

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

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ANNOUNCEMENTS

Geodatabase (SFSGeo) Launched. The Southeast Fisheries Science Center (SEFSC) recently launched the [South Florida Sportfishing Geodatabase](#) (SFSGeo). This application maps the distribution of sportfishing effort off of Palm Beach, Broward, Dade, and Monroe counties in Florida. The current version displays monthly counts of for-hire and private sportfishing vessels on a grid of ten square mile cells. The vessel counts were aggregated from the NMFS Marine Recreational Fishing Statistics Survey, the NFMS Headboat Survey, the SEFSC Aerial Survey, and the Biscayne National Park Recreational Creel Survey. There is also bathymetry and coral reef data in the tool to compare fishing effort with habitat features. The home page provides instructions for obtaining password access to the application.

Upcoming Coral Disease Response Training. The [Coral Disease and Health Consortium](#) (CDHC), in partnership with University of Guam, is convening a Coral Disease Assessment and Outbreak Response Training workshop. The workshop will be held February 27-March 3 for partners in Guam, American Samoa, CNMI and Cook Islands that are involved in coral reef monitoring and assessment programs. The workshop will 1) provide skills in the diagnosis, assessment, sampling and investigation of coral diseases and 2) develop a working group of trained individuals in the Central Pacific who are qualified to respond to coral disease outbreaks.

Secrets of the Gulf Expedition to Explore Connections in the Gulf of Mexico. A groundbreaking expedition, featuring more than a dozen partners, will kick off February 27 with VIP and student tours of the U.S. Navy's nuclear powered research submarine (NR-1) and its support vessel, *SS Carolyn Chouest*. A media event on March 1 will herald the beginning of the expedition, which will continue from March 2-10. The [Secrets of the](#)

[Gulf](#) expedition builds on previous work coordinated by the sanctuary and has several different, yet complementary, missions. Sanctuary researchers will explore the deeper water low-relief ridges and scarps that connect the various banks along the continental shelf in the northwest Gulf of Mexico, including the three banks that comprise the Flower Garden Banks National Marine Sanctuary. Their mission will be to observe and document plants and animals that utilize these 'hidden highways' between the banks to determine how the sanctuary may be affected by events that occur outside its boundaries. University of Rhode Island researchers, led by Dr. Robert Ballard, will explore the same areas for evidence of ancient shorelines and the people who may have lived there. Meanwhile, in the shallower waters of the sanctuary, researchers will be investigating connections on the coral reef cap, including manta ray movements, conch populations, and parrot fish predation of corals. Immersion Presents, a private organization, will air five broadcasts each day of the mission into classrooms and informal settings such as Boys and Girls Clubs. Students at the viewing sites around the country will have an opportunity to ask questions of the scientists on board the vessel. Individuals can follow the expedition from the comfort of their homes through 24 hour live feeds on the [Internet](#), daily mission logs and background information provided on several websites.

UPDATES

Atlantic

Mapping of Florida's Coastal and Marine Resources. On February 7-8, a facilitated workshop was held on the theme of mapping Florida's coastal and marine resources. The meeting was organized by the Florida Department of Environmental Protection, U.S. Geological Survey, and Department of Defense Southeastern Regional Partnership for Planning and Sustainability. The group agreed on a habitat classification scheme that would integrate the

State's smaller-scale [System for Classification of Habitats in Estuarine and Marine Environments](#) with NOAA's national [Coastal and Marine Ecological Classification Standard](#). State agencies also developed a draft priority ranking of 13 sub-regions around the Florida coast based on unmet needs.

Dry Tortugas National Park RNA Assessment: Program Design Interagency Kickoff Meeting.

Public scoping meetings during the late 1990s for the Tortugas Ecological Reserve (TER), part of the system of no-take zones in the Florida Keys National Marine Sanctuary, were held collaboratively with the National Park Service (NPS). At the time, the NPS was developing plans for a no-take Research Natural Area (RNA) within the Dry Tortugas National Park. The TER was implemented in 2001 as part of an integrated approach to managing the larger area of shallow (Park) and deeper (Sanctuary) coral reef ecosystems. However, the RNA designation was delayed by a conflict over jurisdiction of submerged lands between the State and Federal governments. The parties have agreed to disagree, and the State approved the Park's revised general management plan, including the RNA, last month. This meeting was organized by the NPS and Florida Fish and Wildlife Conservation Commission/Fish and Wildlife Research Institute to initiate developing a RNA assessment program. Discussions centered around studies to achieve five objectives regarding changes in populations and communities associated with implementation of the RNA, as well as human dimensions research. This meeting will be followed by public review of draft recommendations for the RNA assessment program.

