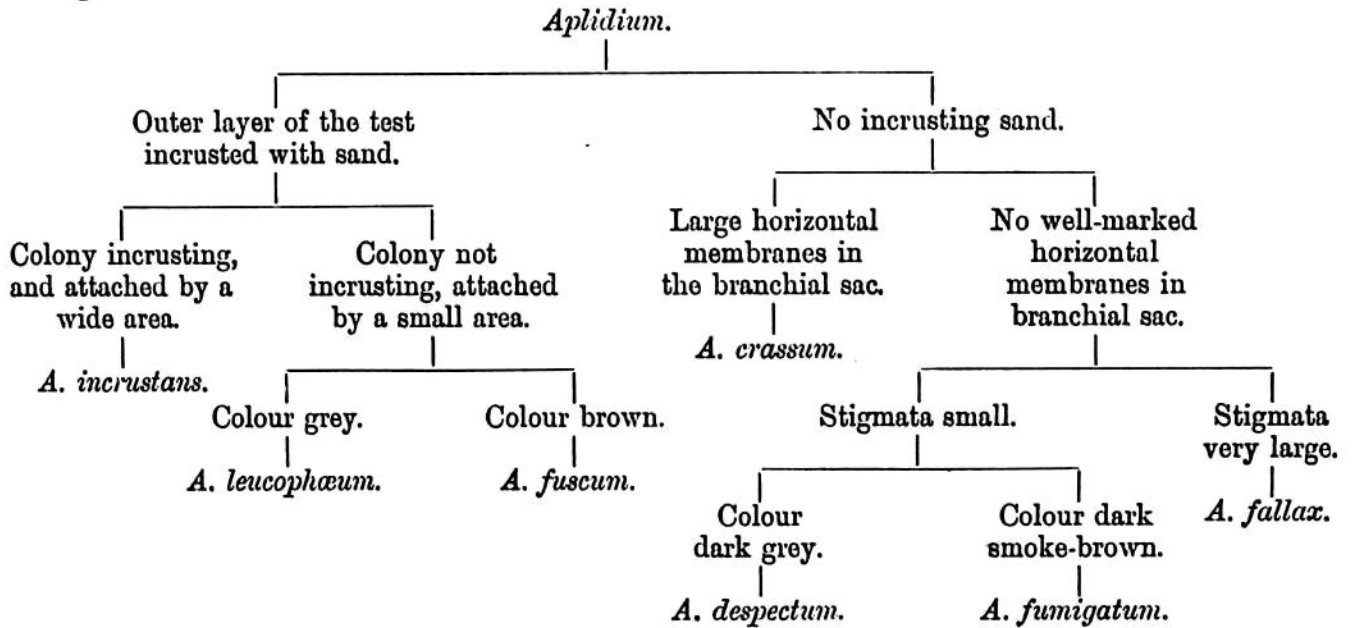


The species of *Aplidium* in the Challenger collection may be distinguished by the following characters:—



These species are all new to science with the exception of *Aplidium fallax*, Johnston, a British species.

*Aplidium incrustans*, n. sp. (Pl. XXVII. figs. 3–8).

*The Colony* is quite irregular in shape. It is a large expanded incrusting mass attached by the greater part of the lower surface. The upper free surface is convex. The edges are thick and rounded. The colour is a dark dull grey with light grey spots formed by the bodies of the Ascidiozooids. The surface is even and smooth.

The length of the colony is 5·5 cm., the breadth is 3 cm., and the average thickness is about 0·5 cm.

*The Ascidiozooids* are large, measuring as much as 5 mm. in length. The greatest breadth is about 2 mm. They lie somewhat irregularly, but most of them are more or less at right angles to the upper surface. The part which is visible on the exterior of the colony is rather more than the anterior end, and forms a spot sometimes upwards of 2 mm. in its greatest extent. There is no long post-abdomen, and no vascular appendages are present.

*The Test* is soft, and tears readily. The external layer is rather firmer than the internal part, and is very smooth and glistening on the surface. Sand-grains are scattered sparsely all through the outer layer. In sections the test is seen to be crowded with cells of very considerable size and of various shapes. The commonest forms are triangular and stellate, with very long branched angles and processes. The nuclei are large and distinct. The matrix is clear and structureless.