

Monday, July 7, 2008

Daily Digest

11th International Coral Reef Symposium

Ft. Lauderdale, Florida, USA

July 7-11, 2008

Greater Fort Lauderdale/Broward County Convention Center

TODAY'S OVERVIEW

Get the latest news from the world's preeminent coral reef symposium attended by nearly 3,000 global scientists, managers, conservationists and policy makers http://www.nova.edu/ncri/11icrs/media_newsroom.html

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ANNOUNCEMENTS

1. **Presentation of Federal Funding for Coral Reef Research**

U.S. Representative Ron Klein (D-FL, Dist. 22) and other South Florida members of Congress were instrumental in securing federal funding for the National Coral Reef Institute (NCRI) this year. Representative Klein presented a check for \$1,100,000 to Dr. Richard Dodge, Executive Director of NCRI and Dr. Rich Appeldorn of the Climate Change Research Initiative (CCRI).

Media Contacts: Richard Dodge, National Coral Reef Institute, Nova Southeastern University Oceanographic Center and ICRC Local Organizing Committee Chair) dodge@nova.edu or Office: 954.262.3651; Mobile: 954.629.2134

- Congressman Ron Klein (D-FL). Contact: Melissa Silverman, Office: 202.225.3026 Mobile: 202.821.8152

2. **Launch of 'The Status of Coral Reef Ecosystems of the United States' Report**

Nearly half of U.S. coral reef ecosystems are in poor or only fair condition according to a new report issued today by the National Oceanic & Atmospheric Administration (NOAA). "We need to redouble our efforts to protect this critical resource," said NOAA administrator retired Navy Vice Admiral Conrad C. Lautenbacher Jr.

Jenny Waddell, NOAA marine biologist and editor of the report said the condition of the nation's coral reefs has been declining for decades, especially those adjacent to populated areas where coastal development, fishing and recreational use is high. Waddell said, "There are urgent needs to reduce the threats facing coral reefs." While 69 percent of coral reefs in the Pacific region are in good or excellent condition, only 25 percent of Caribbean reefs are faring well. Kacky Andrews, director of the NOAA Coral Program added, "This is absolutely a call to action." She said people could minimize the threats to coral by reducing their carbon footprints, curtailing the use of fertilizers, avoiding damage to reefs by anchors by using a mooring buoy, and by stopping the purchase of coral jewelry (www.tooprecioustowear.org). Chantal Collier, Florida Department of Environmental Protection, explained that in Florida, which has the third longest reef system in the world, coastal population has grown by 64 percent in the past two decades, putting pressure on the reefs from development. She added, "Fishing is an activity of major concern in Florida, which is known as the fishing capital of the world." Recreational fishing in the state now accounts for more than 75 percent of finfish landings. In Hawaii, the report states that marine protected areas are most effectively conserving biodiversity and fisheries, but they are limited in number and size, and overfishing and the degradation of habitats by alien algae are of growing concern. But Waddell said there is cause for hope: "We now understand how reefs are being degraded so we can take action to better protect them. There is increasing use of marine protected areas, and that is encouraging." The report, the first comprehensive assessment of U.S. reefs since 2005, was produced by researchers from NOAA's Coral Conservation Program and the National Centers for Coastal Monitoring and Assessment.

Media Contact: Ben Sherman, NOAA, 202.253.5256

On the Web: <http://ccma.nos.noaa.gov/stateofthereefs>

3. **Florida Governor Attends ICRS, Signs Bill To Stop Ocean Outfalls**

Governor Charlie Crist addressed ICRS attendees today and signed into law Bill 1302. The bill states that wastewater treatment plants must eliminate ocean outfalls as the primary disposal method for wastewater by 2025. Facilities will also have to implement a management plan by 2013 and decrease nutrients entering the ocean by 2018. In addition, the law prohibits the construction of new ocean outfall pipes or the expansion of existing outfalls on the southeast Florida coast, and 60 percent of the water previously discharged from these outfalls will be required to be reused.

"Coral reefs are extraordinary living ecosystems that draw visitors, support our economy and protect our beaches and homes from erosion and storm surge," said Governor Crist. "Florida will continue to take steps, such new legislation reducing nutrients and other pollutants in the ocean, that will protect these sensitive ecosystems for residents and visitors for generations to come."

Media Contact: Governor's Press Office
850.488.5394

SCIENCE HIGHLIGHTS

3. Is 500 ppm CO₂ and 2°C of Warming the ‘Tipping Point’ For Coral Reefs?
O. Hoegh-Guldberg

Several lab studies have shown ways that coral change in response to environmental shifts, such as those forecast by climate studies. These physiological studies have led to optimism that corals have the potential to adapt to climate change. However, these studies don’t demonstrate the evolutionary adaptation is occurring. Hoegh-Gulberg suggests five questions that need to be answered before we can say that reef-building corals could adapt to a high CO₂ future:

- Do the potential changes and adaptations affect the likelihood of corals’ survival?
- When corals adapt to their changing environment, does this adaptation come at a cost (for example, reduced reproduction or growth)?
- How many individuals in a population have the potential to adapt? How many species in a community have similar potential?
- Can these potential changes be passed on to future generations?
- Can these changes keep pace with climate change?

These questions, and their answers, will be key to shaping coral conservation strategy.

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4. Forecasting Storm-Mediated Changes in Reef Coral Communities
J. Madin, M. O’Donnell, S. Connolly

Reef building corals are exposed to hydrodynamic forces equivalent to the wind forces that gnarl and uproot alpine trees. Gradients of flow velocity create different niches, with complex, branched corals common where flow is slow, and robust, streamlined corals found where flow velocities are high. Madin *et al* have created a mathematical model that predicts how increasingly strong storms caused by rising sea-surface temperatures will combine with the increasingly weak coral skeletons caused by ocean acidification to reduce corals’ ability to resist. They predict that in the very near future coral reefs will become increasingly dominated by lumpy, robust coral shapes, as weakened skeletons of elaborately branched forms are torn apart by storm action. This innovative study enables scientists to make quantitative predictions about subtle interactions.

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FOR MORE INFORMATION

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For the latest press releases, photos and video:
http://www.nova.edu/ncri/11icrs/media_newsroom.html

Blog reporting live from the symposium:
<http://www.coralreefnews.org>

For interactive abstracts:
http://www.nova.edu/ncri/11icrs/sciprogram_schedule.html

The Daily Digest is edited by SeaWeb (www.seaweb.org), the media liaison for the International Coral Reef Symposium.

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