

"From Acorns to Oaks"

Flourishing from 1-6 centimeter acorns to 50-100 foot giants, oak trees are the single most important tree species to wildlife in Kentucky forests. From the smallest insects and grubs to the behemoth black bear, oaks provide food and shelter to creatures big and small. Not only that, but oak trees also play a critical role in our lives and societies. On the negative side, these trees face hardships such as: diseases, stress, fires, overcrowding, etc. However, there are numerous ways to combat these devastating circumstances with a few simple efforts you can take to conserve, protect, and recover these mighty oaks.

Exploring Kentucky's Mighty Oaks

They stand tall and proud and are firmly grounded. They wear a crown and blossom in beauty. This is Kentucky's mighty oaks. From the uppermost section of the tree, otherwise known as the crown, to the roots and trunk, the section which keeps the tree steadfastly planted, oaks are gentle giants that can stand at 100 feet. However, not only is an oak tree gigantic in height, but mature oak trees' lateral roots, roots that extend from the main roots, can extend as far as ninety feet from the trunk of the tree. In addition, an oak tree's large branches can stretch as far as 135 feet. On account of an oak's size, a developed oak tree can absorb up to 150 gallons of water daily. Due to these immense proportions, oaks can be identified easily by their overall size and appearance. Oak tree's bark is whitish-grey to black and has deep ridges and crevices producing a scaly look on the bark. Their leaves are lobed with pointed or rounded tips. These trees are classified as hardwoods and are deciduous (shedding its leaves annually). Furthermore, oak trees, solely, are the only tree species in the entire world that produce acorns. One single mature oak tree can produce 10,000 acorns per year, but it takes as long as twenty years for the oak tree to develop to this point of production. For this reason, Ralph Waldo Emerson once said, "The creation of a thousand forests is in one acorn". These preceding traits distinguish oaks from all other tree species worldwide.

In Kentucky, there are ten specific oak tree species: black oak, northern red oak, pin oak, scarlet oak, shingle oak, willow oak, bur oak, chestnut oak, chinkapin oak, and lastly, the white oak. Oak trees have many uses in society today such as: furniture, wine barrels, timber, paper, rayon fabrics, rubber balls, and many other products that are manufactured from wood extracts. In the past, oaks were used to build ships, shelters, and treat ailments and wounds. Oak trees have been a resource to humankind for generations, equally they are also a resource for many animals scavenging for a quick meal, cozy home, or shelter from a predator.

From acorns mighty oaks may grow, but in addition, from acorns also grow mammals such as: deer, squirrels, opossums, mice, etc. These critters consume large amounts of acorns during late fall and early winter. During this season, the acorn is

incredibly abundant and accessible making it one of the most important resources for wildlife. Furthermore, oaks' acorns also provide food to many creatures that fly. As well as mammals and birds, insects also take advantage of the oak tree. They construct non-harmful galls on the branches of oaks during summer and fall in order to protect their eggs and larvae. Even so, barn owls, caterpillars, ants, spiders, snakes, salamanders, etc. will use oak trees as a home. Wildlife rely on oak trees so greatly that oaks have become a keystone species in the ecosystem.

The Challenges Kentucky's Mighty Oaks Face

Oak trees face many life-threatening challenges ranging from wildland fires and disease to competing for water and space with other trees. As a result of nearly 1,447 human-induced wildland fires that occur annually in Kentucky, many oaks fall prey to diseases, insect-caused complications, and stress. Wildland fires can create holes in the tree's bark contributing to insects burrowing into those holes and destroying water and sap-producing tissues, staining wood, etc. Likewise, disease can enter, likely distressing the tree and causing: root rot, bacterial wetwood, anthracnose, oak wilt, etc. In addition, other circumstances such as: dehydration, compacted soil, and restricted root space are all conditions that can harm oak trees. However, some of the aforementioned circumstances could have been avoided if we took action.

Small Efforts, Big Difference

You can make a huge difference in conserving, protecting, and recovering oaks by doing small deeds. First of all, when you enjoy a fire, follow all fire safety procedures to ensure that a wildland fire cannot combust. Next, you can protect oaks from disease by minimizing their stress, separating diseased trees from healthy ones, and killing harmful spore mats and fungus on trees. Also, you can recover diseased oaks with inexpensive remedies, and start an envirothon team to raise awareness of preserving oaks. Additionally, you can lavish your lawn with oak trees. Then, not only can you admire your oak trees' beauty, while enjoying their shade, but also conserve their species, and observe the wildlife they attract to your yard. By implementing several of the preceding steps, you will be doing a great measure of good for Kentucky's mighty oaks.

In a Nutshell

Oak trees are a simple, yet intricate species that benefit our world in an innumerable amount of ways. From providing us with furniture and flooring to protecting squirrels and chipmunks from the harsh bite of a cold winter, oaks play an important role in our lives and ecosystems. As a result of oak trees serving such honorable feats, we should take action. We should aid them when they are sick and assist them in their recovery. We should protect them from wildland fires and overcrowding. We should conserve, protect, recover, and highlight this amazing species because our lives would never be the same without Kentucky's mighty oaks.

SOURCES and SITES USED:

<https://www.deeproot.com/>

Sciencing.com

Blog.nwf.org

[Www.uky.edu](http://www.uky.edu)

www.michigan.gov

Forestry.ca.uky.edu

<https://extension.psu.edu/oak-diseases>

https://www.fs.usda.gov/naspf/sites/default/files/publications/identify_prevent_and_control_oak_wilt_print.pdf

<https://eec.ky.gov/Natural-Resources/Conservation/Current%20Art%20and%20Writing%20Information/Exploring%20Kentucky's%20Mighty%20Oaks.pdf>