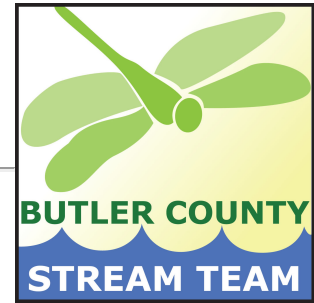


Email not displaying correctly? View it in your browser.

Butler County Stream Team

April News - 2013



Volunteer Stream Monitoring in Southwest Ohio
Next Sampling Day - April 13th - Tomorrow!

Don't forget ...

... the Stream Team and partners events coming up this month (check in the right-hand column for more details):

Earth Day events

Come talk to people at:

Hamilton - April 19th - lunchtime at gov't bldg

Oxford - April 20th

- litter "sweep" at 10 a.m., Cook Field
- booths from 11-1 along Miami's slant walk

To join the "sweep" contact Allie Wagner [here](#)

Do-It-Yourself Rain Barrel Workshop - April 27th

Notify Lynn White by April 19th at 5133-887-3720

Training day and wetland walk - April 30th -

5398 McCoy Rd ****NOTE DATE CHANGE**** All of our consistent samplers are supposed to be retrained every two years. So **if you are in**



need of retraining or are a new sampler, please plan to come. No advance registration is required, but let Donna know at

mccollds@miamioh.edu so we can get you a map and plan enough for the grill. If you don't need training but want to take a hike in [our wetland/prairie complex](#), no problem, come on along!

Ohio's prettiest small-stream fishes - darters!

Volunteer Spotlight Dick Haid

We're giving Dick another short blurb here, since he has been, and soon will be again, teaching a community course at the Miami Hamilton *After Dinner Academy*.

Dick has been sampling for Stream Team since 2008, collecting 4 sites each month. In the last few months, as he has recuperated from an injury, he has been helped out by another long-time sampler, Carol Jones, so that we have continued to get data from his sites.

I recently found out that Dick has been contributing to his community since long before he started working with Stream Team. Back in the late 1970s and early 1980s, he worked with other community members to help the Hamilton Parks Dept. buy, restore and help preserve 100+ acres of forested land across from Badin High School. The area became the largest forested city park in Hamilton, known as Miami Woods. The area sports a cool statue and driving range visible from the road, but its real treasures are the trails that run through a mature woods, over and around a pretty stream.

Based on studies done in the 1980s, this stream has very good water quality. The city is now considering whether to open the park to dirt bikes, so Stream Team will sample there again to see how well the stream is doing today. If you'd like to be involved, please let [Donna](#) know.

Now Dick is helping the community in other ways, by writing and teaching. A book that features two of his chapters, *Live Smart After 50! The experts' guide*

And to show it's true, here are just a few pictures from ODNR's species guide:



Rainbow darter



Logperch darter



Greenside darter

All of these fishes are **small** (the largest pictured above, the log perch, may get 7" long) and are known for their breeding colors. **Males tend to develop brilliant coloring** in late winter as they prepare to attract mates. These colors are used in identification, along with more details like number of scale rows and fin rays, since they are species-specific. Darters have two dorsal fins (fins on their backs), the first of which often has longitudinal stripes and the second vertical stripes and/or spots. The other fins may sport colors from green to orange to blue. All in all ... how could a lady darter resist?! Right now darters are getting ready to spawn and the breeding colors of the males are a bright spot in most creeks.

You might have noticed in the pictures above that the **fins of these fishes are flared out**. You might

to life planning for uncertain times, is in our lending library. The **lecture series he will be teaching also is titled "Live Smart After 50!"** and will feature the information in the book. It begins at **7:00 p.m. on April 30th**, registration night, and will continue every Tuesday through May 21st at Hamilton Downtown, 221 High Street. A fee of \$50 will cover all materials, including a copy of the book, to which Dick is a contributing author.

So, thanks Dick, for all you do, not only for Stream Team but also the wider Hamilton community!

Down on the Farm: Floating Treatment Wetlands

By Amy Cameron

What are Floating Treatment Wetlands?

FTWs consist of a buoyant structure, or raft, which supports plants in a growing media on the top of the water. These plants are perennial, non-invasive emergent plants that mimic the function of natural wetland plants in that they filter and process nutrients, metals and other pollutants. Unlike in a traditional wetland, the plants will not take root in soil at the bottom of the pond. Instead, the roots stay suspended in the water column so the plants adjust to fluctuations in water level without being harmed.



How Floating Treatment Wetlands Can Help Water Quality

We all know that plants need food. In FTWs, the plants take their food – i.e. nitrates and phosphates – from the water, where excess nutrients have accumulated from runoff. By taking up excess nutrients, FTWs can decrease the amount of algal growth in the water body, increasing the overall health of the aquatic ecosystem. The roots of the plants stay suspended in the water

have thought it was just a pose, but in fact, that is one characteristic of darters. These fish generally live in riffles, and they spread their strong pectoral (bottom front) fins to hold themselves in place against the current. If you are lucky enough to hold one sometime, give it just a little water to sit in and you'll probably find it spreading its fins against your hand to keep itself in place.

