

*Leptoclinum jeffreysi*,<sup>1</sup> n. sp. (Pl. XL. figs. 6–9).

*The Colony* is a flattened expansion of irregular form. It is incrusting, and is attached by the whole of the lower surface. The upper surface is somewhat uneven but smooth. The colour is a dull creamy white.

The length is 3.5 cm., the breadth is about 2 cm., and the thickness is from 1 to 2 mm.

*The Ascidiozooids* are fairly numerous, but of small size. Their anterior ends are visible on the upper surface as small inconspicuous dots. They seem to be scattered evenly over the colony. No common cloacal apertures are visible.

*The Test* is hard and brittle. It is of a white colour and quite opaque. The upper surface contains great numbers of calcareous spicules, while the lower part is crowded with large bladder cells, and has no spicules. Small test cells are scattered all through the matrix, but they are not numerous. The spicules are stellate, but their rays are short and wide. They are of a slightly yellow colour.

*The Mantle* is thin and not strongly muscular. The branchial sphincter is strong.

*The Branchial Sac* is small and feebly developed.

*The Endostyle* is conspicuous.

*Locality*.—Tangier Bay, Morocco, August 5, 1870; depth, 35 fathoms.

One colony of this species was obtained during the Mediterranean cruise of the "Porcupine," in the summer of 1870, in Tangier Bay, from a depth of 35 fathoms. It is a small irregularly shaped expansion of a dirty cream colour, and having various fragments of Polyzoa and sand grains attached to its lower surface and edges (Pl. XL. fig. 6). The Ascidiozooids are small and inconspicuous. They occupy only the upper half or so of the thickness of the colony (Pl. XL. fig. 7), and they are not arranged in definite systems.

Vertical sections through the colony show that the test may be divided into two zones (see Pl. XL. fig. 7); an upper containing the bodies of the Ascidiozooids, and densely crowded with calcareous spicules, and a lower into which the Ascidiozooids do not extend, and which contains no spicules, but is occupied by a large number of bladder cells (Pl. XL. figs. 7, 8). The bladder cells are usually spherical, but in some places they become polygonal from mutual pressure. They do not extend quite to the lower surface of the colony (Pl. XL. fig. 8, *l.s.*).

The spicules are of moderate size and usually of stellate form, but the rays are very short and wide and the central part is large, so that the spicule as a whole has often the appearance of a sphere covered with small pointed excrescences. The spicule

<sup>1</sup> This species and the two following ones are named in honour of the three distinguished naturalists who conducted the scientific investigations during the cruises of H.M.S.S. "Lightning" and "Porcupine" in the summers of 1868, 1869, and 1870—the late Dr. Gwyn Jeffreys, the late Dr. W. B. Carpenter, and the late Sir Wyville Thomson.