



Eriophyoid mites from Hainan Province, China I: Descriptions of three new species (Acari: Eriophyoidea)

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Abstract

Three new species of eriophyoid mites from China's Hainan Island are described and illustrated. They are *Epitrimerus danzhouicus* **sp. nov.** on *Ficus gibbosa* (Moraceae), *Epitrimerus dioscoreaepersimilis* **sp. nov.** on *Dioscorea persimilis* (Dioscoreaceae), *Tegolophus liangyuanicus* **sp. nov.** on *Litchi chinensis* (Sapindaceae). All the eriophyoid mite species described here are vagrants on the undersurface of host leaves.

Key words: plant feeding, taxonomy

Introduction

Hainan Province is situated in the southernmost of China and occupies an area of 35,000 square kilometers (13,510 square miles). Its administrative regions are Hainan Island, Xisha archipelago, Zhongsha archipelago and Nansha archipelago. Its neighboring countries are the Philippines towards the east, Malaysia and Brunei towards the south, Indonesia (Natuna Islands) towards the southwest, and Vietnam towards the west. Different from other provinces, Hainan is the second largest ocean island and the smallest land province in China.

Located in the tropical region, Hainan Island has rich resources of plants and animals. However, no systematic research of eriophyoid mite fauna of the island had been conducted. Sporadic investigation had found only 28 eriophyoid mite species in 23 genera in Hainan Province (Table 1) (Huang & Cheng 2005; Kuang 1995, 1997, 1998; Kuang & Cheng 1992; Kuang *et al.* 1991, 2005). A series of field surveys were conducted in Hainan Province in 2008 and more investigations will be conducted in 2009 and 2010 thanks to the support by a grant from the Chinese National Natural Science Foundation. The investigation results will be reported in succession. In this paper, three new species are described. All the new species are vagrants on the undersurface of host leaves. No apparent damage to the host was observed.

Material and methods

Specimens of eriophyoid mites were collected from Hainan Province, 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 (Wetzlar, 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