

**CORAL REEF NEWS**  
Coral Reef Conservation Program  
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NOAA Coral Reef News is a monthly e-newsletter established to provide current information on the activities of the National Oceanic and Atmospheric Administration's (NOAA) Coral Reef Conservation Program (CRCP) and other relevant NOAA programs. The CRCP supports effective management and sound science to preserve, sustain and restore valuable coral reef ecosystems. Back issues are available at <http://coralreef.noaa.gov/news/welcome.html>.

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## OF SPECIAL NOTE

### **Administration Releases Proposal for Reauthorization of the Coral Reef Conservation Act.**

On May 8, the Department of Commerce delivered proposed legislation to Congress calling for greater protection for the nation's coral reefs. The bill, the Coral Reef Ecosystem Conservation Amendments Act (CRECAA) of 2007, reauthorizes the Coral Reef Conservation Act (CRCA) of 2000 and adds greater protections for coral reefs while enhancing marine debris removal and increasing the government's ability to work through cooperative partnerships. 'Our coral reefs continue to be severely threatened and this bill continues the Administration's aggressive commitment to ocean stewardship as called for in the President's Ocean Action Plan,' said Commerce Secretary Carlos M. Gutierrez. 'It will give us the tools we need not only to protect corals, but also to help restore this valuable resource.' The Administration proposal addresses the following issues:

- Adds new areas of emphasis to the National Program and Coral Reef Conservation Program (CRCP) to address new and emerging threats to coral reef ecosystems.
- Provides for consistent guidelines for maintaining environmental data, products, and information.
- Augments authorities to allow for stronger partnerships between the federal government and its partners. These partners include state governments, who are responsible for managing much of the nation's coral reef habitat.
- Provides a suite of tools to facilitate response to and restoration of injury to coral reefs. With this proposal, the federal government would be able to conduct emergency response activities to address coral damage, carry-out long-term restoration on impacted coral reefs, and

hold responsible parties liable for injury to coral resources.

- Provides for direct removal of marine debris by the federal government. Marine debris is a chronic and long-term threat to the health and stability of our nation's shallow-water coral reefs.
- Enhances the Department of the Interior's ability to provide technical assistance to States and territories and carry out their research and management objectives.

Click [here](#) to learn more or to download supporting documents, including the CRECAA. The associated NOAA press release is available for download at the site above, or as a link from the 'Coral Reefs in the News' section of this issue.

## ANNOUNCEMENTS

**Upcoming Deep Coral Research Cruise.** May 31-June 11, NOAA scientists will explore [Gray's Reef National Marine Sanctuary](#) (GRNMS) and South Atlantic deep water coral ecosystems to map and characterize resources located off the coasts of Florida and Georgia. These regions have recently been designated as coral-Habitat Areas of Particular Concern (HAPC) by the [South Atlantic Fishery Management Council](#) (SAFMC). The NOAA ship [Nancy Foster](#) will support this important mission. Multibeam mapping and autonomous underwater vehicle (AUV) operations are the two activities scheduled for this leg of the cruise. Daily field logs, student Q&As, and images will be posted to the mission [Website](#).

**New Hydrocoral Discovered in OCNMS.** [Olympic Coast National Marine Sanctuary](#) (OCNMS) staff, in consultation with marine taxonomic experts, have confirmed the identity of several species of coral documented in the Sanctuary during the June 2006 deep-sea coral and sponge research cruise. OCNMS is excited to report the discovery of a new species of the hydrocoral, *Stylaster*, that has yet to be described.

Sanctuary staff will be forwarding a research cruise report on the results of the research cruise to coastal tribes, Washington State Department of Fish and Wildlife, and the [Pacific Fishery Management Council](#) within the next month; staff will be working with these organizations on management actions to protect this rare and unique habitat.

**Competition Results for Species of Concern Internal Project Funding.** The fiscal year (FY) 2007 competition for [National Marine Fisheries Service](#) (NMFS) internal funding for Species of Concern was recently completed. Two of the 10 funded projects were coral reef-related. The Pacific Islands Region will work with the University of Hawai'i to conduct field surveys of *Lingula reevei*, an inarticulated brachiopod, and *Montipora dilatata*, Hawaiian reef coral. The Southeast Region will receive funding for recovery planning for listed *Acropora* species. Click [here](#) for more information.

**CRW Releases Experimental Doldrums Product Version 0.2.** NOAA [Coral Reef Watch](#) (CRW) released its Experimental Doldrums Product Version 0.2 on April 16. The product identifies regions of sustained low wind speed to help coral reef managers and scientists better assess conditions that may lead to coral bleaching. Lower wind speeds reduce vertical mixing, evaporative cooling, and sensible heat transfer, thereby increasing the likelihood of coral bleaching during summertime maximum water temperatures. The product uses QuikSCAT scatterometry-derived winds and is being developed in collaboration with the Southwest Fisheries Science Center/Environmental Research Division. Unlike the earlier version of this product, the new Version 0.2 now incorporates the duration of these doldrums events by accumulating the number of days over which this condition is met (doldrums days). [Doldrums day images](#) are made available daily, complimenting the operational CRW product suite, and are

available in a series of formats, including Google Earth. CRW is continuing to work with users to further develop the algorithm and test its predictive skill against past bleaching events.

**Change to Operational NOAA CRW Products.** Starting May 3, NOAA [Coral Reef Watch](#)'s (CRW) twice-weekly near-real-time global coral bleaching monitoring [products](#) are now updated every Monday and Thursday morning (U.S. Eastern time). The update has been released on Tuesday and Saturday mornings in the past. This change ensures more world users receive and have access to the updated data during business hours. The users of CRW's Satellite Bleaching Alert (SBA) e-mails and Google Earth products did not need to make any update to the subscription and software settings for this change to take effect. The users who pull these data from CRW automatically will need to change their scripts or programs accordingly.

