



WELCOME!



**UC
MASTER
GARDENERS
NAPA COUNTY**

SUCCESS WITH SUCCULENTS - TIPS



2018



Tonight's Outline

- Welcome to UC County Extension Napa County Master Gardeners
 - Public Outreach Mission
- Tonight's Topics:
 - **Plant Types**
 - **Groupings – Color Wheel Demo; Read the Label**
 - **Growing Outdoors in Containers, Landscapes and Indoors**
 - Containers, Potting Mix and Demo**
 - **Frost Tolerance & Protection**
 - **Propagation Cuttings Demo & give aways**
 - **Resource References**

What is a succulent? What is a cacti?

Spiral Aloe
genus Aloe

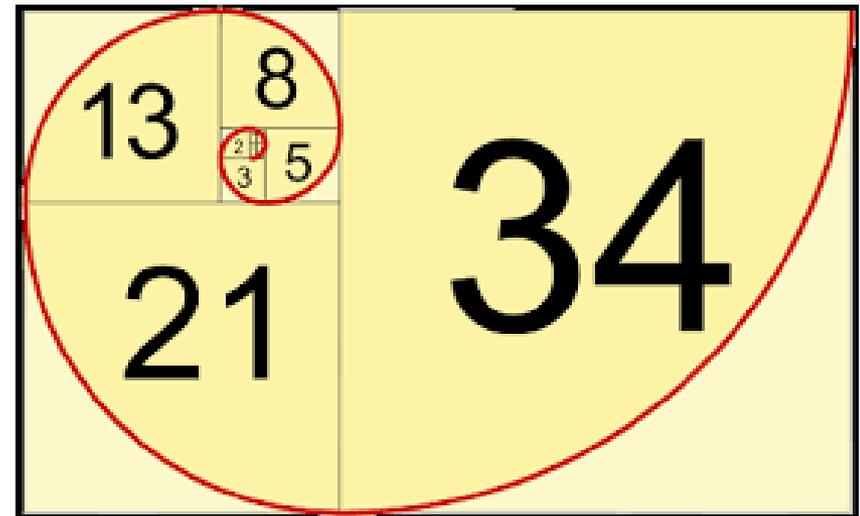


Spiral Cacti
genus Mammillaria

Phyllotaxis is the arrangement of a plant's leaves along the stem.



Spiral Phyllotaxis and the Fibonacci Sequence of Numbers



1, 1, 2, 3, 5, 8, 13, 21, 34, ??

Echevaria - Hen and Chicks



Debra Lee Baldwin



Debra Lee Baldwin

Twelve Genera of Familiar Succulents



Agave

Agave parryi



Agave colorata



Agave neomexicana



Agave victoriae-reginae



Sunset Cornerstone, Sonoma



Aloe



Aloe striata

Aloe polyphylla



Cotyledons

Cotyledon



Cotyledon



Cotyledon

Dasyliirion

Dasyliirion 2



Dasyliirion longissimum



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Dasyliirion desert spoon

Dudleya

Dudleya farinose



Dudleya brittonii



Echevaria

Echevaria



Gorgeous color!



Echevaria 3

Euphorbia



Graptopetalum

Graptopetalum



Graptopetalum



Graptopetalum

Haworthia



Sedum

Sedum



Sedum 2



Sedums go on and on!



Sedum



Sedum



Sedum texture

Sempervivum

Sempervivum



A myriad of colors and leaves!



Right Plant ...Right Place

- Soil/Drainage
- Sun/Shade requirements
- Water
- Plant habit
- Traffic
- Hardiness zone
- Maintenance requirements



Microclimate Influences

microclimate. The long-term weather conditions in a small area on the Earth. Usually, this term refers to such things as the differences in weather between the tops of hills and neighboring valleys, or between different parts of the same piece of land.

In your garden the following conditions can create a microclimate:

- Wind Exposure
- South and North Facing Walls
- West and East Walls/ Eaves
- Sloping ground/ Cold air pockets
- Shade trees and structures

Containers & Growing Medium





DIY Growing Medium

UC Davis Arboretum Recipe

- 1 part ground sphagnum peat
- 1 part uniform coarse sand (no silt)
- 2.5 parts white pumice
- 1 part redwood compost

Very low in organic material.

Specialty Mix Blends

Cactus & Succulent Example:
pumice, aged fir bark, aged redwood and sand





Advantages of Containers



- Drainage: Fast, no standing water
- Soil: Porous, coarse aggregate, low organic content
- Location: Sheltered from frost, harsh sun
- Mobility: Can be relocated with changing conditions
- Style: Size, shape, color, form to suit plants and preferred style



Vertical Gardening – Design Demo





Planning Your Container

- **KNOW YOUR PLANT(S):** Research plants' needs: Water, light, exposure, drainage, fertility, eventual size.
- **GROUP PLANTS** with similar requirements.
- **CHOOSE A CONTAINER** compatible with plants' shallow roots (or modify) and design style desired.
- **ARRANGE PLANTS** for size and color.
- **PLANT GENTLY**, from tallest/largest to smallest/lowest.
- **PLACE** container where plants will receive appropriate light and shelter. Turn if needed to prevent elongating toward light.



