

CORAL REEF NEWS
Coral Reef Conservation Program
National Oceanic and Atmospheric Administration
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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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ANNOUNCEMENTS

CRCP Featured on NOAA's 200th Anniversary Website. NOAA has now officially launched its 200th anniversary celebration, including a Website full of history, transformations, and visions for the agency's future. The Coral Reef Conservation Program (CRCP) was invited to contribute articles to the [Foundations](#) and [Visions](#) sections of the website. Additionally, Coral Reef Watch (CRW) was invited to create a magazine-style feature tracing the origins of CRW's satellite coral monitoring products entitled "[Technology and the Study of Coral Reefs: How a Handful of Students Changed the Way NOAA Does Business.](#)" Many thanks to all the CRCP matrix staff involved in the creation and editing of these articles.

ICRI Secretariat Changeover. At the October 21-23 International Coral Reef Initiative (ICRI) meeting in Cozumel, Mexico, representatives of the Governments of Mexico and the United States formally offered to host the 2007-2009 ICRI Secretariat. The offer was accepted by acclamation by the ICRI membership. The joint Mexico-U.S. secretariat will begin July 1, 2007 and extend until June 30, 2009. Visit the [ICRI Web](#) site for more information.

"Our Sea of Islands" International Forum Planned for January 2007. The newly-established Northwestern Hawaiian Islands Marine National Monument (Monument) has created opportunities for collaboration and information sharing between the U.S. and Oceania. The Monument will take advantage of some of those opportunities January 28- February 2 when, on behalf of the U.S., the Monument will partner with the UNESCO World Heritage Center to host the "Our Sea of Islands" Regional Forum for Oceania on Marine Managed Areas and World Heritage. This forum will bring together representatives from over 20 Pacific States 'to build local and regional pride across Oceania and enhance our natural and cultural heritage through

information sharing, relationship building, and adaptive use of management tools regarding marine managed areas.' The forum will include work sessions such as: Science: An Integral Element of Effective Management; Customary Marine Management Practices in Oceania; Marine Managed Area Representation/Networks; Remote Surveillance and Enforcement; Conservation Finance; and a larger session relating to using international designations such as World Heritage to add value and benefits to marine managed areas. By bringing key people together from Pacific government agencies, non-government organizations, communities, and inter-national organizations active in marine protection, the forum will allow all parties to focus on common issues and to enhance its collective capacity to effectively care for our marine resources and important near-shore areas.

Notice of Public Review and Comment Period for Coral Response and Restoration Guidelines for Florida. The Department of Environmental Protection, Office of Coastal and Aquatic Managed Areas, Southeast Florida Coral Reef Initiative (SEFCRI) announces a public review and comment period for the Maritime Industry and Coastal Construction Impacts (MICCI) focus team's "Project 2: Guidelines for rapid response to, and restoration of, coral reef injuries in southeast Florida." The document is intended to provide guidance for agency policies concerning injuries to coral reef ecosystems, including technical guidelines for triage and restoration of such injuries. This document was created as a result of a two-day workshop involving agencies with relevant emergency response processes. The focus of the workshop was to: 1) Research the existing agency emergency response processes of agencies to identify current procedures, and 2) Compile existing technologies and procedures for triage and restoration of damaged coral habitats. The public review and comment period is from *Friday, December 1st, 2006 through Monday, January 1st, 2007.* Click [here](#) for a copy of the

draft document, or contact [Nikki Poulos](#), MICCI Program Coordinator. Please send your comments via e-mail to [Lisa Gregg](#).

