It runs posteriorly from the stomach for some distance, and then turns abruptly towards the dorsal edge and anteriorly to become the rectum (Pl. XXVIII. fig. 6). The most posteriorly placed part of the intestine is usually rather swollen. The rectum is a long, wide, thin-walled tube of very unequal calibre. It forms the dorsal part of the abdomen in its entire length.

There is no constriction or external line of demarcation between the abdomen and the post-abdomen (Pl. XXVIII. fig. 6), and these two regions are usually of the same length. The post-abdomen scarcely tapers at all, and its posterior end is broad and rounded. The musculature on the post-abdomen is rather feeble, and is entirely composed of longitudinal bands. In one specimen a clump of immature ova was found in the anterior half of the post-abdomen, but in the other Ascidiozooids examined the reproductive organs were in an undeveloped condition. The vas deferens, usually such a conspicuous organ in Compound Ascidians, was not visible.

Aplidium crassum, n. sp. (Pl. XXV. figs. 15, 16).

The Colony is an irregularly conical mass attached by the base, which is wide and spreading. The upper end is truncated and irregular in shape. The colour is an opaque whitish-grey, becoming slightly hyaline towards the point of attachment. The surface is very uneven but moderately smooth.

The length of the colony is 2 cm. and the greatest breadth (above the base) is 1·5 cm.

The Ascidiozooids are large, but they are rather deeply placed in the colony, and are only visible towards the posterior end. The body is about 7 mm. in length and 1·5 mm. in greatest breadth. The division into regions is not distinct.

The Test is firm and moderately tough. It is of a light grey colour, but is not transparent. The matrix contains a number of small test cells of various sizes and shapes, and also larger ovate or elliptical and very granular cells. Large bladder cells are present in the outer part of the test.

The Mantle is thick and opaque over the branchial region of the body, and the musculature is very powerful. Both transverse and longitudinal muscle bands are present, and they form a continuous muscular layer.

The Branchial Sac is short, but contains a good many rows of stigmata. The transverse vessels are wide and have well-marked horizontal membranes. The stigmata are short and rounded and rather numerous.

The Dorsal Lamina is represented by a series of rather short and broad languets with blunt points.

The Tentacles are large and all of much the same size. There are about twelve.

Locality.—Off Bahia, Brazil, in shallow water.