

Invasive Species Information Sheet

Giant Hogweed (*Heracleum mantegazzianum*)



Giant hogweed plant with developing seeds.
Photo courtesy of Ron Black, MNR

introduced Hogweed cow parsnip (*H. sphondylium*). It is superficially similar to Angelica species including the common, native Purplestem angelica (*Angelica atropurpurea*) and the introduced Woodland angelica (*A. sylvestris*). It might also be mistaken for other Angelica species (*A. lucida*, *A. venenosa*), Valerian (*Valeriana officinalis*), Lovage (*Levisticum officinale*), Wild parsnip (*Pastinaca sativa*) and Queen Anne's Lace (also known as Wild carrot) (*Daucus carota*) among others. However, these plants are not as large

General Information: Giant hogweed (*Heracleum mantegazzianum*), also known as Giant cow parsnip is a perennial plant and a member of the carrot family (Apiacea). It is a garden ornamental from southwest Asia that is naturalizing in North America and becoming more common in southern and central Ontario. Giant hogweed has the potential to spread readily and grows along roadsides, ditches and streams, invading old fields and even native habitats such as open woodlands.

Similar Species: Giant hogweed looks very similar to the native and widespread Cow parsnip (*H. maximum*) and the locally



Giant hogweed stem. Note coarse hairs.
Photo courtesy of Ron Black, MNR



Giant hogweed seedling. Photo courtesy of Rachel Gagnon, Ontario Invasive Plant Council.

as a mature Giant hogweed, which grows up to 5.5 m tall under ideal conditions. The white flower clusters (umbels) resemble those of Queen Anne's Lace, but tend to be more widely spaced and can form a flower-head almost 1 m wide.

Distribution: Giant hogweed has a scattered distribution across southern and central Ontario, south of the line from Manitoulin Island to Ottawa. Confirmed reports of Giant hogweed have been made as far north as Kapuskasing.

Biology: Seeds may take several years to germinate and are viable in the soil for up to 15 years. Once the seed has germinated it takes 2-5 years of growth before the plant produces flowers. During the first year, the plant produces a rosette of leaves to 1 m high. As the plant grows a large taproot, thick hollow stems and large deeply lobed leaves are formed. The lower stems of the plant are covered with reddish-purple flecks. The stems are covered with stiff hairs that are filled with sap. Sap may collect in the hollow stem bases. Giant hogweed flowers only once in its lifetime, unless the flower clusters are damaged before opening. Once the plant produces seed it dies. Each plant can produce up to 120,000 winged seeds (typically 50,000), though some of these may not be viable. Seed dropped in streams can float for 3 days before



Giant hogweed flower stalk and umbel.
Photo courtesy of Karen Rimmer.



Close up of Giant hogweed flowers.
Photo courtesy of Karen Rimmer.

becoming water logged and sinking. The seeds are spread by wind up to 10 m but can travel much longer distances via water transport in ditches and streams.

Natural Resource Impacts:

There is some evidence that Giant hogweed impacts biodiversity through shading out native plants, though there has not been comprehensive research to assess its impact in Ontario or other parts of Canada. In the United Kingdom, where it grows in riparian areas,

Giant hogweed is known to cause significant stream bank erosion, which threatens salmon spawning sites. Similar impacts may occur in Ontario, but Ontario research is currently lacking.

Health Concerns: The clear watery sap of Giant hogweed contains toxins that can cause severe dermatitis. Ultraviolet radiation activates compounds in the sap resulting in severe burns when exposed to the sun. Symptoms occur within 48 hours and consist of painful blisters. Purplish scars may form that last for many years. Eye contact with the sap has been reported (in the media and by various web sites) to cause temporary or permanent blindness. Evidence of permanent blindness linked to exposure to Giant hogweed could not be found in the primary literature. Note similar effects result from exposure to the other two Cow parsnip species found in Ontario (*H. maximum* and *H. sphondylium*) and from the widely introduced Wild parsnip (*Pastinaca sativa*).

Prevention: Do not purchase, trade or grow Giant hogweed in your garden. Only buy native or non-invasive garden plants. Industry and private individuals should be vigilant when transporting soil, sand or gravel and take precautions to ensure that it is free of invasive species – both plant parts and seeds.

Removal and Management: There is no government funded program to remove this plant from private property. It is highly recommended that private landowners hire a professional exterminator to remove the plant to ensure safe procedures are followed. Since it takes years for a population to grow to large numbers, it will take a long term commitment to reduce the population. The most appropriate time to remove plants is in late April or early May as plants are typically less than 30 cm in height, are easier to dig up, and more susceptible to herbicide applications. Extreme heat and humidity are also avoided which make wearing appropriate protective clothing more comfortable.

