



UCCE Master Gardener Program

Advice to Grow By...Ask Us!

Missy Gable
mjpgable@ucanr.edu



62

MASTER GARDENER

61

Master Gardener
University of California
Cooperative Extension

Advice to Grow by... Ask Us!
Master Gardener Program

University of California Cooperative Extension



Clipping Box



Master Gardener Program

University of California Cooperative Extension 

UCCE Master Gardener Program

<http://camastergardeners.ucanr.edu>

<http://cagardenweb.ucanr.edu>



Master Gardener Program

University of California Cooperative Extension 

Gardening to Support Bees

Missy Gable
mjgable@ucanr.edu



Overview

Today's Goal:

Offer tools for Master Gardeners to help them inspire landscapes that provide for bee pollinators.

Topics include:

Who are the players?

Why pollinator landscapes?

How can you be successful?

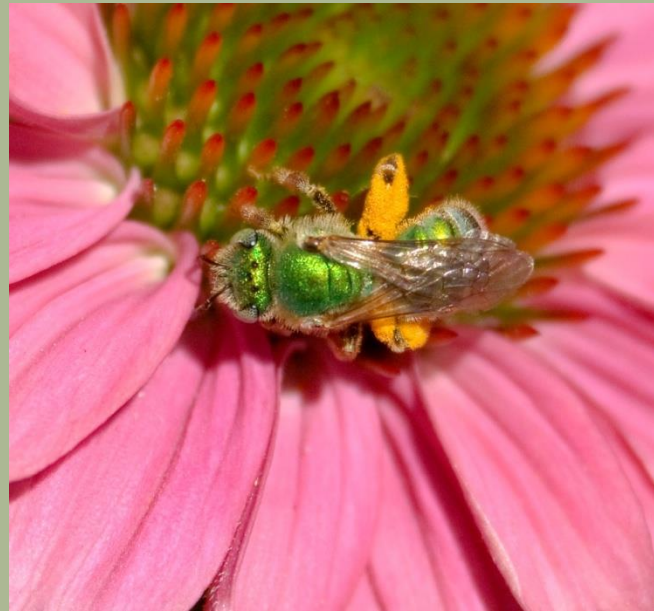


The Players:

1600 bee species in California!

Credit: Kathy Keatley Garvey

- Size
- Shape
- Color
- Habits



Agapostemon sp.



Halictus sp.

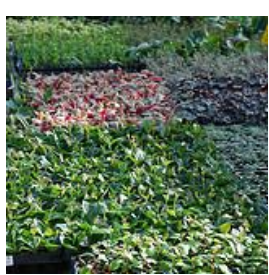


Honey bees

Dwell in extensive colonies, #1 agricultural pollinator.

Credit: Kathy Keatley Garvey





Bumble bees

Over 250 species – all sizes, all hairy.





Carpenter bees

Largest of the CA bees, sometimes over 1" in length.

Credit L to R: Ellen Zagory, Allen Jones





Justification

Why should gardeners support bees?

According to the Xerces Society, pollinators, especially bees, are declining as human population and urban areas continue to expand.



What's the buzz all about?

Credit: Kathy Keatley Garvey

Colony Collapse Disorder (CCD) is an unexplained loss of honey bees. The adults abandon their hive and die.

We don't know why.





Why is it CRITICAL for us to respond to CCD?



Global agriculture relies
on the work of the
European honey bee.

*One in every three bites
of food is thanks to the
honey bee.*

Credit: Kathy Keatley Garvey



Agriculture

Credit: Wikimedia Commons





In an effort to provide inexpensive food, and lots of it, our farm crops are monocultures.



Honey bees are perfect for pollinating monocultures like these almonds.

