uncommon in *Retepora*, and occur well marked in *Retepora imperati*, also in *Retepora lata*, *Retepora cellulosa*, &c., and probably depend upon the character of the ground where they have grown. In the specimen of *Retepora columnifera* which I have examined, there are chitinous tubes in the interior of these dorsal processes, looking at first as if they were produced by the *Retepora*, but they are the chitinous tubes of a *Caberea* or *Scrupocellaria*, and the *Retepora* has attached itself to the *Caberea*. By such means a *Retepora* might grow to considerable dimensions over ground that was unsuitable for direct attachment.

Surrounding the zoœcia at a slight distance from the surface, is a tube which is partly filled with a cellular cord. This[1] parenchymatous cord is common to the whole zoarium, but communicates with the zoœcia by means of threads near the oral aperture, and perhaps we shall find them elsewhere. This is seen in decalcified preparations; also in sections of the calcareous structure the hollow tube which contains it is very distinct near the anterior surface, but no indication is given on the surface of such a tubular structure; however, in *Retepora couchii* it can be seen in the "slightly raised tubular border" between the zoœcia, which I described in Ann. and Mag. Nat. Hist., ser. 5, vol. iii. p. 200. When describing *Retepora couchii* I decalcified specimens without finding the explanation, but perhaps I had unsuitable material, as I now can trace it. Although I have examined a considerable number of species without finding this common zoarial cord, yet I expect that it will be found in several *Reteporæ*. Jullien[2] says that *Retepora* and *Catenicella* are for him only words representing colonial forms and not generic forms, but both these genera shows important characters independent of the colonial form; with *Retepora* Hincks has pointed out several, and I have done the same with *Catenicella*, but for *Retepora* I would now point out another. The shell structure shows lines of deposition in a distinct way, which is peculiar to the genus, and besides the shell is not continuous but encloses hollow spaces or lacunæ. This is specially marked in *Retepora lata*, and is distinct in *Retepora cellulosa*; but in pointing out fresh characters, it must not be supposed that the present boundaries of a natural group may not have to be altered with extended knowledge.

Retepora avicularis, MacGillivray.

Retepora avicularis, MacGillivray, Trans. Roy. Soc. Vict., vol. xix. p. 288, pl. ii. fig. 6; Zool. of Vict., dec. x. p. 16, pl. 94, fig. 16; pl. 95, figs. 7–11.
Retepora jacksoniensis, Busk, Zool. Chall. Exp., part xxx. p. 125, pl. xxvii. fig. 4.

In the Challenger specimens the ovicell has not been noticed, but as the other characters correspond with *Retepora avicularis*, it would seem that it is identical with that species from Victoria.

Habitat.—Victoria; New South Wales. Fossil—Mount Gambier.

[1] The specimen examined was dry.

[2] Bryozoaires, Mission du Cap Horn, p. 5.