

## Taxonomic Notes on Genus *Edosa* (Lepidoptera: Tineidae) with New Records to Western Ghats

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**Abstract:** In the family Tineidea, the labial palpi are stout, erect, bearing piliform scales (bristles) from the apical and lateral surface of second segments. In the forewing, vein R4 usually terminates on costa. In the male external genitalia, the valva and saccus showed several characters useful in the segregation of species. In the present study two species namely, *Edosa glossoptera* Rose and Pathania and *E. opsigona* (Meyrick) have reported from the Western Ghats. *Edosa glossoptera* is a new allotype species to science. All the species possess unicolour forewing.

**Key words:** Tineidea · Labial palpi · Allotype · *Edosa* · Western Ghats

### INTRODUCTION

Most Tineidae are recognizable by the labial palpi having bristles on the second segment and having a long terminal segment; the head of many species has tufts of erect scales. Their wings are held in tectiform or tent-like position when at rest and the moths exhibit have a characteristic scuttling run.

### MATERIAL AND METHODS

The adult moths were collected during the night time with the help of portable light traps. Besides this, some specimens were collected at night to an illuminated vertical white sheet. The light source we used was an 18-watt CFL (Compact Fluorescent Lamp) powered by a 12-watt car battery [1]. The methodology discussed by workers such as Mikkola and Landry and Landry [2-3] was followed for the pinning, stretching and preservation of specimens. The standard techniques given by Zimmerman and Robinson *et al.*, [4-5] have been followed for wings and genitalia respectively. With regard to systematic arrangement of families [6] classification for Lepidoptera were followed.

### Observations

**Genus:** *Edosa* Walker

*Edosa* Walker, 1866. *List Specimens lepid. Insects. Colln. Br. Mus.* 35: 1818.

### Key to Species of the Genus *Edosa*:

- Alar expanse 30 mm; forewing golden in colour; Male genitalia with valva sickle shape ..... ***glossoptera* Rose and Pathania**
- Alar expanse 22-23 mm; forewing golden in colour; Male genitalia with valvae long broader at base ..... 2
- Alar expanse: 22-23 mm, valva with costa concave, vinculum and tegumen form a small cylinder ----- ***opsigona* Meyrick.**

**Abbreviations:** 1A+2A - Vein representing fused first and second anal vein; CuA1 - First anterior cubital vein; CuA2 - Second anterior cubital vein; M1 - First median vein; M2 - Second median vein; M3 - Third median vein; R1 - First radial vein; R2 - Second radial vein; R3 - Third radial vein; R4 - Fourth radial vein; R5 - Fifth radial vein; Rs - Radial sector; Sc - Subcostal vein; Sc+R1 - Stalk of subcostal and first radial vein;

**Edosa Glossoptera [7]:**

Collection data: Peechi; November, 2003 (2 ex.).

Distribution: Himachal Pradesh.

Host: Unknown.

**Male:** Alar expanse 30 mm. Vertex and frons decorated with erect, yellowish scales; labial palpus small, porrect, second segment long, with black scales (bristles), third segment small; antenna long filiform, light grey colour, about equal to length of forewing; thorax black; forewing elongate, glossy black scaled, costa slightly arched at base and 2/3<sup>rd</sup> apex rounded, termen oblique, tornus convex and margin convex, cilia glossy black on termen margin; hind wing deep grey scaled, broad, costa straight, curved at 2/3<sup>rd</sup>, apex rounded, termen convex, tornus poorly defined, anal margin convex, anal and termen margin with cilia grey in colour; prothoracic and mesothoracic legs light fuscous, metathoracic leg creamish, hind tibia with creamish, erect, elongate scales.

**Wing Venation:** Fore wing with Sc ending at 3/4<sup>th</sup> of costa, R1 ending costa beyond 3/4<sup>th</sup>, nearer to Sc at ending. R2, R3 free parallel, R3 arising at angle of discal cell, R3 to costa, R4 and R5 parallel, closer near base, R5 to termen, M1 arising at middle of discocellular, M2, M3 free, Chorda arising at middle of discal cell, ending at R5 formed an accessory cell, M3 and CuA1 connate at angle of cell, CuA2 free, arising beyond 3/4<sup>th</sup> of discal cell; hind wing with Sc+R1 ending beyond 3/4<sup>th</sup> of costa, Rs parallel, Rs to costa, M1, M2, M3 free, M3 and CuA1 connate, CuA2 from middle of discal cell, Cup vestigial, visible at 1/3<sup>rd</sup> distally, 1A+ 2A short, forked at base.

