

## Keeping Plants Alive in Extreme Heat

We are currently enjoying a balmy 99+ degree day. After the record breaking heat of 114° F on Friday, this is somewhat of an improvement. In this blog post I will 1) suggest practices to help your plants make it through the extreme heat; 2) share temperature data from my garden; and 3) give an update (and pictures) on how my plants are doing on day 3 of extreme heat.

### Tips

#### 1. Before extreme heat arrives

- Water deeply during the cool part of the day to hydrate plants.
- Spray leaves in early morning to remove pests and dust. The leaves will dry quickly as the day proceeds, reducing chance of excessive fungal and bacterial growth.
- Trim young, tender growth if you think the plant will have trouble maintaining hydration.

#### 2. It is so hot out there!

Shield young plants with screen or white sheet.

If plant is stressed, check soil to make sure it is dry and then water deeply. If soil is moist, more water will not help.

Mist leaves with a spray nozzle to cool down plant and reduce transpiration.

Desert plants can be watered in the late afternoon to mimic the summer monsoonal rains that they are adapted to.

#### 3. Post Apocalypse

- Once it has cooled down, water plants deeply.
- Do not remove wilted leaves just yet. They will serve as sun shield if another heatwave is on the way.
- If plants that exhibit summer dormancy have lost most or all of their leaves, allow them to continue into dormancy by **not** watering. Extra water now could pull them out of dormancy. These stressed plants may then expend a lot of energy growing a new set of leaves only to be faced with the likelihood of more heat and no natural rainfall. If they do not emerge from dormancy, they will be susceptible to fungal pathogens that grow in moist, hot soil.

Please comment with your own tips and suggestions. If you disagree with mine, let me know how and why so we can learn together.

### Temperature Data

A friend, Drew Ready, posted some interesting data on Facebook's [Southern California Native Plant Gardeners Group](#) during this heatwave. He measured surface temperatures for areas that

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were covered with organic mulch, asphalt, gravel, cement and brick. The winner, surprisingly, was above an **organic mulched bed (177.2° F)**! Next was asphalt (170.4°), followed by cement (159.2°), then brick (156.7°), and gravel (149.9°).

These surprising numbers led me to take my (actually it belongs to my husband) trusty meat thermometer outside today to see what gives. First I must make a disclaimer. A meat thermometer does not do a good job of measuring air temp. Nevertheless, I was more interested in measuring the soil temperature right below the surface. Here are my results:

\* It should be noted that in photo D, although the area was in sun when the measurement was made, it probably was shaded earlier in the day, while photo C probably was exposed to the sun longer. It is likely that this accounts for the temperature difference as much as the thin layer of mulch in photo D.

## My Garden

Finally for a preliminary report on how things look in my garden. As the heat continues more plants may succumb to the stress but here is a quick review followed by a slideshow.

### Significant leaf/plant damage

*Agave attenuata* - likely to recover, though it will look ugly for some time

*Vitis* 'Roger's Red' - will recover

*Ribes speciosum* - leaves dried and curled, plant will go dormant and be fine

*Heuchera* 'Wendy' - very scorched, despite having been watered well before, not likely to make it

*Constancea nevinii* 'Snowflake' - some look fine, two younger plants were cooked; not sure how these will do

### Some leaf damage

Avocado trees - these worry me the most, little damage, but this causes a lot of stress to these old tree

*Ribes viburnifolium* - not much damage, should be fine

*Epilobium canum* - some damage, should make it

### Lookin' good

*Quercus agrifolia* - never a good thing for our oaks, but they look fine now

*Berberis repens* - look real good

*Heteromeles arbutifolia* - minor amount of leaf burn, mostly fine

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*Fragaria chilensis* - looking fine

*Dudleya* - potted collection in the shade is doing okay

*Parkinsonia* 'Desert Museum' - this desert plant looks downright happy

Vegetable garden - looking surprisingly good

Stay cool and let me know how your garden is doing!