

Edward L Rose Conservancy



# Conservancy Currents

Fall 2024



Highpoint Preserve, Silver Lake, PA



*First signs of beech leaf disease*

## **NOW IT'S THE BEECH TREES**

We have all seen the devastating loss of ash trees caused by the emerald ash borer. This invasive beetle has killed virtually all of the mature ash trees in our area. A few years ago ash trees comprised up to 20% of our forest canopy and an even higher proportion of our hedgerows. Today, ash trees are dropping at an alarming rate onto our roadways, power lines and hiking trails.

Recently it's the beech trees that have been hit by a new lethal blight. Beeches were already suffering from beech bark disease, which showed up in our area in the early 1980's. Beech bark disease, unlike emerald ash borer, has been relatively slow in infecting and killing our beech trees. It is characterized by a mottled warty appearance as the cankers and fungal infections spread across what would otherwise be a very smooth gray bark. A walk through our woods will show beeches in various stages of the disease, some seemingly unaffected and others dead or dying, usually within ten years of infection.

As damaging as beech bark disease has been, as of 2022 a new disease has arrived and it is affecting the leaves. This invasive, a nematode, is infecting the leaves, causing them to darken initially, then turn brown and die. It is attacking young and old trees alike and can be readily seen along the trails of the Highpoint Preserve. It is most visible among the saplings. While beeches have not been as valuable a tree for human use as ash, their mast is nonetheless a valuable food source for wildlife. Beech saplings have been one of the few trees which can grow in forests heavily browsed by deer, as they are not apparently preferred compared to the other tree varieties needed to replenish our forests. Now it seems that they are destined to disappear also.





*Deer at Highpoint Preserve and the lack of undergrowth*

## **HUNTING SEASON**

**There are many different hunting seasons in Pennsylvania and New York, but the one we are most aware of, and which results in the most hunting activity and potential risk to others wishing to enjoy the outdoors, is rifle season for deer. This year rifle season runs from November 30<sup>th</sup> through December 14<sup>th</sup>. The Woodbourne Preserve is closed during this period to protect the public and allow a local hunting club unfettered access to control the deer population. This arrangement has been in place for over twenty years and has resulted in a visible rebound in the growth of saplings for forest regeneration.**

**The Conservancy will be allowing limited hunting for deer at the Highpoint Preserve again this season in an effort to control their overabundance and to restore the depleted undergrowth in the Preserve. Trails will not be closed, but visitors should be aware and dress appropriately. Hunters at Highpoint have been vetted and selected for their familiarity with the Preserve and the locations of adjacent houses, and for their reputations for safe and ethical hunting practices. Pennsylvania law requires safety zones of 450' from houses where shooting is not allowed.**



*Kristi setting up to search for laricobius beetles*

## LOOKING FOR “LARRY”

### (*Laricobius Nigris*)

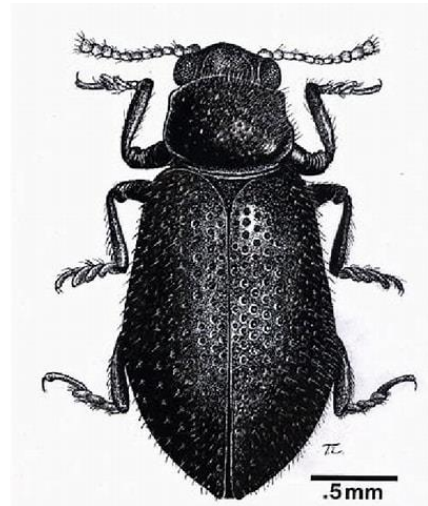
**Seventy years ago on Friday, October 15, 1954, Hurricane Hazel struck with 99 MPH winds, taking down many of the towering white pines on the eastern slope of the hillside along Silver Lake. Waiting patiently in the understory for its time in the sun was the Eastern Hemlock, which filled in like a wall of silent sentinels along the western shore.**

**The hemlock woolly adelgid (*Adelges tsugae*) is a serious threat to the eastern hemlock in Pennsylvania. The egg sacs of these insects look like the tips of cotton swabs clinging to the undersides of hemlock twigs. As climate change accelerates and temperatures climb, the necessary winter kill periods continue to diminish and the disease moves further north.**



HWA was accidentally introduced to Virginia from Japan in the 1950s, and by the end of 2023, the pest was found in all 67 Pennsylvania counties. Efforts are ongoing to introduce several different predatory insects that feed on hemlock woolly adelgid, including the *Laricobius Nigris* beetle.

Both silverflies (which were released earlier this year into the Woodbourne Forest) and *Laricobius* beetles are effective predators of HWA. But their effectiveness can vary depending on environmental conditions. *Laricobius* beetles are active predators during the cooler months when the adelgids are more abundant, while silverflies can be more active in warmer periods.



On October 23, 2024, a team of E. L. Rose board members volunteered to assist Kristi Sullivan as they went “Looking for Larry” in the Highpoint Preserve. The prevalence of the egg sacs seems to wax and wane. In July they were easily visible along the shoreline, so that’s where we went looking for them. The search method involves flagellating an affected stem over a taut canvas ‘kite’. In the photo above, Scott Heckman, with kite and wand in hand, is observing Kristi Sullivan as she tries to suck up a suspect beetle into a glass jar. After several hours of unproductive bush beating, we repaired to the Heckman’s home for coffee and pastries. With one more attempt, the Heckman hemlocks produced the predator. Larry is at the lake.

