

"Beneath the stomach is a tubular heart with a wide vessel leading from it downwards towards the stem (Pl. XXXVII. fig. 1, *h.*).

"In the loop formed by the œsophagus, stomach, and rectum is the large ovisac or ovary, which is circular in outline. The elongate tubular testis running parallel to the rectum in the middle line terminates posteriorly internally to the ovisac, its lower end spreading out into a series of ramifications, which appear very like large nerve fibres. The testis-tube opens into the exhalent aperture close to the rectum, as does also the oviduct, which lies to the dorsal side of the testis-tube and in the same line with it.

"The ovisac was full of very large ova, measuring as much as 1.5 millimetres in diameter. These ova, on slight pressure being applied, were discharged from the oviduct. They were found to consist of a very thick transparent test, with contents composed of oily yelk-globules, without a germinal vesicle.

"The testis was tumid, and full of an opaque white matter, which was discharged on pressure in tenacious threads composed of spermatozoa.

"The spermatozoa are very small. They were examined under a Hartnack No. 10 (immersion system). They consist of an elongate rod-like head, measuring .005 millimetres in length, and an excessively fine tail, the length of which could not be determined. All the spermatozoa examined had a small transparent vesicle attached to one side of their heads, as shown in the figures (Pl. XXXVII. fig. 5)."

The above comprises almost the whole of Professor Moseley's description of this remarkable form, and I have only a few remarks to add. Mr. Moseley supposed that it was allied to *Boltenia*. The peduncle, however, is deceptive, and does not indicate any relationship to the *Bolteninæ*. The whole organisation, and especially the structure of the branchial sac, taken along with the fact that, as far as is known, reproduction is not performed by gemmation, shows that *Hypobythius* must be referred to the *Ascidiidæ*, among which we have already a new deep-sea pedunculated genus, *Corynascidia*.

The body form in *Hypobythius calycodes* is vase-shaped, with a moderately long peduncle attached to the narrow posterior end, while the anterior end is broad and truncated. The atrial aperture is placed on the dorsal edge near the anterior end, while the branchial aperture is indistinguishable, and must have been on the torn anterior end, but probably of much smaller size than is represented by Mr. Moseley in his restoration (Pl. XXXVII. fig. 1).

The test is cartilaginous and thin, except in certain localities, where denser cartilaginous thickenings or nodules are developed symmetrically, as seen in Plate XXXVII. figures 1 and 2. They are especially developed along the dorsal edge, outside the viscera, and it will be seen that in this locality in *Hypobythius moseleyi* also the test is somewhat strengthened.

The mantle is thin and membranous, and has a feeble but distinct musculature. The muscle bands are very fine but numerous. They run longitudinally, and are chiefly