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### Deer Versus Habitat. Is It Winner Take All?



"I now suspect that just as a deer herd lives in mortal fear of its wolves, so does a mountain live in mortal fear of its deer." — Aldo Leopold, A Sand County Almanac, 1949

As an organization whose mission is to be a protector of land and all that live upon that land, we are also subject to some profound contradictions inherent in environmental stewardship.

A hard truth is that a biosphere is not always in perfect harmony, even absent human intervention, which is generally to blame for disrupting the natural balance of flora

and fauna. One case in point is the challenge Binghamton University faces with respect to deer living in its preserve above the campus. There, as well as on our own Greenwood Preserve, deer are relentlessly modifying the diversity of the forest.

A 2010 study by The Nature Conservancy, *Forest Regeneration In New York State*, concluded that, "Sustained overbrowse by deer is known to reduce forest regeneration and diversity, shift species composition, and have cascading effects on plant and wildlife communities, particularly wildflowers and forest bird species. Additionally, selective herbivory, disease or altered disturbance regimes may cause certain plant species (both native and introduced) to form dense understory canopies that can suppress regeneration."

The data is pretty conclusive when comparing the impact of invasive vegetation versus deer browsing. Deer are overwhelmingly more to blame. It's not their fault. Natural predators have largely disappeared, and the deer's habitats have shrunk with urban sprawl. But the results cannot be ignored. Forests cannot regenerate, ground nesting birds leave as the vegetation they rely upon is eaten, and ultimately the culprits—the deer—starve to death. It's a lose-lose situation.

In one square mile of Binghamton University's Nature Preserve 260 deer compete for food where research suggests there should only be 15 or 20. The data is irrefutable. So what options do preservationists have? Is it a Hobson's Choice to save the forest or save the deer but impossible to do both?

After a five-year relaxation of deer hunting restrictions in the Mashomack Preserve on Shelter Island, NY, the density of oaks, red maple, and sassafras seedlings smaller than 0.5 m showed significant increases. But this is not simply an ecological dilemma. Since deer are cute, it is a political problem to gain public acceptance for the solutions required. Certainly, in the case of Binghamton University, developing a plan, which considered the accepted options such as relocation, culling, sterilization, and hunting, was an easier lift than actually implementing that plan.

Since the Edward L. Rose Land Conservancy has a stewardship responsibility for the properties within our portfolio, this is an issue we may soon have to address. The Land Management Plan we have developed for the properties we own (currently three: Greenwood Sanctuary, Longford Lake, and Highpoint Preserve) is being re-evaluated, in part, to address the issue of whether hunting or some other remedy should be one of our management tools.

It is instructive to learn how others around us have arrived at best practices to achieve sustainability of the land as well as its inhabitants. For more information check out Cornell's citizen science program with DEC: www.aviddeer.com.

## **Results of Our Deer Exclosure Project**





In 2005 the Edward L Rose Conservancy participated in an experimental deer exclosure at its Longford Lake property, funded by a grant from the Rockwell Collins Green Communities Program. Member Tim Matthews proposed the project, applied for the grant and oversaw the work. Employee volunteers from Rockwell Collins and volunteers from the Conservancy worked together on the project.

An area consisting of about 250 square feet of unmowed field on the property was fenced off with 6' high fencing, and an adjacent area of the same size was staked out to the same dimensions. The areas were planted in an identical pattern with small oak and hickory **saplings** planted in one portion of each area, and oak and hickory **seeds** planted in another portion of each area. The seeds fared poorly in both the protected and unprotected areas, with no evidence of living trees at this date.

However, the saplings tell a very different story. Most of the saplings planted in the enclosed area have grown to a height well over 16', whereas in the unprotected area, not a single sapling is visible above the grass and low brush. At this time, fifteen years later, none are believed to have survived the constant browsing by deer. Each year inspection revealed that the saplings in the unprotected area remained alive, but could not manage to grow above the weeds. It appears that at this date, they have given up the struggle for survival altogether. The exclosure provides a very stark example of the negative effect that an over-abundance of browsing deer can have on the health of our forests and the future productivity of our woodlands.

