that year; but at one of the Challenger Stations off the western coast of South America, in about the latitude of Valparaiso, the principal part of the contents of the dredge consisted of a weed-like organism of this sort.

The appearance of the specimens varies according to the nature of the sea-bottom whence they have been obtained. Those from the North Atlantic, kindly lent to me by Dr. Carpenter, are from a Globigerina ooze; those from the South Pacific from a "grey mud," containing a few Foraminifera and a good many Radiolaria. Reference to some of the figures in Pl. XXVIII. will show the effect of local conditions in modifying the external characters of the test. Thus, fig. 2 is from the grey mud, and fig. 3 from the Globigerina ooze—the magnifying power being the same in both cases; and figs. 6 and 7 are smaller pieces more highly magnified. Notwithstanding the number of adherent *Globigerina*-shells and the like, the Atlantic specimens retain their flexibility. Specimens as different as those represented in figs. 2 and 3 are indistinguishable from each other in point of structure after they have been decalcified with weak acid, both having the appearance of light-brown chitinous tubes: so that the adherent objects, whether *Globigerinæ* or sand-grains, are manifestly a non-essential portion of the investment. I have therefore preferred to base the description of the species on specimens obtained from the South Pacific habitat, not only because the supply of material is larger, but because the proper test is less obscured by incrustation.

Referring again to the plate,—fig. 1 represents a bit of the organism from the latter locality, drawn to the natural size; and fig. 2 an enlarged representation of one of the younger and more transparent branches, magnified 8 diameters. At first sight the tangled threads bear considerable resemblance to masses of some Melanospermous Alga, such as *Stilophora rhizodes;* but, quite apart from the fact that the animal was observed whilst still in fresh condition, the structure of the investment of the preserved specimens is sufficient to determine its Rhizopodal affinities.

When a little tuft is spread out on a white surface, it is seen to be composed of branching tubes, varying in diameter from $\frac{1}{200}$th to $\frac{1}{80}$th of an inch (0·126 to 0·315 mm.). What their original length may have been it is impossible to say, but it is seldom that pieces can be separated of more than an inch or an inch and a half in length. There is nothing to lead to the supposition that the organism may have been sessile or rooted to any foreign body when in the growing state, indeed in places where it is most abundant the indications are all the other way; and nothing resembling a primordial chamber, such as is found in the branching varieties of *Hyperammina*, has ever been observed. The branching is dichotomous, but, beyond this, does not take place on any regular plan. The branches are of even diameter and regular outline, and bear no trace of segmentation.

Notwithstanding the flexibility and apparent softness of the tubes, the proportion of organic matter they contain is relatively very small. A mass of the "weed," thoroughly washed to free it from soluble salts, and dried at 100° centigrade, left 87·6 per cent.