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A new species of praying mantis, *Ephestiasula woodmasoni* n. sp.
from Gujarat, India with a note on the location of types of some Indian
species
(Mantodea: Hymenopodidae)

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ABSTRACT. A new species, *Ephestiasula woodmasoni* n.sp. is described from Gujarat, India. Supporting figures and comparisons with other species are provided. Notes on the location of types of some Indian Mantodea are given.

Keywords: entomology, taxonomy, Dictyoptera, Mantodea, new species, Gujarat, India.

INTRODUCTION

GIGLIO-TOS in 1915 created the genus *Ephestiasula* and transferred the species *Pachymantis amoena*, which was first described by BOLIVÁR (1897), and the species *Hestias pictipes*, described by WOOD-MASON (1879) (the type generic for *Ephestiasula*), to this new genus. WERNER (1930) described the species *Ephestiasula intermedia*, which is the third and so far the last species described in *Ephestiasula*. All three species of *Ephestiasula* were recorded from India (MUKHERJEE et al. 1995 and EHRMANN 2002). BOLIVÁR (1897) described *Pachymantis amoena* (now the holotype of *Ephestiasula amoena*) on the basis of two males and one female. This particular female was transferred to *Ephestiasula pictipes* by GIGLIO-TOS (1915). Hence no female of *Ephestiasula amoena* was ever described. The description of the female nymph of *Ephestiasula amoena* by MUKHERJEE et al. (1995) is not quite satisfactory as the nymphal colouration often changes in adults. OTTE & SPEARMAN (2005) sorted the genus *Ephestiasula* as a synonym under the genus *Hestiasula*.

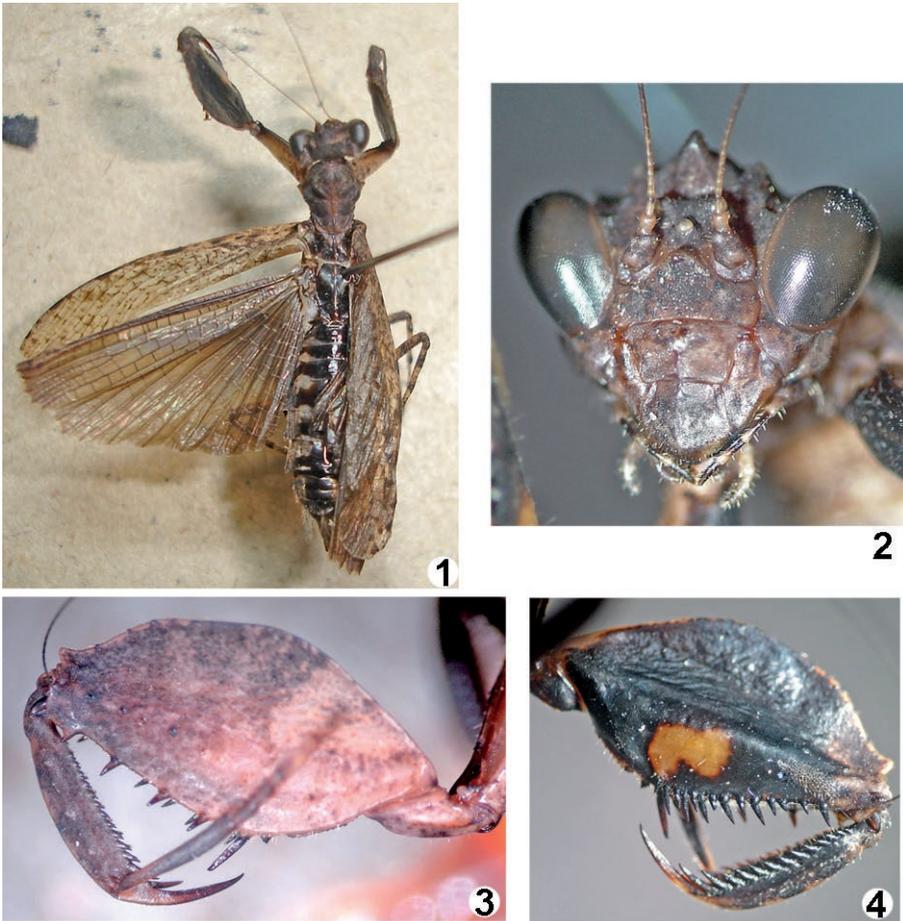
In this paper, the authors describe a new species of *Ephestiasula*, *Ephestiasula woodmasoni* n.sp. a female from Gujarat, India (Fig. 1) along with relevant affinities with related species. Required figures of the specimen are also provided.

