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Butler County Stream Team

August News - 2015



Next Sampling Day - August 8

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Parking at Lab

Folks should park in the garage again this month if they are unable to pick up their pass before Saturday. Consistent volunteers will be issued red passes (what Miami employees get) for free so they can park on campus. I am attaching the list of names (I took them off the Doodle Poll) that I gave parking services. Those people can go over to parking services during office hours to get their pass. They will give their name and state they are an IES volunteer. Unfortunately, they aren't open on weekends. If people have questions, they can contact parking services at 529-2224 or visit http://www.units.miamioh.edu/prk/Contact_Info/

Can't Sample?

If you can't sample on Saturday, please let us know in order to have someone else grab your samples.

- Lynn White - [513-615-2538](tel:513-615-2538)
- Teresa Barnes - [513-706-8991](tel:513-706-8991)

Its a busy month- I have already heard from Pat Towers, Amy Cameron, Randy Ely, Kent & Charlie, and the Coffins about being out of town.

Sample Reminders

So I'm an idiot, I meant to send all of our samplers an

Stream Team Sampling Dates

July 11

August 8

Potluck at Edge of the Farm Preserve (aka Donna's)

Friday, Sept 18.

Mark your calendars for a potluck at Donna's on Friday, Sept 18 at 6:30 pm.

As in past year's we will have our potluck on Donna's patio, then head up the hill to the wetlands. If the weather cooperates, we can sit back and enjoy the wildflowers and birds.

Please [RSVP to Lynn](#) if you plan to attend.

Green Homeowners Workshop

Saturday, August 29. 9 am - 12:30 pm

At Butler SWCD, 1802 Princeton Rd.

Topics Include:

- Composting: Outdoors and In
- Green Cleaning Tips
- What not to recycle
- Native Plants for Pollinators
- Rain Gardens
- Rain Barrels- with the option of building your own to take home

Registration required. Please see the [Butler SWCD website](#) for more details and the registration flier.

email earlier this month, and forgot to hit the send button. Please be sure to read the email. We have had a few weird issues with some of the samples and coolers over the last few months. The email will highlight these issues and hopefully help you for future samples. It covers runaway bottle caps, antique bottles, coolers become warmers, and much more.

Stream Teamers Enjoy Twin Creek Excursion

By Mary Cullum



Eleven Stream Teamers had a blast kayaking and canoeing Twin Creek on July 18th! Our crew-mates on this perfect day were Suellen Albert, Mary Brooks, Amy

Cameron, Mary Cullum, Holly Gage, Chuck Goins, Karen Gotter, Tery Haynes-Toney, her daughter Sara and friend Amy, and Lynn White (not all pictured). Jim Zickgraf, owner of Jimco's Drive Thru/Kayak-Canoe Livery/Bike Rentals, joined us as well. He served as our attentive and entertaining guide as we made our way along the creek, soaking up the sunshine and getting to know fellow Stream Teamers.



Originally we were going on the Great Miami River, but that week's rainfall put it at over 20,000 cfs, too fast to safely negotiate. Lucky for us, all that rain made Twin Creek perfect for our trip! It was anywhere from 3'-5' deep, with several brisk rapids, some tricky. But Jim's keen knowledge of Twin Creek guided us safely down the creek.

Great Miami River Cleanup

Saturday, October 24, 9 am - 12 noon

The Great Miami River Clean up will be held at various locations along the Great Miami River. Mark your calendars now and more details will follow next month. Most locations will be on foot, but kayakers/canoists can join Jim at Jimco Kayak to get the out on the river and cleanup. We have sponsored his canoes, so they are available for free that day to volunteers that are willing to clean up the river. Contact Jim at 513-424-1529 to get your name on the list. He doesn't have all of the cleanup details yet, but at least you can reserve your boat. More details will be posted at

www.greatmiamirivercleanup.org shortly.

Butler County Children's Waterfest

**Fun volunteer opportunity
Friday, October 9, 2015**

About 100 children from schools around the county attend a fun, educational, water themed event at Miami University each year. The event is a success due to the huge number of volunteers that help that day. If you would be interested in volunteering for the event, we are in need to individuals that will walk the campus with a class of kids and their teacher. You will be provided a schedule and your role is to lead the class to each presentation around the campus. It's really easy, and you will get to see some great presenters. Coffee, donuts, lunch and a t-shirt are provided. [Find out more, and sign up online.](#)

Wetland Habitat Workshop

Saturday, September 12th, 2015, 8:30 am to 3:00 pm

Butler County Soil & Water Conservation District staff, Lynn White and Chuck Goins, not only hosted the day on the creek, but ensured each of us were safe and happy. We paddled from Germantown Dam which is the lime green **TC 10.0** mark on the map, downstream to **TC 01.0** where we took out at Carmody Park in Carlisle, having travelled 9 river miles in about 3.5 hours. It was hard to believe that Twin Creek is usually just a trickle, if not just a dry creekbed most of the time. Once back at Jimco's Drive Thru, we debriefed over pizza and a cold one (water of course!). Fun was had by all, and we're all looking forward to the next trip! For all you volunteers who couldn't join us this time, I hope I've inspired you to make it to the next kayak/canoe trip!



