

Garden Planting for Bees

(and other pollinators)

Ellen Zagory

The UC Davis Arboretum

"Connecting People with the Beauty and Value of Plants"



Pollinator support plantings of different types- large landscapes around farms and parks



- Bee pastures around farms: mowed and re-sown annuals
- Hedgerows and farm ponds incorporate woody plants, perennial and grasses to create habitat
- Golf courses and parks: a hybrid depending on available maintenance funding

Home gardens and decorative landscapes also provide important opportunities



- Usually have a method of summer irrigation-expanding the list of potential plants for gardeners
- Mixture of shrubs, perennials and grasses ideal
- Low water and low maintenance plants are best to conserve resources

Why convert to pollinator supporting landscapes?



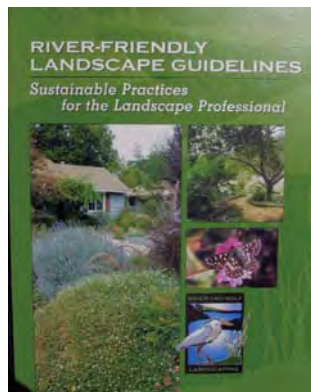
"Gardens can provide oases of safe habitat for migration through 'deserts' of concrete or intensively cultivated farmland"

Royal Horticulture Society *The Garden* April 2012

When selecting plants for pollinator support:
Consider Green Gardener/River-friendly practices

- Select low water plants
- Size plants to fit your space- send less to the landfill
- Eliminate high water (low diversity) lawns
- Use native plants as much as possible
- Choose nectar and pollen plants for pollinators and beneficial insects
- Reduce or eliminate pesticide use

<http://www.msa.sacounty.net/sactostormwater/RFL/>



Recommended plants that are successful at
the UC Davis Arboretum



- 100 Arboretum All-Stars
- Incorporates native and non-native plants
- Some better pollen and nectar than others



What makes an All-Star?

Every All-Star plant must:

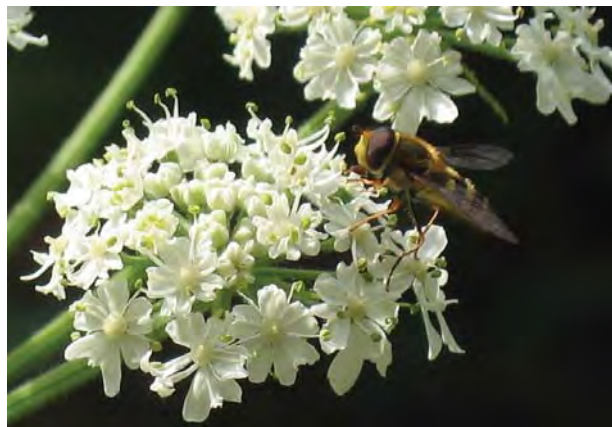
- Be attractive for most of the year
- Thrive in Central Valley conditions
- Be tested in the UC Davis Arboretum
- Be available at Plant Sales

All-Stars were also selected for:

- Low maintenance
- Drought tolerance
- Attracting beneficial wildlife
- Year-round interest



Native plants are preferred when feasible
since they evolved with native insects



We focus on **perennials** not **annual** plants:
both herbaceous and woody

- Native annuals go dormant (turn brown) in summer
- mow to clean up after seed drop
- Tend to become weedy since mulch is not used—high maintenance



All-Stars and other provide long season bloom:
Teaching nursery demonstration

- Pollinator support: a succession of spring, summer and fall blooming plants
- Diversity of plants will invite a diversity of insects and other creatures



Ruth Storer Garden: deep infrequent irrigation

Rosa 'Gruss An Aachen', Lavandula stoechas 'Otto Quast', Salvia greggii, Nepeta



Seasonality of mixed plantings:
Allium bed April



Same bed September 2007



Mixing California natives with drought tolerant non-natives

Deer grass
Muehlenbergia rigens
Spanish lavender
Lavandula stoechas
'Otto Quast'



2009 plantings to attract and observe insect visitation—pollinator bed



Other planting themes are nectar for hummingbirds and butterflies -- also attract carpenter bees and honeybees



Many visitors



- European honeybee
- Valley carpenter bee
- Bumblebees
- Small native bees
- (also hummingbirds, butterflies and predatory insects)

We have seen a diversity of pollinators so far

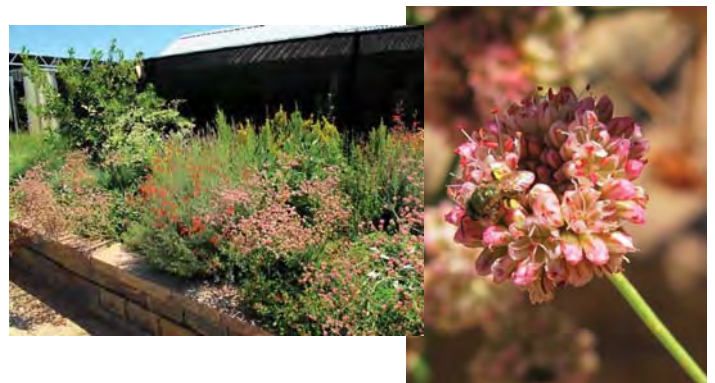


At plant sales the beds are used as educational tools about pollinator plants and vertebrate conservation



