



Bdelloidea of China: a review of progress on systematics and biology, with a checklist of species*

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Abstract

This paper reviews the research on the systematics and biology of the superfamily Bdelloidea in China, with an updated checklist of 48 species belonging to 16 genera in the family Cunaxidae and 26 species belonging to nine genera in the family Bdellidae. Important contributions to the Chinese fauna of the Bdellidae were made by Tseng Yi-Hsiung (Taiwan), Hong Mei (former with Fudan University in Shanghai) and Lin Jian-Zhen (and colleagues in Fujian Academy of Agricultural Sciences, Fuzhou), and those to the Cunaxidae by Tseng Yi-Hsiung, Li Long-Shu (and colleagues in Southwest University, Chongqing) and Lin Jian-Zhen (and colleagues). There have been relatively few studies on the biology and use in biological control of the Bdelloidea in China, and these are briefly reviewed.

Key words: Bdellidae, Cunaxidae, history, faunistics, biology, control, mainland China, Taiwan

Introduction

The superfamily Bdelloidea, including the families Bdellidae and Cunaxidae, are free-living predators of nematodes, springtails, other mites, and various other small arthropods. The Bdellidae currently comprises of approximately 135 species placed in 15 genera and five subfamilies (Walter *et al.*, 2009). The family Cunaxidae currently consists of 289 species placed in 27 genera and nine subfamilies. The bdelloid mites are of interest in agricultural acarology because their potential importance in biological control as was demonstrated in some species of the Bdellidae (e.g. summary in Ireson *et al.*, 2001). Gerson *et al.* (2003) reviewed the biology and the potential of the Bdellidae and Cunaxidae in biological control.

In this paper, we provide a historical review of the research on the systematics and biology of the Bdelloidea in China, with an updated checklist of species. We also briefly review the limited cases of studies on the biology of bdelloids in China.