Local Ecological Knowledge Provides Valuable Information for Improved Management of Coral Reefs in Puerto Rico. Researchers at the University of Puerto Rico- Mayagüez, supported by the National Centers for Coastal Ocean Science and funded through the [Coral Reef Ecosystem](#)

[Studies- Caribbean](#), found that most data collected from local recreational SCUBA divers were consistent with existing scientific documentation. A recently released report through the Interdisciplinary Center for Coastal Studies recognizes recreational SCUBA divers as an important source of local ecological knowledge (LEK), aiding coral reef ecosystem assessments for improved management in Puerto Rico. These data suggest that LEK be given equal significance and value in decision making processes. Furthermore, the incorporation of different forms of knowledge in management plans increases the chance of success and obtains more far-reaching support.

NOAA CRCP Supports Environmental Enforcement Workshop in Puerto Rico.

February 2 concluded the sixth in a series of environmental enforcement workshops held in US coral reef jurisdictions; this meeting was held in San Juan Puerto Rico. Several agencies of the US Coral Reef Task Force; the Department of Commerce (NOAA's CRCP, Office of Law Enforcement and General Council for Enforcement Litigation), the Department of Justice, the Environmental Protection Agency, U.S. Fish and Wildlife Service, Corps of Engineers and the Coast Guard cooperated to conduct training on federal environmental statutes and how they can be used at the Territorial level and in Territorial waters. Those laws include: Clean Water Act (National Pollutant Discharge Elimination Program and Section 404 Dredge and Fill Program), Oil Pollution Act (vessel groundings, treatment of oil spills), Magnuson Stevens Fishery Management and Conservation Act, Marine Mammal Protection Act, Migratory Bird Treaty Act, Lacey Act, and the Endangered Species Act. In addition to legal information, practical training included civil versus criminal cases and why either might be more advantageous, report writing, how to gather evidence, ethics, building a team and interagency cooperation. The Secretary of the Department of Natural and

Environmental Resources of Puerto Rico was very supportive of the workshop, providing support for logistics and simultaneous translation.

Additionally the Governor's Chief of Staff dropped in to hear a portion of the proceedings expressing his support for the effort. The organizers hope to conduct a second round of workshops to continue to meet the enforcement needs of U.S. coral reef territories.

NCCOS Study Evaluates Hawaiian Marine Life Conservation Districts for Effectiveness in Biodiversity Conservation and Fisheries Replenishment. The National Centers for Coastal Ocean Science (NCCOS) has published the first comprehensive evaluation of Hawaii's system of state marine protected areas (MPAs). The report, *Fish Habitat Utilization Patterns and Evaluation of the Efficacy of Marine Protected Areas in Hawaii*, examined the 11 Marine Life Conservation Districts (MLCDs), which were established by the State of Hawai'i over the last four decades in support of conservation and education objectives, and surrounding areas for biodiversity and fisheries conservation effectiveness. The report also made recommendations for effective design of MPAs. Three key study findings were that 1) areas fully protected from fishing had higher fish biomass, larger overall fish size, and higher biodiversity than adjacent areas of similar habitat quality; 2) habitat complexity, protected area size, and habitat diversity were the major factors in determining effectiveness among MPAs; and 3) all of the MLCDs were too small to provide any measurable positive influence on adjacent fished areas. The methods and results in this study, which NCCOS conducted with funding from NOAA's Coral Reef Conservation Program and in partnership with a number of other agencies and organizations, may be applied to other regions working on MPA design, management and evaluation.

MPA Study Reveals Local Community Input is Essential for Effective Management in Puerto Rico. Researchers at the University of Puerto Rico-Mayagüez, supported by the National Centers for Coastal Ocean Science and funded through the [Caribbean Coral Reef Institute](#), found that local communities need to be consulted about conservation and management strategies within established marine protected areas (MPAs) to improve stewardship. Historically, the management of marine resources in Puerto Rico has been driven by outside interests such as the US. Local government has paid little attention to incorporating innovative management alternatives largely because the prevalent US federal regulations have more authority than local initiatives. These findings revealed a prevailing sense of confusion within local communities about which regulations are in place in certain situations and locations at a given time. The findings also suggest a need to evaluate local community perceptions in terms of what they consider is commonly occurring within established MPAs to determine the best conservation and management strategies for each locale.

