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Authors: Li, Hu, Dai, Ren-Huai, and Li, Zi-Zhong

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# FIRST RECORD OF THE LEAFHOPPER GENUS *IGERNA* (HEMIPTERA: CICADELLIDAE: MEGOPHTHALMINAE) IN CHINA WITH A DESCRIPTION OF A NEW SPECIES

HU LI, REN-HUAI DAI AND ZI-ZHONG LI\*

Institute of Entomology, Guizhou University, Guiyang, Guizhou, 550025 P.R. China

The Provincial Key Laboratory for Agricultural Pest Management of Mountainous Region, Guiyang, Guizhou, 550025 P.R. China

\*Corresponding author; E-mail: lizizhong38@163.com

## ABSTRACT

*Igern*a Kirkaldy is reported for the first time from China. The new species *I. tenuicaula* Li, Dai & Li **sp. nov.** is described and illustrated from Yunnan province of southern China.

Key words: leafhopper, *Igern*a, new record, new species, distribution, China

## RESUMEN

*Igern*a Kirkaldy se registra por la primera vez de China. La nueva especie *I. tenuicaula* Li, Dai y Li **sp. nov.** se describe e ilustra por la provincia de Yunnan al sur de China.

Palabras Clave: salta hojas, *Igern*a, nuevo registro, nueva especie, distribución, China

The leafhopper genus, *Igern*a, which belongs to the tribe Agalliini of the subfamily Megophthalminae (Hemiptera, Cicadellidae), was originally described and established in the family, Tettigoniidae, by Kirkaldy (1903) with *Pachynus bimaculicollis* Stål, 1855 as its type species. Viraktamath (2011) revised the Oriental and Australian Agalliini fauna, including the genus *Igern*a, which comprised 14 known species recorded from the Oriental and Australian regions. The genus is also recorded from the Afrotropical and Malagasian regions.

In the present paper, a 15th species, *Igern*a *tenuicaula* Li, Dai & Li **sp. nov.**, is described from Yunnan province of southern China (Oriental region). It represents the first record of the genus *Igern*a in China. The characteristics of the male and female genitalia are illustrated, and photographs of several aspects of the male adult are provided.

In morphological terminology and classification systems, we followed Oman (1949), Dietrich (2005) and Viraktamath (2011), and in terminology of the female genitalia, we followed Davis (1975).

The type specimens of the new species and others examined are deposited in the Institute of Entomology, Guizhou University, Guiyang, China (GUGC).

## SYSTEMATICS

### Genus *Igern*a Kirkaldy

*Igern*a Kirkaldy 1903: 13. Type species: *Pachynus bimaculicollis* Stål, 1855, by original designation, new replacement name for *Pachynus* Stål 1866, not Rafinesque 1815.

