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Taxonomic notes on genus *Coelotrypes* Bezzi (Diptera: Tephritidae: Trypetinae) with description of two new species

K. J. DAVID¹ & D. L. HANCOCK²

¹National Bureau of Agricultural Insect Resources, Bangalore-560024, Karnataka, India

²8/3 McPherson Close, Edge Hill, Cairns, Queensland 4870, Australia

Abstract

Two new species of *Coelotrypes* Bezzi, *C. meremmiae* **sp. n.** and *C. paralatilimbatus* **sp. n.** are described from India. Post-abdominal structures and the third instar larva of *C. luteifasciatus* (Senior-White) are also illustrated and described. A key to Oriental species of *Coelotrypes* is provided.

Key words: Convolvulaceae, Adramini, *Ipomoea*, *Argyreia*, *Meremmia*

Introduction

Coelotrypes Bezzi is predominantly an Afrotropical genus with 17 described species (Hancock, 1986; Hancock and Drew, 2005; Norrbom *et al.*, 1999), five occurring in the Oriental and Australian Regions (Permkam and Hancock, 1995; Hancock and Drew, 2005). Larvae are phytophagous and develop in the flower buds of plants belonging to the family Convolvulaceae. Of the three species previously recorded from the Oriental Region, only two have been reported from India, *C. luteifasciatus* (Senior-White) (Hancock and Drew, 2005) and *C. latilimbatus* (Enderlein) (David *et al.*, 2013). Collection and examination of additional specimens resembling *C. latilimbatus* from southern India revealed that the species reported as *C. latilimbatus* in David *et al.* (2013) was a misidentification and is an undescribed species. In this paper, adults and third instar larvae of *C. meremmiae* **sp. n.** and *C. paralatilimbatus* **sp. n.** are described and illustrated along with those of *C. luteifasciatus*. A key to Oriental species of *Coelotrypes* is provided.

Material and methods

Specimens are deposited in the following museum: ICAR-NBAIR—National Bureau of Agricultural Insect Resources, Bangalore, India.

Images of the specimens were acquired using a Leica DFC 420 camera mounted on a Leica M205A stereozoom microscope; images of genitalia were acquired using Axiocam 503 camera attached to Carl Zeiss Z2 and Leica DFC 425 camera mounted on a Leica DMLB 1000S microscope; the images were stacked and combined to a single image using Combine ZP (Hadley, 2011). Measurements of male and female genitalia were taken using a calibrated ocular micrometer fixed on a Leica DM1000 microscope. Terminology adopted here follows White *et al.* (1999).

Scanning Electron Microscopic images of the III instar larvae were acquired using Hitachi TM3030, facility maintained at ICAR-IIHR, Hessaraghatta, Bengaluru. Specimens preserved in 70% ethanol were kept for drying in tissue paper to absorb moisture; specimens were fixed on two-sided gum copper tape stuck to the stub. Specimens were placed in SEM chamber and evacuated before acquiring the images.