



**NATIONAL MARINE PROTECTED AREAS CENTER  
INFORMATION EXCHANGE FOR MARINE EDUCATORS**

**SEPTEMBER 2005**

This update is provided as a service by the National Marine Protected Areas Center to share information pertinent to the marine educator community. It is intended to encourage exchange of information and programs. We hope that it will also promote collaboration among the different educators addressing similar issues in their programs. Please share this email with your colleagues and constituents. If you request materials or respond to a request for information, please mention that you learned about it in the MPA Information Exchange.

The information included here has been compiled from many different sources, including SeaSpan, NSTA Express, edinfo at FREE, EE-NEWS@NAAEE, CREEC, Scuttlebutt, EEinGEORGIA, the Scout Report, and others. We have verified web addresses, but make no guarantee that they will remain active. The Department of Commerce/NOAA does not necessarily endorse or promote the views or facts presented on these sites.

To subscribe to this distribution list, send a blank message to [requests@willamette.nos.noaa.gov](mailto:requests@willamette.nos.noaa.gov) with "subscribe infoexchange" in the subject field. Similarly, to remove yourself from the list, send the subject "unsubscribe infoexchange".

Collected archives of the information presented in past newsletters are available at [http://www.mpa.gov/information\\_tools/education.html#InfoExchange](http://www.mpa.gov/information_tools/education.html#InfoExchange). Contact the MPA Center's education coordinator directly at [phyllis.dermer@noaa.gov](mailto:phyllis.dermer@noaa.gov), or by phone at (865) 932-5074, to discuss further enhancements or to contribute information for future issues.

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**Notable Addition to MPA Library  
Enforcing U.S. Marine Protected Areas: Synthesis Report**

The MPA Center has published "Enforcing U.S. Marine Protected Areas: Synthesis Report." The MPA.gov home page hosts a link to the report and a presentation by one of the authors, Braxton Davis, highlighting aspects of the report. The report provides a synthesis of existing information relevant to the enforcement of marine protected areas in the United States, as well as new insights into the current challenges, needs, and suggestions of coastal and marine resource managers, enforcement agencies, attorneys, education/outreach specialists, and numerous other public and private stakeholders with respect to MPA enforcement. The report offers a foundation for future improvements in MPA implementation and coordination by providing a "snapshot" of current perspectives on MPA enforcement and compliance issues.

[www.mpa.gov](http://www.mpa.gov)  
[http://www3.mpa.gov/mpa\\_lib/publications.aspx](http://www3.mpa.gov/mpa_lib/publications.aspx)

Davis, Braxton C. and Moretti, Greg S. Enforcing U.S. Marine Protected Areas: Synthesis Report. National Marine Protected Areas Center, 2005.

Main MPA Library URL:

[http://www2.mpa.gov/mpaservices/virtual\\_library/virtual\\_library.lasso](http://www2.mpa.gov/mpaservices/virtual_library/virtual_library.lasso) .

## **PROGRAM OF THE MONTH**

### **EstuaryLive**

EstuaryLive kicks off the National Estuaries Day celebration on September 22 and 23, 2005 by offering free live Internet field trips to different estuaries around the country. Designed as interactive for classrooms, this program can be viewed by anyone. Check out the EstuaryLive schedule and get started on your estuarine adventure by registering today. The program will feature the following sites from around the country:

- \* Tillamook Bay National Estuary Program (NEP) and South Slough NERR, Oregon
- \* New York-New Jersey Harbor Estuary Program, New Jersey
- \* Jacques Cousteau NERR and Barnegat Bay NEP, New Jersey
- \* San Francisco Bay NERR, California

During the program, naturalists from NOAA's National Estuarine Research Reserve System and the U.S. EPA's National Estuary Program will take participants on a journey through each unique ecosystem. Participants will interact with the tour guides by emailing questions during the field trips. Most questions will be answered live during the broadcast. An educator will respond to any questions not answered live during the internet broadcast by emailing the recipient directly.

<http://www.estuaries.gov/elive.html>

## **WEBSITE OF THE MONTH**

### **Encyclopedia of the Sanctuaries - On-Line Marine Life Field Guide**

NOAA's National Marine Sanctuary Program has unveiled an online resource that highlights the diverse marine life of America's ocean and Great Lakes treasures. The Encyclopedia of the Sanctuaries is available online and is part of a continuing NOAA effort to enhance public awareness, understanding, and appreciation of the ocean environment. This online field guide provides photos, streaming video and biological information for over 100 marine species from each of the national marine sanctuaries in the United States.

The Encyclopedia of the Sanctuaries allows visitors to search for their favorite species, as well as view streaming video of marine life ranging from spiny lobster to killer whales and white-tipped reef sharks to sea turtles. The natural history section provides information on the distribution, habitat, diet and status of each species. Each species card also highlights a quick fact and provides links to other organizations for more information. The Encyclopedia of the Sanctuaries was developed by NOAA in partnership with the National Marine Sanctuary Foundation and The Ocean Channel Inc. through an education grant provided by National Marine Sanctuary Program.

This is a fantastic resource for formal and informal educators, students of all ages, zoos and aquariums, science and technology centers, and natural history museums. The

Encyclopedia of the Sanctuaries is a useful resource in the public's quest to better understand the marine environments that thrive in our National Marine Sanctuary System.  
<http://sanctuaries.noaa.gov/education>  
<http://marinelife.noaa.gov/>

## MESSAGE FROM THE BRIDGE

### Hurricane Resources

The destruction from Hurricane Katrina will raise questions in the classroom regarding hurricane frequency, strength, duration and effects. Teachers can address these questions and examine hurricane data in the following BRIDGE Data Activities:

***Haunted by Hurricanes:*** [http://www.vims.edu/bridge/index\\_archive1004.html](http://www.vims.edu/bridge/index_archive1004.html)

Access National Hurricane Center data to examine long-term hurricane patterns and questions regarding the impact of global climate change.

***Hurricanes!*** [http://www.vims.edu/bridge/index\\_archive0899.html](http://www.vims.edu/bridge/index_archive0899.html)

Basic background information about hurricane formation is featured in this activity, along with introductory hurricane mapping tips.

