



Plant bugs of the subfamily Phylinae from Laos (Hemiptera: Heteroptera: Miridae)



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ARTICLE INFO

Article history:

Received 6 July 2016

Accepted 10 December 2016

Available online 15 December 2016

Keywords:

Heteroptera

Miridae

Phylinae

New genus

New species

New record

Laos

ABSTRACT

The phylinae plant bugs in Laos are reviewed on the basis of more than 300 specimens collected in a series of field investigations by Seoul National University, Korea. Twenty-six species belonging to the subfamily Phylinae are recognized and four species are described as new to science. A new genus, *Indochinapsallus* Duwal, Yasunaga & Lee n. gen. is proposed to accommodate one of the new species. Accordingly, the following new taxa are diagnosed, described and discussed herein: *Acrorrhinium laos* Duwal, Yasunaga & Lee, *Europiella indochinana* Duwal, Yasunaga & Lee, *Indochinapsallus rufobrevis* Duwal, Yasunaga & Lee, and *Leucodellus laosensis* Duwal, Yasunaga & Lee. An annotated checklist of all currently known Lao phylinae taxa, including new distributional records for four genera and five species is provided.

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Introduction

The present paper represents a part of recent attempt to document the fauna of the heteropteran family Miridae in Laos, or the Lao People's Democratic Republic, subsequent to Oh et al. (2015) and Yasunaga and Duwal (2015), and comprehensively treats taxa of the Phylinae plant bug subfamily. In Laos, however, only 15 species have been previously reported (Schuh, 1984; Yasunaga and Duwal, 2015).

We herein describe four new species, one of which represents a new genus: *Acrorrhinium laos* Duwal, Yasunaga & Lee n. sp., *Europiella indochinana* Duwal, Yasunaga & Lee n. sp., *Indochinapsallus rufobrevis* Duwal, Yasunaga & Lee n. gen., n. sp. and *Leucodellus laosensis* Duwal, Yasunaga & Lee n. sp. An annotated checklist of all phylinae taxa (26 species in 17 genera) currently known from Laos is provided including new distributional records. Distribution of four genera and five species are reported from Laos for the first time, each of which is indicated by an asterisk in the checklist. The present discovery of members of *Europiella* Reuter and *Leucodellus* Reuter from Laos also represent the first distributional records of these genera in the Indochina as well as the tropics of the Oriental Region.

Materials and methods

All specimens used in this study were collected between 2012 and 2015 by members of Insect Biosystematics Laboratory, Research Institute for Agriculture and Life Sciences, Seoul National University, Republic of Korea. Examined Specimens are deposited in Seoul National University, Korea (SNU), unless otherwise stated.

Matrix code labels were attached to the holotype specimens, which uniquely identify each specimen, and are referred to as 'unique specimen identifiers' (USIs). The USI codes [e.g., AMNH_PBI 012345] comprise an institution and project code (AMNH_PBI) and a unique number (012345). Generally, each USI label corresponds to a single specimen. These data were digitized on the Arthropod Easy Capture (formerly the Planetary Biodiversity Inventory) database maintained by the AMNH (<http://research.amnh.org/pbi/>) and are incorporated with <http://www.discoverlife.org>.

All measurements are given in millimeters (mm). Arrangement of the treated taxa follows the latest suprageneric classification system for the subfamily Phylinae (Schuh and Menard, 2013). Principal terminology follows recent representative works treating the taxa of the Phylinae (e.g., Konstantinov, 2012; Schuh and Schwartz, 2016; Yasunaga and Duwal, 2015). The synonymic lists are not included, as comprehensive catalogs are now available (Kerzhner and Josifov, 1999; Schuh, 1995, 2002–2014, online catalog).

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Annotated checklist of the Phylinae in Laos

[New distributional records for known species are each indicated by an asterisk*]

Tribe Hallodapini Van Duzee, 1916***Acrorrhinium* Noualhier, 1895***

1. *Acrorrhinium laos* Duwal, Yasunaga & Lee, n. sp. (Fig. 2A–B)—Distribution: Laos (Bolikhamsai).

***Alloeomimus* Reuter, 1903**

2. *Alloeomimus muiri* Schuh, 1984—Laos (Vientiane), Thailand (Chaiyaphum, Nakhon Nayok, Pathun Thani), Indonesia (Java).

Cleotomiris* Schuh, 1995

3. *Cleotomiris yamadakazi* Yasunaga, 2012a, 2012b (Fig. 1A)—Laos* (Bolikhamsai), Thailand (Nakhon Nayok, Nakhon Ratchasima).

