

*The Alimentary Canal* is of large size, and forms a wide loop. The stomach is globular and smooth-walled.

*Locality.*—Off the Arrou Islands, September 18, 1874.

One specimen of this interesting species was obtained off the Arrou Islands, to the south-west of New Guinea, from shallow water. It is a moderately large colony, attached slightly by part of one edge to some gravel and shell fragments, and expanding upwards into an irregularly rounded and lobed form (Pl. XLII. fig. 5).

The specimen is a good deal creased and corrugated on the surface, but that is, I believe, to a large extent the result of preservation in alcohol; in all probability when it was living and all the Ascidiozooids in the colony had their branchial sacs expanded with water, it was larger and more rounded, and the surface was more regular than is shown in the figure. From its great softness the specimen is readily deformed, and it is probably now abnormally flat from having lain on one surface in a bottle for more than ten years.

The colour is the same dull white all over the surface. It is due mainly to the superficial layer of test containing spicules. The anterior ends of the Ascidiozooids show as small, rounded, more transparent dots on the surface. They are closely placed, and are equally numerous over the whole colony. The common cloacal apertures are not numerous, and they are not conspicuous. They are of slit-like form.

The test is gelatinous, and is perfectly clear and transparent in the interior of the colony. The outer layer, however, is slightly firmer, and is of a whiter colour and less transparent. It contains numerous small spicules, most of which are spherical, with or without numerous minute spines projecting from the surface. Some, however, are stellate, with many very delicate, sharp-pointed rays (Pl. XLII. fig. 12), and intermediate forms between the stellate and the spherical spicules occur. The calcareous spicules in this colony are absolutely confined to the superficial layer, and it is this which causes the difference between the surface layer of the test and the deeper parts. The test cells are especially abundant where there are no spicules.

The mantle allows the branchial sac and the other organs to be seen distinctly through it. There are two strong muscle bands which run longitudinally down the dorsal edge of the thorax. The branchial siphon is large. It is lined by a layer of test, in which calcareous spicules are found. These spicules are usually aggregated in three distinct clumps which lie just inside the sphincter. The margin of the aperture is not lobed. The branchial sphincter is moderately developed (Pl. XLII. fig. 13).

The superficial layer of test along with the Ascidiozooids may be stripped off from the rest of the colony (see Pl. XLII. fig. 6, which represents such a piece removed from the colony, and seen from the lower surface) as the deeper layers of test are very soft and easily torn, besides being much cut up by the cavities and passages by means of which the