

The first buds formed by the original Ascidiozooids of the colony are seen from this specimen to lie neither on the ventral nor on the dorsal side of the parents, but at their posterior ends. These first buds, as may be seen from the older colony described below (see Pl. II. fig. 7), along with four others, evidently pass as they grow larger to the dorsal side of the parent Ascidiozooids, and so form the circle of young Ascidiozooids surrounding the open end of the colony; while the buds formed later, the third and succeeding series, take up their position on the ventral side of the parent, and become the Ascidiozooids at the closed end of the colony.

(2.) A very young colony (Pl. II. fig. 5), labelled "Surface, South Atlantic," like the last cannot be referred to its species because of its immature condition. It measures 6 mm. in length and about 5 mm. in breadth. It is nearly solid, the central common cloaca being very small, and its terminal opening also minute. There are sixteen Ascidiozooids arranged with perfect regularity (Pl. II. fig. 7). Four large ones occupy the middle of the colony, eight smaller are placed round the common cloacal aperture, while four still smaller occupy the closed end of the colony. The large central ones are probably the four original Ascidiozooids formed from the embryo, and they have evidently produced each two Ascidiozooids on their dorsal sides, thus accounting for the eight round the cloacal aperture, and then each one Ascidiozoid on their ventral sides, these being the four small ones at the closed end of the colony. The large Ascidiozooids are short bodied, wide dorso-ventrally, and narrow from side to side. The three rows of Ascidiozooids alternate with one another most regularly. If the colony be so placed that the four large Ascidiozooids point north, south, east, and west, then the four smallest will be north-east, south-east, south-west, and north-west, while the eight others will be, a pair between north and east, a pair between east and south, a pair between south and west, and the last pair between west and north (see Pl. II. fig. 6, which represents a diagrammatic view from the closed end of the colony with all the Ascidiozooids shown).

The surface of the colony is very irregular. The test is raised up to form a number of conical sharp-pointed processes (Pl. II. figs. 5 and 7). There are a series of these around the common cloacal aperture, and others at regular intervals over the surface of the colony. They do not correspond in number or position to the Ascidiozooids, but are placed here and there upon ridges of the test which mark out the surface of the colony into areas, each of which is occupied by an Ascidiozoid. The branchial apertures are therefore placed upon smooth regions of the test (Pl. II. fig. 7, *br.*).

The large Ascidiozooids are in a condition of active gemmation, each having two or three young buds attached to its stolon. These buds look as if they would take up their position between their parents and the closed end of the colony.

(3.) A small colony obtained off the coast of Africa on August 16, 1873; Station 100; lat.  $7^{\circ} 1' 0''$  N., long.  $15^{\circ} 55' 0''$  W.; surf. temp.  $79^{\circ}$ , is probably *Pyrosoma atlanticum*, Péron, but the characters are not yet well marked. It measures 2.2 cm. in length and