Some recommended plants: buckwheats

Eriogonum grande var *rubescens*



Eriogonum grande var. rubescens
pink buckwheat



Eriogonum giganteum St. Catherine's Lace



Eriogonum fasciculatum
California buckwheat



Also attracts butterflies and wasps



Both native and non-native plants can be shrubs, subshrubs
(woody at the base) or herbaceous perennials
Salvia clevelandii, *Lavandula angustifolia* 'Munstead'



“true” herbaceous perennials and grasses do not have
woody bases and are cut to ground in winter



Oreganos like 'Santa Cruz', 'Betty Rollins' with native deer grass
and lessingia



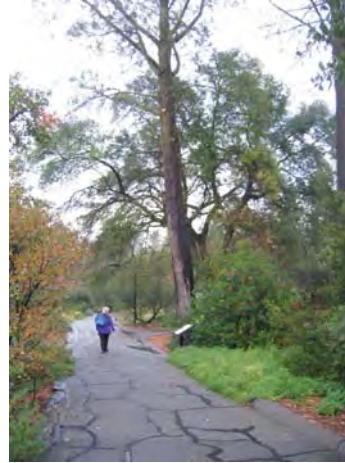
Woody plants for native bees: *Cercis occidentalis*,
redbud



Western redbud: native to the Putah Creek watershed “native here”



Toyon
Heteromeles arbutifolia



Ceanothus ‘Ray Hartman’



California Lilac

- *Ceanothus maritimus* ‘Valley Violet’
- *Ceanothus* ‘Concha’



Ribes aureum
golden currant



And plants for wintering hummingbirds
Ribes, wild currants



Arctostaphylos densiflora 'Howard
McMinn'



Arctostaphylos pajaroensis



Berberis aquifolium 'Compactum

- shiny, evergreen
- Yellow flowers in spring
- A number of different varieties available



Other non-native drought-tolerant shrubs

- *Isomeris arborea* bladderpod
- *Callistemon violaceus*



These woody plants can form the backbone of a planting that uses grasses and herbaceous perennial



deer grass
Muhlenbergia rigens

maritime ceanothus
Ceanothus maritimus

California fuchsia,
Epilobium canum

Plants woody at the base
sub-shrubs: *Salvia greggii*



Lavandula 'Goodwin Creek Grey'



evergreen perennial: *Heuchera* 'Rosada'



Heuchera 'Rosada'



larval food plants:
milkweeds for monarchs
also provide nectar



One of the best is seaside daisy: *Erigeron* 'W.R.'



Popular with many bees



Seaside daisy (*Erigeron* 'W.R.') attracts a variety of visitors over the season



for later season bloom: Goldenrod and asters



Solidago
'Cascade
Creek'



Aster 'Purple Dome'



Sedum 'Autumn Joy'



Epilobium canum, California fuchsia



Native California grasses

Festuca californica California
fescue



Blue grama grass *Bouteloua*



Some All-stars—pollinator visited

Sedum palmeri, *Bulbine frutescens*, *Salvia greggii* and Aster 'Purple Dome'

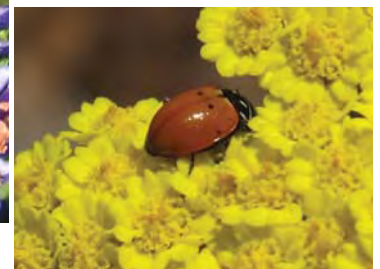


Beneficial insects will also be attracted and
contribute to your natural pest control

Hoverflies/syrphid flies



And beetles will help eat aphids



Hummingbird visits are daily on both native and non-native salvia

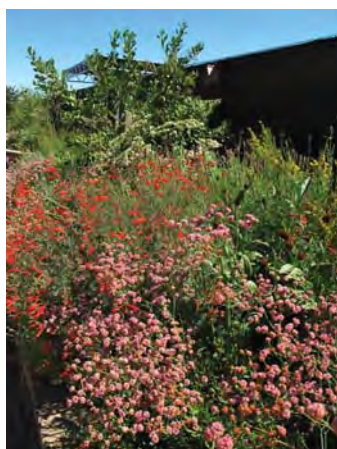


Combinations of Mediterranean and California plants **early season**



- Spanish lavender (*Lavandula* 'Otto Quast')
- Catmint (*Nepeta X faasennii*)
- Toyon or Christmas berry (*Heteromeles arbutifolia*)
- Seaside daisy (*Erigeron* 'W.R.')

Natives can be arranged in pleasing combinations: **late season**



goldenrod
Solidago 'Cascade Creek'

pink buckwheat
Eriogonum grande var.
rubescens

California fuchsia
Epilobium canum

Create a beautiful, pollinator supporting, all season garden by combining California natives and compatible plants



Where can I find out more?

- **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
- **Ecolandscape California**
<http://www.ecolandscape.org/>
Upcoming events and conferences, CNPS plant list and resource list

To see more examples of landscapes visit the UC Davis Arboretum



Visit our website at
<http://arboretum.ucdavis.edu>



Questions?