UPDATES

Atlantic

Enforcement Workshop in Puerto Rico. On Nov 1-3, an information exchange between enforcement disciplines was held at the Puerto Rico (PR) Department of Natural and Environmental Resources (DNER) for the purpose of strengthening enforcement of local coral reef and fisheries laws. The workshop began with presentations on the laws and regulations and on the importance of the marine resources. Other key presenters included representatives of the Tribunal of Puerto Rico, PR Department of Justice, Florida Keys National Marine Sanctuary Enforcement Team, PR DNER Ranger Corps and the DNER Legal Division. Each discipline reported on their roles and responsibilities and their perspective on enforcement. The discussions included case preparation, handling of evidence, confiscation and boarding issues. Expanded discussion periods and presentation of two mock cases yielded much informal discussion about issues and recommendations. Participants mostly included PR DNER rangers and PR Police Department-Rapid Action Forces that are also responsible for enforcing coral reef and fisheries laws and regulations. In addition, the Cordillera Natural Reserve manager conducted a field workshop for the participants.

CITES Appendix II Listing Proposal for *Corallium*. A draft Appendix II listing proposal for precious corals in the Genus *Corallium* have been submitted to the Fish and Wildlife Service (FWS) for possible submission to the next Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) Conference of the Parties. The next Conference will be held in the Netherlands, June 3-15, 2007. Appendix II species can still be traded

internationally, but shipments must include an export permit from the country of origin issued based on a finding of non-detriment and legal acquisition. *Corallium*, the most valuable type of precious coral in trade, is collected and traded in large quantities (on the scale of millions of items and thousands of kg per year) as jewelry, art and as raw coral skeletons. *Corallium* spp. exhibit life history characteristics that make them vulnerable to overfishing, including a sessile growth form, slow growth rates (<1 cm/year), a relatively late reproductive maturity (7-10 years), reproductive output that increases with size (age), long life spans (100+ years), and limited dispersal potential. *Corallium* fisheries have been characterized by exploration, discovery, 4-5 years of intensive harvest within individual beds, followed by overexploitation. Commercial yields of *Corallium* peaked in 1984 at 450 metric tons (mt), declined to 40 mt by 1990, and have fluctuated between 28-54 mt over the last 15 years. The *Corallium* fishery also causes significant damage to coral habitats due to non-selective removal using gear types that destroy bottom features and remove all benthic organisms in their path. Many of the most damaging, unregulated fisheries are occurring on the high seas. If the U.S. decides to move forward, a final proposal must be submitted to CITES on January 4. Copies of the proposal are available upon [request](#). Look for more information on the Habitat Conservation Web site in the near future.

CITES Appendix II Listing Proposal for Banggai Cardinalfish. A draft Appendix II listing proposal for the Banggai cardinalfish, *Pterapogon kauderni*; has been submitted to the Fish and Wildlife Service (FWS) for possible submission to the next Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) Conference of the Parties. The next Conference will be held in the Netherlands, June 3-15, 2007. Appendix II species can still be traded internationally, but shipments must include an export permit from the

country of origin issued based on a finding of non-detriment and legal acquisition. The Banggai cardinalfish, *Pterapogon kauderni*, is a marine fish endemic to Banggai Archipelago in Indonesia. It has been negatively affected by heavy collection pressure for the aquarium trade and is highly vulnerable to extinction if trade continues at current rates. Harvest and trade first began in 1995, and has increased to an estimated 700,000-900,000 fish/yr. This species has an extremely limited geographic range (5,500 km²) and small total population size (estimated at 2.4 million). It exhibits unique reproductive characteristics that make it vulnerable to overexploitation including 1) low fecundity; 2) an advanced degree of parental care and elevated energy allocation per offspring; 3) direct development; 4) long oral incubation period; 5) lack of a planktonic interval; and 6) juvenile settlement within parental habitat. If the U.S. decides to move forward, final proposals must be submitted to CITES on January 4. Copies of the proposal are available upon [request](#). Look for more information on the Habitat Conservation Web site in the near future.

