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SHORT COMMUNICATION

Notes on the rare *Mastigodryas moratoi* (Serpentes: Colubridae) in the Brazilian Amazon white-sand forests

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Palavras-chave: cobertura arbórea, coloração em vida, Colubrinae, serpentes, Squamata.

The Neotropical racer *Mastigodryas moratoi* Montingelli and Zaher, 2011 is a medium-sized terrestrial colubrid snake, which shares meristic characters with congeners of the *Mastigodryas pleei* group, such as length, width and position of longitudinal stripes on the dorsum (Stuart 1941, Montingelli and Zaher 2011). Despite the species geographic range has been considered as "well known" (Guedes *et al.* 2018), it is based on only eight locations in the Guiana Shield, in northern Brazil and Guyana (Montingelli and Zaher 2011, Cole *et al.* 2013, Guedes *et al.* 2018). We expand the known range of *M. moratoi* introducing a new record from the south bank of the Negro River (Negro-Solimões interfluve), central Brazilian Amazonia. The region is mainly covered by arboreous *campinarana,* which is forest growing on white-sand soil.

An adult male *M. moratoi* (885 mm snout–vent length, 344 mm tail length, INPA-H 39770) was found by A. Lima and W. Magnusson on November 20, 2017, killed by a car on an unpaved road in the outskirts of the municipality of Novo Airão, state of Amazonas (02°37'60" S, 61°18'60" W). The specimen was found freshly dead, so we show for the first-time photos of the body color in life (Figure 1). The species identification was checked independently by each of the authors, and a set of characters matches the diagnosis for the species (*sensu* Montingelli and Zaher 2011). This consists of five distinct dark dorsal stripes on the anterior

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region of the body (Figure 1A), dark gular region with cream spots reaching the first ventral scales (Figure 1B), and scale counts within the diagnostic ranges. These counts are dorsal scale rows 17/17/15 (anterior/medial/posterior regions of the body); ventrals 179; subcaudals 98 (paired); cloacal divided; preoculars 1/1 (left/right sides); postoculars 2/2; temporals 2+2/2+2; supralabials (contacting the orbit in parentheses) 9(5–6)/8(4–5); infralabials (contacting genials in parentheses) 10(1–5)/10(1–5). Some head scales are shown in Figures 1C, D. We also plotted an updated distribution on a landsat-based surface of percentage of tree cover (Sexton *et al.* 2013), to determine the environmental variation covered by the species range (Figure 2). Our record extends the known geographic range of *M. moratoi* 440 km southeast (straight line) from the nearest locality, which is also the type locality (Tapera, state of Amazonas).

Mastigodryas moratoi has been cataloged (Wallach *et al.* 2014) and mentioned in studies on geographic distribution (Guedes *et al.* 2018) and morphological variation in snakes (Cole *et al.* 2013), but no new data have been presented since its original description. Lack of data may be related to low detection probabilities (Steen 2010, Fraga *et al.* 2014) or low sampling effort within the species range, and it has biased our knowledge about ecological factors that may determine regional occurrence of the species. For instance, it has been suggested that

