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Cover: Mugger Crocodile basking on the banks of Savitri River at Mahad in Maharashtra, India. © Utkarsha M. Chavan.



## Rediscovery of an interesting preying mantis *Deiphobella laticeps* (Mantodea: Rivetiniidae) from Maharashtra, India

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**Abstract:** *Deiphobella laticeps* (Wood Mason, 1876), is an interesting preying mantis, rediscovered from Maharashtra State, India, after considerable lapse of time since its original description.

**Keywords:** Deiphobinae, Deiphobini, Dictyoptera, *Fischeria*, rediscovered.

Genus *Deiphobella* GiglioTos, 1916 was erected by Giglio-Tos to accommodate Wood-Mason's species *Fischeria laticeps* which was described in 1876. At present, there are only two species under this genus: *Deiphobella laticeps* (Wood Mason, 1876) and *Deiphobella gardneri* (Werner, 1935). This genus belongs to the family Rivetiniidae and the subfamily Deiphobinae as per the recent classification by Schwarz & Roy (2019).

Earlier, Mukherjee et al. (1995) had placed this genus in the family Mantidae, subfamily Mantinae and the tribe Miomantini while in the subsequent classification it was placed in the tribe Rivetiniini (Ehrmann 2002). The genus is oriental in distribution and is so far known from India and Sri Lanka only.

Two specimens, one female from Pune, Maharashtra and one male from Bengaluru, Karnataka, were identified

as *Deiphobella laticeps* based on the key provided by Mukherjee et al. (1995). The genus *Deiphobella* can be easily identified by its laterally conical eyes and sharp triangular supra-anal plate.

The two species under this genus, *Deiphobella laticeps* and *D. gardneri*, are differentiated on the basis of smooth or granular coxa and lower frons (frontal sclerite) with or without black band. *Deiphobella laticeps* has minutely granular fore coxa and a black band on lower frons. According to Mukherjee et al. (1995), the species *Deiphobella laticeps* is known only from Karnataka (Mysuru) in India and Sri Lanka while the other species is known only from Uttar Pradesh (type locality: Chakata Range, Haldwani, now in Naini Tal District, Uttarakhand) in India. Rao et al. (2005) reported the species from Andhra (Kurnool) extending its distribution to the east and the presence of this species in Pune, Maharashtra (Ghate & Ranade 2002), is northward extension of the range of this species. Vyjayandi (2007) reported this species from Kerala, which is further south of Karnataka. Ghate et al. (2012) also enlisted this species in the checklist of Mantodea of Maharashtra. In most of the localities this species was collected from patches of grass.

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We also checked the original description of *Fischeria laticeps* by Wood-Mason (1876) and the original diagnosis of the genus *Deiphobella* by Giglio-Tos (1916). This helped us to confirm the identity of the species. This paper briefly redescribes and illustrates *D. laticeps* with some terms that are recently introduced by Brannoch et al. (2017).

#### Taxonomic Position as per Schwarz & Roy (2019)

Superfamily Eremiphiloidea Saussure, 1869  
Family Rivetiniidae Ehrmann & Roy, 2002  
Subfamily Deiphobinae Schwarz & Roy, 2019  
Tribe Deiphobini Schwarz & Roy, 2019  
Genus *Deiphobella* Giglio-Tos, 1916  
Species *Deiphobella laticeps* (Wood-Mason, 1876)  
(for synonyms see Ehrmann 2002)

#### Brief redescription of *Deiphobella laticeps* Female

General body size and colouration: Large, elongate and slender insect; overall colour dark brown but reddish-brown at places,

Head: much broader than long (because of conical projecting eyes). Vertex smooth, without prominent grooves, flat and wide, its upper edge slightly convex above level of eyes and continuous with eyes. Eyes laterally conical (Image 2A). Ocelli small. Antennae long, filiform, many segmented. Lower frons transverse, with black band.

Pronotum: narrow, elongate; supra-coxal dilation moderate. Lateral margins of pronotum denticulate; denticles denser in prozona. Disc of prozona dorsally and ventrally with numerous prominent granules arranged in four rows, two on either side of median sulcus. Anterior one third part of metazona with obtuse median carina. Pronotum narrow at supra-coxal dilation, gradually becoming broader towards posterior end. Overall pronotum more or less parallel sided with few granules on the disc. Metazona much longer than fore coxa (Image 1A,B, 3A,B).

