



**ccub**

**CALIFORNIA CENTER FOR  
URBAN HORTICULTURE**

**UCDAVIS**

---

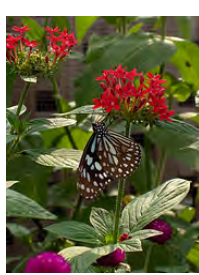
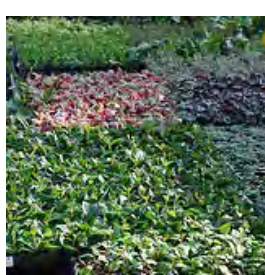
**COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES**



# OUR MISSION

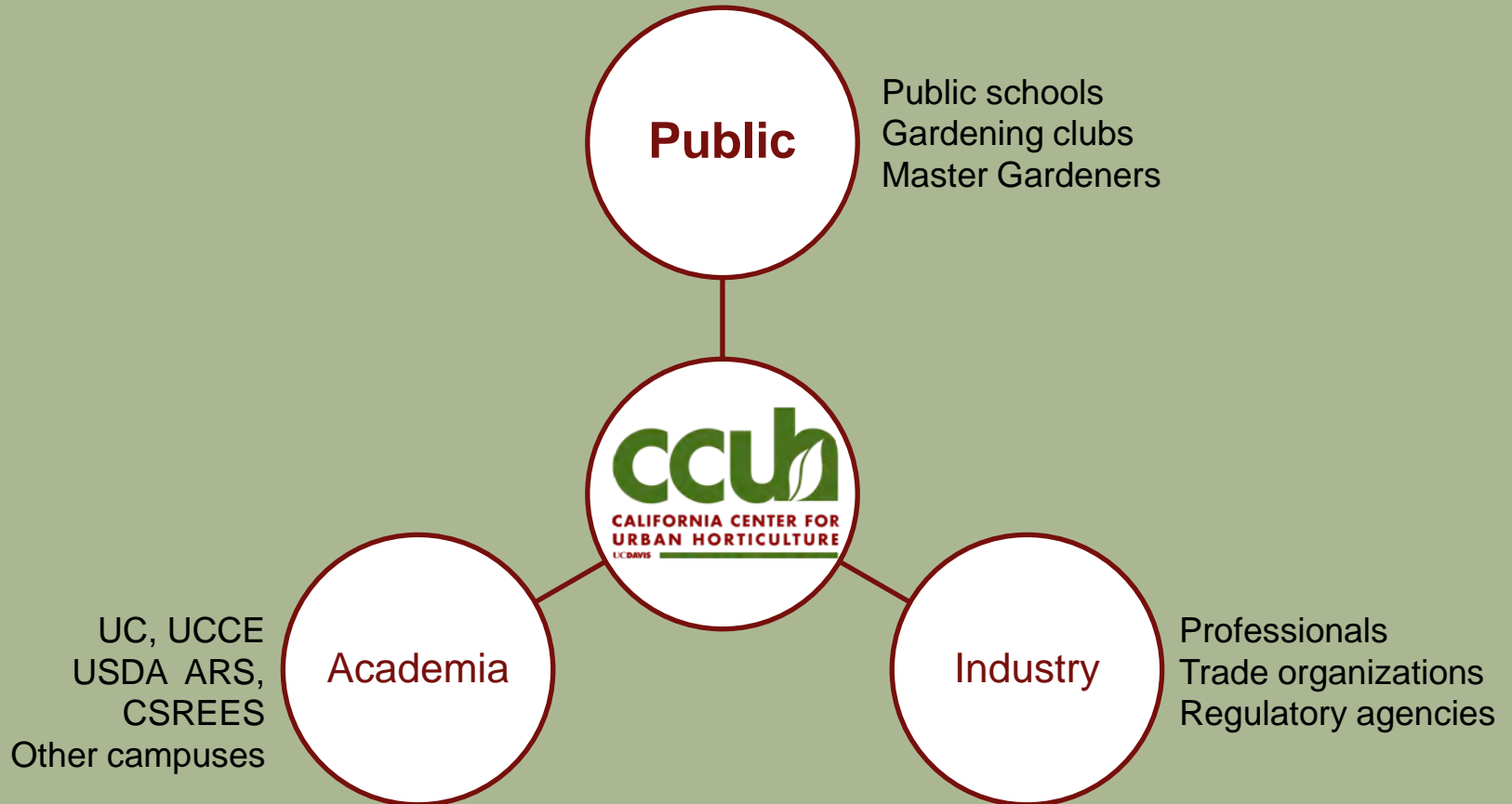
Enhancing urban living  
through horticulture



