

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

FEBRUARY 2006

This update is provided with support from NOAA's Office of Education and 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 from NOAA's Information Exchange.

The information included here has been compiled from many different sources, including EE-NEWS@NAAEE, EEinGEORGIA, CREEC, the Scout Report, edinfo at FREE, scuttlebutt, The Ocean Project, 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.

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Collected archives of the information presented in past newsletters are available at http://www.mpa.gov/information_tools/education.html#InfoExchange. Contact the editor 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 Article
Environmental Performance Index

The *Pilot 2006 Environmental Performance Index* provides benchmarks for current national pollution control and natural resource management results. The issue-by-issue and aggregate rankings facilitate cross-country comparisons both globally and within relevant peer groups. It establishes specific targets for environmental performance and measures how close each country comes to these established goals.
<http://www.yale.edu/eipi/>

PROGRAM OF THE MONTH

Patuxent Wildlife Research Center

The Patuxent Wildlife Research Center in Maryland has a diverse set of ongoing research projects dealing with wildlife and natural resources in and around the region. Their website offers links to a wide range of materials available on the web, including a section on frog calls (with species lists for many states and quizzes), video clips of Atlantic sea ducks, information about surface elevation tables, and much more. The education section includes ecotoxicology lesson plans, an extensive bird identification section with quiz, educational science notes, glossary, and more.

<http://www.pwrc.usgs.gov/>

WEBSITE OF THE MONTH

ReefVid

Dr. Peter Mumby provides a resource of free coral reef video clips for educational use. Currently, there are approximately 550 video clips on the website, designed for use in PowerPoint, covering reef ecology, diseases, coral bleaching, hurricane impacts, human impacts on reefs, corals, fish, sponges, mangroves, seagrass beds, and more. The website includes a search function and instructions for inserting the clips into your presentations. They can be played from the website or downloaded, and include brief descriptions of each clip.

www.reefvid.org

MESSAGE FROM THE BRIDGE

Winter Wonderland

The Bridge features a series of Data Analysis Teaching Activities (DATA) that can be used to supplement curriculum material with timely and seasonal resources. February, 2006 features another cold weather activity that ties in the upcoming Winter Olympics in Torino, Italy. Winter Wonderland focuses on how snow is formed and explores the idea that no two snowflakes are the same. The activity also discusses the water cycle and how water in the ocean can become snow in the mountains. Students will evaluate archived snowfall data and forecast snowfall at home and at the 2006 Olympic Games.

http://www.marine-ed.org/bridge/index_archive0102.html

REQUESTS

Advice Wanted for Teaching Earth Science through Oceanography

Dawn Sherwood is writing curriculum for high school students, titled *Advanced Topics in Earth Science*, teaching Earth Science with a focus on physical oceanography. She would appreciate help from others who may have compiled lists of easily obtained equipment, teaching approaches for different learner types, and other advice.

Contact Dawn at dcsherwood@henrico.k12.va.us

Volunteers Wanted for Derelict Crab Trap Removal Program - Louisiana

Barataria-Terrebonne National Estuary Program and the Louisiana Department of Wildlife and Fisheries will conduct their annual Derelict Crab Trap Removal Program March 4-March 12, 2006. This program needs volunteer help to remove derelict or abandoned crab traps from their marsh areas.

<http://www.derelictcrabtrap.net>

GRANTS AND OPPORTUNITIES

American Stars of Teaching

The U.S. Department of Education honors outstanding classroom teachers through the *American Stars of Teaching* program. The department's Teacher-to-Teacher Initiative seeks nominations about teachers who are improving student achievement, using innovative strategies in the classroom, and making a difference in the lives of their students. One teacher will be recognized from each state. The deadline for submission of nominations is April 15, 2006.

<http://www.ed.gov/teachers/how/tools/initiative/index.html>

Bay Watershed Education and Training - San Francisco Bay, California

The Bay Watershed Education and Training (B-WET) program has expanded to San Francisco Bay watersheds. Cordell Bank and Gulf of the Farallones National Marine Sanctuaries seek proposals for projects in two priority areas: meaningful watershed education for students (K-12) and professional development in the area of environmental education for teachers (K-12) for the San Francisco Bay watersheds. Proposals are due February 21, 2006.

<http://sanctuaries.noaa.gov/news/bwet/welcome.html>

California Education and the Environment Initiative

A request for proposal for consultant services for the California Education and the Environment Initiative is available. The California Integrated Waste Management Board and the California Environmental Protection Agency will hire a consultant to assist with the implementation of Phase 4 of the initiative and seek a consultant that has demonstrated experience in the area of environmental education, with an emphasis on curriculum development. The deadline for submission is March 6, 2006.

<http://www.ciwmb.ca.gov/contracts/details.asp?ID=472>

Captain Planet Foundation Grants

The Captain Planet Foundation provides grants to school and community groups to support hands-on environmental projects for youth in grades K-12. The objective of the foundation is to encourage innovative programs that empower youth around the world to work individually and collectively to solve environmental problems in their neighborhoods and communities. Upcoming applications are due March 31, 2006.

www.captainplanetfdn.org

H. J. Heinz Company Foundation Fellowship Program

Applications are now available for the 2006-07 H.J. Heinz Company Foundation Fellowship Program at the University of Pittsburgh. Heinz Fellowships will be granted to two individuals from developing countries who demonstrate potential as future leaders in the public, government, non-profit or private sectors. The competition for a Heinz Fellowship is open to men and women from developing countries whose records of accomplishment early in their careers indicate strong potential for leadership and achievement. Applicants must have completed a university degree; be suitably proficient in speaking, reading, and writing English; and should be working in some subsection of sustainable development, governance, public health or conflict resolution.

<http://www.ucis.pitt.edu/heinzfellowship/about.html>

Melinda Gray Ardia Environmental Foundation Grants

K-12 teachers worldwide are invited to apply for grants to develop or implement environmental curricula that integrate hands-on ecology exercises into the classroom. To facilitate learning and student empowerment, environmental curricula should be holistic and strive to synthesize multiple levels of learning (facts, concepts, principles), often including experiential integrated learning and problem solving. The application deadline is April 6, 2006.

