

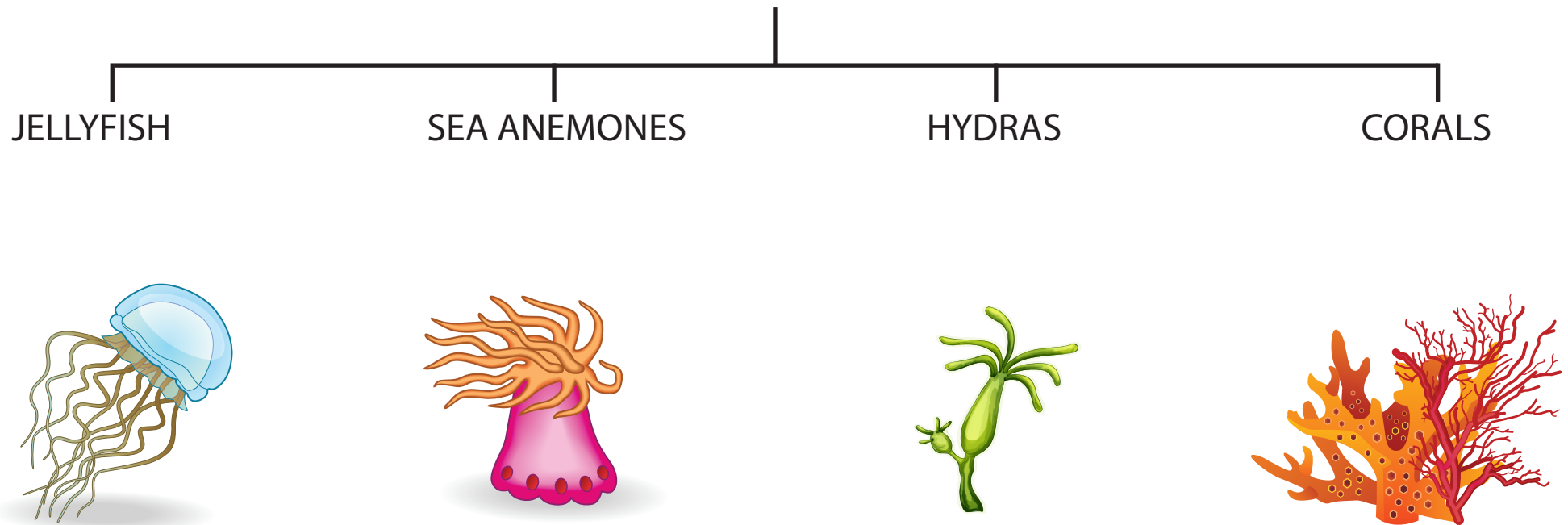
# Cnidaria

## Discussion Questions:

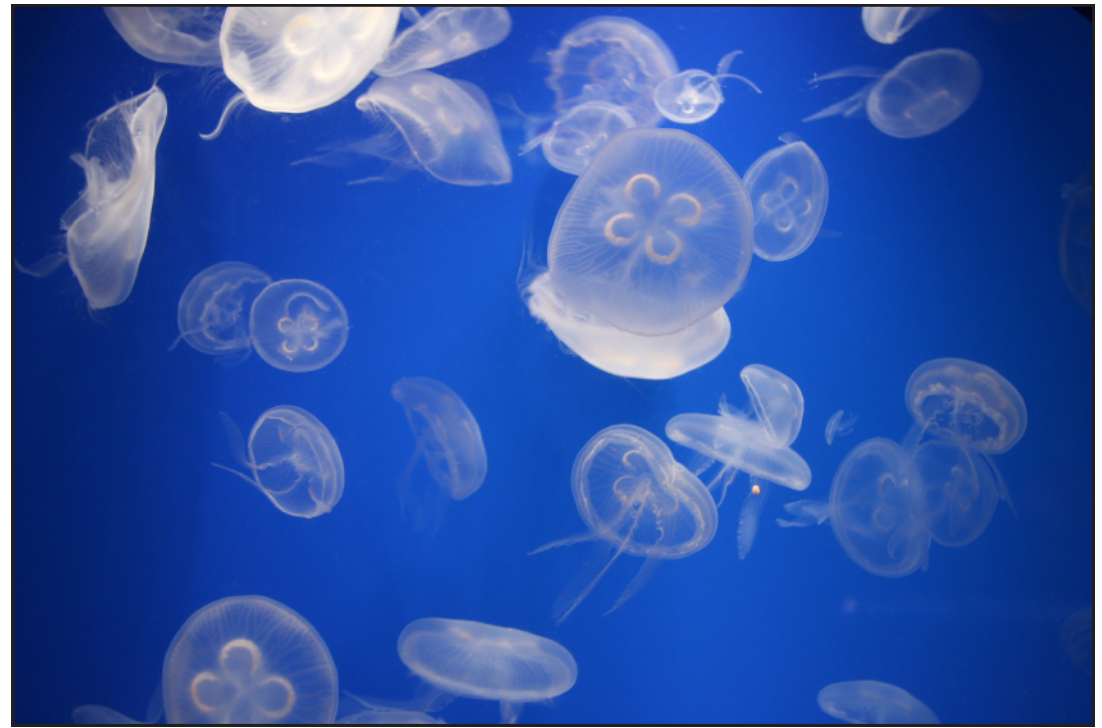
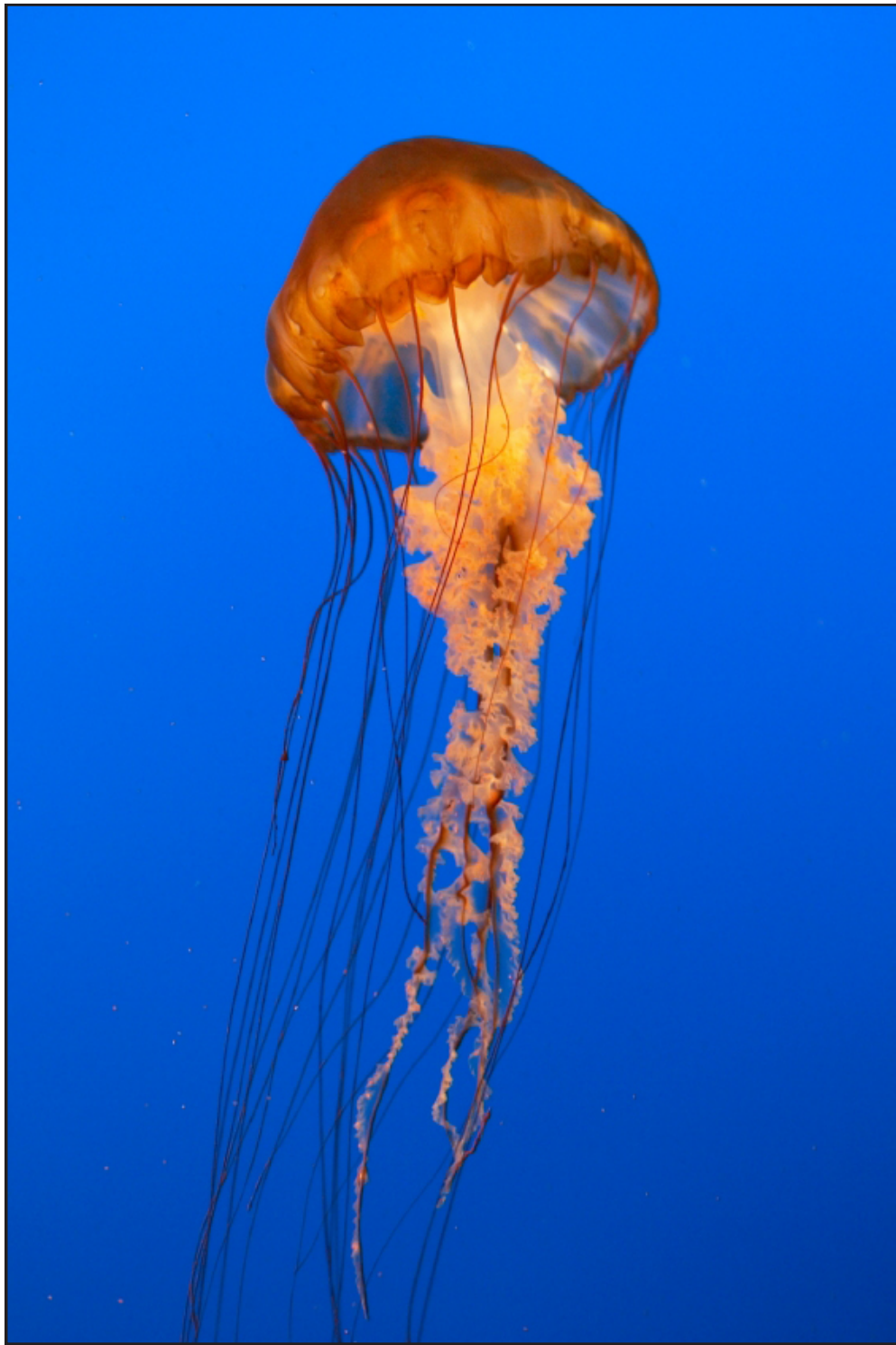
- 1) What features do the cnidaria have in common?
- 2) What types of environments do they inhabit?
- 3) How do cnidarians catch their prey?
- 4) Which jellyfish and stingers are dangerous for humans?
- 5) How do coral reefs and atolls form?
- 6) What human activities are affecting our coral reefs?