***Ephestiasula woodmasoni* n. sp.**

(Figs. 1-8)

TYPE MATERIAL

Holotype female, Jougad near Bajana Creek, Little Raan of Kutch, District Surendranagar, Gujarat, India. Latitude 23.26°N and longitude 71.20° E. The holotype will be submitted to the Central Entomological Laboratory (C.E.L.) of Zoological Survey of India (Z.S.I.), Kolkata (Calcutta), India.



1-4. *E. woodmasoni* n. sp. female from Gujarat, India: 1– habitus dorsal view, 2 – frontal view of the head, 3 – outer view of left raptorial foreleg, 4 – inner view of left raptorial foreleg (photos MUKHERJEE)

DESCRIPTION

Measurements (mm): Total length 22.0. Pronotum 4.8/3.5. fore leg: coxa 5.5, femur 6.5, tibia 5.0. fore wing 17.0, hind wing 15.0.

Colour: Pronotum and fore legs blackish brown; rest black.

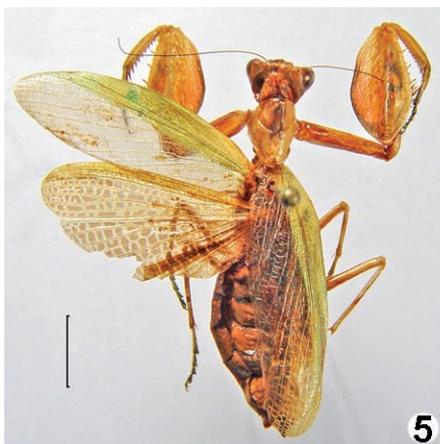
Head: Covered with scattered blackish patches and dots. Middle of vertex nearly straight. Vertex with a prominent median tubercle between eyes. Juxtacular lobes of vertex with smaller tubercle, lobes are raised a little above the eyes. The immediate next inner lobes form a deep groove with a wall that is raised in the form of crest on both sides of the median tubercle.

Eyes and ocelli: Eyes dark grey. Ocelli small and colourless (Fig. 2).

Frontal sclerite: Transverse; surface blackish with black dots. The two middle carinae raised and divergent on the top; upper edge of frontal sclerite raised into a tubercular point that overhangs the disc (Fig. 2).

Antennae: filliform; basal 1/4th area dark grey, the rest is black.

Pronotum: Prozona with anterior raised median pair of hunches and lateral raised divergent carinae. Metazona with fine median carina and raised hunches. The margins at maximum dilation are conical.



5, 6. *Ephestiasula pictipes* female from Satpura Hills Pachmarhi, India (MMUE, Manchester): 5 – habitus dorsal view, scale bar 0.5 cm, 6 – ventral view of raptorial forelegs and head; 7, 8. *E. amoena* male syntype (MNHN, Paris): 7 – dorso-lateral view, 8 – ventral view of left fore femur (all photos STIEWE)

Fore legs: Entire inner face jet black. Externally pale brown with scattered black dots; distal half of femur with more black dots; tibiae pale blackish with three indistinct bands (Fig. 3). All spines internally jet black. Disc of femur whitish. Discoidal spine 4; external spine 4, basal two closer, all blackish and black at apical half; internal spine 14 (7 longer), all jet black. Tibia with 13 external spines, all less blackish. The inside of femur totally black, with a bilobed brownish-yellow patch that extends from claw groove to 4-5th longer internal spines (Fig. 4).

