

## Species Field ID

### *Carduus nutans* L. CANU4 nodding plumeless thistle



**Description:** Musk, or nodding thistle is an aggressive, biennial herb with showy red-purple flowers and painful spiny stems and leaves. Mature plants range in height from 1½ to 6 feet tall, and have multi-branched stems. Leaves are dark green, coarsely lobed, with a smooth waxy surface and a yellowish to white spine at the tip. The large disk-shaped flower heads, containing hundreds of tiny individual flowers, are 1½ to 3½ inches in length and occur at the tips of stems. Flower heads will droop to a 90-degree angle from the stem when mature, hence its alternate name, nodding thistle. Each plant may produce thousands of straw-colored seeds adorned with plume-like bristles.

**Biology & Spread:** Musk thistle is usually a biennial, requiring 2 years to complete a

reproductive cycle, but may germinate and flower in a single year in warmer climates. Seedlings emerge in mid to late July and develop into a rosette where plants can reach 4 feet in diameter. Plants overwinter in the rosette stage until they begin to bolt in mid-March. During the bolting stage plants form multi-branched stems to a height of 6 feet. The number of seedheads per plant is site-dependent and ranges from about 24 to 56 on favorable sites and 1 to 18 on less favorable sites. Flowers emerge in early May to August and seed dissemination occurs approximately one month after the flowers form. A single flower head may produce 1,200 seeds and a single plant up to 120,000 seeds, which may be wind blown for miles. Seed may remain viable in the soil for over ten years, making it a difficult plant to control.

**Ecological Threat:** selective grazing leads to severe degradation of native meadows and grasslands as wildlife focus their foraging on native plants, giving musk thistle a competitive advantage. Although musk thistle is infrequently found in dense forests, it can colonize areas subjected to natural disturbances such as landslides or frequent flooding. Meadows, prairies, grassy balds, and other open areas are susceptible to invasion.

**Resembles/Alternatives:** Canada thistle [*Cirsium arvense* (L.) Scop.][CIRAR], bull thistle [*Cirsium vulgare* (Savi) Ten][CIRVU], and Scotch thistle [*Onopordum acanthium* L. ssp. *acanthium*] may be confused with *Carduus* thistles.

Canada thistle is perennial, with creeping roots and small unisexual flower heads unlike *Carduus* thistles. Plants are either male or female (dioecious). In addition, Canada thistle has smooth stems and plumose pappus bristles.

Bull thistle is a coarse biennial with plumose pappus bristles and upper leaf surfaces covered with stiff bristly hairs that are rough to touch.

Scotch thistle and related *Onopordum* species are distinguished by having receptacles deeply pitted, honeycomb-like, with membranous extensions around pits, and not densely covered with bristles.

***Cirsium vulgare*** (Savi) Ten. CIVU bull thistle,  
common thistle, spear thistle



Bull thistle is an annual or biennial herbaceous plant that invades disturbed areas throughout the United States. The tall, spiny, winged stems (up to 7 feet tall) have many spreading stems. Leaves are long (3 to 12 inches), lance-shaped and very hairy. The purple flower heads are 1 ½ to 2 inches in diameter and 1 to 2 inches long with narrow spine-tipped bracts. Bull thistle can invade almost any type of disturbed area, from forest clearcuts to riparian areas to pastures where it can form dense thickets displacing other vegetation. The spiny nature of the plant renders it unpalatable to wildlife and livestock and reduces the forage potential of pastures. Bull thistle is native to Europe, western Asia, and northern Africa. It is thought to have been introduced to the eastern United States during the colonial times and the western United States in the late 1800s. It is currently found in all 50 states.



***Onopordum acanthium*** L. ONAC Scotch thistle



**Description:** Branched, robust biennial (or sometimes annual) that often grows 2.5 m or more in height and 2 m in width. Main stems may be up to 10 cm wide at the base. Stems have vertical rows of prominent, spiny, ribbon-like leaf material or "wings" that extend to the base of the flower heads. Leaves, which are armed with sharp, yellow spines, are up to 60 cm long and 30 cm wide. Upper and lower leaf surfaces are covered with a thick mat of cotton-like or woolly hairs, which give the foliage a gray-green appearance. The globe-shaped flower heads are borne in groups of 2 or 3 on branch tips. Flower heads are up to 5 cm in diameter, with long, stiff, needle-like bracts at the base. Flowers range from dark pink to lavender. Seeds are smooth, slender, and plumed.

**Resembles/Alternatives:** Canada thistle [*Cirsium arvense* (L.) Scop.][CIRAR], bull thistle [*Cirsium vulgare* (Savi) Ten.][CIRVU], and Nodding thistle [*Carduus nutans* (L.)][CANU4] may be confused with Scotch thistle.



Canada thistle is perennial, with creeping roots and small unisexual flower heads unlike *Carduus* thistles. Plants are either male or female (dioecious). In addition, Canada thistle has smooth stems and plumose pappus bristles.

Bull thistle is a coarse biennial with plumose pappus bristles and upper leaf surfaces covered with stiff bristly hairs that are rough to touch.

Nodding thistle has leaves that are dark green, coarsely lobed, with a smooth waxy surface and a yellowish to white spine at the tip. Flower heads will droop to a 90-degree angle from the stem when mature.