

## CORAL GROWTH AND REPRODUCTION



### Coral Polyps

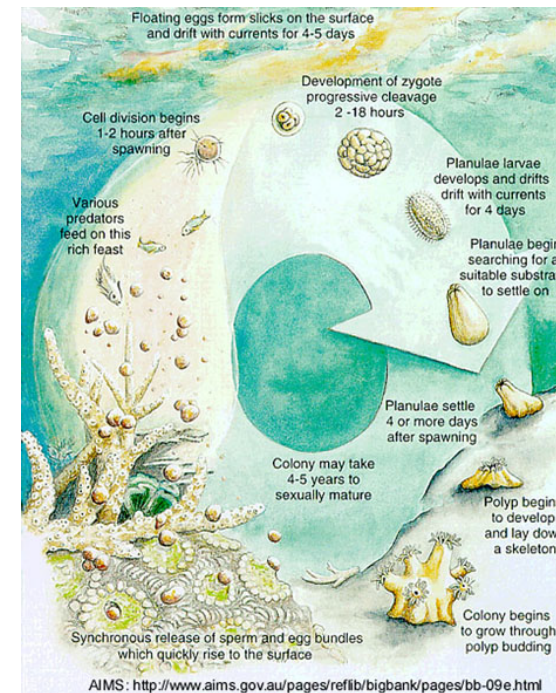
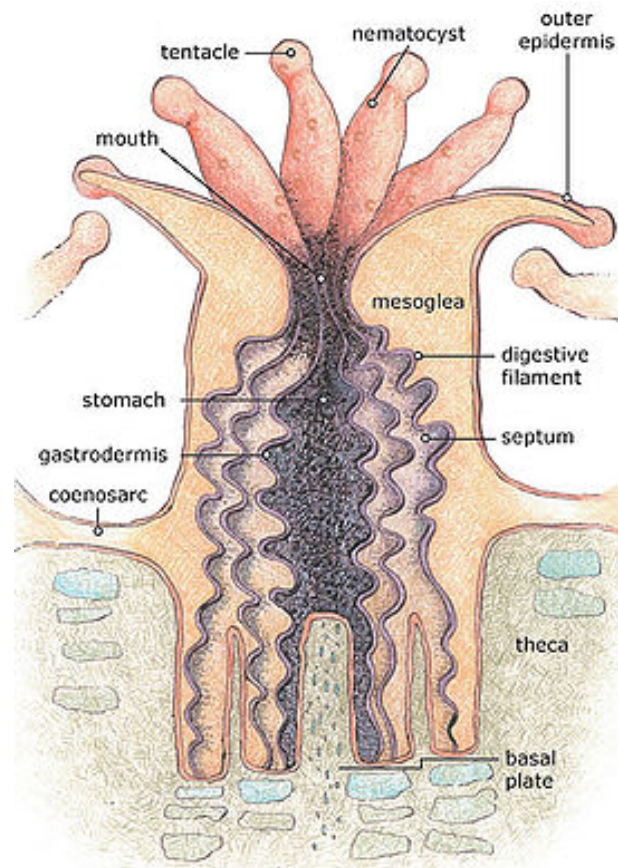
coral organisms are called polyps and range from 1-3mm in size. they are classified as anthozoans in the phylum Cnidaria, which are classified by very symmetrical bodies with an opening that serves as both mouth and anus. They are nestled in a calcic exoskeleton, which they grow as they digest food. Surrounding their opening are tentacles with venomous cells used to capture the prey from the water surrounding the coral growth. One food is captured it is brought through the mouth into the gastrovascular cavity to be digested. The waste from digestion is ejected out of the mouth.

### Types of Corals

Hard corals, also called "reef builders" or hexacorals because of their six tentacles and the hard exo-skeleton they secrete. Soft corals also called octocorals because they have eight tentacles. they lack the hard exoskeleton of hard corals, so their tissue structure can appear rigid, and are often supported by calic bodies called spicules.

### Zooxanthellae Symbiosis

Hermatypic corals host an algae called zooxanthellae in their gastrodermal cells. The coral protects the zooxanthellae from being eaten by herbivorous grazers, while the zooxanthellae algae produce energy which is shared with the coral host.

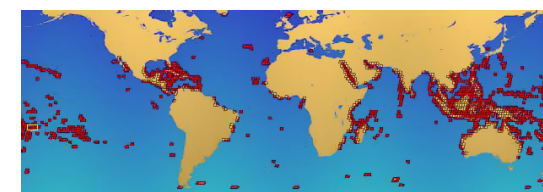


### Coral Gender

Corals grow in groups called colonies. Many species are hermaphrodites and can produce eggs and sperm, and others often exist in separate male and female colonies.

### Coral Reproduction

Polyps can reproduce sexually or asexually. In asexual reproduction coral polyps split from one polyp into two polyps. Sexual reproduction can happen by either brooding or spawning. When brooding occurs female coral take in the sperm and fertilize the egg internally, releasing the planula (fertilized egg) through the mouth. In spawning the male and female corals release their eggs and sperm and the fertilization happens in the water outside the coral polyps. After the planulae form, they drift on the current until they settle on new bare rocks for colonizing. Spawning can happen once or twice a year and the planulae can take months to mature.



Coral Location- the map on the left shows the locations of coral reefs on the earth, demonstrating how they have spread through spawning to cover much of the world's oceans.