

You Ain't From Around Here! Exotic Invasive of the Quarter: Giant hogweed

(*Heracleum mantegazzianum*)

By: Jennifer Gagnon, Virginia Tech

There are many things I haven't seen in the woods which I would like to see. Like a black bear, or a porcupine (as long as neither hurts my dogs). But one thing I sure DON'T want to see is a certain member of the carrot family, the giant hogweed. This is one carrot you don't want to eat, people. According to the USDA's PLANTS Database, this species is not yet established in Virginia; but other sources suggest that it is. Either way, this article should serve both as a warning and an incentive – let's not allow giant hogweed to gain a foothold in the Commonwealth.

Giant hogweed is a native of the Caucasus Mountain region between the Black and Caspian Seas. It was introduced to Europe and the United Kingdom in the late nineteenth century and to the United States in the early twentieth century as an ornamental garden plant. In the U.S. it is currently found in Maine, Pennsylvania, Connecticut, Maryland, New York, Michigan, Illinois, Washington and Oregon. Hogweed is also a problem in Canada and Europe.



This biennial or perennial herb can grow to 12 feet or more. Plants take 3-4 years to bloom and produce seeds. Some plants will die after flowering, while others will continue to flower for several years. Growth occurs in open sites with abundant light, as well as in woodlands and forest edges. Hogweed prefers unmanaged sites, vacant lots, along railways, creeks and streams. In addition, it is resistant to frost and can withstand occasional flooding.

Giant hogweed is an aggressive competitor. Because of its size and rapid growth, it out-competes native plant species, shading them out and resulting in bare ground underneath. In the winter, hogweed plants die back, leaving bare ground which can increase soil erosion on riverbanks and steep slopes.



But really, that's not the biggest threat. The biggest threat is to our own skin. The sap of this plant, which is present in all of its parts, contains photosensitizing furanocoumarins. Now, if you're like me, you've never heard of such things. So I looked them up. Apparently, they are coumarins with a curan ring. Oh, still not helpful? Well, basically, these substances have a molecular structure which allows them to absorb ultraviolet photons, store them for a bit, and then release them all at once to the skin, causing the equivalent of a severe sunburn. Sweat and moisture can enhance the skin reaction. Since giant hogweed grows outside (not a good choice for a houseplant!), if you come in

Blister caused by exposure to the sap in giant hogweed. Photo by: USDA APHIS PPQ Archive.

contact with its oils, chances are, you are also in contact with sunlight (and ultraviolet photons) and you may very well be sweaty. A bad combination.

Skin reactions vary, but phytophotodermatitis can occur; symptoms include painful blisters, which become darkly pigmented and can cause scars which last up to 6 years (effectively ruining a modeling career). Your

skin can remain sensitive to sunlight for many years after exposure as well. And, if the sap gets in your eyes, there is the potential for blindness. Have I convinced anyone to plant this species in their yard?

How to identify giant hogweed

Leaves: compound with 3 deeply lobed leaflets; up to 5 feet wide; stiff dense stubby hairs on undersides; spotted leaf stalks.

Stems: stout (2-4 inches in diameter), dark reddish-purple; hollow; covered with stiff, dense, stubby hairs.

Flowers: white umbrella-shaped clusters; up to 2.5 feet in diameter; mid-May to mid-June.

Fruits/Seeds: green initially (late June early July); dry and brown as they ripen; most plants produce 20,000 seeds with some over-achievers producing over 100,000 seeds; winged seeds can remain viable up to five years; dispersed by water, birds or humans.

Roots: long branching tap root; 6 inches in diameter and up to 2 feet long.



Photos, clockwise: leaves, stem, flowers, unripe fruits, ripened seeds. Photos by: Jan Senanek, State Photosanitary Administration (a & d), Leslie J. Mehrhoff, University of Connecticut (b), USDA APHIS PPQ Archive (c) and Julie Scher, USDA APHIS PPQ (e).

How to control giant hogweed

Before you embark upon a control program, please take care to protect yourself and others working with you. Never touch any part of the plant with your bare skin. Wear long, waterproof gloves, boots and eye protection. Work a good distance away from others, as the sap can splash 3-4 feet. Apply sunblock before working; wash all exposed clothing and equipment immediately. Do not use a weed whacker or brush cutter, which may cause splatters. If you do get sap on your skin, wash the area immediately with soap and

cold water; keep the exposed area out of sunlight for at least 48 hours. See a doctor if you have a reaction. Do not burn or compost harvested plants.

Mechanical

- Cut or dig up roots – labor intensive, but effective. Good for small infestations. Taproots should be cut about 6” below ground level. Best done in early spring.
- Hand pull – best for young plants (in April-May).
- Remove flowers and dispose. Needs to be done after the seeds have formed, but before they mature. Place seed heads in double or triple trash bags. Seal and place in the sun for at least a week. Dispose of bagged seed heads in the garbage.
- Plowing – best method of mechanical control. Must be repeated for several years. Deeply plow in the fall. Clean equipment before moving to a non-infested area.

Chemical

Herbicides with the active ingredients glyphosate or triclopyr are effective for hogweed control. Triclopyr-based products will only affect broad-leaved plants, so any grasses near the treatment area will not be harmed. Although glyphosate does not persist in the soil, it is not selective and will kill any surrounding vegetation. Apply herbicides between March and early June. A follow up application may be required in July or August. You will probably need to repeat the herbicide treatment for a few years to completely control hogweed.

As always, when using herbicides, you must follow the instructions on the label. The label is the law.

Biological

Cattle, sheep and pigs appear to tolerate the toxins in giant hogweed and will eat the plants. Grazing and trampling may help wear the plants down, but may not provide long-term control.

Follow-up

After removal, you may be left with quite a bit of bare soil. To minimize erosion and prevent reinfestation, promptly reestablish native vegetation on the treated sites.

If I can say one positive thing about this species, it’s that I enjoyed researching it. I’ll leave you with the best piece of information I found: the band, Genesis, wrote a song called “Return of the Giant Hogweed”. Here’s an excerpt:

“Fashionable country gentlemen had some cultivated wild gardens,
In which they innocently planted the giant hogweed throughout the land.
Botanical creature stirs, seeking revenge.
Royal beast did not forget.
Soon they escaped, spreading their seed,
Preparing for an onslaught, threatening the human race.



*Manually clipping the seedheads.
Note the eye and skin protection.
Photo by: Thomas B. Denholm.
New Jersey Dept. of Agriculture.*

Mighty hogweed is avenged.
Human bodies will soon know our anger.
Kill them with your hogweed hairs.
HERACLEUM MANTEGAZZIANI!”

Listen to the entire song at www.cnre.vt.edu/forestupdate. Simply awesome!

Jennifer Gagnon is an Extension Associate in the Department of Forest Resources & Environmental Conservation, 540/231-6391, jgagnon@vt.edu