PARKS : STROMATOPOROIDS OF THE GUELPH

connected by horizontal bars at irregular intervals, from eight to ten occurring in the distance of four mm.

Tangential sections (Plate II, Fig. 5; Pl. VI, Fig. 2) present a series of rounded dots representing the cut ends of the pillars. Occasionally the pillars are seen to be connected by bars in the manner typical of the genus *Labechia*. The hollow character of the pillars is seen only in exceptionally well preserved examples.

Vertical sections (Plate II, Fig. 4) exhibit the continuous pillars and the connecting bars; those cut transversely appearing as irregular dots while those which happen to follow the plane of the section are seen as flexuous lines of some thickness passing from pillar to pillar.

This is a well marked species and capable of easy identification, when occurring under ordinary conditions. However the great majority of examples are in the "reversed" state. In these the substance of the original skeleton has been surrounded by infiltered matter and the fibre subsequently replaced by crystalline calcite. The fossil therefore appears in section as clear white matter traversing a muddy base. In many examples this calcite has subsequently been dissolved so that the specimen shows a mass of rock penetrated by numerous small holes. This peculiarity has given rise to the popular term " pin-hole fossils". (Pl. VI, Vig, ig, 1.)

Tangential sections of the reversed examples (Pl. II, Fig. 6) show the cross sections of these pin-holes which are seen to be connected by clear spaces corresponding to the original position of the bars. A rather puzzling appearance is sometimes shown by these specimens; the infiltered calcite and dolomite seems to have formed a concretionary layer around the original skeleton, so that, in thin sections and on polished surfaces, a dense line is seen to surround the position of the pillars. First inspection is apt to lead to the conclusion that these lines represent actual organic tissue but I believe the explanation to be as indicated above. (Pl. II, Fig. 6.)

[153]

21