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## Five new species of *Hypseloecus* Reuter (Hemiptera: Miridae) on hemiparasitic Santalales from India

H.M.YESHWANTH

Department of Entomology, University of Agricultural Sciences, GKVK, Bangalore 560 065, India.

E-mail: [hmyeshwanth@gmail.com](mailto:hmyeshwanth@gmail.com)

### Abstract

Five new species of *Hypseloecus* viz., *Hypseloecus acutus* **sp. nov.**, *Hypseloecus articulatus* **sp. nov.**, *Hypseloecus belli* **sp. nov.**, *Hypseloecus orientale* **sp. nov.** and *Hypseloecus spinosus* **sp. nov.** are described from India. The genus is recorded for the first time from India collected on hemiparasitic plants of the genera *Dendrophthoe* and *Viscum* (Santalales). A key to identification of the five species has been provided with descriptions of the male genital structures, digital microscopic images and also photographic images of live individuals.

**Key words:** taxonomy, Philophorini, *Hypseloecus*, hemiparasitic plants, Santalales

### Introduction

The members of the genus *Hypseloecus* Reuter are associated with hemiparasitic plants of the order Santalales. About twenty-five species have been reported from the world, thirteen living on plants in the order Santalales, including the following genera belonging to families Loranthaceae and Viscaceae: *Amyema* Tiegh., *Dendrophthoe* Mart., *Lysiana* Tiegh., *Tapinanthus* (Blume) Rchb. and *Viscum* L. (Schuh & Menard 2011). The genus *Hypseloecus* has been recorded from Australia, Czechoslovakia, Ethiopia, France, Israel, Japan, Malay Archipelago New Guinea, Nigeria, Philippine Islands, South Africa, Sudan and Uganda (Schuh 1974, 1984, 1989 and Schuh & Menard 2011).

In this paper, genus *Hypseloecus* is recorded for the first time from India, five new species are described; all associated with Santalales of the genera *Dendrophthoe* and *Viscum* as hosts. This is the first record for India, mirids living on hemiparasitic plants.

### Material and methods

All specimens examined for the study are deposited in the collections of the Department of Entomology, Gandhi Krishi Vignan Kendra (GKVK), University of Agricultural Sciences, Bangalore (UASB), India. Morphological terminologies adopted follow Schuh and Menard (2011).

All measurements were made in millimeters, given in Table 1. Photographs were taken using a Leica M205 C microscope. Multiple images were taken at different depths and were combined using Combine ZM software. Illustrations of male genitalia were made using Leica DM2000 compound microscope attached with camera lucida. Field photographs were taken using Canon 7D, SLR camera fitted with 100mm macro lens and raynox lens converter.

**Etymology.** Named for the presence of a medial spine on the endosoma.

**Discussion.** *Hypseloecus spinosus* on the basis of male genitalic character appears close to *H. morobe* (Schuh) and *H. weirauchi* Schuh and Menard but differs from both the species by the presence of the medial spine. Externally *H. spinosus* can be distinguished by deep red coloration whereas *H. morobe* is reddish brown and *H. weirauchi* is pale green to yellow green.

**Material examined.** HOLOTYPE 1♂, INDIA: Karnataka: Sagar: Jog, 14°13'N, 74°48'E, 486 m, 18.i.2011, ex *Dendrophthoe* sp., Viraktamath, C.A., PARATYPE: 3♀, INDIA: Karnataka: Sagar: Jog, 14°13'N, 74°48'E, 486m, 18.i.2011, *Dendrophthoe* sp., Viraktamath, C.A. Other material: INDIA: Karnataka: Sirsi, 1♀, 25.v.2010, at light, Yeshwanth, H.M., Coorg: Chetthalli, 1♀, 28.v.2012, at light, Kumar, A.R.V. (UASB).

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