

## ***Eutarsopolipus americanus* sp. nov. (Acari: Podapolipidae), subelytral parasite of *Chlaenius praesinus* Dejean (Coleoptera: Carabidae) from Michigan and Missouri, USA**

ROBERT W. HUSBAND<sup>1</sup> & DAVID O. HUSBAND<sup>2</sup>

<sup>1</sup> Biology Department, Adrian College, Adrian, Michigan 49221, U.S.A. e-mail: [husbandadrian@aol.com](mailto:husbandadrian@aol.com)

<sup>2</sup> 346 Jamacha, Apartment 61, El Cajon, CA, 92019, U.S.A.

### **Abstract**

*Eutarsopolipus americanus* sp. nov. (Acari: Podapolipidae), subelytral, haemolymph-feeding parasite of *Chlaenius praesinus* Dejean 1826 (Coleoptera: Carabidae), is described from Oceana County, Michigan and Adair and St. Louis Counties, Missouri. Relationships with 17 previously described species in the *myzus* group of *Eutarsopolipus* are discussed. Species in the *myzus* group parasitize beetle species of the genera *Chlaenius*, *Poecilus*, *Scarites* and *Diplocheila*. *Eutarsopolipus americanus* is the first species in the Western Hemisphere in the *myzus* group with adult females with stylets exceeding 80 micrometers.

**Key words:** Taxonomy, Acari, Podapolipidae, new species, U.S.A., *Chlaenius praesinus*, parasite

### **Introduction**

Mites in the family Podapolipidae (Acari: Tarsonemina) are all specialized haemolymph-feeding parasites of five orders of insects: Blattodea, Heteroptera, Hymenoptera, Orthoptera and especially Coleoptera. Regenfuss (1968) placed 18 species in the genus *Eutarsopolipus*, all parasites of the beetle family Carabidae, in seven groups based on apomorphic and other characters. There are now 63 species of *Eutarsopolipus*, 17 of which are in the *myzus* group, including the species described herein and two new species from Iran (Hajiqanbar & Mortazavi, 2012), but not including the new Japanese species (see Husband & Kurosa, 2013). Keys to adult females of nine species of *Eutarsopolipus* in the *myzus* group in the Western Hemisphere and a discussion of the *myzus* group were presented by Husband and Husband (2012). The purpose of this paper is to describe a new species of *Eutarsopolipus* in the *myzus* group that is parasitic on *Chlaenius praesinus* in Michigan and Missouri, U.S.A. and compare the species with previously described species in the *myzus* group.

### **Materials and methods**

Nine of 32 specimens of *Chlaenius praesinus* (Coleoptera: Carabidae) borrowed from the University of Michigan Museum of Zoology by the senior author were parasitized by podapolipid mites. One species with adult females with stylets 90–100 micrometers was removed from beetles collected in Oceana County, Michigan and Adair and St. Louis Counties, Missouri. Four specimens of this species, collected by Michael Huybensz in 1981 in Adair County, Missouri, were given to us by Huybensz in 1981. Mites were mounted in modified Hoyer's medium. Measurements were taken with the aid of a Zeiss compound phase contrast microscope with an ocular micrometer. Setae no