

ON A LINGULID LARVA FROM COONDAPUR
(MYSORE STATE), INDIA

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IN A recent paper (Sudarsan, 1968) describing three types of brachiopod larvae from the West Coast of India, the author has pointed out to the probable richness of the brachiopod fauna of this region. This view is further strengthened by the identification of yet another type of lingulid larva from a plankton sample collected off the mouth of River Gangavali on 30th December, 1966. The paucity of information on Indian brachiopods and their larvae makes the present observation of considerable value.

OBSERVATIONS

In all 37 specimens of the larva were separated out from the plankton. These larvae are much bigger; almost twice as big as the *Lingula* larva reported from Karwar (Sudarsan, *loc. cit.*). They represent a series from the seven pairs cirri (P.C.) to 13 P.C. stages, the size range being 477-1124 μ in length and 577-1092 μ in breadth. The hinge length is relatively stable at 116.6-127.2 μ .

The larvae, in general, agree very closely in structure and organization with the description and figures given by Yatsu (1902) and Ashworth (1915). However, the size range and stage of peduncle formation show certain differences.

In the smallest specimen of the present series measuring 477 μ in length and 577 μ in breadth (Fig. 1) the alimentary system is not fully differentiated and the posterior oclussor muscle is not well developed. However, the anterior oclussor muscles were prominent. Only seven pairs of cirri were present. The earliest indication of the peduncular rudiment is noticed at the 10 P.C. stage (Fig. 2) by which time even the posterior oclussor muscles are well formed and the liver lobes are differentiated but the anus not developed. At the 13 P.C. stage (Fig. 3) the body musculature including the lateral muscles is prominent and the peduncle is also well developed though it has not yet acquired any length. The anal opening is also clear. At this stage the larval shell is just longer than broad. The green colour at the postero-lateral margins and the zone just within the margin observed by Ashworth (1915) in his older larvae is noticed in larvae with 10 or more pairs of cirri. In this set of larvae also, as in the previously known lingulid larvae, the attainment of the linear shape follows closely the formation of the peduncle i.e. 12/13 P.C. and 10 P.C. stages respectively.

In the larvae from Karwar the peduncle formed at the 7 P.C. stage just as in Yatsu's specimens. The Karwar specimens were collected during the middle of