Status and Exploitation of Reef Resources on Navassa Island. The Southeast Fisheries Science Center completed the biennial reef assessment cruise to Navassa Island National Wildlife Refuge on November 20, 2006. During the three-week cruise, over 300 dives were accomplished. This biennial assessment of reef fish, fishing activities, benthic community composition, and coral condition was supplemented by targeted activities related to listed *Acropora* spp. corals. Surprisingly, a severe coral bleaching event was discovered and characterized. On the positive side, continued expansion and excellent condition of *Acropora palmata* populations was documented. Over 1800 *A. palmata* colonies were mapped via GPS and in water observation (snorkel) over 6.8 km of the islands' total 9 km perimeter. Also, 77 colonies were tagged, photographed, and biopsied for genotyping and future demographic monitoring. An unexpected

lack of net fishing, contrary to 2002 and 2004, was observed. This is worth noting in that net fishing is a more intensive gear and was reported responsible for substantial take of conch and bycatch of hawksbill sea turtles in past years.

Puerto Rico Sea Grant-Sponsored Program Wins Emmys. Puerto Rico Sea Grant-sponsored television program, GeoAmbiente, won four Emmys at the National Academy of Television Arts and Sciences Suncoast Chapter's annual Emmy awards night December 2 in Miami Beach, Florida. GeoAmbiente and its producer, Maria Falcon, won Emmys for the coastal and marine-resources related programs *Corales de Culebra: En Agonia (Corals in Culebra: In Agony)*, *Rio Cubuy: Ecoturismo en Potencia, (Cubuy River: Potential for Ecotourism)* and *Punta Guaniquilla: Paisaje Natural Unico (Point Guaniquilla: A Unique Natural Landscape)*. University of Puerto Rico Sea Grant sponsors GeoAmbiente by providing underwater photos and video and suggesting themes and expert contacts as well as serves as a technical resource. GeoAmbiente, which airs weekly on WIPR, Puerto Rico's television station affiliated with PBS, is a key resource for information about the wise use and conservation of coastal and marine resources in Puerto Rico.

'Long Life to the Coral Reefs' Spanish Language Lessons Completed. A video containing seven classroom lessons and exercises was recently completed by GeoAmbiente del Caribe, Inc. for Spanish-speaking children in Puerto Rico. NOAA Fisheries Service Caribbean Field Office provided funding to enable the animation of segments of the lessons, which are part of a project partially funded through NOAA's Coral Reef Conservation Program. The project is a collaboration between GeoAmbiente, the 4-H Clubs of Puerto Rico, and the University of Puerto Rico Agricultural Extension Service. Click [here](#) for more information.

CCRI Launches Website. The [Caribbean Coral Reef Institute \(CCRI\)](#), sponsored by NOAA's National Centers for Coastal Ocean Science (NCCOS), recently launched a Website describing its efforts to address short and long-term management-driven priorities for understanding and managing coral reef ecosystems of the U.S. Caribbean. The Website delivers user-friendly facts about the Institute, as well as a summary of CCRI projects, including project milestones and management implications. CCRI is funded through a Cooperative Agreement by NOAA to the University of Puerto Rico at Mayagüez. The CCRI funding is administered by NCCOS, and is a core component of NOAA's [Coral Reef Conservation Program](#).

New Flower Garden Banks National Marine Sanctuary Website Goes Live. The new version of the Flower Garden Banks National Marine Sanctuary [Website](#) went live on Wednesday, November 29. The new site matches the layout and look of the main sanctuaries website, and includes many new additions. A prominent feature of the new web site is the Management Plan Review section which will keep constituents up-to-date on the progress of this review. In addition, most of the sanctuary's education materials can now be downloaded directly from the site's document library. Check back often for additions.

New Reports Posted on SEFSC Website. The Southeast Fisheries Science Center (SEFSC) [2004-2006 accomplishments report](#) and Margaret Miller's Navassa project socio-economic report, "[Oral History and Contemporary Assessment of Navassa Island Fishermen](#)" are now available on the SEFSC Website.

