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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](#).

Coral Reef News



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February 2008

Announcements

NOAA Seeks Public Comment on Proposed Critical Habitat Designation for Threatened Corals. NOAA recently identified approximately 4,931 square miles of marine habitat in Florida, Puerto Rico, and the U.S. Virgin Islands as proposed critical habitat for threatened elkhorn and staghorn corals. Both *Acropora* species were listed as threatened under the Endangered Species Act (ESA) in May 2006 and the ESA requires the designation of critical habitat for threatened and endangered species. While the designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area, it does require that federal agencies that undertake, fund, or permit activities that may affect critical habitat to consult with the NOAA Fisheries Service to ensure actions do not adversely modify or destroy critical habitat.

The comment period for this action closes on May 6, 2008, and public comment hearings will be held March 4-12. Please see the 'Upcoming Events' section of this issue for dates and locations. Further details about the designation are provided in the Federal Register notice for the proposed rule, which can be found on NOAA Fisheries Service [Southeast Regional Office](#)



Grunts swim over staghorn coral, one of the species affected by the ESA critical habitat designation.

Courtesy: Andy Bruckner, NOAA Fisheries

(SERO) Web site. You will also find Frequently Asked Questions, a press release, and supporting documents for the proposed designation on this site. If you would like hard copies of any of these documents mailed to you, please [contact us](#).

11th International Coral Reef Symposium to Go Green and Qualify as a "Carbon-Neutral" Event.

The [11th International Coral Reef Symposium](#) (ICRS), to be held July 11-18, announced the adoption of a "green meeting strategy" and has made efforts at all levels to reduce the effect this large event will have on the environment. The Symposium is registered with [Carbonfund.org](#), which will allow for a portion of the registration fee to be used to support environmental projects that offset CO₂ emissions. Additional "green strategies" include, among others, setting the air conditioning higher than normal and turning the air and lights off in un-used rooms, providing all ICRS materials online, using only environmentally friendly cleaning products, and providing re-usable coffee cups/water bottles. The [National Coral Reef Institute](#) (NCRI), funded in part by NOAA's [National Centers for Coastal Ocean Science](#) (NCCOS), will co-sponsor this environmentally-conscious event.



New Seafloor Data Enable Mapping of Shallow-Water Coral Ecosystems to Support Local Coastal Resource Managers.

Scientists from NOAA's [National Centers for Coastal Ocean Science](#) (NCCOS), in collaboration with NOAA's [National Weather Service](#) (NWS), [National Geophysical Data Center](#) (NGDC), and [Office of Coast Survey](#) (OCS), completed airborne digital mapping of shallow-water coral ecosystems of southwest Puerto Rico. In addition to measuring ocean depth, innovative new processing techniques were developed to discern seafloor habitat composition. The ability to discern characteristics such as feature hardness and roughness provides a new capability to (continued on page 2)

UPCOMING EVENTS

February 2008

27 – 29: 19th U.S. Coral Reef Task Force Meeting, Washington, DC

March 2008

4: [Acropora Critical Habitat Public Comment Hearing](#), Dania Beach, FL

5: [Acropora Critical Habitat Public Comment Hearing](#), Marathon, FL

11: [Acropora Critical Habitat Public Comment Hearing](#), St. Croix, USVI

12: [Acropora Critical Habitat Public Comment Hearing](#), Rio Piedras, PR

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

Announcements continued...

map shallow-water coral ecosystems. Data were collected to 50 meters water depth encompassing 265 square nautical miles. These data were collected for NOAA by Tenix LADS, Corporation using an airborne Light Detection and Ranging (LiDAR) system. The data can be accessed [online](#). Data collected from this mission meet NOAA's nautical charting requirements, enhance NOAA's tsunami inundation modeling and forecasting capability, and improve NOAA's ability to map and delineate seafloor habitats in tropical marine environments.

New Report on Coral Bleaching Featured in NPR News. In a report on the Sunday January 27 news show *Weekend Edition: Sunday*, [National Public Radio](#) (NPR) reporter John Nielsen discussed the rise of coral bleaching and ocean acidification with Dr. C. Mark Eakin of NOAA's

[Coral Reef Watch](#) (CRW). The story focused on the launch of [International Year of the Reef 2008](#) (IYOR 2008) at the meeting of the [International Coral Reef Initiative](#) (ICRI) in Washington, DC. It also focused on the new report [Status of Caribbean Coral Reefs After Bleaching and Hurricanes in 2005](#) that was released on January 24 by the [Global Coral Reef Monitoring Network](#) (GCRMN). CRW played a key role in the international collaboration that led to the report and NOAA data are prominently featured throughout the volume. The report was launched at an IYOR press briefing that included The French Minister of Overseas Territory and VADM Lautenbacher of NOAA. The NPR story also included interviews with Drs. Clive Wilkinson, Coordinator of the GCRMN and Ainsley Henry from Jamaica. The story can be heard [here](#).