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

NMEA Annual Awards

The National Marine Educators Association offers five different awards to members who have made significant contributions to ocean education at a local, regional, or national level. Award descriptions and the nomination form may be found at the "awards" link on the NMEA website. The deadline for nomination is May 1, 2006.

<http://www.marine-ed.org/>

P3 Award – Student Design Competition for Sustainability

This national student design competition for sustainability focuses on people, prosperity, and the planet. EPA and its affiliates offer the P3 Award competition to achieve mutual goals of economic prosperity while protecting the natural systems of the planet and providing a higher quality of life for its people. The P3 competition will provide grants to teams of college students to research, develop, and design sustainable solutions to environmental challenges. P3 highlights people, prosperity, and the planet - the three pillars of sustainability - as the next step beyond P2 or pollution prevention. The deadline for application is February 20, 2006.

<http://es.epa.gov/ncer/p3/>

Save Our History Honors

The History Channel honors teachers and students across the country who have demonstrated an exceptional commitment to local history through their preservation or history education efforts. Tell about your lesson plans, activities, and/or projects. Students who are helping to document and preserve their local history can submit projects for one of 25 scholarships. The deadline for application is April 7, 2006.

http://www.saveourhistory.com/awards/get_involved.html

Smart Gear

World Wildlife Foundation's International Smart Gear Competition brings together the fishing industry, research institutes, universities, and government, to inspire and reward practical, innovative, and cost-effective fishing gear designs that reduce bycatch - the accidental catch and related deaths of sea turtles, birds, marine mammals, cetaceans and nontarget fish species in fishing gear such as longlines and nets. Entries are due March 15, 2006.

<http://www.smartgear.org>

Starbucks Foundation Grants

Starbucks funds programs for youth, ages 6-18, which integrate literacy with personal and civic action in the communities where they live. The Starbucks Foundation invites letters of inquiry in the fields of literacy (reading, writing and creative/media arts) and environmental literacy. Grant applications are reviewed twice yearly, with the next deadline April 1, 2006.

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

The Wild Gift Wilderness Experience

The Wild Gift is open to all students and young professionals, ages 18 to 30. It provides a seminal experience in deep wilderness and encourages a commitment to a self-designed leadership project that will advance wildlands stewardship and the development of sustainable human community and lifestyle. The 17-month program is provided to Wild Gift recipients at no cost. The most important requirement is a record of accomplishment that reflects leadership talent. Five applicants are chosen each year. Applications are due on April 1, 2006.

<http://www.wildgift.org/index.htm>

Yoshiyama Award for Exemplary Service

Each year, the Hitachi Foundation presents the Yoshiyama Award for Exemplary Service to the Community to ten high school seniors from around the United States. The award recognizes exemplary service and community involvement rather than academic achievement. Nominations are due April 3, 2006.

<http://www.hitachifoundation.org/yoshiyama/>

Youth Birding Competition - Georgia

Georgia's first youth birding competition is open to Georgia students in grades 3-12. This one day birding event, on April 23, 2006 during the peak of spring migration, challenges teams to find as many species as they can as they compete against teams their own age. Sponsor a team and work with Partners in Flight to prepare students for this event. The registration deadline is March 31, 2006.

<http://www.georgiawildlife.com/content/displaycontent.asp?txtDocument=458>

Youth Environmental Symposium - Georgia

Youth Environmental Symposium (YES) is a competition which showcases student-led projects that address local environmental issues. All types of projects are eligible, including stream clean-ups, recycling programs, schoolyard habitat construction, environmental education, and advocacy initiatives. The entry deadline is April 4, 2006.

http://www.georgiaconservancy.org/Education/ED_YES2006.asp

Youth Investment Program - California

The Stewardship Council is a collaborative land conservation and youth investment foundation. The council offers grants to organizations in northern and central California that seek to increase and improve underserved youth's access to quality outdoor experiences, as well as organizations that increase cultural relevancy in outdoor programming. The deadlines for application vary, with some deadlines of February 21, 2006.

http://www.stewardshipcouncil.org/youth_investment/index.htm

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Entry Point!

Entry Point! is a program of the American Association for the Advancement of Science (AAAS) offering internship opportunities for students with disabilities in science, engineering, mathematics, computer science, and some fields of business. AAAS has developed partnerships with NOAA, NASA, university science laboratories, and others to

meet their human resources needs. Working with its partners, AAAS identifies and screens undergraduate and graduate students with disabilities and places them in paid summer internships.

<http://ehrweb.aaas.org/entrypoint/>

Summer Courses in the Caribbean

The Universidad Nacional Autónoma de México and Florida International University are joining together to offer two courses for students, managers, and others interested in marine conservation and marine plants.

- Marine Protected Areas for the South Florida, Caribbean and Mesoamerican Region, June 17-25, 2006 in Puerto Morelos, México. This course provides an interdisciplinary analysis of ecological and socioeconomic aspects of the designing and managing of marine protected areas, with special emphasis in the Caribbean region.
- Marine Botany, June 30- July 10, 2006, in the Florida Keys, Florida: This course provide students with information and technical skills for the study of the biology and ecology of seaweeds, seagrasses and mangroves, with emphasis on south Florida and Caribbean ecosystems. Field trips to mangrove, seagrasses, and reef systems will be conducted, along with laboratory sessions.

Contact Dr. Ligia Collado Vides at colladol@fiu.edu

Summer Internships at North Carolina Aquarium

The North Carolina Aquarium on Roanoke Island will be offering internships in husbandry and education during the summer 2006 season. There will also be seasonal educational positions and special activities instructor positions available.

Call 252-473-3494 or check out the website.

<http://www.ncaquariums.com/newsite/ri/volunteers.htm>

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

American Zoo and Aquarium Association Conferences

The theme of the 2006 annual conference of the American Zoo and Aquarium Association, September 25th–30, 2006 in Tampa, Florida, is *Everything Under the Sun*. The program committee invites your proposals, with the submission deadline of April 7, 2006. Regional meetings will be held March 29-April 1, 2006 in Jacksonville, Florida, and April 25-28, 2006 in Vancouver, British Columbia.