- **Protective clothing:** Wear protective clothing, including waterproof gloves, long sleeve shirts, pants, and eye protection. It is ideal to wear a disposable “spray suit” coverall over top of your normal clothing (spray suits are commercial grade waterproof coveralls). The removal of protective clothing must be done carefully to minimize the risk of coming into contact with any sap that may be on your clothing. Wash rubber gloves first with soap and water prior to removing the protective disposable spray suit. Wash rubber gloves again before taking them off and then lastly remove the protective eye wear. Put non-disposable clothing in the laundry and wash yourself immediately with soap and water.
- **Mechanical control:**
 - Spring Removal (i.e. early May):**
Use the spade of a shovel to remove as much of the tap root as possible. This is more difficult to do on older plants as the taproot can go deeper than 1 m. Therefore, it is possible that the plant will re-grow from the root and repeated digging or covering the dug area with black plastic to smother out new growth will be necessary. If the terrain allows the use of

machinery, mow top growth every two weeks so as to exhaust the plant's root reserves.

Summer Removal (i.e. early July):

Plants without flowers: If the infestation is small, the stems and roots can be dug out and dried thoroughly before disposal.

Plants with flowers: To prevent seed growth and dispersal, remove flower heads while white in colour and prior to ripening (i.e. prior to turning green). **Note: If the flower heads have changed from white to green, seeds are being produced and there is less opportunity for successful management as it is challenging to remove the seed heads and/or cut the plant without dispersing the seeds.** One should return to the site regularly to remove any new plant growth.

- Control Using an Herbicide: The Cosmetic Pesticide Ban contains an exception which allows landowners to use Pesticides to control plants such as Giant hogweed that are poisonous to the touch. Under this exception, only the use of certain herbicides listed in Class 10 (i.e. glyphosate in the case of Giant hogweed) are allowed for use to control plants poisonous to the touch. Glyphosate (e.g. Roundup) is effective at controlling top-growth of Giant hogweed. Foliar herbicide applications are most effective in spring on actively growing plants, followed with a subsequent summer application for missed plants or plants that have re-grown. Since glyphosate is non-selective and removes only the green vegetation that it comes into contact with, new seedlings will often germinate and emerge where glyphosate applications have occurred. It is recommended that areas treated with glyphosate are covered in mulch 10-14 days after application to manage seedling germination. Herbicide treatments need to be repeated annually. If a plant is flowering, herbicides are not effective and control methods should focus on carefully removing the flower heads.
- Disposal: **Do Not Burn. Do Not Compost.** Carefully remove flower heads from stems and place them in black plastic bags. Make sure not to drop any seeds while you are doing this. Seal the bags tightly and leave them in direct sunlight for about a week. Allow stems and roots to dry out thoroughly before disposing of them. Call your municipality to determine if the bags (containing the plants) can be sent to your local municipal landfill site.

In the event of any direct exposure/contact to this plant: If your skin comes into contact with the sap, your skin should be washed thoroughly with soap and water. Further exposure of the affected skin to UV/Sunlight should be avoided. If photo dermatitis occurs, medical consultation should be sought.

If there has been direct exposure to the eye (cornea), flushing the eye with water is immediately required and the individual should seek medical evaluation and treatment on an urgent basis.

If you think you have Giant hogweed on your property or if you see it in your community please call the Invading Species Hotline at 1-800-563-7711 or report your sighting online at www.invadingspecies.com/Report.cfm. You will be asked to send in photos for identification. Do not collect parts of the plant for identification.

The Ontario Ministries of Agriculture, Food and Rural Affairs, Health and Long Term Care, Environment, and Natural Resources are working together with our partners (in particular Ontario Federation of Anglers and Hunters, Ontario Invasive Plant Council, Municipalities and local Health Units) to provide information on the identification and control of this invasive plant species.

Other Resources:

http://www.omafra.gov.on.ca/english/crops/facts/ontweeds/giant_hogweed.htm#pics

http://www.omafra.gov.on.ca/english/crops/facts/ontweeds/giant_hogweed.htm

<http://www.ontarioweeds.com/weed.php?w=HERMZ>

http://www.weedinfo.ca/media/pdf/page_biology_canada_weeds.pdf

<http://www.invadingspecies.com/Invaders.cfm?A=Page&PID=31>

Some photos and text courtesy of the Invasive Plant Council of British Columbia.