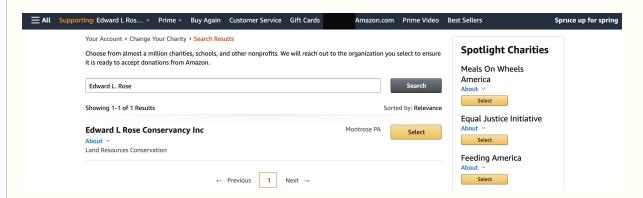
#### --- Keith Oberg





# A Reminder...You Shop - Amazon Gives

# Use Amazon Smile to Help the E.L. Rose Conservancy



This is a great opportunity to help the Edward L Rose Conservancy.

You can make an impact whenever you shop on Amazon, which will donate 0.5% of the price of your eligible *AmazonSmile* purchases to the Edward L Rose Conservancy Inc, at no cost to you.

Thank You!!

# **Update on Our Eagle's Nest Project**

In previous newsletters we have mentioned the effort to construct a raptor's nesting platform in the HighPoint Preserve we own. While no eagle has yet accepted the invitation to put down roots, or at least twigs, you may be aware if you are a regular visitor to our Facebook site that we do have residents now.

A pair of great horned owls (Bubu virginiarus) took notice of the free-rent loft last fall thanks to the remote camera that allows us to check out visitation. Apparently, after checking out competing sites,



the pair chose to take possession early this February. As described by one of our members, Tim Matthews, "with a heavy covering of snow on our raptor nest, a female owl decided that it was time and laid prone on the snow in the nest. By the end of the day, the owl had melted a spot down to the grass lining the nest and laid a single egg. Over the last 5 cold winter days and nights, the female has been laying on the nest, keeping the egg warm in sub-zero temperatures, occasionally perching on the side of the nest and calling."

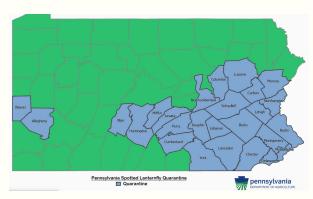
In the video below, you can watch the male deliver food and transfer it to his mate. We assume it is not just because of the pandemic that all of their meals are take-out.

As Tim reported, "The female has the primary role of incubating the egg(s) and the male partner typically brings prey to the nest to feed the female during the 28 - 38 days of incubation...The male looks to be successful at bringing food to the female who has been doing all the egg sitting. Looks like 'legs' were on the menu one morning."

To see for yourselves, check our Facebook page, or this latest one, on YouTube.



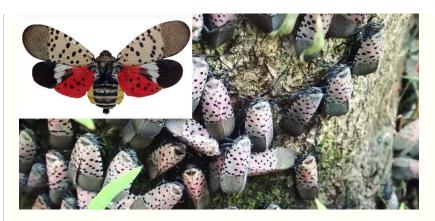
# **Threat from the Spotted Lantern Fly**



grapes, apple, hops, and hardwood industries.

Just when you thought it was safe to venture outside again...we now have another invasive species that may already have taken up residence in Susquehanna County, after threatening a good portion of Pennsylvania. Confirmed sightings, as reported by WENY News, have been made in Ithaca. The critter in question is the Spotted Lanternfly, an immigrant from southeast Asia.

Already laying waste to China, Vietnam, and Bangladesh, this insect made its appearance in the Keystone State in 2014 and has already spread to more than 25 counties. It poses a significant threat to agriculture, especially the



Currently there are few reliable strategies for controlling the invasive pest, though there are some promising approaches, including mycoinsecticides (products whose base is a living fungus) tested on Pennsylvania grapevines in 2019. Because mycoinsecticides are NOT chemical pesticides, there is growing support for using that approach. There is also evidence that the larvae do not thrive in colder environments, so that may ultimately stem its northward movement, though climate change is not helping.

For the moment, if you are in Pennsylvania and spot these insects, or a black, sooty, mold, caused by the sugary excretions from these insects, report it to the Pennsylvania Department of Agriculture <a href="here">here</a>. If you are in New York, report it here.