# CNIDARIA

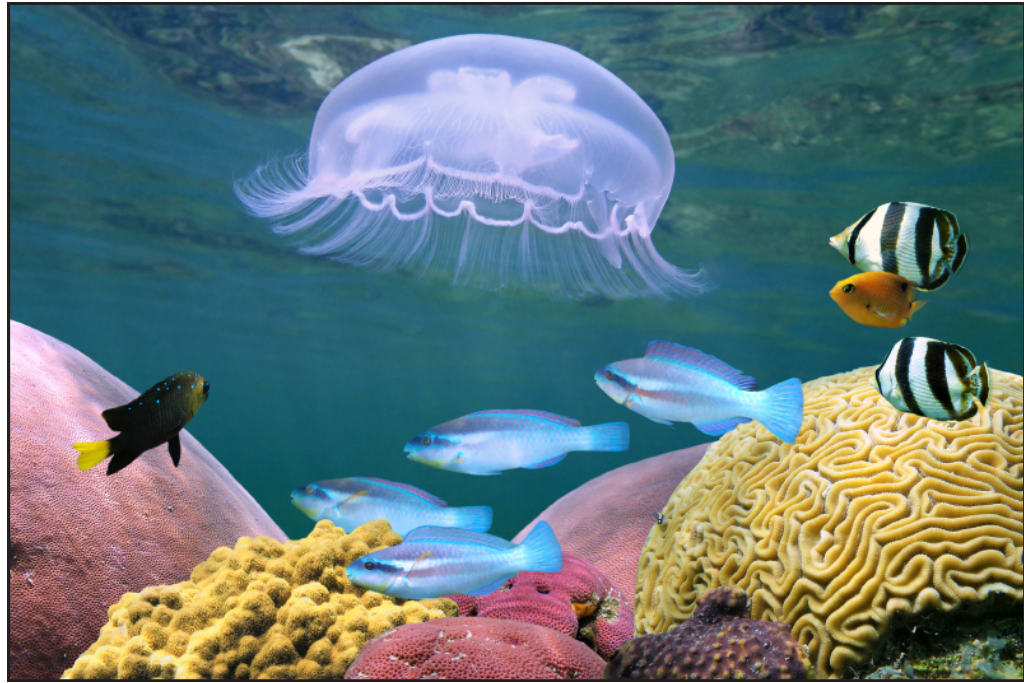
- Have a soft body.
- Have tentacles.
- Have two forms: medusa (bell shaped) and polyp (tube shaped).
- Have a mouth opening surrounded by tentacles.
- Have cnidocysts that fire tubes containing toxins to paralyse prey.



