

**ON A NEW MYSID FROM THE INSHORE WATERS OF THE
KERALA COAST**

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WHILE describing *Doxomysis littoralis*, Tattersall (1922, p. 480) held over three specimens to await further study and observed that they might represent a new species. He briefly mentioned their most diagnostic characters and also gave an illustration of the telson. In his subsequent publication on the Mysidacea of the Great Barrier Reef Expedition (Tattersall, 1936) he revised his earlier opinion and concluded that *D. littoralis* is a spinulose form and that the differences observed earlier were not real. Accepting Tattersall's view I assigned a specimen collected from the present locality to *D. littoralis* Tattersall (Pillai, 1957). However, detailed examination of two damaged specimens, an adult male and an immature female, convinced me that Tattersall's original opinion is valid. I, therefore, create a new species, *Doxomysis longiura*, for *Doxomysis* sp. Tattersall. The specific name alludes to the long uropods.

***Doxomysis longiura* n. sp.**

(Figs. 1-19)

Doxomysis sp. Tattersall, 1922, p. 480, f. 18.

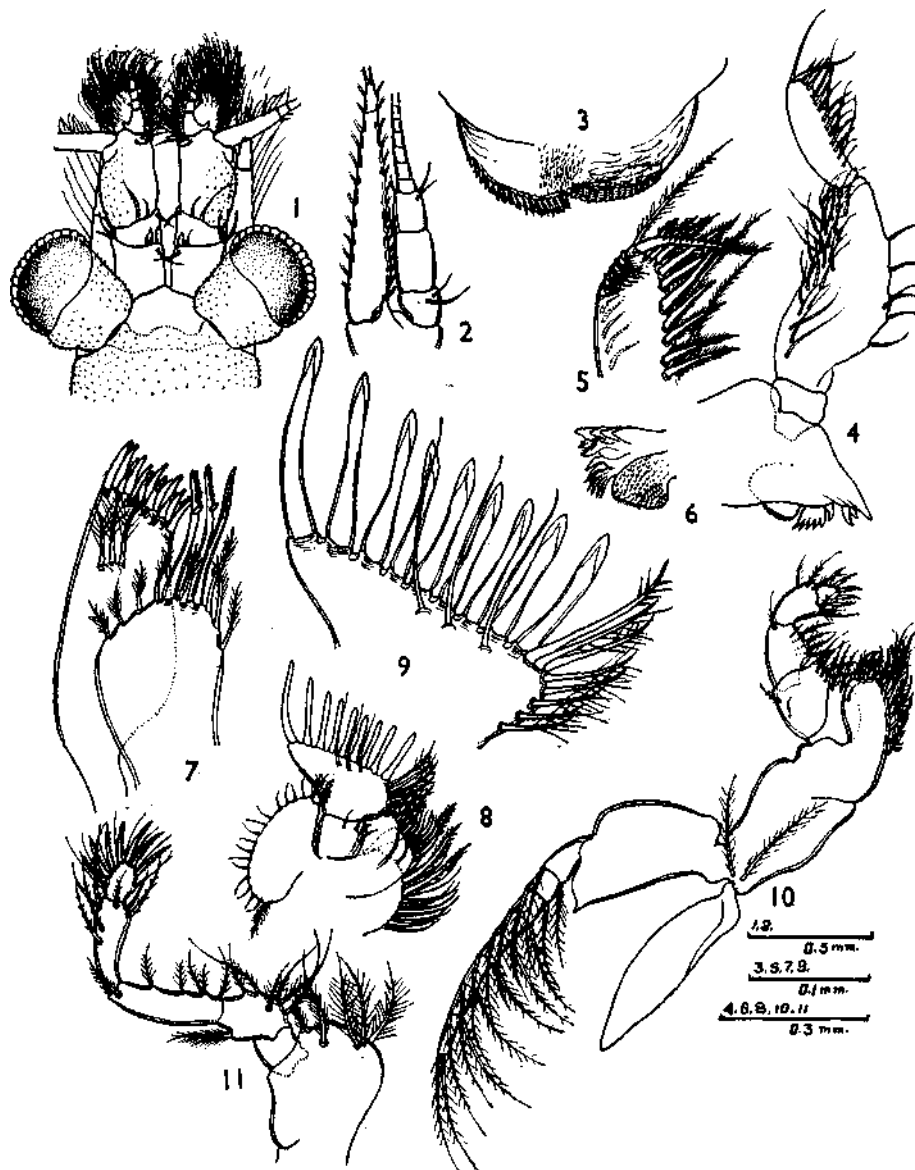
Doxomysis littoralis Tattersall, 1936, p. 154 (in part).

