

Artichoke Thistle

Cynara cardunculus

This plant is an aggressive perennial weed native to the Mediterranean. It is a close relative of both the cultivated artichoke and the cardoon, which is grown as an ornamental flower. Unlike its relatives, artichoke thistle produces inch-long spines on the leaves and stiff, pointed bracts on the flower heads.



Marc Lea, SLO County Department of Agriculture



Mark Souder, SLO County Farm Bureau

Artichoke thistle invades rangelands and grasslands, especially in coastal regions such as SLO County. Infestations can become extremely dense,

forming impenetrable barriers and excluding nearly all other plant life. The deep, perennial taproot enables the plant to out-compete most natives for water and also makes removal nearly impossible, as the plant can resprout from even a small portion of the root. Well-timed herbicide applications have proven effective in controlling this pest.



Mark Souder, SLO County Farm Bureau



Mark Souder, SLO County Farm Bureau

Hoary Cress

Cardaria species

There are three species of this invasive plant found within San Luis Obispo County, all exhibiting similar characteristics and appearance. Plants emerge in early spring, and the characteristic white blooms can be seen from April through June. These plants reproduce both by seed and a creeping, perennial root system, making control efforts difficult. Since new plants can generate from even small root fragments, cultivation can facilitate the spread of hoary cress.



Mark Souder, SLO County Farm Bureau

Hoary cress invades cropland and natural areas, especially areas with moist conditions. It is a major problem in the Chorro Creek watershed around Morro Bay, where it has invaded the fields, roadsides, and sensitive estuary habitat.



Mark Souder, SLO County Farm Bureau

Purple Starthistle

Centaurea calcitrapa

This plant is an invasive biennial (two-year life cycle) native to southern Europe that produces stout, sharp spines. In California, purple starthistle invades rangelands and open grasslands, degrading the forage quality and hindering access for both humans and livestock.



Mark Souder, SLO County Farm Bureau

Although purple starthistle is not as widespread throughout California as its close relative, yellow starthistle, it has become an increasing problem in the coastal areas of the state. In San Luis Obispo County, this plant is a common invader in the areas west of the Santa Lucia mountains, and just over the Cuesta Grade near Santa Margarita.



Mark Souder, SLO County Farm Bureau

Woolly Distaff Thistle

Carthamus lanatus

This weed, native to the Mediterranean, is an aggressive rangeland pest where it displaces forage plants and makes access difficult. Distaff thistle has spiny flower heads, and the leaves have long, stout marginal spines that make this plant a painful invader. Distaff thistle is a winter annual, germinating in fall but not maturing to produce seed until the following summer. It reproduces only by seed, which can be spread by wind, animals and vehicles, creating new infestations.

Distaff thistle is a common problem in the coastal canyons of San Luis Obispo County. Both cultural and chemical methods have provided good control of this plant.



Mark Souder, SLO County Farm Bureau



Mark Souder, SLO County Farm Bureau



Cathy Darling, SLO County Department of Agriculture

Pampasgrass/Jubatagrass

Cortaderia selloana/Cortaderia jubata

These two closely related plants were introduced from South America for use as ornamentals, and were also planted for erosion control. These grasses have escaped cultivation and infested thousands of acres along the California coast, crowding out native species.

Both grasses have showy, characteristic flower plumes,

sharp leaf blades, and can form large clumps over five feet tall. Although both grasses occur locally and are often difficult to tell apart, jubatagrass is

the bigger problem in this region. A large jubatagrass plant, which does not require pollination to form viable seed, is capable of producing a million tiny seed that are easily dispersed by wind. Jubatagrass is a perennial and individual plants can live 10 years or more. These traits make jubatagrass a dangerous invader, and a dire threat to coastal habitats.



Mark Souder, SLO County Farm Bureau

Jubatagrass



Mark Souder, SLO County Farm Bureau

Pampasgrass



Mark Souder, SLO County Farm Bureau

Cape Ivy

Delairea odorata (syn. *Senecio mikanioides*)

Formerly known as German Ivy, this South African plant invades riparian areas along the Pacific Coast. It is a fast growing vine, with long trailing stems that easily stretch over 20 feet from the rooted base, and smother other plant life. Although cape ivy is not known to reproduce by seed in this area, it can resprout from any portion of the plant, including each node on the stem, which enables the plant to spread rapidly and makes control efforts difficult.

Research is currently being conducted on a possible biological control agent for cape ivy control. A search for natural enemies is being conducted in its South African homeland, where numerous insects feed on the vine and keep population levels very low.



Mark Souder, SLO County Farm Bureau

Scotch Broom/French Broom

Cytisus scoparius/Genista monspessulana

Brooms were originally introduced into North America from the Mediterranean region as ornamental shrubs. Since then, the attractive landscape plants have escaped cultivation to become a destructive weed pest all along the Pacific Coast. Brooms easily colonize open and disturbed areas, but can also invade undisturbed grassland and forest habitats.

