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Two new species of cheyletid mites (Acari: Prostigmata) from Thailand

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Abstract

Two new species of predatory mites in the family Cheyletidae (Acari: Prostigmata), *Mexecheles thailandensis* **n. sp.** collected from tree bark infested by scolytid beetles and *Samsinakia charanasriae* **n. sp.** from soil and leaf-litter, are described and illustrated from Thailand. Keys to species of *Mexecheles* and *Samsinakia* are also provided.

Key words: Cheyletidae, *Mexecheles*, *Samsinakia*, new species, taxonomy

Introduction

Mites of the family Cheyletidae have a world wide distribution with about 500 species in 77 genera (Bochkov 2005). They can be found in a wide range of habitats, although the predatory forms are usually from plants, soil-litter, nests of vertebrates, and colonies and galleries of insects. The remaining members of this family are ectoparasites of vertebrates, birds and mammals (Gerson *et al*. 1999), and phoretic associations with insects have been documented in many cheyletid species (Bochkov & Klimov 2005). As part of ongoing research into the biodiversity of cheyletid mites in Thailand, two undescribed species of cheyletid mites were found and both are described herein as new species: *Mexecheles thailandensis* **sp. n.** collected from tree bark infested by scolytid beetles, and *Samsinakia charanasriae* **n. sp.** from soil and leaf-litter. These species also represent the first record of these two genera in Thailand. Keys to species of *Mexecheles* and *Samsinakia*, based on female characters, are also presented.

Materials and methods

Substrates occupied by mites (soil and leaf-litter and the bark of the Siamese rough bush tree, *Streblus asper* Lour. (Moraceae) that was infested with scolytid beetles) were collected into plastic bags and brought to the laboratory. The samples were extracted using Tullgren funnels for 7 days, and extracted animals were kept in 70% (v/v) ethanol. Mites were sorted under a stereomicroscope and transferred to 60% (v/v) lactic acid overnight in order to clear the specimens, washed in 70% (v/v) ethanol and mounted on a permanent slide using Hoyer's solution as a medium (Krantz 1978). Examinations were made under phase contrast microscopy. An eyepiece micrometer calibrated with a stage micrometer was used for measurements. In descriptions, the terminology of the idiosomal and leg chaetotaxy follows that of Grandjean (1939, 1944), as recently applied to cheyletid mites by Bochkov and Klimov (2005) as well as Bochkov and Ochoa (2005). Measurements are in microns and presented as the mean followed by the range in parenthesis.

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