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First report of Genus *Hestiasula* Saussure, 1871 from Jharkhand, India

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| Received: 04 December 2017 | Accepted: 30 December 2017 |

ABSTRACT

The first photographic record of the Genus *Hestiasula* Saussure, 1871 from Latehar district, Jharkhand, India is presented in this paper. During the biodiversity survey of Latehar district of Jharkhand this genus photographed and identified first time for the state Jharkhand. Genus *Hestiasula* Saussure, 1871, commonly known as Boxer Mantis recorded in April, 2017. A small sized brownish nymph documented from forest area of Netarhat town of Latehar, Jharkhand, India.

Key words: photographic record, *Hestiasula*, Boxer Mantis, Netarhat, Latehar, Jharkhand.

INTRODUCTION

Insect is the more than half of the entire faunal species of the world and the major cluster of animal kingdom (May, 1992). Mantids are a group of predatory insects under order Mantodea of class Insecta and Phylum Arthropoda. They are generally known as “Praying Mantids”. They are economically beneficial insects has both positive and negative roles in the ecosystem. They feed on grasshoppers, crickets, moths, butterflies, flies, aphids etc. Forelegs of mantises are specialized for hunting and showing a posture like praying, hence derived the name 'Praying Mantids' (Sureshan, 2009). Mantids are also renowned for their camouflage and mimicry. Being an active group of predatory insects they help to destroy harmful insects (Sureshan and Sambath, 2009). This group of carnivorous insects is showing strange habits of pre-capture, camouflage and reproduction and recognized biological pest control agents (Sathe

and Vaishali, 2014). The mantids have been existing from Paleocene period (Roy, 1996). Approximately 434 genera and 2300 species have been described from all over the world (Ehrmann, 2002). From India nearly 162 species of mantids under 68 genera of six families recorded by Mukherjee et al., 1995. According to Mukherjee *et al.* (1995), there are 16 species of mantids belonging to 12 genera under 6 families are reported from Bihar. Then Sureshan and Sambath (2009) reported 25 species of mantids belonging to 21 genera and 8 families from Bihar and Jharkhand (old Bihar state) and in that work 13 species under 12 genera and 5 families were collected and studied out of which 9 species belonging to 9 genera are reported for the first time from the state. We present here the first photographic record of the *Hestiasula* Saussure, 1871 from Latehar district, Jharkhand, India. Which is previously recorded from Patna district of Bihar (Sureshan and Sambath, 2009); Odisha (Sureshan, 2009); West

Bengal (Mukherjee et al., 1995); Andhra Pradesh (Rao et al., 2005); Maharastra (Ghate et al., 2001) and Kerala, Meghalaya (Sureshan and Sambath, 2009).

MATERIAL AND METHODS

Through Pollard Walk Method (Pollard 1977; Pollard and Yates 1993) during documentation of insects of Lathehar district; Jharkhand, India (Figure 1) sample was photographed. This is first photographic record of Genus *Hestiasula* Saussure, 1871 from the State Jharkhand. On the day of 2017 (01.04.17) at around 10.18 hrs (10:18:14 PM) during a field surveys at the forests of this district

of Jharkhand we photographed one individual of small sized brownish mantis resting on bushes in forest, which is situated Mahuadanar block of Latehar district; Jharkhand (extends between 23°479374' North latitude and 84°260816' east longitude) (Figure 2). Information on this species is based on observation from 10.18 PM to 10.145 PM. Specimen was photographed for further identification process with the help of High Resolution Digital Camera (Canon 550 D with EOS 18- 55mm lens) and the identification was identified using documents of Sureshan and Sambath, 2009; Sureshan, 2009 and confirmed by experts.

