

## DESCRIPTION OF GENERA AND SPECIES.

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### Order **HEXACTINELLIDA**, O. SCHMIDT, *seu* **TRIAXONIA**.

Sponges with very loose soft tissue, in which the spicules are either isolated or united by a siliceous cement into a connected siliceous skeleton. The spicules belong to the triaxial type, or are readily derivable from it.

#### Suborder I. **LYSSACINA**, Zittel (Pls. I.-LXX.; Pl. CII.).

Hexactinellida in which the needles either remain always isolated, or are partly subsequently united in an irregular fashion, often forming strands bound together by siliceous cement, or ladder-like trabeculæ, by means of numerous synapticula.

#### Tribe I. **HEXASTEROPHORA**, F. E. Schulze (Pls. I.-XXVI.; Pls. LIII.-LXX.; Pl. CII.).

Hexasters are always found in the parenchyma. The chambers are clearly marked off from one another, and are thimble-shaped.

#### Family I. **EUPLECTELLIDÆ**, Gray (Pls. I.-XX.; Pl. LXX.).

Saccular or tubular Lyssacina, in which the inferior blind extremity is either rooted in the mud by means of a tuft of fibres, or fixed by a compact base on a firm substratum. The relatively thin lateral wall is in some genera perforated by round or irregular apertures or gaps, more or less regularly arranged, while in others it is non-perforated. The transversely truncated or dome-like upper end is generally (everywhere?) covered by a perforated sieve-plate, and is bordered by a wreath of freely projecting marginal spicules (marginalia), or by a cuff-like fringe. The outer surface of the lateral wall—apart from the gaps—is either uniformly smooth, or exhibits ridge-like elevations; sometimes it is richly furnished with radially projecting spicules. On the inner surface there may be observed—apart again from the gaps—furrow-like grooves in more or less regular arrangement.

The parts of the skeleton are either entirely isolated, or partly united in an irregular