differences in the size, form, or distance of the meshes or pores). In both groups the pores may be either angular or round; so that there may exist altogether four different main forms of network—(A) regular lattice with equal hexagonal pores; (B) regular lattice with equal circular pores; (C) irregular lattice with unequal polygonal pores; (D) irregular lattice with unequal roundish pores. Besides these modifications, the pores may be prolonged into tubules which are directed radially towards the outside (rarely towards the inside) of the sphere. In other cases they are surrounded by elevated or honeycomb-like frames.

The Radial Spines exhibit in the Sphæroidea the greatest variety in form, size, disposition, &c., and their numerous modifications serve mainly for the distinction of genera, their peculiar formation and size also for the distinction of species. In general we may distinguish as the most important modifications primary and secondary spines. The primary spines or "main spines" are commonly direct outward prolongations of the internal radial beams, connecting the concentric shells. The secondary or "by-spines" arise only from the surface of the lattice-shell, without reference to the internal beams. The by-spines are commonly smaller, and much more numerous than the main spines. Regarding the form, the radial spines are either roundish (cylindrical or conical, often also club-shaped, rarely spindle-shaped) or angular (commonly three-sided, prismatic or pyramidal). The spines are constantly solid, never hollow; the "internal canals," described by some authors, are only microscopic views of the transparent edges. In many cases the spines are branched or forked. The most important difference in the variable shape of the spines is their regular or irregular number and disposition, which afford characters for the distinction of our five families.

The Three Dimensive Axes—or the three diameters of the sphere, perpendicular one to another—are in the great majority of the Sphæroidea significant in the promorphological consideration of the body, and are indicated either by the position of the external radial spines, or at least of the internal radial beams, connecting the concentric spheres. Commonly two radial spines are placed opposite in each axis. The most perfect group in this respect seems to be that of the Cubosphærida, in which the three axes are represented by three pairs of spines. Next come the Staurosphærida, in which two axes in cross-form are exhibited by two pairs of spines. The most simple group are the Stylosphærida, in which only one pair of spines is developed, indicating one single axis. These three families form together a continuous natural series,—the Sphæroidea with real dimensive axes,—and exhibit at the same time relations to the three other suborders of Sphærellaria, the Larcoidea, Discoidea, and Prunoidea respectively. At both ends of this series stand two other families, on one side the Liosphærida, without any radial spines on the surface of the sphere, on the other side the Astrosphærida, in which the radial spines are developed in great and variable numbers, at least eight to twelve, commonly twenty to forty, often more than a hundred or even a thousand.