

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
INFORMATION EXCHANGE FOR MARINE EDUCATORS

NOVEMBER 2010

This update is funded by the National Marine Sanctuary Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from NOAA's Office of Education and 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, the Scout Report, edinfo at FREE, scuttlebutt, NSTA Express, 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://mpa.gov/resources/education/#exchange>. 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 References

Connectivity Handbook

Preserving Reef Connectivity - A Handbook for Marine Protected Area Managers is a product of the Coral Reef Targeted Research and Capacity Building for Management Program by the University of Queensland. The downloadable handbook offers a practical guide for reef managers and others interested in the science of coral reef connectivity. Contents include: What is connectivity, What process cause connectivity, The science of connectivity, and more.

<http://www.gefcoral.org/LinkClick.aspx?fileticket=wUelZOi-9QI%3d&tabid=3260>

Lessons from Packard Foundation's EBM Initiative

The David and Lucile Packard Foundation dedicated funding for coastal and marine ecosystem based management projects worldwide from 2004 to 2009. The *Synthesis Report for the Ecosystem-Based Management for Sustainable Coastal-Marine Systems Initiative* describes the design of the initiative, highlights key insights that have been gained through grantees' accomplishments, and identifies lessons learned.

http://www.packard.org/assets/files/conservation%20and%20science/EBM_Report_06.21.10.pdf

INITIATIVE OF THE MONTH

Protected Planet

The United Nations Environment Programme (UNEP) has joined forces with the International Union for the Conservation of Nature (IUCN) to create protectedplanet.net, an interactive, social media-based website that aims to provide information on both widely known and lesser known protected places in the world. Using the latest satellite images, users can pinpoint individual protected areas, such as national parks or marine reserves, and zoom in for information on endangered species, native plant life, or types of terrain.

Protected Planet offers visitors the opportunity to upload photographs of their trips to protected areas, write travelogues of what they saw and experienced for Wikipedia, and recommend places of interest nearby. The website will also offer downloadable information on protected areas for governments, scientists, and NGOs working on conservation. Online reports from tourists and visitors including sightings of species have the potential to strengthen that work.

The website brings together information from across the Internet, including species data from the Global Biodiversity Information Facility, protected area descriptions from Wikipedia, photos from Panoramio and Flickr, and Google maps. The website also expands on the World Database on Protected Areas currently managed by UNEP-WCMC. **Note:** the project is in its initial phase and much information remains to be added, Wiki-style.

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

WEBSITE OF THE MONTH

NOAA Education

NOAA's education resources portal is designed to assist educators in accessing the many educational materials offered throughout NOAA from one centralized interface. Materials are organized by Themes, topical Collections, and content type. Linked resources are organized into collections which provide the user with a toolkit of materials and activities suitable for integration into a variety of educational settings. The materials include multimedia resources, lessons and activities, real world data, background information, and much more. Featured resources collections include hurricanes, oil spill resources, tides, and the newest collection about coral ecosystems. There are also links to news, funding opportunities, professional development, and much more. If you haven't visited this website in a while, take some time to look through these great resources.

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

MESSAGE FROM THE BRIDGE

Sea Level Trends

Sea level (the average height of the ocean's surface relative to land) experiences natural fluctuations from small scale seasonal changes, like springtime runoff, to long term decadal changes due to ocean circulation and El Niño. In addition to these natural changes, sea level around most of the world is rising due to the effects of global warming. Why does this cause sea level to rise? As air temperatures increase, ice in glaciers and icebergs melt, increasing the amount of water in the oceans, thus causing sea level to rise. Additionally, as air temperatures rise, water temperatures rise. When water temperatures rise, water molecules expand, also causing sea level to rise. Like many effects of climate change, sea level change is not consistent around the globe. The Bridge Data Analysis Teaching Activity: Sea Level Trends is designed as an introductory activity exploring just one facet of global climate change. Students will access real scientific data to investigate and compare long-term changes in sea level from different coastal locations around the United States.

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

REQUESTS

Ask Voyager – Ocean Circulation

Scripps Institution of Oceanography at UC San Diego is inviting questions from K-12 students for the next few issues of the magazine, *explorations*. The questions selected will relate to each issue's feature; the next issue (Jan/Feb 2011) will cover how physical oceanographers at Scripps are achieving new breakthroughs in modeling ocean circulation. Questions on how water moves in the ocean, what eddies are, how the ocean is stratified, and anything else related to circulation will be put to the scientists taking part in this research.

http://explorations.ucsd.edu/Voyager/Voyager_QA/Submit/

Seeking Teachers to Pilot Lessons

NOAA's National Ocean Service Education and NSTA are working on a new resource for educators – a SciGuide focused on tides and currents. They seek formal classroom educators to pilot and provide feedback on nine lessons being developed for grades 9-12. Teachers must be able to pilot one or more lessons and provide all feedback by January 31, 2011. Teachers will be selected on a first-come, first-served basis; the deadline for application is November 12, 2010. Compensation may be available.

Contact Leisa Clark at lclark@nsta.org or Bruce Moravchik at bruce.moravchik@noaa.gov

Survey of Middle School Science Teachers in Land-Locked States

Middle school science teachers from landlocked states are urged to take this nation-wide survey. Amy Gillan is concluding a study of middle school science teachers and their teaching about the ocean and she needs to hear from more teachers from states that do not border an ocean. If you have at least one year of experience teaching middle school science and do NOT live in a coastal state, please take her survey. It will take 15-20 minutes to complete and your answers are completely confidential and anonymous. Help support inclusivity from all the states!

https://purdue.qualtrics.com/SE?SID=SV_87zwywgg8dNRqn2

GRANTS AND OPPORTUNITIES

ACE Action Grants

The Alliance for Climate Education offers Action Grants to help teams take on their next carbon-reducing, awareness-raising project. The deadline for application is November 12, 2010.

<http://actiongrants.acespace.org/>

Coleopterists Society Youth Incentive Award

The Coleopterists Society, an international organization of professionals and hobbyists interested in the study of beetles, has established a program to recognize young people in grades 7-12 studying beetles. The deadline for application is November 15, 2010.

http://www.coleopsoc.org/default.asp?Action=Show_SocietyInfo&ID=Youth

Coral Reef Conservation Funds

NOAA's Coral Reef Conservation Program, in cooperation with the National Fish and Wildlife Foundation, offers this grant competition for coral reef conservation projects proposed by domestic and international applicants. See the RFP announcement for full details, including a description of the funding categories. The deadline for pre-proposals is December 15, 2010. A webinar on December 1, 2010 will discuss the priorities identified in the RFP and describe how to write a competitive application.

