



NATIONAL MARINE PROTECTED AREAS CENTER INFORMATION EXCHANGE FOR MARINE EDUCATORS

July 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 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. Contact the MPA Center's education coordinator directly at phyllis.dermer@noaa.gov, or by phone at (865) 932-5074, to discuss further enhancements or to contribute information for future issues.

Notable Publication

Marine Conservation Biology: the Science of Maintaining the Sea's Biodiversity
Marine Conservation Biology brings together leading experts to apply the lessons and thinking of conservation biology to marine issues. Contributors offer insights on the nature of marine biodiversity, what threatens it, and what humans can do to recover the biological integrity of the world's estuaries, coastal seas, and oceans. Sections examine distinctive aspects of marine populations and ecosystems; threats to marine biological diversity; place-based management of marine ecosystems; and the human dimensions of marine conservation.

<http://www.islandpress.org/books/detail.html/SKU/1-55963-662-9>

Elliott A. Norse and Larry B. Crowder, *Marine Conservation Biology; the Science of Maintaining the Sea's Biodiversity*. Island Press. 2005

Main MPA Library URL:

http://www2.mpa.gov/mpa/mpaservices/virtual_library/virtual_library.lasso .

PROGRAM OF THE MONTH

National Marine Educators Association Conference

The theme of the National Marine Educators Association annual 2005 meeting, Kahului, Maui, July 11-16, 2005, is *Nana I Ke Kumu, Nana I Ke Kai – Look to the Source, Look to the Sea*. NOAA educators will offer more than 40 presentations, ranging from weather, to shipwrecks, to human health, to ocean literacy. Here are just a few of the people to meet and planned sessions you might attend.

- Wendy Allen, Zooplankton: wild, beautiful and finally identifiable
- Nina Jackson, NOAA education and training opportunities
- Susan Abbott-Jamieson, Two years in: an assessment of the NOAA local fisheries knowledge pilot project's impact
- Joe Cline, Unusual and interesting meteorological jobs within the National Weather Service
- Michiko Martin, National sanctuaries live!
- Sarah Schoedinger, Ocean Literacy through science standards
- Andy Collins, Navigating change in the Hawaiian Isles
- Cathy Sakas, What's on the bottom?
- Margaret Sedlecky, Baldwin County grasses program

Several presentations focus on offering educational resources that translate learning to fun in the classroom. Phyllis Dermer will pilot the *MPA game*, with trivia questions about habitat, species, geography, culture/history, and management. Susan Baker presents *NOAA for \$1,000 please Alex*, modeled on the Jeopardy game show. Deborah McArthur's presentation offers *Translating marine science research into fun, educational activities*. And Wendy Wicke will show how to have *Fun with Phytoplankton*.

There will be plenty of focus on megafauna. Carol Preston introduces *Shark science for your class*, while Anne Smrcina focuses on *Following the mighty Humpback whales of the Atlantic and Pacific*. Patty Miller helps with *Integrating whales into your classroom*, while Michelle Roest talks about *Ocean etiquette – guidelines for safe and responsible wildlife viewing in the marine environment*.

Corals, watersheds, volunteer programs, exhibit design, and much more are on the agenda, and that's just from NOAA educators. For complete information about the conference, check out the conference website and be sure to download the concurrent sessions to help you plan your days. If concurrent sessions prevent you from being able to attend all the sessions you want, come meet us at the exhibit booths.

<http://www.hawaii.edu/mcc/oceania/NMEA05.html>

WEBSITE OF THE MONTH

Satellites and Orbits: an Introduction

NOAA's Satellite and Information Service has combined the talents of science teachers, rocket scientists, satellite designers, a technology writer, and a creative new-media producer to develop an introduction to satellites and the forces which determine their orbits, for grades 8-12. This education module takes complex satellite and orbit information and transforms them into easy to understand concepts with lots of animation sure to catch a student's attention.

Highlights include a short satellite history, a non-mathematical review of basic orbital physics, orbital terminology, and orbit types with a focus on Earth observation and environmental monitoring. Other features for students include a hands-on demonstration, a reading assignment, a student activity, and a quiz. Teacher and student resources include background information and lesson instructions. The website also has a downloadable booklet for younger students.

