

**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**INFORMATION EXCHANGE FOR MARINE EDUCATORS**

**DECEMBER 2014**

This update is funded by the National Marine Sanctuary Foundation in partnership with NOAA's Ocean Exploration and Research Program, with additional support from 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, 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.

To subscribe or unsubscribe to this list, send information to include in the newsletter, or discuss further enhancements, please contact the editor directly at [phyllis.dermer@noaa.gov](mailto:phyllis.dermer@noaa.gov), or by phone at (865) 932-5074

Collected archives and issues of the newsletter, past and present, are available at <http://marineprotectedareas.noaa.gov/resources/education/>.

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**NOTABLE REFERENCE**

**Climate Change Reports**

The German Federal Ministry for Economic Cooperation and Development has released the brochure, Climate action in practice, featuring seven chapters including Climate for Sustainable Development, Climate Risk Management, and more. The climate report from the World Bank is posted on the Open Knowledge Repository website as part of the Turn Down the Heat series.

[https://www.dropbox.com/s/omek7sth1pjtfll/bmz\\_klima\\_EN\\_screen.pdf?dl=0](https://www.dropbox.com/s/omek7sth1pjtfll/bmz_klima_EN_screen.pdf?dl=0)  
<https://openknowledge.worldbank.org/handle/10986/20595>

**IPCC Synthesis Report**

The Intergovernmental Panel on Climate Change published its latest Synthesis Report.

This report is the fourth and final element of the fifth assessment (AR5) of climate change. It distills information from the IPCC's reports on the science of climate change, climate impacts, and the ways climate risks can be addressed.

[http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\\_AR5\\_LONGERREPORT.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_LONGERREPORT.pdf)

### **An introductory guide to valuing ecosystem services**

The aim of this guide is to provide an introduction to the valuation of ecosystem services. It builds on previous approaches to valuing the environment but takes a more systematic approach to the assessment of impacts on the natural environment. The central theme of the guide is to ensure that the true value of ecosystems and the services provided are taken into account in policy decision-making.

[http://ec.europa.eu/environment/nature/biodiversity/economics/pdf/valuing\\_ecosystems.pdf](http://ec.europa.eu/environment/nature/biodiversity/economics/pdf/valuing_ecosystems.pdf)

## **REQUESTS**

### **Looking for Coral Stories**

The BBC Natural History Unit is following up from the Blue Planet with a seven part series to be broadcast in 2017 featuring all the major ocean habitats from reefs to open ocean to deep sea, along with everything from marine invertebrates all the way up to marine mammals and seabirds. The researchers are looking for new coral reef stories to feature in the coral reef episode, both place based landscape sequences and behavioral sequences. The stories need to be relevant and based in very strong coral reef science, and above all, be highly visual and have appeal to a wide general audience.

Contact [sarah.conner@bbc.co.uk](mailto:sarah.conner@bbc.co.uk) or [yoland.bosiger@bbc.co.uk](mailto:yoland.bosiger@bbc.co.uk)

## **GRANTS AND OPPORTUNITIES**

### **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 to work individually and collectively to solve environmental problems in their neighborhoods and communities. The next deadline for application is January 31, 2015.

<http://captainplanetfoundation.org/apply-for-grants/>

### **Christopher Columbus Awards**

The Christopher Columbus Awards for Middle School Students is a community-based STEM program. Students work in teams of three to four, with an adult coach, to identify a problem in their community and apply the scientific method to create an innovative solution to that problem. The deadline for submission is February 2, 2015.

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

### **Coastal Art and Poetry Contest - California**

The Coastal Art & Poetry Contest is open to all K-12 California students, and is a chance for students to explore coastal themes and present them creatively. By encouraging youth to reflect on the beauty and spirit of California's beaches and ocean, the hope is to inspire a greater sense of stewardship for these natural places. The deadline for entry is January 31, 2015.

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

### **C-SPAN StudentCam Competition**

C-SPAN's StudentCam is a video documentary competition that encourages students to think about issues that affect our communities and our nation. This year, students are asked to create a short (5-8 minute) video documentary on a topic related to the theme, The Three Branches and You. The deadline for submission is January 20, 2015.

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

### **Developing the Next Generation of Conservationists**

Developing the Next Generation of Conservationists brings together public and private partners to support organizations that are developing innovative conservation job opportunities for youth on public lands which expose young people, particularly urban, tribal and minority youth, to the natural world and career opportunities available in conservation. The deadline for application is December 16, 2014.