The flowers and seeds of brooms contain compounds that can be toxic to humans and cattle, and the foliage is unpalatable and avoided by livestock. In forests, these large, aggressive shrubs out-compete native plants and can form dense thickets, causing fire hazards due to heavy fuel loads.



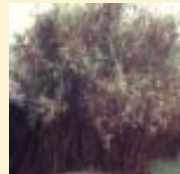
Mark Souder, SLO County Farm Bureau

Arundo/Giant Reed

Arundo donax

This perennial grass species can reach heights well over 25 feet, and has infested thousands of acres throughout the state, especially in southern California. Although it can survive in fairly dry conditions, it is primarily a concern in stream habitats. Arundo spreads vegetatively through its underground rhizome (root) system. During flood events, plant fragments are washed downstream, and can take root, establishing new infestations.

Arundo has overtaken many of California's river systems and flood control channels, forming enormous monocultures with virtually no food or habitat value for native wildlife. Arundo also decreases water availability, and increases the likelihood of fire and flooding. Arundo is established in many San Luis Obispo County waterways, but the problem is not yet as severe as in other parts of the state.



Dr. Scott U. Steinaus, Calif Poly, SLO

For additional information, visit:
<http://wric.ucdavis.edu/information/pampasgrass.html>

For Additional Information, Please Contact:

San Luis Obispo County Department
of Agriculture (805) 781-5910

San Luis Obispo County Farm Advisor,
U.C. Cooperative Extension (805) 237-3101

San Luis Obispo County Farm Bureau (805) 543-3654

INFORMATION AVAILABLE ON THE INTERNET:

California Dept. of Food & Agriculture,
"Encycloweed" - <http://pi.cdffa.ca.gov/weedinfo/>

California Exotic Pest Plant Council -
<http://www.caleppc.org/>

UC Weed Research & Information Center -
<http://wric.ucdavis.edu/>

The Nature Conservancy, "Weeds on the Web" -
<http://tncweeds.ucdavis.edu/>

What is a Noxious Weed?

A "weed" can mean different things to different people. A weed can simply be a plant out of place, like the plants growing up through the cracks in your sidewalk or the dandelions sprouting out of your lawn. However, there is a much more devastating type of weed than the nuisance plants that we all encounter around our homes.

The weeds described in this brochure, known as "noxious" or "invasive", are some of the worst weed invaders found in San Luis Obispo County, and they cause serious problems for local agriculture and the environment.

These plants were introduced into our area from Europe and other areas across the globe, and have since escaped into our local cropland, rangeland, and wildland areas. These weeds disrupt agricultural activities in vineyards, orchards, and row crops. They decrease the productivity of pastures and rangeland causing a reduction in usable land. They cause untold ecological damage by crowding out native plants and degrading wildlife habitat.

The worst of these plant invaders can actually alter the natural processes of the land, making an area more prone to fire or more susceptible to flooding and erosion.

What Can You Do to Help?

Educate yourself and help educate your friends and neighbors. Simply recognizing the problem is an important first step.

Don't contribute to the problem. Most people are not aware that they could actually create or facilitate a new weed infestation. Noxious weeds can be spread into uninfested areas through contaminated hay, seeds, or nursery stock. Weed seeds can also become lodged into vehicle tires, equipment, and even boots and clothing, and then spread into new areas.

There are also certain plants that are known to be invasive that are still sold in nurseries. Ask your nursery if the landscape plants you are purchasing could escape from your yard and create a problem for the agricultural industry or the environment.

Prevention Tips

- * Always check your vehicle for plants or seeds when leaving an infested site.
- * Be aware when moving soil, compost, or equipment and remember that some seeds can be viable for 10 years or more.
- * Do not introduce unknown plants or seeds into the county.
- * Do not plant ornamental or nursery plants that could escape your property and become invasive.
- * Closely monitor areas of bare ground and other disturbed spots on your property, as this is often where noxious weeds establish their foothold.
- * Report noxious weed locations and sightings to the SLO County Department of Agriculture.

What if You Have a Weed Problem on Your Own Property?

Learn about your particular weed species. Be able to identify the weed in its different life stages and determine the best method and the best time of year to control it. For example, if you have a yellow starthistle infestation, it is critical to control the plants before seeds have been produced. Otherwise, your efforts will be ineffective and may even make the problem worse.

Control is an annual task, NOT a one-year miracle

Prepare yourself for a long-term commitment to weed management. Even with a successful control program, there will be viable seeds in the soil for a number of years. Be certain to monitor for missed plants or reinfestations after your initial control efforts. Reestablish desired plant species to replace your unwanted weeds. If you leave areas of bare ground, you will only have more weeds return.