<http://www.aza.org/ConfWork/>

Animal Adaptations Workshop - Texas

The Houston Zoo offers teachers in grades 1-4 the Animal Adaptations Workshop, sponsored by Flower Garden Banks National Marine Sanctuary, February 25, 2006 in Houston, Texas. Animals that live in the ocean face challenges we never dream of. Find out how these amazing creatures have adapted to survive in an underwater world. Free "Adaptations from the Depths" curriculum and materials included. (Note that the curriculum may be downloaded from

<http://www.sanctuaries.noaa.gov/education/teachers/features/divetybee05.html>).

http://www.houstonzoo.org/Educators/Professional_Development.aqf

Civic Tourism Conference

The national conference, Civic Tourism, the Poetry and Politics of Place, will take place March 16-18, 2006 in Prescott, Arizona. Civic Tourism is an extension of other "place-based" approaches that have been practiced for decades, such as cultural tourism, heritage tourism, ecotourism, and geotourism. Civic Tourism seeks to provide a forum for communities to decide if and how the individual ingredients of "place" (cultural, built, and natural) can be integrated to create an appealing, dynamic, and distinctive community identity; the focus is product development, not destination marketing. Presentations are grouped into four themes: sense of place, tourism management, tourism trends, and public voice.

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

Coastal Legacy Program – North Carolina, South Carolina, and Georgia

The Center for Ocean Science Education Excellence-SouthEast (COSEE-SE) partners with the South Carolina Gaining Early Awareness and Readiness for Undergraduate Program (SC GEAR UP) to offer the 2006 Coastal Legacy Program for middle level teachers, June 17-23, 2006 on St. Helena Island, South Carolina. The program highlights the cultural history of the Southeast's coast, barrier islands and sea Islands. In this week-long investigation, teachers will explore coastal culture, history, and heritage to earth, environmental, and physical science and mathematical concepts. Participants will investigate barrier island ecosystems, impact of hurricanes, geography, and physical factors. Educational resources and lessons, access to scientists and community leaders, and field based experiences are key components in this week-long workshop. The deadline for application is April 8, 2006.

http://www.scseagrant.org/se-cosee/teacher/06_coastal_legacy.htm

The Coastal Society International Conference

The Coastal Society will hold its 20th International Conference, May 14-17, 2006 in St. Pete Beach, Florida. The theme of the conference is *Charting a New Course: Shaping Solutions for the Coasts*. Tracks during the conference will cover solutions for land use challenges, governing ocean use conflicts, effective integration of science, mitigating coastal natural hazards, and changing behaviors of professionals and the public.

<http://www.thecoastalsociety.org/conference/tcs20/>

Corals to Classrooms Workshop - Texas

The Corals to Classrooms educator workshop will be held July 11-12, 2006 in Galveston, Texas, sponsored by the Gulf of Mexico Foundation and hosted by the Flower Garden Banks National Marine Sanctuary. The workshop will focus on coral reef biology and ecology, and includes information, resources, hands-on activities, and a field trip. You do not need SCUBA certification to participate.

www.gulfmex.org/duoy.htm

Design for e-Learning - Online

Learners will explore the principles, theories, and paradigms of distance education; review technology issues; and demonstrate design, development and assessment methodologies in the Designing for e-Learning: an e-Learning Course, February 20-May 31, 2006. Participants will have the opportunity to design and develop their own course by the end of the learning experience. Credit is available through University of Alaska Anchorage. Registration ends February 17, 2006.

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

Down Under, Out Yonder Workshop - Texas

The 2006 Down Under, Out Yonder educator workshop will be held June 24-28, 2006 in Galveston Texas. This experiential workshop, focusing on coral reef biology and ecology, is sponsored by the Gulf of Mexico Foundation and hosted by the Flower Garden Banks National Marine Sanctuary. It includes two days of land-based workshop followed by three days of SCUBA diving in the sanctuary. Applicants must already be SCUBA certified. The deadline for application is February 24, 2006.

www.gulfmex.org/duoy.htm or <http://flowergarden.noaa.gov/education/DUOY.html>

Ecological Teaching and Learning Program – Massachusetts and Online

The Audubon Expedition Institute at Lesley University in Cambridge, Massachusetts offers a Master of Science in Ecological Teaching and Learning, an 18 month program for working educators in schools, museums, and nature centers. Students explore the integration of ecological concepts into the curriculum. The program includes field experiences and online courses while the educators use their own classrooms as practicum settings. Students create a self-designed project demonstrating mastery of ecological principles.

http://www.lesley.edu/gsass/audubon/etl_index.html

Ecology of Harmful Algal Blooms - Online

The Center for Ocean Sciences Education Excellence-West invites educators to join in an online workshop to learn about Harmful Algal Blooms (HABs), March 4-19, 2006. Learn about HABs: what they are; how they occur; their importance, and how you can use them to teach science. The workshop is free but the number of participants is limited.

http://www.coexploration.org/cosee_west/index.html

E.E. Just Environmental Leadership Institute

The E.E. Just Environmental Leadership Institute for Educators and Students at Kimball Union Academy in New Hampshire is an integrated summer environmental studies program for students and educators. Their mission is to train and empower participants to become the environmental leaders of tomorrow. Educators will learn how to weave inquiry-based learning units into their curricula. Students will investigate an environmental problem in a three-week journey of field trips, laboratory investigations, and group problem-solving.

