

Stonycreek-Conemaugh River Improvement Project Make Use of Our Rivers

Beaverdam Run Study Complete by Melissa Reckner

Volume XX
Number 4
Fall 2013

Save the Date:

No SCRIP board meeting in Dec.

Jan. 17– SCRIP board meeting, Gander Mountain, 9am

Feb. 14– SCRIP board meeting, Gander Mountain, 9am

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In early 2012, the Kiski-Conemaugh Stream Team received a grant from the Coldwater Heritage Partnership to create a conservation plan for the Beaverdam Run Watershed near Central City, PA. The purposes of this project were to document the value of and threats to this high-quality stream and to jump-start projects to maintain or enhance this waterway.

The Stream Team worked with the California University of PA, PA Fish and Boat Commission, PA Department of Environmental Protection, Shade Creek Watershed Association, and others to study the current state of Beaverdam Run and its tributaries and compare results to historical data.

The Stream Team found that over the years, the water quality of Beaverdam Run has fluctuated ever so slightly, but enough to change the dynamics of the fishery. In the 1990s, the upper reach of Beaverdam Run was classified as a Class A Wild Trout Water by the Pennsylvania Fish and Boat Commission (PFBC).

Wild brook and brown trout were found in abundance; however, a drop in trout biomass in the late 1990s and early 2000s, prompted the PFBC to lower this section of Beaverdam Run to a Class B stream in July 2006. It seems a drop in alkalinity – the ability of water to neutralize or buffer an acid – impeded the natural cycle of trout. While a healthy fish population exists in the upper portion of Beaverdam Run and the PFBC and local trout cooperative stock the lower portion, the Stream Team feels the fishery could be enhanced by careful additions of alkaline

material, like limestone, which would counteract the effects of acidic precipitation and naturally acidic geology. In cooperation with state agencies, the Shade Creek Watershed Association has been adding crushed limestone to select stream segments throughout the upper Shade Creek Watershed. The Stream Team will work with them to expand this work.

Partners were excited to find two wild tiger trout fingerlings in Beaverdam Run. Tiger trout are a cross between brook and brown trout, which typically do not crossbreed in the wild. Additionally, they were surprised to find a blue crayfish– (*Cambarus monongalensis*) – a rare find as it is a burrower, most active at night, and at the very edge of its range in the Beaverdam Run Watershed.



Wild tiger trout

Photos by Melissa Reckner



True blue crayfish

The Beaverdam Run Coldwater Conservation Plan may be downloaded on the **Conemaugh Valley Conservancy's website**, under the Conservation, then Projects tab. <http://www.conemaughvalleyconservancy.org>

Trout in the Classroom Update by Melissa Reckner

The Kiski-Conemaugh Stream Team and its partners, Mountain Laurel Trout Unlimited and Blackleggs Creek Watershed Association, continue to provide support for twelve Trout in the Classroom (TIC) projects at the following schools in Cambria, Indiana, and Somerset Counties: Berlin-Brothersvalley High, Bishop McCort, Cambria Heights Middle, Conemaugh Township Middle, Forest Hills Middle, Kiski Area, North Star East Elementary, Penn Cambria Middle, Saint Benedict (Johnstown), Saltsburg Elementary, and Shade-Central City High.

On Election Day, schools received a shipment of 200-300 fertilized brook trout eggs from the PA Fish and Boat Commission and PA Council of Trout Unlimited (PATU), and they've already hatched! During the course of the school year, students will care for the trout, maintain the aquarium system, study the life cycle of trout, learn the importance of coldwater ecosystems, and be encouraged to become good stewards of our resources. At the end of the school year, schools will release their trout into state approved bodies of water. Most will then participate in a day of Outdoor Discovery Workshops coordinated by the Stream Team.

TIC is not meant to be a stocking program, but rather one that makes students aware of the threats to our trout streams and educates them on ways they can help reduce these threats.

There are costs involved with the maintenance and management of this program. If you would like to support TIC in our schools, please consider making a donation to the Stream Team. Additionally, you can help partners earn "points" for our TIC schools by participating in PATU's fundraiser, which includes the sale of TIC t-shirts and raffle tickets. With the raffle tickets, for \$5, you get 20 chances to win cash prizes of either \$50, \$250, or \$500. Winners will be drawn by PATU on April 11. Contact Melissa Reckner at mreckner@kcstreamteam.org to purchase raffle tickets and complete the form below if you'd like to purchase a t-shirt. Thank you.

Path of the Flood Trail Plant ID Guide In the Works by Stephanie Collis, Natural Biodiversity Americorps member

Ever notice a showy bloom and wonder, "What is that?" Natural Biodiversity has partnered with the Cambria County Conservation and Recreation Authority to create a plant identification guide specifically designed for the Path of the Flood Trail. The guide provides photos and information on over forty woody and herbaceous species found along the eleven mile journey from Ehrenfeld to Johnstown. Trailgoers will be able to scan a QR code found on the Self-guided Tree and Wildflower Tour brochure and signs to access the web-based guide as they walk alongside the scenic Little Conemaugh River. The guide, featuring native, exotic, and invasive species will be available to the public this spring. Natural Biodiversity could not have done it without the time and effort donated by knowledgeable volunteers. Support for the project has been provided by Laurel Highlands CLI & Community Foundation for the Alleghenies.