<http://www.nfwf.org/coralreef>

Disney Worldwide Conservation Fund

The Disney Worldwide Conservation Fund was established to promote wildlife conservation around the world through partnerships with scientists, educators, and organizations committed to preserving Earth's biodiversity. Applying organizations must have U.S. nonprofit status; international NGOs can apply in partnership with a U.S. organization. Funded projects should clearly contribute to the conservation of endangered or threatened species and their habitats. The application deadline for approved inquiries and previous grantees is January 25, 2011.

<http://www.dwcf-rfp.com/>

Edward C. Roy, Jr. Award for Excellence in K-8 Earth Science Teaching

This award from the American Geological Institute is designed to recognize one teacher of grades K-8 for his or her leadership and innovation in Earth science education. The deadline for application is January 5, 2011.

<http://www.agiweb.org/education/awards/ed-roy/>

EPA Greater Research Opportunities Fellowships

The EPA Greater Research Opportunities (GRO) Fellowships for Undergraduate Environmental Study offers fellowships for students in the environmental fields of study. The deadline for applications is December 9, 2010.

http://www.epa.gov/ncer/rfa/2011/2011_gro_undergrad.html

FilterForGood Eco-Challenge

Brita's FilterForGood Eco-Challenge grant offers grants to turn green ideas into action. Proposed programs should be action-based or aim to create tangible results toward producing a more sustainable environment. Each entry will be evaluated on creativity,

environmental benefit, educational impact, and best use of time and budget. The deadline for application is November 19, 2010.

<http://www.filterforgood.com/ecochallenge/>

Find Your Footprint Contest

Learn more about your environmental footprint and how you can make a difference at the P&G Future Friendly Find Your Footprint contest. Classrooms can come up with an idea how their school could save water, reduce waste, or save energy. The deadline for entry is December 3, 2010.

<http://www.nationalgeographic.com/findyourfootprint/enter/>

Fisheries Innovation Fund

The National Fish and Wildlife Foundation Fisheries Innovation Fund is a grant program to support sustainable fisheries in the U.S. by fostering innovation and supporting effective participation of fishermen and fishing communities in the design and implementation of catch-share fisheries. The deadline for application is November 30, 2010.

http://www.nfwf.org/AM/Template.cfm?Section=Charter_Programs_List&Template=/TaggedPage/TaggedPageDisplay.cfm&TPLID=60&ContentID=17640

Fulbright NEXUS Regional Program for the Western Hemisphere

The Fulbright Regional Network for Applied Research (NEXUS) Program will bring together a network of junior scholars, professionals, and mid-career applied researchers from the United States and other Western Hemisphere nations for series of three seminar meetings and a Fulbright exchange experience. Scholars will spend up to one year engaged in collaborative thinking, analysis, problem-solving, and multi-disciplinary research in one of three inter-related topics of regional significance: science, technology and innovation, entrepreneurship, and sustainable energy. The deadline for application is November 15, 2010.

<http://www.cies.org/NEXUS/>

Get to Know Contest

The Get to Know Contest is an invitation for youth (age 18 and younger) to go outside, to a zoo, aquarium, or museum; to "get to know" their wild neighbors; and then to share their experience with the world by creating an original work of art, photography, videography, or writing. The 2010 contest theme is *Celebrating Biodiversity*, with a new video category of *This is my Forest*. The deadline for entry is November 30, 2010.

<http://www.gettoknow.ca/us/contest/details.php>

Grant Calendar

The Mt. Baker-Snoqualmie National Forest Grant Calendar highlights the latest funding opportunities for forest-related issues within western Washington, as well as nationally. These issues include global climate change, habitat restoration, open space conservation, historical preservation, environmental education, and urban community outreach. Check the opportunities out by name or date due.

<http://www.fs.fed.us/r6/mbs/partnerships/grant-calendar.shtml>

<http://www.fs.fed.us/r6/mbs/partnerships/calendar/index.shtml>

Gulf Guardian Awards

The Gulf of Mexico Program is accepting nominations for the 2011 Gulf Guardian Awards. Awards are given for positive steps to keep the gulf healthy, beautiful, and productive. The deadline for nomination is May 15, 2011.

http://www.epa.gov/gmpo/gulfguard/2011_awards.html

Joint Fire Science Program Funding

The Joint Fire Science Program is a partnership of six federal wildland management and research agencies with a need to address problems associated with managing wildland fuels, fires, and fire-impacted ecosystems and offers funding for scientific studies. The deadline for application is November 19, 2010. See the website for complete details.

<http://www.firescience.gov/>

Kenton Miller Award

The Kenton R. Miller Award for Innovation in Protected Areas Management nominees are identified and proposed by individuals related to protected areas management, education, or science for innovation in any combination of the following categories: Communications; Planning and Management; Finance and Economics; Assessment, Monitoring, and Evaluation; Learning and Capacity Building; and, Governance. The deadline for nominations is November 30, 2010.

http://www.iucn.org/about/union/commissions/wcpa/wcpa_what/wcpa_awards/wcpa_kentonaward/

Marine Protected Areas Partnership Fund Pre-Proposals

The NOAA MPA Center and the National Fish and Wildlife Foundation have established an MPA Partnership Fund to foster collaborative conservation among MPA agencies through joint stewardship, science, and outreach projects. Pre-proposals are due November 19, 2010. Non-federal MPA agencies and partners are eligible to apply.

<http://www.mpa.gov/nationalsystem/effectiveness/mpafund/>

Maritime Spatial Planning in Cartoon Format

WWF Germany has published a cartoon guide to implementing maritime spatial planning (MSP) in the Baltic Sea, titled *Become a Maritime Spatialist in 10 Minutes*. The 28- page guide uses drawings, humor, and limited text to explain what MSP is, why it is needed, and what a Baltic sea zoning plan could look like. It is designed to be easily understood by a range of audiences, and is available in multiple languages, including English and German. The guide is downloadable.

http://www.baltseaplan.eu/downloads/WWF_Cartoon_MSP.pdf

National Recreation Trails Photo Contest

American Trails sponsors an annual contest for photographs of National Recreation Trails across the country. The categories are trail use, management, and features, along with artistic merit. They are looking for photos of trail users as well as special facilities, art on the trails, management issues, construction, and volunteers. The entry deadline is December 15, 2010.

