



## **Bronxville's Trees Are Amazing**

By Ellen Edwards

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Did you know that the mighty oak is the official national tree? Lucky for us, Bronxville has many magnificent oak trees.

Like so much else about Bronxville, our mature tree canopy is a legacy left by thoughtful forefathers. That includes William Van Duzer Lawrence who, in planning the development of Hilltop at the turn of the twentieth century, was drawn to the area's hilly, wooded landscape and chose to preserve many of the existing native trees. The 1925 completion of the Bronx River Parkway, the first limited access, car-only highway bordered by a public park, ensured the preservation of acres of well-treed parkland. Such foresight, and the care of generations of homeowners and village stewards who followed, has left us the gift of mature northern red oaks, white oaks, towering tulip poplars, sycamores, maples, American beech, white ash, white pine, and sweet gums.

Mature trees add priceless value to Bronxville. One large canopy tree on the school or library grounds provides enough oxygen for four people. Trees purify the air by removing dangerous compounds, such as carbon monoxide, ozone, and

sulfur dioxide; and particulate matter such as pollen, dust, and soot. Trees also help clean our drinking water by acting as huge sponges and redirecting rain water back to the soil, where natural processes filter out pollutants and refill underground water supplies. One reason why Bronxville's water is of such high quality is because it comes from an immense heavily forested, highly protected watershed one hundred miles north of us. By purifying the water we drink, those forests are making New York City—and Bronxville--one of very few municipalities that is not required to filter its water in an expensive facility.

It's estimated that 100 mature trees can absorb 250,000 gallons of rainwater per year, making the landscape more resistant to flooding. Trees can calm winds, grow fruit and nuts for us to eat, and help fight climate change by absorbing carbon dioxide. According to [arborday.org](http://arborday.org), during one year a mature tree will absorb more than 48 pounds of carbon dioxide and release oxygen in exchange. (To put this in perspective, burning one gallon of non-ethanol gasoline in an internal combustion vehicle releases 20 pounds of carbon dioxide.)

People often underestimate the power of trees to cool the air. Trees can lower daytime surface temperatures up to 10 degrees F and nighttime temperatures up to 22 degrees F by releasing water vapor through their leaves. The result: fewer incidents of heat exhaustion and less energy required to run air conditioners. Years ago, a mature tree canopy and generous sleeping porches—vestiges of which are still visible in many Bronxville homes—were enough to make the summer heat bearable without air conditioning.

Studies have shown that spending time in a natural environment that includes trees promotes emotional wellbeing and lowers blood pressure, even helps fight disease. Trees muffle sound, provide habit for squirrels and possums (the first abundant, the second also seen in Bronxville) as well as many other animals, and beautify ugly sights such as concrete walls and acres of asphalt. The existence of mature trees increases home values by many thousands of dollars.

Trees are remarkable living beings whose complexities we're only just beginning to understand. In *The Hidden Life of Trees*, German forester Peter Wohlleben reveals the startling ways in which trees communicate with each other through chemical warning systems and fungal networks that bind the root system of one tree to another—a phenomenon that some have called "the wood wide web." He describes a cooperation among trees that can seem unbelievable—how a

“mother” tree can nurse its “babies,” and how two trees of the same species which receive different amounts of sunlight, and thus produce differing amounts of energy through photosynthesis, can share nutrients through their root systems so that each has enough to survive the winter.

Many of these processes have been discovered only in mature, undisturbed forests, and never in the parklike setting that characterizes Bronxville. But the behavior of trees in an ideal setting can suggest what trees need to thrive.

Trees suffer increasing stresses from more frequent storms, further development of the built environment, invasive species, and disease. Perhaps if we better appreciate just how amazing trees are, and all the ways they contribute to our own well-being, we’ll be inspired to continue Bronxville’s long tradition of caring well for its trees.