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Butler County Stream Team

February News - 2012



Volunteer Stream Monitoring in Southwest Ohio

Next Sampling Day - February 11th

**Remember - Coolers are picked up by 10:30:
Boyd cooler is available until 11:30; bring
samples to lab after**

Butler County Salamanders



Isn't this guy a beauty?

([image source](#))

I mean, bright yellow polka dots on jet black skin, how can you

get much more dramatic! This beautiful spotted salamander is one of the seven species of mole salamanders found in Ohio (three in Butler County).

Mole salamanders are so named because they spend most of their lives either underground or under rocks, logs or forest debris. These guys are the salamanders least likely to be found by the casual observer **except** on a few nights each spring when they move, sometimes in great numbers, to their breeding ponds.

Ambystomids, or mole salamanders, generally hibernate underground all winter. In the early

Volunteer Spotlight Dave Christman



When I suggested to our lab managers that we highlight Dave this month, Beth immediately said - "Oh, he's the guy who always comes up to us when we're at the Oxford farmers market and thanks us for being there!" Later she added "We know we can count on Dave to bring an instant smile to our faces." Now, as I read through the info Dave supplied about himself, I can understand why.

Dave has been collecting two samples on 4 Mile Creek for four years. Having such consistent data is really valuable for understanding what's going on in our streams. Just

spring, though, picture a night when the snow has just melted, the nighttime temperature is above freezing, it may have been raining all day so the vegetation is soaked ... that's when you can experience, if you're lucky, [one of the great migrations](#) of our SW Ohio. On a night like this, often as early as mid-February, spotted, Jefferson ([pic 1](#)), and streamside ([pic 2](#)) salamanders make their way to their birthplace - a vernal pool, pond or small stream - where males place packets of sperm (spermatophores) on the bottom of the pool or females pick up those packets and lay eggs. The salamanders may stay in the pools a few days to a few weeks, then will return to their subterranean habits in the forest.



Other species of Ohio's 25 salamanders are not so invisible. Most of us remember checking under rocks in small streams or seeps and occasionally finding an adult, or maybe a larva with fluttery external gills. These creatures may be stream dwellers who spend most of their lives in small creeks, like the northern dusky ([pic 1](#)) and longtail ([pic 2](#)) salamanders in Butler County. Dusky and longtail salamanders spend most of their time in or near the creek, usually under rocks, logs or leaf litter. Both breed in late summer, with eggs hatching in the fall and larvae not fully metamorphosing into adults until the following spring. So in the spring, the



last spring Dave picked up another site to consistently sample, on Collins Run. Thanks Dave!

When Dave was growing up in the late '40's and '50's, Oxford was almost literally a mile square (pop. ~5,000). One pleasure and treasure for kids was exploring just beyond the city limits, which, of course, included "swimming in every stream, creek and pond ... as a matter of principle." Dave goes on to say "My pure enjoyment of nature during those years has influenced my life ever since." Dave's early adventures instilled a love for the environment that resulted, for example, in him telling his high school friends to save water - a crazy concept then, since the term 'environmentalism' was little known. Fortunately, the first Earth Day, in 1970, greatly crystalized that innate sense of environmentalism.

He says his last position in the corporate world, as Resource Recovery Administrator, was "personally-created and infinitely satisfying". It helped him divert tons of material from landfills while saving significant revenue for the corporation.

After Dave moved away from Oxford after eighth grade, he went on to get his BA in sociology and social psychology at Ohio State and lived in cities for 20 years. But he still felt a sense of attachment to these watery childhood surroundings ... one reason he moved back here in the late '70's. Dave has also gotten his MA at the University of Dayton in 1987 in Communication, worked 11 years at Miami, including at their Recycling facility, and retired in April 2011. Now he not only works with Stream Team, but monitors conservation easements and 'adopts-a-highway' for the Three Valley Conservation Trust. He also works part-time at the MOON Coop store,

larvae you see in your stream could easily be these common stream salamanders.