<http://americantrails.org/nationalrecreationtrails/photocon.html>

National Wetlands Awards

The Environmental Law Institute offers the National Wetlands Awards Program, celebrating individuals who have demonstrated dedication, innovation, or excellence in wetlands conservation. The awards are given in six categories: Education and

Outreach; Science Research; Conservation and Restoration; Landowner Stewardship; State, Tribal, and Local Program Development; and Wetland Community Leader. The deadline for nomination is December 15, 2010.

<http://www.nationalwetlandsawards.org/nominations.htm>

NSTA Teacher Awards

The National Science Teachers Association sponsors numerous awards for educators. Check the website for complete details of all the awards. The deadline for application for most is November 30, 2010.

<http://www.nsta.org/about/awards.aspx>

Open Rivers Initiative

The NOAA Restoration Center offers the Open Rivers Initiative, providing technical expertise and financial assistance to remove dams and barriers and restore habitat for species that migrate between the ocean and the nation's freshwater rivers and streams. The deadline for application is November 17, 2010.

<http://www.habitat.noaa.gov/funding/ori.html>

P3 Design Competition

The EPA is seeking applications proposing to research, develop, and design solutions to real world challenges involving the overall sustainability of human society. The *P3 Awards: A National Student Design Competition for Sustainability Focusing on People, Prosperity and the Planet* competition highlights the use of scientific principles in creating innovative projects focused on sustainability. The deadline for application is December 22, 2010.

<http://www.epa.gov/P3/>

President's Environmental Youth Awards

Sponsored by the EPA, the President's Environmental Youth Awards program recognizes young people for projects which demonstrate their commitment to the environment. The program is available to individuals, classes, and youth groups. Awards are presented in each of the EPA regions, and one project from each region is presented with a national award. Regional applications are due by December 31, 2009.

<http://www.epa.gov/enviroed/peya/index.html>

Spirit of Innovation Awards

The Spirit of Innovation Awards Program challenges teams of high school students (ages 13-18) to solve real world problems by creating products using science, technology, and entrepreneurship. The competition encourages students to develop new products that can be introduced to the marketplace. The 2011 competition challenges students to develop new ideas in the areas of aerospace exploration, renewable energy, and cyber security. The deadline for submission is December 17, 2010.

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

State Farm Good Neighbor Service-Learning Grant

The State Farm Companies Foundation offers grants, available through Youth Service America, for teachers, youth, and school-based service-learning coordinators to implement service-learning projects for Global Youth Service Day April 15-17, 2011. Eligible programs will engage youth in service-learning, an effective teaching and learning strategy that promotes student learning, academic achievement, workplace

readiness, and healthy communities. Hurry - the deadline for application is November 9, 2010.

<http://www.ysa.org/goodneighbor>

UPS Foundation Grants

The UPS Foundation is offering rural teachers match funding for classroom projects that will have students study about, explore, or clean up the planet. The deadline for application is November 12, 2010.

<http://eeintennessee.org/resource/about.aspx?s=92758.0.0.37935>

Walmart Store and Sam's Club Giving Programs

The Walmart Foundation supports charitable organizations through its Walmart Store and Sam's Club Giving Programs. The deadline for application is December 31, 2010.

<http://walmartstores.com/CommunityGiving/238.aspx>

INTERNSHIPS AND TEMPORARY OPPORTUNITIES

Earth Expeditions and Global Field Master's Program

The Cincinnati Zoo and Botanical Garden, in partnership with Miami University's Project Dragonfly, offers Earth Expeditions graduate courses and the Global Field Program master's degree. Sites for 2011 include the Amazon, Australia Thailand, and many more. The deadline for application is January 28, 2011.

<http://www.projectdragonfly.org/gfp/index.php>

SEA Semester

Space and financial aid are still available for Spring 2011 SEA Semester at Woods Hole programs for undergraduate students looking for an intensive field-based experience focusing on marine and environmental studies. There are several cruise tracks.

http://www.sea.edu/promo/spring_2011.html

Super Science Fellowships

James Cook University's ARC Centre of Excellence for Coral Reef Studies in Townsville, Australia, seeks early career researcher applicants for Super Science Fellowships in coral reef fish adaptation, coral adaptation and acclimation, or the coral genome. The deadline for application is November 19, 2010.

<http://www.coralcoe.org.au/employment.html>

CONFERENCES, WORKSHOPS, AND PROFESSIONAL DEVELOPMENT

American Trails National Symposium

The theme of the 20th American Trails National Symposium, November 14-17, 2010 in Chattanooga, Tennessee is *Trails: The Green Way for America*. The symposium addresses both non-motorized and motorized issues and trails and greenways nationwide.

<http://www.americantrails.org/2010/>

Conservation Conflict Resolution - Virginia

Conservation Conflict Resolution, January 10-21, 2011 in Front Royal, Virginia, is offered by the Smithsonian-Mason Global Conservation Studies Programs, for anyone addressing conservation conflicts. Conflicts can be between people and wildlife or between people about wildlife or other natural resources. The course teaches participants strategies and processes for effectively addressing conservation related conflict, including: the role of neutrality in conflict prevention and reconciliation; effective conflict resolving communication techniques; and how to apply conflict analysis and process models to develop real-life conflict resolution plans.

<http://nationalzoo.si.edu/SCBI/MAB/GMU/consconflict.cfm>

Duke Environmental Leadership Program Information Sessions - Various

The Duke Environmental Leadership Program offers a series of information sessions for working professionals interested in the online and on-campus Master of Environmental Management degree program. The program is an online two-year degree program designed specifically for mid-career environmental professionals and business executives. Check the schedule for upcoming in-person and on-line sessions.