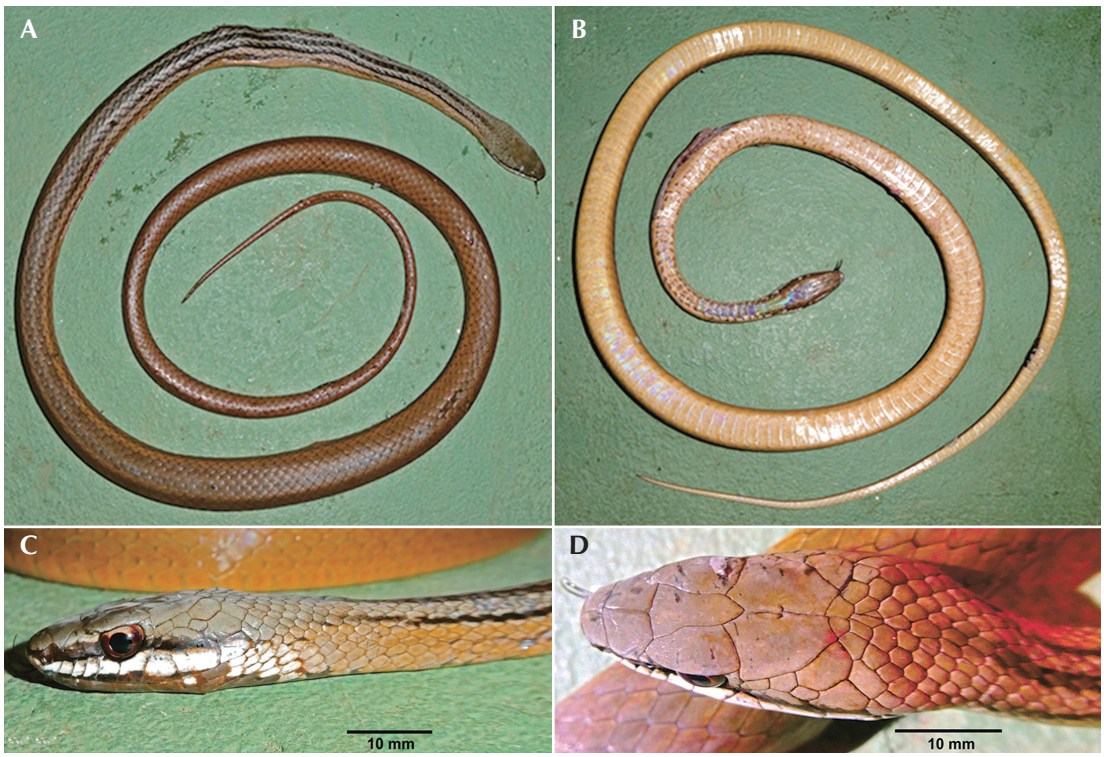

Figure 1. Adult male of *Mastigodryas moratoi* (INPA-H 39770) from the white-sand forests of Novo Airão, Amazonas state, Brazil. (**A**) Dorsal view, (**B**) Ventral view, (**C**) Lateral view of the head, and (**D**) Top view of the head. Photos: William Magnusson.

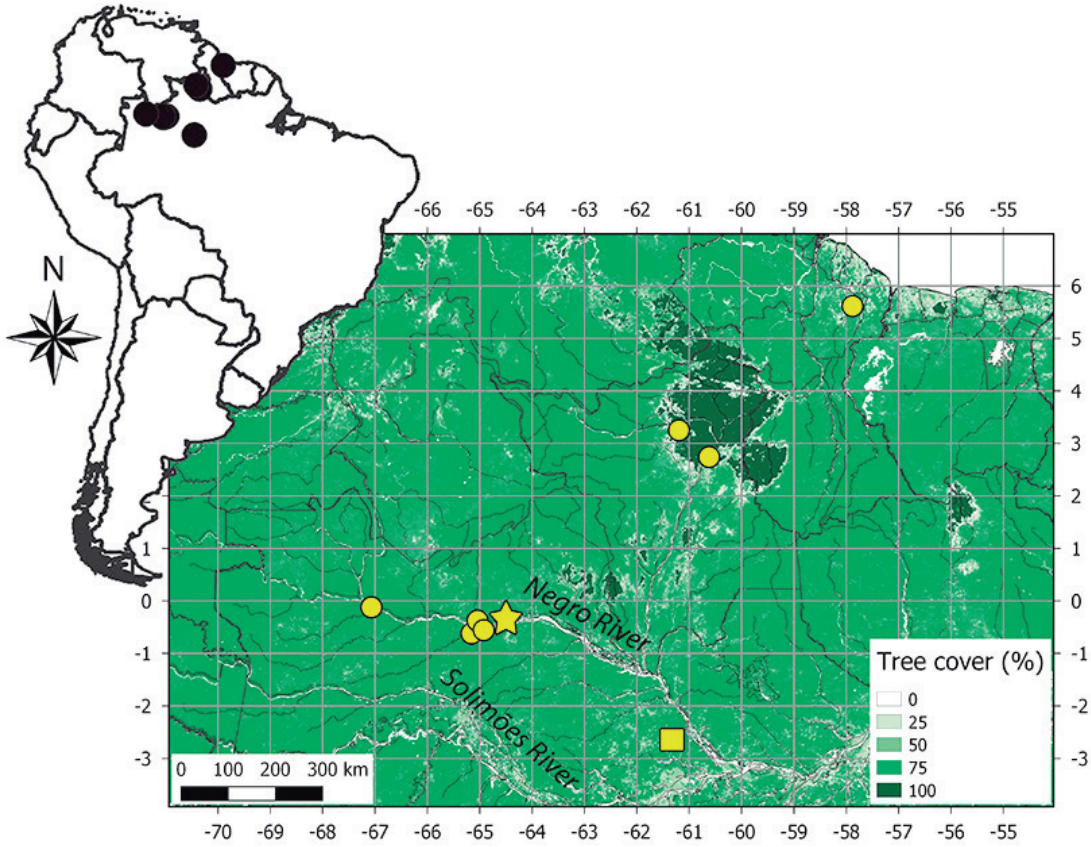

Figure 2. Updated distribution of *Mastigodryas moratoi* along a gradient of tree cover (percentage) in northern South America. Star = type locality (Tapera, Amazonas state, Brazil), circles = paratypes (Montingelli and Zaher 2011), square = new record from the white-sand forests of Novo Airão, Amazonas state, Brazil (this study).

distribution of *M. moratoi* is associated with the open sunny habitats of the South American savannas in northern Brazil and Guyana (Montingeli and Zaher 2011). Although this is supported by the fact that the northernmost locations of the species range are in open habitats and savanna–forest ecotones with 0–25% of tree cover, the southernmost locations are covered by denser forests with ≥ 75% of tree cover. These findings suggest that the species range is biased by lack of data, because it may occur in more varied habitats (*e.g.*, tree cover, sunlight) than previously suggested. Additional data is required to generate reliable inferential models to quantify habitat use and classifying the species range as "well known" (Guedes *et al.* 2018) seems premature.

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