

NOTE

A new combination for a phyline plant bug from Thailand (Hemiptera: Heteroptera: Miridae)

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Abstract

Based on close examination of morphological characters using SEM, a new combination, *Ellacapsus remicornis* (Yasunaga & Duwal, 2019) **comb. nov.**, originally placed in *Lasiolabops* Poppius, 1914, is proposed. The genus *Ellacapsus* Yasunaga, 2013 is rediagnosed, and its suprageneric placement is also discussed.

Key words: Phylinae, Pilophorini, new combination, Thailand, SEM documentation.

Resumen

Nueva combinación para un chinche filino de Tailandia (Hemiptera: Heteroptera: Miridae)

A partir de un minucioso examen de caracteres morfológicos mediante la utilización de MEB, se propone una nueva combinación, *Ellacapsus remicornis* (Yasunaga & Duwal, 2019) **comb. nov.**, originalmente ubicada en *Lasiolabops* Poppius, 1914. Se redefine el género *Ellacapsus* Yasunaga, 2013 y se discute su ubicación supragenerica.

Palabras clave: Phylinae, Pilophorini, nueva combinación, Tailandia, documentación MEB.

Laburpena

Konbinazio berri bat Thaiandiako zimitz filino batentzat (Hemiptera: Heteroptera: Miridae)

Karaktere morfologikoen EME bidezko azterketa zorrotz baten ondorioz, konbinazio berri bat proposatzen da, *Ellacapsus remicornis* (Yasunaga & Duwal, 2019) **comb. nov.**, jatorriz *Lasiolabops* Poppius, 1914 generoan kokatua. *Ellacapsus* Yasunaga, 2013 generoa birdefinitu eta bere kokapen supragenerikoa eztabaidatzen da.

Gako-hitzak: Phylinae, Pilophorini, konbinazio berria, Tailandia, EME dokumentazioa.

Introduction

Ellacapsus (Phylinae) was proposed by Yasunaga (2013) to accommodate a single Thai species, *E. sensibilis* Yasunaga, 2013, suggesting its placement in the tribe Phylini (in broad sense). Also, the latest supra-generic classification system (Schuh and Menard, 2013)

provisionally placed *Ellacapsus* in tribe Phylini (as *incertae sedis*). During our recent reexamination of the holotype of *E. sensibilis* using a tabletop SEM, we found a significant character (presence of appressed, transversely grooved, lanceolate setae), which is shared by *Lasiolabops* Poppius, 1914, known from the Oriental Region to Papua New Guinea (Pilophorini).

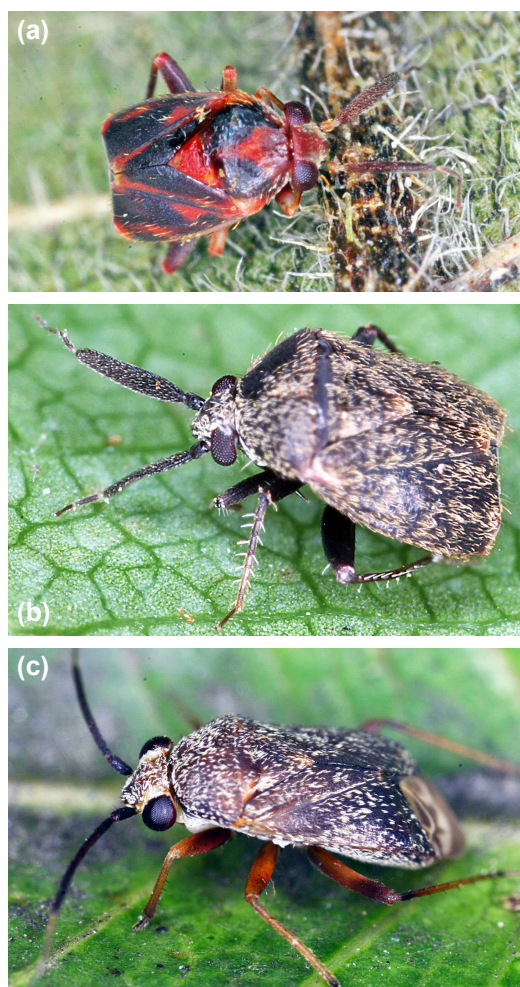


FIGURE 1. Habitus images of: (a) *Ellacapsus sensibilis* Yasunaga, 2013, holotype male (AMNH_PBI 00379419); (b) *Ellacapsus remicornis* (Yasunaga & Duwal, 2019) **comb. nov.**, holotype female; (c) *Lasiolabops cosmopolites* Schuh, 1984, female from Bhaktapur, Nepal.

