

## THE CATALYST

### SLIPPERY ROCK WATERSHED COALITION MONTHLY ACTIVITIES UPDATE

**NEXT MEETING:** 7 pm on 4/9/15 at Jennings Environmental Education Center, pizza and pop provided. 3/12/15 meeting attendance: J. Belgraden, S. Busler, C. Denholm, M. Dunn, V. Kefeli, B. Kuban, S. Smith, W. Taylor, F. VanAtta, S. VanDerWal, B. York

### Re-enacting Winter 1753 at the Cherry Pie Hike

Saturday February 21 saw western PA under a winter storm warning, but that didn't stop SRWC participants **Shaun and Melissa Busler and their three children** from attending the annual Cherry Pie Hike at **Jennings Environmental Education Center**. The Busler family and other attendees were treated to delicious cherry pie and hot chocolate, compliments of **North Country Brewery** in Slippery Rock, as they enjoyed learning more about life for frontiersmen and George Washington's travels in the area in the year 1753. The journey through part of Butler County was part of a diplomatic journey undertaken by Washington and his guide and traveling companion, Christopher Gist, that brought them through the Slippery Rock Creek watershed to what are now Forward and Connoquenessing Townships.

**Rod Gasch**, of the **George Washington Trail**, and **French and Indian War re-enactors Bob Shaner and Dan Nehrer**, recounted some of the adventures of Washington and Gist's travels through Butler County. The pair's travels here were part of a two-part mission undertaken by the young Virginian to: ask the French to leave the Ohio Valley, and recruit the Indians to fight on the British side if a war were to begin. Historians describe it as one of the important initial moves in an "international chess match" between Great Britain and France that led within six months to what is known in the United States as the French and Indian War. Dressed in period costume, the re-enactors relived the stories of Washington's two brushes with near-death: one being shot at by an Indian, and the other a near drowning in the Allegheny River. The Busler family enjoyed the history lessons and interesting collection of artifacts they were able to examine up-close, including a penny knife that did indeed cost only one penny, authentic "pieces of eight" Spanish currency, and an interesting GPS-of-its-time instrument (see photo below) which could provide a traveler his exact latitude and longitude position and time if the sun was shining.



The day's weather ironically re-enacted what Washington and Gist had to endure, except they were forced to camp at night with a blanket that doubled as a tent and clothing! Following the fun history talk, participants in the Cherry Pie Hike did indeed take a hike, through dire conditions similar to what Washington and Gist experienced (actually, it was a lovely winter landscape amid falling snow.) **Eric Best** of JEEC led a hike through the Jennings relic prairie area, where he discussed the resident endangered species, the Massasauga rattlesnake. It was interesting to learn the Massasauga hibernates underground actually in the water table, where it is wet, gaining access through the help of burrows dug by terrestrial crayfish. Eric also discussed the work

it takes to keep the prairie a prairie, including selective seasonal burning, as JEEC staff have to fight off species like aspen trees that would naturally take over the area. The hike ended with a look at the newest residents of the trail: beavers! Hikers were able to view the changes in the woods beavers caused when flooding from their washed-out dam drowned most of the trees in one area along a trail. Freshly gnawed-off bark and chewed off tree limbs indicated the beavers are active in this area, and the Buslers hope to catch a glimpse of them in the spring!

Special thanks to **John Stehle** of the **Butler Outdoor Club** and **Vice President of the Butler Chapter of the North Country Trail (NCT)**, for organizing the event, to the North Country Brewery for the tasty pie, and to JEEC for hosting and leading the hikes. For those interested in following Washington's footsteps, there is now a unique phone-guided, self-driving tour option developed by the Washington's Trail organization. Map locations on a pamphlet direct the driver where to go, and a phone code can be entered to correspond with the location to hear about the historical significance of events which took place at each spot on the tour.



A snowy hike through the prairie at Jennings Environmental Education Center (left) followed an interesting presentation by re-enactors Dan Nehrer and Bob Shaner (right) about George Washington's 1753 travels in western PA. The activities were part of the annual Cherry Pie Hike. *(Please see article on front page.)*

### **“Paddle Without Pollution” Clean-up Day on Schedule**

Water warriors are needed! If you would like to clean up Slippery Rock Creek in a fun, unusual way, please join the **DCNR** and **Jennings Environmental Education Center** on **Saturday, April 25** for another Paddle Without Pollution clean-up event. Teams of kayakers, canoeists, and stand-up paddleboarders will be traversing the waters of Slippery Rock Creek to remove debris and litter. Over 42 tons of litter and illegally dumped debris have been removed on Paddle Without Pollution days from streams, rivers, and lakes in PA since 2011. The clean-up will begin at 9 AM and last approximately 4 hours. You must register online to be a part of this event, to ensure that there are enough kayaks and canoes. Register online at [www.paddlewithoutpollution.com](http://www.paddlewithoutpollution.com). You will be able to request a kayak or canoe to borrow, or “check the box” on the registration form if you plan to bring your own. Please register each individual separately, and state if you will be bringing any minors. You will receive details about the event approximately one week prior to the clean-up day. If you use the waters of Slippery Rock Creek and enjoy their beauty, please consider being a part of this worthwhile effort to keep it clean for recreation and wildlife alike!



