

I am inclined to regard the possession of only three rows of stigmata as being of less weight than the other two important characters taken together. Therefore if I had to decide upon a species forming a thick massive colony and having Ascidiozooids in which the atrial aperture was placed far back upon the dorsal edge of the thorax and had no atrial languet, I would refer it to the genus *Didemnum*, even if there were four rows of stigmata in the branchial sac.

The three new species which follow may be readily distinguished from one another even by their external appearance, as follows:—

*Didemnum savignii* is of a chocolate-brown colour, and has few spicules.

*Didemnum aurantiacum* is of an orange colour, and has many spicules.

*Didemnum* (?) *inerme* is of a light grey colour, and has no spicules.

It is a little doubtful whether the last one really belongs to this genus, but the other two are typical species of *Didemnum*.

*Didemnum savignii*, n. sp. (Pl. XXXIV. figs. 1–5).

*The Colony* is a thick incrusting mass of irregular shape. It is attached by the entire lower surface, which is somewhat concave. The edges are thick and projecting. The upper surface is rather convex; it is even, and quite smooth. The colour is dark brown.

The length is 5.5 cm., the greatest breadth is 3.5 cm., and the thickness is 5 mm.

*The Ascidiozooids* are of fair size, and are abundant. They are arranged in irregularly rounded systems, and their anterior ends form rounded spots of a yellowish colour on the upper surface of the colony, and generally about 0.5 mm. in diameter. Several common cloacal apertures are visible; they are large and distinct. The bodies of the Ascidiozooids are about 2 mm. in antero-posterior length, and less than 1 mm. in greatest breadth; they are divided into two regions, thorax and abdomen.

*The Test* is firm and cartilaginous. It is of a dark greyish-brown colour, and is moderately transparent. The matrix is clear and homogeneous. It is densely crowded with bladder cells and small test cells. A few stellate calcareous spicules are present in some places near the upper surface, but they are by no means numerous. Rounded and elongated pigment cells of a brown colour are abundant. They are placed chiefly in the upper part of the colony.

*The Mantle* is fairly strong and muscular. The muscle bands are mainly longitudinal, and are placed with considerable regularity.

*The Branchial Sac* is moderately large, and is well developed. There are three rows of large and regularly arranged stigmata on each side. The transverse vessels are provided with muscle fibres.

*The Endostyle* is very large and conspicuous.

*The Dorsal Lamina* is represented by a few large languets.