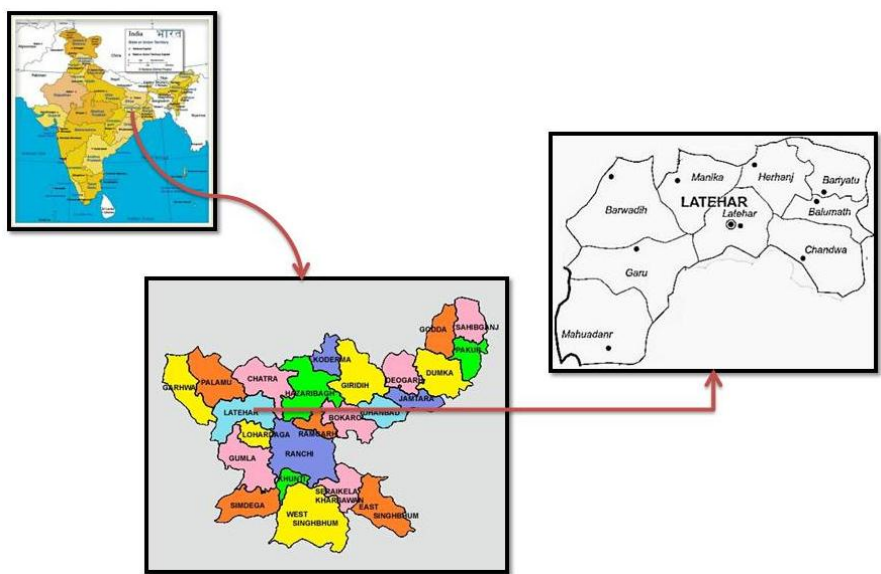


Fig. 1: Latehar (District of record), Jharkhand, India.

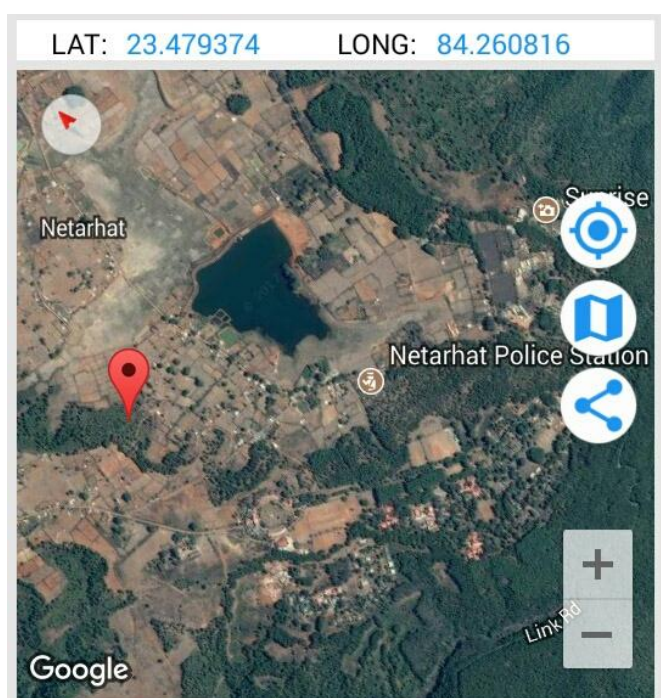


Fig. 2: Study area of Latehar (District of record), Jharkhand, India through Google map with Latitude and longitude.

RESULTS

Species description

Brownish in colour and wings are greenish. Size is Medium with relatively large eyes. Antennas are also medium in size. Superior edge of fore femora is domed, foliaceous oval, internally with 3 black spots on the superior arch and one on the middle, a little above the Spines, four discoidal spines, third one larger. Generally found on leaves of bushes, shake forelegs when get afraid (Figure 3). Though from the photographs of nymph, confirm species level identification is not possible then characters indicate the specimen may be *Hestiasula brunneriana* Saussure, 1871 (Unicorn Boxer Mantis).

