

The Tulare County Noxious Weed Task Force represents the following locally based organizations and agencies:

California Native Plant Society,
Alta Peak Chapter National Park Service-
Sequoia National Park
Sequoia Riverlands Trust
Tulare County Agricultural Commissioner
Tulare County Association of Governments
Tulare County Cattlemen's Association
Tulare County Resource Conservation District
University of California Cooperative
Extension, Tulare County
USDA, NRCS
USFS, Sequoia National Forest
U.S. Geological Survey

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For more information, visit our website:
<http://cetulare.ucdavis.edu>

Other Sources:

www.ipm.ucdavis.edu/PMG
www.cdfa.ca.gov/phpps/ipc/noxweedinfo

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Identifying And Controlling Tulare County's Invasive Weeds



YELLOW STARTHISTLE
*One of the most invasive noxious
weeds in California*

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Noxious and Invasive Weeds in the Tulare County Weed Management Area

A noxious weed is any plant species that the California Department of Food and Agriculture declares a threat. Losses can be in many forms: reduced crop returns, increased expense of public monies to control weeds, damage to equipment and harm to livestock.

Being able to recognize and identify weeds that will cause serious problems is the first step in controlling the pests. This brochure offers photographs, plant descriptions and other information regarding twelve targeted invasive weeds found in our area.

DISTINGUISHING BETWEEN NATIVE AND NOXIOUS THISTLES

There are several native thistles in this area that to the untrained eye may look to be one of the noxious non-native thistles. Native thistles are not invasive and are important members of our natural habitats. A quick way to identify noxious thistles from our native thistles is to look at the stem between the leaf attachments. Noxious thistles tend to have spiny leaf tissue extending along the entire stem. Native thistles, on the other hand, have little or no spiny tissue present along the stem to the next leaf below.

YELLOW STARTHISTLE



Centaurea solstitialis L.

- ⇒ This annual or biennial plant can produce tens of thousands of seeds that remain viable in soil for up to 10 years. This makes it one of the most prominent noxious weeds in California. The yellow flowers bloom May through September. The stems have green weblike flesh.
- ⇒ Found in disturbed areas, grasslands, along roads, disked fields or railroads. Spines can damage machinery. Poisonous to horses, mules and donkeys.
- ⇒ Control: Chemical, controlled grazing, mowing and prescribed fire.
- ⇒ Biocontrol: Weevils and gall flies.



TOCALOTE



Centaurea melitensis

- ⇒ This annual grows 3 ft. high and blooms with small yellow flowers in May and June. It has spines that are red. The leaves dry and wither after flowering.
- ⇒ This weed is often confused with yellow starthistle. However, it lacks a deep taproot and is not as tenacious as its cousin.
- ⇒ Found on rangeland and disturbed soils.
- ⇒ Control: Chemical, mechanical discing and hoeing, grazing and prescribed fire.
- ⇒ In many cases it does not become invasive with proper grazing.



TREE OF HEAVEN



Ailanthus altissima

- ⇒ This perennial, deciduous tree grows rapidly. It has small yellow flowers that bloom in May and June. This tree produces many suckers and spreads by seed or invasive roots. It thrives in poor soils. It once was planted as a hardy shade tree.
- ⇒ This tree not only outcompetes native vegetation, but does major damage to roadways, sidewalks, structures and orchards with its extensive root system.
- ⇒ Control: Cut stems and paint with herbicide in late summer or early fall. Treat resprouts with herbicide spray.



PUNCTURE VINE/GOAT HEAD



Tribulus terrestris L.

- ⇒ This annual weed grows as a flat circular mat that spreads with trailing stems up to 5 ft. long. Its tiny leaves are 1/4-1/2 in. long on both sides of stem. The stems and leaves are covered with silky hairs. The flowers are small, yellow and bloom in April-October. It forms thorny seeds/buds.
- ⇒ Found in dry disturbed areas, along roads and vacant lots. Seeds cause injury to bicycle tires, mechanized equipment, feet and hooves. The leaves and stems are sometimes toxic to live-stock and will decrease the range value.
- ⇒ Control: Chemical and mechanical hoeing.
- ⇒ Biocontrol: Seed Head Weevil, Stem Weevil.



