



## Newsletter

August 2012

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"A thing is right when it tends to preserve the integrity, the stability, and beauty of the biotic community. It is wrong when it tends otherwise."

Aldo Leopold

## The Education of Tree Stewards

Many things have changed since Tree Steward organizations began training their first members. When I became a tree steward the planting of Bradford pears as street trees was common, we were only taught how to plant large B&B trees, and the words "native species," "watershed," "diversity" or "ecosystem services" simply did not exist in our text or classes. Oh my, how things have changed! And that is why the education of a tree steward should never end. Tree stewards must stay informed if we are to be effective advocates for our urban forest. Keeping up to date is especially important since we have become a significant source of education for the community. Here are a few examples...

Bradford pears have become invasive. Yet they are still popular landscape plants and readily available at nurseries. Also, native species are now recognized as a necessity for a healthy, complex ecosystem, even in cities. However, finding a variety of native species for purchase is quite difficult and the public is largely unaware of this need. "Right tree" now has a different meaning—they are no longer just for beauty, they have a function as well. Tree Stewards need to educate the public about choosing appropriate species for their properties.

New tree diseases and pests are being rapidly spread by people who don't know they are "participating", nor do they know the consequences. We must tell them!

And there is more than one way to plant a tree! Bare root seedlings in tree shelters, small container trees, bare root trees and B&B trees all have advantages, disadvantages and appropriate uses. Do you know what they are?

Our Tree Steward Policy and Procedure states that stewards should have at least 5 hours of education a year and your Tree Steward Advisory Panel (TreeSAP) is here to help. We offer Tree Steward classes free to current stewards and most of our meetings have expert speakers; all you need to do is come. Tree walks, water truck training and similar activities within our organization count for education hours. Also, seminars or activities offered by other organizations count as education hours when approved by our education committee. These approved activities are in the newsletter and on the calendar; you will often receive e-mail reminders as well.

**Please take advantage of these opportunities.**

**It's easy to get 5 education hours in one year.**

**May we recommend you try for 10?**

Suzette Lyon

# Biodiversity

**Biodiversity**, the degree of variation of life forms within a given species, ecosystem, biome, or an entire planet, is considered a measure of the ecosystem health. The word keeps cropping up in tree our news lately.

The "2,000 More Trees!" page in the previous two newsletters featured two native species, the Kentucky coffeetree (*Gymnocladus dioica*) and American yellowwood (*Cladrastis kentukea*), recently planted by arborists Luke McCall and Mike Mather. Both arborists cited the need for diversity as a reason for choosing these species.

The local and troubling emerald ash borer news items remind us of the importance of diversity.

And below is a contribution by Janine Lester giving us another reason to carefully consider what we plant.

If you plant trees or shrubs in your yard, what will you choose? Will you (like most other folks) plant whatever is available from the local garden center? Or will you branch out and go for something different?

You could be the first on your block to have sweetbay magnolia (*Magnolia virginiana*) or eastern hop-hornbeam (*Ostrya virginiana*) in front of the house or even have persimmons (*Diospyros virginiana*) in your backyard. This website <http://www.nativeplantcenter.net/> lists native plants for this part of the country and is a good resource for those who want to expand their plant palette. It may take some effort to find specific plants, but if consumers don't request new and different plants, suppliers will just continue to provide whatever we purchase; that does not promote diversity.

**Pledge now to make your next plant purchase a native species and something out of the ordinary.**

**Help your friends and neighbors do the same.**

## **Biodiversity can increase species survival when climates become hotter**

by Janine Lester

Whether a plant and its mutualistic pollinator survive rapid climate change can depend upon the density and distribution of other species in the community, according to a new mathematical model.

The study, published in *Evolutionary Applications*, used computers to simulate the effects of a warming climate on symbiotic communities of plants and their pollinators. We've known for many years that temperature changes alter bloom time in plants and life cycle in insects, both of which occur earlier with global warming. But if mutualistic species become active at different times, it could lead to extinction.

Lead researcher Tucker Gilman, a postdoctoral fellow at the National Institute for Mathematical and Biological Synthesis, says the findings are "troubling". "Climate change is thought to be happening up to ten times faster than any natural climate change in the past 500,000 years," Gilman said. "This means that mutualisms that have survived past climate change events may still be vulnerable." In other words, humans are accelerating climate changes faster than these species could ever evolve or adapt to them.

