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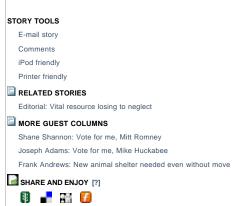
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John Reed, guest columnist Friday, January 11, 2008



John Reed



I am pleased to see that our precious Oculina coral reefs of the Treasure Coast were recently highlighted in a Jan. 9 editorial and on National Public Radio.

Although the news in part may have been dismal regarding the reefs, I would like to take this opportunity to provide the public with some background about these reefs and also the good news that may not have been obvious from my interview with NPR.

First, what are the Oculina reefs and why are they important?

The ivory tree coral, called Oculina, forms an extensive reef system at the shelf edge off the Treasure Coast from about Fort Pierce to north of Cape Canaveral. Over the past several thousand years, this coral has grown, and formed mounds and ridges up to 100 feet tall, at depths of 250 to 300 feet.

We on the Treasure Coast are privileged in that these magnificent Oculina reefs (also termed Oculina banks) occur only here and nowhere else on Earth that we know. When we first discovered these reefs in 1975, using the Johnson-Sea-Link submersibles of Harbor Branch Oceanographic Institution, they were teeming with huge aggregations of grouper and snapper.

Over the years our research showed that these were incredible, biologically diverse ecosystems rivaling shallow reefs. I found that a small coral head the size of a soccer ball could have almost 2,000 animals living in and among the coral branches. Hundreds of species of shrimp, crabs, worms, snails, bivalves and other small creatures use the coral for habitat. And these in turn provide food for small fish and up the food chain to larger grouper.

We also found that these reefs are not isolated, but connected to the shallow reefs and inshore lagoon. For example, Grant Gilmore, a fish biologist, has shown that gag grouper use the deep water Oculina reefs for their spawning aggregations where hundreds of gag and scamp grouper could be found swarming over each reef. But the juvenile grouper use the grassbeds and mangroves of the Indian River Lagoon for habitat and protection until they are large enough to move to the nearshore reefs and finally to the deep offshore reefs to breed.

I was first concerned in the early 1980s that some new types of bottom trawls were being used to fish for shrimp and bottom fish that could decimate the fragile coral. So in 1981, I submitted

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a proposal to the South Atlantic Fishery Management Council to protect these reefs from destructive fishing methods such as bottom-trawling, and the Oculina Habitat of Particular Concern was implemented in 1984 for this protection.

This was the first marine reserve in the world to protect a deep-water coral reef. Now deep water reefs worldwide are being heavily impacted by trawling and many nations are just recently trying to implement their own deep-coral marine protected areas.

The news reported on National Public Radio was about my recent publication on the Oculina reefs, which showed up to 100 percent destruction of the coral in some areas over the past 25 years. However, the important point to consider is that the Oculina marine protected area did work. Maybe not perfectly, but it saved the remaining living deep-water Oculina coral reefs on Earth.

The reefs within the OHAPC were protected and saved. The reefs outside the boundaries of the original OHAPC between Sebastian and Cape Canaveral were heavily damaged by bottom trawling, which was legal then. These reefs weren't protected until 2000 when the OHAPC was expanded north to Cape Canaveral.

And now we have recent research, soon to be published, proving that there are more grouper and black sea bass coming back to these reefs. This research also shows that the grouper need the intact coral habitat and avoid the dead coral rubble areas.

In addition, we have placed more than 100 reef balls in the dead areas and already are seeing evidence of new coral growth and fish associated with them.

Although the recent news suggested these reefs will not grow back in our lifetime, perhaps they can with continuing protection, enforcement, and especially with public support.

Remember the soccer-ball size coral head that contains 2,000 animals? Well, a baby coral larvae can grow to that size within 10 to 20 years.

Reed is a research professor at Harbor Branch Oceanographic Institution, which is now part of Florida Atlantic University, and has spent much of his career researching and trying to protect the Oculina reefs for the past 32 years.

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