

ARBOR VITAE

NEWSLETTER OF TREES FOR CAPITOL HILL, INC. — SPRING 2013



New Tree Species Planted Along Capitol Hill Streets

Margaret Missiaen, Vice-President, TFCH

Trees for Capitol Hill volunteers turned out the morning of the third Saturday in November, our traditional date, to help plant trees—our 21st year of greening our neighborhood. Again a variety of shade trees were selected at Merrifield Garden Center. We are following the lead of City arborists by selecting new species of street trees. This policy is a change from the past when each street had a designated tree species. This type of monoculture made all the trees vulnerable when a disease such as Dutch elm disease struck. A sad lesson learned, all the streets lined with American elms, including East Capitol and North Carolina and Kentucky Avenues, lost most of their mature trees in a few years.

The first tree planted was a scarlet oak (*Quercus coccinea*) on 13th Street, SE sponsored by Peter Bug Matthews. This block between Watkins ES and the old Buchanan School has only a few large trees. One of them was planted by Mr. Matthews in 1993. The other new trees on this block were planted by the City's Urban Forestry Administration (UFA). UFA contractors planted more than 6,000 street trees this season. To meet this ambitious goal, planting began in October 2012 and continued through March 2013.

Most of the new trees were sponsored by residents of the North Lincoln Park Neighborhood where Elizabeth Nelson has been tireless in her efforts to increase the tree canopy near the Park. Chinese pistache (*Pistachia chinensis*), serviceberry (*Amelanchier canadensis*), horse chestnut, and silverbell (*Halesia carolina*) were among the species we planted that are also being used by the Urban Forestry Administration's diversification program.

[See article describing new street tree species in our Spring 2012 newsletter.] Two Chinese pistache trees and a serviceberry were planted near 15th Street and Constitution Avenue, NE. The pistache is a new species of street tree that adds colorful and healthy diversification to our urban forest. We tried a few specimens on the advice of our "guru", Rich Cottrell, formerly of Merrifield Garden Center, have been very pleased with their vigor, and now see that the UFA is planting them, also.

A sourwood (*Oxydendrum arboretum*) and a male ginkgo (*Ginkgo biloba*) were planted in the 1400 block of North Carolina and a red horse chestnut (*Aesculus x carnea Fort McNair*) in the nearby park. This hybrid specimen brings together the best of its parents, the buckeye and the horse chestnut. These trees are in the same family, sharing a similar leaf



The men of Merrifield unload first tree



Willow Oak on 12th St. NE

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shape and flower type, but the cross between *Aesculus pavia* and *Aesculus hippocastanum* produces a bright pink flower with trademark yellow throats. This cultivar is named after the fort in SW where the hybrid was found. Look for its showy panicles of flowers in May in the park between Constitution and North Carolina at 14th Street, NE.

A willow oak (*Quercus phellos*) and a Natchez crape myrtle (*Lagerstroemia x 'Natchez'*) were planted on 12th Street, NE. We finished up with a burr oak (*Quercus macrocarpa*) in the 600 block of Constitution Ave., NE. The day was a tremendous success thanks to the two dozen volunteers who dug holes before the planting and those who settled the trees into their new homes. Thanks also to the Capitol Hill Garden Club and ANC 6A for providing daffodil bulbs to tuck in around the rootballs.

Without you, we could not do our work. If you are interested in sponsoring a tree for public space (parks, public schools and tree boxes), please contact Margaret Missiaen at e.missiaen7@verizon.net.



Scarlet oak, 13th St. SE



Chinese pistache at 15th St. and Constitution Ave. NE



Buckeye in park at Constitution Ave. and 13th St. NE



Shopping trip to Merrifield Garden Center



Ginkgo, 1400 block North Carolina Ave. NE

A Botanic Snipe Hunt

Elizabeth Nelson

I was instantly smitten with the handsome tree just outside the Argonaut's patio and burned with desire to include one in the 2012 tree planting. But what was it? I'd never seen one like it before. The foliage said "oak" but it was covered with bunches of large, cordovan-colored berries that appeared to be a larger version of holly fruits. I caught a quick photo on my cell phone [photo 1] so I could show it to our "personal shoppers", Jack Mutty and Rich Cottrell, when we arrived at Merrifield Garden Center. Someone suggested an oak-leaf holly, so we tromped over to the holly section but couldn't find a match. We "googled" it and—nope—couldn't find it on-line, either. A holly expert was called in. The berries surely did look like those of a holly but the leaves were all wrong. Jack offered to come into town to take a cutting as did Rich, who beat him to it.

