

with radiating furrows. Very numerous, interspersed, immersed avicularia, lying in all positions and of very various sizes, with a broad short mandible, much contracted at the base.

Habitat.—Station 320, lat. $37^{\circ} 17' S.$, long. $53^{\circ} 52' W.$, 600 fathoms, green sand.

(17) *Cellepora solida*, n. sp. (Pl. XXIX. fig. 12).

Character.—Zoarium ramose or globose, very irregular; in the older portions the zoecia are, as it were, all fused together and coated with a porcellanous deposit, so that all trace of openings is lost. Zoecia (younger) barrel-shaped, wide above. Orifice quadrangular, border entire; the zoecium rises behind the mouth into an obtuse, conical process, usually presenting a small avicularium, with a triangular mandible, on the anterior aspect. In front of the mouth is a much larger, rounded, tumid prominence, on which are, occasionally, placed a few very minute, circular avicularia, also with an obtuse triangular mandible. Occasional large, interspersed avicularia (fig. 12a), with a broad short spatulate mandible. Operculum suborbicular about $0''\cdot01 \times \cdot0095$.

Habitat.—Station 160, lat. $42^{\circ} 42' S.$, long. $134^{\circ} 10' E.$, 2600 fathoms, red clay.

The entire growth is solid and has a porcellanous aspect, and in habit bears a strong resemblance to *Celleporaria polythele*, Manzoni, Brioz. fossil. d. Miocene d'Austr. ed Ungh., p. 4. pl. i. fig. 3.

(18) *Cellepora simonensis*, n. sp. ? (Pl. XXIX. fig. 9, and Pl. XXXVI. fig. 8).

Character.—Zoarium branched or massive and irregular; surface uneven, nodulated or papillose. Zoecia deeply immersed and ventricose, with a row of punctures round the border, and sometimes sparsely punctured all over. Orifice clithridiate, peristome thick; in the older stage annular or shortly tubular. An obtuse avicularian process on one side close below the orifice, with a broadly triangular mandible, pointing upwards. Sometimes interspersed minute immersed avicularia with a spatulate mandible.

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

The operculum is of the same shape as the orifice, and has a pyriform thickening on each side (Pl. XXIX. fig. 9a). The interspersed avicularia in the older parts of the zoarium appear to be vicarious, *i.e.*, transformed zoecia of small size.

(19) *Cellepora pustulata*, n. sp. (Pl. XXVIII. fig. 8).

Character.—Zoarium cylindrical, irregularly branched; branches slightly tapering. Zoecia in the younger portions, distinct, ventricose; walls entire, uneven. Orifice clith-