MARINE SPONGES

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SPONGES

- Though extremely plant-like in appearance, sponges are actually one of the most primitive animals in the sea.
- They belong to a group called porifera.
- Most of us are familiar with the dried colorless varieties that populate the kitchens and bathrooms of the world.
- But in the ocean, live sponges can be found in an infinite variety of colors and shapes. Most of them are relatively small, but some varieties can grow to over 6 feet in diameter.

SPONGES

- Sponges differ from all other marine invertebrates in that they have no true tissues or organs.
- Their structure is composed of simple aggregations of cells. The name porifera means pore bearer.
- The tissue of sponges encloses a vast network of chambers and canals that connect to the open pores on their surface.
- Sponges feed by drawing a current of water in through their pores, filtering out the nutrients, and then ejecting it out through an opening.
- Many sponges on the reef resemble some of the corals in shape and color, but upon closer inspection the difference is apparent.

SPONGES

Tube Sponge

(*Callyspongia vaginalis*)

- The tube sponge is one of the most common varieties of sponge to be found on the reef.
- It is distinguished by its long tube-shaped growths, and ranges in color from purple to blue, gray, and gray-green.
- Filtered water is ejected through the large openings on the ends.
- This is one of the few reef invertebrates that is blue in color.

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Vase Sponge (Ircinia campana)

- The vase sponge is a common species found in the Caribbean off the eastern coast of Florida.
- It is characterized by a large bell shape with a deep central cavity.
- This sponge grows up to 2 feet wide and 3 feet high.
- It ranges in color from purple to red and brown, and is found attached to rocks near the sandy bottoms.

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Yellow Sponge

(Cleona celata)

- This small yellow sponge species is commonly found throughout the Pacific coastal waters of the United States.
- It is found growing in small colonies, and ranges in color from orange to bright yellow.
- This sponge and can be found encrusting rocks on the reef face.

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Red Tree Sponge

(Haliclona compressa)

- This bright red sponge species is very common throughout the Caribbean Sea.
- This sponge usually grows to a height of about 8 inches.
- This is one species that is easy to keep and can do relatively well in a home aquarium environment.
- These sponges require a moderate water flow and dim light to do well.

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Common Sea Squirt

(Didemnum molle)

- This species of sea squirt is very common on the reef, and is usually found in deep water.
- It can be found encrusting the rocks in large colonies.
- This squirt's leathery bag-like body has a white and gray or brown spotted exterior with a bright green interior.
- It is sometimes introduced into the aquarium on live rock.

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Painted Tunicate
(Clavelina picta)

- The tunicates are very similar to sea squirts.
- They take water in through a large opening where nutrients are filtered out.
- The water is then expelled through another opening.
- Painted tunicates are about 3/4 inch long and commonly grow in colonies.
- They are found in translucent red, purple, and yellow colors.

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Glass sponge *(Euplectella)*

Venus flower basket sponge live anchored in deep-water sediments and are characterized by a lace-like skeleton of fused siliceous spicules.

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Encrusting sponge

Form thin, sometimes brightly coloured growths on rocks or dead coral

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Boring sponge (*Cliona)*

Actively bore thin chanels through calcium carbonate, such as oyster shells and corals.

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Coralline sponges
(*Ceratoporella*)

A calcium carbonate skeleton forms beneath the body of the sponge, which contain siliceous spicules and spongin

IMPORTANCE OF MARINE SPONGES

- Sponges are a rich source of natural products
- Some act as antibiotics.
- Some have anti-inflammatory or painkilling properties
- Sea squirt (*Tridemnum*) has antibiotic and antifungal properties.
- Bath sponges (*Spongia*) harvested in Gulf of Mexico and eastern Mediterranean for commercial scale.