

***Tetrapolipus anoplophorae* sp. nov. (Acari: Podapolipidae), ectoparasite of *Anoplophora lucipor* Newman (Coleoptera: Cerambycidae) from the Philippines**

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Abstract

Tetrapolipus anoplophorae sp. nov. (Acari: Podapolipidae) is described from *Anoplophora lucipor* Newman (Coleoptera: Cerambycidae) from Luzon, Bataan, Limay Province, Philippines and compared with seven species of *Tetrapolipus* Berlese in the Eastern Hemisphere. This is the first species of *Tetrapolipus* described from *Anoplophora*. No parasitic mites were found on Asian longhorned beetles (ALB), *Anoplophora glabripennis* (Motschulsky), collected in China or on *A. glabripennis* collected in the USA. Examination of additional species of *Anoplophora* failed to yield parasitic podapolipid mites. A key to species of *Tetrapolipus* is provided and genera of beetle families that have podapolipid mites are compared with genera of podapolipid parasites of these families.

Key words: Taxonomy, Podapolipidae, new species, Philippines, *Anoplophora*, parasite

Introduction

Mites in the family Podapolipidae (Acari: Tarsonemina) are highly specialized parasites of five orders of insects: Blattodea, Coleoptera, Heteroptera, Hymenoptera, Orthoptera. Nearly seventy five percent of Podapolipidae are parasites of ten families of the order Coleoptera, including the family Cerambycidae. The genus *Tetrapolipus* Berlese, all parasites of Cerambycidae in Asia, Australia and Africa, was reviewed by Husband (2008) and a key to larval females was presented. The genus *Tetrapolipus* was proposed by Berlese (1911) for *Podapolipus batocerae* described by Berlese (1910). Parasitic podapolipid mites were noted as parasites of *Anoplophora* Hope (Coleoptera: Cerambycidae) but not described by Husband (2008). The podapolipid mite genus with four species parasitizing Cerambycidae in the Western Hemisphere is *Kurosapolipus* Husband & Li, parasites of hosts in the genus *Macropophora* Thomson (Husband & Li 1993). The purpose of this paper is to describe the first *Tetrapolipus* species from the host genus *Anoplophora*, discuss the relationships of *Tetrapolipus anoplophora* sp. nov. with seven existing species in the genus *Tetrapolipus*, provide a list of beetle families and their podapolipid mites and present a revised key to larval female *Tetrapolipus* species.

Materials and methods

E. Richard Hoebeke, Cornell University, Ithaca, New York, identified Cerambycidae and arranged the loan of mite infested *Anoplophora lucipor* Newman collected from Luzon Island, Philippines. In 2002, Leah Bauer, a principal investigator of the Asian longhorned beetle, USDA Forest Service,