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### NOTE

**A NEW RECORD OF *TENODERA FASCIATA* (OLIVIER, 1792)  
(INSECTA: MANTODEA: MANTIDAE: MANTINAE)  
FOR WESTERN INDIA**

Gopal Ambrushi Raut & Sunil Madhukar Gaikwad

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## A NEW RECORD OF *TENODERA FASCIATA* (OLIVIER, 1792) (INSECTA: MANTODEA: MANTIDAE: MANTINAE) FOR WESTERN INDIA

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Order Mantodea is the group of predatory insects with the solitary habit. The Mantid fauna of the World accounts for a total of 2384 species under 434 genera in 15 families (Roy & Ehrmann 2002). The Indian mantid fauna is represented by 169 species, 71 genera, and 11 families (Mukherjee et al. 2014). Maharashtrian mantid diversity consists of 56 species, 45 genera, and 11 families (Ghate et al. 2012). Studies on mantid fauna of Maharashtra are mostly restricted to the Pune region (Ghate & Ranade 2002; Jadhav 2008). In addition, Jadhav et al. (2006) reported 14 species belonging to 11 genera from Pench National Park.

Genus *Tenoder* (Burmeister, 1838) of Mantodea is known by six species from India. The members of this genus can be easily identified by a set of characters like long slender, greenish-brown body; vertex with convex superior margin; rounded eyes; pronotum long not much crenulated, metazona four times longer or more than prozona; long narrow fore wing with an anterior pale green lined edge ending in dark border; hind wing brownish; greenish-brown fore leg; mid and hind legs slender and brown (Mukherjee et al. 1995). *Tenoder* *fasciata* (Olivier, 1792) belongs to family Mantidae, subfamily Mantinae, tribe Mantini. The members of

the subfamily can be distinguished from other mantids in having: body medium to large sized, pronotum simple or lamellar, forelegs usually with 4–5 external spines and 3–4 discoidal spines, tibiae normal. Mid and hind leg femora and tibiae mostly simple or with serrations and sometimes preapical lobules. Supra-anal plate generally transverse, sometime prolonged, cerci cylindrical or rarely compressed. Tribe Mantini is distinguished by characters: Pronotum nearly equal or longer than fore coxae. Fore femora with four discoidal and four external spines, laterally smooth; 1<sup>st</sup> discoidal spine shorter than 2<sup>nd</sup>. Both wings well developed anal cerci conical.

During the present study, *T. fasciata* (Olivier, 1792) is reported for the first time from western India, from the Western Ghats. Previous, distribution records of this species were restricted to northeastern India. Earlier workers, Mondal et al. (2007) and Sureshan (2009) reported this species from Arunachal Pradesh and Odisha, respectively. The present communication is based on specimens collected from the Kolhapur District, Maharashtra in which brief description along with images is given.

*T. fasciata* was collected from Radhanagari and Karveer Tehsil of Kolhapur District, Maharashtra. The male specimen from Radhanagari was hand picked from an electric pole during night when it was trying to capture light attractants, and the female nymph was collected from a grassy patch near Panchganga River, Karveer Tehsil of Kolhapur. The collected female nymph was reared under laboratory conditions up to the adult stage. Specimens were properly spread, preserved as



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dry and deposited at Department of Zoology, Shivaji University Kolhapur (ZSUK.MANT.M71 and ZSUK.MANT.F86). The specimens were studied under a Nikon SMZ 800 stereo zoom microscope and photographed using Canon 550 DSLR camera with 100mm lens. The nomenclature and identification are after Mukherjee et al. (1995).

### *Tenodera fasciata* (Oliver, 1792)

Material examined: ZSUK.MANT.M71, 1 male, Radhanagari (16.4162 N & 74.02769 E; 659m), 12.vi.2015 coll. G.A. Raut; ZSUK.MANT.F86, 23.x.2015, 1 female, Karveer (16.7147336 N & 74.27647501 E; 540m) coll. G.A. Raut.

