

Old Man's Beard

Clematis vitalba
Ranunculaceae

**Class C Noxious Weed
Control Recommended**

Legal Status in King County: Old man's beard is a Class C noxious weed according to Washington State Noxious Weed Law, RCW 17.10 (non-native species that can be designated for control based on local priorities). The State Weed Board has not designated this species for control in King County. The King County Weed Control Board recommends control of this species where feasible, but does not require it.

BACKGROUND INFORMATION

Impacts and History

- Old man's beard smothers trees, causing them to weaken, then to collapse.
- Fast growing, new shoots can grow at least 6 feet per year, older plants 30 feet per year.
- Reduces biodiversity in the understory by blocking light and out-competing native plants and tree seedlings.
- Increases fire hazards.
- Toxic if ingested and causes severe dermatological reactions in some people.
- Native to Europe, Africa and southwest Asia.
- Ornamental escapee in Washington, first introduced to San Juan County in 1904.
- Was introduced to New Zealand in 1922, had spread by 1935 and is now considered naturalized and very difficult to control there.



Description

- Deciduous woody climbing vine, that can grow up to 65 feet long and can also act as a ground cover in absence of trees to climb.
- Pinnate compound leaves with five leaflets, smooth to lobed.
- Flowers with creamy white petal-like sepals, no actual petals, and both male and female parts on same flower.



- Seeds are gray achenes with long, feathery appendages, giving them a fluffy appearance.
- Cascading vines covered with fluffy gray seed clusters give this plant the common name old man's beard.
- Young vines have six longitudinal ridges. Older vines have shredded bark.
- The leaf stalks wrap around other plants, or its own vine, enabling it to climb.
- Can be confused with *Clematis ligusticifolia*, a native of eastern Washington. They have similar looking leaves and flowers, but *C. vitalba* has flowers with both male and female parts and *C. ligusticifolia* has flowers with either male or female parts, not both. Also, *C. ligusticifolia* leaflets are more coarsely toothed and tend to be narrower. *C. vitalba* is found mostly west of the Cascades and *C. ligusticifolia* is mostly east of the Cascades.
- Cotyledons of old man's beard seedlings are elliptic or ovate and palmately veined.
- Old man's beard has a taproot that can reach several yards long.



Habitat

- Disturbed land on forest edges and in wooded areas with partial sun.
- Prefers to have roots shaded but will grow rapidly in full sun.

Reproduction and Spread

- Can self-pollinate or be pollinated by wind or insects.
- Seeds can be produced on vines after one to three years of growth.
- 100,000 seeds produced per plant and seeds are viable as long as five years in the soil.
- Seeds can be spread by water, wind, humans and animals.
- Also spreads by vegetative fragments and rooting at nodes

Local Distribution

Old Man's Beard can be found throughout western Washington. In King County, this plant is especially widespread in Seattle and in the Snoqualmie Valley.

CONTROL INFORMATION

Integrated Pest Management

- The preferred approach for weed control is Integrated Pest Management (IPM). IPM involves selecting from a range of possible control methods to match the management requirements of each specific site. The goal is to maximize effective control and to minimize negative environmental, economic and social impacts.
- Use a multifaceted and adaptive approach. Select control methods which reflect the available time, funding, and labor of the participants, the land use goals, and the values of the community and landowners. Management will require dedication over a number of years, and should allow for flexibility in method as appropriate.

Planning Considerations

- Survey area for weeds, set priorities and select best control method(s) for the site conditions and regulatory compliance issues (**refer to the King County Noxious Weed Regulatory Guidelines**).
- Control practices in critical areas should be selected to minimize soil disturbance or efforts should be taken to mitigate or reduce impacts of disturbance. Any disturbed areas need to be stabilized to control erosion and sediment deposition. Refer to the King County Surface Design Manual for further information about sediment and erosion control practices (call 206-296-6519 or go to <http://kingcounty.gov/wlr/Dss/Manual.htm> for more information). Minimizing disturbance also avoids creating more opportunities for germination of old man's beard and other weeds.
- Generally work first in least infested areas, moving towards more heavily infested areas.
- Properly dispose of all parts of the plant (see Disposal Methods section below).
- Old man's beard produces seeds in the fall, so control should be done earlier to prevent seed production.