<http://www.nicholas.duke.edu/del/del-mem/delinfo/>

Evolution in the Marine Environment - Online

Join this free online workshop offered by COSEE-West and the College of Exploration, November 1-19, 2010. The workshop provides content on evolution, resources, lesson plans, and discussion rooms. Each week will have a new presentation and new resources, and you can join discussions throughout the workshop.

http://www.coexploration.org/cosee_west/fall2010/

Fundamentals of Environmental Education - Online

This online course, developed at the University of Wisconsin, Stevens Point, is now offered through the Department of Environmental Studies at the University of North Carolina Wilmington. Learn about the foundations of environmental education and how it is implemented and evaluated by professionals. The course may be taken for undergraduate, graduate, or distance learning [graduate] credit. No text or face-to-face meetings are required. The deadline for application is November 15, 2010.

Contact Dr. Rosanne Fortner at fortnerr@uncw.edu

Graduate Fellowships in Population Dynamics and Marine Resource Economics

Applications are being accepted for the 2011 NMFS-Sea Grant Fellowship Programs in Population Dynamics and Marine Resource Economics. All applications must come through a sponsoring Sea Grant office. The deadline for application is January 21, 2011. Check the Sea Grant website for your local program; the California Sea Grant website has links to the funding notices.

<http://www.csgc.ucsd.edu/EDUCATION/SeaGrantFellows.html>

<http://www.seagrants.noaa.gov/colleges/>

International Beachcombing Conference

The 2010 International Beachcombing Conference, November 12-14 in Lewes, Delaware, will host beachcombing and sea glass authors and experts, biologists, archaeologists, geologists, and historians. The lead topic is *Shipwrecks on the Delaware Coast and Identifying Shipwreck Artifacts*. Other lecture topics include Beach Biology; the Archaeology of Beachcombing, the History of English Sea; and more.

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

International Coral Reef Symposium – Call for Mini-Symposium

The International Coral Reef Symposium, July 9-13, 2012 in Cairns, Australia brings together coral reef scientists, resource managers, educators, and others. The deadline for mini-symposium proposals is December 1, 2010.

<http://www.icrs2012.com/Symposia.htm>

International Submerged Lands Management Conference - Online

The Florida Department of Environmental Protection's Office of Coastal and Aquatic Managed Areas is hosting the International Submerged Lands Management Conference Webinar Series, September-December 2010. The purpose of the conference is to increase awareness of the management issues surrounding submerged lands within the U.S, Canada, and the Caribbean, and to provide a forum for discussion about submerged lands issues. All sessions are free and may be accessed in real-time or through the archive of the recorded session. Upcoming sessions include managing cultural resources and the Deepwater Horizon Oil Spill.

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

Learning Ocean Science through Ocean Exploration - Various

NOAA's Ocean Exploration Program and partners will offer Learning Ocean Science through Ocean Exploration professional development workshops for science teachers. Participants will receive the curriculum with CD-ROM's, certificates of participation, and more. Contact the noted educator for registration and more information.

- November 13, 2010 with John G. Shedd Aquarium in Chicago, Illinois, an introductory workshop, with a follow-up workshop April 9, 2011. Registration is still open. Contact Jackie Formoso at jformoso@sheddaquarium.org
- November 13, 2010 with Hatfield Marine Science Center in Newport, Oregon, an introductory workshop, with a follow-up workshop April 16, 2011. Registration is still open. Contact Tracy Crews at tracy.crews@oregonstate.edu
- December 4, 2010 with Aquarium of the Pacific in Los Angeles, California, an introductory workshop, with a follow-up workshop May 14 2011. The deadline for registration is November 19, 2010. Contact Alie Lebeau at alebeau@lbaop.org.

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

Marine Mammal and Sea Turtle Rehabilitation: In Your Backyard and Beyond - Online

NYSMEA and the Riverhead Foundation will present an interactive webcast, *Marine Mammal and Sea Turtle Rehabilitation: In Your Backyard and Beyond*, November 10, 2010. The program will offer an overview of marine mammal and sea turtle strandings, current threats and diseases, as well as current research initiatives. The event is open to current members of NYSMEA, the Riverhead Foundation, NMEA and Long Island Marine Association only. Hurry - the deadline for registration is November 4, 2010.

<https://spreadsheets1.google.com/viewform?formkey=dHpuT0tCLTI2X0VacndUenFOV0E1M3c6MQ>

Master's in Environmental Education and Interpretation - Online

The University of Wisconsin–Stevens Point offers an online option for professionals interested in pursuing a Master's degree in Environmental Education and Interpretation. The program is designed especially for environmental education and interpretation professionals, and no travel to the campus is required.

<https://campus.uwsp.edu/sites/cnr-ap/omseei/Pages/default.aspx>

New Perspectives on MPA Performance: Linking Knowledge to Action – Online and Washington, D.C.

WWF is hosting a free international symposium on November 5, 2010 in Washington, D.C., reviewing knowledge of Marine Protected Areas as a foundation for both science-based policy and policy-relevant science. The symposium will discuss three major topics: 1) ecological frontiers such as spillover, connectivity, and MPAs for pelagic species; 2) social frontiers, such as the role of governance in implementation and socioeconomic impacts of MPAs; and 3) opportunities to push the MPA scientific frontier through impact evaluation and other novel research methods. Note that there is a webcast option for attendance.

<http://www.worldwildlife.org/science/fellowships/fuller/fuller-symposium-2010.html>

NSTA Conferences – Call for Session Proposals

Submit a session proposal for NSTA's 2011-2012 conferences. With the deadline for submission of January 15, 2011, upcoming area conferences are:

- Hartford, Connecticut, October 27–29, 2011
- New Orleans, Louisiana, November 10–12, 2011
- Seattle, Washington, December 8–10, 2011.

The deadline for submission of session proposals for the national conference, March 29–April 1, 2012 in Indianapolis, Indiana, is April 15, 2011.

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

Place-Based Learning Symposium - Massachusetts

Join the New Bedford ECHO Project for the first symposium on Place-Based Learning, December 1-3, 2010 in New Bedford, Massachusetts. Conference attendance is free.

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

Reef Resilience and Responding to Climate Change - Palau

The Nature Conservancy, in partnership with NOAA, and with support from the John D. and Catherine T. MacArthur Foundation, will offer a Workshop for Trainers from throughout the Western Pacific to learn about building resilience into reef management and the tools available for addressing the impacts of climate change, June 3-7, 2011 in Koror, Palau. Space is limited to 25 participants for this workshop and selection is competitive. The deadline for application is November 30, 2010.

http://www.reefresilience.org/Training_of_Trainers.html

ROLE Model Webinars - Online

Remember that COSEE-Ocean Systems offers a Fall series of Research-Based Online Learning Event (ROLE) Model webinars featuring ocean scientists and educators from across the country. Join scientists as they present marine science content through concept-map presentations of their research and hear from educators who've used concept mapping in their work in innovative ways. The hour-long webinars are free and offer direct access to scientists as well as customizable, take-home resources. Check out upcoming and previous webinars – all posted online.

