

What Plants Have Taught Me

Lessons from the Desert Garden



Desert Cassia (*Senna armata*)



Presented by Norm Schilling
of Schilling Horticulture Group
and KNPR's Desert Bloom

More water isn't always better, even in the desert

Some plants don't like their feet wet.
Once the plant is established, move the emitter(s) away from the base or cap it!



- Mulga Acacia (*Acacia anuera*)
- Texas olive (*Cordia boissieri*)
- Italian cypress (*Cupressus sempervirens*)
- Texas mountain laurel (*Sophora secundiflora*)
 - *both the green and silver varieties
- Woolly butterfly bush (*Buddleja marrubiifolia*)
- Valentine bush (*Eremophila maculata*)
- Blue bells emu bush (*E. hygrophana*)
- Possibly all Eremophilas?
- Gopher spurge (*Euphorbia rigida*)
- Possibly all Euphorbias?
- Lavender (*Lavandula spp.*)
- Cupleaf Texas sage (*Leucophyllum zygophyllum* 'Cimarron')
- Heavenly Cloud Texas sage (*L. x 'Heavenly Cloud'*)
- Sierra Bouquet Texas sage (*L. pruinatum* 'Sierra Bouquet')
- Blackfoot daisy (*Melampodium leucanthum*)
- Jerusalem sage (*Phlomis fruticosa*)
- Chaparral sage (*Salvia clevelandii*)
- Desert Marigold (*Baileya multiradiata*)
- Bush Morning Glory (*Convolvus cneorum*)

Mulga Acacia (*Acacia anuera*)



Texas olive (*Cordia boissieri*)





Italian cypress (*Cupressus sempervirens*)

Texas mountain laurel (*Sophora secundiflora*)



Summertime Blue Emu (*Eremophila* x 'Summertime Blue')



**Blue bells emu bush
(*E. hygrophana*)**

**Possibly all
Eremophilas?**

**Winter Blaze Emu
(*E. canosa* 'Winter Blaze')**



Valentine bush (*Eremophila maculata*)

Gopher spurge (*Euphorbia rigida*)



Candelilla (*E. antisiphilitica*)



**Possibly all
Euphorbias?**



Sticks on Fire (*E. tirucalli* 'Sticks on Fire')

Woolly butterfly bush (*Buddleja marrubifolia*)



Cupleaf Texas sage (*Leucophyllum zygophyllum* 'Cimarron')

Sierra Bouquet Texas sage (*L. pruinoseum* 'Sierra Bouquet')



Heavenly Cloud Texas sage (*L. x* 'Heavenly Cloud')



Blackfoot daisy (*Melampodium leucanthum*)



Jerusalem sage (*Phlomis fruticosa*)



Chaparral sage (*Salvia clevelandii*)



Lavender (*Lavandula* spp.)



Desert Marigold (*Baileya multiradiata*)



Bush Morning Glory (*Convolvulus cneorum*)

It's important to remember to irrigate these plants at the time they're installed and then to cap or move the emitter away from the base once it's established.



Signs of overwater could be:

- *Yellowing leaves*
- *Stunted or irregular growth*
- *Crispy leaves*
- *Discoloration of trunk tissue*

Another issue is overwatering desert trees, which can lead to serious long-term problems

Most desert trees have evolved to live for months on end without water.

This means when they have unlimited access to it (in the form of regular irrigation), it's in their nature to take up as much as they can.



The trouble is, when it comes to desert trees,
FAST GROWTH = WEAK WOOD

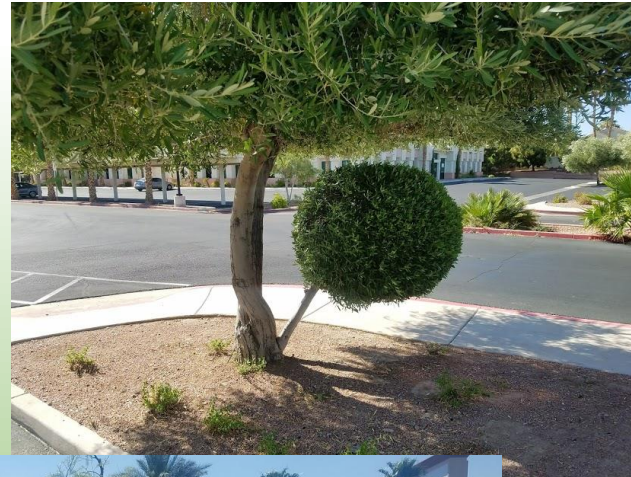
- **When a large tree has weak wood from years of overwatering, it is much more likely to have large limbs break off in the wind**
- **Pick YOUNG DESERT TREES at the nursery. Too many growers overwater these trees in an effort to make them grow faster, making it difficult to find a large specimen with reliably strong wood (we'll get into their pruning sins shortly 🤪)**
- **Water desert trees like mesquites, palo verdes, desert willows and Acacias deep and infrequently (an established desert tree may only need a few drinks a *year*)**

Mushrooms at the base of a desert tree is always a bad sign!

