

The *Ascidiozooids* are of fair size, and not numerous. There is probably a common cloacal aperture on the summit of each of the projections, and the *Ascidiozooids* are arranged in a group round these.

The *Test* is full of imbedded sand grains which render it opaque, hard, and brittle. The matrix is clear and homogeneous. The test cells are abundant and of fair size. No bladder cells are present.

The *Mantle* is fairly thick and muscular.

The *Branchial Sac* is rather small and thick walled. The transverse vessels are wide, and all of one size. The stigmata are narrow but fairly regular.

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

*Locality*.—Station 141, December 17, 1873; lat. 34° 41' S., long. 18° 36' W.; depth, 98 fathoms; bottom, green sand; bottom temperature, 49°·5 F.

A single specimen of this species was obtained off the Cape of Good Hope from a depth of 98 fathoms. It is a small irregular sandy mass (Pl. XXXI. fig. 11), and in external appearance seems as if it were closely allied to *Psammaphlidium subviride*. The two species, however, differ greatly in their branchial sacs (compare Pl. XXXI. fig. 6 with Pl. XXXI. fig. 12). The colour, texture, roughness, and opacity of the colony are all due simply to the presence of the sand grains, Foraminifera shells, and other foreign bodies.

The *Ascidiozooids* are scarcely visible externally, and are rather deeply placed in the colony. They are difficult to find on account of the imbedded sand surrounding them. The test cells are mostly of rounded form and have granular protoplasm.

In the branchial sac the stigmata are narrower than the fine longitudinal vessels (Pl. XXXI. fig. 12, *l.v.*). The ciliated cells are distinct and have pointed free ends. The cilia are very long. The wide transverse vessels are provided with muscle fibres (Pl. XXXI. fig. 12, *tr.*).

Ova are present in the post-abdomen, but no male reproductive organs are visible. Well developed tailed larvæ were found in the peribranchial cavity of one *Ascidiozoid*.

*Psammaphlidium ovatum*, n. sp. (Pl. XXXI. figs. 13–16).

The *Colony* is an irregularly rounded mass fixed by one end and having the upper part broad and convex. The surface is even, but roughened all over. The colour is a dull dark grey.

The length is 2·3 cm., the breadth 1·2 cm., and the thickness 9 mm.

The *Ascidiozooids* are fairly large and numerous. They are scattered over the upper surface of the colony and seem to have no arrangement in systems. They lie generally with their antero-posterior axis perpendicular to the surface of the colony. The body is