

in many instances, shows a dense border line, which however can, in other cases, be seen on both sides of the lamina. An occasional plate shows this dense line towards the centre. Very fine and indistinct striations cross the plates in a vertical direction. Although no certain evidence is obtainable, these striations probably represent minute tubuli. The large pores already referred to can be seen as distinct openings in the laminae as viewed in cross section.

Tangential sections are very unsatisfactory, and in fact reveal nothing further as to the minute structure of the species. The surface of each plate is marked by numerous little rounded and ridge-like elevations between which run the horizontal canals of fine but distinct astrorhizal systems. (Pl. VI, Fig. 5.) The centres of these systems are about 10 mm. apart and are usually situated in a depression of the plate. The large central canal is well marked in some examples, but in others is apparently absent. I am inclined to regard the large open axial canal of the astrorhizal systems as normal and to ascribe its absence to the process of mineralization.

Many examples of this species have been labelled *Stromatopora antiqua* but I cannot agree with this identification. If we have to deal with a *Stromatopora* the horizontal plates must represent latilaminae. But latilaminae are essentially distinct from each other which is not the case here. The plates are also separated from each other by too great an interval for this explanation to hold good. It may be urged that the original latilaminae were thicker and have been reduced by solution. Such a process could not produce the regularity of separation of the plates nor would it leave the surface in the excellent condition observed. The fibre of the coenosteum is dense and not at all of the porous character typical of the Milleporoid type of Stromatoporoid.

The open lenticular skeleton and the absence of pillars at once suggests Nicholson's genus *Rosenella*, but it must be