



**Department of
Environmental
Conservation**

Ouch! This plant hurts: NYSDEC Giant Hogweed Control Program

**Naja Kraus
Forest Health Scientist
May 13, 2021**

Giant hogweed

Life History

Identification

Safety

DEC Control Program

How You Can Help



Department of
Environmental
Conservation

Life History Identification Safety





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canis).—A stem with small dark purple flowers. Central Europe. *Var. Bernardsii*.—Tall, three to five flowered; slender spur of petal not more than 1/2 as long as lamina. Corsica. *Var. nicea*.—A stem with white flowers. *Var. parviflora*.—With dark violet flowers. Transylvanian Alps. *Var. platysepala*.—The sepals of this form are shorter and more obtuse than in the type. *Var. Sternbergii* (A. Hassenknecht).—A dwarf alpine stem with small leaf divisions and bright lilac flowers, larger than in the type. Central Europe. *Var. subulpinia*.—With the foliage of the subulpine flowers of *Sternbergii*. Pyrenean mountains of Central France. *Var. transilvanica*.—Similar to A. *Sternbergii*, except that the whole plant is glabrous. Flowers bright blue. Transylvanian Alps.

(To be continued.)

Heracleum mantegazzianum.

the year 1892 two botanists living at Geneva—Mr. N. Levier, a doctor of medicine of Swiss birth, and Mr. Sommier, a French amateur—explored the Central Caucasus traversing the range from Koutais to Batoum. The aim of their travels was a botanical exploration, and it resulted in the recovery of a good number of species new to science. Several of these were of horticultural interest, and we have grown them in the Jardin d'Acclimatation, viz. :—

nonne radicans	<i>Potentilla</i> <i>lewisii</i>
" <i>serotina</i> var. <i>aurea</i>	" <i>foliosa</i>
<i>terrestris</i> macroglossa	" <i>Sommieri</i>
<i>missilis</i> sericea	" <i>synaethica</i>
<i>agilis</i> <i>Sommieri</i>	<i>Ranunculus</i> <i>alpestris</i>
<i>lanceolatus</i>	" <i>gibber-nolus</i>
<i>caucasicus</i> repens	<i>Sommieri</i>
dalis <i>glaucus</i>	<i>Ran.</i> <i>synaethica</i>
in <i>ca</i> radicans	<i>Scilla</i> <i>caucasica</i>
<i>n. latifolius</i>	" <i>coerulescens</i>
<i>chalcidicus</i> <i>caucasicus</i>	" <i>porphyrantha</i>
<i>kleimii</i> <i>Freyli</i>	" <i>serotina</i>
" <i>montezianum</i>	<i>Scabiosa</i> <i>correvioniana</i>
" <i>caucasicum</i>	<i>Seneccio</i> <i>comps</i>
" <i>glaberrimum</i>	" <i>platyphylloides</i>
" <i>perithyrum</i>	<i>primula</i> <i>officinalis</i>
<i>ericum</i> <i>Sommieri</i>	<i>Silene</i> <i>kulanensis</i>
<i>na penula</i>	" <i>ambrosiifolia</i>
<i>halodius</i> <i>Lefebv</i>	<i>Vincetoxicum</i> <i>scandens</i> , &c
<i>arvensis</i> <i>ad.</i>	

A considerable number of species have not been determined or described, as they were collected in the form of seed only. The seeds have been sown in the Jardin Alpin d'Acclimatation at Geneva, and later will be cultivated in the garden of L^{de} Linnaea at Bourg St. Pierre, where there is a space of rock garden.

specially reserved for
 the plants of the Caucasus. Many of them
 have done very well,
 and have produced such
 an effect as to be re-named
 Heracleum nangetianum
 (in honor of the author,
 Levier), on account
 of its gigantic proportions
 and its monumental
 appearance. The plant
 in our (Levier's) garden,
 or, rather, in its
 auxiliary department
 at Lancy (for it is
 not in its natural
 space at Philadelphus),
 has given superb results.
 It is certainly
 the most beautiful
 of its genus, and one
 of the finest plants for
 an isolated position.
 It was obtained from
 seeds collected in
 the Caucasus on the
 banks of the
 Kura, and it was
 brought to us by
 them. They were sown in
 the spring of 1893 and
 did not vegetate till
 1894. It was already
 very abundant in
 our garden at Lancy
 a specimen whose
 stem was 8 feet high
 and 10 inches in
 diameter of 4 feet,
 the leaves being 3 feet
 long from the base of
 the petiole to the tip
 of the leaf.

According to Dr. Levier, to whom we sent a portion of the umbel, the plant must have borne something like 10,000 flowers. It supplied us with the seed which we were able to distribute to the trade and to amateurs, and also to its discoverers, Messrs. Levier and Sommer, who grew it at Florence and at Bormio. In the latter place it assumed a



HERACLEUM MANTEGAZZIANUM IN A PRIVATE GARDEN IN ITALY

altered character, for, instead of having very large leaves and a tall stem bearing a single umbel, the stem was shorter and divided from the base with a much greater number of umbels.