Pacific

CY 2007 and CY 2008 Funding Opportunity for Coral Reef Research in the Pacific. The Hawai'i Undersea Research Laboratory (HURL), a NOAA Undersea Research Program Center, in partnership with the NOAA Coral Reef Conservation Program is soliciting research pre-proposals for coral reef research for FY2007 and FY2008. Geographic regions of interest are the State, Territories and Freely Associated States of the Pacific. This funding opportunity is for one- to two-year research projects that address one or more of the following key threats facing U.S. coral reefs: overfishing, pollution, invasive species, disease, climate change, and coral bleaching. Proposals should be geared towards management-oriented research. Pre-proposals are due to HURL on December 29, 2006. Click [here](#) for more information and the pre-proposal full announcement, or contact [Dr. John R. Smith](#).

NCCOS Funding to Enhance Enforcement of Environmental Laws in Hawai'i. The Hawai'i Department of Land and Natural Resources (DLNR) has signed a memorandum of agreement (MOA) with the Attorney General's Office, University of Hawai'i (UH) School of Law's Environmental Law Program and the National Centers for Coastal Ocean Science (NCCOS)-sponsored Hawai'i Coral Reef Initiative-Research Program (HCRI-RP). The MOA will create a new one-year law fellowship to enhance enforcement of Hawai'i's environmental laws. Funded by NCCOS' HCRI-RP, the law fellow will work directly with the DLNR's Division of Aquatic Resources and focus on prosecuting violators of the State's laws that protect marine resources. Blaine Rogers, aUH Law Graduate who received his J.D. degree in May and his Certificate in Environmental Law at the William S. Richardson School of Law, will be the first DLNR law fellow. The HCRI-RP was established in 1998 to support scientific research and monitoring to protect Hawai'i's coral ecosystems, with funds provided

through a Cooperative Agreement between NOAA and the University of Hawai`i. The HCRI-RP funding is administered by the NCCOS' [Center for Sponsored Coastal Ocean Research](#), and is a core component of NOAA's Coral Reef Conservation Program.

CNMI Fishermen's Workshop. The Commonwealth of the Northern Mariana Islands (CNMI) Fishermen's Workshop was held on December 7 in Saipan. There were 53 participants attending the workshop. The goal of the workshop was disseminate information to the fishermen on different marine environmental research, education and management projects being conducted in the CNMI. Topics of the workshop included "Protecting Our Coral Reefs," "Traditional Marine Conservation Knowledge and Practices," "Marine Protected Areas and Fisheries Regulations," "Inshore Creel Survey," and "Turtle Investigation." Marine educational resource materials were also disseminated to the fishermen during the workshop. To date, seven posters, three brochures, a calendar and a fishing regulation booklet have been published. Information was also gathered from the participants on different ways fishermen can actively participate in marine resource management, policy, education and conservation of the CNMI. The issues, problems and concerns of the fishermen were also prioritized during the workshop. The workshop was very successful and received high evaluations and praise from the participants.

International

Larval Reef Fish Ecology Workshop Held in Kuwait. John Lamkin from the Southeast Fisheries Science Center (SEFSC) and Art Kendall, retired from the Alaska Fisheries Science Center (AFSC), recently completed a larval reef fish ecology workshop at the Kuwait Institute for Scientific Research. The two-week course focused on larval reef fish taxonomy, sampling techniques and recruitment of reef fish

populations. The Kuwait Institute of Scientific Research is trying to develop reef fish management programs and institute ichthyoplankton surveys. The workshop was well received and there are future plans to conduct an Arabian Gulf regional workshop as well.

