

*Locality.*—Station 48, May 8, 1873; lat. 43° 4' N., long. 64° 5' W.; depth, 51 fathoms; bottom, rock.

There is only a single specimen (obtained on the Le Have Bank, off Nova Scotia, from a depth of 51 fathoms) of this species in the collection, and I am inclined to think that it is probably a stunted and abnormally shaped colony (Pl. XXVIII. fig. 11). From the small base of attachment it expands upwards to form a rudely pear-shaped mass, slightly flattened laterally, and connected with another mass of somewhat similar shape and about the same size by a narrow bar about 4 mm. in length and 2 mm. in thickness. Possibly the colony was placed in an irregular crevice between stones. The colour is a dirty fawn, upon which the pale brown bodies of the Ascidiozooids are scarcely visible (Pl. XXVIII. fig. 11).

The bodies of the Ascidiozooids are short, and are not distinctly divided into regions. They are usually about 1.5 mm. in length, and are quite opaque. Their anterior ends occupy slight eminences on the surface of the colony, which give it in places a somewhat roughened appearance.

The test is rather remarkable in its minute structure. It is densely crowded with test cells, most of which are of very large size (Pl. XXVIII. fig. 12, *t.c.*). All the usual shapes are present, but circular and ovate forms are the most abundant, and many of them are very regular in their outlines. The opacity of the test is in all probability due to the presence of these cells. In the outer layers of the test a good many small sand-grains and minute fragments of shells, &c., may be found imbedded.

The chief muscle bands in the mantle run longitudinally. There are only a very few muscle fibres in each band. The sphincter at the branchial aperture is rather feeble.

The branchial sac occupies nearly half the length of the body, but it is narrow and in a lowly developed condition, the stigmata being few in number and of small size (Pl. XXVIII. fig. 13). The stigmatic cells are rather conspicuous.

The alimentary canal is not large, and it forms a short loop. The wall of the stomach is folded. The post-abdomen does not extend far beyond the intestinal loop, and is not separated from it by any constriction. The vas deferens is a wide tube, which is conspicuous running along the dorsal edge of the post-abdomen and abdomen.

In one of the Ascidiozooids examined, a single very large tailed larva (about 0.75 mm. in diameter) of nearly globular form was found in the dorsal part of the peribranchial cavity.

*Aplidium fumigatum*, n. sp. (Pl. XXVI. figs. 8, 9).

*The Colony* is of ovate or elongated form, and is attached by the narrower end. Several masses may be united by their lower ends or by a short thick stolon. The upper end is broad and rounded, sometimes laterally compressed. The colour is a dull greyish-