

of *Retepora imperati* from the Mediterranean. The points of difference, as will be seen, between them are very slight. The operculum of *Retepora imperati* is smaller and the muscular insertions on the sides of the ring are above the middle, whilst in *Retepora elongata* they are below it. But these differences, trifling as they may seem, appear to be quite constant.

In the general form of the zoarium the aspect of the two differs considerably. The arctic form being altogether much more robust and the fenestræ of larger size and very unequal; in fact, in some instances specimens of *Retepora elongata* might be referred to the flamboyant or reticulate group, whilst in *Retepora imperati* the fenestræ are remarkably uniform in size and shape, and the whole growth is typically fenestrate. Notwithstanding the differences above noticed, and considering the wide interval of space in the habitats of the two forms, which would render variation extremely probable, I am much disposed to consider *Retepora imperati* as a variety of *Retepora elongata*.

(5) *Retepora tessellata* (Pl. XXVII. fig. 8).

*Retepora tessellata*, Hincks, Ann. and Mag. Nat. Hist., ser. 5, vol. i. p. 358, 1878, pl. xix. figs. 9-12; Macgilliv., Proc. Roy. Soc. Vict. 1883.

*Character*.—Zoarium large, intricately folded and contorted in a very irregular manner. Fenestræ oval or circular, small, tolerably uniform, but occasionally larger in parts of the zoarium. Zoœcia (young) urceolate, convex. Orifice semicircular, widely sinuated or notched (no fissure) in front. Peristome thick, with four large articulated spines (fig. 8*d*), two behind and one on each side. In the older zoœcia the orifice is deeply immersed and the two lateral spines only remain (fig. 8*b*). Surface generally very rugose and studded all over with minute avicularia with an acicular mandible; besides which, sparsely distributed, are large rostriform avicularia, with an acute lanceolate mandible with a very broad base (fig. 8*f*) and pointing downwards. Dorsal surface very rugose, often coarsely pitted and studded with innumerable small acicular avicularia, like those on the front. Oœcia deeply immersed, cucullate.

*Habitat*.—Simon's Bay, Cape of Good Hope.

The extraordinary way in which this species bristles with minute avicularia on both aspects is a very distinctive character. As only a few small fragments occur in the collection, no certain indication of the general habit of the zoarium is afforded. But a very good specimen exists in the Oxford Natural History Museum.