

been incorrectly called "spherical" belong to this category, for they are none of them true spheres in the geometrical sense (like the central capsules of the Sphæroidea), but rather endospherical polyhedra, whose angles are indicated by the nodal points of the lattice-shell, or the radial spines which spring from them. These endospherical polyhedra may be divided into three groups, the regular, subregular, and irregular. Of *regular polyhedra*, properly so-called, it may be shown geometrically that only five can exist, namely, the regular tetrahedron, cube, octahedron, dodecahedron, and icosahedron. All these are actually manifested among the Radiolaria, although but seldom. Much more common are the *subregular endospherical polyhedra*, e.g., spherical lattice-shells with regular hexagonal meshes of equal size; they are never exactly equal nor perfectly regular, but the divergences are so insignificant that they escape superficial observation (Pl. 20, figs. 3, 4; Pl. 26, figs. 1-3). On the contrary in the *irregular endospherical polyhedra* the meshes of the lattice-sphere are more or less different in size and often in form also (Pl. 28, figs. 4, 8; Pl. 30, figs. 4, 6). The five truly regular polyhedra require separate notice on account of their importance. (See Gener. Morphol., Bd. i. p. 406.)

26. *The Regular Icosahedral Ground-Form.*—The ground-form whose geometrical type is the regular icosahedron (bounded by twenty equilateral triangles) is rarely exemplified, but it occurs among the PHÆODARIA in the Circopoid genus *Circogonia* (Pl. 117, fig. 1), and also in certain Aulosphærida, but, apparently, only as an accidental variation (e.g., *Aulosphæra icosahedra*). Furthermore, this ground-form may also be assumed to occur in those Sphæroidea whose spherical lattice-shells bear twelve equidistant radial spines (e.g., many species of *Acanthosphæra*, *Heliosphæra*, and other Astrosphærida); the basal points of these spines indicate the twelve angles of the regular icosahedron. (See on this head Gener. Morphol., Bd. i. p. 411.)

27. *The Regular Dodecahedral Ground-Form.*—The ground-form whose geometrical type is the regular dodecahedron (or pentagonal dodecahedron), bounded by twelve equilateral and equiangular pentagons, is very rarely found perfectly developed, as in *Circorrhagma dodecahedra* (Pl. 117, fig. 2). This form is by no means so common among the Radiolaria as in the pollen grains of plants (e.g., *Buchholzia maritima*, *Fumaria spicata*, *Polygonum amphibium*, &c.). It can, however, be regarded as present in all those Sphæroidea whose spherical lattice-shells bear twenty equal and equidistant radial spines (e.g., many species of *Acanthosphæra*, *Heliosphæra*, and other Astrosphærida); the basal points of these spines mark out the twenty angles of the regular pentagonal dodecahedron. (See Gener. Morphol., Bd. i. p. 412.)

28. *The Regular Octahedral Ground-Form.*—The ground-form whose geometrical type is the regular octahedron (bounded by eight equilateral triangles), commonly appears among the SPUMELLARIA in the family Cubosphærida (p. 169, Pls. 21-25). In