
Seedling Identification Guide for Pollinator Forbs of California's Central Valley



Photo credit: Jessa Kay Cruz, Xerces Society

Acknowledgements

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Preface

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Plant Materials Program has been involved in the evaluation of conservation plants and planting technology for more than 75 years. This paper describes the seedlings and flowers of plant species commonly used in California pollinator plantings. All of the plant species in this guide have been chosen due to their high pollinator value, drought tolerance, ease of establishment, and commercial availability. The information in this guide can be used to assess the establishment success of wildflower planting projects at the level of individual plant species.

For additional information on specific species of plants mentioned in this publication, please see the USDA PLANTS database at: (<http://plants.usda.gov/java/>) or contact the nearest Plant Materials Center or plant materials specialist (<http://plant-materials.nrcs.usda.gov/contact/>) and/or the Land Grant Universities that serves the State. For specific information on soils and soil health, please see USDA NRCS soils website at: (<http://www.nrcs.usda.gov/wps/portal/nrcs/site/soils/home/>). Also, see technical resources on the National Plant Materials Program Web site at: (<http://www.plant-materials.nrcs.usda.gov/>).



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Achillea millefolium (Common yarrow)

**Alternative names**

Yarrow; Milfoil; Milenrama (Spanish)

Bloom time

April - September

Mature height

1 – 3 ft (30 – 90 cm)

Growth

Perennial

Common yarrow flower cluster.

Additional Notes:

Especially attractive to beneficial insects such as flower flies and parasitic wasps. Bees occasionally visit.



Common yarrow seedlings.



Young common yarrow plant.

Asclepias fascicularis (Narrowleaf milkweed)



Narrowleaf milkweed flower clusters.

Alternative names

Mexican whorled milkweed

Bloom time

May - October

Mature height

1.5 – 3 ft (45 – 90 cm)

Growth

Perennial (foliage dies back in winter)

Additional Notes:

Milkweeds are important host plants for the larvae of the monarch butterfly (*Danaus plexippus*). Narrowleaf milkweed seeds do not grow well when planted with other species in a mix, and are better propagated as plugs. Milkweeds are perennials that die back in winter and re-grow from the same roots in spring. Leaves produce a milky white sap when damaged.



Narrowleaf milkweed seedlings.



Young narrowleaf milkweed plant.

Asclepias speciosa (Showy milkweed)



Showy milkweed flower cluster.

Alternative names

Showy butterflyweed; Creek milkweed;
Greek milkweed

Bloom time

May - September

Mature height

4 – 6 ft (120 – 180 cm)

Growth

Perennial (foliage dies back in winter)

Additional Notes:

Milkweeds are important host plants for the larvae of the monarch butterfly (*Danaus plexippus*). Showy milkweed seeds do not grow well when planted with other species in a mix, and are better propagated as plugs or root rhizomes. Milkweeds are perennials that die back in winter and re-grow from the same roots in spring. Leaves produce a milky white sap when damaged.



Emerging showy milkweed plants (grown from rhizomes)



Young showy milkweed plants (grown from rhizomes).

Clarkia unguiculata (Elegant clarkia)



Elegant clarkia flower.

Alternative names

Mountain garland; Woodland clarkia

Bloom time

April - September

Mature height

3 ft (90 cm)

Growth

Annual

Additional Notes:

This plant will grow under partial shade. Flower color ranges from pale lavender-pink to deep fuchsia.



Elegant clarkia seedlings.



Young elegant clarkia plant.

Clarkia williamsonii (Fort Miller clarkia)



Fort Miller clarkia flower.

Alternative names

Fort Miller fairyfan

Bloom time

April - September

Mature height

3 ft (90 cm)

Growth

Annual

Additional Notes:

This plant will grow under partial shade.



Fort Miller clarkia seedling.



Young Fort Miller clarkia plants. Both plants are the same age, but the smaller plant was grown in cooler conditions.

Collinsia heterophylla (Chinese houses)



Chinese houses flowers.

Alternative names

Purple Chinese houses; Innocence

Bloom time

February - April

Mature height

0.5 to 1.5 ft (10 - 50 cm)

Growth

Annual

Additional Notes:

Flower color can range from mostly purple to completely white. The upper flower lobe of the flower is usually a lighter color than lower lobe.



Chinese houses seedlings.



Young Chinese houses plants. Both plants are the same age, but the smaller plant was grown in cooler conditions.

Eschscholzia californica (California poppy)



Alternative names

California goldenpoppy; Golden poppy;
Flame flower; Copa de oro (Spanish);
Dedal de oro (Spanish)

Bloom time

February - September

Mature height

0.25 to 2 ft (5 - 60 cm)

Growth

Annual / Perennial

California poppy flower.

Additional Notes:

Flowers open in the sun and close at night. California poppy is the state flower of California.



California poppy seedling.



Young California poppy. A dime is pictured for scale.

Gilia capitata (Bluehead gilia)



Bluehead gilia flower cluster.

Alternative names

Globe gilia

Bloom time

February - April

Mature height

0.5 - 3 ft (10 - 90 cm)

Growth

Annual / Perennial

Additional Notes:



Bluehead gilia seedling.



Young bluehead gilia plants. Both plants are the same age, but the smaller plant was grown in cooler conditions.

Grindelia camporum (Gumplant)



Gumplant flower.

Alternative names

Great Valley gumplant; Great Valley gumweed; Resinweed; Boton de oro (Spanish)

Bloom time

May - November

Mature height

1.5 - 8 ft (60 - 250 cm)

Growth

Perennial

Additional Notes:

This plant is very valuable to pollinators because it blooms late in the year, when few other flowers are available. All parts of the plant are quite sticky to the touch.



