

*Holopsamma cretaceum*, n. sp. (Pl. VII. figs. 7A-7C).

*Habitat*.—North Atlantic, Station 70; June 26, 1873; lat. 38° 25' N., long. 35° 50' W.; depth, 1675 fathoms; bottom, Globigerina ooze.

Sponge massive, lumpy, forming irregular roundish or bulbous chalk-like masses, composed almost entirely of *Globigerina* shells, cemented together by a scarce maltha. The porous surface exhibits conical depressions; the prominent ridges between them bear series of oscula.

*Holopsamma cretaceum* is represented in the Challenger collection by a single dry specimen, an irregular tuberoso white lump, the diameter of which varies between 20 and 50 mm. The dry sponge is like a piece of common rough chalk, white and very friable. Nearly the whole body is composed of Globigerina ooze, the shells of which are cemented together by a small quantity of maltha. No symbiotic Spongoxenia inhabits this species.

The single specimen of the Challenger collection is figured by Miss Traill from two sides on Pl. VII. figs. 7A, 7B. It is very friable, like chalk, represents an irregular, tuberoso, roundish lump, compressed from two sides, and exhibits about a dozen unequal funnel-shaped depressions of the surface. These funnels are 8 to 12 mm. in diameter and are twice as broad as the prominent ridges between them (4 to 6 mm. in diameter). The ridges bear series of black points, which seem to be the oscula of the exhalent canals; they are absent in the white surface of the funnels, in which only the smaller pores of the inhalent canals are to be seen.

After having dissolved the calcareous matter of the skeleton by hydrochloric acid, there remains a very small residuum, composed of the scarce maltha connecting the shells of the Globigerina ooze and groups of branched canals (fig. 7C). These canals have thin structureless walls, and their diameter varies greatly; the smallest branches seem to proceed from the porous thin dermal membrane and are colourless; the canals of medium size bear sand in their walls and exhibit roundish dilatations, which seem to be the remnants of the flagellated chambers. The large canals, which open on the surface by the oscula above mentioned, are easily visible, since their thin wall is impregnated with black pigment-spots; the black oscula have a diameter of 0.4 to 0.6 mm.

*Holopsamma argillaceum*, n. sp. (Pl. VII. figs. 6A, 6B).

*Habitat*.—South Pacific, Station 294; November 3, 1875; lat. 39° 22' S., long. 98° 46' W.; depth, 2270 fathoms; bottom, red clay.

Sponge massive, lumpy, forming irregular roundish or bulbous masses, composed almost entirely of mineral particles characteristic of the red clay, and cemented