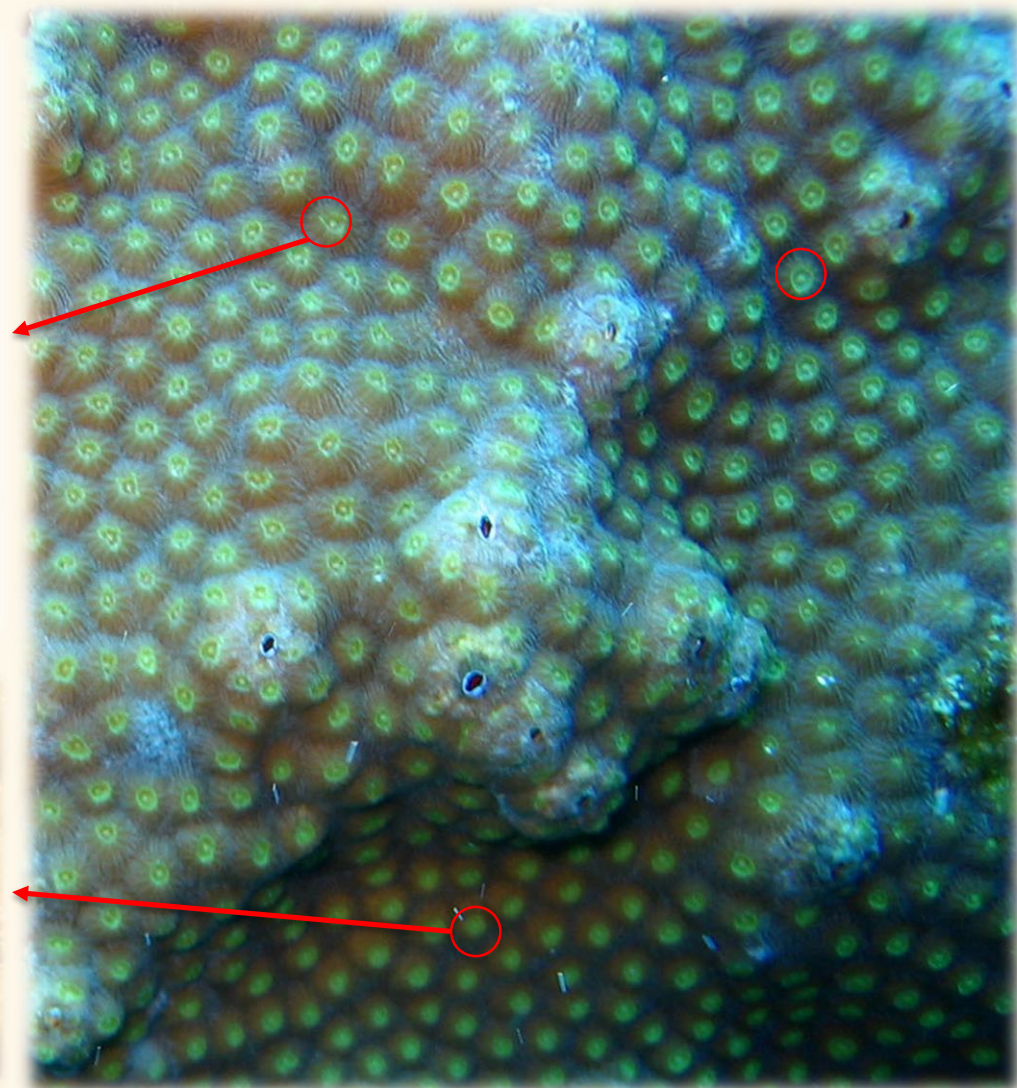
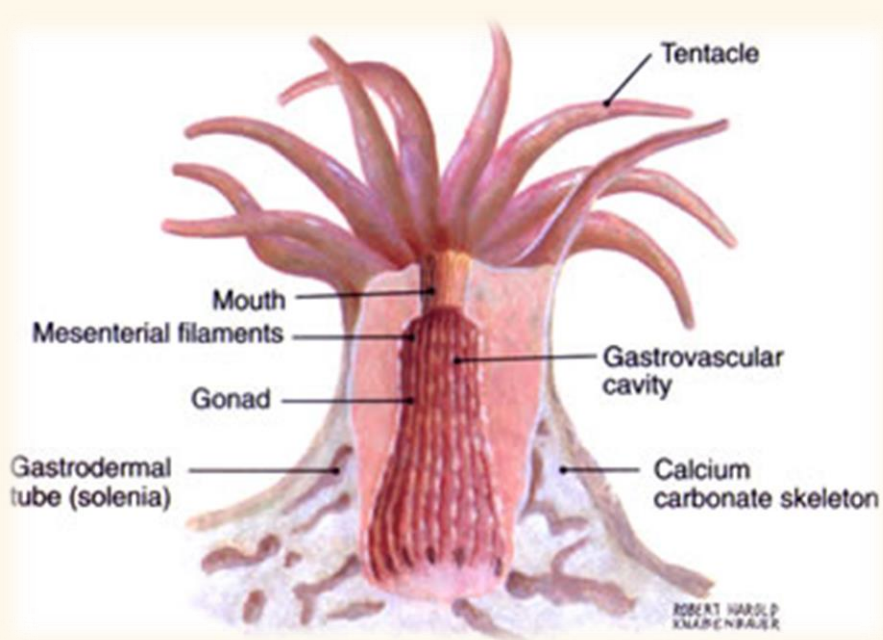