At this point we shouldn’t expect the presence of these introduced natural predators to preclude the need for chemical treatment for HWA, but there is newfound hope as the fight continues to save the Eastern Hemlock.

## **‘TIS THE SEASON**

Now is a good time of year to think about a donation to your Conservancy. Maintaining over a thousand acres of protected lands in our Preserves and monitoring another thousand plus acres of land protected through conservation easements requires a solid fiscal foundation. Taxes, insurance and professional monitoring are ongoing annual expenses. Then there is preserve maintenance, including removal of hazardous trees, trail maintenance, drainage and road maintenance, boundary posting and more. Additionally, there are the office expenses required to maintain and inform the membership, event and program expenses, and finally the cost of new acquisitions. We are actively working toward and anticipating acquiring new conservation easements this year, adding

to the acreage we already protect. Your donation can go a long way to help our all-volunteer board meet its goals and obligations as it works to protect our natural environment.

## **BOOK REVIEW**

**“The Light Eaters”, a book by Zoë Schlanger - Published by Harper Collins, 304 pages.**

*“How the Unseen World of Plant Intelligence Offers a New Understanding of Life on Earth”*

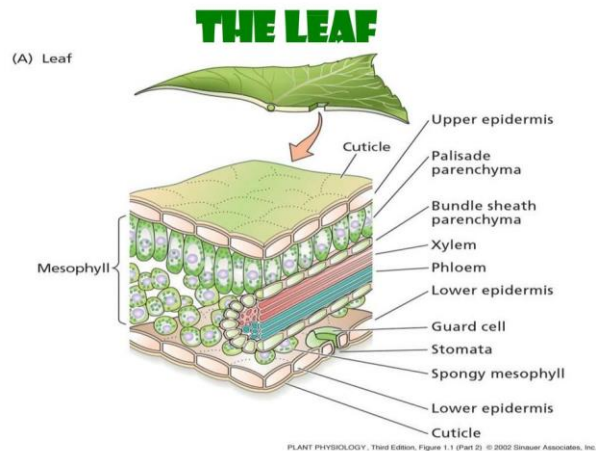
I invested my weekly Kindle budget in this book and learned much. It is a significant inventory of current research by serious botanists to explore the phenomena of plants both sensing and responding to their changing environments. The author takes some liberties in using anthropomorphic terms such as “seeing” to describe a plant’s ability to sense light. Heliotropism was the term I had learned. She explores a plant’s ability to “hear”. Modern research credibly establishes a tree’s ability to sense that it is being attacked by caterpillars, and to launch a deterrent response by increasing the tannin in its leaves, or in some cases by producing volatile organic chemicals that attract predators of the offending insect.

So, it becomes interesting to parse one's understanding of these terms against the inferences proposed by the author. How does a parasitic vine “decide” to direct its attack toward the healthier of two plants at identical distances within its reach? How is that accomplished? What is “hearing” other than the ability to both perceive and analyze vibrations even if there is no ear? Where is the analysis processed without a brain? How does a plant “recognize” that its kin are nearby?

The basic concepts that we may have learned and accepted as fact in eighth grade biology are reviewed and expanded in a way that brings new perspective to our understanding of what plants are, how they function and what they can accomplish without a central nervous system or the ability to move.

I now know that a plant is basically a stack of sequestered carbon that acts as a water pump. Hundreds of 'guppy mouth' openings on the underside of each leaf bring in carbon dioxide (CO<sub>2</sub>) while photons of sunlight strike the topside cells of the leaf, energizing the water (H<sub>2</sub>O) coursing in through the xylem veins. Six molecules of (CO<sub>2</sub>) combine with six molecules of (H<sub>2</sub>O) and convert into two molecules of oxygen and one molecule of sugar in the chloroplasts with the energy provided by the sun. The sugar exits the leaf to feed the plant and its roots via the phloem. The negative pressure developed by departing oxygen and sugar draws new water and minerals up through the plant from the roots. The oxygen that exits through the leaf stomata allows you and I to breathe. The sugar provided in the plants you eat fuels our bodies. Our modern world consists of cement, asphalt, metal, glass, rubber and plastic, yet every breath we take and every thought we think is a gift from plants.

Bill Fischer



## TREES

By Joyce Kilmer

I think that I shall never see

A poem lovely as a tree.

A tree whose hungry mouth is prest

Against the earth's sweet flowing breast;

A tree that looks at God all day,

And lifts her leafy arms to pray;

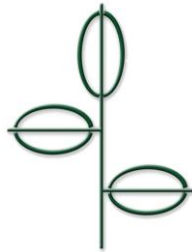
A tree that may in Summer wear

A nest of robins in her hair;  
Upon whose bosom snow has lain;

Who intimately lives with rain.  
Poems are made by fools like me,

But only God can make a tree.

More at [ELROSE.ORG](http://ELROSE.ORG)



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