***Without an Ark:*** [http://www.vims.edu/bridge/index\\_archive0403.html](http://www.vims.edu/bridge/index_archive0403.html)

Learn about some of the short-term and long-term effects of storm flooding on selected freshwater and estuarine organisms using data from the U.S. Geological Survey and plot Hurricane Floyd floods.

BRIDGE-recommended resources:

- Forces of Nature: Hurricanes:  
<http://www.nationalgeographic.com/forcesofnature/interactive/index.html?section=h>
- Hurricane Andrew Lessons: <http://octopus.gma.org/surfing/weather/andyindex.html>
- Hurricane Fran Lessons: <http://octopus.gma.org/surfing/weather/franindex.html>
- National Hurricane Center: <http://www.nhc.noaa.gov/>

Additional websites with images following Katrina:

- Earth Observatory Newsroom:  
<http://earthobservatory.nasa.gov/Newsroom/NewImages/images.php3>
- Global Security:  
<http://www.globalsecurity.org/military/facility/new-orleans-imagery.htm>
- NOAA's National Geodetic Survey:  
<http://alt.ngs.noaa.gov/katrina>

For more hurricane resources visit the Storms section on the BRIDGE Atmosphere page:  
[http://www.vims.edu/bridge/index\\_climate.html](http://www.vims.edu/bridge/index_climate.html)

## REQUESTS

### Seeking Information about Fishing Industry Outreach in MPAs

Karla, an undergraduate student from the University of Victoria, British Columbia, Canada is currently working on a research thesis titled, "Examining the role of interpretation, education and outreach in marine protected areas as it applies to the commercial fishing industry." The research is investigating the role that education and interpretation play in

promoting sustainable use of the marine resource by the commercial fishing industry. The survey consists of a series of questions geared to gain information on the status of this topic throughout different marine parks, which will be used as case studies in the thesis to illustrate what types of programs and techniques various parks are using. Please contact Karla directly if you are interested in answering a series of questions through either a telephone or email questionnaire.

Contact Karla Poplawski at [poplawsk@uvic.ca](mailto:poplawsk@uvic.ca)

### **Seeking Further Input on NCATE Standards**

The North American Association of Environmental Educators is an organizational member of National Council for Accreditation of Teacher Education (NCATE) and is in the process of developing environmental education program standards for NCATE. The writing team has further developed the standards framework, which are available for review. Please submit your comments by October 3, 2005.

[http://naaee.org/pages/projects/inv\\_to\\_participate.html](http://naaee.org/pages/projects/inv_to_participate.html)

### **Pilot Testers Sought for EarthTutor**

The NASA-funded project, EarthTutor, is focused on fostering the use of Earth science satellite data in advanced high school and college classrooms. The software aims to accommodate students of diverse abilities and skills. EarthTutor integrates with an image processing application and offers inquiry-based, self-paced labs. Labs are being developed for oceanography, polar ice, vegetation, atmosphere, and natural disasters.

The project is conducting a phase II pilot to evaluate the functionality, usability, and classroom effectiveness of an expanded version of EarthTutor. The phase II pilot is currently underway; if you are interested in participating, please contact Sarika Singh at [sarika@stottlerhenke.com](mailto:sarika@stottlerhenke.com) as soon as possible.

<http://www.stottlerhenke.com/earthtutor/>

### **Digital Water Education Library Seeks Reviewers and Resources**

The Digital Water Education Library (DWEL) is looking for people with expertise in the following topical areas to complete our collection of high quality K-12 water resources: oceans, water in the atmosphere, groundwater, surface water, water in space, water quality, water and life, water use, water policy, or the cryosphere. DWEL is a collection in the Digital Library for Earth System Education (DLESE) and aims to locate and catalog a minimum of 500 exemplary K-12 water resources. To date, approximately 400 high quality resources have been collected and are available through DLESE, but there are still many good water resources that could be part of the DWEL. Participants will provide a preliminary review of the resources in a particular theme and URLs for additional vital resources. Please respond before September 7, 2005. Work will be completed by October 28, 2005.

For more information please contact Bryan L. Aivazian at [bryana@tribcsp.com](mailto:bryana@tribcsp.com)

### **Searching for Upwelling Demonstrations**

Robert is searching for an upwelling demonstration that works well to show water coming up from below to replace water blown away from the surface, or another demonstration that shows other upwelling methods. He has some examples, but has had mixed results.

Contact Robert Rocha at [rocha@whalingmuseum.org](mailto:rocha@whalingmuseum.org)

## **GRANTS AND OPPORTUNITIES**

### **British Ornithologists' Union Small Research Grants**

The British Ornithologists' Union provides financial support for research and expeditions. Research grants are awarded annually to sponsor scientific and conservation projects. Most of this support is in the form of small grants. These grants support as wide a range of research projects as is possible, including applications from both amateurs and professionals. Applications may be on any aspect of ornithology but especially areas where there are particular difficulties in funding research from national or local sources. If the application is from a multi-disciplinary expedition, the application must be made by the ornithologist and must describe the ornithological research that will be undertaken. The deadline for applications is December 31, 2005.

<http://www.bou.org.uk/bouresg.htm>

### **DisneyHand Teacher Awards**

The DisneyHand Teacher Awards honor full-time creative, inspiring teachers who showcase creativity in the classroom and assist in developing creative teaching strategies in their school districts. Teachers can be nominated by students, former students, students' parents, principals, or members of the community. The nomination deadline is October 15, 2005.

<http://disneyhandteacherawards.go.com/>

### **Graduate Research Fellowships**

Graduate students gain hands on experience with the National Estuarine Research Reserve System's Graduate Research Fellowship program. Students will have an opportunity to conduct their master's or doctoral research in a reserve as well as contribute to the reserve's research or monitoring program. The application deadline is Nov. 1, 2005.

[www.nerrs.noaa.gov/fellowship](http://www.nerrs.noaa.gov/fellowship)

### **Gulf of Mexico Community-based Restoration Partnership - Caribbean**

The Gulf of Mexico Community-based Restoration Partnership is expanding community-based restoration efforts into the U.S. Territories of the Caribbean region. The partnership invites preproposals for its first round of citizen-driven habitat restoration projects in the Caribbean. The partnership is seeking to fund on-the-ground activities to restore marine, estuarine, and riparian habitats to benefit living marine resources and to provide educational and social benefits by significantly involving the community. Preproposals are due September 30, 2005.