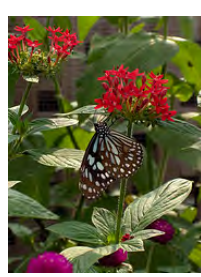


## Where do we fit in?

# RELATIONSHIPS

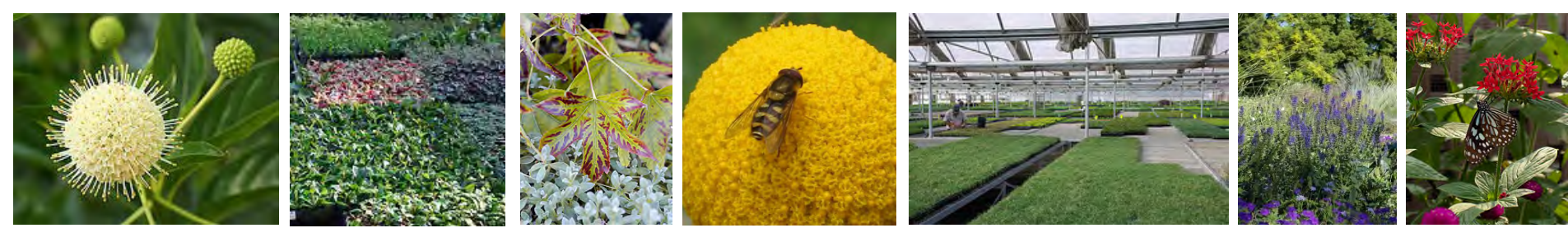






# Wildscaping

*Gardening to attract & nurture wildlife*

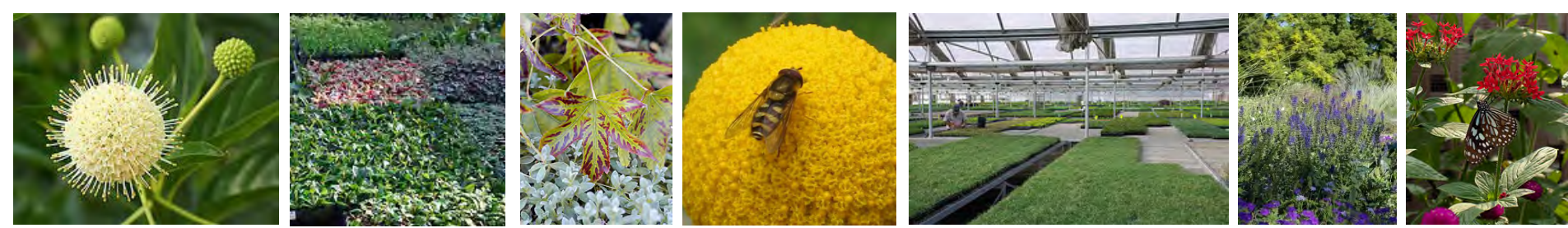


## *Today's Goal:*

Inspire landscapes that provide for pollinators and support sustainable landscaping practices through plant choices.

## *How?*

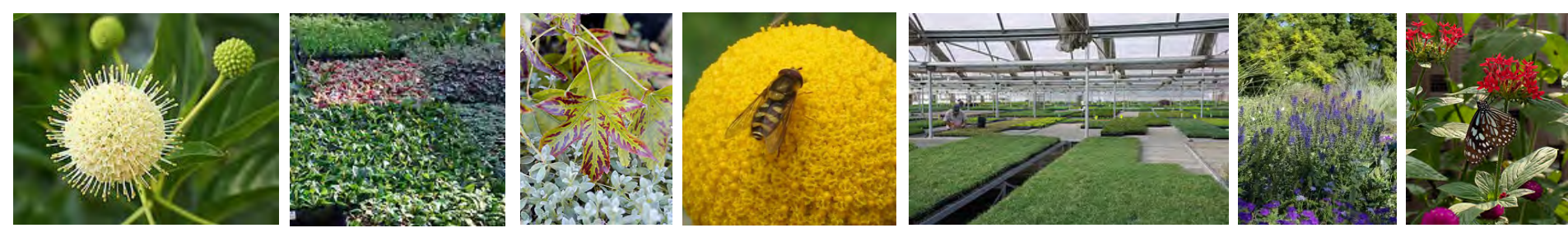
1. Introduce pollinator gardening AKA “wildscaping”
2. Offer tips for successful pollinator landscapes
3. Browse through drool-rific plant slides to inspire sustainable landscapes



## *Narrowing the scope:*

I LOVE bees and will refer to them as the primary object of my affection in pollinator gardens. However, wildscaping principles can also be applied to birds, butterflies and beneficial insects. We'll talk about this at the end.





## The Players:

1600 bee species in California!

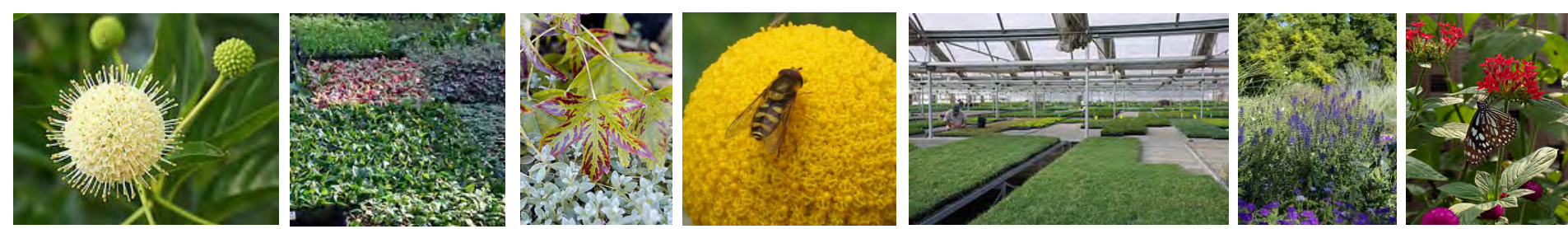
- Size
- Shape
- Color
- Habits



*Agapostemon* sp.



*Halictus* sp.

