

*Polycyclus jeffreysi*,<sup>1</sup> n. sp. (Pl. IV. figs. 6-11).

*The Colony* is a slightly irregular mass of moderate thickness, which has grown upwards from a narrow base. The surface is fairly even and very smooth. The colour is a light yellowish-grey on which slight brownish streaks indicate the Ascidiozooids. The base of the colony is more of a transparent grey, with numerous opaque white terminal knobs scattered over it. The circular systems are regular, and are not closely placed. The common cloacal apertures are in some places fairly conspicuous.

The length of the colony is 3 cm., the greatest breadth is 2 cm., and the average thickness about 8 mm.

*The Ascidiozooids* are elongated obliquely from the ventral edge of the anterior end to the dorsal edge of the posterior end, and the dorsal and anterior regions are nearest to the surface of the colony. On an average they are about 2 mm. in their greatest length.

*The Test* is soft inside but firm on the surface, and is considerably thickened except at the very base of the colony. Where free from Ascidiozooids it is grey and slightly transparent. At the base the terminal knobs of the vessels are very conspicuous. The test matrix is, in most places, clear and homogeneous. The cells are numerous and of various shapes. There are many irregularly stellate forms with long delicate branched rays. Vessels are not very abundant, and are rather small; their terminal knobs are large.

*The Mantle* is thin and membranous, and is remarkable on account of the almost total absence of muscle fibres.

*The Branchial Sac* is very large. There are three internal longitudinal bars upon each side. The transverse vessels are moderately wide, and are all of the same size. The meshes are elongated transversely, and each contains five or six stigmata. The fine longitudinal vessels are very narrow, while the stigmata are unusually wide. They are regularly arranged.

*The Dorsal Lamina* is a plain membrane. At the anterior end, which is narrow, it has a serpentine course, and its edge is usually undulating.

*The Tentacles* are moderately large. There are sixteen, eight long and eight short. The latter are very small, and usually irregular.

*The Dorsal Tubercle* is a small circular aperture placed very close to the dorsal lamina. There is no peritubercular area.

*Locality*.—Tangier Bay, Strait of Gibraltar, August 5, 1870; depth, 35 fathoms.

<sup>1</sup> Named after Dr. Gwyn Jeffreys, F.R.S., who was in charge of the "Porcupine" during the first cruise of the expedition in 1870 when this species was obtained.