A new species of *Notalina* Mosely, 1936
(Trichoptera: Leptoceridae) from Southeastern Brazil

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Abstract: The Neotropical subgenus *Notalina* (*Neonotalina*) Holzenthal, 1986 has ten described species in two species groups: *brasiliana*, formed by seven species from Southeastern Brazilian and Goiás State; and *roraima*, represented by three species from the Amazonian and Andes regions. In this paper, a new species of *Notalina* is described and illustrated from specimens collected in the Mantiqueira mountain range, Southeastern Brazil. The new species belongs to the *brasiliana* group and is easily recognized by the poorly developed dorsomesal and ventrolateral processes and the pair of mound-like protuberances located mesolaterally on abdominal segment X, and by the robust, rounded mesoventral processes and long digitate mesodorsal processes of the inferior appendages. A key to the Neotropical species in the genus is provided.

Keywords: Atlantic Forest, Neotropical, Hudsonemini, new species, identification key.


Resumo: O subgênero Neotropical *Notalina* (*Neonotalina*) possui dez espécies descritas em dois grupos: *brasiliana*, formada por sete espécies provenientes do Sudeste brasileiro e do Estado de Goiás; e *roraima*, representado por três espécies das região Amazônica e Andes. Neste trabalho, uma nova espécie de *Notalina* é descrita e ilustrada a partir de espécimes coletados na Serra da Mantiqueira, Sudeste do Brasil. A nova espécie pertence ao grupo *brasiliana* e é facilmente reconhecida por processos dorsomesal e ventrolateral pobremente desenvolvidos e por um par de pequenas protuberâncias localizadas mesolateralmente no segmento X, apêndices inferiores com processo mesoventral arredondado e robusto, e processo mesodorsal longo e digitado. Uma chave de identificação para as espécies neotropicaís do gênero é fornecida.

Palavras-chave: Mata Atlântica, Região Neotropical, Hudsonemini, espécie nova, chave de identificação.
Introduction

Leptoceridae (or long-horned caddisflies) are among the three largest families of Trichoptera, with about 1,800 described species and 46 extant genera (Malm & Johanson 2011). The family is currently divided into four subfamilies: Leptocerinae Leach, 1815, with cosmopolitan distribution, Triplunctidae Ulmer, 1906 and Grumichellinae Malm & Johanson, 2011, both with primarily Southern Hemisphere distribution in the Neotropics and Australasia, and Leptorussinae Malm & Johanson, 2011, with only the monotypic genus Leptorussa Mosely, 1953 from Australia (Holzenthal 1986, Morse & Holzenthal 1987, Malm & Johanson 2011).


Holzenthal (1986) recognized two species groups of Neotropical (roraima and brasiliana groups). The roraima species group occurs in the upper Amazon basin, the Northern Andes, and the Guiana Highlands, while species of the brasiliana species group are found in the highlands of Southeastern and Central Brazil (Calor 2008). Herein, a new species of Notalina (Neonotalina) from the Mantiqueira mountain range, Southeastern Brazil is described and illustrated.

Materials and Methods

The specimens were collected with Pennsylvania light traps (Frost 1957), Malaise traps, and hand net at Parque Estadual de Campos do Jordão (São Paulo State) and the upper portion of the Itatiaia massif, Itamonte municipality (Minas Gerais State), both located in the Mantiqueira mountain range, an Atlantic Forest highland area of Southeastern Brazil.

The material examined was preserved in 80% alcohol. To observe genital structures, the abdomen was removed and cleared in 10% KOH solution. Both stereo- and optical microscopes were used to examine specimens and specimens were illustrated with the aid of a camera lucida. Morphological terminology follows that of Holzenthal (1986). The type specimens are deposited in Museu de Zoologia, Universidade de São Paulo, Brazil (MZSP), and the Coleção Entomológica Prof. José Alfredo Pinheiro Dutra, Departamento de Zoologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil (DZRJ).