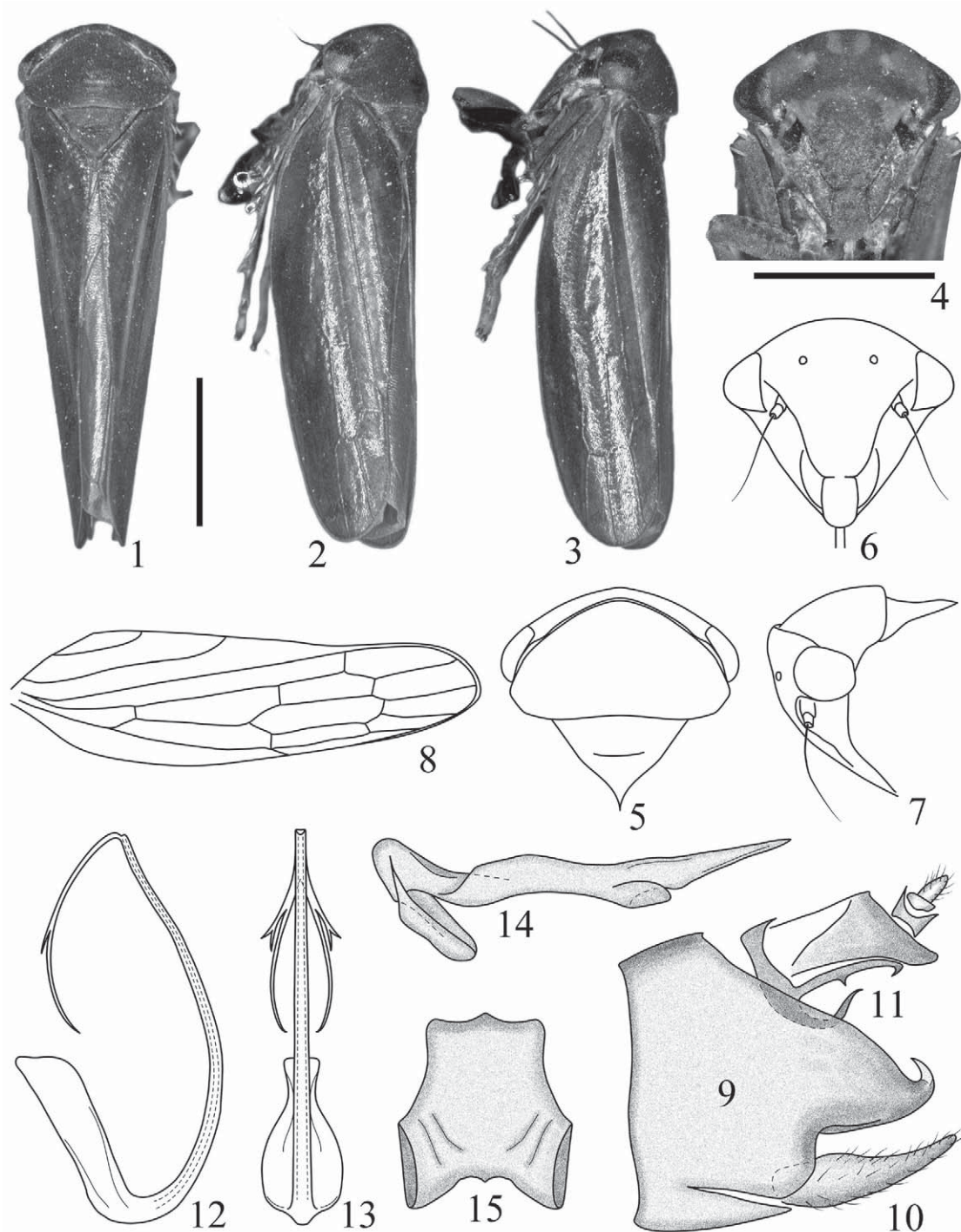
*Pachynus* Stål 1866: 127. Type species: *Bythoscopus* (*Oncopsis*) *bimaculicollis* Stål, 1855, by monotypy.

Diagnosis. *Igern*a can be distinguished from other taxa of Agalliini by the following combined characteristics: forewings with 3 anteapical cells and 4 apical cells, claval veins clearly separate; face rather convex and polished; male pygofer usually armed with tooth-like process or caudal margin presented as a simple spine-like process or elongate dorsal lobe; and male genitalia symmetrical, less robust.