<http://cosee.umaine.edu/programs/webinars/>

Sea Turtle Professional Development - California

The Science Exchange is partnering with Ocean Connectors to offer a free sea turtle education program for Title I high schools and middle schools in San Diego County, summer of 2011.

Contact Frances Kinney at frances@proopeninsula.org

Society for Ecological Restoration – Call for Proposals

The Society for Ecological Restoration is accepting proposals for special sessions, symposia, workshops, and training courses at the 4th World Conference on Ecological Restoration, August 21-25, 2011 in Mérida, Mexico. The deadline for submission is December 1, 2010.

<http://www.ser2011.org/en/registration/call-for-proposals/>

Voices of the Bay - California

Monterey Bay National Marine Sanctuary is hosting *Voices of the Bay: Fisheries Education*, a free teacher workshop and squid fishing cruise, November 20, 2010 from Monterey, California. The first half of the day will be spent learning about standards-based curriculum modules that immerse students in local fisheries, while the second half will be spent out at sea on a Humboldt squid fishing trip aboard the research vessel *Fulmar*. This workshop and cruise are open to all middle and high school educators, with priority given to English, Social Studies, and History teachers.

Contact Kristin Hunter-Thomson at kristin.hunter-thomson@noaa.gov

EDUCATIONAL RESOURCES

A-Z of Areas of Biodiversity Importance

UNEP-WCMC announces the launch of the website *The A-Z of Areas of Biodiversity Importance*, an online resource to provide information on important areas for biodiversity conservation ranging from World Heritage Sites to Key Biodiversity Area, including Ramsar sites. Areas include biodiversity hotspots, important bird areas, intact forest landscapes, and much more.

<http://www.biodiversitya-z.org/>

Antarctica Melting: A Story in 4 Acts

COSEE-NOW offers *Antarctica melting: A Story in 4 Acts*, a four-part audio slideshow series with an accompanying lesson plan on the role that global climate change has had in transforming the Antarctic ecosystem, as seen through the eyes of three scientists. Each episode includes an accompanying lesson plan to help students learn how all aspects of Antarctic's environment are connected. The episodes can be used independently or in tandem for a more complete overview of how human activities have disrupted the normal fluctuations in Antarctica's climate.

<http://coseenow.net/blog/antarctica-melting/>

Arctic Studies Center

The Smithsonian Institution hosts this virtual museum exhibit on Arctic cultures, and offers the center's newsletter, field reports, and staff research. Check out the multimedia exhibitions under Features.

<http://www.mnh.si.edu/arctic/>

Bay Link

Bay Link is an educational site centered on the Chesapeake Bay estuary, the people living on its drainage area, and the effect the various natural and human forces have on the Bay. The website offers lesson plans, links to field trips, and more.

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

Buy, Use, Toss

Buy, Use, Toss? A Closer Look at the Things We Buy, is an interdisciplinary curriculum unit from Facing the Future that leads students through an exploration of the system of producing and consuming goods. Students learn about the five major steps of the materials economy (Extraction, Production, Distribution, Consumption, and Disposal) and are asked to analyze the sustainability of these steps to determine how consumption can benefit people, economies, and environments. This free unit can be downloaded from the website in sections or in its entirety.

<http://www.facingthefuture.org/Curriculum/BuyUseToss/tabid/469/Default.aspx>

Cal-Echoes Cruise

Cal-Echoes was a Scripps Institution of Oceanography student-led cruise, September 25–October 3, 2010 along the coast of southern California, that combined science at sea with science in the classroom. The website hosts an overview of the science, scientist and educator backgrounds, and lesson plans related to geology, physics, biology, and chemistry.

<http://calechoes.ucsd.edu/>

Caribherp

Caribherp contains information on amphibians and reptiles of the Caribbean Islands. It serves as a checklist of what occurs in the region as well as a quick identification guide to the species. Approximately 2000 images, maps, and selected frog calls are presented, along with an integrated open-access journal, *Caribbean Herpetology*.

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

Cold-Water Coral Database

The US Geological Survey's Coastal and Marine Science Center has released a report and accompanying database of deep-sea coral observations for the Western North Atlantic and the Gulf of Mexico: *USGS Cold-Water Coral Geographic Database - Gulf of Mexico and the Western North Atlantic, Version 1.0*. The database is also available through the website and contains over 1600 geospatial records with complete citations.

http://pubs.usgs.gov/of/2008/1351/title_page.html

Communicating Conservation

The Ocean Project advances ocean conservation in partnership with zoos, aquariums, and museums. Their aim is to help their partners effectively educate for conservation action, offering public opinion and communications research; outreach program strategies to assist in changing attitudes and behaviors for conservation; information and tools to increase civic involvement in community conservation activities; and more. Resources on the website include market surveys, communications strategies, links to useful websites categorized by topic, and much more. Check out The Ocean Planet blog for regular updates about their resources.

<http://theoceanproject.org/>

Coral Bleaching

Flower Garden Banks National Marine Sanctuary offers an overview of coral bleaching, along with a link to the Satellites & Bleaching module on NOAA's Coral Reef Watch website.

<http://flowergarden.noaa.gov/education/bleaching.html>

Digital Library for Earth System Education Reviewed Collection

The DLESE Reviewed Collection offers access to resources that meet seven specific review criteria: high scientific accuracy, good pedagogical effectiveness, ease of use, clarity and completeness of documentation, motivating for learners, show robustness, and illustrate significance of content. They can be viewed by subject, grade level, resource type, and standards. Be sure to also use the drop-down menu to access other collections, including COSEE resources, climate change collection, earth exploration toolkit, and much more.

<http://www.dlese.org/dds/histogram.do?group=subject&key=drc>

Encyclopedia of the National Marine Sanctuaries

The Encyclopedia of the National Marine Sanctuaries is an online guide that provides visitors access to photos, videos, and biological information for over 100 species of interest from each of the marine protected areas managed by NOAA. New sections highlighting the Stellwagen Bank and Thunder Bay national marine sanctuaries are now available.

