

First report of some praying mantids (Insecta, Mantodea) from Mizoram state, India

A.P. Kamila^{1,2,*}, P.M. Sureshan¹, Sumit Kumar³ and Debasis Das³

¹Western Ghat Regional Centre, Zoological Survey of India, Kozhikode 673006, Kerala, India.

²University of Calicut, Thenhipalam, Malappuram 673635, Kerala, India.

³Zoological Survey of India, M Block, New Alipore, Kolkata 700053, West Bengal, India.

Email: kamiii619@gmail.com, pmsuresh43@gmail.com, sumitsngh95@gmail.com, ddebadas@gmail.com

ABSTRACT: Seven species of mantids viz. *Humbertiella affinis* Giglio-Tos, 1917, *Acromantis montana* Giglio-Tos, 1915, *Anaxarcha acuta* Beier, 1963, *Creobroter laevicollis* (Saussure, 1870), *Statilia maculata* (Thunberg, 1784), *Statilia nobilis* (Brunner de Wattenwyl, 1893) and *Tenodera aridifolia* (Stoll, 1813) are newly reported from Mizoram state, India. © 2024 Association for Advancement of Entomology

KEY WORDS: Mantid fauna, new records, Mizoram

Despite their ecological importance as biological control agents, the praying mantids have been largely neglected in the studies of taxonomy, ecology, biology, ethology and phylogeny worldwide, including in India. At present, 171 species of mantids belonging to 70 genera and 13 families are known from the country (Kamila and Sureshan, 2024a; Kamila and Sureshan, 2024b). The mantid fauna of Assam, Meghalaya and Arunachal Pradesh are better documented compared to the other North-Eastern Indian states (Sureshan & Kamila, 2023). Ahmed *et al.* (2021) listed mantids of North-East India comprising seven species from Mizoram without providing any data or source on specimens examined or literature. In this paper, seven species in six genera and three families are reported from the state for the first time.

This study is based on the specimens deposited in the Orthoptera Section, Zoological Survey of India,

Kolkata, India. The specimens were examined using Leica EZ4 stereo zoom microscope and photographed using Nikon D7500 digital camera. The classification of Schwarz and Roy (2019) and the terminology of Brannoch *et al.* (2017) are followed. Species identification is largely based on keys provided by Mukherjee *et al.* (1995).

Systematic account

Insecta: Mantodea; Family: Gonypetidae Westwood, 1889; Subfamily: Gonypetinae; Tribe: Gonypetini

Genus *Humbertiella* Saussure, 1869

1. *Humbertiella affinis* Giglio-Tos, 1917 (Fig. 1)

Humbertiella affinis Giglio-Tos, 1917. *Bull. Soc. Ent. Ital.*, 48: 83.

Diagnosis: Body medium-sized. Color brown.

* Author for correspondence

Lower frons with black band, upper edge arched in middle. Vertex grooved. Pronotum with round distinct tubercles. Fore femur with 4 posteroventral and 4 discoidal spines; small tubercles present between posteroventral spines. Costal area of fore wings with irregular veinules.

Materials examined: 2 Male, INDIA, Mizoram, Saiha, 6.iv.1994, Coll. Dr. A. K. Hazra & Party. 1 Male, INDIA, Mizoram, Circuit house campus, Saiha, 9.iv.1994, Coll. Dr. A. K. Hazra & Party.

Distribution: India; Karnataka, Kerala, Maharashtra, Mizoram (new record), Odisha. Elsewhere: Pakistan, Sri Lanka.

Family: Hymenopodidae Giglio-Tos, 1915;
Subfamily: Acromantinae; Tribe: Acromantini

Genus *Acromantis* Saussure, 1870

2. *Acromantis montana* Giglio-Tos, 1915 (Fig. 2)

Acromantis montana Giglio-Tos, 1915. *Boll. Musei Zool. Anat. Comp. R. Univ. Torino.*, 30(702): 7.

Diagnosis: Vertex with a small tubercle. Lateral edges of pronotum with small denticles; metazone of prosternum blackish. Fore femur without hump-like structure on upper edge; with 4 posteroventral and 4 discoidal spines; all long anteroventral and discoidal spines completely black. Apex of wings truncated.

Materials examined: 1 Male, INDIA, Mizoram, Rawngtla, 18.ix.1993, Coll. R. S. Mirdha. 1 Male, INDIA, Mizoram, Circuit house campus, Saiha, 9.iv.1994, Coll. Dr. A. K. Hazra & Party. 2 Male, INDIA, Mizoram, Aibawk, FRH, 15.xi.1995, Coll. M. S. Shishodia & Party.