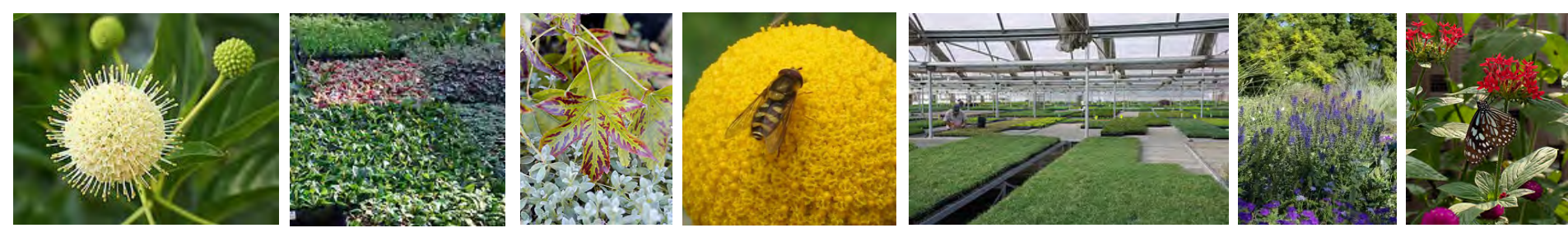


# Honey bees

Dwell in extensive colonies, #1 agricultural pollinator.



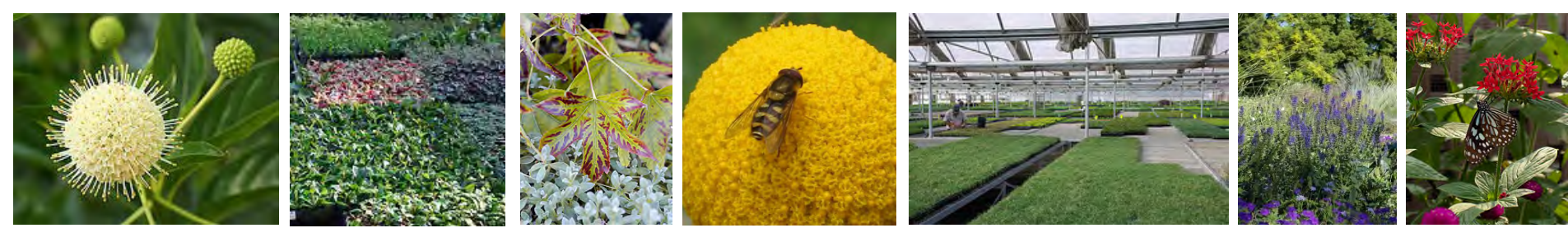




# Bumble bees

Over 250 species – all sizes, all hairy.