"Satellites and Orbits: an Introduction" can be accessed online from the National Polar-orbiting Operational Environment Satellite Systems' Integrated Program Office (NPOESS IPO) web site. NPOESS, which is under development, represents a new era in polar-orbiting environmental satellites. NPOESS will use new and improved technology to provide more data – in less time – for more accurate and timely weather forecasts.

www.npoess.noaa.gov

MESSAGE FROM THE BRIDGE

The BRIDGE collaborated with the Monterey Bay Aquarium Research Institute (MBARI) to develop two classroom data activities. ***Pumping Iron*** focuses on ocean fertilization, and ***Hold the Anchovies*** focuses on climate phenomena and fish populations. These activities and several others are available as part of the EARTH (Education and Research Testing Hypotheses) program. Participants in EARTH include educators from research institutions, universities, community colleges, and high schools as well as MBARI and Monterey Bay Aquarium staff. EARTH allows integration of real-time data with existing educational standards and tests curriculum in an interactive and engaging way.

http://www.marine-ed.org/bridge/index_archive0504.html

<http://www.marine-ed.org/bridge/indexarchive0903.html>

<http://www.mbari.org/education/EARTH/default.htm>

REQUESTS

Blue Ocean Institute Seeking Sea Stories

The Blue Ocean Institute has begun a new initiative: the Sea Stories Project. Harnessing the power of personal experience in the service of ocean conservation, the international Sea Stories Project is soliciting first-person stories, essays, and artwork about the sea, coast, and sea-life from people from all walks of life and all writing levels--scientists and beachcombers, students and vacationers, fishermen and seafood-eaters, coastal residents and inland ocean-lovers. The deadline for submission to the first issue is October 15, 2005.

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

GRANTS AND OPPORTUNITIES

Brimstone Award for Applied Storytelling

The National Storytelling Network's annual Brimstone Award for Applied Storytelling is awarded for a project that focuses on the transformational properties of storytelling to increase understanding of the ways storytelling can promote change in individuals and communities. Educators are invited to submit a storytelling project that is service-oriented, based in a community or organization, and replicable in other places and situations. Preliminary proposals are due August 1, 2005, and full proposals due by September 19, 2005.

<http://www.storynet.org/grant/brimstone/index.htm>

Do Something Grants to Youth

Do Something awards grants to change-makers and potential community leaders age 18 and under who identify problems in their communities, and then create game plans to do something to change their world. Young people can apply on their own behalves, or on behalf of a group or team. The Advisory Council reviews grant proposals twice each year; the next application deadline is September 2, 2005.

www.dosomething.org

Distinguished Scholars in Oceans and Human Health

NOAA has announced its new Distinguished Scholars in Oceans and Human Health funding program. The awards will be of 6-18 months duration. Research must be concluded by September 30, 2007. Full proposals are due July 15, 2005.

<http://www.coreocean.org/Dev2Go.web?id=272776>

Environmental Excellence Awards

The SeaWorld/Busch Gardens/Fujifilm Environmental Excellence Awards recognize the outstanding efforts of students and teachers across the country working at the grassroots level to protect and preserve the environment. Project applicants should be able to demonstrate significant accomplishments that have occurred prior to the November 30, 2005 deadline. Schools and community groups are eligible to apply.

<http://www.seaworld.org/conservation-matters/eea/index.htm>

Estuary Habitat Restoration Program Funding

The Estuary Habitat Restoration Council is now soliciting proposals for estuary habitat restoration projects. Recommended projects must provide ecosystem benefits, have scientific merit, be technically feasible, and be cost effective. Proposals selected for Estuary Habitat Restoration Program funding will be implemented in accordance with a cost-share agreement. Proposals must be received by July 25, 2005.

<http://www.epa.gov/fedrgstr/EPA-SPECIES/2005/June/Day-08/e11358.htm>

Foundation Center RFP Bulletin

The Foundation Center strengthens the nonprofit sector by advancing knowledge about U.S. philanthropy. The Foundation Center collects, organizes, and communicates information on U.S. philanthropy; conducts and facilitates research on trends in the field; provides education and training on the grantseeking process; and ensures public access to information and services. The Foundation Center's website offerings includes the

RFP Bulletin (request for proposal), which includes the categories of education, environment, and science/technology.

