by a second horizontal ring, the cortinar or basal ring (Pl. 92, figs. 11–13). The pores between the former and the latter, or the "cortinar pores," may be regarded as the first beginning of the lattice-plate, composing the "cephalis" or the simple primordial shell in the Archiperida and Tripospyrida, and transmitted from these by heredity to the great majority of NASSELLARIA.

The "cephalis or capitulum" (the "Köpfchen" of the German authors) is therefore the most important part of the skeleton in all Cyrtellaria, or in all NASSELLARIA possessing a complete lattice-shell. In the Plectellaria, however, or in those NASSELLARIA which do not possess a complete fenestrated shell, the "cephalis" is either imperfect or totally wanting. The cephalis surrounds the enclosed central capsule on all sides in the form of an ovate or subspherical lattice-shell, and is separated from it only by the jelly-like calymma. The sagittal ring is either enclosed in the wall of the cephalis (wholly or partially), separating its two lateral halves, or it is enclosed in the cavity of the cephalis and connected with its sagittal perimeter by short beams. The base of the cephalis (with the cortinar plate) often rests immediately upon the centre of the tripod; in the majority of NASSELLARIA, however, this near relation is altered by reason of later changes and secondary modifications.

The number of various forms, developed from these simple original structural elements of the skeleton, is astonishing, and there are described more than three hundred genera and nearly two thousand species of this legion in the following pages. This large number may be easily increased by subsequent observers. Since in all these MONOPYLEA the characteristic structure of the central capsule is identical, and also the structural elements of the siliceous skeleton are similar, it is very probable that they may have arisen from a single common stock. But it is very difficult (and at present impossible) to explain a natural monophyletic system of this large legion. The greatest difficulty is presented by the fact that the three structural elements mentioned above, viz., the sagittal ring, the basal tripod, and the latticed cephalis, are not constantly united, but each alone may also constitute the skeleton by itself. In this respect the following seven cases are possible, and are actually realised.

A. The skeleton is composed of the sagittal ring only and of its spiny appendages, without basal tripod and without latticed cephalis. This is the case in the majority of Stephoidea (Stephanida, Semantida, Coronida, and Tympanida).

B. The skeleton is composed of a basal tripod only (*Plagiacantha*), or of a tripod in the centre of which arises a vertical apical horn (*Plagoniscus*), and often of an irregular framework, arising from the rods of the tripod; but there is neither a trace of a sagittal ring nor a complete latticed cephalis. This is the case in the remarkable suborder Plectoidea (Plagonida and Plectanida).

C. The skeleton is composed of a latticed cephalis only, a simple ovate or subspherical fenestrated shell, which encloses the monopylean central capsule; there is no