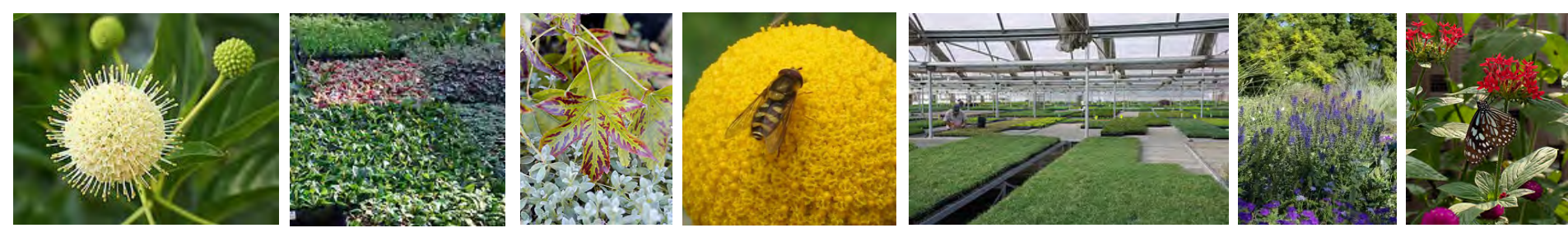


# Carpenter bees

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







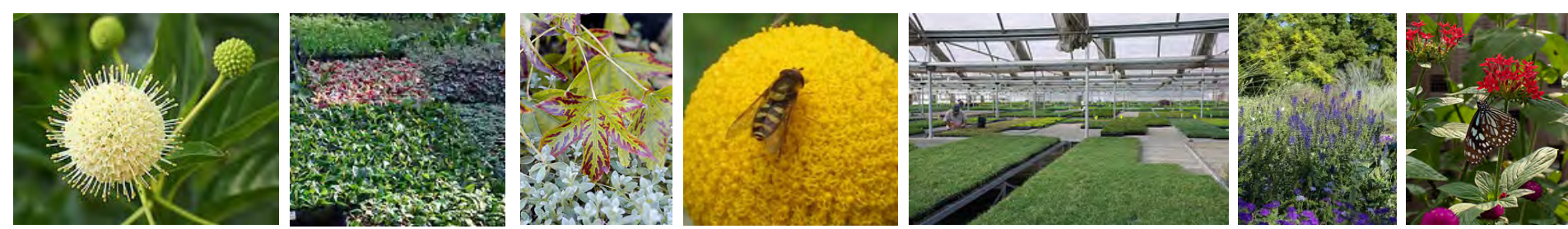
*What's the buzz all about?*

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







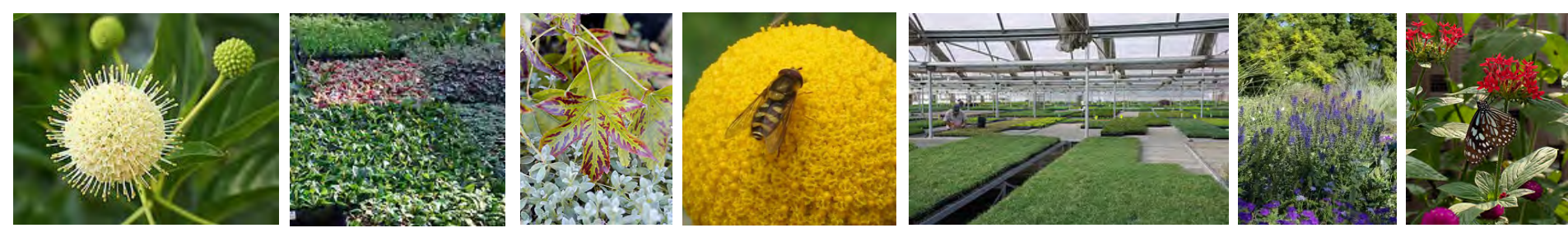


*Urban sprawl is a reality.*



*The question is, how do we compensate for it?*





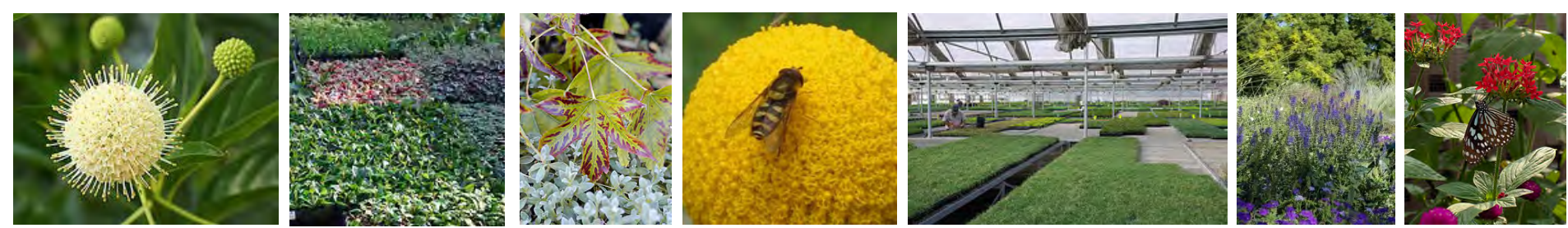
# Traditional Landscapes don't have what it takes.

- Lawns
- Ornamental plants are selected for aesthetics
- Urban sprawl promotes traditional landscapes and reduces ecosystem diversity









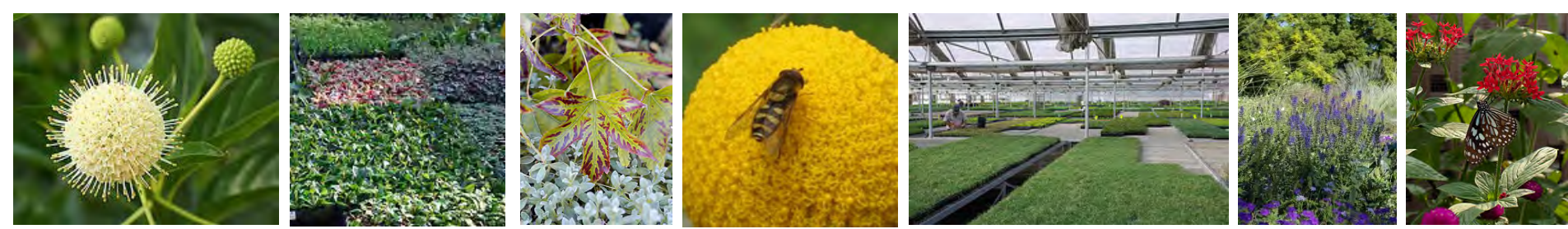
## *What's the buzz all about?*

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

*We don't know why.*







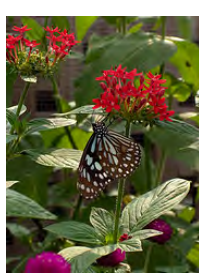
*Why is it CRITICAL for us to respond to CCD?*



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

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



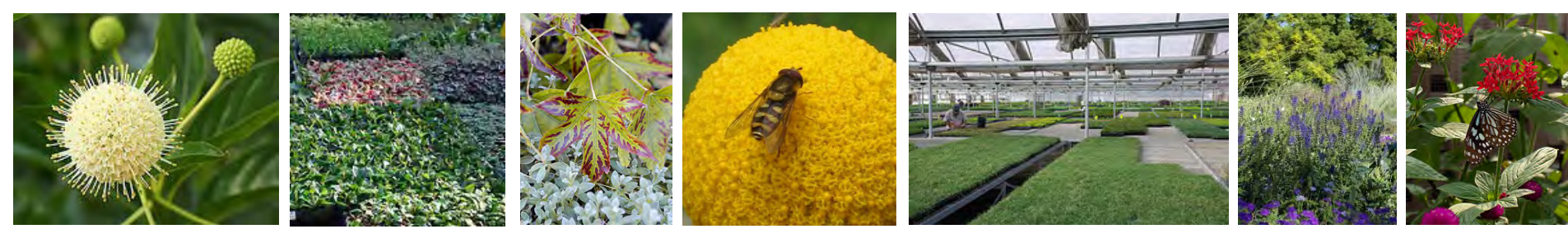


*In an effort to provide inexpensive food, and lots of it, our farm crops are monocultures.*



Honey bees are perfect for pollinating monocultures like these almonds.

