

circular, in the second elliptical or lanceolate, in the third square. All the different forms of spines, which we find in the numerous ACANTHARIA, may be reduced to these three forms, and among these the second and third are derived from the first.

The development of apophyses or of lateral transverse processes (wanting in the Zygacanthida) is of the greatest value for the further differentiation of the ACANTHARIA. For from the Phractacanthida (with two opposite apophyses on each spine) we must derive the Phrastaspida, the common ancestral stock of the Diporaspida (and therefore also the Belonaspida, Hexalaspida, Diploconida, and Phractopeltida). On the other hand the Stauracanthida (with four crossed apophyses on each spine) have produced the Stauraspida, or the ancestral group of the Tessaraspida and Sphærocapsida. From all these Acanthophracta, possessing a complete lattice-shell, the Astrolonchida differ in the absence of such a complete shell. Also in the few cases in which the apophyses become latticed (*Doracantha* among the Phractacanthida, and *Phatnacantha* among the Stauracanthida), the lattice-plates of the neighbouring spines never meet with their edges, as is the case in all Acanthophracta. But in a phylogenetic as well as in an ontogenetic sense the former are the ancestral stock of the latter.

The Central Capsule in the Astrolonchida is commonly spherical, sometimes with twenty roundish elevations or conical papillæ, extending radially to the basal half of the radial spines. The calymma is voluminous, and forms around the radial spines conical or cylindrical "jelly-sheaths," which are connected with the spines by coronas of Myophrisca (or of the bodies formerly called "Gallert-cilien," afterwards recognised as "contractile Filamente").

Synopsis of the Genera of Astrolonchida.

I. Subfamily Zygacanthida. Twenty radial spines simple, without apophyses or lateral transverse pro- cesses.	}	Spines cylindrical, with circular transverse section, 323. <i>Acanthometron</i> . Spines compressed, two-edged or lamellar, with elliptical or rhomboidal transverse section, 324. <i>Zygacantha</i> . Spines quadrangular (prismatic or pyramidal), with four edges, with square transverse section, 325. <i>Acanthonia</i> .								
II. Subfamily Phractacanthida. Twenty radial spines pro- vided each with two opposite apophyses (or two longitudinal rows of apophyses).	}	<table border="0" style="margin-left: 2em;"> <tr> <td style="vertical-align: middle; font-size: 3em;">{</td> <td style="vertical-align: top;"> Two apophyses opposite on each spine. </td> <td style="vertical-align: middle; font-size: 3em;">{</td> <td style="vertical-align: top;"> Apophyses simple, 326. <i>Lithophyllum</i>. Apophyses branched, 327. <i>Phractacantha</i>. Apophyses latticed, 328. <i>Doracantha</i>. </td> </tr> <tr> <td colspan="2" style="vertical-align: top;"> Two opposite longitudinal rows of apophyses (four to eight or more apophyses on each spine, opposite in pairs), 329. <i>Astrolonche</i>. </td> <td colspan="2"></td> </tr> </table>	{	Two apophyses opposite on each spine.	{	Apophyses simple, 326. <i>Lithophyllum</i> . Apophyses branched, 327. <i>Phractacantha</i> . Apophyses latticed, 328. <i>Doracantha</i> .	Two opposite longitudinal rows of apophyses (four to eight or more apophyses on each spine, opposite in pairs), 329. <i>Astrolonche</i> .			
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