

epizoite on the copepod is not understood though such attachment causing inflammation, absence of egg strings and puncturing of the substratum was reported (Natarajan and Nair 1970).

The fish host (No. CMFRI - F 124/676), copepod parasites (No. CMFRI - J 17/200) and the epizoite (No. CMFRI - J 17/200 a) were deposited in the Reference Collection Museum of CMFRI at Mandapam Camp.

We are thankful to Dr. R. V. Nair, Director, Central Marine Fisheries Research Institute, for his kind encouragements. Thanks also are due to Dr. M.D.K. Kuthalingam, Officer-in-charge of this sub-station for his guidance and to Dr. M. Sahul Hameed of the Central Institute of Fisheries Technology for indentifying the parasite.

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**MONSTRILLA TURGIDA SCOTT (COPEPODA - MONSTRILLOIDA)
A NEW RECORD FROM THE INDIAN SEAS**

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ABSTRACT

A description of the monstrolloid copepod *Monstrilla turgida* Scott, recorded for the first time from Indian Ocean is given here. The specimens, obtained in surface plankton tows in the lagoon waters of Minicoy Island, show some variations in the morphological characters from the type specimen described by Scott from the Pacific Ocean and these are discussed.

The following ten species of the monstrolloid copepod genus *Monstrilla* Dana 1849 (Genotype : *M. viridis* Dana; typelocality : Sulu Seas) are known from the Indian Ocean : *Monstrilla grandis* Giesbrecht from Suez Canal (Gurney 1927); *M. anglica* Lubbock, *M(?)*, *conjunctica* Giesbrecht, *M. helgolandica* Claus and *M. investigatoris* Sewell from Nicobar Islands (Sewell 1949); *M. longipes* Scott from Nicobar Islands (Sewell 1949) and Red Sea (Al Kholy 1963); *M. sp.* from Madras coast (Krishnaswamy 1953); *M. lata* Desai and Bal (1962) from Bombay waters; *M. gohari* Al Kholy (1963); and *M. ghardaqensis* Al Kholy (1963) from Red Sea. *Monstrilla turgida* reported here was first described by Scott (1909) based on two females collected during the Siboga Expedition off Laiwui, 0° 24'S 127° 36' E - Pacific Ocean, and there are no subsequent records of this species.

Monstrilla turgida Scott 1909 (Fig. 1 a-k)

Monstrilla turgida Scott 1909, *Siboga Exped. Monogr.*, p. 239, pl. 58, figs. 5.6.

Material examined: 4 females, 2.26-2.42 mm in T.L. collected between 1420-1430 hrs on 9-3-1972 from the lagoon waters of Minicoy Island in surface tow with a half-metre plankton net with mesh size 0.33 mm.

Description :

Female: (Fig. 1 a-e) : Body short, moderately robust, cephalosome about the combined length of metasome and urosome and greatly inflated just

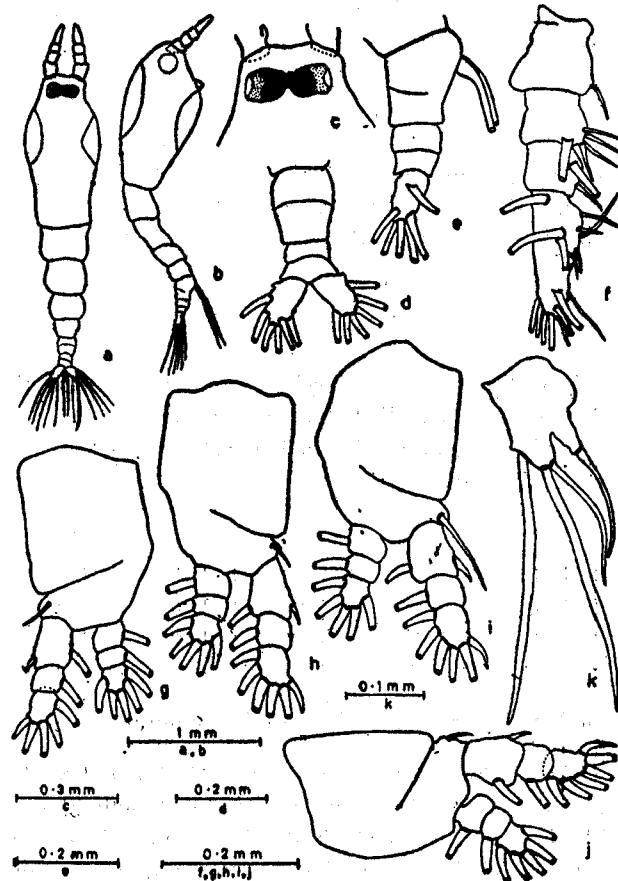


FIG. 1. *Monstrilla turgida* Scott. a: Dorsal view; b: lateral view; c: anterior region of cephalosome enlarged; d: urosome dorsal view enlarged; e: urosome lateral view enlarged; f: antennule; g: 1st swimming leg; h: 2nd swimming leg; i: 3rd swimming leg; j: 4th swimming leg; k: 5th leg.