**Male Genitalia:** Uncus long, broader apically, bifid in shape, sparsely spinose at the apex, dilated in the middle; socii absent; gnathos absent; tegumen small and broad; vinculum forms a sclerotized, moderately large cylinder, more or less emarginated ventrally; saccus is low; juxta small, cap-like, fused with tegumen, weakly sclerotized; valvae long, narrow and apically curved; costal margin almost straight having moderately long hairs, saccular margin slightly convex with small hook-shaped processes directed towards juxta at the base,

cucullus convex dorsally, apex pointed, concave ventrally and hairy; aedeagus longer than valvae, stout, broad at the base, dilated near middle, slightly bent at about 2/3<sup>rd</sup> distance from base, apex rounded; vesica lacking.

**Female Genitalia:** Ovipositor long, thin, with hairs all around; anterior apophyses about 2/3 length of posterior apophyses; ostium bursae broad, centrally placed; ductus bursae long and thin, almost straight, broader near corpus bursae; corpus bursae ovate in shape, simple; signum long and coiled.

**Remarks:** New record for Western Ghats and new allotype to science. Male genitalia of this species have been described.

**Edosa opsigona (Meyrick) [8]:**

Collection data: Peechi; November, 2003 (2 ex.).

Distribution: N. Coorg, Ceylon.

Host: Unknown.

Alar expanse: 22-23 mm.

**Male Genitalia:** Uncus long, bifid apically, broader at middle, apex pointed; socii and gnathos lacking; tegumen small and broad; vinculum forms a moderately sclerotized, large cylinder, more or less emarginated ventrally; saccus low; juxta small, somewhat cap-like, fused with the tegumen, strongly sclerotized; valvae, elongated and broad, densely setose on the inner surface, costal margin slightly concave, saccular margin almost straight, with a moderately long, hook-like process at the base directed inwards; cucullus with long hairs ventrally, concave dorsally, apex pointed; aedeagus long, almost equal to the length of valvae, broader at middle and dilated, basally broad, apically narrowed with a rounded apex; cornuti absent in vesica.

**Remarks:** *Edosa glossoptera* Rose and Pathania is closely allied to *E. opsigona* Meyrick in respect of male genitalic character such as shape of the tegumen, vinculum and uncus but differs in wing maculation of forewing. In the former species, the wings are glossy black and the valvae sickle-shaped in the male genitalia, whereas, in the latter species, the wings are golden coloured.

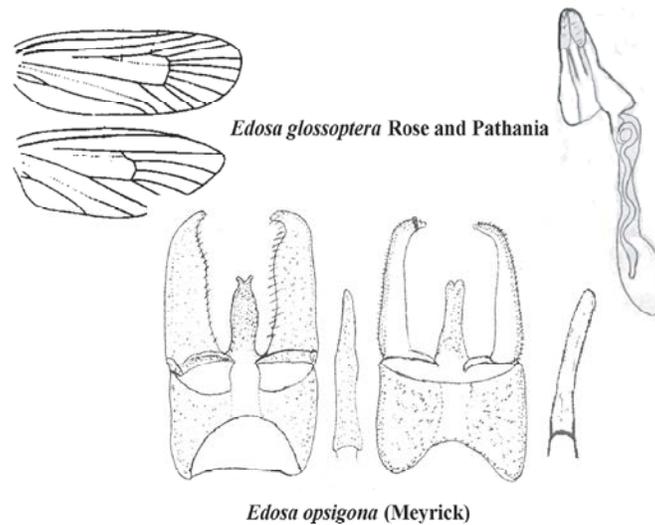


Plate 1:

#### ACKNOWLEDGEMENTS

The author is grateful to the Ministry of Environment and Forest (GOI), New Delhi for funding the project on moths and to the Director, KFRI, Trichur, Kerala for providing facilities to run the coordinating centre on Microlepidoptera under the All India Coordinated project on Taxonomy (AICOPTAX).

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