

# THE NOMENCLATURE OF MURPHYELLA AND DICTYOSIPHILON

(Ephemeroptera: Siphonuridae: Coloburiscinae)

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## SUMMARY

*Murphyella needhami* Lestage is the correct name of the type-species of the monotypic endemic Chilean genus *Murphyella* Lestage (= *Dictyosiphlon* Lestage).

## RESUMEN

*Murphyella needhami* Lestage es el nombre correcto de la especie-típica del género chileno endémico y monotípico *Murphyella* Lestage (= *Dictyosiphlon*).

The mayfly genus *Murphyella* Lestage, known only from Chile, is a distinctive monotypic siphonurid with a notably tangled and confused nomenclatural history. The purpose of this note is to elucidate and clarify the nomenclature of this unique genus and prevent future confusion.

*Murphyella* is easily recognized among the South American Siphonuridae by the absence of abdominal gills and the presence of uniramous filamentous gills on the median of the thoracic sterna in the nymphs, and by the strongly recurved vein CuA in the fore wings of the imagos and subimagos.

In 1924 Needham and Murphy described as "*Metamonius?* sp. (nymph)" two male Ephemeroptera nymphs from Puerto Varas, Chile, which had been collected by Dr. J. C. Bradley. One of these nymphs was illustrated in their Plate V.

Lestage (1930) established the new genus and species *Murphyella needhami* for this nymph previously described and figured by Needham and Murphy (1924).

In 1935, Navás, apparently unaware of Lestage's 1930 paper, established the new species *Metamonius needhami* for Needham and Murphy's (1924) nymph. This established a junior objective synonym because both of these nominal species are based on the same type-specimen, the nymph illustrated by Needham and Murphy.

In 1930 Navás described (as "*Heptagenia? molinai*") the female of a new species of what he thought was a heptageniid [ecdyonurid] mayfly from Angol, Chile. Then, in 1931, Lestage, realizing that *Heptagenia molinai* Navás belonged in the Siphonuridae and not in the Heptageniidae, established the new genus *Dictyosiphlon* for it.

Ulmer (1938) redescribed the adult and described for the first time the nymph of *Dictyosiphlon molinai*. He believed that *Dictyosiphlon molinai* (Navás) and *Murphyella needhami* Lestage were synonyms although he thought it best to continue treating them as separate species until more specimens were known. He made no mention of *Metamonius needhami* Navás in this regard.

Edmunds and Traver (1954) synonymized the genera *Murphyella* Lestage and *Dictyosiphlon* Navás, although they made no mention of the included species. Demoulin (1955a) then synonymized the species *Murphyella needhami* Lestage, *Metamonius needhami* Navás [non Lestage], and *Heptagenia molinai* Navás under the name *Murphyella needhami* Lestage and redescribed both the nymph and adult (1955a, b). Although he chose to use, as reviser, the name *Murphyella needhami* Lestage, 1930, instead of *Murphyella molinai* (Navás, 1930), he gave no reason for doing so. Hubbard (1982), in his catalog of the South American Ephemeroptera, listed this species as *Murphyella molinai*.

Although there is agreement among the taxonomists who have studied these nominal species of *Murphyella* and *Dictyosiphlon* that

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they are conspecific, no consensus has been reached as to what is the valid name.

The International Code of Zoological Nomenclature, however, is quite explicit in requiring the use of the oldest available name as the valid name for this species. In this case the oldest available name would be the earliest of the two specific epithets *needhami* Lestage and *molinae* Navás. Although both *Heptagenia molinae* Navás and *Murphyella needhami* Lestage were described in volumes for the year 1929, neither description was actually published until 1930. Which description appeared first to establish the valid name for this species?

Part XII of volume 69 of the Bulletin & Annales de la Société Entomologique de Belgique which contains the description of *Murphyella needhami* Lestage bears a publication date on the cover of 15 January 1930. I have seen a library receipt date stamp of 31 January 1930 on the copy held in the U. S. National Agricultural Library.

Volume 33 for 1929 of the Revista Chilena de Historia Natural Pura y Aplicada, which contains the description of *Heptagenia molinae* Navás, has a publisher's note on the inside cover which states that distribution of that volume commenced on 27 February 1930.

It is obvious, then, that the description of *Murphyella needhami* Lestage appeared first, and that name must be considered the correct and valid name for this species. A formal synonymy of this genus and species appears below.

#### *Murphyella* Lestage, 1930

*Metamonius* [partim]; Needham and Murphy, 1924: 29, pl. v; Navás, 1935: 140.

*Murphyella* Lestage, 1930: 439 (Type-species *Murphyella needhami* Lestage, 1930, by original designation); Ulmer, 1932: 217; Edmunds and Traver, 1934: 237; Demoulin, 1955a: 5; 1955c: 9; Edmunds, Allen, and Peters, 1963: 11; Hubbard, 1982: 272.

*Heptagenia* [partim]; Navás, 1930: 331.

*Dictyosiphon* Lestage, 1931: 47 (Type species *Heptagenia molinae* Navás, 1929, by monotypy).

#### *Murphyella needhami* Lestage, 1930

*Metamonius* sp. (nymph) Needham and Murphy, 1924: 29, pl. v.

*Murphyella needhami* Lestage, 1930: 439; Lestage, 1931: 49; Ulmer, 1938: 96; Demoulin, 1955a: 5, fig. 2; 1955b: 2; 1955c: 9.

*Heptagenia? molinae* Navás, 1930: 331.

*Dictyosiphon molinae*; Lestage, 1931: 46, fig. 5; Ulmer, 1938: 90.

*Metamonius needhami* Navás, 1935: 140 [non Lestage]; Demoulin, 1955b: 3.

*Murphyella molinae*; Hubbard, 1982: 272.

The type of *Heptagenia molinae* Navás is presently in the Museo de Zoología del Ayuntamiento in Barcelona (Alba and Peters, in press). The two nymphs described by Needham and Murphy (1924) were not found in the collections of the Department of Entomology of Cornell University which holds most of the Needham and Murphy specimens and their present whereabouts are unknown. They must be considered lost. Because the nymphs (and adults) of *Murphyella* are quite distinctive and there is no evidence for more than one valid species I see little need at this time to designate neotypes for either *Murphyella needhami* Lestage or *Metamonius needhami* Navás.

## ACKNOWLEDGEMENTS

The research reported in this paper was partially supported by a research program (FLAX 79009) of the Cooperative State Research Service, U. S. Department of Agriculture. I owe a debt of gratitude to the librarians who have helped me in this endeavor, in particular to Mark Matthewman of the Museum of Comparative Zoology.

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