

Invasive Plants of California's Central Valley and Their Alternatives in the Nursery and Garden

Species Information from Plant Right (www.plantright.org)
Images from Plant Right and Wikipedia

Note: Information provided is not comprehensive in terms of growth habits, growth preferences, or availability. Please research any plants you consider adding to your landscape in order to determine its suitability.

Warning: Invasive in California's Central Valley

Spanish Broom (*Spartium junceum*)

French Broom (*Genista monspessulana*)

Scotch Broom (*Cytisus scoparius*)



These three broom species form large bushes that have bright, sweet pea-shaped flowers. Mature plants can produce up to 12,000 seeds, creating a seed bank of 2,000 seeds/ft² that can remain viable in the soil for over twenty years. These plants block the light and use the water needed by native plants, reducing forage and created stands that are inaccessible and unpalatable to wildlife. Brooms can invade intact, as well as disturbed, ecosystems.



Consider Planting These Non-Invasive Alternatives Instead

Forsythia (*Forsythia x intermedia*)



Forsythia is a beautiful, deciduous, fountain-shaped shrub with bright yellow blooms in winter and early spring. There may be some autumn yellowing of the green foliage but the principal appeal of the plant is the profuse seasonal blooms of yellow flowers develop all along the branches. Most varieties are less than ten feet tall and wide. Plants can be pruned and trained for a variety of applications, including garden borders or screens.

Golden Shrub Daisy (*Euryops pectinatus*)



Golden Shrub Daisy is an evergreen shrub that grows to three to six feet tall and wide. The plant requires very little care and maintenance to thrive, but does require soil with good drainage. The foliage is fairly dense and can be a number of shades of green. All varieties have yellow daisy-like flowers that bloom throughout an extended flowering season.

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Periwinkle (*Vinca major*)

Periwinkle is a spreading, perennial vine with blue-purple flowers, originally from southern Europe and northern Africa. The non-flowering stems of periwinkle grow along the ground, while the flowering stems stand upright. Periwinkle was first introduced to the US as an ornamental garden plant and as a medicinal herb. The plant spreads by way of its sprawling stems that form roots at the node. Because of this, a small piece of fragmented periwinkle is sufficient to start a new vine. Periwinkle flourishes in streamside riparian areas, where water often transports pieces of the plant, creating new populations downstream. Periwinkle is a fast-growing, competitive plant that forms dense mats of growth. These mats crowd out other plants and degrade animal habitat in infested areas. Riparian areas are especially susceptible to periwinkle, where the far-flung vines crowd out native vegetation.



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Dwarf Periwinkle (*Vinca minor*)

Dwarf periwinkle is a smaller and less aggressive relative of *Vinca major*. It is a widely used ground cover that has trailing stems with small and smooth, evergreen leaves. Its showy, lavender to purple flowers bloom intermittently throughout summer into fall.



Hardy Geranium (*Geranium* 'Rozanne')

Geranium 'Rozanne' is a hardy variety that stays evergreen in the milder climates. It grows to just under 2ft high and over 3ft in width. Flowers bloom in early spring and continue until the beginning of winter. The flowers are blue to violet in color, similar to those of periwinkle.



Serbian Bellflower (*Campanula poscharskyana*)

Campanula is a perennial with a vigorous growth habit, mounding to eight inches high and spreading. Flowers appear in spring to early summer on 1ft tall stalks. The 1in star shaped flowers can be blue-lilac, lavender, or white.



Star Jasmine (*Trachelospermum asiaticum*)

Star jasmine is a shrubby evergreen groundcover with glossy green foliage and small, fragrant white flowers. Plants will grow up to 2 feet tall and 10 feet wide; they can grow quite rapidly in areas of full sun and rich soil.

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Chinese Tallow Tree (*Triadica [Sapium] sebifera*)

Chinese tallow tree is a fast-growing deciduous tree with broad leaves and spikes of greenish-yellow flowers without petals. Tallow tree was brought to the US from Asia for the solid fat found in the tree's seeds that are used medicinally and to make candles, soap, cloth dressing and fuel. Chinese tallow tree reproduces by seed. Flowing water, birds and other animals disperse the seed of this tree, creating new invasions. When Chinese tallow tree escapes cultivation, it is capable of form dense stands that crowd out native vegetation. Chinese tallow tree leaf litter decomposes quickly and significantly alters the composition of soil nutrients in invaded areas.



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Chinese Pistache (*Pistachia chinensis*)



Chinese pistache is a deciduous tree that can tolerate a wide range of conditions. Its foliage, foot-long leaves with 10-16 leaflets each, turn a brilliant orange to red in fall, even in mild climates. It has a slow-moderate growth rate and reaches a size of 30-60 feet tall and wide. Pistaches will not fruit unless male and female trees grow close to each other.