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

Exploring Marine GIS: An ArcGIS Field and Lab Course - Mexico

Coastal Ecosystems Research Foundation is hosting an immersion week in geospatial sciences and marine biology, March 6-12, 2006 in San Ignacio Lagoon, Mexico. This course is for both beginning and advanced GIS users. Following 2 days of training, participants will integrate these skills and perform exercises in an exploration of the Marine Data Model, and discover how data modeling is used in GIS. In addition, participants will work with graduate students and marine mammal biologists, collecting data on the distribution, behavior and ecology of gray whales occupying winter breeding grounds. Those with ongoing projects or datasets are encouraged to bring their work with them, as there will be a data modeler and GIS consultant to work with participants. Contact Michelle Kinzel at kinzel@cox.net

Festival of Whales Ocean Awareness Day - California

Dana Point Harbor will celebrate its 35th year with The Dana Point Festival of Whales, March 4-11, 2006, in Dana Point Harbor, California, to provide a greater awareness and understanding of the migrating California Gray Whale and the preservation of the ocean environment. The Ocean Awareness day will take place March 12, 2006, bringing together city, county, state, public and non-profit groups to reach out to the community to educate about the many different issues our oceans and its environment face. Please consider staffing a 10x10 booth with literature and interactive activities.

Contact Kim Tilly at dkckc@cox.net

From Stream to Sea Seminar – New Mexico

The Albuquerque Aquarium will be hosting a professional development seminar for educators on February 17-19, 2006 in Albuquerque, New Mexico. The seminar, *From Stream to Sea: Connecting Classrooms, Local Watersheds and Marine Education*, will provide creative ways for teachers to utilize their student's local landscape--be it the bosque, the foothills, the desert or even the playground--to teach them about the importance and wonders of the ocean.

Contact Allyson Wallace at awallace@cabq.gov

GIS and Ocean Mapping in Support of Fisheries Research and Management

Massachusetts Institute of Technology Sea Grant College Program and the Northeast Fisheries Science Center provide a forum focusing on the use of ocean mapping to support fisheries management and research. The Geographic Information Systems and Ocean Mapping in Support of Fisheries Research and Management Conference will take place April 11, 2006 in Cambridge, Massachusetts. The region of interest is the Eastern seaboard from Cape Hatteras north. This conference will focus on the use of ocean mapping and GIS data sets; management and fisheries needs and expectations; areas where communication can facilitate data integration; and data gaps and mapping needs to support scientific and management expectations. Abstracts are due February 15, 2006. Note: if you registered before January 31st and did not receive a confirmation, please resubmit your registration.

<http://web.mit.edu/seagrant/GIS06/>

International Conference on Education and Information Systems, Technologies and Applications

The 4th International Conference on Education and Information Systems, Technologies and Applications will take place July 20-23, 2006 in Orlando, Florida. The conference will provide a forum for the presentation of both solutions and problems of the application of information communication technologies in education and training. Practitioners and consultants are invited to present case study papers and innovative solutions.

Corporations are invited to present education and training information systems and software based solutions. Although abstracts are due February 3, 2006, an extended deadline may be available.

<http://www.conf-info.org/eista06>

Las Maravillas de Humedales

Environmental Concern, Inc. offers quality wetlands education from their WOW! The Wonders of Wetlands curriculum in Spanish. Instruction includes *WOW! The Wonders of Wetlands* curriculum guide, select translated activities, and instructors who speak both English and Spanish to help participants reach their education goals no matter what their Spanish level.

Contact Bronwyn Mitchell at dir.educate@wetland.org

Management of Coastal Recreational Resources - Malta

The 2nd International Conference on the Management of Coastal Recreational Resources - Beaches, Yachting and Coastal Ecotourism (MCRR2) will take place October 25-27, 2006 in Gozo, Malta. The conference will focus on aspects of coastal management related to the recreational amenities represented by beaches, yacht marinas and ecotourism. The deadline for abstract submission is March 31, 2006.
<http://mcrr2.icod.org.mt>

Mangroves as Fish Habitat

The intent of the First International Symposium on Mangroves as Fish Habitat, April 19-21, 2006 in Miami, Florida, is to provide an oral and written forum for the exchange of ideas, approaches, methods, and pertinent data on the linkages between mangrove forests and the fishes and fisheries associated with them.
<http://www.rsmas.miami.edu/conference/mangrove-fish-habitat/index.php>

MARE Summer Leadership Institute

MARE -- Marine Activities, Resources and Education is located at the University of California at Berkeley's Lawrence Hall of Science. The 2006 MARE Leadership Institute, June 26-July 1, 2006 in Santa Cruz, California, is appropriate for K-8 teachers, science specialists, and environmental educators. Participants will receive leadership training as MARE site-coordinators for implementing whole-school Ocean Week/Month programs as well as instruction using inquiry-based, hands-on science strategies, techniques for addressing the needs of English learners, and experience infusing language literacy programs with science. Field experience will include a trip to Natural Bridge's rocky seashore, exploring the wetlands of Elkhorn Slough, whale watching over the waters of the Monterey Submarine Canyon, and a trip to the Monterey Bay Aquarium.
<http://www.lawrencehallofscience.org/mare/profdev/summer.html>

NAAEE Annual Conference – Call for Presentations

The North American Association for Environmental Educators announces the call for presentation proposals for the 35th Annual NAAEE Conference, October 10-14, 2006 in St. Paul, Minnesota. The conference theme is *Gathering at the Headwaters: Building EE in Society* and includes five strands: sustainability; conservation and community education; EE leadership skills, schools, education, achievement, and literacy; and joining forces: environmental justice, health, and education. The deadline for submission is February 22, 2006.
<http://naaee.org/pages/conferences/index.html#cfp>

Nature and Environmental Writers - College and University Educators - Maine

Nature and Environmental Writers - College and University Educators (NEW-CUE), Inc. is a non-profit, environmental education organization founded primarily to assist writers and educators who are dedicated to enhancing the public's awareness of environmental issues. The Fourth NEW-CUE Writers' Conference and Workshop in honor of Rachel Carson will be held June 13-16, 2006 in Boothbay Harbor, Maine, with the theme of *Wilderness/Wildness*. Conference enrollment is limited to 100 participants.
<http://www.new-cue.org/>

NSTA National Conference 2007 - St. Louis

After careful consideration, the National Science Teachers Association Board of Directors has decided to relocate the 2007 National Conference from New Orleans to St. Louis, Missouri, to be held March 29–April 1, 2007. The deadline for the call for proposals is April 15, 2006. The 2006 conference will be in Anaheim, California from April 6-9, 2006.

http://ecommerce.nsta.org/sessions/proposal_submission.asp

Ocean Awareness Days – Georgia and South Carolina

The following institutions are hosting workshops for high and middle level teachers during events called Ocean Awareness Day workshops. Each workshop focuses on various marine themes for middle and high school teachers in their local area. Please contact the appropriate person for more information.

