

(not here described) in which I could not determine the topographical regions of the cephalis. The difficulty in the examination of these complicated forms is increased by their very small size, which does not reach the usual dimensions of the other *Cyrtellaria*. In some cases I was able to observe on the base of the cephalis the same typical cortinar pores (in two or three pairs), which we also find in the same part of the cephalis in the *Spyroidea* and *Cyrtoida*, and which are inherited from the *Semantida*.

The thorax of the *Botryodea*, or the second shell-joint, absent in the *Cannobotryida*, is usually of very simple form, ovate, truncate, conical or cylindrical, and consists of a secondary joint, developed from the base of the cephalis. The thorax is usually small, about the same size as the cephalis or a little larger, whilst in the *Cyrtoida* it is commonly much larger than the latter. Its terminal mouth is closed by a lattice-plate in the *Botryocellida*, while it remains open in the *Botryopylida* and *Pylobotryida*.

The abdomen, or the third shell-joint, developed in the *Pylobotryida* only, generally also exhibits a very simple shape, like the thorax, and it is a tertiary joint developed from the base of the thorax. It exhibits to the latter the same relation as in the *Tricyrtida*. The terminal mouth of the abdomen remains open in the *Botryocyrtida*; it becomes closed by a lattice-plate in the *Botryocampida*.

The lattice-plate forming the shell of the *Botryodea* is usually very thin and fragile, with very small circular pores. These are often very numerous, at other times scarce, and sometimes nearly wanting, so that the shell appears hyaline. In this group there never occurs that great variety in form and size of the pores, which numerous *Cyrtoida* and *Spyroidea* exhibit.

The radial apophyses which are found in the majority of *Botryodea* seem to correspond in position and relation to the typical radial beams of the other *NASSELLARIA*, viz., three descending basal feet arising from the base of the cephalis, and an ascending vertical apical horn arising from the top of the cephalis. Here also they seem to be inherited from the *Plectoidea* or *Stephoidea* (*Cortina*, *Cortiniscus*). But whilst these four typical radial beams in the other *NASSELLARIA* are usually simple spines or solid rods, here they usually appear as hollow cylindrical tubes, the thin wall of which is pierced by the same small pores as the shell. These porous tubes are either straight or slightly curved, often inflated and ovate at the base. We find in their number and disposition the same variety as in the simple radial spines of the other *NASSELLARIA*. The original number may here also be seen in the development of four typical beams, an ascending apical tube on the top of the cephalis, and three descending basal tubes on its base; the odd posterior tube of the latter corresponds to the caudal foot, the two paired anterior to the pectoral feet. There is often also a fourth foot developed opposite to the caudal, and representing a sternal tube. Sometimes also two superior tubes are developed, a posterior occipital and an anterior frontal. The different