



# Bringing Birds to Your Garden

Pat Trimble and Sandy Bisbee  
September 14, 2024



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# Master Gardener Mission:

To extend research-based knowledge and information on home horticulture, pest management, and sustainable landscape practices to the residents of El Dorado County.

Master Gardeners are volunteers, trained by the University of California Cooperative Extension. There are Master Gardeners in almost every county in California, and most states also have MG programs.



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# Housekeeping

My gratitude to Cheryl Turner for being here this morning to show me how to use our new presentation equipment.

I'd like to thank today's Hosts: Anne Bettencourt, Donna Marshall, Christy Quinlan, and Mana Raabe.

I'd also like to acknowledge my co-instructor, Sandy Bisbee, and MG Gail Fulbeck, who created this class and from whose presentation I've taken many of the slides.

Restrooms are up the hill at the Observatory.



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## A Disclaimer:

If you live in a neighborhood that has an HOA, or in an area of high wildfire risk, you will need to take that into consideration when designing your landscape.





# Why Attract Birds to Your Yard?



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# The Curious Corvid!



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# The Curious Corvid !

Tell us a couple reasons why you want to attract birds to your yard?



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# Birds are in Trouble

- In 2019, scientists reported that more than 1 in 4 North American birds have disappeared over the past 50 years.
- That's 2.9 billion adult birds, gone, since 1970.



Primary factors contributing to the decline in numbers of birds in North America include:

- Habitat loss
- Outdoor cats (2.4 billion/year)
- Window strikes (1 billion/year)
- Pesticides
- Climate change





Aren't our public lands enough to sustain nature?



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# The Curious Corvid !



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# The Curious Corvid!

How much of the US do  
you think is in public  
ownership?



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Only about 17% of the land in the US is in public ownership.

And while many of our parks and forests seem huge, they are isolated with no corridors to connect them.



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Less than 5% of the lower US is anywhere near its original, pristine condition.

Development, logging, mining, grazing, agriculture, straightening and damming of rivers, and introduction of non-native plants, have resulted in remnants of land too small and isolated to sustain species and the ecosystem services they provide.



# So, how can we help birds?

You might be thinking – my lot is only a third of an acre, what can I possibly do to help??

Let's talk about some things we can do in our yards, whether we have a small lot, or 5 or 10 acres, to help our native birds.

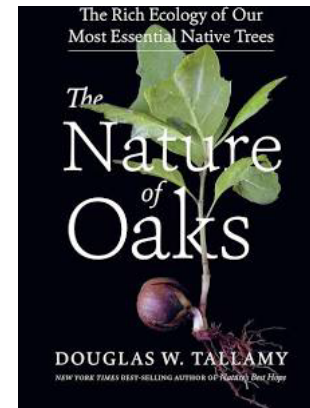
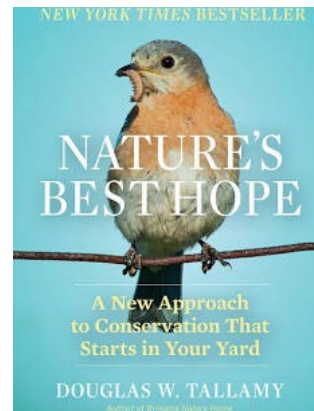
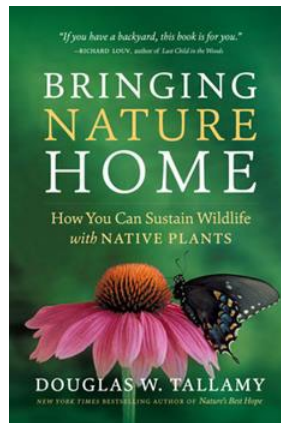


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Dr. Doug Tallamy: Researcher, ecologist, entomologist, author, University of Delaware.

In his book Nature's Best Hope, Dr. Tallamy talks about the concept of "Homegrown National Parks" in which we can all make a difference by how we landscape our own plots of land, no matter the size.



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# Homegrown National Park



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Instead of increasing the amount of public land, which is very controversial and expensive, what if we reduced the size of our lawns by half and planted more useful plants in the other half?



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# What Birds Need



- Food
- Water
- Shelter for nesting and roosting





This suburban lot is essentially a monoculture – the lawn – with a few other non-native plants that provide little biodiversity.



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These yards contain some native plants that provide shelter and food, and require minimal maintenance.



# Plants as Food for Birds

Birds eat seeds, nectar, fruit, leaves, and even flower buds, at different times of the year. Not all birds eat all of these. Berries are an important part of many birds' diets in the fall and winter.



