



## Two new larval species of *Erythraeus* (*Zaracarus*) (Acari: Erythraeidae) from western Iran

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### Abstract

Two new larval species of *Erythraeus* from western Iran, namely: *E. (Zaracarus) soleimanii* **sp. nov.** from a green lacewing, *Chrysoperla kolthoffi* (Navas) and *E. (Z.) hamedanicus* **sp. nov.** from a firebug, *Pyrrhocoris apterus* L. (Hemiptera: Pyrrhocoridae) are illustrated and described. A key to the world species is given.

**Key words:** Acari, Erythraeidae, *Erythraeus* (*Zaracarus*), ectoparasite, Hamedan, Iran

### Introduction

Members of the subgenus *Erythraeus* (*Zaracarus*) Southcott, 1995 are mostly ectoparasites of phytophagous insects such as aphids, leaf hoppers and firebugs (Goldarazena & Zhang 1998; Saboori 2000; this manuscript) but also entomophagous insects like dolichopodid flies and green lacewings (Southcott 1995; this manuscript). Several records are also from plants, where larvae presumably roam in search of host insects (Table 1). This subgenus is represented in the Canary Islands, Hungary, Iran, Poland, Spain, Turkey and Greece (Haitlinger 1987, 1997, 2000, 2006; Fain & Ripka 1998; Haitlinger & Saboori 1996; Saboori 2000; Saboori & Nowzari 2001; Saboori & Akrami 2001; Saboori *et al.* 2004a, b; Southcott 1995; Goldarazena & Zhang 1998; Khanjani & Ueckermann 2005). To date 17 species are described in the world (Table 1).

In this paper the eighteenth and nineteenth species, *E. (Zaracarus) soleimanii* **sp. nov.** ectoparasitic on a green lacewing, *Chrysoperla kolthoffi* (Navas) (Neuroptera: Chrysopidae), from Razan, Hamedan, and *E. (Z.) hamedanicus* **sp. nov.**, ectoparasitic on a firebug, *Pyrrhocoris apterus* L. (Hemiptera: Pyrrhocoridae), from Hamedan, Iran, are described here.

### Material and methods

In order to collect neuropteran fauna of Hamedan province, light traps were established at two different stations, namely: Razan, Shahanjarin (35° 13' 22" N, 49° 10' 16" E and altitude 1825 m a.s.l) and College of Agriculture, Bu-Ali Sina University, Hamedan (34° 48' N, 48° 28' E and altitude 1820 m a.s.l.), Iran. Both traps operated from mid July to late September 2009 and were emptied at 8 AM each day. The materials collected by light traps were preserved in 70% alcohol. The mites were separated from green lacewings and firebugs directly under the stereomicroscope and mounted directly on microscope slides in Hoyer's medium. Drawings were made by means of a Camera Lucida mounted on an Olympus BX51 compound microscope. The terminology follows Haitlinger (2003) and Goldarazena & Zhang (1998). The holotypes are deposited in the Acari Collection of the Department of Plant Protection, Faculty of Agriculture, Bu Ali-Sina University, Hamedan, Iran. and one paratype of each new species will be deposited in the Arachnida Collection of ARC-Plant Protection Research Institute, Pretoria, South Africa. Measurements are given in micrometers (µm).