

given above fairly agree with this species, with the exception of the distinction of a simple corallum. Since the only example hitherto known is a fragment, no conclusion as to the entire colony could be drawn from it. *Thouarella antarctica*, Val., is represented in the Challenger collection, but there is also a series of nearly related forms, which constitute, with the first species, a genus for which the name *Thouarella* may be retained. The diagnosis of the genus has had, however, to be essentially modified.

The colony consists of a main stem, which is generally simple, seldom divided into several branches, which then lie in one plane. From the main stem are given off twigs in different directions, generally in threes, which come off at successive heights at nearly right angles. They are always much thinner than the main stem, and either remain simple or give off twigs, as does the main stem. The polyps are large relatively to their support, club- or cup-shaped, and are arranged on the twigs in short, ascending spirals of three polyps each, seldom opposite. The coenenchyma of the stem and twigs is thin, and contains an outer layer of flat, scale-like, calcareous spicules, which overlap one another at their edges, and below this there are small triangular or polygonal scales. The calyx scales are different on the dorso-lateral and on the ventral sides of the bilateral calyx. The dorso-lateral scales have strong, convex upper edges, towards which the little prominences, radiating from the nucleus, diverge. Frequently the prominences fuse, and then form continuous ribs which terminate in projecting teeth at the edge of the scale, often the middle tooth of the uppermost row of scales is especially prominent, at times forming a long spine. The ventral scales are only in one case similar to the dorsal ones, otherwise they are small, thin plates, which generally form two longitudinal rows, and which, on the ventral curvature of the calyx, may overlap one another with their edges. The upper scale is then overlapped by the upper edge of the one next below it.

The operculum is formed of eight pointed curved scales, convex towards the outer side, which laid together form a low cone. In the middle line on each opercular scale is found a deep longitudinal furrow. When closed the lateral edges do not touch one another but leave eight radial slits between.

The growth of the stem and the development of the twigs takes place at the apex of the colony, while at the same time the twigs at the base of the colony die off. A single polyp forms the origin of the new twig. The base of the polyp elongates like a peduncle, in which a thin axis is developed. First of all two new polyps bud forth on the peduncle, which appear to be arranged in a short spiral. This mode of growth also takes place in those forms which bear polyps arranged oppositely on the end of the twig.

The genus *Thouarella* comes nearest to *Stenella*; the first species to be described, *Thouarella moseleyi*, exhibits in the form of the calyx and in the structure of the colony a close relationship to this genus, and may be regarded as an intermediate form.