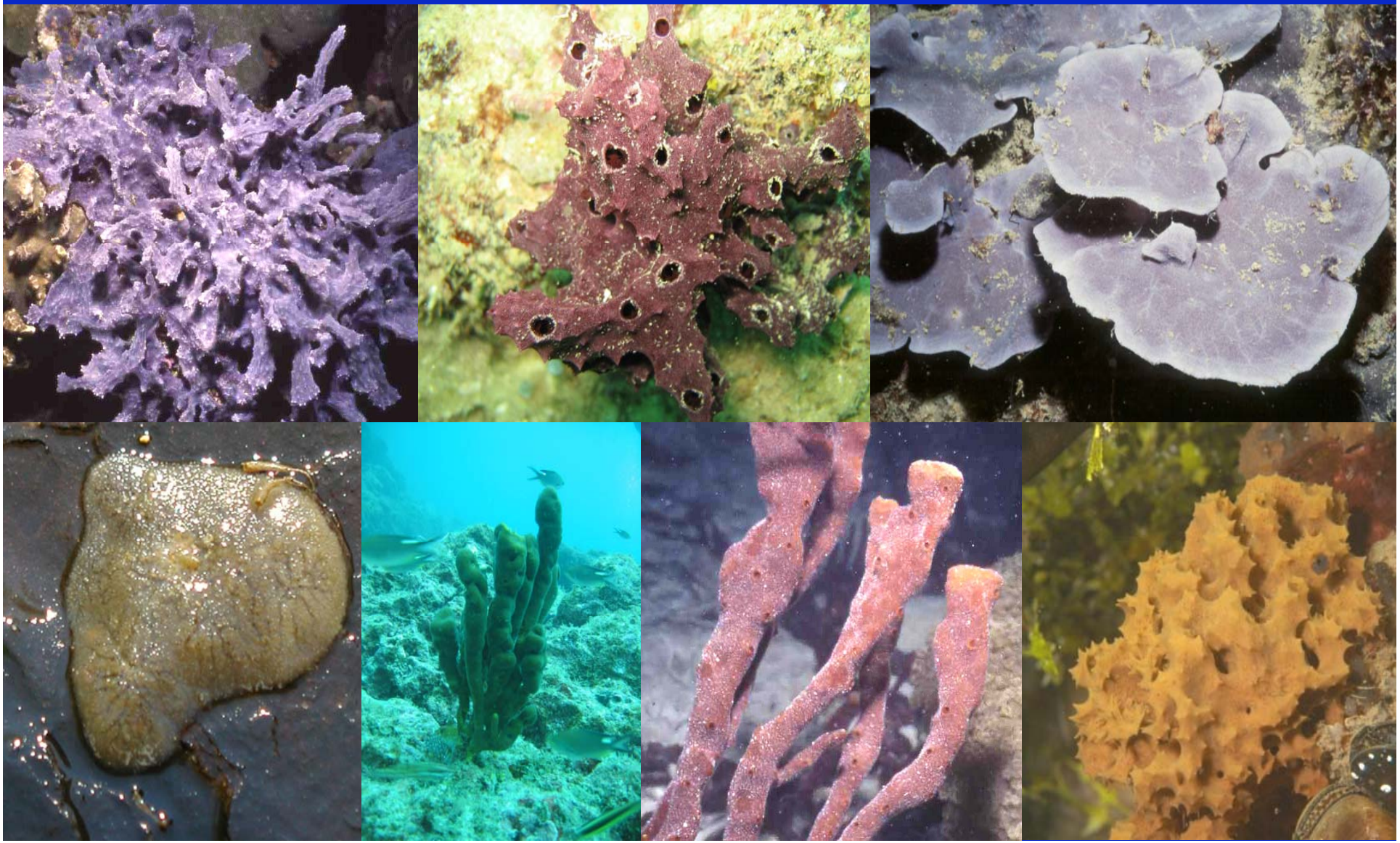
Sponges



Sponges Are Diverse

There are 7,000 named species of sponges.