<http://www.nfwf.org/youth/Pages/home.aspx#.VHtUMMmnEro>

### **DuPont Challenge**

The 2015 DuPont Challenge is a competition for K–12 grade students to research and write a science story (K-5) or science essay (6-12). See the website for complete details. The deadline for submission is March 31, 2015.

<http://thechallenge.dupont.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 leadership and innovation in Earth science education. The deadline for application is January 20, 2015.

<http://www.americangeosciences.org/education/awards/roy>

### **Environmental Solutions for Communities Grant Program**

Wells Fargo and the National Fish and Wildlife Foundation seek to promote sustainable communities through Environmental Solutions for Communities by supporting highly-visible projects that link economic development and community well-being to the stewardship and health of the environment. See the website for complete details. Hurry - the deadline for submission is December 10, 2014.

<http://www.nfwf.org/environmentalsolutions/Pages/2015rfp.aspx#.VHtU1MmnEro>

### **Fund for Teachers Professional Development Grants**

The Fund for Teachers Grant awards preK-12 teachers with funds to support professional development activities during the summer. Check the website for complete details. The deadline for application is January 29, 2015.

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

### **Great American Can Roundup**

In the Great American Can Roundup, schools compete to recycle the most aluminum beverage cans per capita between America Recycles Day and Earth Day. The deadline for registration is January 16, 2015.

<http://www.cancentral.com/recycling-sustainability/programs-initiatives/great-american-can-roundup>

### **Hulet Hornbeck Emerging Leaders Scholarship**

The Hulet Hornbeck Emerging Leaders Scholarship Program is for young adults ages 19-25 to attend the 22nd International Trails Symposium, May 17-20, 2015 in Portland, Oregon. Scholarship candidates should have an interest in trails, conservation, and/or outdoor recreation and be interested in learning about these as potential career paths. The deadline for submitting applications is December 19, 2014.

<http://americantrails.org/ee/index.php/symposium/2015-youth>

### **Implementation Grants**

Youth Learning as Citizen Environmental Scientists offers this initial grant solicitation to support the efforts of those working with youth to do environmental citizen science or student research projects. The deadline for application is January 15, 2015.

[http://ylaces.org/?page\\_id=94](http://ylaces.org/?page_id=94)

### **InvenTeam High School Invention Grants**

Lemelson-MIT InvenTeams is a national grants initiative to foster inventiveness among high school students. Teams composed of high school students, teachers, and mentors are asked to collaboratively identify a problem that they want to solve, research the problem, and then develop a prototype invention as an in-class or extracurricular project. The deadline for early feedback is February 27, 2015.

<http://lemelson.mit.edu/>

### **ISRS Awards**

The International Society for Reef Studies (ISRS) awards acknowledge the scholarship and work of members within the organization. The deadline for nomination is December 31, 2014.

<http://coralreefs.org/membership/awards-fellowships/#bpa>

### **Nancy Foster Scholarship Program**

NOAA's Office of National Marine Sanctuaries hosts the Nancy Foster Scholarship Program, designed to support students interested in NOAA mission-related sciences of oceanography, marine biology, or maritime archaeology (including all science, engineering, and resource management of ocean and coastal areas), particularly by female and minority students. Hurry - the deadline for application is December 10, 2015.

<http://fosterscholars.noaa.gov/howtoapply.html>

### **National Geographic Bee**

The National Geographic Bee is designed to encourage the teaching and study of geography in grades 4-8. The deadline for registration is December 15, 2014.

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

### **President's Volunteer Service Award**

The President's Volunteer Service Award recognizes U.S. citizens who have achieved the required number of hours of service over a 12-month time period or cumulative hours over the course of a lifetime.

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

### **Protect Our Reefs Mote License Plate Grants – Florida**

This Request for Proposals offers eligible organization funds to support projects related to research, education and outreach, and/or conservation of the Florida coral reef ecosystem. The deadline for proposals is March 1, 2015.

<http://mote.org/support/protect-our-reefs>

### **RecycleMania**

RecycleMania is a competition and benchmarking tool for college and university recycling programs to promote waste reduction activities to their campus communities. The deadline for registration is January 16, 2015.

