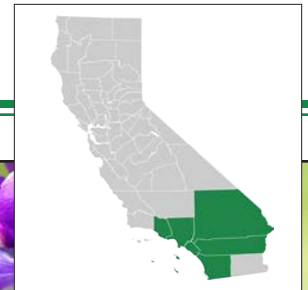


Recommended Plants & Seed Mixes FOR POLLINATORS & BENEFICIAL INSECTS *Southern California Region*



Mining bee on toyon (left), and a large carpenter bee on lupine (right). (Photographs courtesy of Leithen M'Gonigle.)

Plant Selection

The native wildflowers and shrubs on this list are recommended for use in pollinator habitat restoration and enhancement projects in agricultural landscapes. These species have been selected because they are attractive to a diversity of different bee species, and provide pollen and nectar resources throughout the season, provided that a minimum of three different plant species from each blooming period (early, mid, and late season) are selected. A majority of the plants recommended are drought tolerant, easy to establish, and don't serve as alternate hosts to crop pests or diseases, except when specifically indicated.

Native Wildflowers for Pollinators and Beneficial Insects

	COMMON NAME	SCIENTIFIC NAME			LIFE CYCLE [®] MAX HEIGHT	NOTES
Early	Baby blue byes	<i>Nemophila menziesii</i>	L	A	0.25'	
	Bicolor lupine	<i>Lupinus bicolor</i>	M	A	0.5'	
	Common tidytips	<i>Layia platyglossa</i>	L	A	0.25'	Tolerates clay soils
	Golden lupine	<i>Lupinus densiflorus</i> var. <i>aureus</i>	L	A	2.5'	
Early-Mid	California brittlebush 🌵	<i>Encelia californica</i>	L-M	P	4'	Tolerates clay soil
	California poppy	<i>Eschscholzia californica</i>	L	A, P	0.5'	Tolerates clay soils
	Farewell-to-spring	<i>Clarkia amoena</i>	M	A	0.5'	
	Foothill penstemon 🌵	<i>Penstemon heterophyllus</i>	L	P	3'	
	Globe gilia	<i>Gilia capitata</i>	M	A, P	1'	
	Purple sage 🌵	<i>Salvia leucophylla</i>	L	P	2'	
	Showy penstemon 🌵	<i>Penstemon spectabilis</i>	L	P	3'	

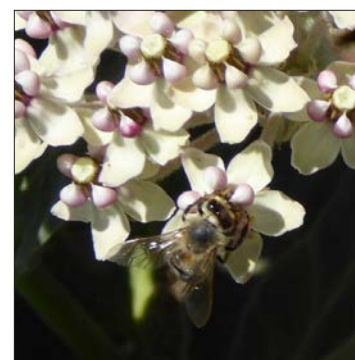
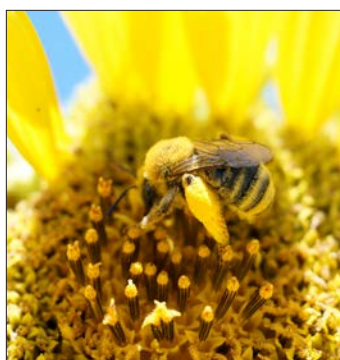
Native Wildflowers for Pollinators and Beneficial Insects *continued*

✿	COMMON NAME	SCIENTIFIC NAME	💧			NOTES
Mid	California buckwheat ✿	<i>Eriogonum fasciculatum</i>	L	P	2.5'	Extremely drought-tolerant
	California phacelia	<i>Phacelia californica</i>	L	P	1'	Tolerates clay soil; can re-seed aggressively
	Common deerweed	<i>Lotus scoparius</i>	L	P	3'	Drought-tolerant, also tolerates wetter conditions
	Imbricate phacelia	<i>Phacelia imbricata</i>	L	P	2'	
	Island buckwheat ✿	<i>Eriogonum arborescens</i>	L	P	2'	
	Narrowleaf milkweed ✿🦋	<i>Asclepias fascicularis</i>	M	P	1.5'	Tolerates clay soils; tolerates wet or dry conditions
	Summer lupine	<i>Lupinus formosus</i>	L	P	1.5'	
Mid-Late	Black sage ✿	<i>Salvia mellifera</i>	L	P	2'	
	California goldenrod	<i>Solidago californica</i>	M	P	3'	Tolerates wet or dry conditions
	Cleveland sage ✿	<i>Salvia clevelandii</i>	L	P	3'	
	Common sunflower	<i>Helianthus annuus</i>	M	A	5'	Tolerates clay soils
	Golden-yarrow	<i>Eriophyllum confertiflorum</i>	M	P	3'	
	Gumplant	<i>Grindelia camporum</i>	L	P	4'	Tolerates clay soils; can re-seed aggressively; tolerates wet or dry conditions
	Woollypod milkweed ✿🦋	<i>Asclepias eriocarpa</i>	M	P	2'	Tolerates clay soils; tolerates wet or dry conditions
Late	St. Catherine's lace	<i>Eriogonum giganteum</i>	L	P	5'	Very long-blooming
	California fuchsia ✿	<i>Epilobium canum</i>	L	P	3'	
	Seaside woolly sunflower	<i>Eriophyllum stoechadifolium</i>	M	P	3'	

