Coral reefs are hurting, study finds

Study finds pollution taking a toll on natural wonders that draw tourists and protect against storm surges

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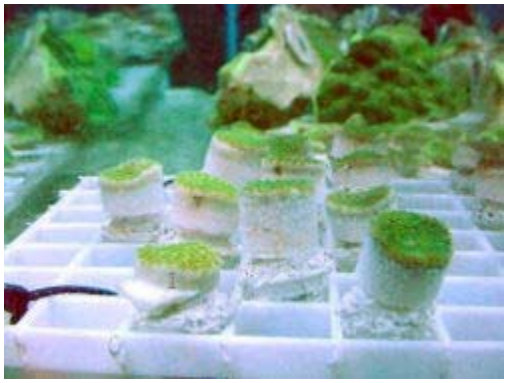
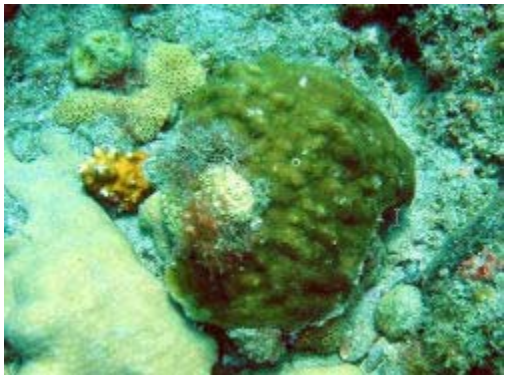
SAMPLES Researcher Alison Moulding of Nova Southeastern University looks at coral being brought in for study at the university's Oceanographic Center.



PORITES ASTREOIDES: Mustard Hill coral pieces are being used in the experiment.



ON THE REEF: Scientist are studying coral like this mustard hill variety, shown here on a reef of Broward.

RESULTS: Coral growing near the outfall had elevated levels of fungicides, industrial chemicals and fuel oils.

Researchers are probing whether sewage and other pollution are damaging coral reefs that help protect coastal areas from storm surges. A two-year environmental study, released last week, concluded that coral reefs off the coast of Broward County are sick -- and the culprit could be the treated sewage that is released into that part of the ocean in Hollywood and Hillsboro Beach.

Coral reefs, dubbed rain forests of the oceans,'' are important because they provide habitat for many other sea creatures, such as sponges, crabs and shrimp.

''We need to figure out what's causing the stress,'' said Ken Banks, manager of marine resources programs at Broward's Environmental Protection Department. ``If it's a human cause, we need to address those causes.''

One problem area is near a treated sewage outfall in Hollywood.

Researchers from the University of Central Florida, College of Charleston, Nova Southeastern University and Broward's Department of Environmental Protection worked together on the $52,746 study funded by the Southeast Florida Coral Reef Initiative, a conservation agency.

Much is at stake if Broward's reef system is distressed. The loss of coral harms the ecosystem and can hurt Florida's tourism economy if divers decide to go elsewhere. Reefs help protect coastal areas from hurricanes because they break up storm surges, much like seawalls do.

Over the next two years, the researchers will continue to study what's in the water that's harming the coral reefs.

To conduct the study, divers took coin-size samples of mustard hill coral, regarded as the weeds of the coral world, and did biopsies on them. Divers took tissue samples about three-fourths of a mile from shore and again a mile and a half off shore.

Coral at the city of Hollywood wastewater outfall, the Port Everglades inlet mouth, the Hillsborough Inlet and control sites away from outfalls and inlets were sampled.

Coral that grew near the wastewater outfalls was unable to repair tissue damage, but coral colonies at healthy sites healed where the scientists removed the tissue.

Coral growing near the outfall had elevated levels of fungicides, industrial chemicals and fuel oils. Tissue loss was highest near the Hollywood wastewater outfall.

Global warming, treated sewage and ship groundings could also be a cause..

''It's kind of the little things that all add up, and we've been slow to change as a culture to remedy,'' said John Fauth, a UCF associate professor of biology.

Richard Dodge, dean of NSU's Oceanographic Center in Dania Beach, says healthy oceans and coral reefs cost money. Dodge thinks there should be marine conservation areas similar to nature preservation areas on land.

''If people want healthy oceans and to have coral reef around, they have to make that sacrifice,'' Dodge said. JOE RIMKUS JR/MIAMI HERALD STAFF SAMPLES/ Researcher Alison Moulding of Nova Southeastern University looks at coral being brought in for study at the university's Oceanographic Center.
