



## Aphid-feeding plant bug: A new record of *Dicyphus miyamotoi* Yasunaga (Hemiptera: Heteroptera: Miridae: Bryocorinae) from the Korean Peninsula

SUNGHOON JUNG<sup>†</sup>, RAM KESHARI DUWAL & SEUNGHWAN LEE\*

Laboratory of Insect Biosystematics, Research Institute for Agricultural and Life Sciences, Department of Agricultural Biotechnology, Seoul National University, Seoul 151–921, Korea

<sup>†</sup> Current address: Department of Entomology, University of California, Riverside, CA 92521, USA; email: sunghoon.jung@ucr.edu

\*Corresponding Email: seung@snu.ac.kr

### Introduction

The plant bug genus *Dicyphus* Fieber 1858 (Miridae: Bryocorinae: Dicyphini) is described with more than 70 species (Schuh 2002–2011) and 43 species have been documented in the Palaearctic region (Kerzhner & Josifov 1999). In Far east Asia, only two species are recognized: *D. parkheoni* Lee & Kerzhner 1995 from the Korean Peninsula, and *D. miyamotoi* Yasunaga 2000 from Japan.

Most members in this genus are known as predators of aphids, mites, thrips, and whiteflies (e.g., Kelton 1983; Gabarra *et al.* 1995); some have been used as biological control agents in commercial greenhouses (Wheeler 2001). Therefore, the predaceous habits of the genus have attracted the attention of researchers who work in agro-ecosystems. However, numerous reports indicated that species in the genus, as well as in the subfamily, usually have strong facultative feeding habits (e.g., Wheeler 2001; Jung & Lee, 2012). Through the long term survey on the Korean heteropteran fauna (e.g., Duwal *et al.* 2010; Jung *et al.* 2010; Jung *et al.* 2011), we discovered an obligate aphid-feeding plant bug, *D. miyamotoi*, for the first time from the Korean Peninsula. In this study, diagnoses of the genus and species (adult and 5<sup>th</sup> nymph) are presented. Illustrations of main morphological characters such as male and female genitalia and biological notes regarding predatory feeding habits for the species are provided, as well as a key to species of the genus in the Korean Peninsula. All the measurements are in millimeters. Examined specimens are deposited in Laboratory of Insect Biosystematics in Seoul National University.

### Systematic accounts

#### Genus *Dicyphus* Fieber 1858

*Dicyphus* Fieber, 1858. Type species: *Capsus collaris* Fallen 1807 (= *Gerris errans* Wolff 1804), by subsequent designation (Reuter, 1888). Extralimital subgenus: *Uhlarella* Cassis 1986, N. America (see Schuh 2002–2011).

**Diagnosis.** Recognized by the usually greenish yellow or yellowish gray coloration, elongate, slender body with uniformly distributed simple black setae on dorsum. Detailed diagnostic characters of the genus were provided by Lee & Kerzhner (1995) and Yasunaga (2000).

#### Key to Korean Species of *Dicyphus*

1. Body grayish yellow, head with orange colored longitudinal stripe; apical part of antennal segment II dark brown; pronotum yellow with longitudinal brownish stripe on calli and fore half of hind lobe ..... *D. parkheoni* on *Solanum lyratum*
- Body yellowish green, head entirely green or yellowish green; basal and apical parts of antennal segment II dark brown; pronotum entirely green or yellowish green ..... *D. miyamotoi* on *Rosa* spp.

#### *Dicyphus miyamotoi* Yasunaga

(Figs. 1–2)

*Dicyphus miyamotoi* Yasunaga 2000: 100.