The description of this remarkable plant has appeared in the *Yuene Giornale Botanico Italiano*, vol. II, April, 1893, where it is stated to be the giant of an already very large race, and also one of the handsomest of its genus. Its cultivation is an easy matter. It likes deep, rich soil that is cool and damp. It is only in these conditions that it will attain its greatest size, but even in those that are less favorable it will grow very luxuriantly. It is observed that the finest plants are those whose roots have not been in any way cut or mutilated, and especially whose tap-root is uninjured. It is best to avoid transplantation: the finest plants are those that are self-sown.

HENRY CORREYON

NOTES ON LILIES.

LILIUM TESTACEUM.

A DELIGHTFUL Lily is this and seen at its best when grouped in the manner so well portrayed recently (p.108) in *THE GARDEN*. Apart from its beauty, the fact that it succeeds so well in most gardens is another great point in its favour, for no special care and attention are needed. Thanks to the various horticultural publications, but more particularly to *THE GARDEN*, the cultural requirements of



HERAKLIM MANTEGAZZIANUM AT HOME IN THE ABKHASIAN CAUCASUS

Giant Hogweed (*Heracleum mantegazzianum*)

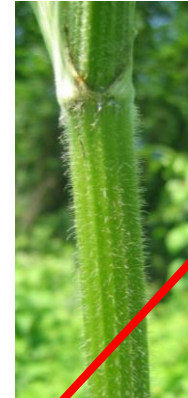
Can be 8-14 feet tall

Flower umbel can be up to 2 ½ feet across!

HUGE deeply incised leaves- up to 5 feet across

Purple blotches on the stem

Coarse hairs circle the stem



Cow parsnip



Angelica

When flowering, this is a **VERY LARGE** plant!







Look-alikes



Giant Hogweed

Invasive

Wild Parsnip

Angelica

Benefits:
Pollinators and
parasitic
wasps/enemies
of crop pests

Native

Cow Parsnip

**Most commonly mistaken for GH



HOBART AND WILLIAM SMITH COLLEGES



Habitat



Growth Stages



Dead Stems

After producing seeds in late summer, the plants die, leaving stems standing into winter. At this point seeds have been dispersed to germinate the following spring or in future years.

(Photo credit: Cornell Cooperative Extension, Misc. Bull. 123)



Seedling

Seeds germinate from early spring throughout the growing season.



Rosette of leaves

Leaf clusters sprout from overwintering roots each year for 2-4 years until the plant flowers.



Cow
Parsnip

Giant
Hogweed


Seeds

Produces seeds in late summer
(Photo credit: Connecticut Invasive Plant Working Group)



Flowering Stems

Plants bolt and flower in early to mid-summer after rosette plants accumulate enough energy reserves.



Spreads through Seeds

- Average plants produces 20,000 seeds
- Most seeds fall within 10 meters
- 95% within top 5 cm of soil
- Viable for more than 5 years



Planted by gardeners

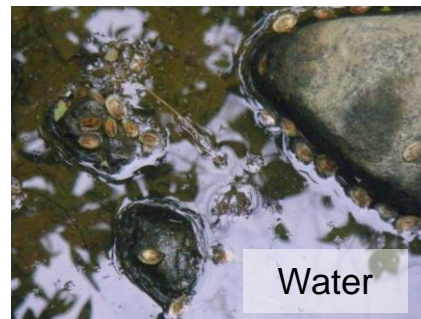


Flower head disposal



Wind

Spread Mechanism



Water



Soil transport



Mowing

Why do we care?

- Replaces native plants
- Can cause soil erosion, impacts streams/fisheries
- Limits access to recreation areas
- Human Health Hazard
- NYS law prohibits possession of giant hogweed with the intent to sell, import, purchase, transport, introduce or propagate.



How do giant hogweed and wild parsnip cause a burn?



- All parts of the plant contain several photosensitizing furanocoumarins which can get on your skin if you touch or break the plant.
- The phototoxic reaction can be activated by ultraviolet light as soon as 15 minutes after contact, with a sensitivity peak of 30 minutes to 2 hours.
- The skin becomes unable to protect itself from the sun. Severe burns can develop within 24 to 48 hours.
- Heat or moisture (sweat or dew) can enhance the skin reaction

Long term: The burns become dark pigmentation, or scars, that can last for up to 6 years, though typically only last a few months.

What to do if you contact the sap?



- Immediately wash the area with soap and water.
- Protect area from sunlight for 48 hours.
- If you do get a reaction- continue to keep area out of sun to prevent further blistering. You may need to do this for years.
- See a physician if reaction is severe. Topical or oral steroids can reduce severity and ease discomfort.