Only two species of Ohio salamanders are completely aquatic, hellbenders and mud puppies. These guys also

are the giants of the group, with mudpuppies reaching 12" long and hellbenders twice that!



(Most Ohio salamanders are in the 4"-8" range.) These aquatic species may be caught by anglers, and so have a variety of local names - waterdog, devil dog, allegheny alligator,

snot otter, and grampus. Many people think they are dangerous, but they aren't. Mud puppies are easily identified because they are the only Ohio salamanders that keep external gills throughout their lives, rather than losing them as they metamorphose to adults.

The remainder of Ohio's salamanders, 7 species, are terrestrial. Although it's not recently been found in Butler County, my personal favorite is the [red-spotted newt](#). In its terrestrial juvenile stage, it ranges over the forest floor garbed all in orange, with distinct scarlet, black-edged spots down its back - WOW! On a fall hike in Massacusetts, we saw dozens of these critters, sometimes 3 or 4 in a small area. This species is unique among Ohio salamanders because its juvenile stage is terrestrial and may last 4 to 7 years. When it becomes an adult, it returns to the water for the rest of its life. Most salamanders spend their early days in the water, then once they emerge as adults, only return to breed.



The five other Butler County terrestrial salamanders include [cave](#), [northern slimy](#), [ravine](#), [redback](#) and

as another way to help preserve the greater Oxford rural landscape and encourage sustainable farming.

And it doesn't stop there ... Dave's daughter Andrea is a freshman at Miami. Fortunately, she is continuing his environmental path by majoring in the Earth Sciences and Sustainability programs. In fact, just last week she called Donna to see if she could get folks from her dorm involved in Stream Team - of course I said no, we don't take people from dorms NOT! This may be a great way to involve lots more Miami students in Stream Team efforts. So thanks Andrea! Andrea also is involved with several other environmental initiatives.



Finally, Dave's words make me feel very proud of our Stream Team community ... *"I feel the Butler Co. Stream Team is such a valuable program, run by such dedicated and amazing people - Heroes, in my opinion! - how could I not do my small part?? Indeed, it's an honor. Hopefully it will help ensure the health of our local environment not only for my childrens' generation but those after theirs as well, so one day they too might be able to enjoy a swim in our local waters!"* Thanks for the vote of confidence, Dave!

Mark Your Calendars!
Lots happening this spring!

February Sampling Day -
Saturday, February 11th

spring salamanders (pictures 1-5, respectively). All these salamanders live in forests



and lay their eggs on the undersides of rocks or dead logs. Because they have moist skin like all salamanders, they need moist places to hang out, like damp forest soils and leaf litter, rocky ravines where moisture is high, springs and seeps in rocky or forested habitat. The most common one - one you might find under the mulch in your flower gardens or in your wood pile - is the redback salamander. These little critters are only about 4"-6" long and may have the characteristic "red back" that gives them their name or just a back that's lighter brown than the rest of them.

So, besides being pretty, what makes salamanders special? For one thing, the midwest has the world's highest diversity of salamander species. We can't say that for many things - we usually get beat by tropical exosystems. In Belize, where I take students in the summer, bird, mammal and insect diversity are many times Ohio's, but there are only 2 species of salamanders instead of Ohio's 25.

Through geologic time, the midwest US had just the kind of habitat salamanders needed - cool, moist forests and plenty of small streams and ephemeral wetlands. Ohio's vernal pools are important, and now rare, habitats that offer wet

March Sampling Day -

Saturday, March 10th

Wetland Hike at Donna's - Saturday
February 18th

"**Success Stories of the Mill Creek Watershed**" - a roundtable forum at the Mill Creek Watershed council of Communities Board Meeting - Tues. Feb. 21st at 2:30 p.m.

