

figs. 6-9), is this number multiplied; the two opposite primary apophyses are here crossed by numerous perpendicular lateral branches, and these are again united by secondary perpendicular ramules which are parallel to the apophyses themselves; therefore each plate here forms a rhombic shield pierced by very numerous (often more than one hundred) small quadrangular or circular pores. Only two of these numerous parmal pores are the primary aspinal pores (sometimes, as in Pl. 136, fig. 8, distinguished by their larger size); all others are secondary or coronal pores. Therefore *Phatnaspis* repeats the characteristic formation of *Coscinaspis*, from which it differs in its ellipsoidal shell.

Moreover, the four other genera of the ellipsoidal Belonaspida correspond perfectly to certain genera of the spherical Dorataspida, and may be derived from these by hypertrophy or stronger development of two opposite equatorial spines. In *Thoracaspis* and *Belonaspis* (Pl. 139, figs. 8, 9) the surface of the shell-plates is without crests and dimples (in the former without, in the latter with accessory by-spines); they thus correspond to *Dorataspis* and *Diporaspis* among the Dorataspida. In two other genera the surface of the shell-plates bears a network of elevated crests, separating funnel-shaped dimples, in *Dictyaspis* without, in *Coleaspis* with by-spines; these correspond to *Ceriaspis* and *Hystrichaspis* among the Dorataspida. The small by-spines, covering the surface, exhibit the same forms as in the Dorataspida; but they are usually smaller, and less developed in the Belonaspida.

The twenty radial spines are commonly more or less compressed or two-edged, sometimes very flat, broad, and triangular (Pl. 139, figs. 8, 9). In some species (mainly of *Phatnaspis*) they are very long, thin, and needle-shaped (Monogr. d. Radiol., 1862, Taf. xxii. figs. 10-12). Rarely they are cylindrical, four-edged, or prismatic. The Belonaspida testify by this and other peculiarities to their near relation to the Diporaspida and Phractacanthida and their older origin from *Zygacantha*.

The *Central Capsule* is in the Belonaspida ellipsoidal, and more or less prolonged in the hydrotomical or longitudinal axis of the shell. It is constantly smaller than the enveloping ellipsoidal shell, and separated from it by the calymma. Its structure and the shape of its nucleus are the same as in the nearly allied Dorataspida.

Synopsis of the Genera of Belonaspida.

I. Subfamily Coleaspida. Forty parmal pores (two aspinal pores on each plate, no coronal pores).	}	Plates not dimpled, without prominent crests.	{	No by-spines, 371. <i>Thoracaspis</i> . With by-spines, 372. <i>Belonaspis</i> .
		Plates dimpled, with a net- work of prominent crests,	{	No by-spines, 373. <i>Dictyaspis</i> . With by-spines, 374. <i>Coleaspis</i> .
II. Subfamily Phatnaspida. Eighty to two thousand or more parmal pores (two aspinal pores on each plate, surrounded by two to one hundred or more coronal pores).	}		{	No by-spines (plates not dimpled), 375. <i>Phatnaspis</i> .