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Southern Area

PRUNING to Save Plants and Water in the DESERT

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TO PRUNE OR NOT TO PRUNE
THAT IS THE QUESTION

PRUNING BENEFITS

- TRAINED TREES ARE STRUCTURALLY STRONGER
- TRAINED TREES LIVE LONGER AND CONTRIBUTE TO THE LANDSCAPE
- WELL TRAINED TREES COST LESS TO MAINTAIN
- THERE IS REDUCED LIABILITY

DENNIS Swartzell

WHY PRUNE?

- TO OPEN UP THE TREE TO PREVENT WIND DAMAGE
- TO ENCOURAGE NEW GROWTH AND BETTER HEALTH

Introduction

- Pruning impacts how much water a plant needs and uses.
- Over-pruning or shearing can stress plants, increasing water consumption.
- Proper pruning promotes plant health and conserves water.
- **Improves Plant Efficiency:** Proper pruning removes dead, damaged, or overgrown branches, allowing the plant to focus its energy and water on healthy parts. This reduces water waste on sections that don't contribute to growth.

From AI search

Introduction

- Reduces Evaporation: By thinning out dense foliage, pruning increases air circulation and reduces the canopy's surface area. This can lower the rate of water loss through transpiration (when plants release water vapor from their leaves), especially in hot or windy conditions.

Encourages Deeper Roots: Strategic pruning, especially in young plants, can stimulate root development. Deeper, stronger roots access water from lower soil layers, making the plant more drought-tolerant and less reliant on frequent watering.

. Mulching: Pair pruning with mulching around the base to retain soil moisture.

From AI search

Introduction

Studies on orchards (like apple or citrus trees) show that pruning to optimize canopy structure can reduce water use by up to 10-20% while maintaining yield. The exact savings depend on the plant type, climate, and soil, but the principle holds: a well-pruned plant is a water-efficient one.

From AI search

Why Pruning Affects Water Use

- Leaves play a role in transpiration and shading the soil.
- Removing too much foliage causes plants to regrow quickly, using more water.
- More exposed soil means higher evaporation rates.

UNNECESSARY PRUNING CAUSES PLANTS TO USE MORE WATER ?

- When plants are pruned, they try to regrow the removed portion of the plant.
- Over-pruning requires more maintenance due to the fast regrowth.
- When plants attempt to regrow lost leaves, more water is required, which is then lost when the new growth needs pruning.
- Proper punning promotes plant health and conserves water

Unnecessary pruning causes plants to use more water:

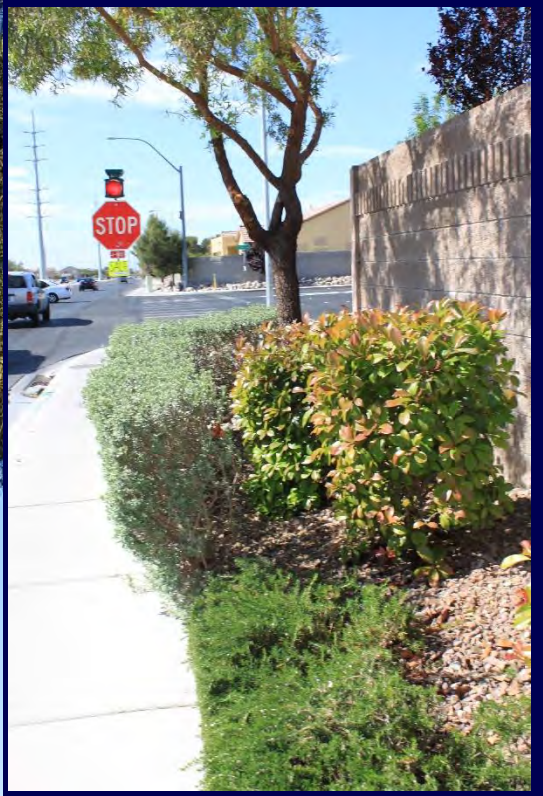
- Over-pruning results in excessive green waste, which often ends up in landfills.
- Over-pruning causes stress and can lead to plant decline.
- Plant stress is especially significant during hot summer months when plants require more water and their limited root systems cannot uptake water fast enough.
- Plants decline faster when they are constantly replacing stems and leaves.

WHEN TO PRUNE?

