

The œsophagus is long and narrow, and runs posteriorly to open into the large quadrate stomach. The walls of the stomach are moderately thick and are thrown into a few slight longitudinal folds. The intestine is long and thin walled. It runs posteriorly from the stomach for a considerable distance and then turns abruptly to the dorsal edge and anteriorly so as to form a narrow loop. The rectum is very like the intestine. In some cases it is wide, when distended with food matter. The anus is placed behind the middle of the branchial sac, usually about two-thirds of the way down from the anterior end. It is a small aperture with a thickened and reflected margin.

The spermatic vesicles are globular in form. The vas deferens is not so large and conspicuous as is usual amongst Compound Ascidiæ. In several of the Ascidiozooids examined mature ova were found in the peribranchial cavity, usually very far forward, close to the branchial aperture, but no embryos or larvæ were seen.

*Psammaplidium subviride*, n. sp. (Pl. XXXI. figs. 5-10).

*The Colony* has an irregularly rounded or ovate form. It is attached by the lower end and is not compressed laterally. The surface is even but is slightly roughened all over. The colour is a pale opaque greenish-grey.

The length is 2.5 cm., the breadth is 1.3 cm., and the thickness is 1 cm.

*The Ascidiozooids* are rather small but numerous. They are scattered evenly all over the surface, and are not arranged in systems. They lie at right angles to the surface of the colony, but their bodies are usually not much elongated.

*The Test* is hard and firm. It contains great quantities of imbedded sand grains in all parts. Where free from impurities it is clear and transparent, and is of a pale grey colour. The test cells are abundant. They are mostly of rounded form and have granular protoplasm. No bladder cells are present.

*The Mantle* is thin and its musculature is feeble. The narrow muscle bands run longitudinally.

*The Branchial Sac* is well developed. The transverse vessels are wide. The stigmata are narrow and exceedingly long. The ciliated cells are rounded and not very conspicuous.

*The Endostyle* is wide. Its course is undulating.

*The Dorsal Lamina* is represented by a series of short horn-like languets.

*The Alimentary Canal* forms a long and very narrow loop. The stomach is small but the intestine is large.

*The Post-Abdomen* is very variable in size. It is always narrow. It contains both male and female reproductive organs.

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