



## ***Pennisetum setaceum* (crimson fountain grass)**

*Pennisetum setaceum* (crimson fountain grass) is a coarse tufted perennial grass (family Poaceae). It primarily grows along the southern California coast. Crimson fountain grass is well adapted to fire, and plants can recover to pre-burn density, even increase in density, following a burn. It is cultivated as an ornamental, but the red cultivar is sterile and not considered invasive.

**Cal-IPC Inventory rating:** Moderate – not known on any islands yet, used by Cal Trans for erosion control along highways.

*Pennisetum setaceum*

Photo by Carolyn Martus







***Cynara cardunculus* (artichoke thistle)** *Cynara cardunculus* (artichoke thistle) is a large perennial thistle (family Asteraceae) found below 500 m elevations throughout California, except in the Great Basin and Desert Regions. Artichoke thistle prefers disturbed open sites, including grassland, chaparral, coastal scrub, and riparian areas. This thistle is closely related to cultivated artichokes (*Cynara scolymus*), and the two species hybridize frequently. Artichoke thistle is also sometimes grown as an ornamental plant, and is available commercially. It reproduces by seed and sometimes by re-sprouting from root fragments. When attempting control by mechanical removal, most of the plant's large taproot must be removed to avoid re-sprouting.  
**Cal-IPC Inventory rating:** Moderate – known populations on Catalina, East & West Santa Cruz Islands.

*Cynara cardunculus* Photo courtesy Joseph DiTomaso







### ***Arundo donax* (giant reed)**

*Arundo donax* (giant reed) is a tall perennial grass (family Poaceae) that typically forms dense stands on disturbed sites, sand dunes, riparian areas, and wetlands. It has invaded central California River valleys in San Luis Obispo and Monterey counties, the San Francisco Bay Area, the Sacramento and San Joaquin River valleys and is also increasing in the North Coast region. *Arundo donax* is threatening California's riparian ecosystems by outcompeting native species, such as willows, for water.

**Cal-IPC Inventory rating:** High – very invasive, severe ecological impacts. Known populations on North Coast of Santa Cruz Island.

*Arundo donax* Photo courtesy Joseph DiTomaso







## ***Acacia melanoxyton* (black acacia, blackwood acacia)**

*Acacia melanoxyton* (black acacia) is a tree (family Fabaceae) found along the coast of California, in the North and South Coast Ranges, and the San Francisco Bay region. It favors disturbed areas, and is often found near buildings and agricultural sites. Black acacia, which has spherical cream-colored flowers, was introduced as a landscape ornamental and has escaped cultivation in some areas. Black acacia trees can develop root suckers that grow to become large clonal populations. The trees also reproduce using seeds that are dispersed by water movement and human activities. To control mature trees, most root fragments must be removed to prevent re-sprouting. **Cal-IPC Inventory rating:** Limited – currently being controlled on Santa Cruz Island – very fast growing. Mature leaves have parallel veins.



*Acacia melanoxyton* Photo courtesy Joseph DiTomaso





**Bladderflower** [*Araujia sericifera* Brot.] - Fast-growing **noxious perennial vine** with milky juice. Plants often thrive in citrus groves, competing with trees for water, nutrients, and light. Plants grow extremely fast. Vines can grow over tree canopies within a couple of years and kill individual branches by girdling. Significant infestations reduce fruit yields and interfere with tree maintenance. Introduced from Central South America (Peru) as an ornamental. Known populations currently being controlled on East Santa Cruz Island, NPS.







### ***Delairea odorata* (=Senecio mikanioides)(Cape Ivy, German Ivy)**

*Delairea odorata* (=Senecio mikanioides) (Cape-ivy, German-ivy) is a perennial vine (family Asteraceae) found along the coast of California and in the San Gabriel Mountains. Cape-ivy is especially problematic in coastal riparian areas, though it may also invade inland riparian areas, moist forests, and oak woodlands. Vines are known to form dense mats of vegetation over trees and shrubs, killing plants underneath. It is toxic to animals and fish can be killed when plant materials are soaking in waterways. Stem, rhizome and stolon fragments re-sprout if left in the ground after treatment.

