

Eriophyoid mite fauna from Henan Province, central China (Acari: Eriophyoidea) with descriptions of five new species

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Abstract

Thirty-seven eriophyoid mites from central China's Henan Province, including five new species, are described and listed: *Boczekella fabris* **sp. nov.** on *Abies fabri* (Mast.) Craib (Pinaceae); *Trisetacus ehmanni* Keifer on *Larix kaempferi* (Lamb.) Carr. (Pinaceae); *Setoptus koraiensis* Kuang & Hong on *Pinus thunbergii* Parl. (Pinaceae); *Eriophyes armandis* **sp. nov.** on *Pinus armandi* Franch. (Pinaceae); *Acaphyllisa populi* **sp. nov.** on *Populus* sp. (Salicaceae); *Epitrimerus amygdali* Xue & Hong on *Amygdalus triloba* (Lindl.) Ricker (Rosaceae); *Epitrimerus sabiniae* Xue & Hong on *Sabina chinensis* (L.) Antoine and *Sabina chinensis* cv. Kaizuca (Cupressaceae); *Paraepitrimerus erigeronsis* Xue & Hong on *Erigeron annuus* (L.) Pers. (Compositae); *Paraepitrimerus paeoniae* Xue & Hong on *Paeonia lactiflora* Pall. (Ranunculaceae); *Phyllocoptes fabris* Xue & Hong on *Abies fabri* (Mast.) Craib. (Pinaceae); *Phyllocoptes taishanensis* Xue & Hong on *Cedrus deodara* (Roxb.) Loud (Pinaceae); *Abacarus wuyiensis* Kuang & Zhuo on *Bambusa* sp. (Gramineae); *Aculodes bambusae* Kuang on *Bambusa* sp. (Gramineae); *Aculops taihangensis* Hong & Xue on *Ailanthus altissima* (Mill.) Swingle (Simaroubaceae); *Aculops strobilaceae* **sp. nov.** on *Platycarya strobilacea* Sieb. & Zucc. (Juglandaceae); *Aculus altissima* Xue & Hong on *Ailanthus altissima* (Mill.) Swingle (Simaroubaceae); *Aculus amygdali* Xue & Hong on *Amygdalus persica* L. (Rosaceae); *Aculus bambusae* Kuang on *Bambusa* sp. (Gramineae); *Aculus coggygriae* Xue & Hong on *Cotinus coggygria* Scop. (Anacardiaceae); *Aculus huixiansis* Xue & Hong on *Salix* sp. (Salicaceae); *Aculus populi* Xue & Hong on *Populus* sp. (Salicaceae); *Aculus salicis* Kuang & Luo on *Salix* sp. (Salicaceae); *Anthocoptes japonicae* **sp. nov.** on *Sophora japonica* L. (Leguminosae); *Heterotergum artemisiae* Hong & Kuang on *Artemisia* sp. (Compositae); *Neotetra bambusae* Kuang on *Bambusa* sp. (Gramineae); *Tegolophus hunanensis* Lin, Jin & Kuang on *Vitex negundo* var. *cannabifolia* (Sieb. & Zucc.) Hand.-Mazz. (Verbenaceae); *Tegolophus zizyphagus* (Keifer) on *Ziziphus montata* Smith (Rhamnaceae); *Tetra formosae* Xue & Hong on *Lespedeza formosa* (Vog.) Koehne (Leguminosae); *Tetra japonicae* Xue & Hong on *Sophora japonica* L. (Leguminosae); *Tetra lobatae* Xue & Hong on *Pueraria lobata* (Willd.) Ohwi (Leguminosae); *Tetra suspensae* Xue & Hong on *Forsythia suspensa* (Thunb.) Vahl (Compositae); *Diptacus songxianensis* Xue & Hong on *Ulmus* sp. (Ulmaceae); *Trimeroptes aleyrodiformis* (Keifer) on *Dendrobenthamia japonica* var. *chinensis* (Osborn) Fang (Cornaceae); *Trimeroptes*

luanchuanensis Xue & Hong on *Rubus* sp. (Rosaceae); *Brevulacus reticulatus* Manson on *Quercus glauca* Thunb. (Fabaceae); *Rhyncaphytoptus acer* Chen, Wei & Qin on *Acer* sp. (Aceraceae) and *Rhyncaphytoptus longipalpis* Xue & Hong on *Bambusa* sp. (Gramineae). All species are vagrant on and under leaves. A key to the eriophyoid mites from Henan Province is provided.

Key words: Phytoptidae, Eriophyidae, Diptilomiopidae, leaf vagrants, *Acaphyllisa populi*, *Aculops strobilaceae*, *Anthocoptes japonicae*, *Boczekella fabris*, *Eriophyes armandis*

Introduction

Henan Province is located in eastern central China, on the plain between the Yellow and Huaihe rivers. The largest part of the province is south of the Yellow River, which runs for over 700 km through its territory. Henan is the largest province in China and covers an area of 167,000 sq km with a population of 97.17 million (as of 2004). Henan's terrain slopes from west to east. It is bisected from north to south by the Beijing-Guangzhou (Canton) Railway, which is flanked on the west by hills and mountains and on the east by a vast plain. On its northwestern border is the Taihang Mountain Range. The western mountain area includes the eastern extensions of the Qinling Mountains. On the southern border are the Tongbai Mountains, that stretch east to adjoin the Dabai Mountains. The wide plain east of the Beijing-Guangzhou Railway is part of the North China Plain and is the principal farming area of the province. Of the province's total area, mountains make up 26%, hills 18% and plains 56%. Henan has the continental climate of the North Temperate Zone, with a hot and rainy summer, dry and inclement winter, and a windy spring. It has a mean annual temperature of 13–15°C, an annual frost-free period of 6–8 months, and a mean annual precipitation of 600–900 mm (Webpage of Henan Provincial Government, 2005; Webpage of the Central People's Government of the People's Republic of China, 2005).

The Science and Technology Committee of Henan Province have organized investigations into the insect and mite fauna of the province in recent years. Many taxonomists of different insect and mite groups joined the project. We took part in these investigations and collected large amounts of eriophyoid mite specimens. Thirty-seven eriophyoid mite species were identified, of which five are new to science. The mites belong to three families, five subfamilies and twenty-one genera. Three species belong to the Nalepellinae, one to the Eriophyinae, twenty-seven to the Phyllocoptinae, three to the Diptilomiopinae and three to the Rhyncaphytoptinae. All the species are vagrant on and under leaves. No apparent damage was observed.

The morphological terminology used here follows Lindquist (1996) and the generic classification is made according to Amrine *et al.* (2003). All type specimens are deposited in the Arthropod/Mite Collection of the Department of Entomology, Nanjing Agricultural University, Jiangsu Province, China. All measurements are given in micrometers (μm) and are lengths when not specified. All specimens were examined and drawn with a Leica DMR (Germany) microscope.