### **A Visit to St. Francis University**

Slippery Rock Watershed Coalition participant **Margaret Dunn**, a geologist, recently spoke to a group of Environmental Engineering students at St. Francis University. Margaret was invited to speak about her experiences both as a student and as a professional. Margaret provided a brief overview of AMD and passive treatment as well as a variety of other projects that she has been fortunate to work on. Some of the projects she discussed included the Nickel Plate Mine Pool Blowout (10,000 gallons per minute on a public sidewalk 12 miles southwest of downtown Pittsburgh!), Philips Mine Fire, Microhydropower generation from the Antrim AMD Chemical Treatment Plant, recovery of metals from passive treatment systems, etc. The students seemed very interested and asked good questions. Following the presentation, Margaret met two students who were excited about working on a Trompe study for a class project that was inspired by **Bruce Leavitt**, who had spoken to their class on the subject last year.



# The KIDS Catalyst

## SLIPPERY ROCK WATERSHED COALITION FUN ACTIVITY



### Hatching Some Springtime Fun

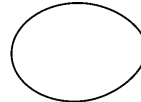
Spring is here and signs of new life are all around us! Maybe you will be lucky enough to spot a new bird's nest in a tree in your backyard, woods, or a park! Birds nests are build with carefully selected materials by the parent birds, who want to make sure their eggs and babies are safe and protected from the ground, predators, and harsh weather conditions. Eggs come in an amazing variety of sizes, from the huge eggs of an ostrich (that can weigh 3 pounds) to the tiny eggs of a hummingbird (the size of a pea or small jellybean).

The egg shapes below show you the typical actual sizes of several species of bird eggs. In the spirit of Easter, you can follow the fun tradition of dying eggs by coloring the eggs we show below! You can draw pictures or color designs or patterns, whatever you like. If you mail us your completed paper, we will give you a \$1 credit to spend (sent to a parent's email address) at Amazon.com! You can save up to buy something super special and fun!

