THE
EDWARD L. ROSE CONSERVANCY

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Land Conservancy in the Time of COVID-19

These are trying times for all, but rest assured the E.L. Rose Conservancy has not ceased operations. Our staff, as with most organizations, is working remotely, and our Board of Directors continue to meet at their regularly scheduled times each month, albeit by Zoom.

As with most land conservancies, our preserves remain open to our members, and we encourage you to maintain social distancing when you do enjoy our facilities.

We are keeping close tabs on directives from the CDC and others as to when it will be safe to resume public events and volunteer activities.

Keep an eye on our website for the most up-to-date information on re-scheduled events.

How Silver Lake is Addressing the Blue-green Algae Problem

Charles Ingraham, Chair person of the Silver Lake Association Water Committee reports the following:

In August, 2019, Silver Lake experienced a serious algae bloom. Many other lakes throughout the northeast have had similar outbreaks. The Silver Lake Association felt that every effort should be made to analyze what occurred at Silver Lake and to seek ways to mitigate against future outbreaks. A Water Quality Working Group was established, and it has arranged for periodic testing of the lake water, with special emphasis on phosphorus as a nutrient. Laboratory analysis in November pointed to two areas (out of 21 sites tested around the lake) of higher than usual phosphorus levels. Water samples were again taken in April.

Unfortunately, the laboratory is closed because of the COVID-19 virus, but the samples are in a freezer and we will have lab results as soon as the lab re-opens.

The Working Group has also approved a plan to test septic systems during this spring and summer, and is looking into various plantings around the lake that may help minimize nutrient flow into the lake. It has surveyed what others are doing in the area. Finally, the Working Group has established an ongoing relationship with outside experts to help guide our activities.

Blue-green Algae is Not Just a Silver Lake, PA Problem

Last year we published a newsletter item on this annual scourge of lakes and streams. As the temperature slowly rises this spring please be reminded that cyanobacteria is not a local problem, nor is it anything to trifle with. It can cause serious illness, to humans and the pets they love.

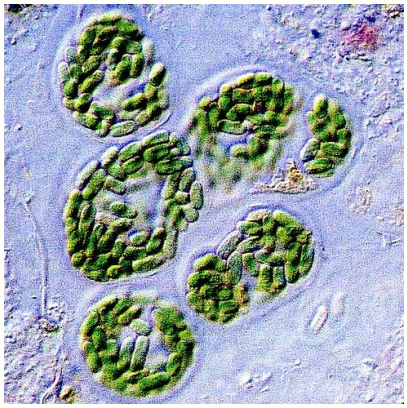
Let’s say your dog decides to go for a swim and collects the algae on his coat. You recognize what happened and grab your hose to wash him down. In the course of this important task you rub your eye. In a few weeks you can’t feel half your body, you have an ulcer in your eye, and your cognition is impaired. These are only some of the symptoms cyanobacteria can cause. There are liver issues, skin issues, etc. Not to mention your dog passed away.

The neurotoxins from the bacteria in these pea soup-like blooms can cause encephalitis and are found in nearly every state. The root cause of these events are not natural—they are largely the result of our agricultural industrial complex, a result of fertilizer and manure run-off and global warming. Think phosphorus, a key ingredient in industrial fertilizer, a by-product of the pulp and paper mill industry, and even present in the rain runoff from your lakeside lawn that was just treated with weed-n-feed.

While it may be nuisance in our backyard, limiting the days when you can take a cool dip on a hot summer day in your favorite swimming spot, it is more pervasive and serious than that. Algal blooms.are responsible for more than a billion dollars in lost revenue from impacted recreation areas, reduced fishing activities, and depressed property values. Local community budgets for water treatment are also impacted if the source of drinking water is cyanobacteria-laden.

How does climate change contribute? The combination of more powerful summer storms (which exacerbate runoff) and prolonged warmer weather (which cause water temperatures to rise), promotes bacterial growth.

Farmers can help if they are willing to modify their field preparation processes. For example, pre-mixing fertilizer into the soil before application has been shown to reduce runoff by half. Reducing the amount a field is tilled can limit drainage from sediment that has become loosened. Knowing how your field is draining, and managing that flow, will also minimize the nutrients that end up in a downstream waterway.



What can YOU do? In the immediate term, keep yourself and your dogs out of water contaminated with blue-green algae. And add your name to the list of folks who are pressuring legislators to limit the amount of phosphorus in fertilizer products, as Wisconsin has done. If enough states pass their own measures it will be in the producers' interest to conform with one version of their product that reduces the impact of runoff on water bodies,. So apply pressure, And stay safe.

Eagle's Nest Update

There was recent activity on the raptor nesting platform that we erected in 2019 in the

Brackney, PA area under a Green Communities grant for Edward L Rose Conservancy. The nest is intended to enhance the chance of successful breeding of raptors, including bald eagles, hawks, osprey or owls. There have been a variety of visitors to the nest over the past year, but no breeding activity as of yet.

Based on the images captured by two motion activated cameras mounted above the nest, here is a possible narration of this morning's event.

1. A pair of frisky squirrels were wrestling in the snow covered nest;
2. A mature bald eagle dropped in looking for breakfast;
3. No definitive evidence as to whether the predation was successful;
4. A lone squirrel views the nest after the eagle departed; and
5. A significant disturbance to the nest lining materials is evident.

This is the first capture of images of an eagle visiting the nest platform!! **This is a milestone that verifies two goals:**

1. The nest location is known to at least one local eagle; and
2. That landing and take-off from the nest location is possible for an eagle with a six-foot wing span.

