

The spines are arranged in longitudinal rows, five of which are visible from one aspect. The number of spines in each row varies considerably; they are, however, usually distant, but here and there two spines may be quite close together. The spines form short laterally compressed cones with a sharp apex; they are placed at right angles to the axis, and are usually about as high as broad (Pl. VIII. fig. 5).

In the terminal portion of each branch, the sclerenchyma is thin and membranous, the spines are very far apart, and the whole axis for several inches collapses when dry.

The whole corallum, with the exception of the basal portion of the stalk, is densely covered with zooids. There is no interval between adjoining zooids either as regards the members of a group (triplet) or the adjacent members of successive groups. There are usually six zooids to a centimetre on the branches, but in parts where the gonozooids become much distended with the reproductive elements they may be a little more distant (five to a centimetre). Height of zooid, excluding tentacles, about 2 mm.; breadth across base of tentacles 3 mm.; length of tentacles 4 to 7 mm. These measurements are only approximate, as in spirit specimens the amount of contraction varies a little in different portions of the colony. There appears, however, no difference in the size of the zooids which may not be attributed to unequal contraction or to a variable development of the reproductive elements (Pl. VIII. fig. 3).

The gonozooids seen from above are oval in outline, the greatest diameter, *i.e.*, in the sagittal axis, being 2.5 to 3 mm. Each gonozooid has a more or less well-marked depression in the transverse axis corresponding to the position of the mesentery.

The gastrozooids are similar in outline to the gonozooids. The mouth, which is usually rounded in outline, is situated on a cylindrical prominence placed between the pair of tentacles. Ova were found in various stages of development in all the gonozooids examined microscopically, so that it seems probable that the species is dioecious.

*Habitat.*—Station 323; February 28, 1876; lat. 35° 39' S., long. 50° 47' W., off Monte Video; depth, 1900 fathoms; bottom, blue mud.

*Schizopathes affinis*, n. sp. (Pl. IX. figs. 1–6).

Branched portion of the corallum flattened, triangular; branches lateral, alternate; the lower ones very long, the others rapidly becoming shorter towards the apex of the stem. Spines crowded, conical, and very short, arranged in imperfect verticils or sometimes with a slight indication of a spiral arrangement.

The base is free and flattened as in *Schizopathes crassa*, but the extremity is more hooked. The middle of each flattened surface bears three or four longitudinal furrows bordered by rows of short sharp serrations (Pl. IX. figs. 5, 6). The total length of the stem is about 31 cm., the length from the lowest branch to the point of the hooked base about 12 cm. The stem is somewhat flattened to near its apex; the lower portion is black,