The Unique Nuttall Oak Tree  
at New Madrid, Missouri

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In the fall of 1999, past president and outgoing journal editor Guy Sternberg stumbled upon a nice, mature Nuttall oak (*Q. texana* Buckley, syn. *Q. nuttallii* Palmer) at a rest stop along I-55 in Southern Missouri. While nothing jumped out at Guy that would make him think this tree would be anything special, he decided to pick a few acorns to test at his central Illinois arboretum. In the past, he had experienced little luck growing this species since central Illinois is well outside of the Nuttall oak’s native range. Despite previous failures (and perhaps lacking self-control!), Guy picked up a few acorns to try the following spring. A little more hunting around the rest stop turned up another Nuttall oak in the northern portion of the parking area. During a second visit Guy collected a few acorns from this tree as well.

Hoping for nothing more than one seedling tough enough to survive the winters at Starhill Forest Arboretum, Guy soon found that some of his new seedlings were indeed something special. As expected, the group of acorns from the second Nuttall oak to the north flushed a vibrant green as is typical of the species. However, the seedlings from the first tree were flushing a consistent vibrant reddish wine color. Guy grew these seedlings over the next few winters and, to his surprise, they did not seem bothered by the harsh winters. When nearly all of his other attempts to grow this species were doomed during the winters, these seedlings stood their ground and, true to Nuttall oak’s form, they grew rapidly. Not only did these seedlings survive the winters, each spring Guy was greeted by bright red flushes of growth that lasted well into May. Perhaps the most unique aspect is that every seedling exhibits these characteristics.

*New Madrid Oak*

The New Madrid Oak and surrounding trees  
photo©Guy Sternberg
Guy and others have made subsequent trips to collect acorns from this tree and, every time, the seedlings display these unusual features. Those who came to the US and joined the grand caravan from Illinois to Texas in 2006 for the Fifth Oak Conference stopped there to gather some of the abundant seed, so I expect that there are some nice seedlings now growing in other parts of the world. Belgian Nurseryman Dirk Benoit grows the tree for European markets and has a nice stock plant established from seed sent to him years ago by Guy.

The well-branched crown of the New Madrid Oak

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I have grown many seedlings from this tree in central Missouri, and I have experienced the same results. In 2008, Guy registered the name ‘New Madrid’ after the city and county where this unique tree was discovered. After some deliberation, the selection has been classified as *Quercus texana* Buckley New Madrid Group because it breeds true, but perhaps not identical to the parent, from seed. It was originally published as a cultivar (*Quercus texana* ‘New Madrid’ Jablonski 2007) but has since been designated as a Group due to possible variations which might
be expected in color, habit, and other features. Although some plants are grafted, they are not selections and so should not be regarded as cultivars.

What makes this tree seemingly impervious to the common oak traits such as self-sterility and hybridization remains unknown (at least to this author). The parent (ortet) tree does not exhibit characteristics unusual to the species, and to date it has not been clonally propagated. I plan to graft several this spring just to be sure a few copies are around in case anything happens to the ortet.

Recently it came to my attention that the ortet was in danger of removal. My father, Dennis Russell, who is employed at the University of Missouri in the
College of Natural Resources, occasionally works at the University’s Delta Center Farm located near the ortet. He was informed that the Missouri Department of Transportation (MoDOT) had decided to remove the buildings at the rest stop where the ortet is found. The tree is located within 100 feet of the main building. At that same time my dad told me that the trees in that area had been hit by a heavy ice storm in 2009, and that the tree I was interested in may not be in very good shape, if it was even still there.

I spent the next few weeks trying to locate the tree, contacting MoDOT personnel to get information. I was informed of the tree’s location and the fact that MoDOT did plan to level the site. I contacted Bree McMurray, MoDOT’s Endangered Species Coordinator, in August 2010. McMurray works with endangered animals, bats being her specialty, and I had a tough time explaining why this tree was special. Terms like hardiness, ortet, cultivar and aesthetics did not seem to be working. Since Nuttall oak is not rare or endangered in Missouri, my efforts alone were insufficient. I called upon the help of several IOS members as well as a couple of well-known garden writers. MoDOT personnel received emails and letters from around the globe in support of saving the tree. I finally had their attention!

I was contacted by McMurray, wanting information on how to proceed. She had spoken with her superiors as well as the architect on the job and they agreed to meet with me at the site to go over the particulars. In March 2011, I drove down to the site to meet with McMurray. We had a very productive meeting in which MoDOT agreed to protect an area about two times larger than the drip line. Bree

Trimming ice damage high in the crown

photo©Ryan Russell
also asked me which other trees should be saved, to which I of course replied “All of them!” The other species at the site include Bald Cypress (\textit{Taxodium distichum} [L.] Rich.), Pin Oak (\textit{Q. palustris} Muenchh.) Green Ash (\textit{Fraxinus pennsylvanica} Marsh.), White Ash (\textit{F. americana} L.), and a few others.

I was not able to follow the job closely throughout the demolition phase because the ortet is a 4.5- hour drive from my house, but I had several people helping me monitor the project. MoDOT kept to their promise to protect the tree up to the drip line, and the tree came through the construction relatively unscathed. Someone stubbed off a few low hanging limbs, but no real harm was done. The work was completed in early spring 2011.

In the fall of 2011, my wife and I made the long drive to New Madrid County Missouri to prune and inspect the ortet. By this time, the tree had been through a terrible ice-storm, poor post-storm pruning, construction, and another hot and very dry Missouri summer. Upon initial inspection, I noticed that in three spots on the root flare, pieces of the bark had been ripped off. I assume this was a result of machinery damage during the mowing season. Since the tree had not been pruned since the ice-storm, it had large amounts of adventitious water-sprout growth, and just setting my climbing line into the tree took fifteen minutes. After fighting my way through the thick jungle of sprouts, I began to notice that the ortet has very nice structure. There were no bad unions or included bark and the tree overall had good balance. My job was to try to restore the tree to its former glory.

In places where the larger limbs had broken in the storm, someone had cut them where they could most easily be reached. There were many internodal cuts which resulted in some dieback. I am glad that those limbs were not cut off completely, however. I carefully selected new growth that will become the new leads. However, a few of these limbs were damaged so severely that I removed them altogether. The tree does have a mild (thus far) case of obscure scale, and I am trying to negotiate a plan with MoDOT to treat it this spring.

Unfortunately, I was not able to prune the entire tree this time due to the long drive and the short days, but I managed to get all of the major concerns addressed. I plan to return next fall to finish the pruning (oaks in eastern North America should not be pruned during the growing season due to the threat of a fatal fungus infection called Oak Wilt). I noticed that only a few limbs had acorns. The lower limbs on the south side of the tree were dripping with acorns. Perhaps prevailing spring winds are the culprit? I did manage to stuff my climbing bag full of acorns before I returned to the ground.

I am glad that this great oak was saved from removal, and that an entity as large as MoDOT was willing to listen to a few concerned people. I would like to thank the IOS members that sent messages to MoDOT in support of this tree. I do not believe saving this tree would have been possible without your support. I would also like to thank Guy Sternberg for finding and introducing this plant (and its offspring) to us as well as dedicating his time and efforts to this journal and to the IOS in general.

Anyone interested in more information about this tree or the ‘New Madrid’ seed group can contact me with questions. If anyone would like to express their gratitude to the Missouri Department of Transportation for their cooperation during this project, they can contact me and I will pass the message along.