

of the branchial sac are narrow (Pl. XXXI. fig. 14, *l.v.*). Some of the tentacles are very long. They project for a considerable distance beyond the branchial aperture, and then are directed anteriorly.

*Psammaplidium retiforme*, n. sp. (Pl. XXXII. figs. 8-10).

*The Colony* consists of a number of elongated, club-shaped or wedge-shaped masses, compressed laterally and united together by a narrow irregular and branched creeping stolon. The upper ends of the flattened masses are usually broad and rounded. The lower ends where they join the stolon are narrow. The surface of the whole colony is irregular and slightly rough from the presence of adhering sand particles. The colour is a dull greyish-buff.

The average length of one of the masses forming the colony is 2.5 cm., and the breadth is 7 mm. at the widest part; the thickness is about 2 mm.

*The Ascidiozooids* are not visible on the outside of the colony, which is quite opaque. A small number of them are found in each of the separate parts of the colony. They are placed vertically and are of moderate size.

*The Test* is small in amount. It is firm and rather tough, of a whitish-grey colour where free from sand and Ascidiozooids, and rather opaque. Its outer layer contains imbedded sand grains and great quantities of siliceous Sponge spicules and Diatoms. The test cells are minute and not numerous. The matrix is clear and structureless. There are no bladder cells present.

*The Mantle* is fairly thick but not opaque. The muscle bands are strong but distantly placed.

*The Branchial Sac* is large and well developed. The transverse vessels are numerous, moderately wide, and all of the same size. The stigmata are closely placed and arranged with regularity.

*The Tentacles* are large and numerous, they are so closely placed that their bases nearly touch one another.

*The Alimentary Canal* is of moderate size. The stomach is folded longitudinally, and the rectum is wide and thin-walled.

*The Post-Abdomen* is long and narrow, and contains both male and female reproductive organs.

*Locality.*—Off Christmas Harbour, Kerguelen Island, January 29, 1874; depth, 50 to 120 fathoms.

One large colony and some fragments of this remarkable form were obtained off Christmas Harbour, Kerguelen Island, from a depth of 50 to 120 fathoms. It has a superficial resemblance to the Clavelinidæ amongst Simple Ascidians, and is certainly