Early Detection and Prevention

- Monitor for old man's beard especially in un-maintained wooded urban open spaces and vacant lots. Look for new patches along edges of forested areas, especially where known infestations are nearby, such as in Seattle or the Snoqualmie Valley area.
- Plants are easiest to spot in the summer or fall when flowering or in seed.
- Make sure not to plant this species; check the Latin name carefully when planting a species or variety of *Clematis* and avoid all cultivars of *Clematis vitalba*.
- Old man's beard seedlings generally don't grow in closed canopy woodlands (especially conifer forests), so protecting shrub and understory vegetation in closed canopy woodlands from clearing can help prevent the establishment of seedlings.

Manual Control

- Cut vines on trees or fences at about waist height, follow the vine back to the root and dig it out. Upper vines can be left on the trees since they will die back, or can be removed if it is safe and feasible to do so. Make sure remaining vines are not touching the ground because old man's beard can form roots at stem nodes.
- Vines growing along the ground should be dug up and removed.
- Pull small plants and seedlings when the soil is damp during winter or spring.
- Although plants can be dug up year round, it is ideal to do so during the winter, when most plants are dormant, to minimize disturbance to the surrounding vegetation.

Mechanical Control

- Cutting alone is not effective for controlling old man's beard. Cutting can stimulate plant growth, spread plant parts and will require multiple visits per growing season.
- Any kind of mechanical control (mowing or lopping) should be followed by digging out the roots or herbicide application on the cut stems or the re-growth (see below). Old man's beard will readily re-sprout.
- Seeds are easily dispersed by the wind and on equipment, so make sure to do any cutting before the seeds form.
- Stems can be suspended above ground and allowed to dry out, as long as the ends are not touching the ground. See Disposal Methods section below for more information.

Chemical Control

- For large infestations or where access is difficult, chemical control will be more cost-effective and will generally have less impact on soil stability than manual removal (when the slopes are unstable) or on sensitive tree roots that are in the infested area.
- **Precautions:**
 - Herbicides should only be applied at the rates and for the site conditions and/or land usage specified on the label of the product being used. **Follow all label directions.**
 - For herbicide use in critical areas and their buffers, certain restrictions apply depending on the site and jurisdiction. In unincorporated King County, refer to the **King County Noxious Weed Regulatory Guidelines** for a summary of current restrictions and regulatory compliance issues. Elsewhere, check with the local jurisdiction.
 - For your personal safety, at a minimum wear gloves, long sleeves, long pants, closed toe shoes, and appropriate eye protection. Follow label directions for any additional personal protection equipment needed.
- For best results and least impact to surrounding vegetation, spray the leaves and stems of actively growing plants in the spring before stem elongation. If control is conducted later in the year after stem elongation, carefully cut the plants down to the ground, wait a couple of weeks or so, and then spray the re-growth.
- Apply herbicide on warm days when winds are low. Check label for specific information on temperature, wind and rain guidelines.

- The “cut stump treatment” works as well. Cut the vine with a horizontal cut close to the ground and at about waist height, then apply herbicide to both cut ends, following the product label for this method (you will generally use concentrated or only partly diluted product, but the exact rates vary by product).
- Sprayed plants should not be removed or cut back until after the herbicide has had a chance to work and the plant is brown and dead.

Specific Herbicide Information

- **Glyphosate** (e.g., Roundup Pro, Aquamaster, any many other products) can be sprayed on the leaves of actively growing plants. It is most effective on new growth in the spring after cutting back to waist height in the winter, or it can be applied undiluted to freshly cut stems from late spring to fall. Follow the product label’s rate recommendations for brush and vine control.
- **Triclopyr**, amine formulation (e.g. Brush-B-Gon, Garlon 3A, Renovate), can be applied to foliage and stems any time old man’s beard is actively growing. Triclopyr can also be used on freshly cut stems when the plant is actively growing, except in early spring (see label for concentration to use for this method, typically a 50% solution mixed with water).