- PROPER PRUNING MAY BE DONE ANY TIME OF THE YEAR DEPENDING ON THE TREE SPECIES AND THE NEED.
- TREES AND SHRUBS THAT GO DORMANT SHOULD BE PRUNED IN WINTER.
- PLANTS THAT BLOOM ON OLD WOOD SHOULD BE PRUNED AFTER BLOOMING.
- PLANTS THAT BLOOM ON NEW WOOD SHOULD BE PRUNED SEVERAL MONTHS BEFORE BLOOMING TO PROMOTE NEW GROWTH.
- IF UNSURE, PRUNE AFTER BLOOMING TO PREVENT REMOVAL OF FLOWER BUDS

ALWAYS REMEMBER WE LIVE IN THE DESERT!

THIS IS THE MAIN REASON FOR PRUNING

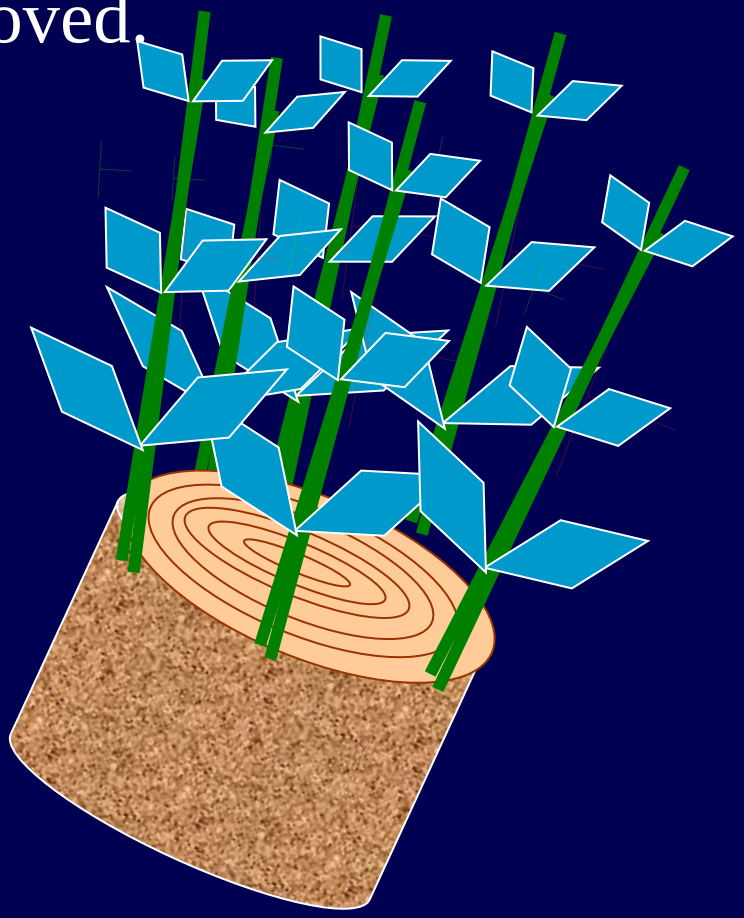


UNNECESSARY PRUNING CAUSES PLANTS TO USE MORE WATER

- When plants are over-pruned, they try to regrow the portion of the plant that was removed.

ADVENTITIOUS BUDS

TRIGGERED BY CATASTROPHIC INJURY



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- Over-pruning requires more maintenance due to the fast regrowth.

UNNECESSARY PRUNING CAUSES PLANTS TO USE MORE WATER

- Flowering trees and shrubs produce fewer flowers after over-pruning.

UNNECESSARY PRUNING CAUSES PLANTS TO USE MORE WATER

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Noelle Johnso A

Unnecessary pruning causes plants to use more water:

- Plants that once were shaded are now sunburned and need more water to try to survive.

Other thoughts on planting, pruning and water conservation

- Before selecting and planting trees or shrubs in the landscape, always check their mature size. Use this measurement to determine proper spacing. For example, if a shrub reaches a mature size of 5 feet wide and 6 feet tall, it should be spaced at least 6 feet from other plants. Planting closer than that leads to overcrowding, requiring more frequent pruning and additional water.
- Apply a generous layer of organic mulch between newly planted shrubs or trees to help retain moisture and suppress weeds.

Other thoughts on planting, pruning and water conservation

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- If a planting becomes too dense and requires frequent pruning, remove excess plants—typically every other one in a hedge. This allows the remaining plants to mature properly, reducing maintenance.

