

Litzsinger Road Ecology Center

Community Newsletter

9711 Litzsinger Road • Ladue, MO 63124 • Phone (314) 540-4068 • www.litzsinger.org

Settling in for Winter

By Bob Coulter

As the days get shorter and I can't go for a bike ride after work any more, I mentally start to shift into winter mode. The leaves are raked, I'm finding the drafty spots in the new house, and I'm starting to catch up on some reading. It's tempting at times to hibernate!

As you think ahead to the winter months, I'd like to encourage you to think of this not as a quiet time in your environmental studies, but as a time of adventure. As plants go dormant and animals prepare for winter, there is much to explore, whether you have a field lab scheduled for the Litzsinger Road Ecology Center or if you are working in your school yard. If you need ideas, please don't hesitate to give us a call or drop us a note. We'd be happy to work with you to design ways to keep your kids engaged year-round in ways that meet your learning goals.

Also, on behalf of the rest of the staff, we'd like to thank all of the teachers and volunteers for their help in making this fall successful. We've worked together in the face of reduced staff and budgets to maintain high quality programs for your kids. Kudos to all for pulling it off.

Best wishes for the holiday season and the new year... ☞



Volunteer Holiday Party

Tuesday, December 15, 11am-2pm at the Glass House.

RSVP to Martha at (314)540-4068 or martha@litzsinger.org.

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Upcoming LREC Events:

Volunteers for Burn

Date to be announced. Contact Danelle danelle@litzsinger.org if interested.

Volunteer Enrichment

December 7, 2:00-3:00pm. The topic is Eurasian tree sparrows and how prescribed burns affect nest box predation. Call (314)540-4068 or email martha@litzsinger.org to RSVP.

Volunteer Holiday Party

December 15, 11am-2pm. At the Glass House. Call (314)540-4068 or email martha@litzsinger.org to RSVP.

Deer Creek Water Testing

December 17, 9am-12pm. Meet at Glass House. Contact Danelle with any questions: danelle@litzsinger.org.

Upcoming Opportunities:

Missouri Stream Team Training

For those who have completed Level 1 Volunteer Water Quality Monitoring training:

- Level 2 Volunteer Water Quality Monitoring Workshop. January 9 at Powder Valley Nature Center. (Registration deadline is January 1; call Priscilla at (573)526-3406 with questions or to register.)
- EPT Identification Workshop (see page 2 for EPT definition). February 6 in Jefferson City. (Registration deadline is January 22; call Amy at (573) 522-4115 x3166 with questions or to register.)

Stream Living: Mayflies

By Danelle Haake

Here at LREC, we have the benefit of a variety of ecosystems represented in a relatively small area. Each of these ecosystems provide habitat to creatures great and small. In an effort to gauge our success at preserving and restoring these habitats, we often measure aspects of the flora and fauna.

During our fall collection of aquatic macroinvertebrates, we found a number of wonderful creatures living in Deer Creek! Among these were two different varieties of mayfly: minnow mayflies and flathead mayflies. It was particularly interesting to capture minnow mayflies as they were emerging from their aquatic nymph life stage and drying their wings for a maiden flight (see photo above)!

Mayflies are in the scientific order Ephemeroptera. This order is one of three that make up what are known by entomologists as the "EPT" taxa: Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies). The number of species of EPT taxa that are found in a stream is commonly used as a measure of stream health since most species in these orders are relatively sensitive to pollution.

There are over 600 species of mayflies in North America. They spend most of their lives underwater as nymphs, going through several molts as they grow larger. Like many aquatic organisms, mayflies breathe using gills. The gills are located along the abdomen and can look a bit like a ruffled skirt. They predominantly eat algae and organic detritus (such as shredded leaves), though a few species are known to be predatory on smaller aquatic macroinvertebrates like midges. This larval nymph stage for may-flies generally lasts three to six months, but can be as short as ten days or last as long as two years.

When mayflies emerge from the water or "hatch," they begin a life stage called subimago. During this life stage, which generally lasts less than 48 hours, the mayfly's wings have fully developed, but the reproductive organs have not. One characteristic of this stage is a



This minnow mayfly recently emerged into the subimago life stage. The wing is wrinkled because it has not completely dried yet. Photo by Danelle Haake.

See **Mayflies**, page 4

Whistle Pig Sighting

By Leslie Memula

Okay, so you're probably scrunching your brow right now and asking yourself, "Just what in the heck is a whistle pig?" Believe it or not, a few weeks ago I was doing the very same thing.

It all started with one of Eddie's school groups, when a kindergarten student from MRH ECC asked if he was going to see a whistle pig during his time at LREC. Soon after, Eddie came over to the Barn and a discussion ensued. I thought I heard "whizzle pig" or "whizzer pig" but when I googled those, I didn't get very far. After asking for clarification, I went back to the drawing board and began to search the Internet for "whistle pig," which pointed me in the right direction. And yes, we do in fact have whistle pigs at LREC.

My most recent sighting was on November 9th, when I spotted a whistle pig in the woodland area between the Cabin deck and Deer Creek. Perhaps it was the nice, warm weather that coaxed this furry mammal out of its burrow to gather food before retreating to hibernate, underground in its nest.

So, for those of you who have remained patient thus far, the time has come...whistle pig is a

See **Whistle Pig**, page 5



Photo by Danelle Haake.