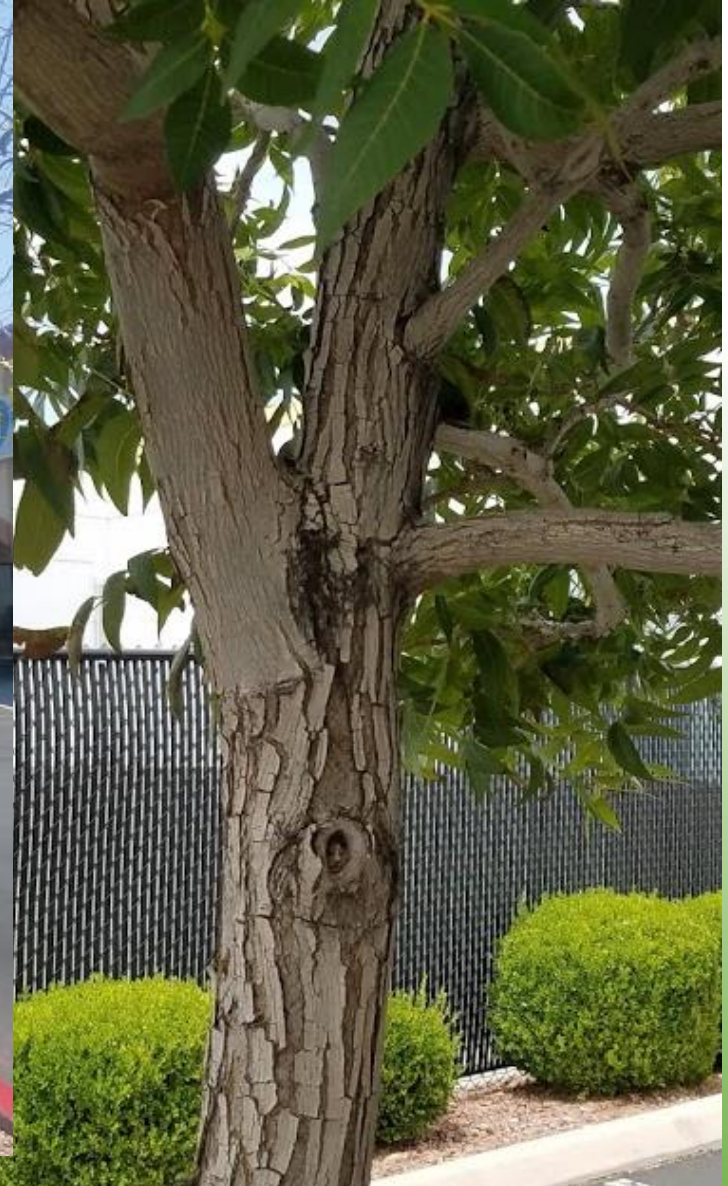


How you prune your trees and shrubs shapes more than just their form.

