

Scientific Note

First record of *Scolia rufiventris* Fabricius, 1804 (Hymenoptera: Scoliidae) from Pantanal, Brazil

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Abstract: The first record of the wasp *Scolia rufiventris* Fabricius, 1804 is reported for the state of Mato Grosso do Sul and the Brazilian Pantanal in the Abobral region, in an area with predominance of flooded fields and *Cambarazal* dominance. The registration of the species contributes to the knowledge of the diversity of insects in the Pantanal, mainly in view of the last events of devastation by large-scale fires.

Keywords: Range extension, Wasp, Wetland.

Among the main shortfall for knowledge and monitoring of biodiversity is the Wallacean shortfall, where the geographic distribution of species is inadequate or incomplete (Hortal et al. 2015) and much of the deficiency in biological knowledge for the different regions of Brazil is related to the low or biased sampling in mega diverse regions (Oliveira et al. 2016). Between the areas with the greatest sampling deficiency and knowledge of entomofauna is the Pantanal, the largest floodplains of the planet with more than 150,000 km², a strategic ecosystems for biodiversity conservation (Moore et al. 1989; Harris et al. 2005; Keddy 2010; Alho & Sabino 2011) and the highest fire outbreak rates reported in history were recorded in 2020 (INPE 2020), which puts at risk the loss of biological information before it is even known.

Scoliidae (Hymenoptera: Aculeata) is a family of ectoparasitic wasps that uses beetle larvae (Coleoptera) of several families as hosts, mainly Scarabaeidae; with about 560 described species that occur mainly in tropical and temperate regions (Hurd 1952; Brothers et al. 2006; Fernández & Sharkey 2006). Although widely distributed, aspects of the biology and distribution of species, especially in the Neotropical region, are scarce. *Scolia* Fabricius, 1775 is one of the largest genera in number of species in Scoliidae, with about 260 described species, 20 known from the Americas (Hanson 2006). *Scolia rufiventris* Fabricius, 1804 presents a dark reddish color in the mesosoma and metasoma and legs with dark orange red.

Sampling was carried out across the Pantanal (for more details on sampling see Aranda & Aoki 2018) and the specimens were collected between January 15th and 16th, 2016. The typical vegetation of the area is formed by a flooded field, characterized by the presence of grasses and herbaceous plants that remain flooded during a period of the year, and the presence of temporary and permanent ponds. The tree stratum has a predominance of *Copernicia alba* (Carandá palm) where the monodominance known as Carandazal is formed.

Two females specimens (Fig. 1) were collected through an active search using an entomological net (ICMBio collection authorization n: 48939-3 - 11/05/2015) near Porto da Manga (19°15'30.37" S, 57°8'28.40" W) in the Pantanal region known as Abobral in the municipality of Corumbá/Mato Grosso do Sul, Brazil. The location of the sampling point is in a transition area to other regions of the Pantanal, the regions of Nhecolândia, Paiaguás and Paraguay. The regions are characterized by topographic aspects of relief and soil, flood and vegetation (Silva & Abdon 1998).

The specimens presented general characters of morphological that

agrees with the description of *S. rufiventris*, such the anterior margin of clypeus with a triangular projection medially (Fig. 1B), mesosoma with dense, medium-sized, punctures (Figs. 1A, 1C), as well the previous records in Brazil allows confirm the identification (Añino et al. 2020). The specimens are deposited in the private entomological collection of the Insect Community Ecology Laboratory of the Universidade Federal de Rondonópolis (UFR).

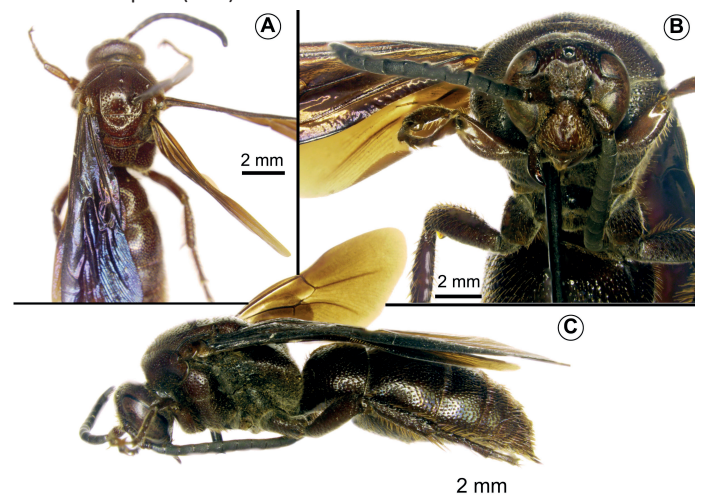


Figure 1. Dorsal (A), frontal (B) and lateral (C) view of *Scolia rufiventris* Fabricius, 1804 exemplar collected in the Brazilian Pantanal.

The species occurs in Mexico, Costa Rica, Panama, Colombia, Peru, Guyana, and Brazil (Añino et al. 2020). Brazilian records are previously known in Minas Gerais and Mato Grosso states (Añino et al. 2020). This is the first record of the species for wetland Pantanal in the state of Mato Grosso do Sul (Fig. 2). For *S. rufiventris* information about biological aspects, hosts and population patterns is practically absent.

For arthropods, especially insects, the density of records in the Pantanal is considered low and has a direct relationship with the accessibility of the area by land (Oliveira et al. 2016). However, few records are associated with a low number of inventories and researchers working in field. For Hymenoptera, in recent years several records of species of wasps (Luz et al. 2017; Aranda 2019) and bees (Aranda 2017) have been carried out for the Pantanal. Even new species being described, for example Diptera such as the gall midge *Neolasioptera pantaneira* Maia, 2017 (Diptera: Cecidomyiidae) (Maia

et al. 2017) and *Trichomyia* spp. (Diptera: Psychodidae) (Araújo et al. 2017). This shows the need for efforts for knowledge of entomofauna to help to clarify aspects of biogeography and diversity patterns in the Brazilian Pantanal.

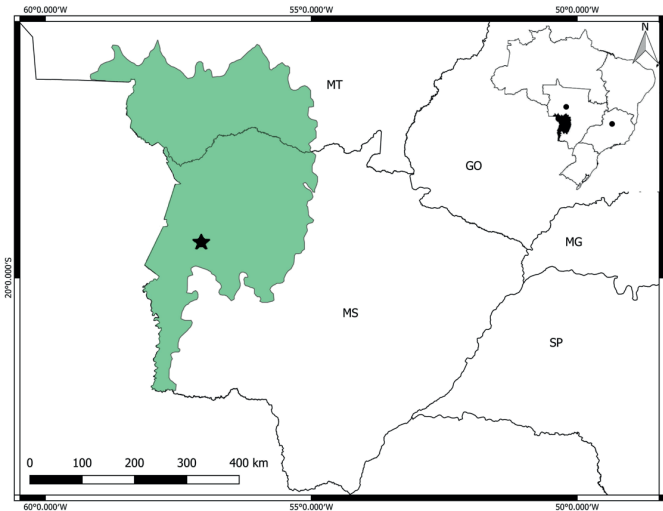


Figure 2. Geographic distribution of *Scolia rufiventris* Fabricius, 1804 recorded in Brazilian Pantanal. ● = previous records in Mato Grosso and Minas Gerais states (Añino et al., 2020), ★ = new record.

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