

# Holcus lanatus

COMMON VELVET-GRASS

<b>ENGLISH NAMES</b>	common velvet-grass, Yorkshire fog, tufted softgrass, meadow soft grass, velvetgrass, mesquite, mesquite grass
<b>SCIENTIFIC NAME</b>	<i>Holcus lanatus</i>
<b>FAMILY</b>	Poaceae or Gramineae (Grass)



Photo Credit: © STEVE MATSON

Common velvet-grass is a greyish, softly hairy, tufted perennial grass that forms dense mats.

## RANGE/KNOWN DISTRIBUTION

Common velvet-grass is native to Europe and has been introduced as an agronomic grass throughout Asia, Africa, New Zealand, Australia and the sub-Arctic. It was also introduced to North America. It has escaped cultivation and is well established from Alaska to California west of the Cascade Mountains. It is found in wetter sites in Garry oak ecosystems in British Columbia.

## IMPACTS ON GARRY OAK AND ASSOCIATED ECOSYSTEMS

Non-native grasses such as common velvet-grass are present in most Garry oak ecosystems and may comprise over 30 percent of the vegetation. Velvet-grass invades disturbed sites more rapidly than native species and will persist as a dominant species. Velvet-grass competes aggressively for water and nutrients and forms dense swards that shade out the seedlings of native plants and may negatively impact plants at risk in Garry oak ecosystems.

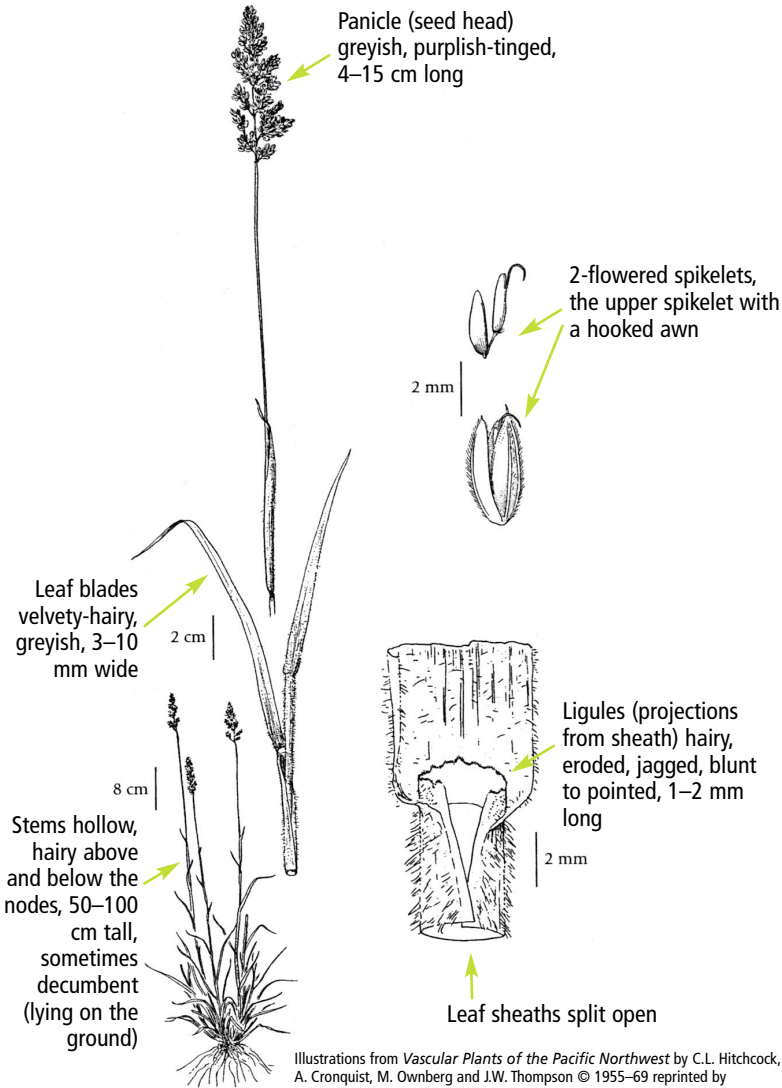
Non-native grasses can affect the amount and quality of litter, alter nutrient cycling and significantly change the plant composition in ecosystems. Velvet-grass can also alter soil chemistry and modify the composition and quantity of soil microbes and fungi.