National/Headquarters

Democratic Staff Briefing on Ocean Acidification and Coral Reefs. Dr. C. Mark Eakin and Dr. Dwight Gledhill of NOAA/NESDIS Coral Reef Watch (CRW) were requested to brief the Senate Commerce Committee Democratic staff and Senator Inouye's staff on the impacts of ocean acidification on coral reefs. The briefing focused on: how increasing atmospheric CO₂ is changing ocean chemistry; the impacts of ocean acidification on marine calcifying organisms such as corals; ongoing and future research and monitoring (Hawai`i-specific and general); and steps that can be taken to reduce vulnerability of corals to stressors that can be controlled by managers at the local level. Important points were raised regarding the extremely rapid rate at which oceanic pCO₂ is increasing and that we have now entered a period during which we expect rapid changes in the ability of corals and other organisms to build their skeletons. Eleven staffers from the Senate Commerce Committee and the offices of Sen. Inouye (D-HI), Sen. Cantwell (D-WA), Sen. Bill Nelson (D-FL), Sen. Kerry (D-MA), and Sen. Lautenberg (D-NJ) attended the briefing. Senate staff raised several issues of interest including the potentials to curtail ocean acidification through reducing CO₂ emissions, economic impacts, and potential for local responses to ocean acidification. Further requests for information in response to the briefing are expected. NOAA CRW is advancing the development of tools that couple satellite monitoring to *in situ* observations to track changes in coral reef ecosystems in response to ocean acidification.

CRW Scientist Meets with Government Accountability Office on Climate Change and Federal Lands. Dr. Mark Eakin, coordinator of NOAA/NESDIS Coral Reef Watch (CRW), served as a member of a NOAA team meeting with officials from the Government Accountability Office (GAO) to develop a case study for its report on Climate Change and Federal Lands. Other NOAA attendees included scientists, marine sanctuary management staff, and management and budget employees of NOAA's National Ocean Service and National Marine Fisheries Service. A few weeks ago, Dr. Eakin served on the Oceans and Coasts Panel of a GAO Expert Workshop on the topic. This meeting was a follow-up to investigate NOAA activities in the Florida Keys as one of four sites planned to serve as case studies for the report.

NOAA Coral Reef Watch Presents Satellite Training Workshop in Silver Spring. On December 13, the entire Coral Reef Watch (CRW) team conducted a training workshop for local collaborators in Silver Spring, Maryland. The workshop curriculum, originally funded under the World Bank/Global Environment Facility (WB/GEF) Coral Reef Targeted Research (CRTR) program in collaboration with the NOAA Coral Reef Conservation Program (CRCP), is designed to build capacity for using CRW's satellite remote sensing tools that warn of regions at risk for coral bleaching. The successful workshop included participants from two DC-based NGOs and NOAA collaborators from the three of the four CRCP-matrix line offices.

NOAA Coral Reef Watch Meets with International Scientists on Light Products. Drs. Mark Eakin and William Skirving from the NOAA Coral Reef Watch (CRW) program traveled to Mexico to visit with Dr. Roberto Iglesias and Prof. Ove Hoegh-Guldberg, two of the world's top scientists in understanding coral physiology related to light and temperature and the processes that lead to mass coral bleaching.

The visit was prompted by the ongoing development of a satellite-derived solar radiation product by a team from NOAA/NESDIS/STAR. The aim of the meeting was to determine the current level of understanding of the physiological response of corals to stress from combinations of light and temperature. A new algorithm was developed as a result of the meeting; it is hoped it will not only improve upon the capabilities of the current CRW suite of products to predict the onset of coral bleaching, but will also indicate the eventual mortality rates as a result of light/temperature stress. An experimental GOES-based insolation product should be available within a few months.

CoRIS Adds New Ecosystems Characterization Essay. Navassa Island is featured as the second in a series of essays on coral reef ecosystems in United States jurisdictions. The essays will cover jurisdictions in the Atlantic and Pacific Oceans, and the Gulf of Mexico. The essay on Navassa Island offers up-to-date information on the status and health of the coral reef ecosystem and provides links to CoRIS-held metadata and data. Read the new essay [here](#).

New Products in CoRIS. See table on Page 11.

Publications

Schittone, J., Franklin, E.C., Hudson, J.H., Anderson, J. 2006. "[M/V Connected Coral Reef Restoration Monitoring Report, Monitoring Events 2004-2005](#)". Florida Keys National Marine Sanctuary Monroe County, Florida. Marine Sanctuaries Conservation Series NMSP-06-10. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Sanctuary Program, Silver Spring, MD. 37 pp.