***Hallodapus* Fieber, 1858**

4. *Hallodapus albofasciatus* (Motschulsky, 1863)—Laos (Bolikhamsai), SE China, Myanmar (Yangon), Thailand (Chiang Mai, Nakhon Nayok, Nakhon Ratchasima, Suphan Buri), Taiwan, and Solomon Islands; widely known from Ethiopian to Oriental regions.
5. *Hallodapus ravenar* (Poppius, 1914)—Laos (Bolikhamsai), China (Hong Kong), Japan (Ryukyus), Myanmar (Yangon), Thailand

(Chiang Mai, Nakhon Nayok, Nakhon Ratchasima); widely known from the Oriental Region.

***Wygomiris* Schuh, 1984**

6. *Wygomiris indochinensis* Schuh, 1984 (Fig. 1B)—Laos (Vientiane), Thailand (Nakhon Ratchasima).

Tribe Decomiini Schuh and Menard, 2013***Decomia* Poppius, 1915**

7. *Decomia anthophila* Yasunaga and Duwal, 2015 (Fig. 1D)—Laos (Bolikhamsai), Thailand (Nakhon Nayok, Nakhon Ratchasima).
8. *Decomia indochinensis* Schuh, 1984—Laos (Xiang Khoang), North and central Thailand, Vietnam, Philippines (Visayas) and Peninsular Malaysia (Perak).

***Rubrocuneocoris* Schuh, 1984**

9. *Rubrocuneocoris nigriceps* Duwal et al., 2010—Laos (Xiang Khoang: Kham District), Nepal (Kaski, Kathmandu Valley).

Tribe Nasocorini Reuter, 1883***Campylomma* Reuter, 1878**

Note: In Indochina region, *Campylomma* is currently known by nine species (Yasunaga, 2016). Further investigations in Laos could add few more species which are commonly found in Cambodia and Thailand,

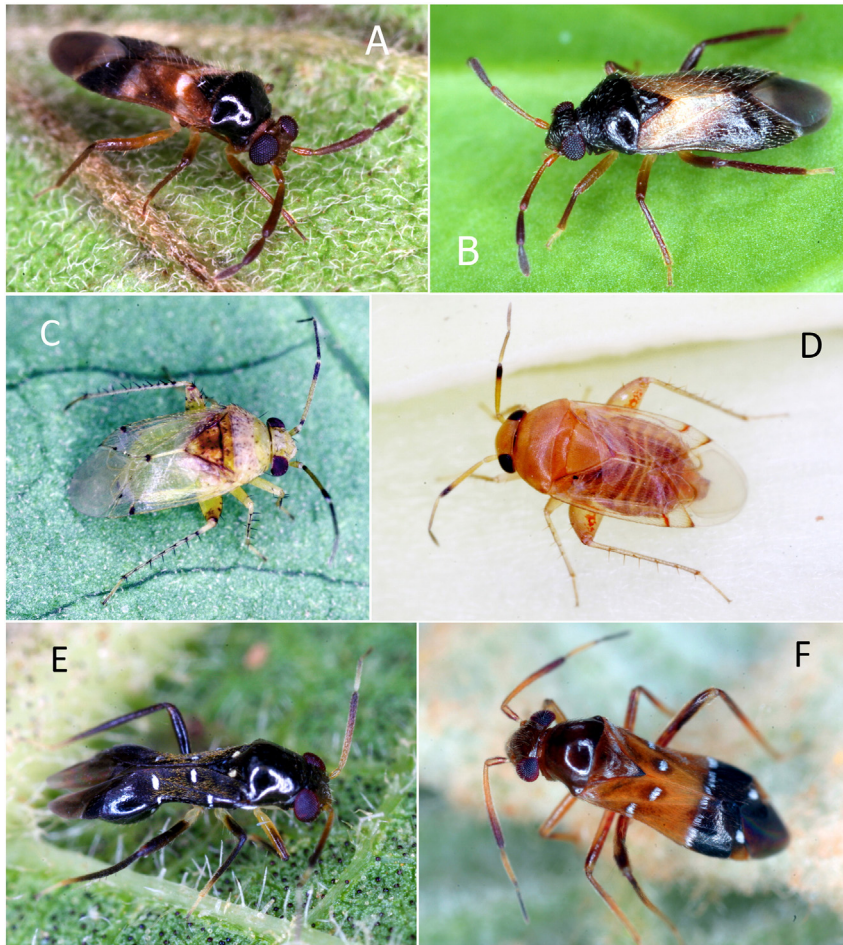


Fig. 1. Habitus images of live individuals of phyline plant bugs known from Laos. A. *Cleotomiris yamadakazi*, male (photographed in Nakhon Ratchasima, Thailand). B. *Wygomiris indochinensis* (in Nakhon Ratchasima). C. *Moissonia sakaerat*, male (in Chaiyaphum, Thailand). D. *Decomia anthophila*, male (in Nakhon Nayok, Thailand). E. *Pilophorus meteorus*, male (in Nakhon Ratchasima). F. *P. saovapruki*, female (in Nakhon Nayok).

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