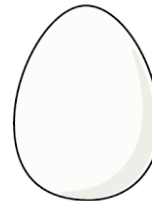
*Hummingbird*



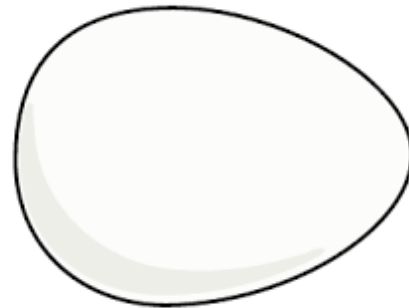
*Chickadee*



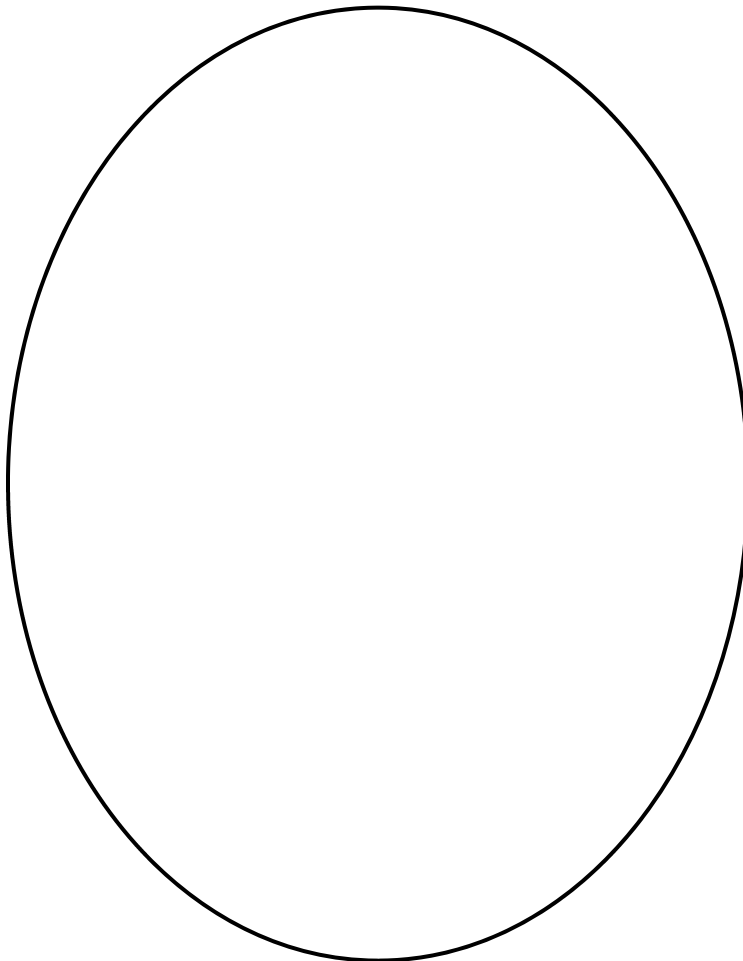
*Robin*



*Bald Eagle*



*Ostrich*



Name \_\_\_\_\_ Age \_\_\_\_ Address \_\_\_\_\_

Parent's email address for Amazon.com gift credit: \_\_\_\_\_



Slippery Rock Watershed Coalition c/o Stream Restoration Incorporated  
A PA Non-Profit Organization  
434 Spring Street Ext.  
Mars, PA 16046

NONPROFIT  
ORGANIZATION  
U.S. POSTAGE  
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PERMIT NO. 63  
Mars, PA

Thanks to The William & Frances Aloe Charitable Foundation, Environmentally Innovative Solutions, LLC, Dominion Peoples, Amerikohl Mining, Inc., Quality Aggregates Inc., Drs. Ron & Kathy Falk Family, BioMost, Inc., Allegheny Mineral Corporation and PA DEP for their support. For more information contact: Slippery Rock Watershed Coalition, c/o Stream Restoration Incorporated (PA non-profit), 434 Spring Street Ext., Mars, PA 16046 (724)776-0161, fax (724)776-0166, [sri@streamrestorationinc.org](mailto:sri@streamrestorationinc.org), [www.srwc.org](http://www.srwc.org). April distribution: 1128 copies

## **What's New With De Sale Phase 2!**

The De Sale Phase II Passive Treatment System was constructed in 2000 to treat an entire unnamed tributary, which is impacted by mine drainage from old abandoned surface mining in the headwaters of Seaton Creek in Venango Township, Butler County. This system, designed by BioMost, Inc., consists of an intake that diverts mine drainage to a forebay, two parallel Vertical Flow Ponds (VFPs), a settling pond, a wetland, and a Horizontal Flow Limestone Bed (HFLB). Routine system maintenance and sampling has been conducted by the SRWC since system construction. Water quality monitoring in 2014 was performed at both VFP outlets and the wetland outlet. Each VFP pipe that was flowing was sampled individually to assess the functionality of each cell, and it was noted that the VFP East upper tier of pipes had poorer water quality, and the lower tier of pipes had better water quality. Due to previous O&M activities, it was suspected that the upper tier of pipes had been compromised and allowed to short circuit. The VFP West pipes were also sampled, which indicated that stirring the treatment media in the pond would be beneficial to improve water quality. Site inspections also uncovered that many leaves, sticks and other debris from the winter of 2013-2014 had clogged the bar guard of the forebay pipe which splits flow between the two VFPs. Ice built up quickly and water began to flow over the emergency spillway, bypassing the treatment system.

To fix these issues, the 2014 rehabilitation of De Sale Phase II included modifying the piping system to help prevent clogging from occurring in the future. The emergency spillway was re-directed to the VFP East so that any overflow in the future would enter the ponds instead of circumventing the treatment system. In addition, both VFPs were backflushed using a 6" pump to attempt to clear the area surrounding the underdrain pipes from any materials which may have been preventing flow to the pipes. The VFP West was then drained and the upper 3-4 feet of media within the pond was stirred with an excavator. Originally, the media within the pond had been layered, with spent mushroom compost placed on top of a limestone aggregate layer containing a perforated piping system to the pond outlet. Stirring the mushroom compost in with the limestone, provided a more uniform distribution of flow. This discourages the development of "rat holes", where water short circuits within the pond and receives less treatment as the full capacity of the treatment media is not utilized. A permanent access ramp was also constructed to aid maintenance activities in the future.

December 2014 site inspections and water quality analysis show the modifications and improvements to De Sale Phase II have been successful, as pH and alkalinity values in the lower tier are excellent. For water monitoring information, please visit [www.datashed.org](http://www.datashed.org). An O&M TAG 2 grant helped to provide funding for this project.