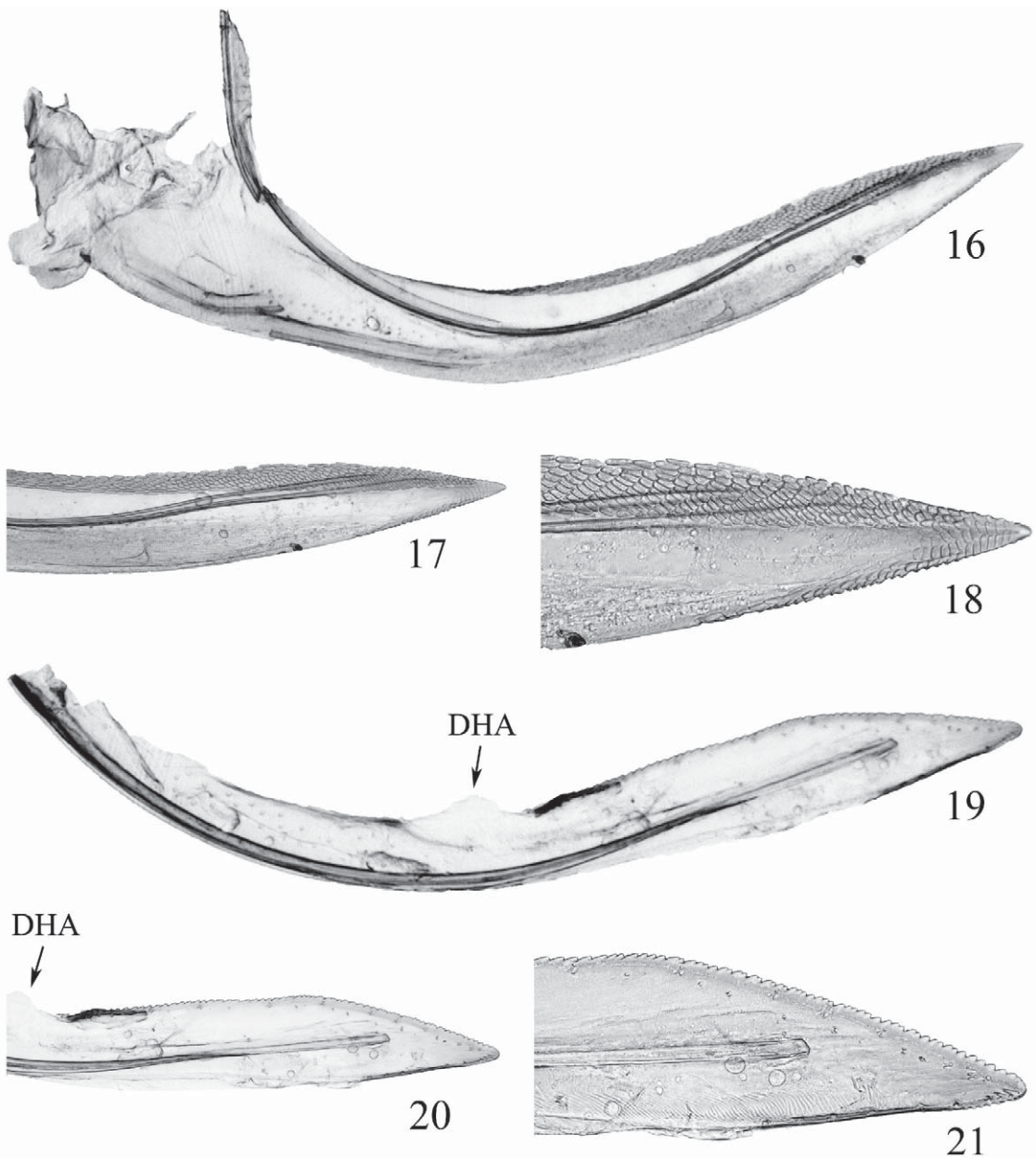
*Igern*a *tenuicaula* Li, Dai & Li **sp. nov.** (Figs. 1-21)

### Type Locality

CHINA: Yunnan province, Gaoligong Mts.



Figs. 1-15. *Igerna tenuicaula* Li, Dai & Li **sp. nov.** (Male) 1. Dorsal habitus; 2. Dorso-lateral habitus; 3. Lateral habitus; 4. Face; 5. Cephalothorax, dorsal view; 6. Cephalothorax, lateral view; 7. Cephalothorax, lateral view; 8. Fore wings; 9. Pygofer, lateral view; 10. Subgenital plate, lateral view; 11. Segments X-XI, lateral view; 12. Aedeagus, lateral view; 13. Aedeagus, ventral view; 14. Style, dorsal view; 15. Connective, dorsal view. (Scale bar = 1.0 mm).



Figs. 16-21. First and second valvulae of ovipositor of *Igernia tenuicaula* Li, Dai & Li **sp. nov.**, lateral view. 16-18. First valvulae; 19-21. Second valvulae, DHA: dorsal hyaline area.

#### Material Examined

**HOLOTYPE:** ♂, CHINA: Yunnan province, Gaoligong Mts., Baihualing, 6-V-2010, collected by Hu Li; 4 ♂♂, same data as holotype; 1 ♀, CHINA: Yunnan province, Gaoligong Mts., Bingzhongluo, 13-V-2010, collected by Li-Xia Xie.

