

*Leptoclinum annectens*, n. sp. (Pl. XXXIV. fig. 14, and Pl. XXXVIII. figs. 5–9).

*The Colony* is an irregularly rounded but thin and incrusting mass, which is attached by the greater part of the lower surface. The upper surface is uneven but fairly smooth. The colour is white.

The length is 3.5 cm., the breadth is 2 cm., and the thickness is 2 mm.

*The Ascidiozooids* are numerous and rather large. They are conspicuous on the outside of the colony. They are distributed evenly over the surface, and do not form definite systems. The branchial apertures are very distinct. A few common cloacal apertures are present. The bodies of the Ascidiozooids are distinctly divided into thorax and abdomen.

*The Test* is not very hard, and it is not stiff. It is opaque white throughout. The test cells are small and inconspicuous, and stellate calcareous spicules are abundant, especially near the upper surface. There are no bladder cells.

*The Mantle* is thin, and the musculature is feebly developed. The branchial siphon is short, and the sphincter muscle is not strong.

*The Branchial Sac* is well developed. The stigmata are large and regularly arranged. There are four rows, with six or seven stigmata in each row. The transverse vessels are very narrow, but have delicate muscle bands.

*The Endostyle* is narrow. Its course is straight.

*The Dorsal Lamina* is represented by a series of languets.

*The Tentacles* are long and narrow. There are sixteen of them; they are of two sizes and are placed alternately.

*The Alimentary Canal* is rather small. The stomach is globular and of small size.

*Locality*.—Off Bahia, Brazil, September, 1873; shallow water.

One colony of this species was obtained in shallow water off Bahia, on the east coast of South America. In external appearance it is not unlike *Leptoclinium speciosum*, but differs in being not quite so white and smooth, and in having the Ascidiozooids more numerous and more closely placed. It resembles *Leptoclinium tenue* in some respects, but is much thicker and more solid and has the Ascidiozooids relatively smaller, while the spicules are, as a rule, larger.

The edges of the colony were not attached, but form free rounded projections. The Ascidiozooids, which are very distinctly seen on the rest of the colony (Pl. XXXIV. fig. 14), do not extend quite up to the margin. Under a slight magnification with a lens the branchial apertures, which are just visible to the eye, can be seen clearly (Pl. XXXVIII. fig. 5, *br.*). They are each surrounded by six triangular lobes which give the aperture a stellate appearance when not widely open (Pl. XXXVIII. fig. 6). The common cloacal apertures are small. They are also stellate, but are not so distinctly six-lobed as the branchial apertures (Pl. XXXVIII. fig. 5, *cl.*).