

*Spongodes macrospina*, n. sp. (Pl. XXXVIb. figs. 2a, 2b).

The colony consists of a short, barren trunk, and a longish capitulum thickly covered with polyps. The trunk is prolonged into a thick, upright stem, from which stout branches arise on all sides. These latter soon divide into smaller branchlets from which arise twigs which bear the bundles of polyps. As the twigs are of equal length they form umbels of polyps, placed very close together, so that externally the head of the colony appears formed entirely of polyps. Those of the main branches of the stem are slightly larger than the others, and cause their umbels to project somewhat above the others.

The apex of the stem is branched at the end in the same manner as are the branches. While the twigs in the middle and upper portions of the colony are more cylindrical, those at the margin of the sterile portion appear to be more flattened, often arranged almost like a fan, and forming a collar around the barren trunk just below its upper end.

Height of the colony 120 mm. Greatest diameter of the capitulum 100 mm. Height of the sterile trunk 29 mm.; diameter of the same 33 mm.

The little polyp heads are united in bundles of from ten to twenty, which occupy the ends of the twigs. The heads themselves are almost terminal, and the large spicules of the peduncles do not project much beyond them, at the most 1 mm. These are generally very unequally developed, often scarcely overtopping the polyp head; usually only isolated spicules in an umbel project beyond the surface.

The trunk is of a dark red colour. It has a thick outer covering surrounding the wide canals, which are divided from one another by thin, soft, partition walls. The surface is finely granular. The entire mesoderm is filled with thickly packed spicules, which thus form a continuous layer. The form and size of the spicules are extraordinarily variable. One finds thick spindles of a dark red colour, covered with large, branched warts; size, 0.7 by 0.18 mm. The branching warts are often so strongly developed as to form lateral, branching processes, or the spicule appears to be forked at one end. In addition to the red spindles there occur also colourless ones, of similar form, spindle-shaped or forked, thickly covered with spiny warts; up to 1 mm. in length. Between these there are numerous small spicules of very various form, filling up all the intervals between the large spindles. They are sometimes stellate, sometimes spheres with branched thorny processes, sometimes twin spicules, and triradiate forms with spiny and warty processes; also curved and flattened spindles, &c., varying much in size. Branched spindles 0.4 mm. long to 0.3 mm. broad; stars 0.1 mm. to 0.12 mm.

In the polyp-bearing head the stem and branches assume a different character. One finds here spindles which are distinctly visible to the unassisted eye, lying in confusion across one another. These are seldom straight, generally undulating or