

remains of other organisms which live in the same depths may also be taken up by the growing sponge, as, for instance, the siliceous spicules of Hyalospongiæ, and the calcareous fragments of echinoderms and other lower animals. Among the twenty-six Deep-sea Keratosa here described, ten species possess a siliceous skeleton composed of Radiolarian shells, eight species a calcareous skeleton composed of Foraminifera shells, three species a mineral skeleton, composed of the volcanic particles of red clay, and five species a mixed skeleton, composed of the various elements of the three kinds of ooze and also of various sponge spicules. The disposition of the different skeletal elements in the four families of Deep-sea Keratosa will be seen from the following table:—

Keratosa.	Without spongin-skeleton.		With spongin-skeleton.	
	I. Family Ammonoconidæ.	II. Family Psammimidæ.	III. Family Spongelidæ.	IV. Family Stannomidæ.
I. Globigerina ooze,	3	3	0	2
II. Radiolarian ooze,	1	2	2	5
III. Mineral particles of red clay, . . .	1	1	1	0
IV. Mixed pseudo-skeleton, with sponge spicules, &c.,	0	1	2	2

The xenophya fill up the whole maltha in all the Deep-sea Keratosa, and are immediately enclosed by the clear transparent ground-mass of the mesoderm. The family Spongelidæ differs from the other three in having a portion of the xenophya also connected and partly enclosed by the skeletal fibres; in *Psammophyllum* (Pls. IV., V.) the enclosure by the spongin-fibres is similar to that in the common Spongelidæ (*Spongelia*, *Dysidea*, &c.), but in *Cerelasma* each single xenophyllum is surrounded by a capsular spongin-envelope, and these are connected by branched spongin-lamellæ, which form a reticular scaffold (Pl. VI.). The new family Stannomidæ differs from all other Keratosa in the peculiar fact, that the whole mesoderm is traversed by innumerable bundles of fine spongin-fibrillæ, but these run between the xenophya and never enclose them (Pls. I.–III.).

Chitinous Tubes of Symbiotic Hydroids.

One of the most remarkable features of our Deep-sea Keratosa, characteristic of the majority of them, is their symbiosis with certain Hydroids. The cylindrical, branched, and anastomosing chitinous tubes, which compose the reticular hydrorhiza of the latter,