Fore legs: coxae shorter than metazona, dorsally few small granules or tubercles are seen only on well raised carina; internally (antero ventral side) finely granulated; distally little widened; coxal lobes (preapical lobes) divergent. Fore femur slender, dorsal margin with few blunt dark brown tubercles; both edges of femur almost parallel sided with spines present in distal half only, internal (antero ventral) spines – 14; external (postero ventral) spines – 4; discoidal spines – 4; all spines black at tips only. First three discoidal spines are very closely placed whereas fourth spine is smaller and is placed considerably away from the first three. Antero ventrally

femora are yellowish, with few blunt tubercles; claw groove (tibial spur groove) is situated in front of middle. Tibia slender, one third shorter than femora; antero ventral spines – left 16/ right 15 and postero ventral spines – 8 (Image 2B,C).

Mid and hind legs: long, slender, smooth, without any spines or spinules on coxa and femora, but few spinules are present on tibia.

Wings: very short in female (brachypterous); fore wings opaque, costal area of fore wings brownish-yellow, anal area smoky, discoidal area smoky brown with a large oval brownish blotch bordered by blackish bands on either side. Hind wings small, smoky brown, costal area dark opaque brown with an apical pale yellow band, on either side of which is a dark brown band; rest of wing translucent with dark brown veins and pale cross veins.

Abdomen: segments longer than broad, except for terminal segment. In female, supra anal plate triangular, pointed and carinate.

#### Male and female difference

Male shorter in length (but exact length in our specimen is not known as last three segments are broken), and less robust; juxta-ocular lobes well marked; antero-ventral spines on femora 16; spines are thin and slender. Wings well developed. Fore wings narrow, with brown patch in anal region. Hind wings broad, translucent, smoky with dark brown longitudinal veins and white transverse veins. Costal area somewhat opaque brown with a magenta tinge in some part and with a pre-apical pale cream large blotch with its distal and proximal margin dark brown.

In Female the antero-ventral spines on femora are thick, short and stout.

#### Morphometry (all figures in mm, arranged as Female / Male )

Total length – 132/73 – (male appears very short because three terminal segments are broken).

Pronotum: prozona -10/10 metazona- 28/20; total pronotum -38/28 Fore wings - 21/45; Hind wings 14/42

Fore leg: Coxa 22/15; Femur 25/18; Tibia 8/6. Mid leg: Femur 30/24; Tibia 25/17. Hind leg: Femur 36/32; Tibia 38/29.

Fore leg spination (for female):

$F = 4DS/14AvS/4PvS$ ;  $T = 15-16AvS/8PvS$

Materials examined: One male (Bengaluru, Coll. K. Kunte, 28.i.2002) and one female (Chatushrungi Hill, Pune, Coll. Sachin Ranade, 9.iii.2001). Both preserved at Modern College, Pune; accession Nos. MCZM 10 and 11, respectively.