"An ounce of prevention is worth a pound of cure..."

It is always easier to solve a problem in the early stages. A small infestation will likely develop into a major one if left unchecked.

Understand your different control options

Most successful weed control programs utilize numerous control methods, combining several into an effective, integrated approach. Early detection, integrated weed management strategies, and diligent follow-up are all keys to a successful program.

Types of Weed Control Methods

Cultural Control: Includes, but is not limited to, mowing, burning, mulching, competitive planting, hand pulling, grazing, and cultivation.

Chemical Control: Consists of properly applying pre and/or post-emergent herbicide products. Always read the label directions before using any herbicide, and check with the SLO County Department of Agriculture for other legal requirements.

Biological Control: Involves a specific natural enemy for a specific weed. Insects are usually the control mechanism used for these long-term projects. Results will not be evident for several years after introduction.



Yellow Starthistle

Centaurea solstitialis

This annual plant has become one of the most prominent noxious weeds in California, infesting over 12 million acres throughout the state. This native of Eurasia is extremely competitive, invading cropland, pastures, and rangeland, increasing farming costs and reducing productivity. Yellow starthistle has degraded thousands of wildland acres, crowding out native plants and reducing the habitat value for wildlife. It is also toxic to horses.

Yellow starthistle is common throughout much of SLO County, but there are still viable methods of managing the existing populations. It is critical that all control measures be conducted prior to seed production and dispersal, which occurs from late May through July, depending on your location and the recent weather. In addition, there are still areas within the county where yellow starthistle is not well established.

For additional information, visit:
<http://wric.ucdavis.edu/yst/yst.html>

Plants That Cause Physical Damage

Spiny Cocklebur & Puncture Vine

These annual weeds occur locally and can cause serious physical damage to people, livestock and equipment.

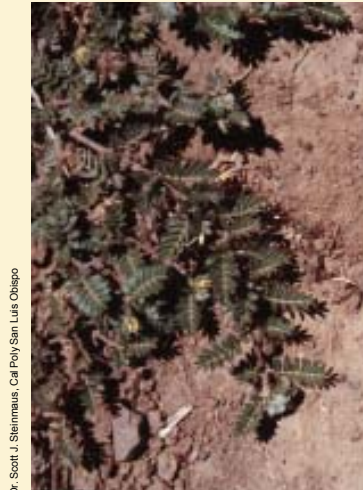
Spiny cocklebur commonly invades pastures and roadsides, where the mature seedheads or "burs" can harm livestock. The plant spines and foliage can also be a major irritant to both animals and humans. Common cocklebur is also found in SLO County, and presents problems similar to its spiny cousin.

Puncture vine has sharp seedheads, called burs or "goatheads", that can injure livestock and people, as well as damage machinery. It is a prostrate, mat forming plant with trailing stems up to five feet long. Puncture vine is well known as the enemy of bicycle riders, as the seedheads cause countless numbers of flat tires for local cyclists.



Spiny Cocklebur
(*Xanthium spinosum*)

Mark Shouder, SLO County Farm Bureau



Puncture Vine
(*Tribulus terrestris*)

Dr. Scott J. Stierman, Cal Poly San Luis Obispo

Other Invasive Plants in San Luis Obispo County

The weeds shown in this guide are some of the worst invaders occurring in San Luis Obispo County, but are by no means an exhaustive list of our troublesome plants. For more information on the following weeds, contact the San Luis Obispo County Agriculture Department, San Luis Obispo County Farm Bureau, the Farm Advisor's office (U.C. Cooperative Extension), or other local groups concerned about invasive plants.

Barbed Goatgrass (*Aegilops triuncialis*): this invasive grass has caused major economic and ecological damage in parts of northern California; it has recently been discovered in SLO County near Cayucos.

Bull Thistle (*Cirsium vulgare*): invades roadsides, pastures, and rangeland; invades natural areas, especially riparian or wetland areas.

Castor Bean (*Ricinus communis*): invades ditchbanks, roadsides, and riparian habitats; seeds are toxic.

European Beachgrass (*Ammophila arenaria*): this perennial grass threatens coastal dunes by displacing native plant species and altering the topography of our local dune systems.

Ice Plant (*Carpobrotus edulis*): a commonly encountered South African plant that is a major invader in California's coastal areas, especially in dune habitats.

Italian Thistle (*Carduus pycnocephalus*): this annual thistle, native to southern Europe, is a common invader of roadsides, pastures and rangeland; it can out-compete native plants in grassland and oak woodland areas.

Medusahead (*Taeniatherum caput-medusae*): this aggressive grass causes major rangeland and grassland habitat damage; currently, it is found mostly in southeastern Monterey County, but it presents a serious threat to the rangeland in SLO County.

