

Perennial Pepperweed (*Lepidium latifolium*)

Identification Perennial pepperweed plants have upright, multi-branched stems, growing from a semi-woody crown and creeping rhizomes. Plant grow 1-3 feet tall, but may reach eight feet in wet areas. Basal leaves have a prominent white mid rib and are up to 12 inches long and 3 inches wide. Leaf margins are entire or toothed. Stem leaves are smaller, lanceolate, and with a less prominent mid rib. Ball-like clusters of small white flowers grow at branch ends and bloom in early summer. Given adequate moisture, flowering may continue until fall. The seeds are in a pod-like structure called a silicle (see inset drawing). Perennial pepperweed may be confused with another member of the Brassicaceae family, whitetop (*Cardaria* spp.). Upper leaves of perennial pepperweed do not clasp the stem like whitetop. Additionally, perennial pepperweed silicles are flattened, while whitetop silicles are round or inflated.

Impacts Perennial pepperweed may be highly invasive given the right conditions. It can form dense stands which have the potential to displace native plants and animals, decrease plant diversity, and reduce nesting frequency of waterfowl in or near wetlands.



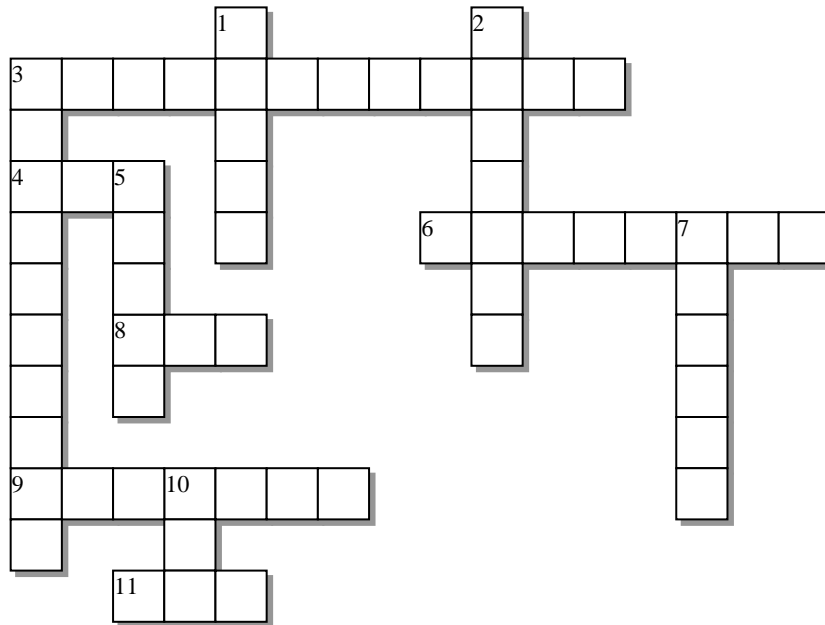
Habitat Perennial pepperweed occurs in riparian areas, marshes, estuaries, irrigation channels, wetlands, and floodplains. It also occurs along roadsides, hay meadows, alfalfa fields, and rangeland habitats. It is less common in undisturbed areas.

Spread Plants spread by seed, rhizomes, and root fragments. Seeds have no mechanism for long distance dispersal, but they are easily transported by water. Seeds have a mucilaginous cover which makes them buoyant. Seeds can also survive through the digestive tract of livestock. Seedlings are not commonly observed, so spread by seed is not believed to

be a major source of population growth. By contrast, spread by rhizomatous growth can be as great as 10' per year. Long distance dispersal is possible when tiny root fragments (< 2" long) are moved off site via farming equipment or other disturbance. They can regenerate even if dried for three days in the sun.

Management Priorities Perennial pepperweed is a priority 2B noxious weed in Montana and has been reported from 18 counties. Management shall be prioritized by local weed districts. Control is easiest in small, recently established patches. Survey riparian areas, irrigation canals and other suitable habitat regularly to identify and eradicate new infestations before they establish. Target these aggressively before the root system develops and expands. For well-established patches, combining herbicides with mowing (at the flower bud stage) may improve herbicide efficacy. Following control with herbicides, revegetation is strongly recommended to provide long term control. Monitoring is recommended after plants appear to be eradicated as roots may remain dormant for several years. For more information refer to Invasive Species Technical Note No. MT-11 "Ecology and Management of Perennial Pepperweed" at ftp://ftp-fc.sc.gov.usda.gov/MT/www/technical/invasive/Invasive_Species_Tech_Note_MT11.pdf

Weed Post Puzzle: Test your knowledge of Perennial pepperweed



Across:

- 3 - In water, this phlegm-like film forms on the seed, allowing them to float
- 4 - Survey suitable habitat regularly as control is easiest in _____ infestations
- 6 - Plants can spread by seed, root fragments and creeping _____
- 8 - Rhizomatous growth can be as great as _____ feet per year
- 9 - Waterfowl _____ frequency may be reduced by dense stands of perennial pepperweed
- 11 - For well-established patches, recommendations are to _____ at flower bud stage, and then apply herbicide to regrowth

Down:

- 1 - Unlike perennial pepperweed, whitetop leaves _____ the stem
- 2 - Leaf margins are entire or _____
- 3 - Think that's all she wrote? Keep _____ after plants appear eradicated as they can remain dormant for several years
- 5 - Clusters of _____ flowers grow at branch ends
- 7 - Basal leaves have a prominent white _____
- 10 - Root fragments as small as _____ inches can regenerate into new plants

Solutions are posted to the MSU Extension Invasive Rangeland Weed website:

<http://www.msuextension.org/invasiveplantsMangold/extensionsub.html>