GILI
LANKANFUSHI
MALDIVES

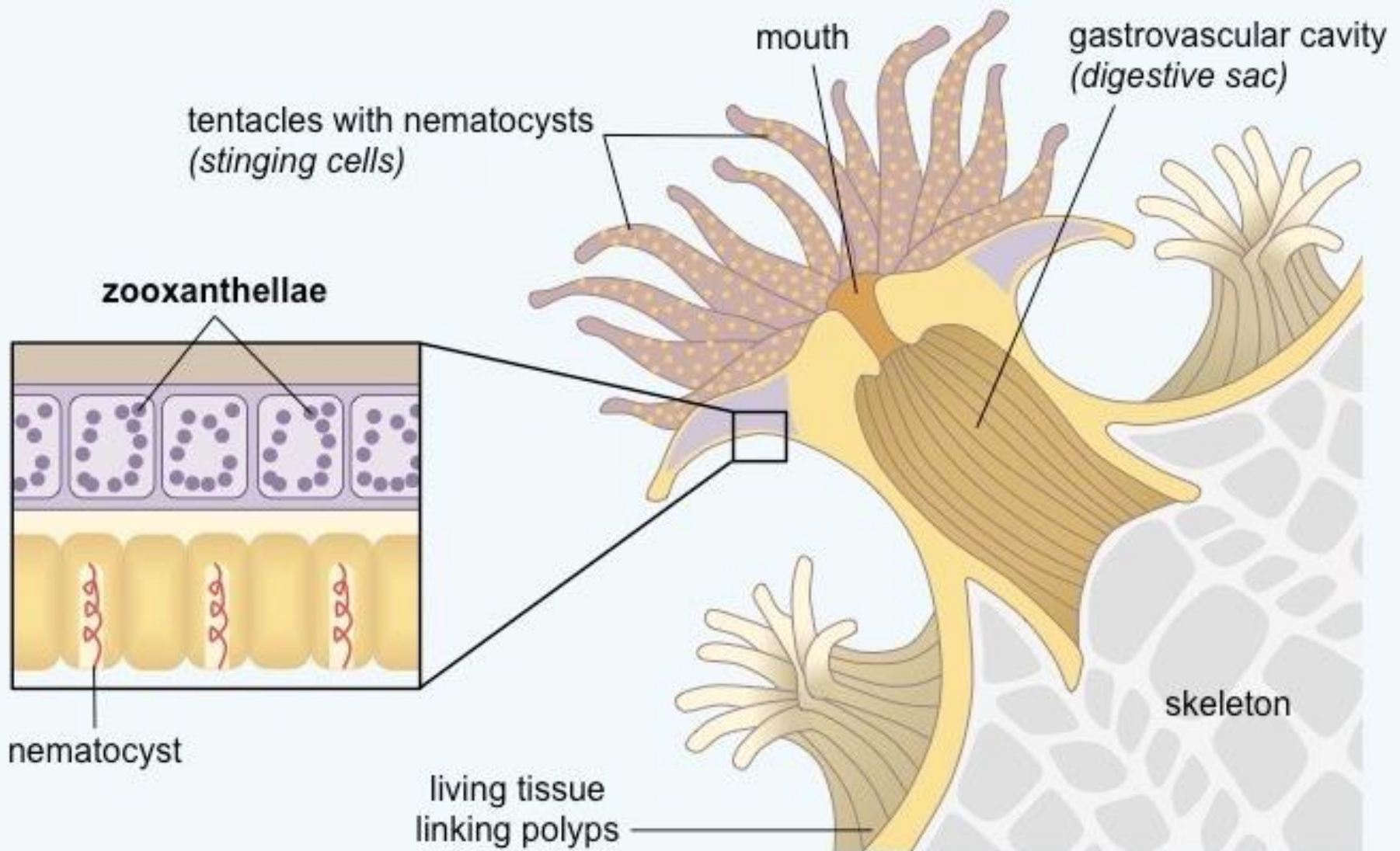
Coral Reefs



WHAT IS A CORAL?

