

Report on the range extension of *Rehimena phrynealis* (Walker) (*Spilomelinae*: *Pyraloidea*: *Lepidoptera*) in Western Ghats, India

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Abstract

The present communication deals with report on significant range extension of a *Spilomelinae* moth species *Rehimena phrynealis* (Walker) from southern Western Ghats of India. The male genitalic attributes of the species *phrynealis* Walker of the genus *Rehimena* Walker are described in details.

Keywords: Western Ghats, India, biodiversity hotspots, *Spilomelinae*, *Pyraloidea*, moths

Introduction

Genus *Rehimena* was established by Walker (1866)^[11] for *Rehimena dichromalis* Walker, 1866^[11] (by monotypy). Hampson (1896)^[2] studied two species under genus *Rehimena* i.e. *phrynealis* (Walker) and *striolalis* (Snellen) with *phrynealis* as type of genus. Klima (1939)^[4] listed six species under genus *Rehimena* but designated *dichromalis* as type species. Inoue (1982)^[3] described a new species *variegata* under this genus and also shifted *Botys surusalis* Hampson under genus *Rehimena*. Fletcher and Nye (1985) confirmed designation of *dichromalis* as type species of *Rehimena*. Currently, this genus is known by as many as ten species from the Globe and two species are known from India (Nuss *et al.* 2025)^[7]. In this scientific communication one species, *phrynealis* Walker is discussed in morphological and distributional details.

Material and Method

Nomenclature of Miller (1970)^[6] has been adopted for description of forewing and hindwing. Terminology of male genital attributes of Klots (1970)^[5] has been followed.

Morphology and Systematic Status

Rehimena phrynealis (Walker)

Botys phrynealis Walker, 1859^[10]; Cat.Lep. Het. Brit. Mus., 18: 630.

Rehimena phrynealis (Walker); Hampson, 1896^[2], Fauna of Brit. India, 4: 261.

Morphological Description

Head with frons and vertex beset with brownish scales; labial palpi brown. Thorax brown; forewing with orange-yellow antemedial band expanding and becoming very broad at costa, its outer edge dentate, a subquadrate yellow patch on costa before apex, widest at costa, a marginal orange line widening at apex, cilia orange, with more or less fuscous towards outer angle; hindwing fuscous, cilia often orange towards apex; legs with tibial spurs equal length.

Wing Description

Forewing with vein R_2 originating from cell, generally approximated to stalk of R_{3+4} , veins M_2 and M_3 from lower angle of cell, 1A always missing, 3A generally weak or

absent; hindwing with $Sc+R_1$ anastomized with Rs , veins M_2 and M_3 rarely stalked; frenulum single in male.

Wing expanse: Male - 21 mm.

Male genitalia

Uncus long and tapering at tip, two distinct outwardly projecting processes on either side of uncus; tegumen short and membranous; transtilla membranous; valva membranous flap like, costa inflated turning to a broadly rounded apex; juxta small and bow shaped; vinculum broad and membranous; saccus broad 'V' shaped; aedeagus of moderate length with sclerotization on its ventral wall; vesica with cluster of small spines towards tip.

Conclusion

As per Hampson (1896)^[2] the localities mentioned for the concerned species are Sikkim, Khasi Hills (Meghalaya), Naga Hills (Nagaland), Burma and Indonesia with no exact locations. Nearest and latest locality for the species under discussion is in Central Western Ghats region in the state of Maharashtra (Reddy and Murthy, 2021)^[8]. Singh *et al.*, 2022^[9] have loosely mentioned the taxon in India without specifying any location. Thus, the present record is first report from Western Ghats region of India. Exact locality of the findings are three male specimens from B.R. Hills, Karnataka. This is an ancient and geologically complex formation in peninsular India, significantly distant from hitherto known localities. Present finding indicates towards more intensive and extensive collection cum survey tours to the Western Ghats and other peninsular regions of India for better understanding of the taxonomic status and conservation.

Note: Collected specimen(s) of the concerned moth species are housed in the Museum of Department of Zoology and Environmental Sciences, Punjabi University, Patiala.

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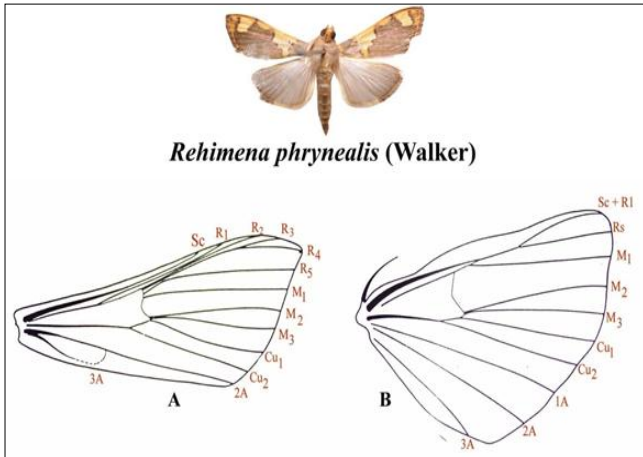


Fig 1: *Rehimena phrynealis* (Walker); A and B forewing and hind wing respectively with detailed venation and labelling

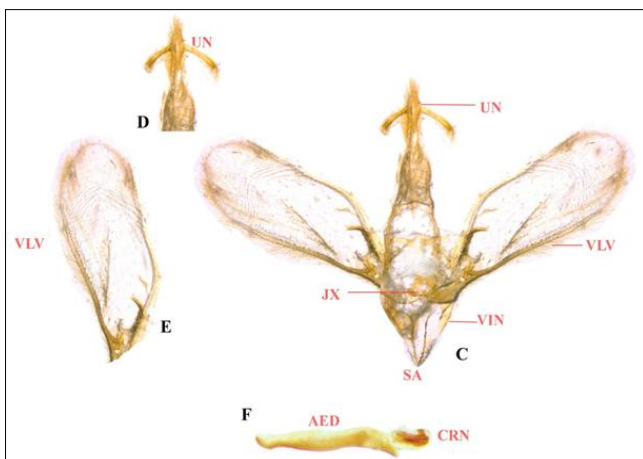


Fig 2: Male genital attributes; valva and aedeagus illustrated. C Uncus (whole). D Uncus tip enlarged. E Valva enlarged. F Aedeagus with cornuti.

Abbreviations of Labelling

Sc	Sub Costa Vein
R ₁ - R ₅	Radial Veins
M ₁ - M ₃	Medial Veins
Cu ₁ - Cu ₂	Cubital Veins
1A - 2A - 3A	Anal Veins
Sc + R ₁	Fusion of Sub Costa and Radial Vein
UN	Uncus
VLV	Valva
VIN	Vinculum
JX	Juxta
SA	Saccus
AED	Aedeagus
CRN	Cornuti

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