

Subscribe to NOAA Coral Reef News, the monthly e-newsletter of NOAA's Coral Reef Conservation program.

Coral Reef News



INSIDE THIS ISSUE:

Announcements:	1
Upcoming Events:	2
Updates:	
Atlantic/Caribbean	4
Pacific	6
International	8
New Data in CoRIS	9
Publications	9

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 Satellite, 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. 12

September 2008

Announcements

MPA Federal Advisory Committee Seeks Nominations. The [Marine Protected Areas Federal Advisory Committee](#) (Committee) is seeking new members to fill approximately 15 vacancies for early 2010. The Committee advises the Departments of [Commerce](#) and the [Interior](#) on the development and implementation of a national system of marine protected areas (MPAs). Nominations for natural and social scientists; state and territorial resource managers; cultural resource experts; and representatives of ocean industry, commercial and recreational fishing, and environmental organizations are sought by November 30, 2008. Nominations must include a resume or CV, a cover letter describing the nominees' qualifications and interest in serving on the Committee, and up to three letters of support. Self nominations are acceptable. Nominations may arrive electronically or via regular mail. Check the Committee's Web page at the link above for more information or to access the mailing and email addresses for the Committee.

Pacific Coral Reef Mapping and Monitoring Workshop. The [Coral Reef Conservation Program](#) (CRCP) is reviewing and potentially revising long-term plans for its monitoring and mapping activities, collectively called the Coral Reef Ecosystem Integrated Observing System (CREIOS). The review's purpose is to ensure these activities are cost-effective, aligned with management needs, and allow for the timely delivery of required products and services to all essential users, given funding constraints. As a first step in a strategic planning effort to strengthen the link between science and management goals, the CRCP will bring together coral reef ecosystem managers and CRCP scientists at a three-day workshop during November 18-20, in Honolulu, Hawai'i. The workshop objectives are to 1) identify mapping and monitoring priorities for local, jurisdictional, regional, and national management efforts, 2) identify data and information needs to address gaps, and 3) identify beneficial products and potential new solutions that meet management needs. This facilitated workshop is intended to be a forum for discussing managers' needs for

monitoring and mapping data to achieve the common goals of increasing understanding of coral reef ecosystems and improving coral reef ecosystem health. The CRCP has invited 26 representatives from local agencies of the State of Hawai'i, the Territory of Guam, the Commonwealth of the Northern Mariana Islands, American Samoa, as well as the [Papahānaumokuākea Marine National Monument](#), the [Western Pacific Fisheries Management Council](#), and the [Department of the Interior](#), to attend this workshop. NOAA scientists will participate alongside the managers in order to discuss scientific capabilities and understand location-specific needs directly from the managers. The outcomes from the meeting will inform strategic long-term funding decisions with regard to the CRCP's CREIOS program.

USCRTF Releases a Call to Action for Coral Reef Conservation. The [U.S. Coral Reef Task Force](#) (USCRTF), at its 20th meeting in Kona, Hawai'i, released a renewed [call to action](#) for coral reef conservation in light of the threats from climate change, land-based sources of pollution, deteriorating water quality, and unsustainable fishing. This call to action is largely in response to: 1) recent scientific findings related to coral reef ecosystems and impacts from climate change reported at the *(continued on page 2)*

"Science has demonstrated that reef communities can recover when they are protected and stressors are removed. Urgent action is needed to reduce greenhouse gas emissions. In the meantime, precious time for coral reef ecosystems can be secured through increased protection from land and marine pollution, unsustainable fishing, development, and other stressors, all of which we know can damage coral health. The time to act is now." — USCRTF

UPCOMING EVENTS

September 2008

20: [International Coastal Cleanup](#)

October 2008

2-3: Virgin Islands Network of Environmental Educators Workshop, St. Thomas, USVI. Contact [Karlyn Langjahr](#) for details.

November 2008

18-20: Pacific Coral Reef Mapping and Monitoring Workshop, Honolulu, HI. Contact [Jessica Morgan](#) for details.

December 2008

31: End of International Year of the Reef 2008.

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

Announcements continued...

