

# FLIXWEED

## *Descurainia sophia* (L.) Webb ex Prantl

**Family:** *Brassicaceae* (Mustard).

**Other Scientific Names:** None.

**Other Common Names:** Flixweed tansymustard, herb-sophia, fine-leaved hedge mustard.

**Legal Status:** Not categorized.



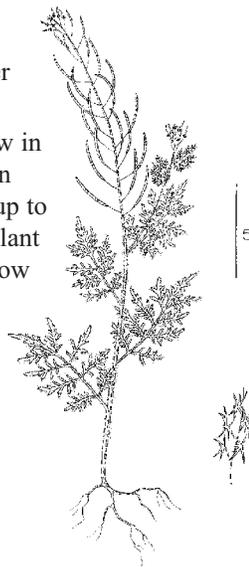
### Identification

**Growth form:** Winter annual forb.

**Flower:** Flowers grow in racemes, which lengthen when in fruit. These racemes may grow up to one-half the total height of the plant (FEIS 1996). The petals are yellow to greenish yellow and very small.

**Seeds/Fruit:** Seeds are borne in linear pods that are 11–33 mm long.

**Leaves:** Leaves are alternate, 2–3 times pinnately compound.



**Stems:** Mature plants are 0.3–1.0 m tall.

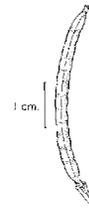
**Roots:** Flixweed has a slender taproot.

**Seedling:** Narrow, stalked seed leaves (cotyledons).

### Similar Species

**Exotics:** None known.

**Natives:** Tansy mustard (*Descurainia pinnata*) is easily confused with flixweed but has leaves that are only 1–2 times compound.



## Impacts

**Agricultural:** In cultivated areas, can crowd out crop plants and reduce yields (Mitich 1996).

**Ecological:** As an introduced species, flixweed has spread very rapidly across portions of the intermountain West (Morishita 1991).

**Human:** No information available.

## Habitat and Ecology

**General requirements:** Flixweed is found growing in disturbed habitats, fields, roadsides, and logged-over forests. It grows on a wide variety of soil types, but it is most abundant on dry, disturbed sites. It is often found along roadsides and ditches where mineral soil has been exposed (FEIS 1996).

**Distribution:** Frequent throughout BC at low- to mid-elevations and present in all agricultural reporting regions except the Queen Charlotte Islands and

adjacent coast (Douglas et al. 1998). It is common throughout North America.

**Historical:** Introduced from Europe.

**Life cycle:** Flixweed is an early-blooming winter annual or biennial and is one of the first weeds to appear in the spring. Flowering occurs from March through July, depending on geographic location. Flixweed spreads by seeds from early to late summer. Flixweed is an early seral species that quickly invades

areas of exposed mineral soil with reduced plant cover. It can survive in dense stands for a few years if undisturbed but is generally replaced by other seral species (FEIS 1996). In later seral stages, flixweed competes poorly with perennial grasses and forbs.

**Mode of reproduction:** By seed.

**Seed production:** Large plants can produce as many as 700,000 seeds (Rutledge and McLendon. Undated).

**Seed bank:** The seeds can remain viable for up to 3 years (Morishita 1991).

**Dispersal:** Seeds are mucilaginous when wet, which may facilitate dispersal by animals or increase adherence to soil particles (FEIS 1996).

**Hybridization:** No information available.

## Management

**Biocontrol:** None.

**Mechanical:** Can be managed through cultivation or hand-pulling in the autumn or early spring as long as the rosettes are small.

**Fire:** Plants are killed by fire at all stages, but seeds readily colonize burned areas (FEIS 1996).

**Herbicides:** Metsulfuron-methyl, chlorsulfuron, and 2,4-D all provide management of flixweed in the US (Morishita 1991). Herbicides should be applied during seedling growth stage for effective management (Whitson et al. 1996). 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:** Prevent new infestations by minimizing disturbance and seed dispersal, eliminating seed production, and maintaining native communities.

### Integrated Management Summary

Land management practices that maintain perennial grass communities will prevent the spread of flixweed. It can be managed by eliminating seed production until the soil seed bank is depleted. Cut, pull, or treat plants with herbicide prior to seed-set. Seed disturbed areas with perennial grasses to provide competition.

## 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].

Mitich, L. W. 1996. Intriguing world of weeds, flixweed (*Descurainia sophia*). *Weed Technology* 10: 974–977.

Morishita, D. W. 1991. Dalmatian toadflax, yellow toadflax, black henbane, and tansy mustard: Importance, distribution, and management. In L. F. James, J. O. Evans, M. H. Ralphs, and R. D. Child, eds. *Noxious Range Weeds*. Boulder, CO: Westview Press.

Rutledge, C. R., and T. McLendon. Undated. An assessment of exotic plant species of Rocky Mountain National Park. Department of Rangeland Ecosystem Science, Colorado State University. Northern Prairie Wildlife Research Center Home Page. <http://www.npwrc.usgs.gov/resource/othrdata/Explant/explant.htm> [15 Dec 98].

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