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

### **Saving Endangered Species Youth Art Contest**

Students in grades K-12 are encouraged to participate in the 2015 Saving Endangered Species Youth Art Contest. The deadline for submission is March 1, 2015.

<http://www.endangered.org/campaigns/endangered-species-day/2015-saving-endangered-species-youth-art-contest/>

### **SeaWorld & Busch Gardens Conservation Fund**

The SeaWorld & Busch Gardens Conservation Fund supports projects in species research, habitat protection, animal rescue and rehabilitation, and conservation education. The deadline for application is January 1, 2015.

<http://swbg-conservationfund.org/en/grant-seekers/>

### **Temper of the Times Foundation Funds**

Temper of the Times Foundation provides grants to nonprofit organizations for wildland ecosystem advertising campaigns. Projects should lead to measurable outcomes for wildland ecosystem conservation and restoration in the United States. Grants may be used to fund the production of print, radio, or television ads; pay for advertising space or airtime; or produce or distribute pamphlets, books, videos, or press packets. The deadline for application is December 15, 2014.

<http://www.temperfund.org/guidelines.html>

### **Toyota Family Teacher of the Year Award**

The Toyota Family Teacher of the Year Award recognizes the positive impact of teachers who engage families in school and community-based educational programming. The deadline for application is December 31, 2014.

<http://familieslearning.org/our-capabilities/2015-toyota-family-teacher-of-the-year.html>

### **UL Innovative Education Award**

Underwriters Laboratories and NAAEE launched the UL Innovative Education Award, designed to invest in environmental and STEM education, sustainable communities, and youth empowerment. The program offers recognition grants to increase the impact of existing innovative nonprofit programs in the U.S. and Canada that are leading the way to inspire a passion for STEM education in young people through a focus on the environment. The deadline for application is February 28, 2015

<http://ulinnovationeducation.naaee.net/>

### **Young Reporters for the Environment Competition**

The Young Reporters for the Environment Competition is hosted by the National Wildlife Federation. Students aged 13-18 investigate an environmental issue in their community

and report on it in writing, photos, or video. The deadline for submission is March 13, 2015.

<http://www.nwf.org/Young-Reporters-for-the-Environment/About-Young-Reporters/Join-the-Competition.aspx>

## **FELLOWSHIPS, INTERNSHIPS, AND TEMPORARY OPPORTUNITIES**

### **Conservancy Summer Internship – North Carolina**

Bald Head Island is located at the mouth of the Cape Fear River in southeastern North Carolina. The Conservancy's mission is to foster community-based barrier island conservation, preservation, and education. The paid intern program is open to rising juniors, seniors or recent graduates from an accredited college or university. The deadline for application is February 1, 2015.

<http://www.bhic.org/media/pdf/Summer2015App.pdf>

### **Coral Reef Graduate Fellowships**

ISRS offers two graduate fellowships which may be used for travel, subsistence, fieldwork, or laboratory analyses in connection with research on coral ecosystems. The deadline for application is January 9, 2015.

<http://coralreefs.org/wp-content/uploads/2014/11/ISRS-Graduate-Fellowships-2015.pdf>

### **Moorea Research Grants**

The Institute for Pacific Coral Reefs based in Moorea, French Polynesia, announces the 2015 call for projects for research grants for Master, PhD and/or postdoc students. Fields of study range from biological to human sciences, and all projects must relate to coral reefs of French Polynesia.

<http://www.ircp.pf/en/call-for-projects-2015-grants/>

### **Student Grants-in-Aid of Caribbean Marine Research**

The Association of Marine Laboratories of the Caribbean supports student research and aims to increase collaboration and diffusion of knowledge among member institutions. The student grants are available to support research by AMLC student members working (but not necessarily permanently based) at AMLC member institutions. Preference will be given to proposals that involve comparisons or collaboration among AMLC institutions. The deadline for application is April 1, 2015.

<http://www.amlc-carib.org/awards/grants.html>

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

### **Amigos de Bolsa Chica Docent Training – California**

The Amigos de Bolsa Chica is accepting applications for the 2015 Docent Training Program, to take place on six Wednesday evenings in January and February, 2015 in Huntington Beach, California. Learn to share your knowledge and passion for conservation of coastal wetlands.

