

Help Protect California Landscapes

Invasive Weed to Watch for:

Yellow Toadflax



Yellow Toadflax (*Linaria vulgaris*)

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!*



A yellow toadflax population

Facts about Yellow Toadflax

- ◆ Yellow toadflax (*Linaria vulgaris*), also known as butter and eggs or wild snapdragon, is one of approximately 130 species of *Linaria* native to Eurasia. This species of *Linaria* is an escaped ornamental brought to the US in the mid-1800's.
- ◆ This perennial plant is a member of the figwort family (Scrophulariaceae) and can typically be found in open, disturbed sites such as roadsides and waste areas. It can also be found in fields, pastures, and rangelands where it can displace native grasses and perennials, thereby altering and simplifying the species composition of natural communities and reducing forage production for livestock and wildlife.
- ◆ Like Dalmatian toadflax, Yellow toadflax contains glucoside compounds which can be toxic to livestock. However, this plant is unpalatable so reports of livestock poisoning are rare. Because this plant is unpalatable, livestock will graze on desirable native vegetation which helps yellow toadflax become established and dominant.
- ◆ Yellow toadflax can reproduce by seeds and by its horizontal rootstalks which send up new shoots. Thus, its spread is mainly due to vegetative reproduction. For example, yellow toadflax can grow new shoots on lateral roots as far as 10 feet away from the parent plant.
- ◆ Seeds can remain viable in the soil for up to 10 years. A mature plant can produce up to 30,000 seeds annually while a single stem has been reported to contain over 5,000 seeds.

Yellow Toadflax Identification:

- ◆ Perennial that grows 8 to 31 inches tall from creeping roots, often forming colonies.
- ◆ Flowers are bright yellow and have a spur which can help distinguish it from native snapdragons.
- ◆ Compared Dalmatian toadflax's broad and heart-shaped leaves, yellow toadflax have leaves that are narrow and lance-shaped. This plant's leaves are also soft, pale green, and are mainly alternate but lower leaves appear to be opposite due to crowding.
- ◆ Mature yellow toadflax plants have 1-25 smooth erect floral stems.
- ◆ Taproots may be up to 3 feet long. Horizontal roots may grow to be several yards long, and can develop adventitious buds that can form independent plants.
- ◆ Seeds capsules are round-ovate, 0.3 to 0.5 long, and two-celled. Seeds are brown or black, and surrounded by a notched wing.



Yellow toadflax flowers. Note its distinctive spur which can help distinguish this plant from native snapdragons.

Control Methods:

Mechanical:

- ◆ Physical methods to control toadflax should focus on destroying the root system. Cutting and mowing will reduce flowering and seed production but will not kill the plants.
- ◆ Hand-pulling and digging is effective during the seedling stage when the plant is most vulnerable before the root system becomes established. Hand-pulling can be effective for small infestations, particularly when soil is moist and/or sandy.
- ◆ Mowing is not effective since the majority of growth occurs via rhizomes.
- ◆ Burning will stimulate seed germination and root sprouting, and is therefore not recommended.

Biological:

- ◆ Several insect species have been investigated and permitted for release in the United States as biocontrol agents for Dalmatian and Yellow toadflax. Please contact your local United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) for more information.

Chemical:

- ◆ According to the USDA, the best performing herbicide for toadflax control is *Chlorsulfuron*. *Glyphosate*, *Imazapic*, and *Imazapyr* have also been recommended by other weed control programs/agencies.
- ◆ Herbicides should only be applied at the rates and for the site conditions and/or land usage specified on the label of the product being used. **Follow all label directions.**

Above: Dalmatian toadflax leaves which are broad and heart-shaped.

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**

