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A new species of the genus *Empitrombium* Southcott, 1994 (Acari: Microtrombidiidae) from Turkey

SEVGİ SEVSAY^{1,3} & İBRAHİM KARAKURT²

¹Department of Biology, Arts & Science Faculty, Erzincan University, Erzincan-TURKEY. E-mail: ssevsay@erzincan.edu.tr

²Institute of Natural and Applied Science, Atatürk University, Erzurum-TURKEY.

³Corresponding author

Abstract

A new species, *Empitrombium makolae* sp. nov., is described based on active postlarval forms and larvae obtained from adult females kept in the laboratory. Based on the adult morphology of *E. makolae*, the adult life stage of *Platytrombidium littorale* (Michener 1946) is moved back to the genus *Empitrombium*. A key to species of *Empitrombium* is provided.

Key words: Acari, Microtrombidiidae, *Empitrombium*, new species, Turkey

Introduction

The genus *Empitrombium* was founded by Southcott (1994) for the species *Atractothrombium dictyostracum* Vercammen-Grandjean and Cochrane, 1974. He also moved *Microtrombidium littorale* Michener, 1946, described from larval and adult life stages, into the genus. Previously, Womersley (1961) had transferred *M. littorale* to *Platytrombidium* Thor, 1935, based on the characters of adults. Gabryś (1999), based on the limited information given by Michener (1946), decided that there was not enough evidence to link the adult and larval life stages. Therefore, the adult of *M. littorale* was returned to the genus *Platytrombidium*, but the larva of *M. littorale* was kept in the genus *Empitrombium*. Gabryś *et al.* (2005) retained this classification.

Empitrombium currently comprises three species: *Empitrombium littorale* (Michener, 1946), based on larvae (Gabryś 1999; Gabryś *et al.* 2005); *Empitrombium dictyostracum* (Vercammen-Grandjean and Cochrane, 1974), based on larvae (Southcott 1994); and *Empitrombium pesici* Saboori and Hakimitabar (2009), described from larvae. This study contains detailed descriptions of all active instars of a new species, *Empitrombium makolae* sp. nov., including larvae obtained from the adult female by experimental rearing.

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Material and methods

The following collecting methods were used: hand collecting, litter sifting and extraction in Berlese funnels. Larvae were reared from eggs deposited by adults collected in the field. Two active postlarval forms, of which one is the holotype, were collected directly from the soil surface, on a humid meadow with copses, close to a stream. For the purpose of laboratory experiments the field-collected, ovigerous females were placed in glass vials (25x30 mm) filled with charcoaled Plaster-of-Paris and closed with tight, semi-transparent lids. The experiment was carried out at room temperature with a natural light/dark cycle. In order to maintain the required humidity, water was added to the substratum. Other specimens were caught with Berlese funnels. Examined material was preserved in 70% ethyl alcohol.

Specimens for light microscope studies (4 females, 8 males, 5 deutonymphs and 10 larvae) were fixed on