The research suggests that increased biodiversity protects both plants and pollinators from early extinctions because alternative pollinators are available to the plants, and alternative food sources are available to the insects, even when the traditional mutualists can no longer get the timing right. Unfortunately, in certain mutualistic species relationships, there are no alternatives.

Extinctions are inevitable, but exactly how many is unknown.

# Tree Stewards at Work—Inventories

By Heather Holub

A constructive way to start many projects is by taking stock of what you already have. This can also help bring to light what you don't have. Richmond has many inviting, tree-lined streets; Richmond also has plenty of empty tree wells. Richmond's parks are home to some beautiful Sweet gums and Oaks, but a closer look may reveal a lack of diversity among city trees. Vacant tree wells are an excellent opportunity to add to our urban forest, and having a handle on the current make-up of that forest can ensure that new plantings will add to overall diversity. Diversity fosters resilience. Grouping large numbers of a single tree species makes easy pickings for pests and disease. Imagine how much greater our dismay at the approach of the Emerald Ash Borer would be if Byrd Park had nothing but ash trees! Or consider a street with new plantings that all have the same life expectancy. It would be difficult to maintain a continuous canopy over time - as most of the trees would need to be replaced at the same time.

Richmond Tree Stewards were involved in at least 3 different tree inventory projects this year.

In Battery Park, Suzette Lyon organized a group of volunteers to identify, rate the overall condition of, and locate on a map every tree over 6" in diameter. Volunteers learned how to measure the tree trunks' DBH or Diameter at breast height using a DBH measuring tape. Arborist Greg Crews of Bartlett Tree Experts guided volunteers in the critical observations necessary to determine a tree's overall health and - perhaps more importantly in a park - structural integrity. Of the 198 trees counted, all but 12 crepe myrtles, a couple of Ailanthus and a paper mulberry were native trees - good news for the resident wildlife. However, 40% were of the same species: sweet gum. These findings were presented to the Friends of Battery Park - who had requested the inventory - to aid in their future planting plans. Tree stewards: Judi Ellis, Lisa Ferrell, Carlton Hines, Hygd Hardin, Heather Holub, Paul LeDuc, Cindi Mashburn, and Robin Ruth participated in this project.



Greg Crews of Bartlett Tree Experts demonstrates how to measure DBH. Steward Lisa Ferrell is assisting.

In the Fan, Louise Seals organized a group of tree stewards to identify where stumps needed to be removed and other planting opportunities. Tree stewards John Caldwell, Laura Cameron, Lee McCown, David McMahon, Jan Taransovic, and Cabell Vest also participated in this project.

In the Shockoe Bottom business district, Jan Thomas has been conducting an inventory of vacant and damaged tree wells. This work, as well as that done in the Fan, will provide helpful information for the arborists as they work on planting plans.

Altogether tree stewards have spent over 90 hours inventorying our urban forest with in the last year.

## Tree Stewards at Work—Creative Contributions

If there were an Engineering Committee on the advisory panel, you can be sure that **George Stewart** would be in charge and committee meeting would probably be in the garage. George, using his engineering skills while tinkering in the garage, has made it possible for us to water more trees in less time. He has found the largest diameter hoses that will work for us - these deliver water faster—and has added quick disconnect features for our convenience. He also invented the watering wand which is easy to get in the gator bag and doesn't make the gator bag sag like the hoses do. There 's also a cut off valve right there on the handle.

George also waters the trees in Oakwood Cemetery and has repaired a number of old gator bags so they can be reused.

The next time you are watering trees on a hot day, just remember - you would be there longer if it weren't for George.



Steward **Jan Thomas** has been busy too. She designed and produced more than 200 tags for the gator bags on trees that are being watered by tree stewards. She saw that we would have a problem keeping up with what had been watered and, more importantly, what had not been watered. The tags solve that problem; the steward who waters the tree writes the date on the tag. The next group that waters can easily tell where to start. The other side of the tag is a little advertisement for our organization. Hopefully a few curious folks walking through the park will go look at the tag and learn about Richmond Tree Stewards!

