

# Dry Tortugas show positive trends: Protected area slowly rebounding

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The goliath grouper is one of the species of fish in the Dry Tortugas that is protected from harvest and recognized as a critically endangered species. Credit: Jiangang Luo/UM-RSMAS

## Multi-agency effort a collaborative success in integrated ecosystem assessment

A team of 38 research divers from the University of Miami (UM) Rosenstiel School of Marine and Atmospheric Science, NOAA Fisheries Service, the Florida Fish and Wildlife Conservation Commission, the National Park Service, REEF, and the University of North Carolina at Wilmington recently completed a successful 20-day biennial census to measure how the protected status of the Florida Keys National Marine Sanctuary's Tortugas Ecological Reserve and Dry Tortugas National Park's Research Natural Area are helping the regional ecosystem rebound from decades of overfishing and environmental changes.

The unprecedented collaboration allowed the team to complete more than 1,700 scientific dives, which will now help to further establish a baseline for the state of reef fish stocks and coral reef habitats in Florida's dynamic marine ecosystem.

According to Jerry Ault, Ph.D., professor of marine biology and fisheries at UM's Rosenstiel School and chief scientist on the cruise.

"We are very encouraged to see that stocks have slowly begun to recuperate since the implementation of 'no-take' marine protected areas in the region. We noted particular improvements in the numbers of snapper, grouper, and coral recruits. We are currently crunching the data collected to see what adjustments may need to be made in order to help guide future management decisions to address the issues of biodiversity protection, restoration of ecological integrity, and fishery management which are critical to this area."

This year, the team documented changes in fish abundance and habitat quality in this region, which was hit by six major hurricanes since 2004. By statistically comparing this year's findings to previous survey information collected, scientists can determine what effects intense hurricane activity had on this marine environment.

The Dry Tortugas, a remote area about 70 miles to the west of Key West, Fla., is known for its extensive coral reefs, fish, sharks, lobsters and other marine life. In 2001, after an extensive designation process the Florida Keys National Marine Sanctuary implemented the Tortugas Ecological Reserve, consisting of 151 square nautical miles of protected marine habitat.

A complete report on the expedition is anticipated to be available in September 2008.

Source: University of Miami Rosenstiel School of Marine &

## Atmospheric Science

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