

three different dimensive axes: the principal axis with different apical and basal poles, the sagittal axis with different dorsal and ventral poles, and the lateral axis with equivalent right and left poles. In only a few genera this bilateral symmetry is not expressed, and a simpler, more regular fundamental form appears. The latter may be either primary (in the monaxonian *Archicircus* and *Lithocircus*) or secondary, afterwards acquired (in the octahedral *Trissocircus* and *Trissocyclus*, the cubical *Lithocubus*, the prismatic *Eutympanium*, and some other forms).

The most important element of the skeleton, with which its formation begins, in all *Stephoidea* is the simple primary or sagittal ring, lying vertically in the sagittal or median plane of the body and surrounding the monaxonian central capsule. This sagittal ring is the only essential element of the skeleton in all *Stephanida*, and is completely preserved in all *Semantida*, also in the greater part of the *Coronida* and *Tympanida*. It is partially reduced in the small groups of the true *Acanthodesmida* (subfamily of *Coronida*) and the *Dystympanida* and *Eutympanida* (subfamilies of *Tympanida*). Here only the vertical parts of it are preserved (dorsal and ventral rod), whilst the horizontal parts are lost (mitral and basal rod).

The sagittal ring lies constantly in the vertical median plane of the body, and therefore divides the enclosed central capsule into a right and a left half. It is rarely regular or subregular, commonly dipleuric or distinctly bilateral, so that we may easily distinguish its dorsal and ventral, apical and basal parts. The most important of these four parts or "rods" is the "basal rod" or the inferior part, because here the ring is in closer connection with the central capsule and its "porous area"; here peculiar spines or branches are commonly developed, which even on the isolated ring immediately determine the basal pole. The opposite upper part, or the "mitral rod," is also often distinguished by peculiar appendages. The posterior part, or the "dorsal rod" (the anterior rod, *a*, in the description of Bütschli), is commonly more straight, often quite vertical. The opposite anterior part, or the "ventral rod" (the posterior rod, *b*, of Bütschli), is usually more convex, and often strongly curved or semicircular.

Whilst this dipleuric or bilateral (commonly obliquely ovate or nearly triangular) form of the sagittal ring is distinctly preserved in by far the greater number of *Stephoidea*, it is replaced in some few genera by a more regular, amphitheet, diaphragmatic, or biradial form. In this case we may often suppose a primary regularity to exist, the dorsal and ventral parts being not yet differentiated, as in *Archicircus* and *Lithocircus*, *Zygo-stephanus* and *Protympanium*, and perhaps also in some other forms. But in other cases the regularity is, on the contrary, secondary, being derived from original bilateral forms.

The rod of the sagittal ring is either cylindrical (with circular transverse section) or angular (commonly with triangular transverse section). In nearly all *Stephoidea* (with very few exceptions) branches or apophyses are developed from the ring, regularly disposed and often of very great morphological importance. Commonly these