

*The Test* is soft and cartilaginous. It varies greatly in thickness, as it is thin on the anterior half, and then becomes thicker, while the posterior third is a solid mass of test substance.

*The Mantle* is thin; the musculature is rather feeble; the siphons are very wide. There are long, thin calcareous spicules found in the mantle.

*The Branchial Sac* has eleven folds on each side. There are eight internal longitudinal bars on a fold, and four in the interspace. The transverse vessels are mostly of the same size, but here and there a much larger one occurs. The meshes are slightly elongated transversely, and contain each about five stigmata; they are generally divided by delicate horizontal membranes.

*The Dorsal Lamina* is formed of short blunt membranous languets.

*The Tentacles* are branched; there are nine large and nine small placed alternately, and about eighteen very minute intermediate ones.

*The Dorsal Tubercle*.—The general outline is nearly circular, but considerably convoluted. Both horns are turned inwards, and slightly coiled.

This curious species has very much the appearance of an *Ascidia*, except that both the apertures are more or less square (Pl. XVII. fig. 1). The test is cartilaginous, and is very thick and solid at the posterior end. It contains quantities of short rod-like calcareous spicules (Pl. XVII. figs. 2 and 3). The spicules in the mantle (Pl. XVII. fig. 4) are like those found in *Cynthia pallida*, Heller, but are longer and thinner. They lie in the interior of long membranous tubes or sheaths (Pl. XVII. figs. 4, 5, and 6) which run in zig-zags in all directions through the mantle. The spicules seem to fit the sheaths exactly (fig. 6), and the echinations are placed in regular transverse rows.

The branchial sac has a large number of folds (22), and they are all well developed and have a number of internal longitudinal bars. The interspaces between the folds (Pl. XVII. fig. 7) are rather narrow, and have only four rows of meshes.

Occasionally very wide transverse vessels are found (Pl. XVII. fig. 7), but the others are all of one size. Small fusiform and curved spicules are found scattered chiefly through the transverse vessels. Two of them are represented more enlarged in Pl. XVII. fig. 8, to show the arrangement of the spines in regular transverse rows. The curiously convoluted dorsal tubercle is shown in Pl. XVII. fig. 9.

One specimen of this species was found at Port Jackson, Australia; depth, 6 fathoms.

*Cynthia hispida*, Herdman (Pl. XV. figs. 1–4).

*Cynthia hispida*, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1880–81, p. 61.

*External Appearance*.—The body is ovate or irregularly circular in shape; it is flattened laterally, and is nearly as broad as long; the dorsal and ventral edges are strongly convex; the anterior end is broadish, and straight, and the body is attached by the