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Coral Reef News



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The Coral Reef Conservation Program (CRCP) is a partnership between the NOAA Line Offices working on coral reef issues, including the National Ocean Service (NOS), the National Marine Fisheries Service (NMFS), the Office of Oceanic and Atmospheric Research (OAR) and the National Environmental Satellites, Data and Information Service (NESDIS). From mapping and monitoring to managing reef resources and removing harmful debris, the CRCP addresses the priorities laid out in both the [National Action Plan to Conserve Coral Reefs](#) and the [National Coral Reef Action Strategy](#).

Volume 5, No. 7

April 2008

Announcements

Workshop Kicks Off SEM-Pasifika Socio-economic Monitoring Training Program. Part of a larger training program, this workshop will present socioeconomic monitoring strategies based upon the SEM-Pasifika manual, the socioeconomic monitoring guidelines for the Pacific region. The workshop will be held May 5-9 in the Republic of the Marshall Islands; its content is aimed at U.S. reef jurisdictions and the Freely Associate States. Successful applicants to the training program will receive travel funds to attend the workshop, a small amount of seed funds to start a socioeconomic monitoring study at their home site, and also will receive technical support. [The Nature Conservancy](#) and the [Pacific Islands Marine Protected Areas Community](#) are funding the training, the [U.S. Department of State](#) is providing funds for the site assessment grants, and NOAA is providing staffing during the training and copies of the SEM-Pasifika guidelines.

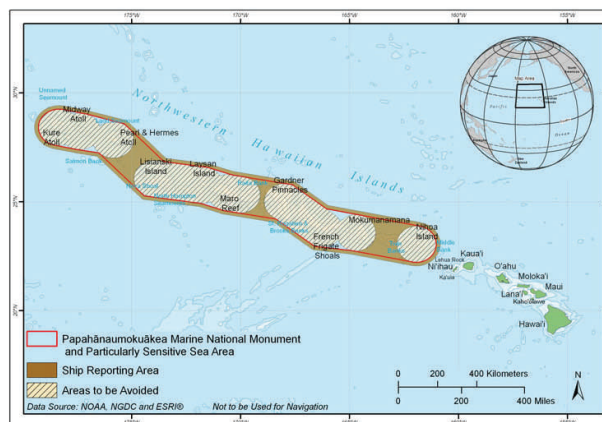
Mapping Cruise to Depart for Northwestern Hawaiian Islands. NOAA's [Coral Reef Ecosystem Division](#) (CRED) mapping team members are preparing for a 30-day expedition to the Northwestern Hawaiian Islands aboard the NOAA Ship *Hi'ialakai* that is scheduled to depart on April 29. In conjunction with scientists from the [Papahānaumokuākea Marine National Monument](#) (Monument) and NOAA's [Center for Coastal Monitoring and Assessment Biogeography Branch](#), this cruise is scheduled to collect multibeam and optical validation data at French Frigate Shoals and Pearl and Hermes Atoll. The highest priority of the cruise is to collect shallow water multibeam data using the R/V *AHI* to fill gaps between existing multibeam coverage and [IKONOS](#) satellite imagery at both islands. Towed cam-

era operations will provide additional optical validation data for creation of benthic habitat maps and to investigate invasive species in the Monument. Limited diving operations are planned for the purpose of better interpreting multibeam backscatter data. Existing multibeam and optical validation data is available online for [French Frigate Shoals](#), and [Pearl and Hermes Atoll](#).

Papahānaumokuākea Designated as PSSA. The fragile and unique marine ecosystems of the Northwestern Hawaiian Islands encompassed by the [Papahānaumokuākea Marine National Monument](#) (Monument) will receive additional protection under a new internationally recognized designation announced April 4 by NOAA. The designation, which was finalized on April 3 by the [International Maritime Organization](#) (IMO), declares the waters of the monument a Particularly Sensitive Sea

Area (PSSA). The designation puts into effect internationally recognized measures designed to protect marine resources of ecological or cultural significance from damage by ships while helping keep mariners safe. Learn more in the NOAA [press release](#) or on the Monument's [news page](#).