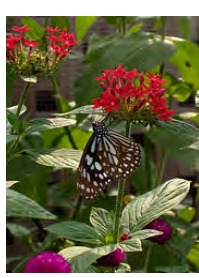




*Where does the bee go between crops?*



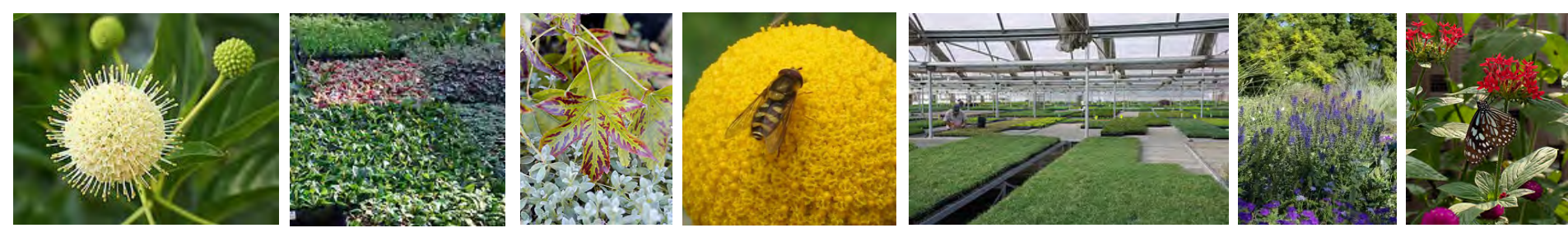




*Wildscaping creates valuable agricultural corridors*





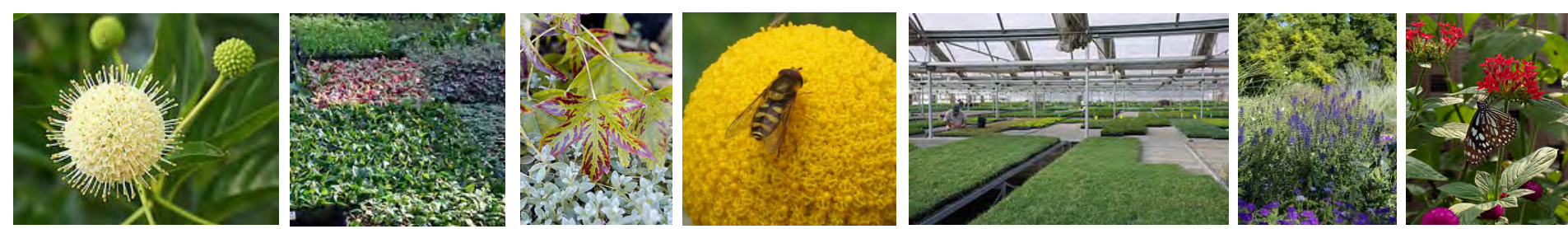


## Justification

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!



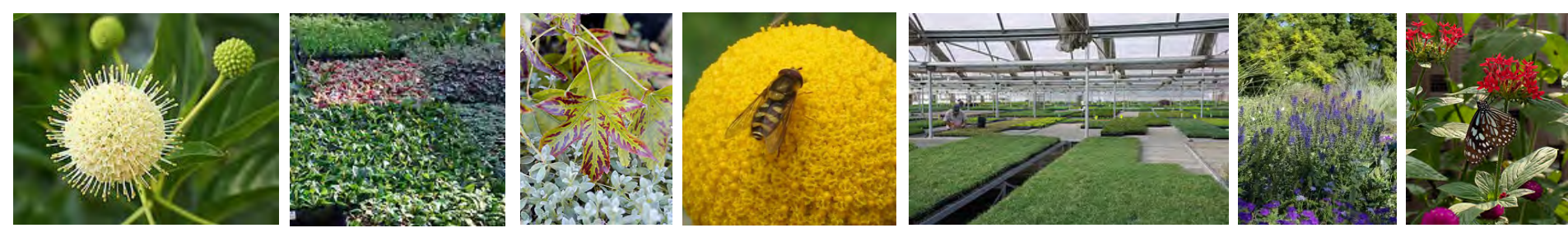
# The How-To of bee gardening

Three basic principles:

