

**Class: Actinozoa** (Anthozoa) (**Antho = Flower, zoa = Animals**); **Characteristics:**

1. They freely live sessile attached to substratum either solitary or in colonies in marine water.
2. Body is diploblastic; cylindrical consisted only of **Colony** (Hydroid) and **Medusa** stage is not found. Colony is a sessile hydroid. **Mouth** is slit-like in the center of oral disc bearing hollow tentacles arranged in a circle; the entrance of enteron is called **stomodaeum** (pharynx) has ciliated groove (**Siphonoglyph**) that drives water current into the enteron that is subdivided by several endodermal Septa (**Mesenteries**).
3. They reproduce asexually by **budding** and sexually by **gametes formation**. Fertilization is external. Sexes are separated (**dioecious**). Gonads are endodermal.
4. Lifecycle includes **Hydroid** stage **only** and the medusa is absent.

**This class is divided into two orders:**

- A. Alcyonaria (Octoradiata)
- B. Zoantharia (Hexaradiata)

**Kingdom: Animalia****Subking.: Metazoa****Phylum: Coelenterata****3. Class: Actinozoa****A. Order: Alcyonaria (Octoradiata);****Family: Alcyoniidae****Genus: Alcyonium sp.:**

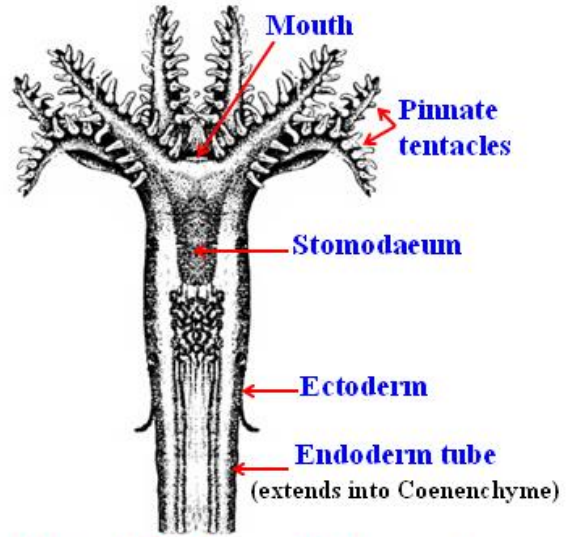
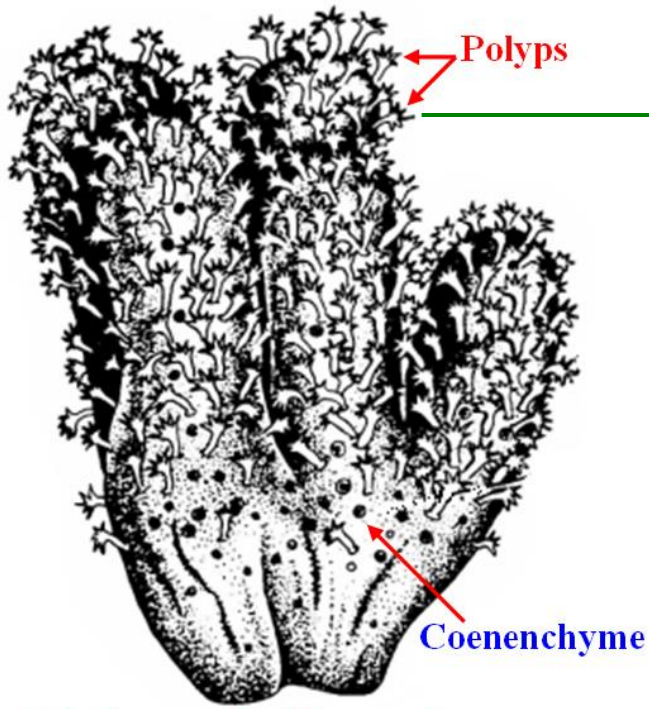
It is found in colony; the colony is formed from a lobed fleshy mass (coenenchyme) mesoglea on which the polyps are attached. An isolated polyp is characterized by:

- 1) 8 pinnate tentacles.
- 2) 8 septa (mesenteries).
- 3) **One** siphonoglyph in the stomodaeum.
- 4) Muscle bands on the septa facing the siphonoglyph. It forms **skeleton**.

