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A long-lasting taxonomic problem in European *Sympycnus* resolved, with the description of a new species and data on habitat preferences

MARC POLLET[1], MAGNUS PERSSON[2], ESBEN BØGGILD[3] & ROY CROSSLEY[4]

[1]*Research Group Species Diversity (SPECDIV), Research Institute for Nature and Forest (INBO), Kliniekstraat 25, B-1070 Brussels, Belgium; Research Group Terrestrial Ecology (TEREC), University of Ghent (UGent), K.L.Ledeganckstraat 35, B-9000 Ghent, Belgium; and Department of Entomology, Royal Belgian Institute of Natural Sciences (RBINS), Vautierstraat 29, B-1000 Brussels, Belgium. E-mail: mpollet.doli@gmail.com*
[2]*Kornvägen 56, 247 34 S Sandby, Sweden*
[3]*Fayesgade 10, DK-9500 Hobro, Denmark*
[4]*1 The Cloisters, Wilberfoss, York, YO41 5RF, United Kingdom*

Abstract

Type specimens of *Sympycnus pulicarius*, *S. annulipes*, *S. cinerellus* and *S. desoutteri* were examined to clear up a long-lasting taxonomic confusion. Our study revealed that they represent, together with *S. pygmaeus* and *S. annulipes* var. *brunnitibialis*, a single species, with *S. pulicarius* as the senior subjective synonym, which is redescribed in this paper. Lectotypes were designated for *Dolichopus pulicarius*, *Porphyrops annulipes, Chrysotus cinerellus* and *Sympycnus desoutteri*. The postpedicel in this species shows substantial variation in shape and size, but the presence of a posteroventral bristle on the mid tibia is more reliable and the particular chaetotaxy and relative lengths of the tarsomeres of the male hind tarsus are entirely consistent. Both latter features separate *S. pulicarius* from another species, *S. septentrionalis* **sp. nov.**, that is described here. Ecological data on both species were examined. An analysis of Malaise trap and white pan trap samples collected in Belgium revealed that *S. pulicarius* is most common in the western part of Flanders, and most abundant in open grassy habitats. In contrast to *S. pulicarius*, which is widespread over Europe, *S. septentrionalis* **sp. nov.** seems confined to northern Europe, where it exhibits a similar habitat preference.

Key words: Dolichopodidae, *Sympycnus pulicarius*, *Sympycnus annulipes*, *Sympycnus cinerellus*, *Sympycnus desoutteri*, new species, Europe, Sweden, taxonomy, distribution, ecology

Introduction

For nearly two hundred years, the most abundant and widespread *Sympycnus* species in Western Europe, *S. pulicarius* (Fallén, 1823), has been causing taxonomic confusion. As in most other European species of this genus, the main diagnostic features in the male of this species are the shape of the postpedicel and the chaetotaxy of the hind tarsus. The confusion started when *Sympycnus pulicarius* and *S. annulipes* (Meigen, 1824) were described almost simultaneously from Sweden and Germany, respectively. Fallén (1823) mentioned the antenna in *S. pulicarius* being short and black ("antennae breves nigrae") and the fore legs being black at the base and the hind legs black dorsally at apex ("pedes pallidis … anticis prope ad basin, posticis supra apicem nigris"). Meigen (1824) described *S. annulipes* with a very similar leg coloration ("pedicus rufis: femoribus anticis basi facia nigra, posticis apice nigris") and a dark antenna with strong pubescence and a basodorsal stylus. He specifically mentioned the hind tarsus featuring two basal equal-sized tarsomeres and a third tarsomere with long posterior bristles ("articulo tertio tarsorum posticorum barbato"). Zetterstedt (1838) added to the situation by describing *S. cinerellus* (in *Chrysotus*), also from Sweden, fourteen years later. Later Parent (1925) completed the confusing array of these species when he described *S. desoutteri,* stating it was different from *S. annulipes* by a short postpedicel (not as long as wide) with a blunt apex.

That the confusion of these species still exists is illustrated by the fact that at present *Sympycnus pulicarius*, *S. annulipes* and/or *S. desoutteri* are listed in checklists, faunistic notes or ecological studies, in various combinations,

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