Doxomysis littoralis Pillai, 1957, p. 12, f. VII, 1-2.

Body is spiny, the spines extending on to the eye stalks, antennular peduncle and the basal part of the telson. The rostrum is somewhat produced with a blunt apex reaching the middle of the basal segment of the antennular peduncle. Eyes are rather thick with the cornea only slightly broader than the peduncle. Telson has a broad base but abruptly narrows slightly beyond the base from whereon its sides are parallel. The apical cleft is rather deep with parallel sides and the apical lobes are perfectly rounded. The cleft carries a pair of long plumose setae and nineteen to twenty pairs of sharp closely packed spines. Each half of the telsonic border carries twenty-one spines, first spine is comparatively long and separated from the second by a moderate gap, next four to five spines are dorsal in position, the spines regularly increase in length from the second to the nineteenth which is truly apical, the last two spines are blunt and are situated within the apical slit of the telson ; in the female the last four spines are blunt.

The antennular peduncle is fairly stout, first segment is subequal to the third in length, latter is externally bulged; in the female the antennular peduncle is longer and more slender. Basal segment of the inner flagellum is produced into an outer conspicuous spine. Male lobe is conspicuously hirsute. Antennal sympod carries

a sharp outer spine, exopod is lanceolate, fully setose and does not reach the tip of the antennular peduncle, endopod has a three-segmented peduncle nearly half as long as the scale. Labrum is only slightly asymmetrical, the asymmetry is, however, increased by the dissimilar armature of the two halves. Mandible has a well developed cutting edge, palp is stout and prominently setose, second segment is very large.



FIGS. 1-11. *Doxomysis longiura* n.sp. 1. anterior part of body, dorsal view, male; 2. antenna; 3. labrum; 4. mandible; 5. same, tip of palp; 6. same, cutting edge; 7. maxillule; 8. maxilla; 9. same, tip of endopod; 10. first thoracic appendage; 11. second thoracic appendage.

Outer lobe of maxillule is armed with fourteen stout teeth arranged in three rows, inner lobe has seven pectinate setae and three stout long spines armed with blunt teeth at the distal one-third. Maxilla has four endites well armed with setae, endopod is two-segmented and very characteristic, the second endopod segment is transversely expanded and carries a row of nine large spines and three long simple setae on the distal border and about eight long pectinate spines along the inner border, outer border is unarmed, exopod is roughly oblong and externally setose, the end setae are longer than the others.

First thoracic limb (maxilliped) has its basis produced into a large lobe, next two segments are broad but not lobed, last three segments are comparatively narrow, dactylus carries five barbed subsimilar spines, the nail being not very prominent. Second thoracic limb (gnathopod) is slender, basis is stout and the dactylus carries seven barbed spines as in the maxilliped. Thoracic appendages three to eight (peraeopods) are long and slender, becoming longer and more slender backwards, ischium and merus are long and subequal in length, there are three tarsal segments, of which the first is always nearly twice as long as the second, dactylus carries a long slightly curved nail; all the legs are well armed with long pectinate spine setae. Fourth pleopod of male is modified, exopod is seven-segmented and nearly one and a half times as long as endopod, fifth segment carries a long strongly barbed curved seta and the sixth a more feebly barbed nearly straight seta, pseudobranchial lobe of endopod is distinct and carries four setae. Endopod of uropod is nearly twice as long as telson, its base is rather swollen and encloses a large statocyst, inner border carries a closely packed row of spines extending the entire length of the ramus, the spines arming the proximal half are blunt and those at the distal half are sharp, they fall into series of two or three beginning with the seventh spine. Exopod is nearly twice as long as telson.

