

Family ASCIDIIDÆ.

To this group belong two species, of which one (*Ciona aspera*, n. sp.) was collected during the Challenger Expedition at Japan, while the other (*Ascidia scabra* (?), O. F. Müller) was dredged during the cruise of the "Porcupine" off the coast of Ireland.

Ascidia scabra (?), O. F. Müller (Pl. XLVII. fig. 11).

One specimen, which probably belongs to this species, was obtained during the first cruise of the "Porcupine," in the summer of 1869, off the coast of Galway, at lat. 53° 10' N. and long. 9° 19' W., from a depth of 15 to 20 fathoms. It is about 1.5 cm. in length, and differs from typical examples of *Ascidia scabra* in having an extraordinarily long atrial siphon (Pl. XLVII. fig. 11, *at*), about 5 mm. in length. The surface of the test is smooth.

The branchial sac is in rather bad condition, and the internal longitudinal bars are very narrow. There are no papillæ. In other respects the specimen agrees fairly well with ordinary British specimens of *Ascidia scabra*.

Ciona aspera, n. sp. (Pl. XLIX. figs. 11-13).

External Appearance.—The general shape is irregularly cubical, and the body is not compressed laterally. The anterior extremity is truncated and much corrugated. The posterior end is wide and evenly rounded, there being no adhering prolongations of the test in this region. The body is attached to an Annelid tube near the middle of each side. The apertures are both anterior, being placed close together near the centre of the truncated anterior extremity; they are much contracted. The surface is very irregular, and is covered with short sharp-pointed projections, which are especially developed at the posterior end. The colour is light grey.

The length of the body is 1.5 cm., the breadth is 1.7 cm.

The Test is thin and transparent except at the points of attachment on the right and left sides, and at the anterior end where it is irregularly thickened.

The Mantle is very muscular on the anterior part of the body, and moderately so along the dorsal and ventral edges and round the posterior end. It is thin and almost destitute of muscles on the posterior parts of the two sides. The sphincters around the apertures are strong, and from under them, upon each side of the body, spring five powerful longitudinal muscle bands.

The Branchial Sac is moderately strong. The transverse vessels are all of much the same size, and are rather wide. The internal longitudinal bars are strong and bear stout papillæ at the angles of the meshes, and also intermediate ones. The latter are joined, like the chief papillæ, by delicate horizontal membranes which divide the meshes