

circular canal, namely the glandular folds or tufts of its endoderm lining, which project from its lower edge into the lumen of the vessel. As all the three genera of the Pectyllidæ which have been observed as yet (each only with one species) are typical deep-sea Medusæ, it is probable that the special peculiarities above mentioned are partially or entirely the result of adaptation to life at great depths of the sea. At any rate they are of sufficient importance to justify the separation of the Pectyllidæ from the Marmanemidæ as a special family. Among the three genera of the Pectyllidæ, *Pectanthis* is distinguished by the sucking tentacles being grouped in sixteen separate bunches, whilst in the other two genera they are closely crowded together along the edge of the umbrella margin. *Pectis* is characterised by having blind centripetal canals which are wanting in *Pectyllis* and *Pectanthis*.

*Pectyllis arctica*, Hæckel (Pls. III., IV.).

*Pectyllis arctica*, Hæckel, 1879, System der Medusen, p. 266, No. 287.

Umbrella nearly hemispherical, about  $1\frac{1}{2}$  times as broad as high. Exumbrella with sixteen projecting radial ribs, alternating with sixteen deep radial grooves. Stomach quadrangular prismatic, about as long as the radius of the umbrella. The margin of the mouth fleshy and thickened, quadrate, with four perradial pointed lobes and four inter-radial strong longitudinal muscles. Eight egg-shaped genitalia in the proximal half of the radial canal, divided in two by broad radial mesogonia. Border of the umbrella thickened, thickly beset with several rows of sucking-cups, which are divided into sixteen larger and forty-eight smaller groups (16 to 20 sucking-cups in each group). Between these are placed sixteen longer and thirty-two shorter tentacles, and numerous (?) (8 to 16) auditory clubs. Horizontal diameter of the umbrella, 18–24 mm.; vertical diameter, 12–16 mm.

*Habitat*.—Arctic part of the North Atlantic Ocean.

I had an opportunity of examining several well-preserved spirit-specimens of this species from the Copenhagen Zoological Museum, which were collected by Olrik in 1868 on the west coast of Greenland. A specimen from Station 50 of the Challenger list (dredged 21st of May 1873, near Halifax, at a depth of 1250 fathoms; lat.  $42^{\circ} 8' N.$ , long.  $63^{\circ} 39' W.$ ) is identical with them. The Pectyllid described by Allman in 1878 as *Ptychogastria polaris* (Nare's Narrative of a Voyage to the Polar Sea, vol. i. p. 299) appears closely related to this species. I saw an incomplete specimen of this in 1879, in the British Museum.

The umbrella (Pl. III. figs. 1, 2; Pl. IV. figs. 3, 4) is nearly hemispherical, so that the transverse diameter across the opening of the umbrella cavity is nearly twice as great as the vertical axis (fig. 1). The former measures 18–24 mm., the latter 12–16 mm. The gelatinous substance of the umbrella is thin but firm, and appears to be nearly of the