On a dank day, Rich and I reconnoitered at the Argonaut [photo 2]. I was initially disappointed because the fruits were all gone but then I spotted a lone remaining clump, desiccated but still present [photo 3]. Rich snipped it off, sealed it in a bag and carried it back to the lab for inspection and dissection [photo 4].

Not too long thereafter, the mystery was solved. Those "berries" were actually oak galls, each one occupied by a nasty little wasp larva [photo 5]. I was crushed—and confused. I'm unaccustomed to finding beauty in infestation. How could it be so pleasing to the eye? One of life's little mysteries, I suppose. Maybe like corn smut—a parasite to be sure but [reportedly] delicious.

At least they aren't harmful to the overall health of the tree. Rich did the research and sent the following information, most likely "cribbed" from the University of Maryland Extension Service website he loves so well:

*Oak bullet galls, caused by the wasp *Disholcaspis quercusglobulus*, have been found on white oak (*Quercus alba*). The wasp is 2.1 – 3.2 mm (1/12 - 1/8 in) long, winged and is brown or black in color. They are rarely seen. In the spring, the tiny adult female wasps chew out of last year's galls. The female wasps deposit their eggs on the midrib of oak leaves. When these eggs hatch, the larvae feed on leaf tissue, causing small blister-like galls to appear on the mid veins of the leaves. These larvae mature inside these galls, mate, and deposit their eggs on branches and twigs of their oak tree host. When these white, legless larvae feed, they inject plant growth-regulating chemicals, which react with the tissue in the tree to produce the abnormal plant tissue that comprises these galls. The gall provides the larvae with a nutritious source of food and protects them from parasites, predators and insecticides. Like all galls, the only damage is cosmetic.*

Only damage cosmetic? They're actually quite beautiful if you can turn your mind from the contents.



Photo 1: Attractive "Berries"



Photo 2: Rich Cottrell inspects



Photo 3: Oak gall

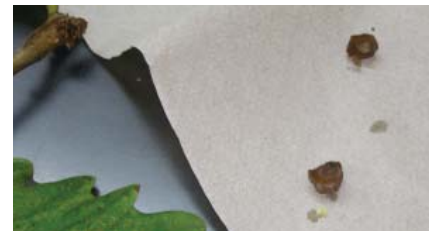


Photo 4: Dissecting the gall



Photo 5: Wasp larva

“Going Zero” Your Personal Contribution Toward Climate Change

Mark Grace, Secretary, TFCH

The recent reporting on the levels of what has been near doubling of carbon dioxide levels in the last 150 years and subsequent debate on how much variance will occur in the earth's temperature might prompt one to give some attention of individual impact. Doing research on how to give a realistic and thoughtful personal contribution to mitigating climate change is to “go zero”. “Going Zero” is a program of “The Conservation Fund organization” whose purpose is to reduce one's carbon production footprint to “zero” through relatively simple, proactive offsets such as tree planting. Considering that just one tree can typically absorb 48 lbs of carbon dioxide a year, it is a good start.

The site has an easy to use going zero carbon calculator (<https://gozero.conservationfund.org/calculator/household#https://gozero.conservationfund.org/cal>) to calculate how many new trees would need to be planted in order to get you to that enviable goal of having reduced to zero your households' CO2 contribution to the atmosphere. Using the site, the calculated estimated annual CO2 production for my approximately 1,800 sq ft. gas heated, electricity cooled home with two residents who primarily take Metro, though we do have two cars and must fly frequently for our jobs, worked out to be 21.06 tons over the next century. To counter this it was determined that just 18 trees were to be planted to zero-balance our CO2 deferential. For this household, that is an obtainable goal, especially since I've been volunteering with Trees For Capitol Hill. On the third Saturday of each November, TFCH volunteers plant on average 21 trees. Equally important to the initial installation, throughout the year we continue the commitment to sustain our urban canopy by watering and pruning past seasons' plantings. The greatest need of a newly planted tree is a healthy supply of water typically 20 gallons a week, and never more critical than in the first month of planting or in the time period between June and September, just remember “from Spring bloom till Winter's freeze”. If it has not rained more than an inch during a week those 20-gallon green Treegators and black tubs should be filled. The tubs hold less water and will need to be filled more often.

