

## **Invasive Plants: Common Sightings**

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### **Why should I think about avoiding invasive plants in my gardens? And why is controlling them essential?**

We all have our thoughts and opinions about our garden design and plant selection. Some of us like a more natural landscape, especially those plants that thrive with minimum care. However, as many of you are aware, some of the robust plants used or that show up as volunteers in residential landscapes, are categorized as invasive.

According to the UCANR IPM site (<https://ipm.ucanr.edu/PMG/PESTNOTES/pn74139.html>), invasive plants can cause significant economic and ecological damage in natural areas by causing ecological changes that impact both plant and animal communities. This is often due to landscape transformations that reduce the adaptability and competitiveness of more desired native species. These transformations are caused by the excessive use of resources by invasive plants (e.g. changes in the soil fertility of the ecosystem; promoting soil erosion by increasing water runoff down slopes, etc.). The following primary resources were used along with others (i.e. IPM/UCANR, UC Davis Weed Report, etc.)

1. Cal-IPC/California Invasive Plant Council. This non-profit organization offers an inventory of plants, <https://www.cal-ipc.org/plants/inventory/>, which threaten our natural areas. This includes plants that are currently causing damage, as well as “Watch” plants that are a high risk for becoming invasive in the future. According to the UCANR IPM site, the Cal-IPC list “does not have legal standing but is based upon the best available published literature and knowledge of invasive plant experts from California.”

2. San Diego County Invasive Ornamental Plant Guide from the San Diego Chapter of the American Society of Landscape Architects and the California Native Plant Society. The two categories of risk are moderately invasive and most invasive.

Curious about the presence of invasive plants in my general locale, I did briefly walk in a small neighborhood area to see if there were any representative invasive plants from the Cal-IPC’s inventory list. This list enabled the quick identification of more than 10 invasive plants in residential yards near the San Elijo Lagoon Ecological Reserve (<https://www.sdparcs.org/content/sdparcs/en/park-pages/SanElijo.html>) in North Coastal San Diego County. Attachment “A” provides a summary of five invasive plants identified and their Cal-IPC risk category and definitions used as an illustration of their ability to thrive locally:

Cal-IPC Rating Category	Definition	Plants Identified/ Common Name
<b>High</b>	These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.	<ol style="list-style-type: none"> <li>1. Highway iceplant;</li> <li>2. Pampasgrass /Jubatagrass; and</li> <li>3. Alegerian/English ivies</li> </ol>
<b>Moderate</b>	These species have substantial and apparent-but generally not severe-ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.	<ol style="list-style-type: none"> <li>4. Crimson fountaingrass</li> </ol>
<b>Watch</b>	These species have been assessed as posing a high risk of becoming invasive in the future in California.	<ol style="list-style-type: none"> <li>5. Asparagus fern</li> </ol>

The descriptions, photos, problem identification, and control methods for these plants are listed below in Attachment “A” for your viewing pleasure and removal from your garden space (if you are so inclined).

**Hopefully, by reading about this small sample of invasive plants, ) you will gain more insight to why we should think about avoiding these plants in our gardens and why controlling them is essential.** Trends that you might note about these plants include: easy regeneration into new plants and/or colonization of new areas; difficult to eradicate once established; and outside introduction, usually as ornamental plants. Cal-IPC’s guide (<https://www.cal-ipc.org/solutions/prevention/landscaping/dpp/>) offers landscape alternatives to some of the different invasive plants highlighted with a recommended

planting guide. In short, avoid the invasive plants as more environmentally friendly alternatives are available! Check out the aforementioned Cal-IPC guide to help you replace any invasive plants that may be in your yard or to choose new plants for your garden that are non-invasive.

## Attachment “A”

**1. HIGHWAY ICEPLANT.** The botanical name is *Carpobrotus edulis*, plus others such as *Carpobrotus chilensis* (sea fig or iceplant) which is less aggressive, (family Aizoaceae).