Distribution: India; Andaman Island, Arunachal Pradesh, Maharashtra, Meghalaya, Mizoram (new record), Tamil Nadu, Tripura. Elsewhere: Borneo; Indonesia.

Subfamily: Hymenopodinae; Tribe: Anaxarchini
Genus *Anaxarcha* Stål, 1877

3. *Anaxarcha acuta* Beier, 1963 (Fig. 3)

Anaxarcha acuta Beier, 1963. *Stuttgart Beitr. Naturk.*, 106: 9.

Diagnosis: Lower frons pentagonal, with a triangular long tubercle in middle. Lateral edges of pronotum denticulate. Fore femur with 4 posteroventral and 4 discoidal spines; all long anteroventral spines black. Tibial spur groove proximal to middle with a black spot at anterior end.

Material examined: 1 Female, INDIA, Mizoram, Lauent Rai (N), 18.ix.1993, Coll. A. R. Lahiri & Party.

Distribution: India; Meghalaya, Mizoram (new record), Sikkim, West Bengal. Elsewhere: Bhutan.

Tribe: Hymenopodini

Genus *Creobroter* Audinet-Serville, 1839

4. *Creobroter laevicollis* (Saussure, 1870) (Fig. 4)

Creobotra laevicollis Saussure, 1870. *Mitt. Schweiz. Ent. Ges.*, 3: 242.

Diagnosis: Body medium-sized. Eyes oblong, extending beyond the level of head. Vertex with a tubercle. Pronotum short, metazone a little longer than prozone. Fore femur with 4 posteroventral and 4 discoidal spines; all spines black at apex only. Fore wings green, opaque, basally with a round yellow spot, eyespot a little proximal to middle. Hind wings pinkish at base and smoky in middle.

Materials examined: 1 Male, INDIA, Mizoram, Aibawk, FRH, 16.xi.1995, Coll. M. S. Shishodia & Party. 1 Male, INDIA, Mizoram, Teirei, 11.xi.1995, Coll. M. S. Shishodia & Party.

Distribution: India; Andhra Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram (new record), Sikkim, West Bengal. Elsewhere: Indonesia.

Family: Mantidae Latreille, 1802; Subfamily: Mantinae

Genus *Statilia* Stål, 1877

5. *Statilia maculata* (Thunberg, 1784) (Fig. 5)

Mantis maculata Thunberg, 1784. *Nov. Ins. Spec.*, 3: 61.

Mantis orientalis Saussure, 1870. *Mitt. Schweiz. Ent. Ges.*, 3: 233.

Pseudomantis haani Saussure, 1871. *Mem. Soc. Hist. Nat. Geneve.*, 21: 185.

Statilia maculata var. *hyalina* Giglio-Tos, 1927. *Tierreich.*, 50: 411.

Diagnosis: Body brownish. Lateral edges of pronotum with denticles; prosternum with a black patch near supra-coxal junction. Fore coxa with 6 spines on upper edge; ventrally blackish at basal end. Fore femora ventrally with a black patch adjacent to yellowish tibial spur groove; with 4 posteroventral and 4 discoidal spines; all long anteroventral spines black.

Materials examined: 1 Male, INDIA, Mizoram, Manpui, 17.ix.1993, Coll. A. R. Lahiri. 1 Female, INDIA, Mizoram, Lawngtlai, 17.ix.1993, Coll. A. R. Lahiri. 1 Female, INDIA, Mizoram, Tuipui, 20.ix.1993, Coll. A. R. Lahiri. 1 Female, INDIA, Mizoram, Lawngtlai, 17.ix.1993, Coll. R. S. Mirdha.

Distribution: India; Andaman Island, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram (new record), Odisha, Sikkim, Telangana, Uttar Pradesh, West Bengal. Elsewhere: Borneo, China, Indonesia, Japan, Labuan, Laos, Malaysia, Myanmar, Nepal, New Guinea, Pakistan, Philippines, Russia, South Korea, Sri Lanka, Taiwan, Thailand, United States of America, Vietnam.

6. *Statilia nobilis* (Brunner de Wattenwyl, 1893) (Fig. 6)

Mantis nobilis Brunner de Wattenwyl, 1893. *Annali Mus. Civ. Stor. Nat. Genova.*, 13(33): 70.

Mantis indica Mukherjee, 1995. *Orient. Insects*, 29: 300.

