

apertures are prominent; they are placed at the extremities of the two projections formed by the cleft; the branchial projection is terminal, the atrial is on the dorsal edge, fully half way from the anterior to the posterior end, and is not so long as the branchial.

The surface is very irregular, and is much wrinkled and rough; on the right side the chief wrinkles run transversely. The colour is yellowish-brown.

Length of the body, 2 cm.; breadth of the body, 1.6 cm.

The Test is strong and stiff; it is white on the inner surface.

The Mantle is thick and moderately muscular.

The Branchial Sac has six folds on each side. There are six internal longitudinal bars on each side of a fold, and three in the interspace. The transverse vessels are wide, and are of two sizes placed alternately. The meshes, which are transversely elongated, contain each six to eight oval stigmata, and are sometimes divided by a narrow horizontal membrane.

The Dorsal Lamina has the free edge terminated by a series of tentacular languets.

The Tentacles are simply pinnate, and are about twelve in number.

The Dorsal Tubercle is large and irregularly oblong, and the aperture is anterior; both horns are turned to the left. It lies in a small, but deeply cup-shaped peritubercular area.

This curious little species looks, on account of the prominent anteriorly placed branchial and atrial apertures, as if the anterior end of the body had been deeply cleft (Pl. XV. fig. 8). In this respect, and in the markings on the surface, the species is rather like *Cynthia dura*, Heller,¹ from which it differs in the number of tentacles, the shape of the dorsal tubercle and several other particulars.

Cynthia fissa is also like *Cynthia irregularis* in some respects. The external appearances are not very dissimilar, and the branchial sacs are very much alike in their minute details (compare Pl. XV. fig. 9, and Pl. XVI. fig. 11), but they differ in their coarser anatomy, as *Cynthia irregularis* has fourteen folds while *Cynthia fissa* has only twelve. The dorsal tubercles of the two species are entirely different.

The tentacles in *Cynthia fissa* are scarcely compound (Pl. XV. fig. 11). They look like the tentacles of a *Styela*, with a series of small buds projecting from each side. The dorsal tubercle is of the simple form very commonly found in *Ascidia*, and is deeply cup-shaped, with both horns turned to the left.

Several specimens were found adhering to the test of *Microcosmus polymorphus*, from Station 162, April 2, 1874; off East Moncœur Island, Bass Strait; 38 to 40 fathoms; bottom sandy.

¹ Untersuchungen ü. d. Tunic. des adriatischen Meeres, Abth. 3, p. 11, pl. iii. fig. 1.