International Year of the Reef Featured on NOAA Web Site This Month. NOAA's Web site now includes rotating monthly feature stories. During the month of April, the theme is "NOAA Goes Green" in honor of Earth Day. The action messages developed for [International Year of the Reef 2008](#) are the topic of a [story](#) on coral reef conservation. In the spirit of Earth Day, learn what you can do to help conserve reefs by making small changes in your daily life. (continued on page 8)



UPCOMING EVENTS

April 2008

18-21: 'Responding to Climate Change' Workshop, Pigeon Key, FL. Attendance by invitation only.

20: [Global Dive for Earth Day](#). Click to search for events in your area.

22-24: '[Reef Resilience Conference 2008: Coping With Climate Change](#)', Key Largo, FL. Click [here](#) for more info, contact [The Nature Conservancy](#) to register.

May 2008

5-9: 'SEM-Pasifika Socioeconomic Monitoring' Training, Republic of the Marshall Islands. [Contact us](#) for more info.

June 2008

8: [World Ocean Day](#).

(continued on page 3)

Click [here](#) to find IYOR 2008 events in your area.

Updates from Headquarters

NOAA Provides Coral Teaching Resources for Science Teachers. The [National Science Teacher Association](#) (NSTA) annual national conference was held in Boston, MA from March 27-30; over 15,000 teachers attended. NOAA's Coral Reef Conservation Program (CRCP) coordinated a half-day symposium about coral ecosystems on March 27. The session featured NOAA scientists and educators from the CRCP Headquarters, [Coral Reef Watch](#) (CRW), the [National Marine Sanctuary Program](#), and the Management and Budget's Outreach and Education Division. The symposium included a general introduction to



Teachers from around the country participated in the coral symposium during the NSTA conference. Courtesy: NOAA Coral Reef Conservation Program

coral reefs ecosystems; an activity to build and then destroy coral reef models, simulating human and natural impacts; an activity to analyze several CRW data sets (temperature, winds, reef location, and doldrums) to predict bleaching events in the Caribbean; and an introduction of NOAA's SciGuides and Science Objects. The latter are featured in the newly launched [NSTA Learning Center](#). The half-day session was at-

tended by 80 teachers and was very well received; it continued with an online sessions in early April and will conclude with a second one in May. On March 29, CRCP Headquarters staff gave a one-hour session to help bring coral reefs into the classroom; it discussed how to access lesson plans and use student activities. In addition, CRW staff conducted additional one-hour sessions that repeated the popular CRW data

analysis activity. There was also a lot of activity at the NOAA booth. Over 8,000 colorful posters of the Caribbean and Indo-Pacific reef species were given to teachers. The CRCP also unveiled the 2008 Coral Reef Re-

sources Roundup CD, a product of the [U.S. Coral Reef Task Force](#) Education & Outreach Working Group. The CD was compiled in celebration of the [International Year of the Reef 2008](#), and it contains lesson plans, student activities, videos, slide shows, electronic posters and background materials. More than 5,000 CDs were distributed to educators and teacher trainers. This product will soon be available [online](#).

Updates from the Atlantic/Caribbean Region

SEFSC Staff Gives Seminar on CRCP Research at Chapel Hill: A staff member from the Miami office of the [Southeast Fisheries Science Center](#) (SEFSC) discussed [Coral Reef Conservation Program](#) (CRCP)-funded research during a seminar on April 11th at the University of North Carolina at Chapel Hill's [Institute of Marine Sciences](#). The seminar, titled "Temporal and spatial trends in reef fish community structure and fishery-targeted species in the FL Keys", focused on expected and observed impacts to the Florida Keys reef fish community given the considerable and increasing human population levels in south Florida.

