

There is little noteworthy about the branchial sac. The vessels are strong and the meshes are large, but each is divided transversely into three or four areas by delicate membranes (Pl. XVI. fig. 2). Figure 3 on Plate XVI. shows a small portion of the branchial sac, from the external surface, where the vessels are irregular. Several stigmata are apparently absent in two adjacent rows, leaving wide longitudinal ducts connecting the transverse vessels.

The dorsal lamina is a wide membrane, with a series of teeth or short languets placed along its free margin (Pl. XVI. fig. 4, *l.*). The tentacles are very numerous (Pl. XVI. fig. 5). There are twelve very large ones, with a row of branched pinnæ along each side (*tn.*). Between each pair of these larger tentacles there are two smaller branched ones, very like the pinnæ of the larger ones, and separated from each other and from the larger tentacles by four or five small conical projections which may be considered as simple tentacles, so that there are three orders altogether, two of them compound and one simple; and there are twelve of the largest or first order, twenty-four of the second, and about 180 of the third (Pl. XVI. fig. 5). The præbranchial zone is broad and transparent, allowing the longitudinal muscle bands to show through distinctly.

The peritubercular area is very small, and does not enclose the dorsal tubercle, which is simple and somewhat reniform. The aperture is anterior, and the horns are simply turned inwards and not coiled (Pl. XVI. fig. 5, *d.t.*).

One specimen of this species was obtained in Torres Strait, between Australia and New Guinea; depth, 3 to 11 fathoms.

*Cynthia arenosa*, Herdman (Pl. XVI. figs. 6-9).

*Cynthia arenosa*, Herdman, Prelim. Rep., Proc Roy. Soc. Edin., 1880-81, p. 59.

*External Appearance.*—The body is irregularly ovate or sub-triangular in shape; it is elongated transversely, and not compressed laterally. The posterior end is broad and rather flat, the anterior is narrow; the dorsal and ventral edges are convex; and the body is not attached. The apertures are both at the anterior end; they are inconspicuous, are placed close together, and are cross-slit.

The surface is entirely covered, with the exception of the siphons, by a close layer of sand grains. The colour is grey.

Length of the body, 1.5 cm.; breadth of the body, 1 cm.

*The Test* is thin, but very stiff on account of the imbedded sand.

*The Mantle* is thin but strong; the muscle bands are well developed.

*The Branchial Sac* has six folds on each side. There are about five internal longitudinal bars on each fold, and the same number in the interspace. The transverse vessels are usually of the same size, but here and there, at distant intervals, very much wider ones occur, which equal at least an entire row of stigmata in breadth. The meshes are