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Aradidae from Vietnam IV. Review of the Oriental flat bug genus *Lissonotocoris* Usinger & Matsuda, 1959 (Hemiptera: Heteroptera: Aradidae)

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Abstract

To date, only the type species *Lissonotocoris membranaceus* Usinger & Matsuda 1959 is known and recorded from Vietnam and China, Hainan Island. Four new species of the previously monotypic genus *Lissonotocoris* are described and figured: *loebli* n.sp. (Thailand), *glabronotus* n.sp. (N.Vietnam), *pachycerus* n.sp. (Malaysia) and *siamensis* n.sp. (Thailand). A key for the identification of all 5 species is provided.

Key words: Hemiptera, Heteroptera, Aradidae, Carventinae, *Lissonotocoris*, new species, Southeast Asia

Introduction

The macropterous Carventinae genus *Lissonotocoris* Usinger & Matsuda 1959 was erected for *membranaceus* described from a single female from Hoahbin, Tonkin (now Vietnam). A second record was cited by Kormilev (1972) who reported a female from Ban Van Eue, Laos (Vientiane province). Thirty-five more years passed before a third specimen (and the first male) was discovered from Jianfengling on Hainan Island, China (Yan et al. 2007).

Investigation of specimens in the author's collection thought to belong to the type species *L. membranaceus* has surprisingly shown that there are at least five different species occurring in Southeast Asia, four of which are described herein as new. A key for the identification of all species of the genus is provided.

Material and methods

This study is based on material preserved in the collection of the author at the Tiroler Landesmuseum (CEHI); other type depositories are mentioned in the descriptions.

The description of *L. membranaceus* by Usinger & Matsuda 1959 is very detailed and a habitus figure is given there (Fig. 34, p.119). This taxon has also been redescribed and additional structural features illustrated by Yan et al. (2007).

As the general habitus is same for all five species, and specific differences concern primarily structures of the pronotum and antennae, the common characters shared with the type species *membranaceus* (structure of head, abdomen, hemelytra, membrane without veins, position of spiracles II–VI ventral, VII sublateral and visible from above, legs) are well documented and will not be repeated in the descriptions of the new taxa.

The whitish incrustation on pronotum and to a lesser extent on the head and abdomen obscures partly their cuticular structures and cavities below. When the waxy incrustation is dissolved in hot KOH, fringes of dense short pilosity remain on the pronotum, along and around which the incrustation develops. Cleaned specimens show deep incisions between the ring like collar and the produced lateral sclerites of the pronotum which are usually obscured by incrustation.

- *loebli* **n.sp.**
- 4 (1) Pronotum without a trisinate transverse sulcus on elevated posterior lobe. 5
- 5 (6) Median pair of tubercles of anterior pronotal lobe small and lower than elevated lateral sclerites of pronotum, antennae more slender, segment III about 4.25x as long as wide, N-Vietnam (Fig. 4) *glabronotus* **n.sp.**
- 6 (5) Median pair of tubercles of anterior pronotal lobes large and elevated to level of lateral sclerites, antennae more robust, segment III 2.45–3.8x as long as wide 7
- 7 (8) Antennae shorter and very stout, 1.76x as long as width of head, segment III 2.45x as long as wide, rounded median projections of anterior margin of posterior pronotal lobe developed, Malaysia (Fig. 6) *pachycerus* **n.sp.**
- 8 (7) Antennae longer and more slender, at least 1.86x as long as width of head, segment III 3.8x as long as wide, rounded median projections of anterior margin of posterior pronotal lobe not developed, N-Thailand (Fig. 5) *siamensis* **n.sp.**

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