Guánica Watershed Project. As part of a project funded by NOAA's [Coral Reef Conser-](#)

[vation Program](#) to enhance the effectiveness of local efforts to address land-based sources of pollution that threaten coral reef ecosystems, a field assessment was conducted during April 8 - 11 for the Guánica watershed in Southwestern Puerto Rico. In order to learn about watershed conditions, concerns, and threats, the assessment team met with local (continued on page 3)



Assessing a mountain-side clearing for coffee planting. Courtesy: J. Kozlowski

Announcements continued...



Walking the Rio Loco for the river survey.
Courtesy: J. Kozlowski

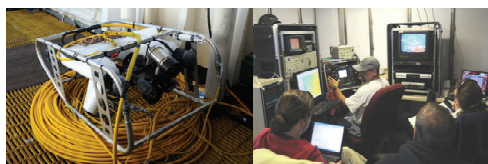
agency representatives and other local stakeholders to tour the watershed. The tour progressed from Guánica Bay, up the Rio Loco, to the mountain top coffee plantations. Data from field surveys will be compiled, along with information from previous and on-going studies on the Guánica Forest and Guánica Bay, to develop a watershed plan that is aimed at improving water quality in the Bay and on surrounding coral reefs, as well as reducing sediment runoff. A draft watershed plan is expected to be completed by July 2008.

Pulley Ridge and West Florida Shelf Surveys. NOAA [National Marine Fisheries Service](#) (NMFS) recently completed a 12 day research cruise to two areas of the eastern Gulf of Mexico with the purpose of conducting visual surveys of habitat and fish populations. The primary gear used for this survey was a Phantom S2 [remotely operated vehicle](#) (ROV) operated by the [NOAA Undersea Research Center](#) at the University of North Carolina-Wilmington. The fishery biologists in charge of the mission were from the Panama City Laboratory of NMFS. A [Teacher-at-Sea](#) and a representative from [Oceana](#) also participated. Pulley Ridge is a drowned barrier island; it is now covered with 240-300 ft of seawater and contains the deepest known reefs of photosynthetic corals in the continental U.S. The targeted corals were seen on roughly half the Pulley Ridge dives. Similar surveys were conducted in the 1980s and 1990s and the results from this cruise will be compared to the previous efforts. Two marine protected areas (MPAs) have been in place on the



Coral and Red grouper observed on Pulley Ridge using the Phantom S2 ROV.
Courtesy: NOAA National Marine Fisheries Service, Panama City Laboratory

West Florida Shelf (WFS) since 2000; Madison-Swanson and Steamboat Lumps MPAs. The primary purpose of these area closures (each ~100 sq mi) is to increase populations of economically valuable grouper which use deep reefs in these areas as spawning sites. The [Gulf of Mexico Fishery Management Council](#) (GMFMC) was responsible for establishing the MPAs and is considering expanding the current MPAs or creating additional ones. The WFS portion of the cruise located suitable habitat in four of the five proposed areas.



The Phantom S2 ROV and its control team. Courtesy: NOAA National Marine Fisheries Service, Panama City Laboratory

CFMC Holds Workshop to Develop Navassa Island Fishery Management Plan. Ponce, Puerto Rico (March 24-25, 2008). [Southeast Fisheries Science Center](#) scientists who are involved in [Coral Reef Conservation Program](#) (CRCP)-funded research were invited to participate at the [Caribbean Fishery Management Council's](#) (CFMC) multi-agency [workshop](#) held in Puerto Rico from March 24-25. The goal of this workshop was to plan for the development of a Navassa Island Fishery Management Plan (FMP), as directed by the re-authorized Magnuson-Stevens Fishery Conservation and Management Act. CRCP-funded reef assessment, mapping, and human-dimensions work at Navassa Island constitutes the bulk of the scientific information available to inform the FMP development. Follow up activities include ongoing planning by the CFMC and a multi-agency planning effort to formulate international capacity-building proposals targeting the fishing communities in southwest Haiti that impact Navassa reef resources.

