



A new species of *Leptonema* Guérin (Trichoptera: Hydropsychidae) from southeastern Brazil

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The net-spinning caddisfly genus *Leptonema* Guérin contains about 120 species, making it the largest genus in the subfamily Macronematinae (Hydropsychidae) and one of the most diverse in the order Trichoptera (Flint *et al.* 1987; Flint 2008). Most species are large, with wingspans of about 60 mm. They inhabit all types of running waters and generally comprise a significant proportion of invertebrate biomass in these waterways (Flint *et al.* 1987). In the New World, the genus is extremely diverse, with 106 species widely distributed from the southwestern United States to northern Chile and central Argentina, including the Antilles (Flint 2008). Another 18 species occur in sub-Saharan Africa and Madagascar (Munõz-Quesada 1997). Flint, McAlpine & Ross (1987) revised the whole genus, and also considered biogeographic and phylogenetic aspects. Brazil has 26 recorded species (Paprocki *et al.* 2004; Flint 2008).

In the present work, we describe and illustrate the adult male of a new species collected at Mangaratiba, Serra do Mar mountain range, in Rio de Janeiro state. The immature stages are unknown. The terminology used in description follows that of Nielsen (1970) and Flint *et al.* (1987). The type specimens have been deposited in two Brazilian collections: DZRJ—Coleção Entomológica Professor José Alfredo Pinheiro Dutra, in Departamento de Zoologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro; MZSP—Museu de Zoologia, in Universidade de São Paulo, São Paulo.

Leptonema amplifurcatum sp. nov.

Figs. 1–9

Leptonema amplifurcatum sp. nov. is a member of the *L. speciosum* Group, as defined by Flint *et al.* (1987). It is closely related to *L. bifurcatum* Flint, McAlpine & Ross, 1987 and *L. bifurcatodes* Flint, 2008, differing principally in the presence of processes *f* on the male phallus (not illustrated and not mentioned in the description of the other 2 species) and by the shape and size of processes *g* on the phallus. The new species has processes *g* forked, like those of *L. bifurcatum* and *L. bifurcatodes*, but the fork is extremely large and wide, U-shaped, resembling a spanner. In the other 2 species, this fork is proportionately shorter and not enlarged. The new species is also distinguished by the apex of the phallus and the shape of the fused processes *b-c*. In *L. bifurcatum* these processes are upturned and bifid apically, whereas in *L. bifurcatodes* they are tapered apically and each has a pair of apicomesal points. In *L. amplifurcatum* sp. nov., processes *b-c* are longer, deeply bifid apically and recurved cephalad. An additional character difference, observed in all individuals, is the presence of a small basolateral projection on the left side of process *b-c*, near apex.

Some asymmetry and small morphological differences were observed in the type series, especially in processes *g*. In some individuals, the processes vary between the right and left sides. The subapical projection may bear 1 or 2 minute spines (Fig. 9A, B) or even be bifid (Fig. 9C). Processes *f* may also be asymmetrical, with 2 accessory spines sometimes present on the left side (as in the holotype specimen).

Description. Adult male (Figs. 1–9): Length of forewing: 14.0–17.0 mm (n=5). Head, antennae, maxillary palps and legs yellowish, stramineous in alcohol. Wings light brown, without maculae.

Head (Fig. 1): Malar space narrow, about 1/5th height of eye. Frontal setal wart, between the antennal bases; one pair of small antennal setal warts not clearly delimited; one pair of large, subtriangular posterior setal warts behind eyes; one pair of slender setal warts, bearing long dark setae on postgenal area. Maxillary palps 5-segmented, long, setose; segment III slightly longer than segment II; segment V extremely long, about the length of all other segments together (Fig. 1).