<http://www.gulfmex.org/restoration.htm>

### **Lorrie Otto Seeds for Education Grant Program**

Schools, nature centers, and other not-for-profit places of learning can apply for these grants for the purchase of native plants and seed for the purpose of establishing outdoor learning centers. The application deadline is November 15, 2005.

<http://www.for-wild.org/seedmony.htm>

### **Marine Turtle Nesting Beach Study Grants - International**

The U.S. Fish & Wildlife Service's Marine Turtle Program is currently soliciting proposals for the conservation of marine turtles throughout their range outside of the United States. These grants are focused on nesting beach studies. The deadline for proposals is October 1st, 2005.

<http://www.fws.gov/international/animals/marineturtleprogram.htm>

### **Minority Fellowship Program**

The Florida Georgia Louis Stokes Alliances for Minority Participation and the University of South Florida announce the 2005-2007 Bridge to Doctorate minority fellowship program. This NSF-sponsored program will foster new cross-disciplinary expertise and research endeavors in marine, environmental, biological, chemical, geological and biomedical sensor designs and applications. The deadline for application is October 1, 2005. Contact Dr. Ashanti J. Pyrtle at [apyrtle@marine.usf.edu](mailto:apyrtle@marine.usf.edu) or (727) 553-1301

### **NAAEE Conference Teacher Scholarships**

K-12 Teachers can apply for a scholarship (first-come, first-served) to attend the North American Association for Environmental Education's 34th annual conference on October 25-29, 2005 in Albuquerque, New Mexico. The deadline for application is September 30, 2005.

<http://naaee.org/pages/conferences/newmexico/blmfund.html>

### **Neotropical Migratory Bird Conservation Grants**

The Neotropical Migratory Bird Conservation Act establishes a matching grants program to fund projects that promote the conservation of these birds in the United States, Latin America, and the Caribbean. Projects may include activities to benefit bird populations and their habitats, research and monitoring, law enforcement, and outreach and education. All grant requests must be matched by partner funds at least 3:1. Partner funds from a U.S. federal source may be involved in the project, but are not eligible as match. The application deadline is December 1, 2005.

[http://www.fws.gov/birdhabitat/Nmbca/eng\\_neo.htm](http://www.fws.gov/birdhabitat/Nmbca/eng_neo.htm)

### **Olympus and Tool Factory Classroom Grants and Contest**

Olympus and Tool Factory will award ten grants to educators whose classroom projects and curriculum ideas illustrate the effective and creative use of digital cameras and software resources. The classroom grants program is designed to strengthen education through digital imaging and the power of visual learning. The Student Photo Contest includes two categories: photography and art. The deadlines for submission for both are December 30, 2005 and June 2, 2006.

[www.toolfactory.com/olympus\\_contest](http://www.toolfactory.com/olympus_contest)

### **Post-Doctoral Positions in International Coral Reef Research**

There will be up to eight funded postdoctoral positions at the Australian Research Council Centre of Excellence in Coral Reef Studies, a multi-institutional centre that will formally begin operations by the end of 2005. The positions are available at Australian universities. The Centre of Excellence will take a leading role in multi-national research programs, and at the outset has ongoing collaborative links to 28 institutions in nine countries.

[http://ocean-partners.org/ARC\\_CECRSopps.htm](http://ocean-partners.org/ARC_CECRSopps.htm)

### **Preserve America Grants**

These matching (50/50) grants are designed to support a variety of activities related to heritage tourism and innovative approaches to the use of historic properties as educational and economic assets. They would go beyond the bricks and mortar grants available under Save America's Treasures. Eligible recipients include State Historic Preservation Officers, Tribal Historic Preservation Officers, designated Preserve America Communities, and

Certified Local Governments that are applying for Preserve America Community designation. See the website for more information as it becomes available.

<http://www.preserveamerica.gov/federalsupport.html>

### **Sea Grant Fellowships**

NOAA's announcement of the "Availability of Grant Funds for Fiscal Year 2006" includes the following Sea Grant fellowship opportunities:

- National Marine Fisheries Service - Sea Grant Joint Graduate Fellowship Program in Population Dynamics
- National Marine Fisheries Service - Sea Grant Joint Graduate Fellowship Program in Marine Resource Economics
- Sea Grant Industry Fellowship Program Dean John A. Knauss Marine Policy Fellowship

Final applications for the fisheries fellowships are due February 10, 2006 and for the Knauss Fellowships, April 6, 2006. Contact your local Sea Grant program for their respective, earlier, deadlines.

<http://www.seagrants.noaa.gov/funding/rfp2006.html>

### **Siemens-Westinghouse Scholarship Competition**

The Siemens-Westinghouse Competition is open to senior high school students who would like to submit an original science and math research project. The competition promotes excellence by encouraging students to undertake individual or team research projects in science, mathematics, engineering and technology or in combinations of these disciplines. The deadline for entries is October 3, 2005.

<http://www.siemens-foundation.org/competition/default.htm>

### **STAR Program – EPA Fellowships**

The U.S. Environmental Protection Agency will award approximately 100 new fellowships for research in environmental fields of study through the Science to Achieve Results (STAR) program. The STAR program provides educational support for full-time master's and doctoral level students who plan to pursue environmental careers with a focus on developing future leaders in environmental science, education, assessment, and restoration efforts. The deadline for application is October 18, 2005.

<http://www.epa.gov/ncer/fellow/>

### **State Scholars Initiative**

The purpose of this initiative is to support a national nonprofit organization or agency that will fund and provide technical assistance, monitoring, oversight, and cost reimbursements to state-level business-education partnerships that will encourage and motivate high school students to enroll in and complete rigorous courses of study that will benefit them in their future careers, postsecondary education, or training. The deadline for applications is September 6, 2005.

<http://www.ed.gov/legislation/FedRegister/announcements/2005-3/080505b.html>

### **Striving Readers Grants**

The purpose of the Striving Readers program is to raise the reading achievement levels of middle and high school-aged students in Title I-eligible schools with significant numbers of students reading below grade level. The program supports new comprehensive reading initiatives or the expansion of existing initiatives that improve the quality of literacy

instruction across the curriculum, provide intensive literacy interventions to struggling adolescent readers, and help to build a strong, scientific research base for identifying and replicating strategies that improve adolescent literacy skills. The deadline for the Notice of Intent to Apply is September 14, 2005.

