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33. DESCRIPTION OF ISOPOD *CIROLANA PARVA* HANSEN
PARASITIC ON THE EYE BALLS OF DOLPHIN, *DELPHINUS*
DELPHIS LINNAEUS WITH A KEY TO THE INDIAN SPECIES
OF THE GENUS *CIROLANA* LEACH

(With eleven text-figures)

INTRODUCTION

Stebbing (1905) recorded *Cirolana parva* from Ceylon waters and Chilton (1924) reported it from Chilka lake, India. As there is no illustration to assist identification of *C. parva* in the earlier accounts of Stebbing (1905) and Chilton (1924) we have described the species with full illustrations in this paper. Seventeen specimens of *Cirolana parva* Hansen have been collected from the eye balls of the dolphin *Delphinus delphis* Linnaeus caught from Palk Bay, Mandapam on 30-xi-1971. The species of the genus *Cirolana* so far re-

corded from Indian region are *Cirolana willeyi*, *C. bovina*, *C. parva*, *C. venusticauda*, *C. sulcatauda*, *C. pleonastica*, *C. fluviatilis*, *C. pustulosa* and *C. sulcata*. A synoptic key to the identification of these species is also given.

Distinguished by the presence of five free pleonal segments with a pleotelson. Endopods of pleopods 1 to 4 fringed with setae. Eyes absent or present. Peduncle of the second antennae five jointed. Molar process blade like with fine sharp and closely arranged teeth. Mandibles with lacinia mobilis; peraeopods ambulatory. Telson broad, sub-triangular; setae on the margin of the pleotelson and

MISCELLANEOUS NOTES

uropod are elongated with fine bristles. Maxillipeds with hooks on second segment.

Cirolana parva Hansen (Figs. 1-11)

1890. *Cirolana parva* Hansen, *Vid. Selsk. Skr., Ser. 6*, 3, pp. 321, 340, pl. 2, fig. 6-6b, pl. 3, fig. 1-1d.
 1902. *Cirolana parva* Moore, *Bull. U. S. Fish. Comm.*, 20, pt. 2, pp. 166-167, pl. 8, figs. 6-8.
 1905. *Cirolana parva* Hansen, Stebbing, *Ceylon Pearl Oyst. Fish. Rep.*, part IV, No. 23, p. 12.
 1924. *Cirolana parva* Hansen, Chilton, *Mem. Indian Mus.*, 5(12), pp. 883-884.

Body smooth, telson broad, sub-triangular in shape, apical margin of telson rounded with 6 thick short setules of which three on the right side and three on the left side of the telsonic segment, close to the apical margin. The terminal segment also bears numerous fine setae along the margin, the outer ramus of the uropod is shorter and narrower than the inner which is very much broader, uropod margins furnished with fine setae and a few setules.

The third joint of the first antenna is longer than the first and second joints, the flagellum is longer than the peduncle and fifteen-jointed. Hansen (1890) described the flagellum as eleven-jointed, much shorter than the peduncle, Moore (1902) as eleven-to twelve-jointed and Stebbing (1905) as nine-jointed, little shorter than the peduncle. The second antenna about more than thrice as long as the first, last joint of the peduncle longer than the preceding, flagellum much longer than the peduncle about fortyone-jointed. Stebbing (1905) has described that the second antennae have the first three joints of the peduncle very short, fourth joint a little shorter than the fifth and flagellum 22-26 jointed. The second antennae closely resembled Stebbing's description except in the flagellum being more jointed. The joints of the flagellum of the antennae

were more numerous in the specimens described by Chilton (1924). The antepenultimate joint of the maxilliped possess three elongated setae on the outer margin. The maxilliped joints setose along their margin. The third palp of the outer margin of the maxilliped furnished with sixteen elongated setae and the setae are ornamented with fine bristles.

Maxilla I and II: First maxilla composed of two lobes—a sensory endopod and a biting exopod., there are long setae present on the two lobes. The second maxilla also possess long setae which serves as food strainers.

Mandibles: Mandibles are strong and serve as biting structures., the incisor process or the cutting part is thickly chitinised., the mandibles have a sensory palp of three articles—lacinia mobilis, molar teeth and mandibular palp. The mandibular palp is curved at the apex and the molar teeth is blade—like which is characteristic of the genus *Cirolana*.

