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A new *Cleotomiris* species (Hemiptera: Heteroptera: Miridae: Phylinae) from North Korea

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Abstract

Cleotomiris josifovi is described from the vicinity of Pyong Kang, North Korea. The description of this new species is provided with scanning micrographs of selected structures, and digital microscopic images of habitus and genitalia.

Key words: taxonomy, genitalia, Hallodapini, Auricillocorini

Introduction

Schuh (1984) originally erected the genus *Cleotomiris* within the myrmecomorphic tribe Auricillocorini Schuh, 1984 to accommodate four species described in the same paper, viz. *C. borneoensis* from Sabah, Malaysia, *C. chinensis* from SE China, *C. bicolor*, and *C. schneirlai* from the Philippines. No new data on the genus have been presented until the recent review of the tribe Auricillocorini from Asia by Yasunaga (2012), who provided a revised diagnosis of the genus and described two new species, *C. miyamotoi* from Japan and *C. yamadakazi* from Thailand.

In his phylogenetic analysis of Indo-Pacific Phylinae, Schuh (1984) recognized Auricillocorini as a clearly monophyletic tribe containing five Oriental genera and forming a sister clade to the Hallodapini Van Duzee, 1916. Yasunaga (2012) described one more genus from Thailand and confirmed the phylogenetic tree drawn by Schuh, although he noted that the structure of male and female genitalia may indicate a closer relationship of the Auricillocorini to Phylini Douglas and Scott, 1865, rather than to Hallodapini. In the most recent total-evidence phylogenetic analysis of the entire subfamily Phylinae (Menard et al. 2013), Auricillocorini was nested within Hallodapini. As a consequence, the tribe Auricillocorini is currently treated as a junior synonym of Hallodapini (Menard et al. 2013, Schuh & Menard 2013), although monophyly of the former group within hallodapines, as diagnosed by Schuh (1984) and Yasunaga (2012), seems well corroborated by the morphological data, especially by the characteristic structure of the scent gland evaporatory area.

Many species of *Cleotomiris* are rare in collections, known exclusively from the type locality and were attracted to a light trap. Almost nothing is known about the biology of the genus; only one specimen of *C. yamadakazi* has been reported from *Mallotus* sp. (Euphorbiaceae) (Yasunaga 2012). Recent examination of Michail Josifov's collection at the National Museum of Natural History, Sofia, Bulgaria, revealed one new species of the genus sampled from *Ulmus* sp. (Ulmaceae) in North Korea. Description of this new species is given below.

Material and methods

Observations, measurements, and digital dorsal color images were made with a Nikon SMZ 1500 stereomicroscope equipped with Nikon D700 digital SLR camera. Images of the male and female genitalic structures were taken with a Leica DM2500 microscope equipped with Leica DFC 450 digital camera. Scanning electron micrographs of selected structures were taken using a Quanta 250 scanning microscope. Unless otherwise stated, all measurements are in millimeters.

Discussion

The new species is somewhat similar to representatives of *Wygomiris* Schuh, 1984 in having a non-ant-mimetic habitus. The elongated, J-shaped vesica with relatively small subapical secondary gonopore and straight apical blade of *C. josifovi* resembles the vesica shape found in several *Wygomiris* spp., e.g., *W. dumaguete* Schuh, 1984, *W. indochinensis* Schuh, 1984, and *W. kaliyahae* Yasunaga, 2012. However, the combination of other characters, viz. the presence of transverse whitish fascia on the clavus, the mesoscutum entirely covered by pronotum, the cuneal fracture perpendicular to corial margin, the medial fracture far not reaching apex of the corium, and the shape of the scent gland evaporatory area (compare Figs. 3, 4 with Fig. 261 in Schuh 1984), clearly demonstrate the generic position of *C. josifovi*. The structure of female genitalia of the new species is also most similar to that of *Cleotomiris yamadakazi* documented by Yasunaga (2012).

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APPENDIX. USI numbers of figured specimens.

Figure	Sex	USI numbers
1, 3–5	male	AMNH_PBI 00340542
8–16	male	AMNH_PBI 00340541
2, 6, 7	female	AMNH_PBI 00340540
17, 18	female	AMNH_PBI 00340539