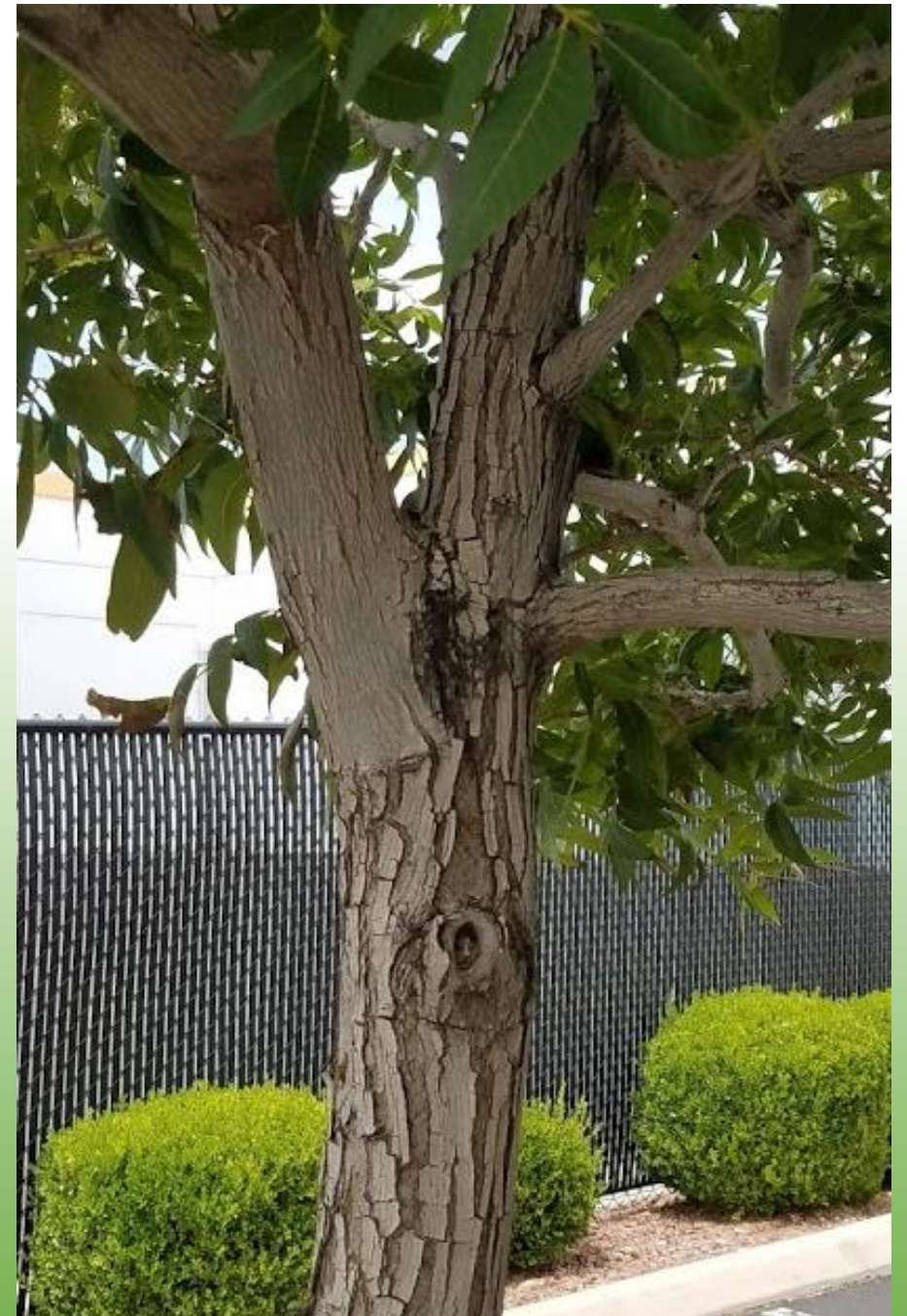
Pruning can also determine how long they live and how much of a return on investment you get from your plants.



- **Always remove dead wood.**
- **Remove no more than 25%-30% of live foliage on a young, healthy, well-adapted tree.**
- **That percentage should be reduced by 3 factors:**
 - **if a tree is older (for the species)**
 - **If a tree is stressed or diseased**
 - **If it's a challenged species in our desert.**
- **Focus on problematic limbs first (crossing branches, weak crotches, co-dominant stems and limbs that pose a threat or obstruction).**



Make sure you avoid co-dominant stems to reduce the chance of breakage.



Leaving stubs is a BIG no-no and not just because it's ugly. It also leaves trees and shrubs more susceptible to pests and disease. Also, those wounds can't heal, and open wounds are stressful for us and them...and you know what they say about stress!