<http://www8.nos.noaa.gov/onms/park/>

Environmental Sociology

Environmental Sociology brings together the tools of social sciences and applies them to key issues affecting our society. The Section on Environment and Technology of the American Sociological Association provides a home for sociologists interested in these issues. They distribute a quarterly online newsletter and offer expert contact information, resources for a Climate Change Teach-In, and much more.

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

Excellence in Earth Science Education

The American Geological Institute's Education Department has created a portfolio of geoscience educational materials and resources for students and teachers. Resources include curriculum, professional development, and more. Check out Earth's Fluid Spheres, a module covering oceans, atmosphere, and cryosphere (glaciers). Other modules include plate tectonics, water resources, land use planning, and more.

<http://www.agiweb.org/geoeducation.html>

Expedition Blue Planet 2010

Expedition Blue Planet 2010 is a 138-day interactive exploration of critical water issues across the U.S., Canada, and Mexico. In addition to filming a range of critical water issues on the Colorado River, Gulf Coast, Tennessee Valley, Great Lakes and Chesapeake Bay, the expedition will stop in 20 communities along the route to host watershed action days. Follow along through the blogs, photos, and videos on the website.

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

Exploring Ocean Color Data in the Classroom

This guide introduces educators to the use of ocean color data in the classroom. The data, from NASA's Ocean Biology Processing Group, are used to examine biological activity and physical and biological interactions in the oceans. Topics include estuarine dynamics; ocean current systems; upwelling; El Nino and La Nina variability; and climate change.

<http://serc.carleton.edu/usingdata/datasheets/LOCUS.html>

Field Trip Earth

Field Trip Earth is an online resource for teachers, students, and proponents of wildlife conservation that focuses on field-based wildlife conservation research projects around the world. Some of the projects are currently active in the field and are featured prominently on the site. Previous projects are archived so that students can continue to access the relevant articles, multimedia, and other materials. Students and visitors can read researchers' field diary entries, direct questions to the researchers, and more. Check out Sea Turtles in North Carolina, Climate Change in Manitoba, and more. Be sure to look through the educator resources, discussion groups, and other materials on this website.

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

Geography Awareness Week 2010: Freshwater

Explore fresh water, November 14–20, 2010, during Geography Awareness Week. This website from National Geographic and partners invites teachers and students to check out the games, activities, and lessons about freshwater. The website features a free download of the National Geographic digital edition from April 2010, *Water: Our Thirsty World*, a *Where's that Water?* quiz, and more.

<http://www.mywonderfulworld.org/gaw.html>

GIS for Kids

The book *20 Minute GIS for Young Explorers* and accompanying materials are for grades 3-5 and use the free ArcGIS Explorer Desktop platform. There are twelve cross-curricular activities with focuses in Social Studies, Science, Language Arts, and Math. The hands-on lessons introduce young learners to geospatial technologies with little to no technology learning curve.

http://gisetc.com/shop/index.php?main_page=product_info&cPath=4&products_id=86

Glogster EDU

Glogster allows users to create free interactive posters, called "glogs." Users insert text, images, photos, audio, videos, and other elements into their glogs to generate a multimedia online creation. Posters can be shared with other people and also exported and saved to computer-compatible formats. With Glogster EDU, teachers register their students and can create a safe, virtual class with as many as 200 students. Teaching glogs are private and are made accessible to others at the discretion of the teacher.

<http://edu.glogster.com/>

Google Docs

Google Docs is an online word processor, spreadsheet, and presentation editor which enables users to securely create, store, and collaborate online in real time. Users can create documents from scratch or upload existing materials. Google offers this web page for educators, highlighting how students and teachers can use Google Docs in their work.

http://www.google.com/educators/p_docs.html

Great Lakes Literacy Principles

The Great Lakes Literacy Principles Website is being developed so that instructional materials, as well as links to Great Lakes and ocean information, will be readily available to the Great Lakes audience. Educators in the Great Lakes have begun using the framework to encourage more Great Lakes content in curricula and to focus state agency efforts toward education that is recognized for relevance to Great Lakes science.

The website offers the literacy principles, downloadable lessons and activities, and more.

<http://greatlakesliteracy.net/>

Gulf Spill Restoration

NOAA's Damage Assessment, Restoration, and Remediation Program developed this Gulf Spill Restoration website to keep the public informed on the status of the Deepwater Horizon natural resource damage assessment and how NOAA is working with partners to restore injured resources to the region. The website offers videos, graphics, an events calendar, links to publications, and more.

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

How Much Is an Ecosystem Worth?

This lesson from the American Institute of Biological Sciences engages students in critical thinking about the value of ecosystems. Students assess ecosystem services, consider the benefits of biomonitors, explore ecosystem databases, brainstorm what if scenarios, and more. The lesson is part of Ecosystem Services: A Primer, by the Ecological Society of America.

<http://actionbioscience.org/environment/esa.html>

The Hunt for Lake Huron's Lost Ships

NOAA's Office of Ocean Exploration and Research has launched *Thunder Bay 2010: Cutting Edge Technology and the Hunt for Lake Huron's Lost Ships Expedition*. The website offers archives of daily logs, videos and images, an Ocean Explorer Expedition Education Module, lesson plans, and more.

<http://oceanexplorer.noaa.gov/explorations/10thunderbay/welcome.html>

Marine Laboratory Meeting Proceedings

The Association of Marine Laboratories of the Caribbean has posted all its meeting proceedings published since its founding in 1957. Earlier proceedings offer summaries of the presentations, while later meetings offer more complete articles.

<http://www.amlc-carib.org/meetings/proceedings.html>

Mariners' Museum

The Mariners' Museum hosts exhibits on the seafaring life, including the recently added Monitor Center. The Collections Online area allows users to search over 30,000 items. Check out the distance learning programs in history, science, and language arts, along with the lecture series, online exhibits, and more.

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

Mendeley Bibliography Software

Mendeley's bibliography maker is a free reference management tool that allows users to extract citations from pdfs, index research paper collection, and generate bibliography lists automatically.

