



URBAN FORESTRY NEWSLETTER

SPRING ISSUE
June 1, 2005

KILLER TREE (ALMOST)

Imagine getting up in the morning to a beautiful April day...the storms of the previous evening are gone, and the sun is shining. You enjoy your morning coffee, then begin your shower. Suddenly, the house gives a shudder, there's a huge crash, and you're seeing blue sky and tree branches all around you. It happened to Sarah Morrison in Due West a few weeks ago.

A 52-inch diameter Willow Oak was growing in her neighbors yard, about 60 feet from her home. The tree appeared healthy, and had provided welcome shade from the summer sun. It had survived many a storm, but on this morning it suddenly fell to a brisk, but not strong, breeze. Sarah's house was demolished as tons of heavy oak wood crashed down onto it.



Sarah Morrison stands by the hollow trunk of the tree that nearly killed her and destroyed her home in Due West last April.

The huge oak was infected with a root and butt rot caused by the fungus, *Inonotus dryadeus*. The fungus had eaten all the buttress roots that supported the weight of the tree, and had hollowed out the base of the tree to a height of several feet. The only external evidence of the fungus was a couple of small conks, resembling "cow patties," at the base of the tree on one side. This fungus can infect a number of tree species, but it seems to have an appetite for Willow Oak. The fungus enters through a wound on a root or at the base of the tree (such as a lawnmower wound), and does not manifest itself through conks until the decay is extensive. The tree may or may not show any dieback in the crown, though the root loss may be considerable.

The insurance adjuster finally decided that Ms. Morrison's home can be repaired, but much of it will have to be rebuilt completely. If Sarah hadn't been in the shower, the story might have had a tragic ending.

ARE WILLOW OAKS A GOOD CHOICE?

Willow Oak, *Quercus phellos*, is one of the best-loved, most widely used street and yard trees in the South Carolina Piedmont. Its fine-textured crown, upright habit, rapid growth and toughness make it an ideal selection for places where a large tree can grow. At least, that's the prevailing opinion. There are a few problems with Willow Oak that ought to be considered:

- Willow Oak tends to form tight crotches and have codominant tops. The included bark that develops predisposes such limbs to breakage. It requires pruning by a knowledgeable arborist to develop a strong branch structure.
- The wood of Willow Oak is not particularly strong. Mature trees often suffer major branch failures in wind or ice storms.
- Willow Oak is very susceptible to root rots, such as *Inonotus*, *Clitocybe*, *Ganoderma* and *Armillaria*.
- Willow oak leaves are impossible to rake. The narrow leaves settle into gutters and clog downspouts and storm drains.
- Like Water Oak, Willow Oak is very susceptible to mistletoe infestation.

So, is Willow Oak a good choice? In many situations, yes. Where the trees will be subject to wounding or other physical abuse, there's no ideal tree. If the leaves must be raked up, an oak with larger leaves (Northern Red, Shumard, Nuttall, Swamp Chestnut, Overcup, etc.) would be a better choice.

There are numerous examples in the Upstate where Willow Oak has been used effectively. Let's look at a few of them:

Greenville's Main Street: It's been years since Greenville's business district was transformed from a near ghost town to a thriving center of business and culture. The trees planted on both sides of the street played a major part in the transformation. A number of species were used, but the dominant tree is Willow Oak. Because of the limited soil volume beneath the sidewalks, these trees will never reach their full potential; in fact, some are in decline and are being replaced. Nevertheless the willow oaks have served well and are a major factor in Downtown Greenville's renaissance.

Greenwood's Crosscreek Mall: It was over 30 years ago that Willow Oaks were planted in parking lot islands at Greenwood's only indoor shopping mall. In spite of the fact that the soil volume in the islands was inadequate for the long-term survival of the trees, and the fact that the trees were planted with the nylon straps in place around the root balls, the trees have looked good and provided welcome shade. Many of the trees are now in decline, and some have already been removed due to outgrowing their space or because of girdling by the nylon seat belt straps that were planted with the trees.

Edgefield's Town Square: Some time ago, the Town of Edgefield planted Live Oaks (*Quercus virginiana*) in sidewalk cutouts around the town square. The live oaks survived and grew-and began to do what Live Oaks do: spread out. In order to keep the trees out of the street, the town hired a company to prune them. After years of being treated like hedge bushes with frequent shearing, the oaks went into decline. A replacement was sought, and Willow Oak was chosen. The upright growth of the Willow Oaks will minimize interference with traffic and store fronts, and the apical dominance of the trees will allow the town to prune up from the bottom, eventually raising the canopies above the store fronts. The trees should provide a beautiful canopy for the next thirty years or so.

Presbyterian College in Clinton: The large Willow Oaks in the college's horseshoe add greatly to the stateliness of the campus buildings. The college realizes that even oaks don't live forever, so in a farsighted move, they have planted young Willow Oaks beneath the overstory trees. When the older trees eventually decline or become hazardous, the younger ones will be in place to minimize the loss.



This row of young willow oaks just inside the Town of Ninety Six should provide shade and beauty for decades.

Ninety Six's Gateway: Anyone traveling into Ninety Six from the west on SC 34 will be impressed by the new trees planted along the road. The old railroad track that used to parallel the highway has been taken up and converted to a walking and biking trail. In the median between the highway and trail, the visitor is first greeted by a row of crapemyrtles beneath the power line. When the power line ends, the crapemyrtles are replaced by Willow Oak saplings. As these oaks mature, they will provide beauty to the highway and welcome shade to the walkers and bikers on the trail. Because the potential root zone is extensive, these oaks could potentially reach their normal life expectancy of eighty-plus years.

In spite of all its faults, there's just nothing quite like a mature Willow Oak. With proper pruning, protection from wounding, and a good leaf blower, it's a great tree.