The mention of a specific product brand name in this document is not, and should not be construed as an endorsement or as a recommendation for the use of that product. Chemical control options may differ for private, commercial and government agency users. **For questions about herbicide use, contact the King County Noxious Weed Control Program at 206-296-0290.**

Biological Control

- There are two biological control agents that were released in New Zealand in 1996 and have been successful at impacting existing populations. One is a leaf mining insect, *Phytomyza vitalba*, the other a fungus, *Phoma clematidina*. These species have not been approved for release in the United States, as they may attack other *Clematis* species.

SUMMARY OF BEST MANAGEMENT PRACTICES

Small Infestations in Native and/or Desirable Vegetation

- Plants can be removed by following vines to the roots and digging them up. Any remaining vines in the trees should be cut far enough up so they do not touch the ground (cut stems will re-root if they reach the soil).
- Do not leave holes or bare dirt areas when removing the plants (fill back in with removed soil/plant material or apply mulch afterwards). This will reduce germination of weed seeds left in the soil and minimize erosion.
- When digging is not feasible or will create problems on unstable slopes or other difficult sites, spot spray carefully with an appropriate herbicide to minimize off target injury or

use the cut stem method described above. See Chemical Control section for more information.

- Monitor site throughout growing season and remove any new plants.

Large Infestations/Monocultures

- Large infestations can be controlled with herbicides (See the Chemical Control section above) or, for best results, use a combination of herbicide, cutting, and digging.
- Survey area and document extent of infestation. Develop a plan based on your ability to do follow-up control and any necessary re-planting or other stabilizing of cleared areas.
- Clear vines from trees and shrubs first, then dig up or spray the remaining vines between the cleared trees, gradually linking smaller cleared areas to form larger ones.
- Repeated removal of seedlings will gradually reduce the seedbank. However, suckers will re-sprout from roots until they are removed or effectively controlled with herbicide.
- Plan on monitoring and following up for at least five years to control plants germinating from the seed bank, surviving the herbicide treatment or digging, and blowing in from nearby infested areas.

Control in Riparian Areas

- Additional permits may be required for control of infestations in riparian areas. See the Noxious Weed Regulatory Guidelines for more information or contact your local jurisdiction.
- In some cases, the cleared area will need to be replanted with native or non-invasive vegetation and stabilized against erosion. See the King County Surface Water Design Manual for further information about sediment and erosion control practices (<http://www.kingcounty.gov/environment/waterandland/stormwater/documents/surface-water-design-manual> or call 206-296-6519).
- Focus on manual removal for small infestations if possible.
- For larger areas where herbicide use is warranted, spray using low pressure and large droplet size or apply with a wick wiper to prevent drift. If there is a likelihood that herbicide could enter a water body or wetland, obtain necessary permits and make sure only licensed aquatic applicators apply approved aquatic herbicides and surfactants.

Control Along Road Rights-of-Way

- Dig up small infestations if possible.
- Spot spray with a systemic herbicide (see Chemical Section above for recommendations).
- In grassy areas, use a selective broadleaf herbicide such as triclopyr; if controlled with a non-selective herbicide, such as glyphosate, re-seed after control is completed.

Disposal Methods

- Non-flowering stems can be suspended above ground or piled on tarps and left to dry out, as long as the stems are not touching the ground. Stems can also be burned or chipped. After drying or chipping, stems can be disposed of on site, taken to a transfer station or put in yard waste containers.

- Stems with flowers and/or rootballs should be collected, contained in bags or a covered load, and removed to a landfill or to a composting facility where heat will be sustained for sufficient time and at high enough temperatures to destroy plant tissues.
- Do not leave stems and root balls on the ground because plant material can form roots and start to grow again. If plant material is left on site, the area should be monitored for re-growth, especially if stems have flowers, seeds or roots.
- Disposed plant material should be kept well away from waterways, shorelines, roads and un-infested areas.

References

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