



## Russian *Zavrelia* Kieffer (Diptera: Chironomidae), with the description of two new species

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### Abstract

Two new species of *Zavrelia* Kieffer, *Z. elenae* sp. n. and *Z. pseudopentatoma* sp. n. from the Russian Far East are described and figured as male, pupa and larva. The generic diagnosis is emended to accommodate the new species. Keys to the males, pupae and larvae of the Russian *Zavrelia* species are given.

**Key words:** Chironomidae, Tanytarsini, *Zavrelia*, new species, key, Russian Far East

### Introduction

Species of the genus *Zavrelia* Kieffer *in* Bause, 1913, are small non-biting midges with immature stages living in standing and slow flowing waters. The larvae construct small transportable cases similar to those of *Stempellinella* Brundin. The genus was erected by Kieffer in 1913 for *Zavrelia pentatoma* Kieffer *in* Bause, 1913. Systematically, *Zavrelia* is placed in the subtribe *Zavreliina* of the tribe Tanytarsini (Diptera, Chironomidae, Chironominae) (Sæther 1977). Brundin (1948) presented the first thorough morphological analysis of the immature stages and grouped *Stempellinella* with *Zavrelia* in the *Zavrelia*-group, morphologically distinct from the *Stempellina*-group in all life stages (Ekrem 2007).

The genus *Zavrelia* includes three species, *Z. atrofasciata* Kieffer, 1921, *Z. pentatoma*, and *Z. tusimatijeus* (Sasa *et* Suzuki, 1999) from the Palaearctic Region and two species, *Z. clinovolsella* Guo *et* Wang, 2004 and *Z. bragremia* Guo *et* Wang, 2007, from the Oriental Region (Ashe & Cranston 1990; Sasa & Suzuki 1999; Guo & Wang 2004, 2007).

Up to now only *Z. pentatoma* has been recorded from Russia (Pankratova 1983). However, during our studies of the chironomid fauna in the Russian Far East, two new species were found in the Primorye and the Khabarovsk Territories. Both species are described below and keys to males, pupae and larvae of the three Russian *Zavrelia* species are given.

### Material and methods

The material was preserved in 70% ethanol and 4% formalin and slide-mounted in Fora-Berlese solution. Morphological terminology and abbreviations follow Sæther (1980). The measurements are given as ranges. The following additional abbreviations are used: PL-male = associated larva, pupa, and adult male; PL-female = associated larva, pupa, and adult female; P-male = associated pupa and male; P-female = associated pupa and female; L = larva.