



First report of *Oxyophtalma engaea* (Wood-Mason, 1889) (Insecta: Mantodea: Eremiaphilidae) from Kerala, India

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ABSTRACT: The mantid species *Oxyophtalma engaea* (Wood-Mason, 1889) (Insecta: Mantodea: Eremiaphilidae) is reported for the first time from Kerala, India, and redescribed based on a single female specimen. © 2021 Association for Advancement of Entomology

KEY WORDS: Mantodea, Eremiaphilidae, *Oxyophtalma engaea*, First report, Kerala.

The genus *Oxyophtalma* Saussure belongs to the tribe Dysaulini in the subfamily Iridinae and family Eremiaphilidae; Dysaulini is currently known from India with three genera; *Dysaules* Stål, 1877; *Dysaulophtalma* Stiewe, 2009 and *Oxyophtalma* Saussure, 1861 (Schwarz and Roy, 2019). None of these genera were reported from the Kerala State till date. The genus *Oxyophtalma* is different from other genera in the group by the shape of eyes and lateral lobes; the lateral lobes are prolonged as a sharp tubercle and extend a little above the upper edge of the eyes. This genus is currently known by only two species, *Oxyophtalma engaea* (Wood-Mason, 1889) and *Oxyophtalma gracilis* Saussure, 1861, both are reported from India. The former species was reported from Andhra Pradesh, Tamil Nadu and Sri Lanka and the latter from Karnataka, Tamil Nadu and Sri Lanka (Mukherjee *et al.*, 2014). *O. engaea* differs from *O. gracilis* in having body covered with dense deep brown to black spots (Mukherjee *et al.*, 1995).

The specimens were collected from the Karyavattom Campus, Kerala University, Thiruvananthapuram, Kerala (Lat 8° 33' 43" N, Long 76° 53' 02" E, Alt 40m), by hand picking. The pinned specimens were examined using stereoscopic binocular microscope of model Leica M 205C and the photographs were taken with Leica DFC 500 camera and Canon EOS M50 camera. Images at varying depth were stacked using Leica Auto Montage Software V3.80. The final illustrations were processed using Adobe® Photoshop® CS6 software. The specimens are deposited in the 'National Zoological Collections' of the Zoological Survey of India, Western Ghat Regional Centre, Kozhikode (ZSIK).

***Oxyophtalma engaea* (Wood-Mason, 1889)**
(Insecta: Mantodea: Eremiaphilidae)

Subfamily: Iridinae; Tribe: Dysaulini

Material examined: 1 female, INDIA, Kerala, Thiruvananthapuram, Kerala University,

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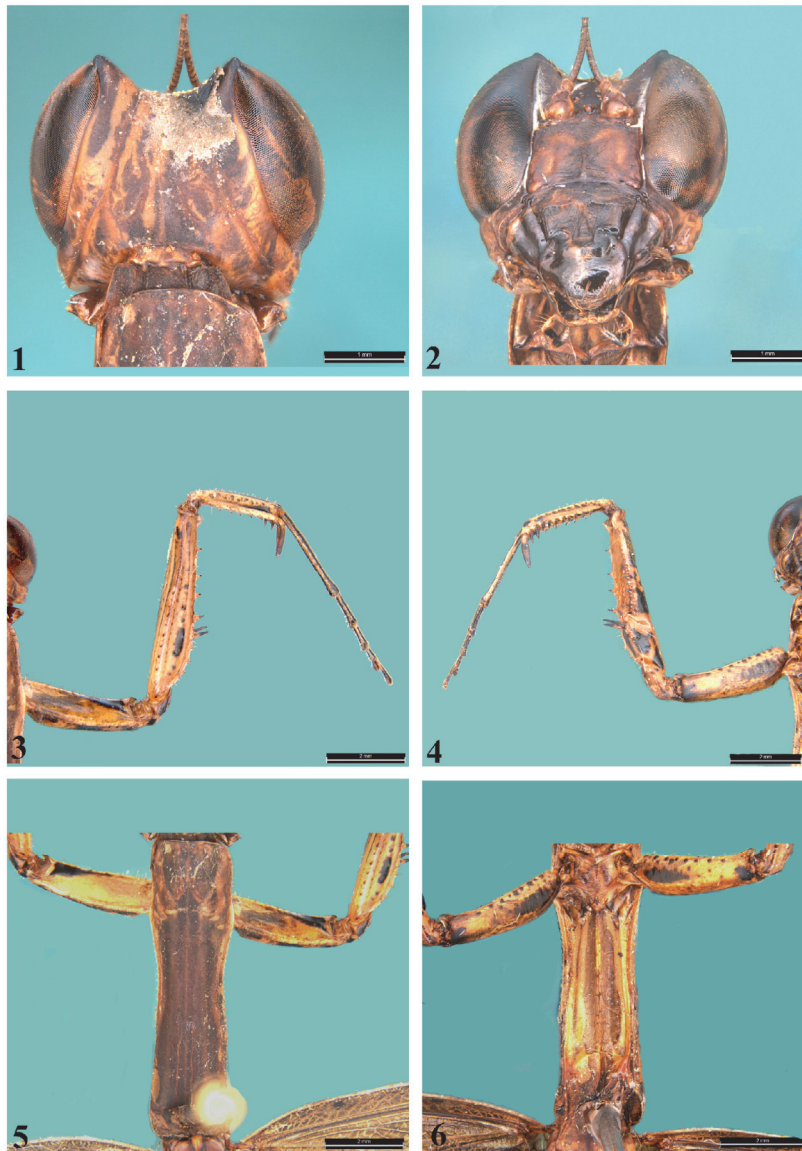