Collaborative Monitoring Cruise Visits USVI Managed Areas. Scientists from NOAA's [National Centers for Coastal Ocean Science](#), in collaboration with biologists from the [National Park Service](#) (NPS) and with support from NOAA's [Coral Reef Conservation Program](#), successfully completed their bi-annual monitoring and characterization mission in and around the waters of [Buck Island Reef National Monument](#) (BIRNM), (continued on page 4)

EVENTS CONTINUED

July 2008

7-11: [11th International Coral Reef Symposium: Reefs For the Future](#), Ft. Lauderdale, FL.

August 2008

25-29: [20th U.S. Coral Reef Task Force Meeting](#), Kona, HI.



The [International Year of the Reef \(IYOR\) 2008](#) is a worldwide campaign to raise awareness about the value and importance of coral reefs and threats to their sustainability, and to motivate people to take action to protect them.

Are you or your organization participating in events for IYOR 2008?

Want to learn more about what you can do to support the goals of IYOR 2008?

Download free educational ads [here](#).

Be an agent of change: Every act counts.



The 11th ICRS, with the theme of Reefs for the Future, will be held in Ft. Lauderdale, FL, July 7-11, 2008. The 11th ICRS is also a key-stone event within the International Year of the Reef (IYOR) 2008.

Atlantic/Caribbean continued...

St. Croix, U.S. Virgin Islands (USVI). During the cruise, which ran from March 9-21, data on fish and invertebrate populations and benthic composition were collected at 122 locations, including sites in the northern part of the [St. Croix East End Marine Park \(EEMP\)](#). The results of this [long-term monitoring study](#) will help BIRNM and EEMP establish the knowledge base necessary for enacting place-based management decisions and assessing the efficacy of USVI Marine Protected Areas (MPAs).

Town Hall Strengthens Interagency Collaboration on Ocean Acidification. Ocean Acidification, or the reduction in global oceanic pH caused by rising atmospheric carbon dioxide concentrations, is a rapidly emerging issue that has garnered considerable interest from Congress, the scientific community, and coastal managers. The [National Centers for Coastal Ocean Science](#) took the lead on organizing one of the first interagency discussions about Ocean Acidification at the [2008 Ocean Sciences Meeting](#), held March 2-7. This forum represented a cooperative planning effort among two branches of NOAA. The town hall meeting, "Ocean Acidification: Towards an Interagency Approach," brought together representatives from the [National Aeronautics and Space Administration](#), the [National Park Service](#), the [National Science Foundation](#) and NOAA to discuss ongoing and future plans related to ocean acidification with the scientific community. Agency representatives related the inventory of federal activities and provided additional impetus for a coordi-

nated ocean acidification interagency program, one which plays to the strengths of each agency and responds to the recent recommendations of the Joint Subcommittee on Ocean Science and Technology.

Underwater Survey Helps Managers Assess Marine Debris Problem at FKNMS.

Lost, abandoned, or discarded fishing equipment can create a variety of hazards for humans and marine animals; recent underwater assessments indicate fishing activities generate most submerged debris in the [Florida Keys National Marine Sanctuary \(FKNMS\)](#). Surveys showing that lobster and crab traps account for over half of underwater debris in the FKNMS will help define the problem in support of possible management solutions. From June 2007 through February 2008, [National Centers for Coastal Ocean Science](#) and [Florida Fish and Wildlife Conservation Commission](#) staff completed 96 towed-diver surveys throughout FKNMS. They conducted sampling within six trap-fishery zones that consist of several habitats including coral reef, hard bottom, seagrass, algae, and sand. Coral reef habitats contained the highest density of trap debris per area surveyed. Geographically, most trap debris was located on the Atlantic side of the Middle Keys, a zone of historically high fishing pressure. Understanding the quantity and distribution of trap debris provides fishery managers and fishermen with a basis for developing ecologically sustainable fishing practices. NOAA's [Marine Debris Program](#) funded this study.