# Plants as Food for Insects

Almost all our terrestrial birds eat insects for at least part of their diet, and caterpillars are essential for feeding young. So if you have the right plants in your garden, expect something to be eating them.



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# Northern mockingbird



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# Toyon

*Heteromeles arbutifolia*



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Cedar waxwing feasting on Toyon berries



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# The Curious Corvid !

What's so great  
about native  
plants?



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# The Case for Native Plants

- Adapted to our climate
- Most use less water than many non-native plants
- Lower maintenance; less fertilizer and fewer (or no) pesticides
- Our native insects and birds evolved with our native plants – they’re “made for each other”





# Native Plants are Best!

- Because they evolved together, native birds and insects recognize native plants as a food sources
- Native plants are adapted to local conditions, and over millions of years, the timing of native plant budbreak and bloom, insect hatch, and bird migration have become tied together



This is the common native plant, *California Buckeye, Aesculus californicus*. Although they are attracted to it, the plant is toxic to non-native European honeybees.

It is not known whether native bees have evolved to tolerate the toxic saponins, or to avoid feeding on the toxic plant parts.



# California Coffeeberry

*Frangula californica*



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## California Quail



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# Black elderberry

*Sambucus nigra*



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Black elderberry  
*Sambucus nigra*



# Valley Elderberry Longhorn Beetle

## *Desmocerus californicus dimorphus*

- Associated with host plant *Sambucus nigra* for all life stages (mutualism)
- Foraging activities of adults help dislodge and transfer pollen
- American River Parkway, urban riparian forest (90% has been lost to development)
- VELB listed as federally Threatened in 1980

# Valley Elderberry Longhorn Beetle



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**VELB**

# Black elderberry

*Sambucus nigra*



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# Western Redbud *Cercis orbiculata* (previously *Cercis occidentalis*)



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# Western Redbud *Cercis orbiculata*

The primary value of this plant for bees is the foliage. Leafcutter bees cut these neat little half-moons from the leaf margins to use as nest-building material.



# Western Redbud *Cercis orbiculata*

Hummingbirds are attracted to the flowers, and Goldfinches will eat the seeds.

Redbud is a legume, so it fixes nitrogen from the air, and it is highly valued by Native Americans for basketry.



# Other great native shrubs:

- Manzanita
- Ceanothus
- Ribes sanguinum or R. nevadense
- California Fuchsia (*Epilobium canum* ssp. *latifolium*)

Check them out on Calscape or Calflora!



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caiscape.org


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**Calscape**  
 Restore Nature One Garden at a Time

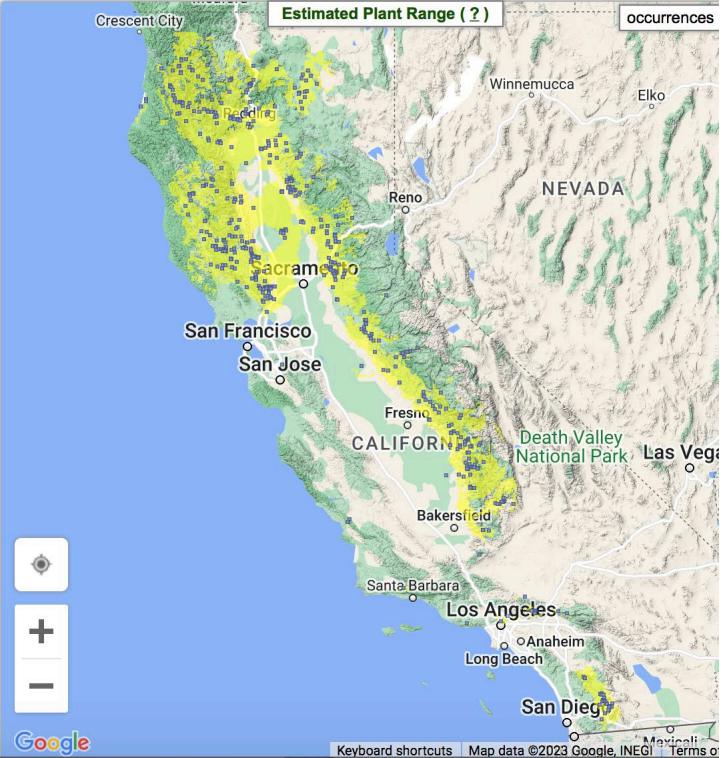
Search for California native plants by name  ADVANCED SEAR

