The spicules are abundant, especially in the upper layers of the test between the Ascidiozooids. They are usually stellate, with tapering rays and sharp points, but here and there deformed and irregular forms occur. They are most of them slightly larger than those of the named specimen of *Leptoclinum albidum* in which I examined the spicules, but are exactly like those of the named *Leptoclinum albidum*, var. *luteolum*.

A small colony of roughly circular form and about 2 cm. across, which was obtained off San Iago, Cape Verde Islands, from a depth of 10 to 20 fathoms, seems also to belong to *Leptoclinum albidum*, Verrill. It is attached to some object in the form of a dome about 1.5 cm. high, which it closely incrusts. The colony is slightly thicker, and the test seems a little whiter and more opaque than in the case of the specimen from deeper water in the same neighbourhood, but in other respects the structure is the same.

One large colony and a few smaller ones and some fragments which were obtained in Simon's Bay, Cape of Good Hope, from a depth of 10 to 20 fathoms, differ very slightly from those above described. They are of very irregular shape, and are thicker (from 1 to 3 mm.) than the specimens from Cape Verde Islands. They are also more opaque and not so grey in colour. The markings on the upper surface caused by the anterior ends of the Ascidiozooids are in some places rather smaller and more irregular, but in other parts of the colony they are of the normal size.

The spicules both in shape and arrangement differ somewhat from those of both the North American and the Cape Verde Island specimens; they are rather larger, and are decidedly more irregular both in shape and distribution. Some of them are of a regular stellate form, but spherical, mammillated, and quite irregular spicules are of common occurrence throughout the test. Some of the larger irregular spicules are composed of several fan-shaped pieces joined together to form an incomplete disk which is marked by concentric and radial lines exactly like those on the discoid spicules of *Cystodytes*. This peculiar form of spicule occurs also in *Leptoclinum subflavum* (see p. 294, and Pl. XXXVIII. fig. 16).

In the specimens from Simon's Bay, as in those from the Cape Verde Islands, the Ascidiozooids are distributed more or less evenly over the surface, and show no arrangement into systems or lines; but in those colonies allied to *Leptoclinum albidum* which still remain to be considered, the anterior ends of the Ascidiozooids form on the upper surface a well marked reticulum composed of branching and anastomosing lines. This arrangement seems also to be generally found in Verrill's *Leptoclinum albidum*, var. *luteolum*, though not so markedly in the species itself. As all the specimens I have examined have been preserved in alcohol, unfortunately colour cannot be made use of as a distinguishing character.