CORAL REEFS IN THE NEWS

Articles mentioning NOAA

“Caribbean Coral in Hot Water.” – November, 2006 (*National Geographic, Environment section, US*). The November issue of the magazine features a short “Environment” item by this title. The article highlights NOAA Coral Reef Watch’s satellite data, showing accumulated thermal stress in the Caribbean during 2005. This article is not in the online version of *National Geographic*.

Other articles

“Two Species Cooperate to Hunt” – December 7, 2006 (*Live Science on www.msnbc.msn.com, US*). “...They found groupers often visited giant morays resting in their crevices and rapidly shook their heads an inch or so from the eels to recruit them in a joint hunt...If the moray emerged, the grouper guided the eel to a crevice where prey was hiding...At times the moray ate the fish it rooted out, while at other times the grouper did.”

“Ocean Sampling Yields Environmental Sources of Coral Symbionts” – December 7, 2006 (*The Hindu, India*). “By sampling different ocean locations for the presence of an elusive but critical group of algae, researchers have gained new insight into the dwelling places of the symbiotic organisms that reef corals need for survival.”

“Territory’s Coral Reefs Have Taken Dive; Underwater Experts Warn Island Birders” – December 5, 2006 (*St. John Tradewinds, U.S. Virgin Islands*). “...U.S.V.I. coral reefs are in crisis due to the ‘extensive mortality of reef-building coral’ from natural and man-made causes, according to [Dr. Caroline Rogers].”

“Ongoing Collapse Of Coral Reef Shark Populations” – December 4, 2006 (Cell Press press release on www.euekalert.org, US and approx. 7 other sources). “Investigators have

revealed that coral reef shark populations are in the midst of rapid decline, and that ‘no-take zones’—reefs where fishing is prohibited—do protect sharks, but only when compliance with no-take regulations is high.”

“Fisheries Division introduces New Fishing Device” – December 2, 2006 (*The Jamaica Observer, Jamaica*). “A new fish-attracting device is being constructed by the Fisheries Division in the Ministry of Agriculture and Lands, which it is hoping will be used by fishermen to promote good fishing techniques, under the Fish Aggregation Project.”

“Professors receive Fulbright Funding” – November 30, 2006 (*Oregon Daily Emerald, OR*). “With funds from the program, Emlet and a colleague will spend six months in Sri Lanka researching ways to help halt the devastation of the country's coral reefs that is caused by commercial harvesting of marine life.”

“Students Join Fight for Reefs” – December 21, 2006 (*Fiji Times, Fiji*). “More than 400 students and teachers joined hands with dive resorts in October to celebrate the value and beauty of Taveuni’s coral reefs. Local dive resorts organised the event which was tagged, ‘Taveuni’s Coral Reefs: Our Future’, to raise awareness amongst youth regarding the importance of the island's coral reefs and ways to help protect them.”

“Study Finds Rare Batfish Invaluable to Great Barrier Reef in Australia” – December 20, 2006 (*Associated Press on www.Planetsave.com, ME*). “When it comes to protecting Australia's Great Barrier Reef, it is hard to beat the batfish. A study by researchers at the Australian Research Council Center of Excellence for Coral Reef Studies found that the rare pancake-like white fish with brown stripes was the only one of 27 species that successfully removed the forest of algae that can otherwise overwhelm and kill off the reef.”

“Living Coral Reefs Provide Better Protection From Tsunami Waves” – December 19, 2006 (www.dailyindia.com, India and approx, 6 other sources). “A recent study by researchers at Princeton University has revealed that healthy coral reefs provide their adjacent coasts with substantially more protection from destructive tsunami waves than do unhealthy or dead reefs.”

