

# Bridging the Watershed

An Outreach Program of the Alice Ferguson Foundation in Partnership with the National Park Service and Area Schools



## By The Way...



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## Join The Team

### BTW Expands and Seeks Enthusiastic Educators!

That's right, the *Bridging the Watershed* staff is growing. Demand for field studies has increased, and the Alice Ferguson Foundation is prepared to fill teachers' needs! Please read the job announcements below, and forward to colleagues, friends, and family.

#### BTW Educator

Help get students outdoors! Do you care about protecting the environment? Think high school students should care too? We need a science educator committed to outdoor experiences for young people. The BTW educator facilitates day-long, curriculum-based field studies for high schools students in an outdoor setting at national parks in the DC-metro area. The position also includes contacting teachers, pre- and post-field study classroom visits, data recording and reporting. The BTW educator will be required to come to the Alice Ferguson Foundation's Washington, DC-area office for training and occasional meetings (primary workspace will be in Hagerstown, MD).

2 positions are available: one based in Hagerstown, MD for programs in the western end of the region and one based in Accokeek, MD for DC-metro area programs

#### BTW Student Action Coordinator

Do you have what it takes to inspire high school students to care about the environment? We need an enthusiastic nature lover with education experience to develop and implement an environmental education program for high school students that encourages them to return to the outdoors, participate in service projects, and pursue internships and careers in the natural resources field. The Student Action Coordinator will also facilitate day-long, curriculum-based field studies to high schools students in an outdoor setting at national parks in the Washington, D.C. metro region through a one-year, full-time appointment.

Full job descriptions can be found at  
[http://www.fergusonfoundation.org/aff\\_jobs.html](http://www.fergusonfoundation.org/aff_jobs.html)

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*"Today was fun because I like getting muddy and wet. The bugs were COOL. Greatest field trip ever!"*

Anonymous AP Environmental Science student from Dick Gongaware's class at Madison HS in Fairfax Co., VA

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## Teacher Training

### Credits, Stipends and Field Experiences!

There is still room for you in our BTW Summer Institutes! If you have been considering attending one of our week-long teacher and ranger training programs, please do not hesitate to send in an application today. During these institutes, participants will explore the Potomac watershed to learn the local history, geology, and ecology and work with student investigations in the BTW curricula. This summer our institutes are earlier in the season than in past years, and the 11th Annual Institute has been cut down to one week – both of these changes are in order to accommodate teachers who have been unable to attend in the past.



As always, we offer a stipend of \$625 to teachers, and you are eligible to receive graduate credits and continuing education credits. Please note, we have WAIVED the \$50 registration fees! See below our schedule, and visit us online for more details and the application: <http://www.fergusonfoundation.org/btw/training.html>

June 16 – 20: Maryland and Washington D.C. National Parks

June 23 – 27: Virginia National Parks

July 7 – 11: Harpers Ferry National Historical Park and Monocacy National Battlefield

To hold your spot, email Rhonda Scott ([rhondascott@fergusonfoundation.org](mailto:rhondascott@fergusonfoundation.org)) today.

### Earth Then, Earth Now: Our Changing Climate

Attention all K-12 science teachers! On July 23-24 in Silver Spring, MD at the NOAA Science Center, NOAA is joining forces with Sally Ride Science, NASA, the National Science Teachers Association, Northrup Grumman and others in hosting a teachers conference, Earth Then, Earth Now: Our Changing Climate. Sally Ride will be the plenary speaker and will focus on how the earth has changed since her first space flight 25 years ago. The format will include plenary sessions, panel discussions and seminars from prominent climate change scientists and topics will be roughly based on the Climate Literacy: Essential Principles of Climate Science.



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The conference is a great opportunity for teachers to learn the science behind climate variability and climate change, as well as to gain tools to integrate associated topics into their classroom. The main sessions will also be web cast so even if they cannot attend they can still benefit. For more information and to register for the conference go to [http://www.sallyridescience.com/for\\_educators/conferences/climate](http://www.sallyridescience.com/for_educators/conferences/climate).

## ***Science Corner***

**Hello, My Name Is: \_\_\_\_\_ ?**  
Editorial by Rebecca Scott

I love science.

It just so happens that one of my favorite things about science, and I suppose learning in general, is that the more I learn, the more I realize there is to learn. Having spent 4 years in the field studying the tributaries of the Potomac River, conducting dozens of macroinvertebrate surveys, I sometimes feel like I have seen it all. Then, just as I get bored with recording mayfly after caddisfly after aquatic worm, nature throws me a curveball.

