the pillars can be made out as distinct dots they are seen to be connected by very delicate arms suggesting the hexactinellid whorls of *Actinostroma*. Among these arms, in part bounded by them and in part squeezed into the sides of the pillars, are the minute tubes already referred to. In many parts of a tangential section the pillars are entirely obliterated by the invasion of these vertical tubules so that it presents a sort of fine net-like aspect. This appearance is due to the fact that the part of a pillar left by the occurrence of a tubule in its centre is of about the same calibre as the connecting arms.

Tangential sections which are at all thick, in fact all tangential sections thick enough to be of any value, do not show the fine connecting arms at all but present the typical appearance of *Stromatopora* (Pl. V, Fig. 6). On polished surfaces however the structure above described can be made out Astrorhizal systems of a delicate character throw a ramification of canals over the whole surface. The centres of these systems are about 4 mm. apart. A somewhat diagrammatic representation of a polished tangential surface is shown in Pl. V, Fig, 2.

This species presents affinities to *Actinostroma* in the distinctness of its pillars and in the lack of complete fusion of its horizontal elements. On the other hand it approaches *Stromatopora* in the character of the fibre and in the presence of zooidal tubes. It seems advisable to include this example with *Stromatoporella elora* and provisionally to give it the rank of a variety. The resemblance to *Stromatoporella elora* is so strong that at times I have been tempted to consider the differences as merely the result of different processes of fossilization. However the vertical pillars in the present variety are more prominent in vertical section. The tubules are smaller. The connecting bars are finer. The astrorhizal systems are smaller and less regular. In fact the whole coe-