HOME > WESTERN REDBUD > CERCIS OCCIDENTALIS | PREVIOUS

**Western Redbud**  
*Cercis occidentalis*



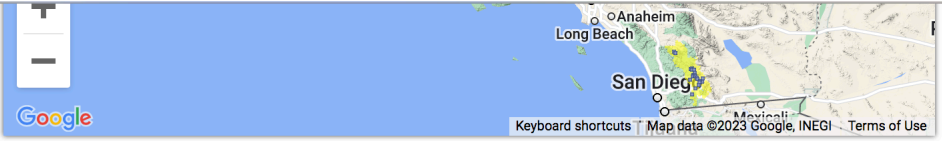
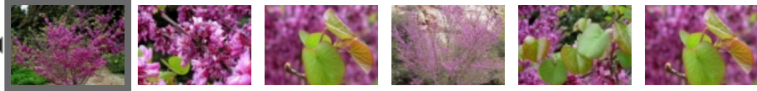
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**About Western Redbud (*Cercis occidentalis*)**

[90 Nurseries Carry This Plant](#)

[Add to My Plant List](#)

[Add to My Plant List](#)

The Western Redbud is a small deciduous tree or shrub found in the foothills and mountains of California. In the northern, rainier part of its range, it grows more often on dry slopes in mountain foothills. In the southern and drier part of its range, it grows most often near higher elevation creeks, canyon bottoms and other moister areas. The thin, shiny brown branches bear shiny heart-shaped leaves which are light green early in the season and darken as they age. Leaves on plants at higher elevation may turn gold or red as the weather cools. The showy flowers develop in the spring and are bright pink or magenta, and grow in clusters all over the shrub, making the plant very colorful and noticeable in the landscape. The shrub bears 3 inch long brown legume pods which are very thin and dry.

This plant is easy to grow just about anywhere in northern California that doesn't get below 15 degrees. In southern California, best to plant Western Redbuds near seasonal streams, springs, damp areas or irrigated areas. Additionally, this plant needs four season climates with a cool winter to thrive, so best not to plant near the immediate coast in southern California.

**Plant Description**

<b>Plant Type</b> Shrub	<b>Size</b> 10 - 20 ft tall 10 - 15 ft wide	<b>Form</b> Rounded	<b>Growth Rate</b> Moderate	<b>Dormancy</b> Winter Deciduous	<b>Fragrance</b> Slight	<b>Flower Color</b> Pink, Yellow, Red	<b>Flowering Season</b> Winter, Spring
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**Wildlife Supported**

Birds



**Butterflies & moths hosted ( 12 likely \* )** [SHOW ALL](#)

<b>White-lined Sphinx</b> Hyles lineata	<b>Red-Humped Caterpillar</b> Schizura concinna	<b>Spotted Tussock Moth</b> Lophocampa maculata	<b>Fruit-Tree Leafroller Moth</b> Archips argyrospila	<b>Salt-and-Pepper Geometer</b> Biston betularia	<b>Miranda Underwing</b> Amphipyra pyramidoides	<b>Oblique-Banded Leafroller Moth</b> Choristoneura rosaceana
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**Landscaping Information**

<b>Sun</b> Part Shade, Full Sun	<b>Moisture</b> Low	<b>Summer Irrigation</b> Max 1x / week once established	<b>Nurseries</b> <a href="#">Carried by 90</a>	<b>Ease of Care</b> Very Easy	<b>Cold Tolerance</b> Tolerates cold to 15 - 20° F	<b>Soil Drainage</b> Fast, Medium, Slow
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**Soil Description**  
Adaptable. Tolerates Sodic Soil. Soil PH: 5.0 - 8.0

**Common uses**  
Bank Stabilization, Hummingbird Gardens, Deer Resistant, Bird Gardens, Bee Gardens

**Companion Plants**



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# Vertical Diversity

Besides shrubs, your garden should include trees, tall grasses and flowering perennials, and groundcover.



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White-crowned Sparrow



Golden-crowned Sparrow





# White-breasted Nuthatch





# Phainopepla



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# Phainopepla



# Keystone Species

In ecology, the concept of keystone species, refers to those plants or animals that are so essential to the food web, that if they are removed, the web ceases to function. Oaks, pines, ceanothus, and willows are examples of keystone plants.

Although they may not be great in number, keystone species disproportionately influence the ecosystem.



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# Keystone Species

- A relatively small subset of local plants host 70% or more of the local butterfly and moth species
- Some species of insects rely on a single species or genera of plant to complete their lifecycle, such as the Monarch butterfly and milkweed





# The Curious Corvid !



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# The Curious Corvid!

Can you think of three keystone species – either plant or animal?



