OUR BELOVED OAKS

by Laurel Rady
UCCE Master Gardeners of El Dorado County

Throughout history, oak trees have been revered for their strength, longevity, value and character. If a particular oak exists in your life, it is likely to be associated with a pleasant memory, like the beautiful, old White Oak *(Quercus alba)* with its tire swing at my childhood home in Pennsylvania; or the tall, majestic Valley Oak *(Quercus lobata)* near Route 50's Prairie City exit, that became my first landmark after moving to California, and which is one of the only remaining original features in a landscape that has radically changed in the last twenty years.

Oaks are members of the beech family, in the genus *Quercus*, which is native to the Northern Hemisphere. There are approximately 600 species of oaks on earth, growing in the Americas, Asia, Europe, and North Africa. Oak trees can grow to 150 feet in height, and can thrive in a variety of environments, including riverbank, woodland, chaparral, and moist prairie. They grow in the form of both trees and shrubs, and can be winter-deciduous, drought-deciduous, or evergreen. More than 60 species are native to the USA; about 22 species are native to California; and at least six exist in El Dorado County: Blue Oak, California Black Oak, Canyon Oak, Huckleberry Oak, Interior Live Oak, and Valley Oak. Other oaks are present here, but due to their close similarities to other species it is often challenging to correctly identify them.

One of the oldest and most widespread trees on earth, oak trees made their appearance about 65 million years ago. It can take up to a century for an oak to fully develop; and it can then live an additional 900 years after that. An oak can continue to grow and produce its seeds, known as acorns, well into old age. Growth may not slow until an oak exceeds the 1,000 year mark and some parts begin to die.

Although oaks bear male and female flowers on the same tree, they still require the presence of neighboring oaks in order to pollinate. An acorn is a single seed with its nutritive tissue enclosed

in a hard shell. Acorns and leaves are coated with tannic and gallic acids, which help prevent diseases, fungal growth and insect infestation. Individual oak species can often be identified by the particular shape, size, and color of the acorns they produce. Different amounts of acorns are produced each year, and scientists are still trying to figure out why.

Oaks are defined as Keystone Species in a large number of habitats (from Mediterranean semi-desert to subtropical rainforest) because they have had -- and continue to have -- an exceptionally important effect on their surrounding environments. Their leaves, acorns and branches provide nutrition, sustenance, and shelter for an estimated 5,000 insects, 80 species of reptiles and amphibians, 100 species of birds, and more than 60 mammals. Oaks provide vital benefits to so many other kinds of plants and animals that entire ecosystems depend on them. Without oaks, these ecosystems would be dramatically different, or cease to exist altogether.

Resilient survivors, oaks can withstand drought, rocky soil, and an amazing variety of inhospitable conditions. Unfortunately, the world's oak tree population is decreasing, due to lawn overwatering and the demand for timber, firewood, charcoal, coffee, cattle ranching, and building materials from an ever-increasing human population; and a variety of other factors. At this moment, 78 species of oaks -- almost 15% of the world's oak population -- are in danger of extinction, and an additional four species are deemed Near Threatened. What would our beautiful landscape look like without them? Let's learn how to recognize, appreciate, care for, and sustain the oaks -- some of California's most important, historic, and iconic trees -- before they are gone.

Master Gardeners continue to offer gardening classes on-line. A five-part online class series, Gardening in a Changing Climate, will be held on Wednesdays from 3:00 to 4:30 PM beginning September 9 (you are welcome to join us midway through the series). Please go to http://mgeldorado.ucanr.edu/Public_Education_Classes/ for registration instructions, to access the archived recording, and to see all upcoming online classes.

Due to the COVID-19 pandemic Master Gardener events will for the foreseeable future be limited. Please see our calendar of events for learning opportunities. We realize our public classes are valued by County residents and we especially appreciate your continued support and understanding during this public health challenge.

The Sherwood Demonstration Garden, located at 6699 Campus Drive in Placerville, is open to the public, from 9 AM to noon on Fridays and Saturdays. State and county public health guidelines require us to limit visitors to ten at a time (including our docents) and ask that they practice social distancing and wear face coverings. Restrooms will not be open. Check http://mgeldorado.ucanr.edu/Demonstration_Garden for more information.

Have a gardening question? Master Gardeners are working hard remotely and can still answer your questions. Leave a message on our office telephone: 530-621-5512, or use the "Ask a Master Gardener" option on our website: mgeldorado.ucanr.edu. We'll get back to you! Master Gardeners are also on Facebook, Instagram, and Pinterest.

Stay safe and follow recommended health and sanitation practices in the coming weeks.

For more information on the UCCE Master Gardeners of El Dorado County, see our website at http://mgeldorado.ucanr.edu. To sign up for notices and newsletters, see http://ucanr.edu/mastergardener e-news.