



A new species of the genus *Acria* Stephens, 1834 (Lepidoptera: Depressariidae: Acriinae) from India

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Abstract

A new species, *Acria meyricki* sp. nov. (Lepidoptera: Depressariidae: Acriinae) occurring on oil palm, is described from India. The status and nomenclature of the genus is reviewed and an annotated checklist of species is given. A key to the seven species known so far from the Indian subcontinent is provided.

Introduction

The genus *Acria* Stephens (1834) was originally included in the family Yponomeutidae, while it was listed under Cryptophasidae by Fletcher (1929). Hodges (1978) transferred it to the subfamily Depressariinae in the family Oecophoridae. Minet (1986), Hodges (1998) and Chen and Wu (2011) assigned *Acria* to Peleopodidae on account of the stalked hindwing veins Rs and M2 and the pupa without lateral condyles on the abdominal segments. On the basis of a large molecular and morphological dataset, Heikkilä *et al.* (2014) recently placed Acriinae in the newly delineated Depressariidae. This treatment is accepted and followed herein.

Acria includes 12 species (Meyrick 1905, 1908, 1915, 1923, 1930; Yuan, Zhang & Wang 2008; Chen & Wu 2011). They are distributed mainly throughout the Oriental Region (India, Sri Lanka and China) with some species also in Africa and Australia (Chen & Wu 2011). In addition to the six species known from India, a new species from Andhra Pradesh, South India, is added. It feeds on oil palm (*Elaeis guineensis* Jacq.). An annotated checklist of species and a key to the species occurring in India are provided. The mitochondrial cytochrome oxidase subunit I 5' region (mtCOI-5P) has been analyzed and the DNA barcode sequence submitted to NCBI GenBank.

Material and methods

The specimens included in the study were collected from oil palm gardens in Andhra Pradesh, India. The voucher material is deposited at the National Pusa Collection, Division of Entomology, Indian Agricultural Research Institute, New Delhi, India (NPC). Male and female genitalia studies were carried out as described by Robinson (1976) and the terminology follows Scoble (1992). The abdomen was treated in 10 % KOH for 10 to 20 min at 90°C using a Dry Block Heizgerät 2800. Subsequently genitalia were cleaned and stored in glycerol. For photographs, genitalia were placed on a slide in glycerol with a cover slip. Photographs were taken with a Leica DFC425C digital camera mounted on a Leica M205FA stereozoom microscope, and processed with Automontage[®] software. Forewing length was measured from the outer edge of the tegula at the wing base to the outermost edge of the apex. Photographs of adults were taken using a Sony DSLR-A700 digital camera. One DNA barcode (mitochondrial cytochrome oxidase subunit I 5' region; mtCOI-5P) of the holotype (from one hind and middle leg used for DNA extraction) was sequenced and submitted to NCBI GenBank (Accession number: KJ851539). The DNA extraction and sequence submission method follow Shashank *et al.* (2014). Sequences were analyzed using MEGA 5.0 software, applying the Kimura two-parameter model of evolutionary distance.