

**Lutherlyn Environmental Education Program**  
**P.O. Box 355**  
**Prospect, PA 16052**

*Return Service Requested*

Non-Profit Org.  
 U.S. Postage  
 PAID  
 New Castle, PA  
 Permit #132



*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 \$6.00 per person and all of the programs involve outdoor adventures! Please check LEEP's website ([www.lutherlyn.com/EE](http://www.lutherlyn.com/EE)) or contact the LEEP office for more information or to register for a program.



- **March 4, 2017**- Maple Sugaring, 9:30-12:00 or 1:00-3:30
- **September 23, 2017** - Gardening, Habitats, & Energy Efficient Living, 9:30-12:00
- **November 4, 2017** - George Washington, the Venango Trail, & Archaeology, 9:30-12:00

**Get Up to 25% 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.**



**Saturday, May 13, 2017**  
**Join us for a day of FUN that highlights all that Lutherlyn has to offer.**  
**The best part.... EVERYTHING IS FREE!**

**Earthcare Corner: LEDs** by Todd Garcia-Bish

A new type of energy efficient light bulb has become widely available over the last few years, the light emitting diode lamp (or LED). According to a very thorough study by the Department of Energy, LEDs have less negative environmental impact than any other light bulb type. They also last for long periods of time, some up to 45 years!

Many utility companies encourage the use of LEDs through rebate programs. Through one such program, Lutherlyn is in the process of replacing over 450 light bulbs with free LEDs. Contact your electricity supplier for more information.



Volume 25

**LEEPfrog**

The Newsletter of the  
 Lutherlyn Environmental Education Program



Winter '16/ '17

**Rare Fireflies at Lutherlyn** by Holly Schubert



In the midst of winter, it is a pleasure to think back to warm summer nights, dusk falling late in the evening, and the twinkling of fireflies in the grass and trees. Everybody loves fireflies, but not everyone knows that there is also a lot of fascinating information to learn about these magical little creatures!

Fireflies are not really flies; and lightning bugs are not true bugs — they are beetles, members of the insect order Coleoptera. They have six legs and three body parts just like all insects. Like all beetles, they have two pairs of wings: one pair adapted to be a hard covering over their back, and another pair that folds underneath this covering, and is used for flying.

Of course, the thing that makes fireflies stand out from other insects and beetles is their ability to light up! This is a type of bioluminescence. The part of a firefly's abdomen that lights up is known as its lantern. Within the lantern are specialized cells called photocytes, and within those cells are the chemicals that create the light of fireflies. The flashing of fireflies is created by regulating how much oxygen is released into the photocytes - when oxygen is present, the light flashes on, when oxygen is not present, there is no light.

Different types of fireflies can be identified by their flash patterns. In most species in the eastern United States, the males fly and flash a certain pattern to attract a mate. The females sit on the ground or on plants and flash a different pattern in response. Different species also prefer different habitats and tend to appear at different times of the evening or season.

(continued on page 2)

**Notes from the Naturalists** by Holly Schubert



**Inside this issue:**

Program Highlight	Pg. 2
Terra Dei Homestead	Pg. 3
Earthcare Corner	Pg. 4
Public Programs	Pg. 4



Visitors to Lutherlyn over the last two years may have caught a glimpse of a rare sight – a piebald deer. A “piebald” is a color variation of white-tailed deer with some patches of white fur, and some patches of brown fur. The piebald deer we have seen at Lutherlyn is a female which was first seen after the spring of 2015. She is most often spotted along the main Lutherlyn driveway, between Dick Rd. and the bottom of the hill, often in the section of forest between the driveway and the Equestrian Center. Her head and neck are brown with some patches of white, while the rest of her body and legs are mostly white. She is quite a sight to see!



Piebalds are different from albino deer. Albinos have a recessive gene that causes them to have no melanin at all in their body. Along with all white fur, this gives albino deer pink noses and eyes and white

(continued on page 3)

The LEEPfrog is published annually by the staff of the Lutherlyn Environmental Education Program.

### Rare Fireflies at Lutherlyn (continued from page 1)

One of the most interesting things that we have learned about fireflies recently, is that Lutherlyn is home to the rare synchronized fireflies, *Photinus carolinus*! These amazing creatures make the twinkling of fireflies even more mesmerizing when they flash all together for several seconds and then go dark for several seconds in unison.

