



New records of *Thambemyia fusariae* Capellari, 2015 (Dolichopodidae, Hydrophorinae) from Brazil

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EntomoBrasilis 15: e1022 (2022)

Abstract. In this paper, the range of occurrence of *Thambemyia fusariae* Capellari, 2015 is expanded to south and southeastern Brazil, with the first records for the states of São Paulo and Santa Catarina. These now represent the southernmost records of the species, which has been known only from its type locality in Uruçura, state of Bahia, Brazil. In addition, we provide a distribution map and additional photographs of the species.

Keywords: Brazilian coast; distribution; Empidoidea; long-legged flies; Neotropical region.

Edited by:

Rafaela Falaschi

Article History:

Received: 12.x.2022

First Answer: 30.xi.2022

Accepted: 01.xi.2022

Published: 13.xii.2022

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Funding agencies:

↪ Without funding declared



doi: [10.12741/ebrasilis.v15.e1022](https://doi.org/10.12741/ebrasilis.v15.e1022)

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The genus *Thambemyia* Oldroyd, 1956 (Dolichopodidae, Hydrophorinae) is currently composed of 31 species (CAPELLARI 2015). These flies are restricted to the intertidal zones of rocky coasts, with most species recorded from the Oriental, Palaearctic, and Australasian regions (CAPELLARI 2015). *Thambemyia borealis* (Takagi, 1965) has been introduced at least in the Pacific (California), Gulf of Mexico (Alabama) and Atlantic (New Jersey) coasts of the United States and Peru (MASUNAGA *et al.* 1999; JACKSON *et al.* 2017; BROOKS & CUMMING 2009, respectively). Recently, the first Neotropical (and New World) species has been described, *Thambemyia fusariae* Capellari, 2015, solely reported from the type locality, in Uruçuca, Bahia, northeastern Brazil (CAPELLARI 2015).

CAPELLARI (2015) recognizes the following set of characters as diagnostic for *T. fusariae*: curved surstylus, tapering hypandrium and short epandrial lobe, as well as a conspicuous row of ventral setae on the hind femur (which is also present in the Indian species, *Thambemyia lopatini* Grichanov, 2013).

Four adult specimens were collected with a sweep net and manually, in two neighboring localities in Florianópolis metropolitan area, state of Santa Catarina, Brazil. They are pinned and labelled as follows: 1 male, BRAZIL, Santa Catarina, Florianópolis, Praia da Armação, Ilha das Campanhas 27°44'54"S 48°29'59"W, 03.viii.2021, Coleta manual, Amaral AP, Pinho LC leg.; 1 male, BRAZIL, Santa Catarina, Palhoça, Pinheira, Costão Praia de Baixo, 27°52'54"S, 48°35'18"W, 05.vi.202, sweep net, Amaral AP leg.; 1 female as previous; 1 female as previous, except: 11.vi.2021. These specimens are deposited in the Entomological Collection Mítia Heusi Silveira at the Federal University of Santa Catarina, Brazil. Twelve males and 18 females were collected with a sweep net in rocky shores in the city of Peruíbe, São Paulo state. They are pinned and labelled as follows: BRAZIL, São Paulo, Peruíbe, Reserva Ecológica Juréia-Itatins, 24°26'10.1"S 47°03'35.1"W, 23.v.2021, sweeping, R.S. Capellari leg. These specimens are deposited in the Museu de Zoologia da Universidade de São Paulo (MZUSP). The distribution map was created with Simplemapp (SHORTHOUSE 2010) using data from the collections of the present study, from the original description by CAPELLARI (2015), and an additional record from iNaturalist (<https://www.inaturalist.org/observations/128491622>).

This paper reports two new occurrences of *Thambemyia fusariae* in Brazil (Figure 1), one of them is in the state of Santa Catarina (Figures 2 A-B), about 1,500 km south from the type locality, which now becomes the southernmost record of the genus for the New World, and another from the state of São Paulo (Figure 1). Furthermore, a possibly conspecific female specimen from Bertioga, São Paulo, was published on iNaturalist, but since the it was not collected, we are unsure about its identity, and it is kept here as *Thambemyia* sp.

The distributional range of this species is significantly broader than the native range of other species in the genus (MASUNAGA *et al.* 2005). This could be due to the relatively continuous extension of the Brazilian coast along the Atlantic Forest biome, in which the four reported localities are situated, or possibly reflects the absence of collections and/or specialists in the biogeographic regions where the other species of the genus occur.