Seminar on Fishing in Marine Reserves Held at RSMAS. Dr. Jim Bohnsack gave a faculty seminar last Friday at the University of Miami, Rosenthal School of Marine and Atmospheric Sciences (RSMAS) on MPAs and coral reef fisheries. The seminar was entitled "Marine reserves and catch and release fishing: issues and trends" and included coral reef work in the Keys and the Southeast Florida Coral Reef Initiative (SEFCRI) region. This was part of the MBF Faculty Spring 2007 Seminar Series.

Monitoring Recruitment Connectivity: Meso-American Cruise. The NOAA Ship *Gordon Gunter* recently completed the Larval Fish and Physical Oceanography Survey of the Mesoamerican Reef System. This was the second and last cruise of a joint international effort between NOAA's Southeast Fisheries Science

Center ([SEFSC](#)) and the Atlantic Oceanographic and Meteorological Laboratory (AOML), El Colegio de La Frontera Sur (ECOSUR) in Chetumal, and Centro de Investigacion y de Estudios Avanzados (CINVESTAV) in Merida, Mexico. This year also included additional work in conjunction with the University of Belize and Conservation International. In addition to the planned work from the Yucatan Channel south, an additional survey was conducted to map larval grouper populations along the offshore reef system and atolls. An initial survey of the Honduran Gyre, thought to play a significant role in larval reef fish recruitment in the region, was also conducted. One hundred and twenty plankton tows were conducted using a one meter Multiple Opening Closing Net Environmental Sensing System (MOCNESS), a 10 meter MOCNESS, and a three meter Methot trawl. Conductivity/Temperature/Depth readings (CTD's) were conducted at each station and Acoustic Doppler Current Profiler data collected throughout the trackline. Samples are at ECOSUR where they will be sorted this year. In addition, scientists conducted shore-based sampling from the atoll, Bancho Chinchorro and Xcalak in the Yucatan, and at three sites in Belize. These collection efforts provided grouper recruitment data for the same time period as the ship based collections. Representatives from Belize indicated an interest in organizing a more intensive offshore survey by developing a joint project with the SEFSC similar to the one established with Mexico. Three articles appeared in local newspapers about the group's research efforts in conjunction with Mexican scientists in Yucatan.

Education and Outreach with Local Fishing Cooperatives. [Southeast Fisheries Science Center](#) (SEFSC) scientists presented a talk about the above study at the request of the local Banco Chinchorro fishing cooperatives. The scientists were very delighted with the opportunity to teach the fishermen about larval processes and the talk was very warmly received. They were the first

group of scientists to give a talk about their research to the cooperative and members of the reserve. Work is underway to set this as a precedent for all scientists working at the reserve as it is believed that this would greatly improve the current relationship between the fishermen, scientists and employees of the reserve. In addition, SEFSC scientists have taken on the task of advocating additional emphasis on educational outreach efforts such as the creation of a library for the island residents (fishermen and scientists).

Pacific

PIFSC Marine Debris Team Removes Marine Debris from Lanai's Beaches. The Pacific Islands Fisheries Science Center (PIFSC) Coral Reef Ecosystem Division's (CRED) Marine Debris Team successfully completed a derelict fishing gear removal operation along the remote northern and northeastern shorelines of Lanai in the main Hawaiian Islands. A January 2007 aerial survey identified 263 debris sites on Lanai, and in seven working days, the Marine Debris Team successfully removed 156 individual net piles from Lanai's windward beaches. This effort was supported by NOAA's Marine Debris Program and numerous industry and local partners on Oahu and Lanai. For more information please visit the PIFSC [Website](#).

Our Sea of Islands Forum a Resounding Success. *Our Sea of Islands: A Regional Forum for Oceania on Marine Managed Areas and World Heritage* was held in Honolulu from January 29 to February 2. It was attended by representatives from 20 countries, states and territories around the Pacific. The Forum was co-sponsored by NOAA, the Department of the Interior, and the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Programme. The Forum included work sessions with topics on: Science—An Integral Element of Effective Management, Customary Marine Management Practices in Oceania, Marine Managed Area Representation, Remote

Surveillance and Enforcement, Conservation Finance, and World Heritage Designation. This Forum provided an opportunity to meet with other managers, government officials, and practitioners from around Oceania (which includes the regions of Micronesia, Melanesia, Polynesia, and Australia) to discuss shared experiences. A communiqué from the forum will be finalized and available from the Monument's [Web site](#) in the next couple of weeks. See the 'Coral Reefs in the News' section to read selected media coverage by local media outlets, as well as the *Associated Press*.