The males of this species flash together and go dark all at the same time, creating a mesmerizing pattern of synchronized flashing and darkness in the forests where they fly. They only exist in a few places in the United States. Viewing this rare spectacle of synchronized flashing has become a popular tourist attraction in Great Smoky Mountains National Park, which is home to the largest population of *Photinus carolinus*. In recent years, it has been confirmed that a thriving population also exists in Allegheny National Forest in northwest Pennsylvania.

It is not easy to see synchronized fireflies, mostly because they hang out in places that humans usually are not - they are most visible in mature forests, away from the forest margins, after 10:00 or 11:00 pm. They are best viewed, of course, in the dark, with flashlights (and cell phones and cameras) turned off. We have happened upon them on night hikes into the forest with campers, early in the summer. They are most active in our area in mid-June.



While the synchronized fireflies may be the most spectacular or rare species we have seen at Lutherlyn, there are plenty of other fireflies around, and they all have their own distinctive flash patterns too, as well as favored habitats and peak times. We are fortunate at Lutherlyn to have a lot of suitable habitat for fireflies of many different types, and therefore many spectacular fireflies to enjoy on summer evenings! This summer keep an eye out for fireflies and their flash patterns. Better yet, come to Lutherlyn for a week and see if you can find some of our synchronous fireflies!



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

### Program Highlight: Early Settlers and the Venango Trail



In December 1753, George Washington followed the Venango Trail through Lutherlyn on his way home to Virginia. The events of his excursion into the PA frontier led to the outbreak of the French and Indian War a year later. However, native people were using this trail for hundreds of years before George did. When students spend time learning about the Venango Trail at Lutherlyn, they learn the importance of this trail and learn about many of the artifacts that have been excavated from the archaeology site adjacent to it. Being able to walk on the historic trail and touch history, makes it come alive!

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



### Terra Dei Homestead: Renovations!

The house at Terra Dei has been helping Lutherlyn educate visitors about environmentally-friendly ways of living since 1996. Like any house that is 20 years old, it has been in need of some updates and repairs. Thanks to a group of generous donors, we have been able to make the needed renovations within the past year. Visitors to Terra Dei in 2017 will notice the upgrades to several features of the home.

The most significant renovation is brand new south-facing windows. The old windows and framing were deteriorating badly, allowing significant heat loss. All of the large south-facing windows were replaced with Pella fixed-frame windows and the cooling doors were replaced with crank-out awning windows. The rest of the south facing wall was also improved with new siding, interior and exterior trim, and more effective insulation in the wall below the windows. The windows, and the entire south facing wall, are the main part of the house's passive solar heating system, which allows us to capture the heat from the winter sun to help warm the house.

The steel roof on the house was also in need of renovation. It is made of recycled steel shingles, but much of the protective coating had worn off over the years. These shingles have now been repainted with a high quality paint that should last for several decades.



The deck on the house has been rebuilt, this time using recycled plastic lumber. Recycled plastic lumber finds a new use for discarded plastic while also providing a highly weather-resistant building material, perfect for outdoor locations.

These and other small renovations have really renewed the house at Terra Dei. We are grateful to the faithful group of donors who came through with the funding to make these essential upgrades happen and keep the house well cared for and up to date. We look forward to sharing our new and improved Terra Dei home with visitors in 2017!

### Notes from the Naturalists (continued from page 1)

hooves. The chances of an albino deer being born are only 1 in 20,000. Piebald deer have a genetic variation or defect that produces white fur on some parts of the deer's body. The eyes, nose, and hooves are normal color. Other defects often occur along with the piebald color variation, including short legs, arching spine (scoliosis), short lower mandible, bowing of the nose (often called Roman nose), and even some internal organ deformities. The piebald deer at Lutherlyn does appear to have shorter legs than the other white-tailed deer around her.

Piebald deer are much more common than true albino deer, but are still rare – it is estimated that less than 1% of the white-tailed deer population in average areas are piebalds. If piebald deer mate with normally-pigmented deer, the offspring could be either piebald or normally colored deer.