Updates from the Pacific Region

Cruise to Puerto Rico Provides AUV Training Opportunity for Scientists. Scientists from [Woods Hole Oceanographic Institution \(WHOI\)](#) and NOAA's [Pacific Islands Fisheries Science Center's Coral Reef Ecosystem Division \(CRED\)](#) and [Northwest Fisheries Science Center \(NWFS\)](#) are participating in a two-week cruise aboard the R/V *Cape Hatteras* in the waters around Puerto Rico, which started on April 12. CRED and NWFS scientists will be observing and training on an autonomous underwater vehicle (AUV), built and operated out of [WHOI](#). This AUV is an excellent platform for collecting optical validation data in support of benthic habitat mapping in coral reef environments, because it is designed to automatically follow the terrain at a height of three to four meters above the bottom and provides very high

resolution optical imagery.

Final Leg of Pacific RAMP Cruise Returns to Port. The NOAA Ship *Hi'ialakai* returned on Saturday, April 12 from the third leg of the [2008 cruise to the Central Pacific and American Samoa](#). Twenty-two scientists from NOAA's [Coral Reef Ecosystem Division \(CRED\)](#) and partner agencies participated in this final 23-day leg, from American Samoa to Hawai'i, and conducted surveys at Jarvis Island, Kingman Reef, and Palmyra Atoll. The three cruise legs comprise the fourth [Coral Reef Conservation Program \(CRCP\)](#) expedition to American Samoa in recent years and the sixth to the U.S. Line and Phoenix Islands. During each of the three legs of this research expedition, scientists conducted comprehensive Reef (*continued on page 5*)

Pacific Continued...

Assessment and Monitoring Program (RAMP) surveys of the shallow-water marine resources using uniform methods that are used throughout U.S. waters in the Pacific. In addition to the standard RAMP surveys, scientists investigated a newly identified wreck of a fishing boat at Kingman Reef. Preliminary results from these surveys show that large fish biomass has substantially decreased at both Rose Atoll and Swains Island and that a native tunicate of the *Didemniidae* family is behaving like an invasive species at Swains Island.



Marine mammal and marine debris observations using large binoculars called “Big Eyes.” Courtesy: NOAA Papahānaumokuākea Marine National Monument

Multi-purpose Cruise Returns From the Convergence Zone. On April 9, the NOAA Ship *Oscar Elton Sette* and scientists from NOAA’s [Coral Reef Ecosystem Division](#) (CRED), [Marine Debris Program](#) (MDP), and [Papahānaumokuākea Marine National Monument](#) (Monument), as well as from [Airborne Technologies Inc.](#), returned from a 17-day cruise to the Convergence Zone north of Hawaii where marine debris accumulates. This cruise supported three separate missions: 1) oceanographic observations using CTD, or conductivity, temperature, depth sensors, as well as water sampling; 2) marine mammal and marine debris observations using large binoculars called “Big Eyes;” and 3) the first deployment of a prototype Unmanned Aerial System (UAS) called the

Malolo I to detect derelict fishing gear, mostly large nets, concentrated in this area. The oceanographic observation mission was very successful, with CTD deployments throughout a much broader area than was planned, partly because fog and rough weather limited both Big Eye and *Malolo I* operations. Two concentrations of debris were tagged and the UAS was deployed nine times. For more information on the cruise, visit the [Monument’s mission page](#), the [MDP mission page](#), or the [crew’s blog](#).



