The Tentacles are rather large. There are sixteen, eight long and eight shorter, placed alternately.

The Dorsal Tubercle is a simple rounded opening placed not far behind the base of the tentacles.

Locality.—Station 54 (of the third cruise of H.M.S. "Porcupine" in the summer of 1869); lat. 59° 56′ N., long. 6° 27′ W.; bottom temperature −0°·3 C. ("cold area" of Færöe Channel); depth, 363 fathoms.

Only one specimen referable to the genus *Sarcobotrylloides* is in the collection. It was dredged during the cruise of H.M.S. "Porcupine" in 1869, at Station 54, from a depth of 363 fathoms. It is an irregularly elongated mass (Pl. IV. fig. 12), which has grown over and partially buried a group of Hydroid Zoophytes composed of *Sertularia operculata*, *Diphasia rosacea*, and *Campanularia volubilis*. Ascidiozooids are visible and abundant on all surfaces of the mass except a small area at the narrow lower end of the colony, near where the Zoophytes were attached. On this area the colour is a light partially transparent grey, elsewhere it is a pale pinkish or faded purple, with here and there a tinge of blue. The small anterior ends of the Ascidiozooids are lighter than the rest, and seem at first sight to be scattered quite irregularly over the surface. In some places, however, systems or parts of systems can be made out. A few of these are circular or elliptical, the rest are elongated and very irregular (see Pl. IV. fig. 12).

A surface view of the colony under a low power of the microscope reveals the minute and rather inconspicuous branchial aperture of the Ascidiozooid surrounded by an opaque white band caused by the sphincter muscle. Outside that is seen, in some cases, the peripharyngeal band and the nerve ganglion, and almost invariably the anterior extremity of the endostyle. The branchial aperture, when not circular, is frequently elongated transversely. The darkest coloured part is the region lying around and between the branchial apertures, and this owes its slightly purple tint to the lower parts of the bodies of the Ascidiozooids showing through the grey test. Here and there very fine vessels can be seen ramifying near the surface, and in some parts of the colony buds and young Ascidiozooids of a pale colour are visible.

No common cloacal apertures can be satisfactorily made out either by the eye or in a low power surface view. This is doubtless due to the contracted condition of the specimen.

The test is very thick. In a section across the colony it is seen that the Ascidiozooids occupy only a layer extending for at most 2 mm. inwards from the surface, while the whole of the centre of the mass is composed of the grey semi-transparent softish test, in which, however, many vessels and young buds are imbedded (see below).

The cells in the test are abundant and fairly large. The vessels are rather peculiar. They are abundant, but are narrower than usual and branch comparatively little, the result being that they appear in the form of long straight or winding but usually