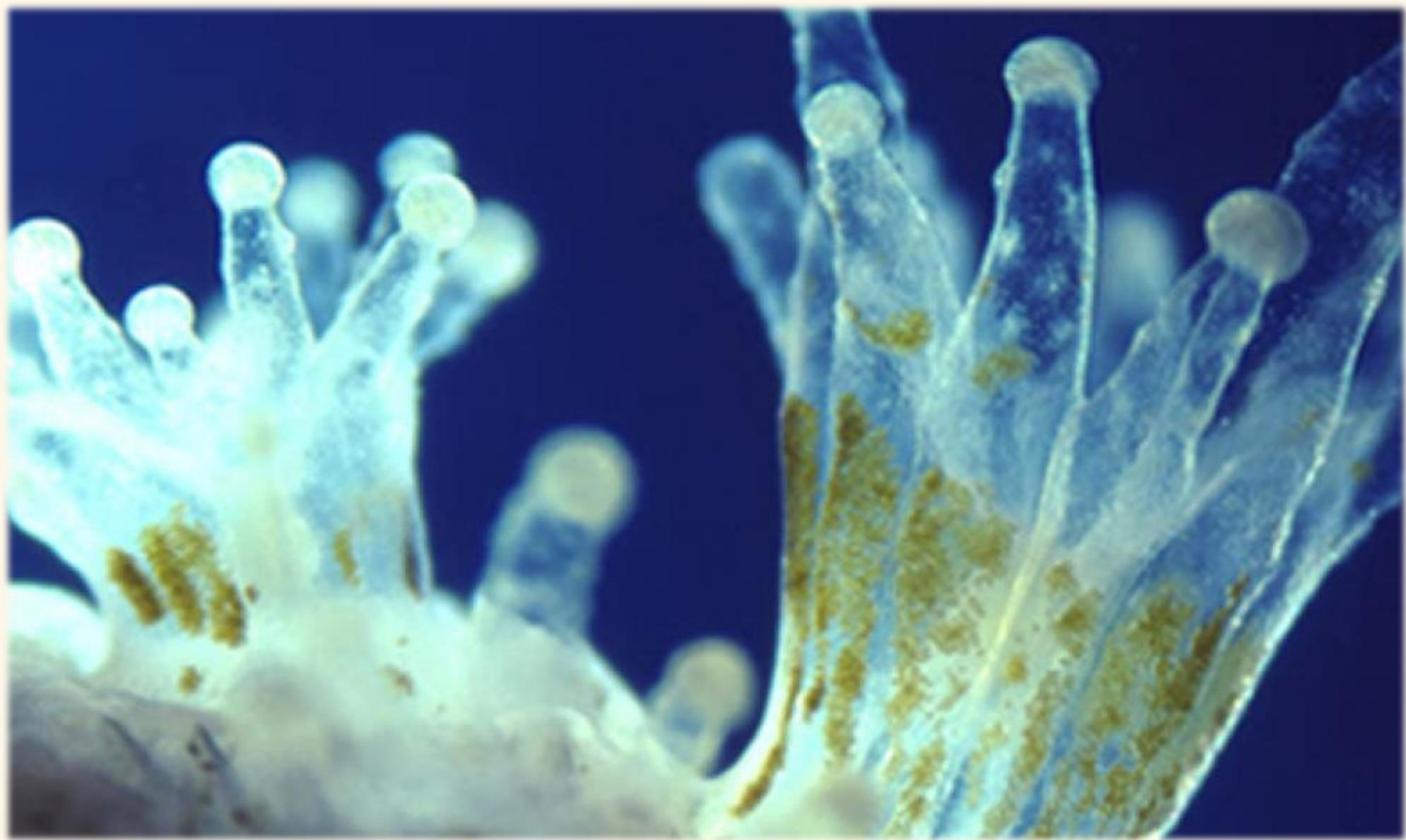
A little bit of algae, a little bit of rock and a lot of animal!

