

Mecistogaster amalia (Burmeister) Odonata: Pseudostigmatidae: First Record from Rio Grande do Sul State, Brazil

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Abstract. *Mecistogaster* is a New World genus of Pseudostigmatidae (Odonata) that is poorly studied due to its preference for flying in forest clearings and trails. In Brazil, only one endemic species, *Mecistogaster amalia* (Burmeister), is known. The distribution of *M. amalia* extends from Southeast Brazil (Rio de Janeiro and São Paulo states) to Argentina. Herein, we report *M. amalia* for the first time in Rio Grande do Sul State, Southern Brazil. This record extends the species' range ca. 630 km from the previous report at Paranaense Forest in Misiones province.

Keywords: Distribution; Phytotelma; Zygoptera

Mecistogaster amalia (Burmeister) Odonata: Pseudostigmatidae: Primeiro Registro para o Estado do Rio Grande do Sul, Brasil

Resumo. *Mecistogaster* é um gênero da Família Pseudostigmatidae, restrito ao Novo Mundo e pobremente estudado devido sua preferência por clareiras e trilhas dentro de matas. No Brasil, apenas uma espécie é conhecida, *Mecistogaster amalia* (Burmeister). A distribuição de *M. amalia* se estende do sudeste do Brasil (nos estados do Rio de Janeiro e São Paulo) até a Argentina. Aqui, reportamos pela primeira vez *M. amalia* para o estado do Rio Grande do Sul State, Sul do Brasil. O presente estudo amplia o registro de ocorrência da espécie em 630 km, a partir do registro anterior na Floresta Paranaense, na Província de Misiones, Argentina.

Palavras-Chave: Distribuição; Fitotelmata; Zygoptera

The genus *Mecistogaster* Rambur is characterized by long and narrow wings, a nodus that is 1/4 the length of the wing, only one row of cells between Cu_2 and the wing margin, an M_4 that is often not bifurcated before reaching the wing margin and a cerci much longer than the rudimentary paraproctus. This group is found throughout Brazil, although some species are geographically limited. However, they are rarely seen due to their preference for flying in forest clearings and trails. The genus comprises nine New World species (BISBY *et al.* 2010), seven of which can be found in Brazil: *Mecistogaster amalia* (Burmeister), *Mecistogaster asticta* Selys, *Mecistogaster buckleyi* McLachlan, *Mecistogaster linearis* (Fabricius), *Mecistogaster lucretia* (Drury), *Mecistogaster ornate* Rambur and *Mecistogaster pronoti* Sjöstedt (LENCIONI 2005). *M. amalia* is a South American species that is characterized by the anterior margin of the hind wing of the male being strongly pronounced, an antieriad at the pseudostigma and a particular circus pattern (Figure 1). They breed in phytotelmata, or tree holes. The distribution of *M. amalia* extends from southeastern Brazil (states of Rio de Janeiro and São Paulo) to Argentina (LENCIONI 2005; VON ELLENRIEDER & PAULSON 2006; MUZÓN *et al.*, 2010) (Figure 2). Originally described under genus *Agrion*, there are numerous synonyms: *Mecistogaster filiformis* Rambur; *Mecistogaster leucostigma* Rambur, 1842; *Mecistogaster linearis* Rambur (nec Fabricius, 1776), 1842; *Agrion linearis* (Blanchard (nec Fabricius 1776) 1840); *Mecistogaster virgata* Rambur, 1842. We report *M. amalia* for the first time in Rio Grande do Sul State, southern Brazil. This record extends this species' range ca. 630 km from the previous report at Paranaense forest in Misiones province.

The specimens studied in the present paper were collected at Palanquinhos Canyon, between the cities of Caxias do Sul and São Francisco de Paula in Rio Grande do Sul State (Figure 2). One male was collected by a wildlife rescue team during the filling of a small hydropower plant at the Palanquinho Reservoir. The Specimens (Figure 1a) were identified using the keys in LENCIONI (2005) and HECKMAN (2006). The specimens were collected from a tree trunk on the banks of the Lageado Grande River (-28° 58'S, -50° 47'W), 10/05/2010, one male (Figure 2). All specimens were deposited in the Entomology Collection of the Zoobotanic Foundation Museum of Natural Science, in Porto Alegre, Rio Grande do Sul, Brazil.

The specimens examined perfectly match the description of *M. amalia* and do not show significant morphological variation. The species is included in the IUCN Red List of Threatened Species as a data-deficient species. Despite its estimated distribution of about 225,000 km², more data is needed to establish population trends and to evaluate threats to the species. This species' habitat is threatened by deforestation (VON ELLENRIEDER & PAULSON 2006). The discovery of this species in southern Brazil suggests that although the Odonata fauna of southern Brazil is well known, there are still unexplored environments where there may be species not yet reported. More detailed taxonomic efforts should be made to describe the wildlife of these environments in order to facilitate future studies of distribution and species conservation.

