

on the one hand but a step to species which have been associated with *Prenaster*, leading to *Pericosmus*, and which in their turn lead most naturally to *Macropneustes*, and of such types as *Brissomorpha* of Laube, in which the peripetalous fasciole has completely disappeared; while in another direction the structure of these species would also indicate affinities to such genera as *Faorina*, which in their turn lead to such genera as *Cyclaster*, to which many fossil species are frequently referred without reference to the presence or absence of a peripetalous fasciole.

We have not as yet sufficient data, for the study of the young *Schizaster*, to enter into very detailed comparisons, but the following points are interesting as throwing additional light on the affinities of the genera allied to the Schizasteridæ:—

The limits which have been assigned to the genera closely allied to *Schizaster* are very unsatisfactory, and the generic characters by which different species are assigned to these genera or sub-genera pass so gradually one into the other, not merely among the recent species, but especially when we come to include the fossil species, that the task of properly limiting them appears hopeless, although these characters are convenient as subdivisions according to which we may associate groups of species.

Take, for instance, species like *Schizaster canaliferus*, with a broad, deep sunken anterior ambulacrum, a short posterior lateral pair of ambulacra, and a well-developed lateral fasciole extending under the anal system, and they seem to form a well-marked group when contrasted to species like *Schizaster moseleyi*, in which the test is comparatively flattened, the anterior ambulacrum broad but shallow, and where no lateral fasciole exists, having the course of that of *Schizaster canaliferus*, or but slight traces of it, exist as an indistinct branch of an anal fasciole; while in other species *Schizaster fragilis* and *Schizaster philippii*, having the same general facies as *Schizaster moseleyi*, we have not thus far found the variation in the course and extent of this lateral fasciole, but it is quite as well defined as in *Schizaster canaliferus*; while again such a group as that to which *Schizaster ventricosus* and *Schizaster gibberulus* belong has the more deeply sunken ambulacra of *Schizaster canaliferus*, without a lateral fasciole but very distinct anal fasciole, and yet has the low flattened test of *Schizaster philippii* and *Schizaster fragilis*.

The small specimens (from 12–19 mm.) of young *Schizaster ventricosus*, *Schizaster japonicus*, and *Schizaster moseleyi* collected by the Challenger, show already the specific characters sufficiently well developed to enable us readily to assign them to their respective species; the difference in outline in the test is, however, quite marked, and the test of all these species is much more globular than in the adult, and in one specimen of *Schizaster moseleyi* the test was, as in young specimens of *Brissopsis*, nearly globular, with a slightly indented peripetalous fasciole, and the suckers of the odd anterior ambulacrum already developed out of proportion to the rest of the test. The anal fasciole is quite well marked in the smallest specimens of *Schizaster ventricosus*, but the latero-anal fasciole of *Schizaster japonicus* is occasionally interrupted on the sides of the test in small specimens, evidently