

# Knotweed

## Invasive Species Alert Sheet

### Capital Region Invasive Species Program

The spread of non-native invasive plants has serious ecological, economic and health impacts. Local governments and partners are asking for help from all residents to address knotweed outbreaks on private property and public lands. Local professionals can assist with the special treatment required for this species.

Native to eastern Asia, a number of knotweed outbreaks have been reported across the province—including in the capital region, where it has been designated a priority species while eradication is still possible.

**Knotweed species in the region include:** Japanese (*Fallopia japonica*), Bohemian (*F. x Bohemicum*), Giant (*F. sachalinensis*) and Himalayan (*Persicaria wallichii*).



Flowering knotweed

### Why is knotweed a problem?

- One of the world's worst invasive species and a top-ten invasive species for eradication in BC that is extremely difficult to control
- Dense stands eliminate all other vegetation and are extremely difficult to eradicate
- Ecological impacts include damage to fish and wildlife habitat, biodiversity, bank erosion and clogging waterways
- Economic/infrastructure impacts include penetration of hard surfaces, pavement, roads, foundations, other structures, drainage and septic systems
- Extremely vigorous rhizomes, new outbreaks come from tiny fragments of rhizome or stem

### What does it look like?

- Sometimes called ornamental bamboo
- Reddish purple-speckled hollow stems, 1.5-6 metres tall
- Of the four species, Himalayan is the shortest and Giant Knotweed the tallest
- Leaves are egg or heart-shaped with pointed tips (except Himalayan which is lance-shaped); approx. 8-10 cm wide/15 cm long (except Giant Knotweed which is twice the size)
- Flowers August-September in small white/green clusters
- Can be easily confused with elderberry (*Sambucus* spp. lance-shaped and toothed leaves) or bamboo



Flowering knotweed



Himalayan knotweed

## Habitat and biology

- Perennial shrub-like herb from rhizomes; Polygonaceae (buckwheat) family
- Found especially in disturbed soil and open habitats; roadsides, watercourses, gardens and drainage systems
- Reproduces primarily by rhizome and some seed production (especially Bohemian); reproduces also from stems fragments and buds in root crowns
- Overwintering rhizomes spread rapidly, extending 15-20m laterally, to a depth of 3m; can remain dormant up to 20 years
- Dispersal: primarily by rhizome and fragments of stem, through human activities and by water



Knotweed stem

## Proper disposal

- Specialized regional disposal bins for incineration; *please contact us below for knotweed disposal*
- Hartland Landfill may accept knotweed for disposal by permit as part of its controlled waste program: [www.crd.bc.ca/controlledwaste](http://www.crd.bc.ca/controlledwaste)
- **Do not compost**

## What should you do if you spot a knotweed plant?

Please report any sightings of this invasive species to the contacts listed below.

- **Spread the word, not the weed:** don't purchase, grow or trade knotweed
- **Contact:** There is a special treatment program for this species in the capital region. Please contact the Capital Region Invasive Species Partnership or local government (below) for assistance with treating and disposing of this species
- **Avoid:** digging and cutting this species as this can cause further spread
- **Wash:** plant parts and seeds from vehicles, equipment and personal gear before leaving infested sites
- **Dispose:** of any knotweed parts and contaminated soils in the proper manner (below)
- **Monitor:** knotweed sites to avoid spread and for ongoing treatment until eradicated
- **Soil and gravel:** use soil and gravel that are not contaminated and follow safe procedures to treat or dispose of contaminated soils and gravel
- **Pesticides:** depending on what jurisdiction you are in, a pesticide permit may be required for treatment.



Knotweed leaves

### CONTACT INFORMATION

P: 250.360.3302

E: [invasive@crd.bc.ca](mailto:invasive@crd.bc.ca)

[www.reportaweedbc.ca](http://www.reportaweedbc.ca)

[www.crd.bc.ca/invasive](http://www.crd.bc.ca/invasive)

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# Giant Hogweed

## Invasive Species Alert Sheet

### Capital Region Invasive Species Program

The spread of non-native invasive plants has serious ecological, economic and health impacts.

Local governments and partners are asking for help from all residents to address giant hogweed outbreaks on private property and public lands. Local professionals can assist with the special treatment required for this species.

#### **Giant hogweed is a priority invasive of concern with serious human health risks.**

Native to Asia, giant hogweed invasions are located primarily in southwestern British Columbia (including Vancouver Island).

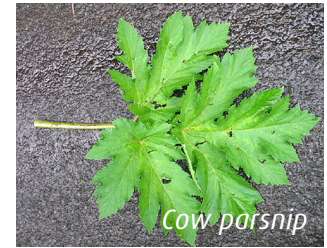


#### **Why is giant hogweed a problem?**

- **Public health hazard:** risk of severe burns, scarring and temporary or permanent blindness in humans
- Watery sap in the stalk, stem and leaves is highly toxic, causing dermatitis after contact with sunlight (effects within hours or days and scarring can last from months to a lifetime)
- See WorkSafe BC alert for first aid treatment at [www.worksafebc.com](http://www.worksafebc.com)
- Outcompetes native plants and causes soil erosion on steep slopes and stream banks

#### **What does it look like?**

- Large plant up to six metres tall with deeply lobed leaves and umbrella-shaped white flower heads up to one metre across
- *Giant Hogweed is often confused with native Cow Parsnip (much smaller, less than three metres tall)*



Giant hogweed has large, very deeply lobed leaves with jagged edges (up to 2.5 metres long). Cow parsnip leaves are wider, less lobed and jagged than giant hogweed leaves (and only 40cm long).



Giant hogweed blooms May to July with flower heads up to one metre wide; cow parsnip blooms May to July with much smaller flower heads (0.2 metres).