Other thoughts on planting, pruning and water conservation

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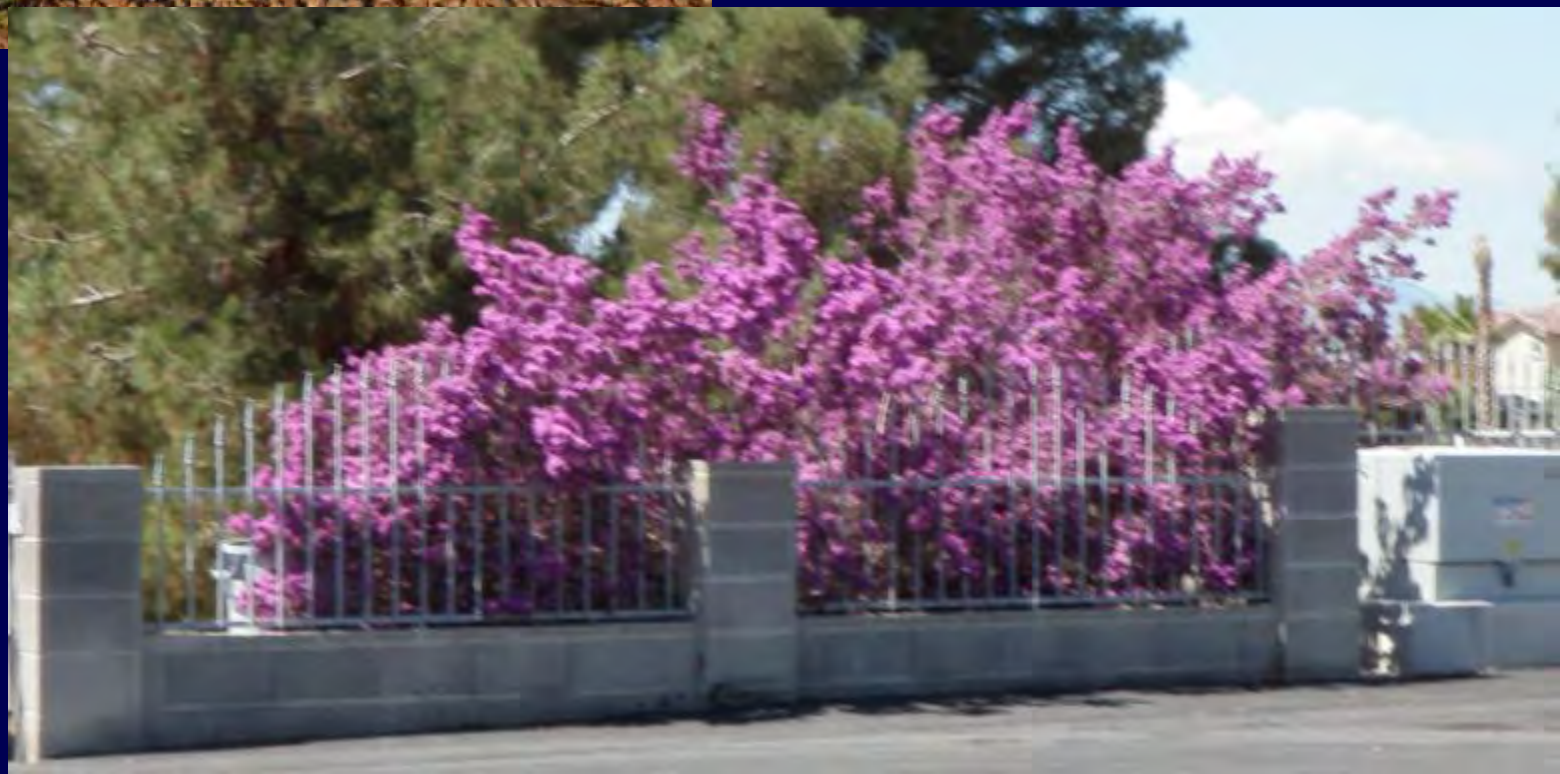
- Flowering shrubs should be pruned no more than once a year, or even less, to encourage natural, open growth. Many desert shrubs can be cut back to the ground every few years (early to late spring before it becomes too hot). Once new growth begins, select 3 to 5 of the strongest shoots (more for larger shrubs) to develop, ensuring they have enough space to grow and flower.



RETROFIT BY PRUNING DESERT PLANTS

SOME PLANTS WILL TELL YOU IF THEY CAN BE PRUNED TO THE GROUND.

HOW DO YOU KNOW IF YOU CAN PRUNE TO THE GROUND?

SOME PLANTS WILL TELL YOU IF THEY CAN BE PRUNED TO THE GROUND.


