

I am now of opinion, however, that as these characters, and especially the condition of the dorsal lamina, are apparently constant and are easily applied, and as the two groups of species (*Microcosmus* and *Cynthia*) seem fairly distinct, it is, if not absolutely necessary, at least convenient to retain both generic terms.

The Challenger expedition added two new species to the nine or ten already known, and found a large specimen of *Microcosmus polymorphus*, the common Mediterranean species, in a new locality.

*Microcosmus helleri*, Herdman (Pl. XIV. figs. 1-4).

*Microcosmus helleri*, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1880-81, p. 54.

*External Appearance.*—The body is longish ellipsoidal in shape, with a projection at the anterior end; it is scarcely compressed laterally. It is attached by a small area at the posterior end of the ventral edge. The anterior end narrows rapidly into the truncated conical branchial projection; the posterior end is broad and rounded, and the dorsal and ventral edges are nearly straight and parallel. The branchial aperture is at the anterior end of the dorsal edge; it is terminal, on a large projection directed anteriorly and slightly ventrally. The atrial aperture is on the dorsal edge, about two-thirds or three-fifths of the way down, and placed on a hemispherical projection. It is not so prominent as the branchial aperture, and is directed dorsally and a little posteriorly.

The surface is wrinkled and roughened, but not covered with excrescences; the branchial and atrial projections are much corrugated and thickened; a few Zoophytes, Polyzoa, &c., are found adhering, especially on the left side and posterior end.

The colour is a dull gamboge yellow, with a little reddish-brown at the posterior end and on the left side.

Length of the body, 8 cm.; breadth of the body, 4 cm.

*The Test* is leathery; it is rather thin, except at the area of attachment and on the siphons. The inner surface is white with a few yellowish-brown patches.

*The Mantle* is strongly muscular on the right side and the dorsal part of the left; it is membranous on the ventral part. The musculature is strong and regular.

The muscular band at the base of the branchial siphon, and just above the circle of tentacles, bears four large bluntly conical processes projecting into the lumen of the tube.

*The Branchial Sac* has six folds on each side. The alternate transverse vessels are larger than the intermediate ones, and about every fifteenth larger transverse vessel is very much wider than the others. The internal longitudinal bars are numerous. There are eight only on the folds and about twelve in the interspaces, each of which has six wide and six narrow rows of meshes. The largest meshes contain each six to eight stigmata.

*The Dorsal Lamina* is a plain membrane.

*The Tentacles* are compound, they are twenty in number, and of two sizes placed large and small alternately.