1) [11th International Coral Reef Symposium](#); and 2) statements made by the [Intergovernmental Panel on Climate Change](#), the [Group of Eight \(G8\)](#), and leaders of the Major Economies regarding greenhouse gas emissions, climate change and subsequent deteriorating effects on the environment. The USCRTF call to action complements the [Coral Reef Conservation Program's](#) new [Roadmap for the Future](#) ([pdf, 246 kb](#)), which prioritizes action focused on the three major threats to coral reef ecosystems: climate change, land-based sources of pollution, and impacts from fishing. This year marks the 10-year anniversary of the USCRTF and [International Year of the Reef 2008](#). The USCRTF's renewed call to action commemorates both events and demonstrates the USCRTF's continued leadership in and dedication to coral reef conservation.

NOS Launches Redesigned USCRTF Web Site. In honor of the [International Year of the Reef 2008](#) and the 10-Year Anniversary of the [U.S. Coral Reef Task Force](#) (USCRTF), the USCRTF Web site has undergone a redesign by [NOAA](#). This Web site is the official business site of the USCRTF and it serves as a repository for information on the USCRTF members and

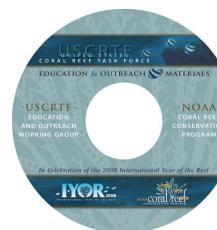


Screen capture of the newly redesigned U.S. Coral Reef Task Force Web site's home page. Courtesy: U.S. Coral Reef Task Force

activities as well as an outreach mechanism. The redesigned site was launched on August 25th to coincide with the start of the 20th meeting of the USCRTF in Kona, Hawai'i. In addition to a new look, the redesigned site boasts additional information and improved navigation.

RAMP Data to Assist Administration. On August 25, the White House requested inputs from the [Council on Environmental Quality](#) (CEQ) and the Departments of [Commerce](#), [Interior](#), and [Defense](#) to provide assessments and other relevant information on Rose Atoll, the seven islands of the Pacific Remote Island Areas and the three northernmost Mariana islands. The Administration is researching the advisability of providing additional recognition, protection, or improved conservation and management for objects of historic or scientific in-

terest around these 11 islands, coral reefs, geologic features and the surrounding waters. A major portion of the biological, oceanographic, and geologic data that have been collected over the past eight years at these islands is the result of the [Coral Reef Conservation Program's](#) Pacific Reef Assessment and Monitoring Program (RAMP). Scientists from the [Pacific Islands Fisheries Science Center](#) have been working to provide relevant information in response to requests from CEQ, DOI and other interested parties.

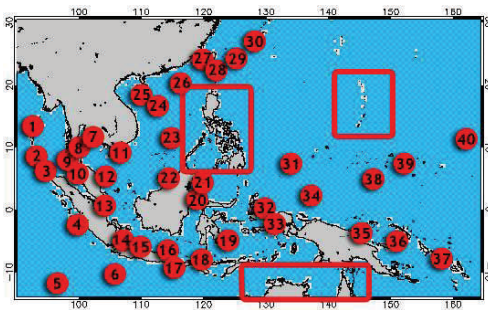


Second Edition of 2008 Educational Resource CD Released. The [Coral Reef Conservation Program](#) recently produced a second edition of a popular CD of free educational resources.

The materials contained on the CD, which primarily target grades 3-12, were created by state agencies and various branches of [NOAA](#), as well as non-profits that are part of the [Education and Outreach Working Group](#) of the [U.S. Coral Reef Task Force](#). The materials, such as lesson plans, videos, and student activities, cover a wide range of topics related to coral reefs. These topics include basic coral reef biology, reef ecosystems, human use and other threats, as well as conservation efforts. [Contact us](#) to request copies of the CD; due to limited supplies, educators and those conducting coral reef outreach will be given priority. To allow wider distribution, the contents are also available [online](#); the new resources found on the second edition of the CD will be online by the end of September.

NOAA Expands Coral Bleaching Alert System. Abnormal sea surface temperatures, in conjunction with natural and anthropogenic stressors, are causing the delicate balance of coral ecosystems to be disrupted, thus increasing the frequency of bleaching events. [NOAA Coral Reef Watch](#) (CRW) operational products help coral resource managers anticipate and plan for potential coral bleaching events in their jurisdictions. The operational system began in 2005, with 24 reefs around the world. CRW is pleased to announce that expansion of the experimental Virtual Station system is complete; automated alerts of potential bleaching conditions, based upon the data collected for the 24 operational and 166 experimental Virtual Stations, are now available. The new experimental sites cover coral reefs in the Florida Keys, Caribbean, Gulf of Mexico, Indian Ocean, (*continued on page 3*)

Announcements continued...