1. Plants
2. Practices
3. Primping





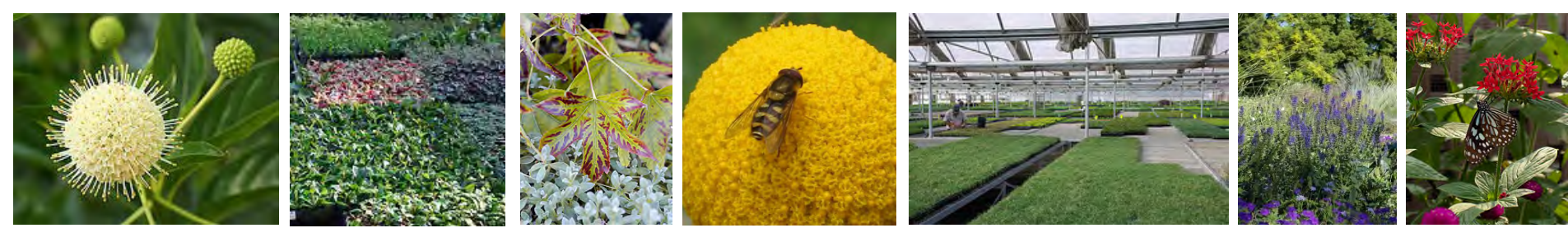


# Plants

Provide basic needs for life

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



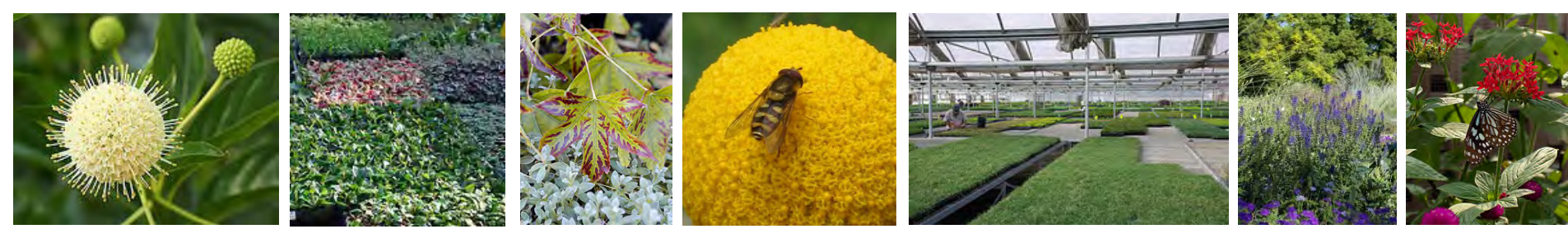


# Plants

## Key characteristics ~

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

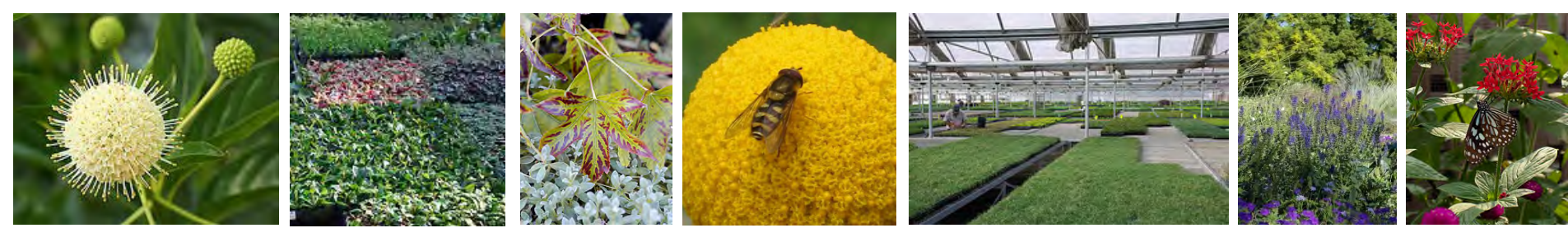




# Practices

## 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

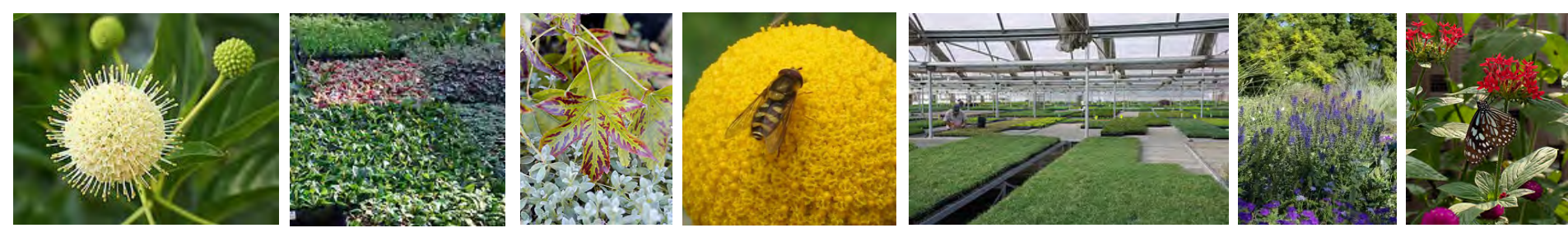
Perfection in the garden

– SLOW DOWN

- Deadheading and pruning
- Raking leaves
- Thorough mulching
  - Bare soil
  - Sand piles



