Sponge massive, lumpy, forming irregular, roundish, club-shaped or turbinate masses, which are composed almost entirely of calcareous *Globigerina* shells, cemented together by a scarce maltha. No symbiotic Spongoxenia.

Psammopemma calcareum sometimes assumes, like the preceding species, the characteristic subregular turbinate form, which is figured in Pl. VII. fig. 5, taken from Station 89; the same form has been described in *Holopsamma turbo* by Carter in 1885,[1] but the central depression of the summit of the funnel-shaped body has not the large vent or osculum in its centre, as described in the latter species. The whole surface is coarsely porous, pierced by innumerable smaller and larger pores, but no distinct oscula are visible; they are absent also in the typical species of the genus first described by Marshall. The dry body of our *Psammopemma calcareum* is white, hard, chalk-like, friable, composed almost entirely of smaller and larger *Globigerina* shells, which are cemented together by a scanty clear maltha. After dissolving the calcareous matter in hydrochloric acid, there remains a small residuum, composed mainly of branched canals, similar to those of *Holopsamma cretaceum* (Pl. VII. fig. 7C). The *membrana propria* of the canal-wall is reinforced by small xenophya (sand-grains). The diameter of the specimen figured is between 20 and 25 mm.

Similar pieces of a chalk-like *Psammina* of the same composition occur also at other Challenger stations, where the bottom of the sea is covered with Globigerina ooze, but they have not that regular turbinate form, seen only in the single specimen figured from Station 89. The pieces, which were occasionally observed in the Globigerina ooze of Stations 220, 270, &c., were for the most part roundish or club-shaped, 2 to 8 mm., rarely 12 to 20 mm., in diameter.

Family III. Spongelidæ, Lendenfeld (Pls. IV.–VI.).

Definition.—Keratosa with a reticular horny skeleton, composed of anastomosing spongin-fibres, which enclose xenophya (or manifold foreign bodies). Maltha transparent, not granular, also often supported by xenophya. Canal-system vesicular, developed on the Leuconal-type (similar to *Spongelia*).

The family Spongelidæ (Lendenfeld) or Dysideidæ (Marshall) comprises those Keratosa which produce a network of anastomosing homogenous spongin-fibres and possess a clear maltha, or a transparent, not granular, ground-mass of the mesoderm. They differ in this latter character from the closely-allied Euspongidæ (the Spongidæ of Vosmaer), which all possess a granular maltha (like the Aplysinidæ). Most of the Spongelidæ—especially all the deep-sea forms—are arenaceous sponges or "Psammospongiæ," and possess a pseudo-skeleton composed of manifold xenophya or foreign bodies (sand-grains, calcareous shells of Foraminifera, siliceous shells of Radiolaria and Diatoms,

[1] *Loc. cit.*, p. 213.