



# Oxeye Daisy

*Leucanthemum vulgare* Lam.

Synonym = *Chrysanthemum leucanthemum* L.

Oxeye daisy is a showy perennial herb in the Asteraceae family that was introduced from Europe, most likely as a medicinal herb to treat asthma, whooping cough, and other coughs. Some people enjoy the young leaves in salads. Oxeye daisy is still sold as an herb and as an ornamental by itself and in mixes. Other common names include white daisy, marguerite, field daisy, aspen daisy, poor-land flower, and moon-penny.

Oxeye daisy occurs in 17 Idaho counties, 20 Oregon counties, and 40 Washington counties. It is a noxious weed in Washington, and several Idaho counties have added oxeye daisy to their county noxious weed lists. It is illegal to sell oxeye daisy seeds or plants where it is designated as noxious. A related species, Shasta daisy (*Chrysanthemum maximum*), looks very similar and is a better choice for beautifying the landscape.

Oxeye daisy prefers upland meadows and pastures but can be found in landscapes, along roadways, and in fields, rangelands, and waste areas. Once established, it competes



*Oxeye daisy flower head.*



*Oxeye daisy rosette.*



*Mature oxeye daisy plant. Oxeye daisy looks similar to the Shasta daisy (*Chrysanthemum maximum*).*

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against grasses, reducing forage production. It also exposes soil in the fall making the infested area vulnerable to erosion and other aggressive weeds.

Management practices discussed in this bulletin focus on pasture, rangeland, and roadside infestations.

## Identification

Oxeye daisy is an herbaceous perennial with rhizomes and adventitious roots. Plants grow 1 to 3 feet in height.

Stems and leaves are smooth to sparsely hairy. Basal leaves are spatula-shaped to round and occur on long stalks that are 2 to 5 inches long. The leaf margins are toothed to more or less pinnately lobed. Leaves progressively decrease in size upward on the stem. The upper leaves clasp the stem in an alternate arrangement. The upper leaves are narrowly oblong with toothed to shallowly lobed margins.

Flower heads are usually solitary and grow at the ends of the branches. Flowers are showy and daisy-like, with 20 to 30 white ray flowers and numerous yellow disk flowers. Flower heads average 1 to 2.2 inches in diameter. The petals are slightly notched at the tip, and the floral bracts are green with dark brown margins.

The fruit is a round achene, brown to black in color, 1/16 of an inch long, with 8 to 10 ridges down the sides and no pappus. One flower head can contain up to 200 seeds.

## Biology and Ecology

Oxeye daisy plants flower June through August. A healthy plant may produce up to 26,000 seeds. The seeds generally germinate in the fall in Idaho, Washington, and Oregon but may germinate throughout the growing season. Drier fall conditions will delay germination until spring, but the seed does not have a dormancy period. Oxeye daisy seeds maintain viability, and in one study 82 percent of the seed germinated after 6 years and 1 percent germinated after 39 years. Oxeye daisy spreads mainly by seeds, but it also spreads effectively by the rhizomes.

Oxeye daisy competes aggressively, especially under continuous grazing pressure. High seed production allows oxeye daisy to quickly take over a pasture or meadow, especially if management allows exposure of bare soil, which is where seeds are more likely to germinate. Cattle preferably graze other plants when kept in a pasture at low stocking rates, reducing plant competition with oxeye daisy and allowing it to get an even better hold in the pasture. Ungrazed meadows are susceptible to invasion because the branched rhizomes and strong adventitious roots allow the plant to fully utilize any open space.

## Management

### Mechanical control

Mowing should be timed to the onset of flowering. Plants

may flower more than once, and subsequent mowings also should be timed to the onset of flowering. Hand weeding of small populations can be effective, especially in moist soil where more of the root system can be removed by digging. Repeated hand weeding likely will be required because roots remaining may sprout, forming new plants, and seedlings will continue to emerge because the seeds remain viable for many years.

### Grazing

Horses, sheep, and goats readily consume oxeye daisy, but cattle usually avoid it. Effective grazing programs should include short-duration, high-intensity grazing with cattle prior to flower production followed, if possible, by grazing with goats or sheep to consume remaining oxeye daisy plants. Grazing will suppress established populations; however, seeds and rhizomes will replace any oxeye daisy vegetation removed by animals. Oxeye daisy may alter the taste of milk from dairy cows that have consumed it.

### Competitive plants

Perennial bromes, both native and introduced, are competitive with oxeye daisy as are timothy, orchardgrass, tall fescue, and most native and introduced wheatgrasses. Stimulating grass competition with fertilizer has been shown to increase forage production by 500 percent and hinder oxeye daisy growth. Pastures

and meadows with established infestations of oxeye daisy are often nitrogen deficient. In pasture settings, fertilization according to a soil test may be required after control of oxeye daisy to improve growth of grasses and increase their competitive ability. Fertilization timing can be either (1) late spring after a spring herbicide application or (2) early fall to mid-spring after herbicide application during the previous spring or summer.

### **Control with herbicides**

Several broadleaf herbicides registered for use in pasture are effective against oxeye daisy beginning when leaves are visible in the spring until flowering. Weedy hawkweeds are associated with oxeye daisy, often growing within the same fields, and herbicides mimicking natu-

ral plant hormones effective on hawkweeds are also effective on oxeye daisy. Adjuvants should be used according to the specific herbicide label; there are no special adjuvant requirements for oxeye daisy. Herbicides that disrupt plant enzyme production that are effective on members of the aster family are also effective on oxeye daisy. Herbicide recommendations change, often yearly, so please use the guidelines for herbicide use found in the annually revised *Pacific Northwest Weed Management Handbook* available in print or online at <http://ag.ippc.orst.edu/pnw/weeds>.

### **Biological control**

No biological control agents have been introduced for oxeye daisy control.

## **Summary**

Oxeye daisy is well established in the Pacific Northwest. Forage production can be reduced by oxeye daisy competition. Goats and sheep readily eat oxeye daisy, but cattle require high-intensity, short-duration grazing to set back oxeye daisy. Oxeye daisy is susceptible to many herbicides used for pasture and rangeland weed control. Maintaining competitive forages will deter expansion of oxeye daisy populations. Management will require long-term diligence since seed longevity is longer than 6 years.

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*Oxeye daisy infests open meadows and pastures.*

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Published and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914, by University of Idaho Extension, the Oregon State University Extension Service, Washington State University Extension, and the U.S. Department of Agriculture cooperating.

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