

the mesenterial folds are very small, calcareous rodlets, which lie close together and fill the mesoderm of the folds.

The genus, to which four species from the Antarctic Ocean must be referred, exhibits in the contour of its polyps a resemblance to the Primnoids. This, however, is merely superficial; on more careful examination it soon becomes evident that the form and connection of the scale-like spicules are very different. The scales do not overlap, but the upper edge of one scale interlocks with the lower edge of the next above it.

The calices are radial and without an operculum, but the structure of the calyx exhibits close relationship with that of the scaly species of *Dasygorgia*. Here also the calyx has a lower layer of chain-like calcareous rods, over which lie the scales. The condition of the tentacles is also the same in both cases. The genus stands very near to *Mopsea*, to which *Primnoisis ambigua*, in the condition of the calyx and spicules, directly leads.

1. *Primnoisis antarctica* (Studer) (Pl. VIII. figs. 2, 2a, 2b; Pl. IX. fig. 6).

*Isis antarctica*, Studer, Monatsber. d. k. preuss. Akad. d. Wiss. Berlin, 1878, p. 661, Taf. v. fig. 32.

The branches arise from each of the calcareous joints of the stem in four directions, generally two, sometimes three, at the same base, the third and fourth, or only the fourth, somewhat higher up. They are unequally developed; generally two opposite ones are stronger than the others; they stand off from the stem at angles of 35° to 40°. Each branch again gives off lateral branches at acute angles in several directions, often near its base, which may reach the thickness of the main branch and again bear twigs, but the ramification does not go beyond the development of twigs of the fourth order.

The height of the stem, which is also that of the colony, reaches 100 mm. The diameter at the lowest part, where it is broken off from the base, is 2 mm. The branches develop to a length of 35 mm. Length of the terminal twigs reaches 10 mm.

The polyps, 1 to 1.5 mm. long, are placed on the branches and twigs at relatively great intervals, in spirals of three to four. Their form is tall, cup-shaped. They arise with broad bases and exhibit in the middle, before the expanded mouth-opening, a constriction. In repose the tentacles are folded together over the mouth-opening and form with their scales, which cover them, a kind of operculum.

The polyps mostly stand perpendicularly upon the main axes; towards the ends of the branches they are more obliquely placed. The last polyp is never terminal, but is placed laterally on the end twig which runs out into a short point.

The calcareous joints of the stem are cylindrical, distinctly furrowed longitudinally,