

NEW RECORD AND DESCRIPTION OF GENITALIA OF *DEIPHOB* *INCISA* WERNER, 1933 (MANTODEA: INSECTA)

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INTRODUCTION

Werner (1933) first described *Deiphobe incisa* from Uttar Pradesh of India. Its known distribution in India is Jharkhand, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Uttar Pradesh. It is also found in the adjacent countries Myanmar and Nepal (Mukherjee, *et al.*, 2014). The characteristic features of this species are narrow crescent shaped frontal sclerite, normal wings in male (reduced in female) and the hind wings bear a round pale patch near apex of the discoidal area.

A male from Onda, Dist. Bankura of West Bengal has been collected and studied here. The male has been described in detail and dissected for the study of the genital complex. Photographs of taxonomic structures are given. All the measurements are in millimeter.

TAXONOMY

Class INSECTA

Order MANTODEA Latreille, 1802

Subfamily MIOMANTINAE Westwood, 1889

Deiphobe incisa Werner, 1933: 900-901. Holotype female, paratype male (IFRI, Dehra Dun); syntype male (BMNH). Type locality: India, Uttar Pradesh.

Distribution: India: Jharkhand, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Uttar Pradesh, West Bengal; Myanmar; Nepal.

DESCRIPTION

Body (Fig. 1) pale brownish, long, stout built with normal wings. Vertex with scattered black spots, confluent with the eyes, lateral lobes less elevated than the inner lobes of vertex. Ocelli big. Frontal sclerite (Fig. 3) crescent shaped, pale brown, with two minute dirty white tubercles.

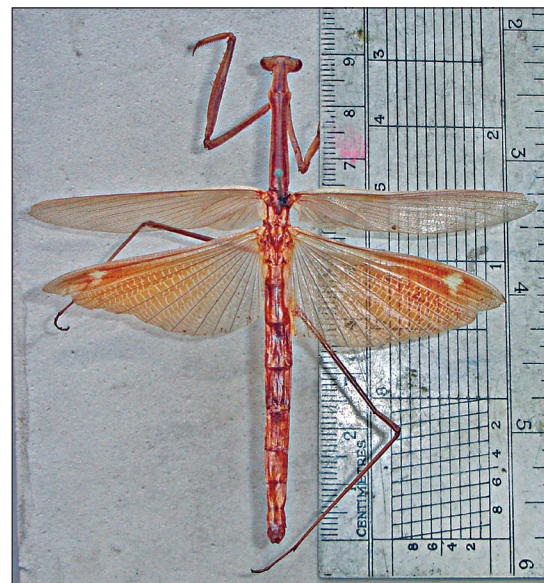


Fig. 1. Dorsol view of male

Pronotum pale brown, smooth; prozona denticulated at borders, metazona long, a fine carina visible only in front and back of its length; ventrally (Fig. 2) pale yellow; with a distinct transverse black band just posterior to coxal joint, rest of the area behind this band

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with few small rounded black spots. Mesosternum and metasternum uniformly pale brownish and spotless.



Fig. 2. Prothorax

In fore legs, coxae internally pale brown, with a blackish transverse band in the proximal half; the internal apical lobes divergent; with 18 tubercular spines (bigger and few smaller). Femur internally pale brown, with a blackish band near femoral brush; with 13-14 internal spines (6 longer), 4 external and 4 discoidal spines, all spines are black at tips only. Fore tibiae internally pale whitish, with 14 internal and 8 external spines. Four posterior legs long, with apical spines.



Fig. 3. Front view of head

In the fore wing (Fig. 1), the costal area

greenish-white, opaque, subcosta brown; discoidal and anal areas transparent, uniformly pale brown, anal membrane transparent; stigma colourless. Hind wing (Fig. 1) transparent, colourless at base; costal area almost colourless; discoidal area colourless upto basal 2/3rd length, next portion uniformly pale brown, with a big whitish patch in the middle of the distal half of discoidal area; the small distalmost length of this area is again colourless. All longitudinal veins brown; cross veins of anal area whitish.

Supra anal plate trapezoid, incised at apex.

Genitalia (Fig. 4): Right epiphallus with anterior incurved spine with irregular lower edge; its posterior edge narrowed to a rounded extremity. Hypophallus oval and broad, its posterior end quite narrowed, triangular with the rim chitinized. The left epiphallus has a median thickened area (apophysis of pseudophallus); its anterior end is a small flat square plate with thickened and finely serrated rim; posterior end distinct, sharp spine like and marked by transverse ridges; titillator nearly of uniform width along length, flat and blunt at apex.