The *Malolo I* is deployed for a marine debris survey. Courtesy: NOAA Papahānaumokuākea Marine National Monument

HCRI Using Ecosystem Based Management to Restore Maunalua Bay. The [Hawaii Coral Reef Initiative-Research Program](#) (HCRI), a Cooperative Agreement funded by the [National Centers for Coastal Ocean Science](#), is using a new approach to restore Maunalua Bay in Oahu, Hawai‘i. By linking land-based practices, recreational use, and commercial harvests with the health of coral reef ecosystems, HCRI is bringing together key stakeholders to agree on a set of goals to accomplish this restoration. The new approach recognizes that management of the coral reefs will not succeed if activities on the adjacent watershed are not altered to minimize the impact of land-based stressors, particularly freshwater runoff. As a result, the [Army Corps of Engineers](#) is considering revising their stream channelization projects in the area to reduce the amount of rain water flushed into Maunalua Bay.



TAKE ACTION! Sign the [International Declaration of Reef Rights](#) and the [pledge to Protect Ocean Life During International Year of the Reef](#).

While you’re online, send your friends one of three free IYOR-themed [E-cards](#).

International Updates

International Coral Experts Train MPA Managers to Respond To Climate Change. NOAA’s [Coral Reef Conservation Program](#) and [Florida Keys National Marine Sanctuary](#) have partnered with [The Nature Conservancy](#), [World Wildlife Fund](#), Australia’s [Great Barrier Reef Marine Park Authority](#), and [Mote Marine Laboratory](#) to host a training workshop for ma-

rine protected area (MPA) managers from around the Caribbean region on responding to climate change and coral bleaching. In 2005, the Caribbean experienced a severe mass coral bleaching event that left over half of all corals dead in some parts of the eastern Caribbean. This workshop will provide managers with the tools they need to *(continued on page 8)*

New Data in CoRIS

Even if you don't live near a reef, you can [help protect coral reefs](#) in the U.S.A. and around the world



Coral Reefs support more species per unit area than any other marine environment. Courtesy: Dave Burdick

Product Name	Description
Long-Term Monitoring at the East and West Flower Garden Banks National Marine Sanctuary 2002-2006 Link to sample metadata for this product	The Long-Term Monitoring at the East and West Flower Garden Banks National Marine Sanctuary 2002-2006 data include both biological and oceanographic data collected through the year 2006.
CRED REA Coral Assessment for 2006 and 2007 at CNMI, Guam, Northwestern Hawaiian Islands, and PRIA. Link to sample metadata for this product	Belt transects along 2 consecutively-placed, 25m transect lines were surveyed as part of Rapid Ecological Assessments. Raw survey data included species presence and relative abundance, colony counts and size classes by genus, and determination of benthic cover using the line-intercept method.
Coral Reef Ecosystem Division (CRED), NOAA Pacific Island Fisheries Service Center Wave Tide Recorder Time Series American Samoa 2004-2006 Link to sample metadata for this product	Data from CRED Wave and Tide Recorders (WTR) provide a time series of temperature, wave, and tide data at coral reef ecosystem sites.
CRED REA Algal Assessments Wake 2005 Link to sample metadata for this product	Raw survey data including genus presence and relative abundance, and voucher specimens. Detailed taxonomic analyses of voucher specimens are presented.
CRED Oceanographic Moorings American Samoa 2002-2004 (CREWS, RCM9, ODP, ADP, EDL) Link to sample metadata for this product	CREWS buoys telemeter hourly data in near-real-time (NRT). Data telemetry serves to alert researchers to the potential of imminent or ongoing coral reef bleaching or other natural events. Sensor packages may include Ocean Data Platform (ODP), Temperature/Conductivity Sensor, Environmental Data Logger (EDL), and Recording Current Meter.
CRED Oceanographic Moorings American Samoa (STR) 2004-2006 Link to sample metadata for this product	Subsurface Temperature Recorders (STR) provide a time series of water temperature at reef sites. These data were collected for coral reef ecosystem research. They are collected concurrently with ecological/biological reef assessments.
NOAA Coral Reef Watch Program NOAA National Environmental Satellite Data and Information Service, AVHRR Sea Surface Temperature Anomaly Charts (Global) 2008 Link to sample metadata for this product	These archived satellite sea surface temperature (SST) anomaly charts are graphic displays of the satellite global nighttime SST anomalies at 50km resolution produced twice-weekly in near real-time fashion. The SST anomaly is the difference of SST compared to daily SST climatology.
NOAA Coral Reef Watch Program NOAA National Environmental Satellite Data and Information Service, AVHRR Sea Surface Temperature Charts (Global) 2008 Link to sample metadata for this product	These archived satellite sea surface temperature (SST) charts are graphic displays of the satellite global nighttime composite SSTs at 50km resolution produced twice-weekly in near real-time fashion. Satellite data from the Advanced Very High Resolution Radiometer (AVHRR) on NOAA's Polar Orbiting Environmental Satellite (POES) are used to generate AVHRR-SST.

