

An older larva abounded amidst the tentacles of the Australian form, and its resemblance to the free-swimming *Actinotrocha* was at once apparent.

In his description of the larva of the British form, Dyster appears to refer to the præoral lobe by his term abdominal division; for he states that the "cephalic" segment divides into three lobes, of which the lateral are longest. This probably refers to the early condition of the ciliated arms of *Actinotrocha*. He has the merit of being one of the few to see the early larval stages of this peculiar form.

Very soon after the stage mentioned in the preceding paragraphs the larval *Phoronis* swims freely in the water, and presents a large præoral lobe or hood—the mouth lying in the fold between it and the body, a stomach, and an anus. The rudimentary arms soon appear; indeed, in many, as above mentioned, they have the form of blunt papillæ arranged in a somewhat linear manner on the aboral face, before the larval animal leaves the tentacles of its parent. The body and arms elongate, a peculiar sac or pouch is formed in the ventral wall of the body just behind the arms, and this rapidly enlarges so as nearly to fill the perivisceral cavity, and its inner wall is rugose. The larval *Phoronis* now becomes quiescent, and suddenly the long pouch is thrust outward through its opening in the body-wall, like the finger of a glove or the proboscis of a Nemertean. Moreover, the loop of the alimentary canal slips into the extruded pouch; the larval body contracts so as to approximate mouth and anus. The præoral lobe slips into the œsophagus, leaving only a process—the "epistome." The arms of the *Actinotrocha*-stage atrophy, and from a basal remnant the tentacles of the adult spring.

### *Homologies.*

Some of the earlier authors linked *Phoronis* with the Polyzoa, chiefly on account of its lophophore; though Professor Allman at once pointed out that, notwithstanding the singular resemblance in certain parts of its structure between it and the hippocrepian Polyzoa, it had no real affinity, "and must be viewed as a remarkable example of representative form—of *homomorphism* as distinguished both from homology and analogy." He thought, indeed, its relationships lay rather with the Annelids, a conclusion which Krohn and Schneider had arrived at with regard to the "Gephyrean worm," resulting from the metamorphosis of *Actinotrocha*. Kowalewsky considered it neither a Gephyrean nor a Polyzoan, but an enigmatical form approaching the worms, and diverging from the Mollusks. Claparède,<sup>1</sup> again, considered that the position of *Phoronis* was between the Gephyrea and Bryozoa. The juxtaposition of mouth and anus is a condition, he says, foreign to the Annelids, and much can be said in favour of this view.

*External Form.*—In external form *Phoronis* has little or no connection with any

<sup>1</sup> Annél. Chétop. Naples, p. 409, note.