- March 4 2006, Carrollton Georgia – Steve Rich at srich@westga.edu
- March 25, 2006, Athens, Georgia – Kate Mowbray at katemowbray@co.clarke.ga.us
- April 1, 2006, Ravenel, South Carolina – registration, Amy Oser at aoser@ccprc.com or content questions, Sara Marhenke at smarhenke@ccprc.com

Ocean Sciences Education Leadership Institute – North Carolina

The Center for Ocean Sciences Education Excellence SouthEast invites middle and high school science teachers to participate in the fourth Ocean Sciences Education Leadership Institute, *Estuaries and Living Resources*, July 23-28, 2006 in Pine Knoll Shores and Beaufort, North Carolina. This Institute is designed to promote ocean sciences in formal and informal education and forge lasting relationships between ocean sciences researchers and educators. Twenty teachers (5th grade - 12th grade) will be selected from North Carolina, South Carolina and Georgia. Teachers will participate in field exercises, meet ocean scientists, receive new curricula and resources, and explore classroom activities relating to estuaries and living marine resources. The deadline for application is April 1, 2006.

http://www.scseagrant.org/se-cosee/teacher/06_leadership.htm

On the Cutting Edge – Geoscience Workshops and Resources

The 2006 series of workshops for current and future geoscience faculty is available from the Science Education Resource Center website. The *On the Cutting Edge* project from the National Association of Geoscience Teachers and the Digital Library for Earth Science Education helps geoscience faculty stay up-to-date with both geoscience research and teaching methods. The workshop series and website combine to provide professional development opportunities, resources, and opportunities for faculty to interact on-line and in person with colleagues around the world who are focused on improving their teaching. Workshops include Teaching Public Policy in the Earth Sciences and Teaching Climate Change: Lessons from the Past. In addition, this extensive website provides resources available for teaching, including role play scenarios, investigative cases, assessment strategies, and much more.

<http://serc.carleton.edu/NAGTWorkshops/index.html>

Project Design and Evaluation Workshop – North Carolina

This course, February 13-14, 2006, on Roanoke Island, North Carolina, provides coastal resource management extension and education professionals with the knowledge, skills, and tools to design and implement projects that have measurable impacts on the

audience they want to reach. The workshop is provided by NOAA Coastal Services training staff. There is no charge for the workshop, but pre-registration required. Contact Wanda Best at Wanda.M.Best@ncmail.net

Project E3 Workshops - Texas

Project E3: Expanding Energy Education is an interdisciplinary, PreK-12th grade energy education program. This workshop offers teaching ideas for use in science, math, social studies, language arts, art, physical education, and music to increase your students' energy and earth science literacy. Each activity utilizes readily available materials and contains all of the information necessary, including grade levels, concepts, skills, objectives, materials, time constraints, and a glossary. Check out the website for the schedule for the 6 hour workshops, offered in Houston, Texas, along with other materials and useful links.

<http://www.oceanstaroec.com/education/education.htm>

Project WILD Aquatic Facilitator Training - California

Facilitator training will certify participants to conduct WILD workshops that train and provide the WILD materials to others. Facilitators are expected to conduct one workshop, presentation or staff an exhibit each year to remain active. This free workshop will take place February 21, 2006 in El Sagundo, California.

Contact Bobbie Winn at bwinn@dfg.ca.gov

Society for Conservation Biology Annual Meeting

The 20th annual meeting of the Society for Conservation Biology will be held June 24-28, 2006 in San Jose, California. A primary objective of the meeting, *Conservation without Borders*, is to transcend real and perceived boundaries of ecology, sociology, politics, and human behavior that impede conservation science and its application. The meeting will be held concurrently with the meeting of the Society for Conservation GIS.

<http://www.conbio.org/2006/>

South Carolina Marine Educators Association Mini-Conference

The first Mini-Conference of the South Carolina Marine Educators Association, March 25, 2006, will be held in Charleston, South Carolina. The conference will include information, collaboration, discussion, and a field trip. Join them for current marine research in South Carolina, a round-table discussion of the Ocean Literacy, and more.

http://oceanica.cofc.edu/scmea/conf_mini_2006.htm

Teacher at Sea

NOAA's Teacher at Sea program, is accepting applications from currently employed K-16 teachers. The mission of the program is to give teachers a clearer insight into our ocean planet and a greater understanding of maritime work and studies, and to foster an interdisciplinary educational experience that provides a unique environment for learning and teaching. Since 1990, more than 400 teachers have gained first-hand experience of science and life at sea through this. The deadline for applications is February 28, 2006.

<http://teacheratsea.noaa.gov/>

Tread Trainer - Alabama and Florida

The Tread Trainer program is designed to train participants in innovative, practical methods of spreading outdoor ethics to the public with a curriculum specifically focused on motorized and mechanized recreation. A Tread Trainer course will be held March 22, 2006 in Birmingham, Alabama; the deadline for registration is February 27, 2006. The

Ocala, Florida course will take place 5/1/2006; the deadline for registration is April 7, 2006. Scholarship opportunities may be available.

<http://www.treadlightly.org/trainer.mv?action=listcourses&coursetype=trainer&auth=>

Virtual Curitiba Biodiversity Conference: Achieving the 2010 target

In Johannesburg in 2002, and again in New York in 2005, heads of state committed themselves to "achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on earth." The virtual Curitiba Biodiversity Conference focuses on achieving the 2010 biodiversity target. The conference will give voice to citizens as to how the global family can achieve the 2010 biodiversity target, for the benefit of current and future generations. A study tour of the headquarters of the UNEP Secretariat in Montreal, Canada and of the headquarters of UNEP in Nairobi will be offered for the best contribution to the forum.

