



CCRI NEWS

Caribbean Coral Reef Institute

April 2006

2006 Coral Reef Symposium Highlights

Problems and Solutions. Over 100 scientists and managers met in February to attend the first symposium since 1998 dedicated specifically to Puerto Rico's coral reefs and

associated resources. The 18 presentations reviewed ongoing research and how results related to coral reef management at the local and Federal levels (see accompanying articles). Mr. Ernesto Diaz, Administrator of Natural Resources, PR Department of Natural and Environmental Resources, called for establishing better mechanisms to incorporate research results into management data bases.



Ernesto Diaz, Administrator of Natural Resources, DNER, addresses the Coral Reef Symposium



Coral bleaching off Puerto Rico

Coral Bleaching Hits Puerto Rico.

Ongoing monitoring by CCRI scientist Dr. Edwin Hernandez, University of Puerto Rico - Rio Piedras, documented the extent of the 2005 bleaching event, one of the worst on record. Over 82 species showed bleaching, with almost half having an incidence of over 80%. Major reef-building corals were among the most affected, and resulting partial and total colony mortalities were observed. However, spatial variations in the incidence of bleaching suggest that strong water flow may ameliorate bleaching effects, thus calling into question previous ideas of coral bleaching and reef resilience.

Researchers Target Reef Fish

Spawning Aggregations. CCRI supported projects are attempting to locate and characterize spawning aggregations sites, locations where aggregating species are particularly vulnerable to over exploitation. Dr. Edgardo Ojeda, UPR Sea Grant College Program, is conducting structured interviews with acknowledged expert fishers to map the times and locations of reef fish aggregations. Michelle Sharer and colleagues, University of Puerto Rico – Mayagüez, have documented spawning aggregations of parrotfishes, surgeonfishes and groupers at Mona Island, an important biogeographic



Female red hind at spawning site gravid with eggs

stepping stone for genetic connectivity between Puerto Rico and the Dominican Republic. In a new project, David Mann, University of South Florida, will quantify the abundance of spawning fish and their behavior by monitoring fish sounds. This will allow assessments during nighttime, when spawning occurs, and during sea conditions that prohibit access to spawning sites. The latest information and research results on reef fish spawning aggregations can now be found on a new bilingual (Spanish/English) web log supported by the Center for Interdisciplinary Coastal Studies: <http://www.amp-pr.org/spag>



Geneticists Study Bottlenecks in *Acropora*.

Dr. Nick Schizas, University of Puerto Rico – Mayagüez, is studying genetic variation in acroporid corals, currently being considered for listing under the Endangered Species Act. Part of his work addresses bottlenecks to gene flow at multiple spatial scales, from across islands to within reefs. Research to date indicates that the level of sexual reproduction and the degree of genetic variation within reefs are sufficient to avoid reproductive bottlenecks to the recovery of these species.

Elkhorn coral, *Acropora palmata*, is a major reef-building species and provides shelter for many fishes. It has undergone severe population declines since the 1970's

New Web Resource Aids Scientists and Managers. A bilingual (Spanish / English) web log now offers up-to-date information and discussion pertinent to coral reef resources. Supported by the Center for Interdisciplinary Coastal Studies, UPR-Mayagüez, it targets research and management on Marine Protected Areas, including information specific to Puerto Rico, as well as the conservation of coral reefs and local fisheries (<http://www.amp-pr.org/blog>).

First Assessment of Puerto Rico's Ornamental Fishery Resources.

A team headed by Dr. Steve LeGore, has conducted the first assessment of the fishes and invertebrates targeted by Puerto Rico's ornamental fishery and exported to the US for the aquarium trade. The results, indicating that most populations are harvested at relatively low levels, come as good news to both the fishery and the PR Department of Natural and Environmental Resources. Dr. LeGore plans to build on these results and work with fishers and agency personnel to draft regulations to protect both the resource and the industry



The ornamental fishery targets over 150 fishes and 50 invertebrates

Construction Begins on New Home for CCRI. April saw the start of construction of CCRI's new facilities. Supported entirely by the University of Puerto Rico, these facilities exemplify the commitment of the UPR to conserve and manage Puerto Rico's coral reef resources. Located at the Magueyes Island marine station of



Construction begins on new CCRI facilities

the Department of Marine Sciences, UPR-Mayagüez, the 1,700 ft² complex will contain offices, a large conference room and a GIS laboratory for teaching and research.

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CCRI is a cooperative program between the University of Puerto Rico – Mayagüez and the National Oceanic and Atmospheric Administration.