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## A new species of praying mantis genus *Metacromantis* BEIER from Andhra Pradesh, India (Mantodea: Hymenopodidae: Acromantinae)

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ABSTRACT. A new species of the genus *Metacromantis* BEIER is described based on two male specimens collected in Andhra Pradesh, India. This genus is also a new record for India as the only other known species *M. oxyops* BEIER was described from Sri Lanka and has been so far known only from the type specimen, which is a female. The new species is characterized by laterally mammiform eyes, tuberculate pronotum and posterior femora that possess only distal small lobes.

Key words: entomology, taxonomy, Dictyoptera, Mantodea, Hymenopodidae, Acromantinae, new species

A survey of Mantodea of Srisailam region of Hyderabad, Andhra Pradesh, India, has been carried out for the past 2 years. The topography of this area along with the type of vegetation present has already been described elsewhere (THULSI RAO et al. 2004). The area has rich mantid fauna and some 26 species of mantids, belonging to 23 genera have been known from the area up till now (THULSI RAO et al. 2005). During one such survey of July-August 2004, a strange mantis with all the features of the family Hymenopodidae, subfamily Acromantinae, was collected. This mantis turned out to be a new species and it is described here under the genus *Metacromantis*.

The genus *Metacromantis* was created by MAX BEIER (BEIER 1930) to accommodate a single female collected in Ceylon (now Sri Lanka) and he named the

species *Metacromantis oxyops* in the same publication. This species (type specimen), preserved in the Natural History Museum, London, has been up to now the only one known for the genus. The name *Metacromantis* was chosen due to the general similarity of the animal to those of the genus *Acromantis* SAUSSURE 1870; the specific name "*oxyops*" indicated the conical eyes of the species.

The new species, described here on the basis of two males, is placed in the genus *Metacromantis* as it is the only Hymenopodidae genus with which the present species shows overall similarity, especially in general form, frontal sclerite, wings and eyes.

Because the genus *Metacromantis* has been so far known only from Sri Lanka (EHRMANN 2002), description of this new species adds one more genus to the known mantid fauna of India (see MUKHERJEE et al. 1995).

### ***Metacromantis nigrofemorata* GHATE et ROY, new species**

#### ETYMOLOGY

The specific name is based on black coloration of the inner face of the femora.

#### DIAGNOSIS

Although similar to *Metacromantis* in general characters, the new species differs from *M. oxyops* in possessing 1) eyes much laterally prolonged and with a tubercle 2) pronotum that is less elongate and much granular 3) stout fore femora and 4) mid and hind femora having only distal lobes.

#### DESCRIPTION

**General:** Medium size (total length 27 mm); color dark brown; head with numerous black spots; pronotum short, brown, with distinct supra-coxal dilation and overall tuberculate appearance; abdominal tergites mostly dark brown, ventrites light brown with many black spots and fine tubercles; mid and hind legs with three distinct bands; both wings longer than body (at least in male, female not seen), brown with several dark brown blotches and brown veins, fore wings somewhat opaque, with pale stigma; hind wings hyaline. (Figs. 1 & 2; dorsal and ventral view, respectively, of the holotype)

**Head** broad (more than twice as broad as high, breadth about 6 mm includes the tubercles on the eye); eyes large, somewhat upturned, laterally perfectly mammiform with a nipple like brown tubercle, without spine (Fig. 3); antennae short (18 mm), filiform, with the first two segments dark brown and the third and following pale brown; vertex with 4 grooves, lateral lobes conical but with blunt tip, projecting backward and outward behind the eyes (Fig. 4); ocelli large; a small tubercle behind the ocelli; frontal sclerite transverse (about 3 times as broad as high), narrow, its upper angle produced in a fine beak, disk more or less flat with two very indistinct blunt carinae seen as blunt tubercular area at the base; tips of the maxillary and labial palpi dark brown.