<http://fdncenter.org/pnd/rfp/index.jhtml>

Greenworks! Grants

This grant opportunity from GreenWorks! for Project Learning Tree trained educators supports community action and service-learning projects. Projects should address an environmental issue and involve students from pre-school to high school in hands-on community action. The deadline for application is September 30, 2005.

http://www.plt.org/cms/pages/21_22_21.html

Kids in Need Foundation Teacher Grants

The SHOPA Foundation (School, Home and Office Products Association) provides the Kids in Need Teacher Grant, offering grants to certified K-12 teachers at any public, private or parochial school in the U.S. for innovative classroom projects. Applications will be available mid-July; the deadline for application is September 30, 2005. Check out the website for the Best Practices Guide, with descriptions of projects from 2003-2004.

http://www.shopa.org/shopa_foundation/teacher_programs.php

National Oceanic and Atmospheric Administration – Grant Funds 2006

NOAA announces the availability of grant funds for Fiscal Year 2006. The notice provides a single source of program and application information related to the agency's competitive grant offerings, and it contains the information about those programs required to be published in the Federal Register. This omnibus notice is designed to replace the multiple Federal Register notices that traditionally advertised the availability of NOAA's discretionary funds for its various programs. Many of the proposals may include an education or outreach component. Fellowships, coral, marine debris, B-Wet, right whale, and many more areas of interest are covered.

<http://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/pdf/05-12927.pdf>

National Weather Association Sol Hirsch Teacher Grants

The National Weather Association awards Sol Hirsch Teacher Grants for teachers in grades K-12 to improve students' education in meteorology. Teachers selected will be able to use the funds to take an accredited course in atmospheric sciences, attend a relevant workshop or conference or purchase scientific materials or equipment for the classroom. The deadline for application is August 1, 2005.

<http://www.nwas.org/solhirsch.html>

Starbucks Youth Leadership Grant

The Starbucks Foundation funds local programs that serve low-income, at-risk youth through its Youth Leadership Grant Program. Grants are given in two areas, including the Power of Literacy - programs that stimulate personal development and a commitment to social equity, justice, and environmental awareness through writing, literacy and expression in public forums. Grant applications are reviewed twice yearly, April 1st and October 1st. The grant application will be posted on the website July 27, 2005.

<http://www.starbucks.com/aboutus/grantinfo.asp>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Aquatic Science Workshop Instructor

The Ohio State University, F.T.Stone Laboratory is looking for an educator to assist with teaching aquatic science workshops from August 29-October 28, 2005. The workshops will teach visiting school groups, 4th grade through high school. Housing and meals are provided, along with an hourly wage. Field station assistant positions are also available through October 27, 2006.

www.sq.ohio-state.edu/slab/jobs/bio.asp

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

Advanced Project WILD Spaced Out Workshop - Georgia

This workshop explores wildlife and ecosystems in Georgia, July 13-14, 2005, in Pine Mountain, Georgia. Find out how ecosystem integrity and shrinking habitats are affecting Earth. Other topics include adaptive defenses, niches, and more. Registration deadline is July 7, 2005.

<http://eeingeorgia.org/net/calendar/details.aspx?c=26780&s=29847.0.68.4863>

Cape Ann Whale Watch Workshops for Students or Teachers – Massachusetts

Cape Ann Whale Watch is offering two new programs this summer. The *World of Whales* is a one-day, hands-on workshop for teachers, which will take place each Thursday from July 21 through August 25, 2005. Their team of educators will provide teachers with inquiry-based learning tools and lesson plans. The afternoon will consist of an optional whale-watch trip to Stellwagen Bank National Marine Sanctuary. *Ocean Detectives* offers students entering grades 4-6 a one-day, hands-on experience exploring the plants and animals in the Gloucester Harbor as well as the Stellwagen Bank National Marine Sanctuary. The students will first gather plankton, benthic organisms, lobsters, and more from the harbor. Then, they will take a whale watch tour and learn about whales, dolphins, birds, and sharks in their natural habitat. These workshops will be held Wednesday mornings, July 20 through August 24.