Image courtesy of Joseph LaForest via ISA-arbor.com UGA5046007



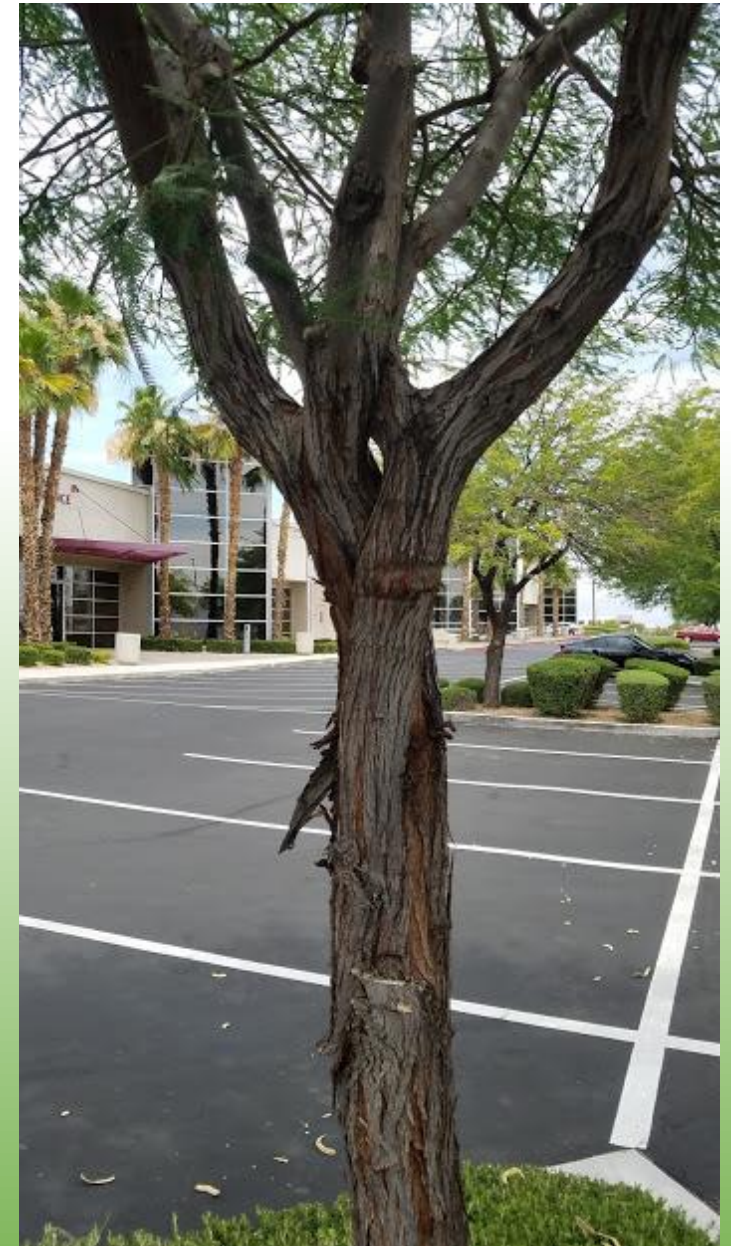
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Image courtesy of Joseph LaForest via ISA-arbor.com

Clean your tools between each and every tree and shrub to avoid transferring potentially lethal disease. Rubbing alcohol (70%) will work just fine.

If you're unsure about how or what to prune in a tree, it pays to have a skilled arborist take care of the work for you. Trees are *valuable, living* things and should be treated as such.

There's an industry term for this ... it's called a "hot mess"!



It's important to know what your plants want to be and then to let them be that (within reason)

Pruning a specific type of plant does require a bit of specific knowledge, but it's well worth it for the long-term health and beauty of your garden.



Don't lion-tail your trees! It creates branches that are more likely to bend or twist to the point of breaking in the wind.



First and foremost, not everything has to be hedged all the time!



For example, this row of hackberries at the RTC Park 'n Ride woulda coulda shoulda been...

...a row of beautiful shade trees to provide relief to that parking lot and reduce our valley's heat island effect.



Image courtesy of Lurvey Landscape Supply

Many potential trees are being pruned into shrubs for no other reason than it's what landscapers think they're supposed to do.

Shiny Xylosma, Vitex and Texas mountain laurel are some of the most common victims of this short-sighted practice but almost any plant in our valley could be subjected to hedgeclippers at some point.



Shiny Xylosma



Texas Mountain Laurel



- **Hesperaloes (Red Yucca, etc) and Dasylirions (Desert Spoons, Toothless D.S) suffer from over-pruning regularly when its completely unnecessary to keep them looking naturally beautiful. Remove only dead leaves on these species! On Dasylirion, cut them, on Hesperaloe, pull them off**
- **When pruning grasses, cut them down to a couple of inches from the ground to reduce the chance of rot in their center.**



Palms are tough but they're not indestructible. Pruning still matters!

Despite their reputation as bulletproof plants, palms can absolutely respond to poor pruning habits, especially if they're subjected to them repeatedly.



There's no benefit to over-pruning any palm. They can all suffer from nutrient deficiencies and a weaker trunk as a result of overly aggressively removing green leaves.



Mediterranean fan palms will often grow smaller leaves while Canary Island date palms become more susceptible to fusarium wilt.



Prune palms when it's warm and go no higher than the 3:00 and 9:00 positions on the tree's canopy. Don't take off any leaves with green if you can avoid it.



Some issues are created in the cradle.

While it may seem like growers should know better, it's not uncommon to find problems that were created through poor nursery practices. Shop informed so you can choose wisely.