Annual NWHI Symposium Held at the Monument Offices. A two-day research symposium was held February 5-6 to highlight ongoing research being conducted in the Northwestern Hawaiian Islands (NWHI). Sessions covered a range of topics including NWHI connectivity, monitoring, protected species, ecosystems and coral health assessment, geospatial technologies, fish biology and stock assessment and human dimensions. The symposium was co-organized by NOAA's Pacific Island Fisheries Science Center and the University of Hawaii's Hawaii Institute of Marine Biology. The NWHI Marine National Monument hosted over 50 scientists and managers who attended the symposium.

New Exhibit on Marine Debris Installed at Mokupapapa. A new exhibit highlighting the issue of marine debris in Hawaii was installed at the Monument's Mokupapapa Discovery Center in Hilo, Hawai'i this past weekend. The exhibit features informational panels in Hawaiian and English, and an entire wall draped in marine debris. The exhibit was funded by the NOAA Marine Debris Program. Marine debris is one of the biggest threats to ecosystems and wildlife in the Northwestern Hawaiian Islands and the exhibit highlights several facets of the problem, what NOAA is doing to address it, and what individuals can do.

Updates to Pacific Islands Benthic Habitat Data. The Coral Reef Ecosystem Division of the Pacific Islands Fisheries Science Center has updated benthic habitat data for American Samoa and the Northwestern Hawaiian Islands. The GIS layers, describing geomorphology with slope, rugosity, and bathymetric position index (BPI) zones and structures, are derived from multibeam bathymetry to support NOAA CRCP goals. These are experimental layers that are under consideration as part of a standard set of benthic habitat products, and were developed for two pilot study sites: Tutuila, American Samoa and French Frigate Shoals, Hawai'i. For more information and to view the maps, please visit the Pacific Islands Benthic Habitat Mapping Center (PIBHMC) [Web site](#).

2006 FGBNMS Research Report Completed. The 2006 Flower Garden Banks National Marine Sanctuary (FGBNMS) research activities summary was released the first week of February. A short summary of activities includes the Sanctuary office move from Bryan to Galveston, TX. In addition, the FGBNMS research team was involved in 11 research cruises last year. A pool of 54 FGBNMS personnel, scientists, and volunteer divers conducted approximately 1109 SCUBA dives during the 2006 field season. A total of 644 volunteer hours were used for Sanctuary research activities. A coral bleaching response cruise was also conducted. Other activities included biological surveys and collection, equipment maintenance and image collection. Thirteen sanctuary permits were processed and an additional 10 were ongoing. For more information, download a copy of the report [here](#).

HIHWNMS Ocean Count. More than 600 volunteers gathered data from the shores of Oahu, Kaua'i, the Big Island, and Kaho'olawe for the annual Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) Ocean Count on January 27. Participants tallied

humpback whale sightings and documented the animals' surface behavior during the survey, which will continue on the last Saturday in February and March. Volunteers collected data from 59 sites statewide. The following are the average numbers of whales sighted per 15-minute count period on each of the islands: O'ahu – 4 whales, Kaua'i – 5 whales, Big Island – 5 whales, and Kaho'olawe – 23 whales. Many new volunteers took part in last month's count. If you're going to be in Hawaii during whale season consider taking some time to take part in the count. Two more Sanctuary Ocean Counts are scheduled to take place on Saturday, February 24 and March 31.

Maritime Heritage Resources May be Considered in Sanctuary Management Plan Review Process. Last week, the Pacific Islands region, Hawaiian Islands Humpback Whale National Marine Sanctuary, the Naval Historical Center, the State of Hawaii's Historic Preservation Division, and the National Park Service's Submerged Resources Center participated in a conference call regarding the shipwreck assessment document for the Humpback Whales Sanctuary and the main Hawaiian Islands. The document, in response to a request from the State, provides background and current management status for maritime heritage resources in the main Hawaiian Islands. It will go forward to the Governor as one of the types of resources which may potentially be considered in the sanctuary's management plan review process.

Maritime Archaeology Expedition to be Linked with New England School. Maritime Archaeologists in the Pacific Islands Region of the National Marine Sanctuary Program (NMSP) have begun plans to link their 2007 maritime archaeological expedition with elementary school students at St. Joseph's School in Fairhaven, Massachusetts. The 2007 expedition will visit the Northwestern Hawaiian Islands on the NOAA vessel *Hi'ialakai*. Students will follow the

maritime archaeologists as they prepare for and conduct work at the shipwreck site of the whaling ship *Parker*, wrecked at Kure Atoll in 1842. The *Parker* was built in Fairhaven, Massachusetts and this will be an exciting opportunity to connect these two regions through their common maritime heritage.

