



A new family of trombidoid mites (Acari: Prostigmata) from Iran

ALIREZA SABOORI¹, ANDREAS WOHLTMANN² & MASOUD HAKIMITABAR¹

¹Department of Plant Protection, College of Agriculture, University of Tehran, Karaj, Iran.

E-mail: saboori@ut.ac.ir; hakimitabar@yahoo.com

²Findorffstr. 11, D-27721 Ritterhude, Germany. E-mail: wohltman@uni-bremen.de

Abstract

Achaemenothrombium cyrusi **gen. et sp. nov.** (Acari, Prostigmata: Trombidioidea) is described and illustrated from larvae ectoparasitic on *Catocala* sp. (Lepidoptera: Noctuidae) from Tehran, Iran and *Achaemenothrombium talebii* (Karimi Irvanlou & Kamali, 2001) **comb. nov.** is redescribed. A new family, Achaemenothrombiidae is proposed for accommodating this genus. A key to families of larval Trombidioidea and to species of *Achaemenothrombium* (larva) is presented.

Key words: Parasitengona, new species, new genus, new combination, *Catocala* sp., Noctuidae, larva, ectoparasite, key

Introduction

Larval Trombidioidea are being considered particularly important in understanding the phylogeny of these mites (Welbourn 1984, 1991; Southcott 1994; Zhang 1998). Despite some progress in recent years (Gabryś 1999; Söller *et al.* 2001; Wohltmann 2006; Mağol 2007), our knowledge about phylogenetic relationships of major subgroups as well as about affiliation of species to subgroups is still fragmentary and mainly based upon European species.

During re-analysis of mite collections sampled in Tehran province as a part of the Ph. D. thesis of the third author and of the mite collection of Tarbiat Modares University, the senior author came across three specimens of larval Trombidioidea that could not be assigned to any known family.

A detailed study of these specimens reveals that they obviously represent two closely related species. A new family, Achaemenothrombiidae, is proposed, which accommodates the new genus *Achaemenothrombium* comprising two species, *Achaemenothrombium cyrusi* **gen. et sp. nov.** and *Achaemenothrombium talebii* (Karimi Iravanlou & Kamali, 2001) **comb. nov.** The possible relationship of this new family with other members of the Trombidioidea is discussed.

Material and methods

All specimens of Achaemenothrombiidae were collected in Tehran province, Iran, parasitic on Acrididae (*A. talebii*) (19 October 1998, 51°39'N, 35°19'E, 900m a.s.l., Iran, Varamin) and Noctuidae (*A. cyrusi*) (December 2007, 51°50'N, 35°47'E, 2300m a.s.l., Iran, Tehran, Roodbar Ghasran village). *Achaemenothrombium cyrusi* **gen. et sp. nov.** specimens were removed from hosts and preserved in 70% ethanol, subsequently cleared in lactophenol, and finally mounted in Faure's medium. *Achaemenothrombium talebii* **comb. nov.** mounted on slide was received from the Acari collection, Department of Entomology, Faculty of Agriculture, Tarbiat Modares University. Drawings and measurements were done under oil immersion using a microscope equipped with differential interference phase-contrast and camera lucida.

Terminology and abbreviations are adapted from Zhang & Fan (2007), Wohltmann *et al.* (2007) and Mağol (2007). Measurements are given in micrometers (µm).