Invertebrate animals in the Phylum Cnidaria, that have a symbiotic relationship with Zooanthellae.



A symbiotic relationships

Most corals have zooxanthellae, a type of algae, living in their 'skin'.



A symbiotic relationships

Most corals have zooxanthellae, a type of algae, living in their 'skin'.



TYPES OF CORAL

Different growth forms – branching, tabular, massive



HARD VS SOFT CORAL

Hard corals produce a calcium carbonate exoskeleton, whereas soft corals are not reef building and are often found deeper.

TYPES OF CORAL REEFS

FRINGING REEF

- Project directly from the shore
- The most common

BARRIER REEF

- Adjacent to land mass
- Separated by open water

ATOLLS

- Fringing reef around subsided/ing volcano
- What we have here in Maldives!





WHY ARE REEFS IMPORTANT?

Reefs occupy less than 1% of the marine environment but are known to support more than 25% of marine life

THREATS

CLIMATE CHANGE

- Reefs are being stressed from increased temperatures more frequently

UNSUSTAINABLE TOURISM

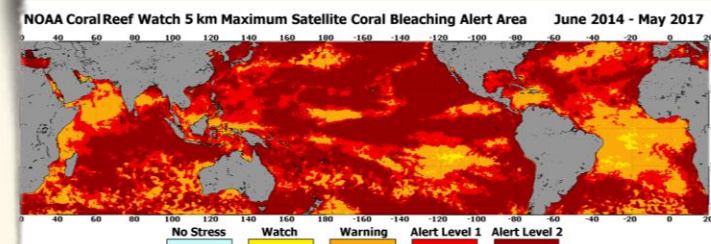
- Damaging and taking from the reef

MARINE DEBRIS

- Plastic
- Fishing lines

CROWN OF THORNS OUTBREAK

- Outbreak causes rapid destruction of coral reefs

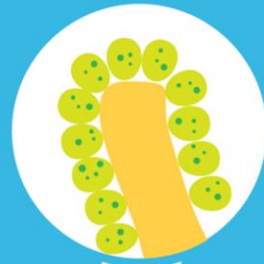




BLEACHING

HEALTHY CORAL

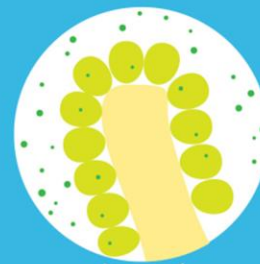
1 Coral and algae depend on each other to survive.



Corals have a symbiotic relationship with microscopic algae called zooxanthellae that live in their tissues. These algae are the coral's primary food source and give them their color.

STRESSED CORAL

2 If stressed, algae leaves the coral.



When the symbiotic relationship becomes stressed due to increased ocean temperature or pollution, the algae leave the coral's tissue.

BLEACHED CORAL

3 Coral is left bleached and vulnerable.



Without the algae, the coral loses its major source of food, turns white or very pale, and is more susceptible to disease.

Bleaching occurs when the zooxanthellae leave their coral hosts due to stressful environmental factors such as: temperature, ocean chemistry, and pollution.



2016 Bleaching in the Maldives

Up to 80% of coral coverage in shallow areas of Maldives was lost due to rise in ocean temperatures



ONE PALM ISLAND REEF

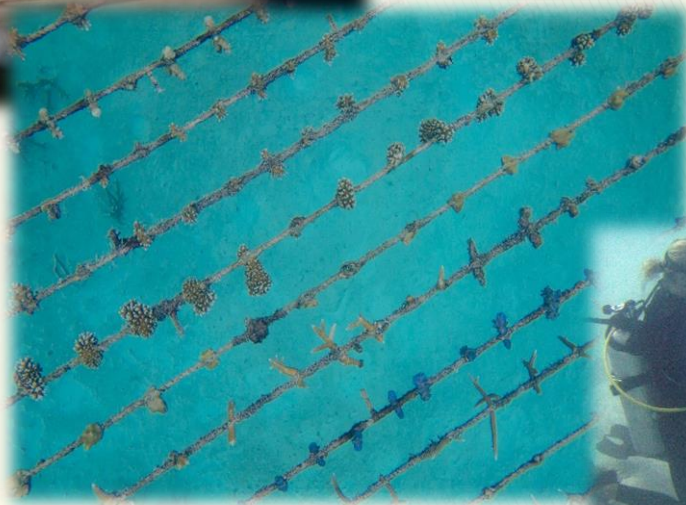
We **fragment live coral** into small pieces and attach them to a length of rope. Similar to plant cutting and grafting, the small pieces broken off the large colony are able to regenerate and grow.