Sweet Gum (*Liquidambar styraciflua*)



In garden settings, this beautiful tree grows to heights of 60 feet, beginning with a narrow form and then spreading with age. Foliage is green but turns brilliant purple, red, or yellow (depending of variety) in fall before dropping. The individual leaves are maple-like. Spiky seed pods remain on the tree through the winter.

Red Maple (*Acer rubrum* 'October Glory')



Red Maple is native to low wet areas of the Eastern United States. It is fairly fast growing, reaching a size of 60 feet tall by 40 feet wide. As with all maples, it is deciduous and characterized by beautiful fall foliage color. Leaves are 2-4 inches long with three to five lobes, and shiny green until they change to brilliant red in fall. In addition to the red fall foliage, trees have red twigs, fruit, and buds.

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Pampas Grass (*Cortaderia selloana*)

These tall grasses have long, saw-toothed leaves with large plumes in late summer. A single individual of pampas grass can produce 10,000 seeds per plume, and seeds can blow up to 20 miles in the wind. This allows the grass to spread rapidly and colonize new areas. Pampas grass can alter native plant community composition and structure. The large grass produces significant amounts of biomass that are extremely flammable, increasing both the frequency and intensity of fire. Pampas grass develops mono-specific stands with up to 75% cover and their large size significantly reduces light availability, blocking out native species. It has been cited as a direct threat to California natives like Gowen's cypress, Crystal Springs fountain thistle, short-leaved Dudleya, and Mission Blue Butterfly habitat.



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Foerster's Feather Reed Grass (*Calamagrostis x acutiflora* 'Karl Foerster')



'Karl Foerster' is a hybrid grass cultivar that is valued for its early bloom, vertical lines and ability to grow in wet soils. It is a slowly-spreading, clump-forming, cool season ornamental grass which features an erect, slightly arching, slender clump of narrow, stiff, rich green leaves growing to 3' tall and 2' wide. Leaves produce little fall color, eventually turning tan in winter. In June, tightly-vertical flower stalks rise well above the foliage to 6' tall bearing narrow plumes of feathery, purplish-green flowers which turn golden as the seeds mature in summer and eventually tan.

Deer Grass (*Muhlenbergia rigens*)



A California native perennial grass that forms dense clumps 4 feet tall by 4 feet wide with narrow, bright green leaves. In autumn, yellow to purplish flower spikes grow two feet above foliage. As opposed to invasive pampas grass, Deer Grass maintains a much more manageable size.

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Russian Olive (*Elaeagnus angustifolia*)

Russian olive is a deciduous tree with narrow silver leaves, clustered greenish-yellow fruits, and shaggy bark. Russian olive was brought to the US from southern Europe and western Asia as an ornamental landscaping tree. Russian olive spreads by seed. Birds and small mammals gather, stockpile and eat the mealy fruits of this tree, depositing seed far from original populations. Along waterways in dry areas, the fast growth and low seedling mortality of the Russian olive provides tough competition for native willow and cottonwood species, which are intolerant of shade. These stands of Russian olive provide lower habitat quality, and fewer species of birds are found in these trees than native riparian vegetation.



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Arizona Cypress (*Cupressus arizonica*)



Arizona cypress is an evergreen conifer that can grow to forty feet tall and twenty feet wide. It maintains a pyramidal form with blue-green foliage of small, scale-like leaves on splay branches. It makes an excellent windbreaks or screens, but can just as well be used as a specimen tree.

Desert Willow (*Chilopsis linearis*)



Desert willow is a good choice for stream-side planting, growing beautiful flowers, and attracting hummingbirds. Native to streambeds and washes in arid regions of the western United States. The size of mature trees is 15-30 feet tall and 10-20 feet wide. Trees are fast growing at first, but once established will slow down. Desert Willow is a deciduous tree, dropping leaves early in the season but leaving seed pods on the tree that may remain throughout the winter.

Fruitless Olive (*Olea europaea* 'Swan Hill'® , 'Majestic Beauty'®, 'Little Ollie'®, 'Wilsoni')



These lovely trees resemble the invasive Russian olive but do not spread to wildland areas. The recommended varieties have very much the same characteristics of other true olives with the exception that they bear little to no fruit.

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Mexican Feather Grass (*Nasella/Stipa tenuissima*)

Mexican feather grass is a graceful, delicate and fine textured ornamental grass. It grows in a dense fountain like clump with slender leaves that roll tightly inward so that they appear wiry. It blooms in late spring with a greenish flower cluster that persists well into fall as it ripens to golden brown. Mexican feather grass produces thousands of seeds, which are dispersed by wind, water or contaminated soil – as well as via automobiles and animal droppings. The seed-bank can persist for four years and the plant commonly self sows in California. Mexican feather grass often self sows abundantly and may spread out of its designated place in the garden. It is an extremely vigorous plant, which crowds out pasture species as well as native grasses in coastal areas. This grass is unpalatable to livestock, and consumption of it is potentially fatal to livestock.