<http://www.ed.gov/programs/strivingreaders>

### **Take a Walk<sup>®</sup> Book Contests**

Jane Kirkland, naturalist and author of the Take A Walk<sup>®</sup> Book series, sponsors a variety of contests for young students. Current contests include Nature at the Beach, Why I Love My Pennsylvania State Park, and Why I Love the Nature in My Schoolyard. See the website for details and October, 2005 deadlines.

<http://www.takeawalk.com/A5580D/tawhome.nsf/Contests?OpenPage>

### **Youth Venture**

Youth Venture provides seed money grants for new youth-created, youth-led, sustainable ventures that benefit the community. Youth ages 12-20 who want to start a new ongoing environmental club or organization can get guidance on how to plan, organize, and launch their venture, along with funds for start-up expenses. The deadline for application is December 31, 2005.

<http://www.youthventure.org/>

## **CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT**

### **American Museum of Natural History's Online Graduate Science Courses – D.C.**

Deepen your knowledge with Seminars on Science courses from the American Museum of Natural History. Fall classes begin September 26, 2005. Offerings include the new integrated science course on the Ocean System. Each 6-week course immerses the learner in a collaborative investigation of a current topic within one of the life, Earth, or physical sciences. All courses are taught by museum scientists and educators, and highlight current, cutting-edge research.

<http://learn.amnh.org/courses/courses.php>

### **Cordell Bank ROV Teacher Workshop - California**

Are you interested in learning about Remotely Operated Vehicle (ROV) technology and its application in ocean studies? Want to learn how to build a ROV with students? Want to put together a student team to participate in a regional ROV competition? If so, we invite you to participate in the Cordell Bank ROV Teacher Workshop, offered by NOAA's Cordell Bank National Marine Sanctuary in collaboration with the Marine Advanced Technology Education Center, Deep Ocean Exploration and Research, and the National Marine Sanctuary Foundation. Cordell Bank National Marine Sanctuary will be hosting this workshop November 4-6, 2005 in Alameda, California. Participants are encouraged to participate with a team member (another teacher or student) as limited kits with parts will be distributed. The application deadline is October 14, 2005.

<http://www.sanctuaries.noaa.gov/education>

### **Designing for e-Learning – Online**

Explore the essential components of designing and developing an e-Learning course through this online course, which runs September 5-December 18, 2005. Learners will explore principles, theories, and paradigms of distance education; review technology issues; and demonstrate design, development and assessment methodologies.



Participants will have the opportunity to design and develop their own course by the end of the learning experience. Hurry – registration has been extended until September 7, 2005. <http://www.creative-conservation.com/designinffordistance.htm>

### **Ecological Field Studies – Online**

The Montana State University On-Line Course - Environmental Science Education: Fall Ecological Field Studies, which will take place from September 19 - December 9, 2005, is designed for educators of students in grades 6-12 who are interested in integrating inquiry oriented, experienced-based, environmental studies into their educational program. Participants will learn basic ecological field study techniques and conduct studies in their local environment. Autumn field studies include study site mapping, geological exposure, river valley profile, forest health, bird populations, geobotanical and soil studies, assessment of human impact, and air pollution. They seek a good geographic distribution of educators and people who will eventually implement the field study techniques in their teaching.

<http://www.scienceteacher.org/courses/edci580FldStdA.htm>

### **E-Learning Opportunities from Creative Conservation**

Creative Conservation designs, develops, and teaches professional development e-Learning programs. Upcoming offerings include Project WILD and Project Learning Tree professional development workshops. Special professional development for K-12 and non-formal educators in Alaska includes Alaska Wildlife Curriculum, Fire! In Alaska, and Project Learning Tree/Project WILD.

<http://www.creative-conservation.com/trainingopps.htm>

### **Flying WILD with Project WILD Workshop - Georgia**

Flying WILD, from the Council for Environmental Education, introduces students to bird conservation through standards-based classroom activities and environmental stewardship projects. This workshop will take place October 13, 2005 in Acworth, Georgia. Flying WILD encourages schools to work closely with conservation organizations, community groups, and businesses involved with birds to implement school bird festivals and bird conservation projects. Space is limited to 30 participants.

<http://eeingeorgia.org/net/calendar/details.aspx?c=27390&s=32849.0.68.4863>

### **Global Warming Conference – Call for Papers**

The Global Warming International Center has issued a call for papers for the 17th Global Warming International Conference and Expo, to be held April 20-21, 2006, in Miami, Florida. Subjects include human health in a changing climate; education: global change and sustainable development; and more. The deadline for submissions is October 30, 2005

<http://www.globalwarming.net/>

### **International Submerged Lands Management Conference**

The 24<sup>th</sup> annual International Submerged Lands Management Conference will take place October 16-21, 2005 in St. John, U.S. Virgin Islands. Bringing together local, state, territorial, national and international organizations, government, and private sector, the objective of the conference is to increase awareness of submerged land management issues within the United States, the provinces, the Caribbean basin, and internationally. Presentations will focus on tools, strategies, case studies, and lessons learned. The deadline for proposals is September 6, 2005. Topics include aquatic studies with submerged lands, takings issues, beach management/public access, and more.

<http://www.islc2005.org/>

### **Learning Ocean Science through Ocean Exploration Workshop – South Carolina**

Teachers of grades 6-12 who are interested in ocean exploration can participate in this professional development workshop on September 24, 2005 in Charleston, South Carolina. Join South Carolina Aquarium educators as you do inquiry- and standards-based activities tied directly to ocean expeditions. A copy of Learning Ocean Science through Ocean Exploration and CD-ROM will be provided. The deadline for registration is September 16, 2005.

Contact Katrina Bryan at 843.579.8546 or [kbryan@scaquarium.org](mailto:kbryan@scaquarium.org)

### **Marine Aquarium Congress of North America - MACNA XVII**

The Marine Aquarium Conference of North America is the premier conference focused on the hobbyist and the industry that serves it. This year's conference, whose theme is *Expanded Horizons*, will take place September 16-18, 2005 in Washington, DC. The program includes speakers and sessions for hobbyists along with two new core focus areas, marine ornamental sustainable harvest and industry regulatory issues; and marine aquarium education in the K-12 classroom: funding, curriculum development and logistics.