<http://2010.biodiv.org/>

Wilderness Management Distance Education Program

The Wilderness Management Distance Education Program, from the University of Montana College of Forestry and Conservation and the Arthur Carhart National Wilderness Training Center, offers accredited university courses for a comprehensive study of wilderness management. The courses offer an understanding of wilderness resources and the issues surrounding their management, and include topics from philosophy and ecology to recreation and planning. The program offers on-line versions of the courses in the spring and fall, cycling through the four courses. The courses are offered in two formats: 1) traditional correspondence and 2) online (spring and fall). Their distance education option removes the constraints of time and location, with study from the privacy of your own home and rolling admissions.

- Wilderness in the American Context
- Management of the Wilderness Resource
- Wilderness Management Planning
- Managing Recreation Resources

<http://wmdep.wilderness.net/default.htm>

William P. Ridley 4-H Center Workshops - Tennessee

The William P. Ridley 4-H Center's Science program in Columbia, Tennessee invites participation in two free teacher workshops in Columbia, Tennessee - *Project Archeology* and *Project Flying WILD*.

- Flying Wild, February 16, 2006; register by February 10, 2006
- Project Archeology, March 2, 2006; register by February 24, 2006.

Contact Terri Quillin at tquillin@utk.edu

EDUCATIONAL RESOURCES

Advanced Field Oceanography

The University of Washington, School of Oceanography's course, Oceanography 444, is a five-credit undergraduate course. This year, their research has been aboard the *R/V Thomas G. Thompson* near the Galapagos Islands. In addition to planning, performing, and writing up their own research, the students were responsible for much of the cruise planning. This is a good site for your students to get a feel for oceanography and research from the students' perspective.

<http://courses.washington.edu/ocean444/>

Archipelago Exhibit – Hawai'i

"Archipelago: Portraits of Life in the World's Most Remote Island Sanctuary" will be on exhibit at the Maui Ocean Center for the month of February. This photographic exhibit on the flora and fauna of the Northwest Hawaiian Islands and conservation efforts to protect them showcases images from the new book "Archipelago" by photographers David Liittschwager and Susan Middleton.

<http://www.mauioceancenter.com/home.html>

Classroom Companion

The National Geographic has developed a new online resource called a Classroom Companion series, which includes K-12 lessons, maps, photographs and multimedia resources. While the materials can be listed by category or alphabetically, the keyword search yields the most useful method of finding resources.

http://www.ngsednet.org/community/resources_category.cfm?community_id=168

Community Risk Assessment Toolkit

The Community Risk Assessment Toolkit is part of the Community Risk Assessment and Action Planning project, which aims at strengthening community level risk assessment practices. The toolkit contains resources and a compendium of case studies.

http://www.proventionconsortium.org/CRA_toolkit.htm

CORSACS: Controls on Ross Sea Algal Community Structure

CORSACS is a research cruise to the Ross Sea in Antarctica to study what controls the phytoplankton dynamics. From December 17, 2005 to January 27, 2006, a team of scientists from universities and research institutions from around the world explored the ecosystem of the Ross Sea near the continent of Antarctica. The main research objective was to investigate the relative importance and potential interactive effects of iron, light and CO₂ levels in structuring algal assemblages and growth rates in the Ross Sea. The website includes logs, descriptions of life at sea, questions and answers from students, and more.

<http://www.whoi.edu/sites/corsacs>

Davidson Seamount: Exploring Ancient Coral Gardens

NOAA's Ocean Explorer program has launched *Davidson Seamount: Exploring Ancient Coral Gardens*, the website for their first expedition of 2006, which runs from January 26-February 4, 2006. The seamount is a vast underwater mountain 75 miles off the coast of Monterey, California, and more than 4,000 feet below the sea surface, created by volcanic activity. Seamounts are an important habitat for deep-sea corals and demonstrate a high degree of endemism. On the website, you will find the mission plan, biographies of the explorers, daily logs, essays on coral conservation and the unique geology of the region, information on the high-tech equipment the team will be using, and more.

<http://oceanexplorer.noaa.gov/explorations/06davidson/welcome.html>

Dutch Caribbean Nature Alliance

This website from the Dutch Caribbean Nature Alliance offers an Internet resource for both professionals and the general public on issues of biodiversity and conservation within the Dutch Caribbean, including the islands of Aruba, Bonaire, Curaçao, Saba, St Eustatius and St Maarten. The website currently features information on protected

areas, habitats, ecosystems, and endemic, endangered and vulnerable species; details about ongoing projects; a sea turtle tracking programme; and more. Check out the downloads section, with a Kids' newsletter in Papiamentu. Future updates will include the results of a year long baseline study of the protected areas as well as a fully searchable species database for the six islands.

www.DCNAnature.org

Earth From Above on the Web

Sponsored by UNESCO and Fuji Film, the *Earth from Above* project included a traveling exhibition that made its way across the United States. Photographer Yann Arthus-Bertrand documented many of the world's places and examined the effects of humans on the earth. This website allows users to view many of these photographs via an innovative interactive interface. Visit a mangrove forest in New Caledonia, motion graphics of the Planet Blue, and the Mark of Man. Note that Netscape 6 is not supported. Check this out if you have a high-speed Internet connection.

<http://home.fujifilm.com/efa/>

EE in Mexico

The Senderos e-bulletin from the Border-Wide EE Coalition features stories and news from the border region's environmental educators, and information about programs and events taking place in all of the ten US-Mexico Border States. Check out the on-line version in English or Spanish.

<http://www.eecc.net/ecostarteng.htm>

Environmental Science Labs and Activities

With funding from the Department of Education's Fund for the Improvement for Postsecondary Education, and in collaboration with the College Board, the Environmental Literacy Council offers labs which have been developed by an experienced team of environmental science educators and subjected to peer review. The content of the collection is varied, and each contains an inquiry-based component. They include a Tragedy of the Commons simulation, air quality monitoring, primary productivity, a coastal resources debate, and more.