Another cool characteristic of darters is that they have **very reduced or no swim bladders**. Swim bladders are inflatable sacs in the abdominal cavity that fish inflate or deflate to keep themselves at the proper level in the water column. Since darters live in sometimes strong currents, it is advantageous to be on the bottom, so as not to be washed away. An absent or reduced swim bladder helps them stay there.

Darters, in the family Percidae and subfamily Etheostomatinae, are one of the most diverse groups of fishes in North America, with almost 200 species discovered so far. The species diversity is largest in the southeastern Appalachians (TN, GA), but they are spread across the US from the Appalachians to the Rockies, with 22 species in Ohio. One interesting piece of trivia is that [5 oval office residents now have darters named after them!](#) Last year researchers took a closer look at what had been considered a single species and found it was actually 5 different species, so they named them after Presidents Obama, Clinton, Roosevelt, and Carter and VP Gore. These presidents were chosen based on the ranges of each particular species and what the presidents had done in that area. What a great tribute for conservation actions!

Darters are usually **indicators of good water quality**, since almost all are insectivores. Like the invertebrates they eat, they generally need clean water and good flow over rocky substrates. In most species, the females lay eggs in the sand, gravel or cobble of riffles, where they are fertilized by the males. These fishes, like many other species, rarely show parental care; the eggs and young are left to make it on their own. This makes clean streams essential; if sediment fills the spaces between substrate particles, then

column, where microbes that colonize them help to break down other pollutants that may have arrived in the runoff.

How to Find Out More about Floating Treatment Wetlands

Butler Soil and Water Conservation District is working with interested landowners and their ponds to implement an FTW project in Butler County. The goals of the project are to:

- a) decrease excessive nutrients and other unwanted pollutants,
- b) increase community awareness of water quality and source water protection and
- c) Determine if FTWs can be considered a viable best management practice in the future.

We encourage you to attend our upcoming **Floating Treatment Wetland Workshop** to assist with the construction and deployment of FTWs and learn more about the ways in which you can increase the health of ponds, streams and rivers. The workshop will be held on **May 21, 2013**, from **9:00a.m. to noon**. If you plan on attending both the informational session and construction, please dress to work.

If you have additional questions or would like to RSVP for the FTW workshop, please contact Butler Soil and Water Conservation District at (513)887-3720

[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](#)

both eggs and larval fish are readily visible and available food for other fish.

In Butler County, we have 9 fairly common darters that differ in where they are found and how well they are doing. Two of my favorites are the fantail



darter (*Etheostoma flabellare*; left pic) and Johnny darter (*Etheostoma nigrum*; right pic), probably because they are different

from most darters!

These fish lay their eggs on the underside of rocks, then the

male stays around to guard the young. Perhaps because of this reproductive care and the fact they can survive in pools, fantails and Johnnies are more tolerant of pollution than most darters.

They are often the last darter species to leave a polluted area and can live even in very small streams.



The rainbow darter (*Etheostoma*; 1st pic above) is one of Ohio's most sensitive darters. They



are found throughout Ohio in medium-size streams and in small numbers in large rivers, but seldom in headwater

streams. The orangethroat darter is very similar (male left pic) - in fact, females and non-breeding males (right pic) are almost indistinguishable to the untrained eye.



Greenside darters (*Etheostoma blennioides*) are one of our largest darters - about 5" for a large breeding male. Although the male pictured above, the females (right) are also beautiful, with their

* [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 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](#)

Mark Your Calendars! Earth Day events

Each year the Stream Team distributes information about our program and Butler County streams at these two local Earth Day events. If you like to talk to people or run games for kids, let us know - we'd be happy to have your help! Come see what local groups are doing to celebrate Earth Day.

Hamilton - April 19th - lunchtime at gov't bldg

browns and grays blending with the stream bottom. If you catch one, they are fairly easy to distinguish from other darters because of their stocky bodies and their blunt, rounded snouts.



The logperch darter (*Percina caprodes*) is unmistakable - their dark stripes on a tan background stand out (see pic above), along with their long thin bodies and rough scales. If you pick one up, it almost feels like a sauger, very rough and scratchy. Like all darters, these guys eat macroinvertebrates, but because of their larger size (up to 7") they are ferocious predators or the largest of invertebrates. The logperch inhabits mostly larger streams and rivers and is one of only two darters that may be found in Ohio's many reservoirs, the other being the Johnny darter.