International

CRCP Assists with Capacity-Building Workshop for Socioeconomic Monitoring in the Western Indian Ocean. The Global Socioeconomic Monitoring Initiative (SocMon), coordinated by the CRCP, facilitates community-based socioeconomic monitoring in six regions worldwide, including the Western Indian Ocean (WIO) region. On January 8-12, the SocMon Global Coordinator assisted with a "Train the Trainers" workshop in the Seychelles, held to increase the number of SocMon trainers in the WIO region. The successful workshop established a lead trainer for each of the SocMon WIO countries: Kenya, Tanzania, Mozambique, Madagascar, Mauritius, and the Seychelles. The training workshop, which also served to launch a national SocMon program for the Seychelles, enjoyed tremendous publicity and government support. The Seychelles Minister of the Environment and the head of the Seychelles Marine Parks Authority both contributed to the workshop, which was featured on the Seychelles' national evening news as well as on the front page of the national newspaper.

National/Headquarters

Contribution to Online Article on IPCC Climate Change Report. "Earth and Sky", a radio series and Web site devoted to presenting science to the general public, released an article on February 2 entitled, "[After IPCC, 25 scientists speak on global warming.](#)" Dr. Mark Eakin was one of the 25 scientists (including three from NOAA) who contributed. His piece focused on the future of coral bleaching as ocean

temperatures continue to rise, and what reef managers can do to help their reefs survive. The key message is that rising temperatures have been, and will continue to be, bad news for corals. While resource managers can have little impact on global carbon emissions, they can help alleviate the impact on corals through better management of local threats.

Story on NOAA's Support for the IPCC Report Receives Top Billing on NOAA Home Page. As previously reported, Dr. Mark Eakin participated in the U.S. Government peer-review of the Intergovernmental Panel on Climate Change (IPCC) international climate science report released on February 2, leading the review teams for two of the chapters. His efforts, along with five other scientists from the National Environmental Satellite, Data, & Information Service (NESDIS), were acknowledged in a [news article](#) that was the top story on the NOAA website that week.

NACP Investigators Meeting on Ocean Acidification. Coral Reef Watch (CRW) scientist, Dr. Dwight Gledhill, attended the U.S. North American Carbon Program (NACP) Investigators Meeting held January 22-24 in Colorado Springs, CO. Major themes of the workshop addressed ocean acidification and air-sea CO₂ fluxes. The goal of the workshop was to foster a community of NACP scientists to resolve uncertainties in understanding and managing the carbon cycle of North America and adjacent oceans. Participants identified data and infrastructure gaps and to better understand integration needs across earth system boundaries. Coastal regions have been identified as playing an important role in the North American carbon budget. Data products currently under development at CRW include characterizing the variability of the carbon system overlying selected coral reef ecosystems in the Greater Caribbean Region and could offer important contributions to the NACP efforts.

CRW Scientists Present at Limnology and Oceanography Meeting. Coral Reef Watch (CRW) scientists, Drs. C. Mark Eakin and Dwight Gledhill, presented at the annual meeting of the American Society of Limnology and Oceanography held February 4-9 in Santa Fe, NM. Relevant themes of the meeting included climate impacts on ecosystems, marine calcification, and ocean acidification. Dr. Eakin made a presentation on "Record Breaking Coral Bleaching in the Caribbean: The 2005 Bleaching Event" as part of a session on climate change impacts. Dr. Gledhill presented preliminary results of "Reef Metabolic Index" observations currently being retrieved from Media Luna Reef, Puerto Rico. These observations couple NOAA/ Atlantic Oceanographic and Meteorological Laboratory (AOML) station observations to offshore estimates of sea surface pCO₂ derived using satellite remote sensing. Such coupled observatories will provide important insight into coral reef ecosystem response to ocean acidification. The meeting also featured an Ocean Carbon Biogeochemistry "Town Hall" to discuss this interagency US effort in which NOAA is heavily involved. NOAA CRW is keenly interested in these topics as ocean acidification is of growing concern as a potential threat to coral reefs and other marine ecosystems. In addition, experimental products under development at CRW are dependent on advances in measuring marine CO₂ and ocean chemistry parameters. The conference served as an important avenue to foster multi-agency and academic collaborations relevant to ocean acidification, including the potential use of satellite data to investigate ongoing impacts of ocean acidification on marine systems.