Learning more about how to “get to zero” yielded some interesting facts:

How much carbon dioxide does one tree absorb?

- A tree can absorb as much as 48 pounds of carbon dioxide per year, and can sequester one ton of carbon dioxide by the time it reaches 40 years old.
- One large tree can provide a supply of oxygen for two people.
- According to the USDA Forest Service, “Trees properly placed around buildings can reduce air conditioning needs by 30 percent and save 20-50 percent in energy used for heating.”
- The net cooling effect of a young, healthy tree is equivalent to ten room-size air conditioners operating 20 hours a day.
- In one day, one large tree can lift up to 100 gallons of water out of the ground and discharge it into the air.
- For every five percent of tree cover added to a community, storm water runoff is reduced by approximately two percent. Vegetation reduces runoff and improves water quality by absorbing and filtering rainwater.
- Healthy trees provide wildlife habitat and contribute to the social and economic wellbeing of landowners and community residents.
- Tree shade can slow deterioration of street pavement, decreasing the amount of maintenance needed.

Channeling Rain Water to New Street Trees

Margaret Missiaen, Vice-President, TFCH

Care instructions for newly planted trees begin with “Water weekly during the first two growing seasons.” TFCH volunteers have spent many hours watering trees, especially since Tree Gator watering bags came on the market more than 10 years ago. However, all of us have discovered that there are street trees planted far from any water source. I have learned a few lessons from watering trees at the Eastern Market Metro plaza.

Since the water was cut off of a few years ago, I have tried various methods of caring for newly planted trees. Filling 5-gallon water jugs at my house and hauling them to the plaza turned out to be too labor intensive. Over the years I developed a method of soil aeration and weeding that does not require carting water. This method channels rain water to the tree roots and offsets the effects of heavy foot traffic.

The first step is to aerate the soil by using a 4-pronged spading fork to poke holes around the perimeter of the tree box. [Photo 1] Working the fork back and forth enlarges the holes to capture storm water as it runs toward the gutter.

Pulling the weeds also aerates the soil and loosens the much that may have caked during the winter. [Photo 2] A weeder used carefully near the trunk will not disturb the roots. Bermuda grass has invaded many tree boxes with its extensive root system. [Photo 3]

A thin layer of mulch, kept away from the trunk, will help retain soil moisture. These steps may need to be repeated during the growing season. [Photo 4]



Photo 1: Poke holes with spading fork



Photo 2: Remove weeds



Photo 3: Extensive Bermuda grass root system



Photo 4: Apply fresh mulch

Please Water Trees

Watering Guidelines

Beth Purcell, President & Margaret Missiaen, Vice-President, TFCH

We are fortunate to have received so many new street trees this year, both through our own efforts and those of the UFA. But they have little chance of survival without our assistance; they will need supplemental water for at least their first two-three summers if they are to survive and the District government does not water street trees. It is up to the neighbors to do the watering. You can help by joining UFA's Canopy Keeper program and adopting a tree near your home. A good tip for spotting the "newbies" is to look for stakes with wires attached to them.

A quick blast from a hose encourages poor root development. It's much better to let the water trickle for 20 to 30 minutes—or better still, use a watering bag. A garden hose connected to a nearby water source makes this job easy and it provides a useful way to measure the amount of water you are delivering. The trees will need an absolute minimum of 10 gallons each week from spring bloom until winter freeze—but as much as 20-30 gallons may be needed in very hot, dry weather. Mulch is also important in keeping a tree hydrated. A 2-4 inch layer is sufficient but the mulch must be kept away from the trunk. Clean weeds and debris from the planting space. This helps in two ways. First, the tree will not have to compete with the weeds for precious water. Second, the water bags are far less likely to be punctured by mowers if there is no vegetation to mow. A note of caution: watering bags must be removed as soon as they are no longer needed. If left on over the winter, they prevent proper bark development and can cause permanent damage.

