

## Order II. LITHISTIDA, O. Schmidt.

Tetractinellida provided with a consistent skeleton by the zygois of modified spicules or desmas.

## Suborder I. HOPLOPHORA.

Lithistida provided with special ectosomal spicules, and usually with some form of microsclere.

## Demus I. TRIÆNOSA.

Hoplophora in which the ectosomal spicules are some form of triæne, and in which microscleres (spirasters, amphiasters, or microrabds) are invariably present.

## Family I. TETRACLADIDÆ (Zittel).

Triænosa in which the desma is tetracrepid.

Genus 1. *Theonella*, Gray.

Tetracladidæ with a large single oscule, the external opening of an axial cloaca, or with numerous oscules dispersed on the interior surface of a cup-shaped sponge; pores in sieves, generally distributed over the exterior. The ectosomal megasclere is a phyllotriæne; discotriænes are absent. The microsclere is a microstrongyle.

*Theonella swinhoei*, Gray (Pls. XXIX., XXX.).

*Theonella swinhoei*, Gray, Proc. Zool. Soc. Lond., pp. 565, 566, woodcut, 1868.

” ” Carter, Ann. and Mag. Nat. Hist., ser. 4, vol. xii. p. 437, 1873.

” ” Zittel, Abhandl. d. k. baier. Akad. d. Wiss., Bd. i. pp. 103, 151, pl. i. fig. 9, 1878.

” ” Carter, Ann. and Mag. Nat. Hist., ser. 5, vol. vi. p. 147, 1884.

*Sponge* (Pl. XXIX. figs. 1-3).—Simple, erect, attached, more or less cylindrical, with a smooth surface, raised into unequal irregular bosses and high, sinuous, longitudinal and transverse, anastomosing ridges. The single circular oscule is situated in the centre of the rounded summit, surrounded by a smooth wrinkled membrane. It leads into a cylindrical cloaca, which extends axially through nearly the whole length of the sponge, and is lined by a network of collenchyma, limited by a smooth shining concentrically ridged or plicated membrane, fenestrated by a multitude of small oval apertures, and perforated by larger openings, which lead into the main branches of the cloaca.