



Last Updated 27-04-2011

Common Mullein (*Verbascum thapsus*)

aka Flannel Plant, Velvet Plant, Lungwort, Feltwort, Jacob's Staff, Torchplant

Provincial Designation: Noxious

Overview:

Common mullein, a biennial in the figwort family, is native to Asia. It was deliberately introduced to the United States in the 1600s as both a medicinal herb and a fish poison. Historically it has been used to treat a variety of ailments ranging from coughs to earaches.¹

Common mullein naturalized and rapidly spread west after introduction. Currently it is not a weed of cultivated crops.² However, it can overtake and displace native species in disturbed areas.³ It is also thought to serve as an alternate host for insects which can attack apples and pears.²

Common mullein is a high seed producer. A single plant may develop as many as 240,000 seeds. The seeds have no specialized structures for dispersal so most fall in close proximity to the parent plant. Research has shown that the seeds can remain viable in the soil more than 100 years.²



Photo by Steve Dewey, Utah State University, Bugwood.org

Habitat:

A colonizing species, common mullein will readily establish in disturbed areas with well-drained, sandy or gravelly soils.³ It is intolerant of shade and is frequently found along roadsides, rights-of-way and waste areas. Common mullein also grows in meadows, pastures and forestry cut blocks. It is one of the first species to appear on recently burned sites.²

Identification:

Stems: Erect, 0.3-0.2 m in height with few to no branches.¹ Stems appear ridged and are densely wooly-hairy.⁴ Mature stems from the previous season are brown and often remain standing through the winter.⁵

Leaves: Rosette leaves are grey-green, 5-40 cm long and wooly-hairy or felt-like.² Upper leaves are alternate and smaller (10-30 cm long) with bases that extend down the stem.⁴

Flowers: Bright yellow (rarely white) flowers are produced in 20-50 cm spike-like racemes. Individual flowers mature from the bottom to top in a spiral pattern.⁴ Each flower is 5-lobed and nearly regular in shape.²

Seeds: Brown, irregular, oblong seeds (0.5-



Photo by Mary Ellen (Mel) Harte, Bugwood.org

0.7 mm long) are located in two compartment capsules. The surface of each seed has longitudinal grooves and ribs.²

Prevention:

The key to prevention is to avoid disturbance from machinery, vehicles and overgrazing.⁵ Common mullein is highly unpalatable to cattle and sheep so maintenance of proper stocking rates will help curtail spread in pastures or rangeland.⁶ Sources for soil used in construction should be checked to ensure they are mullein-free. Contaminated soil used for building highways and buildings is believed to have been a major means for dispersal of this plant in the past.² Small infestations of common mullein are easily hand-pulled or hoed. If flowers or seeds are present, plants should be bagged and burned.⁷

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Common Mullein *(continued)*

Control:

Cultural: Seeding bare ground with early successional native grasses and forbs will decrease the establishment of common mullein on disturbed sites.⁷

Mechanical: Where feasible, tillage provides good control of common mullein rosettes.⁸ Mowing is less effective since the rosettes will continue to develop after cutting. Once mowing ceases, the plants will produce axillary branches that can flower later.⁶

Chemical:⁸ Common mullein is difficult to kill with herbicides because the thick, woolly hairs prevent chemicals from reaching the leaf surface.² At the present time glyphosate-based products are considered the most effective control for common mullein. Care must be taken to protect non-target vegetation when using non-selective herbicides. Product labels should be checked carefully to ensure use is approved. Consult your local Agricultural Fieldman, Certified Pesticide Dispenser or IPM Specialist for more information.

Biological: A weevil, *Gymnaetron tetrum*, was accidentally introduced to North America from Europe. The larvae destroy up to 50% of the seeds, but not enough to keep populations in check.⁴ Another agent, the mullein moth (*Cucullia verbasci*) is currently being researched in the United States.⁷

REFERENCES

- 1 Mitich, L.W. 1989. Common Mullein – The Roadside Torch Parade. *Weed Tech.* 3: 704-705
- 2 Invasive Plants of California's Wildland – *Verbascum thapsus* <http://www.cal-ipc.org/ipc/management/ipcw/pages/detailreport.efm?usernumber=87&surveynumber=182.php>
- 3 United Forest Service Weed of the Week – Common Mullein http://www.na.fs.fed.us/fhp/invasive_plants/weeds/common-mullein.pdf
- 4 Gross, K.L. and P.A. Werner. 1978. The Biology of Canadian Weeds. 28. *Verbascum thapsus* L. and *V. blatteria* L. *Can. J. Plant Sci.* 58: 401-413
- 5 Common Mullein: Options for Control <http://www.co.lincoln.wa.us/weedboard/biocontrol/COMMON%20MULLEIN%20BROCHURE.pdf>
- 6 Common Mullein – *Verbascum thapsus* Fact Sheet http://sbse.wr.usgs.gov/research/projects/swepic/factsheets/vethsf_info.pdf
- 7 Plant Conservation Alliance Fact Sheet: Common Mullein <http://www.nps.gov/plants/alien/fact/pdf/veth1.pdf>
- 8 Always follow the product labels. The use of pesticides in any manner not published on the label or registered under the *Minor Use of Pesticides* regulation constitutes an offence under both the *Federal Pest Control Products Act* and *Alberta's Environmental Protection and Enhancement Act*.



Photo by Richard Old, XID Services Inc., Bugwood.org



Leaves

Photo by Forest & Kim Starr, Starr Environmental, Bugwood.org



Seeds

0.5 mm

Photo by Steve Hurst, USDA NRCS PLANTS Database, Bugwood.org



Mature Stem

Photo by Richard Old, XID Services Inc., Bugwood.org