

DESCRIPTION OF THE FEMALE OF *MYSIDOPSIS INDICA*
W.M. TATTERSALL

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IN his report on 'The Indian Mysidacea' W. M. Tattersall (1922) created *Mysidopsis indica* to describe two males and two females collected at Port Blair, Andamans. He gave only a short description emphasising the characters in which it differed from *M. gibbosa* G. O. Sars. Ii (1964) gave a more elaborate description of this species based on a single adult male collected from South China Sea. Ii's specimen did not have the endopods of the thoracic limbs but he gave a detailed description of the whole animal, the mouth parts and the pleopods, supplementing the original short description.

At station 1788, R.V. *VARUNA* collected a single ovigerous female. This specimen also lacked thoracic endopods three to eight. But a study of the remaining parts clearly indicates that this species shows marked sexual dimorphism. A detailed description of the female is, therefore, given below.

Mysidopsis indica W. M. Tattersall

Figs. 1-13

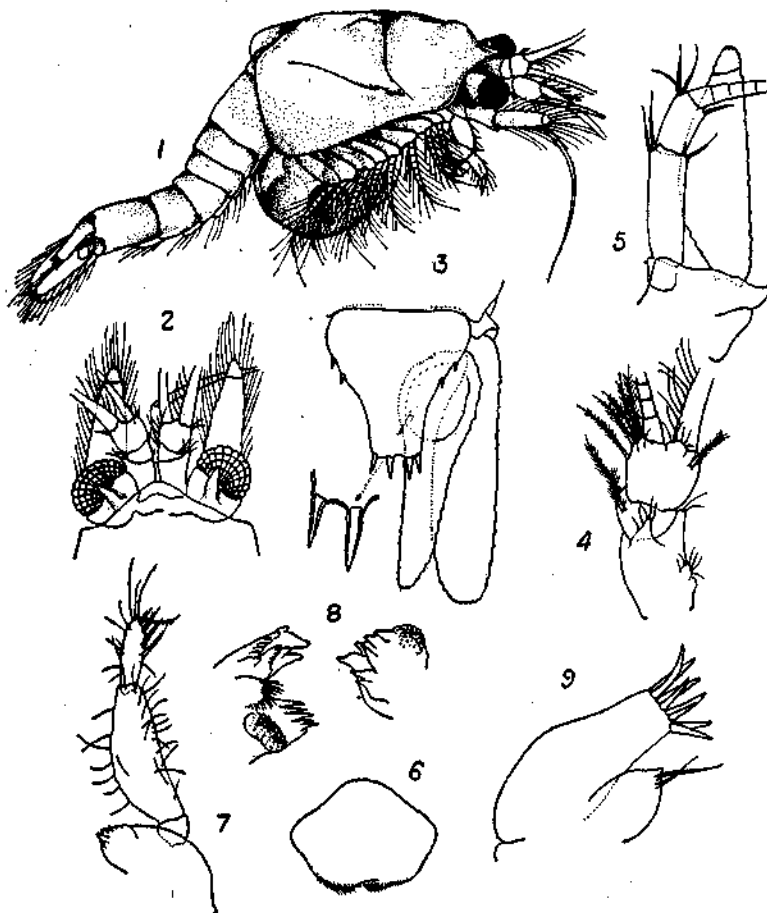
Mysidopsis indica W. M. Tattersall, 1922, p. 466, fig. 12 ; Illig, 1930, p. 586 ; Ii, 1964, p. 398, fig. 100.

Material : A single ovigerous female without thoracic endopods, measuring 3.2 mm., from Station 1788, R.V. *VARUNA* collections, vertical haul with the International Indian Ocean Expedition Standard Net, operated at 73-0 metres.