<http://www.caww.com/Teachers%20and%20Students.htm>

Deep Atlantic Stepping Stones Teacher Workshops – Maine and Rhode Island

Bring the excitement of current ocean science discoveries to your students - from mapping uncharted features of the deep sea floor to colorful and complex deep sea corals to the bizarre fishes of the deep to cutting edge technologies. This workshop allows you to do inquiry- and standards-based activities tied directly to the exploration of the Atlantic seamounts. You will receive copies of the "Learning Ocean Science through Ocean Exploration" curriculum and the Ocean Explorer Web site CD-ROM to help you interpret this multidisciplinary ocean discovery voyage. You will also receive a DVD from the 2003-2004 "Mountains in the Sea" expedition that includes video of the technologies and remarkable biodiversity and complex geologic structure of seamounts. Use these inquiry-based activities in biology, earth, physical, and marine science courses to connect your students to the excitement of ocean exploration as they explore these sea floor features.

- Gulf of Maine Research Institute, July 26, 2005, Portland, Maine
- University of Rhode Island Bay campus, July 27, 2005, Narragansett, Rhode Island

Contact Ms. Chris Marceau at 860.405.9121 or at Chris.Marceau@uconn.edu

Environmental Educators of North Carolina

The Environmental Educators of North Carolina's 15th Annual Conference, *Connecting Through EE for a Greener Future: A Natural Convergence at the Scuppernong*, will be held on November 4-7, 2005 in Columbia, North Carolina. The conference committee is seeking proposals for concurrent session presentations in the following strands: EE Trends and Techniques; Coastal Connections; Sustainability Education; and Exploring the Environment through the Arts, History, and Health. The deadline for submission is August 15, 2005.

Contact Laura Webb Smith at laura.smith@durhamnc.gov

Environmental Educators Training Program - California

The Environmental Educators Training Program, cooperatively presented by the Headlands Institute, the National Park Service and UC Berkeley Extension, is a residential training program for formal and nonformal educators to enhance knowledge of environmental sciences, concerns, and skills for teaching integrated, hands-on curriculum. This five-day residential course is offered August 1-5 or August 8-12, 2005, in Sausalito, California.

<http://www.yni.org/hi/educator.html>

Mangrove Forest Ecology, Management and Restoration Training Workshop - Florida

The fourth Mangrove Forest Ecology, Management and Restoration training workshop will be held February 20-23, 2006 in Hollywood, Florida. The training site is within a 500 hectare mangrove restoration project at West Lake Park operated by Broward County. Two qualified students will be allowed to attend for free. This course is organized by the Coastal Resources Group, Inc., and will be taught in conjunction with the Mangrove Action Project.

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

Maritime Heritage Education Conference – Request for Abstracts

The Maritime Heritage Education Conference will be the first of its kind to bring formal and informal educators together to promote the sharing of maritime heritage education partnerships, programs and products. The conference will take place November 18-20, 2005 in Norfolk, Virginia. Abstracts are requested for presentations on the following, or other, maritime heritage topics as related to education: lighthouses/lightsaving stations; whaling and fishing heritage; native canoe cultures; shipping and port heritage; shipboard education programs; shipwrecks and other submerged sites.

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

Maryland Association for Environmental and Outdoor Education Conference

The Maryland Association for Environmental and Outdoor Education Conference 21st Annual Environmental Education Conference, *No Child Left Inside: Getting Boys and Girls Back into the Outdoors*, will be held on February 3-5, 2006, in Ocean City, Maryland. Consider submitting a proposal for a presentation for one of the following strands: Natural History, Maryland Issues, Research Results, Nuts-n-Bolts, and Getting Boys and Girls Back into the Outdoors. The deadline for submission is September 23, 2005.

<http://209.142.214.237/>

Satellites and Education Conference

The Satellites and Education Conference will be held August 18-20, 2005, in Los Angeles, California. This conference promotes the use of satellites and related technologies as a vehicle for helping students to appreciate and understand the complex interrelationships among science, technology, individuals, societies, and the environment, while developing and applying inquiry and technology skills to study authentic questions and problems. Sessions include GIS applications in education, urban expansion and impacts on protected areas, coral reef remote sensing, satellites and the water cycle, and more.

