

## ITALIAN THISTLE

Also known as slender thistle  
*Carduus pycnocephalus*  
 Sunflower Family (Asteraceae)

### DESCRIPTION

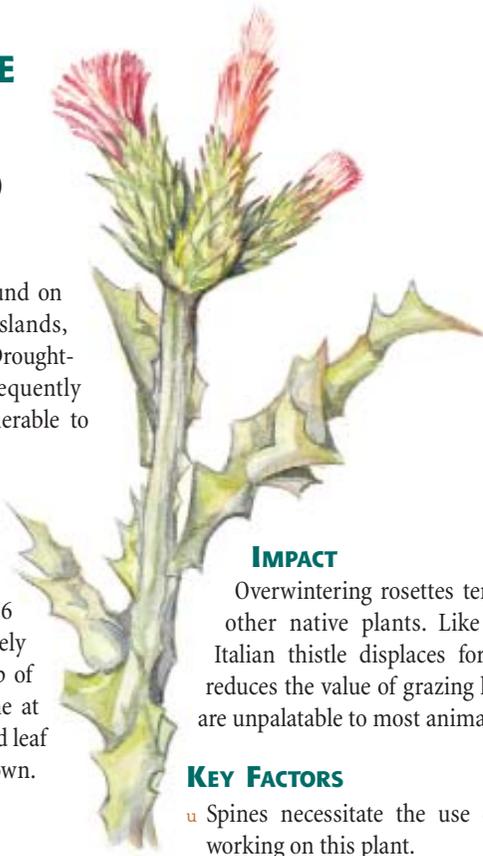
Italian thistle is commonly found on disturbed sites, annual grasslands, pastures, and riparian areas. Drought-stressed, overgrazed, and frequently disturbed sites are more vulnerable to Italian thistle invasion.

Italian thistle is a winter annual or biennial broadleaf plant. It grows 1–6 feet tall and has erect, spiny-winged stems. The leaves are lanceolate, up to 6 inches long, and pinnately divided, with a spine at the tip of each lobe and the largest spine at the tip of the leaf. The stems and leaf undersides have a cobwebby down.

### REPRODUCTION

From September to December, pink to purple (but rarely white) flowers bloom in composite inflorescences borne terminally in clusters of 2–5. Italian thistle inflorescences measure only a half-inch across, smaller than those of bull or artichoke thistle.

Italian thistle reproduces only by seed. Inner (disk) seeds are cream-colored, sticky at first, striped, and have bristles. Outer (ray) seeds are yellowish to brown, smooth, and have no bristles. Most disk seeds are wind-dispersed and can travel several hundred feet. Disk seeds also have a thin gummy coating, which allows them to attach to animals and machinery. The germination rate is high, and germination typically takes place in the fall. Ray seeds generally remain in the flower head until it drops. These seeds persist in the soil for up to 10 years.



### IMPACT

Overwintering rosettes tend to shade out other native plants. Like many thistles, Italian thistle displaces forage plants and reduces the value of grazing land. The spines are unpalatable to most animals.

### KEY FACTORS

- u Spines necessitate the use of gloves when working on this plant.
- u Very high seed production.
- u Seed longevity up to 10 years.
- u High germination rate.
- u Resprouts from root portions left in the soil if not cut below root crown.

### TREATMENT OPTIONS

- u Unless you have a lot of volunteers to help, controlling Italian thistle by hand methods (pulling, digging, cutting) may be feasible only for small infestations. Digging is reported to be effective at killing Italian thistle, but will cause considerable soil disturbance, often resulting in seed germination or recolonization.
- u Pull individual plants by hand once the flowering stems have bolted but before flowers are produced.

- u **Dig** the plants out with a pick or shovel.
- u **Cut** just below the crown with a small pick or trowel. This is a useful option in summer when the ground is too hard for pulling stems by hand.
- u **Brush cut** or **weed whip** before the thistles begin to flower. Repeat the treatment into early summer to ensure energy reserves have been reduced.
- u **Graze.** Sheep and goats will graze on thistles, especially in the early spring when they have reached 4–6 inches in height. Graze the animals for roughly 2–3 weeks in large numbers.
- u **Foliar spray.** Some practitioners apply glyphosate to the plants before they go to seed, generally around mid-spring.

## DISPOSAL

Seed heads should be removed from the site and bagged or burned. The stems can be composted.

## FOLLOW-UP

Whichever treatment you choose, return to the site at least twice a year for a period of several years to monitor seedling growth and prevent further seed production.

## INTERESTING FACTS

Native to the Mediterranean, Italian thistle appeared in California in the 1930s, but it is not clear how it was introduced.

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## Notes