**Description/Issue:** This is a familiar plant commonly seen on San Diego freeways, community areas, industrial areas, and private yards (see photo above). Highway iceplant is a succulent shrub that is robust, low-growing, and has fleshy leaves. It is native to coastal South Africa and was introduced as an ornamental to California and used to stabilize soil along roadsides and railroads. CalTrans planted thousands of acres of it in the 20<sup>th</sup> century. Now it inhabits coastal scrub, grasslands, chaparrals, bluffs, dunes and beaches where it creates dense mats that increase soil organic matter over time, allowing new non-native species to invade. According to *San Diego County Invasive Ornamental Plant Guide*, highway iceplant can suppress the growth of both native seedlings and mature native shrubs. It propagates by seed and vegetatively. Even small stem fragments can regenerate into a new plant, making control difficult. Reference:

<https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=57084#:~:text=The%20highway%20iceplant%2C%20also%20known,late%20spring%20and%20early%20summer>

**Control/Removal:** Highway iceplant can be pulled out by hand as long as the entire plant is removed. Generally, they are easy to remove due to their shallow root system. Because of the high-water content of the shoot tissues, removed plants are heavier than other plants for disposal. The *University of California’s Weed Research and Information Center’s Weed Report* (excerpt from the book,

Weed Control in Natural Areas in the Western United States) section on *Carpobrotus edulis*. provides guidance on herbicide use for chemical control for large areas.

**2.PAMPASGRASS/JUBATAGRASS.** The botanical name is *Cortaderia selloana* (common names are pampasgrass or white pampasgrass) and *Cortaderia jubata* (common names are jubatagrass or pink pampasgrass), (family Poaceae).



**Description:** Pampasgrass and jubatagrass are large perennial grasses found locally. According to [p](#)-from UC Davis, Weed Research & Information Center, they are very similar in appearance and have been difficult to tell apart until fairly recently where botanists have made distinctions. Both are native to South America and are believed to be introduced by the horticultural trade. The brochure highlights that “jubatagrass” is the more widespread and aggressive species. It is often called pampasgrass because of the difficulty in distinguishing the two species. These *Cortaderia* species are large with long basal leaves and tall, showy plumes that can be 1 to 3 feet long. They grow dense bunches of leaves 3 to 13 feet tall. The leaves have serrated margins. Pampagrass plumes are generally larger than the jubatagrass, and have a more erect appearance (see photo above). Jubatagrass plumes typically have a purplish tinge. Both plants reproduce by seeds and each plume produces up to 100,000 seeds that are widely dispersed by wind (up to 20 miles). Despite the similar appearance, their reproductive cycle is different (i.e. all jubatagrass are females and develop seed without fertilization versus Pampasgrass which are male and female and require pollination).

**Problem:** Once established, both species create large infestations of plants which compete with native vegetation. They threaten California's coastal ecosystems by crowding out native species in dunes, bluffs, coastal shrublands and marshes, inland riparian areas, and disturbed areas. Both pampasgrass and jubatagrass can

quickly colonize bare ground. According to the San Diego County Invasive Ornamental Plant Guide, the plants are capable of surviving about 15 years and can create fire hazards with the excessive build-up of dry leaves, leaf bases, and flowering stalks. The saw-toothed leaves can cause injury to humans and animals.

**Control/Removal:** The *University of California's Weed Research and Information Center's Weed Report* (excerpt from the book, [Weed Control in Natural Areas in the Western United States](#)) section on pampasgrass and jubatagrass provides instruction for removal and control. It is suggested that hand pulling seedlings is preventive and the easiest method. For more mature plants, the use of a shovel or equivalent tool is the most effective method for physical removal (i.e. digging out the entire plant, including the crown and root system). Cutting the plumes or tussocks beforehand is also a consideration to avoid the spread. For large plants, a chain saw or weedeater may be needed to expose the plant base and to allow better access to the crown. Also, herbicides may be used for chemical control and is addressed in more detail in the aforementioned report.

**3. ALGERIAN IVY and other *Hedera species***, such as *H. helix* or English Ivy. The botanical name is *Hedera canariensis* and the common name is Algerian ivy. (Family Araliaceae).



**Description:** Ivy is a fast-growing evergreen vine. The various species of ivy are difficult to distinguish, and they sometimes hybridize according to the California Department of Food and Agriculture site (<https://blogs.cdfa.ca.gov/Section3162/?p=3372>). Leaves are thick and leathery and palmately shaped. The stems are reddish, partly decorated with stellate hairs or scales. The leaves come in two forms: juvenile and mature. As with other *Hedera species*, Algerian ivy is extremely fast-growing and can grow 2.5 m long per year, depending on the conditions. Older plants develop thick branches and produce clusters of greenish flowers and black berries. These plants are characterized by long viny stems reaching up to 30 m in length, with aerial, clinging small roots. It vigorously climbs on other vegetation and on structures.