**Cal-IPC Inventory rating:** High – very invasive, severe ecological impacts. Known populations on West Anacapa Island. *Delairea odorata* (=senecio mikanioides) Photo courtesy Joseph DiTomaso







***Cardaria draba* (hoary cress)** *Cardaria draba* ((hoary cress, white top) is a perennial herb (family Brassicaceae) found most commonly in riparian areas and marshes of the central coast of California. It is also found in the southwestern region of the state, the Sacramento Valley, and the Klamath Range, where it is very invasive. This plant quickly colonizes disturbed sites, irrigated agricultural fields, roadsides and ditches. Hoary cress reproduces by seed and vegetatively from its extensive root system. Plants may re-sprout from small root fragments, especially where the soil is moist. Hoary cress also spreads rapidly due to its prolific seed production, but extensive control efforts have decreased the rate of spread in recent years. **Cal-IPC Inventory rating:** Moderate

(Known on Santa Cruz [extensive] and Santa Rosa Islands [isolated, 2 small populations])







**Common chicory, *Cichorium intybus*** - When flowering, chicory has a tough, grooved, and more or less hairy stem, from 30 to 100 centimetres (10 to 40 in) tall. The leaves are stalked, [lanceolate](#) and unlobed. The flower heads are 2 to 4 centimetres (0.79 to 1.6 in) wide, and usually bright blue, rarely white or pink. There are two rows of [involucral bracts](#); the inner are longer and erect, the outer are shorter and spreading. It flowers from July until October. The [achenes](#) have no [pappus](#) (feathery hairs), but do have toothed scales on top. Known populations on Santa Cruz Island, previously restricted to West End, now in Main Ranch. Known isolated population on Santa Rosa

Island, re-emerged 2013 and treated.







### ***Ehrharta calycina* (purple veldtgrass)**

*Ehrharta calycina* (purple veldtgrass) is a perennial grass (family Poaceae) found in disturbed grasslands, roadsides and coastal habitats in California's south and central west regions. Purple veldtgrass is spreading very rapidly in the central coast region, where it invades dunes and shrublands. It was originally imported to California for use as a pasture grass and for erosion control. Purple veldtgrass displaces native vegetation and converts coastal scrub and chaparral communities to grasslands. It resprouts after fires and may increase fire frequency. **Cal-IPC Inventory rating:** High – severe ecological impacts. Known locations: Santa Rosa Island-upper Lobo Canyon trail; Catalina Island – Bullrush Canyon.

*Ehrharta calycina*  
Photo courtesy Joseph DiTomaso





## Hedera spp. (English and Algerian ivy)



*Hedera* spp. (*Hedera helix* = English ivy, *Hedera canariensis* = Algerian ivy) are perennials (family Araliaceae) that grow as evergreen woody vines. Both plants are found throughout California along the coast, as well as in Shasta and Butte Counties. *Hedera* spp. grows vigorously in forests where nothing else seems able to compete and inhibits regeneration of understory plants, including forest wildflowers and new trees and shrubs. **Cal-IPC Inventory rating:** High – very invasive, severe ecological impacts. Known populations Santa Cruz Island – TNC Ranch, Canada del Puerto.

*Hedera* spp.

Photo courtesy Joseph DiTomaso







### ***Euphorbia terracina* (carnation spurge)**

*Euphorbia terracina* (carnation spurge) is a perennial or biennial species (family Euphorbiaceae) found on California's south coast. Carnation spurge forms dense patches in disturbed grasslands, coastal bluffs, dunes, salt marshes, riparian areas and oak woodlands. Although carnation spurge was recently introduced to California and is not yet widely distributed, it has the potential to spread rapidly. Like many other members of the spurge family, it produces toxic sap, and has allelopathic properties that reduce germination of native

plants. **Cal-IPC Inventory rating:** Moderate – Alert. Known population(s) Santa Cruz and San Nicolas Islands.

*Euphorbia terracina*

Photo courtesy Joseph DiTomaso



*Euphorbia terracina*

Photos: J. Dodd & K.R. Thiele

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## ***Olea europaea* (olive)**

*Olea europaea* (olive) is a shrub or tree (family Oleaceae) that can produce hundreds of seeds that are spread by birds and mammals. Though commonly grown as a crop in California, gardeners should use caution planting olives near open space. It has invaded areas in southern California and the Central Valley.

**Cal-IPC Inventory rating:** Limited. Known populations across Santa Cruz Island, originating from Historic Grove at Smugglers Harbor.