Female : Body is short but stout, with the abdomen characteristically curved in a sigmoid fashion. Carapace has a fairly deep postero-median gap but the posterior border of the wings of the carapace is subtruncate. The rostral prolongation is prominent in the lateral view but dorsally appears broadly triangular and apically rounded. The carapace has a prominent high boss just behind the rostral prolongation but the boss behind the cervical sulcus and the hind part of the carapace are very low and difficult to make out. The lateral bosses observed by Ii may or may not be present, but I could not definitely locate them. In the dorsal view the last two thoracic segments are left uncovered by the carapace. Abdomen is almost as long as the cephalothorax, first segment is as long as the sixth, others are short, third segment is the shortest. Each abdominal segment has its postero-lateral angles slightly produced but no distinct pleural lobes, as observed by Ii, could be seen.

Telson is nearly as long as broad. Its basal part is very broad and from the middle steadily narrows so that the distal third is parallel sided and less than half

as broad as the base. The distal border of the telson is truncate, with a small median concavity. Basal half of the lateral borders carries two pairs of comparatively small spines. The distal border is armed with two pairs of strong spines which are more than twice the size of the lateral spines, the outer pair of distal spines is clearly smaller than the inner.



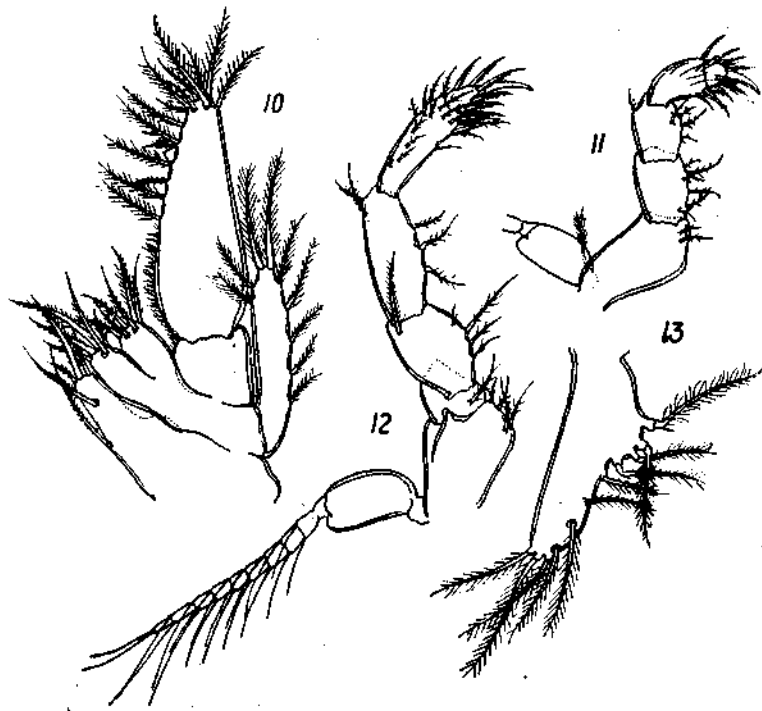
FIGS. 1-9. *Mysidopsis indica* W.M. Tattersall. 1, entire animal, lateral view; 2, same, anterior end, dorsal view; 3, same, posterior end, dorsal view; 4, antennule, dorsal view; 5, antenna, dorsal view; 6, labrum; 7, mandible; 8, cutting edge of mandibles; 9, first maxilla.

Uropods are setose all around, exopod slightly overreaches the endopod, the basal part of the endopod, housing the comparatively large statocyst, is swollen and armed with a sharp spine situated almost on the statocyst. The telson just reaches the middle of the endopod. Exopod is nearly twice as broad as the endopod.

Basal segment of the antennule is equal to the combined length of the other two segments, its proximal outer part has a semicircular setose lobe and the distal medio-dorsal part a conical setose lobe, outer distal corner is slightly produced and setose. Second segment is short, third segment has a distal median lobe.

Antennal scale reaches far beyond the antennular peduncle and is setose all around, its distal transverse partition is distinct and the apical lobe is slightly longer than broad, the scale is broadest at the proximal one-third and is nearly three times as long as broad. The peduncle of the endopod is distinctly three-segmented and shorter than the scale, the sympod carries an acute spine.

