Zootaxa 3794 (3): 469–480
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3794.3.8
http://zoobank.org/urn:lsid:zoobank.org:pub:C882021E-E26A-498D-9EF2-93DDC7B7ADE6

Two new species of *Hygronemobius* Hebard, 1913 (Orthoptera, Grylloidea, Nemobiinae) from Brazilian Amazon

LUCIANO DE P. MARTINS[1,4], MARCELO R. PEREIRA[2], AUGUSTO L. HENRIQUES[1] & EDISON ZEFA[3]

[1]*Instituto Nacional de Pesquisas da Amazônia (INPA), Coordenação de Biodiversidade, Av. André Araújo, 2936, 69060-001, Manaus, Amazonas, Brazil*

[2]*Universidade Federal de Viçosa (UFV), Departamento de Entomologia, Programa de Pós-Graduação em Entomologia, 36570-000, Viçosa, Minas Gerais, Brazil*

[3]*Universidade Federal de Pelotas, Departamento de Zoologia e Genética, Campus Universitário Capão do Leão s/n, 96010-900, Capão do Leão, Rio Grande do Sul, Brazil*

[4]*Corresponding author. E-mail: lucianodpm@gmail.com*

Abstract

Two new Neotropical species of *Hygronemobius* Hebard were described from Brazilian Amazon: *Hygronemobius duckensis* **sp. nov.** and *Hygronemobius dialeucus* **sp. nov.** Photographs of habitus, morphological characteristics and male genitalia were provided. Calling songs and spectrograms of the new species were characterized.

Key words: Crickets, Calling Songs, Nemobiini, Amazon Forest, Brazil

Resumo

Duas espécies novas neotropicais de *Hygronemobius* Hebard foram descritas para a Amazônia brasileira: *Hygronemobius duckensis* **sp. nov.** e *Hygronemobius dialeucus* **sp. nov.** Fotografias do hábito, de caracteres morfológicos e da genitália masculina foram apresentadas. Os sons de chamado e os espectogramas das espécies novas foram caracterizados.

Palavras-chave: Grilos, Sons de Chamado, Nemobiini, Floresta Amazônica, Brasil

Introduction

Hygronemobius Hebard, 1913 comprises 28 valid species distributed in all biogeographic subregions of the Neotropics occurring from latitude 30° N [*H. alleni* (Morse), Florida State, USA] to latitude 27° S [*H. nemoralis* (Saussure), Corrientes province, Argentina] (Eades *et al.* 2013; Pereira *et al.* 2013). Despite the fact that *Hygronemobius* species are non-volant, i. e. they do not fly, the genus can be considered the Neotropical group of Nemobiinae that has the highest known distribution, covering approximately 6500 Km.

There are only eight species of *Hygronemobius* with described calling song in literature (Desutter-Grandcolas 1993; Otte & Peck 1998; Walker & Moore 2011; Pereira *et al.* 2013), three of them for the Amazonian subregion (*H. albolineatus* Desutter-Grandcolas*, H. amoenus* Chopard*, H. tetraplagion* Desutter-Grandcolas), two for the Caribbean subregion (*H. daphne* Otte & Peck and *H. speculi* Mcneill), one for southern Florida, USA [(*H. alleni* (Morse)], and two for Parana subregion (*H. indaia* Pereira, Miyoshi & Martins and *H. iperoigae* Pereira, Miyoshi & Martins).

In this paper, we described two new species of *Hygronemobius* from Brazilian Amazon, providing photographs of the type specimens and of the genitalia, calling song description, as well as spectrograms of *Hygronemobius duckensis* **sp. nov.** and *Hygronemobius dialeucus* **sp. nov.**

Accepted by D. Rentz: 19 Mar. 2014; published: 7 May 2014

two longitudinal white stripes running dorsally from fastigium to the posterior margin of pronotum; central portion of posterior margin of pronotum black; in females, tergite II with a transversal white stripe, tergite III with white spots on lateral margins and tergite IV with central portion black; tibiae and tarsi without white dots. *H. amoenus* differs from *H. dialeucus* **sp. nov.** by having: head with two longitudinal thin white stripes, from fastigium to occiput; and two longitudinal white stripes along lateral margins of dorsal disc of pronotum. Calling song of *H. amoenus*, *H. albolineatus* and *H. dialeucus* **sp. nov.** are characterized by brief chirps with 3 pulses in *H. amoenus*, usually 4 pulses in *H. albolineatus* (Desutter-Grandcolas 1993) and usually 5 pulses in *H. dialeucus* **sp. nov.** (Fig. 4B).

Measurements (mm). Male (n=10, excluding holotype). body length, 6.18 ± 0.43 (5.50–6.80); pronotum length, 1.28 ± 0.11 (1.20–1.50); pronotum width, 1.91 ± 0.06 (1.80–2.00); head width, 1.93 ± 0.05 (1.90–2.00); length of femur III, 3.78 ± 0.20 (3.50–4.10); length of tibia III, 3.12 ± 0.14 (2.90–3.30); right tegmen length, 2.95 ± 0.16 (2.70–3.20); right tegmen width (dorsal field), 2.42 ± 0.04 (2.40–2.50). Female (n=5): body length, 5.98 ± 0.41 (5.40–6.30); pronotum length, 1.42 ± 0.08 (1.30–1.50); pronotum width, 1.86 ± 0.05 (1.80–1.90); head width, 2.00 ± 0.10 (1.90–2.10); length of femur III, 4.08 ± 0.18 (3.90–4.30); length of tibia III, 3.36 ± 0.18 (3.10–3.60); ovipositor length, 2.60 ± 0.07 (2.50–2.70).