New Data in CoRIS. See page 13.

CORAL REEFS IN THE NEWS

Articles Mentioning NOAA

“Center Provides New Look at Underwater Environment in Florida’s Keys” – February 21, 2007 (*Voice of America*, US). “....‘The beauty of the Eco-Discovery center is that you can get under the water without getting wet, but it is going to be an inspiration so that when you do get to the water you are going to treat it in a sensible way and again make it available for future generations,’ said James Connaughton, President Bush’s senior adviser on the environment.”

“A Good Idea Gone Wrong Harms Florida Reefs” – February 17, 2007 (*Associated Press* video on <http://vidoe.ap.org/>). “More than 30 years ago, the state of Florida ok’d sinking old tires to form a reef off the coast. But that has been an environmental disaster.”

“Sanctuary Wants Opinions” – January 26, 2007 (*Florida Keys Keynoter*, FL). “A decade after rules for the Florida Keys National Marine Sanctuary took effect, a research team is asking what people think.”

“Reef Rescue’s outfall studies not scientific enough for DEP” – January 30, 2007 (*Palm Beach Post*, FL). “....Scientists from the DEP, the Environmental Protection Agency and National Oceanic and Atmospheric Administration have thoroughly reviewed the data from Reef Rescue and agree that it does not show a direct link between the ocean outfall and algae growth near the Gulfstream Reef. DEP is seeking definitive answers and has required the SCR Wastewater Treatment Plant to complete a study and monitor water quality to define the effects of outfall nutrients on the reef.”

Other Articles

“Today at Cornell” – February 23, 2007 (*The Ithaca Journal*, NY). “....While humans can

survive large temperature fluctuations, such species as corals are only comfortable within a 12-degree temperature range. And rising global temperatures appear to be threatening their survival, according to Drew Harvell, Cornell professor of ecology and evolutionary biology.”

“Images Reveal River Sediment Reaching Outer Reef” – February 23, 2007(*ABC North Queensland, Australia*). “CSIRO images taken of the Great Barrier Reef after heavy rain in north Queensland earlier this month have defied the common scientific belief that sediment plumes from rivers never reach the outer reef.”

“Horizon International Launches Magic Porthole Coral Reef Project Preview on Web” – February 22, 2007 (*Horizon International* press release on www.solutions-site.org).

“....The Magic Porthole preview launched today at www.magicporthole.org takes visitors into the fascinating world of coral reefs with videos, photographs, reef creatures who will be guides, games to enjoy while making discoveries about the lives of boxing crabs, moray eels, sharks, and many other creatures who are part of the fascinating and fragile life in coral reefs.”

“UN Agency Gets 5-year, Rent-free Accommodation” – February 21, 2007 (*The Jamaica Observer, Jamaica*). “....Colmenares, who, in his capacity as unit coordinator also has responsibility for the Regional Seas Programme - a programme which is jointly managed by the International Seabed Authority - expressed pleasure at the new agreement and stressed the importance of the Caribbean Sea’s reef system to the region.”

“Bishop Museum Receives MacArthur Grant” – February 21, 2007 (*HULIQ*, NC). “The John D. and Catherine T. MacArthur Foundation has awarded Bishop Museum with a \$290,000 grant over eighteen months to study climate change planning and mitigation to help stem the threats of global warming.”

“Marine Project Launched” – February 19, 2007 (*The Bahama Journal, Bahamas*). “At the end of a one-year project, the government would be in a position to better select new sites as marine reserves in The Bahamas which will assist in protecting the longevity of the country’s coral reefs, fishing habitats and mangrove areas, according to officials involved in the initiative.”

“Tire Reef Off Florida Proves a Disaster” – February 16, 2007 (*The Associated Press in The Washington Post, FL and approx. 2 other sources*). “A mile offshore from this city's high-rise condos and spring-break bars lie as many as 2 million old tires, strewn across the ocean floor – a white-walled, steel-belted monument to good intentions gone awry.”

“BIOS Ushers in a New Age of Exploration” -- February 14, 2007 (*The Royal Gazette, Bermuda*). “A new programme at the Bermuda Institute of Ocean Sciences (BIOS) will expose students directly to environmental issues and allow them to participate in significant scientific research conducted by the facility.”

