send out lateral branches. All these branches lie on a spherical face, and form by communications the irregular delicate network of the outer shell, very like that of the inner, with large polygonal meshes, six to eight meshes in the half meridian of the shell. Surface of the outer shell covered with numerous straight spines, prolongations of the inner spines, but only half as long as these. The radius of the inner shell bears to that of the outer a ratio = 3 : 5.

Dimensions.—Diameter of the inner shell 0·1 to 0·12, of the outer 0·15 to 0·19; pores of the inner shell 0·02 to 0·04 to 0·06, of the outer 0·04 to 0·06 to 0·08; length of the outer spines 0·01 to 0·02.

Habitat.—Central area of the Tropical Pacific, Station 263, depth 2650 fathoms.

2. *Xanthiosphæra erinacea*, n. sp. (Pl. 8, fig. 9).

Inner shell spherical, with irregular roundish meshes, one-half to two times as broad as the bars. Fifteen to twenty meshes in the half meridian of the shell. From its surface arise numerous thin radial spines, which at equal distances from the surface send out lateral branches. All these branches lie on the face of a sphere, and form by communications the irregular delicate network of the outer shell, very unlike that of the inner, with large polygonal meshes, twelve to twenty-four in the half meridian of the shell. Surface of the outer shell covered with numerous straight spines, prolongations of the inner spines, and of the same length. The radius of the inner shell bears to that of the outer a ratio = 3 : 4.

Dimensions.—Diameter of the inner shell 0·1 to 0·12, of the outer 0·13 to 0·16; pores of the inner shell 0·002 to 0·008, of the outer 0·01 to 0·03; length of the outer spines 0·02 to 0·03.

Habitat.—Central area of the Tropical Pacific, Stations 270, 272, depth 2925 and 2600 fathoms respectively.

3. *Xanthiosphæra lappacea*, n. sp. (Pl. 8, figs. 10, 11).

Inner shell spherical or subspherical, with very small roundish pores, quite irregularly scattered, one-fourth to three-fourth as broad as their bars. Ten to twenty pores in the half meridian of the shell. From its surface arise in an extremely irregular and variable manner numerous oblique spines, often curved, often lamellar, and perforated by pores, sometimes hollow, fenestrated cones. At different distances from the surface these spines send out lateral curved branches, which by communications form the delicate and very irregular network of the outer shell. This network is often incomplete and very unlike that of the inner shell, with large polygonal meshes, six to eighteen in the half meridian of the shell. Surface of the outer shell covered with numerous small, curved, and oblique spines, prolongations of the inner spines, but scarcely one-third to one-half as long as these. The radius of the inner shell bears to that of the outer a ratio = 3 : 4.

Dimensions.—Diameter of the inner shell 0·08 to 0·12, of the outer 0·11 to 0·15; pores of the inner shell 0·001 to 0·009, of the outer 0·01 to 0·04; length of the outer spines 0·005 to 0·009.

Habitat.—Central area of the Tropical Pacific, Stations 263 to 274, depths 2350 to 3000 fathoms.