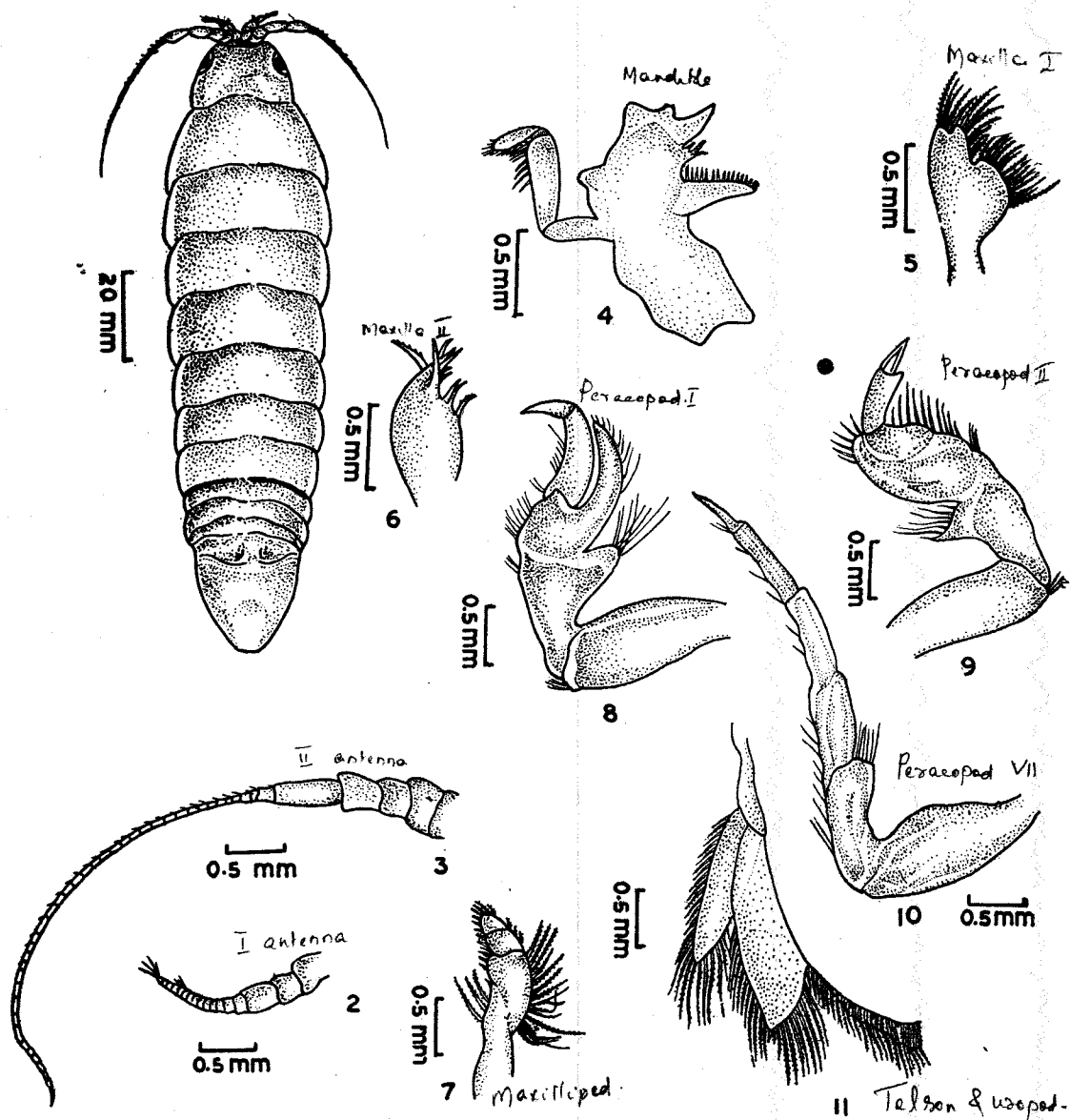
Size: The length and breadth of males ranged between 8.0 and 17.0 mm and 1.0 and 4.2 mm respectively. The length of females ranged between 8.5 and 17.0 mm and the breadth between 1.5 and 3.0 mm.

General Distribution: Gulf of Mexico, West Indies, Tale Sap, Sri Lanka and Chilka Lake.

Remarks: *Cirolana parva* has been reported for the first time from the Palk Bay region. Though Stebbing (1905) and Chilton (1924) have described *C. parva*, this report gives detailed description and illustration of the species.

KEY TO THE INDIAN SPECIES OF THE ISOPOD GENUS *Cirolana* LEACH 1818.

1. Frontal lamina pentagonal or hexagonal in shape, margin of cephalon medially produced., posterior margin of the pereon segments and the pleon armed with spines., dorsal surface of telson without spines. *C. willeyi*



Figs. 1-11. *Cirolana parva* Hansen. 1. Dorsal view of the entire specimen; 2. First antenna; 3. Second antenna; 4. Mandible; 5. Maxilla I; 6. Maxilla II; 7. Maxilliped; 8. Peraeopod I; 9. Peraeopod II; 10. Peraeopod VII; 11. Telson and Uropod.

MISCELLANEOUS NOTES

l lamina is differently shaped in adult
posterior peraeon segments not with dis-
spines but with crenulate margin., pleon
ants armed with spines, telson conical with
of large submedian spines. *C. bovina*
l margin of cephalon slightly produced.,
onal segment VII as broad as other per-
l segments., eyes small not on border of
lon., endopod of uropod reaching beyond
posterior margin of pleotelson. *C. parva*
al lamina quadrangular in shape., margin
phalon medially produced.
.. .. *C. venusticauda*
in of cephalon slightly produced., trans-
rows of spines along the posterior margin
e peraeon segments., telson with double row
ubercles or spines. .. *C. sulcicauda*
al margin of cephalon smooth, angular.,
l lamina narrow pentagonal, very broad
ae., posterior margin of the posterior per-
segments with one to three transverse rows
ines., pleon tuberculate., telson with a series
ars of tubercles. *C. pleonastica*

7. Frontal margin of cephalon rounded., posterior peraeon segments and the pleon armed with spines., dorsal surface of the telson with two submedian spines followed by two parallel rows of three to four small spines. *C. fluviatilis*
8. Frontal margin of cephalon rounded., posterior margin of the peraeon segments with a single row of spines., telson with double row of elongated tubercles. *C. pustulosa*
9. Frontal lamina widening to middle., one to three transverse rows of spines along the posterior margin of the peraeon segments., pleon not tuberculate., telson grooved with a series of pairs of tubercles or spines .. *C. sulcata*

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