

bodies and long tails (Pl. XXXVIII. fig. 22). The tail has a wide membranous fringe but no supporting transverse rays. About the middle of the body there are two closely placed pigmented sense organs, and three well-developed adhering papillæ are situated at the anterior end (Pl. XXXVIII. fig. 22).

*Leptoelinum rubicundum*, n. sp. (Pl. XXXIII. figs. 9-15).

*The Colony* forms an irregularly shaped and moderately flattened mass attached by a considerable part of the lower surface. The free end is rounded and slightly lobed. The surface is uneven and rough. The colour is a bright reddish-brown or rusty colour.

The length is 3.5 cm., the breadth is 2.5 cm., and the thickness is 7 mm.

*The Ascidiozooids* are rather small but numerous. They are scattered evenly over nearly the whole surface of the colony. The body is of rounded form, and is not distinctly divided into regions.

*The Test* is hard and tough. It is reddish-brown and quite opaque on the outer surface, whitish-grey and semi-translucent in the deeper parts.

The spicules are slightly yellow in colour and are stellate in form. They are of rather small size, but are abundant in the outer layers of the test. The test cells are small and rather scarce. They are usually of rounded or ovate form.

*The Mantle* is thin and transparent. Its musculature is rather feeble.

*The Branchial Sac* is moderately large and has the stigmata well developed. The transverse vessels are wide, and are provided with muscle bands. The stigmata are moderately long and are arranged with regularity.

*The Endostyle* is wide and conspicuous. Its course is straight.

*The Tentacles* are numerous but very short. There are about twenty of them; they vary in size, and are not arranged with great regularity.

*The Dorsal Tubercle* has a circular aperture of fair size.

*Locality*.—Station 149c, Balfour Bay, Royal Sound, Kerguelen Island, January 19, 1874; depth, 20 to 60 fathoms; bottom, volcanic mud.

A single specimen of this conspicuous species was collected in Royal Sound, Kerguelen Island. It is a small colony of irregularly conical form when laid on one side (Pl. XXXIII. fig. 9); and the area of attachment occupies more than half of the lower surface. The colour is peculiar. It is in most places a bright rusty brown, but in some parts it is much paler, becoming yellowish and almost white, while in others again it is darker.

Only one common cloacal aperture is visible on the upper surface. It is of elliptical form, about 2.5 mm. in length and 1 mm. across. No systems are present, the Ascidiozooids being placed at equal distances, with their centres usually about 1 mm. apart, all