**SAVE THE DATE**

Tree Steward Meeting

October 23 6:30 p.m. at the Round House

Annual Business Meeting

Graduation for New Stewards and a Celebration of Our Success!

# Urban Forestry Commission

by Louise Seals

Tree Stewards constitute the "boots on the ground" volunteer tree care group in Richmond, Capitol Trees undertakes demonstration-prototype projects, and Friends of Urban Forestry supports and advocates for the division. That was how the three groups presented themselves to the Urban Forestry Commission at its July 17 meeting. Enrichmond Foundation was slated to make its presentation to the August meeting.

Tree Stewards were already well-known to several members of the commission, including Vice Chair Andy Mason and Joel Koci, both arborists; Tree Stewards Jody Branch and Karen Townsend; and ex-officio member John Chupek, the manager of the Urban Forestry Division. Several of them voiced considerable praise for our work on the community forest. (Tree Steward Elizabeth Barrett, also a member, could not attend.)

The commission has finished revising the tree ordinance and forwarded the document to the city legal department for review and is now looking at what role it could and should play in coordinating tree-related activities and public education.

The commission meets in the 5th-floor conference room at City Hall at 4 p.m. on the 3rd Tuesday of each month.

## Richmond Tree Stewards

Trained volunteers promoting the health of the urban forest through education, planting and planning for the future, and providing maintenance and care for street and park trees



July 17, 2012

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### What we do – 1,478 hours

<b>PRUNE</b>	Prune for (1) pedestrian and vehicle access and (2) tree strength and health
<b>WATER</b>	Water about 200 1" & 2" year trees in 3 parks
<b>PLAN &amp; PLANT</b>	Plant with our funds Inventory local sites Design planting plans
<b>EDUCATE</b>	Celebrate Arbor Day FR releases, brochures
<b>ASSIST</b>	Stake, mulch Distribute Gator bags, tree guards

### How we operate

**TRAINING:** Certified Tree Stewards have completed the certification course – 20 hours of classroom instruction in tree biology, soils, pathology, pruning and other topics, plus hands-on pruning training – and 20 volunteer hours, at least 10 of which must be pruning. This year, each candidate must pass a pruning test before certification.

**RELATION WITH CITY GOVERNMENT AGENCIES:** We are an independent organization but undertake projects at the request of and/or with approval from Urban Forestry and, where applicable, operating officials of the Department of Parks, Recreation and Community Affairs. Both Public Works and Parks provide essential support. (Richmond Arborist Norman Brown revived the Tree Steward program in 2007.)

**PARTNERSHIPS:** We prize community education and involvement as we work with parks Friends groups, neighborhood groups such as the Fan District Association, Holton school parents and the school garden task force, Alliance for VCU's Tree Campus USA, the Chesapeake Bay and Committee.

Learn more about us  
Find easy-to-understand tree care advice on our Webpage



## Tree Articles and Info on the Web

### Can These Trees Be Saved?

When a tree suffers storm damage, can you — should you — try to save it? This site, from the Oregon Department of Forestry Urban and Community Forestry Program, provides excellent information on this sometimes difficult decision. Text and illustrations cover everything from the “Minor Damage” and to the “Young To Die” categories to “Farewell To a Friend”.

Thanks to Steward Joe Terry for providing this information.

### Troubles In the Rhizosphere

We’ve learned from the arborists and others who teach tree steward classes, that most tree health problems begin in the soil. As Dr. Alex Shigo states in this article, “When there are troubles in the rhizosphere, there will be troubles with the tree.” Read this article to add the word rhizosphere to your vocabulary and learn more about Root Cause Analysis!

### Shade Trees and Biodiversity in the Urban Environment

Why we need biodiversity, How diverse is diverse? And finding “new” plants

## Educational Opportunities

### September

13

Northern Virginia Urban Forestry Quarterly Roundtable  
Benefits of Urban Trees: Economic and Social  
Go to [treesvirginia.org](http://treesvirginia.org) for information and registration

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Woody Plant Walk at Dragon Run  
Last year’s Tree Walk in this wonderful protected area near Saluda, Virginia was excellent. This year it’s called a “Woody Plant Walk” and will explore the trees and bugs, birds, fungi and whatever there is to see!  
Go to <http://www.dragonrun.org/> and see their September newsletter for more information.

