



# Tree Talk

*Those who contemplate the beauty of the earth  
find reserves of strength that will endure  
as long as life lasts.*

— Rachel Carson

LYNNFIELD TREE COMMITTEE

SPRING 2020

Science tells us that the first modern humans appeared about two hundred thousand years ago. In contrast, tree-like plants started to appear about 350 million years ago. Unsurprisingly, trees evolved among other plants in competition for resources; the bigger, leafier, and “rootier” you were – the better you would be at grabbing water, nutrients, and sunlight. While not entirely comparable to modern trees, ancient trees had all the basic parts: roots, long trunks, branches, and leaf-like structures. Like today’s trees, early trees consumed water, trapped carbon dioxide and released oxygen. You might be surprised that we live only a day-trip away from one ancient forest. Located in Gilboa, NY, you can see the fossilized trunks of trees that composed an ancient swampy forest.

Since their emergence, trees have “blossomed” into the many forms that occupy most of our planet today. And, as trees have evolved, so has all life around them. Have you noticed how well an owl’s feathers blend in with tree bark? Having a good disguise maximizes the chance that the owl will evade predators, find a mate, breed, and successfully raise

owlets. You can thank owls for being on the frontlines of keeping small mammal populations, such as mice, in check. The bark that obscures the owl also provides shelter and sustenance for insects that are food sources for wildlife. As each life ends, nutrients return to the soil from where they are taken up by trees to grow, produce more leaves and seeds and continue the cycle of life.

Until the Industrial Age, we were unable to affect large-scale, consequential impact on the environment. Change occurred at a pace and scope that nature could match. With increasing technology and globalization, change has outpaced nature’s ability to adapt. A recent study reports urban areas are losing the eye-popping net loss of 36 million trees per year nationwide. Such loss significantly impacts pollution mitigation, cooling, water and soil management, and wildlife. Each one of us can make a difference - even one person, one tree at a time. One tree can produce enough oxygen for two people for an entire year! In this issue of TreeTalk, we learn how each one of us can contribute to a healthy, robust, and thriving environment.

## NATURE CALENDAR

### APRIL

- 22 **Earth Day** Celebrating 50 years as the day to recognize our planet is worth saving.
- 23 **Native Trees: The Heart of Your Landscape** The Tree Committee presents a special lecture on our native trees. Presented by a nationally recognized speaker, come learn about their unique ecological contributions and adaptations as we explore more than a dozen native tree species in detail. At the Meeting House, 7 p.m., Free
- 24 **Arbor Day** Plant a native tree and support life. Free

### MAY

- 1 **Lynnfield Through the Lens** Lynnfield’s second photography contest is open to all ages kicking off in April and culminating with an award ceremony in June. Express your appreciation of the trees through four categories; Habitat, Canopy, Best Bud and Conifer Crazy. Prizes will be awarded. Open to all ages. Free
- 9 **Lynnfield Flower Workshop** Plant Sale at the Meeting House, 9 a.m. - noon; supports civic planting at the library.

### JULY

- 8 **Arbor Day Celebration** The Tree Committee celebrates Lynnfield’s trees on the Common. Our Arbor Day ceremony includes reading of the Proclamation and tree prizes. 7 p.m. Free

## **Q. Is it time for you to make a difference?**

**A.** The world needs you — and your actions — for Earth Day 2020. We celebrate Earth Day to continue promoting environmental awareness and to remind us that we can protect the earth in our everyday lives. The great Northeastern Forest is changing as our region becomes wetter and warmer. Conservation and stewardship begin at home and there are things that we can do at an individual level such as planting more native plants and trees.

The health of wildlife, people, and the habitats they rely on are all interconnected. Effects on one part of an ecosystem affect other parts over time, and climate change is already altering many wildlife habitats vital to New England. We must embrace local systems while operating in a globally connected world. The risk that climate change pose to the region's plants are not irreversible — if we take action.

One of your first steps this spring would be to join the Tree Committee on Thursday, April 23 at the Meeting House. This special lecture *Native Trees: The Heart of Your Landscape* will be presented by Grow Native Massachusetts. They will help us reframe our landscapes and integrate our built environment into a native plant heritage. We share their vision of the world that views humans as being “of nature,” not separate from it.

Simply recognizing the role trees play in our life and ecosystems is another step forward. The Tree Committee's second town-wide “Lynnfield Through the Lens” photography contest is an opportunity to take a closer look from a camera's viewpoint. Look at who else has taken advantage of the cover and ready availability of food to build a home among the branches. Observe the canopy and enjoy the spreading cover as spring leaves unfurl; study tree buds, both flowers and leaves, as they burst open providing nectar and attracting beneficial insects. Become a conifer admirer and enjoy the year round benefits of reduced stress from being in nature. Even if a picture doesn't present itself, stop and appreciate the many sides of trees that spring will treat us to.

Supporting native tree populations can be one of the most critical steps you can take. Not only will they suffer the most with a quickly altering climate - trees are also an important part of the solution. Warmer temperatures and changing precipitation patterns are driving forests northward, to higher elevation, or to less optimal soil. Many tree species may lose their advantage over species found farther south. There's so much we can do; the Tree Committee looks forward to community-wide participation in these spring actions!

## **Q. How do trees cleanse our water?**

**A.** Or more accurately, how do trees protect our water table - let's get to the bottom of it by starting at the top! There are few of us who haven't taken shelter under a tree when caught in a sudden rainstorm; like second nature, we run under the safe canopy to protect us from getting soaked. Tree leaves, branches, and bark intercept rainfall before reaching the ground. The canopy is the initial storage unit where moisture is slowly released through evapotranspiration. The ripple effect created by this simple process is just the beginning of clean water.

Below every mature tree, over 2000 gallons a year of storm water runoff is absorbed by a complicated root system. Our large trees have the greatest impact due to the canopy structure and extensive roots system. Roots run far and wide – extending much wider than the drip edge – with the majority located in the top 18” of soil. They work to anchor the tree for stability and provide it with nutrients. During a rainstorm this complex network is a filter for pollutants and storage that will minimize flooding, soil degradation and erosion.

Rapidly moving water is one of the most destructive forces of nature, as very little velocity is needed to move objects a long distance quickly. With our weather turning more extreme producing heavier storms in a shorter amount of time, it is more critical that we capture rushing water. Rain from impervious surfaces carries chemicals and pollutants that find their way to our streams and rivers, and eventually to the ocean. Our everyday actions can be the source of these pollutants: trash, pet waste, lawn fertilizer and pesticide application, oil and grease from our cars, illegal dumping and spills. All of these contribute to the degeneration of the watershed.

Trees are instrumental in reducing the flow of this runoff and allowing water to infiltrate the soil. Leaf litter, which is the start of good soil, and the power of roots to transform harmful substances are major factors in keeping our water table healthy. Our connection to trees and the water we drink is a strong one. Nature is all around us providing life for the planet; we only need to allow ourselves to be nurtured.