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

ROBERT W. HUSBAND & DAVID O. HUSBAND

1 Biology Department, Adrian College, Adrian, Michigan, 49221, U.S.A. e-mail: husbandadrian@aol.com.
2 346 Jamacha, Apartment 61, El Cajon, CA 92019, U.S.A.

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 anoplophorae 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,