



## Macrochelidae of China: a review of progress, with a checklist\*

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\* In: Zhang, Z.-Q., Hong, X.-Y. & Fan, Q.-H. (eds) Xin Jie-Liu Centenary: Progress in Chinese Acarology. *Zoosymposia*, 4, 1–345.

### Abstract

This paper reviews the taxonomy and biology of the family Macrochelidae in China, with a special focus on the taxonomy and their role as predators of pests in biological control. A checklist with distribution data of 37 species in four genera is provided.

**Key words:** mainland China, Taiwan, Macrochelidae, predators, biological control, dung, fly eggs, stored products

### Introduction

The family Macrochelidae includes some 400 species of predators of nematodes and immature microinvertebrates in a wider range of organic habitats (Lindquist *et al.*, 2009). They are considered potential biological control agents of various species of flies (see reviews by Xin *et al.*, 1998 and Gerson *et al.*, 2003).

The reports on the Macrochelidae of China were scattered in many sources, some of which are difficult to access. In this paper, we provide a historical review of the literature on the systematics and biology of the Macrochelidae in China, with a checklist of 37 species. Our primary goal is to review progress in research on this family in China within the context of this volume. We also hope to stimulate further studies of this family in China and also facilitate access to Chinese literature on the family for researchers outside China.

### Historical review of faunistic studies

Jeu (1962) reported *Macrocheles muscaedomesticae* Scopoli ectoparasitic on the body of house fly *Musca domestica domestica* in Chongqing. Yin *et al.* (1964) listed nine species of *Macrocheles* in China: *M. decoloratus* (Koch); *M. glaber* (Müller); *M. kolpakovae* Bregetova & Koroleva; *M. muscaedomesticae* (Scopoli); *M. matrius* (Hull), *M. pavlovskii* Bregetova & Koroleva; *Macrocheles plumiventris* Hull; *M. subbadius* (Berlese). Krantz (1965) described *Neopodocinum vanderhammeni* from Fujian and *N. emodioides* from Tibet. Li & Chang (1979) reported *Neopodocinum dehongense* and *N. jaspersi* from Yunnan.