This is late in the eagle nest selection/breeding season for this year, but it gives hope for more activity in the future for possible raptor breeding. We will keep you posted.

As of today, one of the two motion-activated cameras (which can transmit pictures via email) is working. The cameras are battery operated and have a solar panel which extends the battery charge. The batteries need changing about every few months.

Visitors to the nest have included gray squirrels, flying squirrels, Great Horned Owls, and various small birds. This Spring we have observed osprey and other eagles flying nearby.

We continue to be hopeful that more permanent eagle tenancy is in our future.

Wild Things in Your Woodlands

Contributed by *Kristi Sullivan*

Ruffed Grouse (*Bonasa umbellus*)

The ruffed grouse is a heavy-bodied, medium-size game bird, measuring about 17 inches from the tip of the beak to the end of the tail. Both sexes are similar in color, which varies among individuals from a dark gray phase to a chocolate brown or red phase. In a given area, the population may consist primarily of individuals of either the gray phase or the red phase, with the red phase being more common in milder climates and the gray phase occurring most often in coniferous areas and regions with more severe winters. Male grouse have a large, black patch of feathers, or ruff, on each side of

 *the lower neck, and a large crest of feathers on the head. Female grouse have a shorter tail and crest, and a smaller, less apparent neck ruff. Both sexes have a wide, black band across the tip of the tail, though in females the band is often broken or blotchy.*

As you pause to catch your breath while walking through the woods, a grouse can leave your heart racing as it explodes into the air. Its cryptic coloration blends well with the leaf litter, leaving it undetected until the last minute. The startling noise created by the sudden burst into flight provides an excellent mode of escape from would-be predators. The ruffed grouse is a year-round resident and a thrill to encounter in any season.

The grouse is well adapted to living in cold, snowy climates. In the fall, in preparation for winter the grouse grows fleshy, feather-like protrusions, called pectinations, along both sides of its three front toes. When winter arrives, these growths serve as snowshoes, allowing the bird to walk on top of snow, and helping it cling to slippery branches while feeding on tree buds. The grouse also may keep warm at night by burrowing into soft snow, where it is covered and protected from the wind-chilled air above. Alternatively, a grouse may roost in conifers, where it finds protection from the wind and cold.

Once winter has passed, male grouse are heard making the familiar, bass-like drumming sound during the breeding season, from late March to early May. A male chooses a favorite displaying site, typically a large log with a birds-eye view of the surrounding area, to be the center of his territory. Here he struts and drums to attract females and stake claim to his territory. With his back straight up and tail braced against the log, he cups his wings and moves them sharply forward and back in a horizontal, slightly circular motion. The drumming sound that is produced starts with a few evenly spaced thumps that increase in frequency to a whir.

After mating, the hen selects a nest site at the base of a stump or a tree, and lays a clutch of 10-12 eggs. The chicks are able to move about and feed soon after hatching, searching for insects in forest openings and edges. Grouse eggs and chicks are vulnerable to predation by a variety of animals including snakes, weasels, mink, fishers, house cats, red and gray foxes, coyotes, red squirrels, bobcats, skunks, opossums, raccoons, barred or great horned owls, and a few hawk species. Cold, wet, spring weather can also affect chick survival. Grouse numbers peak and bottom out in eight- to 10-year cycles, and wildlife biologists have different theories about what causes these population fluctuations. Potential factors include the weather, food supply, predation, habitat changes, or a combination of factors.

The ruffed grouse occurs across Pennsylvania in areas of suitable habitat and is generally more abundant in forests of higher elevations (above 1,000 ft). It is most common in extensive forests or wooded hillsides and ravines, especially those with young, early-successional stage forest, or scattered clearings. The grouse also inhabits abandoned farmlands and pastures that are reverting to brush and forest. Specific habitat features attractive to this bird include brush heaps, fallen timber, grapevine tangles, and conifers.

The adult grouse eats a mostly vegetarian diet. Adults consume large quantities of buds and catkins of aspen, birch and hop hornbeam as they appear in the spring. In the summer, they eat the leaves, fruits, and seeds of aspen, cherry, sedges, strawberry, blackberry and raspberry. In the fall, they feed on fruits of hawthorn, apple, cherry, viburnum, sumac, and dogwood, as well as beechnuts and the buds of apple, birch, cherry and hop hornbeam. During the winter, grouse depend on cherry, aspen, birch, hop hornbeam and serviceberry buds.

Forest landowners can provide a number of habitat features to benefit the ruffed grouse. With enough acreage, it is possible to create and maintain patches of young, sapling stage forest in close proximity to 10 to 25 year-old pole stands for wintering and breeding cover, and 25 to 40 year-old mature

aspen for winter food resources. Having all of these forest stages present within a 6 to 10-acre area is ideal. Maintaining patches of conifers to provide winter cover, and leaving large logs on forest floor to serve as drumming logs, nesting sites, and escape cover, can also be beneficial. Landowners can encourage a diversity of food-producing shrub and understory species including grapevines, blackberries, hop hornbeam, serviceberry, dogwood, sumac, viburnum, hawthorn, and apples trees. In the overstory of the forest, promote aspen growth for winter food, as well as American beech and black cherry. When cutting trees for firewood, or having a timber harvest, consider leaving the tree tops lying on the ground to provide cover. Then revisit the area repeatedly to enjoy your success and the surprises that the ruffed grouse promises to deliver.

Kristi Sullivan is Co-Director of the Conservation Education and Research Program in the Department of Natural Resources at Cornell Univeristy, and Director of the New York Master Naturalist Program. More information on managing habitat for wildlife, as well as upcoming educational programs, can be found by visiting ArnotConservation.info