(continued on page 7)

New Data in CoRIS Continued...

Product Name	Description
NOAA Coral Reef Watch Program NOAA National Environmental Satellite Data and Information Service, AVHRR Coral Bleaching Hotspot Charts 2008 Link to sample metadata for this product	These archived coral bleaching HotSpot charts of the Western Hemisphere are graphic displays of the satellite coral bleaching HotSpots of the Western Hemisphere at 50km resolution produced twice-weekly in near real-time fashion.
NOAA Coral Reef Watch Program NOAA National Environmental Satellite Data and Information Service, AVHRR Coral Bleaching Degree Heating Week Charts 2008 Link to sample metadata for this product	These archived coral bleaching Degree Heating Week (DHW) charts of the Western Hemisphere are graphic displays of the satellite coral bleaching DHWs of the Western Hemisphere at 50km resolution produced twice-weekly in near real-time fashion.
Metadata for Rapid Ecological Assessment Fish Belt Transect surveys in the Northwest and Hawaiian Islands, American Samoa, Guam, CNMI, Wake, and other Pacific islands, have been added to CoRIS. These surveys took place 2005 - 2007. Link to sample metadata for this product	For fish belt transect surveys, data were collected by two divers swimming in tandem along the length of a 25m transect line. The team swam each transect two times. Fish were identified to the lowest possible taxon which in most cases was the species level.
Metadata for Rapid Ecological Assessment Stationary Point Count Surveys in the Northwest and Hawaiian Islands, American Samoa, Guam, CNMI, Wake, and other Pacific islands, have been added to CoRIS. These surveys took place 2005 - 2007. Link to sample metadata for this product	Stationary Point Counts at different stations and sites at each survey area were surveyed as part of Rapid Ecological Assessments (REA). Raw survey data included species level abundance estimates.
NCCOS Fish and Habitat Ecosystem Assessment in Puerto Rico for 2007 Link to sample metadata for this product	Data is collected using established protocols and monitoring efforts consistent with NOAA's National Coral Reef Monitoring Program and the Biogeography Branch's long-term monitoring efforts in southwest Puerto Rico and the US Virgin Islands since 2000 and 2001, respectively.
NCCOS Fish and Habitat Characterization for the Flower Garden Banks in 2006 Link to sample metadata for this product	The Long-Term Monitoring at the East and West Flower Garden Banks National Marine Sanctuary 2002-2006 data include biological and oceanographic data through the year 2006. The purpose of these biological and oceanographic data is to serve as a long-term record of the conditions of the coral reef communities within the East and West Flower Garden Banks study sites.
NCCOS Palau Accuracy Assessment Benthic Habitat Maps for 2006, Benthic Habitat for 2003, Ground Validation Benthic Habitat for 2005, IKONOS Imagery for 2003, and Shoreline Data for 2003 Link to sample metadata for this product	The National Ocean Service is conducting a map production effort to digitally map biotic resources and coordinate a long-term monitoring program that can detect and predict change in U.S. coral reefs, and their associated habitats and biological communities.