Path of Flood Trail Photo by K. Strosnider

Trout in the Classroom T-shirt Order Form

All shirts are kelly green with the PATIC logo (pictured) in white ink on the front and back. T-shirts cost \$20 each (*\$2 extra for 2XL and 3XL). If interested in ordering a shirt, please make check payable to "PA Trout", complete this order form, and send both to **PA Council of Trout Unlimited, PO Box 5148, Bellefonte, PA 16823**

Name _____
Address _____
City/State/Zip _____
Phone _____ Email _____

Youth sizes:

_____ Medium _____ Large

Adult sizes:

_____ Small _____ Medium _____ Large
_____ X-Large _____ 2XL* _____ 3XL*

Total Amount Enclosed: _____

TIC organization you represent or support: K-C Stream Team and its partners. All proceeds from the fundraiser go directly to supporting the TIC program.



In May 2013, nine Saint Francis students had the opportunity to travel with three SFU professors to the South American country of Bolivia. The group was a mix of students studying environmental engineering or exercise physiology. Whatever their major, all of the students had the opportunity to truly experience the native culture and traditions of the Bolivian people.

The main purpose of the journey to Bolivia was for students to conduct various scientific studies. Dr. Fitzgerald led the exercise physiology students in conducting research on the effects of high altitude on a person's body and Oxygen Saturation levels. During the trip, the participants were consistently at 14,000 to 16,000 feet of elevation. At Saint Francis, the elevation is about 2,000 ft. Therefore, the oxygen levels in the air were much lower in Bolivia than what students were accustomed to at home. Testing was done on the participants prior to, during, and immediately following the trip to Bolivia. These tests showed the effects of living and working at high altitude as well as how the body and oxygen saturation levels change upon returning to a lower elevation after becoming accustomed to the high elevation.

The engineering students, under the guidance of Dr. Strosnider, and Dr. Muino, conducted research on the effectiveness of a recently built acid mine drainage (AMD) treatment system. Acid mine drainage occurs as water runs through open or abandoned mines. The water becomes laden with harmful contaminants such as iron, sulfate, and other metals. The increased metal content also causes the water to have dangerously low pH levels. In Bolivia, mining is one of the most important industries, therefore causing some of the most extreme cases of AMD in the world.

AMD and More in Bolivia

by Sarah Yeager



Dr. Strosnider and Josh working hard to sample some of the most contaminated water on Earth.

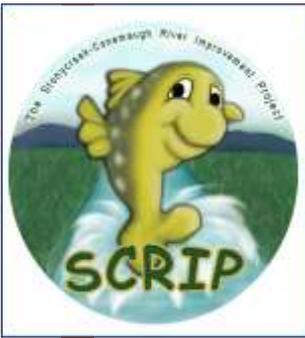
As citizens of the poorest country in South America, Bolivians have few options to avoid exposure to the contaminated water. Bolivia has a desert-like climate, leaving the Bolivian people in great need of usable water. While talking to locals in Bolivia, we learned that when people have a wart or growth on their skin, they often travel to the AMD ponds in order to “burn off” the lesion. This water used to treat warts is the same water that is used to irrigate crops and wash clothes. In some cases, this water is also the only water available to drink. Saint Francis students and faculty are working with Rotary International and Engineers in Action to help provide clean water to the people in remote villages of Bolivia.

Although the main purpose of the trip was to complete research, it was much more than just work. The Rotary club of Potosi welcomed us to their meetings and helped us enjoy all that Bolivia had to offer. We had the opportunity to tour an active mine and get a feel for what it means to be a miner in Bolivia. Many miners took time to stop and talk to us, explaining more about the Bolivian mines, the risks of being a miner, and the average lifestyle of the Bolivian people.

While in Bolivia, students also had the opportunity to experience and even participate in one of the grandest celebrations of the Bolivian year, Día de la Madre – Mother's Day. When trying to describe Día de la Madre, the best explanation would be the equivalent Mardi Gras, Fourth of July, and New Year's all rolled into one wildly fantastic celebration. During this celebration, the streets of La Paz, Bolivia's capitol, were jam-packed with colorful parades and thousands of spectators. As we pushed our way to and from our hostel, we found ourselves engulfed by the festivities. The parade highlighted many traditions of Bolivia, such as bright, traditional costumes and traditional music and dancing. Some students were even able to meet and interact with some of the parade performers.

One of the greatest things about the Bolivian people is that despite the poor conditions and difficult circumstances they face, there is always a reason to celebrate. Whether it is thanking God for everything they have received or asking Pachamama (Mother Earth) for safety in the mines, the Bolivian people treat every day as a celebration. Even when the Bolivians were protesting, which they did frequently, to outsiders it looked like an entertaining event. Overall, our time in Bolivia was a great opportunity to experience a culture very different from our own and to build new friendships while pursuing our academic studies.

Sarah Yeager and other students of Dr. Strosnider have worked with various SCRIP partners to help improve our local watersheds.



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SCRIP is the Stonycreek-Conemaugh River Improvement Project, a coalition of grass-roots groups and local resource agencies working to restore and promote the Upper Conemaugh watershed.

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* If you are not sure of your membership status contact SCRIP's secretary at mreckner@kcstreamteam.org or 814-444-2669.

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