Fourth larval species of Calyptostoma (Acari: Prostigmata: Calyptostomatidae)

ALIREZA SABOORI¹, NAHID SOUKHTSARAI², MOHSEN YAZDANIAN² & AZADEH ZAHEDI GOLPAYEGANI¹

¹ Department of Plant Protection, College of Agriculture, University of Tehran, Karaj, Iran; e-mails: saboori@ut.ac.ir; zahedig@ut.ac.ir
² Department of Plant Protection, Faculty of Plant Production, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, Iran; e-mails: nahidsoukhtsaraii@gmail.com; mohsenyazdanian@gau.ac.ir

Abstract

Calyptostoma gorganica Saboori & Soukhtsaraei sp. nov. (Acari: Calyptostomatidae) is described and illustrated from larvae ectoparasitic on Limonia caucasica Lackschewitz, 1940 (Diptera: Tipulidae) from Shast Kalateh forest, Gorgan, Golestan Province, Northern Iran. It is the first report of the representatives of the superfamily Calyptostomatoidea from the Middle East. Calyptostoma latiseta and C. simplexa are not synonymous with C. velutinum. A key to larval species of Calyptostoma of the world is presented.

Key words: Calyptostoma gorganica Saboori & Soukhtsaraei sp. nov., Tipulidae, larva, ectoparasite, Parasitengona, Limonia caucasica, new record, key

Introduction

Calyptostoma Cambridge, 1875, the only genus of Calyptostomatidae has seven species; four species, namely, C. brevirostris Wainstein, 1976, C. caelatum (Berlese, 1905), C. extranea (L. Koch, 1867) and C. longirostris Wainstein, 1976, are known from the adult stage and C. velutinum (Müller 1776) and C. latiseta Shiba, 1976 are known from both larval and adult stages and C. simplexa Shiba, 1976 is known only from the larval stage (Müller 1776; L. Koch 1867; Berlese 1905; Vistorin Theis 1974; Wainstein 1976; Shiba 1976; Beron 2008). Calyptostoma velutinum larvae parasitize species of Tipulinae and Limoniinae (Diptera: Tipulidae) (Wohltmann et al. 2007). This genus has a worldwide distribution, except Antarctica, with some species inquirenda in Africa (C. exculta (Berlese, 1917) & C. tracheatum Lawrence, 1944), Asia (C. caelatum, C. latiseta & C. simplexa), Australia (C. extranea) and Europe (C. velutinum, etc.) (Berlese 1905; Vitzhium 1926; Lawrence 1944; Shiba 1969; Womersley 1942; Southcott 1961). Vistorin Theis (1977) synonymized all but two European species with C. velutinum. The two remaining ones, C. longirostris Wainstein, 1976 and C. brevirostris Wainstein, 1976 from Russia, were obviously not known by her and certainly deserve re-evaluation.

The aim of the present manuscript is to describe the larva of Calyptostoma gorganica sp. nov. ectoparasitic on Limonia caucasica Lackschewitz, 1940 (Diptera: Tipulidae) from Iran.

Material and Methods

The mites were attached on leg segments of adults of Limonia caucasica Lackschewitz, 1940 (Diptera: Tipulidae). They were detached by an entomological pin and preserved in Oudemans' fluid,