<http://www.sated.org/index1.htm>

Planning of Wetlands Facilitator Training – Maryland

This three-day course, August 3-5, 2005, in St. Michaels, Maryland, is designed to guide educators to become a trained facilitator and teach others to turn their schoolyard into a wetland. Participants will be guided through the steps of planning and designing a wetland.

Contact Suzanne Greene at wow@wetland.org or (410) 745-9620

Science Training Programs

The Science Training Programs Directory for Teachers and Students from Science Service Inc. has more than 300 programs in their on-line catalog of science, mathematics and engineering enrichment programs for pre-college students and teachers. The training programs listed in the directory cover a wide variety of scientific disciplines and take place throughout the year at a variety of institutions, predominately at colleges and universities. Many of the programs listed specifically target members of groups traditionally under-represented in the sciences. Each record includes the date it was last updated, a useful feature.

<http://www.sciserv.org/stp>

Watershed Institute - California

Follow the path of water as it moves down the Salinas Valley and into the ocean at Monterey Bay Aquarium's Watershed Institute for 4th – 6th grade classroom teachers. Implement new teaching strategies and activities. Investigate local streams and rivers, integrate inquiry science into your curriculum and visit aquarium exhibits. The workshop will take August 8-12, 2005 in Monterey, California. It is free, but limited to 40 participants.

Contact Alfonso Brillantes at abrillantes@mbayqaq.org or (831) 648-4862.

EDUCATIONAL RESOURCES

Algae: The Forgotten Treasure of Tidepools

Hosted by the Department of Biology at Sonoma State University, this very informal website introduces browsers to the world of algae through a small collection of different alga images. The website's three galleries feature seaweeds of the Green (Chlorophyta), Red (Rhodophyta), and Brown (Phaeophyta) varieties, accompanied by brief and easily read text. The home page links to more extensive resources for those who have become intrigued by algae and want more information.

<http://www.sonoma.edu/biology/algae/algae.html>

American Field Guild

Immerse yourself in the great outdoors without leaving your desk. Tap into the sights and sounds from a wide variety of environments throughout America. PBS has collected over 1400 video clips that enable you to experience America's wilderness firsthand. Browse through their selections on animals, ecosystems, plants, and more. Hike the Tijuana Estuary, go on a whale watch, or follow Glacier Bay rangers perform their unique duties in some of the world's most beautiful surroundings. Teacher resources include lesson plans that weave segments of video together into units of inquiry around specific topics. The lessons in the units of inquiry were all written by high school teachers and draw upon national and state standards for science learning.

<http://www.pbs.org/americanfieldguide//index.html>

Archeology and Ethnography Program

The National Park Service Archeology Program has launched a series of new webpages. "The Public Benefits of Archeology" offers a unique perspective for different segments of the public. Through narrative scenarios, case studies, and additional reading, visitors to the webpage can learn about ways that archeology can benefit them. The website includes links for teachers and kids, lesson plans, distance learning, and career information.

<http://www.cr.nps.gov/aad/PUBLIC/INDEX.HTM>

Beach Water Quality Monitoring System

This partnership effort between Earth 911, Oceana, and participating states and communities provides information regarding the most recent water quality conditions at local beaches. This application is currently being expanded in several communities and will soon be available nationwide. The site also provides links to learn more about beach water monitoring, waste disposal, stormwater, rip currents, and more.

<http://southcarolina.earth911.org/usa/WaterQuality/index.asp>

Caribbean Natural Resources Institute

The Caribbean Natural Resources Institute (CANARI) seeks to create avenues for the equitable participation and effective collaboration of Caribbean communities and institutions in managing the use of natural resources critical to development. They provide many tools and resources to help MPA managers, including a new policy brief, *Marine Protected Areas and Sustainable Coastal Livelihoods*. The policy brief is based on research undertaken by CANARI and others in the Caribbean over the past several years and includes guidelines on developing effective MPA management partnerships that involve local stakeholders; dealing with conflicts between the tourism and fisheries sectors, and sustaining fishery-based livelihoods.

<http://www.canari.org/mpa.htm>

CITIZENShift

CITIZENShift is a National Film Board of Canada website dedicated to citizen engagement and social change. The website integrates written, audio, and visual media and provides a space where filmmakers and citizens can share knowledge, be entertained, and debate social issues. The focus on biodiversity under the Reel Community link includes *Nomads of the Ocean*, *Reefs: Rainforest of the Ocean*, and *Lords of the Arctic*. The website also includes background information, photographs, and more.

