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Karyotype of *Propsilocerus akamusi* (Tokunaga) from China (Diptera: Chironomidae)

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Abstract

The karyotype structure and banding patterns of the polytene chromosomes of *Propsilocerus akamusi* from China are investigated for the first time. Photographic maps of the three chromosomes of *P. akamusi* are presented. Three heterochromatic blocks in the centromere regions are characteristic of this species. Chromosomal polymorphisms were not found in the Chinese populations. Cytogenetic data support the phylogenetic argument previously outlined for the genus.

Key words: Chironomidae, karyotype, polytene chromosomes, sibling species

Introduction

A detailed revision of the orthoclad genus *Propsilocerus* Kieffer (= *Tokunagayusurika* Sasa) was carried out recently by Sæther and Wang (Sæther and Wang 1996, Sæther 1997, Wang and Sæther 2001). The genus includes six species: *P. akamusi* (Tokunaga), *P. jacuticus* (Zvereva), *P. lacustris* Kieffer, *P. paradoxus* (Lundström), *P. sinicus* Sæther and Wang, and *P. taihuensis* (Wen, Zhou and Rong). Among these species are European (*P. lacustris*), Eurasian (*P. jacuticus*), and East Asian (*P. akamusi*, *P. paradoxus*, *P. sinicus*, *P. taihuensis*) representatives. Recently, a new species (*P. taimyrus*) was described from Russia (Zelentsov 2000).

Parsimony analysis of species in the genus *Propsilocerus* (Sæther and Wang 1996) indicates that *P. akamusi* and *P. taihuensis* form one cluster as sibling species, and *P. paradoxus* and *P. lacustris* form another cluster; *P. sinicus* diverges from both clusters. Sæther (1997) later proposed *P. jacuticus* as the sister taxon to *P. akamusi* and *P. taihuenthis.*

Here we compare karyotype divergence in the genus *Propsilocerus* with morphological divergence as described by Sæther and Wang (1996), in the light of a hypothesis of

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