

Published Saturday, November 18, 2000, in the Miami Herald

## Scientists hope 'reef balls' repair damage done by sub

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A damaged coral reef off Dania Beach is getting a transplant.

On Friday, researchers and oceanographers from Nova Southeastern University and Broward County took the first step in repairing the reef that was damaged seven years ago by a U.S. Navy nuclear submarine.



PHOTO BY RANDY BALZMONE / RONALD BERRY

From a barge about a quarter of a mile off the coast, a large crane dropped 160 artificial structures called "reef balls" into the ocean.

Each 3-by-4-foot reef ball is a concrete shell perforated by large holes, somewhat resembling half a child's whiffle ball toy.

Made of a special concrete, the reef balls are designed to mimic the rocks and crevices found in a natural reef system.

"We're trying to speed up or enhance recruitment of coral," said Richard Spieler, an NSU professor heading a study on coral growth.

Three years ago, Florida sued the Navy for loss of habitat when one of its nuclear submarines, the U.S.S. Memphis, smashed aground on the reef. Its propellers dug two deep trenches in the bottom as the sub tried to free itself from the reef, which is estimated to be 3,000 years old. The Navy settled the claim for \$750,000.

Now, the county and NSU's Oceanographic Center in Dania Beach are using the money to try to repair the damage, as well as study coral reef growth. The study is expected to last three years.

The study also will look at what types of fish are attracted to the reefs. 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.

Researchers also plan to put algae extract on some of the reef balls to see what types of sea life are drawn to the artificial reef.

"Some fish destroy coral growth. Other fish enhance it," Spieler said.

Living corals also will be planted on the reef balls throughout the year to try to stimulate growth, said Ken Banks, manager of marine resource programs for Broward County.

In addition, reef balls of different shapes will be dropped into the water to see if they attract different types of fish, Banks said.

"It's a cutting-edge experiment with different hypotheses," Spieler said.