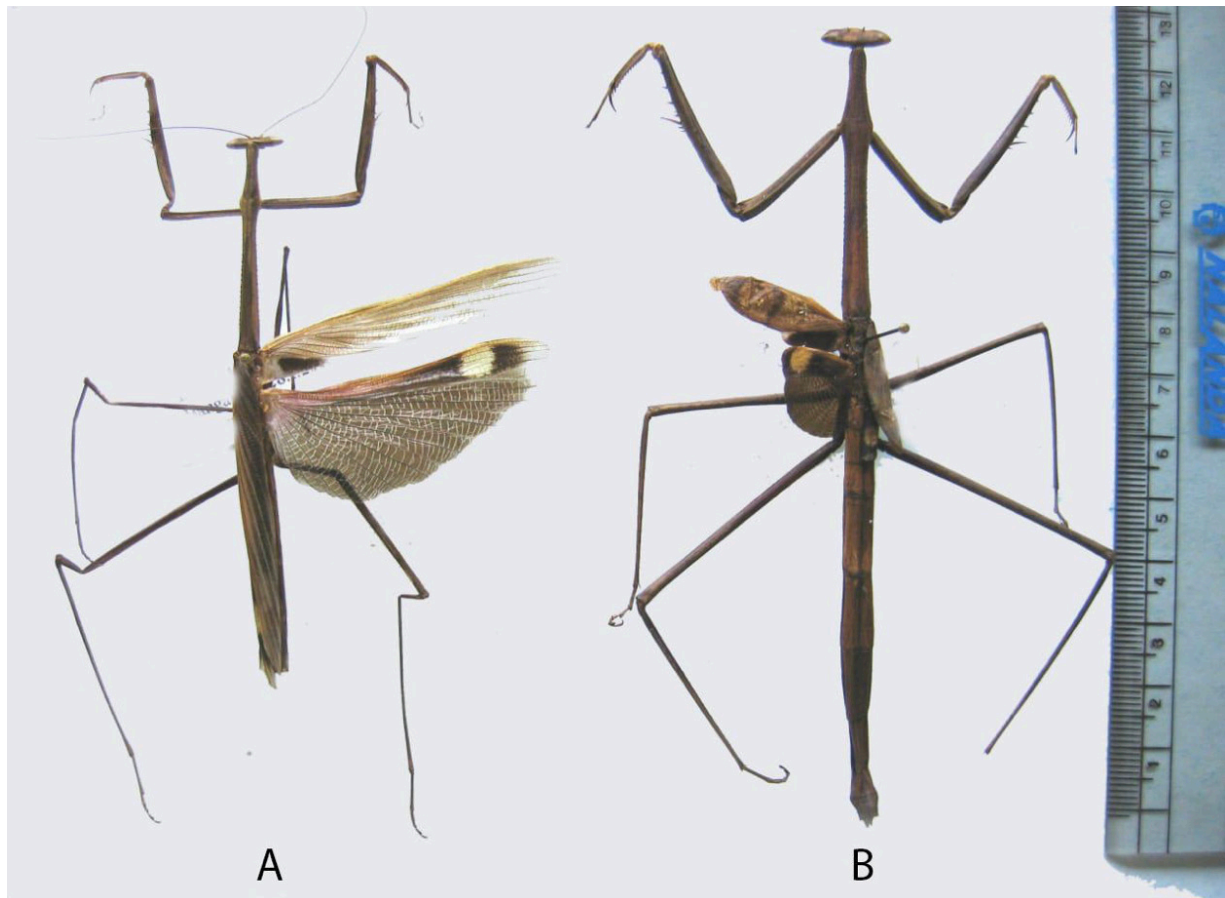


Image 1. *Deiphobella laticeps* male (left) and female (right) habitus: dorsal view. © Hemant Ghatge



Image 2. *Deiphobella laticeps*: A—head and pronotum | B—anteroventral spines on fore femora | C—posteroventral spines on fore femora. © Hemant Ghatge





Image 3. *Deiphobella laticeps* male (left) and female (right) habitus: ventral view. © Hemant Ghate

## DISCUSSION

Length of male given by Giglio-Tos (1927) is 121 mm; as our male specimen is damaged we are providing this data. The body length of the male specimen examined by Wood-Mason in the original description is 121 mm; the type locality of this species is given as 'Sheargaon, Kolapur State', now Shirgaon, Kolhapur District of Maharashtra. So, originally this species was described from Maharashtra but this fact was overlooked earlier. Recently the species was reported from various parts of Kolhapur, including Radhanagari (Raut 2017) but in subsequent report of Radhanagari Mantodea there is no mention of this species (Raut et al. 2022)

The species *D. laticeps* is thus far known only from India: Maharashtra (Ghate & Ranade 2002, but see remarks above), Karnataka (Mukherjee et al. 1995), Andhra (Rao et al. 2005), Kerala (Vyjayandi 2007) and Sri Lanka (Mukherjee et al. 1995), but this clearly is due to lack of surveys specifically for Mantodea. The species

may be more widely distributed as similar habitats are present elsewhere in Maharashtra. Thorough surveys would certainly add more localities of this rarely observed / reported mantis.

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