

Help Protect California Landscapes

Invasive Weed to Watch for:

Purple starthistle



Purple starthistle (*Centaurea calcitrapa*)

What is a Noxious Weed?

A noxious weed is a category of invasive plant. Invasive plants are not native to the area, and tend to be very aggressive by outcompeting native plants for nutrients and water. By crowding out native plants, noxious weed infestations result in decreased plant diversity and decreased forage and habitat for native animals. Noxious weeds degrade fish and wildlife habitat, clog waterways, turn pastures into wastelands, disrupt forest regeneration, and overrun our forest and park areas. Although usually brought in accidentally, sometimes noxious weeds are introduced intentionally, especially when homeowners are looking for new and exotic landscaping specimens.

Did you know? Noxious weeds are the second greatest threat to species conservation—second only to land development!



Mature purple starthistle plants

Facts about Purple starthistle

- ◆ Purple star thistle (*Centaurea calcitrapa*) is native to the Mediterranean region of Southern Europe and Northern Africa. It was first detected in California near Vacaville in 1886.
- ◆ Purple starthistle's stiff, sharp spines and bitter taste discourages feeding by grazers making this plant a serious concern for pasture lands and rangelands. Because it is unpalatable to grazers, it increases on rangelands as more palatable species are consumed. Infestations of this plant also result in dense, impenetrable stands and will crowd out desirable native vegetation.
- ◆ Its spines are thicker and stronger than those of yellow starthistle and do not fall from the plants in autumn as do those of yellow star thistle. Because of this, forage that may grow in infested areas during fall and winter after purple star thistle has senesced may be inaccessible to grazers.
- ◆ This plant only reproduces by seed. Most plants remain in the rosette stage for one year, bolt, flower, and set seed in the second growing season, and then die. Some individual plants may complete their life cycles in one year in extremely favorable conditions.
- ◆ Seeds can remain in the soil for approximately 3 years. The seed head falls as a unit near the parent plant, but the seeds can disperse via vehicles, water, clinging to clothes, and fur and feathers of animals.
- ◆ Purple starthistle prefers alluvial soils.

Purple Starthistle Identification:

- ◆ Upright branched perennial growing up to 3.3 feet tall. It is covered in cobwebby hairs often becoming smooth with maturity.
- ◆ Narrow flowerheads of lavender to deep purple flowers. 25 to 40 florets make up each flower head. Underneath the flower are greenish or straw-colored spine-tipped bracts.
- ◆ Before growing flowering stems, it exists as a basal rosette with a central cluster of spines. On the stems, the leaves are alternate, with deeply divided lower leaves and narrow and undivided upper leaves.
- ◆ Stems are branched and angled, not winged.
- ◆ Seeds are small (0.1 to 0.13 inches), white or brown streaked in color and hairless.



Purple starthistle rosette

Control Methods:

Mechanical:

- ◆ Grubbing or digging can control small infestations. Plants should be cut at least 2 inches below the soil surface early in the growing season before they begin to flower in order to prevent the release of viable seed. Follow-up treatments are necessary as field tests indicated that 10-15 percent of plants cut below the root crown resprouted (Roche and Roche 1990).
- ◆ Mowing is not an effective control method. The rosettes are too low to be cut and plants that have already bolted often respond to mowing by producing multiple rosettes. Mowing plants that have flowered will spread the cut flowerheads which may still be capable of dropping mature seed.

Biological:

- ◆ Currently no biological control program exists for purple starthistle.
- ◆ Conventional grazing by sheep or cattle will not control this plant and will in fact promote it because grazing animals avoid this plant and selectively feed on species that would otherwise compete with purple starthistle

Chemical:

- ◆ Aminopyralid is recommended as a postemergent to control rapidly growing plants in the fall, or in spring from rosette to bolting stages. Late winter to early spring applications will provide residual control of germinating seedlings
- ◆ Glyphosate will only provide control during the year of application; it has no soil activity and will not kill seeds or inhibit germination the following season.
- ◆ Clopyralid is also recommended as a postemergent to control rosettes before the flower stem elongates. The plant should be rapidly growing at the time of treatment.

Invasive weeds displace native plants and destroy healthy forests and parks.

Please

Help protect our native forest and park lands from weed invasion and preserve wildlife habitat.

What You Can Do:

- ◆ **Become familiar with local noxious weeds**
- ◆ **Report any weed sightings**
- ◆ **Do not plant invasive plants in gardens where they potentially could become a problem.**
- ◆ **If traveling from weed infested area, remove seeds and plant parts on clothing, pets, car/bike tires, etc. before returning to an un-infested area to prevent weed spread.**

To report suspected noxious invasive weeds in your area, please contact:

**El Dorado/Alpine County
Department of Agriculture,
Weights and Measures**

**311 Fair Lane, Placerville, CA
(530)621-5520
eldcag@edcgov.us**