The eyes are comparatively large with the corneal part nearly of the same size as the peduncular part. The peduncle is dorsally produced into a stout lanciform process overlapping the cornea. The eyes reach the tip of the outer distal prolongation of the basal segment of the antennule.



FIGS. 10-13. *Mysidopsis indica* W.M. Tattersall. 10, second maxilla; 11, endopod of first leg; 12, second thoracic leg; 13, first pleopod.

The labrum is slightly broader than long and asymmetrically bilobed.

The cutting edges of the mandibles are highly asymmetrical. The right mandible has a weak cutting lobe with a feeble molar and a low multidentate incisor, lacinia mobilis is not clearly defined. The incisor process of the left mandible is broad and projecting, lacinia mobilis is tridentate, molar is armed with four stout processes, palp is stout but feebly armed.

Inner lobe of the maxillule is apically slightly produced and armed with two setae. Outer lobe has its distal third suddenly constricted, distal border is armed with eight comparatively long spines arranged in two rows of four each.

Basal segment of the maxilla has a narrow lobe armed with very few setae, only four in the present specimen, second segment has two lobes, each armed with five

to six setae, endopod is two-jointed, distal segment steadily narrows towards the rounded apex and the apical and distal half of the inner margin are sparsely setose, the segment is about two and a half times as long as broad, exopod is very slender and reaches the basal one-fourth of the distal segment of the endopod.

Endopod of the first thoracic appendage is comparatively stout and six segmented, first segment is the longest, next three are subequal in length, fifth segment is short, as long as broad, the sixth segment or nail is very strong, fourth and fifth segments are armed with pectinate spine setae.

Second thoracic endopod is stout and seven-segmented, first four segments are rather stout, fifth and sixth are slender and armed with several barbed setae, nail is stout as in the previous appendage. Exopod is ten-segmented, outer distal part of the enlarged basal segment is rounded. Remaining thoracic endopods were missing.

Pleopods are thin unsegmented plates steadily decreasing in size backwards. The first pleopod has a very thin proximal outer lobe.

Remarks: According to W. M. Tattersall the nodules on the carapace are more prominent in the female than in the male. I do not have a male for comparison but this observation is apparently correct since the anterior nodule in the present female is indeed very high. W. M. Tattersall observed that the antennal scale in the male is two and a half times as long as broad and according to Ii a little more than twice as long as broad. In the female the antennal scale is nearly three times as long as broad and thus shows clear sexual dimorphism. The antennal scale in the female is visibly narrower than in the male, almost exactly as in *M. gibbosa* G. O. Sars.

In both the previous descriptions of this species the third segment of the antennular peduncle is described as the longest. In the present female the first segment is equal to the combined length of the other two segments and is again a character showing sexual dimorphism.

W. M. Tattersall makes no particular mention of the process on the peduncle of the eye. But since he compares his species with *M. gibbosa* it should be presumed that in this character there is no difference between these species. Ii has shown a large bifid process. In my specimen the process is simple and this character also varies according to sex.

W. M. Tattersall did not describe the mouth parts. Compared to the description given by Ii the present female shows some difference. In the female the mandibular palp is much less setose. A more important difference is the shape of the distal segment of the endopod of the second maxilla. In the illustration given by Ii this segment is very narrow but in my specimen it is much broader. According to Ii the basal plate of the exopod of the thoracic limbs has a small process at the outer distal angle but in my specimen this angle is rounded. The most noteworthy difference between the male and the female observed in the present study is in the armature of the telson. In the male described by W. M. Tattersall and Ii the apical and lateral spines of the telson are of the same size. But in the present female the apical spines are twice the size of the lateral spines and the two pairs of apical spines are dissimilar. These differences are clearly due to sexual dimorphism as there is absolutely no reason to doubt the identity of the present specimen.

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