

The Medullary Shell is always double in this family, composed of two small concentric shells lying in the middle of the central capsule. They are either spherical or lenticular, compressed towards both poles of the main axis; sometimes the inner is spherical, the outer lenticular. From the equatorial circumference of the latter starts a number of radial beams, which perforate the central capsule, and are inserted into the equatorial constriction of the cortical shell. Commonly all radial beams lie in the equatorial plane, sometimes also a part of them on both sides of it.

The Cortical Shell is constantly composed of four completely latticed chambers, which are only separated by the three annular constrictions. In many species all four chambers have the same form and size (Pl. 40, fig. 3), but in the greater number of species both proximal (or central) chambers are different in size, shape, or structure from both distal (or polar) chambers. The cortical shell is either simple or double, composed of two concentric four-jointed shells; rarely it is triple or multiple, composed of three or more shells fitting one inside the other. Very often the outer cortical shell is incomplete, and only developed around the two proximal chambers of the complete inner cortical shell, both distal chambers of the latter remaining simple.

On both poles of the main axis often are developed solid spines (*Panicium*, Pl. 40, fig. 4) or hollow fenestrated tubes (*Panarium*, Pl. 40, fig. 9), as in the foregoing families. Besides this, the surface of the cortical shell may be armed with spines.

The Central Capsule of the Panartida is always cylindrical, on both poles hemispherical; commonly it is more or less distinctly four-jointed, with three ring-like constrictions corresponding to those of the enclosing cortical shell. From the inner surface of the latter it is separated by a thinner or thicker jelly-mantle.

Synopsis of the Genera of Panartida.

On both poles of the main axis neither peculiar polar spines nor fenestrated tubes.	}	Cortical shell simple,	163. <i>Panartus</i> .
		Cortical shell double or triple,	164. <i>Peripanartus</i> .
On both poles of the main axis a large apical spine or a group of polar spines.	}	Cortical shell simple,	165. <i>Panicium</i> .
		Cortical shell double or triple,	166. <i>Peripanicium</i> .
On both poles of the main axis a conical or cylindrical fenestrated tube.	}	Cortical shell simple,	167. <i>Panarium</i> .
		Cortical shell double or triple,	168. <i>Peripanarium</i> .

Genus 163. *Panartus*,¹ n. gen.

Definition.—Panartida with simple cortical shell and double medullary shell, without polar spines or tubes on both poles of the main axis.

¹ *Panartus* = quite bread-like; πάνατος.