Type material. Holotype ♂: BRASIL, AM[azonas], Manaus, R.[eserva] F.[lorestal] Adolpho Ducke, AM-010, 26-31.viii.2011, 02º55'49"S, 59°58'31"W. Coleta ativa. L. P. Martins & V. Linard / 127PROSET (INPA). Holotype condition: detached left leg III; genitalia placed in microvial with glycerin; all parts are maintained in holotype's tube. Paratypes: same data of Holotype (1♂, 1♀, INPA). *idem* 23-28.ix.2011 / 144PROSET (1♂, INPA). *idem* 26-31.i.2012. L. P. Martins & K. Soares (2♂, MZUSP). *idem* 14-19.x.2011. L. P. Martins & A. Souza / 152PROSET (1♂, INPA). *idem* / 153PROSET (1♂, INPA). *idem* / 154PROSET (1♂, INPA). *idem* (3♂, 3♀, INPA). *idem* 21-24.iv.2011. L. P. Martins (1♀, INPA). *idem* 01-15.vii.2011 (2♂, 1♀, INPA). *idem* 23-28.ix.2011. L. P. Martins & V. Linard (2♀, MZUSP). *idem* 01-03.xi.2010. L. P. Martins & D. Mendes (1♂, INPA). *idem* / 05PROSET (1♂, INPA). *idem* 26-28.ii.2011 / 49PROSET (1♂, INPA). *idem* (1♀, INPA). *idem* 15-19.xi.2013. L. P. Martins & L. G. Da Silva (3♂, INPA).

Acknowledgments

To Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) for the financial support to the Projects PROSET (Edital MCT/CNPq/FNDCT nº 19/2009, Proc. 556871/2009-0), SISBIOTA Brasil (Edital MCT/CNPq/MMA/MEC/CAPES/FNDCT – Ação Transversal/FAPs nº 47/201047/2010, Proc. 563360/2010-0) and PROTAX/CNPq (Process n° 562229/2010–8). To Programa de Apoio a Núcleos de Excelência of the Fundação de Amparo à Pesquisa do Estado do Amazonas (PRONEX–CNPq–FAPEAM Edital 016/2006, Proc. 1437/2007). Luciano de P. Martins was financially supported by CNPq grants 350059/2010-1 and 350059/2012-8; Marcelo R. Pereira was financially supported by FAPEMIG grant BPD-00063-13.

References

Baccaro, F.B., Drucker, D.P., Vale, J., Oliveira, M.L., Magalhães, C., Lepsch-Cunha, N. & Magnusson, W.E. (2008) A Reserva Ducke. *In:* Oliveira, M., Baccaro, F.B., Braga-Neto, R. & Magnusson, W.E. (Org.), *Reserva Ducke: A biodiversidade amazônica através de uma grade*. Attema Design Editorial (ed), Manaus, pp. 11–20.

Desutter, L. (1987) Structure et évolution du complexe phallique des Gryllidea (Orthoptères) et classification des genres Nétropicaux de Grylloidea. Première Partie. *Annales de la Société Entomologique de France*, 23, 213–239.

Desutter-Grandcolas, L. (1993) New Nemobiine Crickets from Guianese and Peruvian Amazonia (Orthoptera, Gryloidea, Trigonidiidae). *Studies on Neotropical Fauna and Environment*, 28, 1–37. http://dx.doi.org/10.1080/01650529309360885

Desutter-Grandcolas, L. (2003) Phylogeny and the evolution of acoustic communication in extant Ensifera (Insecta, Orthoptera). *Zoologica Scripta*, 32, 525–561. http://dx.doi.org/10.1046/j.1463-6409.2003.00142.x

Eades, D.C., Otte, D., Cigliano, M.M. & Braun, H. (2013) Orthoptera Species File Online. Version 2.0/4.1. Available from: http://Orthoptera.SpeciesFile.org (accessed 18 October 2013)

Otte, D. & Peck, S.B. (1998) Crickets of the Galapagos Islands, Ecuador (Orthoptera: Gryllidae: Nemobiinae and Trigonidiinae). *Journal of Orthoptera Research*, 7, 231–240. http://dx.doi.org/10.2307/3503525

Pereira, M.R., Miyoshi, A.R., Martins, L.P., Fernandes, M.L., Sperber, C.F. & Mesa, A. (2013) New Neotropical species of *Hygronemobius* Hebard, 1913 (Orthoptera: Grylloidea: Nemobiinae), including a brief discussion of male genitalia morphology and preliminary biogeographic considerations on the genus. *Zootaxa*, 3641 (1), 001–020. http://dx.doi.org/10.11646/zootaxa.3641.1.1

Walker, T.J. & Moore, T.E. (2011) Singing Insects of North America. Available from: http://buzz.ifas.ufl.edu (accessed 17 September 2011)