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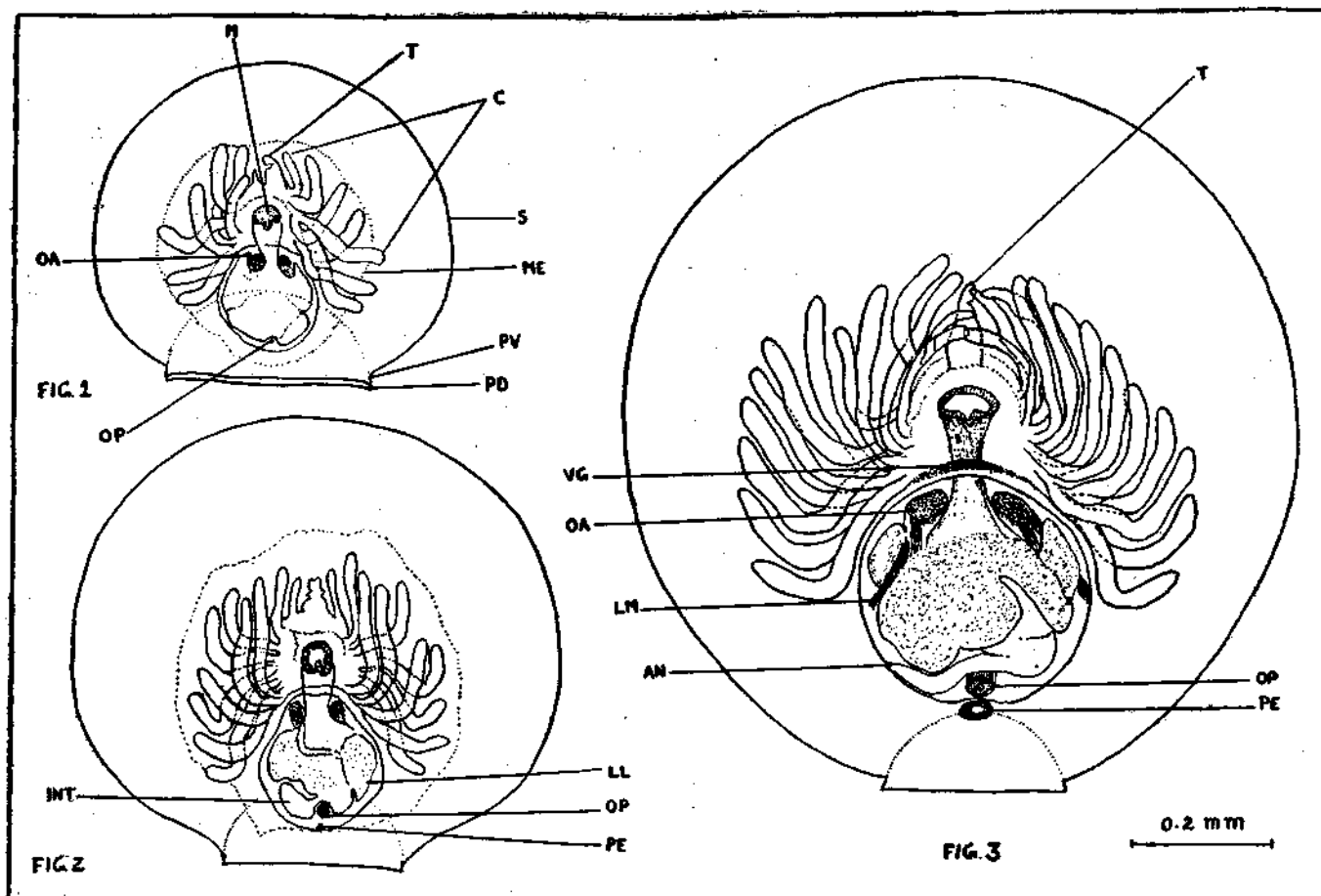


FIG. 1. Larva with 7 pairs of cirri.

FIG. 2. Larva with 10 pairs of cirri.

FIG. 3. Larva with 13 pairs of cirri.

AN Anus, C Cirri, INT Intestine, L.L. Liver Lobes, L.M. Lateral Muscles, M Mouth, M.E. Mantle Edge.
 O.A. Anterior Ocluser Muscle, O.P. Posterior Ocluser Muscle, P.D. Dorsal Protegulum, PE Peduncle,
 P.V. Ventral Protegulum, S Shell, T Tentacle, V.G. Ventral Ganglion.

January whereas the present material was obtained during the end of December. Since the time lag between the collection of these two sets of larvae is less than twenty days the observed differences cannot be attributed to seasonal variation. It may safely be inferred that the present set of larvae belong to a different species of *Lingula*. However, it must be pointed out that the larvae collected off Coondapur were easily within the area of influence of the fresh water from the River Gangavali.

The size of the larvae, as already pointed out, is much bigger than those described off Karwar but correspond very closely with Sewell's (1912) December series and Ashworth's collections. A statistical study of the pattern of growth in the Coondapur material as well as the larvae of *Lingula*, *Pelagodiscus atlanticus* and *Discinisca* sp. from Karwar is being made and the results would be published elsewhere.

SUMMARY

A series of *Lingula* larvae ranging from the 7 P.C. to 13 P.C. stages collected from Coondapur are described. This type of *Lingula* larva is being described from the Indian waters for the first time. The peduncle makes its appearance at the 10 P.C. stage and the larva attains the linear shape at 12/13 P.C. stage.

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