

ON THE OCCURRENCE OF THE CYCLOPOID COPEPOD *VETTORIA*
PARVA (FARRAN) IN THE INDIAN SEAS

ABSTRACT

Vettoria parva (Farran), a cyclopoid copepod is recorded for the first time from the Indian Seas. This is also the first record of the species from the Indian Ocean. The specimens obtained in surface plankton tows off Vizhinjam, Kerala agree in all details with the description of the type given by Farran (1936) from the Great Barrier Reef, except for the absence of lenticular swellings on either side of cephalosome.

WILSON (1924) proposed the genus *Vettoria* for the cyclopoid genus *Corina* Giesbrecht 1892 (nec *Corina* Westerlund, 1887 for a Gastropod mollusc). The genus *Corissa* Farran 1936 is also a synonym on *Vettoria* which is now known from four species namely, *Vittoria granulosa* (Giesbrecht, 1892); *V. parva* (Farran, 1936); *V. indica* (Krishnaswamy, 1951); and *V. longifurca* Rose and Vaissiere (1952).

Farran (1936) described *Vettoria parva* from a female specimen collected outside the Great Barrier Reef. Subsequently Johnson (1942) described the male of *V. parva* from the Eastern Pacific Ocean. More recently Carlo (1967) and Hure and Carlo (1967) recorded this species from the Gulf of Naples, and Shmeleva (1964), and Hure and Carlo (1967) from the Adriatic Sea. The present record of *V. parva* from the Southwest coast of India is the first record of the species from the Indian Ocean. A description of the species based on a good series of specimens available in the collection is given here.

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Vettoria parva (Farran) 1936 (Fig. 1 a-p)

Corissa parva Farran, 1936, *Sci. Rep. Great Barrier Reef Exped.*, p. 132, fig. 27; Johnson, 1942, *Trans. Amer. Microsc. Soc.*, p. 436, p 13; Shmeleva, 1964, *Oceanologija*, p. 1068; Carlo, 1967, *Pubbl. Staz. Zool. Napoli*, pp. 239-242, fig. 1.

Vettoria parva Hure and Carlo, 1967, *Pubbl. Staz. Zool. Napoli*, pp. 292-294, pl 4, fig. d-j.

Material

19 females 0.80 to 0.93 mm in T. L. (mean 0.87 mm) and 24 males 0.80 to 0.90 mm in T. L. (mean 0.85 mm) collected at 0700 hrs on 18-9-1959 in surface tow with a half metre organdie net from coastal waters off Vizhinjam, Kerala.

Description

Female: (Fig. 1 a, b) Body more or less transparent, proportionate length of prosome and urosome being 69.57:30.43; cephalosome at its tip bears a pair of large eyes placed close to each other; cephalosome and first metasomal segment are not fused together; fifth metasomal segment bears three subequal setae on each side analogous to P 5. Urosome (Fig. 1c) three-segmented, genital segment broadened anteriorly, the swollen broadened portion on its ventral region bearing a seta on each side; third segment wider than preceding segment; caudal rami long and narrow with one outer seta, one inner seta and three terminal setae on each ramus. Proportionate lengths of various segments of body are as follows:

Cephalosome	Metasome					Urosome			Caudal rami
	1	2	3	4	5	1	2	3	
% 34.30	10.15	7.25	6.76	5.80	3.86	11.11	2.41	4.35	14.01 = 100

A 1 (Fig. 1 d): five-segmented, with many setae; second is the longest; segments with following proportionate lengths:

Segments:	1	2	3	4	5
%	15.00	28.33	24.44	14.45	16.78 = 100

A2 (Fig. 1 e) : four-segmented ending in a claw; first segment with a slender distal spine; second segment longest and about equal to combined length of distal two segments and bears a spine on lower half of segment; third segment shortest but broader at distal end and bears three setae along inner margin; fourth segment narrow and slightly broader at base, bears five setae distally; claw longer than

