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Review of *Europiella* Reuter (Hemiptera: Heteroptera: Miridae: Phylinae: Phylini) from Korea, with a description of a new genus

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Abstract

Five species of *Europiella* (Phylinae: Phylini) including three newly reported species, *E. artemisiae* (Becker, 1864), *E. kiritshenkoi* Kulik, 1975, and *E. miyamotoi* (Kerzhner, 1988), are recognized for the first time from Korea, and *Europiella albipennis* (Fallén, 1829) is removed from the Korean list. A new genus *Europiellomorpha* Duwal n. gen., is proposed to accommodate *Plagiognathus lividellus* (Kerzhner, 1979) (= *Europiella lividellus*). A key to the Korean species of *Europiella*, diagnosis, and descriptions of both male and female genitalia are provided.

Key words: Hemiptera, Miridae, Phylinae, Phylini, *Europiella*, *Europiellomorpha* n. gen, Korea

Introduction

Although, *Europiella* Reuter is considered a Holarctic group (Schuh et al, 1995), the recent investigation suggests that this group also occupies the temperate and sub boreal regions of the Oriental zone (Duwal et al., 2010). The genus also predominantly feeds on *Artemisia*.

The comprehensive revision and basic concept on definition of *Europiella* were provided by Schuh et al. (1995) and Schuh (2004), and several synonyms were created and many species were transferred from other genera. Additionally, the recent phylogenetic study of the Miridae indicated that the genus *Europiella* is monophyletic and is positioned basally within the tribe Phylinae (Jung & Lee, 2012). About 65 species of *Europiella* are reported from the world (<http://research.amnh.org/pbi/catalog>).

In this study, 5 species of *Europiella* are recognized from Korea; three are reported for the first time: *Europiella artemisiae* (Becker, 1864); *E. kiritshenkoi* Kulik, 1975; *E. miyamotoi* (Kerzhner, 1988). Herein, the reported species, *Europiella albipennis* (Fallén, 1829) from Korea (Kwon et al., 2001), is confirmed as a misidentification of *E. artemisiae*.

The peculiar genital characteristics of *Plagiognathus lividellus*, the saw-like marginal edge at a process of the endosoma is different from the endosoma of *Plagiognathus* and/ or *Europiella*; thus, a new genus, *Europiellomorpha* Duwal n. gen., is erected to accommodate *Plagiognathus lividellus* (Kerzhner, 1979).

In this study, a key to species of the Korean *Europiella*, and detailed diagnosis and illustrations of the male and female genitalia, are provided. All measurements are in millimeters. The newly reported species from Korea are indicated by an asterisk (*) after a locality name. In the synonymic lists of known taxa, selected references are only cited, as comprehensive catalogs are available (Kerzhner and Josifov, 1999; Schuh, 1995; 2002–2013).

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