

## What is the Drought Doing to Our Native Trees and Grasses?

Two weeks ago I wrote about what the drought is doing to our native wildlife. Today let's think about what is happening to our native grasses, forbs and woody plants. What happens to the vegetation, in a very large part, determines what will happen to our wildlife, and for that matter our livestock. Without vegetation, we wouldn't have any wildlife.

At this point it is probably safe to say that there have been longer droughts in the past, but quite possibly none as severe as this one. As of now, over the last 11 months, we have had only about 6 inches of rain.

To the casual observer driving along looking at the scenery, it may not be apparent, but many of our trees are showing signs of stress. Live oaks are the most common hardwood tree in the Hill Country. This past March and April, when the live oaks were undergoing leaf exchange (dropping last year's leaves and growing new ones), we were already in a serious drought, so the oaks didn't have as much water available in the soil as was needed to produce a normal amount and size of new leaves. Water is required not only to transport nutrients from the roots to the leaves, but also as a raw material for the process of photosynthesis to make new leaves.

So the net result is that many live oaks have a thinner canopy, fewer leaves and smaller leaves, than they would in normal years. It is unlikely that even were we to get a big rain tomorrow that the trees would grow any more leaves this year. Presumably, if we get rain before next spring, next year's growth will be back to normal.

There are individual blackjack, post and Spanish oaks, as well as other kinds of hardwoods, that have either lost leaves or the leaves have turned brown (blackjacks seem to be suffering the most). It is certainly too early to declare the trees dead. Assuming rain before next spring, they may very well leaf out again.

But it is also true that all of our large native trees are being stressed by these conditions, and this stress can make the trees more susceptible to diseases of various kinds that could kill them in the next few years. So even if trees appear to have survived the drought, they may succumb to the stress in years to come.

What can you do to help? If watering is an option, soaker hoses or drip hoses around the dripline are the most effective, and if the ground under the dripline is not covered with leaves or grass, then putting an inch or two of mulch down will also help. Water mature trees until the ground is wet 6 to 8 inches down (when you can push a 6 to 8 inch screwdriver blade all the way into the ground), every 3 to 6 weeks at least until winter. Please observe water restriction rules.

All the native grasses have long since gone dormant, and some grass plants may have died. Most areas of native grasses have an abundance of grass seed already in the soil waiting for favorable conditions. So when rains do come, most of the grasses will recover either from breaking dormancy or from regrowth from seed. Obviously, the longer the drought continues, the more time it may take to recover.

The drought is forcing some ranchers to keep animals on worn-out pastures too long, causing excessive degradation which may take years to recover. Long term, removing the animals would be best. One problem is in areas where animals congregate, the hoof action of the animals will grind up the grass leaves to the point of laying the ground bare.

Where there is bare ground, the temperature of the soil is 20 to 30 degrees hotter than soil that is shaded by leaf litter or vegetation. This hotter temperature not only destroys the bacteria and other microorganisms that are essential to healthy soil, but also bakes the last traces of moisture out of the ground. Wherever this happens, the feeder roots of any vegetation will likely be destroyed.

Another thing that happens when grass isn't growing is that animal trails become bare ground trails that can then become the beginning of erosion when rains do come.

There are probably viable seeds for many forbs still in the ground, and in time, with rain, they will recover too.

Until next time...

Jim Stanley is a Texas Master Naturalist and the author of the book "Hill Country Landowner's Guide". He can be reached at [jstmn@ktc.com](mailto:jstmn@ktc.com). Previous columns can be seen at [www.hillcountrynaturalist.org](http://www.hillcountrynaturalist.org).