Zootaxa 3702 (3): 247–261
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3702.3.3
http://zoobank.org/urn:lsid:zoobank.org:pub:F6A27EC6-98AC-45D7-9D02-FAAD4AC99133

Three new eriophyoid mite species in the tribe Phyllocoptini from Yunnan Province, southwestern China (Acari: Eriophyidae: Phyllocoptinae)

XIAO HAN, XIAO-FENG XUE & XIAO-YUE HONG[1]
Department of Entomology, Nanjing Agricultural University, Nanjing, Jiangsu 210095, China
[*] *Corresponding author. E-mail: xyhong@njau.edu.cn*

Abstract

In this paper, three new Phyllocoptini eriophyoid mite species from Yunnan Province, China are described and illustrated: *Proiectus rodgeseta* **sp. nov.** on *Pinus armandii* Franch. (Pinaceae), *Proiectus granularpro* **sp. nov.** on *Pinus tabuliformis* Carr. (Pinaceae) and *Phyllocoptruta juniperiana* **sp. nov.** on *Juniperus chinensis* Linn. (Cupressaceae). All are vagrants causing no apparent damage to their host plants. A key to the species of *Proiectus* is provided.

Key words: Eriophyoidea, plant feeding, Prostigmata, taxonomy

Introduction

Yunnan Province (97°31′E–106°11′E, 21°08′N–29°15′N), is located in the southwestern area of the People's Republic of China (Fig. 1), with the topography of mountainous regions and plateaus occupying 94% of the total area. The average temperature ranges from 19–22 °C in summer (July) and 6– 8 °C in winter (January) according to the Yunnan Province Government Website (2012).

During August 2009, field surveys were conducted in Yunnan Province. Two new eriophyoid mite species belonging to the genus *Proiectus* and one new species from the genus *Phyllocoptruta* in the tribe Phyllocoptini were found and are described in this paper. Up to now, six species are known to be assigned to *Proiectus* (Table 1). All have so far only been collected in China. A list of 35 species and a taxonomic key for the genus *Phyllocoptruta* was provided by Xue *et al*. (2010).

The tribe Phyllocoptini was established by Nalepa (1892) based on the type genus *Phyllocoptes* Nalepa 1887. Later, Amrine *et al.* (2003) characterized it as having: scapular setae usually with well-formed, often plicate, tubercles placed ahead of rear shield margin, directing setae forward, up or centrad; if tubercles and setae are near rear shield margin, then tubercles are subcylindrical and bent forward or the alignment of their bases is longitudinal or diagonal to the body.

Materials and methods

In the field, mites were collected from plants with the aid of a hand-lens (30×). Eriophyoids, together with their host plant parts, were placed in vials and stored in 75% ethanol. Each vial was marked with the following collection data: specimen number, date, host plant species name, colour of living mites, sample location, collector name and relationship of mite to the host plant. Collection data were also recorded in a notebook and examples of host plant parts were kept in a plant specimen folder in a dry environment for further identification and reference.

The morphological terminology follows Lindquist (1996) and the generic classification was made according to Amrine *et al*. (2003). The liquid contents were pooled into a cavity dish from the vials, then mite specimens were picked up using a fine pin and slide mounted using Keifer's Booster and modified Berlese medium (Amrine & Manson 1996). Specimens were examined with the aid of a Zeiss A2 (Germany) research microscope equipped

Accepted by D. Knihinicki: 12 Aug. 2013; published: 27 Aug. 2013