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Occurrence of a new species of *Letana* (Orthoptera: Tettigoniidae: Phaneropterinae) in India

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Abstract

A new species of the Oriental genus *Letana*, Walker (Orthoptera: Tettigoniidae: Phaneropterinae), proposed as *Letana dentata* sp. nov., collected from the North-eastern province, Meghalaya, India (Ri bhoi 90°55'15 to 91°16' latitude and 25°40' to 25°21' longitude, 993 MSL), is described together with the morphological characterization of eight reported species. Of these, *Letana rubescens* (Stål, 1861) collected from Shalimar, Srinagar, Jammu and Kashmir (India) is being reported for the first time from India. The other species of *Letana* include: *L. atomifera*, *L. bulbosa*, *L. inflata*, *L. infurcata*, *L. pyrifer* and *L. rufonata*. Taxonomic and diagnostic characters with illustrations of the head, pronotum, ventral view of left tegmina to show stridulatory file teeth and the genitalia (supra-anal plate and subgenital plate) including the phallus sclerite has been given.

Key words: Tettigoniidae, Phaneropterinae, *Letana* new species, new record, India

Introduction

The tettigoniid subfamily Phaneropterinae is widespread (Jago, 1997) and well described (Eades *et al.*, 2007) that are known to occupy open habitats (Kocarek and Holusa, 2006). The Oriental genus, *Letana* Walker, 1869 is an attractive long horned katydid with a good number of species reported from India. Ingrisch (1990) revised the Oriental genus *Letana* recognizing 22 species. Though they are often medium to large in size, adult *Letana* (12–42 mm) happen to be poorly known; earlier, Ingrisch and Shishodia (2000) reported some new species of *Letana* from India to which addition of a new species is being proposed in this paper.

Material and methods

The specimens studied were field collected during survey and collection trips conducted in the states of Gujarat; Madhya Pradesh; Kerala; Maharashtra; Meghalaya; Rajasthan; Jammu & Kashmir; Tamil Nadu and Karnataka during 2006 to 2015 under the ICAR Network Project on Insect Biosystematics, Rajasthan College of Agriculture, Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan. The collections were made by sweep net during the day and hand collection using head lamp at night. Some specimens could also be handpicked at night from bushes near street lamps. Digital photographs of specimens and their body parts were taken with the help of Stereozoom Binoculars, model Stemi 2000 C of Carl Zeiss make. The software used for linear measurements was Axio Vision L.E. 4.8; besides the graph paper method was also employed. The genitalia were dissected using the standard procedure advocated by Dirsh (1956) and Rattan Lal and Baldev Prasad (1959) for the study of male genitalia. The abdomen was detached with a micro-scissors and transferred to a test tube containing 10 per cent KOH, then slightly heated and later transferred to a glass cavity block with water. The digested soft tissues were removed, followed by repeated washings with RO (reverse osmosis) water and finally placed in the glass cavity block with some glycerine. Subsequently, the muscular tissues were also gently removed and the