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Design

Location

Function

Form

Style

Color

Repetition



Formal or
whimsical



Repetition



AND THEN GROWTH HAPPENS!

When those lovely succulents outgrow their pots, or have so many offsets they look like the Old Woman in the Shoe, or your carefully planned design just doesn't look the same, it's

Time to find a place in the garden!

KNOW YOUR GARDEN:

Sun/shade direction, time of day,
Frost/wind exposure,
Reflected heat and light,
MICROCLIMATES

KNOW YOUR PLANT(S): Research plant's needs: Water, light, exposure, drainage, fertility, eventual size. Plan ahead! **RIGHT PLANT, RIGHT PLACE:**





Considerations for Planting in the Garden:

Location:

- Higher ground: Mounds or slopes for improved drainage and frost protection.
- Morning light or shelter from hottest sun.
- Bright light shade for Dudleyas and other plants from coastal areas.
- Generally, at least 2 hours of sun or bright light to avoid elongation.
- Fast-draining soil. Plant rosettes at an angle to allow centers to drain.
- Shelter from rain during dormancy (Best if bright, dry, and cool.)

Function:

- Structure/"bones", filling middle ground, ground cover?
- Near parking, path, or play area? No sharp points please!



Pocket Gardens



Parking strips and other narrow spaces



Location/Function/Scale: Near paths? Foot traffic? Small tight area?

Style



What feel do you want in your garden?









Structure and
Texture



Form and
Repetition

Color





Billows of warm chartreuses and oranges repeat in round forms.



Textural play of greens against a rough stone wall.





Jeanne Meadows Garden
Photo by Debra Lee Baldwin





Planning for the future:

Plan ahead,
or
Plan to redo!





**Dense mix, or
room to grow?**





Tale of a Garden

March 2014



May 2016



June 2018





Plan ahead, or



**Plan to
redo!**



Which can be
great fun.

That is why
we garden,
right?

Wirikuta Botanical Cactus Garden Puerto Los Cabos



Oreocereus celsianus Old Man of the Mountain



Lemaireocereus pruinosus





Are You Ready?

Vegetative Plant Propagation

- ✓ Pots
- ✓ Succulent-Cactus Potting Mix for Rooting
- Tools
- + Gloves
- Disinfect
- Rubbing Alcohol
- or
- Mix 1 part bleach + 9 parts water





Select Healthy Cuttings

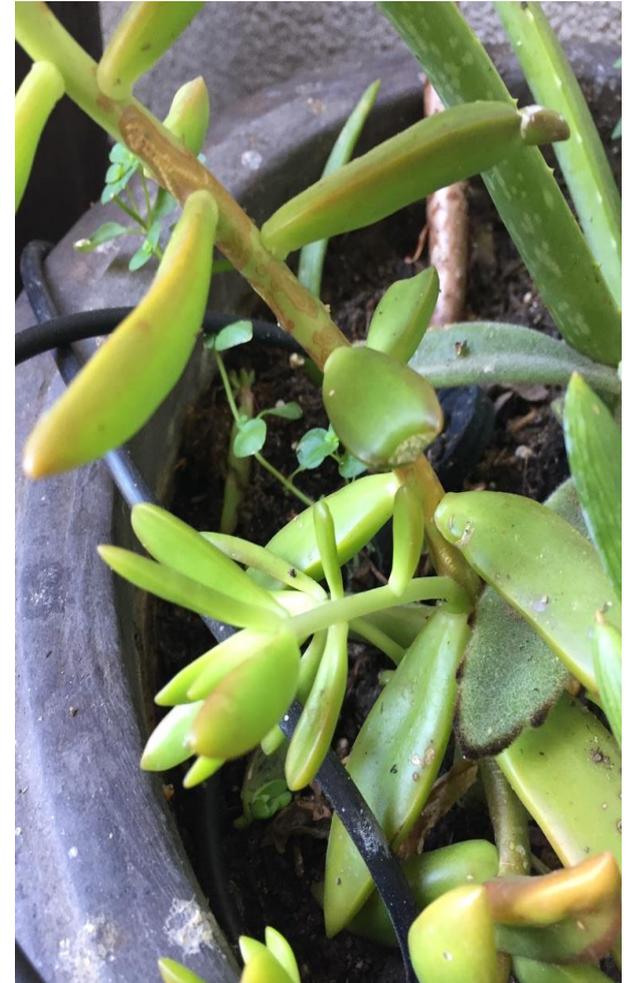
Shoots, Stems

- Tip cuttings – 2- to 6-inch piece of stem with terminal bud
- Medial cuttings – cut above & below nodes (“eyes”) with axial buds

