

very different in external appearance from all other known Compound Ascidiæ (see Pl. XXXII. fig. 8).

The Ascidiozooids occupy flattened elongated masses varying from 4 mm. to 3 cm. in length, and from 2 mm. to 8 mm. in breadth at the broadest part. These are connected by branching stolons so as to form a rude network (Pl. XXXII. fig. 8). Probably the stolon was slightly attached to some foreign object, and the remainder of the colony lay in a recumbent or semi-erect position. Its sandy condition suggests that it probably trailed over a sandy bottom. Each of the flattened masses rising from the stolon contains a few Ascidiozooids which may be regarded as forming a system. No common cloacal apertures, however, are visible. If present, they are probably placed in the middle of the upper end.

The test does not become thickened in any part of the colony. It merely forms a thin but tough skin around each group of Ascidiozooids, and is greatly strengthened by imbedded foreign bodies. Some of the Sponge spicules attached to the surface are of large size, from 1 cm. to 2 cm. in length.

The branchial siphon is well formed, and the aperture is surrounded by six elongated lobes (Pl. XXXII. fig. 10, *br.l.*). The sphincter is well developed. The atrial aperture is provided with a short languet. The stigmata though not large are well formed (Pl. XXXII. fig. 9, *sg.*). The ciliated cells are distinct, and have pointed free ends. The rectum is filled with fragments of Diatoms, Sponge spicules, and minute sand grains.

The ova are large and of a bright yellow colour. The vas deferens is large and conspicuous. The spermatid vesicles are rather small and of a pale colour; they are ovate in shape.

In some of the Ascidiozooids tailed larvæ were found in the peribranchial cavity. They have each two pigmented sense-organs placed close together near the posterior end of the body. Large groups of ectodermal processes are present at the anterior end.

*Psammaplidium flavum*, n. sp. (Pl. XXXII. figs. 11-13).

*The Colony* is a small irregularly hemispherical mass attached by a wide base. The upper end is convex. The colour is a dull opaque yellowish-brown. The surface is even but finely roughened all over.

The length is 1 cm., the breadth 1.5 cm., and the greatest thickness 1.4 cm.

*The Ascidiozooids* are rather small and not very numerous. They are not visible until the colony is cut open. The usual size is about 3 mm. in length and less than 1 mm. in greatest breadth. They are quite opaque and are not divided into regions externally.

*The Test* is hard and firm, but not tough. It is of a yellowish-brown colour externally, but dull grey in the interior of the colony; it is quite opaque all through. The matrix