<http://www.enviroliteracy.org/subcategory.php/243.html>

Great Backyard Bird Count

The National Audubon Society and the Cornell Laboratory of Ornithology encourage everyone to count birds with a buddy for the ninth annual Great Backyard Bird Count, February 17-20, 2006. Share your love of birds with a friend, a child, a scout troop, a class, or a co-worker and help create a unique snapshot of winter bird abundance and distribution across the continent. The Mississippi Classroom Activity Kit can help you bring the birds into your classroom at <http://www.msaudubon.org/GBBC/classroom.php>. Count in a backyard, on a high-rise balcony, in a park, or on any of the 730 million acres of public lands. The Lab of Ornithology and Audubon are also launching an element of friendly competition. Explore sightings maps, lists, and charts as the count progresses, enter your sightings, and check out the competitions on the website.

www.birdsource.org/gbbc

iSpecies.org

The term "mashup" was originally used to describe the mixing together of musical tracks, but now refers to websites that weave data from different sources into a new service. They are becoming increasingly popular, especially for plotting data on maps. iSpecies,

a species search engine, is a test of E O Wilson's idea of a web page for each species. The data displayed are generated "on the fly" by querying other data sources
<http://darwin.zoology.gla.ac.uk/~rpage/ispecies/>

Jiminy Cricket's Environmental Challenge

Through Jiminy Cricket's Environmental Challenge, students are encouraged to blend the idea of thinking and acting environmentally at school, at home, and in the community into their daily lives. The downloadable Environmental Challenge Handbook can be used to guide a class project. A message board is available for teachers to share stories, ask questions and provide feedback to each other.
<http://disney.go.com/environmentality/jcec/home.html>

Journey North Begins

Journey North begins in February. Begin tracking the arrival of spring and the migrations of numerous wildlife species using the Journey North web site. Journey North is a free online program engaging students in a study of wildlife migration and seasonal change, following tulips, monarch butterflies, whooping cranes, gray whales and more. Students share their own field observations with classrooms across the Hemisphere. In addition, students are linked with scientists who provide their expertise directly to the classroom. The Annenberg Channel offers free Journey North video programs on February 22, 2006 and May 9, 2006.
<http://www.learner.org/jnorth/>

Loggerhead Lessons

The College of Charleston's Project Oceanica offers *Loggerhead Lessons: A Web-Based Educational Resource* for middle school. All lessons are inquiry-based and aligned with National Science Standards. In addition to the lessons, the website includes pre- and post-tests, answer keys, and the Loggerhead Board Game. (Editor, Rachel Teller)
<http://oceanica.cofc.edu/LoggerheadLessons/LoggerheadHome.htm>

Monterey Bay Photo Database

The Sanctuary Integrated Monitoring Network, SiMoN, has launched a new photo database containing 1,200 digital images of species, habitats, locations, and issues of the Monterey Bay National Marine Sanctuary. You can search or browse thumbnails of images then download a high resolution version for educational purposes.
<http://sanctuaries.noaa.gov/education/tour/gallery.html>

Observing the Coastal Ocean: Buoys, Ships and Science

COSEE SouthEast announces a new resource for teachers and informal educators about coastal ocean observing systems. The DVD, *Observing the Coastal Ocean: Buoys, Ships and Science*, is a collaborative effort with Carolina Coastal Ocean Observation and Predicting System (Caro COOPS) and South East Atlantic Coastal Ocean Observing system (SEACOOS). The DVD explores coastal ocean observing systems using a fully automated and narrated, graphic-rich presentation. The DVD focuses on the installation of a buoy off the coast of the Carolinas, a guided underwater tour to investigate the buoy, and experiences of consultants, graduate students and technicians in oceanography. The glossary is accompanied by photos. This resource is free while supplies last.

Contact Carolyn Robinson at carolyn.robinson@scseagrant.org

Place-Based Education

The second edition of David Sobel's book *Place-Based Education—Connecting Classrooms and Communities* is available. The book reviews academic research, practical examples, and step-by-step strategies drawn from classrooms throughout the United States which emphasize the connection of school, community, and environment. Place-based education uses the local community and environment as the starting place for curriculum learning, strengthening community bonds, appreciation for the natural world, and a commitment to citizen engagement.

http://www.oriononline.org/pages/ob/nls/index_nls.html

Reef Fish Guide (for the responsible aquarium hobbyist)

The goal of Reef Protection International's Reef Fish Guide program is to increase public awareness about the ethical implications of keeping coral reef fish as pets and provide those entering the hobby, as well as existing hobbyists, with the knowledge to make informed buying choices that contribute to coral reef conservation. The downloadable, one-page guide ranks popular fish species according to several categories, assigning fish into "Take it Home" (recommended) and "Keep it Wild" (avoid) lists.

http://www.reefprotect.org/fish_guide.htm#

Science Explorations

Science Explorations is a collaboration between the American Museum of Natural History and Scholastic, created to promote science literacy among students in grades 3-10. Science Explorations offers a series of online investigations featuring the latest scientific discoveries of the museum's experts. Upcoming investigations include invertebrates (in February) and reptiles (in May). The website includes a searchable database of lesson plans and activities, teaching tools, and more. A quick search yielded many good links to ocean resources.

<http://teacher.scholastic.com/activities/explorations/>

SciLinks on Weather and Global Warming

NSTA's SciLinks program links teachers and students to teacher-approved web sites to support science instruction. While SciLinks is primarily offered through the pages of science textbooks and NSTA Press publications, NSTA Express is making three popular topics available for free access, for a short period of time.

- What is Weather? (K–4)
http://www.scilinks.org/retrieve_outside.asp?sl=63823447142110221066
- Measuring Motion (5–8)
http://www.scilinks.org/retrieve_outside.asp?sl=63823447145510221066
- Global Warming (9–12)
http://www.scilinks.org/retrieve_outside.asp?sl=63823447149910221066

7 Generations

The 7 Generations manual, *Addressing Village Environmental Issues for the Future Generations of Alaska*, is designed for people in rural Alaska who want to accomplish environmental planning and management using a community based approach. This downloadable manual was written to assist communities to be more self reliant, and to take responsibility for their own environmental issues. It includes planning process, surveys, funding sources, and more.