*Olea europaea*

Photo courtesy Joseph DiTomaso







**Foeniculum vulgare (fennel)** *Foeniculum vulgare* (fennel) is an erect perennial herb (family Apiaceae). Although the plant is very common throughout the state, dense local populations have been reported from Santa Cruz Island, in fields around the San Francisco Bay region, Palos Verdes Peninsula (Los Angeles County), and Camp Pendleton (San Diego County). It can drastically alter the composition and structure of many plant communities, including grasslands, coastal scrub, riparian, and wetland communities. It is still unclear whether culinary varieties of fennel are invasive. **Cal-IPC Inventory rating:** High – severe ecological impacts. Currently being controlled on Santa Cruz, Catalina, and minimally on Santa Rosa Islands. Please report new infestations!

Foeniculum vulgare  
Photo courtesy Ken Owen







**Genista monspessulana (French broom)** *Genista monspessulana* (French broom) is a perennial shrub (family Fabaceae) found in the Coast Ranges, Sierra Nevada foothills, Transverse Ranges, Channel Islands and San Francisco Bay area. French broom was introduced as a landscape ornamental, along with Scotch and Spanish broom. French broom is an aggressive invader, forming dense stands that exclude native plants and wildlife. Broom is unpalatable to most livestock except goats, so it decreases rangeland value while increasing fire hazards. These leguminous plants produce copious amounts of seed, and may re-sprout from the root crown if cut or grazed. There are small hairs on the underside of the leaves and along the young stems. The flowers are very fragrant.

**Cal-IPC Inventory rating:** High – very invasive, severe ecological impacts. Known populations being controlled on Santa Cruz Island, Laguna Canyon.

*Genista monspessulana*  
Photo courtesy Joseph DiTomaso







## ***Phalaris aquatica* (hardinggrass)**

*Phalaris aquatica* (hardinggrass) is a perennial grass (family Poaceae) found throughout California. Hardinggrass is widespread in California because it has been used as a forage species and for revegetating after fires. It is most common in coastal valley and foothill grasslands from Oregon to the Mexican border. It is also found in the Sacramento and San Joaquin valleys at elevations below 4,000 feet (1,200 m). Hardinggrass is typically found along roadsides that are seldom mowed, allowing this tall, erect, leafy plant to dominate neighboring vegetation. In wildland habitats, hardinggrass can out-compete and displace native plant species. Tall stands of its dry foliage can present a fire hazard in summer.

**Cal-IPC Inventory rating:** Moderate – infestations occur on Santa Cruz (treated on West side) and Santa Catalina Islands (being treated). *Phalaris aquatica* Photo courtesy Joseph DiTomaso







### ***Helichrysum petiolare* (licorice plant)**

*Helichrysum petiolare* (licorice plant) is a shrub (family Asteraceae) found in forested areas and coastal scrub on the central coast, including the southern side of Mt. Tamalpais and the Monterey Peninsula. Licorice plant is a landscape ornamental that has escaped cultivation, invading undisturbed habitats. It reproduces by seed and vegetatively from stem fragments. The extent of its impacts, are unknown, but it can grow to form dense stands that crowd out native plants. Licorice plant has been growing outside of cultivation for several decades, but it is

unknown how rapidly these naturalized populations spread. **Cal-IPC Inventory rating:** Limited – severe ecological impacts on South side of Santa Cruz Island, also in 2 canyons on North side (2014). *Photo courtesy Joseph DiTomaso*



Figure 1-This woman is 5'9" tall, standing in the bottom of the creek bed at Punta Arena, South side of Santa Cruz Island, surrounded by Helichrysum.





***Rubus armeniacus* (Himalayan blackberry)** *Rubus armeniacus* (Himalayan blackberry), formerly known as *Rubus discolor*, is a sprawling, essentially evergreen, glandless, robust shrub (family Rosaceae). *Rubus armeniacus* occurs in California in the coast ranges, Central Valley, and Sierra Nevada. This weed is a strong competitor. It rapidly displaces native plant species and thickets to produce such a dense canopy that the lack of light severely limits the growth of understory plants. **Cal-IPC Inventory rating:** High – very invasive, severe ecological impacts. *Rubus armeniacus* (= *R. discolor*) Known populations being controlled on Santa Cruz Island. *Photo courtesy Joseph DiTomaso*



California Blackberry

Himalayan Blackberry





## ***Carduus pycnocephalus* (Italian thistle)**

*Carduus pycnocephalus* (Italian thistle) is a winter annual forb (family Asteraceae) widely distributed in disturbed open sites, roadsides, pastures, annual grasslands, and waste areas in much of California.