## FIELD DESCRIPTION

Common velvet-grass is a hairy, perennial grass that grows 50-100 cm tall. The panicle (seed head) is often purplish and ranges from spike-like (compressed against the stem) in the spring to more open later in the season. The soft velvety leaves are the most consistent feature for identification of velvet-grass.

Expert consultation may be required as grass identification may be difficult.

# HOLCUS LANATUS



## LIFE HISTORY

Common velvet-grass seeds have high germination rates and do not require any special conditions, such as cold stratification, to germinate. The seeds are present in large numbers in the seed bank. Velvet-grass can also reproduce from decumbent tillers (stems that lie on their sides and grow roots). Growth begins early in the spring and seeds are set in the fall. Velvet-grass has a relatively short life span.

## HABITAT

Common velvet-grass is found on nutrient poor, moist soils in lawns, fields and disturbed areas such as roadsides and clearings. It aggressively invades wet, mildly acidic soils and prefers sunny or semi-shaded areas. It is favoured by disturbance and fertilization.

In Garry oak ecosystems, velvet-grass is limited to wetter sites, deeper soils, seepage areas and pasture land.

## MANAGEMENT

Early detection and removal of isolated individuals before the population becomes established is the best control option for common velvet-grass. It is very difficult to remove once established. The highest priority should be placed on control or removal of velvet-grass in the areas of highest conservation value, such as areas with rare or endangered plants.

**Develop a long-term, realistic program for invasive species removal before undertaking any work. Before taking action, expert advice should be obtained. Please refer to the introductory section of this manual.**

**PHYSICAL CONTROL:** For small patches of velvet-grass, hand-pulling or careful hoeing of the grass clumps can be effective in early summer before the seeds set, but this is very labour intensive. It can also be difficult, as non-native grasses will likely be mixed with native species. Carefully identify native and non-native species before starting removal of non-native grasses. It is very important to minimise soil disturbance when hand-pulling.

**BIOLOGICAL CONTROL:** No known biological agents are available.

**CHEMICAL CONTROL:** Nonselective herbicides will kill velvet-grass but will also kill native plants. Selective herbicides, such as fluzafop and sethoxydim, will kill only broad-leaved grasses but will not harm sedges, wildflowers or fine-leaved grasses such as the native Roemer's fescue (*Festuca idahoensis* ssp. *roemeri*). Herbicides are most effective on seedlings and adults as the flower heads emerge. Several applications may be needed for full control.

*Herbicides should only be used with extreme caution, and under expert advice, in sensitive Garry oak ecosystems.*

**OTHER TECHNIQUES:** Intensive grazing seems to control velvet-grass, but this technique is not appropriate in sensitive Garry oak ecosystems. Low intensity grazing may allow velvet-grass to spread and increase because it is less palatable than other grasses.

# H O L C U S   L A N A T U S

Mowing can prevent further invasion of velvet-grass. Mowing should be done before the velvet-grass sets seed but after the wildflowers have set seed (early to mid-July); there is a very narrow window of time for effective control. Mowing too early or too late can cause velvet-grass to increase. Mowing should be repeated and intensive to be effective.

Repeated plowing severs the young tillers from the adults and helps control velvet-grass, but this technique should only be applied in highly degraded sites where there are no native species.

Prescribed burns are not effective for controlling velvet-grass, as it increases in Garry oak ecosystems after fires.

**PREVENTATIVE MEASURES:** The best way to minimise the invasion and spread of common velvet-grass is to prevent soil disturbance in natural areas. The use of fertiliser should be avoided in Garry oak areas where velvet-grass is present because fertiliser can favour this species. Encourage plant nurseries, gardeners and farmers to stock and use native or non-invasive species and avoid using non-native invasive grasses such as velvet-grass.

**PERSISTENCE:** Control of well-established infestations of common velvet-grass is very difficult because of the large seed bank. Seeds are spread in contaminated grass seed, mud and animal manure, and by attaching themselves to clothing or the fur of animals.

## GENERAL COMMENTS

Common velvet-grass is most distinctive early in the morning when dew clings to the hairs on the stem and leaves. This is the best time of day to mark isolated individuals for future control.

## REFERENCES

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**For more information contact the Garry Oak Ecosystems Recovery Team, or see the website at [www.goert.ca](http://www.goert.ca)**