Diagnosis: Fore coxa with 6-7 spines on upper edge; ventrally without any patches. Fore femur with 4

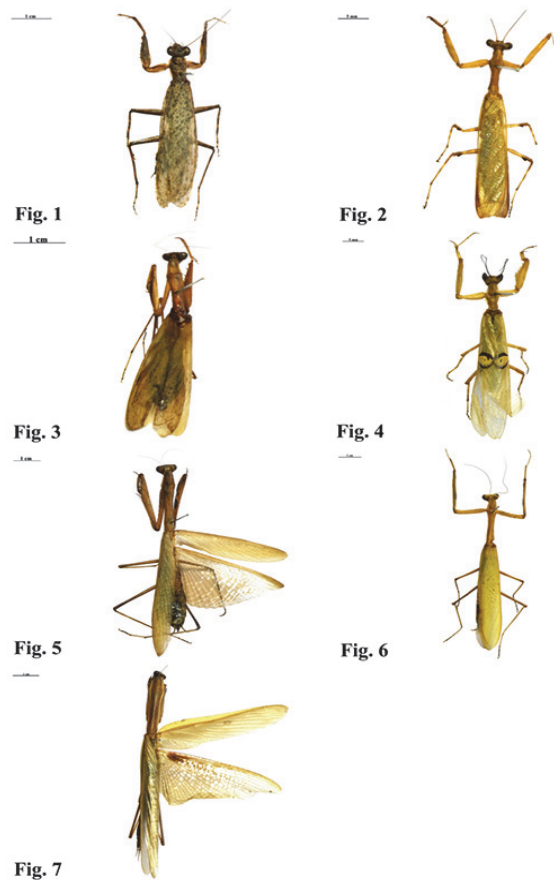


Fig. 1 *Humbertiella affinis* Giglio-Tos, 1917,
Fig. 2 *Acromantis montana* Giglio-Tos, 1915,
Fig. 3 *Anaxarcha acuta* Beier, 1963,
Fig. 4 *Creobroter laevicollis* (Saussure, 1870),
Fig. 5 *Statilia maculata* (Thunberg, 1784),
Fig. 6 *Statilia nobilis* (Brunner de Wattenwyl, 1893),
Fig. 7 *Tenodera aridifolia* (Stoll, 1813)

posteroventral and 4 discoidal spines; all long anteroventral spines black; tibial spur groove yellowish, proximally with a black patch and distally with a black line.

Material examined: 1 Male, INDIA, Mizoram, Tungvel, 18.ix.1994, Coll. I. B. Dutta & Party.

Distribution: India; Himachal Pradesh, Manipur, Mizoram (new record), West Bengal. Elsewhere: Myanmar.

Subfamily: Tenoderinae; Tribe: Tenoderini

Genus *Tenodera* Burmeister, 1838

7. *Tenodera aridifolia* (Stoll, 1813) (Fig. 7)

Mantis aridifolia aridifolia Stoll, 1813. *Represent. Spectres. Mantes.*, 65.

Mantis japonica Saussure, 1871. *Mem. Soc. Hist. Nat. Geneve.*, 21: 238.

Mantis mandarinaea Saussure, 1871. *Mem. Soc. Hist. Nat. Geneve.*, 21: 289.

Diagnosis: Body large. Lower frons pentagonal, bicarinate. Pronotum slender. Fore femur with 4 posteroventral and 4 discoidal spines. Costal area of fore wings green, opaque. Hind wings hyaline, with a large reddish patch near base and brownish patches beneath costal area.

Material examined: 1 Male, INDIA, Mizoram, Twampui, 19.ix.1993, Coll. A. R. Lahiri.

Distribution: India; Arunachal Pradesh, Assam, Himachal Pradesh, Maharashtra, Mizoram (new record), Sikkim, Tamil Nadu, Uttar Pradesh, West Bengal. Elsewhere: Borneo, China, Indonesia, Japan, Malaysia, Myanmar, Nepal, Taiwan, Thailand, United States of America.

Mizoram is one of the Seven Sister States in the North-Eastern India, which is the southernmost state sharing borders with Myanmar and Bangladesh. The state has the highest percentage area covered by forests among the Indian states with a variety of forest types and rich flora and fauna, making it a significant region for biodiversity. This is the first report of mantid fauna from the state with seven species in six genera and three families. Since Mizoram is a part of Indo-Burma biodiversity hotspot, the possibility of finding more interesting species of mantids from this area is very high. More extensive surveys are needed in this region.

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