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SHORT COMMUNICATION

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Range Extension of *Gauromydas mystaceus* (Wiedemann, 1830) (Diptera, Mydidae) for the Maranhão State, Brazil and Cerrado Biome

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Abstract

The present study expands the distribution of *Gauromydas mystaceus* (Wiedemann, 1830) for the Maranhão state, northeastern Brazil in Cerrado biome. Previously, this species was only recorded in Brazil (Pará), French Guyana, Guyana and Suriname on Tropical Forest biome.

Keywords: Giant flies, Neotropical Region, Mydinae, distribution, biodiversity.

The genus *Gauromydas* Wilcox et al., 1989 comprises six nominal species distributed in Argentina, Brazil, Costa Rica, French Guyana, Guyana, Paraguay, Peru, Suriname and Trinidad and Tobago (Calhau et al. 2015). Adults are mimetic in form and behavior with Pompillidae (Hymenoptera) (Carvalho et al. 2012 p. 702). In the Maranhão state, the only record of Mydidae is represented by two specimens of *Dolichogaster brevicornis* (Wiedemann, 1821): a male collected in 2007 and a female collected in 2010, both deposited in the Coleção Zoológica do Maranhão at the Universidade Estadual do Maranhão, Brasil (CZMA) (Dikow 2015).

The species *Gauromydas mystaceus* (Wiedemann, 1830) is one of the largest flies in the world, reaching over 40 mm in body length and occurs in French Guyana (Guyane), Guyana (Upper Demerara-Berbice), Suriname and Brazil (Pará), always in forested environments (Calhau et al. 2015).

We found a male of *G. mystaceus* measuring 44 mm, collected in Santo Antonio dos Lopes, a municipality in the central part of the Maranhão state, Brazil (Latitude: 4° 51' 50" S; Longitude: 44° 21' 17" W), in 21/05/2015. The habitat where it was found was a grassy-woody savanna in the Cerrado biome, the savanna ecoregion of Brazil. This habitat is characterized by its herbaceous and shrubby vegetation, with spaced shrubs and sub-bushes (Catunda & Dias, 2019).

The sampling was conducted using a malaise trap (Gressitt & Gressitt 1962) with area of 2.4 m2. Specimens were sampled fortnightly. All specimens were stored in alcohol 70%, labeled and carried to the Laboratório de Entomologia Básica e Aplicada, Centro de Ciências Agrárias e Ambientais, Federal University of Maranhão, for further identification. The specimens were identified using dichotomous keys and diagnosis (Papavero & Artiga 2009; Calhau et al. 2015; Cumming & Wood, 2017).

According to Calhau et al. (2015), *G. mystaceus* is characterized by the following characters:

"Antenna nearly two times longer than head width. Postpedicel orange, with proximal portion almost two times longer than distal portion. Distal portion of postpedicel 5.8 times longer than wide. Scutum velvety-black with a distinct lateral white pruinose spot around transverse suture. Male hind femur 2 times wider than hind tibia. Hind tibia with well-

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developed ventral keel, apical spur well-developed and curved on male, shorter on female. Hind first tarsomere 2.7 times longer than wide, and 2.2 times longer than fifth tarsomere. Wing mostly dark brown with violate reflection, posterior margin hyaline. Alula longer than wide. Tergites and sternites black, sometimes with bluish metallic reflection. Tergite 2 golden setulose, remaining tergites dark brown to black setulose. Male epandrial lamellae trapezoidal; phallus with bifid dorsal crest, lateral projections absent. Sternite 10 of female widely membranous medially. Sclerite at base of spermathecal ducts wider than cercus."

The specimen was deposited in the Coleção de Invertebrados do Centro de Ciências Agrárias e Ambientais (CINCA) of the Universidade Federal do Maranhão, under number 164.

Here we update the distributional knowledge of *G. mystaceus*, providing a new record for the state of Maranhão, northeastern Brazil. A distribution map with all records of the species (Figure 1) and photos of habitus and anatomical details (Figures 2-4) are provided.

This new record in the central part of the state of Maranhão represents the most oriental record of *G. mystaceus*. Also, all previous records are from tropical forest habitats and we present the first record in Cerrado biome. This new information indicates that the knowledge of distribution and biology of Mydidae species is still poorly known as well the knowledge of the Maranhão entomofauna.

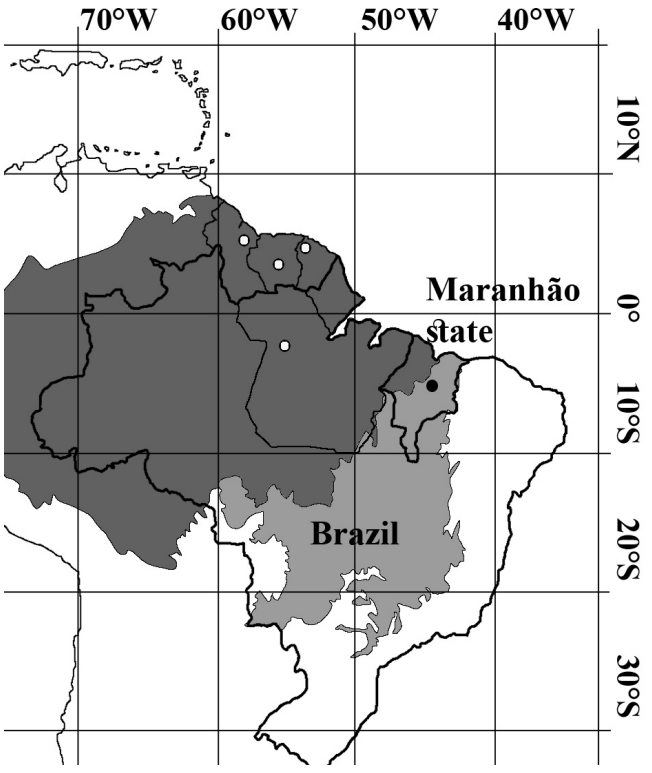

Figure 1: Map with distribution records of Gauromydas mystaceus. Empty spots represent records cited by Calhau et al. 2015. Solid spot represents the new record. In dark gray the Amazon Biome, in light gray CerradoBiome.

Figure 2: Dorsal habitus of *Gauromydas mystaceus*.

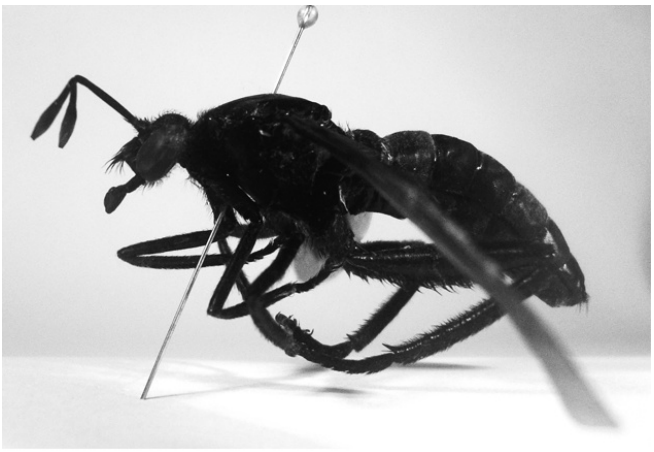

Figure 3: Lateral habitus of *Gauromydas mystaceus*.

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Figure 4: a, antennae b, hind leg of *Gauromydas mystaceus*.

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