**B. Order: Zoantharia (Hexaradiata)****Family: Metriidae****Genus: Metridium sp. (Sea anemone):**

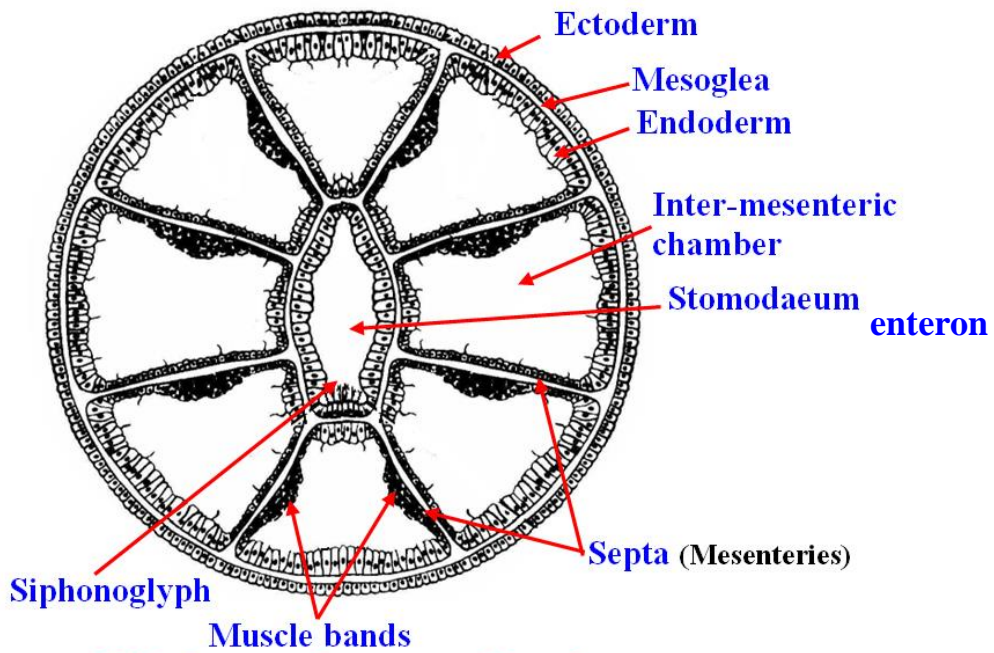
Metridium sp. is found solitary with an oral disc; a basal disc; & is characterized by:

- 1) 6 simple tentacles, a multiple number of 6 or are indefinite in number.
- 2) 6 septa of 3 kinds (primary, secondary, tertiary septa).
- 3) **Two** siphonoglyph in the stomodaeum.
- 4) Muscle bands on the mesenteries facing each other. It doesn't form **skeleton**.