Virtual Station locations in the Coral Triangle region, the global center of coral reef biodiversity. Courtesy: Coral Reef Watch

Coral Triangle, Australia's Great Barrier Reef, Hawai'i, and the Pacific Ocean. Virtual Stations are based on satellite measurements of the thermal stress that can lead to coral bleaching, highlighting pixels that are close to specific reefs. Users can access time series graphs and data, view regional temperature imagery, and sign up for free alert e-mails that warn when conditions are right for coral bleaching. The new experimental sites are open for comment and further discussion from partners around the world to optimize placement. The satellite data will be validated against *in situ* data, where available. These products are available from CRW's [experimental products Webpage](#).

ICRS Organizing Committee and Super-Chairs Release Symposium Outcomes and Call to Action. The [11th International Coral Reef Symposium](#) (ICRS) concluded on July 11 with over 3,500 attendees from 75 countries; 1032 oral and 1600 poster presentations; 26 mini-symposia (scientific sessions); three special sessions; and 20 field trips. There were also over 75 exhibits as well as an educational center on-site. The symposium included addresses by six distinguished plenary speakers as well as talks given by the [International Society for Reef Studies](#)' (ISRS) President, the ISRS 2008 Darwin Medalist, three Congressional Representatives, [NOAA's](#) Administrator, and Florida's governor. Forty sponsorships from diverse government agencies, academic institutions, NGOs, and private industry, including Co-Sponsorships from the state of Florida, NOAA, and the [Department of the Interior](#), supported this international meeting.

Following the conclusion of ICRS, the Local Organizing Committee and Super-Chairs of the 26 mini-symposia have provided an overview to highlight outcomes of this meeting. A defining

theme of the 11th ICRS is that the news for coral reef ecosystems is far from encouraging, but that a consensus emerged indicating that society has both the knowledge and the tools to bring coral reefs back from the brink. In their words, "The time to act is now. The canary in the coral-coal mine is dead, but we still have time to save the miners. We need effective management rooted in solid interdisciplinary science and coupled with stakeholder buy-in, working at local, regional, and international scales alongside global efforts to give reefs a chance." For the

ICRS Recommended Actions

- Cut CO₂ emissions by lowering our carbon footprint and ask our policymakers to commit to low carbon economic growth.
- Eliminate open access fisheries in coral reef ecosystems.
- Protect coral reef herbivores, including parrotfish.
- Establish and strictly enforce networks of Marine Protected Areas that include No-Take Areas.
- Effectively manage the waters in between Marine Protected Areas.
- Maintain connectivity between coral reefs and associated habitats.
- Report regularly and publicly on the health of local coral reefs.
- Recognize the links between what we do on land and how it affects the ocean.
- Bring local actors together to develop a shared vision of healthy reefs and a road map for getting there.
- Work for change with management to produce desired outcomes.

full 11th ICRS Outcomes Document, click [here](#). In response, a Call to Action has been issued. It highlights ten actions that this body feels must be taken immediately to reverse the tide. To sign this statement committing to action, or to read the full Call to Action, click [here](#).



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.



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

Every Act Counts

It stinks to send chemicals into our waterways.

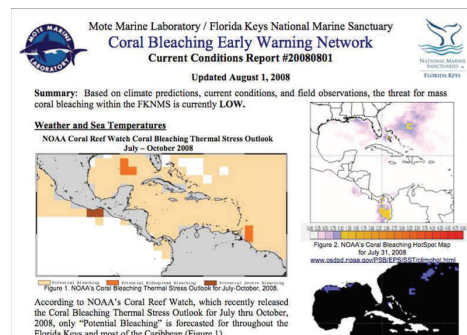
Whether you live one mile or one thousand miles from a coral reef, the chemicals we use to clean our houses and beautify our lawns end up in our waterways and are carried to the oceans. Just one pound of phosphorus in water produces an estimated five hundred pounds of algae, blocking sunlight and starving coral reefs.

Do your part by using naturally-derived and biodegradable detergents and cleaning products. Outside the house, minimize the impacts of fertilizer by using zero-phosphorus products or no more than one pound per 1,000 square feet of turf area for nitrogen (you need just half that amount in shade).

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.

