



Bringing Birds to Your Garden

Pat Trimble and Sandy Bisbee
September 9, 2023



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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, and most states also have MG programs.



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A Disclaimer is needed:

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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Birds are in Trouble

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



Birds are in Trouble

Many factors are contributing to the decline in numbers of birds in North America, among them:

- Habitat loss
- Outdoor cats
- Window strikes
- Pesticides
- Climate change



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.



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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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What Birds Need



- Food
- Water
- Shelter for nesting and roosting



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



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



Plants as Food

Birds eat seeds, nectar, fruit, leaves, and even flower buds, at different times of the year. Not all birds eat all of these.



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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 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.



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California Coffeeberry

Frangula californica



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California Quail



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California quail and a jack rabbit on the steep hillside below my house. I have this hill weed – whacked once or twice before it gets hot, then let the dandelions bloom and the turkey mullein, also called doveweed, grow for the insects and birds.



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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.



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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.



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Other great native shrubs:

- Manzanita
- Ceanothus
- Ribes sanguinium 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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CALIFORNIA NATIVE PLANT SOCIETY
Calscape
 Restore Nature One Garden at a Time

Search for California native plants by name ADVANCED SEARCH

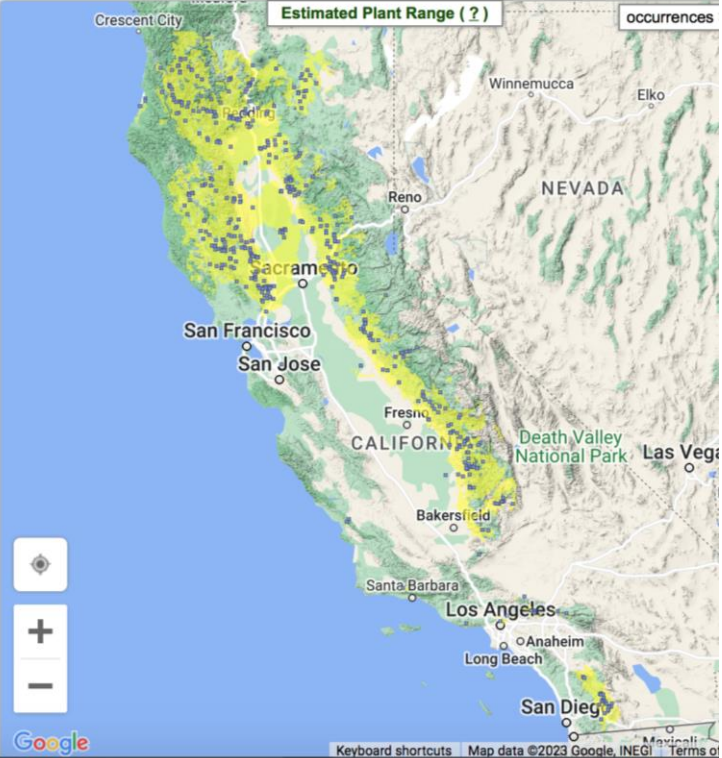
HOME > WESTERN REDBUD > CERCIS OCCIDENTALIS | PREVIOUS

Western Redbud

Cercis occidentalis



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About Western Redbud (*Cercis occidentalis*)

[90 Nurseries Carry This Plant](#)

[Add to My Plant List](#)

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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



Plant Type
Shrub



Size
10 - 20 ft tall
10 - 15 ft wide



Form
Rounded



Growth Rate
Moderate



Dormancy
Winter Deciduous



Fragrance
Slight



Flower Color
Pink, Yellow, Red



Flowering Season
Winter, Spring

Wildlife Supported

Birds



Butterflies & moths hosted (12 likely *)

[SHOW ALL](#)

*



White-lined Sphinx
Hyles lineata

*



Red-humped Caterpillar
Schizura concinna

*



Spotted Tussock Moth
Lophocampa maculata

*



Fruit-Tree Leafroller Moth
Archips argyrospila

*



Salt-and-Pepper Geometer
Biston betularia

*



Miranda Underwing
Amphipyra pyramoides

*



Oblique-Banded Leafroller Moth
Choristoneura rosaceana

Landscaping Information



Sun
Part Shade, Full Sun



Moisture
Low



Summer Irrigation
Max 1x / week once established



Nurseries
[Carried by 90](#)



Ease of Care
Very Easy



Cold Tolerance
Tolerates cold to 15 - 20° F



Soil Drainage
Fast, Medium, Slow



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



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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



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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.

