

# SPOTTED KNAPWEED

*Centauria stoebe*



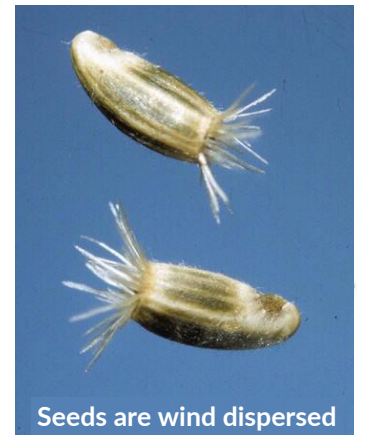
## WHAT IS IT?

Spotted knapweed (SK) is a perennial forb in the Aster family that was accidentally introduced from Eurasia around 1900. It has since spread throughout the western US and Canada. It releases chemicals from its roots that inhibit growth of surrounding plants, allowing it to invade established plant communities as well as disturbed areas. SK invasions greatly reduce plant diversity and wildlife habitat, replacing it with a plant that is unpalatable to most wildlife and livestock.

## HOW TO IDENTIFY SPOTTED KNAPWEED



### STEM AND LEAVES



SK forms a rosette of leaves its first year, and 3-foot-tall flowering stalks in subsequent years. Leaves are divided into long thin lobes. Stems are wiry and branched, giving the plant a bushy appearance. The entire plant is covered in small hairs giving it a rough texture and a grayish-green appearance

### FLOWERS

Flowers are clusters of narrow pink petals that emerge from an urn-shaped base. The base is covered with scaly black-tipped bracts that give the flowers a spotted appearance. These "spots" give SK its name and distinguish it from other knapweed species.

## REPRODUCTION AND SPREAD

### FRUITS/SEEDS

Flowers are insect pollinated to produce clusters of small oval fruits. A short bristly pappus at one end enables wind dispersal. SK produces up to 1,000 seeds per plant, which may remain viable in the soil for up to 7 years. Seeds can be spread by wind, water, wildlife, and human activities. Motorized vehicles are the greatest contributor to the spread of SK.

### ROOTS

SK produces a strong taproot as well as lateral roots. It releases a chemical from its roots that inhibits the growth of plants around it.

### LIFE CYCLE

First-year plants form a deep taproot and a rosette of leaves. In subsequent years, plants send up several flowering stalks that produce fruits and seeds. Once seeds are dispersed, the above-ground portion dies back, but the roots survive under the soil, awaiting the next growing season. SK continues this cycle each year, and may live for 2 to 5 years.



Seedhead mining weevils on SK



SK seed head destroyed by mining weevils



Root mining weevils in SK roots



Targeted grazing on SK

## HOW TO CONTROL IT

### PREVENTION

Human activities - especially motorized vehicles - are the greatest contributors to the spread of SK. Prevent this by avoiding driving through infested areas and by practicing *Play Clean Go*.

### MECHANICAL

SK can be hand-pulled or dug out with a tool, but entire root must be removed to assure it doesn't grow back. Any flower or seed heads should be bagged. Tilling will work on first-year rosettes, but does not kill the root of mature plants. Mowing is ineffective and not recommended.

### CHEMICAL

SK can be controlled using herbicide applied in the spring before flowering and to new rosettes in the fall. Herbicide that contains Aminopyralid or 2,4-D are effective.

### BIOLOGICAL

Biocontrol insects including root- and seed head mining weevils are helping to maintain lower populations of spotted knapweed. Goats and sheep can graze SK when it is young - before flowering - and this will reduce seed production.

### CULTURAL

Encourage competition from native plants by maintaining healthy native plant communities.

Thanks to Teton County Weed and Pest for creating this material.