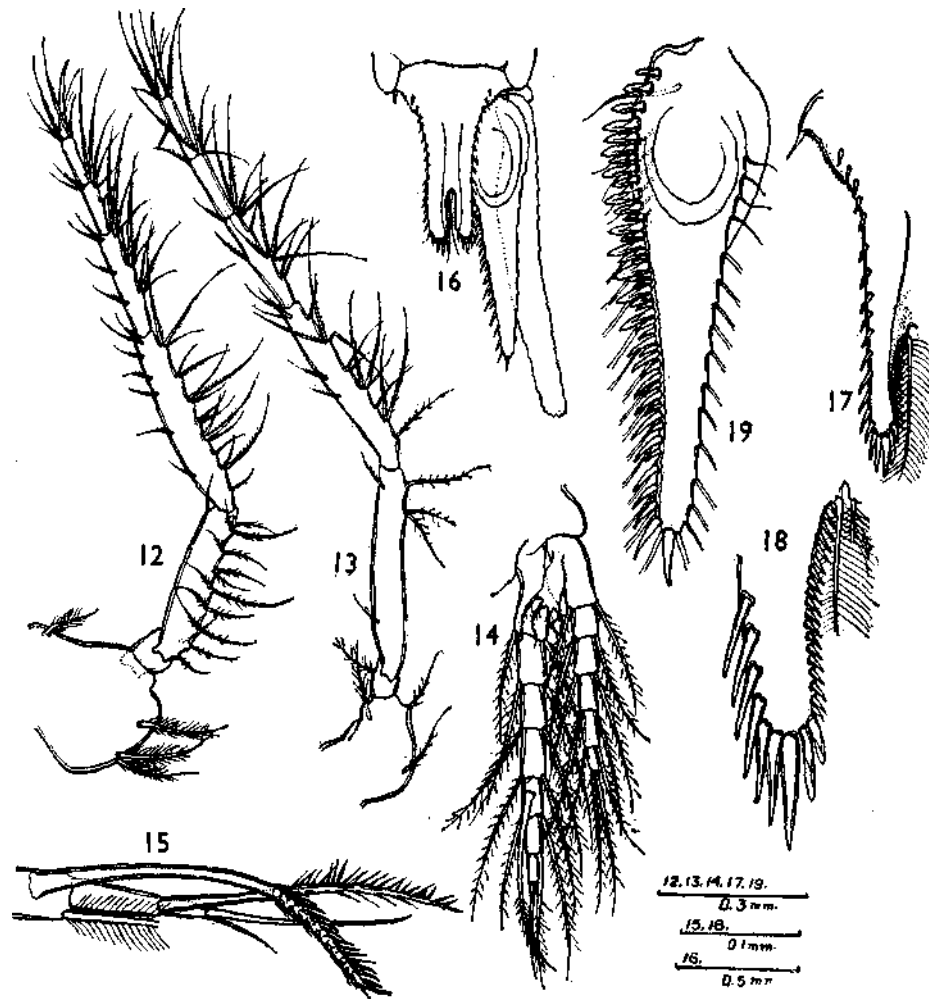
Length from tip of rostrum to tip of telson 6.4 mm.

Remarks. The original specimens for which Tattersall proposed a new species were spiny and the Barrier Reef material included both spiny and smooth specimens. This led Tattersall to the conclusion that the spines may be rubbed off during capture. The three specimens I was able to examine were so badly damaged that if Tattersall's opinion is correct they would have been smooth. I am of opinion that the smooth specimens belong to *D. littoralis* Tattersall and the spiny ones really constitute a new species as originally suggested by Tattersall. In his second report Tattersall did not mention anything about the differences, other than the spinulation of the body, which he enumerated earlier.

D. longiura differs from *D. littoralis* in the following characters. The body is spiny and the spines extend on to the antennular peduncle, eye stalk and the telson. The antennal scale hardly reaches the tip of the antennular peduncle; in *D. littoralis* it reaches far beyond the antennular peduncle. Endopod of uropod is nearly twice as long as telson and its entire inner border is spiny, the spines are of two types, blunt and sharp ones; in *D. littoralis* the spines extend from the statocyst to a little short of the apex and all the spines are rather blunt.

As characters of lesser importance may be mentioned the different shape of the rostrum, the dorsal position of the first four or five of the spines arming the lateral border of the telson and the peculiar modification of the basal segment of the inner flagellum of the antennule. In both *D. littoralis* and *D. anomala* Tattersall the first two tarsal segments of the peraeopods are subequal in length and the partition is

oblique. In *D. longiura* the first tarsal segment is nearly twice as long as the second and the partition is straight. The two species differ in size also, *D. littoralis* is only 5.0 mm. long while *D. longiura* is 6.4 mm. long.



FIGS. 12-19. *Doxomysis longiura* n.sp. 12. third thoracic limb ; 13. eighth thoracic limb ; 14. fourth pleopod, male; 15. same, tip of exopod ; 16. telson and uropod ; 17. telson enlarged ; 18. telsonic lobe enlarged ; 19. endopod of uropod.

SUMMARY

For the specimens which Tattersall (1922, p. 480) assigned to *Doxomysis* sp. a new specific name is given. A detailed description of the new species, *D. longiura* n. sp. is given.

REFERENCES

- PILLAI, N. K. Pelagic Crustacea of Travancore. 1. Schizopoda. *Bull. Res. Inst. Univ. Travancore*, 1957, 5 :1-28.
- TATTERSALL, W. M. Indian Mysidacea. *Rec. Ind. Mus.*, 1922, 24 :445-504.
- Great Barrier Reef Expedition, 1928-29. Mysidacea and Euphausiacea, *Sci. Rep.*, 1936, 5 :143-176.