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Two new species of the genus *Igerna* (Hemiptera: Cicadellidae: Megophthalminae) from India

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Abstract

Two new megophthalmine species of leafhoppers, *Igerna kolasibensis* **sp. nov.** and *I. shillongensis* **sp. nov.,** are described from India, Mizoram and Meghalaya, respectively. Detailed morphological descriptions, illustrations and photographs are provided. An updated key to the species and taxonomic notes on the genus are provided.

Key words: Leafhoppers, Agalliini, Key, Distribution

Introduction

The genus *Igerna* was established by Kirkaldy (1903), with type species *Pachynus bimaculicolis* Stål (1866), as a replacement name for *Pachynus* Stål (1866). Viraktamath (2011), in his monograph of the Oriental and Australian Agalliini, revised this genus with 14 species, provided a checklist, and a key to its Oriental species. Later, in the revision of Agalliini from China, Viraktamath *et al*. (2012) described another new species. Li *et al.* (2012) recorded this genus for China, with description of another new species. Recently, Viraktamath and Gonçalves (2013) revised the Madagascaran Agalliini, which led to the addition of three species to the genus. Some members of *Igerna* were reported to feed on *Coffea robusta* Linn., *Justicia betonica* Linn. and *Achyranthes aspera* Linn. (Viraktamath, 2011). To date, 18 species have been reported in this genus, including 14 from the Indian subcontinent

The genus is widely distributed in India, and the Oriental region. These leafhoppers are small to medium size, wedge shaped and belong to the tribe Agallini. *Igerna* can be distinguished from all the other Agallini genera by the combination of the following characters: aedeagus with base ventrally produced, often sunken into dorsal apodeme basally, usually symmetrical; dorsal apodemes well developed; anal collar simple (except in *Igerna violacea*); face somewhat polished, slightly curved from frons to clypellus; and ocelli located in relatively shallow pits (Viraktamath, 2011).

Recent explorations under the Indian Council of Agricultural Research, Network Project on Insect Biosystematics, from the North-Eastern hills of Meghalaya and Mizoram led to collection of a series of specimens of *Igerna* representing two new species. DNA barcodes (partial mtCOI sequences) were generated for these species.

Material and methods

Line diagrams were drawn using a drawing tube attached to a Leica DM500 phase contrast compound microscope. Photographs were taken with a Leica DFC 425C digital camera on the Leica M205FA stereozoom automontage microscope. Male genitalia dissections were carried out as described by Oman (1949) and Knight (1965). Type material is deposited in the National Pusa Collection, Division of Entomology, Indian Agricultural Research Institute, New Delhi, India (NPC).

For mtCOI analysis, the DNA was extracted from a single whole specimen according to the manufacturer

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References

Folmer, O., Black, M., Hoeh, W., Lutz, R. & Vrijenhoek, R. (1994) DNA primers for amplification of mitochondrial cytochrome c oxidase subunit I from diverse metazoan invertebrates. *Molecular Marine Biology and Biotechnology*, 3 (5), 294–299.

Kirkaldy, G.W. (1903) Einege neue und wenig bekannte Rhynchoten. *Wiener Entomologische Zeitung*, 22, 1–13.

Knight, W.J. (1965) Techniques for use in the identification of leafhoppers (Homoptera: Cicadellidae). *Entomologist's Gazette,*16, 129–36.

Li, H., Dai, R.H. & Li, Z.Z. (2012) First record of the leafhopper Genus *Igerna* (Hemiptera: Cicadellidae: Megophthalminae) in China with a description of a new species. *Florida Entomologist*, 95 (4), 979–982. http://dx.doi.org/10.1653/024.095.0424

Oman, P.W. (1949) The Nearctic leafhoppers (Homoptera: Cicadellidae). A generic classification and checklist. *Memoirs of the Entomological Society of Washington*, 3, 1–253.

Stål, C. (1866) Hemiptera. Homoptera Latr. *Hemiptera Africana,* 4, 1–276.

Tamura, K. & Nei, M. (1993) Estimation of the number of nucleotide substitutions in the control region of mitochondrial DNA in humans and chimpanzees. *Molecular Biology and Evolution,* 10, 512–526.

Tamura, K., Stecher, G., Peterson, D., Filipski, A., & Kumar, S. (2013) MEGA6: Molecular Evolutionary Genetics Analysis version 6.0. *Molecular Biology and Evolution,* 30, 2725–2729. http://dx.doi.org/10.1093/molbev/mst197

Viraktamath, C.A. (2011) Revision of the Oriental and Australian Agalliini (Hemiptera: Cicadellidae: Megophthalminae). *Zootaxa*, 2844, 1–118.

Viraktamath, C.A. & Gonçalves, C. (2013) Review of Madagascaran Agalliini (Hemiptera: Cicadellidae: Megophthalminae) with descriptions of a new genus and six new species. *Zootaxa*, 3616 (1), 001–021. http://dx.doi.org/10.11646/zootaxa.3616.1.1

Viraktamath, C.A., Dai, W. & Zhang, Y. (2012) Taxonomic revision of the leafhopper tribe Agalliini (Hemiptera: Cicadellidae: Megophthalminae) from China, with description of new taxa. *Zootaxa*, 3430, 1–49.