

Ant-lion fauna recorded in the Abu Dhabi Emirate (Neuroptera: Myrmeleontidae)

by Anitha Saji and Andrew E. Whittington

Abstract. The desert areas of the Abu Dhabi Emirate supply suitable habitats for a species-rich ant-lion fauna. A faunistic survey was conducted for adult myrmeleontids, using light traps in 11 desert sites of Abu Dhabi during a five-year period between 1993 and 2004. A total of 27 species were found, of which 24 are recorded in Abu Dhabi for the first time. They belong to 14 genera: *Centroclisis*, *Iranoleon*, *Lopezus*, *Myrmecaelurus*, *Ganguilus*, *Creoleon*, *Distoleon*, *Gepus*, *Geyria*, *Neuroleon*, *Quinemurus*, *Solter*, *Cueta*, and *Palpares*. A short diagnosis of each species is given and their geographic ranges are noted.

Key words. Ant-lion, Myrmeleontidae, biodiversity, Abu Dhabi, United Arab Emirate.

Introduction

The super-order Neuropterida (net-winged insects) includes the orders Megaloptera (Dobson flies and alderflies), Raphidioptera (snake flies) and Neuroptera (lacewings, ant-lions, etc.). Of these, only Neuroptera are recorded from the Abu Dhabi Emirate (TIGAR 1996) and in this paper we specifically deal with the family Myrmeleontidae. They are very typical insects of deserts/semi-deserts. Their larvae (ant-lions) are common generalist predators in loose, small-grained (sandy, loess) soil having an important role in food web of desert ecosystems. They can be divided into pit-builders and non-pit-makers and have a tendency to ambush their prey, which are soil and surface-active arthropod species. The adults are clumsy fliers, often attracted to lights at night and are mainly predatory, hunting smaller aerial insects, while some species are known as pollinators. The aesthetic value of adults may be high, because they are frequently large-bodied, beautifully coloured, or rare insects.

Compared to other countries of the Arabian Peninsula the Neuropteran fauna of the UAE is poorly known. Myrmeleontidae were first reported from the Arabian Peninsula 170 years ago (KLUG 1834). Later, numerous publications followed by NAVÁS (1916, 1926, 1934), KIMMINS (1943), HÖLZEL (1968, 1972, 1982, 1983, 1988, 1998) and WALKER & PITTAWAY (1987). From the UAE only some incomplete species lists were published by TIGAR (1996), TIGAR & OSBORNE (1999), ASPÖCK, HÖLZEL & ASPÖCK (2001), WHITTINGTON (2002), HOWARTH & GILLET (2004) and VAN HARTEN (2005).

The present overview of the myrmeleontid diversity of the Abu Dhabi Emirate is based on surveys and studies made by the Environmental Agency, Abu Dhabi (EAD), United Arab Emirates. The biology of most of the species included is poorly understood, but the dry desert of Abu Dhabi provides an ideal habitat for the predaceous immature stages of these insects.

Material and methods

Collecting methods and sampling effort

All specimens were captured from nocturnal light trapping at selected sites (Fig. 1), excepting a single male of *Gepus invisus* collected by hand in a sweep net in Oman and reported here for