



<http://dx.doi.org/10.11646/zootaxa.3750.1.8>

<http://zoobank.org/urn:lsid:zoobank.org:pub:29528101-C19E-47C9-96BB-8ED75E933437>

## A new species of *Labiobaetis* Novikova & Kluge, 1987 (Ephemeroptera: Baetidae) from Washington, USA

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### Abstract

*Labiobaetis sonajuventus* n.sp. is described from nymphs collected in a tributary of the Okanogan River in north-central Washington, USA. The new species is distinguished from North American congeners by the well-developed keel between the bases of the antennae, the concave lateral margin of labial palp segment 2, the apically expanded submarginal setae on the labrum, and its western Nearctic distribution.

**Key words:** Ephemeroptera, Baetidae

### Introduction

The small minnow mayfly genus *Labiobaetis* Novikova & Kluge, 1987 (Ephemeroptera: Baetidae) is globally widespread (Lugo-Ortiz *et al.* 1999) and includes North American species that had previously been considered to form the *propinquus* Group of *Baetis* of Leech, 1815 (Moriyama & McCafferty 1979a, b). *Labiobaetis* was originally described as a subgenus of *Baetis* by Novikova and Kluge (1987) to include the *propinquus* Group as well as similar species groups from Eurasia. McCafferty and Waltz (1995) later elevated it to the generic rank and described an additional species from western North America. Shortly thereafter, Lugo-Ortiz *et al.* (1999) synonymized *Labiobaetis* with *Pseudocloeon* Klapálek, 1905, thereby transferring all *Labiobaetis* to that genus. Gattolliat (2001) rejected this synonymy as the immature stages are unknown for the Javanese type species of *Pseudocloeon* and because of differences in the male genitalia, but *Pseudocloeon* continued to be recognized in North America until McCafferty *et al.* (2010) reassigned the species to *Labiobaetis*.

Six species are currently recognized in North America, all of which are known in both the nymphal and adult stages (Moriyama & McCafferty 1979a, b; McCafferty & Waltz 1995; Durfee & Kondratieff 1997): *L. apache* McCafferty & Waltz, 1995; *L. dardanus* (McDunnough, 1923); *L. ephippiatus* (Traver, 1935); *L. frondalis* (McDunnough, 1925); *L. longipalpus* (Moriyama & McCafferty, 1979b); and *L. propinquus* (Walsh, 1863). Nymphs can be identified using the keys in McCafferty and Waltz (1995) and adult males can be identified using the key of Moriyama and McCafferty (1979a) together with emendations by Durfee and Kondratieff (1997).

Examination of routine biomonitoring samples from Washington revealed numerous *Labiobaetis* nymphs from Loup Loup Creek, a tributary of the Okanogan River in the north-central portion of the state. These nymphs clearly differed from *L. apache*, the only other species of the genus currently known from Washington (Meyer & McCafferty 2007), as well as from other congeners and is herein described as a new species. The holotype and some paratypes are deposited in the Illinois Natural History Survey, Champaign, IL [INHS] and the remaining paratypes are deposited in the Purdue Entomological Research Collection, West Lafayette, IN [PERC]. Terminology used for describing the mandibles follows Moriyama and McCafferty (1979b).

### *Labiobaetis sonajuventus* n. sp.

**Material examined:** HOLOTYPE: 1 nymph, USA, Washington, Okanogan County, Loup Loup Creek, 48.47593°

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