

C H A U T A U Q U A



BIRD
TREE
&
GARDEN
CLUB



What's in Bloom?

Jack-o-Lantern Mushrooms

Well, technically they are *in fruit* rather than *in bloom*, but they are so cool that I hoped you'd forgive a little artistic license this week.

There's a nice stand of Jack-o-Lantern Mushrooms (*Omphalotus olearis*) growing behind the Hall of Philosophy. Go down the long steps from the Hall and look left.

The Jack-o-Lantern mushroom usually grows beneath red oak trees and appears annually in late summer. The interesting thing about these is that there is no longer a red oak tree there. But if you look closely, you can see that the mushrooms are growing in a depressed circle, which is almost certainly the rotting roots of a long-gone red oak.

The name refers not only to the mushroom's bright orange coloring, but also to the fact that young mushrooms exhibit **phosphorescence**, meaning that it **GLOWS IN THE DARK!**

The fungus grows on rotten oak is in fact a sign of **heart rot** in the tree. However, trees can live for quite a long time after they become host to the fungus. Eventually the fungus will kill the tree if it doesn't die of something else first.

Some people think that if they remove the mushrooms, they will be helping the tree, however BTG Naturalist Jack Gulvin says that is like picking apples off an apple tree and thinking it might kill the tree. The mushrooms you see are simply the **fruiting body** of the fungus - they are not the main body.

Yes, it looks poisonous and it is, so just enjoy its beauty with your eyes and resist the urge to taste it.

Need scavenger hunt ideas with your kids or just want to escape into nature after this tough week? There are other Jack-o-Lantern mushroom around grounds. Try to find them. Here are a few:

1. In the ravine. If you're heading south toward Thunder Bridge, it's on the left of the brick walk on an old beech stump (which does call into question the red oak theory).
2. Not fruiting yet, but there's usually one that grows up under [the old red oak](#)

by on the topside of the HOP by the ramp from the brick walk to Haven.
3. And the BEST stand of them is in a private garden at the top of Hurst. The owner doesn't love them but she appreciates that some of us do so she allows them to stay. Thanks, Brenda!



Historical Tidbit

The mushrooms alone are worth the walk down the long steps from the Hall of Philosophy, but there's yet another reward at the bottom of the steps.

In 2018, Ish Pederson gave me this piece she had written. Here it is:

The first stepping stone to the left at the bottom of the Hall of Philosophy steps looks like an impression of a rope. It is not likely that there was rope when these

fossil stones were laid down. A geologist friend identified this impression as the mark made by a prehistoric clam inching its way across a mud flat soon to be covered up to become a fossil.

Isabel Braham Pederson

July 18, 2018



Above: Doug Tallamay will present our Tuesday Brown Bag Lecture this week. Details are below with more information on our website.

Day by Day by the BTG

Monday, August 15

6:30 PM [Lake Talk: "The Water Treatment Plant" with Mike Starks, Superintendent of the Chautauqua Utility District \(CUD\)](#)

Location: Heinz Beach

Tuesday, August 16

12:15 PM [BTG Brown Bag Lecture: "The Nature of Oaks" with Doug Tallamay, noted scholar and entomologist at the University of Delaware](#)

Feel free to **bring your lunch** and listen to Doug reveal what is going on in oak trees month by month, highlighting the seasonal cycles of life, death, and renewal. From woodpeckers who collect and store hundreds of acorns for sustenance to the beauty of jewel caterpillars, Doug illuminates and celebrates the wonders that occur right in our own yards and restorations. He also shares practical advice about how to plant and care for an oak, along with information about the best oak species for your area. *The Nature of Oaks* will inspire you to treasure these trees and to act to nurture and protect them.

4:15 PM [Garden Walk with Horticulturist Joe McMaster](#)

Location: Smith Wilkes Hall - lakeside

Wednesday, August 17



4:15 PM [Tree Walk with Forester Jack Gulvin](#)

Location: Smith Wilkes Hall - lakeside

Thursday, August 18



7:30 AM [Bird Walk with noted ornithologist](#)

Location: Smith Wilkes Hall

* Binoculars encouraged, dogs discouraged!

Friday, August 19



9:00 AM [Nature Walk with Naturalist Jack Gulvin](#)

Location: Smith Wilkes Hall - lakeside

10:30 AM Weed Team! Meet us at the corner of Hawthorn and Massey for our first Weed Team of the 2022 Season. Betsy will give a short talk on invasives and

explain which invasives we will be pulling from the Secret Silo Garden. Wear gloves and bring clippers and weed poker things if you have them.

