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## The genus *Pseudostenophylax* Martynov (Trichoptera, Limnephilidae) in Japan

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### Abstract

I revise the Japanese species of the genus *Pseudostenophylax* Martynov (Trichoptera, Limnephilidae), and recognize 8 species including five new species, *P. tohokuensis*, *P. kuharai*, *P. itoae*, *P. tanidai* and *P. befui*, and three previously described species, *P. tochiensis* Schmid, *P. ondakensis* (Iwata) and *P. dentilus* (Kobayashi). *Pseudostenophylax takaoensis* Schmid is synonymized with *P. ondakenis*. Adults and larvae of all species are described or redescribed except for the larval stage of *P. befui* **sp. nov.**

**Key words:** new species, new synonym, description, male, female, larva, distribution

### Introduction

The genus *Pseudostenophylax* Martynov 1909 is a genus composed of 96 species distributed in the Oriental, East Palaearctic and Nearctic biogeographic regions (Morse 2013). In Japan, the first species, *P. ondakensis* (Iwata 1928), was described based on larval specimens collected from streams and ponds in Mt. Ondake, Nagano, central Honshu. Tsuda (1945) described an adult male as this species based on specimens collected from a pond, one of the type localities of this species. On the other hand, Schmid (1991) also described a male as this species based on a specimen collected from Togakushi, Nagano, central Honshu, but the illustrations provided by him slightly differ from those by Tsuda (1945) in the shape of abdominal segment VIII and intermediate appendages of segment X. The male genitalia illustrated by Schmid (1991) are rather similar to those of the second Japanese species, *P. dentilus* (Kobayashi 1973). Furthermore, Schmid (1991) described the third and fourth Japanese species, *P. takaoensis* Schmid 1991 and *P. tochiensis* Schmid 1991, from central Honshu; however, the illustrations of the male of *P. takaoensis* are similar to those of *P. ondakensis* provided by Tsuda (1945).

To solve these taxonomic problems, I examined extensive material of *Pseudostenophylax* including the type specimens of *P. ondakensis*, *P. dentilus* and *P. takaoensis*, and recognized 8 species in the Japanese fauna. In this paper, I describe or redescribe all Japanese species.

### Material and methods

Male and female genitalia and some larval characters were figured after being cleared in a 10% solution of KOH. Larval characters described are based on final instar larvae. Larvae were associated with their adult males by rearing for *P. tochiensis*, *P. ondakensis*, *P. dentilus*, *P. tohokuensis* **sp. nov.** and *P. kuharai* **sp. nov.**, but larval specimens of *P. itoae* **sp. nov.** and *P. tanidai* **sp. nov.** collected from the same area where males of each species were collected were used for the descriptions of larvae of those two species. Morphological terms mainly follow Schmid (1998) for the adult and Wiggins (1996) for the larva. Depositories of the specimens are abbreviated as follows: Natural History Museum and Institute, Chiba (CBM); N. Kawase, Minakuchi Kodomo-no-mori Nature Museum, Koka (NK); National Museum of Natural History, Smithsonian Institution, Washington DC (NMNH); the Kyoto University Museum, Kyoto (KUM); K. Tanida, Osaka Prefecture University, Sakai (KT); T. Nozaki, Ninomiya, Kanagawa (TN).