1, 2. *Metacromantis nigrofemorata* n. sp., holotype: 1 - dorsal view of the holotype (actual size 27 mm). Note overall body coloration, elytra and wing coloration (right elytra partly folded), 2 - ventral view of the holotype

**Pronotum** convex, brown with distinct supra-coxal dilation; prozona dorsally tuberculate with an anterior mid dorsal group and posteriorly two lateral, oblique rows of black prominent tubercles; a distinct longitudinal, median groove between the oblique rows; a distinct transverse groove separating the anterior mid-



3, 4. *Metacromantis nigrofemorata* n. sp., holotype: 3 - head, frontal view to show frontal sclerite, ocelli and laterally mammiform eyes, 4 - head, dorsal view. Note shape of the eyes and backwardly directed blunt, conical lobes

dorsal group and the oblique rows (so that the prozona appears to have 3 distinct tubercular areas); lateral margins of prozona with large black tubercles. Metazona also tuberculate with many dark brown or pale colored tubercles, tubercles apparently arranged in 3 dorsal rows and 2 lateral rows, one on each side on the vertical face; margins with small light brown tubercles; mid-dorsally the posterior tip of metazona with two conical protuberances with a tubercle on each (Fig.5). Prosternum more or less flat; with transverse wrinkles in the “neck” region;

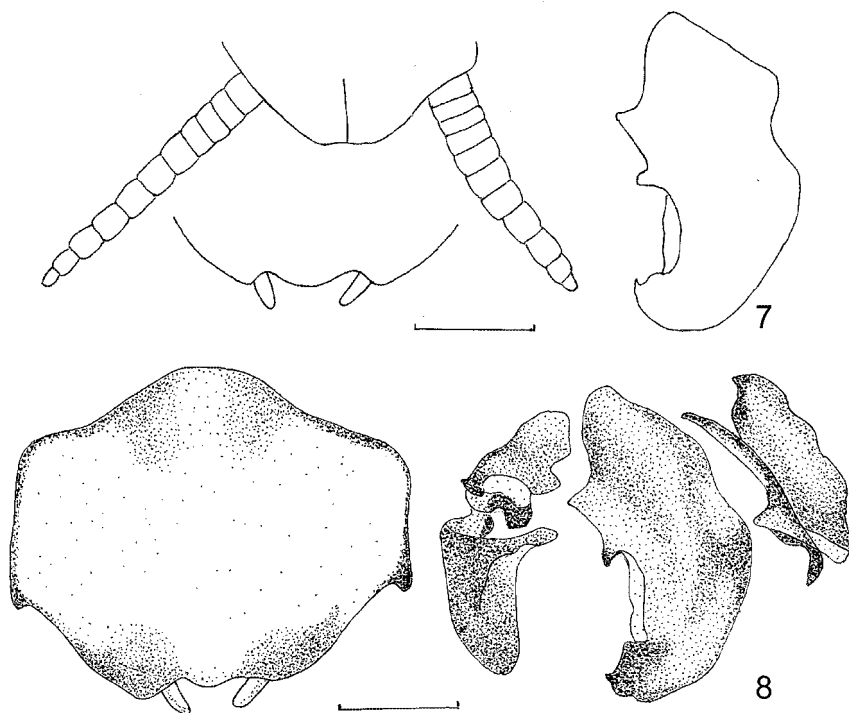


5, 6. *Metacromantis nigrofemorata* n. sp., holotype: 5 - pronotum, dorsal view to show overall arrangement of tubercles, 6 - inner face of fore femur to show coloration and spines

metasternum flat, pale cream, with rows of fine black spots in the middle; two lateral, rounded structures and a fine median groove at base. Pronotum total length 7.3 mm (prozona 2.6 and metazona 4.7; width 2.9 mm at supra-coxal dilation and 1.5 at narrow part). The same measurements for the paratype are: pronotum 7.2 (prozona 2.6 and metazona 4.6; maximum width 2.8 and narrow part 1.4).