<http://citizen.nfb.ca/onf/info?aid=3423>

Conservation International: Biodiversity Hotspots

The Biodiversity Hotspots site from Conservation International features profiles of more than 30 ecologically important areas of the world, including island hotspots. In addition to regional profiles, the site offers a number of resources such as a terrestrial vertebrate species database, a glossary, maps, and related references.

<http://www.biodiversityhotspots.org/xp/Hotspots/>

Drink it Up

This online educational environmental project encourages global participation for schools to learn about their local drinking water. Lessons for the project include how to test your drinking water, the water cycle, and what makes up a watershed. Participating classes are encouraged to test their drinking water, and to post their results to the database for others to use as real data. Each class is also encouraged to submit a group project as a web page about their research complete with pictures, maps and diagrams.

<http://www.millennium.scps.k12.fl.us/staffpages/ShawR/drinkitup/waterover.html>

Electronic Navigational Charts Direct to GIS Web Portal

The NOAA ENC Direct to GIS web portal provides comprehensive access to display, query, and download all available large-scale NOAA ENC (electronic navigational charts) data in a variety of GIS/CAD formats for non-navigational purposes using Internet mapping service technology. Nautical chart features contained within a NOAA ENC provide a detailed representation of the U.S. coastal and marine environment. These data include coastal topography, bathymetry, landmarks, geographic place names, and marine boundaries. Features in a single NOAA ENC are limited in that they only represent the geographic region that is depicted in that particular NOAA ENC cell. By aggregating nautical features from all NOAA ENCs in the creation of GIS data, a continuous depiction of the U.S coastal and marine environment is achieved. This is a great site for students to explore the coast from their computer.

http://nauticalcharts.noaa.gov/csdl/ctp/encdirect_new.htm

EstuaryLive 2005

Take your students on a field trip through our nation's estuaries without ever leaving your classroom. Celebrate National Estuaries Day by taking a free, interactive field trip over the Internet on September 22 and 23, 2005. Estuaries are the significant places where fresh water from rivers mix with salt water from the ocean. EstuaryLive brings these ecosystems into your classroom, providing your students with a platform to take an active role in the learning experience by allowing them to ask questions during the field trips. Many of these questions are answered live during the program.

Naturalists from the National Estuarine Research Reserve System and the National Estuary Programs will take participants on guided tours through:

- Tillamook Bay National Estuary Program, Oregon
- New York-New Jersey Harbor Estuary Program, New Jersey
- Grand Bay National Estuarine Research Reserve and Mobile Bay National Estuary Program, Alabama
- Jacques Cousteau National Estuarine Research Reserve and Barnegat Bay National Estuary Program, New Jersey
- San Francisco Bay National Estuarine Research Reserve, California

Please visit the website throughout the summer for updated information about this year's program, including the program schedule, details about how to participate in the program, registration information, curriculum materials, information about each of the field trips, and more.

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

Expedition Chesapeake

On June 24, 2005, a group of students from Rockingham County, Virginia, all active members of the National Future Farmers of America Organization, embarked on a unique, educational, 30-day journey with the Chesapeake Bay Foundation. Sixteen upcoming juniors and seniors from Turner Ashby High School are paddling 355 miles, from their home town at the beginning of the South Fork of the Shenandoah River to Tangier Island, Virginia. Follow the journey online through the students' own journal entries and photographs, posted and updated regularly on the website. You can participate in Expedition Chesapeake yourself by asking the team members a question about what they're experiencing. NOAA has supplied a sophisticated piece of water quality testing equipment that will monitor the entire 355 miles, beaming a signal to satellite. The continuous fresh to salt water monitoring down the Potomac River to the Bay will be the first water quality record of its kind. The data will help describe the impact of pollution from local rivers and streams on the Chesapeake Bay.

www.baybound.org

FIRESafe Marin

Firesafe Marin is a non-profit organization dedicated to reducing wildland fire hazard and improving fire safety awareness in Marin County. They foster community involvement by building partnerships and providing resources for mitigating fire danger. The website includes a survival guide, firewise plant list, a teacher's guide, and additional information.

