

REPORT CORAL BLEACHING!

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HEALTHY CORAL



BLEACHED CORAL



DEAD STAGHORN CORAL OVERGROWN BY ALGAE

Staghorn corals in the Saipan Lagoon have taken a big hit over the last two years due to unprecedented coral bleaching and die off. What is coral bleaching, you ask? Well, corals get their beautiful colors from microscopic algae that live within their tissues. It is this symbiotic relationship that makes coral reefs possible; the algae photosynthesize and provide some of the resulting energy and nutrients to the coral animal. The corals, in turn, use this energy to grow and deposit their skeletons, which form the foundation of coral reefs and provide habitat for many other animals. When corals get stressed, this symbiotic relationship

WORD OF THE DAY

SYMBIOTIC – a biological term for when two organisms live and work together in a way that benefits both of them.

breaks down and the algae are expelled from the coral tissue. Because the tissue of the coral animal is transparent (just like their cousins, the jellyfish!), what you see once the algae are gone is the bright white skeleton underneath. Although corals can recover from bleaching, death will occur if the stress does not subside soon.



Let's keep our eyes open for coral bleaching with hotter temperatures during summer. This NOAA National Ocean Service infographic walks you through what happens when a coral bleaches.

CORAL BLEACHING

Have you ever wondered how a coral becomes bleached?

HEALTHY CORAL

1 Coral and algae depend on each other to survive.



STRESSED CORAL

2 When stressed, algae leaves the coral.



BLEACHED CORAL

3 Coral is left bleached and vulnerable.



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.

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

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

WHAT CAUSES CORAL BLEACHING?



Change in ocean temperature

Increased ocean temperature caused by climate change is the leading cause of coral bleaching.



Runoff and pollution

Storm generated precipitation can rapidly dilute ocean water and runoff can carry pollutants — these can bleach near-shore corals.



Overexposure to sunlight

When temperature are high, high solar irradiance contributes to bleaching in shallow-water corals.



Extreme low tides

Exposure to the air during extreme low tides can cause bleaching in shallow corals.

Summer is here and often brings prolonged periods of abnormally high seawater temperatures are the major cause of large-scale coral bleaching worldwide. Unfortunately, these events are expected to increase in frequency and severity with global climate change. It is important that resource managers understand the patterns and extent of these events so that we can develop effective conservation and management strategies. As summer swings into full gear, you can help the BECQ marine monitoring team with these efforts by reporting any instances of coral bleaching. We need as many eyes on the reef as we can get! **If you see coral bleaching please report it to BECQ at 664-8513.** Also, keep an eye open for training and volunteer opportunities with BECQ and other local conservation and management agencies to help monitor and collect data on coral reef health.

