

## Nurse Plants. How Many Young Plants Survive the Deer

When you walk around a pasture or natural area, pretty soon you realize that Mother Nature places plants in what might seem to be a random arrangement. If we humans had placed all the trees and shrubs on the landscape, we would probably have put things in rows or some kind of “logical” groupings and probably some kind of spacing separating individual plants from each other. While Mother Nature’s plant arrangements are certainly not anything we would think of as “logical”, they are far from random. There is a reason everything is where it is, even if it is not obvious to us.

First, trees or shrubs are where they are because that is where the acorn or seed was when it germinated. I know that is obvious, but it explains a lot. The seeds, acorns or nuts of most trees and shrubs are moved around by animals, rather than, say, the wind. Yes, some trees have seeds that are light enough and have thin membranes that allow them to drift short distances in the wind, but the seeds are not carried larger distances that way.

Most all berries either fall down under the parent tree, or are eaten by a bird or other animal and then transported some distance in the animal’s digestive system before being deposited elsewhere. Of course, squirrels also carry nuts and acorns around and bury them, theoretically to find them later.

But the point is that the birds and animals cause the trees and shrubs to be where they are. But not all of the seedlings planted by the birds or animals survive, because they are eaten at an early stage in their lives by grazers and browsers. Which is where nurse plants come into the picture.

Nurse plants are plants that have the ability to protect young saplings from being eaten and thus allow the young plants to grow to a stage where they can survive without protection. The most common nurse plants in this part of the Hill Country are prickly pear, especially Texas prickly pear, the large pad species (*Opuntia engelmannii* var. *lindheimeri*) and agarita (*Mahonia trifoliolata*).

It is not uncommon when walking on a ranch or along a trail in a park to see a small tree growing up inside a large prickly pear or agarita. And it may be the only place where you will find a young hardwood tree only 4 feet tall anywhere in the area. A bird or a small animal either perched on the prickly pear or agarita bush or crawled up inside and then left their droppings containing the seed.

As the first young leaves emerged, nothing could get to them to eat them and the new plant grew bigger and bigger, eventually sticking out above the nurse plant but still out of reach of browsing critters. Eventually the tree will be big enough to have sufficient

leaves above browse height so that it could survive even if the prickly pear or agarita were to die.

The most common hardwood trees we see growing up inside nurse plants are hackberry, escarpment black cherry, Texas redbud, Carolina buckthorn, Spanish oak and cedar elm. Other than hanging over a steep cliff along a creek bed, this may be the only place that these deer-favorite trees can be found as youngsters.

Large cedar (Ashe juniper) trees can sometimes also serve as nurse plants. It is not uncommon, especially in the southern half of Kerr County and Bandera County to find young madrone trees growing up inside the protection of a large cedar bush which has limbs down to the ground.

Of course, the nurse plants also provide protection for small animals as well. Cottontails are particularly fond of making their nests inside large prickly pears.

Sometimes Mother Nature hasn't provided as many nurse plants as are needed, and we can step up and take over for her. We can make small, loose piles of cedar branches to accomplish the same thing, and at the same time become nurse areas for new grass or wildflowers. We can make circular cages out of tree branches or small logs to protect larger areas from the deer, or we can build wire exclosures to accomplish the same goal. This is especially successful if you find a small hardwood sapling that has not been eaten, usually in the spring, and you cage it, you will almost always have the makings of a mature hardwood.

Until next time...

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