Systematic position of *Hestiasula* Saussure, 1871

Class: Insecta

Order: Mantodea

Family: Hymenopodidae

Sub Family: Acromantinae

Tribe: Acromantini

Genus: *Hestiasula* Saussure, 1871

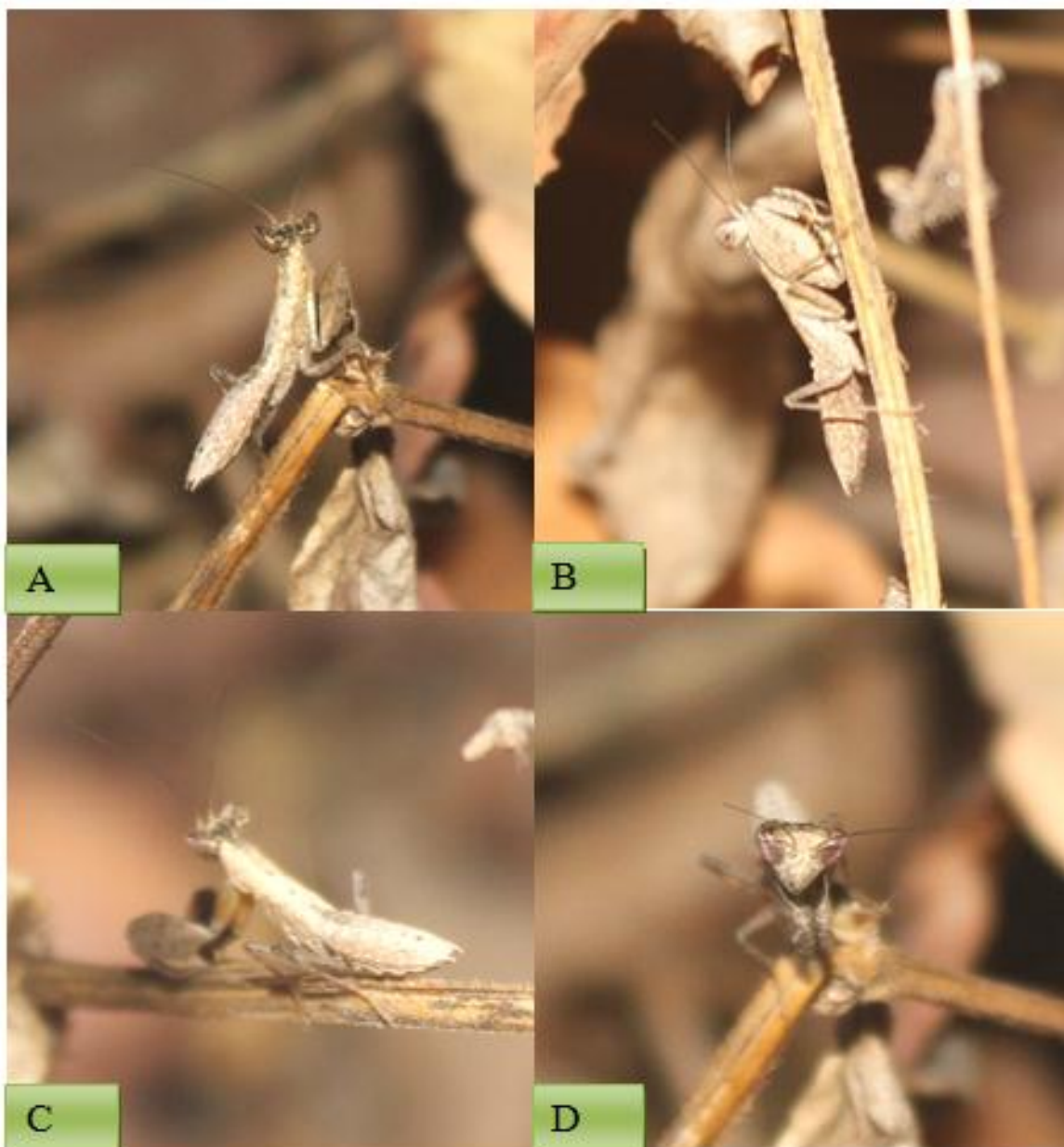


Fig. 3: A. Top view of *Hestiasula* Saussure, 1871; B. Lateral view of *Hestiasula* Saussure, 1871; C. Lateral view of *Hestiasula* Saussure, 1871; D. Close up head view of *Hestiasula* Saussure, 1871.

DISCUSSION

Early distributional range

Hestiasula Saussure, 1871 previously recorded from Bihar, Andhra Pradesh, Kerala, Meghalaya, Orissa, Maharashtra, West Bengal of India and also from Bangladesh, Sri Lanka by several workers. Previous records are from Patna district of Bihar (Sureshan and Sambath, 2009); Odisha (Sureshan, 2009); West Bengal (Mukherjee et al., 1995); Andhra Pradesh (Rao et al., 2005); Maharashtra (Ghate et al., 2001) and Kerala, Meghalaya (Sureshan and Sambath, 2009).

Habitat structure of new locality

Jharkhand is a state of India located its eastern part. Neighbour states of Jharkhand are Bihar, Odisha, West Bengal, Chhattisgarh and Uttar Pradesh. Latehar is a medium sized and one of twenty four districts of the Jharkhand. The Area of Latehar is 1412 km². The Latehar district lies between 23°44.4' N latitudes and 84°31' E longitudes. The specimen actually photographed in Mahuadanar block of Latehar district; Jharkhand. The place of record lies between 23°47'37.4" North latitude and 84°26'08.16" east longitude. The place is roadside forest area with bushy plants cover. Annual normal rainfall in this district is 1407 millimeter per year. Annual maximum temperature varies between 40-42°C, whereas minimum temperature varies between 10-12°C.

ACKNOWLEDGEMENT

We would like to express our heartfelt indebtedness to Andrew Pfeifer, 4307 Windjammer Drive, Monroe, North Carolina 28110, USA for his Identification help and confirmation of this genus. We would want to convey our gratitude to the honorable Dr. Sanjukta Mondal (Parui), HOD and Associate Professor, WBES, Post Graduate Department of Zoology, Lady Brabourne College, Kolkata-700017, West Bengal, India, for her consistence help during my study period. We also very much thankful to UGC for their laboratory support in the form of DRS-SAP - Phage 1 [2011-2016] in our work. I would like to express my thanks to all research scholars of our laboratory.

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