Updates from the Atlantic/Caribbean Region

Biogeography Mission Will Integrate Previously Collected Data and Incorporate Media Day. [Center for Coastal Monitoring and Assessment, Biogeography Branch](#) (CCMA-BB) personnel are preparing for a cruise to Puerto Rico to integrate abiotic data collected with biotic information obtained via alternate technologies. The abiotic data was collected from acoustic sonar systems (ie. multibeam mapping) while the biotic data was collected via SCUBA surveys and underwater imagery systems such as Remotely and Autonomously Operated Vehicles and Drop/drift camera systems. The mission will also test technology to identify fish aggregations. While at sea on February 28, CCMA-BB will hold a media day; reporters, photographers and videographers from the *Associated Press* have confirmed they will attend. The activities planned for the media day include surveys of Tourmaline Bank off Puerto Rico's southwest coast, where the [Caribbean Fisheries Management Council](#) (CFMC) has established fishing reserves. The event will provide the press with an opportunity to highlight resource management issues, the status of corals and other benthic communities, and Federal, Commonwealth, and academic research and monitoring efforts.

Florida Reef Mapping Project Changes Gears. This week, four members of the [Center for Coastal Monitoring and Assessment, Biogeography Branch](#) (CCMA-BB) met with State,

academic, and non-governmental organization (NGO) partners in southern Florida to discuss the ongoing efforts to map Florida's coral reef ecosystems. Over twenty-five representatives of State and Federal agencies, NGOs, and academic institutions participated in the check-in meeting. Results of the meeting include a refined way forward for the mapping project.

Ongoing Field Work Characterizes Nutrient Pollution in Vieques, PR. Scientists from the [Center for Coastal Monitoring and Assessment](#) (CCMA) are continuing ongoing field work in Vieques, Puerto Rico to characterize baseline nutrient concentrations in the coastal waters and how they change over space and time. A total of 40 sites, in both lagoons and near coastal waters, have been sampled on five sampling dates thus far and two more field missions will be conducted in February and March. These data will allow scientists and managers to identify nutrient "hotspots" which may be altering sensitive coral reef ecosystems, as well as provide baseline data for future comparisons as land use changes on the island.

"Islands in the Stream" Science Forum Held. On January 23rd, the Mote Marine Laboratory (MML) in Sarasota, FL hosted a Science Forum to discuss the "Islands in the Stream" initiative. MML and NOAA's Office of National Marine Sanctuaries organized the meeting, which was attended by over 100 (*continued on page 3*)

Atlantic/Caribbean continued...

scientists. The purpose of the forum was to consider the question of a network of environmentally "connected" marine protected areas (MPAs) extending along the continental shelf from the Florida Keys to Belize. There were presentations and panel discussions on the geological and oceanographic settings, benthic characterizations, fish and fisheries characterizations, existing legal structure and regulations, and connections between the U.S. and Mexico and the Mesoamerican Barrier Reef System. Organizers are compiling a document on the proceedings of the forum.

Coral Reef Ecosystems Studies Near Completion. Scientists from NOAA's [National Centers for Coastal Ocean Science](#) (NCCOS) met in Puerto Rico from January 10-

12 to discuss integrating results of the NCCOS-funded [Coral Reef Ecosystems Studies](#) (CRES) Caribbean grant. The purpose of this grant is to provide science-based recommendations for management to ameliorate the decline of coral reef ecosystems in the U.S. Caribbean. The multidisciplinary effort combines expertise in biology, chemistry, physics, geology, modeling, and socioeconomics from several institutions including NCCOS, the [U.S. Geological Survey](#) (USGS), the [University of Puerto Rico](#), and the [University of Miami](#). To date, the CRES Caribbean grant has led to the publication of 16 peer-reviewed journal articles and technical memoranda, and will culminate with a conference to be held in La Parguera, Puerto Rico in October 2008. Project information is available [online](#).

