

*The Test* is not thick, but is tough on the upper part ; it is thinner below, except at the posterior end, where it is considerably thickened.

*The Mantle* is thin and the musculature very delicate.

*The Branchial Sac* has four folds upon each side ; these scarcely project, and are formed merely by a crowding together of the internal longitudinal bars, six to nine being placed close together, and separated by wide spaces containing only three bars each. The meshes are elongated antero-posteriorly, contain each only three stigmata, and are each divided transversely by a narrow membrane.

*The Dorsal Lamina* is narrow and much crumpled, but is neither ribbed nor toothed.

*The Tentacles* are simple and rather large, there are twelve of them.

*The Dorsal Tubercle* is rather prominent, it is cup-shaped, with a wide anterior opening.

This species was probably buried in sand nearly half its length. The posterior part of the test is of a different texture from the anterior, has a different appearance (Pl. XX. fig. 7), and is incrustated here and there with sand. The apertures are both sessile, four-lobed, and distinctly visible at the anterior extremity. The test is thin, leathery and tough, as in the typical *Cynthiidae*. At the posterior end, it is considerably thickened.

The branchial sac has the folds in a rudimentary condition. They are no longer true folds and do not project into the cavity of the sac, but are merely longitudinal tracts along which there is a crowding together of the internal longitudinal bars (Pl. XX. fig. 8. *br.f.*). Consequently, the meshes on the inner surface of this branchial sac are of two sizes,—(1), the ordinary ones, which are nearly square and contain each usually three stigmata ; and (2), the very much narrower ones, half a dozen rows of which represent the branchial fold. These last contain one or sometimes only part of a stigma. The transverse vessels are of two sizes placed alternately. The narrow horizontal membranes crossing the meshes are only present occasionally, and sometimes run for very short distances only (Pl. XX. fig. 8).

In this sac there are a considerable number of muscular fibres, which are present not only in the large transverse vessels, but also in the fine longitudinal interstigmatic vessels (Pl. XX. fig. 9, *m.f.*). The dorsal lamina is much crumpled, but has a smooth edge.

One specimen of this species was dredged in the South Atlantic (off the coast of Buenos Ayres), at Station 320 ; February 14, 1876 ; lat. 37° 17' S., long. 53° 52' W. ; depth, 600 fathoms ; bottom temperature, 2°·7 C. ; bottom, hard ground.

*Styela flava*, Herdman (Pl. XX. figs. 1–6).

*Styela flava*, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1880–81, p. 64.

*External Appearance*.—The body is rudely spherical, but is slightly elongated later-