long and narrow and form, when closed, a cone over the mouth of the polyp, or they are short and flap-like so that the closed mouth of the polyp appears evenly truncated.

The calyx scales have generally the form of an irregular quadrangle. The nucleus, consisting of small calcareous granules, is always excentric, whereby the quadrangle in all cases appears inequilateral. From the nucleus little protuberances radiate outwards towards the edges. The free edge of the scale is smooth, the covered edge is provided with small teeth and projecting spines. The scales of the cœnenchyma, which are so placed as to cover each other with their edges, are very irregular, oval, or angular little discs, always much smaller than the scales of the calyx. One can distinguish an outer layer of flat, warty, little discs, and a inner layer of spiny spicules which are more spindle-shaped, sometimes branched, and recall the spicules of the Muriceidæ.

The bilateral symmetry is evident in the internal organization of the polyp as well as in the form of the calyx. The œsophageal tube is laterally compressed, the two ventral and the dorsal mesenterial folds are shorter than the lateral ones and inclose a ventral and a dorsal chamber, which are distinctly smaller than the six lateral ones. During life the polyps may be stretched out straight from the stem and may again be bent in towards the stem, in this position they are found in all dead and dried specimens or in those preserved in spirits. The canal system of the colony consists of eight longitudinal canals, which are arranged strictly radially around the axis of the stem and are separated from one another only by thin septa. Into these canals, which traverse the entire stem, a net-like anastomosing system of narrow canals opens, which originates from the digestive cavities of the polyps. A canal always arises from each mesenterial chamber of each polyp, and unites in a net-like manner with its fellows in the cœnenchyma. Ova and spermatozoa arise on the mesenterial folds below the œsophageal tube; hermaphroditism appears not to take place; on the contrary, in *Primnoa flagellum* at least, the colonies are dicœcious. New polyps arise by budding from the canal system in the internodes between two whorls of polyps, at first they are situated ventrally to the base of a whorl of polyps and as they grow larger they gradually become further removed from it by simultaneous growth of the internodes. The growth of the colony accordingly takes place in the internodes of the whole stem at the same time. A resolution of the polyps appears to set in gradually at the base of the stem. The lowest circles have generally a smaller number of polyps than those higher up. The most vigorous development always takes place in the middle of the stem. The number and arrangement of the calyx scales is precisely the same in the youngest buds as in the most developed, so that the scales increase in size with the growth of the calyx.

The species of this genus are inhabitants of deep water, and as yet have only been found in seas south of the equator, in water of low temperature, and at depths of 40 to 600 fathoms.