of these specialised zooids along a branch is always the same, and may be indicated in the following manner, using the letter R to indicate gonozooid and S the gastrozooid:—

R—S—R—R—S—R—&c. (*cf.* Pl. VIII. fig. 3).

The fission by which the dimorphism is probably produced alters the relation of each zooid to its axis. In both gastrozooid and gonozooid the sagittal axis is longer than the transverse, so that now the long axis of each zooid is at right angles to the axis of the branch instead of being parallel with it. There is no difference in shape between the two types, but the gastrozooid can always be distinguished by the presence of an oral opening in the centre of the peristome; this is usually situated at the summit of a conical or cylindrical projection (Pl. VIII. fig. 3).

Each zooid bears two tentacles, both of which are of the same type, usually fusiform and of considerable length. In specimens in which the ova are well developed the gonozooids become much distended, and are then usually different in colour from the gastrozooids. In *Schizopathes crassa* the gonozooids have a distinct yellow tint, whilst the gastrozooids are a dirty white in spirit preparations. Nearly all the species referred to this subfamily have been obtained at great depths.

Schizopathes.

In this genus the zooids are closely packed, like a number of beads arranged along one surface of the axis. In side view there is scarcely any interval between the individual zooids in normal portions of the colony, and adjoining gonozooids are as close together as each gonozooid is to the gastrozooid to which it morphologically belongs.

In the *gastrozooid* the mouth is situated at the apex of a cylindrical projection of the peristome, which is of considerable length in *Schizopathes crassa*. A series of horizontal sections shows that there is no marked elongation of the stomodæum in the sagittal axis, usually such an elongation does not exist at all. The ectodermal lining is thrown into dendritic folds, and a lumen is rarely visible in the upper portion of the stomodæum. Ten mesenteries are present in the gastrozooid, all of which are of similar breadth in the upper sections of the oral cylinder. These, as in Antipathinæ, are divisible into six primary and four secondary mesenteries; the arrangement is the same as in *Antipathes* and other allied genera. Towards the base of the oral cylinder the secondary mesenteries become lost, apparently remaining attached to the wall of the cylinder after having lost their connection with the stomodæum. The secondary mesenteries in *Schizopathes crassa* all disappear before the plane is reached at which the two tentacles become continuous with the general surface of the peristome. At this point the stomodæum is somewhat elongated in the transverse direction, and the transverse mesenteries being broader than the others the whole oral cylinder is, at its base, oval in outline, its long axis corresponding with that of the branch. Still lower down, where the lumen of each