



Branching Out

Urban Forestry Council Undertakes Project to Evaluate Forest Quality in Campbell County

*By Sherry Carran, Chairperson
NKY Urban & Community Forestry Council*

The Northern Kentucky Urban & Community Forestry Council is sponsoring a forest quality assessment for Campbell County. The assessment is an important next step toward the inclusion of forest resources in land use planning and decision making for Campbell County. Smaller scale forest quality assessments have been completed in parts of Campbell County.

Forests are an important natural resource providing valuable benefits to communities – including air and water quality, mitigation of storm water runoff, land stability and soil erosion control, wildlife habitat, outdoor recreation and education opportunities and overall aesthetic quality. It is important to understand the ecological quality and functional value of forests to ensure that forests are appropriately considered in land-use planning and development activities.

County planning agencies of Northern Kentucky have expressed the need for natural resource inventories to aid them in planning for land use. “The forest quality assessment is a critical element in the larger issue of the review and analysis of green infrastructure for our county. We need to gain a better understanding of our green infrastructure and apply that knowledge to our efforts in the areas of sustainability, economic development, and

most importantly, the enhancement in the quality of life for our community and region. We are very grateful to the Northern Kentucky Urban & Community Forestry Council for sponsoring this forest quality assessment”, said Peter Klear, Director of Campbell County’s Planning and Zoning Commission.

Forest quality assessments are also important planning tools for urban forestry and tree boards, land conservancies, and conservation districts.

Funding for the project is being provided by The Greater Cincinnati Foundation as well as the Ed and Jean Hengelbrok Foundation Fund and the U.S. Bank, N.A./Northern Kentucky Fund of The Greater Cincinnati Foundation; also by the Nippert Foundation and by the Kentucky Division of Forestry/USDA Forest Service.

Under contract to the Forestry Council, the Center for Applied Ecology of Northern Kentucky University will conduct the forest quality assessment. Forests will be mapped using aerial photographs and then systematically evaluated for ecological quality and integrity. Once delineated, countywide field inspections of public woodland areas will be conducted to verify a percentage of the forest clas-

sifications and further assess forest attributes.

Forest quality assessments, commissioned by the Northern Kentucky Urban & Community Forestry Council, have already been completed in Boone and Kenton Counties. Sherry Carran, President of the Forestry Council, notes, “The missing piece in Northern Kentucky is the assessment for Campbell County. With a completed Campbell County Forest Quality Assessment there will be a green data layer for all of Northern Kentucky which will aid the coordination of planning for land use, natural systems and public facilities.” The green data layer can be used to do “ecosystem analysis” to quantify ecological and economic benefits of trees and related green infrastructure, to communicate forest values, to support public policy decisions and to promote green infrastructure in communities. Forest location and quality can be used in coordination with other data for comprehensive landscape-level planning.

For more information, contact Sherry Carran, President of the Northern Kentucky Urban & Community Forestry Council at (859)-491-0722 or visit <http://www.nkyurbanforestry.org>.

Don't Leap to Repair Freeze Damage in Landscape

UK College of Agriculture, through its land-grant mission, reaches across the commonwealth with teaching, research and extension to enhance the lives of Kentuckians.

By: Carol Spence

Sources: William Fountain, 859-257-3320
Rick Durham, 859-257-3249
Winston Dunwell, 270-365-7541

Across the state, the recent freeze came on the heels of an unseasonably warm March, so when the arctic blast hit, woody plants were bursting with lush, new growth, and many perennials had broken dormancy earlier than usual. The four-day stretch of frigid air did substantial damage because plants were at their most vulnerable stage.



"I have not observed anything like this in my 29 years in west Kentucky," said Winston Dunwell, University of Kentucky Cooperative Extension nursery crop specialist.

"The damage is extensive."

When faced with what appears to be a home landscape decimated by a hundred-year weather event, it's easy for the home gardener to panic. The word from extension specialists is: Don't.

"The best advice is to do nothing at this point in time," said Bill Fountain, UK extension arboriculture specialist. "Plants have adapted to adversity with multiple secondary methods for remaining alive. Remember, Mother Nature never said that plants had to be as perfect in form and habit as people would like for them to be."