The most common species in cultivation on the West Coast are English ivy (*H. helix*), Irish ivy (*H. hibernica*) and Algerian ivy (*H. canariensis*). They can be distinguished by the types of hairs on the underside of the leaves, as well as by their chromosome number. Nevertheless, because of confusion between the species, all three will be treated together given their tendency to become invasive. These ivies reproduce both from mature seeds as well as from root-like stems and sprouting fragments. From the 1950s through 1970s, ivy (i.e. Algerian ivy and other closely related *Hedera* species) was hugely popular as a landscape plant. It was introduced to the United State as a garden ornamental and has more than 400 cultivars. Algerian ivy is native to the Canary Islands and the Mediterranean coast of North Africa and English ivy is native to Europe.

**Problem:** These ivies are difficult to control and, in many cases, the resprouting shoots will outnumber the original plants. Algerian and English ivies have escaped cultivation to become highly invasive in natural areas. They grow vigorously where nothing else seems able to compete. They have replaced native vegetation such as trees, shrubs and herbaceous plants. Ivy eliminates the ability of other plants to reproduce by outcompeting their seedlings for light and can smother existing shrubs and trees by climbing and enshrouding them. These severe consequences in riparian corridors and woodland areas have earned Algerian and English ivies a “high” statewide negative ecological impact rating in the [California Invasive Plant Council](#) Inventory. The IPM site offers more information on these invasive plants:

<https://ipm.ucanr.edu/PMG/PESTNOTES/pn74139.html> .

When ivies take over, not only is native plant biodiversity reduced, but many insect and animal populations suffer. The ground covers these ivies produce reduce habitat quality for ground-feeding birds and ground-dwelling bees have more difficulty finding suitable substrates for their homes. Ivy does provide excellent cover for small rodents, especially rats in urban areas which can have further detrimental effects on nesting birds as well as cause crop and garden issues, such as contamination with droppings and structural damage to property.

Also, according to ASPCA, the ivy leaves and berries are toxic to cats, dogs, and horses, which can cause vomiting, abdominal pain, hypersalivation, and diarrhea. Leaves may also cause a rash on some individuals as some people may be sensitive to the sap.

**Control/Removal:** Ivy will likely take consistent efforts to eradicate. It can spread by rooting from growing stems, seeds and even from cuttings left on the ground. Digging out the plants can be effective if the roots, stems, and runners are removed. Gloves

should be worn when removing ivy. Typically, it will be necessary to come back regularly to get rid of resprouts from roots that were missed in the initial removal(s).

While the ivy is young, the roots and runners can be pulled or dug out of the ground and removed from around the base of trees and shrubs. The best time to do this is after rain, when the ground is moist. The IPM site highlights that removing these ivies (<https://ipm.ucanr.edu/PMG/GARDEN/PLANTS/ivy.html>) with a shovel can be effective if roots and stems are dug out while the soil is moist and the roots are easily removed. Be aware that the ivy plants can re-sprout and establish themselves from stem fragments, so place all pieces of the removed plant off the ground, in a place where they can dry out.

Cutting or mowing English or Algerian ivy followed by an application of herbicide to the damaged leaves and cut stem tips can also provide effective control. Should this option be chosen, the best time to apply herbicides to ivy plants is when the plant is actively growing and before it flowers, in late summer or early fall. More details on herbicide use are provided at the IPM site <https://ipm.ucanr.edu/PMG/GARDEN/PLANTS/ivy.html>

**4. CRIMSON FOUNTAIN GRASS.** The botanical name is *Pennisetum setaceum* or *Pennisetum ruppelii*; other common names are purple fountain grass or tender fountain grass. (Family Poaceae).



<https://ipm.ucanr.edu/PMG/PESTNOTES/pn7441.html>

**Description:** The crimson fountain grass is a coarse tufted perennial grass. It primarily grows along the southern California coast. Crimson fountain grass is a perennial, bunch grass that grows from 3-4 feet tall. Its leaves are narrow, flat, arching, up to 2 feet and are long and purplish in color. Flowering occurs in summer through fall, when off-white/pinkish plumes develop about 1 foot above the leaves.

Individual plants may live up to 20 years. Crimson fountaingrass is native to Africa and was introduced as an ornamental. It is a tough, vigorous plant that will tolerate adverse conditions of heat and drought. Crimson fountaingrass does not appear to suffer from any pests or diseases. It is well adapted to fire, as the plants can recover to pre-burn density, following a burn.

