ABSTRACT

Destruction of many of the world's coral reefs due to coral bleaching is no new phenomena. This problem is mainly caused by human influence and has been occurring since the early 80's at least. There are many causes related to the mass deaths of several coral habitats. Thankfully there are several ways we as humans can help slow the destruction of these beautiful aquatic habitats.

Coral reef bleaching occurs as a result of the symbiotic zooxanthellae being released from original host coral organism due to stress.

Introduction/background information

History:
The first observation of coral bleaching was discovered in the South Pacific ocean in 1983. Although the first recorded case of this tragic phenomena happened in the pacific, it is not the only place that suffers from this event. Some of the more extreme occurrences of coral bleaching happened in the Caribbean and the Great Barrier Reef. The summer of 1997-1998 was the hottest recorded on the Great Barrier Reef since records began in the late 19th century. Mild bleaching began in late January and intensified by February/ March. In 2005, The United States lost most than half of its coral reefs in the Caribbean sea.

Causation of Coral Bleaching:
Some of the main causes of Coral bleaching are: Global warming, extreme temperatures (hot or cold), ad stressful environments. Stressful environments include: toxins in the water, low salinity, or other extreme environments.

Effects of Stressful Environments on Coral:
Warming temperatures or unpleasant water conditions disturb the symbiotic relationship between the coral and zooxanthellae. When this relationship is disrupted the zooxanthellae stop producing food. The coral then kick the zooxanthellae out. Coral rely heavily on the zooxanthellae but can catch their own food for a short period of time. Without the zooxanthellae the coral will die. Coral polyps are translucent and without the zooxanthellae the coral's white skeleton can be seen. This is what is meant by coral bleaching.

Ways Humans Can Help Slow Coral Bleaching:
From research we know that coral cannot adapt fast enough to survive in certain situations so precautions must be made to slow the rate of decline down. There are some ways we can help as individuals. People should stop using products that contain CFCs (chlorofluorocarbons). CFCs are found in all aerosol cans. These harmful chemicals go into the atmosphere and destroy the O3 molecules which make up our atmosphere. Other ways we can help are by relying less on fossil fuels and decreasing forest destruction. Humans should also eat less meat. With cattle production increasing, more and more methane is being produced by cows. Methane destroys the ozone. If we all pitch in together maybe we can help coral reefs restore themselves to the way they were.

Works Cited


"When corals are stressed by changes in conditions such as temperature, light, or nutrients, they expel the symbiotic algae living in their tissues, causing them to turn completely white." What is coral bleaching? Jan. 2010. 29 Feb. 2012 <http://oceanservice.noaa.gov/facts/coral_bleach.html>.