CONTROL IS AN ANNUAL TASK - NOT A ONE TIME EVENT!

CONTROL PROGRAM

Most noxious weeds can survive and outcompete other plants. First priority is to attack noxious weeds at first sight to prevent them from maturing and spreading.

- ⇒ **Chemical Control:** In most established populations chemical control will be the first step. New chemicals have proven effective on some species that have previously been difficult to control.
- ⇒ **Biological Control:** Any insect, fungus or disease that is used to control invasive species.
- ⇒ **Mechanical Control:** Such as mowing and hoeing. Taproot regrowth is possible from some weeds and at some times of the year will spread many more weeds. Some weed seeds will spread by transporting on equipment. Can be effective in some circumstances.
- ⇒ **Prescribed Grazing:** Timed, intensive, or rotational grazing of livestock has been effective in managing some weeds.
- ⇒ **Plant Favorable Vegetation:** Reseeding with more favorable species such as grass, wildflower, crops or trees and shrubs in combination with other control methods can be an effective part of a control program by increasing competition with weeds for light, nutrients, and water.
- ⇒ **Prescribed Fire:** Must be planned in accordance with local burn and air quality regulations. Contact your local fire department.
- ⇒ **Timing:** Early control before the seed set is best. Disturbing a plant with seed may sow more of the weed.
- ⇒ **Cover Crop:** Seed mixes that are planted on fallowed land or between rows. Cover crops may discourage weed species from establishing, prevent soil erosion, encourage water penetration, add soil fertility and support populations of beneficial insects.

RUSSIAN THISTLE, TUMBLEWEED, SALTWORT



Salsola iberica/S. australis, S. tragus

- ⇒ This annual plant grows 5 ft. tall and is becoming more prominent in the foothill region. It has tiny needlelike leaves. The stems get prickly with age. The flowers appear oval, flat, white, lavender or rose colored and bloom May-November. The plant is blue-green becoming gray-brown to gray after maturity. The taproot is brittle and breaks off allowing the plant to tumble and spread seeds.
- ⇒ Grows in drier areas amidst cultivated dryland crops, ditch banks, fencelines, overgrazed rangeland, roadsides, and waste.
- ⇒ Control: Chemical, hoeing, pulling and prescribed fire. Not suitable for grazing.
- ⇒ Biocontrol: Casebearer Moth.



GIANT REED



Arundo donax

- ⇒ This perennial has invasive rhizomes. The erect cane-like stems grow 6-20 ft. tall with leaves 3 ft. long by 1 to 2-1/2 in. wide. The flowers at the end of the stems have a brown, leathery appearance.
- ⇒ Grows in moist places. It outcompetes important riparian plants, blocks water flow, and contributes to flooding.
- ⇒ Control: Chemical/mechanical. Cut stems and paint incision with herbicide registered for use in aquatic environment in late summer or early fall. Chip and dispose of plant material away from site as pieces of plant can readily re-root even when appearing to be dead. Resprouts can be treated using spray to leaves. Use care when removing rootmass as root fragments can easily regenerate.



COCKLEBUR/SHEEPBUR



Xanthium strumarium

- ⇒ This annual plant grows 2-4 ft. tall. The leaves are somewhat triangular in shape. The flowers are inconspicuous and produce spiny cylindrical burs. Their stems can have red blotches.
- ⇒ Located in disturbed places, drainages, fields and waste places. This plant is poisonous to livestock. The burs are irritants and will tangle in hair and wool reducing their value.
- ⇒ Control: Chemical, mechanical hoeing, discing and prescribed fire. Avoid grazing.



