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Preparing for nightmare scenario: Team checking on Bahamas coral expects to see destruction

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Craig Dahlgren from the Perry Institute for Marine Science conducts an underwater survey during a 2018 trip with the Angari Foundation to South Abaco and East Grand Bahama. [Photo Credit: Kevin Davidson]

A team set out from West Palm Beach this week to test the coral in the Bahamas after Cat 5 Hurricane Dorian. The Northern Bahamas relies on its coral reefs for food and tourism dollars.

Scientist Craig Dahlgren has reared staghorn coral in the ice-blue waters of the Northern Bahamas for a decade, hanging pinky-size fragments on submerged trees of PVC piping and watching them grow.

After about a year, the golden-colored building blocks of Caribbean reefs can be planted to help rehabilitate areas stressed by warming oceans and disease. It was going well, until Dorian.

"I'm preparing myself for the worst," said Dahlgren, who sailed from West Palm Beach on Tuesday to evaluate reef health in Grand Bahama and Abaco following Hurricane Dorian. "Probably a lot of what we've done was destroyed."

Dahlgren, executive director of the Vermont-based Perry Institute for Marine Science, believes the two-week expedition with the West Palm Beach-based Angari Foundation is one of the first scientific missions for reef analysis since Category 5 Dorian raked over the islands Labor Day weekend.

The foundation, started by sisters Angela and Kari Rosenberg, offers expeditions on its 65-foot research vessel at cost to educational and non- profit groups such as the Perry Institute.

Shelley Cant-Woodside, director of science and policy for the Bahamas National Trust, said she is relying on the institute for her first information on how the reefs fared and knows of no other coral surveys.

Mark Eakin, coordinator for the National Oceanic and Atmospheric Administration's Coral Reef Watch, has likewise received no reports on the state of the necklace of corals that sustains a fragile ecosystem vital for ocean health, tourism and fishing.

"I haven't heard a word and it can't be pretty," Eakin said. "When a storm sits there and churns it just sandblasts reefs and can be really devastating."

In rare occasions, a hurricane can benefit a reef, bringing up cooler waters from the depths of the ocean to temporarily halt coral bleaching events. Dorian pulled that off in the Keys, ending months of damaging heat. The scouring of coral can also clean off harmful algae. But if it's too deep of a scrubbing, the coral's protective mucus is scraped away, leaving it

vulnerable to being choked by settling sand, burned by the sun and besieged by pollutants.

Also, the violent washing-machine action underwater during a hurricane can topple shallow corals, knocking them over like bowling pins and leaving a pile of rubble that can undo habitats. Antler-like corals, such as the staghorn, are particularly susceptible to being torn from their moorings because the branches catch the waves.

The estimated 70 reefs studied by the Perry Institute are in water between 15 and 60 feet deep.

"Any good news about the little bit of cooling the Keys got from the outskirts of Dorian will be nothing compared to the damage wrought in Grand Bahama," Eakin said.

The Bahamas National Trust announced last week it would begin a review of how Dorian's 185-mph winds affected the environment – marine and land – on Grand Bahama and Abaco. Early land assessment of Lucayan National Park on Grand Bahama shows "catastrophic" destruction of mangrove and pine forests.

Dahlgren hopes his team, which includes an aquarist from Walt Disney World, and a representative from The Nature Conservancy, will be able to survey 25 to 30 reefs doing three dives per day.

The Institute was working on the reefs just before Dorian hit, taking thousands of photos that can be knit together to form an image of a full reef. The idea on the current expedition is to repeat those surveys and develop a restoration plan from them.

But recovery above and below sea level will take decades.

Cant-Woodside said most of Dahlgren's coral nurseries are likely lost.

"We rely on the sea around us for food and tourism, and tourists are not coming to see algae. They want to see beautiful reefs teeming with fish." she said. "I'm trying to be hopeful, but I'm sure everything is looking pretty awful."