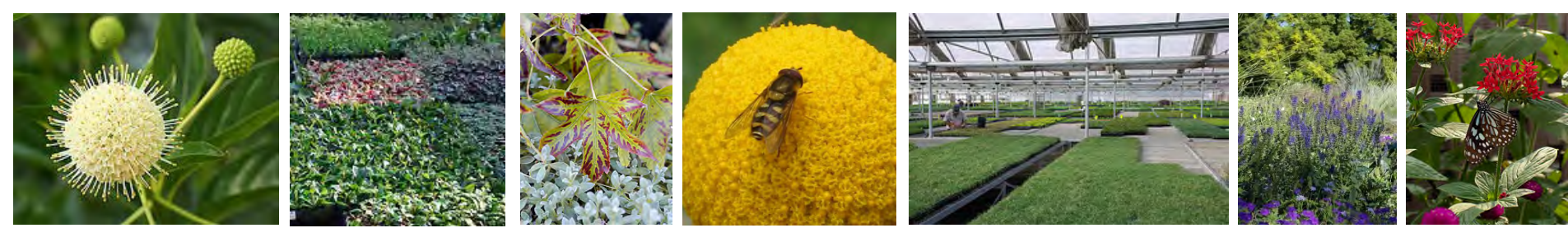




## “How-To” Summary

- 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

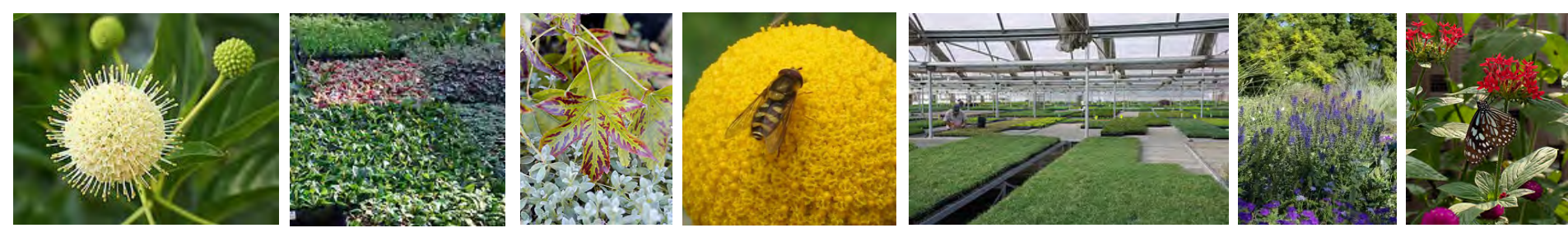




# Plants

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

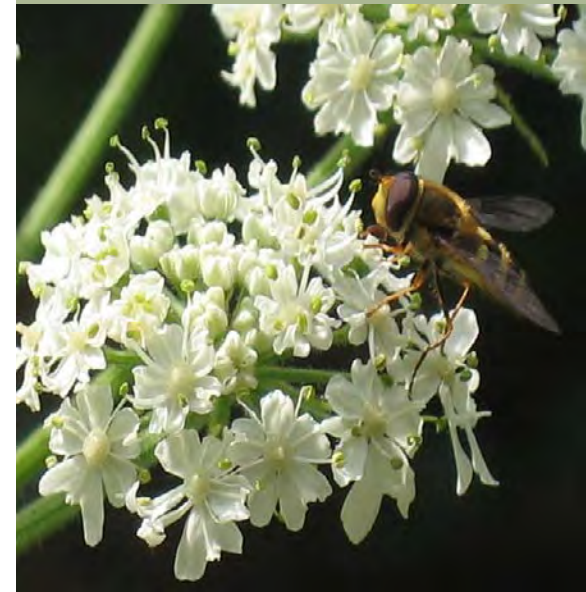




# Resources

- UC Davis Arboretum  
([arboretum.ucdavis.edu](http://arboretum.ucdavis.edu))
- UC Integrated Pest Management  
([imp.ucdavis.edu](http://imp.ucdavis.edu))
- Pollinator Partnership  
([pollinatorpartnership.org](http://pollinatorpartnership.org))
- The Xerces Society ([info@xerces.org](mailto:info@xerces.org))

# Other pollinators?



- Birds, migratory & year-round residents
- Butterflies – monarchs are endangered by habitat removal
- Beneficial insects – not your enemies!
  - Pollinators, our tiny agricultural workers
  - Predators and parasitoids