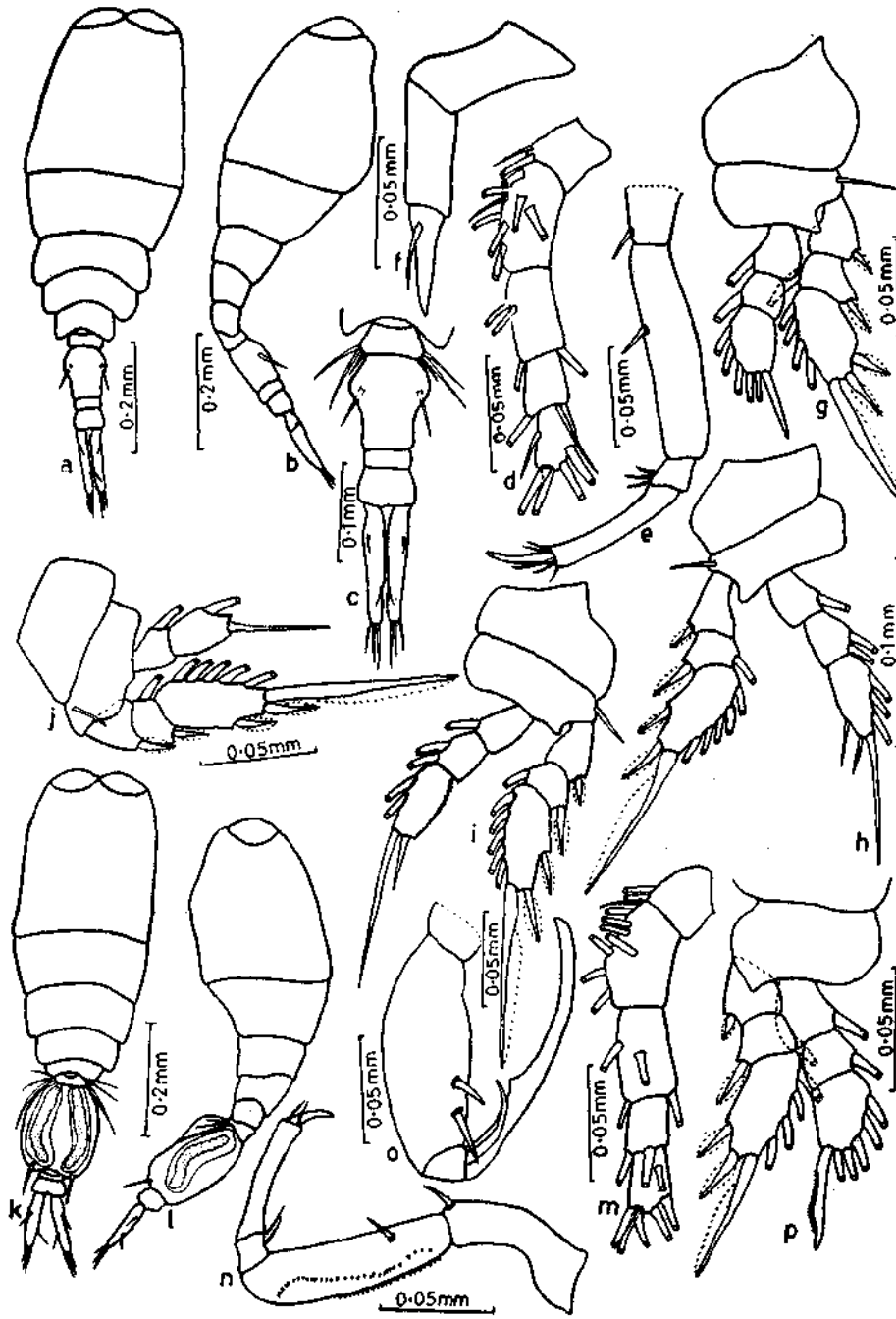


Fig. 1. *Vettoria parva* (Farran). *Female*: a. dorsal view; b. lateral view, c. urosome enlarged; d. antennule; e. antenna; f. maxillipede; g. first swimming leg; h. second swimming leg; i. third swimming leg; j. fourth swimming leg; *Male*: k. dorsal view; l. lateral view, m. antennule; n. antenna, o. maxillipede; and p. first swimming leg.

twice length of third segment. *Mxp* (Fig. 1 f): three-segmented with a short stout basal segment; a slightly longer and thicker second segment and a tapered third segment with a long spine near its base. All other mouth parts are greatly reduced and are placed close to each other.

Swimming legs, P1 - P4 (Fig. 1 g-j): with three-segmented exopodite and endopodite (except endopodite of *P4* which is two-segmented; setal and spine formulae of *P1* to *P4* are given in Table 1.

TABLE 1. *Setation and spines in the segments of the swimming legs of V. parva**

Legs	Exopodite	Endopodite
P 1	0+I. 1+I. 4+III	1+0. 1+0. 5+I
P 2	0+I. 1+I. 5+III	1+0. 2+0. 3+III
P 3	0+I. 1+I. 5+III	1+0. 2+0. 2+II
P 4	0+I. 1+I. 5+III	1+0. 1+I.

* Setae in Arabic and Spines in Roman numerals.

Male (Fig. 1k,l): General shape of body as in female; proportionate length of prosome and urosome regions of body is 64.02: 35.98; urosome three-segmented with barrel-shaped genital segment, length-breadth ratio being 37 : 32; genital segment slightly bulges ventro-laterally on each side and each bulged portion is provided with a seta, this is followed by a very small segment and by anal segment; latter broader than long and broader at posterior end. Caudal rami long and narrow as in female. Proportionate lengths of various segments of body are as follows:

Cephalosome	Metasome					Urosome			Caudal rami
	1	2	3	4	5	1	2	3	
% 31.30	10.75	8.88	7.01	2.81	3.27	17.76	2.80	3.74	11.68 = 100

A 1 (Fig. 1 m): five-segmented as in female. *A 2* (Fig. 1 n): four-segmented ending in claw; first segment on its inner apical end bears a spine; second segment longest and has one row of spines along its entire length and another row along margin, a longer spine is also present on lower half of segment, third segment short and bears two setae on its inner margin; fourth segment long, narrow, bears two setae distally; claw longer than third segment. *Mxp* (Fig. 1 o): four-segmented, second segment long with two spines on its upper half; third segment short; fourth segment long, claw-like, bears a long curved spine at its base; slightly above it there is a tooth-like projection. *P1 - P4* (Fig. 1 p): as in female except that of third segment of *P1*, endopodite of which bears a strong spine of irregular form with spinules on outer margin, narrowing at end.

Remarks

The specimens of *V. parva* from the west coast of India agree in all details with the description of the type given by Farran (1936) except that the lenticular swellings on either side of the cephalosome are not present. In the relative proportion of the body length there is agreement between material of *V. parva* from the Indo-Pacific and Mediterranean. Sexual dimorphism is not marked except in the modification of the genital segment.

The known distribution of the species is very discontinuous and the non variability in all diagnostic characters in material from widely separated areas is interesting and suggest that the species has a wide distribution in the Indo-Pacific and Mediterranean and is likely to occur also in the Atlantic. More careful scrutiny of material from the different geographical areas is needed to get a proper picture of the natural distribution of this species.

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