Zootaxa 4044 (4): 556–566
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.4044.4.5
http://zoobank.org/urn:lsid:zoobank.org:pub:A586866F-D65E-4058-815B-13D7CA0D781F

A new species of *Alhajarmyia* Stuckenberg (Diptera: Vermileonidae), the first wormlion fly described from East Africa and its biogeographical implications

VAUGHN R. SWART[1], ASHLEY H. KIRK-SPRIGGS[2] & ROBERT S. COPELAND[3]

[1]*Department of Zoology and Entomology, University of the Free State, P.O. Box 339, Bloemfontein 9300, South Africa. E-mail: SwartVR@ufs.ac.za*
[2]*Department of Entomology, National Museum, P.O. Box 266, Bloemfontein 9300, South Africa. E-mail: ashley.kirk-spriggs@nasmus.co.za*
[3]*International Centre of Insect Physiology and Ecology, P.O. Box 30772, Nairobi and Research Affiliate, National Museums of Kenya, P.O. Box 40658, Nairobi 00100, Kenya. E-mail: rcopeland@icipe.org*

Abstract

A second species of the genus *Alhajarmyia* Stuckenberg (*A. stuckenbergi* Swart, Kirk-Spriggs & Copeland, **sp. n.**), is described and figured, from the Eastern Arc Mountains of Kenya (Kasigau Mountain and Taita Hills), being the first vermileonid recorded from East Africa. The species is shown to differ from its congener, *A. umbraticola* (Stuckenberg & Fisher), described from Oman in the Arabian Peninsula, based on external characters including male and female terminalia. An identification key is provided together with distribution maps for the two species, and biogeographical aspects are discussed.

Key words: Afrotropical, allopatric speciation, ancient relicts, biogeography, Eastern Arc Mountains, Kenya, identification key, Oman, Taita Hills, Tabanomorpha

Introduction

Vermileonidae is a family comprising *ca*. 60 described species in eleven genera globally, with greatest species diversity in xeric areas of the southern Palaearctic and Afrotropical Regions (Marshall 2012: 196). The larval stages, or "wormlions", of Vermileonidae construct conical pits, usually in dusty rock-overhangs like those made by species of Myrmeleontidae (Neuroptera), and in which they capture prey in a similar fashion (*e.g*., Marshall 2012: 196; Wheeler 1930; Woodley 2009: 482). Adults are not commonly collected and most taxonomic studies are based on specimens reared from collected larvae (Woodley 2009: 482).

The phylogenetic placement of the family remains contentious, but it appears that Vermileonidae is an early-diverging lineage in the Tabanomorpha (*e.g*., Sinclair *et al*. 1994; Woodley *et al*. 2009: 84). Eight genera are currently recognised as occurring in the Afrotropical Region; *Isalomyia* Stuckenberg, *Lampromyia* Macquart, *Leptynoma* Westwood, *Perianthomyia* Stuckenberg, *Namaquamyia* Stuckenberg, *Vermileo* Macquart, *Vermilynx* Stuckenberg and *Vermipardus* Stuckenberg. The family Vermileonidae has not been recorded previously from East Africa, although Stuckenberg (2003) suggested that dispersal from an East African ancestor may have produced the *Alhajarmyia* Stuckenberg lineage in the Arabian Peninsula.

In 1999, Stuckenberg & Fisher described *Lampromyia umbraticola* from the Al Hajar Mountains of northern Oman, the first recorded species of the family Vermileonidae from the Arabian Peninsula. Later, in 2003, Stuckenberg erected the new monotypic genus *Alhajarmyia* to contain it. Stuckenberg suggested that *Alhajarmyia* and the endemic, monotypic Malagasy genus *Isalomyia* represent sister-groups and discussed possible means of dispersal of the two genera. He predicted that undescribed species of *Alhajarmyia* may occur in the mountains of Yemen and the Somali Peninsula.

In 2011, one of the authors (RSC) sampled six specimens of a vermileonid using Malaise traps in two localities in Kenya. Examination of this material confirms its placement within the heretofore monotypic genus *Alhajarmyia* and a new species is described and figured herein.

 Accepted by C. Lamas: 29 Oct. 2015; published: 20 Nov. 2015