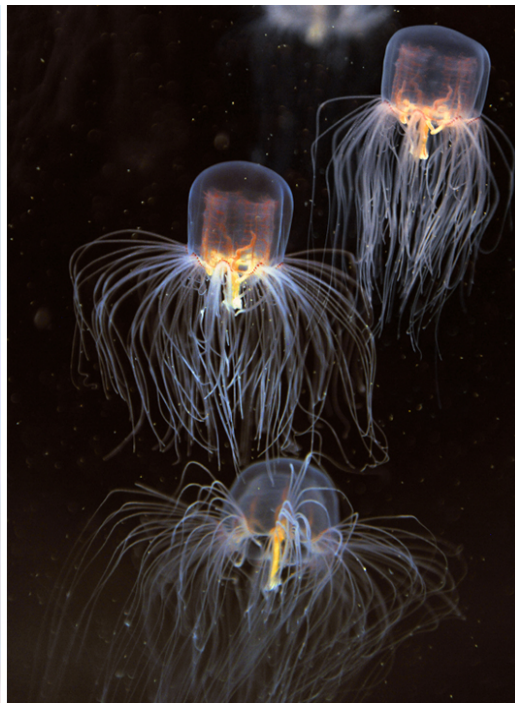






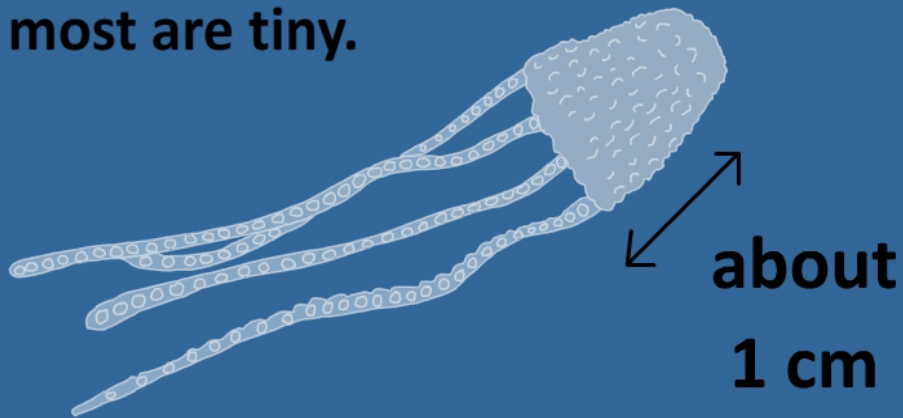






## Irukandji Jellyfish

- \* **at least 6 different species**
- \* **most are tiny.**



There are a number of different species of dangerous jellyfish that inhabit the warm tropical waters of the world. Many are found off the northern coasts of Queensland and Western Australia.

People are at greatest risk from dangerous marine stingers during the warmer summer months, but stingers can move into coastal waters at other times of the year.

Irukandji jellyfish are tiny and the most dangerous of the stingers. Severe symptoms appear about 30 minutes after a sting. These symptoms could cause heart failure in some cases.

Stinger nets are set up around many northern Australian beaches but these are only effective in filtering out larger jellyfish. People are advised to wear lycra 'stinger suits' that cover the whole body while swimming in areas that could be affected by irukandji.



# Portuguese Man o War (Known as 'Bluebottles' in Australia)

The body of the Portuguese Man o War floats on the surface of the ocean. Its long tentacles that drift in the water contain stinging cells called cnidocysts (also known as nemotocysts). As with all cnidaria, these cnidocysts fire out toxins that are used to paralyse their prey.

When Portuguese Man o War float in with the tide they can brush against swimmers at the beach. The sting can be extremely painful, leaving a rash where the tentacles barbs have clung to the skin.

The best treatment for stings is to pick off the tentacles, wash the affected area with seawater, then immerse (or shower) in very hot water for 20 minutes to help reduce pain. People should seek medical help if stings occur on the neck or face.







# Hydras

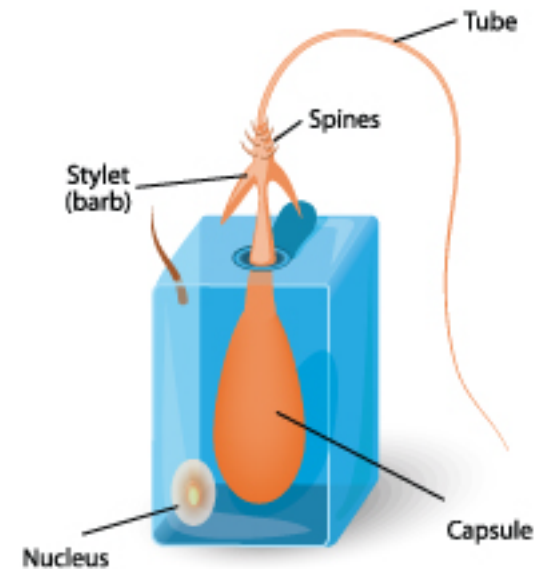
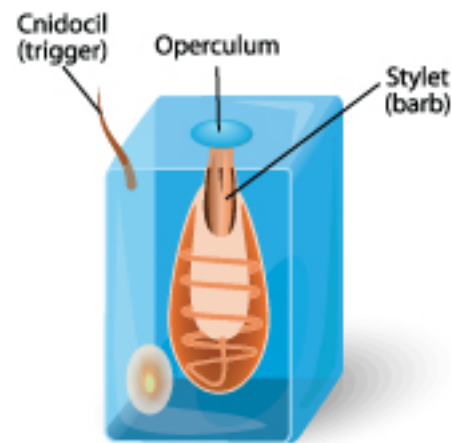
Hydras are small fresh water animals that live in ponds and lakes. They can be found living in weedy areas and are best seen under a microscope.