<http://www.amigosdebolsachica.org/volunteers.htm#docent>

### **George Wright Society Conference**

The 2015 George Wright Society Conference on Parks, Protected Areas, and Cultural Sites will take place March 28-April 3, 2015 in Oakland, California. The conference is a leading U.S. professional meeting of protected area managers.

<http://www.georgewright.org/gws2015>

### **International Trails Symposium**

Presentations in support of the International Trails Symposium's theme, Solutions for Success, are being accepted for the conference, May 17-20, 2015 in Portland, Oregon. The deadline for proposal submissions is January 9, 2015.

<http://americantrails.org/ee/index.php/symposium/2015-call>

### **Interpretive Media - Online**

This online course, CLM8243, March 17-April 9, 2015, teaches participants to design visually appealing signs, write dynamic interpretive messages, select appropriate fabrication materials, identify considerations for sign placement, and estimate project costs. Once enrolled, participants must complete the Eppley Institute "Interpretive Media" self-study class. The deadline for registration is February 13, 2015.

Contact: [Laurie\\_Heupel@fws.gov](mailto:Laurie_Heupel@fws.gov)

<http://www.doi.gov/doilearn/index.cfm>

### **Ocean Exploration Workshops – Various**

NOAA's Ocean Exploration Program and partners offer the Okeanos Explorer Education Materials Collection How or Why Do We Explore? Professional Development Workshops for Educators. Participants will receive curriculum with CD-ROM's, certificates of participation, and more. Contact the noted educator or check out the website for registration and more information.

- January 10, 2015 with the Oregon Museum of Science and Industry in Portland, Oregon; How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is December 19, 2014. Contact Nate Lesiuk at [nlesiuk@omsi.edu](mailto:nlesiuk@omsi.edu)
- January 24, 2015 with the Dauphin Island Sea Lab on Dauphin Island, Alabama; Why Do We Explore? Professional Development Workshop for Educators. The deadline for registration is January 9, 2015. Contact Sara Johnson at [sejohnson@disl.org](mailto:sejohnson@disl.org)
- February 28, 2015 with the North Carolina Aquarium at Pine Knoll Shores at Pine Knoll Shores, North Carolina; How Do We Explore? Professional Development Workshop for Educators. The deadline for registration is February 6, 2015. Contact Pam Pittman at [pamela.pittman@ncaquariums.com](mailto:pamela.pittman@ncaquariums.com)

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

## **EDUCATIONAL RESOURCES**

### **10 Best STEM Resources**

The National Education Association offers a list of 10 Best STEM Resources - Science, Technology, Engineering & Mathematics Resources for preK-12. Be sure to browse the lesson plans linked to on this website, along with grants, teaching strategies, and much more.

<http://www.nea.org/tools/lessons/stem-resources.html>



### **Banana Slug String Band CD Sale**

All CDs from the Banana Slug String Band are on sale. Get your presents here – including Only One Ocean, La Tierra Y El Mar, and my favorite, Wings of Slumber.  
<http://www.bananaslugstringband.com/#!cdis/cil3>

### **Climate Resilience Toolkit**

A NOAA-led partnership of U.S. federal agencies has released the U.S. Climate Resilience Toolkit to provide tools, information, and scientific expertise to help communities and businesses build resilience to climate-related impacts and extreme events.  
<http://toolkit.climate.gov/>

### **Communicating for Success**

Communicating for Success – a handbook for MPAs from NOAA and the IUCN outlines how to use communication as more than a tool for outreach, rather as a way to catalyze change within communities. The guide will be periodically updated to include new examples of ways ocean managers are communicating and engaging with the public.  
<http://cectalksnature.org/members-in-action-articles/communicating-for-success-a-handbook-for-mpa>

### **Coralax**

This film was created by students in Maui Huliau Foundation's Huliau Environmental Filmmaking Club. Inspired by Dr. Suess's The Lorax, this claymation film by middle school students uses 667 images to show how irresponsible shoreline development can impact reef ecosystems.  
<https://www.youtube.com/watch?v=7p0Gcy6P9GY>

### **Ecosystem Valuation**

This website from NOAA and U.S. Department of Agriculture describes how economists value the beneficial ways that ecosystems affect people. It is designed for non-economists who need answers to questions about the benefits of ecosystem conservation, preservation, or restoration. It provides non-technical explanations of ecosystem valuation concepts, methods, and applications.  
<http://www.ecosystemvaluation.org/>