Perennial Pepperweed (*Lepidium latifolium*): invades wetlands, marshes, ditches, and other moist areas forming dense colonies that displace native vegetation and wildlife.

Periwinkle (*Vinca major*): a commonly planted ornamental ground cover that has escaped cultivation and invaded riparian areas and other coastal habitats.

Poison Hemlock (*Conium maculatum*): this highly toxic Mediterranean plant, which can be mistaken for parsley, invades ditch banks, crop borders, and is an especially troublesome weed in riparian and wetland areas.

Russian Knapweed (*Acroptilon repens*): this invasive plant, native to Eurasia, forms dense colonies that crowd out native plants and forage grasses.

Russian Thistle (*Salsola tragus*): commonly called tumbleweed, this weed easily invades roadsides and other disturbed areas.

Saltcedar/Tamarisk (*Tamarix* species): this Eurasian shrub has completely altered the streams and riparian areas in the western U.S. deserts; it has begun to invade some of the riparian corridors in the hotter, drier portions of this county.

Skeleton Weed (*Chondrilla juncea*): invades roadsides, rangelands, and causes problems for harvest equipment in grainfields. It has yellow, daisy-like flowers and a stiff, spindly appearance with very small leaves.

Tocalote (*Centaurea melitensis*): this plant has shorter spines on the flowerheads than its close relative, yellow starthistle, but is often mistaken for it; it is not as severe of an invader as its relative, but it is still a common problem.

Tree of Heaven (*Ailanthus altissima*): capable of growing under very poor conditions, these trees have extensive root systems that crowd out other plants and can cause major structural damage to roads, sidewalks, etc.

Veldt Grass (*Ehrharta calycina*): this South African bunch grass, which is especially damaging to coastal dune habitats, has spread along the SLO County coast from the southern border north past Morro Bay.

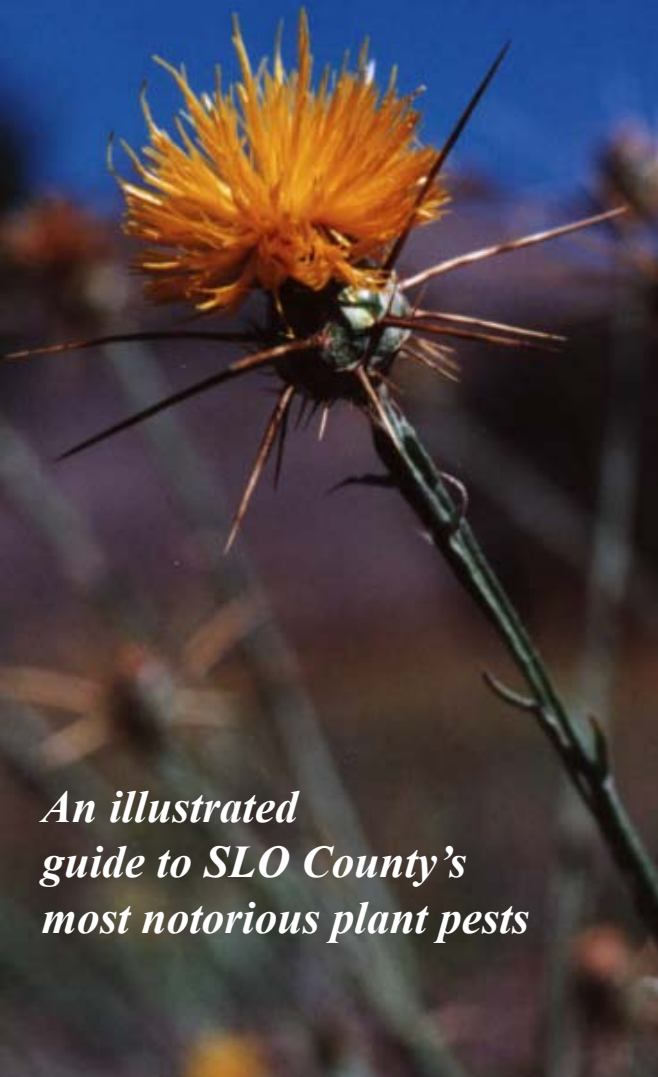
Wild Fennel (*Foeniculum vulgare*): a tall, perennial herb that has a strong anise odor, and is a common, persistent invader in disturbed areas.

White Horsenettle/Silverleaf Nightshade (*Solanum elaeagnifolium*): both the foliage and berries of this perennial weed are toxic when ingested by either livestock or people; the foliage can also be a skin irritant.

The publication of this pamphlet was made possible with the assistance of the SLO County Foundation for Agriculture Awareness, Inc. and the members of the San Luis Obispo County Weed Management Area.



Noxious Weeds of San Luis Obispo County



An illustrated guide to SLO County's most notorious plant pests