

Family IV. ROSSELLIDÆ.

Subfamily 1. Rosselline.

- (1) *Lanuginella*, Osc. Schmidt.
- (2) *Polylophus*, n.
- (3) *Rossella*, Carter.
- (4) *Acanthascus*, n.
- (5) *Bathydorus*, n.

Subfamily 2. Crateromorphine.

- (1) *Crateromorpha*, Gray.
- (2) *Rhabdocalypus*, n.

Subfamily 3. Aulochonine.

- (1) *Aulochonen*, n.

APPENDIX.

Hyalostylus, n.

Alocalyx, n.

Order II. DICTYONINA, Zittel.

Suborder 1. UNCINATARIA.

Tribe I. Clavularia.

Family I. FARREIDÆ.

- (1) *Farrea*, Bowerbank.

Tribe II. Scopularia.

Family I. EURETIDÆ.

- (1) *Eurete*, Semper.
- (2) *Periphragella*, Marshall.
- (3) *Lefroyella*, Wyv. Thoms.

Family II. MELITIONIDÆ.

- (1) *Aphrocallistes*, Gray.
- (2) *Melittiaulus*, n.

Family III. CHONELASMATIDÆ.

- (1) *Chonelasma*, n.

Family IV. VOLVULINIDÆ.

- (1) *Volvulina*, Osc. Schmidt.
- (2) *Tretodictyum*, n.
- (3) *Fieldingia*, Sav. Kent.

Family V. SCLEROTHAMNIDÆ.

- (1) *Sclerothamnus*, Marshall.

Suborder 2. INERMIA.

Family I. MYLIUSIDÆ.

- (1) *Myliusia*, Gray.

Family II. DACTYLOCALYCIDÆ.

- (1) *Dathylocalyx*, Gray.
- (2) *Scleroplegma*, Osc. Schmidt.
- ? (3) *Margaritella*, Osc. Schmidt.

Family III. EURYPLEGMATIDÆ.

- (1) *Euryplegma*, n.
- ? (2) *Joannella*, Osc. Schmidt.

Family IV. AULOCYSTIDÆ.

- (1) *Aulocystis*, n.
- (2) *Cystispongia*, Ræmer.

The Tetractinellida.—Professor W. J. Sollas, who is preparing a Report on the Tetractinellid Sponges collected by the Expedition, writes as follows:—"Although my investigation of the Tetractinellida of the Challenger Expedition is by no means yet complete, it is sufficiently advanced to show that considerable additions have been made to our knowledge of this group. The excellent state of preservation in which the spirit specimens have been brought home has afforded me an opportunity of ascertaining the anatomy and histology of most of the recognised genera of the group. This is especially fortunate in the case of the Lithistidæ, of the soft parts of which next to nothing was hitherto known. These sponges conform in all essential characters of the canal system to the complicated racemose type which occurs in the majority of sponges, and neither in the characters of the pores, subdermal cavities, nor of the flagellated chambers, offer anything markedly distinguishing the group from the non-cortical Choristid Tetractinellids.

"The Choristidæ have not only afforded rich material for working out the relations of the genera of the group, but furnish also some new forms of considerable interest on account of the reduction and other modifications presented by the Tetractinellid spicules characteristic of the order.

"It would be premature to discuss questions of distribution before the practical study