On April 9<sup>th</sup>, during a Water Canaries field study at the Chesapeake and Ohio Canal NHP near Great Falls Tavern, a group of students from Jennifer Dargue's environmental science class at TC Williams High School in Alexandria, VA, found a crustacean I had never seen before. All natural and cultural resources in national parks are protected, of course, so my fellow educator Anna Wadhams and I knew we could not preserve the canal-dwelling organism for further study. Instead, we took some photos and I emailed them to several scientists who study the Potomac Gorge – the biologically rich region of the Potomac River basin that includes Great Falls.



In what I can only describe as a heated e-debate, scientists from the National Park Service and Maryland Department of Natural Resources exchanged hypotheses of what critter we had found. All were satisfied that it was a freshwater shrimp, but the agreements ended there. The two most popular ideas were that it could be a grass shrimp, normally found in brackish water and a rare find for a non-tidal stream section, or a fairy shrimp, common to the Potomac Gorge but maybe not a perfect match in appearance.

This finding and subsequent debate prove that data from BTW field studies can be of significant value to NPS natural resource managers. The presence of a grass shrimp in the freshwater of the C&O Canal could indicate that it is not a native, but rather an exotic species, perhaps introduced by people fishing with live shrimp bait. Exotic species of any organism may spread foreign diseases or parasites to new habitats, and if they become invasive – approximately 1 in 100 do, according to experts with the Delaware Sea Grant – they can drive out native species and throw local food webs out of balance. Natural resource rangers will take special care to note any new freshwater shrimp found during regular studies this spring.

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As we all know, field identification can be extremely difficult. Even with dichotomous keys in hand, many experts require preserved specimens and microscopes to see enough detail for genus and species classification. We may never find out exactly “who” this organism was, but now the scientists in the Potomac Gorge will have reason to look more closely for this mysterious decapod.

(left to right) Antonio Funn, Axel Waku, Eric Orellana, Jamie Rattanaphone

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*“The park made me feel like a kid again! Super fun!”*

Anonymous AP Environmental Science student from John Ausema’s class at Gonzaga College HS in Washington, DC

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## Classrooms to Parklands

### National “Get Outdoors Day”

Join the National Park Service, the U.S. Forest Service, the National Wildlife Federation and many other partners for a day of fun, healthy, active outdoor adventure during the first annual NATIONAL GET OUTDOORS DAY! On Saturday, June 14<sup>th</sup> from 10 am until 4 pm, families, kids of all ages, and anyone interested in learning more and participating in fun in the outdoors are invited to Anacostia National Park in Washington, DC. Come meet Smokey Bear and Woodsy Owl, experience state of the art family camping equipment, join REI for a hand-held GPS treasure hunt and enjoy the Anacostia River and learn about fishing, canoeing, and wildlife. Meet at the Urban Tree House near the Pavilion and Boat Ramp. For more information, visit <http://www.getoutdoorsusa.org> or email [jmanuel@fs.fed.us](mailto:jmanuel@fs.fed.us).

### A Challenge from One of Earth’s Ocean Explorers

Excerpt from a letter from Philippe Cousteau, President of EarthEcho International

**EARTHECHO** To help provide teachers around the country with support for INTERNATIONAL their innovative work to bring environmental education into the classroom, the National Environmental Education Foundation is launching the Classroom Earth National High School Challenge - an opportunity for up to 25 teachers to secure as much as \$5,000 to \$10,000 in funding to bring innovative environmental themes into their coursework.

Visit [www.neefusa.org](http://www.neefusa.org) to learn more and to download the application.

Through this program, I hope that teachers around the country can continue to inspire students about environmental issues so that they will have the knowledge to live by to protect our planet. I promise you, your students will be grateful.

## Calling all Paddlers!

The Interstate Commission on the Potomac River Basin is once again holding their annual Potomac River Ramble. The 2008 Potomac River Ramble is set for June 19th - 22nd and will be featuring some of the tidal creeks south of the Nation's Capitol in Maryland and Virginia.

During this paddling trip, they will highlight the natural and historical resources of this area, while drawing attention to pertinent issues. This year's programs will include: capturing and learning about the invasive snakehead fish in Dogue Creek, a historical tour of Fort Washington, collecting and identifying SAV in Pohick Bay, bird watching around Piscataway Creek and the Mason Neck Peninsula, service projects, historical programs at the Accokeek Foundation. Registration is still open! For an application, contact Adam Griggs at [agriggs@icprb.org](mailto:agriggs@icprb.org).



## Bilingual Podcasts Coming to Parks Near You



Exciting stories about history, nature, and recreational opportunities will be revealed in a series of bilingual (English/Spanish) audio and video podcasts about park sites at the George Washington Memorial Parkway and Chesapeake & Ohio Canal National Historical Park. Created through a partnership with the American Recreation Coalition, National Tour Association, and Eastern National, the podcasts will reach many diverse audiences who enjoy recreation and learning about the nature and history protected by the National Park Service along the Potomac River.