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Seminar—Waynesboro, Virginia  
Trees - Fifty Shades of Green"  
Go to [treesvirginia.org](http://treesvirginia.org) for information and registration.

**These events qualify for Tree Steward Education Hours.  
If you attend, report your learning experience to the membership committee.  
It’s easy to do on the website—Steward Toolkit—Volunteer Hours tab**

## More about EAB

You don't need to hear more about the life cycle of the emerald ash borer and you already know the signs of EAB damage, so we will not repeat that here. We also won't remind you not to move firewood, but you should probably remind your friends and neighbors.

According to city arborist Mike Mather, many ash trees in this area have been negatively affected by a lilac borer for quite some time and, at this point, many of those trees are no longer valuable. The early stages of emerald ash borer symptoms would be very similar to lilac borer. See our [December 2011 newsletter](#) for a short article about the lilac borer.

If you happen to see a [purple box](#) hanging in a tree, you have probably spotted an emerald ash borer trap. These are used in an attempt to define the leading edge of the insects' spread. These traps will come down in the fall for inspection and will probably go back up again in the spring.

Early detection of new EAB infestations is critical for the success of containment and management efforts. However, early detection is exceedingly difficult, because D-shaped exit holes are much more likely to be high in the canopy than on the trunk and other external symptoms including bark cracks, dieback, and epicormic shoots are generally not evident until trees become heavily attacked.

**If you know of a large, healthy ash in the city please make note of the location. These are the trees that may be worth trying to save if EAB arrives here in Richmond. Identifying them now, may help us in the future. E-mail location to [slyon10@yahoo.com](mailto:slyon10@yahoo.com) Indicate if the tree is on public or private property.**

Did you know....

Stingless wasps are a natural enemy of the EAB. The U.S. Department of Agriculture is working with the Forest Service and Agricultural Research Service (ARS) to raise and harvest these stingless wasps for monitored releases in selected EAB infested locations. Specifically, they are using three parasitoid species of wasps from China called *Spathius agrili*, *Tetrastichus planipennis* and *Oobius agrili*.

Last year, wasps were released in Indiana, Illinois, Kentucky, Maryland, Michigan, Minnesota, Ohio, and West Virginia. Additional controlled releases are planned.

The wasps target EAB eggs and larvae and use them as hosts to support their own species. The wasps' offspring consume the EAB egg and larvae as they grow and develop.

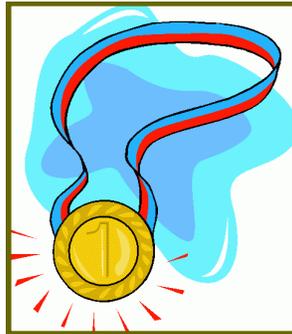
This information is from <http://stopthebeetle.info/help-stop-the-eab/>

# Tree Steward Olympics

With 1817 volunteer hours reported as of mid August, it appears that Tree Stewards are going for the gold this year. The premier summer event—watering trees—is ensuring the survival of the newest members of the community forest. This successful effort is being supported by our awesome coach, Louise Seals, whose training and organizational skills make all the difference.

Pruning, a nearly year round event, is in full swing as well. Pruning exams for new stewards will be underway very soon and we are all looking forward to adding more members to our pruning teams. The interesting and sometimes challenging developmental pruning will begin after the trees go dormant in the fall. There will be training sessions for those who need to sharpen the skills needed for important this event.

Other events (staking trees, hauling mulch, and invasive plant removal), while perhaps not as glamorous or popular as the others, are still a necessary part of the tree steward skill set; these require some strength and endurance training.



**If only we could hear the trees in the urban forest cheering us on!**

**GO, TREE STEWARDS, GO!**

## Richmond Tree Stewards

The mission of Richmond's trained, volunteer Tree Stewards is to promote and improve the health of city trees to assure the city's forest will survive and thrive. This is accomplished by increasing public awareness through community education, planning and planting for the future, and providing maintenance and care for young trees on streets and in parks. Tree Stewards work closely with Urban Forestry and with other organizations interested in the health of our community forest.

Visit our website at [richmondtreestewards.wordpress.com](http://richmondtreestewards.wordpress.com)