Alcyonium antarcticum, n. sp. (Pl. XLII. fig. 5).

The colony forms a fleshy irregular mass, the flat extended base covering the stem of a species of *Macrocystis*, while the upper portion forms a head consisting of numerous rounded tufts carrying the polyps. On close examination these appear as the terminal branches of the short, thick, and sometimes even also branched twigs, which spring from the cœnenchyma.

The polyps are crowded in the terminal tufts, less numerous in the branches and basal portion; they are in circles on the tufts, but are somewhat bilaterally placed on the other parts of the colony. The upper two-thirds of the polyp can be completely retracted; the body and cœnenchyma are well provided with small spiny spindle-shaped spicules. These spicules are also found in the bases of the tentacles, which are folded together when being withdrawn.

The colony measures in its longest diameter 130 mm., it rises to an average height of 55 mm. The flat membranous basal extension is about 100 mm. in diameter. From the cœnenchymal mass short thick branches arise chiefly in an oblique direction; these soon divide into thick ragged lateral twigs of various lengths; finally ending in knobby buds, which are spherical or oval in outline, and thickly covered with the polyps.

The branches vary from 15 to 20 mm. in thickness, but are often little more than globular projections from the basal membrane; the twigs are from 8 to 10 mm. in diameter, and of an average height of 10 mm.

The polyps on the basal portion and the branches are so tightly packed together as to touch one another; they are more or less obliquely placed on the branches. Around the edge of the retracted polyp are eight small projections, which cannot completely close over the polyp opening. The bases of the tentacles are armed with two converging spicules.

The numerous canals in the ramifications of the colony are the direct continuations of the gastral canals of the polyps, and in several instances ova were to be found on the mesenterial filaments; four of the mesenterial filaments were much shorter than the others. The partition walls between the polyps are of a moderate consistency, about 0·5 mm. thick, and contain some small spicules, and an extensive system of inosculating nutrient canals which are interspersed between the polyps. The outer covering is but little thickened, its mesoderm is well furnished with spicules, which in dried specimens give the whole a somewhat rigid consistency.

In the cœnenchyma and the polyp bodies the spicules are numerous, though scattered irregularly.

The spicules are small spindles and rod-like forms; these are sometimes spiny, sometimes with processes at right angles to their main shafts; there also occur small double stars, with the two whorls of spines distinct from each other; there are also to be found some quite irregular spicules.