NATURAL PRUNING

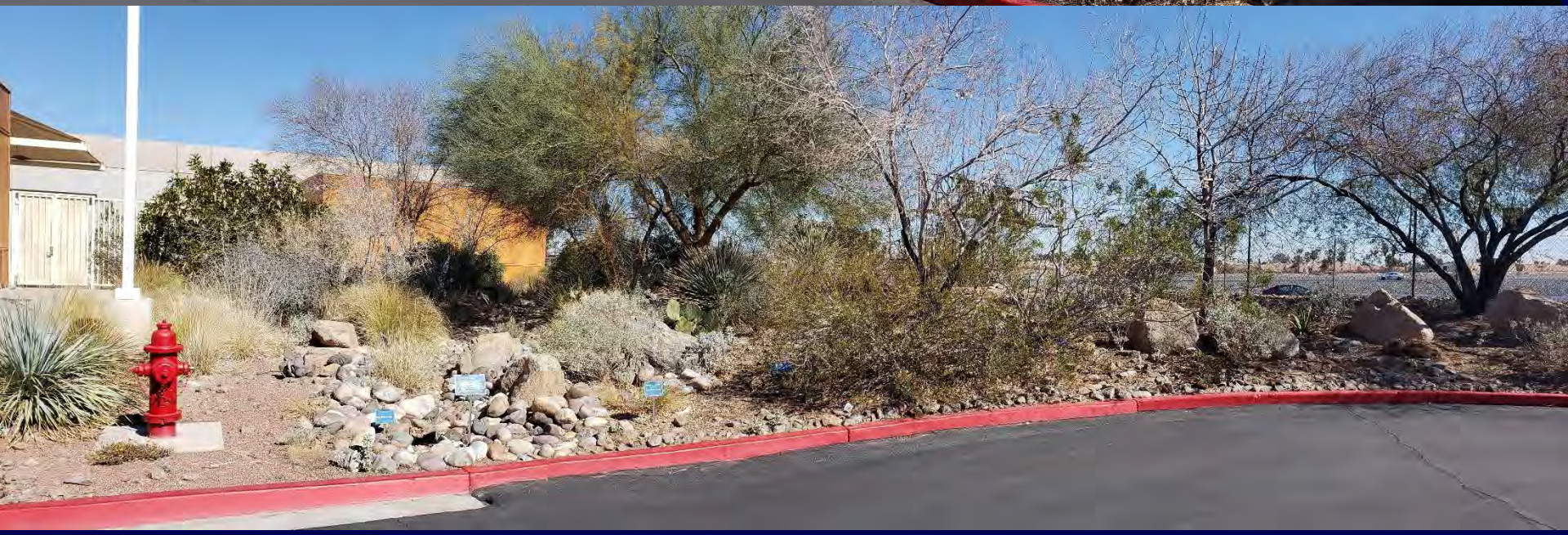
NATURAL PRUNING

NATURALLY PRUNED SHRUBS PRODUCE MORE BLOOMS (never pruned in 30 t0 40 years)

Other thoughts on planting, pruning and water conservation

- Remember, the main causes of constant pruning are poor plant and site selection, overwatering, and over-fertilization.

SEPTEMBER 2016



March 2020


FOR SIGHT
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WHAT TO REMOVE FIRST

- WATER SPROUTS OR SUCKERS


OR PRUNE UNTIL YOU HAVE A BIG PILE OF LIMBS

ML IS TEACHING JEFF HOW TO PRUNE A TREE

EVEN DEAD TREES CAN BE PRUNED INTO BEAUTY

SOMETIMES IT JUST MAKES YOU SICK THE WAY SOME PEOPLE PRUNE

NOT ALL TREES GROW THE SAME-EVEN THE SAME SPECIES!

NOT ALL TREES GROW THE SAME-EVEN THE SAME SPECIES!
DESERT TREES LIKE TO DO THEIR OWN THING.

COLLEGE OF AGRICULTURE & LIFE SCIENCES
Cooperative Extension

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Pruning Shrubs in the Low and Mid-Elevation Deserts in Arizona

Ursula K. Schuch

Pruning is the intentional removal of parts of a plant. Pruning needs of shrubs commonly planted in the low and mid-elevation deserts in Arizona vary from no pruning to regular seasonal pruning. Requirements vary by plant species, design intent, and placement in a landscape. Fast growing shrubs generally need frequent pruning from the time of establishment until maturity, while slow growing shrubs require little to none. Pruning should only be done when necessary and at the right time of year. Using the natural growth form of a shrub is a good guide for pruning. Shearing shrubs should be avoided except for maintenance of formal hedges or plant sculptures. All pruning should be done with sharp hand pruners or, for thicker stems, loppers.