<http://www.macnaxvii.com/>

### **Mote Professional Development Workshops - Florida**

Join Mote Marine Laboratory this fall for new Marine Science Professional Development Workshops during September in Sarasota, Florida. Choose from the listed programs and receive supporting print materials and more.

- Manatees 09/10/2005, registration deadline September 2nd, 2005
- Dolphins 09/24/2005, registration deadline September 9th, 2005
- Sharks, 10/15/2005, registration deadline September 30th, 2005

Contact Kasey Gaylord at [kasey@mote.org](mailto:kasey@mote.org) or 1-800-691-MOTE ext 263

### **Ocean Explorer Professional Development**

NOAA's Ocean Explorer website lists upcoming professional development offerings for teachers and other educators to engage in learning more about ocean exploration. Opportunities focus on how educators can use the mathematics, science, and technology associated with exploring the oceans in their classrooms to help increase awareness and understanding of the ocean world. These workshops are designed to introduce educators to premiere ocean scientists/explorers and their research and explorations, and at the same time, provide exemplary tools and resources to engage students in ocean exploration by bringing the classroom closer to the ocean than it has ever been before. The website includes contact information to sign up for individual workshops.

<http://oceanexplorer.noaa.gov/edu/development/development.html>

### **One Ocean Education Symposium – Washington, D.C.**

The Marine Technology Society and the IEEE Oceanic Engineering Society are sponsoring the OCEANS Conference. This is the largest international professional meeting and exposition devoted to the full spectrum of ocean sciences, technology, policy, engineering, and education, September 18-23, 2005 in Washington, D.C. On September 18, 2005, the conference will open with an "One Ocean Education Symposium" for middle and high school educators, a day of professional development sessions offered at no charge to educators from DC, Maryland, Virginia, and other surrounding area schools.

<http://www.oceans2005.org/education.htm>

### **Outdoor Classroom Symposium - Georgia**

The 2005 Outdoor Classroom Symposium, *Teaching Outside the Box*, will be held October 14, 2005, in Acworth, Georgia. This year's symposium will provide ideas how to better use your outdoor learning center and offer creative ways to teach outdoors. Discounted registration ends September 14, 2005.

<http://eeingeorgia.org/net/calendar/details.aspx?c=27057&s=31021.0.68.4863>

### **Project Wet Facilitator Workshops - California**

Two workshops are scheduled in California, in Fresno, October 1, 2005, and El Cajon, December 2, 2005. The goal of Project WET (Water Education for Teachers) is to promote the awareness, appreciation and knowledge of California's water resources. A facilitator training is an 8-hour workshop that provides training in using the Project WET activities with your students and to help train fellow educators. Participants will be trained in the basics of how to use Project WET materials as well as in facilitation and organization skills. Each seminar participant will receive a copy of the Project WET Curriculum and Activity Guide Book and a Facilitator's Handbook with all the information necessary to conduct a Project Wet workshop.

Contact Brian Brown at [projectwet@watereducation.org](mailto:projectwet@watereducation.org)

### **Reaching Out: What's in it for Scientists? At the Ocean Sciences Meeting, Hawaii**

You are encouraged to participate in a special session on scientists' involvement in education and public outreach (EPO) at the 2006 Ocean Sciences Meeting, February 20-24, 2006 in Honolulu, Hawaii. The primary goals are to inspire scientists to get involved in EPO and to promote discussion of the short and long-term benefits of EPO involvement. A focus on incentives for EPO involvement; discussion of strategies to build institutional and agency support; and recognition and reward for scientists' EPO efforts would be particularly valuable. A wide range of perspectives is desirable. Electronic abstracts are due by October 20, 2005. Please use the session code: OS005.

Contact Michiko Martin at [michiko.martin@noaa.gov](mailto:michiko.martin@noaa.gov)

<http://www.aqu.org/meetings/os06/>

### **Restore America's Estuaries Conference**

Restore America's Estuaries was to host the 3rd National Conference and Expo on Coastal and Estuarine Habitat Restoration, December 9-13, 2006 in New Orleans, Louisiana. *Please check the website in the coming months for updated information.* The conference theme is "*Forging the National Imperative for Restoration*," with a focus on coastal and estuarine restoration at all scales. Participants from all sectors of the restoration community are encouraged to participate including scientists and researchers; community organizations; and educators and students.

<http://www.estuaries.org/?id=77>

### **Smithsonian Environmental Leadership Course - Virginia**

The Smithsonian Institution's Monitoring and Assessment of Biodiversity Program offers professional training courses for international scientists, resource managers and educators. The Environmental Leadership Course, September 11-23, 2005 in Front Royal, Virginia, teaches communication skills and problem solving techniques. Through demonstrations, lectures, and personal and group exercises, this course covers topics such as foundation skills for the environmental leader, negotiation and conflict resolution strategies, creating compelling futures, and environmental communication.

<http://nationalzoo.si.edu/ConservationAndScience/MAB/training/leader.cfm>

### **Tortugas Field Trip and Symposium – Carnegie Lab Centennial**

The centennial celebration of the Carnegie Laboratory for Marine Biology in the Dry Tortugas will take place October 13-15, 2005 in Key West, Florida. The celebration includes a field trip to the Dry Tortugas and the site of the Laboratory, along with a Symposium on the Past, Present and Future of Research in the Tortugas. Limited financial aid is available for university students and high school and college teachers early in their careers. The registration and financial aid deadline is September 9, 2005.

<http://www.rsmas.miami.edu/conference/tortugas/>

### **Treasures of the Deep Workshop - Florida**

This one-day workshop, *Treasures of the Deep - Deep Water Corals of the South Atlantic and the Oculina Bank: A Local Resource Workshop for Teachers*, will be held September 17, 2005, in Titusville, Florida. Teachers will learn about deep-water coral ecosystems, the Oculina Bank Habitat Area of Particular Concern, research and monitoring efforts, and educational materials available for classroom use. Additionally, this workshop solicits educator input on various deep-water coral outreach and education activities, including possible teacher and student participation in upcoming research and monitoring cruises via classroom curriculum material development, world wide web interaction, Port Day events, and possible day-at-sea-visits to the research trip during a research mission. Participants will receive new curriculum and educational resources, conduct activities relating to oceanographic exploration, and gain a further understanding of the importance of this unique deep-water habitat. This workshop is targeted at science, math, and technology teachers (grades 9-12) from St. Lucie, Indian River and Brevard Counties. Contact Jennifer Schull at [jennifer.schull@noaa.gov](mailto:jennifer.schull@noaa.gov) or 305 361-4204

### **Youth Groundwater Congress**

The Youth Groundwater Congress, November 2-4, 2005 in Nebraska City, Nebraska, is a national conference for students ages 10-15 which provides students the opportunity to learn more about groundwater, voice concerns regarding water issues, and develop possible solutions to take action in the community. The deadline for application is October 15, 2005.