Updates from the Atlantic/Caribbean

CRW Bleaching Forecast Used by Florida Reef Managers: The [August 1 issue](#) (pdf, 667 kb) of the [Current Conditions Report](#) from [Mote Marine Laboratory's "BleachWatch"](#) program highlighted [Coral Reef Watch's \(CRW\) new Coral Bleaching Outlook](#) as another tool in providing a comprehensive overview of conditions in the [Florida Keys National Marine Sanctuary](#). As a tool for the multi-agency [Florida Reef Resilience Program](#), Mote issues the [Current Conditions Report](#) regularly through the summer-fall period when the potential for coral bleaching is greatest. It provides scientists, managers, and community volunteers in Florida with a summary of [NOAA's](#) remote sensing and *in situ* data as well as "BleachWatch" observer reports for the area. CRW products have been the key to allowing managers and scientists to put teams in the water to monitor coral bleaching and CRW's operational products can contribute to better resource management in coral reef jurisdictions.



Screen shot of the August 1 2008 Current Conditions Report from the BleachWatch program. Courtesy: Mote Marine Lab/FKNMS BleachWatch

Ongoing *Acropora* Research Conducted in USVI. [Southeast Fisheries Science Center](#) scientists in Galveston recently completed a joint field expedition researching conch populations and the productivity of *Acropora cervicornis*. The *A. cervicornis* project is monitoring the growth and productivity of staghorn coral colonies in permanent transects located from western Puerto Rico to the northern U.S. Virgin Islands (USVI). During this expedition, all nine USVI transects were surveyed for fish abundance and biomass, coral point intercepts for coral distribution and health, and via photoquadrats to document and monitor growth and changes in condition of the coral and ecosystem. In addition, temperature loggers were downloaded and replaced and water quality parameters were

measured. Data analysis is on-going; however, several transects showed apparent increases in growth and in abundance of several important reef fish species such as grazing parrotfishes, grunts, and snappers. In addition, several of the transects showed losses of coral structure compared with previous surveys. Lastly, similar surveys last March documented a net entangled in the *A. cervicornis* in one of the St. Thomas transects. The net was removed at that time and the coral's recovery is being monitored, although it is progressing slowly. See the next story to learn about the conch portion of this joint cruise.

Conch Population Recovery Project. One of the most highly valued coral reef resources in the U.S. Caribbean, conch populations have been suffering the effects of overfishing for many years with little sign of recovery. This year [Southeast Fisheries Science Center \(SEFSC\)](#) scientists extended their sampling locations to include sites within the [Virgin Islands Coral Reef Monument \(Monument\)](#), a no-take marine reserve, to compare with their previous study. They tagged over 950 conch and completed tag-recapture in four bays within the Monument. The researchers continued tag-recapture surveys at sites in the original two bays for improved population estimates and stock assessment inputs. They continued sonic tracking in five bays to identify habitat use and migration patterns. Scientists observed evidence of high levels of poaching and subsistence fishing. The researchers also downloaded and replaced temperature loggers and downloaded sonic data covering the last five months. They deployed 12 acoustic tags. Additionally scientists shot video footage to be used in a companion NOAA-funded educational project using this conch project to teach students about scientific research and sustainable resource management. Reports to the [National Park Service](#), [USVI Division of Fish and Wildlife](#), as well as peer reviewed publications will be forthcoming.

New USVI Educational Materials Forthcoming. The electronic versions of three educational materials for the U.S. Virgin Islands (USVI) are now complete. The [Southeast Regional Office](#) has received the final versions of a guide to USVI seabirds and a USVI sanctuaries brochure as part of a project to create educational materials that were previously identified by USVI law enforcement officers as being necessary to meet resource conservation needs. These materials will be utilized to educate fishermen and other (continued on page 5)

Atlantic/Caribbean continued...

A page from the USVI sea-bird ID guide, one of 3 new products for USVI. Courtesy: NOAA SERO

members of the public about these two topics. The electronic version of an insert for table tents has also been received. The table tents will be distributed during upcoming activities in USVI with restaurants and other stakeholder groups; they will be placed on tables in cooperating restaurants in Puerto Rico and USVI informing consumers about the regulations protecting red hind spawning aggregations and Nasau and goliath grouper from fishing. All three materials will be available soon.