Hydras have a tubular body and a sticky foot that they use to attach to weeds and rocks. Tentacles branch out around a central mouth. These tentacles are covered in stinging cells called cnidocytes. (See diagram below) When their prey brush past the tentacles, toxic threads shoot out of each cnidocyte to paralyse the prey.

Hydras can pull their tentacles into their tube like bodies when in danger.



## Cnidocytes



Stingers are triggered when hairs detect movement





## Sea Pens

Sea pens are named after old fashioned quill pens which were made from feathers. They do look like feather quills gently waving in the ocean current!

The sea pen is made up of a colony of organisms. Each organism takes on a specific role in the colony. Some develop tentacles and hunt for plankton while others form the rigid root and stem of the sea pen.

The bulbous root end of the colony generally stays deep in the sand. However, if necessary, the sea pen is able to move itself to a more desirable location where food is abundant.





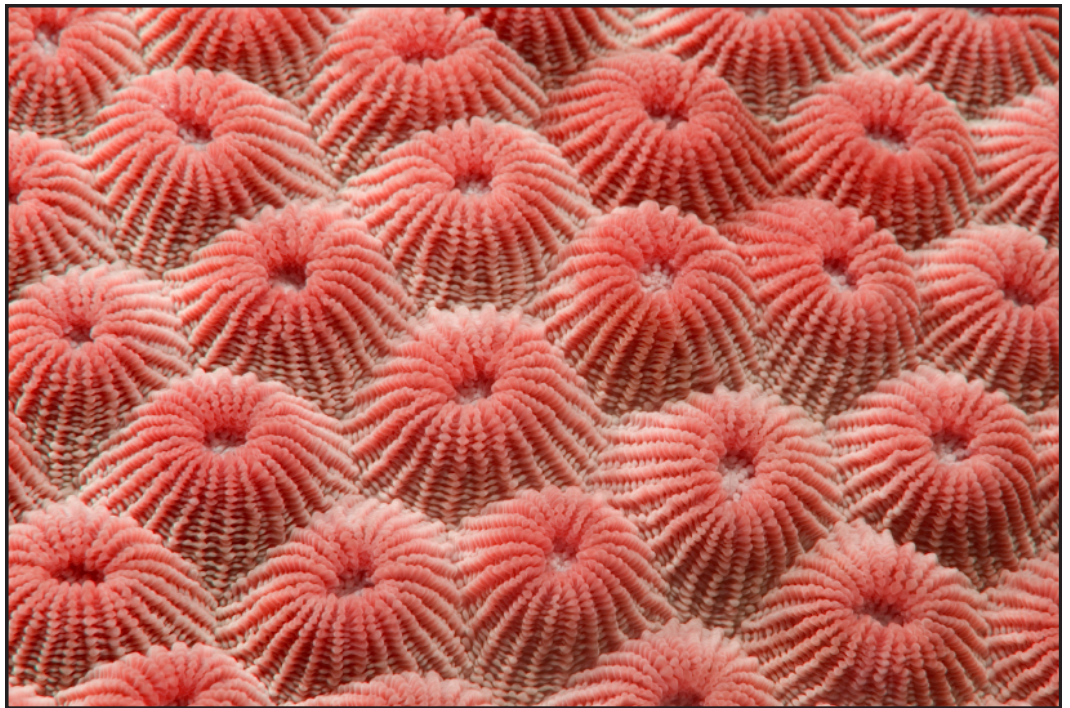
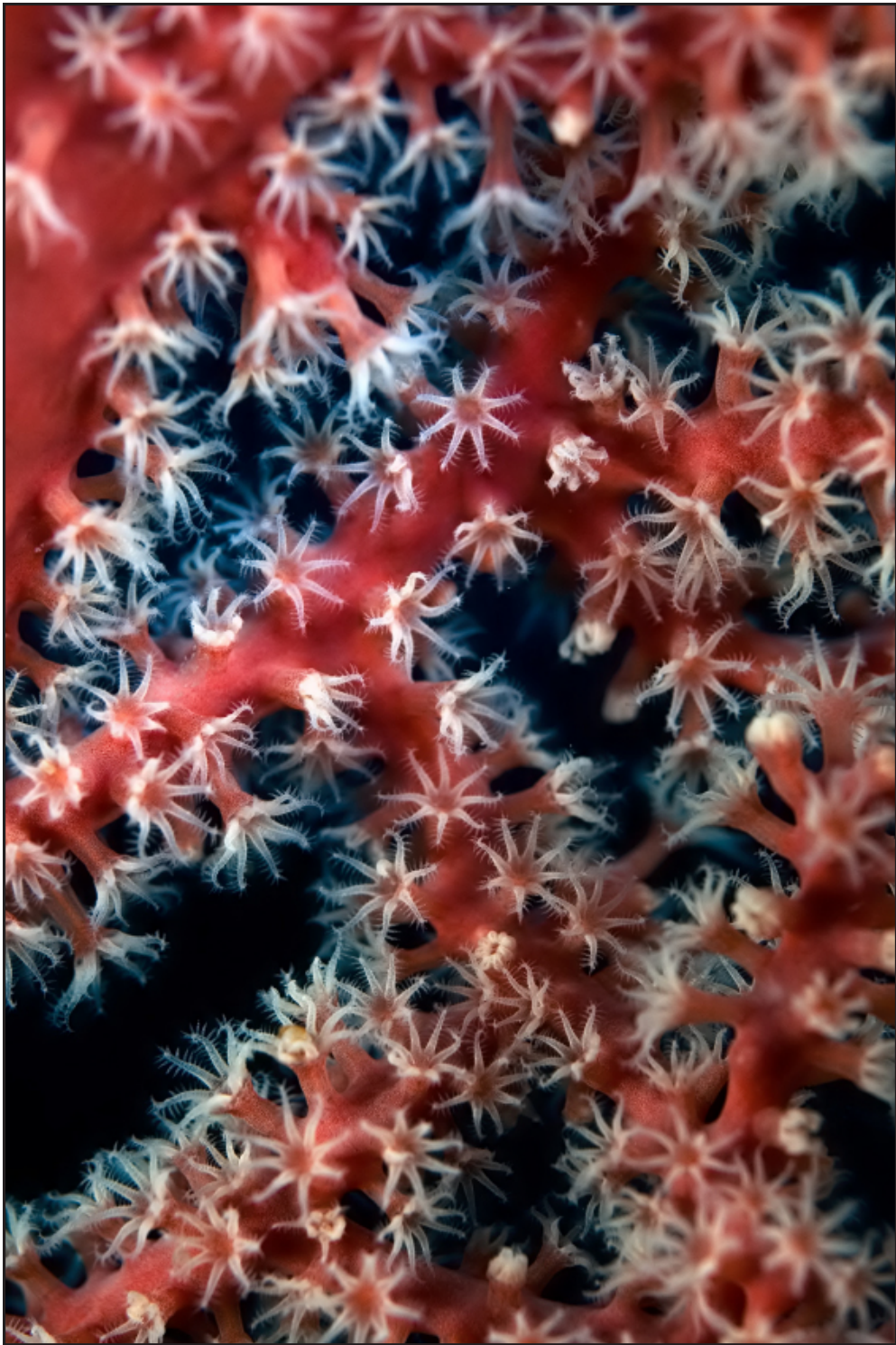
## Sea Anemones

Sea anemones attach to the rocks on the sea bed and reefs in tropical waters. They have a central mouth with many tentacles surrounding it. Their tentacles contain stingers that are used for protection and for hunting prey.

Clown fish are immune to the sting of the anemone that they coexist with. The anemone sweeps through the clown fish's tentacles bringing in oxygen and eating parasites and the anemone provides the clown fish with food scraps and a safe haven from predators.

