

Some statistics on the taxonomy of the family Cunaxidae (Acari: Prostigmata)*

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* In: Moraes, G.J. de & Proctor, H. (eds) Acarology XIII: Proceedings of the International Congress. Zoosymposia, 6, 1–304.

Abstract

Cunaxidae is a cosmopolitan mite family consisting only of predatory species. Prompted by the goals of “Species 2000”, a database for the cunaxids was prepared and made available at www.catalogueoflife.org. The family is presently arranged in five subfamilies, six tribes, 27 genera and 329 species. The three largest subfamilies are Cunaxinae, Coleoscirinae and Cunaxoidinae. *Cunaxa* is the most species-rich genus, followed by *Armascirus* and *Coleoscirus*. Most of the authors of new cunaxid species have their working bases in the Palearctic, Oriental and Nearctic Regions. By far, the largest numbers of species have been described from South Africa, USA and Philippines, but the distribution of the described species may not reflect the actual diversity of these mites around the globe. Rather, it may reflect the variable dedication of authors in different countries in their study. In most countries, taxonomic studies of the cunaxids have hardly started, and much remains to be investigated. However, an immediate threat to the future of cunaxid taxonomy refers to the fact that most of the cunaxid taxonomists are retired, and that replacement by new taxonomists has not been considered a priority. Efforts should be directed to change this trend, motivating new professionals to take the cunaxids at least as part of their working priorities. In this work, I comment on the experience in trying to establish a database for the Cunaxidae, provide the most relevant results of this effort in relation to that family, and provide comments and advice for other professionals interested in doing similar work for other mite groups.

Key words: Biological control, catalog, database, predator.

Introduction

Cunaxidae is a cosmopolitan mite family consisting only of predatory species. They are found from tropical to arctic regions, feeding on nematodes and small arthropods (Walter & Kaplan, 1991), although some species will occasionally consume honeydew (Walter & Proctor, 1999). They occur in the litter and the immediate subjacent soil layer, on aerial plant parts and in stored food products. Very little is known about the biology of cunaxids; the life cycle of only seven species of this family has been studied (Castro & Moraes, 2010). Their potential as control agents of plant pests has not been adequately investigated but it has been suggested that mass production of these mites could be hampered by their strong tendency towards cannibalism (Gerson *et al.*, 2003).

A list of cunaxid species was recently made available (Den Heyer, 2011). A total of 329 species are mentioned in that list. The database was compiled according to the requirements of “Species 2000”; an autonomous federation of taxonomic database projects, whose aim is to eventually compile the “Catalogue of Life” (CoL), a universal database including all the world’s named species (plants, animals, fungi and microbes). It is available online at www.catalogueoflife.org, an electronic web-service.

The objective of this paper is to present important information about cunaxids that was obtained while preparing that database.

Materials and Methods

The information presented here was obtained through an analysis of data gathered to compile the cunaxid database for Species 2000 (Den Heyer, 2011). The vast majority of the papers used as primary