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## New Neotropical species of *Hygronemobius* Hebard, 1913 (Orthoptera: Grylloidea: Nemobiinae), including a brief discussion of male genitalia morphology and preliminary biogeographic considerations of the genus

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### Abstract

Three new Neotropical species of *Hygronemobius* Hebard are described from Atlantic Forest remnants in southeastern Brazil: *Hygronemobius indaia* sp. n. and *Hygronemobius iperoigae* sp. n. from the state of São Paulo and *Hygronemobius guriri* sp. n. from the state of Espírito Santo. We provide photographs of types and male genitalia, and discuss the morphology of male genitalia, taxonomy, calling songs and biogeographic distribution of the genus.

**Key words:** Atlantic Forest, Brazil, crickets, genitalia, taxonomy

### Introduction

*Hygronemobius* was proposed by Hebard (1913) for the species *H. alleni* (Morse, 1905) and is characterized by the number of spurs and spines on the hind tibia: three pairs of dorsal spurs and five apical spurs, two on the inner side and three on the outer side. *Hygronemobius* is currently the second most diversified genus of Nemobiinae in terms of described species (25), with four from French Guiana (*H. amoenus* Chopard, 1920a; *H. benoisti* Chopard, 1920b; *H. nigrofasciatus* Desutter-Grancolas, 1993 and *H. tetraplagion* Desutter-Grancolas, 1993), seven from Peru (*H. albolineatus* Desutter-Grancolas, 1993, *H. boreus* Desutter-Grancolas, 1993, *H. diplagion* Desutter-Grancolas, 1993, *H. elegans* Desutter-Grancolas, 1993, *H. nanus* Desutter-Grancolas, 1993, *H. stellatus* Desutter-Grancolas, 1993, *H. torquatus* Desutter-Grancolas, 1993), four from Brazil (*H. albipalpus* (Saussure, 1877); *H. basalis* (Walker, 1869); *H. dissimilis* (Saussure, 1874); *H. minutipennis* Bruner, 1916), two from the Galapagos islands (*H. daphne* Otte & Peck, 1998; *H. speculi* (McNeill, 1901)) and one from Argentina (*H. nemoralis* (Saussure, 1874)), the Bahamas (*H. alleni* (Morse, 1905)), Bolivia (*H. longespinosus* Chopard, 1956), Chile (*H. araucanus* (Saussure, 1874)), Cuba (*H. histrionicus* Zayas, 1974), Guyana (*H. liura* Hebard, 1915), Panama (*H. darienicus* Hebard, 1928) and the Dominican Republic (*H. epia* Otte & Perez-Gelabert, 2009).

Although there was a report of *Hygronemobius* in the Serra do Mar and continental islands in the Brazilian Atlantic Forest biome De Mello (1997), there has been no description of a new species in Brazil since 1916.

In this paper, we describe three new species of *Hygronemobius* collected in Atlantic Forest remnants (São Paulo, Brazil) and transitional ecotone between Atlantic Forest and Restinga vegetation (Espírito Santo, Brazil). We also provide drawings and photographs of male genitalia, distribution map of known species, photographs of the type specimens and spectrograms of *H. indaia* sp. n. and *H. iperoigae* sp. n.