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Eriophyoid mites from Northeast China (Acari: Eriophyoidea)

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Abstract

We describe and illustrate herein one new genus and eighteen new eriophyoid mite species (Acari: Eriophyoidea) collected in northeast China. They are: *Shevtchenkella huzhongiensis* sp. nov. on *Ulmus davidiana* Planch. var. *japonica* (Sarg. ex Rehder) Nakai (Ulmaceae), *Shevtchenkella jingboicus* sp. nov. on *Acer* sp. (Aceraceae), *Calepitrimerus flexuosus* sp. nov. on *Spiraea flexuosa* Fisch. ex Cambess. (Rosaceae), *Calepitrimerus maximowiczii* sp. nov. on *Crataegus maximowiczii* Schneid. (Rosaceae), *Calepitrimerus pilosus* sp. nov. on *Agrimonia pilosa* Ledeb. (Rosaceae), *Calepitrimerus yichunensis* sp. nov. on *Sorbaria sorbifolia* (L.) A.Br. (Rosaceae), *Cupacarus oxyphyllus* sp. nov. on *Euonymus oxyphyllus* Miq. (Celastraceae), *Epitrimerus sambucus* sp. nov. on *Sambucus williamsii* Hance (Caprifoliaceae), *Epitrimerus wuyingensis* sp. nov. on *Acer* sp. (Aceraceae), *Longisolenidionus amurensis* gen. nov & sp. nov. on *Tilia amurensis* Rupr. (Tiliaceae), *Phyllocoptes jiagedaqiensis* sp. nov. on *Cunninghamia* sp. (Taxodiaceae), *Aculops huzhongensis* sp. nov. on *Salix* sp. (Salicaceae), *Aculus huzhongsalixus* sp. nov. on *Salix* sp. (Salicaceae), *Tetra angelica* sp. nov. on *Angelica* sp. (Apiaceae), *Tetra jiagedaqia* sp. nov. on *Lespedeza* sp. (Fabaceae), *Vittacus mandshurica* sp. nov. on *Corylus sieboldiana* Blume var. *mandshurica* (Maxim.) C. K. Schneid. (Betulaceae), *Vittacus cannabus* sp. nov. on *Cannabis sativa* L. (Moraceae), and *Peralox dentatis* sp. nov. on *Ulmus* sp. (Ulmaceae). Two species formerly assigned to *Rhyncaphytoptus*, *R. abiesis* (Xue, Song & Hong, 2006) and *R. fabris* (Xue, Song & Hong, 2006) were reassigned to *Nalepella*, based on the presence of seta *vi* on the apical shield, and other characteristics of *Nalepella*. One species formerly assigned to *Rhyncaphytoptus*, *R. fargesis* (Xue, Song & Hong, 2006) was reassigned to *Pentaporca*, based on the presence of seta *vi* on the apical shield, opisthosoma with five ridges and other characteristics of *Pentaporca*. At the same time, four new eriophyoid mite records from China are provided, *Acaphyllisa distasa* (Keifer, 1961) rec. nov. on *Betula costata* Trautv. (Betulaceae), *Shevtchenkella ulmi* (Farkas, 1960) rec. nov. on *Ulmus* sp. (Ulmaceae), *Calepitrimerus cariniferus* Keifer, 1938, rec. nov. on *Artemisia argyi* H. Lev. & Vaniot (Asteraceae), *Aculodes dubius* (Nalepa, 1891) species complex, rec. nov. on *Roegneria* sp. (Poaceae). With this publication, the number of eriophyoid mite species in the region reaches 101. A list of these eriophyoid mites is provided.

Key words: taxonomy, *Longisolenidionus* new genus, new species, new records, Liaoning Province, Jilin Province, Heilongjiang Province, Inner Mongolia Autonomous Region, geographic distribution

Introduction

Northeast China, historically known as Manchuria, normally includes three provinces, and one league and three cities of the Inner Mongolia Autonomous Region, namely, Heilongjiang Province, Liaoning Province, Jilin Province, Xing'an League, Chifeng City, Tongliao City and Hulunbeier City in Inner Mongolia (Figure 1). The main mountains in the region are the Greater Khingan Mountains, Lesser Khingan Mountains and Changbai Mountain.

During 2006 and 2008, field surveys were conducted by Xiao-Feng Xue, Zi-Wei Song and Zhen Wang in Northeast China. These field surveys mainly focused on the Greater Khingan Mountains, the Lesser Khingan Mountains and Changbai Mountain. In total, 183 eriophyoid collections and 2000 slides were made. Seventy-one eriophyoid species were identified among which one new genus, eighteen new species and four new records were found.

Prior to this research, 51 eriophyoid mite species, belonging to 3 families, 6 subfamilies, 8 tribes, 24 genera, were known to occur in Northeast China (Hong & Kuang, 1989; Kuang 1995b; Kuang, 2001; Kuang, 2002; Kuang & Luo, 1997; Kuang & Hong, 1990, 1995; Kuang *et al*., 2005; Liu & Kuang, 1997, 1998; Xin & Dong, 1981; Xue & Hong, 2011; Xue *et al*., 2007, 2008, 2009, 2011, 2012) (Table 1). Our research added eighteen new species and four new records. Of all 101 eriophyoid mite species in northeast China, six fall in the Phytoptidae, 81 in the Eriophyidae, and 14 in the Diptilomiopidae (Table 1). The majority of the eriophyoid species were found in recent years: 70.3% (71/101) species were collected in our surveys and only 30 species were previously listed by other researchers.

The aims of this study were to 1) review the eriophyoid mite fauna of Northeast China, 2) check the materials collected in the field surveys and add new distribution information, and 3) describe new genera and new species.