On the other hand, Yasunaga and Duwal (2019) described *Lasiolabops remicornis* based on a single female holotype. Although this species also has the transversely grooved setae, the box-like, stout body and remarkably thickened antennomere II are not possessed by other members of *Lasiolabops* (Schuh, 1984). Judging from these distinctive characters, we consider it best to transfer *remicornis* to *Ellacapsus* and accordingly suggest a new combination in this paper.

Measurements in the text are given in millimeters; for some of the SEM images, scale bars are shown in micrometers (μm). Scanning Electron Micrographs were taken with Hitachi Miniscope® (TM-3030 for Fig. 2h-l and TM-4000 plus II for others). All examined specimens (holotypes) are deposited in the collection of Plant Protection Research and Development Office, Department of Agriculture, Bangkok, Thailand (DOAT) and searchable (by each species name) on «Heteroptera Species Pages» (<http://research.amnh.org/pbi/heteropteraspecies-page/>).

Results

Ellacapsus Yasunaga, 2013

Ellacapsus Yasunaga, 2013: 199 (n. gen.), type species by original designation: *E. sensibilis* Yasunaga, 2013: 199; Schuh, 2002-2013 (online catalog); Schuh and Menard, 2013: 31 (tribal placement).

Rediagnosis:

Body ovoid, box-like, tumid (Figs. 1a, 2a), with golden, appressed, transversely grooved, lanceolate setae (Fig. 2d-f); head including eyes less than 3/4 as wide as pronotum; antennomere II remarkably enlarged, lamellate, oar-shaped (Fig. 2b-c); antennomere III shorter than IV; metathoracic scent efferent system subtriangular, with rather stout peritreme (Fig. 2e); tibia with long, distinct spines (Fig. 2a); parempodia setiform (Fig. 2g) and vesica C-shaped, rather narrow, with a rather complex apical structure (Yasunaga, 2013: fig. 5).

Ellacapsus remicornis (Yasunaga & Duwal, 2019) **comb. nov.** (Figs. 1b, 2h-j)

Lasiolabops remicornis Yasunaga & Duwal, 2019: 60 (n. sp.).

Material examined:

1 ♀ (holotype): THAILAND: Nakhon Ratchasima, Wang Nam Khieo, Sakaerat Environmental Research Station, 14°30'26.9" N, 101°55'39.2" E, 400 m alt., light trap, 22.iii.2014, T. Yasunaga & K. Yamada (DOAT) (AMNH_PBI 00380590).