Why prune?

Reasons for pruning shrubs include maintenance of plant health, controlling plant size (for preventing obstruction of a view, sidewalk, or driveway), and rejuvenating old plants. Maintaining plant health includes the removal of diseased, dying, injured and dead branches. Stems that rub against each other should be removed. Control of shrub size for visibility and safety concerns is sometimes necessary. These can be minimized by allowing sufficient space for the plant to reach its mature size in the landscape. Renovating or rejuvenating old or overgrown shrubs through pruning generally improves the structure and quality of the plant, and results in improved displays for flowering shrubs. Some shrubs are grown as formal hedges and require continuous pruning to maintain their size and shape.

How to prune?

Selective thinning refers to removing branches back to the point of attachment to another branch, or to the ground. This type of pruning opens the plant canopy, increasing light and air movement (Figure 1). Thinning cuts do not stimulate excessive new growth. They serve to maintain the natural growth habit of the shrub. When light can penetrate the canopy, entire branches can maintain leaves whereas in a dense canopy branches have leaves near the tip but are bare further back. Selective thinning is suitable for all plants and is generally the most desirable type of pruning cut.

Figure 1. Selective thinning removes the branches back to the point of attachment (left) or to the base of the plant (right) and preserves the natural shape of the plant.

Figure 2. A heading cut removes part of a branch resulting in multiple new shoots below the cut (left and middle). Leaving stubs should be avoided (right) as they will usually die back.

Heading cuts remove parts of a stem or branch resulting in multiple new shoots just below the cut (Figure 2). This can create a bushy plant and is sometimes done when plants are very young to stimulate more branches. However, repeated heading is similar to shearing and eventually results in a dense canopy with branches having leaves at the tip and no leaves further back. Heading cuts should only be used for formal hedges, for rejuvenation, or when a cluster of branches is desired. Stubs left by heading cuts will usually die back, unless cut just above a bud.

No pruning or little pruning is required of some slow growing shrubs (Table 1). Such plants are ideal for low maintenance landscapes and include creosote, hop bush, Texas mountain laurel, Arizona rosewood, pomegranate, jojoba, and juniper. These shrubs should be planted where they can reach their natural size without interfering with other plants, structures, or lines of visibility. A yearly inspection can determine whether any corrective pruning is necessary, but generally these species will grow for many years with minimal maintenance.

Table 1. Shrubs for the low and mid-elevation deserts in Arizona that require little or no regular pruning. Light pruning for size control or selective thinning can be done anytime.

Latin Name	Common Name
Buddleja marrubiifolia	Woolly butterfly bush
Dermatophyllum secundiflorum	Texas mountain laurel
Dodonea viscosa	Hop bush
Fallugia paradoxa	Apache plume
Juniperus chinensis cultivars	Juniper
Larrea tridentata	Creosote
Ligustrum japonicum	Waxleaf privet
Nandina domestica	Heavenly bamboo
Pittosporum tobira	Japanese mock orange
Rhus microphylla	Little-leaf sumac
Rhus ovata	Sugar bush
Rhus virens	Evergreen sumac
Ruellia peninsularis	Desert ruellia
Simmondsia chinensis	Jojoba
Thuja cultivars	Arborvitae
Vauquelinia californica	California rosewood
Xylosma congestum	Xylosma

Correct vs. Incorrect Pruning

Correct Pruning:

- ✅ Maintains plant structure
- ✅ Encourages deep root growth
- ✅ Reduces unnecessary water loss

Incorrect Pruning:

- ❌ Forces excessive regrowth
- ❌ Increases plant stress
- ❌ Leads to excessive water consumption

Best Practices for Water-Efficient Pruning

- **Prune selectively** to maintain natural shape and function.
- **Avoid shearing** unless necessary for specific design purposes.
- **Time pruning correctly** to avoid heat stress and water loss.
- **Leave enough foliage** to shade soil and reduce evaporation.

Conclusion & Key Takeaways

- **Over-pruning increases water use** and plant stress.
- **Correct pruning promotes plant health** and conserves water.
- Landscapers should **adopt water-smart pruning techniques** to create sustainable landscapes in arid regions.

ALWAYS HIRE AN EXPERT TREE CLIMBER


5913


STOP
NO

Photos by Mathile Bradts

Posted by Adam Pineheart

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REFERENCES

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