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Article

A new genus and three new species of Diptilomiopidae from Zhejiang Province, China

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Abstract

One new genus and three new species of the Diptilomiopidae from Zhejiang Province, China are described and illustrated. They are *Linacutus cathayensis* **gen. nov.** and **sp. nov.** on *Carya cathayensis* Sarg. (Juglandaceae), *Diptacus elegantulum* **sp. nov.** on *Acer elegantulum* Fang & Chiu (Sapindaceae) and *Diptacus tianmuensis* **sp. nov.** on *Prunus* sp. Linn. (Rosaceae). All the new species described in this paper are vagrants on their respective host plant.

Key words: Taxonomy, Diptilomiopinae, Rhyncaphytoptinae, Tianmu Mountain, Qingliang Mountain

Introduction

The Eriophyoidea consists of the families Eriophyidae, Phytoptidae and Diptilomiopidae. The family Diptilomiopidae was established by Keifer (1944) based on the type genus *Diptilomiopus* Nalepa, 1916. The mites of the Diptilomiopidae can be distinguished from the mites of the other two families on the bases of a larger gnathosoma, abruptly curved and bent down near the cheliceral base, longer oral stylet and attenuate pedipals. The Diptilomiopidae consists of two subfamilies, Diptilomiopinae Keifer, 1944 and Rhyncaphytoptinae Roivainen, 1953. Tarsal empodium is divided in the Diptilomiopinae or entire in the Rhyncaphytoptinae (Amrine *et al*., 2003). As of 2011, the family Diptilomiopidae included 63 genera and 450 species worldwide (Zhang *et al*., 2011), of which two subfamilies, 34 genera and 186 species had been reported from China (Hong *et al.*, 2010).

During 2011 and 2012, plants in the Tianmu Mountain and Qingliang Mountain were surveyed in Zhejiang Province, China. One new genus and three new species of diptilomiopids were found. All the new species described herein are vagrants on their respective host plant species.

Materials and Methods

Eriophyoid mites were collected from different host plants with the help of hand-lens (30X) from Tianmu and Qingliang Mountains of Zhejiang Province of China. Collected mites, together with their host plants were placed in vials and preserved in 75% ethanol and brought into laboratory for identification. Host plant parts were kept in plant specimen folder for further identification. The morphological terminology used to describe the body parts of the mites follows Lindquist (1996) and generic classification follows Amrine *et al*. (2003). Slides were mounted using Keifer's F-medium and modified berlese medium (Amrine and Manson 1996) and measurements of specimens were taken following de Lillo *et al*. (2010). Specimens were observed by using Zeiss A2 (Germany) research microscope with phase contrast and semi-schematic drawings were made. Micrographs