

A new species of larval *Erythraeus* (*Zaracarus*) (Acari: Trombidiformes: Erythraeidae) from Iran, with a key to the world species of the subgenus

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Abstract

Erythraeus (*Zaracarus*) *hafezi* Saboori, Hakimitabar & Mahmoudi **sp. nov.** is described and illustrated from larvae ectoparasitic on various insects collected in Shiraz city, Fars Province, Iran. A key to world species of *Erythraeus* (*Zaracarus*) larvae is presented.

Key words: Trombidiformes, Prostigmata, Parasitengona, insects, Iran

Introduction

Southcott (1995) erected the subgenus *Zaracarus* of the genus *Erythraeus* for his new larval species *E. (Z.) lancifer*, which was ectoparasitic on a dolichopodid fly (Diptera: Dolichopodidae) in Spain. Eight species of the subgenus have previously been described from Iran, namely: *E. (Z.) tehranicus* Haitlinger & Saboori, 1996, detached, on a plant; *E. (Z.) kharrazii* Saboori, 2000, ectoparasitic on an undetermined aphid (Homoptera: Aphididae); *E. (Z.) rajabii* Saboori, 2000, ectoparasitic on an undetermined cicadellid (Homoptera: Cicadellidae); *E. (Z.) iranicus* Saboori & Akrami, 2001, ectoparasitic on an undetermined aphid; *E. (Z.) longipedus* Saboori & Nowzari, 2001, ectoparasitic on an undetermined aphid; *E. (Z.) ueckermanni* Saboori, Nowzari & Bagheri-Zenouz, 2004, from an unknown host and from a fire bug, *Pyrrhocoris apterus* L. (Hemiptera: Pyrrhocoridae) (host of junior synonym *E. (Z.) hamedanicus* Khanjani, Miromayedi, Rezai-Nahad & Asali Fayaz, 2010; syn. by Mahmoudi *et al.* (2011)); *E. (Z.) kurdistanensis* Khanjani & Ueckermann, 2005, from soil and litter under *Quercus infectoria* Olivier (Fagaceae), and *E. (Z.) soleimanii* Khanjani, Miromayedi, Rezai-Nahad & Asali Fayaz, 2010, ectoparasitic on a green lacewing, *Chrysoperla kolthoffi* (Navas) (Neuroptera: Chrysopidae).

In this paper, a new species of larval *Erythraeus* (*Zaracarus*) from Shiraz city, Fars Province, Iran is described.

Materials and methods

The attached specimens were detached from their hosts under a stereomicroscope (Zeiss, Stemi SV6) using an entomological pin. They were preserved in 70% ethanol, then cleared in lactophenol solution and mounted in Hoyer's medium (Walter & Krantz 2009). Drawings were made using an

18. Ti III < 250	<i>E. (Z.) jinkaensis</i> Haitlinger	19
- Ti III > 300		
19. Ti III > 460	<i>E. (Z.) adrianicus</i> Haitlinger	20
- Ti III < 380		
20. Microseta on Ge II absent, AM = 26	<i>E. (Z.) sibiljinius</i> Haitlinger	
- Ge II with one microseta, AM = 80	<i>E. (Z.) bibadakensis</i> Haitlinger	
21. Ti III with 16 normal setae	<i>E. (Z.) budapestensis</i> Fain & Ripka	22
- Ti III with 14 or 15 normal setae		
22. Ti III with 15 normal setae		23
- Ti III with 14 normal setae		25
23. Ti II with 14 normal setae	<i>E. (Z.) arminouensis</i> Haitlinger & Łupicki	24
- Ti II with 15 normal setae		
24. Ti III < 198, SD < 89	<i>E. (Z.) ueckermanni</i> Saboori, Nowzari & Bagheri-Zenouz	
- Ti III > 289, SD > 105	<i>E. (Z.) kurdistanensis</i> Khanjani & Ueckermann	
25. Ti II with 14 normal setae	<i>E. (Z.) monrealicus</i> Haitlinger	26
- Ti II with 15 normal setae		
26. Ti III > 210, Ta II > 100	<i>E. (Z.) iranicus</i> Saboori & Akrami	
- Ti III < 190, Ta II < 90	<i>E. (Z.) preciosus</i> Goldarazena & Zhang	

* Beron (2008) placed this species in the subgenus *Erythraeus*, whereas based on Fig. 14 in Tseng *et al.* (1976) it is clear that this species belongs to the subgenus *Zaracarus*.

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