**Cal-IPC Inventory rating:** Moderate. Known populations being controlled on Santa Cruz Island.

*Carduus pycnocephalus*

*Photo courtesy Joseph DiTomaso*





## ***Cortaderia selloana* (pampasgrass)**



*Cortaderia selloana* (pampasgrass) is a large perennial grass (family Poaceae) found along the coast of California, and in the Coast Ranges, Central Valley, Western Transverse Ranges, and Mojave Desert. Pampasgrass favors dunes, bluffs, coastal shrublands and marshes, inland riparian areas, and disturbed areas. It was introduced as an ornamental plant and for erosion control. Each plume produces up to 100,000 seeds that are widely dispersed by wind and develop without fertilization. Pampasgrass quickly colonizes bare ground, but establishment is generally poor where the seedlings must compete with other grasses or sedges.

**Cal-IPC Inventory rating:** High – very invasive, severe ecological impacts.

*Cortaderia selloana*

Photo courtesy Joseph DiTomaso



Pampas Grass grows the best in sun filled places with somewhat damp ground. It also grows well along a small stream bank or in shallow moist ravines. An amazing feature about Pampas Grass is that it can live in almost any habitat. This amazing grass can grow in hard, rocky areas, flooded areas, dry and damp ground plus its normal habitat. The leaves die during frosts in northern climates, but grow back in the spring. The habitat it flourishes in is

a damp, warm environment like that of the South American Pampas. Pampas Grass can adapt to most places and can adapt fairly quickly. This quick adaptation is the product of a deep root system that digs down and finds water so it can survive in the driest areas.



Figure 2-Pampas treatment in Chinese Harbor, North side Santa Cruz Island.



## ***Brassica tournefortii* (Saharan mustard or African mustard)**

*Brassica tournefortii* (Saharan mustard or African mustard) is a winter annual (family Brassicaceae) found in deserts, desert dunes, and coastal scrub, including the San Joaquin Valley, Sonoran and Mojave Deserts, and southwestern region of California. Saharan mustard readily invades newly burned areas, and is known to increase fire frequency and fuel load. Increased fire frequency can cause scrub habitats to convert to grasslands because the native shrubs are not adapted to recurrent fires. The high biomass of Saharan mustard, along with frequent fires, may deplete soils of important nutrients, making native habitat recovery more difficult.

**Cal-IPC Inventory rating:** High. Populations being controlled on San Nicolas Island. New population at Christie Ranch, Santa Cruz Island (2014).







## ***Schinus molle* (Peruvian peppertree)**

*Schinus molle* (Peruvian peppertree) is an aromatic, evergreen shrub or tree (family Anacardiaceae) found in central and southern California. Along with Brazilian peppertree (*S. terebinthifolius*), Peruvian peppertree has escaped cultivation to become invasive. **Cal-IPC Inventory rating:** Limited – currently being controlled on Catalina and Santa Cruz Islands.

*Schinus molle*

Photo courtesy Joseph DiTomaso





## **Solanum elaeagnifolium**

- Silver-leaf Nightshade (*Solanum elaeagnifolium*) is an herb up to 60 cm tall. Its roots are deep (up to 2 m) and while the upper parts of the plant may die off each year, the roots remain viable and produce new plants. Individual plants are variable with respect to prickliness, leaf margin, hair color and flower color but the stems and leaves are usually densely covered with whitish hairs giving it the silvery-white appearance of the common name. There are also populations which have a rusty green appearance, but these are less common. Stems usually have slender, 2-5 mm long, red or yellow spines which also sometimes occur on the veins of the leaves. The oblong leaves with **wavy margins** are 2-10 cm long and 1-3 cm wide on a petiole (stalk) up to 1 cm long. Flowers are 2-4 cm diameter and are blue, violet, or sometimes white, on a stalk up to 1 cm long; they are a typical star-shaped "solanum" flower of 5 fused petals and 5 conspicuous yellow stamens, the latter 7-8 mm long. The fruits are globular, green with darker green markings when immature, ripening to yellow or brownish and up to 15 mm diameter. Seeds are flat, brown and up to 4 mm long. Noxious Weed List B: California. Drought stress makes the leaves more silvery. **Currently being treated on Santa Cruz Island – 3 populations.**