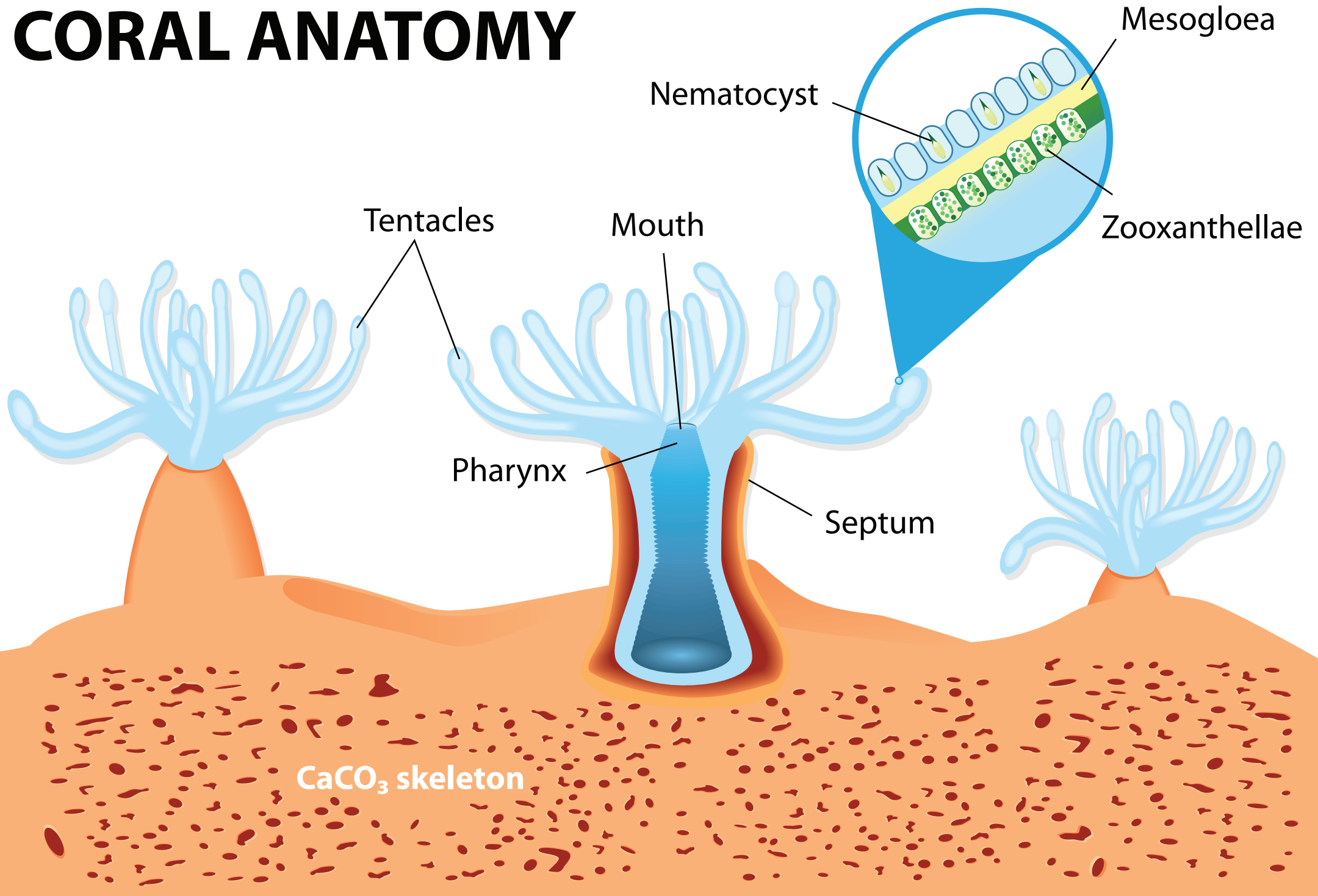








# CORAL ANATOMY







## Coral Reefs and Coral Atolls

Coral polyps are very small creatures that live together in colonies. They secrete a substance called calcium carbonate that hardens to form their colourful homes. Over time this hard substance builds up to form the reefs that we see in tropical waters throughout the globe. When coral polyps die their reef homes turn white.

When a reef develops into a full circle in the ocean, a coral atoll is formed. Sometimes these can develop into an island that supports plant and animal life. The island is made up of crushed coral skeletons.

The effects of pollution, global warming and rising sea levels are affecting our coral reefs.