[http://www.groundwater.org/pe/youth\\_congress.html](http://www.groundwater.org/pe/youth_congress.html)

## **EDUCATIONAL RESOURCES**

### **Atlantic and Gulf Rapid Reef Assessment Database**

The Atlantic and Gulf Rapid Reef Assessment (AGRRA) database is now available in Microsoft Access<sup>®</sup>. The database hosts data for 737 sites that were surveyed during the 35 assessments conducted between 1997 and 2003 in the Caribbean, Gulf of Mexico, Florida and the Bahamas.

<http://www.agrra.org/>

### **Atlas of Our Changing Environment**

*One Planet, Many People: Atlas of Our Changing Environment*, from the United Nations Environment Programme (UNEP), provides a comparative picture of our environment 30 years ago with the present day. The atlas contains photographs, satellite images, maps, and narratives that provide insights into the many ways people around the world have changed, and continue to change, the environment. The chapters are available for downloading from the web in either low resolution (for quicker downloading) or higher resolution for better quality printing

<http://na.unep.net/OnePlanetManyPeople/index.php>

### **BookletChart**

NOAA's Office of Coast Survey is testing a potential new product named the BookletChart™. This product will enable recreational boaters to print charts at home for no charge. It has been created to help recreational boaters better navigate and practice safer transportation on the water. The BookletChart™ is a form of nautical chart that has been reduced in scale and divided into a series of pages for convenience, but retains all the information of the full-scale nautical chart. Currently, Chesapeake Bay BookletCharts™ are available for evaluation.

<http://www.nauticalcharts.gov/bookletcharts/>

### **Calendar of Events from NSTA**

The National Science Teachers Association (NSTA) hosts a searchable online calendar of events in the world of science and science education: events, awards and competitions, conferences, exhibits and films, and more. You can search according to your area of interest, by grade level, and by region of the United States or Canada.

<http://www.nsta.org/main/calendar/events.php>

### **Contrail Count-A-Thon from GLOBE**

The 3rd Annual GLOBE Contrail Count-a-thon will be held on October 13th, 2005, during Earth Science Week. Clouds are among the largest variables controlling Earth's global climate and also a main source of uncertainty for scientists studying the atmosphere. Since contrails are difficult to study using satellite data, student observers are invited to help scientists by observing contrails in their area and reporting on the amount and type of contrails present.

<http://asd-www.larc.nasa.gov/GLOBE>

### **Deep Scope 2005**

NOAA Ocean Exploration has launched the Deep Scope 2005 website in support of the current exploration, which runs from August 19–September 3, 2005. This is the fifth signature expedition for NOAA's Office of Exploration 2005 field season, with three additional expeditions to follow. Utilizing the Johnson-Sea-Link submersible and deploying a unique deep-sea observatory camera system to observe as unobtrusively as possible, an international team of scientists aboard the Harbor Branch Oceanographic Institute's research vessel /Seward Johnson/ will expand upon the exciting discoveries of the 2004 Deep Scope exploration to further examine the deep-sea environment in the Gulf of Mexico from the perspective of the animals living there. The website contains content essays and lesson plans written especially for this exploration, and the archives will remain accessible after the expedition ends.

<http://oceanexplorer.noaa.gov/explorations/05deepscope/welcome.html>

### **Dihydrogen Monoxide Website**

Explore the many special reports, FAQ, a primer on the subject, plus reports on the environment, current research, and other exposés about this often dangerous chemical. (Recent events have proven just how deadly it can be).

<http://www.dhmo.org/>

### **Engaging the Public through Communication and Social Science**

The Biodiversity Project brings us *Breakthrough Strategies for Engaging the Public: Emerging Trends in Communications and Social Science*. This working draft white paper

provides an introduction to some emerging trends in the fields of communications and social science that could benefit public education, engagement, and awareness campaign planners. Drawing from a variety of resources, this paper attempts to address the challenges faced when communicating about biodiversity and our environment.

<http://www.biodiversityproject.org/publications.htm>

### **EPA Public Involvement Tools and Techniques Website**

The US Environmental Protection Agency's public involvement web pages have been expanded to include new materials and links to useful information about tools and techniques in use all over the world. The site also includes a new feedback section with ready-to-use surveys. In addition, the Public Involvement Resources and Training database, previously on EPA's Intranet, is now publicly available for use.

<http://www.epa.gov/publicinvolvement>

### **The Eyes of Nye**

This new series from Bill Nye (the science guy), *The Eyes of Nye*, is geared toward older children and adult viewers. It provides a more in-depth look at science topics that are making news, changing lives, and impacting policy. Episodes began airing on public TV in April, and include population and climate change. The website offers links to additional content, information about scientists featured in the episodes, and more

[www.eyesofnye.org](http://www.eyesofnye.org)

### **GoNorth!**

This free K-12 online classroom expedition in the arctic sets out to explore the prospects of oil exploration, document the realities of Arctic climate change, and the value of traditional ecological knowledge. Team GoNorth! will dogsled the land of Alaska to learn from the Gwich'in and Inupiat Eskimo (Inuit) people along the trail while gathering scientific data from the field in collaboration with NASA and the Office of Polar Programs at National Science Foundation. Learn how real-time learning adventures create a standards-aligned curriculum resource for the K-12 classroom, covering science, math, language arts, and social studies.

<http://www.polarhusky.com/te2005.asp?menuID=121>

### **Guide to the Exotic Species of San Francisco Bay**

The bays and estuaries of the Pacific Coast contain some of the most invaded marine habitats in the world, with additional species arriving every year. The Species Gallery of this guide to the exotic species of San Francisco Bay helps you identify and learn more about some of the most common invaders in this area. Clicking on an image in the gallery takes you to a web page with information about the species, native range, distribution, and more.