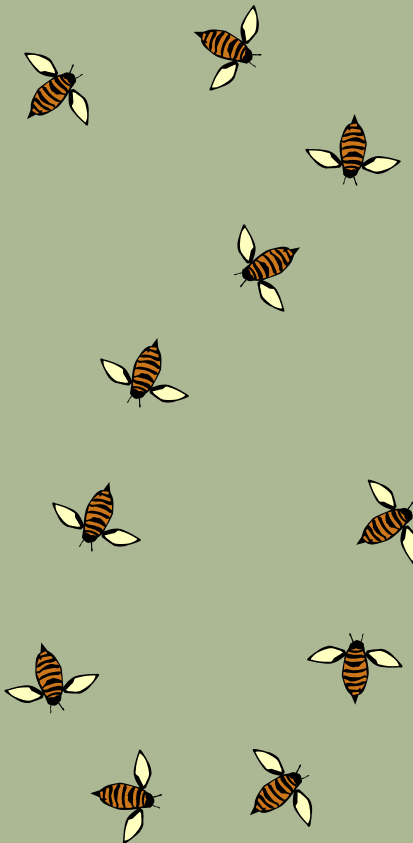
Credit: Wikimedia Commons



Where does the bee go between crops?



Credit: Kathy Keatley Garvey



Credit: Kathy Keatley Garvey





Natural Landscapes

Credit: Ellen Zagory







Urban sprawl is a reality.



Credit: Missy Gable

The question is, how do we compensate for it?



Traditional Landscapes

Credit: Ellen Zagory

- Lawns = monocultures
- Ornamental plants are selected for aesthetics
- Landscapes and gardens are primarily decorative amenities
- Urban sprawl promotes traditional landscapes and reduces ecosystem diversity





Justification

Why should gardeners support bees?

In a 3 year study, University of CA researchers found that urban pollinator gardens can increase bee diversity and abundance.

This has a positive effect on agricultural yields!



Wildscaping! Why garden for wildlife?

- Make your landscape functional by offering habitat for wild creatures. Landscapes that do this are called 'eco-functional'.
- Many native insect species cannot survive without native plants.
- Feel good – be an ambassador for Mother Nature.
- Create a dynamic garden with learning lessons for kids.



Credit: Ellen Zagory



The How-To of bee gardening

Three basic principles:

1. Plants
2. Practices
3. Primping



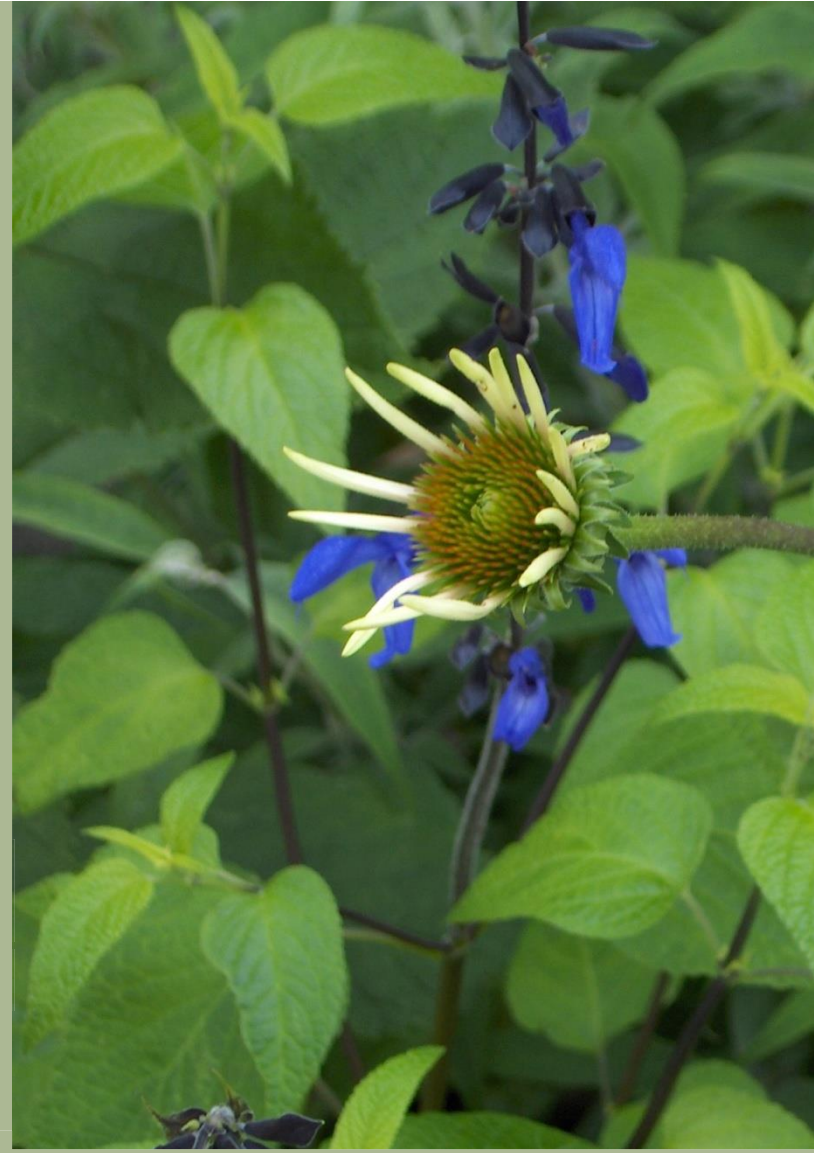


Plants

Provide basic needs for life

- Food (nectar, pollen)
- Water
- Shelter
 - Dense plantings
 - Brush piles

Credit: Neils Proctor





Plants

Key characteristics ~

- Long blooming season
- Abundance
- Diversity
- Daisy-like flowers



Practices

Pest management

- Insects aren't your enemy! 90% of bugs do no harm to your plants
- Know when, why and how to correctly use chemicals in your garden
- Incorrectly using chemicals can cost you money, time, good bugs and birds



Primping

Perfection in the garden

– SLOW DOWN

- Maintenance
- Raking leaves
- Thorough mulching

– Bare soil

– Sand piles



Credit: Kathy Keatley Garvey



“How-To” Summary

- Embrace plant diversity
- Use combinations of plants to create a long bloom season
- Kick the chemical habit or know what you’re doing
- Don’t be too perfect



Credit: Kathy Keatley Garvey



Plants

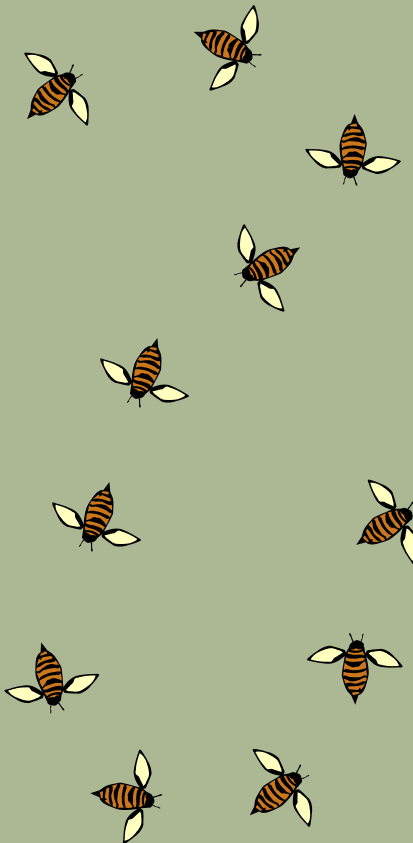
- Aster, Achillea, Erigeron, Solidago, Grindelia
- Rhamnaceae: Ceanothus spp. and coffeeberry (Rhamnus californica)
- Lamiaceae: Mint family
- Sedum
- Scabiosa
- Buddleja
- Verbena



Where does the bee go between crops?



