



LEEPfrog



The Newsletter of the
Lutherlyn Environmental Education Program

Volume 26

Winter '17/ '18

Charismatic Crustaceans by Holly Schubert

Charismatic crayfish are often the stars of stream studies at Lutherlyn! Few sights will cause shrieks of both horror and delight as reliably as a glimpse of these distinctive creatures scurrying from under a rock.

People sometimes call them “baby lobsters” because that is what they look like, and indeed, lobsters and crayfish are related. Both are crustaceans and both have five pairs of legs - two pincers they hold in front of their body, and four pairs of legs along their sides - making them decapods. Their many legs and jointed tail make it possible for them to easily move forward, backward or sideways.



Crayfish are omnivores and eat a wide variety of foods, including insects, plants, decomposing plant and animal matter, worms, other crayfish, and fish eggs. They are eaten by herons, owls, snakes, large salamanders, frogs, raccoons, muskrats, minks, river otters, many fish, turtles, other crayfish, and even people. The wide variety of foods they eat and animals that rely on them for food makes them an important piece of many ecosystems.

Crayfish live in water, and breathe through gills, but they don't have to stay in water to survive. They can breathe as long as their gills remain moist. While they are most often spotted in streams, in wet weather we sometimes see them walking right down the middle of one of Lutherlyn's trails!

Many of the crayfish that leave the water are generally known as “burrowing crayfish” and dig tunnels in areas with a high water table, like near the edges of ponds and streams. They spend

(continued on page 2)

Notes from the Naturalists by Todd Garcia-Bish

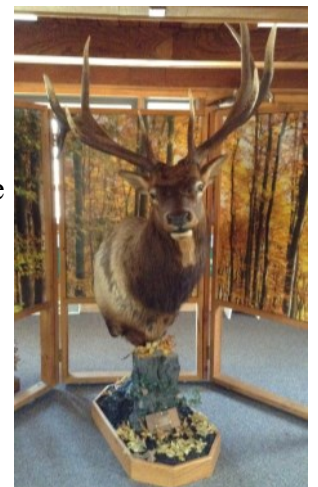


Inside this issue:

Earthcare Corner	Pg. 2
Terra Dei Homestead	Pg. 3
Year in Review	Pg. 4
Public Programs	Pg. 4



No one will miss the newest addition to the Discovery Room! At nearly 8 feet tall and almost 6 feet wide, the Pennsylvania **wapiti** easily takes up more space than anything else. Wapiti is the Shawnee term for what others may call “elk.” (“Elk” is actually a German name for the European moose.) Wapiti once roamed over all of Pennsylvania, but were hunted to extirpation by the 1850s. Between 1913 and 1926, the PA Game Commission brought western wapiti from Wyoming to Pennsylvania. The first 60-70 years after reintroduction did not go well for these animals, but the population started to grow during the 1970s. Today there are about 1,000 individuals living mainly in Clearfield, Elk, Cameron, Clinton, and Potter counties. Wapiti can weigh up to 1,000 pounds, run 30 mph, and stand up to 5 feet at the shoulder.



(continued on page 3)

Charismatic Crustaceans (continued from page 1)

almost all of their lives living in these burrows. You can spot the entrances of these burrows by the small mud “chimneys” left behind when the crayfish excavates its tunnel.

The chimneys that burrowing crayfish leave behind are very important; the tunnels they create provide habitat for eastern massasauga rattlesnakes. The massasauga is a small, shy, and rare rattlesnake. In Pennsylvania it is considered an endangered species. Massasaugas are known to hibernate in abandoned crayfish burrows. Our neighbors to the north at Jennings Environmental Education Center have a



population of massasauga rattlesnakes and are participating in a study with crayfish expert Zach Loughman of West Liberty University to learn more about burrowing crayfish and their relationship to massasaugas.

Crayfish and massasaugas are yet another example of how “everything is connected.” Keep an eye out for the small mud chimneys and holes when you are walking near a pond. Think about the little excavator living down below and how important it is to the surrounding ecosystem.

Would you like to receive this newsletter electronically? Simply email the LEEP staff (leep@lutherlyn.com) and your next newsletter will be an electronic one instead of a paper one.

Earthcare Corner: Sharing Nature with the Next Generation by Todd Garcia-Bish

One of the most significant things that we can do to take care of the earth is to teach others about being good stewards. A prime example of this is Dr. Gordon Bachman. Since 1997, Gordy has been a key part of Lutherlyn’s maple sugaring program. For the last 20 years, Gordy has been our Sugar Maker and has cooked thousands of gallons of sap into maple syrup. He has also taught the students who come to Lutherlyn on maple sugaring field trips about the syrup process and how important trees are. Gordy has recently decided that it is time to pass the sugary torch on to someone else. We thank him for all of his time and energy in teaching over 7,000 children and making hundreds of gallons of Lutherlyn’s delicious maple syrup. Gordy has shared nature with thousands and inspired them to be good stewards of creation.