<http://www.exoticsguide.org/>

### **Harmful Algal Bloom Educational Resources**

A request for information about a good lab to teach about harmful algal blooms (HAB) received the following responses, with additional options about HAB educational resources culled from the archives of this *Information Exchange* newsletter.

- Bigelow Lab for Ocean Science has an interactive CD-ROM available titled "Phytobia-Discovery of the Marine Ecosystem." Phytobia has three learning modules Phyto Factors, Phyto Files and the Bloom Activation tool. The website also includes many other HAB materials. <http://www.bigelow.org/hab/>

- The following monograph on brevetoxins can be a good primer for teachers <http://ehp.niehs.nih.gov/members/2005/7501/7501.pdf>
- The Bridge's April 2002 Data Tip entitled "In Full Bloom" is a classroom activity that uses HAB data from the NOAA Coastal Services Center. To access this activity, go to the Bridge's home page and type in Full Bloom in the search box. The Data Tip will be the first resource to come up. <http://www.vims.edu/bridge>
- While not all phytoplankton blooms are harmful, teachers can also refer to "When is Dinner Served? Predicting the Spring Phytoplankton Bloom in the Gulf of Maine, through the Earth Exploration Toolbook. <http://serc.carleton.edu/eet/index.html>
- The Southeast Phytoplankton Monitoring Network provides information and activities. <http://www.chbr.noaa.gov/CoastalResearch/SEPMN/index.htm>
- NOAA's Discovery Classroom includes an HAB lesson plan. [http://www.nos.noaa.gov/education/classroom/07\\_algal.html](http://www.nos.noaa.gov/education/classroom/07_algal.html)

### **Journey South Begins**

Following the ever-continuing cycle of seasons, K-12 teachers and students can participate in one of the Journey North project's free online global studies of wildlife migration and seasonal change. The fall Journey South activities prepare students for spring and help them grasp the cyclical nature of the seasons. Participating classrooms follow the migration patterns of monarch butterflies, gray whales, and other animals and study plants, changing sunlight and other natural events. Students share field observations with classmates across North America and analyze real-time maps and data from other classroom and professional scientists. Each Journey South study features many entry points to meet your teaching needs: standards-based lessons and challenges, reading and writing connections, photos and video clips, weekly migration updates, interactive maps, connections with field scientists and migration stories. The studies help students conduct local observations and relate them to a global context.

<http://www.learner.org/jnorth/>

### **Key to the Sea**

The goal of the Key to the Sea program is to promote environmental stewardship by stimulating students' sense of wonder, learning, and empowerment through key environmental experiences. Key to the Sea is Heal the Bay's free marine environmental education program for teachers and elementary school children (K-5) throughout Los Angeles County. Students participating in Key to the Sea learn about watershed stewardship, stormwater pollution prevention, and marine conservation, accomplished through hands-on educational activities culminating in a field trip to the beach. In addition, teachers receive professional development training before the field trip along with standards-based curriculum. The website has information about workshops, field trips, and curriculum resources.

<http://www.healthebay.org/key2sea/>

### **MSN Virtual Earth**

MSN's Virtual Earth website draws on detailed aerial photographs of the United States. Visitors can look at photographs of their home, school, or other location. Visitors can also type in city names, and zoom in on various features at their leisure. The software works directly from the website.

<http://virtualearth.msn.com/>

### **National Undersea Research Program**

NOAA's National Undersea Research Program (NURP) has launched a new website that features NURP's scientific and research discoveries in simple and easy to understand language. The site also contains a searchable database of underwater video and photos that are all public domain.

<http://www.nurp.noaa.gov/>

### **Navigating the Nation's Marine Managed Areas**

The MPA Center and NOAA's Office of Coast Survey are working jointly to include information about the nation's marine managed areas (MMAs) in the U.S. Coast Pilot® series to improve safe navigation and coastal stewardship. You can review *Navigating the Nation's MMAs*, which uses the coast of central California as a model. The purpose of this document is to provide: 1) an overview of the "Navigating the Nation's MMAs" project; and, 2) an example of how information on MMAs is intended to be presented in the U.S. Coast Pilot series. It is estimated that by the end of 2005, information about existing MMAs will start making its way into the U.S. Coast Pilot books.

<http://mpa.gov/>

### **North American Mammals**

The Smithsonian Institution presents a searchable database of the approximately 400 living mammals of North America. The database may be searched by species, geographic location, conservation status, and family tree. For each mammal, visitors can view several renderings and photographs and also read a short scientific and narrative description. Many of the mammal monographs include a sound clip and links to additional information. Visitors can create their own printable field guides by merely clicking a box next to each mammal's scientific name, and then proceed to print these materials out as they wish.

<http://www.mnh2.si.edu/education/mna/>

### **Northwestern Hawaiian Islands Education Project**

From August 12 through 21, 2005, the NOAA research vessel *Hi'ialakai* ("embracing pathways to the sea") carried educators on NOAA's first-ever dedicated education voyage. While visiting Nihoa, Mokumanamana, and French Frigate Shoals, educators learned about the natural and human history of the Northwestern Hawaiian Islands and the challenges of restoration and resource management. Journals and activities have been and will continue to be posted to the website.

<http://hawaiianatolls.org/>

### **PortalOceanico.net - The Ocean Portal**

This gateway is supported by UNESCO, and offers links to sources of ocean information on South America and the Caribbean. Some first-level topics include Education and Training; Information by Country; and more. Select "English" under the idiom box (left side of screen) to view site in English. Some items are available only in Spanish.

<http://www.portaloceanico.net/>

### **A Primer on Invasive Species in Coastal and Marine Waters**

What are invasive species? How long have invasive species been around? What changes can invasive species cause? How do invasive species get introduced? What agencies are trying to manage the influx of invasive species? These questions and more are addressed in this publication. The primer includes a glossary, international regulations, expert contact information, educational information links, and more.

[http://www.flseagrant.org/program\\_areas/coastal\\_habitats/habitats\\_pm.htm](http://www.flseagrant.org/program_areas/coastal_habitats/habitats_pm.htm)



### **Seas the Day**

To complement, reinforce, and expand upon The Ocean Project's focus of helping their partners customize conservation for their visitors and members, this website features different conservation themes each month, with an emphasis on personal awareness and action. The new Seas the Day tools and products include the Seas the Day 2006 desktop calendar, with a new look and conservation content for each themed month.