**CRW Product Climatologies Now Available in HDF Format.** The global 50-km sea surface temperature (SST) climatologies used in producing [Coral Reef Watch](#)'s (CRW) operational satellite near-real-time coral bleaching monitoring products are now available in hierarchical data format (HDF). This [data package](#) includes 12 monthly mean satellite nighttime SST climatologies for producing SST anomaly products and the maximum of the monthly mean SST climatologies, often known as CRW's MMMSST climatology, for generating bleaching HotSpot and degree heating week (DHW) products. With CRW's successful monitoring and prediction of coral bleaching over years and rapid increase of its global user community, CRW has received increased requests from users to obtain these climatologies.

## UPDATES

### *Atlantic*

**CRCP Partners With Puerto Rico to Train Rangers.** NOAA's [Coral Reef Conservation Program](#) (CRCP), in partnership with the [Puerto Rico Department of Natural and Environmental Resources](#) (DNER), held a training workshop on May 15-16, for 40 DNER rangers. The course on marine species identification, including fish, coral, and other invertebrates, was taught in collaboration with DNER staff by Dr. Edwin Hernandez. This was the third in a series of workshops designed to increase DNER rangers' capacity to enforce the Puerto Rico Coral Reef Law and Fisheries Regulations. The main instruction tool was a revised version of the Regulated Marine Species Guide- a photo guide of regulated and similar species, shown as they appear when out of the water. The Guide contains all the Fisheries Regulations amendments including the ones approved in March 2007. The course was implemented with a built-in performance measure in the form of a pre- and post- examination; all rangers demonstrated learning.

**SEFSC Holds Open House to Celebrate NOAA's 200th Anniversary.** In celebration of [NOAA's 200th Anniversary](#), the [Southeast Fisheries Science Center](#) (SEFSC) hosted a two-day [Open House](#) on May 11-12. Over 1100 middle- and high-school students, as well as over 160 members of the general public, attended the event. Several SEFSC coral reef PI's were on hand to talk about coral reef conservation and research with associated displays, posters, and hands-on activities. Displays on corals, coral reef fishes, larval fishes, GIS, SCUBA and research vessels, fishing gear, fish tagging and tracking, mangroves, and a touch tank engaged the public and demonstrated the exciting work done at SEFSC via the [Coral Reef Conservation Program](#).

**SEFSC Completes Second Annual Elkhorn Monitoring in Curaçao.** Two scientists from the [Southeast Fisheries Science Center](#) (SEFSC) and a University of Miami graduate student traveled to Curaçao, Netherlands Antilles in May to collect data on the status and health of [ESA-listed elkhorn coral](#) (*Acropora palmata*). Monitoring sites established in April 2006 were revisited during this trip. This work was leveraged by support from Royal Caribbean Cruise Line and the Education and Research Department of the Curaçao Sea Aquarium. The new information will be added to a comparative database characterizing *A. palmata* condition throughout Florida and the Caribbean.

**Geodetic Marker Installed at *Aquarius* Ocean Laboratory.** A [Florida Keys National Marine Sanctuary](#) biologist, Coral Restoration Monitoring Team member, and the Associate Director of [NOAA's Undersea Research Center](#) at UNC-Wilmington, installed a geodetic marker on Conch Reef near the [Aquarius](#) underwater ocean laboratory. In conjunction with staff from the [National Geodetic Survey](#), survey-grade latitude and longitude data will be collected to accurately mark the location. The marker will be used for training exercises during the upcoming [NASA Extreme Environment Mission Operations](#) (NEEMO) [XII](#) space simulation and training project May 7-18. [Timothy Keeney](#), Deputy Assistant Secretary for Oceans and Atmosphere for NOAA, is scheduled to unveil the marker with astronaut [Heidemarie Stefanyshyn-Piper](#) during a ceremony on Tuesday, May 15.

**NCCOS Scientists Develop Cost-effective Fish Mapping Technique to Assist Coral Reef Resource Managers.** Researchers from NOAA's [National Centers for Coastal Ocean Science](#) (NCCOS) have developed a novel, cost-effective and multi-scale statistical technique for predicting fish species richness across coral reef ecosystems to assist resource managers in identifying species diversity hotspots in surveyed areas and to predict

such hotspots in unsurveyed areas. The technique spatially integrates a wide range of NOAA data sets including field survey data, NCCOS' benthic habitat maps, and [National Geophysical Data Center](#) (NGDC) bathymetry in a geographical information system (GIS) and applies predictive modeling algorithms to produce maps of fish species richness for southwestern Puerto Rico, St. John, and Buck Island, St. Croix. The results were published in the paper, "[Predictive Mapping of Fish Species Richness Across Shallow-Water SeaScapes in the Caribbean](#)" in the May issue of *Ecological Modelling*.

### **300-Year Old Coral May Elucidate Impacts of Freshwater Discharge on Coral Health.**

Researchers sponsored by NOAA's [National Centers for Coastal Ocean Science](#) (NCCOS) produced a chronology of growth rate response from a 300 year-old coral that indicates previously undocumented impacts associated with past freshwater discharge on Florida near-shore coral communities. Such historical information can help optimize watershed management and minimize any adverse effects of Everglades restoration. Scientists at the [National Coral Reef Institute](#) (NCRI) at Nova Southeastern University (NSU), collaborating with scientists from NOAA and Broward County, FL, obtained cores from the oldest known coral in southeast Florida. Assessment of the coral X-radiograph revealed a distinct region of high density and low growth rate, an indicator of coral stress, from approximately 1940 to 1970. This corresponds to a period of dramatically increased freshwater discharge from the Everglades. NCRI researchers will be presenting results at the [International Sclerochronology Conference](#) in July 2007. The NCRI is a Congressionally-directed core component of NOAA's [Coral Reef Conservation Program](#).

