



<http://dx.doi.org/10.11646/zootaxa.3904.4.7>

<http://zoobank.org/urn:lsid:zoobank.org:pub:EFD33424-D714-4BA6-A6D4-76870358FE29>

## Two new species of the genus *Ectmetopterus* (Hemiptera: Miridae: Orthotylinae) feeding on grass in India

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### Abstract

Two new species, *Ectmetopterus mishmiensis* sp. nov. from Arunachal Pradesh and *E. nandiensis* sp. nov. from Karnataka, India are described. Documentation is provided to substantiate that both new species feed on the grass *Paspalum* (Poaceae). The genus is recorded for the first time from India. Descriptions of the new species are provided, along with digital images of the genitalia, dorsal habitus, and images of live individuals on their host plant.

**Key words:** taxonomy, Halticini, *Ectmetopterus*, *Paspalum*, host plants

### Introduction

The subfamily Orthotylinae comprises six tribes and 259 genera. The tribe Halticini contains 39 genera worldwide, of which only 5 genera (*Acratheus* in India, *Dimorphocoris* in Central Asia, *Halticus* in South East Asia, *Ectmetopterus* in Eastern Asia, and *Scirtetellus* in Central and North Asia) are known from the Oriental region. Tatarnic & Cassis (2012) provided generic conspectus of the Halticini, redescribed the tribe, and presented a generic level phylogenetic hypothesis for the tribe. Based on similarities in male genitalia, five species of *Halticus* (*H. maculipes* Zou, 1985, *H. niger* Zou, 1985, and *H. fuscous* Zou, 1985 all from China and *H. bicoloratus* Kulik, 1965 and *H. comitans* Josifov and Kerzhner, 1972 from Russia) were transferred to *Ectmetopterus* as new combinations. All five species are from eastern Asia and no information on their biology or host plant association is available.

This paper describes, *Ectmetopterus mishmiensis* sp. nov. and *E. nandiensis* sp. nov. and represents the first records of *Ectmetopterus* from India, including the first host record for the genus. Both new species breed on the grass, *Paspalum* (Poaceae), with adult and immature stages feeding frequently on the leaves leaving small, pale or whitish longitudinal markings on the surface where the cell contents were removed, resulting in a whitish speckling (bleached appearance) on the foliage. However, the species of another halticine tribe *Labops* exclusively utilizes grass (Poaceae) as its hosts (Mills 1939).

This paper is a first contribution towards understanding the distribution and host–plant association of *Ectmetopterus*.

### Material and methods

All the specimens examined in the study are deposited in the collections of the Department of Entomology, Gandhi Krishi Vignan Kendra (GKVK), University of Agricultural Sciences Bangalore (UASB), India.

The morphological terminologies adopted follow Konstantinov (2003) for male genitalia and Davis (1955) for female genitalia. Dorsal color images were made using Leica M205 C microscope. Images of male and female genitalic structures were taken with a Leica DM2000 microscope attached with Leica DFC 420 digital camera. Multiple images were taken at different depths and were combined using Combine ZM software. All measurements

sclerotized basally; endosoma with weakly sclerotized medial structure extending from secondary gonopore (Fig. 12).

**Female.** Similar to male, total length 2.16–2.30, width pronotum 0.75–0.79. **Genitalia** (Fig.13): Sclerotized rings widely separated, elongate–ovoid, diagonal; posterior wall of bursa copulatrix membranous.

**Distribution.** The species is known from the sole locality, Nandi Hills, Chickaballapur of Karnataka, India.

**Host.** Breeds on *Paspalum* sp. (Poaceae) both adults and immature stages feed on the grass surface leaving whitish markings (Figs.17–19).

**Etymology.** The specific epithet is a noun in apposition and refers to the type locality.

**Discussion.** *Ectmetopterus nandiensis* can be easily confused with species of other brachypterous genera of Halticini, but is readily distinguished by the trifurcate left paramere and endosoma without elongate serrated spicules. This species is easily distinguished from other species of *Ectmetopterus* by its brachypterous form whereas all other known species are macropterous.

**Material examined.** HOLOTYPE 1♂, INDIA: Karnataka: Chickaballapur: Nandi Hills, 1478m, 06.ix.2013, ex *Paspalum* sp., Yeshwanth, H. M., PARATYPES: 10♂, 10♀, INDIA: Karnataka: Chickaballapur: Nandi Hills, 1478m, 06.ix.2013, ex *Paspalum* sp., Yeshwanth, H. M., Other material: same data, 26♂ and 10♀ (UASB).

## Acknowledgments

I am grateful to Dr. C. A. Viraktamath, Emeritus Professor, Department of Entomology UAS, GKVK, for his constant support and encouragement and Dr. Nikolai J Tataric, Curator of Entomology, Western Australian Museum, for his valuable comments on the identity of the species and comments on an earlier draft of this paper. I am also indebted to Dr. Katrina Menard and Dr. Michael D. Schwartz, for reviewing the manuscript and whose comments have all improved the manuscript. The work is supported by ICAR Network Project on Insect Biosystematics funded by the Indian Council of Agricultural Research, New Delhi.

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