

# Scientists: Flower Garden Banks coral bleaching part of global problem

By **MARISSA BARNETT** The Daily News | **Posted: Saturday, November 5, 2016 11:00 pm**

GALVESTON

A massive coral bleaching event at the Flower Garden Banks about 100 miles off the coast of Galveston is part of the longest-running, most widespread coral bleaching event in history, a top oceanic scientist said.

Rising surface water temperatures in the major oceans prompted coral bleaching beginning in 2014 that's spread to reefs around the world, including the Flower Garden Banks, said Mark Eakin, coordinator for Coral Reef Watch at the National Oceanic and Atmospheric Administration.

Coral Reef Watch monitors surface water temperatures in oceans around the world and issues warnings for possible issues with reefs.

Last month, oceanic administration researchers reported that nearly 50 percent of the coral colonies in the East Flower Garden Bank were bleached or paling, which is caused by the coral's expulsion of the algae that gives it its pigmentation.

Other coral reefs around the world have also suffered from historic bleaching. Warmer water temperatures caused more than 90 percent of the Great Barrier Reef to be bleached in an event that began in March. Scientists are still surveying the damage at the Australian reef.

"This problem of widespread coral bleaching has only been with us since 1980 and it's getting worse," Eakin said.

Coral can recover from bleaching, but prolonged or repeated bleaching events can cause coral to die off, scientists said.

Scientists attributed the latest coral bleaching event to warmer waters in the Gulf of Mexico this summer. Many scientists report the recent spikes in temperature are part of a long-term warming trend in sea temperature caused by climate change.

This year, water temperature at the East Flower Garden Bank registered at 31.3 degrees Celsius or 88.3 degrees Fahrenheit, according to data recorded by the Texas Automated Buoy System at 8 p.m. on Aug. 1. The temperature taken at 8 p.m. on Aug. 1, 2013 was 29.94 degrees Celsius, according the system.

Those two degrees can mean major changes in the sanctuary's environment, said Steven DiMarco, a physical oceanography professor at Texas A&M University at College Station.

"That's very significant when you're talking surface water temperature," DiMarco said. "That small change could cause fish and other creatures that live within the surface to get stressed. A fish living right near the surface, for instance, they'll have to come down a bit to reach colder temperatures."

This summer, scientists recorded surface water temperatures above 90 degrees Fahrenheit consistently in the Flower Garden Banks. As part of an initiative by the Texas General Land Office, researchers have used buoys to track surface water temperatures in different parts of the Gulf since 1995.

The Flower Garden Banks have not had monitors for that long, but since the beginning of tracking them in the early 2000s, the summer temperatures have typically hovered around 88 degrees Fahrenheit, he said. Those temperatures were higher this year.

"By the end of June and July, some temperatures were exceeding 32 degrees, which is unusual for that part of the Gulf," DiMarco said.

It's difficult to attribute the single data sets from the Flower Garden Banks to a more general trend because there isn't enough data, DiMarco said.

But other researchers said the warming temperatures are caused by climate change.

"As humans continue to put more carbon dioxide in the atmosphere, that's causing a warming of the oceans globally and is part of the reason why 2014 was the warmest year on record and that record was beaten in 2015 and looks like it will be beaten by 2016," Eakin said.

To preserve reefs, which more than 1 billion people globally depend on for food and are beneficial to coastal protection, communities need to be involved in efforts to scale back warming and stop activities that hurt reefs, such as overfishing, Eakin said.

"If we want to have coral reefs in the future, we need to be dealing with two things: reducing carbon dioxide in the atmosphere and dealing with local stresses such as overfishing, pollution and habitat loss," Eakin said.