The Casey Trees website (Caseytrees.org) posts moisture conditions each Monday during the growing season, eliminating the guess work in monitoring rainfall. But, even if you think that Mother Nature has been providing enough rain, it doesn't pay to be over-confident. By the time a tree looks like it needs water (is shriveled or drops leaves), it has already been damaged. Don't wait. Be pro-active!

Trees for Capitol Hill has a few bags and basins that can be borrowed for the season. If you want one, contact Margaret Missiaen (e.missiaen7@verizon.net). Watering devices are also available from DDOT if you promise to water a specific tree for the first two years after planting. Go to www.ddot.dc.gov. Click on "Tree Planting"; then click on "Canopy Keepers: Adopt a Tree." You will be asked to submit an agreement on-line or by mail to:

Urban Forestry Administration

District Department of Transportation

55 M Street, SE, Suite 600

Washington, DC 20003

202 673-6813

Service requests can be made on dc.gov or by calling 311.



Tregators are easiest to fill by hose



Jack Montgomery and Margaret Missiaen filling Tregator with bucket



No hose? Basins may be easier to fill

Sycamore Anthracnose

University of Maryland Extension Service, excerpted by Elizabeth Nelson

Conditions have been perfect this spring for a severe outbreak of sycamore anthracnose, caused by the fungus *Apiognomonia veneta* (say that three times!). We have had many reports in the past of American sycamores (*Platanus occidentalis*) and London plane trees (a cross between American sycamore and Oriental plane tree with the scientific name *Platanus x acerifolia*) that show significant shoot blight and defoliation. The fungus overwinters in cankers from previous infections, and produces spores in the spring that are dispersed by rainfall to young developing shoots.

Symptoms include shoot dieback and blighted areas on leaves that usually run along the veins. In addition to the amount of rainfall, the severity of the disease is affected by spring temperatures during bud break through leaf emergence. If the average daily temperature at this critical time is below 55F, anthracnose infections will be severe. If the average daily temperature is 60F or above during this time, disease incidence will be greatly reduced. Conditions were so favorable this spring that even London plane trees, which are reported to be resistant to sycamore anthracnose, are showing significant dieback. Remember, resistance does not mean immunity—when environmental conditions are very favorable for the pathogen, some disease will develop in resistant plants.

What can be done? At this point in time, nothing! Infections have already occurred, and the damage is done. Infected sycamores will develop new foliage later this spring to take the place of the initial growth lost to anthracnose, and temperatures will be warmer and therefore unfavorable for disease development on this new growth.



Healthy leaves on uninfected specimen



Poor sick Sycamore

Check Our Website—and Volunteer!

Elizabeth Nelson

As we announced in our 2011 issue, thanks to generous funding from the National Capital Bank, and the efforts of volunteer, Mark Grace, you can follow us online at <http://treesforcapitolhill.org>. Newsletter articles, photos and other information will be posted there.

Volunteers are needed, wanted and appreciated. We are always looking for tree-huggers to assist with the fall plantings. If you know of anyone who would enjoy that activity, please lasso them! Also, our professional newsletter designer, Barbara Richey, moved to Seattle. We have temporary assistance (or you would not be receiving this publication) but we would welcome a more permanent solution. If you have publishing skills and can help with this annual effort, please let us know.

Tree of the Year, Zelkova

Beth Purcell, President, TFCH

Our tree of the year is the hard-working and dependable zelkova. Zelkovas (*Zelkova serrata*), in addition to possessing great beauty, are robust street trees with wide canopies and sturdy trunks. They are pest-resistant, drought-resistant once established, and are well-adapted to a warming climate. Zelkovas will grow in Zones 5 through 8 on the USDA hardiness zone map. The District is in Zone 7, although the last several summers have felt like Zone 8, for sure.

TFCH began planting them as a replacement for elms in the organization's early days when strict "zoning" requirements were still in place—only one or two species were allowed on any given block. At the time, we hoped they would do well but couldn't be sure. Our faith has been amply rewarded. Many of them are now thriving in their 20's or 30's. A row of them can be seen on the 1300 block of North Carolina Ave, mixed in with a few examples of a supposedly-disease-resistant elm that proved to be a disappointment.

