the species based on fieldwork and skin specimens, representing the first documented records for Brazil, from the state of Roraima, and for southern Colombia. We encourage new searches and studies of this species to determine its status of occurrence in Brazil.

KEY-WORDS: Caprimulgidae, Roraima, savanna.

Setopagis heterura was originally described as a full species based on a specimen collected in Santa Marta region, Colombia (Todd 1915), but has been long considered a subspecies of the widespread *S. parvula* due to their morphological similarity and clear close relationship (Peters 1940, Schwartz 1968). Only recently the species had its specific status reinstated based mostly on its highly distinct voice, as shown by Davis (1978), and subtle plumage characters, especially the greater extent of white on the tips of the rectrices (Schwartz 1968, Cleere 1998, Holyoak 2001, Remsen-Jr. *et al*. 2015).

Until recently, the species was known to occur exclusively in grasslands and forest edges in central-north Venezuela and northern Colombia (Cleere 1999). This distribution is distant from that of its sister species *S. parvula*, which has a large range in the central-south part of the continent and is not known to occur regularly north of the Amazon River (Cleere 1999, Holyoak 2001). Thus, a considerable gap exists between the ranges of the two species, as already pointed out by Schwartz (1968).

On 17 March 1992, DFS tape-recorded an individual *S. heterura*, then considered a subspecies of *S. parvula*, in central Roraima, northern Brazil, representing a considerable southern range extension and the first record for Brazil. The bird was recorded close to the Quitauau River, a left bank tributary of the Branco River, *c*. 10 km south of the town of Serra Grande and roughly 35 km southeast from Boa Vista (Figure 1). He also heard at least two additional birds at the same site. At the time, the site was in the ecotone between the Roraiman savanna and Amazonian Forest. The original tape recording has been deposited at the Arquivo Sonoro Neotropical of UNICAMP. Almost 15 years later, on 11 February 2007, LFS collected an adult male *S. heterura* (MZUSP 77954, Figure 2) at Serra da Lua (02°13'N; 60°19'W), 70 km southeast from Boa Vista and *c*. 50 km in straight line from the site where DFS tape-recorded the species in 1992 and in a similar habitat (Figure 1), representing the second record for Brazil and the first specimen for the country. The confirmation of the occurrence of *S. heterura* for Brazil brings the total number of Caprimulgidae species for the country to 25, making Roraima among the richest Brazilian states for that avian family with 15 species (see Naka *et al*. 2006).

The southern range limits of the species in Colombia are also very poorly known. To date, the species is only known to occur in the northern region in the Departments of Magdalena, Norte de Santander, Santander and Cundinamarca (Cleere 1998). However, two overlooked skin specimens expand the species' known range further south in the central-south part of that country. One adult male (No. 1621) deposited at the Instituto Alexander von Humboldt, Bogotá, Colombia, was collected on 21 November 1977 at the Rio Guaviare, Bocas del Ariari, Meta Department. That new locality represents a major range extension from the closest localities in that country (in Cundinamarca Department), and the first record for Meta, being roughly at the same latitude as the Brazilian records. Another specimen, an adult female, deposited at the Los Angeles County Museum of Natural

History (No.73170) was collected on 7 August 1967 at Mitu, Vaupés Department. That specimen represents the first report of *S. heterura* for Vaupés and the world's southernmost locality (Figure 1). This record is also *c.* 35 km from the border with the extreme northwestern portion of the Brazilian state of Amazonas.