**Post-Hurricane Cruise Surveys Northwestern Gulf of Mexico.** A post-hurricane cruise was conducted at several banks in the Northwestern Gulf of Mexico by researchers from [Flower Garden Banks National Marine Sanctuary](#), [Minerals Management Service](#), and contractors PBS&J and Geo-Marine, Inc. The mission goal was to determine whether hurricane impacts occurred during the passage of Hurricane Rita in 2005. SCUBA surveys were conducted on Sonnier, Geyer, and Bright banks. Impacts were most severe at Sonnier Bank, although the development of a visual timeline will be necessary to attribute impacts to hurricanes or anchoring and fishing activities over time. Surveys will be conducted at deeper depths and additional locations by remotely operated vehicle later in the month. Biological sightings of note included scalloped hammerhead sharks, sandbar sharks, Caribbean reef sharks, nurse sharks, a loggerhead sea turtle and a school of over 100 mobulid rays. Invasive orange cup coral, *Tubastrea coccinea*, was documented at both Sonnier and Geyer banks.

**NCCOS-Lead Benthic Habitat Mapping Effort of Puerto Rican Conservation Areas Will Assist Resource Management.** Scientists from NOAA's [National Centers for Coastal Ocean Science](#) (NCCOS) conducted a joint scientific research mission to develop the first comprehensive benthic habitat maps of Conservation Areas, high priority marine protected areas on Puerto Rico's western coast. The [Caribbean Fishery Management Council](#) and University of Puerto Rico also participated in the effort on board the NOAA ship [Nancy Foster](#) from April 14-24. The mission purpose was to help collect data for the maps needed to advance management of these areas; the mission explored and characterized grouper spawning grounds and high density coral reef habitats. High resolution multibeam sonar data were collected at

Bajo de Cico, Abrir La Sierra Bank, and Mona Island. Underwater video of the seafloor was collected at 84 sites. Click [here](#) for more information; the site will also soon include data.

### *Pacific*

**CNMI Holds Second Youth Conferences on Traditional Marine Conservation Practices.** On April 13 and May 23, youth conferences on “Traditional Marine Conservation Practices” were held in Saipan, Commonwealth of Northern Mariana Islands (CNMI). These conferences were targeted at students in grades 4-6 and 9-12, respectively. Both conferences were a great success; the first conference had 186 participants, 150 of whom are students from 10 local elementary schools, and the second had 150 participants, 120 of whom are students at four local high schools. The remaining participants are teachers and administrators. Both conferences started with opening remarks and a presentation, “Preserving Cultural Diversity and Marine Biodiversity.” Seven other guest speakers presented at both conferences, with an eighth presenting only at the second conference. Presentations covered topics such as preserving cultural diversity and marine biodiversity, Carolinian traditional use of the marine environment, the human impacts on traditional fishing, cultural taboos on marine life, the role of the traditional chiefs in relation to marine conservation, traditional Chamorro tools and fishing implements and their use, the impact of development on Chamorro culture and the marine environment, the importance of preserving traditional coastal medicinal plants, and recapturing traditional fishing practices. During afternoon break-out sessions, each workshop’s students came up with a Youth Action Plan for Marine Conservation that lays out what the youth of the CNMI could do to conserve and protect coral reefs.

**FBNMS Creates Reef Exhibit.** The Sanctuary Manager of [Fagatele Bay National Marine Sanctuary](#) (FBNMS) is designing an exhibition of American Samoa’s coral reefs that will be housed in the convention center in Pago Pago. The exhibit is set to open prior to the [U.S. Coral Reef Task Force](#) meeting that will be held there in late August. The exhibits will include an overview of coral reef ecology and the threats they face in American Samoa. Displays on the accomplishments of local coral reef science and management programs, as well as highlights of the Sustainable Reefs Program the sanctuary has been conducting in the territory with the [Ocean Futures Society](#), will be included in the exhibit. The design of the exhibition will consist of a series of display banners that will drop from the ceiling, partitioning a small theater area for viewing films.

**FBNMS Assists in Preparing Traditional Reef Stewardship Workshop for Task Force Meeting.** The Sanctuary Manager of [Fagatele Bay National Marine Sanctuary](#) (FBNMS) is helping to organize a workshop for the [U.S. Coral Reef Task Force](#) (Task Force) meeting that will highlight traditional methods of coral reef stewardship. The meeting of the Task Force in American Samoa provides a unique opportunity for Task Force [members](#) to learn about successful indigenous strategies for managing marine resources from the cultures of Samoa and the South Pacific. As a result, the workshop is proposed to bring together local and regional practitioners of traditional knowledge and management to show meeting participants cases where traditions are being used in the successful stewardship of coral reef resources. The goal is to provide recommendations to the Task Force for implementing policies that will strengthen the role of traditional practices in developing coral reef marine protected areas strategies. The workshop will also serve to enhance local efforts to revive traditional stewardship of FBNMS.

### National/Headquarters

**NOAA Briefs Environmental NGOs on Administration Coral Bill.** The NOAA [Coral Reef Conservation Program](#) (CRCP) held a briefing on Tuesday, May 22 on the Administration's proposal for reauthorization of the Coral Reef Conservation Act. The [Coastal States Organization](#) (CSO) hosted the briefing. The purpose of the briefing was to provide environmental non-governmental organizations (NGOs) with (1) information on the proposed reauthorization to clarify the Administration's intentions and (2) an opportunity for questions and discussion on this important topic. The briefing was also available via conference call for those unable to attend in person. A total of 13 NGOs attended, including the [Ocean Conservancy](#), [The Nature Conservancy](#) (TNC), [World Wildlife Fund](#) (WWF) and the [Marine Conservation Biology Institute](#) (MCBI), among others. The Administration's proposed legislation was delivered to Congress May 8, 2007. The bill, the Coral Reef Ecosystem Conservation Amendments Act of 2007, reauthorizes the Coral Reef Conservation Act of 2000 and adds a variety of additional protections for coral reefs. Additional information including the bill, a section-by-section summary, and a stikethrough that shows changes to existing legislation can be found [online](#).