SPANISH BROOM

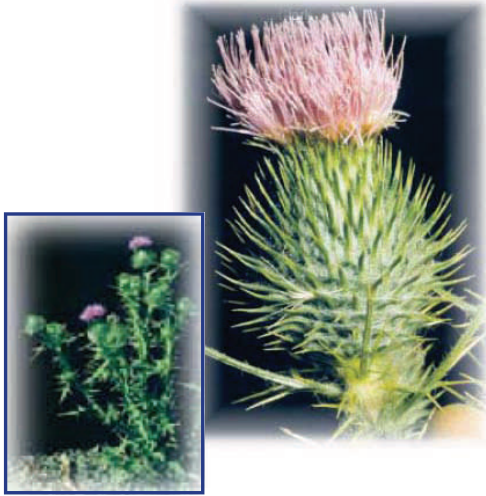


Spartium junceum

- ⇒ This tall perennial shrub was introduced as an ornamental plant. The leaves are less than 1 in. long, small, oval and blue-green. The flowers are about 1 in. long, fragrant, yellow and bloom April-June. It forms seed pods in the summer. It will spread aggressively, outcompeting native plants and displacing native woody plant species.
- ⇒ Plants become a problem in disturbed areas on ditch banks and roadsides, creating a road hazard by reducing visibility.
- ⇒ Control: Mechanical digging, chopping and chemical control.



BULLTHISTLE



Cirsium vulgare

- ⇒ This annual has spine-tipped leaves with prickly tops and cottony underside. It grows to 7 ft. tall in dense populations. The flowers are large and purple in color. It blooms June-October. The roots are short and fleshy.
- ⇒ Found in disturbed places, marshes, meadows, right of ways, riparian and heavily grazed areas.
- ⇒ Control: Chemical, mowing and hoeing.
- ⇒ Biocontrol: Gall fly.



ITALIAN THISTLE

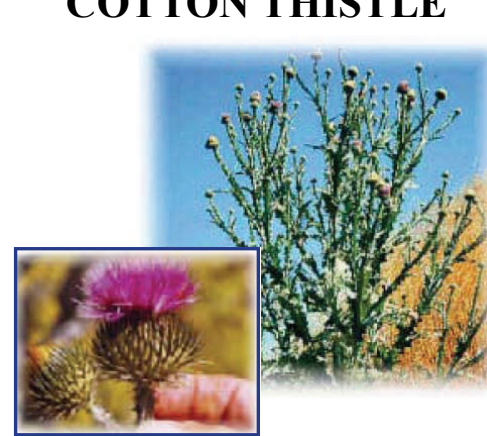


Carduus pycnocephalus

- ⇒ This annual or biennial is spreading on roadsides and pasture lands. This weed is outcompeting native grasses in pasture land, resulting in lower land value. The flowers are purple or pinkish in color and appear in May or June lasting through mid-July.
- ⇒ Control: Graze new plants before stems and spines start growing. Infestations can be spot treated with herbicide or by discing.
- ⇒ Biocontrol: Seed head weevil. A *Rhino-cyllus* weevil was introduced in the mid-1980's for biological control but has not yet become a dominating control factor.



SCOTCH THISTLE, COTTON THISTLE



Onopordum acanthium

- ⇒ This annual or biennial will grow 3-12 ft. tall. It has irregular large leaves with very spiny edges covered with short stiff hairs on the leaf surface. Main veins are prominent on the underside of the leaf that is gray. The flowers are pale red-purple.
- ⇒ Found in dense stands in disturbed agriculture areas, roadsides and wasteland. Severe infestations can form tall, dense, impenetrable stands, especially in fertile soils.
- ⇒ Control: Chemical and mechanical discing.
- ⇒ Biocontrol: None



MILK THISTLE, WHITE THISTLE, VARIEGATED THISTLE



Silybum marianum

- ⇒ These annuals have large, 2 ft. long, shiny, dark green leaves, with white or blotched and white veins. The stems are 2-6 ft. tall. It produces large pink-purple flowers that bloom May-July.
- ⇒ This very invasive weed is found in disturbed areas, ditch banks, cultivated crops, overgrazed moist pasture lands and roadsides. It may cause nitrate poisoning.
- ⇒ Control: Chemical and mechanical mowing. No grazing.
- ⇒ Biocontrol: Seed Head Weevil. *Septoria* fungus may be available soon.

