

*The Dorsal Tubercle* has a simple circular aperture.

*The Alimentary Canal* is moderately large. It forms a long narrow loop. The stomach is globular and smooth walled.

*The Reproductive Organs* are conspicuous, especially the testis and vas deferens which are of large size in the older Ascidiozooids. They are placed on the intestinal loop. The younger Ascidiozooids only have ova.

*Locality*.—Doubtful; probably Station 142, December 18, 1873; lat. 35° 4' S., long. 18° 37' E.; depth, 150 fathoms; bottom, green sand; bottom temperature, 47° F.

One large colony of this well-marked species was found in the collection with the label "Station 142 (?)" attached to it. I have named it *Didemnum savignii* in honour of the founder of this and most of the other important genera of the Compound Ascidiaceae.

The colony is of irregular shape (Pl. XXXIV. fig. 1), and was attached by a large area on the lower surface. The edges are, however, free and rounded. The thickness varies from 3 mm. up to nearly 1 cm.: the average is about 5 mm. The colour is a chocolate-brown with a few lighter-coloured areas, and it is marked all over by the yellowish anterior ends of the Ascidiozooids. The systems are compound and very unequal in size. The common cloacal apertures are elliptical slits from 1.5 to 3 mm. in greatest length. They are irregularly placed on the surface (Pl. XXXIV. fig. 1).

The Ascidiozooids are rather long and narrow (Pl. XXXIV. fig. 2). The thorax and abdomen are separated by a very narrow elongated constriction or neck occupied by the oesophagus and the rectum. Narrow retractor muscles spring from the Ascidiozooids and run for a considerable distance through the test.

In its thick massive colony, with conspicuous common cloacal apertures, this species resembles *Leptoclinum maculatum*, Milne-Edwards, of which I have a specimen from the Bay of Naples, measuring as much as 1 cm. in thickness. Such a thickness is unusual in the family Didemnidæ, and especially in the genus *Leptoclinum*. In colour, however, and in some other respects this species differs from *Leptoclinum maculatum*. The Ascidiozooids are placed vertically in the colony, and where the test becomes thickened they only occupy its upper layer.

The test is relatively of large amount. It is firm and moderately tough, and is of a clear dark greyish-brown colour. The bladder cells are large and very abundant, most of them are polygonal from mutual pressure. The test cells are also numerous and conspicuous (Pl. XXXIV. fig. 3). They are coarsely granular. Various shapes occur, but rounded and fusiform ones are the most abundant. The pigment cells are scattered irregularly. In some places they are very abundant and closely placed, while in others they are absent. As a general rule the upper surface of the test is more pigmented than any other part. Most of the pigment cells are rounded, but in some places, close to the surface, they become fusiform and even elongated to a considerable