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New subgenus and new species *Nousia (Araucophlebia) latifolia* subgen. n. et sp. n. (Ephemeroptera: Leptophlebiidae) from Chile

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Abstract

A new subgenus and new species, *Nousia (Araucophlebia) latifolia* subgen. et sp.n., are described from the Maule and Araucania regions in Chile, based on male and female imagos reared from larvae. This species has unusual shapes of larval tergalii, male imaginal genitalia and flat eggs.

Key words: Chile, mayflies, Ephemeroptera, Leptophlebiidae, systematics, new species

Introduction

The genus *Nousia* Navas 1918 (Ephemeroptera: Leptophlebiidae) was based on the male subimago of a single Chilean species *N. delicata* Navas 1918; Navas (1925) subsequently attributed imagos to this species. Needham & Murphy (1924) established a new genus *Atalonella* Needham & Murphy 1924 based on imagos and larvae described by them as a new Chilean species, *A. ophis* Needham & Murphy 1924, and they also included an Australian species originally described as *Atalophlebia fusca* Ulmer 1920 which was then unknown as a larva. Navas (1925) synonymized *Atalonella* with *Nousia*, and Pescador & Peters (1985) synonymized *Atalonella ophis* with *Nousia delicata*. Pescador & Peters (1985) redescribed the genus *Nousia* (= *Atalonella*) and revised the South American representatives, giving descriptions of imagos and larvae of 6 species: *Nousia delicata* Navas 1918, *N. maculata* (Demoulin 1955), *N. crena* Pescador & Peters 1985, *N. grandis* (Demoulin 1955), *N. minor* (Demoulin 1955) and *N. bella* Pescador & Peters 1985.

A new subgenus and species from Chile, described in this paper, differs considerably from all formerly known species by characters of the larva, imago and egg.

The holotype and most paratypes of the new species will be permanently deposited in the Zoological Institute of the Russian Academy of Sciences in Saint Petersburg, Russia (ZIN), but are temporarily located in the Department of Entomology of Saint Petersburg State University; 4 larvae and 1 male imago with associated larval and subimaginal exuviae are deposited in the Museo Nacional de Historia Natural in Santiago de Chile (MNHN). In the list of material examined, the following arbitrary signs are used: **L-S-I♂**—male imago reared from larva, with larval and subimaginal exuviae; **L-S-I♀**—female imago reared from larva, with larval and subimaginal exuviae.

Genus *Nousia* Navas 1918

= *Atalonella* Needham & Murphy 1924

Type species: *N. delicata* Navas 1918.

Larva. Clypeus parallel-sided or slightly widened anteriorly (Figs 1, 24); labrum not widened, with median incision shallow or non-expressed; number of median denticles odd—5 or 3; both dorsal transverse setal rows

Imago, female. Coloration similar to that of male. Posterior margin of sternum IX with shallow median incision (Fig. 17).

Egg (Figs 21–23). Length 0.25 mm. Has a form of flat disc with rigid and smooth margin. Each of two flat sides with net-like relief of hexagonal and pentagonal cells not reaching margin; some of these cells bear hemispheric papillae—one papilla per cell. On one side, papillae near margins are dense and large, so that contiguous one with another (Fig. 21). On another side papillae are smaller and irregularly dispersed (Fig. 23).

Dimensions. Fore wing length (and approximated body length) 6–7 mm.

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References

- Demoulin, G. (1955) Ephéméroptères nouveaux ou rares de Chili. III. *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique*, 31 (73), 1–30.
- Domínguez, E., Molineri, C., Pescador, C., Hubbard, M. & Nieto, C. (2006) *Ephemeroptera of South America. Aquatic Biodiversity in Latin America. Vol. 2*. Pensoft, Sofia—Moscow, 646 pp.
- Finlay, K.J. (2000) Description and distribution of a new species of *Nousia* Navás (Ephemeroptera: Leptophlebiidae: Atalophlebiinae) from south-eastern Australia. *Australian Journal of Entomology*, 39, 111–117.
<http://dx.doi.org/10.1046/j.1440-6055.2000.00157.x>
- Navás, L. (1918) Insectos chilenos. *Boletín de la Sociedad Aragonesa de Ciencias Naturales*, 17, 212–230. [cited from Pescador & Peters, 1985]
- Navás, L. (1925) Insectos neotropicos. 1.ª Serie. *Revista Chilena de Historia Natural*, 29, 305–313.
- Needham, J.G. & Murphy, H.E. (1924) Neotropical mayflies. *Bulletin of the Lloyd Library*, 24 (Entomological Series 4), 1–79.
- Pescador, M.L. & Peters, W.L. (1985) Biosystematics of the genus *Nousia* from southern South America (Ephemeroptera: Leptophlebiidae: Atalophlebiinae). *Journal of the Kansas Entomological Society*, 58 (1), 91–123.