

areas, which are of circular or elliptical form (Pl. XXXIX. fig. 10), the spicules are scarce, and are scattered irregularly, while outside, in the test lying between the Ascidiozooids, they are fairly abundant. The six well-marked lobes which surround the branchial apertures are strengthened and rendered conspicuous by lines of spicules which border their edges (Pl. XXXIX. fig. 10, *br.*). In the deeper layers of the test the spicules are abundant. They are scattered irregularly.

The spicules are not large, and are fairly uniform in size. They are not so large as and are less densely packed than in the case of *Leptoclinum annectens*, which the present species resembles somewhat in general appearance. The majority of the spicules are regularly stellate in form, and have rather short rays. Here and there a few mammillated spherical forms occur, and occasionally deformed or monstrous forms with long irregular rays (Pl. XXXIX. fig. 11) are found; these abnormal spicules are, however, very rare.

The branchial siphon is large. It is lined by a layer of test containing spicules. The sphincter is well developed. The branchial sac is small, and is usually crumpled, doubtless from contraction in death. The stigmata are long and narrow, and the ciliated cells are distinct.

The endostyle is wide and its course is undulating. The tentacles are short. There are eight or ten of them.

The alimentary canal is small. The stomach is globular and smooth-walled. The intestine forms a short wide loop. The testis is large, and has the vas deferens coiled spirally around it.

A few large tailed larvæ were found in the colony. They have the body nearly circular in outline, with two pigmented sense organs placed on one side, nearer the anterior than the posterior end.

There are some undescribed specimens of *Leptoclinum* in the British Museum collection which were obtained during the cruise of the "Alert," from (*a*) Tom Bay, on the south-west coast of Chili, depth 0 to 30 fathoms; and (*b*) Sandy Point, in the Strait of Magellan, which are closely allied to the present species. They differ, however, in having the spicules more numerous and of a more spherical shape, the rays being generally very short and blunt.

The "Lightning" specimens obtained in the North Atlantic, between Scotland and the Færoe Islands, are all attached to a fragment of Coral (Pl. XL. fig. 3). They are of small size and of a pure white colour, and agree well in almost all points of structure with the Challenger specimens described above. The spicules, however, seem to be more closely placed in the superficial layer of the test, and especially over the areas occupied by the Ascidiozooids. Most of the spicules are of the same size and shape as those in the other specimens of the species (Pl. XL. fig. 4), but a few very much larger forms of regularly stellate shape, and provided with many rays (Pl. XL. fig. 5), occur scattered through the test.