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## DESCRIPTION OF THREE SPECIES OF INDIAN MANTIDS (INSECTA : MANTODEA) FROM MAHARASHTRA

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### INTRODUCTION

This paper illustrates the hitherto unpublished females of *Amantis subirina* and *Deiphobe brevipennis*. Along with this, additional character variation as observed in female of *Hierodula assamensis* is also provided. Photographs of relevant parts are included here. In remark, dispute regarding type location is given.

### DESCRIPTION

#### 1. *Amantis subirina* Giglio-Tos 1915

(Pictures 1a and 1b female)

Body blackish (both dorsally and ventrally). Frontal sclerite trapezoid (upper side nearly straight), entirely black, no carina. Edge of vertex a little above eyes, 4 grooved, juxtacular lobes a bit prominent, with scattered brownish spots. Ocelli minute. Pronotum dorsally with scattered brown spots, margins finely toothed at prozona (less prominent in metazona); surface with distinct bosselles of which two basal are most prominent. Fore coxa without any colour patch (excepting a small black patch at base (internally)); with minute spines at anterior edge; internal apical lobes divergent. Fore femur triangular, externally with 3 brownish bands, internally entirely black (except at claw groove and in the middle of claw groove and distal end); claw groove towards base; discoidal spines 4 in number, almost black and blackish near base; internal spines 11 in number, entirely blackish (except near base) and black at tips; external spines 4 in number, (coloured as internal

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spines); proximal two external spines closer to each other. Fore tibia with 10-11 external and 11 internal spines; all tarsal segments black (1<sup>st</sup> one is black except near basal part). Fore and hind wing pads are continuous with tergal plates. Middle and hind femora and tibia triannulated by brown ((less on posteriors). Hind metatarsus as long as (appears a bit longer than) rest segments taken together.

*Measurements (mm)* : Total length 14.0, pronotum 3.5, fore coxa 4.3, fore femur 3.8, fore tibia 2.1.

*Material examined* : 1 female, collected at Amboli Ghat, Maharashtra, 24/10/2004, coll. Ashok Captain.

*Remark* : The female of this species was not described before. The specimen was observed to lay eggs and hence it a mature female with reduced wings. Ehrmann (2002) mentioned the type male is in Zoological Survey of India but this was not found.

*Distribution* : India : Assam, Maharashtra, West Bengal.

## 2. *Deiphobe brevipennis* Sjöstedt 1930

(Pictures 2a and 2b, female)

Colour brown. Frontal sclerite narrow. Pronotum with both edges beset with blunt whitish tubercular spines; carina raised and tuberculated; entire dorsal surface beset with minute tubercles; metazona ventrally with a pair of oval elongated mark. Fore coxa with whitish tubercular spines; internal apical lobes divergent, with a black spot ventrally at coxal joint (in male). Fore coxae a little shorter than metazona. Fore femur with 4 discoidal, 4 external, and 14 internal spines and all black at tips only; no visible serration along outer margin (except rows of granular structure on inside along the outer spines and such rows are also seen on disc of femur); claw groove almost in the middle. Fore tibia with 8–9 external spines, 12–13 internal spines and all black at tips. Middle and hind tibia ventrally spinulated (more distinct on middle tibia). Spinulation on middle and hind femora not visible. Fore wing opaque; costal area pale yellow, discoidal area brownish, anal area black. Hind wing similarly coloured but the discoidal area posteriorly mixed with black; anal area black. Supra anal plate longer than broad, keeled and apex acute-angular, extends beyond the abdominal tip.

*Measurements(mm)* : Total length G 53.0, E 58.0; pronotum G 18.0, E 20.0; metazona G 13.5, E 14.0; fore coxa G 9.5, E 11.0; fore femur G 12.0, E 14.5; fore tibia G 4.5, E 6.0; length of supra-anal plate G 5.0, E 3.2; fore wing pad G 7.0, E 6.7.

*Materials examined* : One male and one female, collected on Torna fort, Maharashtra, October 2004, coll. Ashok Captain.

*Remarks* : So far un-described female has been described here along with other characters. Some important characters observed are : fore tibia with 8–9 external spines and 12–13 internal spines (all black at tips); fore wing with black anal area; hind wing with the discoidal area mixed with black at posterior part and its anal area black; supra anal plate longer than broad, keeled.

*Distribution* : India : Himachal Pradesh, Maharashtra.

### 3. *Hierodula assamensis* Mukherjee 1995

(Pictures 3a and 3b, female)

Body brown. Frontal sclerite transverse, carina not distinct, upper margin very widely arched. Pronotum finely serrated along edges. Metazona almost as long as anterior coxa, carinated, prosternum with two blackish bands towards basal area and the posterior band more black; mesosternum black at anterior area that bears a pair of rounded and a bit elevated whitish spots. Fore coxa with four whitish, obtuse tubercular premarginal spines and few similar spinules among them; no callous spots inside the coxa; narrow black band at apices of internal apical lobes. Fore femur deep brownish; discoidal and longer internal spines (7 in number) and their bases are reddish-brown (sockets are deep brown and one socket of longer internal spine black); 15 internal spines in total. Fore tibia with a distinct black spot at proximal dorsal end; with 12–14 internal and 11 external spines; tarsal segments black at distal ends (both externally and internally). Fore wing brown, with colourless punctures; stigma nearly rectangular and cream-yellow; hind wing transparent. Four posterior femora with apical spines.

*Measurements (mm)* : Total length 69.0, pronotum 21.5, metazona 15.0, fore coxa 13.5, fore femur 19.0, fore tibia 8.5, fore wing 53.0, hind wing 46.5.

*Material examined* : One female, Collected in Pune off Sholapur Road (Pune Wanowari Road), February 2004, coll. Rahul Paturkar.

*Remarks* : The additional characters of the present female of this species are : frontal sclerite without visible carina, upper margin convex (i.e., very widely arched); prosternum with two blackish bands towards basal area (posterior band deeper black); fore coxa with apices of internal apical lobes with narrow black band; fore tibia with a distinct black spot at proximal dorsal end.

*Distribution* : India : Arunachal Pradesh, Assam, Maharashtra, Meghalaya.

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