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# Keystone Species

- Oak, willow, cottonwood and pines are keynote tree species in our area.
- The iconic keynote animal species is the gray wolf. Its reintroduction to Yellowstone NP in 1995 resulted in reduced elk and moose populations, which allowed overbrowsed vegetative communities to rebound; bison to increase; and all the animals that scavenge on wolf kills to increase.





Black Oak *Quercus kelloggii*



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## Black Oak *Quercus kelloggii*



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## Red-breasted Sapsucker



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# Acorn Woodpecker



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Acorn  
woodpecker  
granary tree.  
A wooden  
fence post or  
telephone  
pole will work,  
too.



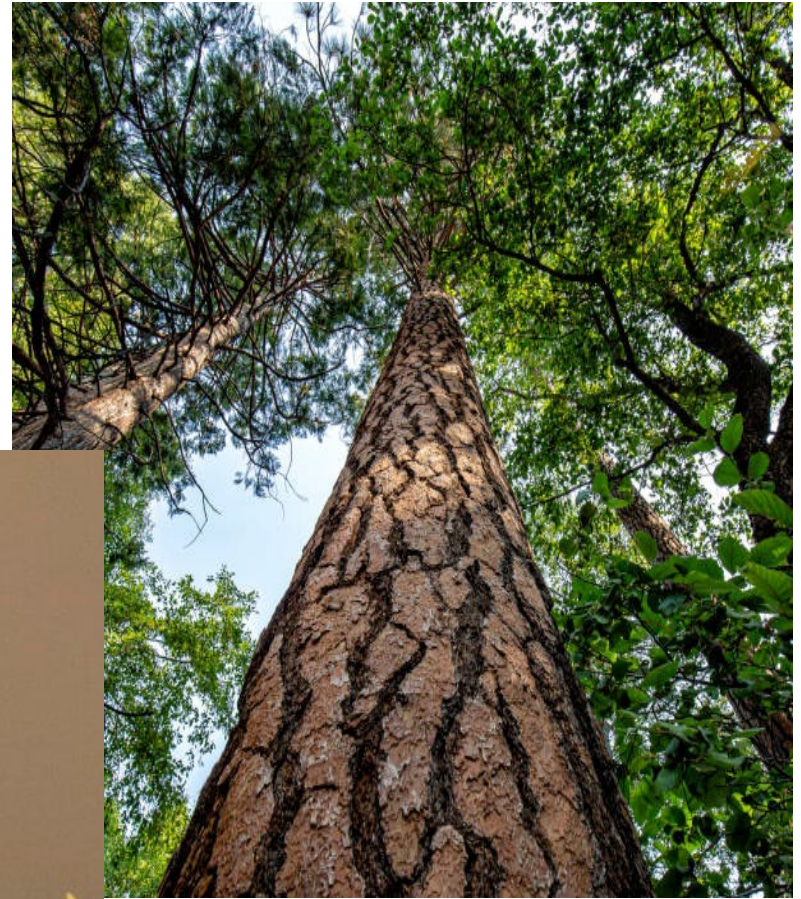
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# Don't forget conifers!

If you have room for a Ponderosa pine or other native conifer, it can be a great addition for birds. Coast redwood is not a good choice for our county.



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# Insects

- Birds rely heavily on insects – especially caterpillars - to feed their young. For most of our terrestrial birds, caterpillars are not optional.
- Caterpillars transfer more energy to other animals than any other plant eaters.





96% of  
terrestrial  
bird species  
rear their  
young on  
insects



Babies want bugs!



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## Caterpillars are:

- Soft – perfect for stuffing down the throat of a nestling
- Large - compared to aphids
- Nutritious - high in fat and protein
- Low in chitin - beetle shells and grasshopper legs are too hard for babies to digest
- High in essential carotenoids - antioxidants





Dark-eyed Junco



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Some birds, like those in the Wood-warbler family, eat insects almost exclusively. Notice the slender bill, which is not designed for eating seeds.

You are most likely to see Warblers during spring or fall, when they are migrating.



