

3. *Acanthoisis*, n. gen.—Colony ramified in one plane, polyps insignificant, cylindrical, with truncated mouth-opening. Spicules of the calyx minute, needle-like. Toothed ribs on the calcareous joints of the axis.

Genus 1. *Primnoisis*, n. gen.

Colony ramified, consisting of a main stem, which gives off branches from three to four sides, usually arising at varying heights, and giving off abundantly lateral twigs, so that the whole colony forms a thick bush.

The cœnenchyma is thin and allows the jointed axis to show through. The polyps are isolated on the stem, numerous on the branches and twigs; in loose to close spiral order. They project either at right angles to their support or their axis is directed obliquely towards the apex of the twig. Their form is club- or cup-shaped, the base broad, the middle more or less constricted, the mouth-opening widened. The tentacles are provided with spicules on the dorsal side, and are folded together in repose inwards over the mouth-opening. The form of the polyps is markedly radial and the mesenterial folds are in great part so filled with calcareous spicules that these remain well preserved and rigid even in dried specimens.

The cylindrical axis consists in the branches and twigs, of alternating internodes of thick, calcareous material and horny nodes. The calcareous joints are long, in opposition to the very short horny joints, and are provided with distinct longitudinal furrows. The branches begin with a horny joint and arise always from the calcareous joints. Sometimes it happens that a branch arises near to the upper edge of the calcareous joint, and that, by thickening of the branch, its first horny joint comes into contact with the horny node of the stem, so that individual branches apparently arise from the horny joints; the terminal joints of the twigs are calcareous.

The base appears, in the single example where it is preserved, as a flat calcareous lamellar disc, which covers foreign bodies.

The spicules form two layers in the cœnenchyma and calices.

The scales of the cœnenchyma are more or less flattened, longish, lancet, rod-like or irregular scale-like bodies covered with warts or spines. Their edges are irregularly indented and serrated, and interlock on opposite sides, so that they form a continuous layer.

In the polyps there is a deep layer of rod-like indented scales, which are placed in eight longitudinal rows and surround the periphery like so many chains; above these are flat, transversely placed scales, with toothed edges and warty or thorny surfaces whose edges interlock. These scales are broad and narrow and constitute a firm skeleton for the calyx. In the tentacles two to three rows of scales form the skeleton. The spicules in