Zootaxa 4028 (4): 551–576
www.mapress.com/zootaxa/

Article

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

http://dx.doi.org/10.11646/zootaxa.4028.4.6
http://zoobank.org/urn:lsid:zoobank.org:pub:E60BC9B3-0E6D-4DC2-A405-1358F8B75EC7

Review of the aphid genus *Aspidophorodon* Verma, 1967 with descriptions of three new species from China (Hemiptera: Aphididae: Aphidinae)

JING CHEN[1], BIN ZHANG[1, 2], XICHAO ZHU[1, 2], LIYUN JIANG[1] & GEXIA QIAO[1,3]

[1]*Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China*
[2]*University of Chinese Academy of Sciences, Beijing 100049, China*
[3]*Corresponding author. E-mail: qiaogx@ioz.ac.cn*

Abstract

The aphid genus *Aspidophorodon* Verma, 1967 is reviewed, with descriptions of three new species from China, namely *Aspidophorodon (Aspidophorodon) cornuatus* Qiao **sp. nov.**, *Aspidophorodon (Aspidophorodon) musaicus* Qiao **sp. nov.**, and *Aspidophorodon (Aspidophorodon) obtusus* Qiao **sp. nov.**. *Aspidophorodon sinisalicis* Zhang, 1980 and *Trichosiphonaphis lijiangensis* Zhang, Zhong & Zhang, 1992 are considered as junior synonyms of *Aspidophorodon (Aspidophorodon) salicis* Miyazaki, 1971, **syn. nov.**. The Chinese endemic genus *Margituberculatus* Zhang, Zhong & Zhang, 1992 is proposed as a junior synonym of *Aspidophorodon (Eoessigia)* David, Rajasingh & Narayanan, 1972, **syn. nov.**, this subgenus is thereby recorded from China for the first time and *Margituberculatus longituberculatus* Zhang, Zhong & Zhang, 1992 is referred to as *Aspidophorodon (Eoessigia) longituberculatus* (Zhang, Zhong & Zhang, 1992) **comb. nov.**. A generic diagnosis and keys to *Aspidophorodon* species are given. Molecular evidence to support the validity of new species and their subgeneric affiliation is also provided.

Key words: *Aspidophorodon*, new species, new synonyms, new combination, new record, key, China

Introduction

The aphid genus *Aspidophorodon* was erected by Verma (1967), with *Aspidophorodon harvensis* Verma, 1967 infesting *Salix* sp. (Salicaceae) from India as the type species. Miyazaki (1971) described another species, *Aspidophorodon salicis* Miyazaki, 1971 collected on *Salix udensis* from Japan. Zhang and Zhong (1980) described the third species, *Aspidophorodon sinisalicis* Zhang, 1980 feeding on *Salix* sp. from China, which was thought possibly synonym of *A. salicis* by Blackman and Eastop (1994).

David *et al*. (1972) described a new genus *Eoessigia*, with *Eoessigia indica* David, Rajasingh & Narayanan, 1972 on *Cotoneaster* sp. (Rosaceae) and an unknown plant from India as the type species. Later, Eastop and Hille Ris Lambers (1976) transferred *Aspidaphis longicauda* Richards, 1963 feeding on *Spiraea* sp. (Rosaceae) in Canada to *Eoessigia*. Chakrabarti (1978) erected a new genus *Raychaudhuriella*, with description of type species *Raychaudhuriella myzaphoides* Chakrabarti, 1978 collected on *Salix* sp. from India. Chakrabarti and Maity (1984) described another species, *Raychaudhuriella potentillae* Chakrabarti & Maity, 1984 from *Potentilla* sp. (Rosaceae) in India and erected a new genus *Indotuberoaphis* with type species *Indotuberoaphis sorbi* Chakrabarti & Maity, 1984 on *Sorbus foliolosa* (Rosaceae) in India. After examining the type materials of *E. indica*, *R. myzaphoides*, and *R. potentillae*, Chakrabarti and Medda (1989) concluded that the latter two species were synonyms of *E. indica* and *Raychaudhuriella* was thus a synonym of *Eoessigia*. They pointed out that *E. indica* was holocyclic and heteroecious, alternating between *Cotoneaster* and *Potentilla*, and suggested that the host plant record *Salix* sp. was erroneous. Afterwards *Eoessigia* was regarded as subgenus of *Aspidophorodon* by Remaudière and Remaudière (1997). Stekolshchikov and Novgorodova (2010) described a new species of this subgenus, *Aspidophorodon (Eoessigia) vera* Stekolshchikov & Novgorodova, 2010 infesting *Potentilla fruticosa* from the South-east Altai, and proposed that *Indotuberoaphis* erected by Chakrabarti and Maity (1984) was a synonym of *Aspidophorodon (Eoessigia)* and consequently referred *I. sorbi* to *Aspidophorodon (Eoessigia)*.

Accepted by D. Ouvrard: 24 Sept. 2015; published: 12 Oct. 2015