Glass House Quiz: Turkeys

By Deanna Lawlor and Danelle Haake

As we bid Thanksgiving 2009 a fond farewell and eagerly anticipate the end-of-the-year holidays, it seems to be a good time to talk turkey! If there is anyone reading this who has been to LREC and has NOT seen a turkey, you need to get back here! Granted, the majority of these large, lovely birds leave our Center to go home for the holidays themselves—it seems that most of our turkeys spend the winter down the road somewhere in Warson Woods.

Anyway, if you think you know a lot about turkeys, take this month's Glass House Quiz and see how you fare!

1. Who would have liked to see the turkey instead of the eagle as the United States' national symbol?
A) Benjamin Franklin B) George Washington C) Bill Clinton
2. What is the tuft of hair like feathers in the middle of a male turkey's chest called?
A) Trachid B) Beard C) Brush
3. If it's not a flock of turkeys, what is it?
A) Rafter B) Canoer C) Paddler
4. What are baby turkeys called?
A) Turkins B) Chicks C) Poults
5. What is a wattle?
A) The way a turkey walks B) The flesh that hangs off the neck or chin C) The sound it makes when it perceives a predator

See **Quiz Answers**, page 5

Mayflies, from page 2

noticeable cloudiness to the wings. This short, transitional life stage is unique to mayflies.

With one final molt, the subimago becomes an imago or adult that is capable of reproducing. In fact, this is the sole mission of the adult mayfly. With no mouth, adult mayflies generally survive for about 24 hours (hence the Greek root of the scientific name: *ephemeros* meaning “lasts one day”). This is enough time for the adults to find a mate and deposit their eggs on the water surface or on the substrate. There are a few genera in which the females can survive for a couple of weeks; these individuals hold their eggs until they hatch.

The minnow mayflies, like the one in the photo, are in the family Baetidae. These mayflies are “gathering collectors,” which means that they feed on particles of organic matter that they find in the stream sediments. Different species in this family will have as few as one generation per year, or as many as one every six weeks.

Minnow mayflies prefer shallow, flowing water. As their name suggests, minnow mayflies move with a swimming motion, while other mayflies might crawl along or burrow into the stream substrate. Minnow mayflies swim by moving their abdomens up



Note the size of the minnow mayfly relative to the ice cube tray it is standing upon, and the damselfly nymph to the left. Photo by Danelle Haake.

and down. When they stop swimming, they are known for always facing upstream with their abdomen swaying side to side with the current.

On a scale of mayfly pollution tolerance, the minnow mayfly is not exactly a water quality snob. They are known to live in streams with high concentrations of nutrients, excessive algae (LUNCH!), sedimentation, high

temperatures, and low dissolved oxygen. Various parts of this description fit Deer Creek in different seasons. The other variety of mayfly we collected, the flathead mayfly (Family Heptageniidae), seem to be somewhat more sensitive. But having two distinct varieties of this biological group is very heartening, indeed! ☘

References:

Merritt, R.W. and Cummins, K.W. 1996. *An Introduction to the Aquatic Insects of North America*. 3rd Ed. Kendall/Hunt Publishing Company; Dubuque, IA.

Murdoch, T. and Cheo, M. 1999. *The Streamkeeper's Field Guide*. Adopt-A-Stream Foundation; Everett, WA.

Voshell, J.R. Jr. 2002. *A Guide to Common Freshwater Invertebrates of North America*. McDonald & Woodward Publishing Company; Blacksburg, VA.

Quiz Answers, from page 3

1. A) Benjamin Franklin. In a letter to his daughter in 1784, Benjamin Franklin described his preference for the turkey over the eagle as the national bird. There is no known documentation that he actually advocated for the turkey.
2. B) Beard. The beard is a group of modified feathers that look like hair. Most mature males have a beard and some females have also been known to grow beards.
3. A) Rafter. The word comes from the 1830 variant of the word raff, "heap or large amount." Also associated with riff-raff or rabble.
4. C) Poult. Poults are precocial, which means they are born fairly mature and mobile. They leave the nest and feed themselves shortly after birth. They will stay with their mother at least through the fall for males and into the spring for females.
5. B) Wattle. Also called a dewlap, this flesh hangs under the neck. The piece of flesh seen growing above the bill and draping across is called a snood.

The Turkeys at Litzsinger

By Martha Schermann

Winston and Churchill apparently have moved on perhaps to start their own flock. The good news is that two young males have taken their place at LREC.

Remarkably, their personalities are much like those of my cats (Oliver being the obedient and loving cat and Laurence being the drama queen). These two turkeys come when called to get their seed and stop fighting when scolded. Oh, to live the life of a wild turkey or a domestic cat!

We have watched our little turkey hen with the bad leg become a little more disabled and a little slower over the last year. But another hen has been watching over her and stays with her throughout the day.

During this coming holiday season perhaps we should be more like these turkeys. Have a safe and happy holiday season. 🐾

Whistle Pig, from page 2

common term for...yep, you guessed it... *Marmota monax* — oh, so sorry, but I couldn't resist. Still stumped? The suspense has got to be killing you, so here goes...a whistle pig is a groundhog, also known as a woodchuck.

All right, I know...it's certainly not earth shattering information, but I hope, at the very least, you find it interesting.

Please visit <http://mdc.mo.gov/nathis/mammals/woodchuck/> to learn more about this fascinating little critter. 🐾



The whistle pig, groundhog, or woodchuck (*Marmota monax*).