12:30 PM Garden Walk with Betsy Burgeson, Supervisor of Gardens and Landscapes, CHQ

Location: Children's School

Saturday, August 20



9:00 AM First Forest Field Trip

Join fellow Life Members on a field trip to the First Forest, near Stockton, New York. \$10 Limited to 20 Life Members. [Click here](#) for more information and to buy a ticket for the event. We will carpool from Chq to the forest.

****Most BTG walks involve some uneven ground. We suggest sturdy shoes.****

Around Town!

Mayville Library Garden Tour
August 17 at 5pm
5 Stops
Admission by donation



Pictured above - the beloved [red oak at Children's Beach](#) in summer and winter. I'm betting you already love this tree for its beauty, but after reading Dennis's column below and hearing Doug Tallemey's lecture on Tuesday, you will have a new appreciation for the red oaks in your life.

Photos by Angela James

The Dish from Dennis

Coevolution and Keystone Plants

Certain species are absolutely required for the stability and proper functioning of the particular ecosystems in which they exist. They work like the keystone atop a Roman arch: when the keystone is in place, it keeps the arch intact; when it is removed, the entire arch collapses.

Several tree species fulfill that keystone niche in our forest communities.

Plants can't run away from their predators like animals can, so they have evolved chemical

defenses that make them inedible or repugnant to most plant-eaters. In turn, some plant-eating animals have evolved the ability to resist the damaging effects of those chemicals. This back-and-forth evolutionary dance is called coevolution, and its study has revealed many fascinating examples of species that are closely interdependent.

Many keystone plant species have caterpillars that feed primarily or exclusively on them. Monarch butterflies are a well-known example. Monarchs are members of a largely tropically distributed butterfly family, Danaeidae, that feeds on members of the milkweed family, Aesclepidaceae, as caterpillars. Milkweeds contain cardiac glycosides that are toxic to most animals, including most caterpillars. Monarchs and their kin have evolved ways to side-step the toxic compounds, so they have a rich and varied plant food source almost to themselves. Additionally, they can actually store the toxins in their tissues, making Monarchs distasteful to predators, both as caterpillars and adults. The conspicuous coloration of caterpillars (yellow, black and white) and adults (orange and black) helps predators remember not to eat them again after one unpleasant experience.

When studying plant predators, biologists tend to concentrate on species of the order Lepidoptera, moths and butterflies, because there are so many of them (over 11000 species in North America alone), their caterpillars show strict food preferences, and they are well known. (Butterflies, active during the daytime, make up about 10% of the order, while predominantly night-flying moths constitute the remaining 90%.) If a biologist collects an insect that can't be readily identified, it can be submitted to the US Department of Agriculture where an expert on that group of insects will identify it authoritatively. Caterpillars are so closely associated with one or a few food plants that the USDA won't even attempt to identify a submitted caterpillar unless it's accompanied by the name of the species of food plant it was collected from.

Leaves of some trees only contain a few "generic" toxic substances and serve as host to many caterpillar species. For example, leaves of the genus *Quercus*, the oaks, within one county in southeastern Pennsylvania have been shown to support 511 different caterpillar species. If an oak tree in your yard is replaced by another tree, for instance a native black cherry (genus *Prunus*) that only supports about 100 species, the food for birds will obviously be decreased. Even though many people have bird feeders that they supply generously with birdseed, almost all of our native songbirds feed their young on insects, primarily caterpillars, and many of the young can't even digest seeds. Birds, in turn,

distribute seeds of many plant species and help maintain the diversity of the forest ecosystem. Those plants may support other insects that are pollinators, or fungi that help break down dead plant or animal matter and return nutrients to the soil.

This means that certain species of trees serve as keystone plants and their absence or replacement may cause the collapse of a whole ecosystem. Contrary to popular belief, one tree is not “just as good as” another, similar tree if one supports many insects and the other supports only a few. Tree species that evolved elsewhere in the world may not produce leaves that are nutritious to our native caterpillars. And native maples, cherries, birches, even willows, support lots of insects, but **native oaks are the champs.**

Ornamental and exotic trees are often planted around people’s homes for aesthetic reasons, with little consideration given to the native trees they may be replacing. Deadly diseases (e.g., Dutch Elm fungus) or exotic insects (e.g., Emerald Ash borers) may wipe out entire populations of beneficial trees in a particular region. Loss of the American Elm or the several species of Ash trees (genus *Fraxinus*), or their replacement with trees that aren’t susceptible to those diseases or insects, often means the loss of their particular, coevolved insects as well and subsequent loss of songbirds. The ill-considered importation of trees that are intended to beautify a landscape can easily lead to the impoverishment of an entire neighborhood or development just like it would in a forest. So, we ignore keystone tree species, especially oaks, at our peril.

Dennis M. McNair, PhD
