

1. *Suberogorgia*, Gray, Proc. Zool. Soc. Lond., 1857, p. 159.

Sclerogorgia, Kölliker, Icones histiologicæ, pt. ii. pp. 142, 144, 1865.

The colonies are upright, branched, the branches sometimes anastomosing. Polyps with slightly protruding calyces, which are especially distributed on either side of the somewhat flattened stems and branches. The cœnenchyma is thick, and exhibits longitudinal furrows on the surface of the areas which are free from polyps. The spicules are warty spindles, and in one species birotate.

2. *Keroeides*, Wright and Studer, Archiv f. Naturgesch., Jahrg. liii. Bd. 1, p. 30.

The upright colony branches in one plane; the polyps form wart-like verrucæ, which are given off mainly from two sides of the somewhat flattened branches, leaving an interspace free. The spicules of the cœnenchyma are large broad spindles and polygonal, often triangular discs. These latter are closely approximated to one another, and form a pavement-like outer layer in the cœnenchyma. The calyces are thickly covered with polygonal scales, and the tentacles also contain broad smooth spicules. The whole habit, and even the character of the spicules, recall the genus *Acis*.

The axis is colourless and consists of closely intercalated calcareous spindles enclosed in a horny fibrous substance, which remains and preserves the form of the axis after decalcification.

Family III. MELITODIDÆ.

Melithæidæ, Ridley, Rep. Zool. Coll. H.M.S. "Alert," Alcyonaria, p. 356.

Melithæaceæ, Kölliker, Icones histiologicæ, pt. ii. p. 142.

Melithæadæ, *Mopselladæ*, *Trinelladæ*, *Elliselladæ* (*pars*), Gray, Cat. Lithophytes Brit. Mus. pp. 3, 5, 12, 24.

Scleraxonia with a well-marked axis, which is jointed, *i.e.*, consisting of alternating portions of a hard calcareous and of a soft horny substance. The hard joints (*internodes*) consist of fused calcareous spicules, with but a trace of horny substance; the soft joints (*nodes*) are formed of loose calcareous spicules, in a mesh of horny substance.

Gray made of this group a number of distinct families, but these, as Ridley has shown,¹ cannot be upheld. Ridley proved that the difference on which Gray relied in distinguishing *Melithæidæ* and *Mopselladæ*, namely, the penetration of the axis by nutritive canals, is not persistent, and he refers the genera to one family, and distinguishes them only by the characters of their spicules. The *Melitodidæ* may be possibly derived from the *Briareidæ*. Like the lower forms of the latter many *Melitodidæ* exhibit nutritive canals within the axis. Ridley thinks that siphonozooids may occur as in *Paragorgia* beside the autozooids. An example of this dimorphism, he thinks, is

¹ *Loc. cit.*, p. 356.