A **one-day Adult Education Forum** will be held at Shawnee State Park on Thursday, April 26th. It will include:

- *River Voices* documentary about the 1937 flood
- *Life Below the Water Line* mobile aquarium with Ohio River fish
- a tour of a nearby lock and dam
- a tour of Portsmouth's famous floodwall murals
- an evening viewing of the movie *Call of the Scenic Rivers*, made to celebrate the 40th anniversary of the Clean Water Act

Click [here](#) for more information.

The **Environmental Education Council of Ohio Annual Conference**

- April 26-29. Includes the above plus other sessions on Project Wild, Ohio natural history, and canoe trips on Ohio Brush Creek.

Rain Barrel Make-and-Take

Workshop - sponsored by Butler County Storm Water and Soil and Water Districts - May 19. More detail to come soon.

Butler Soil and Water Plant Sale -

Items include trees, shrubs, groundcover and perennials, many of which are native species. Other items for the yard include rain barrels,

spring pools needed for breeding and the absence of fish predators. In permanent ponds, predacious fish eat salamander eggs and larvae, so salamanders struggle to survive, if they can at all.

Unfortunately, Ohio's vernal pool and headwater stream habitats have been disappearing for centuries. Forests have been replaced by homes, cities, roads and farms. Remaining forests often were grazed for decades, which left small pools trampled by cattle and unsuitable for salamanders, or logged, which decreases forest density and moisture levels. Since many salamanders return to their birthplace waters to breed, often living long distances from that natal pool, destruction of a small vernal pool often leaves its returning mamma and pappas out of luck for good. The fact that most salamanders need two different habitats makes them extra vulnerable, since disruption of either habitat may have dire consequences.

Salamanders, along with frogs and toads, also are especially sensitive to toxins in their environment. Unlike their close relatives, the reptiles, amphibian skin has no scales and so is moist and absorptive. Chemical herbicides and pesticides used on farms and lawns often dissolve in water and wind up in small streams or ponds. Runoff from lawns, driveways and roads may carry other toxins like oils, car fluids, or heavy metals. When these chemicals get into small streams they bathe salamanders and their larva in toxins that are readily absorbed into their bodies through their permeable skin.

Fortunately, the importance of vernal pools and small streams has become better known in recent years and efforts are under way to decrease human impact on these sensitive habitats. The Ohio EPA has devised methods for evaluating the quality of wetlands, vernal pools, and small streams.

Understanding of the importance of wetlands in general, and how to restore them, has also gained ground so that wetlands that must be destroyed for

compost bins, and blue bird houses. Proceeds of this sale go towards the District's education program including college scholarships, forestry camp, and school outdoor classroom grants. The **order deadline is March 23**, with order **pick up on April 19-20**. More info can be found at <http://www.butlerswcd.org/>.

BC Storm Water - Webinar Series

If you are interested in learning more about how storm water affects streams, don't miss the 2012 webcast series produced by the Center for Watershed Protection, hosted by the Butler County Storm Water District. Each webcast will air from 12 - 2 pm at the Engineers Office, 1921 Fairgrove Ave., Hamilton. Cost to you is \$0! That's FREE! For more info on these titles, click [here](#).

Retrofit This -- A guide to retrofitting the world?

Wed. Feb. 29th

Build This - Stormwater retrofit construction issues

Wed. April 18th

Stream Restoration: Implementation you can take to the BANK

Wed. June 20th

Get the Dirt on Stormwater

Wed. Aug. 15th

Leaving You Out In The Rain - Design and implementation of monitoring projects

Wed. Oct. 24th

Customizing Your Stormwater BMP Design for Specific Pollutants

Wed. Dec. 12th

If you have ideas of things you'd like

development or roadways now must be replaced.

So perhaps the era of salamander decreases in Ohio has come to a close and these delightful creatures are on the rebound. Hopefully, Ohio will continue to be the world's hot spot for salamanders!