Banded darters (*Etheostoma zonale*) are interesting because of where they are found. As you can see in the above picture, breeding males are very green! So guess where they hang out in rocky riffles where there is lots of filamentous algae! Great camouflage! Females lay eggs on this algae

and the males stay around for a short while to guard them, before leaving them to fend for themselves. The females are similar to many other darters, but do have the distinct green stripes on the back half of the body.



Blackside darters (*Percina maculata*) are also easily distinguished because of the dark horizontal



stripes on their sides. They hang out in medium-sized streams, especially where there are lots of woody debris and submerged tree roots. Unlike some darters, they don't need fast-moving riffles and actually prefer slow-moving

Oxford - April 20th

- litter clean-up at 10 a.m., beginning at Cook Field
- booths from 11-1 along Miami's slant walk near King Library and Campus Avenue.
To join the "sweep" click [here](#) or contact Allie Wagner at beckneal@miamioh.edu

DIY Rain Barrel Workshop - April 27th

9 -11:30 a.m.
Registration fee \$25 for Butler Co. residents
Registration deadline - April 19th
Butler Soil and Water office, Hamilton

One way to decrease runoff is to capture rain where it falls, with rain barrels, rain gardens, or wetlands. This annual workshop is sponsored by Butler Soil and Water Conservation District. More info: www.ButlerSWCD.org or call Lynn White 513-887-3720

Training day and wetland walk - April 30th

Pot luck - 5:00 p.m.
Sampling training - 5:45 p.m.
Hike to wetlands ~ 6:30-7:30 p.m.
5398 McCoy Road, near Reilly

Samplers, WE NEED YOU HERE if you have not done the sampling training in the last year. Training our samplers allows us to keep our level 2 status with the Ohio EPA for our data. After eating and doing the training, we'll hike to look at the Edge of the Farm Conservation Area wetlands. Feel free to come to all or part of this event and to bring family or friends along!

Lab Tour and Stream Report - May 11th

Presentation 10-11 a.m.
Lab tour - 11 a.m.
Room 217 Boyd Hall, Oxford

If you've wondered what happens to your sample after you drop it off, or if you want to hear what your samples have told us about our Butler County streams in 2012, this event is for you. We put off our normal open lab last spring thinking we would have one in our new lab in the fall, but our move has been put on hold, probably until this fall.

waters.

Slenderhead darters (*Percina phoxocephala*), are a great species to end with. Their small heads do seem slender in relation to their bodies, but the dull colors of breeding males do not set them apart from other fishes. They tend to be in larger rivers, like the Great Miami, so this is a species you probably will **not** see while sampling!



River Reflections

Since we're thinking about fish this month ...

We Fish

by Herman Melville

We fish, we fish, we merrily swim,
We care not for friend nor for foe.
Our fins are stout,
Our tails are out,
As through the seas we go.

Fish, Fish, we are fish with red gills;
Naught disturbs us, our blood is at zero:
We are buoyant because of our bags,
Being many, each fish is a hero.
We care not what is it, this life
That we follow, this phantom unknown;
To swim, it's exceedingly pleasant,--
So swim away, making a foam.
This strange looking thing by our side,
Not for safety, around it we flee:--
Its shadow's so shady, that's all,--
We only swim under its lee.
And as for the eels there above,
And as for the fowls of the air,
We care not for them nor their ways,
As we cheerily glide afar!

We fish, we fish, we merrily swim,
We care not for friend nor for foe:
Our fins are stout,
Our tails are out,
As through the seas we go.

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

So we wanted to make sure you had an opportunity to tour the lab and also want to report what we see in our streams.

Floating Treatment Wetland Workshop - May 21 - 9-12 am

RSVP to Butler Soil and Water Conservation District at (513)887-3720

Renovated Retention Basin tour - June 4th - ****NOTE DATE CHANGE****

Potluck at 5 p.m.

Tour of renovated urban retention basin (Beckett Ridge)- 6 p.m.

In 2006 the Stream Team and its partners took part in implementing an innovative approach to retention basins more ecologically functional by retrofitting an existing basin into a wetland. This suburban site lets storm water runoff, even from small rain events, be purified naturally. It has been a tremendous success, both for residents and the Mill Creek. Feel free to join us for the potluck or be at the park by 6 to head to the wetland.

Macro Training - July 20th and 27th

Details in future newsletters

We are partnering with Butler County Metroparks to do some macro invertebrate training. We will be doing one day of field sampling and one of identifications in the lab. So stay tuned for details!

Canoeing - Aug. 24th

Details in future newsletters

This is always a fun event, so if you're interested, let us know and we'll keep you informed as plans are developed.

Also note - the Butler County Clean Sweep will be held in the fall this year

Details in future newsletters

Crisis Spot

If you see something that needs to be addressed as you sample, please let us know! We will try to get the information to the right folks to do something about it.

Crisis Spot emails can be sent to Donna
McCollum at mccolds@miamioh.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

Copyright (C) 2010 Butler County Stream Team All rights reserved.

Forward this email to a friend
Update your profile