**CRW and NMSP Discuss Climate Change in Florida.** The Coordinator of NOAA [Coral Reef Watch](#) (CRW), and the Southeast Regional Director of NOAA's [National Marine Sanctuaries Program](#) (NMSP), presented on the impacts that climate change has had and will have on coral reef environments in Florida. They were plenary speakers at the [Florida Climate Change Conference](#) hosted by the University of South Florida and Florida Atlantic University May 9-11 in Tampa. The conference included a wide range of scientists, resource managers, planners, and elected officials. The NMSP Southeast Regional Director discussed declining health of reefs in the Florida Keys over the past 30 years in terms of both coral bleaching and disease outbreaks. CRW's Coordinator focused on the increase in the frequency and intensity of bleaching, the [2005 Caribbean coral bleaching event](#), and expected

change in the future. Both spoke on research and management actions recommended in [A Reef Manager's Guide to Coral Bleaching](#), released last year by NOAA and partners. Their presentations are available [here](#); they are the first two presentations in Science Session 3. In addition, both men were interviewed by news media, including WMNF radio, and part of the CRW presentation was aired on the local NBC-TV affiliate's news broadcast. The conference was developed to make recommendations to Florida's Century Commission that advises state government and others.

**CRCP Holds First Domestic SocMon Workshop.** NOAA's [Coral Reef Conservation Program](#) (CRCP), in partnership with the [Puerto Rico Department of Natural and Environmental Resources](#) (DNER) and the University of Puerto Rico (UPR), held a socioeconomic monitoring workshop in La Parguera, Puerto Rico on April 19-21. This was one of the first domestic applications of the [Global Socioeconomic Monitoring Initiative](#) (SocMon). Dr. Manolo Valdez Pizzini trained Natural Reserve managers in the SocMon methodology for collecting socioeconomic data with emphasis on semi-structured interviews and field observations. It was a dynamic, interactive workshop where some of the managers prepared to teach one of the workshop components. Guest lecturers from the UPR presented on the use of census data and considerations of space and community. A follow-up meeting will occur in June for the presentation of the managers' plans to incorporate socioeconomic monitoring at their respective reserves. Several sites will then be selected for funding to fully implement SocMon, which will allow comparisons to socioeconomic data collected at over 40 other SocMon sites worldwide.

**CRW Coordinator Meets with Florida Reef Resilience Program Team.** The Coordinator of NOAA [Coral Reef Watch](#) (CRW), attended a meeting held April 8 in St. Petersburg, Florida that brought together scientists and managers that participate in the [Florida Reef Resilience Program](#) (FRRP). This collaborative program, which is led by [The Nature Conservancy](#) (TNC), includes state and federal agencies, NGOs, and representatives from industry. FRRP began in 2004 to study reef systems in south Florida to determine factors that increase resilience of coral reef ecosystems to climate change and to apply these to management of the regional marine environment. NOAA has been a partner in this program since its inception and the CRW Coordinator has represented the NOAA [Coral Reef Conservation Program](#) for the last year. CRW is delivering products specifically designed for the FRRP and is working with the University of South Florida to develop 1 km sea-surface temperature (SST) products to meet local and regional needs.

**CRW Scientists Discuss Interagency Collaboration on Ocean Acidification:** Two [Coral Reef Watch](#) (CRW) scientists attended a meeting held April 7 in St. Petersburg, Florida. The meeting brought together scientists from NOAA, the [U.S. Geological Survey](#) (USGS), the University of Miami, and the University of South Florida to discuss existing and planned resources and programs on ocean acidification and carbonate geochemistry. Collaborative work was planned starting in fiscal year (FY) 2008 to improve our understanding of ocean acidification and its influence on marine ecosystems. CRW, together with NOAA's [Atlantic Oceanographic and Meteorological Laboratory](#) (AOML) and academic collaborators, have been working to develop a Reef Metabolic Index (RMI) for Media Luna Reef in La Parguera, Puerto Rico. The RMI couples satellite remote sensing and *in situ* observations to track changes in reef metabolism. Sustained RMI observations can be applied to monitoring changes in community-scale calcification which can be

impacted by ocean acidification. By partnering with the USGS, NOAA can leverage considerable resources thereby greatly enhancing these and future ocean acidification activities.

**New Data in CoRIS.** See page 15.

#### Publications

Bruno, J.F., E.R. Selig, K.S. Casey, C.A. Page, B.L. Willis, C.D. Harvell, H. Sweatman, and A.M. Melendy. 2007. [‘Thermal Stress and Coral Cover as Drivers of Coral Disease Outbreaks.’](#) *PLoS Biology* 5: e124

Intelmann, S.S., G.R. Cochrane, C. Edward Bowlby, M.S. Brancato, and J. Hyland. 2007. [‘Survey report of NOAA Ship \*McArthur II\* cruises AR-04-04, AR-05-05 and AR-06-03: Habitat classification of side scan sonar imagery in support of deep-sea coral/sponge explorations at the Olympic Coast National Marine Sanctuary.’](#) Marine Sanctuaries Conservation Series MSD-07-01. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Sanctuary Program, Silver Spring, MD. 50 pp.

