

PERENNIAL PEPPERWEED

Lepidium latifolium L.

Family: *Brassicaceae* (Mustard).

Other Scientific Names: None.

Other Common Names: Tall whitetop, broad-leaved peppergrass, Virginia pepperweed.

Legal Status: Regional Noxious: East Kootenay, Thompson-Nicola.

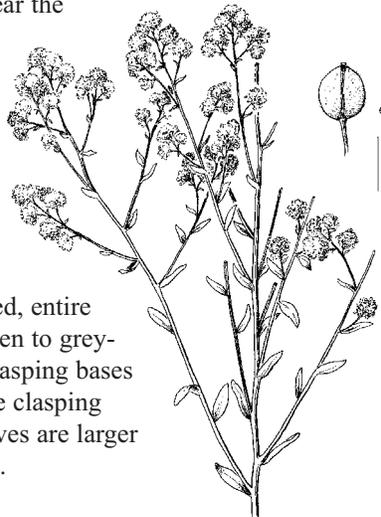


Growth form: Perennial forb.

Flower: White flowers are packed in dense clusters near the ends of branches.

Seeds/Fruit: Fruits are nearly round, about 2 mm in diameter, and usually sparsely hairy.

Leaves: Leaves are alternate, lance-shaped, entire to toothed, bright green to grey-green, and without clasping bases (whitetop leaves have clasping bases). The basal leaves are larger than the upper leaves.



Stems: Mature plants are 0.5–2.0 m tall.

Roots: Perennial pepperweed roots grow deep into the soil.

Seedling: No information available.

Other: The leaves and stem are covered with a waxy layer (Whitson et al. 1996).

Similar Species

Exotics: Whitetop (*Cardaria draba*) leaves have clasping bases; perennial pepperweed can also be distinguished by its waxy appearance.

Natives: Many native members of the sunflower (*Asteraceae*) family resemble this species in the rosette stage.



Impacts

Agricultural: Invades irrigated pastures, cropland, and native meadows (FEIS 1996).

Ecological: Aggressively colonizes riparian habitats and can eliminate competing vegetation (FEIS 1996).

Human: No information available.

Habitat and Ecology

General requirements: In BC, perennial pepperweed, although rare, grows on beaches and tidal shores, along roadsides, in fields and disturbed habitats. Outside the province it is most often found in open, unshaded areas on disturbed and often saline soils. Perennial pepperweed is locally common in riparian areas, marshy flood plains, valley bottoms, and seasonally wet areas from 1,675 to 2,750 m.

Distribution: Perennial pepperweed is known from Vancouver and Windermere (Douglas et al. 1998) and

also from Cranbrook (1997) and Walachin (1998). It is considered a major concern in the Kootenay and Thompson agricultural reporting regions. This weed is found throughout much of the western US.

Historical: Introduced from Eurasia.

Life cycle: Dense flower clusters appear in early summer and continue through August.

Mode of reproduction: By seed and vegetatively from roots.

Seed production: Perennial pepperweed produces an abundance of highly germinable seeds. Seed production is from June to August.

Seed bank: Seeds have no apparent dormancy.

Dispersal: Seeds drop from the plant or travel short distances by wind and water.

Hybridization: No information available.

Management

Biocontrol: None.

Mechanical: Periodic mowing and spring burning have reduced perennial pepperweed density in Utah (FEIS 1996).

Fire: (See above.)

Herbicides: Metsulfuron-methyl is the most effective herbicide in the US. Dicamba, glyphosate, chlorsulfuron, imazapyr, and a combination of glyphosate and 2,4-D have also been effective in the US. Consult the most recent edition of BC Ministry of Agriculture, Food and Fisheries Crop Production Guides for specific recommendations. **Before applying herbicides, read the label for full use and precautionary instructions.**

Cultural/Preventive: Cutting and pulling can manage this weed if plants are treated before seed-set.

Integrated Management Summary

Cutting or pulling, combined with herbicide applications, can provide effective management of perennial pepperweed. Plants should be cut or pulled during the flower bud stage and herbicides applied to the recovering stems before they set seed.

References

Douglas, G. W., D. Meidinger, and J. Pojar, eds. 1998. *Illustrated Flora of British Columbia*. Vol. 2: *Dicotyledons (Balsaminaceae through Cuscutaceae)*. Province of British Columbia.

FEIS—Fire Effects Information System. 1996. Prescribed Fire and Fire Effects Research Work Unit, Rocky Mountain Research Station (producer), US Forest Service. <http://www.fs.fed.us/database/feis/> [12 Mar 98].

Whitson, T. D. (ed.), L. C. Burrill, S. A. Dewey, D. W. Cudney, B. E. Nelson, R. D. Lee, R. Parker. 1996. Perennial pepperweed. *Weeds of the West*. Western Society of Weed Science, in cooperation with the Western United States Land Grant Universities Cooperative Extension Services, Newark, CA.