Oil Industry and Government Representatives Join Collaborative Dive Trip to FGBNMS. NOAA's Flower Garden Banks National Marine Sanctuary (FGBNMS) held a joint dive expedition with environmental scientists, engineers and lawyers from the Gulf of Mexico's offshore oil industry Aug 24 - 27. This annual expedition offers an opportunity for sanctuary, government agency, and private sector representatives to share information in an informal setting, while learning first-hand about the spectacular nature of the FGBNMS. The FGBNMS' Education Coordinator, the Southeast Region Liaison, the National Outreach Coordinator, and the National Marine Sanctuary Foundation's Government Relations and Education Coordinator represented the Office of National Marine Sanctuaries on the trip. They were joined by staff from the Minerals Management Service, Chevron, W&T Offshore, Williams Gas Pipelines, Diamond Offshore Drilling, Shell, and BHP Billiton. Aboard the M/V Spree, the group was able to make numerous dives at Stetson Bank and East Flower Gardens Bank. Surface intervals between dives were filled with presentations by participants, identifying reef creatures, and brainstorming future collaborative efforts to protect and promote the underwater treasures of the Gulf of Mexico.

Vessel Grounding Surveys to Improve Understanding of Coral Recovery. Scientists from two branches of NOAA are compar-

ing vessel grounding sites to assist with the design of future restoration efforts by developing a better understanding of ecological processes that contribute to coral reef recovery. From August 19-25, researchers from NOAA's National Centers for Coastal Ocean Science joined NOAA's National Marine Fisheries Service's Restoration Center to survey three sites off southern Puerto Rico. To determine the degree to which injured coral have recovered, scientists compared stony and soft coral community structure at injury sites and at impact-free control reference areas. Permanent monitoring stations will be established to determine if the abundance of newly settled coral polyps, or recruits, varies on loose rubble versus hard substrate, and whether coral recruit abundance differs in injured and uninjured areas.

South Atlantic Bight Research Cruise The Southeast Fisheries Science Center's Panama City Laboratory completed a research cruise to five proposed marine protected area (MPA) sites in the U.S. South Atlantic during the week of July 21st. These MPAs are described in Amendment 14 of the South Atlantic Fishery Management Council's (SAFMC) Snapper-Grouper Fishery Management Plan. They target spawning aggregation sites and general habitat of five species of grouper and two species of tilefish. The 2008 mission was conducted aboard the National Aeronautics and Space Administration (NASA) ship M/V Liberty Star and utilized a stationary camera array and a remotely operated vehicle (ROV) operated by NOAA's Undersea Research Center at the University of North Carolina Wilmington (NURC-UNCW). Biological samples were collected with fishery-dependent and -independent methods and several physical oceanographic parameters were also measured. Data were collected in control and experimental sites within each of the five proposed MPA areas. Four of the seven grouper and tilefish species targeted by these MPAs were observed on this mission. The order of magnitude increase in invasive lionfish densities found between the 2006 and 2007 surveys appears to have abated this year; however lionfish are still very numerous at sites along the continental shelf of the southeast U.S. between 50 and 100 m. with deep reefs off South Carolina having the highest densities. Analysis of the mission data is underway and once completed will be provided to the SAFMC along with comparisons to fish densities found in 2004, 2006, and 2007.

(continued on page 6)



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](#).

Atlantic/Caribbean continued...

Research Cruise to Riley's Hump. In late July, partners completed a six-day research cruise aboard the *M/V Spree* at Riley's Hump in the [Tortugas Ecological Reserve](#) (TER) within the [Florida Keys National Marine Sanctuary](#) (FKNMS). NOAA scientists from the [Beaufort](#) and [Miami](#) laboratories, along with staff from the [Center for Coastal Fisheries and Habitat Research](#), the [Coral Reef Conservation Program](#) headquarters, joined scientists from the [Florida Fish and Wildlife Conservation Commission's](#) (FWC) Marathon laboratory, the [University of Miami's Rosenstiel School of Marine and Atmospheric Science](#), and volunteers from [Reef Envi-](#)

[ronmental Education Foundation](#). While the mission focused on the southern portion of the TER, some sites in the northern section were also visited. Work completed included visual census transect surveys and point counts on 16 stations in the south reserve and nine stations in the north reserve, photographic habitat transects, roving diver surveys, split beam sonar transects to search for and identify mutton snapper aggregation sites, and acoustic sonar transects to locate tagged reef fish and study their movements between the south reserve and other areas of the FKNMS.