## CORAL REEFS IN THE NEWS

#### Articles Mentioning NOAA

**[“Students Focus on Marine Conservation”](#)** – **May 24, 2007 (Saipan Tribune, Commonwealth of the Northern Mariana Islands).** “Some 120 high school students participated in the Youth Conference on Traditional Marine Conservation Practices in the CNMI held yesterday at Giovanni's Restaurant, Hyatt Regency Saipan.”



**“Reef Doctor’ is Taking a Big Plunge”** – May 14, 2007 (*Miami Herald*, FL). “Biologist Harold Hudson -- known as the Reef Doctor for research and repair work -- is retiring this summer after 50 years of federal service.”

**“Bush Administration Proposes Coral Reef Recovery Fund”** – May 11, 2007 (NOAA press release in *Environment News Service*, DC).

“The Bush administration delivered proposed legislation to Congress Tuesday calling for greater protection for the nation’s coral reefs. The bill, the Coral Reef Ecosystem Conservation Amendment Act of 2007, reauthorizes the Coral Reef Conservation Act of 2000....The proposed legislation would for the first time establish a damage recovery process for the coral reefs in National Wildlife Refuges, and increase the effectiveness of the current authorities for recovering damages to reefs in National Parks and National Marine Sanctuaries.”

**“Suit Planned to Protect Coral Habitat Off Southeast Florida”** – May 10, 2007 (*South Florida Sun-Sentinel*, FL). “An environmental group on Thursday filed notice of plans to sue the federal government to protect the habitat of two species of coral found off southeast Florida....The Endangered Species Act requires the government to designate critical habitat, which is subject to higher legal protection, within one year of adding a species to the list, and the government missed the May 9 deadline.”

**“Bush Bill Bolsters Isle Reef Defenses”** – May 10, 2007 (*The Honolulu Advertiser*, HI). “The Bush administration’s proposed 2007 reauthorization of the 2000 Coral Reef Conservation Act significantly strengthens protections for the nation’s coral reefs and will provide security to a series of Hawai`i-based reef programs, Hawai`i officials said yesterday.”

**“Bush Administration Calls for Greater Protection of Nation’s Coral Reefs”** – May 8, 2007 (NOAA press release on [www.publicaffairs.noaa.gov](http://www.publicaffairs.noaa.gov), US). “The Bush Administration delivered proposed legislation to Congress today calling for greater protection for the nation’s coral reefs. The bill, the Coral Reef Ecosystem Conservation Amendment Act of 2007, reauthorizes the Coral Reef Conservation Act of 2000 and adds greater protections for coral reefs while enhancing marine debris removal and increasing the government’s ability to work through cooperative partnerships.”

#### Other Articles

**“Parliament Investigates Reefs’ Status”** – May 23, 2007 (*Gulf Daily News*, Kingdom of Bahrain). “A probe into the status of two major Bahraini coral reefs was launched by parliament yesterday. A parliamentary committee will investigate reports that Fasht Al Jarem, Bahrain’s largest constellation, was sold for \$785 million (BD295m) and that Fasht Al Adhm has been destroyed.”

**“County Sounds Alarm on Reef Plan”** – May 23, 2007 (*Palm Beach Post*, FL). “The county’s environmental arm has joined the list of experts, scientists and activists who want to preserve one of the area’s most pristine reefs from harmful nutrients. The Department of Environmental Resources Management has recommended that more research be done before Lake Worth is allowed to dump its reverse osmosis effluent about a mile offshore of Lake Worth Beach.”

**“Research to Rescue the Reefs”** – May 22, 2007 ([www.sciencealert.com.au](http://www.sciencealert.com.au), Australia). “A new project by Southern Cross University researcher to re-seed damaged coral reefs in the Maldives has important implications for the recovery of coral reefs around the world.”

**“Indonesia Protects Marine Areas”** – May 21, 2007 (*Frontlines on [www.conservation.org](http://www.conservation.org), VA*). “...This month, Indonesia’s Minister of Marine Affairs and Fisheries Mr. Freddy Numberi formalized traditional community efforts to safeguard marine life when he announced the creation of a network of seven marine protected areas (MPAs) encompassing the region’s diverse coral reefs, mangrove forests, and other coastal ecosystems.”

**“Biodiversity Fades as Coral Bleaches”** – May 21, 2007 (*Inter Press Service News Agency on [www.ipsnews.net](http://www.ipsnews.net), Italy*). “Synonymous with big game and rolling savannahs, Kenya has also garnered fame for a part of its natural heritage that is found off shore, in the form of coral reefs. But, officials warn that higher sea temperatures -- ascribed to climate change -- are taking a toll on these reefs, as well as the diverse marine life they play host to.”

**“Bahamas Scientists Say No-fishing Zones Help Threatened Coral”** – May 19, 2007 (*Associated Press in San Diego Union Tribune, CA and approx. 11 other sources*). “Governments can help save threatened coral reefs by prohibiting fishing nearby, giving species of fish beneficial to coral colonies a chance to flourish, scientists said Saturday.”

**“Sarawak All Geared Up to Live Up to its Tourism Potential”** – May 19, 2007 (*New Straits Times, Malaysia*). “An offshore area, covering nearly 190,000ha, has become the first coral reefs national park in Sarawak. Located in Miri Division and off the Miri and Sibuti coasts, the area was declared a coral reefs national park on Feb 28.”

**“Coral Reefs ‘a Bed of Rubble’”** – May 18, 2007 (*Gulf Daily News, Kingdom of Bahrain and approx. 2 other sources*). “Bahrain risks losing all its vital coral reefs unless action is taken immediately, an environmental expert warned

yesterday. British biologist Dr Charles Sheppard said that excessive excavation, land reclamation, landfill, illegal dumping and pollution - among other things - were already to blame for the destruction of one major coral reef in the country’s waters.”