**Problem:** The downside is that crimson fountaingrass has no natural enemies and readily out-competes other plants. When planted in a yard, the seedlings will grow in bare soil and also grow vigorously in the gaps between sections of concrete and bedrock of natural slopes. It shows up everywhere: grasslands, deserts, canyons, and disturbed areas along roadsides, especially adjacent to urban/suburban centers. Fountain grass can reproduce by either fertilized or unfertilized seeds according to Cal-IPC, <https://www.cal-ipc.org/resources/library/publications/ipcw/report66/>.

The seeds are carried long distances in the wind and can spread to other yards and nearby natural areas. Seeds may remain viable in the soil for at least seven years according to Cal-IPC. As a result, fountain grass is difficult to eradicate given the long-lived seeds, so continued monitoring is essential. In fire hazard areas, it is especially dangerous, as it dries out early in the summer and becomes extremely flammable.

**Control/Removal:** **Control/Removal:** Crimson fountaingrass will likely take consistent efforts to eradicate. The *University of California's Weed Research and Information Center's Weed Report* (excerpt from the book, Weed Control in Natural Areas in the Western United States) section on crimson fountaingrass provides instruction for removal and control. It is suggested that hand removal is preventive and the easiest method. For more mature plants, the use of a shovel or equivalent tool is the most effective method for physical removal (i.e. uprooting the entire plant). It is recommended to cut the inflorescences beforehand and bag them to avoid the spread of seeds. Removal may need to be repeated several times a year if seedlings continue to emerge. Also, herbicides may be used for chemical control and is addressed in more detail in the aforementioned report.

**5.ASPARAGUS FERN.** The botanical name is *Asparagus aethiopicus* (Synonyms are *Asparagus sprengeri*, *Asparagus densiflorus*), plus others such as *Asparagus setaceus*). Common names include: Asparagus fern, Sprenger's Asparagus, and foxtail fern. (Family Asparagaceae or Liliaceae)



**Description:** The asparagus fern is a fast-growing, evergreen plant with fern-like leaves and arching stems. Interestingly, it is not a fern and is originally from South Africa. It can be distinguished by its wiry stems with many, alternately branching branchlets, feathery appearance, and small needle-like, whorled leaves. After flowering, small, round berries appear that start out light green and ripen to a red color; toxic to humans but are eaten by birds and rodents. See above for photo of the plant with berries. The asparagus fern is shown as a common weed in the IPM site, <https://ipm.ucanr.edu/PMG/PESTNOTES/pn7441.html>.

**Problem:** While some people may believe that there are some aesthetics to the asparagus fern, it is difficult to control. It forms dense thickets, ensnares other plants with its vining habit and thorns, and displaces native vegetation. According to the *San Diego Ornamental Invasive Plant Guide*, *Asparagus setaceus* is categorized in the *Checklist of Vascular Plants of San Diego County* as “A taxon that is non-native to the county, but has become naturalized, meaning that the taxon is persisting or spreading in natural, non-cultivated areas.” Specifically, “many species of the *Asparagus* genus are known to be invasive locally because of its ability to spread easily from landscaped areas into natural areas or open spaces.” The recommendation is to not use it for landscaping, particularly in properties adjacent to natural areas as it invades riparian/wetland as well as coastal habitats. The asparagus genus is likely to spread via creeping rhizomes (root-like structures) and seeds.

It is important to highlight that the asparagus fern is toxic to dogs and cats, as it contains sapogenins which are highly irritating to the skin and mucous membranes and gastrointestinal tract. It can cause stomach upset including vomiting, abdominal pain, or diarrhea. (<https://www.aspc.org/pet-care/animal-poison-control/toxic-and-non-toxic-plants/asparagus-fern>)

**Control/Removal:** The most effective method for physical removal is to dig out the entire plant, including the root system and tubers. It is critical to remove all parts of the root system as any pieces of an asparagus fern left in the soil will regrow. Be mindful that the leaves contain spines, so it is recommended to use gloves for protection. It is best to remove plants when the soil is moist, prior to flowering or fruiting, and when the plants have foliage. If there are any berries, make sure to remove them and dispose of them properly to prevent further growth. Herbicides can be used but be cautious as they can harm other plants if not applied carefully.