

# Great Mullein

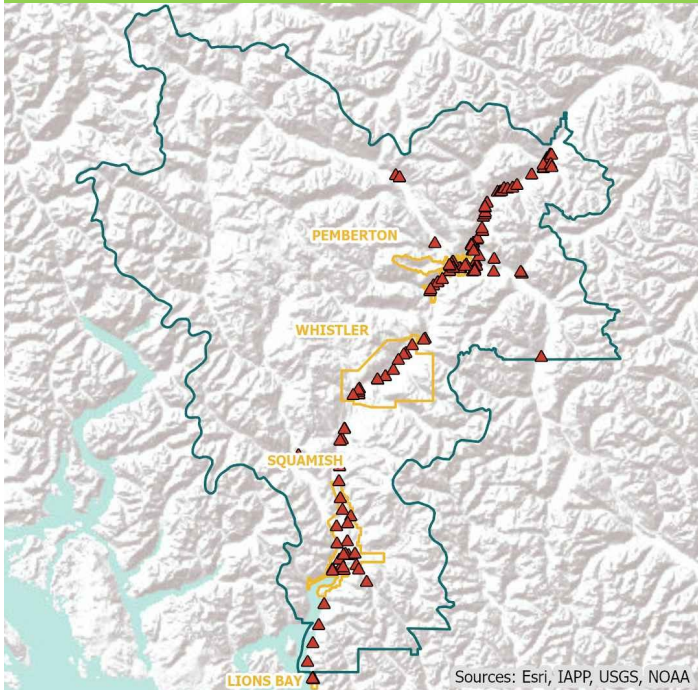
*Verbascum thapsus*

Common Mullein — Cow's lungwort — Velvet plant — Adam's flannel

FACT SHEET

Squamish: No action | Whistler: No action | Pemberton: No action

## DISTRIBUTION



**Origin:** Great Mullein was introduced from Eurasia to North America in the mid-1700's as an ornamental plant. Evidence indicates that Great Mullein use ranged from medicinal and ceremonial to fish poison!

**Habitat:** Great Mullein thrives on open, disturbed land. It is intolerant to shade and does not compete well with vibrant, established native plant communities. Great Mullein is often the first species to appear at burned sites, along railroads, fence rows, fields, pastures, roadsides and gravel pits.

**Reproduction:** Great Mullein reproduces by seed. Each seed capsule (see Fruits section) contains hundreds of seeds, so a single plant may develop as many as 240,000 seeds. Moreover, Mullein seeds are persistent: one study successfully germinated seed samples within soil dated to 1300 A.D.!

## IDENTIFICATION



**Overview:** Great Mullein is best known for its bright yellow candle-like flower columns and prevalence on roadsides, fields and pastures. As a biennial, this herb spends year one as rosette of felt leaves, waiting until the following year to flower.

**Flowers:** Dense clusters of small sulphur yellow flowers. Each flower is 5-lobed and approx. 1.5 - 3 cm across.

**Stems:** Tall, erect, hairy stems which can grow up to 2 m tall. Through the summer the stems are green, whereas in the winter they are brown.

**Leaves:** Are 10 - 45 cm long, lance-shaped, grey-green, and woolly. Basal leaves (the leaves closest to the ground) are arranged in a rosette. Stem leaves grow in an alternate pattern.

**Roots:** Root size and depth may vary by site, but Great Mullein generally has relatively a shallow taproot.

**Fruits:** Small, woolly, egg-shaped capsules that contain many seeds. The brown seeds are 0.5 - 0.7 mm across.

### Similar Species

- **Native:** Moth Mullein (*Verbascum blattaria*)
- **Invasive:** Common Foxglove (*Digitalis purpurea*), Common Comfrey (*Symphytum officinale*)

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**Vectors of Spread:** Great Mullein has no morphological adaptations for long-distance seed dispersal; therefore, most seeds fall very close to the parent plant. However, Great Mullein's long-lived seed bank makes transport of contaminated soil a possible long-distance vector of spread.

#### WHAT CAN I DO?

Great Mullein is found throughout the Sea to Sky Region, so PREVENTION of further spread is key:

- **Regularly monitor properties** for weed infestations.
- **Remove plant material from any equipment**, vehicles or clothing used in infested areas and wash equipment and vehicles at designated cleaning sites before leaving infested areas.
- **Ensure soil and gravel** are uncontaminated before transport.
- **Minimize soil disturbances** (e.g., use grazing plants that prevent soil exposure from overgrazing), and use seed mixes with dense, early colonization (e.g., alfalfa or barley) to re-vegetate exposed soil and resist invasion.
- Ensure invasive plant (particularly flowering heads or root fragments) are **bagged or covered** to prevent spread during transport to designated disposal sites (e.g., landfill). **Do NOT compost.**

Great Mullein can be controlled by:

- **Mechanical Control:** Hand-pull plants that grow on loose soil; for harder soils, use a spade or shovel to cut the taproot. Try to minimize soil disturbance, since it will encourage seed germination. If blooms or seed capsules are present, remove and bag them before disposing of them appropriately. Mowing new plants (when they are 30 - 60 cm tall) can reduce population and seed production for the season, especially in dry years.
- **Chemical Control:** Herbicide application is most effective when the rosettes have 6 - 12 leaves but before the stem starts to grow, usually in May to mid-June. Due to the woolly leaves, the use of a surfactant is recommended. Consider re-treating sites more than once to tackle the long-lasting seed bank. Aminopyralid + metsulfuron methyl; aminopyralid; metsulfuron methyl; chlorsulfuron; picloram; picloram + 2,4-D; glyphosate; chlorsulfuron + metsulfuron methyl; and aminopyralid + 2,4-D are all considered effective on Great Mullein. Note that picloram is not suitable for wet, coastal soils. We recommend that any herbicide application is carried out by a person holding a valid BC Pesticide Applicator Certificate. Before selecting and applying herbicides, you must review and follow herbicide labels and application rates; municipal, regional, provincial and federal laws and regulations; species-specific treatment recommendations, and site-specific goals and objectives.
- **Biological Control:** Some biological agents exist, including seed feeding weevils (*Rhinusa tetra*), curculionid weevil (*Gymnaetron tetrum*) and mullein moth (*Cucillia vergasci*), which is currently being studied in the US.

**If you suspect you have found Great Mullein anywhere in the Sea to Sky region:**

**Contact** the Sea to Sky Invasive Species Council to report and for the most recent, up to date control methods. All reports will be kept confidential.

**References:** Alberta Invasive Species Council, Canadian Science Publishing, Eflora BC, Garden Guides, Government of BC, Government of Ontario, Lincoln County Noxious Weed Control Board, Matthaei Botanical Garden, Peace River Regional District, The Wildlife Trust, UC Davis, USDA.

## IMPACTS

#### Ecological:

- Reduces biodiversity.
- Unpalatable to livestock due to its woolly leaves.

#### Economic:

- Established stands are extremely difficult and costly to control (see Reproduction section).
- Reduces crop or forage yield.

#### Health:

- Star-shaped, felted hairs can cause skin irritation.



Government of Ontario

## REPORT SIGHTINGS

Visit [ssisc.ca/report](https://ssisc.ca/report)

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Sea to Sky Invasive Species Council | [www.ssisc.ca](https://www.ssisc.ca) | 604-698-8334 | [info@ssisc.ca](mailto:info@ssisc.ca)