“Coral Cultivating Catches On” -- February 12, 2007 (*Kennebec Journal, ME*). “As many as 2 million people worldwide keep marine aquariums, including roughly 800,000 American households, said Reef Protection International president Drew Weiner. 'There are still a lot of people unaware of the plight of coral reefs and how global warming and rising ocean temperatures are affecting them,'...Weiner said aqua-trade practices of collecting live coral for sale worldwide are contributing to damage to coral reefs worldwide. Captive breeding, he said, is offering some relief.”

“Peckish Fish Key to Reef Health” -- February 10, 2007 (*The Australian, Australia*). “Schools of big plant-nibbling fish could protect the Great Barrier Reef from pollution and climate change ...

as long as their numbers remain high. Not only would the hard-working fish help maintain the resiliency of the reef, they'd help it recover from stresses such as runoff from land-based pollution, bleaching, overfishing, disease and severe storms.”

“Kanak Traditions Guide Future Conservation” -- February 8, 2007

(**Conservation International feature on www.conservation.org, US**). “...Kanak tribes and CI have worked together for many years to conserve ancestral waters and natural resources. In 2004, a CI-led marine rapid assessment program (RAP) survey of 42 coral reefs near Province Nord's Mont Panié led the local government to seek World Heritage recognition. Guided by a Kanak fisherman, CI's Center for Applied Biodiversity Science and Pacific Islands Program conducted the assessment with the government of Province Nord, local NGO Association Dayu Biik, and the association Mauria Trust of New Caledonia.”

“Atlantic Corals Now Protected” -- February 6, 2007 (**World Wildlife Fund press release on www.panda.org**). “After years of lobbying efforts, the North East Atlantic Fisheries Commission and the European Community have agreed to protect the coral-rich waters off north-west Scotland. The Rockall and Hatton Banks — located in the North Atlantic some 400 kilometers from the Scottish coast — will now be protected from destructive fishing, which threaten cold-water coral reefs that a several thousand years old, and populations of vulnerable fish species.”

“Expedition Presents Thousands of New Marine Species Found in the Philippines” -- February 5, 2007 (*All Headline News, FL*). “The Panglao Marine Biodiversity Project, a French-led expedition including 80 marine biologists, technicians, students and volunteers from 19 countries presented thousands of new species of marine animals found among the rich

ocean wildlife in the Philippine island of Panglao.”

“Pesticides 'Threaten' Aussie Coral Reefs” --
February 5, 2007 (*The Age, Australia*).

“Pesticide run-offs are putting Australia's already fragile coral reefs at greater risk of destruction, a new scientific study has shown. The study, published in the Marine Ecology Progress Series journal, shows corals on the Great Barrier Reef are being harmed by agricultural chemicals, even when the chemicals are only present in small quantities.”

“Artificial Reef Could Raise Fish Population” -
February 5, 2007 (*Honolulu Star Bulletin, HI*).

“The state wants to bring more fish to Oahu, but first it has to hook the community with its plan. The state Department of Land and Natural Resources' fifth shallow-water artificial reef would be build off the coast of Ewa if it clears permits and receives favorable community feedback.”

“Diving the Coral Reefs of Mozambique” --
February 3, 2007 (*Times Online, United Kingdom*).

“...Johnston Davidson, a coral biologist from the Great Barrier Reef Marine Park Authority in Australia, is impressed by what he finds. “These reefs are easily comparable to the very best sites we have on the Great Barrier Reef,” he says. “Places like Vamizi are rare now, both in terms of the health of the corals and the likelihood of seeing the megafauna — marlin, sailfish, dolphins, sharks and even whales.”

“Global Warming Threatens Australia's Barrier Reef” -- **February 3, 2007** (*Reuters in The Macon Daily, GA*).

“From a boat at sea, Australia's Great Barrier Reef seems invincible -- its myriad corals stretching 2,300 kilometers (1,400 miles) beyond sight. But the reef's vastness and wave-smashing outcrops mask fragility in the face of climate change threatening to bleach its fluorescent depths the stark white of death. The reef, and possibly the A\$5.8 billion (\$4.5 billion)

tourist industry it underpins, will be 'functionally extinct' by 2050, a draft report by the Intergovernmental Panel on Climate Change (IPCC) warned this week.”

“DoE Offers Coral Guide to Teachers” --
January 29, 2007 (*Caymanian Compass, Cayman Islands*).

“The Department of Environment has supplied all the schools in the Cayman Islands with new copies of the Coral Gardens Teacher's Guide....The Coral Garden's Teacher's Guide provides background information on the complexity of coral reefs and their surrounding environment, the threats that they are facing, and the possible solutions to these threats...”