### **Encyclopedia of Earth: People**

This website from the Encyclopedia of Earth focuses on the researchers who have made great science happen. Entries are broken down into categories that include Biologists, Environmental Scientists, and more.  
<http://www.eoearth.org/topics/view/51cbfc78f702fc2ba8129e86/>

### **Expedition 353: Indian Monsoon**

Sign-ups are now open for Expedition 353 JR Live interactive ship-to-shore events with the *JOIDES Resolution*, a research vessel dedicated to scientific ocean drilling. The expedition focuses on the development of monsoons in the Bay of Bengal region. The expedition runs from November 29, 2014–January 29, 2015.  
<http://joidesresolution.org/node/3759>

### **Maggie's Earth Adventures**

Maggie's Earth Adventures offers materials designed to provide children with the knowledge and motivation to make educated and responsible decisions so they may



protect and build a sustainable future for our planet. Ocean Conservancy recently partnered with Maggie's Earth Adventures to create classroom-ready activities on ocean acidification. Produced in English and Spanish, the lessons are available on three reading levels for grades preK-6. Check out the example activities and subscribe to the weekly email packets.

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

### **Monster Guard**

Monster Guard, a free app from the Red Cross, lets children ages 7-11 attend Monster Guard Academy where, as the monster character of their choice, they bone up on ways to prepare for a variety of hazards. After all the lessons are learned, the kids graduate to a world where disasters are a little less scary.

<http://www.redcross.org/monsterguard>

### **My Maps Tutorial**

Google's My Maps tool helps visualize data. EarthEcho International offers a free, online tutorial on using My Maps in the classroom.

<http://earthecho.org/news/HOA-110414>

### **NOAA View Data Exploration Tool**

This map-based exploration tool provides access to more than 100 environmental variables from NOAA's archive of satellite images, climate model results, and other observations. Categories include Ocean, Land, Climate, and more.

<http://www.nnvl.noaa.gov/view/>

### **Outstanding Science Trade Books**

NSTA and the Children's Book Council have collaborated to select an annual list of Outstanding Science Trade Books for Students K-12. It includes not only traditional science content but also engineering and design.

<http://www.nsta.org/publications/ostb/ostb2015.aspx>

### **Submarine Ring of Fire 2014 – Ironman Expedition**

NOAA's Office of Ocean Exploration and Research website follows the Submarine Ring of Fire 2014 – Ironman Expedition, November 29-December 21, 2014. The posting includes mission logs, images and video, an education module, lessons, and much more. Scientists on the R/V *Revelle* will explore two seamounts in the region of Marinas Arc in the western Pacific Ocean, both part of the Marianas Trench Marine National Monument.

<http://oceanexplorer.noaa.gov/explorations/14fire/welcome.html>

### **Top 100 Sites for Going Green**

The websites featured here offer stories, advice, and resources about sustainable living.

<http://www.environmentalsciencedegree.com/green-living/>

### **Treasures of the Flower Garden Banks**

Check out this latest banner from the Flower Garden Banks National Marine Sanctuary. It highlights some of the notable features of Flower Garden Banks National Marine Sanctuary amid clusters of cascading gold coins.

[http://flowergarden.noaa.gov/document\\_library/edddocuments.html#treasures](http://flowergarden.noaa.gov/document_library/edddocuments.html#treasures)

### **World Wetlands Day**

World Wetlands Day is February 2, 2015 and this website offers a focal point for WWD activities. Materials include a guide for teachers and organizers, posters, and more. Additional materials will be added, so check back often. Be on the lookout for the photo contest, which runs February 2-March 2, 2015.

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

### **Year in the Life of Earth's CO<sub>2</sub>**

This NASA computer model gives visitors a new way to look at how carbon dioxide in the atmosphere travels around the globe throughout a yearly cycle.

<https://www.youtube.com/watch?v=x1SgmFa0r04>

## **INITIATIVES, JOURNALS, and MORE**

### **International Journal of Early Childhood Environmental Education**

The second issue of the International Journal of Early Childhood Environmental Education is now available online, along with links to the initial publication. The journal is a free, online, peer-reviewed journal designed to promote sharing of information to support effective practice, research, and policy around the world pertinent to the education of young children (birth to eight years).

<http://www.naaee.net/publications/ijecee>