**“Biodiversity-Philippines: Warmer Seas Threaten Rich Marine Life”** – May 18, 2007 (*Inter Press Service News Agency on [www.ipsnews.net](http://www.ipsnews.net), Italy*). “...‘Coral reefs serve as one of the best barometers of climate change, [Domingo Ochavillo, a marine biologist in the Philippines] said in an interview from Manila. ‘Coral bleaching is an indicator of what is happening due to global warming. We are going to lose our heritage with this.’”

**“Coral Reefs More Resilient Than Thought”** – May 17, 2007 (*United Press International on [www.earthtimes.org](http://www.earthtimes.org), DC and approx. 5 other sources*). “...Florida Institute of Technology research suggests the impact of coral reef bleaching, believed to be caused by global warming, might be mitigated through effective local management.”

**“Lowly Manini an Algae Control”** – May 16, 2007 (*The Maui News, HI*). “...‘If people can raise herbivore (planting eating) stocks quite substantially, I believe it will have a big impact,’ said coral reef ecologist Ivor Williams of the Hawaii Coral Reef Initiative and the state Division of Aquatic Resources. With manini, that shouldn’t be that hard.”

**“Investigating Coral Reefs to Understand Past and Future Climate Change”** – May 16, 2007 (*[www.huliq.com](http://www.huliq.com), NC*). “...Reconstructing past environments may lead to a better estimate of the climate sensitivity and hence of future climate change. Fossil coral reefs can be used to accurately reconstruct past sea level variations, climate change and environmental perturbations.

According to [Gilbert] Camoin, they provide the most precise records of sea-level changes.”

**“Nature Foundation Urges Dive Operator to Protect Coral Reefs”** – May 16, 2007 (*The Daily Herald, Netherlands Antilles*). “It is incomprehensible that a dive tour operator would anchor on a reef, the very reef that provides a source of financial income through its inherent value and the natural beauty such an ecosystem affords.’ This was the word from Nature Foundation St. Maarten in support of Ocean Care Foundation, which has expressed outrage and worry about dive operators damaging the coral reefs around the island with anchors and other careless practices.”

**“Sustainable Economic Development for Developing Nations”** – May 14, 2007 ([www.worldchanging.com](http://www.worldchanging.com), WA). “....Thomas Goreau with the coral-growing company Biorock stressed the importance of bolstering struggling coral reefs, which are dying in many areas because of global warming, pollution, and other human impacts....He described how his company is promoting the use of underwater steel structures that, when charged with an electric current, can help coral communities grow at 3 to 5 times the natural rate.”

**“Are the Reefs Dying?”** – May 13, 2007 (*The Hindu, India*). “As latest research confirms the effect of climate change on the coral reefs of the Great Barrier Reef, Australia is gearing to deal with the threat to its greatest natural resource.”

**“Cayman Coral Reefs ‘Critical’”** – May 12, 2007 (*Telegraph, UK*). “....The reef system of the British Caribbean territory has lost 50 per cent of its hard corals in the past 10 years, marine experts report.”

**“Hawaii Biologists Use Sea Urchins, Fish to Control Seaweed”** – May 11, 2007 (*Associated Press* on <http://cnews.canoe.ca>, Canada).

“Biologists fighting invasive seaweeds taking over Hawaiian reefs are using native sea urchins and fish to help control the aggressive plants.”

**“Anchoring Banned to Protect Corals”** – May 11, 2007 (*Worcester Telegram, MA*). “The government has banned cruise ships from anchoring at a port where their massive chains have destroyed coral reefs, the Port Authority director said.”

**“Mind and Hand—and Rebar”** – May/June 2007 (*Technology Review, MA* and approx. 1 other source). “....This January, [Gerardo Jose] la O’, whose funding came in part from the prize money his team received for winning the 2005-2006 MIT IDEAS Competition ([web.mit.edu/ideas](http://web.mit.edu/ideas)), led two MIT -students to Sagay City and its neighboring reefs to install electric--powered coral--restoration devices called Biorocks, which are rebar rods assembled into a mesh and molded into reeflike shapes.”

**“Climate Change Fosters Coral-Eating Starfish”** – May 10, 2007 (*Inter Press Service News Agency* on [www.ipsnews.net](http://www.ipsnews.net), Italy).

“....‘The ocean around Kushimoto has become one degree warmer compared to the 1970s, and this is causing the proliferation of coral-destroying starfish. Removing the animals is hard work but our divers are eager to help,’ says Keiichi Nomura, biologist at the marine park.”

**“Climate Change with Cold Currents is Reported to Have Caused Damage to Coral Reefs at Hin Muang Hin Daeng Near Krabi”** – May 9, 2007 (*Thais News, Thailand*). “The climate change with cold currents in April is reported to have caused the deaths of marine animals like fish and damaged about 20 % of the coral reefs in certain spots in Krabi province’s part of the Andaman Sea.”

**[“FDA Now Confirms Local Ciguatera Case”](#)** – **May 8, 2007** (*Galveston County Daily News, TX and approx. 3 other sources*). “The U.S. Food and Drug Administration confirmed Monday that the Galveston couple sickened after eating a Gulf of Mexico grouper were victims of ciguatera toxin.”

**[“Healthy Coral Reefs Hit Hard by Warmer Temperatures”](#)** – **May 7, 2007** (**National Science Foundation press release on [www.nsf.gov](http://www.nsf.gov), VA and approx. 5 other sources**). “Coral disease outbreaks have struck the healthiest sections of Australia's Great Barrier Reef, where for the first time researchers have conclusively linked disease severity and ocean temperature. Close living quarters among coral may make it easy for infection to spread, researchers have found.”

**[“Famous Caymans Coral Reefs Dying, Scientists Say”](#)** – **May 6, 2007** (*Scientific American, NY*). “To coral reef-driven tourism industries like those of the Cayman Islands, there could be a greater cost in ignoring climate change than fighting it. Ranked among the top 10 scuba diving destinations in the world, the reef system of the western Caribbean territory has lost 50 percent of its hard corals in the last 10 years in spite of strong environmental laws, scientists say.”

