Psammaplidium effrenatum, n. sp. (Pl. XXXII. figs. 6, 7).

The Colony is an irregular incrusting mass of large size. It is attached by an extended base to a dead fragment of coral, and does not attain any great thickness. The surface is irregular and rough. The colour is dark brown.

The length is about 7·5 cm., the breadth 4 cm., and the usual thickness 8 mm.

The Ascidiozooids are of small size, and are not much elongated. They are fairly numerous and are placed rather closely over the upper surface of the colony, an arrangement in systems being visible in some places. The body is usually about 2·5 mm. in length and less than 1 mm. in greatest breadth. The post-abdomen is distinctly marked off from the anterior part of the body.

The Test is relatively small in amount and contains great quantities of imbedded sand grains of a dark colour. The matrix where free from impurities is clear and transparent and of a light grey tint. The test cells are small and inconspicuous. They are not numerous, but show the usual variety of form. No bladder cells are present.

The Mantle is thick and opaque, and the musculature is moderately strong. Most of the muscle bands run longitudinally.

The Branchial Sac is small, and is not well developed. The stigmata are few in number and of rounded form. The ciliated cells are inconspicuous.

The Endostyle is large and its course is undulating.

The Alimentary Canal forms a long narrow loop. The stomach is relatively small, and the rectum is large.

The Post-Abdomen is not large. It is narrow and tapers posteriorly.

Locality.—Station 320, February 14, 1876; lat. 37° 17′ S., long. 53° 52′ W.; depth, 600 fathoms; bottom, green sand; bottom temperature, 37°·2 F.

Two broken colonies of this species were obtained off the east coast of South America, at a depth of 600 fathoms. They are large incrusting masses of a dull brown colour (Pl. XXXII. fig. 6). The two specimens differ slightly in their colour, one is of a reddish-brown and the other is a dark grey-brown. In the former the Ascidiozooids are of a yellow colour, while in the latter they are opaque white.

The colony does not rise to any height above the place of attachment, but it becomes thicker at the free edges where it has grown beyond the coral which it surrounds. The upper surface is of large extent, and is flat or slightly convex. No common cloacal apertures are visible. In some places the Ascidiozooids (which are only visible as slight elevations) seem to be arranged in irregular lines which resemble the elongated systems found in the genus *Botrylloides*, but in other parts there is no definite arrangement (Pl. XXXII. fig. 6).

The numerous sand grains imbedded in the test cause its stiffness, give it its dark