Taxonomy

Notalina jordanensis, new species

Notalina jordanensis belongs to the brasiliana species group as defined by Holzenthal (1986), by sharing the phallopse with paired, lateral, acuminate flanges and the large, well-developed phallopse sclerite. The new species is most similar to N. brasiliana and N. goianensis, due to the general structure of saddle-like segment X. However, N. jordanensis has the dorsomesal and ventrolateral processes poorly developed on abdominal segment X and has a mound-like protuberance mesolaterally, absent in the other species. Furthermore, the robust and rounded mesoventral processes and the long digitate mesodorsal processes of the inferior appendages, are also useful diagnostic characters for the new species.
Etymology: The epithet specific name *jordanensis* refers to the holotype locality, Campos do Jordão municipality, in São Paulo State, Southeastern Brazil.

Key to the males of *Notalina* (*Neonotalina*)
(modified from Holzenthal 1986)

1. Phallobase with paired, acuminate flanges; phallotremal sclerite well developed, large (*see Figures 3D, E in Holzenthal 1986*)
   - *brasiliana* group (2)
   1'. Phallobase with paired, spatulate flanges; phallotremal sclerite underdeveloped, small (*see Figures 9D, E in Holzenthal 1986*)
     - *roraima* group (9)

2. Abdominal segment X bearing a single pair of terminal processes (*see Figures 5A, B in Holzenthal 1986*)
   - *N. paulista*
2'. Abdominal segment X bearing 2 pairs of terminal, finger-like processes (*see Figures 3A, B in Holzenthal 1986*)
   - *N. hamiltoni*

3. Segment X with dorsolateral processes (*see Figures 2A, C in Calor, Holzenthal & Amorim 2006*)
   - *N. morsei*
3'. Segment X without dorsolateral processes
   - *N. cipo*

4. Terminal processes of segment X large, quadrate in dorsal view; segment X with pair of lateral protuberances (*see Figures 5A, B in Holzenthal 1986*)
   - *N. froehlichi*
4'. Terminal processes of segment X small; segment X without lateral protuberances (*see Figures 8A, B in Holzenthal 1986*)
   - *N. goianensis*

5. Segment X saddle-shaped in lateral view; inferior appendage narrow basally and bearing 2 sclerotized points mesoventrally (*see Figures 5A, C in Holzenthal 1986*)
   - *N. matthiasi*
5'. Segment X not as above; inferior appendage with basal region massive and bearing a lateral ridge (*see Figures 7A, C in Holzenthal 1986*)
   - *N. nanay*

6. Segment X with a setose, mound-like protuberance mesodorsally; inferior appendages with mesoventral process rounded in lateral view (*Figures 2, 3, 4*)
   - *N. jordanensis*
6'. Segment X without mound-like protuberance; inferior appendages with mesoventral process elongate (*see Figure 3A in Holzenthal 1986*)
   - *N. braziliana*

7. Segment X with phallotremal sclerite greatly enlarged, with anteriorly-directed projection (*see Figures 3A, B, D, E in Holzenthal 1986*)
   - *N. roraima*
7'. Segment X with dorsomesal processes not surpassing or with same length of ventrolateral processes; phallotremal sclerite not greatly enlarged, without projection (*see Figures 2A, E in Calor 2008*)
   - *N. goianensis*

8. Phallobase with pair of laterally directed, acuminate flanges (*see Figures 1D, E, F in Calor, Holzenthal & Amorim 2006*)
   - *N. goianensis*
8'. Phallobase with pair of dorsally directed, acuminate flanges (*see Figures 2B, D, F in Calor 2008*)

9. Segment X with apex entire or with a very slight mesal cleft; without heavy setae (*see Figures 9B, 10B in Holzenthal 1986*)
   - *N. goianensis*
9'. Segment X with a deep apico-mesal cleft and bearing heavy setae (*see Figures 11A, B in Holzenthal 1986*)
   - *N. matthiasi*

10. Inferior appendages with basal and apical portion long and slender, bearing a sharply pointed mesoventral projection (*see Figures 9A, C in Holzenthal 1986*)
    - *N. roraima*
10'. Inferior appendages with basal portion broad, lacking pointed mesoventral projection (*see Figures 10 A, C in Holzenthal 1986*)
    - *N. nanay*
A new species of Notalina Mosely

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References


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