

It's "Leaf Exchange" Time for Our Live Oaks

This is the time of the year when local tree experts and Forest Service folks tend to get lots of calls from people saying something like, "My live oaks are losing all of their leaves. What can we do about it"? If you are also concerned about your live oaks, you shouldn't be. It is leaf exchange time for them.

Everyone is accustomed to seeing most of our deciduous trees lose their leaves in November or December, even earlier for some species. And many of those trees are now beginning to show signs of buds swelling or of new small leaves beginning to emerge. It is something we have seen all of our lives and we don't view the dropping of leaves in the fall as anything alarming.

Well, live oaks actually do exactly the same thing, but they just do both the leaf drop of last-year's leaves and the emergence of new leaves at almost the same time. We tend to think of live oaks as being evergreen, like Texas mountain laurel or yaupon or cenizo or even non-native ligustrum. But botanists refer to live oaks as being "semi-evergreen," indicating that while they do keep their leaves throughout most of the winter, they lose their leaves every year, and that occurs at the end of winter or early spring.

Actually, it is not really just a two-step process, but usually a three-step process. As most, but usually not all, of the old leaves have fallen, the formation of the male oak flowers, called catkins, begin to form. These are most conspicuous as strings of yellow-green flowers that mostly look like little balls. The catkins eventually become 2 to 4-inches long, and this is where the oak pollen is produced. This is the time when TV weather reports high levels of oak pollen.

Live oaks are wind-pollinated, but don't look for the female flowers as they are very tiny and inconspicuous at the axils (where the new leaf comes off of the branch). The next step in leaf exchange is the emergence of tiny new leaves that may take some weeks to become full sized, and this step is usually slightly later than the catkin formation.

Each these three steps do not all take place exactly everywhere on the tree at exactly the same time. Somewhere on the tree you may find some of last-year's leaves even after most of the tree will be showing catkins of various lengths and on other parts of the tree you may see the beginning of new leaves. Even though all of the parts of the tree have the same DNA, some parts of the tree can be ahead or behind the rest of the tree in terms of the leaf exchange process.

And, just as with other deciduous trees, not every individual tree in an area will do everything at the same time. In fact, different live oak trees within a close area that even appear to be about the same age, may be a few weeks apart in the timing of the leaf exchange.

Catkins are common to all species of oaks, but some other species of trees also have similar bloom structures.

A common tree found planted in this area is the Monterrey oak or more properly, the Mexican white oak. It is also “semi evergreen,” generally similar to the live oak in keeping its old leaves throughout the winter and then dropping them in late winter to early spring as the new leaves surface. This tree is not native to the Hill Country, but has been found growing natively in Val Verde Co.

Different species of trees have different times for dropping old leaves, putting up new leaves and flowering. Some flower before the new leaves, some after the new leaves have emerged. And just like no people are exactly alike, the same goes for trees. The timing of various processes within individual trees is controlled by the DNA of the individual tree, the timing of hormone production, the microclimate the tree is growing in and to a minor extent, the recent weather.

The beauty of all of these differences between and among the species just makes Mother Nature that much more interesting and enjoyable.

Until next time...

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