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Six new species of the planthopper genus *Usana* Distant, 1906 (Hemiptera: Fulgoromorpha: Achilidae) from China

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Abstract

Six new species of the planthopper genus *Usana*, *U. aspergilliformis* sp. nov., *U. concava* sp. nov., *U. congjiangensis* sp. nov., *U. fissura* sp. nov., *U. oblongincisa* sp. nov. and *U. unispina* sp. nov. are described and illustrated from China. A checklist, a key to all species of the genus and illustrations of *U. lineolalis* Distant, 1906 are also given.

Key words: Achilid, distribution, Fulgoroidea, taxonomy

Introduction

The genus *Usana* (Achilidae: Plectoderini), was established by Distant (1906) with *U. lineolalis* Distant, 1906 from Burma as the type species. Three species were subsequently added: *U. yanonis* Matsumura, 1914, *U. abdominalis* Distant, 1916 and *U. demochares* Fennah, 1978.

Among the four known species of *Usana* Distant, only the male genitalia of *U. demochares* was described and illustrated (Fennah, 1978), the descriptions of the remaining three species (*U. lineolalis*, *U. yanonis* and *U. abdominalis*) excluded genitalia. Although male genitalia of *U. lineolalis* was described by Fennah, no illustration was given (Fennah, 1956). In this paper, six new species are described and illustrated from China. A checklist, a key to all species and illustrations of *U. lineolalis* Distant, 1906, including male genitalia, are also provided.

Material and methods

Specimens were collected by sweeping net. Dry specimens were used for the description and illustration. The morphological terminology and measurements used in this study follow Chen *et al.* (1989) and Yang and Chang (2000). The color photographs of examined specimens were taken with a Keyence VHX-1000C camera. External morphology was observed under an Olympus SZX7 stereoscopic microscope and characters measured with an ocular micrometer. The genital segments of the examined specimens were macerated in 10% KOH and drawn from preparations in glycerin jelly using an Olympus CX41 stereomicroscope. Illustrations were scanned by a Canon CanoScan LiDE100 and imported into Adobe Photoshop CS5 for labeling and plate composition. The spinal formula refers to the numbers of apical spines of the hind tibiae and 1st and 2nd hind tarsomeres.

Specimens examined are deposited in the Institute of Entomology, Guizhou University, Guiyang, China (GUGC).

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