



Oribatid mites of China: a review of progress, with a checklist*

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Abstract

The present paper gives a review of the taxonomic study on the suborder Oribatida (the cohort Astigmata excepted) in China including Hong Kong and Taiwan, with a checklist of 599 species and subspecies in 275 genera, representing 97 families. One junior synonymes is proposed, *i.e.*, *Peloribates praeoccupatus* Subías, 2004 is regarded as a junior synonym of *Peloribates tsengi* Wen, Wang & Chen, 2003. The taxonomic study of oribatid mites in China was started by A. P. Jacot in 1922, and was very productive during the period from 1980 to the end of last century with the efforts of several Chinese and foreign oribatologists. In addition to taxonomic research, publications on biodiversity, seasonal dynamics, biological monitoring for soil pollution, and esterase isoenzyme patterns of oribatid mites have been published by Chinese scholars.

Key words: Oribatida, beetle mites, taxonomy, checklist, Mainland China, Hong Kong, Taiwan

Introduction

Oribatid mites are a suborder with much taxonomic biodiversity among arthropods. They are also called “beetle mites”, “armored mites”, or “moss mites” because of most adults having an extensively sclerotized integument, or because of their typical habitats. Although some live in water or on plants above ground, most of them inhabit the soil system. Oribatid mites play an important role in the decomposition of litter in soil with their saprophagous and mycophagous feeding habits. They can be used as good bioindicators for monitoring environment pollution. Some species are intermediate hosts of tapeworms, or harmful to plants.

According to recent phylogenetic research, Astigmata, a separate suborder in the traditional classification system, should be included in the suborder Oribatida as a cohort (Krantz & Walter, 2009). But because of the obvious distinctions of biology, morphology and life cycle, Astigmata are still treated separately. There are more than 9000 named species representing 172 families of Oribatida (excluding Astigmata) (Schatz, 2002, Subías, 2004, Norton & Behan-Pelletier 2009).

In China, there has been significant research progress in oribatology, especially in taxonomy, in the past 30 years. At the end of 2001, a total of 580 species and subspecies in 279 genera, representing 101 families have been reported from China (including Taiwan and Hong Kong) (Wang, Wen & Chen, 2002, 2003). But compared with other countries and areas, there are still many