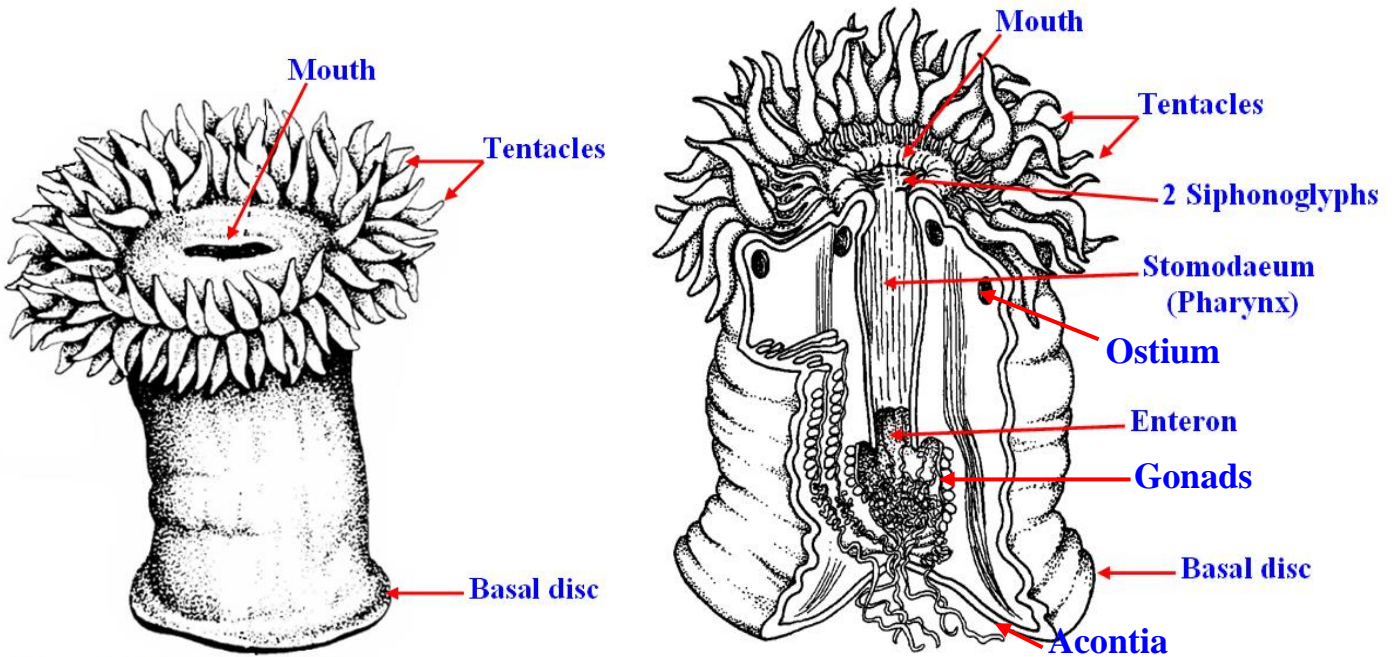
**Isolated Polyp of *Alcyonium* sp. , L.S.**

**Colony of *Alcyonium* sp.**

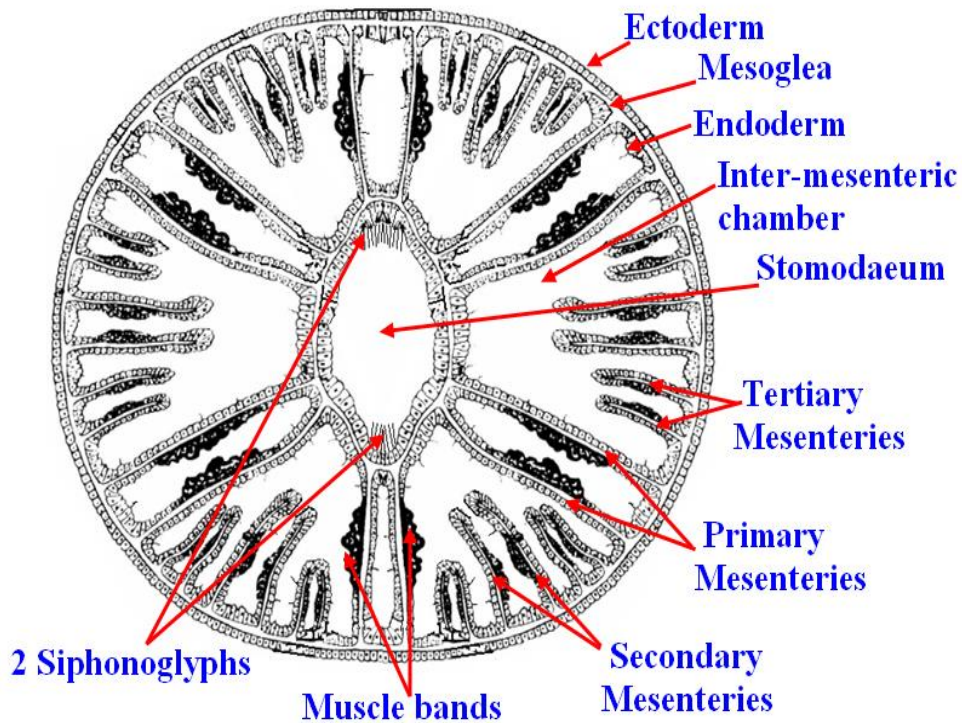


**CS through stomodaeal region of *Alcyonium* sp.**





**Metridium sp. (Sea anemone)    Metridium sp. (Sea anemone), L.S.**



**CS through stomodaeal region of  
*Metridium* sp. (Sea anemone)**