

Family 9. CÆLOPTYCHIDÆ, Zittel.

Sponge body umbel-like, stalked. Wall thin, deeply folded; the central cavity divided into radial chambers. Upper surface shallow or deepened, entirely enveloped by a continuous dermal layer which usually consists of variable coarse and finely porous strands. Canalicular ostia only on the under side of the umbel, on the backs of the folds, sometimes also on the stalk. Lattice framework with large, regular, cubical meshes. The intersection nodes of the amalgamated six-rayed spicules octahedral, perforated. The radii of the six-rayed spicules bear thorny and root-like protuberances.

Example.—The single fossil genus *Cæloptychium*.

Suborder II. LYSSACINA.

The whole skeleton consisting of spicules which are bound together only by sarcode (exceptionally also by a smooth siliceous substance in irregular ways). Flesh spicules usually present in rich abundance and much differentiated.

Family 1. MONACIDÆ, Marshall.

Whole sponge body composed of similar spicules.

Examples.—*Acanthospongia*, Salt, and *Stauractinella*, Zittel.

Family 2. PLEIONACIDÆ, Marshall.

Main portion of the skeleton composed of six-rayed spicules and also of forks and rosettes.

Examples.—The living genera *Asconema*, Kent, and *Lanuginella*, Schmidt.

Family 3. POLLACIDÆ, Marshall.

Form of skeleton and flesh spicules very variable. Special dermal skeleton and inner lining of the gastral cavities present. Base usually forming a root-tuft of long siliceous spicules.

Examples.—The living genera *Holtenia*, Schmidt, *Pheronema*, Leidy, *Crateromorpha*, Gray, *Rossella*, Carter, *Sympagella*, Schmidt, *Placodictyon*, Schmidt, *Euplectella*, Owen, *Habrodictyum*, Wyv. Thomson, *Labaria*, Gray, *Semperella*, Marshall (*Meyerina*, Gray), *Hyalonema* (*Carteria*), Gray, and ?*Acestra*, Roem, from the Silurian.

In the report which Marshall and Meyer¹ made in 1877 on the Philippine Hexac-

¹ *Mittheilungen aus d. Königl. Zool. Museum in Dresden*, 1877, p. 263.