



# Branching Out

## Kris's Corner

Contributed by Kris Stone, Certified Arborist and Director of the Boone County Arboretum at Central Park

Kris's Corner focuses on recommended and often overlooked high quality urban tree species.

### PawPaw (Asimina triloba)

Pawpaw, also known as Indiana Banana, is an excellent small native tree that deserves wider consideration for use in the landscape. Pawpaw is a small deciduous tree that may attain 15 to 30 ft in height. A native of the forest understory and woodland edges, Pawpaw trees often exist in small groves. These groves often develop from root suckering or seedlings developing from fruits that dropped to the ground from an original seedling tree.

Although often found in shady woodland situations, Pawpaw grows equally well in sunny locations, and open grown trees typically assume a pyramidal habit, straight trunk, and dense dark green foliage. The overall appearance of the tree is somewhat tropical in nature because of its dark green, long, drooping leaves that turn golden-orange in color during the fall. In early to mid spring flowers emerge before leaves, and are maroon in color. Flowers occur individually on the previous year's growth and may reach up to 5 cm in diameter. Most individual trees are self-incompatible and require cross pollination in order to set a good crop of fruit although some trees may be self-compatible. Pollination is primarily accomplished by flies and beetles.

Fruit set in the wild is usually low and may be resource-limited, but under cultivation tremendous fruit loads are possible. Pawpaw fruit are oblong-cylindrical berries that are typically 3 to 15 cm long, 3 to 10 cm wide and weigh from 200 to 400 g. They may be borne singly or in clusters which resemble the "hands" of a banana plant hence the other common name "Indiana Banana".

Ripe Pawpaw fruit is said to have a creamy mixture of banana, mango, and pineapple flavor. Shelf-life of a tree-ripened fruit stored at room temperature is 2 to 3 days, though when refrigerated, fruit can be held up to 3 weeks.

Pawpaw trees are ideally suited in Northern Kentucky for the residential 'edible' landscape due to their lush, tropical appearance, attractive growth form, smooth gray bark, size, fall color, and delicious fruit. Possible uses for this tree include a small patio



tree, woodland garden, small accent tree, or in tight spaces where a small tree is needed. Pawpaw trees are desirable for butterfly gardens as they attract the zebra swallowtail butterfly (*Eurytides marcellus*) for which they are the exclusive larval host plant. Pawpaw trees are fully hardy to zone 5, and should be transplanted in early spring before bud break, or during fall. Root suckers are notoriously difficult to transplant, and small suckers are best attempted in early spring while the trees are dormant. Seedlings need protection from intense afternoon shade during the first year, but can be introduced to more sun the following year and eventually planted in full sun if desired.

Pawpaw is naturally very shade tolerant though trees grown in shade will be come very open and airy in these conditions. Pawpaw trees can be observed in natural grove settings at Boone County Arboretum in several locations along the Arboretum trail.

For detailed information on the Kentucky State University Pawpaw Research program in Frankfort, KY visit their website at: <http://www.pawpaw.kysu.edu>

#### Recommended Cultivars:

'Overlease'- Fruit size: 6 oz. (170 g); bears in clusters of 3 to 5; ripens 1st week of October in MI; Origin: Rushville, IN.

'Davis'- Fruit size: 4 oz. (113 g), up to 4 3/4" (12cm) long; yellow-fleshed; ripens 1st week of October in MI; green skin; seed large; keeps well in cold storage.

#### Plant Sources:

Edible Landscaping Nursery (Mail Order)  
361 Spirit Ridge Ln.  
Afton, VA 22920  
(434)361-9134  
<http://www.eat-it.com/>

Complete Nursery Source Listing online:  
<http://www.pawpaw.kysu.edu/pawpaw/nurslst.htm>



# SUDDEN OAK DEATH NOT A PROBLEM IN KENTUCKY YET

Source: John Hartman, U.K. Extension Plant Pathologist

Since 1995, large numbers of oak trees in California's coastal counties have been dying. Kentucky gardeners, landowners and foresters may wonder what that epidemic has to do with the bluegrass state.

During recent years we've been concerned about the possibility that Sudden Oak Death would be found in Kentucky. So far it has not been found here, but the threat is real because during the past year infected nursery stock may have been shipped to Kentucky and our gardeners need to be aware of the disease.

