

Scotch Broom (*Cytisus scoparius*)

Identification: A member of the pea family (Fabaceae), Scotch broom is a perennial deciduous shrub that reproduces by seed. Initially it grows quite rapidly, reaching 8 feet in height within the first two years, and up to 13 feet after 6-10 years. The stems are green when young and become woody as they age. They are angled (square or with edges) and have no spines. Leaves are alternate and trifoliate, or clover-like, except at the branch tips where they are simple. Flowers are bright yellow. The fruit is a flattened pod (resembling a sugar snap pea) up to 2 inches long and contains 5-9 seeds. Immature pods are green, and turn black as they age.

Impacts: Scotch broom can out-compete species for light and nutrients and form dense monospecific stands. It can impact conifer forests and has reduced biomass of juvenile Douglas-fir trees by as much as 96%. As a nitrogen fixer, it can modify nutrient levels. It is also toxic to livestock due to the presence of quinolizidine alkaloids, but it is rarely grazed. Livestock poisonings have been reported in Europe, but are very rare in the United States.

Habitat: Scotch broom prefers areas with mild winters and warm summers, but it can tolerate very cold conditions as well. It prefers a soil pH of less than 6.5, and is rarely found on limestone-derived or calcareous soils. It is typically found in disturbed areas—especially along roadsides and on road cuts, in pastures, open forests, gravel pits, and cultivated fields, but is also known to colonize undisturbed shrub and grass lands and open canopy forests located below 4,000 feet elevation. It is extremely shade tolerant, requiring as little as 10% ambient sunlight for seedling establishment, allowing for germination in shaded areas or under forest canopy.



Spread: In the Pacific Northwest, seed is commonly spread in gravel and by vehicles used for road construction associated with timber harvest. Locally, seeds typically don't fall more than 3 feet from the parent plant. Ants, which are attracted by a substance exuded by the seed, may disperse seed up to 15 feet or more.

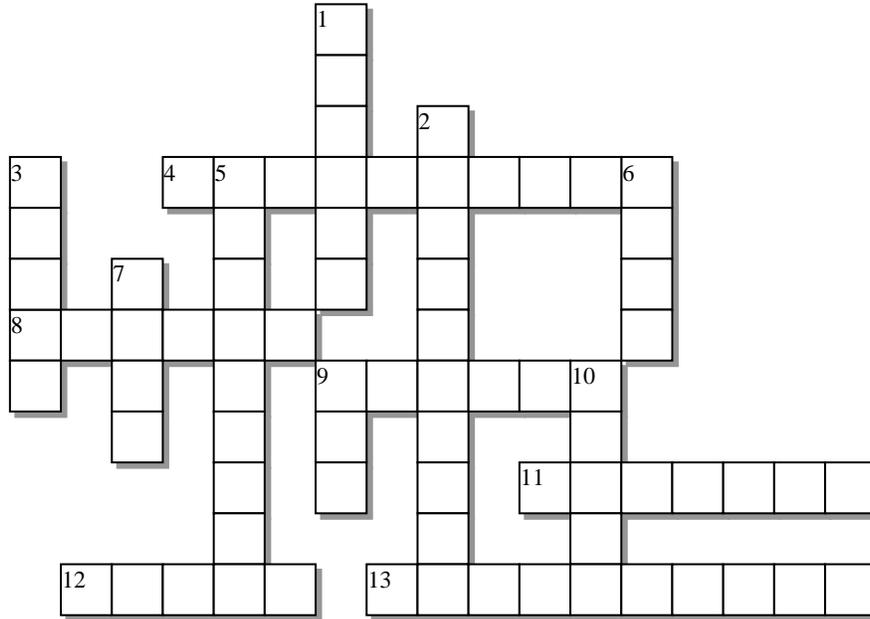
Management Priorities: Scotch broom is listed as a **Priority 1B** noxious weed in Montana. Because limited populations have been reported only in Sanders and Lincoln Counties, prevention is the top management priority. Learning to identify Scotch broom so it can be detected and eradicated early is

critical. Plants don't reproduce until the second year, but they can then produce up to 30,000 seeds that may last more than 30 years in the soil. For more information on this plant, see "Biology, Ecology and Management of Scotch Broom", EB 0202

<http://msuextension.org/publications/AgandNaturalResources/EB0202.pdf>



Weed Post Puzzle: Test your knowledge of Scotch broom



Across:

- 4 - U.S. state where Scotch broom is reported on more than 700,000 acres.*
- 8 - Except at the branch tips, leaves are trifoliate or _____-like.
- 9 - In California, grazing with _____ has been somewhat successful.*
- 11 - Montana county reporting Scotch broom.
- 12 - Color of immature Scotch broom pods.
- 13 - Based on Scotch broom's limited presence, _____ is the top management strategy.

Down:

- 1 - Mechanical control done at the end of summer which can reduce re-sprouting and population size if done repeatedly.*
- 2 - Dense infestations of Scotch broom have drastically reduced biomass of juvenile _____ trees.
- 3 - Color of mature Scotch broom pods.
- 5 - Scotch broom leaf arrangement.
- 6 - Six-legged organisms capable of dispersing seed 15 feet or more.
- 7 - Scotch broom is rarely found above _____ thousand feet in elevation.
- 9 - Scotch broom prefers soils with a _____ pH (less than 6.5).
- 10 - Scotch broom plants are very tolerant of _____, allowing them to invade forests.

*Refer to the Extension Bulletin for answers to these questions.
 Solutions posted at the MSU Extension Invasive Rangeland Weed website:
<http://www.msuextension.org/invasiveplantsMangold/extensionsub.html>