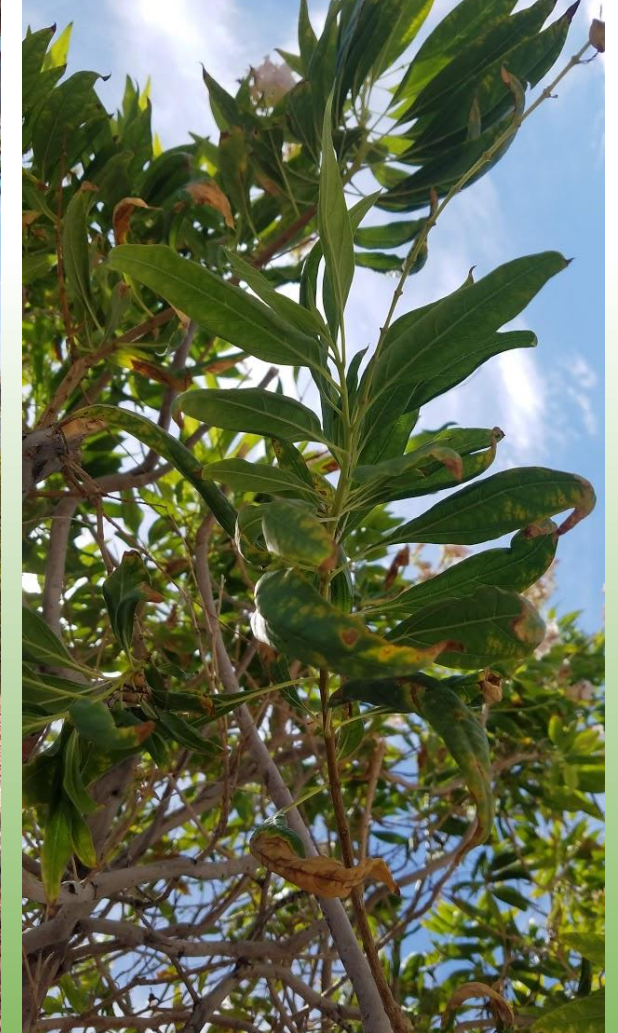
Even diseases are sometimes transmitted from a mother plant to her clones.

This can doom a tree to a much shorter life and expose other healthy plants to a deadly disease.

Chitalpas (*x Chitalpa tashkatensis*) and bacterial leaf scorch (*Xylella fastidiosa*) are a perfect example of this phenomenon.

Xylella fastidiosa is a bacterium that plugs a plants xylem vessels, making it difficult to get enough water to its leaves.

Chitalpas are most often grown from cuttings and if the mother plant is infected, so are its clones. As a result, many infected Chitalpas are planted, exposing surrounding Chitalpas to the disease.



- **Girdling roots are detrimental at any age but they're easy to avoid if you know what to look for. Poorly rooted trees and shrubs are also common. You'll save yourself a lot of money and trouble by inspecting plants before you buy.**
- **Some trees come from the nursery with a buried trunk so be sure to check when planting**
- **Poor form in a young tree can often be corrected but in a more mature specimen it's much more difficult to tackle. Also, younger trees establish and grow more quickly, so they're a better investment; less work, less cost and ultimately a bigger tree. And if all that wasn't enough, younger trees are less likely to be girdled & it's easier to spot it if they are.**
- **In an effort to maximize space and profits, some growers will prune a tree's canopy to no more than the width of the container it's in, resulting in weak crotches and co-dominant stems galore.**

*In a hunt for a nice 36" box Desert Museum palo verde we found 24 specimens at a local nursery. **Not one** was acceptable due to poor pruning and overwatering.*



Proper staking (and stake removal!) is critical to a tree's long-term health

*Staking can make or break a tree, sometimes literally.
Make sure you understand staking basics to help ensure
a strong and healthy mature tree down the road.*



- Always remove the transport stake immediately upon planting. It is not meant for long-term support.
- Stake trees using lodge poles positioned at the edge of the rootball and driven at least 18-24" into the ground.
- Use Arbor Tie or another material that won't bind the tree as it grows and allow for some movement in the trunk. Rigid ties won't allow for healthy development.
- Remember to remove the support stakes and tie once the tree is established (usually about a year) and to check ties periodically so you can loosen them if they're starting to cut into the tree



Not all plants need fertilizer.

There's no fertilizer regimen that works for all plants across the board. The nutrient needs of a plant will vary based on species, soil quality and season.

- Desert plants don't usually like being fertilized so don't force the issue if they're healthy.
- If they do show signs of nutrient deficiency, there are a few elements that are harder for them to access than others.
- A good rule of thumb is to look for a complete, balanced fertilizer with CHELATED micronutrients included. (Gro Power is a reliable product)



- IRON
- ZINC
- MANGANESE
- MAGNESIUM
(Epsom salts)



Any Questions?