Sudden Oak Death was confirmed in coastal California in 2000. The disease is caused by a fungus and its origin is unknown at this time. It has caused dieback of several oak species on the coast since 1995, and dozens of plant species are known to be susceptible to its invasion.

The most common and lethal symptom of the disease on oaks is the formation of a moist canker in the

bark on the trunk, which eventually girdles and kills the tree.

While mortality is mostly associated with oaks, other host species like Douglas-fir, rhododendron, California Bay laurel and camellia may show symptoms of leaf spots, leaf tip necrosis, blight and twig cankers, but not death. The latter plants serve as reservoirs for the Sudden Oak Death pathogen.

The disease is favored by cool, moist conditions and according to the USDA Forest Service information, most of eastern Kentucky would be a high risk region for the disease because of favorable weather and susceptible hosts. In Kentucky, red oaks could become cankered and die, while rhododendrons, mountain laurel and others would be pathogen reservoirs.

So far the disease only has been found in California and Oregon forests and landscapes. Sudden Oak Death is spread through splashing and wind-blown rain, movement of

the soil and on infected plant material. It can even be spread via hikers' boots or equipment used in infected areas.

Unfortunately, diseased camellias from a large California nursery were shipped to many states in the Eastern U.S., including Kentucky. If the pathogen escapes into native oak forests, the effects could be catastrophic.

In response, officials from the USDA Animal and Plant Health Inspection Service are working with University of Kentucky to conduct a survey of Kentucky nurseries and forests to find and eradicate the disease if it is present.

Kentucky gardeners need to be observant of, and bring to the attention of their county Extension agents, any unusual landscape plant disease outbreaks. Especially watch rhododendrons, camellias, viburnums and mountain laurels.

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## The Northern Kentucky Stream Restoration Program: No-Cost Stream Restoration and Reforestation for Public and Private Lands

By Mark Leopold, NKU-CAE

Deforestation, hard surface development and stream relocation activities disturb the natural stability of Northern Kentucky streams. These actions result in increased flow and erosive energy in the stream, which may result in severe streambank erosion and channel entrenchment (down cutting). Stream restoration measures often require forest buffer reestablishment along with complex stream engineering components.

Kentucky now has a statewide stream restoration program funded and technically supported to provide qualify-

ing public and private landowners with stream restoration projects. Boone, Campbell, Gallatin, Grant, Kenton and Pendleton counties are grouped within this program into the Northern Kentucky Stream Corridor Restoration Fund (NKSCRF).

The goal of this program is to improve degraded stream systems and water quality. Funded projects must directly relate to compensation for impacts to the stream environment. Types of projects generally include one or more of the following:

- Restoration of a stream to its natural pattern (meanders, floodplains, pools, riffles, etc).
- Bank stabilization through soil bio-engineering techniques.
- Removal of culverts or concrete lining from the stream channel.
- Stream enhancement with streamside reforestation.

Projects of 1000 linear feet or more located in the upper portion of watersheds (i.e. smaller streams) are priority sites. Perspective landowners must be willing to allow permanent

protection (e.g., through a Conservation Easement, Deed Restriction or similar written agreement) of the project area.

The NKSCRF pays 100% of the stream restoration cost, and provides all administrative and technical oversight. These projects are monitored for extended years to assure engineering and biological restoration success.

Additional aspects of NKSCRF projects:

- Benefits include improved aesthetics, safety, passive recreation, wildlife habitat, educational opportunities, etc.
- Property owner maintains title to and control of the property.

- Private property does not become public property.
- Restrictions are put in place on future use of the protected area, but may allow for the installation of trails, road crossings, etc.

The NKSCRF originates from the Federal Rivers and Harbors Act and the Clean Water Act administered by the U.S. Army Corps of Engineers and the Kentucky Division of Water. A Mitigation Review Team chaired by the Louisville District Corps of Engineers and including representatives from the U.S. EPA, U.S. Fish and Wildlife Service, Kentucky Division of Water, and Ken-

tucky Department of Fish and Wildlife Resources reviews and approves restoration projects for the NKSCRF program. Program funds are derived from unavoidable stream impacts that occur due to permitted development and construction projects, commonly called “in-lieu-fees”.