**Wings:** Fore wing (=elytron, 23 mm) and hind wing (19 mm) well developed (at least in male, female not seen); fore wings pale brown with dark brown blotches, longitudinal veins dark brown; stigma very pale, thin and elongate (3 mm X 0.5 mm). Hind wings translucent, very pale brown with costal area and the apical part of the discoidal area dark brown, all long veins very dark brown. Both wings appear distally truncate.

**Fore legs:** Coxae somewhat triangular, with outer face light brown, inner face pale cream, preapical lobes black, divergent; anterior edge of coxae with minute light brown tubercles with setae, outer posterior edge also with fine tubercles and setae; trochanter internally black; external face of the femora light brown, with many fine, black tubercles almost in the form of a median longitudinal row, edges also with tubercles; most of the inner, inferior face of the femora black, superior



7, 8. *Metacromantis nigrofemorata* n. sp.: 7 - supra-anal plate with cerci (top left), posterior edge of sub-genital plate (below left), and hypophallus (extreme right), of *Metacromantis nigrofemorata* n. sp. paratype (slide No. 3908 R. Roy), 8 - Subgenital plate (at left) and genitalia (ventral view, at right) of holotype, (slide No. 3888 R. Roy). Scale bar 1 mm

face with 3 broad dark brown, vertical bands that meet the inferior black area except for a thin pale line (see Fig.6). Femora with 4 external, 4 discoidal and 11 internal spines (wide gap between 10<sup>th</sup> and 11<sup>th</sup> spine); the edge strongly crenate between the external spines; all internal femoral spines and 3<sup>rd</sup> and 4<sup>th</sup> discoidal spines black on external as well as internal face; first and 2<sup>nd</sup> discoidal spines with black tips only; claw groove at the base. Tibia internally brownish, with 3 faint black bands, externally blackish; external tibial spines 10 or 11, very closely beset and oblique; internal tibial spines 10, all blackish on their inner face, tibial disk (area between the spines) dark black; All tarsal segments pale on inner side and black on external as well as on undersurface.

**Mid and hind legs** pale colored; moderately setose; femora and tibiae with three brownish bands or rings as seen from dorsal side; ventrally bands are faint but visible; hind legs longer than mid legs; basitarsus shorter than the remaining tarsal segments put together. Mid and hind femora with a small ventral, triangular, spiny sub-apical lobe and this area covered with a dark band.

**Abdomen:** Abdominal tergites dark brown; ventrites grayish brown, pale and with fine granulation; supra-anal plate transverse with dorso-median carina; cerci short, about 2 mm long, cylindrical and setose, not visible from above due to wings. Subgenital plate with sinuate posterior edge; styli short (Figs. 7 & 8).

**Measurements:** Table 1 showing measurement (in mm) of the male holotype specimen; those in parenthesis are of paratype (also a male):

	Fore Leg	Mid Leg	Hind Leg
Coxa	6.2 (6.4)	2.7 (2.7)	2.9 (3.0)
Femur	7.3 (7.5)	5.0 (5.0)	6.4 (6.5)
Tibia	3.6 (3.9)	4.2 (4.2)	6.0 (6.1)
Tarsus	4.6 (4.7)	3.6 (3.8)	4.7 (4.8)
Basitarsus	2.6 (2.7)	1.4 (1.4)	2.0 (2.1)

**Male genitalia:** Genitalia are much pigmented, unlike those of *Acromantis*. Hypophallus elongate with two lobules at the right edge, and the apex is turned to the right, somewhat truncate with a little point. Right epiphallus of simple shape; left epiphallus with very short titillator and the pseudophallus curved to the right (Fig.8)

#### TYPE MATERIAL

Two male mantids (one treated as holotype, the other as paratype) collected by S.M. Maqsood Javed; 18<sup>th</sup> August 2004; locality- Srisailam, Nagarjunsagar, Kurnool Dist., Andhra Pradesh. Holotype deposition: ERM-Labs, Biodiversity Research Center, Project Tiger, Srisailam, Kurnool dist. (A.P). Paratype will be deposited in Museum National d'Histoire Naturelle, Paris.

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