

## Monthly Newsletter, November 2005

Respect the animals so they won't die  
Endangered animals are protected  
Food the birds eat are invertebrates  
Under mud and water they live  
Go and be safe like at their house  
Everyone lives happy at the refuge

*By Omar Chavez, Age 9, San Diego National Wildlife Refuge*

### ***Member News***

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Kathy August from Red Rock Canyon National Conservation Area in Nevada shared some of the efforts her site is making to engage and recruit volunteers. Red Rock Canyon NCA has collaborated with other agencies to create a website for volunteers. The website, <http://www.getoutdoorsnevada.org>, is the result of four federal land management agencies (Bureau of Land Management, US Fish and Wildlife Service, US Forest Service and National Park Service) working together to develop collaborative programs and projects that enhance services to the public, improve the stewardship of the federal lands and increase the efficiency and effectiveness of their management activities. The website won the National "Take Pride in America" award in 2005. Congratulations!

Great Smoky Mountains National Park engages local students by involving them in ozone bio-monitoring. Susan Sachs, the education coordinator at the park, reports that their high school interns were featured in the American Chemical Society's ChemMatters magazine in September. Go to <http://www.chemistry.org> to view the article.



Amanda Johnson from Tuscola High School in Waynesboro, NC, looks for brownish-purple markings and yellowing on plant leaves in Great Smoky Mountains National Park. Such discolorations can indicate high ozone amounts in the air. Amanda's work contributes to park researchers' assessment of air quality in the park.

At the end of October Andy Spencer will be in Oregon visiting with the Alder Creek Children's Forest team. In July, Alder Creek Children's Forest, Canyonville Middle School, and the Alder-Jordan Creek watershed held the first of an annual series of summer institutes for local teachers. The six teacher participants came from throughout Douglas County, and were taught by John Panches, Douglas County Extension Forester and OSU Associate Professor, and Jim Proctor, Professor and Director of the Environmental Studies Program, Lewis & Clark College. Many other technical volunteers helped as well. The local Roseburg News-Review also gave this Teachers' Institute some excellent front page coverage. To view the article, visit this website:

<http://www.oregonnews.com/article/20050727/NEWS/107270057&SearchID=73216036916196>

## ***Featured Site***

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In Great Smoky Mountains National Park, students not only learn about the environment when they come on field trips, they also contribute to actual research. Through the efforts of the education and research coordinators at the Appalachian Highlands Science Learning Center, located in the Great Smoky Mountains NP, the activities of researchers with permits are extended beyond the regular field season by students and teachers during training seminars. Many of these projects have databases housed on the HOL website. Currently, five environmental monitoring studies are featured; they include a salamander mark/recapture study, water quality monitoring, a slime mold study, ozone bio-monitoring and a brand new terrestrial invertebrate study. Two of the studies are collaborations with another “Hands on the Land” site, the US Forest Service’s Cradle of Forestry in America in the Pisgah National Forest.



*A high school student looks for aquatic macro-invertebrates in Great Smoky Mountains National Park. The database for this study is housed on the Hands on the Land site and currently, more than 20 actively participate in entering data into this database.*

Each environmental monitoring study is set up to provide background information on the topic and the research project. There are photos, glossary terms and links to other pertinent websites. Additionally, teachers who bring their classes out to the participating field site to collect data can view the data they collected back in the classroom. Most of the environmental monitoring studies are generic enough that they can be reproduced at other HOL sites. If you are collecting water quality data at your site, why not post your data so we can compare the deciduous forests of the Appalachian mountains to the desert southwest or Pacific northwest? For more information, contact Education Coordinator Susan Sachs at [susan\\_sachs@nps.gov](mailto:susan_sachs@nps.gov).

## ***Action Items for November 2005***

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We still need your articles, lessons and student work posted to the HOL website! Please visit the website or contact us to post your site’s information.

## ***Odds and Ends***

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The HOL website is frequently updated to make it easier for sites and browsers to find information. In November, we will be conducting a usability test to ensure the website’s effectiveness and usefulness for HOL members. If you are interested in participating, please contact Ellen Reid at The Keystone Center at 970-513-5828.

Sign up for the upcoming conference in the Las Vegas area entitled “Our Places Tell Stories-Making Connections with our Audiences”, January 24-27, 2006. Learn more by visiting [www.publiclands.unlv.edu](http://www.publiclands.unlv.edu).