“Cuba-US: Science Bridges the Gulf” --

January 29 (*Inter Press Service News Agency, NY*). “The U.S. Harte Research Institute for Gulf of Mexico Studies (HRI) is carrying out a research project on the northwestern coast of Cuba. HRI is collaborating with the University of Havana's Centre for Marine Research (CIM)...Cuba ‘is still a mystery to scientists,’ because its coral reefs have been conserved. ‘...we should put this piece of the puzzle alongside the other research results, to find out how to protect these ecosystems.’”

UPCOMING EVENTS

March 2007

1 – 2: **17th U.S. Coral Reef Task Force Meeting**. Washington, D.C.

<http://www.coralreef.gov/taskforce/meetings.html>
29 – 31: **NSTA National Conference**. St. Louis, MO.

http://www.nsta.org/conferencedetail&Meeting_Code=2007STL

April 2007

1: **NSTA National Conference**. St. Louis, MO.

http://www.nsta.org/conferencedetail&Meeting_Code=2007STL

What's New in CoRIS?

CoRIS has 1616 metadata records that refer to over 18,000 data and data products.

Product Name	Description
CRED APEX Drifting Buoys Northwest Hawaiian Islands, September-November 2001 Deployment	Six APEX (Autonomous Profiling Explorers) floats, were deployed in the NWHI in the fall of 2001. Profiling satellite drifters mimic diurnal migrations of zooplankton and transmit profiles of water column temperature daily by satellite telemetry to "simulate" diurnal migration of larvae to and from 100m depth and back as possible indicators of potential larvae paths.
<i>Link: ftp://ftp.nodc.noaa.gov/pub/outgoing/CoRIS/data/nmfs/cred/drifters/apex_trks_2001_2003_2.jpg</i>	
<i>Sample Metadata Link: http://coris.noaa.gov/metadata/records/html/cred_drifters_apex_nwhi_2001.html</i>	
CRED SVP Drifting Buoys along the Northwestern Hawaiian Islands and Niihau, MHI, September-November 2001 Deployments	Six Surface Velocity Profiling Drifters, drogued at 35m, were deployed at the main Hawaiian Islands (mHI) and the NWHI, to simulate possible paths of larvae as indicators of potential recruitment and dispersal.
<i>Link: ftp://ftp.nodc.noaa.gov/pub/outgoing/CoRIS/data/nmfs/cred/drifters/svpfall01_trks_2001_2003_2.jpg</i>	
<i>Sample Metadata Link: http://coris.noaa.gov/metadata/records/html/cred_drifters_svp_nwhi_2001.html</i>	
CRED SVP Drifting Buoys near American Samoa, February and March 2002 Deployments	Eight SVP (Surface Velocity Profiling Drifters) were deployed in American Samoa. These drogued satellite drifters telemeter their position and sea surface temperature to simulate possible paths of larvae as indicators of potential recruitment and dispersal.
<i>Link: ftp://ftp.nodc.noaa.gov/pub/outgoing/CoRIS/data/nmfs/cred/drifters/2002svpAmsam.jpg</i>	
<i>Sample Metadata Link: http://coris.noaa.gov/metadata/records/html/cred_drifters_svp_american_samoa_2002.html</i>	
CRED Pacific Island Remote Areas Reef Assessment and Monitoring Program (RAMP) 2000, Cruise TC0001 and 2001, Cruise TC0101	CRED Shallow Water Conductivity-Temperature Depth (CTD) casts are vertical profiles of temperature, salinity, and turbidity providing indications for water masses and local sea water chemistry changes. They are collected at regularly spaced intervals around the study sites, both around islands or banks and within lagoons. Casts are to a depth of 33 m (typical). The instrument used to collect the data was a Seabird Instruments (www.seabird.com) 19 plus CTD with a Wetlabs C-Star Transmissometer. Data binning and other processing was performed using Seabird Instrument's SeaSoft software. Data format is discreet, tabular (formatted, space delimited ASCII) files for each profile, with a full header as provided by SeaSoft. File extension is CNV. The header contains latitude, longitude and other location information, as well as all processing steps. All dates and times are UTC. Contact Coral Reef Ecosystem Division (CRED), NOAA Pacific Island Fisheries Science Center for more information.
<i>Link: http://crei.nmfs.hawaii.edu/ocean_data.html</i>	
<i>Sample Metadata Link: http://coris.noaa.gov/metadata/records/html/cred_shallow_ctd_baker_2000.html</i>	