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.

Updates from the Pacific Region

NWHI RAMP Cruise Departs. Led by scientists from the [Pacific Islands Fisheries Science Center's](#) (PIFSC) [Coral Reef Ecosystem Division](#) (CRED), the 2008 Northwestern Hawaiian Islands (NWHI) Reef Assessment and Monitoring Program (RAMP) cruise departed Honolulu on September 12. The 32-day cruise aboard the [NOAA Ship *Hi'ialakai*](#) is conducting monitoring operations at French Frigate Shoals, Maro Reef, Laysan Island, Lisianski Island/Neva Shoals, Pearl and Hermes Atoll, Kure Atoll, and Midway Atoll. The planned activities include [Rapid Ecological Assessments](#) and monitoring operations of reef fish, corals, other invertebrates, and algae; [towed-diver surveys](#) of fish, macroinvertebrates, and benthic cover/habitat mapping; and long-term biological and oceanographic monitoring of the coral reef ecosystems of the NWHI. Preparations are also underway for Main Hawaiian Islands RAMP surveys on the [NOAA Ship *Oscar Elton Sette*](#) in late October and early November, 2008.

Main Hawaiian Islands Marine Debris Surveys. Marine debris surveys in the Main Hawaiian Islands (MHI) were completed on September 5 with an aerial survey of the island of Kaho'olawe. In collaboration with the [Kaho'olawe Island Reserve Commission](#), the [Pacific Islands Fisheries Science Center's](#) (PIFSC) [Protected Species Division](#) and [Coral Reef Ecosystem Division](#) (CRED), observations were made to determine the locations of marine debris accumulations and endangered Hawaiian monk seals around Kaho'olawe. Five monk seals and 255 debris accumulations were detected during this survey. A booklet is being prepared showing the locations of marine debris in the MHI; this booklet will be provided to management agencies and stakeholders to facili-



Composite showing how aerial marine debris surveys are conducted along HI coasts. Courtesy: Coral Reef Ecosystem Division

tate the location and removal of debris. To date in 2008, CRED debris specialists have removed 5.9 metric tons of debris from the island of Oahu.

NOAA Co-hosts Climate Change Workshop for Pacific Reef Managers. From September 2-5, NOAA co-hosted a climate change workshop in Hawai'i to increase the ability of Pacific coral reef managers to anticipate and respond to coral bleaching events, and to build resilience into management plans. Partners included the [Papahānaumokuākea Marine National Monument](#) (Monument), the [Hawaii Institute of Marine Biology](#) (HIMB), the [Office of Hawaiian Affairs](#), [The Nature Conservancy](#), and Australia's [Great Barrier Reef Marine Park Authority](#). Funding was provided by the [Coral Reef Conservation Program](#), with additional support coming from the Monument and HIMB. Thirty reef managers from Palau, Pohnpei, American Samoa, Samoa, Hawai'i, and the mainland U.S. attended. Utilizing [A Reef Manager's Guide to Coral Bleaching](#), the participants initiated coral bleaching response plans for their home sites and engaged in significant *(continued on page 7)*

Pacific continued...

discussions on how to integrate and build both social and ecological resilience in the face of climate change. This workshop provided reef managers with the tools they need to understand coral bleaching, know when bleaching is likely to occur, and take actions to respond to these events. Previous workshops in this series, held in Australia, American Samoa, and the Florida Keys, have also been extremely successful. To date, over 150 coral reef experts and managers have been trained; these individuals are able to apply what they learned to their local reefs in 18 nations around the world.



Participants at the bleaching workshop in Hawai'i. Courtesy: Mark Eakin

Improved Understanding of Food Chain Dynamics to Aid Reef Managers. Based on 600 animal and plant samples from Hawai'i's [Papahānaumokuākea Marine National Monument](#) (Monument), scientists from [NOAA's National Centers for Coastal Ocean Science](#) (NCCOS) were recently able to identify links in the food chain that support fish production and will improve coral reef management. The NCCOS scientists used results from sampling at the remote Northwestern Hawaiian Islands (NWHI) to run food web models, which estimated the trophic levels, or the position within the food chain, of over 25 species of fish and sharks, including herbivores, zooplanktivores, and predators. The models identified tiger sharks as the top predator in the Monument ecosystem. The models also confirmed initial findings that benthic algae in the NWHI serve as the base of the food chain that sustains apex predators like the tiger shark. These findings will help resource managers develop ecosystem models and biogeographic assessments to assist with resource protection efforts.