Gumplant seedlings. Dime is pictured for scale.



Young gumplant. Dime is pictured for scale.

Helianthus annuus (Sunflower)



Sunflower with a visiting bee.

Alternative names

Common sunflower; Annual sunflower

Bloom time

June - October

Mature height

Up to 10 ft (up to 3 m)

Growth

Annual

Additional Notes:

Sunflower species also have pithy stems, which native bees can use for nesting. The common sunflower is one of California's tallest native wildflowers.



Sunflower seedlings.



Young sunflower plant.

Helianthus bolanderi (Bolander's sunflower)



Alternative names

Serpentine sunflower

Bloom time

June - October

Mature height

Up to 5 ft (Up to 1.5 m)

Growth

Annual

Bolander's sunflower.

Additional Notes:

Sunflower species also have pithy stems, which native bees can use for nesting. Bolander's sunflower is shorter than the common sunflower.



Bolander's sunflower seedling.



Young Bolander's sunflower plant.

Lasthenia glabrata (Yellowray goldfields)



Yellowray goldfields flower.

Alternative names

Yellow rayed lasthenia

Bloom time

February - June

Mature height

1 - 2 ft (30 - 60 cm)

Growth

Annual

Additional Notes:

In the wild, yellowray goldfields often grows as a monoculture that resembles a field of golden yellow when viewed from a distance.



Yellowray goldfields seedling.



Young yellowray goldfields plant

Layia platyglossa (Tidytips)



Tidytips flowers.

Alternative names

Coastal tidy tips; Common tidy tips

Bloom time

February - July

Mature height

0.1 – 2.3 ft (3 - 70 cm)

Growth

Annual

Additional Notes:



Tidytips seedlings.



Young tidytips plant.

Lupinus microcarpus var. *densiflorus* (Golden lupine)



Golden lupine flower cluster.

Alternative names

Whitewhorl lupine; Dense flowered platycarpus

Bloom time

April - June

Mature height

0.5 - 2.5 ft (15 - 75 cm)

Growth

Annual

Additional Notes:

Golden lupine seedlings can be identified by their fused cotyledons, as pictured below.



Golden lupine seedling. Dime is pictured for scale.



Young golden lupine plant. Dime is pictured or scale.

Lupinus formosus (Summer lupine)



Summer lupine flower clusters.

Alternative names

Western lupine

Bloom time

June - October

Mature height

0.5 – 2.5 ft (20 - 80 cm)

Growth

Perennial

Additional Notes:

At low elevations, this lupine blooms later than most other lupine species.



Summer lupine seedling. Dime is pictured for scale.



Young summer lupine plant. Dime is pictured for scale.

Lupinus succulentus (Arroyo lupine)



Arroyo lupine flower cluster.

Alternative names

Succulent lupine; Hollowleaf annual lupine

Bloom time

February - May

Mature height

0.5 – 3.3 ft (20 - 100 cm)

Growth

Annual

Additional Notes:

Arroyo lupine is the most water-tolerant of California's lupines.



Arroyo lupine seedling.



Young arroyo lupine plant. Dime is pictured for scale.

Nemophila maculata (Fivespot)



Fivespot flower.

Alternative names

Bloom time

March - July

Mature height

0.5 - 1 ft (15 - 30 cm)

Growth

Annual

Additional Notes:



Fivespot seedling.



Young fivespot plant.

Nemophila menziesii (Baby blue eyes)



Baby blue eyes flower.

Alternative names

Bloom time

March - June

Mature height

0.5 ft (15 cm)

Growth

Annual

Additional Notes:

Baby blue eyes is one of the earliest blooming wildflowers.



Baby blue eyes seedlings.



Young baby blue eyes plant. Dime is pictured for scale.

Phacelia californica (California phacelia)



California phacelia flower cluster.

Alternative names

Rock phacelia; California scorpionweed

Bloom time

March - September

Mature height

0.5 - 3 ft (15 - 90 cm)

Growth

Perennial

Additional Notes:



California phacelia seedling. Dime is pictured for scale.



Young *California phacelia* plants. Dime is pictured for scale.

Phacelia campanularia (Desertbells)



Desertbells flowers.

Alternative names

Desert bluebells

Bloom time

February - April

Mature height

0.3 – 2.3 ft (10 - 70 cm)

Growth

Annual

Additional Notes:



Desertbells seedling.



Young desertbells plants.

Phacelia ciliata (Great Valley phacelia)



Great Valley phacelia flowers.

Alternative names

Bloom time

February - June

Mature height

0.3 - 2 ft (10 - 55 cm)

Growth

Annual

Additional Notes:



Great Valley phacelia seedling.



Young Great Valley phacelia plant.

Phacelia tanacetifolia (Lacy phacelia)



Lacy phacelia flower clusters.

Alternative names

Tansy phacelia; Bee phacelia; Facelia;
Fiddleneck

Bloom time

March – May

Mature height

0.5 – 3.3 ft (15 - 100 cm)

Growth

Annual

Additional Notes:



Lacy phacelia seedling. Dime is pictured for scale.



Young *lacy phacelia* plants.

Trichostema lanceolatum (Vinegarweed)



Vinegarweed flowers.

Alternative names

Vinegar weed; Turpentine weed;
Camphor weed; Blue curls; Yerba del
aigre (Spanish)

Bloom time

June - November

Mature height

Up to 3.3 ft (Up to 1 m)

Growth

Annual

Additional Notes:

Vinegarweed gives off a strong vinegar-like aroma, especially when its leaves are crushed. Vinegarweed is one of the latest blooming wildflowers, making it very valuable as a late-season nectar source.



Vinegarweed seedling. Dime is pictured for scale.



Young vinegarweed plant. Dime is pictured for scale.

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Photos

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