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Where unknown *Cladotanytarsus* occur and how to distinguish their males (Chironomidae: Diptera)

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Abstract

The Chironomidae is the huge family of highly diversified aquatic dipterans. The number of chironomids is approaching 7500 species and 550 genera, and each year nearly 100 new species are described. This family is divided into 12 subfamilies, including the Chironominae, with the diverse tribe Tanytarsini (ca. 700 species), and morphologically the probably most variable genus - *Cladotanytarsus*. Despite the increasingly common use of molecular methods, *Cladotanytarsus* had so far been described using morphological characters, mainly those taken from adult males. The great variability of diagnostic features makes, however, their determination extremely difficult.

Studies on *Cladotanytarsus* based on materials from North America, Russian Far East and Fennoscandia indicated that an unknown species may occur in all the regions. As a result, *Cladotanytarsus saetheri* was described and compared with *C. gedanicus*. These two species were previously misidentified, however, a close analysis indicated several distinct differences between males, both in their morphology and behaviour. Morphological variations found in *C. saetheri*, resulting in a non-typical mode of life in some specimens (material from Finland), were considered as an adaptation to harsh conditions, which in a long-term period led to behavioural and spatial isolation. *C. saetheri* is the 20th known *Cladotanytarsus* representative in Europe.