"We are watching and waiting to see if the damage will be limited to flowers (and ultimately ornamental fruit loss), leaves and new tender stem growth, or if there will be bark damage and how extensive will it be," Dunwell said.

Rick Durham, UK extension consumer horticulture specialist holds out hope.

"My take is that even though things look pretty well gone, most will put out a second growth flush in a few

weeks," he said. "This would include herbaceous perennials and most woody plants."

According to Fountain, whether a plant recovers depends on a number of things: the stage of the plant at the time of the freeze, what the low temperature was, how long it stayed below freezing, how quickly it gets hot again (the slower the better), the age and health of the plant, and the species and cultivar. His advice? Don't fret. Worry will not help the plant.

According to Fountain, a plant's goal in life is to reproduce as much as it can before it dies, so it has backup buds in reserve in case the terminal shoots are killed. He recommends giving woody plants time to recover and sprout again.

Dunwell agreed.

"Woody ornamental plants frequently surprise us with their resiliency, making for an optimistic outlook," he said.

When examining trees and shrubs for damage, look first at the leaves.

"If the leaves look like corn flakes, they're dead, don't worry about them, they're going to fall off," said Fountain, adding, "Don't pick these dead leaves off. Doing so might damage buds that are still alive at the base of the dead foliage. Just let these dead leaves fall off naturally."

Examine the base of the leaves to find last year's buds. Open up the bud with your fingernail. If it's dry, then the bud is dead, and Fountain says regrowth at that point will be very poor. Take a knife and slice into the stem. If you see purpling showing up just below the bark, that's an indication that you have extreme damage. Be aware, however, that this does not apply to trees and shrubs with purple foliage. They will naturally show purple below the bark.

Once new growth does appear and you have ascertained which branches

are dead, it's safe to go in and do judicious pruning, Fountain said. First, remove dead twigs and branches. Then trim areas where multiple shoots have appeared, leaving only the strongest to grow. This is important for trees such as maples, ash, dogwood and buckeye, which have opposite branching. Though the stress of multiple branches fighting for dominance won't appear immediately, it can often lead to failure in a decade or so.

It might sound like a good idea to help things along with a little fertilizer, but Fountain is adamant about resisting the urge.

"Do *not* – repeat *not* – fertilize trees and shrubs," he said.

Adding nitrogen changes starches within the plant to sugars, which results in rapid shoot growth. It's healthier for the plant to begin growing slowly and to replace damaged tissues before putting out new growth that will demand water during the typically hot and dry months of summer.

He suggests watering trees and shrubs during dry spells this summer, to prevent additional stress on the plant. Don't fertilize until fall and then only if it's necessary. Use 1 to 2 pounds of slow release or water insoluble nitrogen per 1,000 square feet.

The cambium, a layer of cells under the bark that is instrumental in creating a plant's vascular system, was very active in many shrubs and trees when the freeze hit. Because of that, vertical cracks in trunks may start to appear in May or early June. Fountain said there is nothing that could have been done or can be done at this point to prevent damage.

"Wrapping the trunk, using duct tape, painting the wound, and nailing or using glue to keep the bark from peeling off is not going to help," he said.

"Some of these trees are going to die, others will be disfigured."

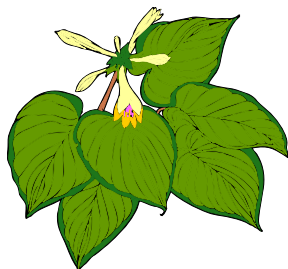
Many plants will be more susceptible to attack by wood-boring insects. Fountain recommends preventing these attacks rather than trying to kill the insects after damage has already occurred. Check with a certified arborist in your area for more information about preventive methods. A list of International Society of Arboriculture Certified Arborists is available at <http://www.isa-arbor.com>.

Newly awakened perennials also might have suffered dam-

age. Durham recommends a wait-and-see approach before you decide to dig them up and throw them on the compost pile.