**[“A World Without Corals?”](#)** – **May 4, 2007** (*Science, D.C. and approximately 15 other sources*). “Besieged by pathogens, predators, and people, the ‘rainforests of the sea’ may soon face their ultimate foe: rising ocean acidity driven by CO<sub>2</sub> emissions.”

**[“Fractured Paradise”](#)** – **May 4, 2007** (*Science, D.C.*). – **May 4, 2007** (*Science, D.C.*). “...During surveys carried out a few days after the tsunami, Nippon and his colleagues at the Phuket Marine Biological Center discovered the shallow seabed at Paradise and Lolana littered with pieces of branching corals, particularly

staghorn and other members of the Acropora genus. Realizing that the polyps would be abraded to death in the rough-and-tumble waters, Nippon's group gathered up hundreds of Acropora fragments in a bid to save them.”

**[“Palau Combats Coral Bleaching”](#)** -- **May 4, 2007** (*Science, D.C.*). “...In the summer of 1998, unusually warm ocean temperatures killed a third of the reefs ringing this tiny archipelago in the western Pacific. But here in the Ebiil Channel Conservation Area off Babeldaob, Palau's main island, underwater denizens have roared back to life with exceptional vigor.”

**[“Nemo Really Can Find Way Home”](#)** – **May 4, 2007** (*The Australian, Australia and approx. 5 other sources*). “...An Australian-led team of coral reef scientists has discovered that 60 per cent of clownfish complete the journey back to their reef of origin after being swept into the open ocean as babies. The team of Australian, American and French scientists say they have achieved a world breakthrough that could revolutionise the sustainable management of coral reefs and help restore threatened fisheries.”

**[“Spotts Cruise Anchoring Banned”](#)** – **May 3, 2007** (*Caymanian Compass, Cayman Islands and approx. 6 other sources*). “‘Because of the damage to living coral reefs caused by ships’ anchors at Spotts, cruise ships are no longer allowed to anchor at this location,’ said Port Authority Director Paul Hurlston in a press release.”

**[“Digital Field Guide for Magnetic’s Marine Life”](#)** – **May 2, 2007** (*Magnetic Times, Australia*). “Magnetic Island Marine Scientist Dr Andy Lewis has, after 12 months, compiled the first volume of the Magnetic Island Coral Reef Field Guide.”

**“Two New Species of Coral Found Off Coast of Oman”** – May 1, 2007 (*Times of Oman, Sultanate of Oman and approx. 10 other sources*). “Two new species of coral have been discovered off the Omani coast, as well as other existing coral species that had previously not been known to live in the region.”

**“Taiwan Kicks off Coral Reef Conservation Week in Southern Taiwan”** – April 30, 2007 (*Radio Taiwan International, Taiwan*). “Taiwan has kicked off coral reef conservation week in southern Taiwan. The event coincides with the spawning season for the coral off the southern coast of the island.”

**“Reef Invader: The Crown of Thorns Starfish”** – April 30, 2007 (*The Environmental Magazine, CT*). “Corals reefs are dying at an unprecedented rate, due in large part to a brightly colored predatory invader.”

**“Coremap Focuses on Local People Empowerment to Protect Coral Reefs”** – April 28, 2007 (*Antara News, Indonesia*). “The Coral Reef Rehabilitation and Management Program (Coremap) has given a priority to the empowerment of local people to help protect coral reefs in Biak Numfor District, Papua Province.”

**“Government to Take Steps to Protect Coral Reefs”** – April 27, 2007 (*Daily Yomiuri, Japan*). “The Environment Ministry will revise the range of nature preserves, such as nature conservation areas and natural parks, to protect coral reefs, the ministry said. The decision came after the International Coral Reef Initiative passed a resolution at its general meeting this week in Tokyo, calling for the establishment of an international network for protected marine areas.”

**“Public Voices Concerns Over Ocean Waste Discharge”** – April 27, 2007 (*Cayman Net News, Cayman Islands*). “Following on from recent reports of the illegal dumping into Grand

Cayman’s sewage system, further concerns have been raised about water purity, this time regarding waste discharge into the coastal waters off the Island.”

**“Ocean Care Collects Reef Check Coral Reef Monitoring Protocol”** – April 27, 2007 (*Netherlands Antilles Daily Herald, Netherlands Antilles*). “The Ocean Care foundation has picked up its Reef Check coral reef monitoring protocol. The protocol, which is done on an international scale, is used to gauge the health of coral reefs around the world. Groups of volunteer divers, lead by Ocean Care, record information on the health and diversity of coral reef, as well as on reef fish and invertebrate populations.”

**“Wrecks Worry Seaisiders”** – April 25, 2007 (*The Fiji Times, Fiji*). “Members of a coastal settlement opposite Suva harbour are concerned about the damage to their environment by old wrecks and derelict vessels which have surfaced inside their qoliqoli or traditional fishing ground.”

**“GMA Wants Climate Change Taught in Schools”** – April 24, 2007 (*Manilla Standard Today, Philippines*). “...[President Gloria Macapagal Arroyo] sought the public’s cooperation in carrying out the Green Philippines Plan drawn up by the Department of Environment and Natural Resources. She said the plan would include reforestation, preservation of reefs and waterways, removal of land and air pollutants, and energy independence.”

