

Comments on the identity of *Neoseiulus californicus* sensu lato (Acari: Phytoseiidae) with a redescription of this species from southern China

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Abstract

The identity of *Neoseiulus californicus* sensu lato is reviewed and its polymorphic nature in published descriptions is discussed. Some mistakes in previous redescrptions of this species are clarified by studying the voucher specimens. A new strain of this species was discovered from *Eriobotrya japonica* in Dinghushan National Nature Reserve, Zhaoqing, Guangdong Province, southern China, and both adult male and female of this population are redescrbed. Previous records of *N. californicus* and *N. fallacis* in China are reviewed. Preanal glands are described for the first time for a phytoseiid species. World distribution records for *N. californicus* sensu lato are reviewed, with extension of its range to southern China and Australia/Oceania.

Key words: Phytoseiidae, *Neoseiulus*, *Eriobotrya japonica*, Guangdong Province, China

Introduction

The Phytoseiidae is the most important family of predatory mites, with over 2,300 known species placed in over 90 genera (Moraes *et al.* 2004, Chant & McMurtry 2007, Beaulieu *et al.* 2011). Many species of this family have been shown to be effective biocontrol agents of phytophagous mites and small insects on crops, and several commercially available species are widely used for the control of plant-feeding mites, thrips and whiteflies on greenhouse crops (McMurtry & Croft 1997, Gerson *et al.* 2003, Zhang 2003). In China, over 300 species of the Phytoseiidae have been described or recorded (Wu *et al.* 2009, 2010).

During a recent survey of phytoseiids for potential use in biocontrol, one species of the genus *Neoseiulus* closely related to *Neoseiulus californicus* (McGregor, 1954) sensu lato was discovered in Guangdong, southern China. In this article, we discuss the identity of *N. californicus* sensu lato, clarify some mistakes in previous descriptions of this species and provide a redescription based material from China in comparison with specimens from all over the world. The preanal glands are described for the first time for a phytoseiid species. We also briefly review the Chinese records of *N. californicus* and also closely related species *Neoseiulus fallacis*.

from the commercial strain (originated from California) will be interesting. If some genetic changes have evolved, then there may be reduction in at least the reproductive rates between inter-population crosses (compared with control within the same population).

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