[http://www.theoceanproject.org/seas\\_the\\_day/](http://www.theoceanproject.org/seas_the_day/)

### **Species - Electronic Newsletter from IUCN**

The World Conservation Union (IUCN) Species Survival Commission electronically publishes two newsletters each year. While *Species* does not focus on marine species and habitat, they are included.

<http://www.iucn.org/themes/ssc/species/spec-int.htm>

### **State of Coral Reef Ecosystems**

*The State of Coral Reef Ecosystems of the United States and Pacific Freely Associated States: 2005* establishes a quantitative baseline of the conditions of U.S. shallow coral-reef ecosystems. The report is a compilation of information from more than 160 scientists and resource managers in 14 jurisdictions. The National Centers for Coastal Ocean Science coordinated and published the report for the NOAA Coral Reef Conservation Program. Each jurisdictional chapter provides the geographic extent of reef ecosystems; current monitoring and management activities; information on water quality, benthic habitats, associated biological communities, and key threats to ecosystem health; and recommendations for future research and management actions.

[http://ccma.nos.noaa.gov/ecosystems/coralreef/coral\\_report\\_2005](http://ccma.nos.noaa.gov/ecosystems/coralreef/coral_report_2005)

### **Teachers' Grab Bag**

As the school year starts, don't forget that the National Science Teachers Association's Teachers' Grab Bag is available with free access on the Internet. You can find free and almost free items such as videos, publications, CD-ROMs, lab kits and more.

<http://www.nsta.org/resourcesgrabbag>

### **Virtual Voyage to the Marianas**

The research vessel Oscar Sette will be on an expedition in the Marianas Archipelago from September 1 until October 1, 2005, to study marine organisms and habitats. Log on daily to join a virtual exploration of the underwater world of the Northern Islands, as well as the more familiar southern neighbors. The website will feature photos, reports from the field, interviews with scientists and crew, and feature articles. Sign your class up as a "Classroom at Sea" and receive a free package of educational materials, including posters, brochures, and a certificate of participation. The website is due to be operational by September 2, 2005.

<http://www.crm.gov.mp/maramp/>

### **WebRangers Website**

The National Park Service hosts an interactive WebRangers website for kids age 6 and up. They can earn achievement certificates by completing different activities and earning passwords. Along the way they learn about the Park Service, as well as different National Parks, cultural artifacts, wildlife, and more. The activity list includes Protect the Harbor, Turtle Hurdles, Water Quality, and more. This site is strictly for fun.

<http://nps.gov/webrangers/>

## **WildFinder**

The World Wildlife Fund has created the WildFinder database, which allows users to find out where various species live around the world. The information in the database is based on the Fund's 825 ecoregions and currently includes information for four large taxa, or groups of species: birds, reptiles, mammals, and amphibians. The appeal of such a database extends to groups such as teachers, conservationists, and the general public. Visitors can search by country, U.S. ZIP code, or city; search by species name; and also view a map gallery that contains some pre-selected themes, such as the richness of mammal species or reptiles species as distributed across the world. The database also includes images and information about threatened status.

<http://www.worldwildlife.org/wildfinder/>

## **INITIATIVES**

### **International Coastal Cleanup**

This year marks the 20th anniversary of the International Coastal Cleanup. In that time, the event has grown from a local event at one beach in Texas to the largest event of its kind. Join thousands of people around the world on September 17, 2005 to mark this special year. Cleanup Coordinators are standing by to help you make a difference for our oceans and waterways. A few opportunities around the U.S.:

- L.A. County, with over 55 cleanup locations. California Coastal Cleanup Day is coordinated in Los Angeles County by Heal the Bay in conjunction with the California Coastal Commission, Los Angeles County Department of Beaches and Harbors. <http://www.healthebay.org/volunteer/ccd/>
- New Jersey will have 4 cleanup sites along the Southern New Jersey Shore. <http://www.southjersey.com/articles/?articleid=13379>
- Florida cities are hosting coastal cleanups throughout Florida. Search individual cities in addition to this Palm Beach website <http://www.volunteersolutions.org/uwpbc/org/opp/5843836.html>

### **International Polar Year**

The polar regions play key roles in our global environment. Many important broad and interlinked research challenges involving both polar regions exist today. The International Polar Year (IPY) 2007-2008 will be an intense, coordinated campaign of polar observations, research, and analysis that will be multidisciplinary in scope and international in participation. IPY will use today's powerful research tools, such as high powered computers, automatic observatories, satellite-based remote sensing, autonomous vehicles, and genomics, to better understand the key roles of the polar regions in global processes. It also affords an opportunity to engage the upcoming generation of young earth system scientists and to get the public to realize just how much the cold ends of the sphere we all live on really do influence us. To ensure that researchers get the opportunity to work in both polar regions or work summer and winter if they wish, the Polar Year will actually run from March 2007-March 2009.

<http://dels.nas.edu/us-ipy/index.shtml>

<http://www.ipy.org/>

### **Successful Partnering Helps Stranded Dolphin**

Coastal America facilitated a successful joining of two of their partners for the return a stranded rough-tooth dolphin to the wild. The Texas State Aquarium, a Coastal

Ecosystem Learning Center (CELC), spent the past year rehabilitating Noah at its SeaLab facility. The now healthy Noah is almost ready for release back into Gulf of Mexico waters, no easy task. The Texas CELC identified the perfect pod which Florida's Gulf World is about to release into the Gulf. Through the Texas CELC partnership with Coastal America, an Air Force AC-130j Hercules crew from Keesler AFB, Mississippi flew Noah safely through a thunderstorm to the pod in Panama City, Florida on July 15, 2005. A team of doctors and a crew accompanied the dolphin, ensuring that Noah stayed wet and comfortable. Transporting the dolphin provided innovative readiness training for the AF crew and a unique partnership with the Texas State Aquarium. Both the Defense Department and the Aquarium share the commonality of dolphin protection. Noah is presently becoming acquainted with his new family before the pod is released safely into the Gulf.

Contact Marguerite Duffy at [Marguerite.Duffy@usda.gov](mailto:Marguerite.Duffy@usda.gov)  
[www.coastalamerica.gov/](http://www.coastalamerica.gov/)