Diagnosis: Body long slender (Image 1), vertex convex, superior margin little above the eyes, frontal sclerite more than 2x as wide as high, bicarinate (Image 2A). Pronotum not much dilated, lateral borders smooth in male, finely serrated laterally in the female, median carina distinct in female and indistinct in male (Image 2B,C); metazona with a pair of whitish tubercles at a base (Image 2D). Fore coxae smooth in male and with fine serrations in female (Image 2E,F); femora with

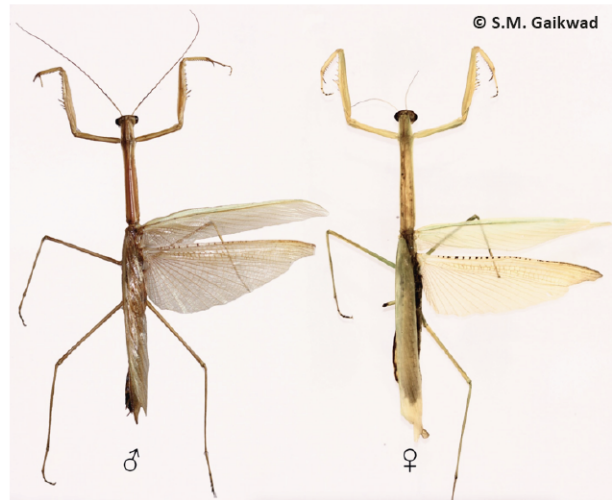


Image 1. *Tenodera fasciata* (male & female)

four external spines, four discoidal, 15 internal spines in which eight small and seven large; tibia with 13 internal and nine external spines, (Image 2G,H,I & J). All spines black at the tip only. Costal area of fore wing opaque with anterior border dark, discoidal area hyaline in male, thickly reticulate in the female. Hind wing hyaline,

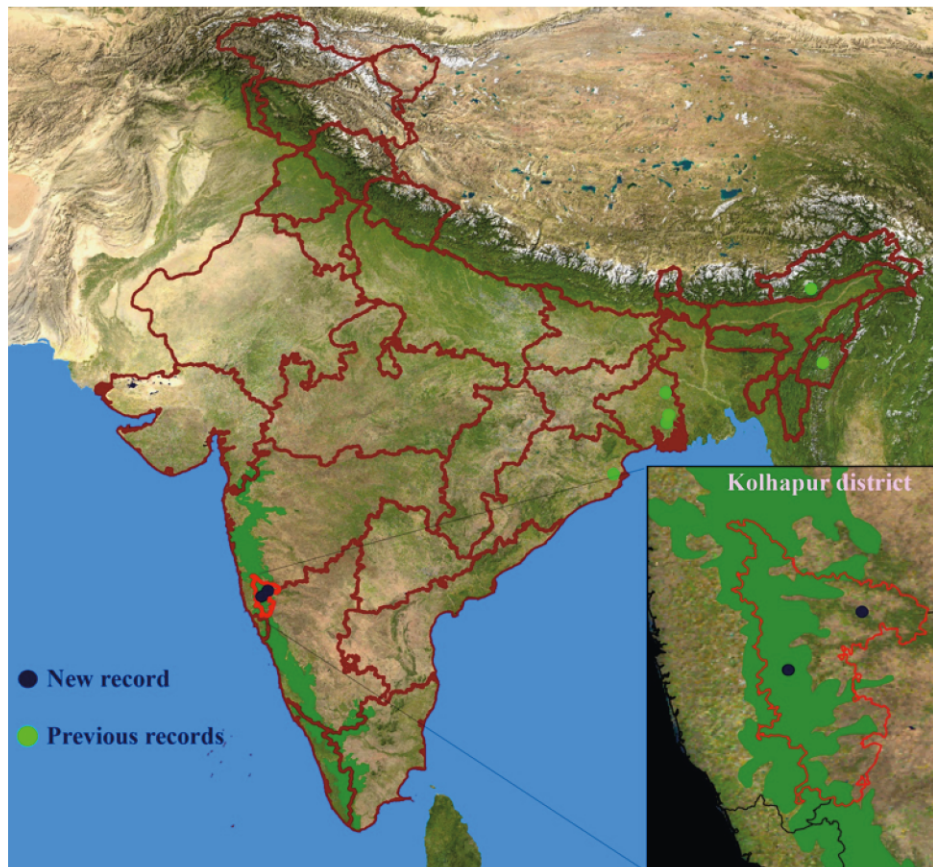


Figure 1. Distributional records of *Tenodera fasciata* in India

Table 1. Details of collection locations of *T. fasciata* in India.