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# Plant Choice = White Oak

Banded tussock moth	4
Nason's slug	2
Pear slugs	104
Bagworms	3
Leaf-tip rollers	21
Yellow-necked caterpillar eggs	80
Yellow-necked caterpillars	115
Pyralid leaf rollers	4
Saddled prominent	3
Tortricid leaf tiers	34
Leaf miners	12
Geometrid inch worm	1
Bucculatrix ainsliella	1
Midrib webber	5
White-dotted prominent	2
Double-lined prominent	2
Douglasiidae	1
Lepidoptera eggs	12
Leaf folders	4

410 caterpillars  
19 species





# Plant Choice = Black Cherry

239 caterpillars  
14 Species

Pear slugs	12
Saddleback caterpillar	1
Leaf-tier	1
Tent caterpillar eggs	175
Tenthredinid sawfly	1
Bucculatrix pomifoliella	8
Leaf –folder	3
Tufted bird dropping moth	2
Ugly nest caterpillar	13
Leaf miners	16
Large Pyralid	1
Acleris variegata	1
Bagworm	1
Leaf-roller	4



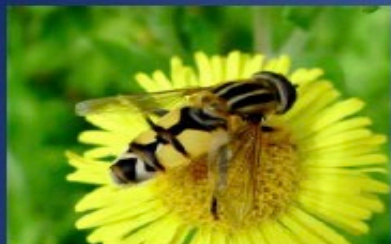
# Plant Choice = Bradford Pear

Geometrid inchworm 1

1 Caterpillar  
1 Species



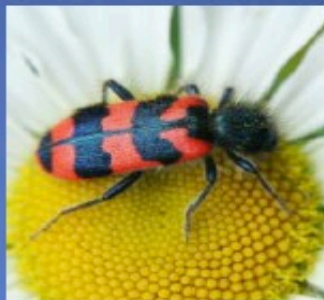
# Non-Bee Insect Pollinators



Flower flies



Ants



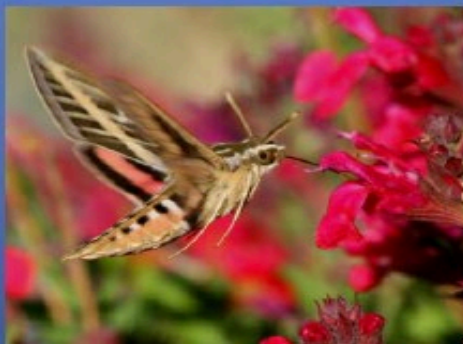
beetles



Butterflies



Mosquitoes



Moths



Wasps



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# Water





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# Butterflies Love Water, too



Puddling station



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# Supplemental Feeding

- Sometimes plants can't provide enough food
- Feeders can be used to supplement the natural food you provide through plants



# Suet

- High energy food source for winter
- Woodpeckers, nuthatches, chickadees, titmice and hawks
- Feed only from October - April or May









# Nectar Feeders



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# Project FeederWatch

HOME

ABOUT

LEARN

COMMUNITY

EXPLORE

YOUR DATA

*Embrace the*

# WINTER.

*Count Feeder Birds for*

# SCIENCE!



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# Unexpected Consequences?







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# Embrace Messiness!

- Leave some leaves – they provide nutrients for the soil and shelter for invertebrates
- Leave the last of the dried flowers that contain seeds for birds to glean during cold weather
- Leave a brush pile or two



# Eight Takeaways for Landscaping for Birds



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# The Curious Corvid !



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# The Curious Corvid !

Let's see how many of  
the take home lessons  
we can remember!



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1. Include native plants in your landscape, especially keystone species



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2. Provide water, moving or dripping if possible





### 3. Keep cats indoors



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## 4. Reduce or eliminate pesticide use



Tolerate some insect damage to feed birds.



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## 5. Shrink the size of your lawn

There are more than 40 million acres of lawn in the US! If we reduced that by half, and planted native plants on 20 million acres, that is more acres than

Yellowstone, Yosemite, the Grand Canyon, Denali, plus 9 more National Parks, combined!



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## 6. Increase vertical layering

Include trees, shrubs, tall grasses, flowering perennials, and groundcovers in your garden if you have room. More vertical diversity makes for a more complex landscape, attractive to more species.



## 7. Provide snags, brush piles, rock piles



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## 8. Reduce window strikes and light pollution



- Move feeders closer to windows so birds are flying slower if they hit a window
- Use materials that will cut down on reflection and glare
- Lights at night cause birds to be disoriented, may interfere with migration, and reduce insect populations





# Ready to get started?

Sacramento Valley CNPS

Online Plant Sale

September 21, 7am to

September 22, 6 pm

<https://www.sacvalleycnps.org/plant-sales/>

Redbud Chapter CNPS

Online Plant Sale

October 5, 11am to 4 pm

<https://chapters.cnps.org/redbud/plant-sale/>

El Dorado Chapter CNPS

Online Plant Sale

October 12, 6am – October 13, 6pm

Pickup October 19

<https://shop.eldoradocnps.org>



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# Help Us Better Serve You!

Our follow-up survey provides us the tools we need to grow and improve the quality of our program.



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