The coral lines we make from the fragments are **grown in our nurseries** underwater just next to the castaway platform. Each line is **monitored and cleaned every three months** for a year. We **measure each fragment and take photos** for records.

The progress of each line can be found online on our website at :

<https://gili-lankanfushi.com/discover/gili-veshi-marine-biology-shack/coral-lines-blog/>



Three month old coral lines in nursery



Monitoring one year old coral lines in nursery

Coral Lines Project



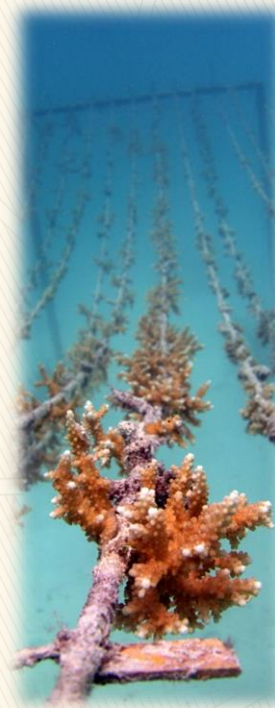
Coral Line 102 at 0 month



Coral Line 102 at 3 months



Coral Line 102 at 6 months



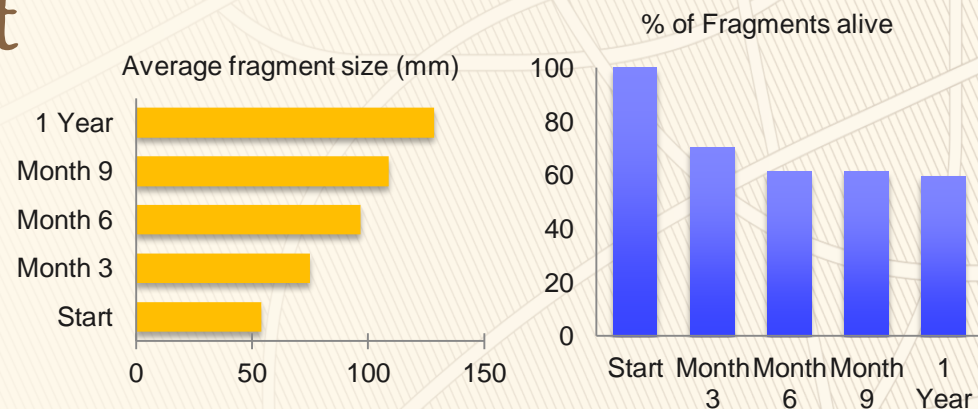
Coral Line 102 at 9 months



Coral Line 102 at 1 year

Coral Lines Project

An example of a coral line that has been planted in our nursery for a year. **Not all fragments survive, but the majority do.** Each fragment grows into a larger colony that can be then used to transplant back on to the reef

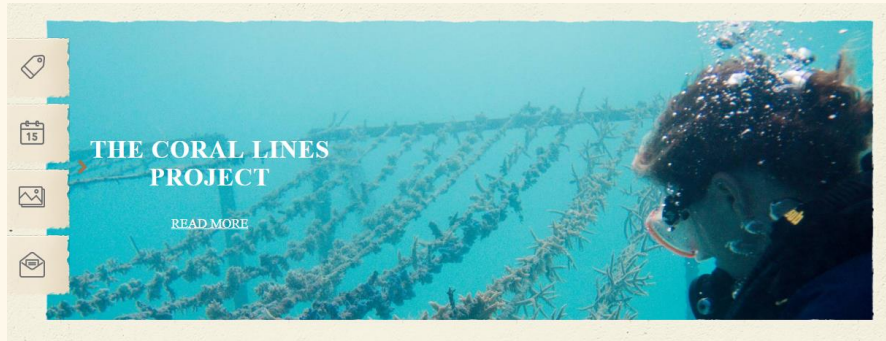


GET INVOLVED



SPONSER A CORAL LINE

- Update on our coral lines website every three months for a year



- Fund Gili SEAS (Social & Environmental Awareness and Sustainability fund)