“Holy Seaweed! Batfish Save Reef” – December 19, 2006 (*Australian Broadcasting Corporation, Australia*). “A fish that gatecrashed an experiment in Australia’s Great Barrier Reef has surprised scientists by emerging as an unexpected weapon against the worldwide decline of coral reefs.”

“Corals Defy the Odds” – December 18, 2006 (www.News24.com, South Africa). “Coral reefs are defying the odds in Hong Kong and flourishing in the city’s polluted waters, a media report citing a government survey said on Sunday.”

“Worst Coral Reef Die-Off in 11,000 Years” – December 18, 2006 (www.mongabay.com, CA). “Two new studies by scientists at the Australian Research Council Centre of Excellence for Coral Reef Studies at James Cook University suggest that coral reefs may be in worse shape than previously thought. The first, appearing in the journal *Geology* indicates that the current large scale coral die-offs are now occurring more frequently than at any time in the last 11,000 years. The second, published in *Current Biology*, suggests that the loss of a single ‘keystone’ species can trigger a rapid shift in the health of a reef.”

“Canada Investor Plans to Grow Coral Reef in Sri Lanka as an Export Business” – December 18, 2006 (www.asiantribune.com, Thailand). “A Canada based company, Sea Culture Ltd plans to breed Coral Reef in Sri Lanka .Pramuk Wijesingha....The project is 100% externally

funded by a group of investors from Canada and the principle aim is to demonstrate that environmentally beneficial methodologies can be used to farm coral, anemones, invertebrates, and other marine wildlife that is in demand by the marine aquarium hobby industry.”

“Centre Says Beauty of Reefs Important to All” – December 16, 2006 (*Cayman Net News, Cayman Islands*). “Coral reefs were among the natural world’s wonders that inspired Darwin’s theory of evolution, helped explain the mechanisms behind the theory of plate tectonics, and have been fundamental to understanding the great climatic shifts in geologic time....The Central Caribbean Marine Institute’s seventh and eighth reasons to protect the reefs in the Institute’s twelve-part series on Why Healthy Coral Reefs include their important aesthetic and cultural values which contribute to the economy of the Island and to the wealth of the human spirit.”

“Coral Die-Offs Highest Since the Past 11,000 Years” – December 15, 2006 (www.zeenews.com, India). “Australian-based scientists have carried out investigations that the frequency of coral reef deaths in the continent is at present the highest in the last 11 000 years....‘What we found was in stark contrast to what we see in the modern day,’ says A/Prof Pandolfi. ‘The frequency of reef [die-off] events in the fossils is at least an order of magnitude less than it is today,’ Pandolfi was quoted as saying.

“A Teen Effort” – December 15, 2006 (www.livescience.com, NY). “Coral reefs are the most productive and diverse marine ecosystems in the world, yet drastic coral declines in the Caribbean region over the last 25 years have threatened this vital resource. Next July, the first full team of teenagers will participate in a Bahamian Reef Survey project, investigating the impact of environmental changes and disease on coral biodiversity.

“Building Hotels? First Simulate the Effect on the Reef” – December 14, 2006 (*Christian Science Monitor*, MA). “...[Les] Kaufman heads the Marine Management Area Science program (MMAS). Working with Conservation International, he aims to combine understanding from both the social and "hard" sciences and turn it into effective ecosystem management. A global network of monitoring sites informs MMAS, and a computer model of human and reef ecosystem interaction is central to the project. Still in the early stages of development, the Marine Integrated Decision Analysis System (MIDAS) will allow anyone with a decent computer to simulate human activity’s impact on the reef environment.”

“Mass Fast Against Sethusamudram Canal Project” – December 14, 2006 (www.dailyindia.com, India). “A mass hunger strike will be held Friday against the Sethusamudram Shipping Canal project by organisations claiming the venture had been cleared without the requisite environmental go ahead...the Tamil Nadu government has announced that a study has been undertaken on the consequences of the project for the coral reefs and marine life in the dredging area. The study is being conducted by four researchers of the Annamalai University from on board a research vessel.”

