

Bull Thistle



Cirsium vulgare (Savi) Ten.

Alternate Names

Common thistle, spear thistle

Synonyms

Cardus lanceolatus L., *Cardus vulgaris* Savi, *Cirsium lanceolatum* (L.) Scop.

Description

Bull thistle is a biennial plant with a short, fleshy taproot. The stem is 2–5 feet tall, conspicuously winged and bearing many spreading branches. It is green to brownish and sparsely hairy. Leaves are pinnately lobed, hairy and prickly on the upper side, and cottony underneath. Leaf blades extend down the petiole and along the stem to form long, prickly wings. Flowerheads are 1–2 inches wide with deep purple flowers. The bristles on the pappus are feathery. Flowering occurs from July through September.



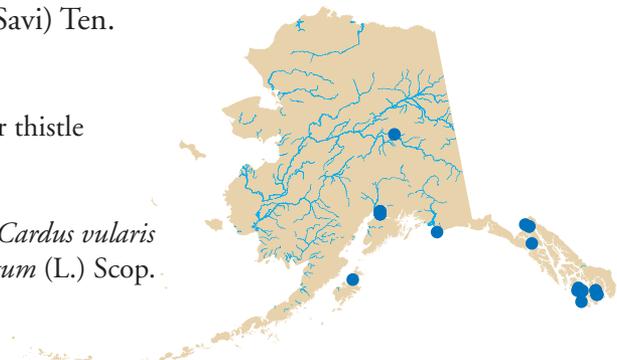
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Similar Species

There are three native species of thistle whose ranges barely extend into Alaska—see the Canada thistle account for more information. Bull thistle is the only large-headed thistle in Alaska with a prickly, winged stem. Edible thistle (*Cirsium edule* Nutt.) is found in the southern portion of southeast Alaska and is included in the Forest Service's Regional Forester's List of Sensitive Species. It lacks the winged stem of bull thistle.

Ecological Impact

Bull thistle competes with native species for water, nutrients, and space, displaces native plants, and decreases forage quality for grazing animals.



Biology and Invasive Potential

Bull thistle reproduces only by seeds, and cross-pollination is required. A wide variety of insects pollinate this species. Average fruit production is nearly 4,000 per plant. Seed viability is high (up to 90% may germinate within a year), but bull thistle is not known to form persistent seedbanks (Klinkhamer and DeJong 1988). Disturbance of soil and vegetation increases seedling emergence and establishment. Most seeds fall within 3 feet of the parent plant, but up to 10% may travel greater distances with little wind (Klinkhamer et al. 1988). Bull thistle is also spread by the movement of livestock, vehicles, farm machines, seed, and hay. Germination is stimulated by soil moisture and light, and seeds have no innate dormancy. Bull thistle is most common on soils with intermediate moisture, and it tolerates a wide pH range. It is listed as a noxious weed in Colorado, Iowa, Kansas, Maryland, Michigan, Minnesota, New Mexico, Oregon, Pennsylvania, and Washington and in Manitoba and Ontario.



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Distribution and Abundance

Bull thistle is most common in recently or repeatedly disturbed areas such as pastures, rangelands, roads, and ditches. It can also colonize areas in relatively undisturbed grasslands, meadows, and forest openings. It is native to Europe, western Asia, and northern Africa. It is now naturalized and widespread throughout the United States and southern Canada and present on every continent except Antarctica. In Alaska, bull thistle has been found in Ketchikan, Prince of Wales Island, Juneau, Haines, Gustavus, Cordova, Kodiak, Anchorage, and Fairbanks. The

first documented occurrence in the state was from Cape St. Elias on remote Kayak Island in 1978 (ALA 2004). It was probably introduced to North America as a contaminant of seed or ballast in the late 1800s.

Management

Bull thistle plants are easily pulled up by hand, but be sure to wear stout leather gloves to protect against the spines. It does not withstand cultivation, and mechanical cutting of plants at the soil surface is also an effective method of control. Control programs should be maintained for at least four years. Herbicides are often most effective when applied to rosette stage plants. Rosettes can be induced by mowing several weeks before the application. A variety of natural seed predators are present in the Netherlands, and so biological control may become an option in the future (Klinkhamer et al. 1988).



USDA Forest Service photo by Michael Shephard

Notes

Horses will eat bull thistle flowerheads, carefully avoiding ingesting the spines, because they are attracted by the sugary nectar found at the base of each floret.