Wetland Hike Info

RSVP to Donna mccollds@muohio.edu

When: next
Saturday - Feb. 18th,
10 am
What: Tour of



our prairie/wetland/forest preserve

Where: 5398 McCoy Road, Oxford (near Reily; see [map](#))

What to bring:

- * a dish for brunch
- * boots or waterproof shoes - it will likely be wet and/or muddy
- * appropriate outdoor clothes - who knows what the day will bring!

We're really looking forward to showing you our small effort toward preservation of land and streams. Hopefully, you will enjoy the wilderness as much as we do!

Creativity Corner

Just for fun, and since next week some of you will be here at our prairies, I thought I'd include one of my favorite of Hays' prairie pictures. As you might see next week, the prairies are a wonderful "spongy" buffer that absorbs nutrients from runoff before it hits the waterways.

to see the Stream Team do, please let Donna know at mccollds@muohio.edu. For instance, if enough people are interested, we can open the lab up for macroinvertebrate identification again, or run another morning session to get people started knowing what bugs are in our streams.

Lending Library Titles

We all have lots of books that we would love to share with someone who has similar interests. So we thought this might be a way to share them with people we know like streams! If you have books, DVDs or other things - especially about water - that you would like to contribute, feel free to bring them along anytime. Or, if there are particular books you would like us to buy, let us know and once a year or so we can add a few to our collection.

Here's our list to date:

- * [A Guide to Common Freshwater Invertebrates of North America](#)
- * [A Guide to Ohio Streams](#)
- * [After the Storm](#) - DVD
- * [An Introduction to the World's Oceans](#)
- * [Bugs of the Underworld](#): a fly fisher's guide to the natural history of aquatic insects (DVD - available on request)
- * [Exploring the World Ocean](#)
- * [Fostering Sustainable Behavior](#): An introduction to community-based social marketing
- * [Guide to Aquatic Insects & Crustaceans](#)
- * [Gulf Hypoxia: Action plan 2008](#)
- * [Handbook for Developing Watershed Plans](#) to Restore and Protect Our Waters
- * [Introductory Oceanography](#)
- * [Life in the Soil](#): A guide for naturalists and gardeners
- * Marine Ecology
- * [Migratory Shore and Upland Game Bird Management](#) in North America
- * [Monitoring Guidance for Determining the Effectiveness of Nonpoint Source](#)



Crisis Spot

As you are out sampling or just out for a walk along the waterways and see something wrong, email us. We always want to hear from our volunteers, especially if there is a problem that can be corrected.

You are our eyes in the field, the first line of defense for streams in Butler County when there is a problem. Once a problem has been reported to us, we can pass it along to the appropriate agencies.

For instance, Carol Jones's interest in streams led her sister to make her aware of cleared brush in her local creek. When Carol contacted us, Doug Dirksing contacted Duke Energy, who was unaware of the mess and promptly cleaned it up. Success is sweet!

Thanks again for all you do for Butler County Stream Team!

Crisis Spot emails can be sent to Donna McCollum at mccollids@muohio.edu.

Controls

*Oceanography

*[Ohio Vernal Pools: Diamonds in the Rough](#) (DVD - available on request)

*[Our Waters, Our Health](#)

*[Pond and Brook: A guide to nature in freshwater environments](#)

*[River of Words](#)

*[Stemming the Tide of Coastal Fish Habitat Loss](#)

*[Swamp and Bog](#): Trees, shrubs, and wildflowers of eastern freshwater wetlands

*[The Colorado](#): A river at risk

*[The Evolution of North America](#)

*The Face of the Deep

*[The Mill Creek: An Unnatural History of an Urban Stream](#)

*[Watersheds: A Practical Handbook for Healthy Water](#)

If you have any comments, concerns, or suggestions, please contact us at mccollids@muohio.edu.

Butler County Stream Team Monthly Newsletter

Unsubscribe from this list.

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

Phone: 513-529-5811

Fax: 513-529-5814

E-mail: ies@muohio.edu / Website: www.butlercountystreamteam.org
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