

inches to fifteen feet in length. The largest extremity, most probably the base, is pointed or conical, expanding for a few inches, and then, usually, becoming more slender. From this part upwards the body of the fossil either tapers very gradually or remains cylindrical throughout. The upper extremity appears to be abruptly truncated, and to have a central cup, similar to that of the ordinary cyathophylloid corals, but without radiating septa. The surface is either smooth, longitudinally grooved, irregularly corrugated, or covered with small nodular projections. These markings, in most of the specimens, run in nearly straight lines from end to end, but sometimes they have a spiral arrangement, as represented above, in fig. 1. There appears to be also a thin, minutely perforated epidermis.

The internal structure consists of a central tube running the whole length and divided into numerous compartments by concave transverse septa; outside of this a thick layer of vesicular tissue composed of small sub-lenticular or irregularly concavo-convex cells—the convex side of each cell being always turned outwards. This outer vesicular area is usually arranged in a number of concentric layers, of variable thickness, like those of an exogenous tree. Occasionally, specimens are found in which this lamellar structure cannot be detected. The central tube is from one-third of an inch to fifteen lines in diameter; the outer vesicular area from one-fourth of an inch to five or six inches in thickness. There does not seem to be any constant proportion between the two—for specimens of two inches have the central tube as large as it is in those of twelve inches in diameter.

In polished transverse sections, of those individuals which have the surface smooth, the concentric layers of the outer vesicular tissue are seen as so many uniformly circular or ovate rings. But when the surface is corrugated or tuberculated, the rings are undulated, so that the form of the external ridges or tubercles is repeated on each ring, sometimes nearly to the centre.

The true character of the cup, at the smaller extremity, has not yet been ascertained with the certainty that is to be desired. Indeed it seems to be rarely preserved; for although large collections have been made of these fossils, and Mr. Weston, who visited Anticosti last summer, made a special search for this part, only three specimens have been collected which give any clue to its form. One of these is a fragment four inches in length and twenty lines in diameter. When slit in two, longitudinally, by the lapi-