#### Description

**Measurements.** Body length (including wings in repose): ♂, 3.8-4.1 mm; ♀, 4.2 mm.

Body uniformly dark brown in male and female (Figs. 1-3). Head and Face (Fig. 4) dark ochraceous with symmetrical black markings,



frons more ochraceous, antennal bases yellow, flagellum fuscous, eyes dark brown, somewhere reddish brown, clypellus and lora black. Pronotum and mesonotum also evenly dark, in some individuals occasionally yellow brown. Forewings dark basally, yellow brown distally. Legs black.

Body form (Figs. 1-3) typical as wedge-shaped and slender (body slightly stouter in females). Head wider than pronotum, crown shorter in middle than next to eyes. Face across eyes as long as wide, ocelli on face, distance between ocelli slightly larger than distance between ocellus to adjacent eye, clypellus nearly oblong. Pronotum approximately oval, anterior margin more prominent, slightly depressed on both parts near eyes. Mesonotum small, triangular, with a clear notch in middle. Forewings translucent with 3 anteapical cells, appendix vestigial.

Male Genitalia. Pygofer nearly triangular, with a strong semitransparent hook caudally (Fig. 9). Subgenital plates long, deltoid, with marginal setae (Fig. 10). Segment X developed, bifurcate to 2 branches, upper branch with spine in middle and tip twisted ventrally, lower branch directed posteriorly, apically bent dorsally (Fig. 11). Aedeagal shaft rather long, slender, and tapered, apex with pair of long symmetric processes nearly equal to length of half shaft, and biramose and again biramose on upper branches, gonopore apical (Figs. 12 and 13). Apex of style sharp (Fig. 14). Connective nearly square (Fig. 15).

Female Genitalia. First valvulae (Figs. 16-18), in lateral view, strongly curved dorsally from base; ventral interlocking device on basiventral portion of shaft clear; dorsolateral surface reticulately sculptured by oblique rows of scale-like processes on distal 2/3; ventroapical region also with scale-like processes; apex sharp, file-like. Second valvulae (Figs. 19-21), in lateral view, curved dorsally from base, with broadest point on apical third; dorsal hyaline area medial; dorsal prominence present but inconspicuous; dense teeth mostly subtriangular, not bearing denticles, positioned behind dorsal hyaline area; apex subacute.

#### Etymology

The new species name is derived from the Latin word "*tenuicaulis*", referring to the slender aedeagus and its apical processes.

#### DISCUSSION

This new species resembles *Igernia violacea* (Distant, 1916) from India, but can be distinguished from the latter by the following: the pygofer with a strong hooked process caudally (Fig. 9); segment X is distinct in shape (Fig. 11); paired and symmetrical processes on apex of aedeagal shaft are biramose and again biramose on dorsal branch (Figs. 12 and 13); connective is free attaching with penis (Fig. 15); and also in body coloration and size (Figs. 1-3). *Igernia tenuicaula* is also similar to *I. keyae* Viraktamath, 2011, also from India, but differs from latter in the following features: the pygofer process is not bifurcate (bifurcate in *I. keyae*) (Fig. 9); segment X is different in shape (Fig. 11); and aedeagal processes on apex are doubly ramose (Figs. 12 and 13).

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#### REFERENCES CITED

- DAVIS, R. B. 1975. Classification of selected higher categories of Auchenorrhynchos Homoptera (Cicadellidae and Aetalionidae). Tech. Bull. U. S. Dept. Agric. 1494. 52 pp.
- DIETRICH, C. H. 2005. Keys to the families of Cicadomorpha and subfamilies and tribes of Cicadellidae (Hemiptera: Auchenorrhyncha). Florida Entomol. 88: 502-517.
- KIRKALDY, G. W. 1903. Einige neue und wenig bekannte Rhynchoten. Wiener Entomol. Zeitung 22: 13-17.
- OMAN, P. W. 1949. The Nearctic leafhoppers: a generic classification and check list. Mem. Entomol. Soc. Washington 3: 1-253.
- STÅL, C. 1866. Hemiptera. Homoptera Latr. Hemiptera Africana 4: 1-276.
- VIRAKTAMATH, C. A. 2011. Revision of the Oriental and Australian Agalliini (Hemiptera: Cicadellidae: Megophthalminae). Zootaxa 2844: 1-118.