Although the Hydrophorinae are abundant in coastal regions, only two species in two genera

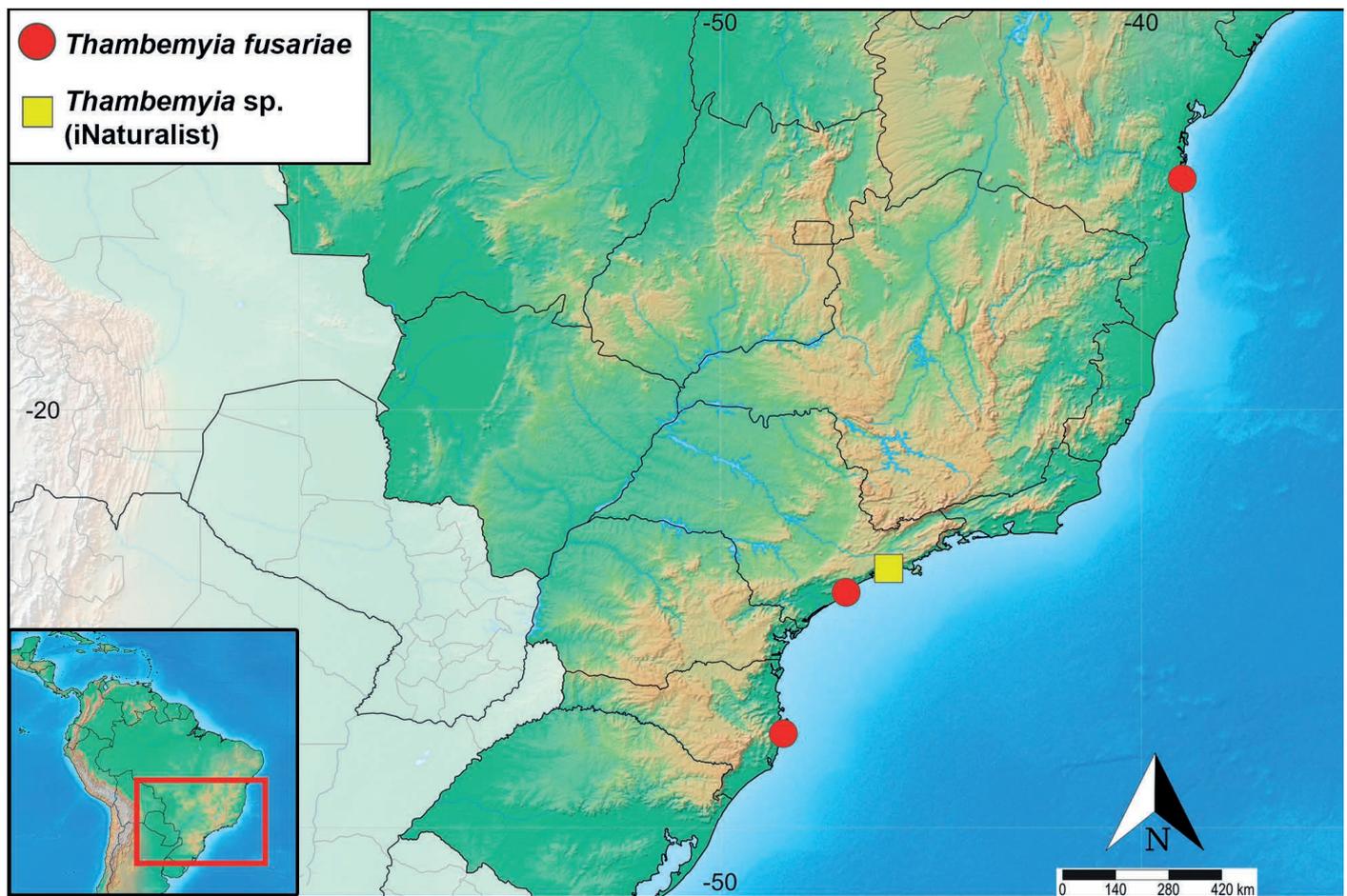


Figure 1. *Thambemyia* Oldroyd. Geographical records of *T. fusariae* Capellari and *Thambemyia* sp.

