

## Review of the Japanese Species of *Conchapelopia* (Insecta: Diptera: Chironomidae), with Keys to the Known Males and Pupae

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The Japanese species of the chironomid midge genus *Conchapelopia* Fittkau, 1957 are reviewed based on a study of the type material and/or recently obtained specimens. The following eight species are recognized as valid: *C. japonica* (Tokunaga, 1937); *C. amamiaurea* Sasa, 1990; *C. okisimilis* Sasa, 1990; *C. shikotuensis* Sasa, 1990; *C. unzenalba* Sasa, 1991; *C. togamaculosa* Sasa and Okazawa, 1992; *C. togapallida* Sasa and Okazawa, 1992; and *C. seiryusetea* Sasa, Suzuki, and Sakai, 1998. The male and female imagines of *Conchapelopia japonica* and *C. shikotuensis*, and the male imagines of *C. okisimilis*, *C. togamaculosa*, and *C. togapallida* are redescribed, while the immature stages of these species and the female imagines of the latter three species are described for the first time. Reexamination of the holotypes of *Conchapelopia amamiaurea*, *C. unzenalba*, and *C. seiryusetea* has shown that the respective original descriptions contain errors in some diagnostic aspects, which are corrected in this study. Seven previously described taxa are found to be synonyms. Keys to male imagines and pupae of known Japanese species of *Conchapelopia* are included.

**Key Words:** Insecta, Diptera, Chironomidae, Tanypodinae, *Conchapelopia*, taxonomy, synonymy, Japan.

### Introduction

The chironomid genus *Conchapelopia* Fittkau, 1957 belongs to the subfamily Tanypodinae and has a nearly worldwide distribution. Some 30 species have been recorded from the Northern Hemisphere (Oliver *et al.* 1990; Sæther *et al.* 2000; Chaudhuri *et al.* 2001; Michiels and Spies 2002). Seventeen nominal species are hitherto known from Japan (Sasa and Kikuchi 1995; Sasa 1998; Sasa and Suzuki 2001a, 2001b).

During the course of taxonomic studies on Chironomidae in Japan, I successfully raised *Conchapelopia* midges from larvae and pupae collected from many localities. Species of the genus are easily separable from one another primarily by the structure of the median volsella in the male hypopygium. The extensive material at hand has enabled me to compare various ontogenetic stages among many