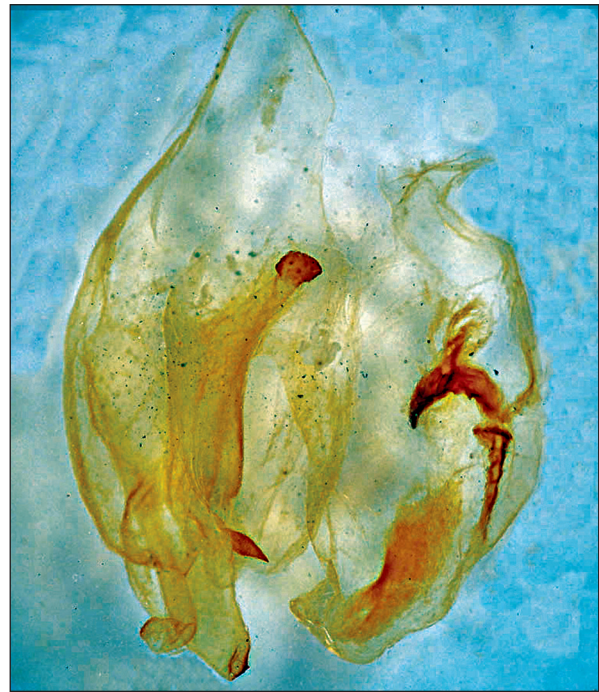


Fig. 4. Male genitalia

Measurements (mm): Total length 86;

pronotum $7.5+17=24.5$; fore coxa 14, fore femur 20, fore tibia 9.5; fore wing 44, hind wing 40.

Material examined: 1 male, India: West Bengal: Dist. Bankura, Onda, 23.13° N, 87.20° E, presented by Pradeep Ghosh.

DISCUSSION

The male example was collected from the bush adjoining the dry bed of Dwarakeswar river. The area supports scanty vegetation. This species is already known to be found from the neighboring countries (Myanmar and Nepal, Mukherjee *et al.*, 2014) and also from some states of India. This species is very similar to *Deiphobe indica* Giglio-Tos, 1916. It is characterized by the incised supra anal plate. Werner (1933) mentioned that this species is longer than *Deiphobe brunneri* (Saussure, 1871) and *Deiphobe indica* Giglio-Tos, 1916.

The observations by Sureshan and Sambath (2012) are interesting. The present specimen differs from that of the authors by the absence of (i) median faint black line over metazona (ii) scattered black granules on the disc of pronotum (iii) in fore wings, yellowish-green costal area; brown and light green and semi-opaque discoidal area; blackish anal fold; (iv) in hind wing, violet black discoidal area. The blackish anal fold of fore wing is also seen in *Deiphobe indica* Giglio-Tos (1916). In present specimen, the prosternum has few small rounded black spots (also observed by Mukherjee *et al.*, 1995 and Chatterjee *et al.*, 2015); in fore wings the costal area is greenish-white, discoidal and anal area transparent (also observed by Mukherjee *et al.*, 1995); hind wing almost transparent and colourless at base; its

costal area almost colourless and the discoidal area colourless except a small distal portion. Some observations in the female example of this species by Chatterjee *et al.* (2015) are similar to that of Sureshan and Sambath (2012) such as black anal fold of fore wings, median faint black line over metazona represented by blackish line and entirely granulose disc of pronotum; basal area of hind wing colourless. However, the specimen observed by Chatterjee *et al.* (2015), the hind wing has its all longitudinal veins brown, costal area black near basal region, base of discoidal area pale yellow and black near middle and finally the anal area entirely black with white cross veins. The hypophallus posteriorly ends in a squarish area with chitinized rim in the present specimen but which is distinctly spine like in the specimen observed by Sureshan and Sambath (2012) (photo-4, page 127). It is unclear if this is due to mounting of the material during photography or not. In spite all these morphological disparities, the genitalia observed in these two cases are similar which prove the specimens are conspecific and regional variations are exhibited.

SUMMARY

Deiphobe incisa Werner, 1933 is described in details and this is a first record from West Bengal. The description of this male mantis shows some new features which have been discussed with the findings of previous authors. The male genital complex is described herewith and compared with the earlier description.

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