Sponge biologists estimate that nearly 15,000 species of sponges actually exist.

There are probably 8,000 species yet to be discovered and described.

We have already found 6 new species of sponges in Bocas del Toro.

Sponges Are Useful

Winslow Homer – Sponge Fishing, Nassau: 1885

Historically, sponges were used by Roman soldiers to drink and to pad their armor.

Today, over 60,000 lbs of sponges are harvested annually in Florida for the bath industry.

The species *Spongia pertusa,* found in Bocas del Toro, are used to make bath sponges.

Sponge package photo from: www.kidslandusa.com

Sponges Clean the Oceans

Sponges can trap 90 percent of all bacteria in the water they filter.

Sponges can pump 10,000 times their own size (volume) in water in one day.

A sponge the size of a gallon milk container could pump and clean enough water to fill a residential swimming pool in one day.

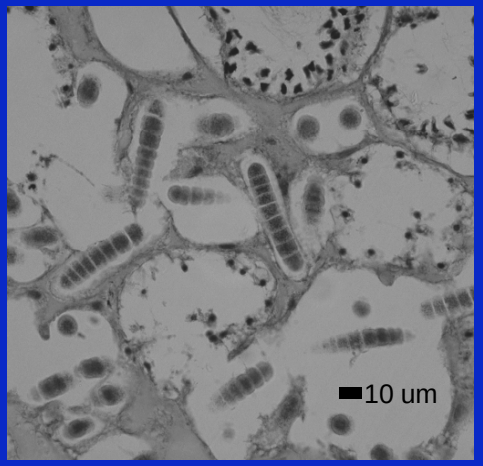
In the Caribbean Sea, sponges might be able to filter all of the water in one day.

Some Sponges Act Like Plants

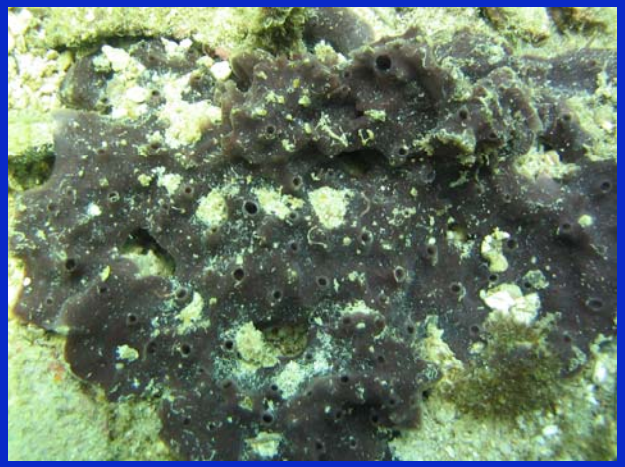
Algae living inside some sponges provide sugars to their host sponge.

Without sunlight, these sponges would die.

We have described two new species of photosynthetic sponges from Bocas del Toro.



Symbiotic blue-green algae

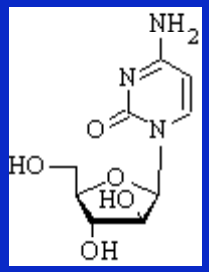


Xestospongia bocatorensis

Haliclona (Soestella) walentinae

Sponges Help Fight Cancer

Tectitethya keyensis
at Bocas del Toro



Sponges use chemicals to prevent other sponges from growing near them.

These chemicals can prevent cancer cells from growing.

One of the first drugs for treating cancer, cytosine arabinoside, was isolated from the sponge *Tectitethya crypta*.

This drug is used today in chemotherapy to treat leukemia.

Other Sponge Facts

Within a single sponge, it is possible to find 16,000 other animals. Tiny shrimps and amphipods are particularly common in sponges.

Some sponges actually kill corals and destroy their skeletons.

Sponge Biologists are Needed

We are training a new generation of sponge biologists at Bocas del Toro.