

in photographing. Badly preserved at the best, so that thin sections are difficult to examine, this species seems to have a peculiar power to absorb Canada balsam with the result that the evidence of structure entirely disappears. The best results were obtained by photographing the polished surface.

The average vertical section presents the appearance seen in Pl. V, Fig. 1. The vertical pillars are apparent as well as the horizontal laminae. Zooidal tubes are but indistinctly seen. A much better preserved portion is seen in Pl. III, Fig. 3, which was prepared from a polished surface. The horizontal laminae and the vertical pillars are here quite distinct as well as the zooidal tubes, which owing to mineralization show but faint evidence of tabulac. The wide open axial canal of the astrorhizal system is well shown with a heavy cylinder surrounding it. This cylinder shows indistinct vertical striations and some evidence of a central hollow. Certain sections show the large axial canals lying one above another between a pair of pillars. Occasional sections are cut which show scarcely any sign of the laminae. Such slices suggest the structure of a true *Stromatopora*.

Tangential sections are, on the whole, more satisfactory than the vertical. The coarsely porous character of the fibre is distinctly seen. The cut ends of the wide axial tubes are prominent, as well as the ramifying canals of the astrorhizae. A somewhat different appearance is presented according to the level at which the section is cut. If the line of section passes through a lamina (Pl. V, Fig. 3) the astrorhizal canals are conspicuous and the pillars lose their significance, being fused together by the horizontal elements. Through the tissue thus formed pass the distinct round zooidal tubes. In many parts of such sections the pillars are seen to be deformed by the zooidal tubes pointing to the assumption that the latter are the more important elements to which the pillars have to give place. If the horizontal section is situated at