



Revision of the genus *Indomias* Marshall (Coleoptera, Curculionidae, Entiminae, Tanymecini) from India

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Abstract

Twenty-five species of the genus *Indomias* Marshall (1941) (Curculionidae, Entiminae) known from India are revised. Their taxonomic characters and economic importance are discussed. The previously known species of *Indomias* are redescribed, while fourteen new species are also described: *I. ajaykumari* sp. nov., *I. albizziae* sp. nov., *I. dubeyi* sp. nov., *I. kriparami* sp. nov., *I. maicykuttyae* sp. nov., *I. mangalai* sp. nov., *I. marshalli* sp. nov., *I. mayarami* sp. nov., *I. menoni* sp. nov., *I. premlali* sp. nov., *I. rajendrani* sp. nov., *I. ramakrishnani* sp. nov., *I. sharanagoudai* sp. nov., and *I. yercaudensis* sp. nov.. A new species of *Sympiezomias* (Faust, 1887) from India, *S. subserratipes* sp. nov., is also described. Annotated checklists of the species of *Indomias*, *Sympiezomias* and *Burmotragus* (Marshall, 1941) are given. A key to the species of *Indomias* is provided.

Key words: Curculionidae, Entiminae, Tanymericini, *Indomias*, *Sympiezomias*, *Burmotragus*, India, key

Introduction

The genus *Indomias* Marshall (1941) is endemic to India and Sri Lanka. Prior to this study, only 14 species were known. Some are pests and vectors of certain diseases of agricultural crops, forest trees and other economically important plants (Marshall, 1921; Ayyar, 1922; Atkinson, 1926; Hart and Rengaswamy, 1926; Anonymous, 1932, 1933; Wadhi and Batra, 1964; Singh, 1964). *Indomias* was originally described by Marshall (1941) based on species from the country formerly known as Burma. Marshall also clarified the synonymy of *Iphisomus* with *Sympiezomias*, and gave a comprehensive review of the species included. He proposed that the species included in *Sympiezomias* should be divided into three independent genera, namely *Indomias*, *Sympiezomias* and *Burmotragus*. *Indomias* is distinct from *Sympiezomias* and *Burmotragus* in many morphological, as well as, zoogeographic characters (Table 1). All three genera are distinct from other genera within Tanymericini as they possess a humeral callus or a swelling in the humeral region amounting to a humeral fold or false shoulder making them resemble some species of *Lepropus* in elytral form. In many species of *Indomias*, the shoulder is replaced by a simple swelling or humeral fold without any corresponding indentation on the lower surface of the elytra. In addition, many species also exhibit a small or very small basal lateral notch on the elytra, characteristic of weevils having functional wings. As the episternum is not fused with the metasternum, this suggests that the power of flight has been lost. Thus, *Indomias*, *Burmotragus* and *Sympiezomias* are characterized by non-functional hind wings and by the comparatively small size of the epimera of the mesosternum and relatively shorter metasternum. The wingless condition is most likely apomorphic and the variation in the humeral region of the elytra demonstrates the link with the plesiomorphic winged condition.

Neither Marshall (1941), nor any further study could clearly define *Indomias* as a genus in relation to closely allied genera, namely *Sympiezomias*, *Burmotragus*, *Geotragus*, *Tanymericus*, *Lepropus* and *Brachyaspistes*. Evidence obtained through genitalic studies was therefore also necessary. The species descriptions available needed additional illustrations and morphometrics of essential characters. This necessity became more apparent with the economic importance of many species. Hence, a revisionary study was undertaken on *Indomias* and results are presented herein.

Indomias is currently placed in the tribe Tanymericini of the subfamily Entiminae (Alonso-Zarazaga and Lyal, 1999). The analysis of *Indomias* with reference to its related genera revealed that there are distinct genitalic and morphological differences, such as: *Burmotragus* having the apex of the median lobe of aedeagus much broader and manubrium 0.7x as long as the median lobe (figs. 255, 256, 257), spiculum gastrale with basal prongs having a massive base and a more elongate apex (fig. 188), *Geotragus* with parameres of manubrium distinctly deflected (fig. 248), spermatheca with proximal and distal arms equal in length (fig. 148), spiculum ventrale with basal plate much longer than broad, sides straight and base with a pedicel (1.66:1) (fig. 157). In addition, the following characters will differentiate *Burmotragus* from *Indomias*: scutellum concealed, elytra without any humeral fold, the metasternal episternum distinct only in the basal half and fusing posteriorly with metasternum, mesosternal episternum much smaller than epimeron, venter with segment 2 separated from 1 by a curved suture. All these genera are similar to *Leptomias* as they