



A new *Siphonoperla* species from the Eastern Alps (Plecoptera: Chloroperlidae), with comments on the genus

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Abstract

We describe a new species of stonefly from the genus *Siphonoperla*, from a glacial refuge in the Eastern Alps of Austria. The species' unique genitalia among congenitors as well as high genetic divergence from the co-occurring *Siphonoperla montana* strongly support its status as a distinct species. We describe *Siphonoperla ottomoogi* nov. sp. based on morphological and genetic characteristics as well as provide notes on its presumed habitat and distribution. Further notes on the biogeography of the genus are provided.

Key words: Stoneflies, *Siphonoperla*, Soboth, glacial refuge, genitalia, COI

Introduction

The stonefly genus *Siphonoperla* is distributed throughout Europe and reaches both northern Africa and Central Asia. Erected by Zwick in 1967, the genus is currently represented by up to 10 species: *S. hajastanica* (Zhiltzova 1961), *S. libanica* Alouf 1992, *S. lepineyi* (Navás 1936), *S. baetica* (Aubert 1956), *S. burmeisteri* (Pictet 1841), *S. montana* (Pictet 1841), *S. neglecta* (Rostock & Kolbe 1888), *S. graeca* (Aubert 1956), *S. taurica* (Pictet 1841) and *S. torrentium* (Pictet 1841). Several subspecies of *S. torrentium* have also been described including *S. torrentium transsylvanica* (Kis 1963), *S. torrentium manevali* (Kimmins 1935) and *S. torrentium italica* (Aubert 1953). *Siphonoperla* species are relatively small stoneflies inhabiting cold spring habitats, though some species also occur in lowlands. The systematics of the genus is much disputed, and thus far has only been based on morphological criteria.

Unglaciated regions of the Eastern Alps such as the Soboth in Austria are rich in endemic aquatic insects, particularly Trichoptera (Malicky 2000). During faunal studies of some Soboth springs *Siphonoperla* specimens morphologically resembling *S. montana* were collected. Adult males, however, revealed distinct genitalia and thus taxonomic assignment was questioned. Further investigations concerning the morphology, occurrence and genetic relationship of these specimens to their congeners strongly supported their designation as a distinct species. Herein we provide a morphological description of *Siphonoperla ottomoogi* nov. sp. as well as genetic data supporting its species designation. Further notes on the biogeography of the genus raise the notion that the Alpine region may harbour considerably more endemic species awaiting description.