<http://www.firesafemarin.org/index.html>

Micropolitan Museum

Hosted by Microscopy UK, the Micropolitan Museum exhibits images of microorganisms in the freshwater collection, marine collection, and insectarium. Exhibitions within the first two collections include forams, diatoms, desmids, and more. The images are accompanied by brief captions.

<http://www.microscopy-uk.org.uk/micropolitan/index.html>

Posters of Marine Life

NOAA's National Marine Fisheries Service has reprinted its historic series of posters depicting species of fish, shellfish, marine mammals, and sea turtles that are indigenous to the United States. Commissioned over 30 years ago, these posters have become classics and continue to be one of the most requested items by constituents and school teachers alike. The eight posters can be viewed and purchased individually at the Government Printing Office's on-line bookstore.

http://bookstore.gpo.gov/collections/ocean_exploration.html

Priority Conservation Areas: Baja California to the Bering Sea

The Commission for Environmental Cooperation and the Marine Biology Conservation Institute offer Priority Conservation Areas: Baja California to the Bering Sea, a new book and map that identify 28 aquatic environments which marine experts consider essential to safeguarding the biological diversity of the west coast of North America. The book presents key information regarding the biodiversity, ecological significance and threats

found in each area. The priority conservation areas were identified on the basis of their ecological significance to North America, and the opportunities to advance conservation efforts given the threats faced by biodiversity.

http://www.cec.org/pubs_docs/documents/index.cfm?varlan=english&ID=1756

Project Shark Awareness Teacher Workshops - Florida

The Florida Program for Shark Research and Florida Museum of Natural History offer two upcoming "train the teacher" Project Shark Awareness workshops, August 4-5 and 18-19, 2005. Participants will receive information and teaching kits that will enable them to conduct shark awareness programs in their individual school districts. These include a teaching kit consisting of a PowerPoint presentation, teaching guide, handouts, and more. Also included are hands-on items such as a shark jaw, embryo, teeth, and skin. A companion web page within the Florida Museum of Natural History Ichthyology education web site is also available online to accompany these Project Shark Awareness materials.

<http://www.flmnh.ufl.edu/fish/education/psa/psa.htm>

Role of Protected Areas in Sustaining Society

The proceedings of the World Congress on National Parks, which took place in Bali, Indonesia, in October 1982, *National Parks, Conservation, and Development - the Role of Protected Areas in Sustaining Society* can be downloaded in pdf format from the IUCN (World Conservation Union) Protected Areas Learning Network website. While on the website, check out other documents using the browse feature.

www.parksnet.org/docs/0/77231_documents_document_file_65.pdf

NASA's Earth Explorers Series

This monthly NASA series introduces a variety of learning adventures and lesson plans designed for K-12 educators and students. The articles focus on the investigators researching a wide variety of topics, with links to further information. Recent issues have investigated migrating land and marine animals, ocean satellites, women in science, and more.

http://science.hq.nasa.gov/education/earth_explorers/index.html

National Science Digital Library

The National Science Digital Library was created by the National Science Foundation to provide organized access to high quality resources and tools that support innovations in teaching and learning at all levels of science, technology, engineering, and mathematics education. It offers an easy-to-use search engine, or browsing by selections. A special portal has been created for middle school teachers to provide a direct path to selective online resources for instruction and professional development. Enter the science, mathematics or technology sections of the site to browse resource lists organized by topic and to take an in-depth look at how digital resources can help you teach specific concepts.

<http://www.nsdlib.org>

North Cascades Institute

The North Cascades Institute seeks to inspire a closer relationship with nature through direct experiences in the natural world. Their mission is to conserve and restore Northwest environments through education. Their programs help connect people, nature, and community through science, art, literature, and the hands-on study of natural and cultural history.

North Cascades Institute is committed to innovation and excellence in environmental learning. They believe that sustainable communities are built on healthy environments, vibrant economies, and social equity. Four key themes run through the programs:

- The convergence of natural and cultural history, science, humanities and the arts
- Human history as integral to the history of landscapes and wild lands
- Respect among individuals and the broader community
- Exploration, reflection and stewardship in the out-of-doors

They offer seminars, school programs, summer youth adventures, teacher education, and graduate courses. Be sure to check out the Procession of the Species Parade.