behind frontal margin, length-breadth ratio being 69.63 : 30.37; ratio of cephalosome : rest of body being 49.21:50.79; urosome three-segmented, markedly short, about one-seventh total length; genital segment sub-quadrangular in shape and traversed at its mid-length by a distinct suture; it is longer than the combined length of following two segments, length breadth ratio being 51.90:48.10; a pair of ovigerous spines present on ventral side which is about one-and-half times length of urosome; third urosome segment broader distally; caudal rami longer than broad, length-breadth ratio being 58.82:41:18, each with one outer marginal seta and five sub-equal apical setae; mouth placed near anterior region of cephalosome; eyes well developed; proportionate lengths of various segments of body are as follows:

Seg:	Cephalosome		Metasome			Urosome			Caudal rami
	2	3	4	5	1	2	3		
%	49.21	9.95	12.05	7.85	6.28	5.24	2.09	2.62	4.71

A 1 (Fig. 1f) : four-segmented; short, stout, attains about one third length of cephalosome; last segment longest, but shorter than combined length of first three segments; segments with following proportionate lengths:

Seg:	1	2	3	4
%	23.66	17.74	16.67	41.93

Swimming legs, P1-P4 (Fig. 1 g-j) : four pairs, with three-segmented Re and Ri; Re longer than Ri, Re1 longer than broad; Re3 of P1 has four setae while Re3 of P2, P3 and P4 bears five setae; setae and spines on three segments of Re and Ri as follows*:

Legs	Re				Ri	
P1	1 + 1	1 + 0	4 + 1	1 + 0	1 + 0	5 + 0
P2	1 + 1	1 + 0	4 + 1	1 + 0	1 + 0	5 + 0
P3	1 + 1	1 + 0	5 + 1	1 + 0	1 + 0	5 + 0
P4	1 + 1	1 + 0	5 + 1	1 + 0	1 + 0	5 + 0

* Spines in Roman and setae in Arabic numerals

Fifth leg (Fig. 1k) : rudimentary, symmetrical and broad; apex bilobed, inner lobe narrower than outer lobe and about the length of outer lobe; outer lobe provided with three setae of which the inner most is short; inner lobe is furnished with a seta which is shorter than the inner most seta of outer lobe.

Remarks:

Specimens of *Monstrilla turgida* from Minicoy Island agree in diagnostic characters with the description of the species of Scott 1909 from Pacific Ocean.

However, there are some variations in the proportionate length of the cephalosome: rest of the body ratio, structure of fifth leg and the proportionate length of the ovigerous spines. The morphological differences seen in the present specimens from Minicoy Island from that described from Pacific Ocean is given below:

Specimens from Pacific Ocean	Specimens from Minicoy Island
♀: T. L. 2mm	♀: 2.26 - 2.42 mm
Cephalosome: longer than rest of body	About the same length as rest of
Last metasome segment: broader than	body. Broader than long, but broader
long and rectangular in shape.	at base. About one-and - half times
Ovigerous spines: about three-and half	length of urosome.
times length of urosome	Broad, inner lobe about same length
P5: moderately long and slender inner	of outer lobe, outer and middle setae
lobe extends beyond apex of outer	on outer lobe about same length and
lobe, middle seta on outer lobe longest,	long, inner most seta short; seta on
two other setae of same length, setae	inner lobe shorter than inner most
on inner lobe long, but shorter than	seta on outer lobe.
those on outer lobe.	

Gurney (1927) has rightly pointed out that as monstrilloids are so rarely taken in the plankton collections, very little is known of their natural distribution. However, the presence of species in the Atlantic, Mediterranean and Indo-Pacific waters suggests that as a group they are widely distributed. The occurrence of *Monstrilla turgida* in Minicoy waters, in the Arabian Sea, and in the western Pacific suggests that it has a wide distribution in the Indo-West Pacific region, though the distribution may appear disjunct at present. The slight variations noted in the specimens described here as compared to the type material may be due to the geographical variations in the species.

We are grateful to Dr. E. G. Silas for his guidance, Critically going through the manuscript, and giving valuable suggestions. Our thanks are also due to Dr. P. Parameswaran Pillai for the help he has rendered.

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