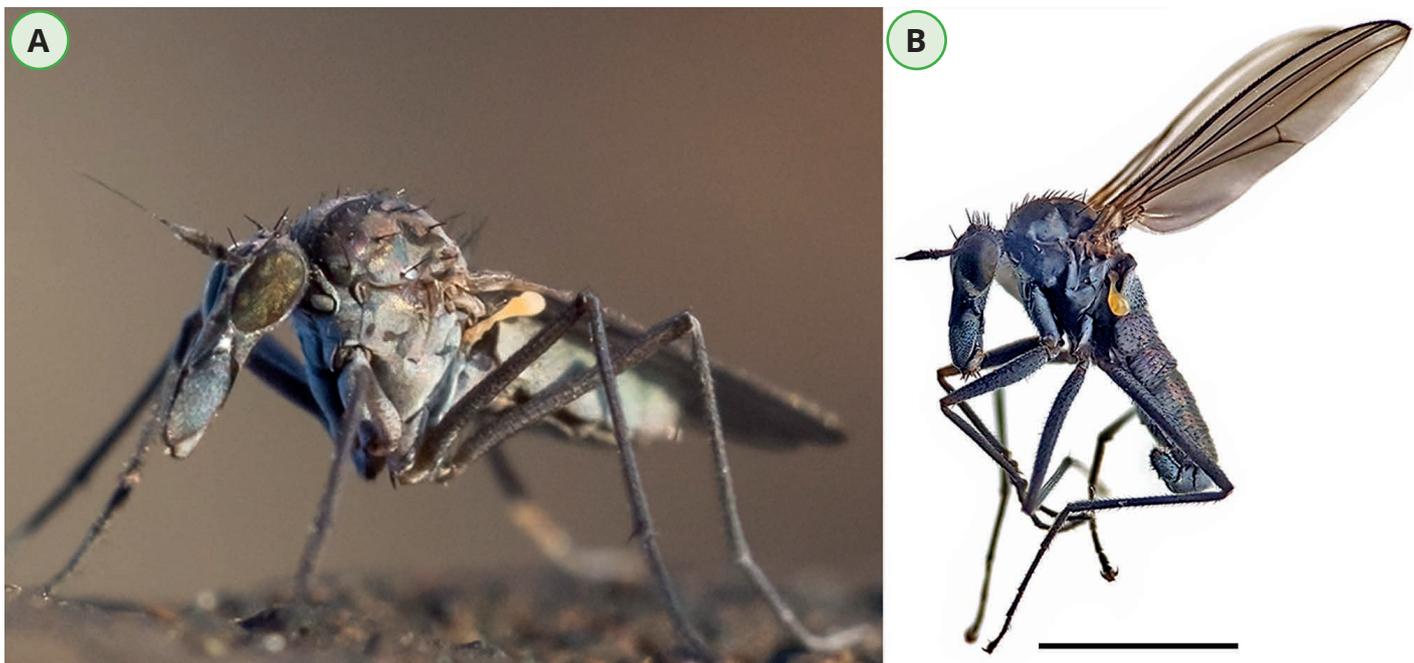


Figure 2. *Thambemyia fusariae* Capellari. **A.** Female from Florianópolis, state of Santa Catarina. **B.** Male from Palhoça, state of Santa Catarina. Scale bar: 2.0 mm.

are reported from Brazil: *Hydrophorus solitarius* D'Andretta, 1952 (state of Rio de Janeiro) (D'ANDRETTA 1952) and *T. fusariae* (states of Bahia, São Paulo and Santa Catarina). The diversity of the subfamily is probably higher in Brazil, considering the extensive coastal region of the country. The low number of recorded species probably reflects the insufficient collections and studies with the dipteran fauna from the coastal regions of Brazil. Thus, more extensive sampling would be valuable for a better understanding of the distribution and composition of the Hydrophorinae fauna in the Neotropical region. Additionally, this paper clearly illustrates the growing

relevance of citizen science and platforms like iNaturalist for providing ecological and distributional data on poorly sampled taxa.

ACKNOWLEDGMENTS

Capellari for providing the specimens from Peruíbe, state of São Paulo. Two anonymous reviewers offered useful suggestions to earlier versions of the manuscript. MMMS thanks Coordenação de Aperfeiçoamento de Pessoal de Ensino Superior (CAPES) for the PhD scholarship (proc. no. 88882.444402/2019-01).

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