

between the two shells, while the two following verticils, by communication of their ramules, form the irregular framework. Central capsule with many herniæ, forced out through the meshes of the medullary shell (fig. 5).

Dimensions.—Diameter of the spongy shell 0·7, of its inner cavity 0·45, of the medullary shell 0·07.

Habitat.—South Pacific, Station 284, surface.

Genus 117. *Lychnosphæra*,¹ Haeckel, 1881, Prodrömus, p. 453.

Definition.—Aströsphærida with a single, spherical, latticed medullary shell, which is armed with free radial by-spines, and connected by stout radial main spines with the spongy cortical shell.

The genus *Lychnosphæra*, known only by one single, large, and very remarkable species, mainly differs from the foregoing in the development of free radial by-spines on the surface of the medullary shell, and in the free interval between it and the cortical shell; but beyond this the loose spongy framework of the latter exhibits a very remarkable structure, figured in Pl. 11.

1. *Lychnosphæra regina* (Pl. 11, figs. 1–4).

Medullary shell (fig. 3) with regular, circular, hexagonally framed pores, twice as broad as the bars; from each hexagon-corner arises a radial, bristle-shaped by-spine, as long as the diameter. Twelve radial main spines, each as broad as one of the meshes, three-sided prismatic, six to eight times as long as the medullary shell. From their three leaf-shaped (often somewhat denticulated or spirally contorted) edges arise four verticils of lateral branches, each composed of three forked, thin branches. The forked branches of the first verticil end free between the two shells (figs. 2, 3), while the two following verticils are ramified, and, by anastomosis of their branches, compose the loose spongy framework of the cortical shell. On the surface of the latter arise numerous radial (zig-zag-shaped) by-spines. The fourth verticil is terminal, with three shorter, thicker, dentated, simple branches, which constitute, together with the distal apex of the spine itself, a bunch of four terminal spines. The large central capsule completely distends the medullary shell, and forces out by its pores numerous club-shaped herniæ (fig. 1).

Dimensions.—Diameter of the spongy cortical shell 0·6, of its inner cavity 0·4, of the central capsule 0·22, of the medullary shell 0·06; length of the radial spines 0·4, breadth 0·01.

Habitat.—Central Pacific, Station 271, surface.

Genus 118. *Centrocubus*,¹ n. gen.

Definition.—Aströsphærida with a single, cubical medullary shell, immediately surrounded by the spongy framework of the cortical shell; from the eight corners

¹ *Lychnosphæra* = Lantern-sphere; λύχνος, σφαίρα.

² *Centrocubus* = Shell with a central cube; κέντρον, κύβος.