



Article

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Phytoseiidae of Thailand (Acari: Mesostigmata), with a key for their identification

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Abstract

Little has been published about the phytoseiid mite fauna of Thailand. This paper presents information about the morphology and distribution of phytoseiid mites collected in Thailand between 1991 and 2011 on different plant species, a list of the species presently known from that country, and a key for their identification. Twenty six species belonging to 11 genera were collected and identified in this study, six of which are reported for the first time from Thailand. In total, 38 species of phytoseiid species of 13 genera are reported, 29 of Amblyseinae, seven of Phytoseiinae and two of Typhlodrominae.

Key words: taxonomy, predatory mites, biological control, diversity

Introduction

Phytoseiid mites have been generally considered the most promising group of predators of pest mites on different crops (Gerson *et al.*, 2003). The taxonomy of these mites has been extensively studied, as summarised by Moraes *et al.* (2004b). However, only two works have been dedicated to the taxonomic study of phytoseiids of Thailand (Ehara & Bhandhufalck, 1977; Moraes *et al.*, 1989). A total of 32 species have been reported from that country, nine of which described as new to science.

Efforts have been directed towards the practical use of these mites in pest control in Thailand (Kongchuensin *et al.*, 2001, 2005, 2006). It is likely that this effort could be intensified if the composition of the Thai phytoseiid fauna were better understood. The aim of this paper is to present information about the phytoseiid mites collected in Thailand between 1991 and 2011 on different plant species, a list of the species presently known from that country and a key to help in their morphological separation.

Material and methods

Specimens examined in this work were collected from various plants in different provinces from Thailand, at irregular intervals. Unless otherwise specified in the text, the specimens were collected by Mrs. Vatana Charanasri (Plant Protection Research and Development Office, Thailand Department of Agriculture). They were mounted in Hoyer's medium for examination under a phase contrast microscope. Measurements of structures were made with a graded eyepiece and are given in micrometres. When more than two specimens were measured, measurement of each structure is indicated by the mean followed (in parentheses) by the respective range. The classification system used in this paper is that of Chant & McMurtry (2007). The setal terminology is that of Rowell *et al.* (1978) and Chant & Yoshida-Shaul (1991) for dorsal and ventral idiosomal setae, respectively.