

SHEPHERD'S-PURSE

Capsella bursa-pastoris (L.) Medic.

Family: *Brassicaceae* (Mustard).

Other Scientific Names: None.

Other Common Names: None.

Legal Status: Not categorized.



Identification

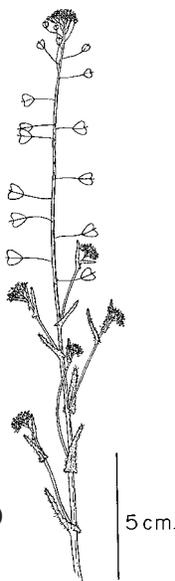
Growth form: Annual or winter annual.

Flower: The inflorescence is a long, many-flowered raceme. Flowers are clustered at the end of slender, spreading stalks 7–15 mm long (Douglas et al. 1998). Each tiny flower has 4 notched petals.

Seeds/Fruit: Fruit are flattened triangular or heart-shaped pods resembling a purse. Stalks elongate after the pods develop.

Leaves: Basal leaves are stalked, deeply lobed, and hairy, and form a rosette. Stem leaves are alternate and unstalked, and clasp the stems.

Stems: Stems are erect and simple or branched at the base. Stems grow 10–90 cm tall and are covered with grey hairs.



Roots: Thin, branched taproot.

Seedling: Cotyledons are rounded and long-stalked with a grainy appearance. The first true leaves are opposite with numerous star-shaped hairs (Royer and Dickinson 1999).



Similar Species

Exotics: Stinkweed (*Thalspi arvensis*) also has flattened seed pods on stalks along a raceme, but it has much larger seed pods and the whole plant is completely smooth.

Natives: Some species of rock cress (*Arabis* sp.) resemble shepherd's purse, but none have the distinctive purse-shaped pods.



Impacts

Agricultural: This weed of cultivated fields, row crops, hayfields, and pastures can seriously reduce crop yield. It is a host to many viral diseases as well as to a fungus that attacks vegetables in the mustard family (Royer and Dickinson 1999).

Ecological: Common on disturbed areas in native plant communities but impacts poorly understood.

Human: No information available.

Habitat and Ecology

General requirements: This plant grows under a wide range of environmental conditions. It is found in cultivated fields, hayfields, gardens, and roadsides and other disturbed areas. It is commonly found on slash piles on logged areas.

Distribution: Shepherd's purse grows in all agricultural regions of the province and is found in temperate regions around the world.

Historical: Introduced from Eurasia.

Life cycle: The annual form germinates in the spring or summer and produces seed the first year. Winter annuals germinate late in summer or in autumn, overwinter as rosettes, and set seed the following year.

Mode of reproduction: By seed.

Seed production: One plant may produce up to 40,000 seeds.

Seed bank: Both dormant and non-dormant seeds are formed. Non-dormant seeds germinate readily at high or alternating temperatures and account for seedlings emerging late in the season. Dormant seeds are very long-lived in the soil and will remain dormant if buried deeper than 2 mm (Holm et al. 1977). Dormancy can be broken with exposure to light following a period of cool temperatures (below 15°C). These conditions are met with spring tillage.

Dispersal: Seeds can be dispersed through ingestion by birds or animals, or spread on vehicles, on equipment, or in hay.

Hybridization: None known.

Management

Biocontrol: None.

Mechanical: Small infestations can be hand-pulled or tilled. Frequent cultivation of summerfallow or unplanted areas will bring seeds to the surface and maximize germination. Repeated harrowing may be required in infested fields before reseeding.

Fire: Fire is ineffective.

Herbicides: Numerous herbicides are available for control of shepherd's purse. Their selection depends on the crop and environmental conditions. 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: Monitor disturbed areas for new outbreaks. Maintain strong perennial stands in pastures.

If necessary, reseed deteriorating stands. Prevent seed-set on established infestations by mowing or herbicide application.

Integrated Management Summary

Integrated management may require a combination of mechanical, cultural, and chemical treatments, depending on an infestation's size and location. On cropland, this plant can be a significant weed, but on non-cropland it is often regarded as a nuisance with little ecological impact.

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.

Holm L. G., D. L. Plucknett, J. V. Pancho, and J. P. Herberger. 1977. *The World's Worst Weeds—Distribution and Biology*. Honolulu: University of Hawaii Press.

Royer, F., and R. Dickinson. 1999. *Weeds of Canada and the Northern United States*. Edmonton: University of Alberta Press.

