



## Eight new species of the genus *Aculus* Keifer (Acari: Eriophyidae) from China

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### Abstract

In this paper, eight new species of the genus *Aculus* Keifer from China are described and illustrated, namely *Aculus amurensis* sp. nov. on *Tilia amurensis* Rupr. (Tiliaceae); *Aculus asteri* sp. nov. on *Aster tataricus* L. f. (Compositae); *Aculus changbais* sp. nov. on *Salix gracilistyla* Miq. (Salicaceae); *Aculus cuihuae* sp. nov. on *Ribes* sp. (Saxifragaceae); *Aculus eupteleae* sp. nov. on *Euptelea pleiospermum* Hook. f. et Thoms. (Trochodendraceae); *Aculus rumexis* sp. nov. on *Rumex acetosa* L. (Polygonaceae); *Aculus jingbois* sp. nov. on *Prunus tomentosa* Thunb. (Rosaceae); *Aculus toxicodendri* sp. nov. on *Toxicodendron* sp. (Anacardiaceae). A key to the Chinese *Aculus* species is provided. The eriophyoid mite species described here are vagrants on the undersurface of host leaves.

**Key words:** Eriophyoidea, eriophyoid mites, key, plant feeding, taxonomy

### Introduction

The genus *Aculus* was established by Keifer (Keifer 1959) based on the type species of *Phyllocoptes ligustri* (Keifer 1938). *Aculus* included 248 species world-wide up to 2003 (Amrine *et al.* 2003). To date, there are 30 species known to occur in China (Huang 2001a, b; Huang & Wang 2004; Kuang 1987, 1991, 1995, 1997, 1998a, b, 2000; Kuang & Luo 1997; Kuang *et al.* 2005; Kuang & Zhuo 1989; Lin *et al.* 1997; Liu & Kuang 1998; Wei & Kuang 1997; Xue & Hong 2005). From 2003 to 2006, field surveys were conducted in the provinces of Jilin (northeastern China), Shaanxi (northwestern China), Shanxi (central China), Heilongjiang (northeastern China) and Henan (central China). Eight *Aculus* species new to science were found and are described in this paper. A key to the Chinese *Aculus* species is provided. All the new species are vagrants on the undersurface of host leaves. No damage to the hosts was observed.

### Material and methods

Specimens of eriophyoid mites were collected from north and central China. The morphological terminology used here follows Lindquist (1996) and the generic classification is made according to Amrine *et al.* (2003). Specimens were examined with a Leica DMR (Germany) research microscope with phase contrast and semi-schematic drawings were made. For each species, the holotype female measurement precedes the corresponding range for paratypes (given in parentheses). For males only the ranges are given. All measurements are in micrometers (µm), and are lengths when not otherwise specified. All type specimens are deposited as slide mounted specimens in the Arthropod/Mite Collection of the Department of Entomology, Nanjing Agricultural University, Jiangsu Province, China.