Fig. 1. Head dorsal view, 2. Head frontal view, 3. Foreleg dorsal view, 4. Foreleg ventral view, 5. Pronotum dorsal view, 6. Pronotum ventral view

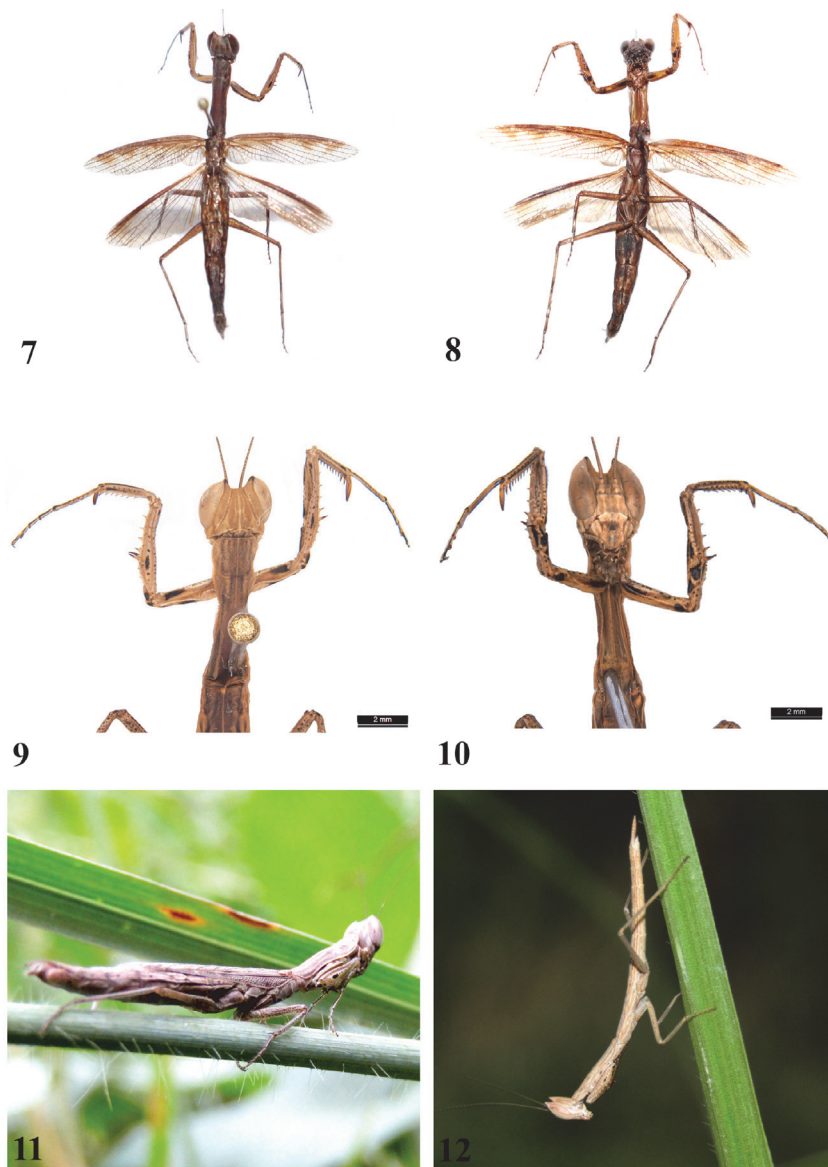
Karyavattom Campus (8° 33' 43" N - 76° 53' 02" E), 27-ix-2019, coll. A.P. Kamila (Reg. No. ZSIK – INV 16946). 1 female nymph, same data as above.

