

*Psammina globigerina* is very similar to the preceding *Psammina plakina*, and may be perhaps identical with it, but it differs in the more complicated form of the canal-system and the chambered gastral cavity. Perhaps these differences are caused by the development of a reticular symbiont in its interior medullar plate. The irregular roundish or subcircular disc is white, hard, and rigid, between 20 and 30 mm. in diameter, 1.5 to 2.5 mm. in thickness, and is composed of two parallel hard cortical plates, and a soft medullar plate enclosed between them. The two white cortical or dermal plates are composed almost entirely of larger and smaller *Globigerina* shells, cemented together by a scanty clear maltha; the superior plate is pierced by very small pores. The soft medullar mass between the two plates consists of the mesoderm of the sponge with its canal-system, and of the network of a symbiotic Spongoxenia disposed between the branches of the latter. The maltha is filled up with xenophya, fragments of *Globigerina* shells and small complete shells.

Having dissolved the calcareous mass of the pseudo-skeleton by hydrochloric acid, and stained the remains of the body by carmine (Pl. VII. fig. 2D), I could distinguish clearly in the scanty maltha of the mesoderm two branched canal-systems, the dark reticular network of a brown Spongoxenia (probably the hydrorhiza of *Stylactella*, *h*), and the delicate red tree-like tubes of the sponge itself (*c*). The latter are branched, not anastomosing, canals, with a distinct *membrana propria*, and in the course of these the remnants of numerous flagello-chambers. The dark network of the Spongoxenia (or the hydrorhiza), expanded horizontally between the two dermal plates, is composed of anastomosing cylindrical horny tubes, of variable diameter, filled up by greenish brown epithelia. The thickest tubes radiate from the centre of the disc (fig. 2C, *h*).

*Psammina nummulina*, n. sp. (Pl. VII. fig. 3).

*Habitat*.—Tropical Pacific, Station 274; September 11, 1875; lat. 7° 25' S., long. 152° 15' W.; depth, 2750 fathoms; bottom, Radiolarian ooze.

Sponge discoidal, subcircular, composed of two parallel hard cortical plates and a soft medullar substance between them, the former being composed of Radiolarian tests, the latter of maltha with the canal-system, and the network of a symbiotic Spongoxenia. Gasteral cavity chambered. A corona of oscula on the peripheral margin.

*Psammina nummulina* is, like the two preceding species, a thin and hard subcircular disc (Pl. VII. figs. 1A, 1B), but while the two parallel hard dermal plates of the disc in the two latter are coarsely sandy and calcareous, composed of *Globigerina* shells, they are in *Psammina nummulina* more finely sandy and siliceous, composed of Radiolarian tests. These are cemented together by a rather conspicuous maltha. The upper face of the disc is traversed by numerous small inhalent pores, which are not visible on the lower face.