Daylilies and hostas are two common landscape perennials that were in a vigorous growth spurt when the

freeze hit and consequently show considerable damage. But Durham said, while the foliage above ground looks pitiful, the plants' underground growth buds were protected. Now that the foliage



has stopped growing, the underground buds will begin the cycle again. In a few weeks, gardeners should see a second flush of growth appear.

"My general recommendation would be to wait a few weeks to see if and where regrowth is occurring and cut back dead tissues at that time," he said.

"I wish I had some magic words and cures to give you, but 'wait and see' is the best advice we can give," Fountain said.

For more information about freeze damage or protecting woody plants from insects and disease, contact your local Cooperative Extension office.

FLORENCE TREE INVENTORY FEATURED IN ISA JOURNAL ARTICLE

By Jenny Gulick, Secretary, NKU Urban & Community Forestry Council

The City of Florence's public tree inventory data was used as part of a research database to examine the importance of species diversity in controlling the damaging effects of exotic insects to an urban forest.

The results of the study were published in the International Society of Arboriculture's November 2006 issue of the *Journal of Arboriculture and Urban Forestry*. The article was titled, "Street Tree Diversity in Eastern North America and Its Potential for Tree Loss to Exotic Borers."

The authors, from the University of Maryland and the U.S. Forest Service, included Florence's urban forestry inventory with the inventory from eleven other cities and a college campus to create the study's database. Peter Glenn was acknowledged in the article for his help and cooperation.

The ISA Journal is an international publication reaching over 16,000 subscribers in over a dozen countries. Perhaps an arborist in Florence, Italy benefited from the information shared by Florence, Kentucky!

The Importance of Diversity

As a result of the study that included the inventory data from Florence, new consideration is being given and stronger emphasis is being placed on understanding species diversity in the urban forest.

The study concludes that given the devastating impacts Dutch Elm Disease, gypsy moths, Asian Longhorned beetles (ALB), and now emerald ash borers (EAB) can and will have on our urban forests, diversity is more important than ever as a buffer against catastrophic tree loss.

The two most abundant species in Florence's public forest are maple (*Acer*) making up 20% of the population and ash (*Fraxinus*) comprising 13% of the population. Both species are susceptible to ALD; therefore over a third of Florence's trees are at risk from this insect. If EAB were discovered in Florence, 13% of its forest is at risk.

What are the species diversity percentages in your community? Are you prepared if destructive and

widespread insect and disease problems develop in your area?

These are a few recommendations to keep your urban forest as diverse and healthy as possible:

1. Through planning and planting, try to assure that no more than 5-10% of a single species and 20% of a single genus make up your tree population.
2. Have an up-to-date inventory of your public forest.
3. Select species that are described as insect or disease resistant or tolerant.
4. Keep your trees as vigorous and healthy as possible through routine maintenance.
5. Educate yourself on the signs of and treatments for insect and disease threats.

We should all take steps now to diversify the types of trees we plant in our cities and our yards to avoid catastrophic tree losses or massive and expensive tree protection programs.

NORTHERN KENTUCKY URBAN & COMMUNITY FORESTRY COUNCIL

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Creating an awareness about the value of urban forestry in Northern Kentucky Communities.

We're on the web!
www.nkyurbanforestry.org

Reforest Northern Kentucky Big Success

By Jessica Metzger, NKU Center for Applied Ecology

More than 110 volunteers attended the Reforest Northern Kentucky event sponsored by



the Northern Kentucky Urban and Community Forestry Council. Participants planted

nearly 2000 white oak, red oak, yellow poplar and red bud seedlings at Big Bone Lick State Park and received a seedling of their own to take home. The tree planting project will help to protect water quality and restore native habitats at the park.

Thanks to all those who participated!

Reforest Northern Kentucky was sponsored by the Northern Kentucky Urban and Community Forestry Council with support from Big Bone Lick State Park, Boone County Arboretum, Kentucky Division of Forestry, Northern Kentucky Water District, NKU's ECOS, and NKU's Center for Applied Ecology.

Save the Date!



**Annual Community Dinner
and Program
Thursday, October 25, 2007
The Plantation Club at Twin
Oaks
Covington, KY 41015**