<http://www.7generations.us/page2.html>

Upwelling Zones

Upwelling Zones, from the Bigelow Laboratory for Ocean Sciences, is an educational resource to help learners understand the importance of marine upwelling systems, including ties to fisheries, El Nino, and La Nina events. Users can interactively track and analyze temperature, wind, salinity and chlorophyll data. Other features include a user guide, movies, links to published research, and summaries of relevant background topics. Worksheets and accompanying rubrics are designed to help educators assess student understanding of various topics.

<http://www.bigelow.org/upwelling>

Water Facts and Fun

The California Department of Water Resources offers water education materials at no charge. The materials are limited in quantity, so please review a sample copy before ordering classroom sets. Non-California residents may receive one free copy of each of the materials, sent to United States addresses only.

<http://www.publicaffairs.water.ca.gov/education/catalog.cfm>

Watershed Handbook

EPA's Office of Water has published *Draft Handbook for Developing Watershed Plans to Restore and Protect Our Waters*, a guide to watershed management as a tool in developing and implementing watershed plans. The handbook is aimed toward communities, watershed groups, and local, state, tribal, and federal environmental agencies. The handbook is designed to take the user through each step of the watershed planning process, including watershed monitoring and assessment, community outreach, best management practices, and more. The draft handbook is available online; comments should be addressed to watershedhandbook@epa.gov by June 30, 2006.

http://www.epa.gov/owow/nps/watershed_handbook/

Whales: Voices in the Sea

This website from the Scripps Institution of Oceanography at the University of California, San Diego was created in partnership with the Aquarium of the Pacific and with support from the Pacific Life Foundation. The site offers information about whales using Flash graphics, video, and more. Listen to the audio files and view the spectrograms of calls of humpback, beaked, gray, right, sperm and blue whales. The graphics show whale range and short video features offer information about each of the whales, current research on their sounds, and conservation efforts.

A major expansion of the website will be unveiled in May 2006. This new site will feature the illustrations and calls of 40 species of marine mammals, additional videos about orcas and bottlenose dolphins, and a resource section for educators with companion activities and multi-level curricula written to national science education standards.

<http://cetus.ucsd.edu/VoicesintheSea/Flash/MAIN.html>

After February 14, 2006 the website address will be <http://voicesinthesea.org>

Wildlife and Whale Cruises

The Aquarium of the Pacific invites the public on whale watch cruises through their educational "Wildlife and Whale Cruise," Saturdays and Sundays in February and March, 2006. Cruises include an educational multimedia presentation by a marine naturalist as they search for migrating animals along with hands-on learning activities for children of all ages, including *Whale Biofact Discovery* and the *Plankton Tow*.

<http://www.aquariumofpacific.org/EDUCATION/OUTDOOR/whale.htm>

World Heritage in Young Hands

UNESCO offers an on-line learning community for students, teachers, and others involved in the preservation and promotion of cultural and natural heritage sites from local to global levels. This educational toolkit developed by the World Heritage organization is designed to teach about the importance of the preservation of cultural and natural heritage around the world. Based on an interactive and interdisciplinary approach, the downloadable toolkit invites teachers of various disciplines to explore heritage conservation with their students in the form of a journey through the world's magnificent cultural and natural heritage. The toolkit proposes classroom and extra-curricular activities, offers student activity sheets, and provides a series of enlarged photographs of World Heritage sites, a poster, a World Heritage map, stickers and thematic overhead projection sheets to be used for classroom discussions. It is available in English, French, and Spanish.

<http://whc.unesco.org/education/sindex.htm>

INITIATIVES, JOURNALS, and MISCELLANEOUS

Coastal Services Magazine

NOAA's Coastal Services Center publishes *Coastal Services*, a bimonthly magazine for the nation's coastal resource managers. You can read the magazine online or subscribe to this free publication. The January/February 2006 edition reports on what coastal resource managers are doing to increase their communities' disaster resiliency.

<http://www.csc.noaa.gov/magazine/>

Dive In To Earth Day

Dive In To Earth Day has been broadening people's knowledge of Earth Day to include the education and conservation of our planet's aquatic ecosystems. It will be celebrated throughout the week of Earth Day, April 22, 2006. To date, 300,000 participants from 103 countries and territories around the world have removed 140 Tons of trash from coastal areas, educated and inspired children to care for water resources, supported coral reef areas, and much more. Visit the website for inspiration, tools, information, and to register your event for a global impact.

<http://www.coralreefalliance.org/divein/>

Endangered Species Research

Inter-Research produces web-hosted publications, with on-line abstracts and many on-line full text articles. The latest journal is *Endangered Species Research*. Others include *Marine Ecology Progress Series*, *Climate Research*, *Ethics in Science and Environmental Politics*, and more.

<http://www.int-res.com/home/>

Humpback Whale Awareness Month and Whale Count – Hawai'i

February is Humpback Whale Awareness Month in Hawai'i, an effort that includes distributing information to libraries throughout the state, lunchtime whale watches, a lecture series, and other events. Because whale population numbers are still relatively unknown, Hawaiian Islands Humpback Whale National Marine Sanctuary, the University of Hawaii's Marine Option Program, and the Kaho'olawe Island Reserve Commission engage the community in an annual census count.

<http://hawaiihumpbackwhale.noaa.gov/>

Water Trails Memorial Picnic and Paddle

There will be a picnic and paddle in memory of All States of America's Water Trails on June 10, 2006 in Lorton, Virginia.

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

World Wetlands Day

World Wetlands Day takes place yearly on the 2nd of February and offers an opportunity "to undertake actions aimed at raising public awareness of wetland values and benefits in general and the Ramsar Convention in particular." The Ramsar Secretariat has promotional materials available free of charge. The theme is *Her Future at Risk*.

Materials are available in English, French, and Spanish.

http://www.ramsar.org/wwd/6/wwd2006_index.htm