

First record of the boxer mantis *Hestiasula brunneriana* in Assam, India

The Mantis species *Hestiasula brunneriana* Saussure 1871, is found almost all over the Indian sub-continent including the neighbouring countries- Bangladesh, Nepal, Pakistan, and Sri Lanka (Schwarz & Shcherbakov 2017). In India, it is known from the states of Andhra Pradesh, Bihar, Goa, Kerala, Maharashtra, Meghalaya, Odisha, and West Bengal (Mukherjee et al. 1995; Ghate et al. 2019). A detailed morphological description of the male and female specimen of this species has been provided with illustrations by Ghate et al 2001. The biology of the species has been described by Ahmad et al. (1985) for the first time from India.

This species was first recorded at Rani in Kamrup District of Assam, during 2018. Subsequently it was observed in same areas till



Nymph of *Hestiasula brunneriana* displaying the fore femoral pattern.
© Sachin Ranade.



Freshly emerged Adult *Hestiasula brunneriana* with last moult. © Sachin Ranade.

2021 confirming the stable population. In June 2018 two nymphs were sighted. The male was bright brown coloured while the female individual was darker. Both these nymphs were observed and their final moulting was noted. The male moulted into an adult on 4 July and female on 12 July 2018. The favoured habitat of the nymphs was branches of the broad-leaved trees-*Gmelina arborea* and *Mallotus paniculatus*.

Generally, the members of the genus *Hestiasula* are known as Boxer Mantis due to the movements of their forelegs for threat display and/or communication (Schwarz & Shcherbakov 2017). This behaviour not only attracts its conspecific but also photographers, amateur biologists and entomologists. Earlier recorded from only a few states in India, this species has now been reported from additional five states within a decade—Maharashtra (Ghate et al. 2001), Kerala (Vyjayandi 2007), Odisha (Sureshan et al. 2007), Bihar (Sureshan & Sambath 2009), and Goa (Vyjayandi et al. 2010).

This could be the result of increased use of the photographic records in scientific publications; for example, 23 new records of mantids were described with photographic evidences recently (Mukherjee et al. 2017).

The colour pattern on the inner surface of the forefemur is species specific in the genus

Hestiasula, although a slight variation has been recorded in *H. brunneriana* such as presence or absence of a small black spot at the midportion of forefemur (Mukherjee et al. 1995; Schwarz & Shcherbakov 2017). In the specimen photographed from Assam, the black spot is clearly visible. The specimens were not collected. This photographic record of the species is the first record in the state of Assam in India.

References

- Ahmad, M., S.N. Vijayachandran & J.C.B. Choudhuri (1985).** Biology of *Hestiasula brunneriana* Saussure (Dictyoptera: Mantidae) *Indian Forester* 111(5): 333–338.
- Ghate, H.V., S. Ranade, R. Kaur & R. Marathe (2001).** On *Hestiasula brunneriana* Saussure (Insecta: Mantodea) from Pune, Maharashtra. *Journal of the Bombay Natural History Society* 98(3): 473–476.
- Ghate, H.V., S.S. Jadhav, P.M. Sureshan & R.M. Sharma (2019).** Updated checklist of Indian Mantodea (Insecta), 31 pp. https://www.researchgate.net/publication/266590909_Updated_checklist_of_Indian_Mantodea_Insecta. Downloaded on 06 July 2022.
- Mukherjee, T.K., A.K. Hazra & A.K. Ghosh (1995).** The mantid fauna of India (Insecta: Mantodea). *Oriental Insects* 29(1): 185–358.
- Mukherjee, T.K., G. Iyer & P. Chatterjee (2017).** Twenty-three new records of mantodea (Insecta) from some states of India. *Journal of Threatened Taxa* 9(2): 9829–9839.
- Schwarz, C.J. & E. Shcherbakov (2017).** Revision of *Hestiasulini* Giglio-Tos, 1915 stat. rev. (Insecta: Mantodea: Hymenopodidae) of Borneo, with description of new taxa and comments on the taxonomy of the tribe. *Zootaxa* 4291(2): 243–274.



Sureshan, P.M. & S. Sambath (2009). Mantid (Insecta: Mantodea) fauna of old Bihar (Bihar and Jharkhand) with some new records for the state. *Records of the Zoological Survey of India* 109(3): 11–26.

Sureshan, P.M., T. Samanta & C. Radhakrishnan (2007). Mantid (Insecta: Mantodea) fauna of Orissa with some new records for the state. *Zoo's Print Journal* 22(1): 2539–2543.

Vyjayandi, M.C. (2007). Mantid fauna of Kerala, India. *Records of the Zoological Survey of India*, Occasional Paper No. 267: 169.

Vyjayandi, M.C., R.S. Rajeesh, P.S. John & M.M. Dhanasree (2010). On a collection of praying mantids (Insecta: Mantodea) from Goa, India, with new distribution records. *Journal of Threatened Taxa* 2(12): 1325–1329.

Sachin P. Ranade

Vulture Conservation Breeding Centre, Rani, Kamrup district, Assam 781131, India.

Email: sachinranade@yahoo.com

Citation: Ranade, S.P. (2023). First record of the boxer mantis *Hestiasula brunneriana* in Assam, India. *Bugs R All* #270, In: *Zoo's Print* 38(9): 23–25.

Bugs R All is a newsletter of the Invertebrate Conservation and Information Network of South Asia (ICINSA)

