

Beloidea (*Lampoxanthium*, *Sphærozoum*, &c., Pls. 2 and 4). The central capsule of these simplest Plectoidea (with vertical main axis) rests perpendicularly on the horizontal triangle, formed by the triradial skeleton; the porochora of the former (or the "area porosa") rests upon the central point of the latter.

Another kind of triradial structure characterises the genera *Plagiacantha* and *Plectophora*. The three radial spines united in the central point lie here not in one plane, but diverge in different planes, so that they correspond to the three lateral edges of a three-sided pyramid. Commonly the three spines are of equal size, and also the angles between them equal, so that the pyramid is regular, sometimes very flat, at other times more elevated. Spicula of exactly the same form are also found in some Beloidea. Probably the three divergent spines are homologous to the three basal feet of numerous Spyroidea and Cyrtoida. The central capsule, according to Hertwig, is placed in the apical part of the pyramid, the axes of both being identical, and the porochora resting in the apex itself. This fact seems to contradict the above-mentioned affinity; but since in *Triplecta* and *Triplagia* the three spines lie horizontally, they may have changed this original position in different direction, in *Plagiacantha* and *Plectophora* becoming divergent upwards, whereas in *Plagoniscus* and *Plectaniscus* (as in the Spyroidea and Cyrtoida) directed downwards.

The triradial structure, common to the Triplagida and Triplectida, is replaced by the quadriradial structure in the Tetraplagida and Tetraplectida. Probably the latter have been derived from the former by development of a fourth spine, and then this latter would correspond to the "apical horn" of the other NASSELLARIA. But possibly also both structures have originated independently from one another. We may distinguish not less than four different kinds of the quadriradial structure. In the first case all four spines are equal, and diverge from a common central point at equal angles in different directions, corresponding to the four axes of a regular tetrahedron (*Tetraplagia* and *Tetraplecta*, Pl. 91, figs. 3, 8).

In the second case all four spines are also equal, but they are not united in a common central point, but opposite in pairs on the two poles of a common central rod (*Plagonidium*). Therefore the skeleton possesses here the same form as in the "geminate-biradiate" spicula of many Beloidea (e.g., *Thalassoxanthium bifurcum* and *Sphærozoum furcatum*). The development of the short horizontal middle rod, connecting the two divergent pairs of spines, is here probably effected by the porochora of the central capsule resting upon it.

Whilst in these two cases of quadriradial structure all four spines are equal, in two other cases they become differentiated in a very remarkable manner. One spine is vertically directed upwards, in shape and size different from the three others, which are directed downwards; the former corresponding probably to the "apical horn," the latter to the three "basal feet," which are found in the great majority of the Spyroidea