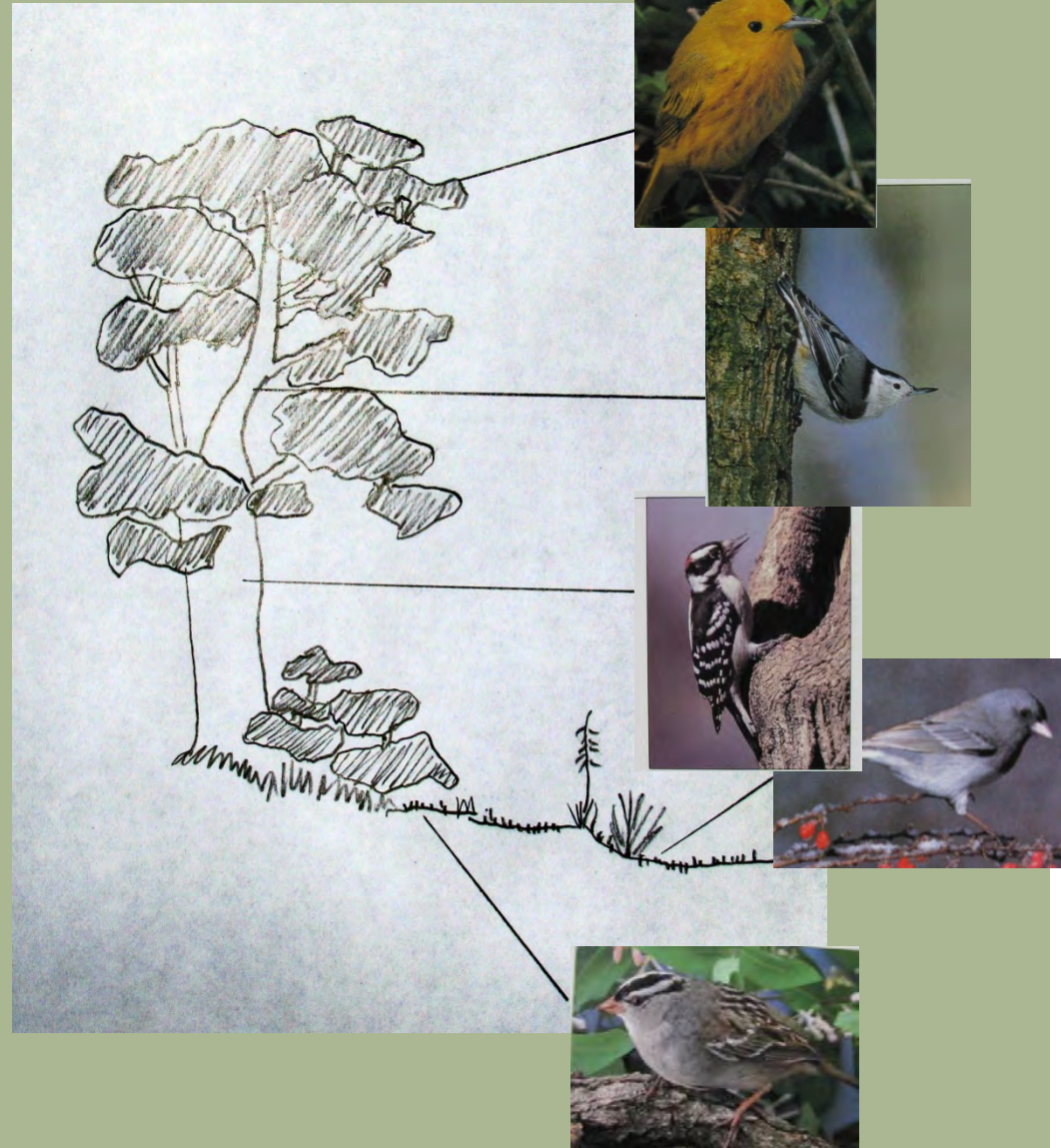
# Birds

## *Notes*

- Food:
  - Plant a variety for pollen, nectar, fruit and seed production. Use specific plants to attract specific birds.
- Shelter:
  - Trees of different sizes create different niches.
  - Provide cover with thick shrubs and evergreens



- One tree can support many different birds: leaf gleaners (warblers), bark-gleaners (creepers and nuthatches), wood/bark probers (woodpeckers)





# Butterflies

## *Notes*

- Shelter:
  - Butterflies are pretty picky about where they lay their eggs. Do your research to learn about specific plants that will attract Momma butterflies.



# Beneficial Insects: Pollinators & Predators

## *Notes*

- Shelter
  - Use specific plants to promote egg-laying. Often, it is the larval form of a beneficial insect that is the most effective parasitoid, so you want a complete life cycle.





# *Introducing*

UC DAVIS  
ARBORETUM

*All Stars*



*Encouraging gardeners to choose and use top performing, water-conserving plants.*



*Introducing*

UC DAVIS  
ARBORETUM



*All Stars*

## Criteria for selecting an All-Star

### **Every All-Star plant must:**

- Be attractive for most of the year
- Thrive in different California conditions
- Be tested in the UC Davis Arboretum

### **All-Stars were also selected for:**

- Low maintenance
- Drought tolerance
- Attracting beneficial wildlife





*Introducing*

UC DAVIS  
ARBORETUM



Online resources for the Arboretum All-Stars at  
<http://arboretum.ucdavis.edu/>

### All-Stars Plant Details



<b>Latin Name:</b>	Hunnemannia fumariifolia
<b>Common Name:</b>	Mexican tulip poppy
<b>Type:</b>	Perennial
<b>Size:</b>	Medium
<b>California Native:</b>	No
<b>Description:</b>	Bright yellow poppy flowers bloom spring through fall; bushy perennial with lacy, gray-green foliage; heat and drought tolerant with seeds that grow to replace the mother plant.
<b>Pruning Needs:</b>	cut back old flower stalks for tidy appearance and prolonged bloom
<b>Sun Exposure:</b>	Full Sun Part Shade
<b>Arboretum Location(s):</b>	Ruth Risdon Storer Garden
<b>Water Needs:</b>	Very Low Low
<b>Color(s):</b>	Yellow
<b>Bloom Season(s):</b>	Spring Summer Fall
<b>Wildlife Value:</b>	None

- Searchable plant database
- Retail locations
- Plant care, planting and maintenance tips
- Suggested planting plans
- Much, much more!

*Introducing*

**UC DAVIS  
ARBORETUM**



*All Stars*

## *Grow it!*

Plant Type                      small shrub

Height/Width    approx. 3 ft x 3 ft

Placement                      full sun

Water Needs    very low

Pruning Needs no pruning, very  
                         nice form

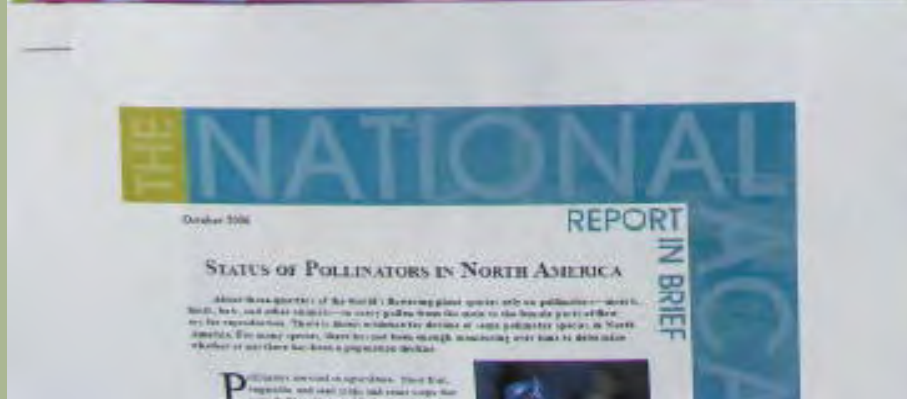
Native To                      California

Sunset Zone                    5-9, 14-24





# Great Gardening Resources



# *Ceanothus* species, California lilac

Huge pollen and nectar resource, especially in late winter during almond pollination.





# *Salvia apiana*, white sage

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



# *Triteleia laxa*, Ithuriel's spear

Bulbs can enhance spring, summer and fall blooms.





# *Salvia leucantha*, Mexican sage

Late summer/early fall bloomer that will provide for bees when few plants are blooming.



# *Echinacea* species, coneflower

A versatile garden plant, coneflower blooms in summer and attracts many pollinators.





# *Solidago californica*, California goldenrod

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



# *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.





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







**Questions & Discussion**