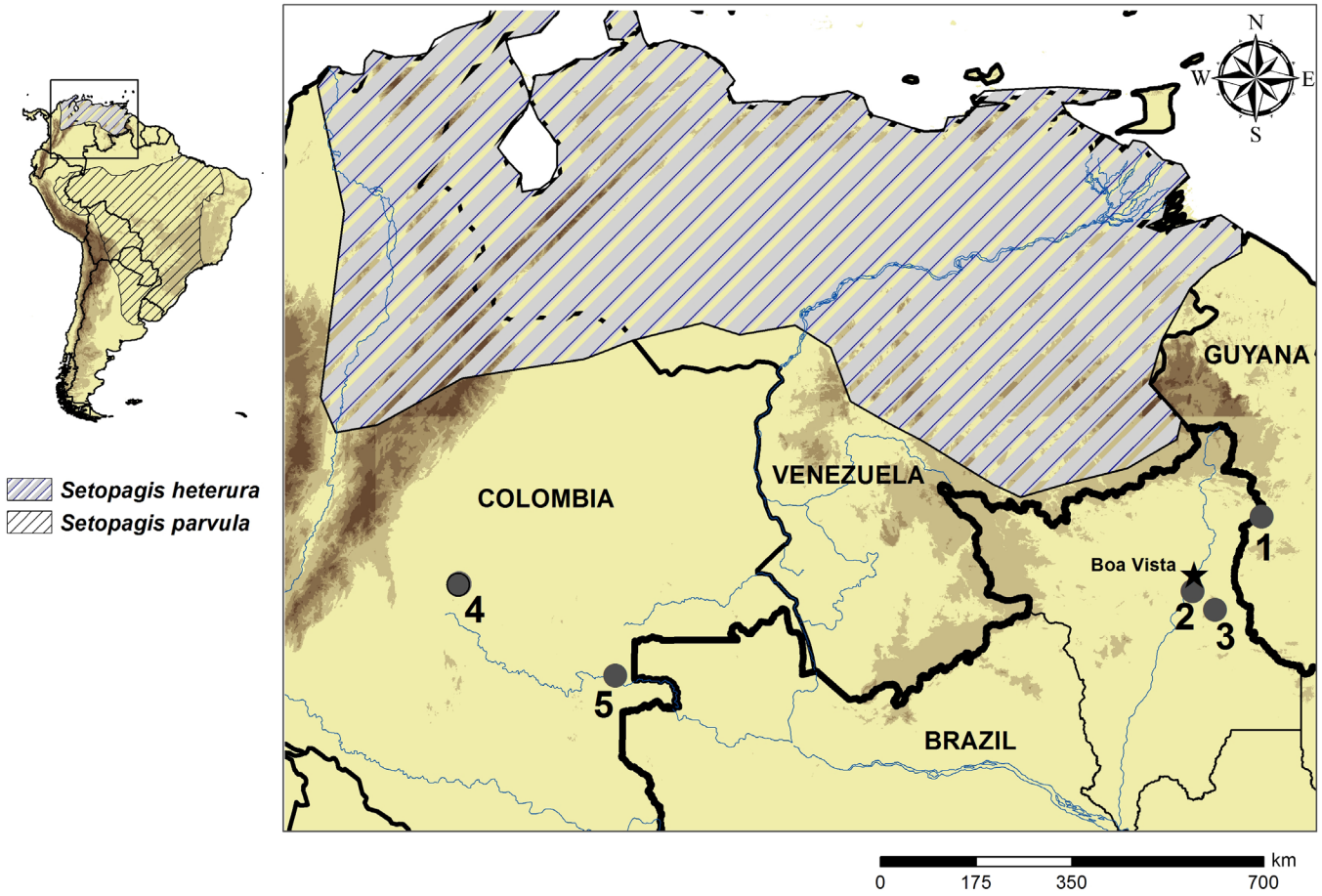

FIGURE 1. Map of northern South America, depicting the current known range of *Setopagis heterura* (hatched, on the right) and *S. parvula* (hatched in the small map on the left) according to Cleere (1998, 2010). Star represents the Brazilian city of Boa Vista, Roraima, and gray dots represent the following localities: 1 – Rupununi savanna, Guyana (Milensky *et al.* 2009); 2 – Serra Grande, Roraima, Brazil; 3 – Serra da Lua, Roraima, Brazil; 4 – Rio Guaviare, Meta, Colombia; and 5 – Mitu, Vaupés, Colombia.

FIGURE 2. Ventral views of the holotype of *Setopagis heterura* (CMNH 41904, above) and the first Brazilian specimen (MZUSP 77954, below) collected at Serra da Lua, Roraima. The former presents extensive white in the wings and tail compared to the latter, which seems to be related to intraspecific variation.

Morphologically, the extension of the white in the tail seems to be the only reliable character that separates *S. heterura* from *S. parvula* (Schwartz 1968). However, this character seems to vary among individuals within both species. According to Schwartz, *S. heterura* presents the outermost rectrices completely (or almost completely) white-tipped, the second and third outermost tail feathers with at least some white on the outer web, and the fourth outermost pairs with white restricted to the inner web. According to the same author, in *S. parvula* the white is usually restricted to the inner web in all rectrices, even though some individuals may present some white on the outer web of the outermost feathers. On the specimen collected at Serra da Lua, both the first and second outermost pair of rectrices have white on both webs, albeit reduced in the outer web, and the third and fourth pairs have the white confined to the inner web only. In a few *S. parvula* specimens (*e.g.* MZUSP 97046, from southern Pará State, Brazil), the outermost rectrices are completely

white-tipped, the second and third outermost feathers present some white on the outer web, and the fourth outermost pair has white also restricted to the inner web. Differences in the wing between the two species have already been suggested, especially in the width of the white band in the primaries (Cleere 1999). Schwartz (1968) mentions that some individuals of *S. heterura* do have larger wing bands compared to *S. parvula*, and that there is a tendency in the former to have the band extending to outer web of the outer primary, but the differences between the species are masked by overlapping variation and seem to have limited usefulness for identification. The specimen collected at Serra da Lua presents an apparently narrower white band across the primaries compared to the holotype, and the white on the outermost primary is restricted to the inner web. Hence, further studies are still needed to verify the extent of variation of the white markings in the remiges and rectrices in these species and whether they represent taxonomically useful characters.

Differences in wing and tail length between the two species are not significant, even though *S. heterura* seems to show slightly longer wings and shorter tail, what results in a larger wing/tail ratio in that species (Schwartz 1968). The wing (chord) length of our Brazilian specimen is 144 mm, within the range of the measurements of this species presented by Schwartz, 135–146 mm versus 134–143 mm in *S. parvula* (only males); on the other hand, tail length (99 mm) falls within the range of variation of the two species, 89–98 mm in *S. heterura* and 94–105 mm in *S. parvula*.

As with many other nightjars and nocturnal birds, the actual range limits of *S. heterura* have not been well known. Before the early 90', the southernmost known records of the species were from northeastern Bolívar, Venezuela, roughly 600 km north of the localities in central Roraima reported here. About six months earlier than our record in Serra da Lua, the species was also recorded at the Rupununi savanna in western Guyana (Milensky *et al*. 2009), *c*. 35 km from the border with Roraima and almost 200 km northeastern of Serra da Lua. The fact that the species has not been regularly recorded in that region may indicate that the individuals represented vagrant or migrant birds. On the other hand, and like many species of Neotropical nightjars with poorly known distribution, it is not surprising that *S. heterura* has proven to be more widespread than previously known, albeit uncommon. Regarding the Colombian localities, even though situated in a largely forested area, Meta includes large areas of *llanos* and Vaupés is also well-known for having extensive areas of white-sand forests, which might be suitable habitats for the species.

However, more studies are needed to determine whether *S. heterura* is a resident species in Roraima and in southern Colombia, or represents a migratory or vagrant species in those localities. Searches for the species should focus mainly on forest edges and open areas in hilly terrain, but also in savannas and white-sand forests.

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