(continued on page 8)

Every Act Counts

Corals are already a gift. Don't give them as presents.

Corals are popular as souvenirs, for home decor and in costume jewelry, yet corals are living animals that eat, grow and reproduce. It takes corals decades or longer to create reef structures, so leave corals and other marine life on the reef.

Whether you live one mile or one thousand miles from a coral reef, your actions affect the reefs' future – and the reefs' future affects yours. As the natural guardians of our shores, reefs play a vital role in our global ecosystem. With climate change, pollution, and overfishing contributing to coral reef degradation, we can all play a role in protecting our land, sea and sky. And all it takes is a few simple changes to your daily routine.

Announcements continued...

UNESCO Publishes Summary of Coral Report. The [United Nations Educational, Scientific and Cultural Organization](#) (UNESCO) Intergovernmental Oceanographic Commission published a short summary of the recently launched publication, "[Status of Caribbean Coral](#)

[Reefs after Bleaching and Hurricanes in 2005.](#)" This summary, "A Bad Year for Caribbean Corals" appears in the April-June issue of the UNESCO science publication, "[A World of Science.](#)" It is available in English, Spanish and French.

International continued...

understand coral bleaching, know when bleaching is likely to occur, and take actions to protect their valuable coral reef resources. The workshop will be held April 18-21 on Pigeon Key, Florida, and workshop participants will represent Puerto Rico, US Virgin Islands, Florida, Jamaica, Honduras, Colombia, Bahamas, Bonaire, Mexico, Guatemala, and Belize. To date, over

70 coral reef experts and managers have been trained during the workshops in Australia and American Samoa; these individuals are able to apply what they learned to their local reefs in American Samoa, Samoa, Guam, Hawaii, Fiji, the mainland U.S.A, Indonesia, Thailand, the Philippines, Malaysia, and Australia.

CoRIS Products continued...

New Publication Available from CoRIS. The [Report to Congress on the Implementation of the Deep Sea Coral Research and Technology Program](#) is now available from the [Coral Reef Informa-](#)

[tion System](#) (CoRIS) web site. The report is linked from our NOAA's Coral Reef Activities pages, as well as the CoRIS home page.

Publications

Brainerd, Theo R. (Compiler) 2008. SEFSC Coral Reef Program: FY2007 Project Accomplishments Report. Miami .66 p.# 568. This publication is available online. To access it, click [here](#) and query by 'Author' or 'Year.'

NCCOS Research Quantifies Chemical Contaminants in Southwest Puerto Rico. Coral reefs ecosystems are extremely important to the Puerto Rican economy, not only as a resource for food, but for water related tourist activities which provide jobs in rural, economically depressed areas. The research presented in an article in the March 2008 issue of [Marine Pollution Bulletin](#) is part of a larger [National Centers for Coastal Ocean Science](#) effort to link chemical contamination with coral condition, in order to help resource managers preserve and

restore these valuable ecosystems. The article, "[Chemical contamination in southwest Puerto Rico: An assessment of organic contaminants in nearshore sediments.](#)" presents the results of a study which indicated somewhat elevated levels of polycyclic aromatic hydrocarbons (PAHs), typically associated with the use and combustion of fossil fuels, adjacent to coral reefs and near the town of La Parguera. Even higher concentrations were found in Guánica Bay at the eastern end of the study area. Within Guánica Bay, concentrations of polychlorinated biphenyls (PCBs) and dichloro-diphenyl-trichloroethane (DDT) in the sediments were at toxicologically relevant levels, and appear related to past industrial and agricultural activity in the watershed. Additional analyses are currently being carried out to quantify contaminants in coral tissues.

We value your feedback. Feel free to [email](#) us comments on the new format.

[Subscribe](#) to NOAA Coral Reef News, the monthly e-newsletter of NOAA's Coral Reef Conservation program.

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The CRCP supports effective management and sound science to preserve, sustain and restore valuable coral reef ecosystems.