Sunlight Degradation of Herbicides in Wetlands

By Dr. Linda Weavers, The Ohio State University

Herbicide residues in surface waters from agriculture runoff can be problematic to humans and aquatic organisms. One natural way to remove the herbicide uses sunlight or "photolysis." Photolysis works in a couple of different ways. First, if the herbicide itself is able to absorb solar energy, the light energy (called a photon) absorbed may lead to the breakdown of the herbicide. This process is called direct photolysis. If the herbicide is not good at absorbing sunlight, other components in wetlands may become involved in the breakdown. Components in natural waters that give wetland waters an iced-tea color, called natural organic matter, can absorb solar energy and generate a group of highly reactive chemical species which in turn degrade the herbicide. This process is called indirect photolysis. Like other self-purification methods such as degradation by naturally present microorganisms in surface waters, the rate of photolysis depends on environmental conditions like sunlight intensity, pH of the water, presence of trace metals, and water temperature. The natural fluctuation of these factors, especially the unavailability of light at night, will also alter the time needed for the disappearance of herbicides.

In Mercer County

A habitat workshop series is being offered to landowners wishing to improve wildlife habitat on their property. The content of the workshop will primarily focus on construction and management of wetlands. It will start off at the Mercer County Central Services Building, 220 W. Livingston St., Celina, OH 45822. Participants will spend the first half of the workshop indoors and the second half at a nearby property with wetlands to experience hands-on education in the field with wildlife biologists and other professionals.

The purpose of the workshop series is to offer landowners and wildlife enthusiasts a well-rounded approach to managing their property to establish and maintain wildlife habitat. This wetland workshop will focus on wetland design and construction, plant ID, vegetation and muskrat control, and water level management for wildlife.

This event is \$10 per person and includes light breakfast refreshments, lunch, and a folder full of reference materials to take home. All participants **must pre-register** with the Mercer Soil & Water Conservation District at (419) 586-3289. The registration deadline for this workshop is **September 4th**.

Fall Tree ID Walk October 10, 10 am

Dudley Woods MetroPark in Liberty Twp

Jacob Hartman, a past stream team volunteer, is leading a fall tree ID hike. Great park for a short hike as it has an abundance of plants and over the last few years, this park has seen some big changes. These include: as invasive plant removal (thanks Chuck and all his volunteers), a stream bank restoration project, and a revamping of the trail.



Current research conducted at The Ohio State University by Dr. Linda Weavers (professor in Environmental Engineering), Dr. Yu-Ping Chin

(professor in Earth Science), and their graduate student, Chenyi Yuan, has focused on an unexpected day-degradation and night-rebound cycle of an herbicide called isoproturon. Experiments were done in artificial wetland waters with a solar simulator to mimic daytime and a dark room to mimic nighttime. Isoproturon is mainly applied to fields growing grain to kill broad-leaf weeds. Although it can degrade by indirect photolysis, keeping the solution in the dark shows slow rebound of isoproturon over more than a week. This rebound results from an unstable intermediate formed during photolysis that slowly reacts back to isoproturon in the dark. Using state-of-the-art instrumentation including liquid chromatography with mass spectrometry and nuclear magnetic resonance spectroscopy, the intermediate was determined to be an isoproturon peroxide. Furthermore, this intermediate-to-parent-herbicide reaction depends on wetland pH, temperature, and salts in the wetland water. Higher pH, higher temperature and higher carbonate concentration speed up the back reaction in the dark. Therefore, the residue of isoproturon in slightly basic wetlands during summer time might be underestimated if the reversible reaction is not taken into consideration. Interesting questions to answer in the future include screening similar herbicides for this day-degradation and night-rebound cycle, and evaluating the toxicity change throughout this diurnal cycle.

As local governments grapple with reduced revenues, decision-makers struggle with which services to cut. Did you know that there is one necessary expense that residents can help reduce?

Street Gutters and Storm Drains

Stormwater inlets, those grated drains located curbside on many streets prevent roadway flooding by transporting rainwater to the closest river or stream. When these drains become blocked by grass clippings, leaves and litter, rainwater puddles, pools and then floods roadways. Small rains can also cause problems for blocked stormwater inlets because both the catch-basin

and road gutter become mosquito breeding grounds. Even small amounts of standing water can support mosquitoes that carry diseases.

The local government then must pay to clean the stormwater inlets in order to maintain safe roads and reduce disease vectors—functions difficult to ignore, even with tight budgets. So how can residents help? Extend your concern beyond your lawn and the sidewalk to include the roadway gutter, if you have one.



- If you have a side-discharge mower, adjust your course so the discharge is pointed to the lawn, not the street
- After mowing, sweep up grass clippings from the street
- When the leaves fall in the autumn, extend your raking or leaf-blowing to include the gutter
- If there is a stormwater grate in front of your house, rake yard clippings, leaves and litter off of the grate, so that water can drain easily
- You should never attempt to lift the grate cover to clean inside the catch-basin yourself!
- If the catch basin is clogged and not draining, call your service department to report it

Some concerns with expanding your yard maintenance to include the curb area are:

- Watching for distracted drivers (stand in the yard, not the street)
- Finding broken glass from littered bottles (wear gloves)

If you need just one more reason to take this extra step in yard maintenance, remember that you are also improving the fishing in your local stream or river!

Butler County Stream Team Monthly Newsletter

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Our mailing address is: 102 Boyd Hall, Institute of Environmental Sciences, Miami University, Oxford, OH 45056

Phone: 513-785-6666

E-mail: whitelr@butlercountyohio.org

Website: www.butlercountystreamteam.org

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