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Blue Grama Grass (*Bouteloua gracilis* 'Blonde

Blue grama grass 'Blonde Ambition' grows to the same size as Mexican feather grass. It is drought tolerant, has attractive flower heads, can be planted in mass, and is cold hardy.



Prairie Dropseed (*Sporobolus airoides*)

Prairie dropseed is a graceful, fine-textured, clumping grass that is both tough and good-looking. It contains deep-roots and is drought-tolerant.

Mexican Deer Grass (*Muhlenbergia dubia*)

This species is a great looking grass that is similar in appearance but about half the size of the more commonly used California Deer Grass (*Muhlenbergia rigens*).

Pink Muhlygrass (*Muhlenbergia capillaris*)

White Awn Grass (*M. capillaris* 'White Cloud')



Pink muhlygrass, is a clump-forming, warm season, perennial grass that is noted for its attractive summer foliage and spectacular clouds of fall flowers. The average plant size is three feet high by six feet wide.



Autumn Moor Grass (*Sesleria autumnalis*)

Autumn moor grass is a cool season, clump-forming ornamental grass which typically grows 8-12" tall with narrow flower spikes rising above the foliage clump in summer to 18" tall.

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Yellow Flag Iris (*iris pseudacorus*)

Iris pseudacorus is a fast-growing and rapidly-spreading invasive plant that can out-compete other wetland plants, forming almost impenetrable thickets, in much the same way as cattails do. It grows to 5 feet tall and has yellow, showy flowers. It often blooms from mid-spring to summer and its leaves remain green all year when there are mild winters. Yellow flag iris reproduces both vegetatively and by seed. It regenerates vegetatively via rhizomes, that fragment and contribute to new plant establishment when plants reach about 10 years of age. Its seeds also float on the water surface in fall and early spring and germinate along shorelines when the water recedes. Yellow-flag iris displaces native vegetation along streambanks, wetlands, ponds and shorelines and reduces habitat needed by waterfowl and fish, including several important salmon species. In addition, it clogs small streams and irrigation systems, and it dominates shallow wetlands, wet pastures and ditches. Its seeds also clog up water control structures and pipes.



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Canna (*Canna* Hybrids)

Canna hybrids are generally characterized as having bold foliage and large showy flowers that come in a variety of colors. They are cold hardy, heat-tolerant, and drought-tolerant.



Japanese Iris (*Iris ensata*)

Japanese Iris is easily grown in average, medium to wet soils in full sun to part shade. Cultivars come in single, double and peony flowered forms in a wide range of colors including shades of blue, lavender, violet-red, pink and white.



Laevigata Iris (*Iris laevigata*)

Laevigata iris should have constant moisture in order to stay healthy and achieve large blooms. In contrast to *Iris ensata* (Japanese iris), it will grow with its crown under water.



Louisiana Iris (*Iris hexagona*)

Louisiana iris is an emergent water plant that requires consistently moist soil. It is not recommended to let it dry out between waterings suitable for both bogs and water gardens.



Pickerel Weed (*Pontederia cordata*)

Pickerel weed is an emergent aquatic plant with showy flowers and edible fruit that attracts butterflies. One should be cautious when using it as it can spread vegetatively downstream, but at much less risk than other invasive plants, like yellow flag iris.

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Water Hyacinth (*Eichhornia crassipes*)



Water hyacinth is a floating aquatic plant with bright green, waxy leaves and attractive, violet flowers that have yellow stripes on the banner petals. It is reputed to be the fastest-growing plant in the world, doubling in size in a week during hot weather. Water hyacinth invasions jam rivers and lakes with tons of floating plant matter that can weigh up to 200 tons per acre. Water hyacinth reproduces vegetatively and sexually. The major means of dispersal, and the most difficult to control, is active transport by people who, ignorant of its impacts, seek to propagate it in other ponds and lakes. Water hyacinth also spreads through fragmentation of established plants and may resprout from rhizomes or germinate from seeds. Dispersal also occurs by water-borne seeds and by seeds that stick to the feet of birds. The seeds can live 15-20 years.



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King of Siam Water Lily (*Nymphaea* 'King of Siam')



The flowers of the 'King of Siam' water lily are a rich purple color, mirroring that of water hyacinth. The flowers stand about 20 cm above the water surface and get a size of 10 – 17 cm across. They open in the morning and close by sundown, during June to September.

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Cape Pondweed (*Aponogeton distachyos*)



Cape pondweed has a similar appearance with leaves that float lightly on the water's surface. In addition, its flowers are abundant when this plant is in bloom and are also fragrant.