Leaves

- Whole leaf with petiole or without
- Leaf section

Stems



Leaf





Propagation from Leaves

- Let leaf dry out in shady location 2 – 7 days
Optional – Dip basal end in rooting hormone
- Lay leaf on top of moist soil/potting mix
- Place in warm airy location, keep soil moist & mist leaves
- Small roots appear and new succulent plant will appear at base
- Plant being careful not to disturb roots, old leaf can be removed
- Reduce watering as plant develops



Propagation of Stems - Demo

- Let cutting dry out in shady location
 - Cut ends need 1 – 2 days drying time
 - Optional – Dip cut end in rooting hormone
- Plant in moist soil/potting/rooting mix
- Place in warm airy location, bright indirect light
- Mist as needed to keep soil mix slightly moist
- Mist leaves
- Reduce watering as plant develops roots



Additional Prop. Techniques

Layering

- Tip layering
- Simple layering
- Compound layering

Other

- Stolons or runners (Spider plants)
- Offsets (rosetted succulent types)

Propagate from Rosette



Kitchen Propagation



Thanksgiving/Christmas Cactus

Rooting Experiment:
Stems in 1" of water
Indoors by north
facing window



Indoor Gardening





Maintenance

How Do I Take Care of This Thing?

- The positive is - growing succulents requires very little maintenance!
- Watering & Fertilizing
- Light (Read plant labels, reference literature)
- Grooming
- Re-potting



References

Books

- Brenzel, Kathleen, Ed. The New Sunset Western Garden Book, Time Home Entertainment, 2012.
- Baldwin, Debra Lee. Designing with Succulents Timber Press, Portland, OR, 2007.
- Kelaidis, Gwen Moore. Hardy Succulents, Storey Publishing
- Schulz and Kapitany, *Succulent, Care and Health*
- Silver, *The Bold Dry Garden*
- Sunset Easy-Care Succulents, December 2017
- Sunset Western Garden, September 27, 2012 Edition

Websites

- succulentguide.com
- succulent-plant.com
- debraleebaldwin.com
- <http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=23262>
- [http://sonomamg.ucanr.edu/Top Plants Category Parent/Succulents/](http://sonomamg.ucanr.edu/Top_Plants_Category_Parent/Succulents/)
- <http://acmg.ucanr.edu/succulents/>
- <http://ucce.ucdavis.edu/universal/printedprogpageshow.cfm?pagenum=6142&progkey=2080&county=5576>

A list from the UC Botanical Garden:

- <http://ucbglcs.blogspot.com>
- <https://debraleebaldwin.com/echeveria-varieties-labeled/>
- <https://shopsucculents.com/pages/succulent-plant-types>



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UC Master Gardeners of Napa County

The Master Gardener program is a volunteer organization associated with the University of California Cooperative Extension. *Our mission is to extend research based knowledge on home horticulture, pest management, and sustainable landscape practices to the residents of California and to be guided by our core values and strategic initiatives.*

Become a
Master Gardener!

Click Here for
More Info about the
2019 Class!

Upcoming MG Workshops

Fall & Winter Vegetables



Saturday August 18, 2018
9:30 - 11:30 am

UCCE Meeting Room, 1719 Second Ave., Napa
\$8 per person, reservations preferred, seating is limited
To register: <http://ucanr.edu/2018/08/18/vegetables>
(707) 253-4221

Create your own garden-to-table movement by growing vegetables that thrive in colder weather! Discover a multitude of choices for fall, winter, and early spring dining, from tender lettuces and carrots to exotic Asian greens and sugar snap peas. The hands-on workshop provides free starter plants and the essential growing tips that will guide home gardeners every step of the way from planting and watering to harvest and taste.

FREE Garden Talk

St. Helena Public Library
1493 Library Ln., St. Helena, CA
Both talks are 5:30 - 6:30pm



Master Gardener Calendar

Event Name	Date
2018 Master Gardener Informational Meeting - Yountville	8/2/2018
Tips for Success with Exotic Plants - Napa County Library	8/2/2018
Guided Tree Walk - Napa	8/6/2018
Home Vineyard Part 2 Yountville - CANCELLED	8/11/2018

View More Events

Weekly Newspaper Article

Garden Pests—Here's a
Little Help!

Added July 22, 2018



By Iris Craig,
U. C. Master
Gardener of
Napa

Curly When I asked a friend how her garden was doing, she told me that the day after...

Growing Olive Trees in
Napa County

Added July 15, 2018



By Orlan
Harris, U. C.
Master
Gardener of
Napa County

The olive tree (*Olea europaea*) is well suited to Napa Valley. The tree's Mediterranean origin makes it a natural fit for our sunny, and...

Pocket Garden Hints from
Hawaii.

Added July 6, 2018



By Orlan
Harris, U. C.
Master
Gardener of
Napa County

The Big Island of Hawaii has captured