



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

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### Abstract

This paper reviews the taxonomic research on the superfamily Tydeoidea in China, with a checklist of 41 named species belonging to 14 genera and four families in the Tydeoidea. Contributions to the Chinese fauna of the Tydeoidea were made mainly by Xin Jie-Liu, Tseng Hsiung, Zhu Zhi-Min and Li Long-Shu (and colleagues). A single paper on the biology of a *Tydeus* species and its use in biocontrol in China is briefly discussed.

**Key words:** Tydeioidea, faunistics, biology, control, mainland China, Taiwan

### Introduction

The Tydeidae as traditionally known includes free-living predators of rust mites, spider mites and others. Some of them are recorded as plant and fungus feeders, scavengers and some of them are prey of other group of predatory mites (e.g. the Phytoseiidae). The taxonomy of the family Tydeidae *s.l.* has been in a state of confusion. Based on a phylogenetic analysis, Andre & Fain (2000) split the Tydeidae *s.l.* into two families and transferred two of its subfamilies—Tydaeolinae and Probemarinae—to the expanded Iolinidae. As a result, the superfamily Tydeoidea now consists of four families: Triophtydeidae (=Edbakerellidae of Andre, 2004), Ereyneidae, Tydeidae and Iolinidae (Walter *et al.*, 2009). The small family Triophtydeidae includes some 40 species placed in two subfamilies: Triophtydeinae and Edbakerellinae. The Ereyneidae includes some 180 free-living and parasitic species placed in three subfamilies. The Tydeidae *s.s.* consists of about 340 species placed in 30 genera and three subfamilies. The Iolinidae includes over 120 species placed in 36 genera and three subfamilies.

The Ereyneidae has not been studied systematically in China; only Li *et al.* (1992) recorded *Ereyne* sp. on kelp, aniseed, onion and Jew's ear in Sichuan. In this paper, we provide a historical review of the research on the systematics and biology of the Triophtydeinae, Tydeidae and Iolinidae in China, with a checklist. We also briefly discuss a single study on the biology of tydeids in China.

### Historical review

The first report of the Tydeidae of China seems to be made by Prof Xin (as Shin) *in* Shin & Hsu