NOAA-funded Research Identifies Critical Areas for HI Resource Management . Research undertaken by the [Hawaii Coral Reef](#)



A. spicifera
Courtesy: HCRI

[Initiative](#) (HCRI), a program funded by [NOAA's National Centers for Coastal Ocean Science](#) (NCCOS), has helped to identify an area of concern known as North Ka'anapali along Maui's northwest coast. Coral reefs along this stretch of coast are overrun with the invasive alien algal species *Acanthophora spicifera*. As a result, Hawai'i's

[Department of Land and Natural Resources](#) is seeking approval for public hearings on new regulations that will protect algae-eating fish and sea urchins in the area in order to bring the invasive alga under control. HCRI is administered as a cooperative agreement between NCCOS and the [University of Hawaii](#), and provides critical information needed to address novel problems, such as invasive species, in the State of Hawai'i.

New Shipwrecks Discovered in the Monument. The 2008 [maritime archaeology](#) team returned on August 28 from a research expedition to the [Papahānaumokuākea Marine National Monument](#) (Monument). The team, still excited about a recent discovery of the 1837 whaling ship GLEDSTANES at Kure Atoll, discovered a second shipwreck near the end of their journey at French Frigate Shoals. On Saturday, August 23rd, the team set out to survey an area reported as an historic anchorage and shortly after beginning the first towboarding of the day discovered what appears to be an early 19th-century anchor lodged in the reef. After surveying the surrounding area, the team discovered more artifacts, including another large anchor, rigging components, bricks, and three trypots. The latter clearly identifying this shipwreck as a whaler. Only three whaling ships, all American vessels, have been reported lost at French Frigate Shoals and the team is now working to identify her. This expedition wrapped up a successful and exciting research season for the [Office of National Marine Sanctuaries](#) in the Monument.

Derelict Fishing Net Survey at Midway Initiates Study. In August, the [Papahānaumokuākea Marine National Monument](#), [Pacific Islands Fisheries Science Center's](#) (PIFSC) [Coral Reef Ecosystem Division](#) (CRED), and the [U.S. Fish and Wildlife Service's Midway Atoll National Wildlife Refuge](#) (continued on page 8)

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

IYOR PSAs

A free [IYOR PSA](#) related to the U.S. Messaging Campaign's main message was added to the national broadcast rotation for all Discovery TV Networks on June 19; it will run through the end of 2008.

The English version is 15 seconds; the 30 second Spanish version is in national broadcast rotation on the Discovery Channel Latina.

PSAs for each of the five action messages

Pacific continued...

conducted an initial survey of the long-term impacts of derelict fishing nets on coral reef habitats at Midway Atoll. The study is designed to assess the impacts from nets entangled on the reefs by tracking the changes in the benthic community and substrata over time, either after removal of the nets or if they are left in place. Over the next year *Pocillopora* sp. and *Montipora* sp. reef sites and corresponding control sites with no impacts from nets will be monitored three more times using two methods: quantification of habitat type using photoquadrats and mortality/injury counts. These data should indicate if and in what time frame the nets or the removal of the nets significantly alters the benthos and substrate cover on the affected sites. The data collected in this study will influence future removal efforts in the region.

USCRTF Participants Go “Back to School” in Hawai‘i. Twenty-one representatives from [NOAA](#) and other agency members of the [U.S. Coral Reef Task Force](#) (USCRTF) took

part in the USCRTF Education Day on August 26. Participants visited six Kona schools and gave interactive presentations, conducted student activities, and answered questions on coral reef science and conservation. Some classes participated in fish dissection, others learned about the importance of clean water for healthy fish, invasive fish species, and threats to coral reefs and their inhabitants. Over 600 students, grades K-12, benefited from this outreach event. In addition, outreach materials were distributed to a portion of the students and teachers.



Be a Reef-Hugger

As you do your Fall yard work, please fertilize less and use eco-friendly fertilizer or alternatives to fertilizer. **ALWAYS** dispose of household, yard, and garage chemicals properly.