“Kelly Hu Lends Star Power To Protect Hawaii's Reefs” – December 13, 2006 (www.khnl.com, HI). “Hawaii is known for its beautiful waters and reefs. And actress Kelly Hu wants to keep it that way....Monday night, Hu and other celebrities lent their star power to launch the non-profit organization- Reef Check Hawaii.”

New Products in CoRIS.

CoRIS now has 1548 metadata records that refer to over 18,000 products.	
Product Name	Description
CRED Gridded Bathymetry of the Northwest Hawaiian Islands 2005	Gridded bathymetry of the shelf and slope environments of Northwest Hawaiian Islands, USA. Bottom coverage was achieved in depths between 20 and 250 meters. The bathymetry dataset includes Simrad EM300 and EM3002d multibeam data collected as of December 2005.
<i>Link:</i> http://www.soest.hawaii.edu/pibhmc	
<i>Sample Metadata Link:</i> http://coris.noaa.gov/metadata/records/html/cred_gridded_bathy_10m_brooks_banks_2005.html	
CRED REA Coral Health and Disease Assessment at Main Hawaiian Islands 2004 and Northwest Hawaiian Islands, 2005	Belt transects along 2 consecutively-placed, 25m transect lines were surveyed at 50-cm intervals as part of Rapid Ecological Assessments. Raw survey data included percent cover of benthic parameters, including live coral, carbonate pavement, sand, coral rubble, fleshy macroalgae, and crustose coralline algae. In addition, an area of 6x25 m along each transect was surveyed for prevalence of coral disease.
<i>Link:</i> http://www.pifsc.noaa.gov/cred/coral.php	
<i>Sample Metadata Link:</i> http://coris.noaa.gov/metadata/records/html/cred_rea_coral_disease_lehua_2005.html	
CRED Shallow Water CTDs: Marianas Archipelago and Guam 2003 and 2005 , Northwest Hawaii Islands 2002 and 2004, Main Hawaiian Islands 2005 and PRIA 2002 and 2006. Reef Assessment and Monitoring Program Cruises	Shallow Water CTDs sample vertical profiles of temperature, salinity, and turbidity providing indications for water masses and local sea water chemistry changes. They are collected at regularly spaced intervals around all study sites, both around islands or banks and within lagoons. The CTD profiles are part of a suite of oceanographic assessments made concurrently with a large number of biological coral reef assessments.
<i>Link:</i> http://www.pifsc.noaa.gov/cred/oceanography.php	
<i>Sample Metadata Link:</i> http://coris.noaa.gov/metadata/records/html/cred_shallow_ctd_agrihan_2003.html	

UPCOMING EVENTS

If you have events you would like listed in future newsletters, please contact coralreef@noaa.gov.

January 2007

15 – 20: [International Pacific Marine Educators Conference](#). Suva, Fiji.

29 – 31: **Our Sea of Islands – A Regional Forum for Oceania on Marine Managed Areas and World Heritage**. Honolulu, HI.

February 2007

1 – 2: **Our Sea of Islands – A Regional Forum for Oceania on Marine Managed Areas and World Heritage**. Honolulu, HI.

15 – 19: [AAAS Annual Meeting](#). San Francisco, CA.

26 – 28: [17th U.S. Coral Reef Task Force Meeting](#). Washington, D.C.

March 2007

1 – 2: [17th U.S. Coral Reef Task Force Meeting](#). Washington, D.C.

29 – 31: [NSTA National Conference](#). St. Louis, MO.

April 2007

1: [NSTA National Conference](#). St. Louis, MO.

Questions, comments?

Contact coralreef@noaa.gov, NOAA Coral Reef Conservation Program.

Access to NOAA's coral reef data and information is provided through NOAA's [Coral Reef Information System](#). Current news on NOAA's coral reef activities can be found on the NOAA [Coral Reef Conservation Program Website](#).

