



A new species of the genus *Apsilops* Förster (Hymenoptera: Ichneumonidae: Cryptinae) from Japan; parasitoid of an aquatic crambid moth

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Abstract

Apsilops japonicus n. sp. is described from Japan. This species parasitizes an aquatic crambid moth, *Neoschoenobia testacealis* Hampson, a petiole borer of the yellow water lily, *Nuphar subintegerrimum* (Casp.) Makino *sensu lato*. A key to the world species of *Apsilops* is provided.

Key words: Aquatic Hymenoptera, aquatic moth, parasitoid, taxonomy, yellow water lily

Introduction

Apsilops Förster is a small genus of the subfamily Cryptinae and hitherto known from seven species. Of these, three species are known from North America, three from Europe, and one from Java, Indonesia. As far as has been reported, species of this genus parasitize aquatic or semiaquatic moths of the families Crambidae and Noctuidae.

In Japan, the presence of an undetermined species of *Apsilops* parasitizing an aquatic moth, *Neoschoenobia testacealis* Hampson (Lepidoptera: Crambidae) has been known for many years (Nagasaki 1992). The mature moth larvae bore in the leaf petiole of the yellow water lily, *Nuphar subintegerrimum* (Casp.) Makino *sensu lato* (Nagasaki 1992, 2004), and adults of the Japanese *Apsilops* species enter the water by walking down the leaf petiole of the plant to access the moth larvae (Nagasaki *et al.* in prep.). The biology of *Apsilops* is very intriguing, and for some years Nagasaki and collaborators have been conducting observations on the natural history and host searching behavior of the Japanese species. The purpose of this paper is to describe this new Japanese *Apsilops* species, and place it in context with the currently described species.

Material and methods

Stereomicroscopes (Nikon SMZ-10 and Olympus SZ40), and a light-microscope (Olympus BX40) were used for observation and preparation of figures. Digital images were edited using Adobe Photoshop Elements® 6.0. Terminology mainly followed Gauld (1991). Harris (1979) was consulted for microsculpture descriptions. Measurements of flagellomeres, 1st metasomal segment, and ovipositor sheath were taken as in Figures 7, 11 and 12, and 16. OOL and POL refer to ocello-ocular line and posterocellar line, respectively. Nervellar index is defined as in Gauld and Mitchell (1981), i.e. the relative length of first abscissa of Cu1 to length of cu-a of hind wing (Fig. 14).

Specimen depositories are abbreviated as follows: AEKC, Laboratory of Animal Ecology, School of Human Sciences, Kobe College, Nishinomiya; BMNH, The Natural History Museum, London; CNCI, Canadian National Collection of Insects, Ottawa; MNHN, Muséum National d'Histoire Naturelle, Paris; SEHU, Laboratory of Systematic Entomology, Hokkaido University, Sapporo.

Specimens of all seven described species were also examined for comparison with the new species.