

ECOWATCH

A requiem for the Sombrero Reef

BY DELORES SAVAS

“Because of climate change and other factors, the Keys waters have lost 80 to 90 percent of their coral over the past 50 years. That affects not only marine life that depends on the reefs for survival but also people. Coral reefs are a natural buffer against storm surge from hurricanes and other storms.”

*Andy Bruckner
Researcher with the
Florida Keys National Sanctuary*

In 2020, the Sombrero Reef in the Keys was listed as one of the best snorkeling tours in Marathon.

Advertising pamphlets stated, “The great barrier reefs on our planet are precious. Like underwater ocean forest, they team with wildlife and colorful corals. Sombrero Reef is alive. It is a place where parrot fish feed on the living coral while trumpetfish try to blend in among moving branches. The reef is protected, so you could expect to see large schools of grunts and snappers swimming and hiding in the crags and looking for a meal.”

Now in 2023, it is dead. The Coral Restoration Foundation, a group centered around restoring and protecting Florida’s coral reefs, said it visited the Sombrero Reef off the Florida Keys on July 20 and found “100 percent coral mortality.” The discovery means all corals on the Sombrero Reef have died, and the reef will not recover on its own without active restoration, the Foundation said.

This means that the host of sea life – which included nurse sharks, parrot fish, green moray eels, southern stingrays, barracuda, yellowtail snappers and even a few sea turtles, and which found a haven in the once flourishing Sombrero Reef – now will no longer have protection and breeding grounds on the Sombrero Key Sanctuary Preservation Area.

Over the last 40 years, coral reefs in the Florida Keys have suffered even more dramatic decline, due to coral bleaching caused by greenhouse gas emissions, the main cause of ocean acidification along with the increases in sea temperature. Nearly 90 percent of live corals that once-



Researcher check a part of the coral restoration project, only to discover, it's dying.

dominated the reefs have been lost. Greenhouse gas emissions have risen steadily in recent years

Scientists alarmed at the continued demise of the corals descended on the Keys and harvested coral specimens. The University of South Florida (USF) and the Florida Institute of Oceanography’s Keys Marine Laboratory (KML) quickly stepped in to house thousands of corals to save them. Currently, KML is housing more than 1,500 coral specimens that were harvested in the past week from off-shore nurseries during the crisis. With 60 tanks ranging from 40 to 1,000 gallons each, KML has the capacity to house thousands more as the coral bleaching event continues.

“For years we have been developing the infrastructure capacity to support reef restoration efforts that enable KML to temporarily house corals during emergencies such as this,” said Cynthia Lewis, director of KML. “Typically, water temperatures at

this time of year rare in the mid-80s, but we are already recording temperatures of 90 degrees. It is very alarming.”

It is likely that corals will be housed in land-based systems for months, with some being part of a breeding program. Once these historically high water temperatures return to normal, USF scientists in partnership with restoration practitioners across the Keys can return corals to their off-shore nurseries and ultimately their natural environment, reattaching them to reefs using epoxy, cement, zip ties and nails.

“We are very fortunate that aquarium systems like those at the Keys Marine Laboratory are available and can be reliably used to stabilize and hold corals in emergency situations,” said Keri O’Neil, director and senior scientist in the Coral Conservation Program at the Florida Aquarium. “Some of the corals held here today will become part of our coral breeding

program at the Florida Aquarium and will be given world-class human care for the rest of their lives, producing hundreds of offspring every year. When the time is right to return those offspring to the reef, they will once again have a short stay at the Keys Marine Laboratory before returning to the ocean.”

However, is this a pipedream with the best of intentions? Consider that even the largest reef system in the world, Australia’s Great Barrier Reef, has experienced some of the most severe effects caused by coral bleaching and climate change. The most notable mass bleaching events occurred in 2016 and 2017, when a stunning 50 percent of Australia’s famous reef died as a result. While major efforts have since been put in place to reduce coral bleaching, the scale of mortality has proven difficult for the reef system to repair and replenish.

Other countries have suffered the same fate. Indonesia’s coral is 95 percent under threat, the Pacific Ocean has seen a 70 percent decline, Hawaii has experienced declines ranging from 42 to 90 percent, and the Caribbean has two-thirds of its coral threatened.

If coral reefs were to disappear, the coastal industries would collapse. According to a United Nations Environmental Program (UNEP) report, around a billion people globally depend on coral reefs for their livelihood.

According to UNEP, “Unless we reduce emissions, all the reefs will bleach by the end of the century. Human activity and a warming planet are rapidly degrading these fragile ecosystems.”

Actions by the masses have been slow when it comes to climate change, which is one of the main contributors to coral loss. The issue has been batted around and denied. But now we are on the verge of losing one of the greatest gifts to mankind, coral reefs, and if so, we will pay the price for our inaction. One cannot put the genie back in the bottle once it has been let out.

There will be more requiems to come.

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TIDES & SKIES

August 4 - 10

Boca Grande Tides

4 FRI	High 4:15 am Low 8:37 am High 3:02 pm Low 9:58 pm	6 SUN	High 5:11 am Low 11:11 am High 5:37 pm Low 10:45 pm	8 TUE	High 6:17 am Low 2:08 pm
5 SAT	High 4:42 am Low 9:51 am High 4:12 pm Low 10:26 pm	7 MON	High 5:42 am Low 12:38 pm High 7:21 pm Low 10:44 pm	9 WED	High 7:02 am Low 3:31 pm
				10 THU	High 8:01 am Low 4:39 pm

LUNAR CALENDAR

- Last Quarter
Aug 8 - 6:28 a.m.
- New Moon
Aug 16 - 5:38 a.m.
- First Quarter
Aug 24 - 5:57 a.m.
- Full Moon
Aug 30 - 9:35 p.m.

SUNRISE
Friday, Aug. 4 - 6:55 a.m.
Saturday, Aug. 5 - 6:55 a.m.
Sunday, Aug. 6 - 6:56 a.m.
Monday, Aug. 7 - 6:56 a.m.
Tuesday, Aug. 8 - 6:57 a.m.
Wednesday, Aug. 9 - 6:57 a.m.
Thursday, Aug. 10 - 6:58 a.m.

SUNSET
Friday, Aug. 4 - 8:14 p.m.
Saturday, Aug. 5 - 8:13 p.m.
Sunday, Aug. 6 - 8:12 p.m.
Monday, Aug. 7 - 8:12 p.m.
Tuesday, Aug. 8 - 8:11 p.m.
Wednesday, Aug. 9 - 8:10 p.m.
Thursday, Aug. 10 - 8:09 p.m.