

*Ammoconia auloplegma*, n. sp. (Pl. VIII. fig. 4).

*Habitat*.—Tropical Atlantic (between the Canary and Cape Verde Islands), Station 89; July 23, 1873; lat. 22° 18' N., long. 22° 2' W.; depth, 2400 fathoms; bottom, Globigerina ooze.

Sponge reticular, composed of anastomosing cylindrical branches, the porous wall of which is calcareous, composed of agglutinated *Globigerina* shells.

*Ammoconia auloplegma* forms a loose roundish network, 12 to 16 mm. in diameter, of the same form as that of the following species, figured in Pl. VIII. fig. 5. The cylindrical branches composing it are, however, only half the size of those of the latter, viz., 0.5 mm. in diameter. They present the same aspect as the free cylindrical tubes of *Ammosolenia rhizammina*, so that the former sponge may be derived from the latter simply by the anastomosing of the branches. The structure of the canal-walls, too, is the same in both. After the removal of the opaque calcareous matter by hydrochloric acid, there remains a delicate membrane, pierced by numerous circular pores (*p*). The membrane contains small stellate cells scattered in a granular maltha (*m*), and a few larger dark granular cells, which may be amœboid wandering cells. Seen from the inside, the porous wall is covered here and there by small irregular flakes of epithelium, composed of minute granular cells, probably the remnants of the flagellated entodermal epithelium (*n*). Fig. 4 on Pl. VIII. is semi-diagrammatic, exhibiting these different elements united as they would appear in a transverse section of the living sponge.

*Ammoconia sagenella*, n. sp. (Pl. VIII. figs. 5A, 5B).

*Habitat*.—North Pacific, Station 256; July 21, 1875; lat. 30° 22' N., long. 154° 56' W.; depth, 2950 fathoms; bottom, red clay.

Sponge reticular, composed of anastomosing cylindrical branches, the porous wall of which is siliceous, composed of sponge spicules and volcanic debris.

*Ammoconia sagenella* (in Pl. VIII. fig. 5A magnified four times) forms a loose network, composed of short, cylindrical, anastomosing branches. The diameter of the reticular sponge is 12 to 20 mm., that of the branches 1 to 2 mm., that of the meshes of the network 2 to 4 mm. The thin wall of the tubes is rather hard and firm, pierced by numerous very small circular pores (fig. 5B, *p*). The xenophya composing the wall are siliceous, partly fragments of various sponge spicules, partly small polyhedral or more rounded sand-grains, the characteristic constituents of the red clay (*x*). Some fragments of the tubes, treated with carmine, and seen from the inside, exhibited here and there between the pores small epithelial flakes, composed of small granular cells; they are probably the remnants of the flagellated entodermal epithelium.