International Updates

CRW Trains Teachers and Students at Satellites & Education Conference: A member of [Coral Reef Watch](#) (CRW) travelled to the 2008 Satellites and Education Conference at California State University - Los Angeles. This conference was held August 7 – 9 and was hosted by the [Satellite Educators Association](#) (SEA), with major sponsorship from [NOAA](#) and the [National Aeronautics and Space Administration](#). It was attended by approximately 90 science teachers who use satellite data as a teaching tool in their classrooms. CRW presented a session entitled “NOAA Coral Reef Watch: teaching about coral reefs with satellite data” to 22 teachers. Many teachers indicated they were going to attempt developing a coral reef information module in their classrooms. CRW staff also had the opportunity to collaborate with teachers and students from SEA’s [Multinational Youth Studying Practical Applications of Climatic](#)



CRW training 22 high school science teachers to use CRW products in the classroom. Courtesy: Nancy Strong



Kris McElwee, of the CRCP, works with Kona students on an activity. Courtesy: CRCP



2008 M.Y.S.P.A.C.E. students and their teachers. Courtesy: Al E. Strong

[Events](#) (M.Y. S.P.A.C.E.) program. The M.Y.S.P.A.C.E. project began at the 2007 conference and has grown in the past year to a group of 24 students. This year’s group includes new and returning students from Florida, California, the U.K., and China. The students spent time during this conference analyzing remote sensing data for hot-spots, or anomalies, to evaluate potential responses of various animals. The Florida students developed a local network over the internet this summer to communicate information both to and from reef managers and dive shops during times of coral bleaching. By equipping teachers to bring NOAA satellite products into their classrooms, students are learning about threats to valuable marine resources and how NOAA is helping to address these threats.

New Data in CoRIS

Product Name	Description
CRED - Cumulative Maps of Percent Scleractinian Coral Cover for PRIA, CNMI, Guam, NWHI and American Samoa. Link to sample meta-data for this product	The maps show percent cover values of scleractinian coral derived from classified photos and videos at each location. Each point represents an analyzed video frame or photo.
CRED - Coral Health and Disease Assessments for PRIA, Hawai'i, NWHI, CNMI and American Samoa. 2006 – 2008. Link to sample metadata for this product	Coral health and disease assessments were conducted as part of the Rapid Ecological Assessments performed during recent Reef Assessment and Monitoring Program (RAMP) cruises. Note: data are available two years following the data collection date.

Publications

Coral Reef Watch Article Appears in the Freshwater and Marine Aquarium Magazine. [Coral Reef Watch](#) (CRW) was invited to write an [article](#) on climate change threats to coral reefs, published this month in the [Freshwater and Marine Aquarium](#) magazine. The article describes the threats of climate change to coral reefs, including rising sea surface temperature and ocean acidification. It also supplied actions that individuals could take to affect climate change. The article was part of a series of articles appearing in the magazine to highlight [International Year of the Reef 2008](#).

CRW Article in PADI's Undersea Journal. [Coral Reef Watch](#) (CRW) was invited to write an article on climate change threats to coral reefs, published in the August issue of *Undersea Journal*. This quarterly journal is published for the global dive professional industry, by the [Professional Association of Diving Instructors](#) (PADI). The article is a non-technical descrip-

tion of the current state of knowledge on corals and climate change.

Threats to Coral Reefs Addressed in Voice of America Television Story. [Coral Reef Watch's](#) (CRW) coordinator was one of two [NOAA](#) scientists featured in a July [Voice of America](#) story about the threats to coral reefs; it highlighted the recently-released report [The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2008](#). The CRW coordinator's interview centered on the impacts of the [2005 Caribbean bleaching event](#) and the combined threat to coral reefs from rising temperatures and ocean acidification.

Williams, I. D., Walsh, W. J., [Schroeder, R. E.](#), Friedlander, A. M., [Richards, B. L.](#), & Stamoulis, K. A. (2008). Assessing the importance of fishing impacts on Hawaiian coral reef fish assemblages along regional-scale human population gradients. *Environmental Conservation*.

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

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

Attn: Outreach and Education
NOAA Coral Reef Conservation
Program, N/OCRM
1305 East West Highway, 10th
Floor
Silver Spring, MD 20910-3281

Phone: (301) 713-3155
Fax: (301) 713-4389
E-mail: coralreef@noaa.gov

We're on the Web!
<http://coralreef.noaa.gov>

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