Updates from the Pacific Region



Wreckage from the F/V Young Kwan is strewn over one kilometer of shoreline on the island of Aunu'u. Shifting debris has been documented covering coral heads in the area. Courtesy: Doug Helton, NOAA Office of Response and Restoration

OR&R Wreck Surveys Completed in American Samoa. During the week of February 4, NOAA's [Office of Response and Restoration](#) (OR&R) worked with the [Navy Mobil Diving and Salvage Unit I](#) (MDSU), a commercial salvage expert, and local agency representatives to conduct a wreck removal feasibility survey in American Samoa. Several wrecks of 1980's vintage are stranded near the villages of Amouli, Aunu'u, and Fatumafuti. Previous surveys found no intact fuel tanks, but the wrecks are disintegrating and vessel debris is being spread over the adjacent coral reefs. The Aunu'u wreck, in particular, has an extensive debris field covering

over a kilometer of shoreline. There is evidence that the debris is mobile during storms and is periodically shifting. The survey team will prepare a summary of potential removal options including likely costs and environmental trade-offs. The work was conducted with funding from the NOAA's [Marine Debris Program](#) and [Coral Reef Conservation Program](#) (CRCP).

F/V Jui Man No. 3 lies near the village of Amouli. Surveys have shown that moving wreckage damages coral and dislodges coral recruits.

Courtesy: Doug Helton, NOAA Office of Response and Restoration



Web Pacific RAMP Cruise Underway. Scientists from the [Pacific Islands Fisheries Science Center](#) (PIFSC) [Coral Reef Ecosystem Division](#) (CRED), the [U.S. Fish and Wildlife Service](#) (USFWS), and the [University of Hawaii](#) are presently conducting the 2008 Pacific [Reef Assessment and Monitoring Program](#) (RAMP) surveys in the Line and (continued on page 4)



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.



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](#).

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.

Pacific continued...

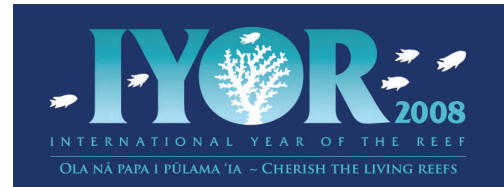
Phoenix Islands en route to American Samoa. This cruise is the fourth in a series of biennial cruises in support of on-going conservation and management needs in the region. The NOAA Ship *Hi'ialakai* departed Honolulu on January 24 and operations were conducted at Johnston Atoll (five days) and Howland (two days) and Baker (two days) Islands. RAMP operations on this mission include rapid ecological assessments of fish, corals, non-coral inverts, and algae; towed-diver benthic, macroinvertebrate and large-fish surveys; oceanographic and water quality observations; USFWS land-based surveys; and deployment of a oceanographic and biologi-



Fish rapid ecological assessment (REA) team conducting belt transect survey at Ofu, American Samoa

Courtesy: Robert Schroeder, NOAA Coral Reef Ecosystem Division

cal monitoring instruments. Deployed instruments include a sea level gauge replacement at Johnston Atoll and installation of Autonomous Reef Monitoring Structures and Ecological Acoustic Recorders. More information on this mission can be found [online](#).



HCRI is Integral Partner in Hawaii's International Year of the Reef Activities. The [Hawaii Coral Reef Initiative Research Program \(HCRI-RP\)](#) funded by NOAA's [National Centers for Coastal Ocean Science \(NCCOS\)](#) helped to kick off [Hawaii's International Year of the Reef](#) activities this January. The program was launched on Friday, January 25 at the Hawaii State Capitol when Governor Linda Lingle signed a proclamation designating 2008 as [International Year of the Reef](#). At the inauguration activities, HCRI scientists shared their most recent research results on Hawaii's coral reefs to educate lawmakers and the public about the ways that Hawaii's residents can help to preserve these valuable resources. HCRI is also providing logistical and Web site support to the year-long program.

International Updates

International Cyanide Detection Workshop Outcomes. NOAA convened a Cyanide Detection Workshop from February 6-8 in Orlando, Florida. Representatives attended from the NOAA's [Coral Reef Conservation Program \(CRCP\)](#) and [Office of Law Enforcement \(OLE\)](#); the [U.S. Fish and Wildlife Service \(USFWS\)](#); domestic and international nongovernmental organizations (NGOs); government officials from the Philippines, Indonesia, and Vietnam; and forensic chemists from USFWS, the [Centers for Disease Control and Prevention \(CDC\)](#), and academia. The attendees reviewed existing cyanide testing approaches and identified options for 1) cyanide detection testing (CDT) in the field in addition to export and import points; and 2) requirements in importing and exporting countries to address this problem. The group felt that a field test to quickly detect cyanide presence as well as a detailed quantitative labo-

ratory analysis at export points was possible; however, a more costly and time-consuming analyses of cyanide metabolites are necessary at points of import. Key next steps, in priority order, include research to determine background levels and the half life in fish tissues of cyanide and cyanide metabolites, followed by validation of the existing (Ion Selective Electrode) test, proficiency programs for CDT labs, complementary legislation in importing and exporting countries, and implementation of a cohesive program to raise awareness and improve capacity for training, testing, and enforcement. Recommendations will be provided to the [U.S. Coral Reef Task Force \(Task Force\)](#) this month in response to the [resolution](#) on enforcement that was issued at the 15th Task Force meeting. In addition, detailed workshop proceedings will be compiled for release at a later date.

