

there is little or no bare patch at the summit of the colony, suggesting that the Ascidiozooids are rarely cast off; and lastly, that there is not such a complete gradation between the buds at the top of the peduncle and the young Ascidiozooids at the base of the head. The buds are not produced in such numbers, and they probably go through their development as a whole more slowly than in the last species. The young Ascidiozooids added to the base of the colony will therefore be fewer in number, and will occur at rarer intervals. Each Ascidiozooid in the head will live longer, and the death and decay of those at the summit will not occur so frequently. This of course only applies to a colony in a full grown and flourishing condition. When young the budding will no doubt be more rapid; and when old the death of the Ascidiozooids and the decay of the colony will certainly increase greatly in its rate, and be accompanied by a diminution in, or entire stoppage of, the process of gemmation.

*Colella gaimardi*, n. sp. (Pl. XIV. figs. 7-14).

*The Colony* has the form of a more or less rounded mass, the head, attached by a peduncle. The head is usually flattened in one direction. The peduncle tapers downwards slightly to the point of attachment. The colour is dull yellow, passing in some parts into drab or brown. The surface is even and moderately smooth. No common cloacal apertures are visible.

The length of the head is 9 mm., the breadth 10 mm., and the thickness about 5 mm.

The length of the peduncle is about 2 cm., and the thickness at the middle about 2 mm.

*The Ascidiozooids* are elongated antero-posteriorly, and are rather large, usually about 3 mm. in length and 1.5 mm. in greatest breadth. They are not arranged regularly. The abdomen is large and has a rounded posterior end from which a vascular appendage is prolonged through the common test.

*The Test* is soft and gelatinous. The outer layer on the head is firmer and has a smooth glistening outer surface. It is very transparent. The homogeneous colourless matrix is crowded with cells of various sizes and shapes. A few very small bladder cells are present, but no pigment cells.

*The Mantle* is fairly strong. The musculature is regular and well developed. It consists mainly of transverse bands.

*The Branchial Sac* is delicate. The transverse vessels are rather narrow and are all of the same size. The stigmata are long and narrow.

*The Dorsal Lamina* consists of a series of short pointed languets.

*The Tentacles* are very short. There are eight, and they are all of the same size.

*The Alimentary Canal* is large.