Native Wildflowers and Hedgerow Plants—Additional Notes:

- 1 Life cycle: annual (A), perennial (P)
- 2 Dioecious—plant male plants to provide pollen and avoid unwanted seeding

KEY	✿ Bloom time	💧 Water needs: low (L), medium (M), high (H)	✿ Establishes better from transplant than seed	🦋 Monarch butterfly host plant
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Above: numerous species of pollinators are active in late summer and early fall, making it important to include mid-late and late blooming plants—such as sunflower (left), gumplant (middle left), coyotebrush (middle right), and woollypod milkweed (right)—in any pollinator habitat. (Photographs courtesy of Leithen M'Gonigle (left); John Anderson, Hedgerow Farms (middle); and by Mace Vaughan (middle right) and Brianna Borders (right) of the Xerces Society.) Below: seaside woolly sunflower (Photograph courtesy of Phil Hogan, Yolo County RCD.)



Native Hedgerow Plants for Pollinators and Beneficial Insects

	COMMON NAME	SCIENTIFIC NAME		MAX HEIGHT	NOTES
Early	Bigberry manzanita	<i>Arctostaphylos glauca</i>	L	10'	
	Bladderpod	<i>Cleome isomeris</i>	L	5'	Tolerates salinity
	California buckthorn	<i>Frangula californica</i>	L	5'	
	California lilac	<i>Ceanothus 'Julia Phelps'</i>	L	6'	
	Oregon grape	<i>Mahonia aquifolium</i>	L	5'	
Early-Mid	California brittlebush 🌵	<i>Encelia californica</i>	L-M	4'	Tolerates clay soils
	California wildrose	<i>Rosa californica</i>	M	8'	Tolerates clay soils; can be a host for spotted wing drosophila
	Foothill penstemon 🌵	<i>Penstemon heterophyllus</i>	L	3'	
	Purple sage 🌿	<i>Salvia leucophylla</i>	L	2'	
	Showy penstemon 🌵	<i>Penstemon spectabilis</i>	L	3'	
Mid	Toyon	<i>Heteromeles arbutifolia</i>	L	12'	Can be an alternate host for fire blight
	California buckwheat 🌾	<i>Eriogonum fasciculatum</i>	L	2.5'	Can be extremely drought-tolerant
	Common deerweed	<i>Lotus scoparius</i>	L	3'	Drought-tolerant, but also tolerates wetter conditions
	Island buckwheat 🌾	<i>Eriogonum arborescens</i>	L	2'	
	Narrowleaf milkweed 🦋	<i>Asclepias fascicularis</i>	M	1.5'	Tolerates clay soils; tolerates wet or dry conditions
Mid-Late	Black sage 🌿	<i>Salvia mellifera</i>	L	2'	
	California goldenrod	<i>Solidago californica</i>	M	3'	
	Cleveland sage 🌿	<i>Salvia clevelandii</i>	L	3'	
	Golden-yarrow	<i>Eriophyllum confertiflorum</i>	M	3'	
	Gumplant	<i>Grindelia camporum</i>	L	4'	Tolerates clay soils; can re-seed aggressively; tolerates wet or dry conditions
Late	St. Catherine's lace	<i>Eriogonum giganteum</i>	L	5'	Very long-blooming
	Woollypod milkweed 🦋	<i>Asclepias eriocarpa</i>	M	2'	Tolerates clay soils; tolerates wet or dry conditions
	Blue curls	<i>Trichostema lanatum</i>	L	5'	Requires good drainage
	California fuchsia 🌺	<i>Epilobium canum</i>	L	3'	
	Coyotebrush ②	<i>Baccharis pilularis</i>	L	10'	Extremely drought-tolerant
	Dwarf coyotebrush ②	<i>Baccharis pilularis 'Pigeon Point'</i>	L	2'	Extremely drought-tolerant
	Seaside woolly sunflower	<i>Eriophyllum stoechadifolium</i>	M	3'	



On the left, installing a hedgerow from transplants. On the right, blooming Cleveland sage transplants are protected by a layer of straw. (Photographs courtesy of the Mission RCD.)