(continued on page 5)

International continued...

Science Expedition to Caribbean Reefs Helps Launch International Year of the Reef. A NOAA-sponsored expedition investigated shallow and deep coral ecosystems off the Caribbean island of Bonaire, part of the Netherlands Antilles. Multiple underwater robots and divers surveyed arguably the most pristine coral reefs in the Caribbean to learn why they remain relatively healthy while many in the Caribbean and around the world are threatened. The mission was one of the first in the [International Year of the Reef 2008](#) (IYOR 2008).

“The International Year of the Reef is a year-long, worldwide campaign to highlight the importance of coral reef ecosystems, and to motivate people to protect them,” said Vice Admiral Conrad C. Lautenbacher, Jr., under secretary of commerce for oceans and atmosphere and NOAA administrator. “NOAA supports this campaign with leadership and coordination, and by sponsoring scientific study of reef systems such as those off Bonaire.”

Scientists from The [College of William & Mary](#), the [University of Delaware](#), and [Scripps Institution of Oceanography](#) at the [University of California-San Diego](#) shared science leadership, while NOAA provided personnel support and funding. NOAA’s [Undersea Research Center](#) at

the [University of North Carolina Wilmington](#) provided diving expertise and equipment. Using compressed air or trimix, (helium, nitrogen and oxygen), divers journeyed to 100 meters deep to selectively verify Autonomous Underwater Vehicle (AUV) mapping.

In shallower waters, the team measured changes from limited surveys in the 80’s and 90’s. In deeper waters, three AUVs surveyed the “Twilight Zone,” 65 to 150 meters deep, where sunlight is scarce and little is known about reef systems. The expedition ran January 7-30 and is chronicled [online](#). For more information, read the NOAA [press release](#).



AUV launch off the beach in Bonaire.
Courtesy: NOAA Bonaire 2008 Expedition

Protect Reefs

Become a volunteer monitor!
Participate in community coral reef monitoring programs. If you do not live near a coast, get involved in protecting your watershed.

Report dumping or other illegal activities. Help be the eyes and ears of the reef! Your involvement can make a big difference.

Coral reefs enrich our health, our wealth, our lives

Every Act Counts: Long-Lasting Light Bulbs are a Bright Idea. If every household in the U.S. replaced a burned-out bulb with an energy-efficient, ENERGY STAR-qualified compact fluorescent bulb, it would prevent greenhouse gas emissions equivalent to that from at least 800,000 cars. Climate change is one of the leading threats to coral reef survival, so let your conservation light shine.

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.



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

New Products in CoRIS

New Publication Highlighted on CoRIS. A report entitled '[Status of Caribbean Coral Reefs After Bleaching and Hurricanes in 2005](#)' is now available on CoRIS. The dedicated Web page provides the report's abstract as well as access to downloads of the report (full document and by chapter).

Publications

Study Characterizes Contaminants in Puerto Rico Coral Reef Ecosystems. A recent paper, '[Chemical contamination in southwest Puerto Rico: An assessment of organic contaminants in nearshore sediments](#),' published in the *Marine Pollution Bulletin* characterizes the occurrence and magnitude of organic contaminants in sediments in southwest Puerto Rico coral reef ecosystems. Concentrations of most organic contaminants were below national medians, although specific compounds (e.g. PCBs) were elevated at some sites. This study is part of a larger integrated study which includes inorganic contaminants in sediments, as well as contaminants in coral tissues and integration with biogeographic information, such as species richness. This effort conducted by the [National Centers for Coastal Ocean Science](#) (NCCOS) leverages previous work done through [Coral Reef Conservation Program](#) (CRCP) funding and included partners from the [University of Puerto Rico](#).

Draft Coral Reef Ecosystem Monitoring Report for American Samoa Available.

During three American Samoa Reef Assessment and Monitoring Program (ASRAMP) expeditions in 2002, 2004, and 2006, scientists at the [Pacific Islands Fisheries Science Center's Coral Reef Ecosystem Division](#) (CRED) and partner organizations conducted comprehensive integrated ecosystem assessments and monitoring of biological communities, benthic habitats, and environmental conditions throughout the American Samoa archipelago. The draft version of the '[Coral Reef Ecosystem Monitoring Report for American Samoa: 2002-2006](#)' (Brainard et al.), describing the results of these interdisciplinary surveys, was presented to resource managers and key stakeholders during the [18th U.S. Coral Reef Task Force meeting](#) in American Samoa in August 2007. While the final version of the report is in review, the draft is now available to interested readers.

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

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

