

Spotted Knapweed

Centaurea stoebe



FAMILY	Asteraceae-daisies & sunflowers	ORIGIN	Central Europe
LIFE CYCLE	Perennial	OTHER NAMES	Panicled knapweed, Bushy knapweed

QUICK FACTS

- Originally from central Europe, spotted knapweed was introduced to North America in the early 1800s. Since then, it has spread quickly across different ecosystems, **threatening local plants and agriculture**.
- This perennial plant features striking purple or white flowers, which readily attract many **pollinator species**, including bees, butterflies, and hummingbirds.
- Spotted knapweed is **allelopathic** and releases harmful compounds that suppress native grasses, significantly **reducing forage availability** for livestock. Its seeds can disperse widely, exacerbating its invasive spread.
- Today, spotted knapweed **continues to spread** and has been documented in all but four states across the U.S. The USDA has noted its presence in eight counties in New Mexico. As it propagates, spotted knapweed threatens native plant populations and disrupts agricultural practices nationwide.

As you stroll through an abandoned field filled with vibrant clusters of purple flowers, you might initially mistake the plants for thistles. However, you are quite possibly observing a widespread invasion of spotted knapweed, an aggressive, noxious weed. This invasive species was recorded in the Pacific Northwest in 1960 and by 1999, spotted knapweed had invaded more than 326 counties across the western United States, including every county in Washington, Idaho, Montana, and Wyoming.

What does it look like?

Spotted knapweed is a showy biennial or short-lived perennial plant known for its striking purple flowers, though some variants showcase delicate white blooms. Flowers appear from June to October. Some may mistake spotted knapweed for a small thistle, but the plant is easily distinguished by its lack of sharp spines.



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Plant: Low-to-the-ground basal rosettes reach up to 16 inches in diameter and are comprised of deeply lobed, nearly pinnate leaves up to 2 inches wide. Vertical growth from the rosette can reach 1 to 5 feet with multiple upright, branched stems loosely covered with gray hairs.

Roots: Spotted knapweed has a deep taproot, which produces a new shoot each year.

Leaves: The leaves of the plant are slightly hairy and deeply lobed, exhibiting a rich green color, and they decrease in size as they ascend the stem. The basal leaves have petioles (leaf stems), with blade sizes ranging from 4 to 6 inches and margins divided into linear or oblong segments.

Flowers: The flowers grow in clusters with many small heads on long, slender stems. Each flower cluster has an oval-shaped protective layer and is about the size of a small grape. The outer bracts are usually pale green, sometimes with a hint of pink, and are ovate. These bracts often have noticeable lines running through them and can feel smooth or slightly fuzzy. Each flower head contains around 30 to 40 smaller flowers. These can be pink, purple, or white.

Seeds: The seed cases are light in color, either whitish or pale brown, and are covered with fine pinkish hairs. The fluffy part of the seeds that help with wind dispersal is made up of stiff white bristles that grow up to 0.2 inches long.

Impact and Management

Livestock

Because it competes so aggressively, spotted knapweed is a serious threat to livestock forage. The plant releases a chemical compound called cnicin, which inhibits the growth of many native grasses. Studies show that spotted knapweed can reduce the yield of some native grasses by up to 88%, significantly limiting the amount of forage available for livestock.

Wildlife Habitat

The continued spread of spotted knapweed harms wildlife as well as agriculture. Studies have shown that elk forage the land 98% less in knapweed-infested areas than in regions with native bunchgrass. This suggests that the weed significantly impacts elk, which depend on diverse forage species for year-round food.

Erosion

The spread of spotted knapweed, which displaces native grasses, causes serious ecological problems. As these native grasses, such as blue grama and side oats grama in New Mexico, are replaced, it reduces the availability of forage for wildlife and livestock. Grasses are one of the most important factors for maintaining healthy soil, as they help to stabilize it and prevent erosion. Without them, the land becomes more vulnerable to flooding and fires.

Before attempting to eradicate this weed, long-term goals for land use should be set. Without a plan for effective revegetation, spotted knapweed, being a pioneer species, will quickly move back into a cleansed area, along with other undesirable weeds. To prevent spotted knapweed's spread, it is important to remove plants before they flower and release seeds, especially along roadsides, trails, or other high-traffic areas. Mechanical control can include digging up plants or mowing them before they set seed, though this must be done consistently to be effective.

DO's

- Monitor infestations regularly to catch new plants early and prevent further spread.
- Reseed disturbed areas with native or desirable plants/crops after removing spotted knapweed to encourage healthy, competitive vegetation.
- Remove plants before they flower to prevent seed production and spread.

DON'Ts

- Ignore small infestations—spotted knapweed can spread rapidly, so early intervention is critical.
- Allow seeds to disperse by failing to remove plants before they flower or by letting them go to seed.
- Disturb the soil unnecessarily—this can create an environment favorable to the spread of spotted knapweed.



For more information on managing spotted knapweed, please visit www.nmweeds.org