***Spartium junceum* (Spanish broom)** *Spartium junceum* (Spanish broom) is a deciduous shrub (family Fabaceae) found throughout the western part of California. Spanish broom was introduced as a landscape ornamental and was planted along highways to prevent soil erosion. It may grow into monospecific stands, excluding native species. Broom is unpalatable to most livestock except goats, so it decreases rangeland value, while increasing fire hazards. These leguminous plants produce copious amounts of seed, and may re-sprout from the root crown if cut or grazed. Flowers are very aromatic.

**Cal-IPC Inventory rating:** High. Known population currently being controlled, East End of Santa Cruz Island, NPS.

*Spartium junceum*  
Photo courtesy Joseph DiTomaso







***Tamarix ramosissima* (saltcedar, tamarisk)** *Tamarix ramosissima* (saltcedar, tamarisk) is a shrub or a tree (family Tamaricaceae) and can be found along streams and lake shores, throughout California. *Tamarix ramosissima* is associated with dramatic changes in geomorphology, groundwater availability, soil chemistry, fire frequency, plant community composition, and native wildlife diversity. It also hybridizes with *Tamarix gallica* and *Tamarix chinensis*.  
**Cal-IPC Inventory rating:** High – very invasive, severe ecological impacts. Currently being controlled on Catalina and Santa Cruz Islands.  
*Tamarix ramosissima*  
Photo courtesy Joseph DiTomaso

**Invasive species -** *Tamarix ramosissima* has naturalized and become a major invasive plant species in parts of the world, such as in the Southwestern United States and Desert Region of California, consuming large amounts of groundwater in riparian and oases habitats due to the density of its stands. The balance and strength of the native flora and fauna is being restored by tamarisk eradication projects using a combination of methods,

including manual stem cutting followed by the application of herbicide to the stump, and burning stands of tamarisk, with subsequent low-volume herbicide application to re-sprouts.







**Nicotiana glauca (tree tobacco)** *Nicotiana glauca* (tree tobacco) is a tree/shrub (family Solanaceae), which stands 10-20 feet tall and is short-lived. Tree tobacco was introduced to California about 100 years ago and is found growing up to 5,000 feet in disturbed soils, vacant lots, along roadsides, streamsides, and other riparian areas. **Cal-IPC Inventory rating:** Moderate - known populations on Catalina and East Santa Cruz Islands. *Nicotiana glauca*  
*Photo courtesy Joseph DiTomaso*







***Vinca major* (big periwinkle)** *Vinca major* (big periwinkle) is a spreading perennial vine or ground cover (family Apocynaceae) with dark green stems that contain milky latex. In California it is rapidly spreading in most coastal counties, foothill woodlands, the Central Valley, and even desert areas. Big periwinkle has escaped from garden plantings, and lowers species diversity and disrupts native plant communities. Riparian zones are particularly sensitive. Fragments of periwinkle vines can break, wash downstream, and start new invasions.

**Cal-IPC Inventory rating:** Moderate. Known populations currently being controlled on Santa Cruz Island.

*Vinca major* Photo courtesy Joseph DiTomaso







### ***Centaurea solstitialis* (yellow starthistle)**

*Centaurea solstitialis* (yellow starthistle) is a bushy winter annual (family Asteraceae) that invades 12 million acres in California. Yellow starthistle inhabits open hills, grasslands, open woodlands, fields, roadsides, and rangelands, and it is considered one of the most serious rangeland weeds in the state. It propagates rapidly by seed, and a large plant can produce nearly 75,000 seeds. Stems are bluish green in color and have "wings" running the length of the stems. Not to be confused with Tocolote, which has much smaller spines and no wings.

**Cal-IPC Inventory rating:** High – very invasive, severe ecological impact. Known populations currently being controlled on Catalina and Santa Cruz Islands; previously known on Santa Rosa.

*Yellow starthistle flowerheads*  
Photo courtesy Bob Case



Figure 3 – Above, Tocolote (*C. melitensis*), native.

