

colour, make the surface rough, and render the whole colony opaque. On making a section of the colony the Ascidiozooids, which are easily removed, are found to lie in small cavities separated by narrow partitions formed of test substance and sand grains. The Ascidiozooids although small are conspicuous on account of the contrast between their light yellow colour and the dark surrounding test. They are placed nearly at right angles to the upper surface. The test cells are granular and are generally of branched forms, but they are not pigmented and are usually very inconspicuous.

The mantle is fairly muscular over all parts of the body (see Pl. XXXII. fig. 7). The branchial aperture is distinctly six-lobed, and the sphincter is well developed. The wall of the branchial sac is rather thick and opaque.

The atrial aperture is circular and has no lobes and no languet. It is placed on the dorsal edge at some distance from the branchial aperture. In this respect this species resembles the genus *Aplidium*.

The stomach is moderately large. It is globular, and has its wall slightly folded longitudinally. The spermatic vesicles are of considerable size. They are ovate or spherical in form, and the vas deferens is conspicuous.

*Psammaplidium rude*, n. sp. (Pl. XXXI. figs. 1-4).

*The Colony* is an irregularly lobed sandy mass. It is incrusting and is attached by a broad base. The upper surface is wide and usually flattened, with low projections or knobs. The surface is uneven and rough. The colour is greyish-yellow, the colour of the sand.

The length is about 1.5 cm., the greatest breadth is 2.5 cm., and the thickness is 1.5 cm.

*The Ascidiozooids* are not visible on the outside of the colony, and no common cloacal apertures are to be seen. The body is about 3 mm. in length and scarcely 1 mm. in breadth. The thorax, which is about 1.5 mm. in length, is indistinctly separated from the rest of the body.

*The Test* contains a large amount of imbedded and incrusting sand, which renders it stiff but brittle and quite opaque. The matrix is clear and structureless. The test cells are minute and not very numerous. No bladder cells are present.

*The Mantle* is thin and transparent, but fairly muscular. On the thorax the muscle bands are mainly transverse in direction, and are branched so as to form an irregular network. On the post-abdomen the muscle bands run longitudinally.

*The Branchial Sac* is large and well developed. The transverse vessels are moderately wide, and all of the same size. The stigmata are numerous; they are well developed, and are arranged with regularity. The ciliated cells are distinct.

*The Dorsal Lamina* is represented by a series of very short stout tentacular languets.