

Article

***Eutarsopolipus osunaharae* sp. nov. (Acari: Podapolipidae),
subelytral parasite of *Diplocheila zeelandica* (Redtenbacher)
(Coleoptera: Carabidae) from Japan**

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Abstract

Eutarsopolipus osunaharae sp. nov. (Acari: Podapolipidae), subelytral parasite of *Diplocheila zeelandica* (Redtenbacher) (Coleoptera: Carabidae), is described from three localities in Japan. The relationships with seven previously described species in the *pterostichi* group of *Eutarsopolipus* are discussed and keys are provided to species in the *pterostichi* group. This is the first record of *Eutarsopolipus* in the *pterostichi* group in Japan and the first record of a species in this group parasitizing the carabid genus *Diplocheila*.

Key words: Taxonomy, Acari, Podapolipidae, new species, Japan, *Diplocheila*, parasite

Introduction

Mites in the family Podapolipidae (Acari: Heterostigmata) are all specialized parasites of five orders of insects: Blattodea, Heteroptera, Hymenoptera, Orthoptera and especially Coleoptera. Regenfuss (1968) placed 18 species in the genus *Eutarsopolipus*, parasites of the beetle family Carabidae, in seven groups based on apomorphic and other characters. In 2011, there are 56 species, eight of which are in the *pterostichi* group, including the species described herein. Keys to 14 groups of *Eutarsopolipus*, keys to seven species of *Eutarsopolipus* in the *pterostichi* group and a discussion of the *pterostichi* group were presented by Husband and Husband (2009). The new species described herein is the third species of podapolipid mite parasitizing *Diplocheila zeelandica*. Two species of *Dorsipes* (Podapolipidae) from *D. zeelandica* are described in Kurosa and Husband (2011). Earlier reports from Asia are *E. pterostichi* Regenfuss 1968 from Tuva, Russia and *E. vernalis* from “far eastern Russia” (Eidemberg, 1994). The purpose of this paper is to describe a new species of *Eutarsopolipus* in the *pterostichi* group that is parasitic on *Diplocheila zeelandica* in Japan, compare the species with seven previously described species in the *pterostichi* group and present a revised key to adult females of eight species in the *pterostichi* group.

Materials and methods

Fourteen specimens of *Diplocheila zeelandica* (Redtenbacher) (Coleoptera: Carabidae) from Yamagata, Chiba, Ehime, Fukuoka and Okinawa Prefectures, Japan were examined for mites by the junior author. Three species in two genera of podapolipid mites were discovered on eleven specimens of *D. zeelandica*. Two *Dorsipes* species have been described from this host (Kurosa &