Dimensions.—Diameter of the spongy sphere 1 mm., of its central cavity 0.15, of the central cube 0.02; length of the spines 1 to 1.2 mm., breadth 0.008.

Habitat.—Central Pacific, Station 271, surface.

Subgenus 2. Octodendronium, Haeckel.

Definition.—Radial spines thirty-two or more, eight primary (arising from the eight corners of the central cube) and twenty-four or more secondary (between them).

6. Octodendron verticillatum, n. sp.

Radial spines thirty-two, with three denticulate straight edges, six to eight times as long as the diameter of the shell-cavity; the distal parts half free. Eight primary spines arise from the eight corners of the central cube, twenty-four secondary from the edges of these (a verticil of every three from each primary spine). Distal free parts of all thirty-two spines equal. Each spine with eight to ten verticils of forked lateral branches, without spathillæ. Surface of the spongy sphere covered with short simple bristles.

Dimensions.—Diameter of the spongy shell 0.3, of its cavity 0.12, of the central cube 0.02; length of the spines 0.7 to 1 mm., breadth 0.02.

Habitat.—South Pacific, Station 291, surface.

7. Octodendron contortum, n. sp.

Radial spines thirty-two, disposed in a similar manner to those of the former species (eight primary and twenty-four secondary); also the spongy shell of the same shape. The difference arises in the form of the spines, the three edges of which are much broader and spirally contorted around the axis; and thus the corresponding branches of the vertical do not lie in the same meridian-plane, but alternate one with another.

Dimensions.—Diameter of the spongy shell 0.4, of its cavity 0.1, of the central cube 0.02; length of the spines 0.8 to 1.2, breadth 0.04.

Habitat.—Central Pacific, Station 274, surface.

8. Octodendron arboretum, n. sp.

Radial spines sixty to ninety, three-sided prismatic, with spirally contorted and denticulate edges, six to eight times as long as the diameter of the inner shell-cavity. Eight primary arise from the eight corners of the central cube, twenty-four others from their three edges (as in the two former species); the remaining thirty to sixty spines seem to arise between the former and immediately from the dense spongy framework, which is twice as thick as the diameter of the inner shell-cavity. The numerous verticils of the free distal part are of equal shape in all the spines, composed of three forked branches in the terminal, and of more ramified branches in the inferior parts. Entire surface of the spongy shell covered with simple radial bristles, without spathillæ.