

The family *Tympanida* (or *Parastephida*) differs from the other *Stephoidea* in the development of two horizontal rings, which lie in horizontal planes and arise from the upper and the lower poles of the primary sagittal ring. Therefore the same formation, which we found in the *Semantida* on the basal pole only of the main axis, here takes place also on its apical pole. On both poles arise at each side from the sagittal ring two corresponding pairs of curved branches: the lateral ends of the opposite branches (dorsal and ventral branch) become united in the frontal plane and so form two complete horizontal rings. The upper ring, composed of the superior or mitral branches, may be called the mitral ring, the lower ring, formed by the inferior or basal branches, the basal ring. Both rings are commonly of nearly equal size, more rarely of different sizes. Their connection is effected either by the primary (sagittal) ring only, or also by secondary vertical rings, a frontal ring in the lateral plane, or some diagonal meridian rings between the latter and the former. These vertical rings, which connect both horizontal rings in the form of "columellæ," may be either complete or incomplete; in the latter case their apical and basal parts are lost, the dorsal and ventral parts only being preserved.

The *Tympanida* develop a great variety of different forms, greater than in the three other families of *Stephoidea*, so that we may distinguish here not less than sixteen genera and seventy-two species. Hitherto only three species were known: *Prismatium tripleurum*, figured in 1862 in my Monograph, *Tympanidium barbadense*, figured by Bury in the "fossil Polycystins of Barbados," and *Tympaniscus fibula*, described in 1875 by Ehrenberg as a *Ceratospyrus fibula*. The number of species in this large and richly developed group will be considerably augmented by further researches. A great many of them exhibit remarkable relations to different *NASSELLARIA*. For better survey of the whole family we distinguish here four subfamilies, the first of which (*Protympanida*) is probably the common ancestral group of the other three. They may have been derived originally either from the *Semantida* or directly from the *Stephanida*.

The first subfamily, *Protympanida*, exhibits a complete primary or vertical sagittal ring, bearing on the upper part a horizontal mitral ring, on the lower part a horizontal basal ring. Therefore the gates of these two parallel rings become bisected by the sagittal ring, each divided into a right and a left half. The sagittal ring itself becomes divided by the two horizontal rings into four parts or rods; two opposite of these are more or less vertical; the dorsal (posterior) and the ventral (anterior) rod; the two other rods are more or less horizontal; the mitral (upper) and the basal (lower) rod.

In *Protympanium* (Pl. 93, fig. 14), the simplest and most primitive form of *Tympanida*, the connection of the two horizontal rings is effected only by the dorsal and ventral rods of the sagittal ring forming two parallel more or less vertical "columellæ." In all other *Protympanida* accessory columellæ are developed between the latter. In the greater number we find two secondary columellæ in the lateral plane, being the lateral