

Subclass 1. Tetractinellida

1. Skeleton of siliceous tetraxon (four-rayed) spicules. (These spicules are absent in Myxospongida).
2. Spongin is absent.

Subclass 2. Monaxonida

1. Skeleton of siliceous monaxon spicules.
2. Spongin fibre may be present or absent.
3. Micro-and megascleres may be present or absent.

Subclass 3. Keratosa

1. Spicules absent.
2. Skeleton contains horny spongin fibres.
3. Includes horny sponges.

Examples. *Euspongia* (bath sponge), *Hippospongia* (horse sponge), *Hircinia* (heron sponge).

Subclass 1. Tetractinellida

It is divided into following **three** orders.

Order 1. Myxospongida

1. Simple structure.
2. Spicules absent.

Examples. *Oscarella*, *Halisarca*.

Order 2. Carnosa (or Homosclerophora)

1. Simple structure.
2. Microscleres (tissue spicules) and megascleres (skeletal spicule) are similar in shape and size.

Examples. *Alina*, *Plankina*, *Chondrilla*.

Order 3. Choristida

1. Microscleres and megascleres differ in size and shape.

Examples. *Geodia*, *Thenea*, *Stelletta*.

Subclass 2. Monaxonida

It is divided into following **four** orders.

Order 1. Hadromerida

1. Microscleres absent or aster-shaped.
2. Monaxon megascleres are in the form of tylostyles (in which both ends of the spicule are knob-like).
3. Spongin absent.

Examples. *Cliona* (boring sponge), *Tethya*, *Poterion* (Neptune's goblet), *Ephyra* (a freshwater sponge).

Order 2. Halichondrida

1. Microscleres absent.
2. Very little spongin fibre.
3. Monaxon megascleres are often of two types, i.e., monactines and diactines.

Example. *Halichondria* (crumb of bread sponge).

Order 3. Poecilosclerida

1. Microscleres include **sigmas** (C or S-shaped), **toxas** (bowl-shaped) and **chelas** (with recurved hooks or plates).
2. Monaxon megascleres are of two types, one type is found in the ectoderm and another type in the choanocyte layer.

Example. *Cladorhiza*.

Order 4. Haplosclerida

1. Monaxon megascleres of only one kind (diactinal or two-rayed).
2. Microscleres absent.
3. Spongin fibres present.

Examples. *Chalina* (mermaid's gloves or deadman's finger), *Spongilla*.