Example Seed Mix for Pollinators

This example seed mix has been formulated for a one-acre area*, based on field trials and monitoring conducted by the Xerces Society, and other conservation partners, and is designed to provide permanent, high-quality foraging resources for a diversity of pollinators and other beneficial insects. None of the recommended species are known to serve as alternate hosts for any crop pests. In addition to pollinator attractiveness, species were selected for their ease of establishment, broad natural geographic range, and drought tolerance.

*To use this mix on larger or smaller areas, adjust rates accordingly. For more information on sourcing Xerces Society recommended seed mixes, please visit www.xerces.org/pollinator-seed/.

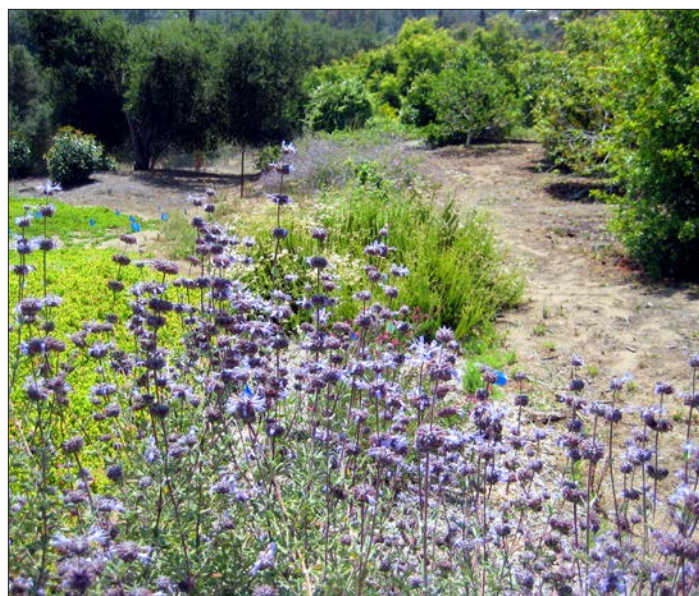
Pollinator and Beneficial Insect Seed Mix for the Central Coast Region and Southern California

This mix is comprised primarily of native wildflowers and is appropriate for habitat restoration throughout most of Southern California. Native bunch grasses that provide nesting habitat for bumble bees and other beneficial insects may also be included at a low rate.

COMMON NAME	SCIENTIFIC NAME	LIFE CYCLE ^①	SEEDS/ FT ²	% OF MIX	
				(by seed count)	(by weight)
Baby blue eyes	<i>Nemophila menziesii</i>	A	5	10%	10.5%
California phacelia	<i>Phacelia californica</i>	P	3.5	7%	6.1%
California poppy	<i>Eschscholzia californica</i>	A, P	4	8%	6.3%
Common sunflower	<i>Helianthus annuus</i>	A	1	2%	2.9%
Farewell-to-spring	<i>Clarkia amoena</i>	A	12.6	25%	3.4%
Globe gilia	<i>Gilia capitata</i>	A, P	11.6	23%	7.4%
Golden lupine	<i>Lupinus densiflorus var. aureus</i>	A	0.8	1.5%	34.7%
Golden-yarrow	<i>Eriophyllum confertiflorum</i>	P	4.8	9.5%	3.1%
Gumplant	<i>Grindelia camporum</i>	P	3	6%	24.8%
Yarrow ^②	<i>Achillea millefolium</i>	P	4	8%	0.7%
TOTAL:			50.4	100%	

Example Seed Mix—Additional Notes:

- ① Life cycle: annual (A), perennial (P)
- ② Included for its high value to beneficial insects (not known to be particularly attractive to pollinators).



On the left, a wildflower strip planted with globe gilia, farewell-to-spring, and California poppies. On the right, a hedgerow with Cleveland sage, blue curls, and California buckwheat in bloom. (Photographs courtesy of the Mission RCD.)

Acknowledgements

These lists were first published in *Conservation Cover (327) for Pollinators: Southern California* and *Hedgerows (422) for Pollinators: Southern California*, thanks in large part to a USDA–NRCS California Conservation Innovation Grant. For more information on installing pollinator habitat, visit: www.xerces.org/pollinator-habitat-installation-guides. Photographs remain under the copyright of the photographers. California map vector courtesy of Thadius Miller, via Wikimedia Commons.