

vessels are very inconspicuous. They are small and of a greyish colour, and are only abundant at the free edges. The test is formed of a homogeneous matrix in which small cells are scattered. These are not very numerous. In sections the vessels are fairly numerous, and their enlarged terminal knobs are abundant in the lower part of the colony and in the test lying between the Ascidiozooids.

*The Mantle* is moderately strong, and is very transparent. The muscle bands are narrow and are mostly transverse in direction.

*The Branchial Sac* is large, and the stigmata are numerous. There are three internal longitudinal bars on each side. The transverse vessels are moderately wide and not all of the same size. The meshes are square, and contain two or three stigmata each.

*The Dorsal Lamina* is perfectly plain.

*The Tentacles* are sixteen in number, eight long and eight short, placed alternately.

*The Dorsal Tubercle* is a circular opening with prominent edges placed about one-third of the way from the dorsal lamina to the tentacles. It is rather large. There is no peritubercular area.

*Locality.*—Station 12 of "Lightning" Expedition; lat. 59° 36' N., long. 7° 20' W.; bottom temperature, 6°·4 C.; depth, 530 fathoms.

One specimen<sup>1</sup> of this species was obtained during the cruise of H.M.S. "Lightning" in the summer of 1868 between Scotland and the Færøe Islands at Station 12,<sup>2</sup> depth, 530 fathoms. It is attached to a fragment of a large Lamellibranch shell, around which it has grown in such a manner as almost to cover the shell completely (Pl. III. fig. 1). The colour is pale and looks bleached, very possibly it was much brighter when living. The areas between the rows of Ascidiozooids are of a light brown colour, the edges of the colony where formed of test only are greyish, and the anterior ends of the Ascidiozooids are of a pale buff colour, and show clearly, when closely examined, the open circular branchial apertures.

Under a lens or low power objective the open branchial apertures are conspicuous objects, each surrounded by an opaque whitish region, the branchial siphon and sphincter (Pl. III. fig. 5, *sph.*). The anterior extremity of the endostyle is also clearly seen, and in some cases the peripharyngeal band and the nerve ganglion. The branchial aperture is frequently elliptical in shape, being elongated in a dorso-ventral direction (see Pl. III. fig. 5). Between the Ascidiozooids some of the vessels of the test can be made out, and occasionally terminal knobs are visible.

In one or two places the Ascidiozooids are arranged in small circular systems as in *Botryllus*, but over the greater part of the colony the systems are long and winding

<sup>1</sup> This specimen had been deposited along with some more of the "Lightning" material in the British Museum, and I am indebted to Dr. Günther for having placed the specimen at my disposal for description here along with the "Porcupine" and Challenger Compound Ascidiarians.

<sup>2</sup> Station 12 of the "Lightning," not the Challenger, series. For further particulars see *Depths of the Sea*, p. 81.