

The annular joints of the Stichocyrtida succeeding the third joint, and very variable in number, may be regarded either as a series of new postabdominal chambers, succeeding the true abdomen, or as secondary joints of the annulated abdomen itself. The latter view may be sustained by the fact that these joints are usually of an indifferent shape, and do not possess the characteristic features which we find in the first three joints, the abdomen, the thorax and the cephalis.

The lattice-work of the shell exhibits in the *Cyrtoidea* an extraordinary variety, similar to that of the *Sphaeroidea*; it serves in the first place for the distinction of species. The three first joints of the shell are often distinguished by the different character of the lattice-work. The cephalis has usually very small and simple pores. The lattice-work of the thorax is often characterised by radial structures. The pores of the abdomen are usually very numerous and regular. The numerous joints in the annulated abdomen of the Stichocyrtida commonly exhibit little variety.

The closure of the mouth, effected by a convex or horizontal terminal lattice-plate, has a different signification in the Monocyrtida and in the jointed *Cyrtoidea*. In the Monocyrtida clausa this closing plate is the original cortinar plate or the basal plate of the cephalis. In the jointed *Cyrtoidea*, however, the lattice-plate which closes the terminal mouth of the thorax or of the abdomen (of the last annular joint in the Stichocyrtida), is produced by central union of the convergent edges, which grow centripetally from the margin of the mouth of the last joint towards its centre.

The radial apophyses arising from the shell of the *Cyrtoidea* may probably be always derived from that tripodal structure which is found in all *Plectoidea*, in *Cortina* and *Cortiniscus* among the *Stephoidea*, and in the majority of *Spyroidea*. Therefore the prototype of this radial structure would be *Plagoniscus* and *Cortina*, with four radial spines united in a common point, the cortinar centrum; an ascending apical horn and three descending basal feet. The odd posterior or caudal foot is usually similar in shape to the two paired anterior or pectoral feet, but may be distinguished from these latter by its relation to the apical horn. Very frequently an internal vertical free columella arises in the cephalis, or instead of it an ascending rib in the dorsal wall of the cephalis, which connects the base of the apical horn with the origin of the caudal foot. This is probably the remaining part of the sagittal ring. More rarely also a part of the ventral rod of the latter is preserved, or on the anterior pole of the basal rod of the cephalis an ascending procolumella arises which is inserted on the frontal face of the cephalis, and sometimes prolonged into a nasal horn (the rod, C, of Bütschli). These two odd horns, the posterior apical horn and the anterior nasal horn, are usually different and divergent. In some genera a variable number of accessory radial horns is developed on the convex face of the cephalis. In many hornless genera the free apical horn is lost, but not unfrequently the columella is preserved which connects the caudal foot with that point of the cephalis, in which formerly the apical horn was inserted.