<http://www.mendeley.com/bibliography-maker-database-generator/>

MPA Mapping Tool

The MPA Center has created an interactive online mapping tool that allows users to view boundaries and access data for over a thousand marine protected areas in the United States. The tool provides simple functions to visualize MPA boundaries, review MPA

classification information (e.g. level of protection, managing agency, fishing restrictions, etc), and explore all MPAs in a given location.

<http://www.mpa.gov/dataanalysis/mpainventory/mpaviewer/mpaviewer.swf>

Northeast Florida Sea Grant Resources

The NE Florida Sea Grant Extension Program offers a variety of educational programs throughout the year. This website offers downloadable PowerPoint slideshows on corals, estuaries, beaches, and more. The slideshows are accompanied by downloadable activities. Check the website for additional links, including photos of plants of northeast Florida, newsletters, and further educational materials.

<http://stjohns.ifas.ufl.edu/sea/education.html>

Northwest Center for Sustainable Resources

The Northwest Center for Sustainable Resources offers this pdf file containing information about their myriad materials and services. The file contains information about courses, manuals, educator guides, modules, and much more.

<http://www.ncsr.org/documents/NCSRAboutUs.pdf>

Ocean Motion

The Ocean Motion, designed for students in grades 9-12, offers a review of the surface circulation of Earth's ocean, along with classroom investigations. The website features a toolbox of satellite and model data, allowing investigation of ocean surface current patterns and how they relate to issues of navigation, weather/climate, natural hazards, and marine resources.

<http://oceanmotion.org/>

Oceanography Through Time

Oceanography Through Time is an interactive timeline of surface exploration and deep-sea exploration from Rutgers Marine and Coastal Sciences, part of their COOL Classroom. While on the website, check out what's been added to the COOL Classroom since your last visit, such as Gone Fishing, Follow that Bloom, and more.

http://www.coolclassroom.org/cool_projects/lessons/miniunits/lesson2.html

Oceans for Life Resources

This National Geographic Blue Frontier now hosts the Oceans for Life educator materials developed with the National Marine Sanctuary Program. Topics include biological oceanography; ocean regions and habitats; physical ocean process; human links to and impacts on the ocean; and applications of oceanography. Virtual expeditions link the classroom experience with the individual National Marine Sanctuaries, research methods and technology, and researchers' experiences. Free, archived, on-line teacher workshops feature ocean researchers and policy makers.

<http://www.nationalgeographic.com/seas/>

Oil Spill Educational Resources

This series of PowerPoints and hands-on activities from COSEE-NOW is designed for teachers to use in their classrooms to help discuss the BP oil spill in the Gulf of Mexico. Teachers can decide which activities and topics to include, download the appropriate PowerPoint, and then modify the PowerPoint according to their class level and the time available. Information for the teacher is included in the notes section of each PowerPoint. The website also includes a link to sample unit plans.

<http://coseenow.net/blog/oil-spill-resources/>

On The Rocks: Shipwreck Database

This website from the Maritime Museum of the Atlantic offers an online shipwreck database of 5000 shipwreck records from the Nova Scotia Museum's Marine History Database, along with 250 images. Read castaway stories, explore mystery wrecks, and more.

<http://museum.gov.ns.ca/mmanew/en/home/researcheducation/shipwreckdatabase.aspx>

One Species at a Time

The Encyclopedia of Life has launched a second series of podcasts, *One Species at a Time*, with a focus on biodiversity and public participation. Each podcast features a 3-5 minute audio report, a Meet the Scientist feature, and an Extras page with additional information about the species, as well as ways for listeners to connect with biodiversity.

<http://education.eol.org/podcast>

Penguin Science

The 2010-2011 Adelie Penguin breeding season runs November 7, 2010-January 28, 2011. Follow along as Adelie Penguin families raise their chicks in one of the harshest environments on Earth. Check the website for information and educational activities.

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

Planet Connect

Planet Connect, a component of Classroom Earth, is an online social network where high school students can learn about current environmental issues, funding opportunities, green colleges, and environmental careers.

<http://planet-connect.org/>

Power of Story

Master Storyteller Kendall Haven presented *Story: the Language of the Mind* at the ClimateWatch Summer Workshop, describing the science behind the power of story. The presentation can be watched on YouTube (in several parts), and the slides downloaded in pdf format on the NOAA website.

<http://www.youtube.com/user/hunterba123#p/c/47CC56A7ABE17D4A/0/12o34V6cs24>

<http://www.nodc.noaa.gov/General/NODC->

[About/Outreach/docs/10/OneNOAAScience_11Aug2010_Haven.pdf](http://www.nodc.noaa.gov/General/NODC-About/Outreach/docs/10/OneNOAAScience_11Aug2010_Haven.pdf)

Remote sensing toolkit

The aim of the online remote sensing toolkit is to show managers, scientists, and technicians working in marine, terrestrial, and atmospheric environments how images collected from satellites and aircraft can be used to map and monitor environmental features or processes and their change over time. Users can select to view graphics or read the text. The resources section offers a quick list of manuals and data sources.

http://ww2.gpem.uq.edu.au/CRSSIS/tools/rstoolkit_new/index.html

Sanctuaries of the Caribbean

Sanctuaries of the Caribbean is a short film about MPAs in the Southeastern Caribbean, produced as part of the Coastal and Marine Management and Education in the Southeastern Caribbean project. It can be viewed on YouTube.

<http://www.youtube.com/watch?v=sMKKkpLreXw>

Satellite Tagging of Marine Mammals and Turtles

These satellite tagging units from WhaleNet can be used in learning different concepts, including geography, habitat use by organisms, math, map skills, comprehensive reading, and more. The active tags are highlighted, and over 155 archived satellite tagging events are available.

http://whale.wheelock.edu/whalenet-stuff/stop_cover.html

Science Objects - Online

Science Objects, professional development from NSTA, are two-hour, online, interactive, inquiry-based content modules that help teachers better understand the science content they teach. Check out Ocean's Effect on Weather, Earth's Changing Surface, Plate Tectonics, and more. Many are available for free.

<http://learningcenter.nsta.org/search.aspx?action=browse&subject=38>

ScienceEducation.gov

ScienceEducation.gov is a portal for federal agency resources on science, technology, engineering, and mathematics education content. The website includes lesson plans, curricula, classroom activities, professional development, and more. Searches can be filtered by resource type, grade level, and agency. This is a newly released website and changes and additions will continue to be made.