Measurements of adult specimen (mm): Total length 28.5, Forewing 13.98, Hindwing 12.27, Prozona 2, Metazona 6.75, Foreleg: Coxa 6.6, Femur 7.7, tibia 6.3.

Body: Slender, brownish with black spots and patches (Figs. 7-12).

Head: Elongate. Eyes conical and spineless (Fig. 1). Frontal sclerite trapezoid, a little wider than high (Fig. 2). Vertex strongly excavated, with deep brownish patches. Lateral lobes prolonged into a sharp point which extend a little above the upper margin of eyes. Antennae simple.

Pronotum (Figs. 5, 6): Long, slender and rectangular. Supra-coxal dilation not prominent. Pronotum constricted a little after dilation. Disc of pronotum smooth. Metazona about 3 times longer than



7. Adult-body dorsal view, 8. Adult-body ventral view, 9. Nymph-body dorsal view, 10. Nymph-body ventral view, 11. Adult female-live habitus, 12. Nymph-live habitus

prozona. Lateral margins of metazona with small serrations and that of prozona simple. Metasternum with a median ridge and two lateral grooves.

Foreleg (Figs. 3, 4): Yellowish brown with black spots. Fore coxa dorsally with a black triangular patch in the apical region which extends proximally, ventrally with a black line near base and a small patch near apex. Trochanter with a black spot dorsally, ventrally with a small one. Fore femora

with a black line near the base dorsally, ventrally with four black patches (two at base, one in the middle and one along the claw groove). A black patch between the external and discoidal spines. External spines 5, gradually shorter towards distal end; internal spines 14 (8 short and 6 long); discoidal spines 4, first minute, third long and fourth decumbent towards apex. Claw groove situated in the middle of basal half. All fore femoral spines black at apex only, except third discoidal spine. Fore

tibiae with 7 external spines, black at apices; 10 completely black internal spines; internally with a black spot in the apex and externally with a black line which extends from middle to the apex. First tarsal segment almost as long as other segments taken together.

Middle and hind legs: Brownish, with dense black spots. Mid and hind femora with an apical spines. Hind metatarsus shorter than other segments taken together.

Wings (Figs. 7, 8): Both wings shorter than abdomen. Fore wing smoky, hind wing with brown costal area and other areas hyaline.

Remarks: *Oxyophthalma engaea* was originally described by Wood-Mason based on three males, two females and four nymphs from Nilgiri hills, South India as *Oxyophthalmus engaeus* in 1889. The genus *Oxyophthalmus* was described by Saussure in 1861, later he renamed it as *Oxyophthalma* in 1869. Nevertheless, *Oxyophthalmus* continued to be used until Giglio-Tos (1927) when Wood-Mason's species name was also corrected to *engaea* (Mukherjee *et al.*, 1992). The present record of this species from plains, Kariavattom, Trivandrum, Kerala is interesting. The species has been reported in India only from higher elevations. It was originally described from Nilgiri hills (elevation 900-2000m) and later reported from Shikharam, Kurnool District of Andhra Pradesh (elevation about 860 m) in 2004 (Rao *et al.*, 2005).

The collected nymph specimen has well-developed wing buds. The spots and patches on the legs of female nymph specimen (Fig. 9, 10) are very similar to that of the female adult specimen. The body colour of the nymph is a little paler than the adult. The deep brownish markings on the vertex of the adult are absent in nymph except on the tip of the extended lateral lobes above the upper edge of the eyes.

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