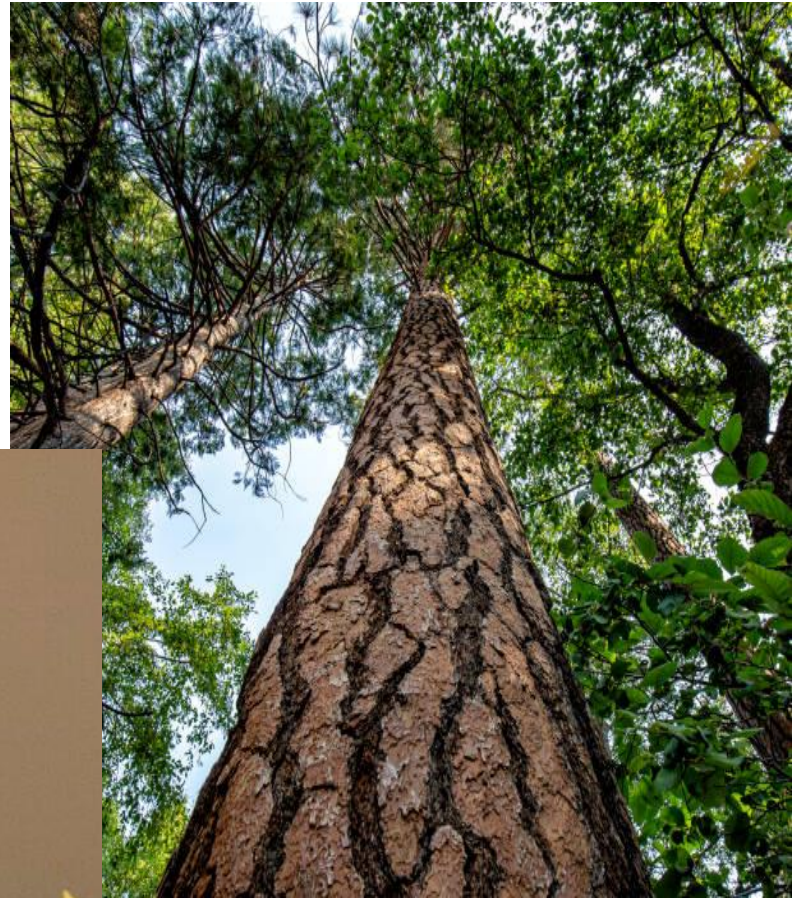


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Don't forget conifers!

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



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Dark-eyed Junco

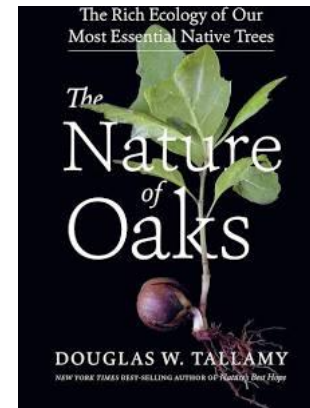
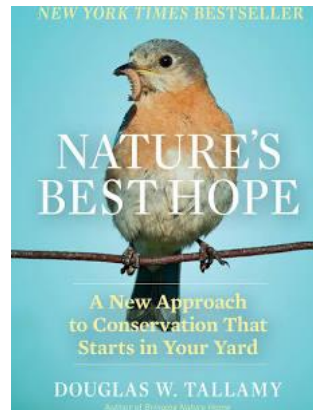
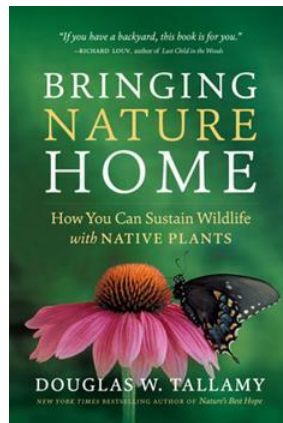


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Dr. Doug Tallamy: Researcher, ecologist, entomologist, author, University of Delaware.

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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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

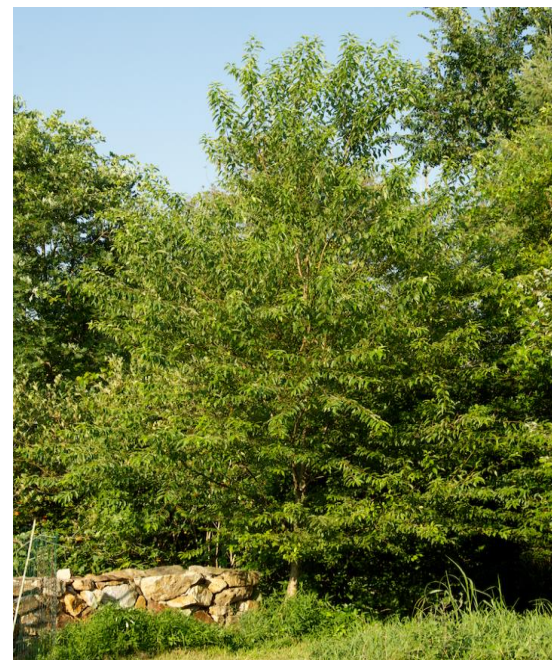
410 caterpillars
19 species



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 variegana	1
Bagworm	1
Leaf-roller	4



Plant Choice = Bradford Pear

1 Caterpillar
1 Species

Geometrid inchworm 1



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



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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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1. Include keystone native plants in your landscape



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2. Provide water, moving or dripping if possible



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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.



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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?

Saturday September 16
Sacramento Valley CNPS
In-person Plant Sale
10am-2pm
Soil Born Farms

Saturday October 7
Redbud Chapter CNPS
Online only Plant Sale
8am-1pm Members only
1pm-8pm General public

October 1, 10am – October 7, 5pm
El Dorado Chapter CNPS
Online only Plant sale
Pickup October 14



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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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