Credit: Kathy Keatley Garvey



Credit: Kathy Keatley Garvey





Wildscaping creates valuable agricultural corridors



Credit L to R: Kathy Keatley Garvey, Ellen Zagory, Ellen Zagory

Cercis occidentalis, California redbud

Very popular with native bees.

Credit: Ellen Zagory



Leucophyllum frutescens, cenizio

What a prolific bloomer! Great medium shrub for low-water conditions and it attracts native pollinators.



Credit: Ellen Zagory

Ceanothus species, California lilac

The good bugs love *Ceanothus* for its pollen and nectar.



Credit: Ellen Zagory

Salvia apiana, white sage

Native & non-native salvias typically have long bloom times.



Credit: Ellen Zagory

Rosmarinus officinalis, rosemary

This fantastically tough evergreen has a long blooming and is exceptional for supporting bees.



Sedum 'Autumn Joy', stonecrop

Stonecrop species have a variety of bloom times.

This one has huge flower clusters in early fall.



Credit: Ellen Zagory

Solidago californica, California goldenrod

Goldenrod is a bee and butterfly magnet that blooms in summer.



Triteleia laxa, Ithuriel's spear

Bulbs can enhance spring, summer and fall blooms.



Credit: Ellen Zagory

Ribes sanguineum
var. *glutinosum*
Great late winter
bloomer!

Credit: Ellen Zagory



Penstemon 'Margarita BOP'

Native pollinators love this hearty penstemon.



Credit: Ellen Zagory

Epilobium canum, California fuchsia

Our native hummingbird magnet.



Isomeris arborea,
bladderpod

Year round bloomer with
very, very low maintenance
(if it needs any at all)



Credit: Ellen Zagory

Lavandula stoechas 'Otto Quast', Otto Quast
Spanish lavender

Talk about a showy lavender! Thrives in dry, sunny conditions and attracts a myriad of pollinators.