Locality	District	State	Latitude	Longitude	Altitude (m)
Dooars	-	Assam	-	-	Unknown
Imphal valley	Imphal	Manipur	24.8418921	93.8999748	989
24-Parganas	Khurdha	West Bengal	22.7320153	88.3672428	12
Calcutta	Calcutta	West Bengal	22.5410191	88.3819413	2
Bethuadohari	Nadia	West Bengal	23.5923065	88.3951377	22
Indupur	Kendrapara	Odisha	20.6141878	86.4125990	10
Papum pare	Papum pare	Arunachal Pradesh	-	-	Unknown
Radhanagari (present record)	Kolhapur	Maharashtra	16.4160911	74.0276974	659
Karveer (present record)	Kolhapur	Maharashtra	16.7147336	74.2764750	540

(Mukherjee et al. 1995, Mondal et al. 2007; Sureshan 2009)

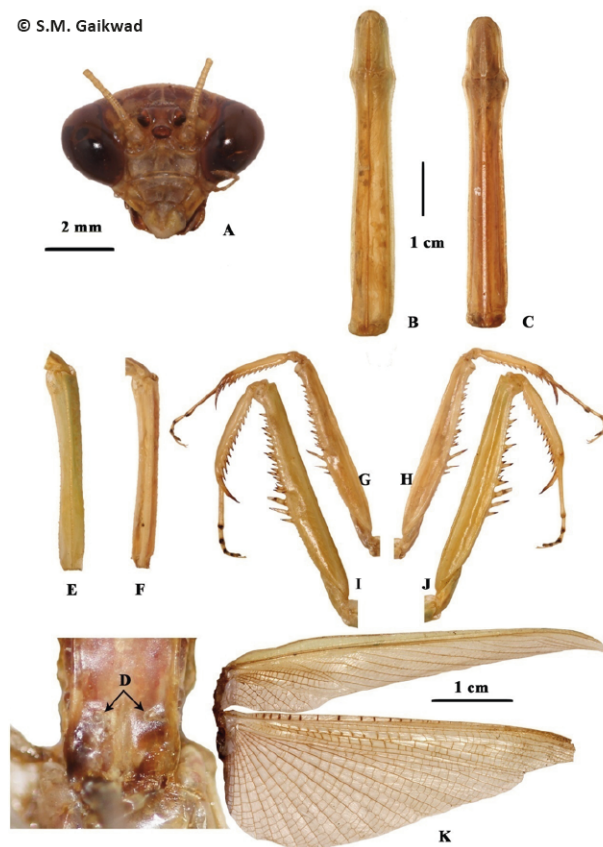


Image 2. *Tenodera fasciata*: A - head in frontal view (male); B & C - pronotum dorsal view (female & male); D - tubercles on metazona; E & F - coxa in external view (female & male); G & H - internal, external and desciodal spines (male); I & J - internal, external and desciodal spines (female); K - forewing and hindwing (male)

costal area opaque with deep reddish colored transverse venation and little brownish in the posterior part of a discoidal area. Tip of the hind wing dark or brownish and no reddish patch at the base (Image 2K). *Tenodera fasciata* is distinguished from the other five species of the

genus *Tenodera* by its elongated and narrow pronotum and hind wing with reddish transverse veinlets in costal area.

Measurements: Body length, male 78.19, female 85.67; Pronotum, male 27.41, female 32.48; Pronotum width, male 4.11, female 4.68; Metazona, male 22.02, female 25.82; Coxa, male 13.45, female 14.43; Femur, male 17.20, female 18.85; Tibia, male 9.03, female 10.14; Fore wing, male 49.28; Hind wing, male 46.87 (all measurements in mm).

Distribution: India: Arunachal Pradesh, Assam, Manipur, Meghalaya, Odisha, West Bengal (Mukherjee et al. 1995; Mondal et al. 2007; Sureshan 2009) and Maharashtra (present record); China, Surinam, Borneo, Flores, Java, Malaysia, Mollucas, Myanmar, Philippines, Sri Lanka, Sumba, Sulawesi, Talaud Islands, Thailand (Mukherjee et al. 2014).

A distribution map (Fig. 1.) and table (Table 1) for *T. fasciata* in India are prepared based on the published records (Mukherjee et al. 1995; Mondal et al. 2007; Sureshan 2009) and the present collection made from the Radhanagari and Karveer Tehsil of Kolhapur District.

The present record extends its known geographical range notably from eastern India towards western India (Aerial distance about 1,400km). Reported area of Radhanagari Tehsil is under cultivation of rice and sugarcane cultivation whereas adjoining areas are covered with grassy patches. Second locality, Karveer Tehsil near Panchganga River where the dominant crop is sugarcane and banks of the river are with grassy patches. It has been observed that the habitat of this species is destroyed annually by burning the grassy patches posing threats to fauna and flora of that region.

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