Giant hogweed stalks are purple-spotted or streaked and hollow with stiff hairs; cow parsnip stalks are usually green (but may have some purple) with soft hairs.

## Habitat and biology

- Perennial plant from carrot or parsley (*Apiaceae*) family
- Mature plants flower in May, producing up to 100,000 seeds that are viable in soil to 15 years
- Reproduces by seeds, possibly vegetative reproduction (from buds on rootstalks)
- Found especially along ditches, roadsides, riparian areas, open forests, marine shorelines and disturbed sites
- Large taproot will rapidly re-sprout if mowed

## What should you do if you spot a giant hogweed plant?

Please report any sightings of this invasive species to the contacts listed below.

- **Spread the word, not the weed:** don't purchase, grow or trade giant hogweed
- **Inform:** please report outbreaks to the contacts listed below for support and monitoring
- **Remove:** if you have an outbreak on your property, please follow the instructions below for careful removal and follow up
- **Dispose:** of all plant parts in the proper manner outline below
- **Soil and gravel:** use soil and gravel that are not contaminated and only remove soil from infested sites with safe disposal/treatment plan to avoid further spread
- **Prevent spread:** brush off clothing, tires, equipment before leaving infested area
- **Monitor:** for several years, return to the site in spring and summer to continue treatment
- **Replant:** after effectively eliminating this species over time, replant with non-invasive plants (such as appropriate native species)

### • **Caution: wear protective clothing when in contact with this plant:**

- Full face protection and heavy, water-resistant gloves (dispose of immediately afterwards)
- Waterproof cover-alls with long sleeves or long sleeved shirt and pants that are not cotton or linen (sap can soak through), thicker clothing so plant hairs don't penetrate
- Wash clothing and tools after contact

### *For small infestations (less than 25 plants):*

- **Manual removal:** remove young plants by gently hand pulling to remove all roots
- A small hand tool can be used to ease out the roots
- For large, mature plants cut the stem near the base, then dig out the roots (focus on central root and remove at least 8—12 cm below soil surface)
- For all manual removal, care should be taken to minimize soil disturbance which can encourage seeds to germinate
- Ideally, remove in spring and repeat as required in early summer
- If removing late during flowering season cut, bag and dispose of flower-heads first
- Mulch over the area disturbed by the removal may be beneficial

*Report large infestations (more than 25 plants) to the contacts listed below.*

## Proper disposal

- Please place all plant parts in garbage bags labelled 'invasive species' and take to Hartland Landfill.
- **Do not compost.** Flowers can still form viable seed after removal.

### CONTACT INFORMATION

P: 250.360.3302

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# Blessed Milk Thistle

## Invasive Species Alert Sheet

### Capital Region Invasive Species Program

The spread of non-native invasive plants has serious ecological, economic and health impacts.

Local governments and partners are asking for help from all residents to address blessed milk thistle outbreaks on private property and public lands. Local professionals can assist with the special treatment required for this species.



### Why is blessed milk thistle a problem?

- Highly invasive species that forms dense stands
- Can cause lethal nitrate poisoning in cattle and sheep and injury from spines
- Forms dense stands that exclude forage species and livestock



*Blessed milk thistle seed*

### What does it look like?

- Tap-rooted annual or biennial up to 2.5 metres tall
- White marbling patterns on shiny green, deeply lobed leaves
- One large purple flower per stem (2—2.5 cm).
- Broad, spiny bracts surrounding the flower head
- *Look for marbled leaves and spiny flower heads*
- Could be confused with other thistles such as bull thistle (*Cirsium vulgare*)



*Blessed milk thistle leaves*

### Habitat and biology

- Found predominantly in full to partial sun on disturbed sites such as roadsides, ditches, fencerows and fields.
- This plant is also an escapee from ornamental or medicinal gardens
- Annual or biennial plant in the sunflower (*Asteraceae*) family
- Flowers from April to October
- Over 6,000 seeds per plant produced annually
- Seeds can remain viable in the soil for at least nine years
- This species can overwinter as a rosette
- Reproduces by seed that can be spread by water, mud, wind, agricultural produce, animals, machinery and vehicles





*Blessed milk thistle rosette*

## What should you do if you spot a blessed milk thistle plant?

Please report any sightings of this invasive species to the contacts listed below.

- **Spread the word, not the weed:** don't purchase, grow or trade blessed milk thistle
- **Inform:** please report outbreaks to the contacts listed below for support and monitoring
- **Remove:** if you have an outbreak on your property, please follow the instructions below for careful removal and follow up
- **Prevent spread:** reduce new introductions or spread by using/purchasing clean soil and gravel free of seeds. Please report outbreaks from purchased soil.

Please **do not mow** as this may increase the problem.

*For small infestations (less than 25–30 plants):*

- **Manually remove** before they flower in April/May; dig or pull to avoid soil disturbance
- **Cut:** if unable to remove entire root, cut the plant/ root about 2.5 cm below ground
- **Protect:** when flower heads present, wear protective clothing
- **Bag flowers/seeds:** if in flower or seed, carefully remove the flower/seed heads and bag them before digging out the plants; ensure all seeds are bagged.
- **Wash before leaving:** to avoid further seed spread wash footwear, vehicles and equipment before leaving the site
- **Monitor:** return in spring and fall for a few years to monitor growth and remove new plants
- **Replant:** especially in disturbed areas, replant with non-invasive or native plants

*Report large infestations (more than 25 plants) to the contacts listed below.*

## Proper disposal

- Please place all plant parts in garbage bags labelled 'invasive species' and take to Hartland Landfill.
- **Do not compost.** Flowers can still form viable seed after removal.

### CONTACT INFORMATION

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