The Center for Applied Ecology of Northern Kentucky University provides program management for NKSCRF projects. Landowners interested in more information should contact Scott Fennell, NKU-CAE Environmental Engineer, at 572-7588, or [fennells@nku.edu](mailto:fennells@nku.edu).

*Before*



*After*



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## WHAT ARE THEY DOING OVER THERE?!

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Want to know what your good neighbors are doing to manage their urban forests and community natural resources? Or, do you just want to “keep up with the Joneses”?!

Well, check out this newest column in each issue of our newsletter to see what projects other communities are working on to improve their urban forests. This information is provided to acknowledge the hard work of our local cities and organizations and to let you know you who might contact if you want to embark on similar projects in your own community.

Highland Heights received the good news that the City’s grant application for the State’s 2004 “Urban and Community Forestry Grant Program was approved. The City plans to extend and do an exhaustive re-evaluation of the *Highland Heights Nature Trail*. New trail brochures, maps, and signage will be pro-

duced with the support of the grant, and much of this urban forestry information will be available on the City’s website. Congratulations, Highland Heights!

Covington continues to move their comprehensive urban forestry program forward. The City is working on converting its entire street tree inventory into an online software program called *Tree-Keeper Online*. After the City completes this task and receives training on the use of this program, the data may be available for public viewing. Thanks, Covington, for continuing to be an urban forestry leader in Northern Kentucky!

Bellevue just received the results of a professional street tree and vacant planting site inventory. The City hopes this information will help them better manage their urban forest, plant the right tree in the right place, and respond to citizen requests more efficiently.

Newport recently completed an exten-

sive urban forestry project. They contracted for a citywide street, park, and public property tree inventory, and then received a five-year, detailed management plan, and a tree inventory software program with mapping capabilities called *Asset Manager*. The City now has the major components of what is considered a comprehensive urban forestry program, and is dedicated to putting the information to good use immediately.

Florence Public Works and Administrative staff received a full day’s professional training on the use of their public tree inventory program, *Tree-Keeper 7.0*. The City has been using this software system since the completion of their citywide inventory several years ago, and because of personnel changes and program upgrades, they elected to have additional training.

**NORTHERN KENTUCKY URBAN & COMMUNITY FORESTRY COUNCIL**

c/o Boone County Extension Service  
P.O. Box 876  
Burlington, KY 41005

Phone: 859-572-2600

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

**We're on the web!**  
[www.nkyurbanforestry.org](http://www.nkyurbanforestry.org)

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## Upcoming Events

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Check here to see what's happening locally and regionally in urban forestry and related events. If you know of other events, please contact the Council and we'll include the announcement in our next newsletter.

- ◇ International Society of Arboriculture's *Annual Conference and Trade Show* — Pittsburgh, PA, August 8-11, 2004
- ◇ Ohio Chapter, ISA, Southwest Ohio Regional Educational Seminar "Trees and Utility Conflict Resolution" - Cincinnati, OH, September 24, 2004. For more information: [www.ohiochapterisa.org](http://www.ohiochapterisa.org)
- ◇ *Sediment and Erosion Control Expo* —Idlewood Park, Burlington, KY, September 29, 2004. Call 859-586-7903 for more information.
- ◇ *Arborist Certification Training* — Florence Government Center, Florence, KY, October 20 and 27, 2004. Pre-registration required. Contact the NKY Urban and Community Forestry Council.
- ◇ *ISA Certified Arborist Examination* — Winton Woods Park, Greenhills, OH, November 4, 2004. Pre-registration required; call 1-800-ISA-TREE
- ◇ *NKY Urban and Community Urban Forestry Council Fall Awards Dinner and Announcement of the Trees in Our Community Grants Program* — November 4, 2004. Location and time to be announced. Pre-registration required. Contact the NKY Urban and Community Forestry Council
- ◇ *ISA Certified Tree Worker/Climber Specialist Examination* — Winton Woods Park, Hamilton County, OH, November 5, 2004. Pre-registration required; call 1-800-ISA-TREE
- ◇ *Building With Trees Dinner Presentation at the NKY Home Builders Association Office with their LAND Development Council* — November 11. 5:00-7:30 p.m.