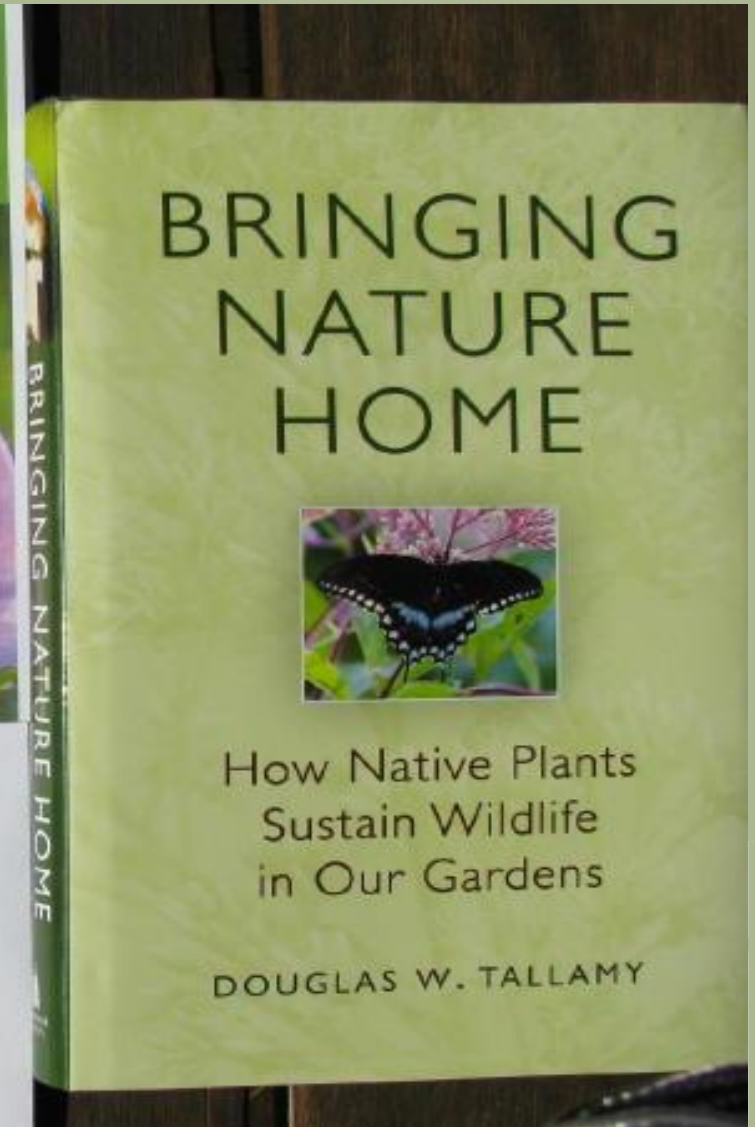
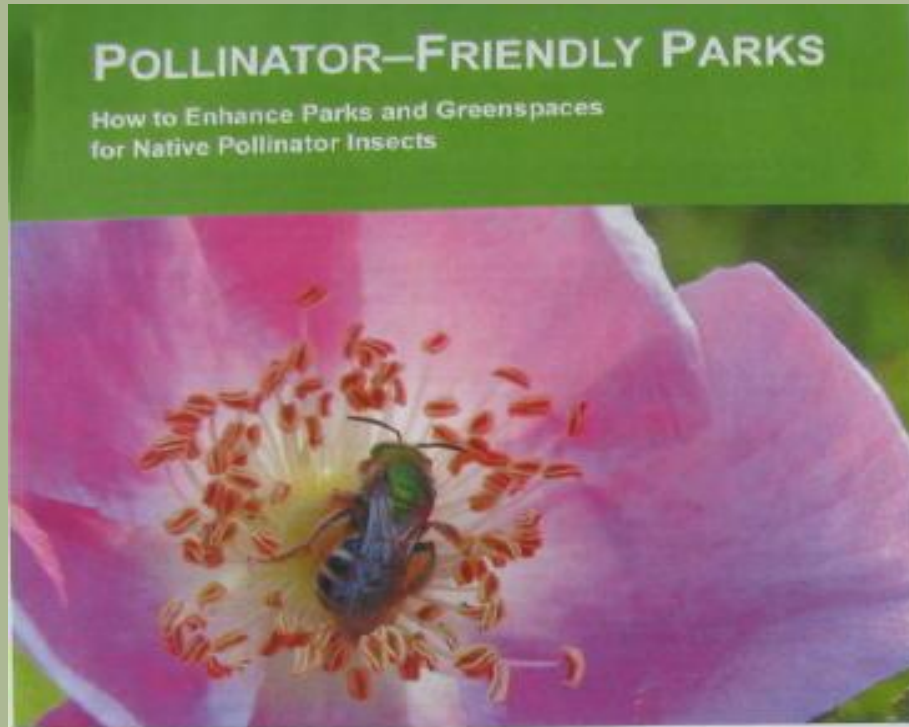


Credit: Ellen Zagory

Where can I find out more?

- **UCCE Master Gardeners**
(camastergardeners.ucanr.edu)
- **Pollinator Partnership**
(pollinatorpartnership.org)
- **Help the Honeybees**
(helpthehoneybees.com)
- **The Xerces Society** (info@xerces.org)
 - Fact sheets: California plants for natives\ bees and butterflies
 - Booklet: Pollinator-friendly Parks
- **California Native Plant Society**
 - plant lists for Central Valley gardens

Great Gardening Resources





Example Wildscapes







Credit: Rosalind Creasy



Credit: Rosalind Creasy











Credit: Rosalind Creasy





Credit: Ellen Zagory





Recap

Today's Goal:

Offer tools for Master Gardeners to help them inspire landscapes that provide for bee pollinators.

Topics include:

Who are the players?

Why pollinator landscapes?

How can you be successful?



Master Gardener Program

University of California Cooperative Extension 

Questions?

Credit: Kathy Keatley Garvey

Missy Gable
mjgable@ucanr.edu