A few years back, a Schenectady NY official with oversight of that city's street trees visited the District and was equally impressed with the zelkova's vigor and non-fussiness and has since added them to his planting list.



Spectacular zelkova in Garfield Park



Mixed row of zelkovas and elms planted by TFCH in early 1990's

Good Neighbors in Action

Elizabeth Nelson

Saving a Sandy Victim

The Hill was spared the worst when Hurricane Sandy howled through town but when dawn broke the morning after, one of our juvenile trees, just in the ground a couple of years, was tilted at an alarming angle. Rain soaked soils had failed to hold the rootball in place. It looked like it was a goner. I was feeling mighty discouraged, thinking of all the work we'd invested in that poor dear, and wistfully remembering a similar tree on the same block that we'd salvaged after a previous storm - when a crew of neighbors arrived - including a foreign exchange student. Someone made an emergency run to Frager's Hardware for rope and stakes; someone else re-purposed sand-bags; others found a mallet and shovels. We dug, pried and pushed until we had it righted and then strapped it down so it couldn't budge. It was a tense winter, wondering if there was damage we couldn't see but it leafed out this spring like it had never been disturbed. We'll have to keep an eye on it and show it some extra love this summer but ... Nice save!



Good as New—a total team effort



Pounding stakes and stringing guy wires

Water Works Wonders

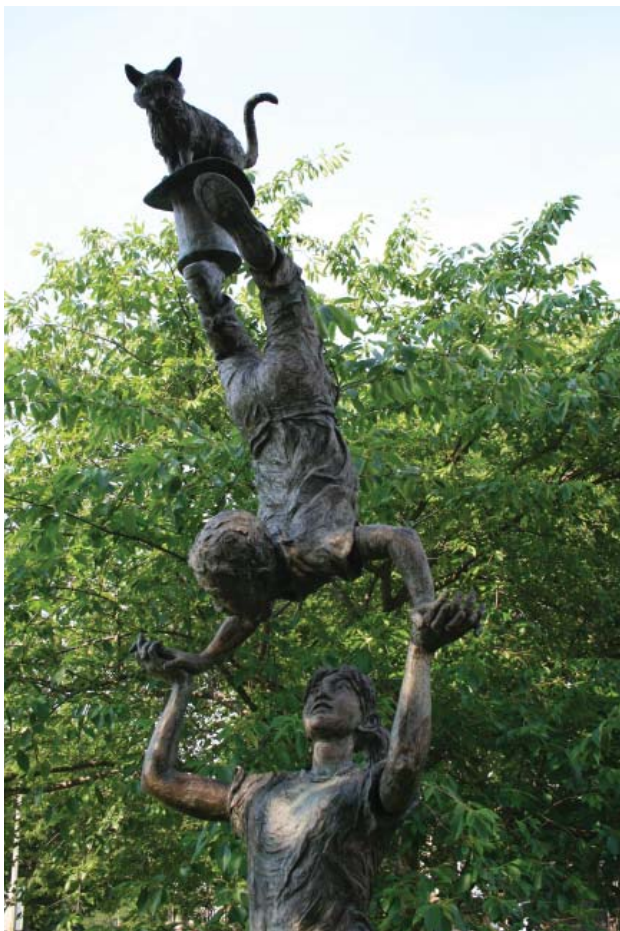
These neighbors on the 100 block of 13th St. NE were completely committed to the seedless sweetgum they planted in the fall of 2011 and look at it at the end of last summer! Not a speck of drought damage anywhere and it's grown by leaps and bounds. There's no magic required, just add water!



The results of lavish watering

Trees For Capitol Hill, Inc.
647 South Carolina Ave., SE
Washington, DC 20003

ADDRESS CORRECTION REQUESTED



Trees For Capitol Hill



Who we are:

Trees for Capitol, Inc., a DC non-profit corporation founded in 1991, is dedicated to enhancing our neighborhood by planting and caring for trees in public spaces. Our funding comes from generous grants from the Capitol Hill Community Foundation, the National Capital Bank and individual donors. We are a 501(c)(3) corporation.

To make a contribution, send a check made out to:

Trees for Capitol Hill, Inc.
647 South Carolina Ave., SE
Washington, DC 20003

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