Contact us: Lutherlyn Environmental Education Program, Box 355, Prospect, PA 16052
(724) 865-9079, leep@lutherlyn.com, www.lutherlyn.com



Terra Dei Homestead: Energy Efficient Blinds by Holly Schubert

In the fall of 2016 the house at Terra Dei Homestead received some much needed updates, including new windows in the south-facing wall.

These new windows allowed us to hold onto heat more effectively and make the most of the passive solar heating. After the windows were installed, one more feature needed to be updated to truly provide energy efficient heating and cooling in the house: insulated blinds for the windows. This last piece of the puzzle was put in place in the spring of 2017, thanks to Lutherlyn's Woodland Quilters.

Insulated blinds are an important part of passive heating and cooling. On winter days, the blinds are kept open to allow the heat from the sun into the house, then closed at night to trap that heat.

In the summer, the blinds are kept down during the day to keep extra heat out of the house and hold onto the cool air that flowed into the house overnight.

The blinds are made with a material called Warm Window Insulated Fabric, which includes layers of backing, insulation, and reflective foil. All of this is sewn to a plain or patterned curtain, to make attractive insulated blinds. When the windows at Terra Dei were replaced, we realized we needed to replace the 13 year-old blinds that had been insulating those windows, too. They had degraded over the years from sun exposure. We are very grateful to the Lutherlyn Woodland Quilters for their excellent work in assembling a new set of blinds to complete our passive heating and cooling system.

The finishing touch was finding a way to seal the edges of the blinds securely to the window frames to prevent cold or heat from leaking in around the edges (without marring the beauty of the new windows). We decided on metal bars that could be attached with magnets when the blinds are closed, and removed when the blinds are open.

The combination of new windows, new blinds, and a more effective way to seal them has made an incredible difference in the efficiency of the entire home. There are always ways to make a home more energy efficient, even if it is the house at Terra Dei Homestead.



Notes from the Naturalists (continued from page 1)



Another recent addition to the Discovery Room is a **mink**. A member of the weasel family, mink are about the size of a house cat. This rather solitary animal lives along streams, rivers, and wetlands. They are active at dawn and dusk and eat small mammals, frogs, crayfish, muskrats, rabbits, snakes, and chickens. Mink are able to hear rodent sounds that most other animals can't. They like to live in abandoned groundhog dens or muskrat lodges, but will also live in hollow logs. In good habitat, there is

about one mink per 30 acres. Good habitats for mink are areas that are unpolluted and give them access to a diversity of prey. Mink are more common than most people realize, with up to 14,000 taken each year by trappers.

Return Service Requested



Share this newsletter with a friend!

LEEP Public Programs

Saturday Safaris

Lutherlyn Saturday Safaris are a great way to spend Saturday mornings! They are designed for groups and families of all sizes and shapes. Safaris are \$7.00 per person and all of the programs involve outdoor adventures! Please check LEEP's website (www.lutherlyn.com/EE) or contact the LEEP office for more information or to register for a program.



- **March 3, 2018**- Maple Sugaring, 9:30-12:00 or 1:00-3:30
- **September 22, 2018** - Survival Skills, 9:30-12:00
- **November 3, 2018** - Geology and the Rocks of Lutherlyn, 9:30-12:00

Get Up to 20% Off

Special Offer for
New Schools

Your First LEEP Field Trip Experience

LEEP has school field trips available year-round!
Please check out our website and call or email us
for more information.

Year in Review: 2017 by Todd Garcia-Bish

Last year was extraordinary for the Lutherlyn Environmental Education Program. The number of students attending maple sugaring field was the largest in at least 10 years. In fact, over **6,500** students took part in environmental education experiences in 2017, making it our **largest year ever!**

Improvements to the mine treatment wetland are also a highlight of 2017. Iron hydroxide was removed from the settling pond and wetland, freshwater was diverted around the wetland system, and breaches in parts of the wetland were repaired. These improvements and repairs will continue to keep pollution out of Semiconon Run.

Unfortunately, we don't have much time to reflect on the success of 2017; we have reason to believe that 2018 will be just as extraordinary, and even bigger!

You Are Invited:

CampBlast



Saturday, May 12, 2018

Join us for a day of FUN that highlights all that
Lutherlyn has to offer.

The best part.... **EVERYTHING IS FREE!**