**“Beautiful Oceans Offers First Dive Vacations and Eco-courses that Address Global Warming – a New Standard for Sustainable Eco-tourism”** – April 24, 2007 (*Beautiful Oceans press release on Canada News Wire, Canada*). “Beautiful Oceans, a progressive eco-dive tour operator and premier coral reef education organization, today announced that it will address the impact of global warming from all its eco-dive vacations by carbon offsetting of customer flights and dives. This

groundbreaking step, which represents a first in the dive travel industry, is made possible by the 'carbon calculator' - an initiative of Sustainable Travel International (STI), adapted for the diving industry by Ocean Frontiers in Grand Cayman."

**["Save Guana Cay Reef Association to Attend United Nations Event"](#)** – April 23, 2007 (*The Freeport News, Bahamas*). "Save Guana Cay Reef Association (SGCRA) has been invited to send delegates to the United Nations Commission, who will be discussing Sustainable Development in third world countries, at their New York City offices, in early May.... Loss of mangroves, threats to coral reefs, and fish habitat will be their primary focus. The group will be joining other organizations in presenting the issue on the floor of the UN on May 7, at which time they hope to capture the attention of the world as they work to save The Bahamas' reefs, beaches and oceans."

**["Researchers Find Large-Scale Death of Coral in Indonesia"](#)** – April 23, 2007 (*Voice of America, D.C.*). "Scientists have discovered that an earthquake two years ago in Indonesia lifted hundreds of kilometers of sea floor out of the water, causing the largest death of coral reefs ever recorded. As Chad Bouchard reports from Jakarta, this is only one of several threats facing Indonesia's fragile marine ecosystems."

**["Auberge Resorts and Partners Create the St. Kitts Foundation to Focus on Environmental and Community Programs in St. Kitts"](#)** – April 19, 2007 ([www.SKNVibes.com](http://www.SKNVibes.com), St. Kitts and Nevis). "...The St. Kitts Foundation, a fund of The Ocean Foundation, is hosting the "Southeast Peninsula Marine Ecosystem Survey Week" on the island of St. Kitts to get a real-time snapshot of the fish and corals these waters harbor and their current health status. These data will be used in support of the Federation's current efforts to create a Marine Management Area network. Two expert

US-based organizations, REEF and Reef Relief, will lead local divers in on-land trainings and in-water surveys."

**["Coral Reefs: Method Amid the Madness"](#)** – April 19, 2007 (*The New Straits Times, Malaysia*). "Coral reefs are one of Malaysia's most important natural assets and have been abused for too long."

## UPCOMING EVENTS

### June 2007

4 – 8: **33<sup>rd</sup> Scientific Conference of the Association of the Marine Laboratories of the Caribbean**. St. Thomas, U.S. Virgin Islands.

[www.amlc-carib.org](http://www.amlc-carib.org)

13 – 17: **21<sup>st</sup> Pacific Science Congress**. Okinawa, Japan. [www.psc21.net](http://www.psc21.net)

### July 2007

1 – 5: **Society for Conservation Biology, 21<sup>st</sup> Annual Meeting**. Port Elizabeth, South Africa.

<http://www.nmmu.ac.za/scb/>

17 – 21: **First International Sclerochronology Conference 2007**. St. Petersburg, FL.

<http://conference.ifas.ufl.edu/sclerochronology/>

22 – 26: **Coastal Zone '07**. Portland, OR.

<http://www.csc.noaa.gov/cz/index.html>

### August 2007

20 – 23: **18<sup>th</sup> U.S. Coral Reef Task Force Meeting**. Pago Pago, American Samoa. Look for detail at

<http://www.coralreef.gov/taskforce/meetings.html> in the future.

27 – 29: **Bleaching Tools Workshop**. Pago Pago, American Samoa. Contact [Jessica.Morgan](mailto:Jessica.Morgan) to register or for more information.

### September 2007

25 – 28: **European Symposium on Marine Protected Areas**. Murcia, Spain.

<http://www.mpasymposium2007.eu/index.html>

## New Data in CoRIS.

| Product Name                                                                                                                                                                                                                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>NOS/NCCOS Seafloor Characterization of the U. S. Caribbean USVI 2005 Multibeam Bathymetry, Rugosity, Slope and Color by Depth Products</p>                                                                                                      | <p>This multibeam data was collected as IOCM (Integrated Ocean and Coastal Mapping) project NF-05-05 during the second year of an ongoing NOAA scientific research mission in the US Caribbean to characterize nearshore coral reef habitats at depths down to 300 meters. The mission purpose is to better understand the resources within the surveyed reef habitats, and ultimately develop species utilization models linking physical habitats with biological information. The multibeam backscatter, multibeam bathymetry, and ground truth video footage collected during the 2005 mission will be used internally to characterize sea floor topography and to create benthic habitat maps, helping NOAA meet its mapping commitment to the US Coral Reef Task Force. The resulting publicly-distributed data is also a contribution to the greater scientific community interested in the USVI seafloor.</p> |
| <p>Link: <a href="http://www.coris.noaa.gov/metadata/records/html/nccos_bathymetry_2m_grid_grammanik_bank_st_thomas_2005.html">http://www.coris.noaa.gov/metadata/records/html/nccos_bathymetry_2m_grid_grammanik_bank_st_thomas_2005.html</a></p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>Coral Reef Ecosystem Division (CRED), NOAA Pacific Island Fisheries Science Center, Tethered Optical Assessment Device (TOAD) Video Data</p>                                                                                                    | <p>Optical validation data were collected using a Tethered Optical Assessment Device (TOAD), an underwater sled equipped with an underwater digital video camera and lights. Data were collected in the Pacific Remote Islands Area (PRIA) to support Benthic Habitat Mapping efforts. These data provide optical observations that will be correlated with bathymetry and acoustic backscatter imagery to develop a benthic habitat map of Howland.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p>Link: <a href="http://www.coris.noaa.gov/metadata/records/html/cred_toad_howland_2002.html">http://www.coris.noaa.gov/metadata/records/html/cred_toad_howland_2002.html</a></p>                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