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

NSTA Free for All

The June 2005 issue of the elementary edition of NSTA's *Science Class* features more than 60 free online opportunities teachers can use to get ready for next year. Websites of note include:

- Information Today, Inc., free and fee-based online science resources for the K-12 community, http://www.infotoday.com/MMSchools/nov04/lackie_congleton.shtml
- BUBL Information Service, with subject menus including math, earth sciences, animals, and more, <http://bubl.ac.uk>
- Educator's Reference Desk, with access to ERIC—a database of information on education research and practice, <http://www.eduref.org/>

<http://www.nsta.org/main/newsletters.php>

Predicting the Weather

The Internet Scout Project focuses its Topic in Depth of the *NSDL Scout Report for the Physical Sciences* newsletter for June 10, 2005 on Predicting the Weather. The listed websites describe the basic tools and knowledge used to create weather forecasts; explore how the weather can impact local communities; provide graphics for five forecast models; and more.

<http://scout.wisc.edu/Reports/NSDL/PhysSci/2005/ps-050610-topicindepth.php#1>

Protecting Water Resources with Smart Growth

The EPA offers *Protecting Water Resources with Smart Growth*, intended for audiences already familiar with smart growth, seeking more ideas on how to protect their water resources. The document describes how communities and local governments have used smart growth practices to minimize impacts of new development on their water resources. Education sections describe how communities or local governments engage in activities such as water quality education, model town demonstrations, certification programs for industry best practices, teacher training, and providing smart growth resources to developers.

http://www.epa.gov/smartgrowth/water_resource.htm

Richmond Bridge Harbor Seal Survey

The Richmond Bridge Harbor Seal Survey is a collaborative research project between San Francisco State University and the California Department of Transportation, examining possible effects of seismic-related bridge construction on resident harbor seals in the San Francisco Bay. The website provides an overview of the project;

tracking and tagging activities; and basic information about harbor seals. The site also provides Kids' Pages with photo ID matching, wildlife of San Francisco Bay overview, and more.

<http://userwww.sfsu.edu/%7Ehalmark/seals.htm>

State Wetland Program Evaluation: Phase I

The Environmental Law Institute has released *State Wetland Program Evaluation: Phase I*, as the first part of a multi-phased study of state wetland programs across a cross-section of states. These states represent various approaches to wetland protection and regulation, as well as geographic diversity. This study seeks to analyze seven core areas of state wetland programs, including regulatory programs, water quality standards, monitoring and assessment programs, restoration projects and initiatives, public/private partnerships, education and outreach, and coordination with state and federal agencies.

http://www.elistore.org/reports_detail.asp?ID=11079

Unearthing Tse-whit-zen

The Seattle Times published a special report, May 22-25, 2005, about the Tse-whit-zen archaeological site uncovered by the Washington Department of Transportation on the Port Angeles waterfront in August 2003. Working side by side, archaeologists and tribal members have uncovered burials, the remains of many structures, and signs of human activity dating back at least 2,700 years. The website includes background information, a narrated slideshow, and a study guide.

<http://seattletimes.nwsourc.com/news/local/klallam/index.html>

INITIATIVES and JOURNALS

California Coastweeks

Join the California Coastal Commission's Public Education Program in celebrating Coastweeks from September 17 to October 9, 2005. The Commission will feature the events of participating organizations in a special section of their website, and conduct targeted outreach to publicize it. The deadline for submitting information is July 28, 2005. Follow the link on the left side to Coastweeks for more information.

<http://www.coastal.ca.gov/publiced/pendx.html>

P.O.N.D. – Protecting Our Natural Diversity

Over 140 students from West Ashley High School in Charleston, South Carolina, became interested in habitat encroachment and water pollution at their school. For the past year, these students have researched, designed, and implemented a variety of solutions aimed at increasing wildlife diversity, improving natural habitat, educating the community about environmental issues, and decreasing the amount of pollution entering wetlands. Projects included a riparian buffer zone around storm water retention pond, storm drain education, a nature trail, and bird habitat. Their projects won numerous awards and acclaim, including a grant for continuation and expansion of the projects. Contact Margaret Spigner at Margaret.Spigner@charleston.k12.sc.us