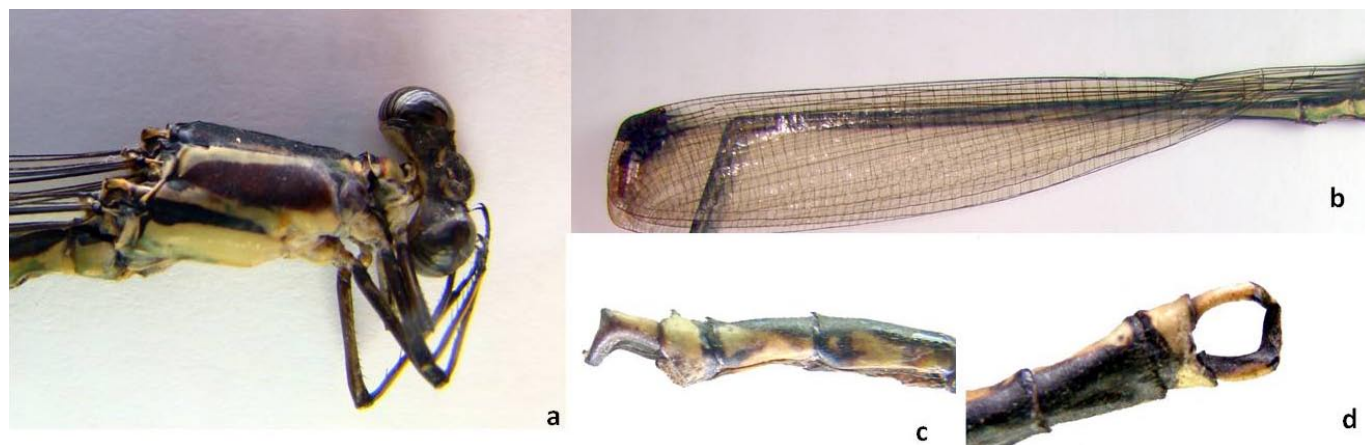


Figure 1. *Mecistogaster amalia*: (a) Overview of head and sinthorax; (b) Caudal appendices: dorsal view; (c) Caudal appendices: lateral view; (d) Wings.

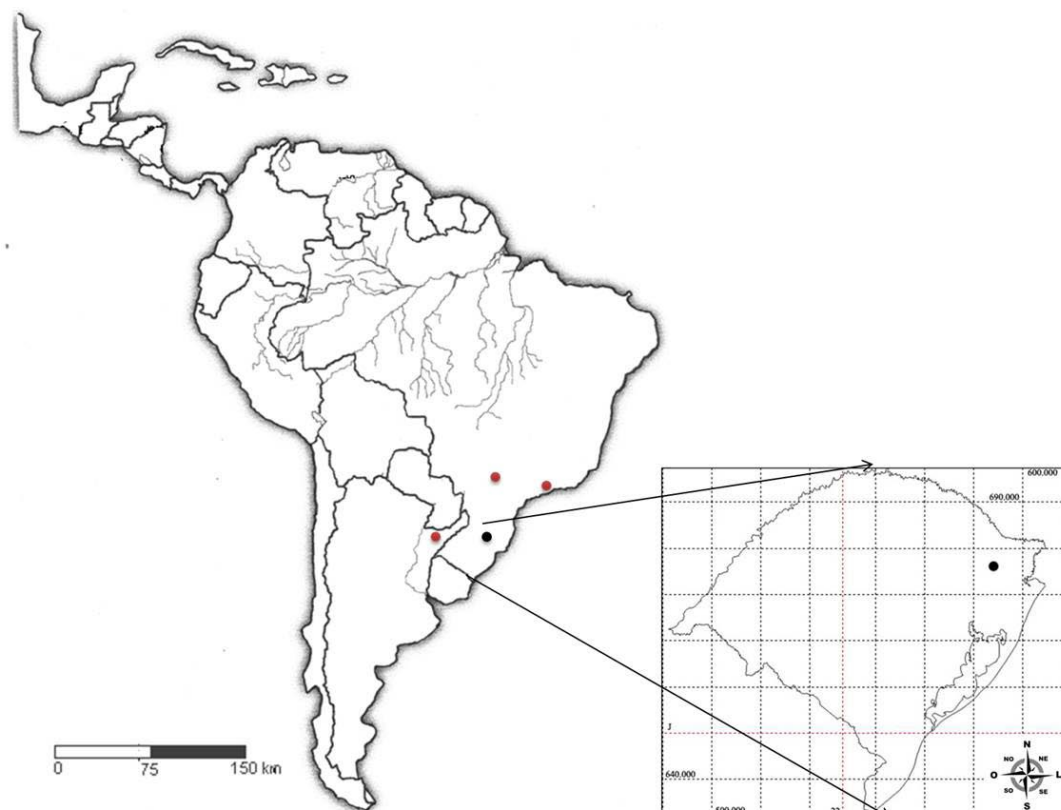


Figure 2. Previous known distribution (red points) of *Mecistogaster amalia* and the current record (black points).

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