

figured (Pl. XL. fig. 9) is one of the larger and more regularly stellate ones. Many of the others are much smaller and more spherical. The spicules have a slight yellow colour, which probably gives the creamy tint to the colony as a whole.

The testis is a large globular mass around which the vas deferens is coiled spirally. Part of the vas deferens is seen in the section figured (Pl. XL. fig. 7, at the right hand side of the figure).

*Leptoclinum carpenteri*, n. sp. (Pl. XLI. figs. 1-4).

*The Colony* forms an irregularly ovate or rounded mass, incrusting, but not flattened. Its surface is fairly even and quite smooth. The colour is a dull white.

The length is about 1.5 cm., the breadth about 1 cm., and the thickness about 0.5 cm.

*The Ascidiozooids* are inconspicuous and show no definite arrangement in systems. No common cloacal apertures are visible. The body of the Ascidiozoid is slightly elongated vertically, and is distinctly divided into two regions—thorax and abdomen.

*The Test* is soft and flexible. It is of a greyish-white colour, and is almost quite opaque. In sections the structureless matrix is seen to contain large numbers of very minute test cells, and a comparatively small number of calcareous spicules. The spicules are of regular stellate form, but vary considerably in size.

*The Mantle* is transparent, but is of moderate strength over the thorax. It has fine muscle bands running both longitudinally and transversely.

*The Branchial Sac* is short but wide. It has four rows of moderately long stigmata. The transverse vessels are rather wide, and are provided with muscle fibres.

*The Alimentary Canal* is long and narrow, it forms a wide loop. The stomach is short and rather quadrate in outline.

*Locality.*—Unknown.

Several specimens of this species were found during one of the cruises of the "Porcupine" attached to Algæ along with specimens of *Leptoclinum thomsoni* (see Pl. XLI. fig. 1, where B. represents the present species). The exact locality from which the specimens were obtained is not known.

The colonies are all more or less rounded masses of considerable thickness which have grown around the Algæ. They are readily distinguished from the similar specimens of *Leptoclinum thomsoni* by being much softer and more flexible, and by the colour, which in the present species is a dirty white with a slight greyish tint. The Ascidiozooids also are not nearly so distinct, as in the case of *Leptoclinum thomsoni* (compare A. and B., Pl. XLI. fig. 1).

The surface of the colony is smooth and soft, and sections show (Pl. XLI. fig. 2) that the superficial layer is formed of test only and contains no spicules.