"This is exciting news for visitors and virtual visitors to two national park sites located in the backyard of the nation's capital. Through the podcasts, people will be able to find new ways to connect to our national parks through available technologies," said Superintendent David Vela of the George Washington Memorial Parkway. Funding for the podcast project comes from project partners and a Centennial Challenge grant from the National Park Service, of which BTW is also a recipient.

## Adventures at Great Falls Park

Special programs abound at Great Falls Park, a beautiful site along the George Washington Memorial Parkway. Here are just a few of the fun and educational programs offered at Great Falls this spring. Call the Visitor Center for more information at 703-285-2965. There is a \$3 fee for individuals to enter the park on foot, bicycle or motorcycle, or visitors can drive to the park and pay a fee of \$5 for each vehicle. Rangers programs are provided free of charge.

### TREES

Saturday, May 31 from 1:00 - 2:00 p.m.

Tree identification can be a challenge. Learn some common sense tips during a one-hour hike with a ranger. Meet in the Visitor Center.

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### SNAKES IN THE GRASS!

Saturday, May 31 from 2:00 - 3:00 p.m.

If a crawling snake makes your skin crawl, this program is just for you! Meet in the Visitor Center auditorium.

### FALLS WALK

Saturdays and Sundays from 12:30 - 1:15 p.m. & 3:00 - 3:45 p.m.

Monday – Friday from 2:00 - 2:45 p.m.

Join a ranger to explore the natural and cultural aspects of Great Falls Park on this walk. Meet the ranger in the Visitor Center.

### BIRD WATCHING

Sundays from 8:00 - 10:00 a.m.

Grab your binoculars and join this informal group to catch a glimpse of resident and migratory birds in Great Falls Park. Meet in the Visitor Center courtyard. Rain or shine.

## Think Field Studies

### Northwestern High School Students Have a Ball on the National Mall (And Talk Some Serious Trash, Too!)



Last month Angela Chan's Environmental Science students from Northwestern High School participated in a successful and inspiring *Talkin' Trash* field study at the National Mall. The students spread out along the waterfront near the Franklin Delano Roosevelt Memorial and waged a war on litter collecting along the banks of the Potomac. At the end of the day, over 160 lbs. of trash were collected, including a pair of jeans, two tires, aerosol cans, and construction debris. After compiling all of their data, the students enjoyed an interpretive tour of the FDR Memorial and were able to spend some time reflecting on their experiences in the shade of the trees along the tidal basin. This experience proved equally rewarding for BTW Educators Becca and Anna, who were enthused by the students' dedication and desire to use what they learned to become great environmental stewards. Great job guys!

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*"International Mall  
Passion, emotion,  
History, sensation,  
Labor, honor,  
A place of a new sense of humor.  
For all of you who are so sad, depressed  
Who hope all those wars'll ended  
In order to built a better nation  
Without confusion, but with sense of evolution  
A small piece of a new world  
Where a better life can be afford  
I dedicate you this flower."*

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This poem was written by Mr. Pierre, an ESOL Environmental Science student from Angela Chan's class at Northwestern HS in Prince Georges County, MD, in response to a Talkin' Trash field study and tour of the FDR Memorial at the National Mall.

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## SCA Spotlight

### Super Summer Job Opportunity!



Looking for a summer job? [SCA](http://thesca.org) has opportunities for both high school students and adults to work outside in local national parks for the summer. It's a chance for everyone to learn about local and global environmental issues, complete meaningful projects, earn money, and have fun! For more information, please contact Kelli at [kford@thesca.org](mailto:kford@thesca.org), or 703-524-2441 x 21.

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*"This trip was a rewarding experience and helped me understand the world around me and understand the tests. Out here, the tests create much more color and life than [sic] the same tests done in the classroom. I understand more of the facts about the stream."*

This reflection was written by Caroline, an 8<sup>th</sup> grade science student in Tai Shoff's class at Flint Hill School in Fairfax Co., VA.

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## Fun For Students

### Win a Prius! River Conservation Video Contest

All of our Bridging the Watershed partners work tirelessly to make a positive difference in the Potomac River watershed. Whether by teaching conservation, participating in service projects, or creating new programs to promote stewardship, BTW teachers, rangers and students are making great things happen! If you have a story to share and a knack for videography, check out this opportunity to win a car! This year's Tom's of Maine Rivers Awareness Partnership is a video contest to get folks involved in river conservation by sharing the inspirational stories of people who are already making a difference. The video contest will run on YouTube between May 1 and October 31, 2008 with the grand prize of a Toyota Prius. Entry forms and rules will be posted at <http://www.tomsofmaine.com/savingrivers> beginning May 1. Contact Rob Robinson for more details: [robr@tomsofmaine.com](mailto:robr@tomsofmaine.com).