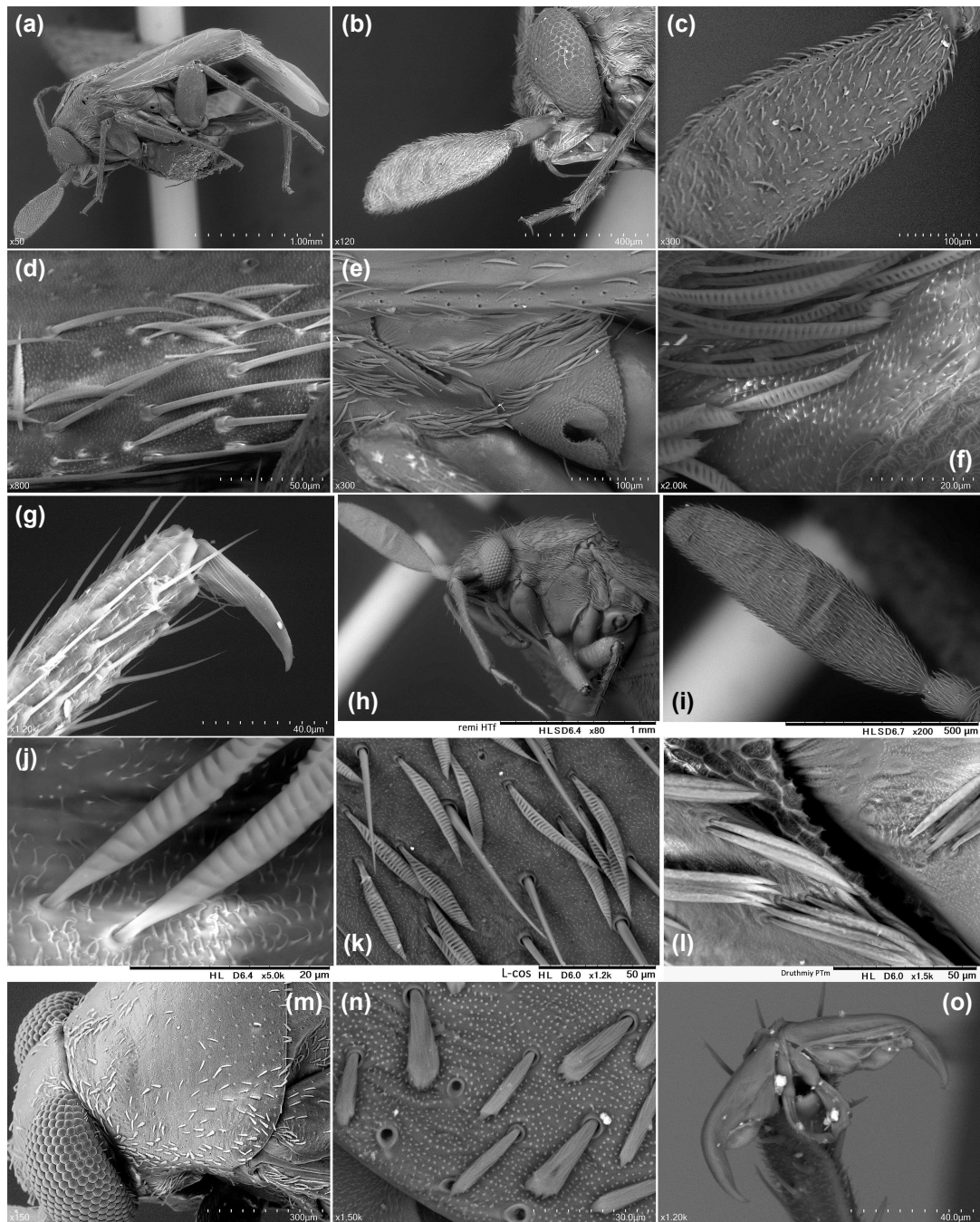


FIGURE 2. Scanning electron micrographs for: (a)-(g) *Ellacapsus sensibilis* Yasunaga, 2013, holotype male; (h-j) *Ellacapsus remicornis* (Yasunaga & Duwal, 2019) **comb. nov.**, holotype female (AMNH_PBI 00380590); (k) *Lasiolabops cosmopolites* Schuh, 1984, male from Nepal; (l) *Druthmarus miyamotoi* Yasunaga, 2001; (m)-(o) *Brendaphylus solocidens* Yasunaga, 2013, holotype male (00379418) / (a) Left lateral habitus; (b) Head, left lateral view; (c), (i) Antennomere II; (d), (j)-(k) Vestiture on corium; (e), (l) Thoracic pleura (with transversely grooved setae); (g) Apex of mesotarsus; (h) Anterior body, left lateral view; (m) Head and pronotum, left dorso-lateral view; (n) Vestiture on pronotum; (o) Pretarsus of metaleg.

Discussion

As mentioned above, *Lasiolabops remicornis* Yasunaga & Duwal, 2019 was described on a single female holotype. Since this species has the appressed, transversely grooved, lanceolate setae which are shared by other *Lasiolabops* members (Schuh, 1984), generic placement of the taxon under *Lasiolabops* was most plausible at the moment. However, the following distinctive characters are not possessed by any of *Lasiolabops* species: Body ovoid, box-like, stout [*vs.* elongate ovoid, subparallel-sided in *Lasiolabops*]; head narrow [*vs.* wide]; head across eyes about 2/3 times as wide as pronotum [*vs.* slightly narrower than pronotum]; antennomere II remarkably thickened, lamellate [*vs.* cylindrical, almost linear]; antennomere III shorter than IV [*vs.* as long as or slightly longer than IV]; and tibial spines long, densely distributed [*vs.* short and sparse]. These features properly fit the above diagnostic characters of *Ellacapsus*.

During recent reassessment of characters for *Ellacapsus sensibilis* (a single male holotype of the type species) using a tabletop SEM, we confirmed the transversely grooved setae on the body surface (Fig. 2d-f), as in *E. remicornis* **comb. nov.** (Fig. 2j) and *Lasiolabops* species (Fig. 2k). We also recognized the lanceolate, scale-like setae of *Druthmarus miyamotoi* Yasunaga, 2001 (Pilophorini), which are shallowly grooved (Fig. 2l). Current evidence, or presence of the transversely grooved setae, argues for the placement of *Ellacapsus* in the tribe Pilophorini.

Incidentally, Schuh and Menard (2013) placed *Brendaphylus* Yasunaga, 2013 (similar in general appearance to *Ellacapsus*, cf. Yasunaga, 2013: fig. 1C) in the Exaeretini, based on the similarity of the male genitalic structures (Yasunaga, 2013: fig. 4) and weakly lamellate parempodia (Fig. 2o). However, our SEM examination found unique peg-like, longitudinally grooved, apically notched setae in a single holotype male of the type species, *B. solocvidens* Yasunaga, 2013 (Fig. 2m-n). To our knowledge, such peculiar setae have not been reported for any phylinae plant bug, whereas we observed similar setae in the Cylapinae and Isometopinae (immature forms in particular), and the bed-bug family Cimicidae (*Cimex* spp.).

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