<http://www.scienceeducation.gov/>

Ship-2-Shore Education Program

The Ship-2-Shore Education Program links students from around the world with the plastic pollution research being performed at sea aboard research vessels. Utilizing Algalita Marine Research Foundation's research vessel's satellite communication system, this program allows students to follow daily updates from the research crew, as well as to interact directly with the crew by sending questions and comments to the research vessel. Supplementary resources and lesson plans on the topic of plastic pollution are provided for teachers to enhance their student's learning experience. Sign up to follow the upcoming cruise, leaving November 8, 2010.

<http://www.algalita.org/ship2shore/index.php>

Smithsonian Education

The Smithsonian Education website offers a portal to the institution's educational resources and programs, including the publication *Smithsonian in Your Classroom*, a journal for elementary and middle school educators; research opportunities and resources for the museum community; and professional development programs for educators at all levels. There are over 1800 online resources, including lesson plans in Art & Design, Science & Technology, History & Culture, and Language Arts. Be sure to check out Prehistoric Climate Change, Ocean Planet, Tale of a Whale, and much more.

<http://smithsonianeducation.org/>

State of the World's Sea Turtles

State of the World's Sea Turtles (SWOT) is a partnership among Conservation International, the IUCN Marine Turtle Specialist Group, Duke University's OBIS-SEAMAP, and other organizations and scientists. The SWOT Team seeks to create a global network of specialists working to accelerate the conservation of sea turtles and their habitats, pooling and synthesizing data, and sharing the information with audiences who can make a difference. The website offers interactive maps, downloadable reports, sea turtle news, and more.

<http://seaturtlestatus.org/>

Teachers' Domain Redesign

The Teachers' Domain website has been redesigned and offers new features, resources, and easier navigation. The website features multimedia, lessons and activities, links to professional development, and more. Users can browse by subject, keyword search, view special collections, and much more.

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

Tennessee Aquarium WebCam

The Tennessee Aquarium's exhibit, the Secret Reef, offers a virtual dive into an exhibit modeling the Flower Garden Banks through a Secret Reef Cam.

<http://www.tnaqua.org/OurAnimals/SecretReefcam.aspx>

Tidal Creek Habitats

This booklet is based on a synthesis of more than 15 years of research in tidal creek systems. The contents include brief reviews of valuing and studying tidal creeks, recommendations for decision-makers, and links to additional resources.

http://hml.noaa.gov/pdf/tidal_creek_booklet.pdf

Ultimate Squid Dissection

Paul Detwiler offers a 9-minute video that provides marine biology teachers with an overview of a dissection of the market squid, *Loligo opalescens*, along with accompanying materials, including a cephalopod adaptations lab. The video illustrates the squid's external and internal anatomical structures to enable teachers to lead and assist their students in dissecting this species in the classroom.

http://www.nmeaweb.org/gatlinburg2010/0721_215.html

<http://www.kendallhunt.com/detwiler/>

Waste In Place Curriculum

Keep America Beautiful's educational resources for teachers and students includes this K-6 classroom curriculum supplement, *Waste in Place*, which helps build critical thinking, processing, and problem-solving skills through hands-on lessons that can be taught individually or in sequence.

https://secure2.convio.net/kab/site/SPageServer?pagename=waste_in_place&JServSessionIdr004=3meecn6tb3.app209b

Wetland Ecosystem Services

The Ramsar Convention on Wetlands offers a variety of downloadable publications and information packs that can be useful for studying wetlands. Wetland Ecosystem Services fact sheets are available, with topics such as Reservoirs of biodiversity, Wetland products, Cultural values, Climate change mitigation and adaptation, and more. The information is also available in French and Spanish.

http://www.ramsar.org/cda/en/ramsar-pubs-info-ecosystem-services/main/ramsar/1-30-103%5E24258_4000_0

Wisconsin's Great Lakes Shipwrecks

This website includes underwater videos and photos of shipwrecks in Lakes Superior and Michigan, information on individual vessels, a map of the shipwrecks, a searchable database, and much more. Check out the Explorer's Tools for educational materials, video and more.

<http://www.wisconsinshipwrecks.org>

INITIATIVES, JOURNALS, and MORE

Green Team America

The mission of Green Team America is to organize, educate, and motivate America's youth about the effects of man-made climate change and to provide an infrastructure that allows students to combine their individual and local efforts with a nationwide movement.

<http://americasgreenteam.org/>

Hyperbolic Crochet Coral Reef

The Hyperbolic Crochet Coral Reef by the Institute for Figuring and Companions will be on display at the Smithsonian's Natural History Museum in the Sant Ocean Hall October 16, 2010-April 24, 2011. A sea of vibrant colors and fantastic structures, the Hyperbolic Crochet Coral Reef evokes a sense of stewardship of its real-life counterparts through this whimsical and beautiful display.

<http://www.mnh.si.edu/exhibits/hreef/index.html>

International Electronic Journal of Environmental Education

The *International Electronic Journal of Environmental Education* is a new refereed academic journal covering research on all aspects of environmental education. The aim of the journal is to provide environmental researchers, practitioners, and scholars a journal to further the study and practice of environmental and sustainability education. The journal offers open access to its content.

<http://www.iejeegreen.com/index.php/iejeegreen>

Journal of Environmental Studies and Sciences

The new quarterly journal, *Journal of Environmental Studies and Sciences*, is the official publication of the Association for Environmental Studies and Sciences. The journal offers peer-reviewed publication of explicitly interdisciplinary environmental research, policy analysis and advocacy, educational discourse, and other related matters. Contributions are welcome from any discipline or combination of disciplines.

<http://www.springer.com/environment/journal/13412>

Science

Founded in 1880, the peer-reviewed general-science journal *Science* is an outlet for scientific news, commentary, and cutting-edge research. The website offers the full text of the journal's news stories, research reports, and commentary articles in a searchable database. The website is enhanced by additional information, links, multimedia, and more; science jobs; science careers; and a Science Express area with selected original, peer-reviewed hot research weeks ahead of its print publication date. Check out the multimedia, special collections, and much more.

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

Smiling Sea Magazine

Smiling Sea Magazine covers marine science, coastal activities, sports, careers, events, books, music and more, and has articles for younger readers on marine topics. You can download the current issue from the website or request a free copy.

<http://smilingsea.squarespace.com/>