tabulate, panelled or dimpled. Central capsule excentric, placed in the aboral half of the shell-cavity.

The family Circoporida comprises those PHÆODARIA in which the simple, spherical, or polyhedral shell exhibits a peculiar porcellanous structure, possesses a simple mouth, and is particularly distinguished by the constant character denoted by their name, viz., by circles of pores surrounding the base of the radial spines. It agrees in these striking peculiarities with the following family, the Tuscarorida, but differs from them essentially by the spherical or polyhedral form of the shell, which is never ovate, with the main axis prolonged. The radial spines, variable in number, are regularly or symmetrically disposed in all Circoporida, whilst they are arranged around the poles of the main axis in all Tuscarorida. Whilst the latter are always extremely large, more than a millimeter in size, the former are much smaller and never reach the diameter of a millimeter. The number of genera and species in this family is not large, and the majority are very rare, but they belong to the most remarkable Radiolaria by the peculiar structure, as well as by the geometrical regularity of the polyhedral shell.

The Circoporida may be divided into two different subfamilies, the Circogonida and the Haeckelinida. The latter are represented by the single genus *Haeckeliana* (Pl. **114**), and possess a spherical shell with numerous small dimples between the circles of pores, and numerous simple radial spines which do not exhibit a regular arrangement. The Circogonida, on the other hand, comprise all other genera (Pls. **115–117**), and possess a panelled shell with polygonal plates, and a certain number of radial spines, which are regularly disposed on the corners of the polyhedral shell, and usually armed with verticillate bristles and terminal forks or spathillæ. Perhaps the Circogonida and Haeckelinida may better be considered as two separate families.

The geometrical fundamental form of the shell is in the Circoporida of the highest interest, since it exhibits regular proportions, which are very rare in other organic forms, generally some rare forms of regular polyhedrons. The shell in all members of this family belongs to that group of geometrical forms which I have called in my General Morphology "*Polyaxonia*" (vol. i., 1866, pp. 406–416). The shell therefore is constantly an "endospherical polyhedron," *i.e.*, a polyhedron, all the corners of which lie in a spherical surface. The corners are always indicated by the bases of the radial spines arising from the surface of the shell and marking its axes, and it is immaterial whether the shell itself is a true polyhedron or a sphere; for in the latter case also the radial spines mark the axes of the polyhedron.

The six genera, which we here distinguish among the Circoporida, represent six different fundamental forms. *Circoporus* (Pl. **115**, figs. 1–3; Pl. **117**, figs. 5, 6) possesses six radial spines, opposite in pairs in three diameters, perpendicular one to another; it agrees therefore with the Cubosphærida (p. 169, Pls. **21–25**) and repre-