The four posterior coxae, trochanters and femora with stiff bristles. Middle and posterior legs: simple, short; both dorsally and ventrally pale whitish with black dots and triannulated by black. Femora with minute genicular spine. Posterior femur at proximal base with minute lobe at posterior edge. All metatarsi nearly equal to or little shorter than rest segments together

Fore wings: Extends a little beyond end of genitalia. Costal area dirty yellowish brown, reticular; long veins spotted by black; cells with smoky patches. Anal membrane pale smoky.

Hind wings: Entire area uniformly smoky. Long veins blackish brown; transverse veinlets of costa parallel. Base of wing white.

Abdomen: Dorsal view- tergites deep brownish black with lateral white patches at junction of two tergites. Lateral angles well extended. Ventral view- black. Each sternite in middle a little conically raised.

Supra anal plate: transverse, carinated, apex widely rounded.

Cerci: 11 segmented, uniformly rounded and setaceous.

ETYMOLOGY

The species has been named *woodmasoni* after Professor James WOOD-MASON who was a great worker on Mantodea and Director of Calcutta Museum, India.

COMPARISON

Ephestiasula woodmasoni n. sp. is similar to *Ephestiasula amoena* (male) in having a broad black patch on the upper and lower halves of the inner face of fore femora; the number of spots is two in *Ephestiasula amoena* but bilobed in *Ephestiasula woodmasoni* n. sp. and of completely of different colour. It differs from the male of *Ephestiasula amoena* (Fig. 7 and Fig. 8) in the presence of a stouter and bigger median tubercle on the vertex and the absence of band or cilia on pronotum. The colour of the wings and longitudinal veins, shape and colour of femoral band are completely different in both species. Moreover the body of *Ephestiasula woodmasoni* is much longer than *Ephestiasula amoena* (Fig. 8). This new species, however, could not be compared with the female of *Ephestiasula amoena*.

The present species shows similarity with *Ephestiasula pictipes* (WOOD-MASON, 1879) (Fig. 5) in the similar colouration of internal spines and the yellowish costal area of the fore wing (although not green but dirty yellowish brown). *Ephestiasula pictipes* differs from *Ephestiasula woodmasoni* n. sp. in the presence of minute median tubercle, yellowish hyaline hind wings, shorter wings (in female), three pale spots on lower part of inside of fore femur (Fig. 6).

Ephestiasula woodmasoni differs from the male of *Ephestiasula intermedia* of WERNER (1930) in the presence of a stout and bigger median tubercle on the vertex, the absence of a black stripe on the vertex and pronotum and an entirely black inner face of fore femora with a bilobed brownish-yellow patch that extends from claw groove to 4-5th longer internal spines.

TYPE LOCATION OF THREE SPECIES UNDER GENUS *EPHESTIASULA*

For the *Ephestiasula amoena* types, the holotype male appears to be deposited in the Madrid Museum (Museo Nacional de Ciencias Naturales). EHRMANN (2002) also listed a female allotype for this museum whereas OTTE & SPEARMAN (2005) did not. A male syntype of this species is held in the Paris collection (OTTE & SPEARMAN, 2005) (Fig. 7 and Fig. 8). The syntypes of BOLIVÁR (1897) are supposed to be at the St. Joseph's College, Tiruchirappally (India) but they may have been lost or were never deposited, as they could not be found. Repeated communication to the institution yielded no response.

Holotype male and paratype female of *Ephestiasula intermedia* WERNER (1930) are present at Forest Research Institute, Dehra Dun, India.

The type's male and female of the third species *Ephestiasula pictipes* (WOOD-MASON, 1879) are located at the C.E.L., Z.S.I., Kolkata, India.

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