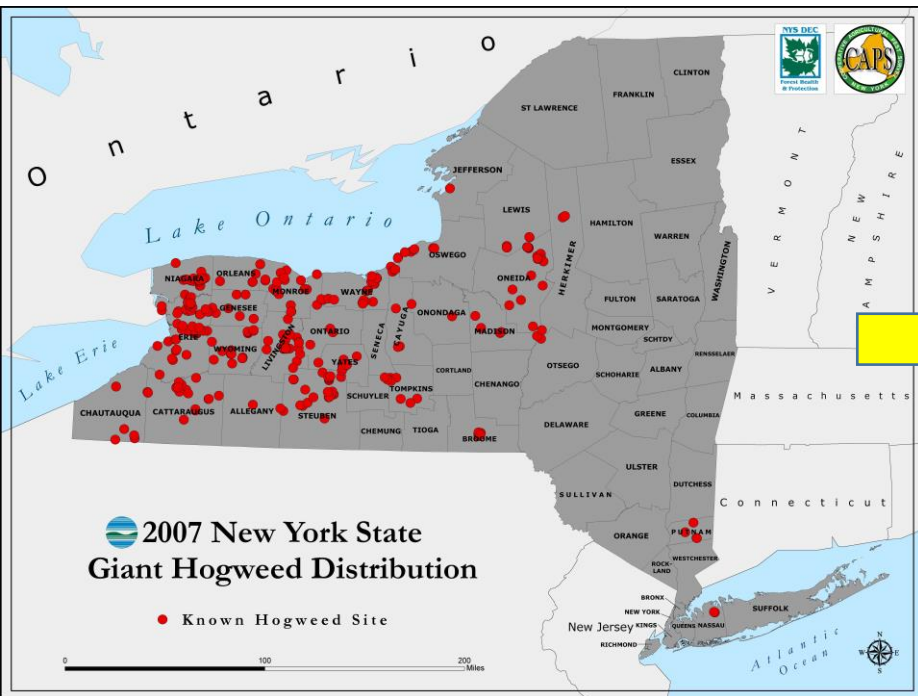
Safety Considerations

- Learn to recognize & avoid these plants
- Don't touch the plants with bare skin
- When working around these plants wear waterproof pants & long-sleeved shirt, waterproof gloves, rubber boots, eye protection
- Wash yourself & equipment with soap and water after working near these plants.

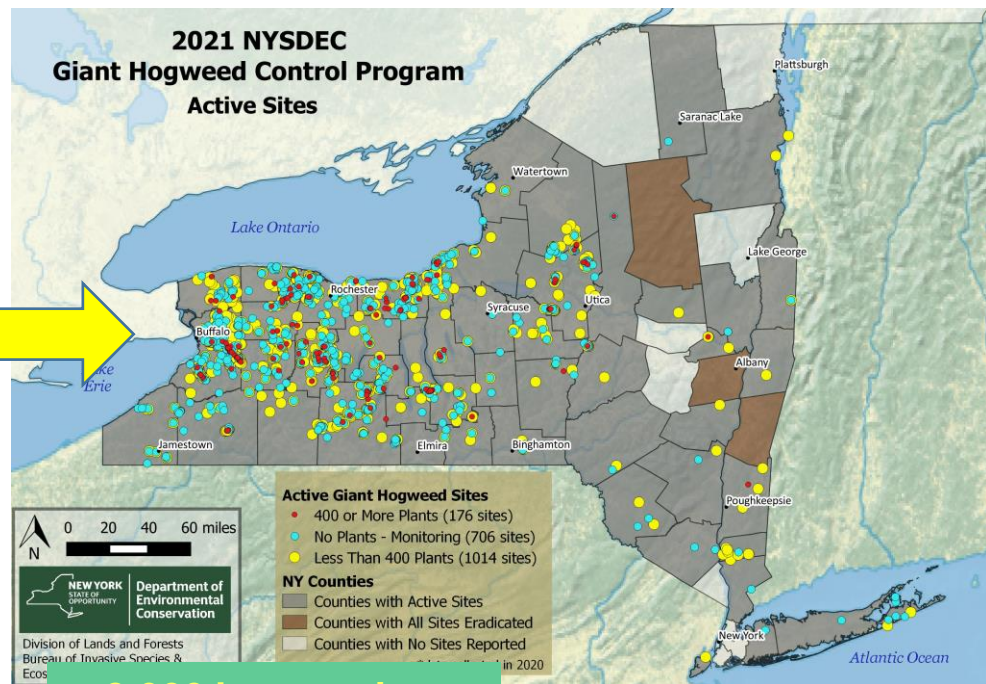


DEC-FH giant hogweed control program





378 known sites

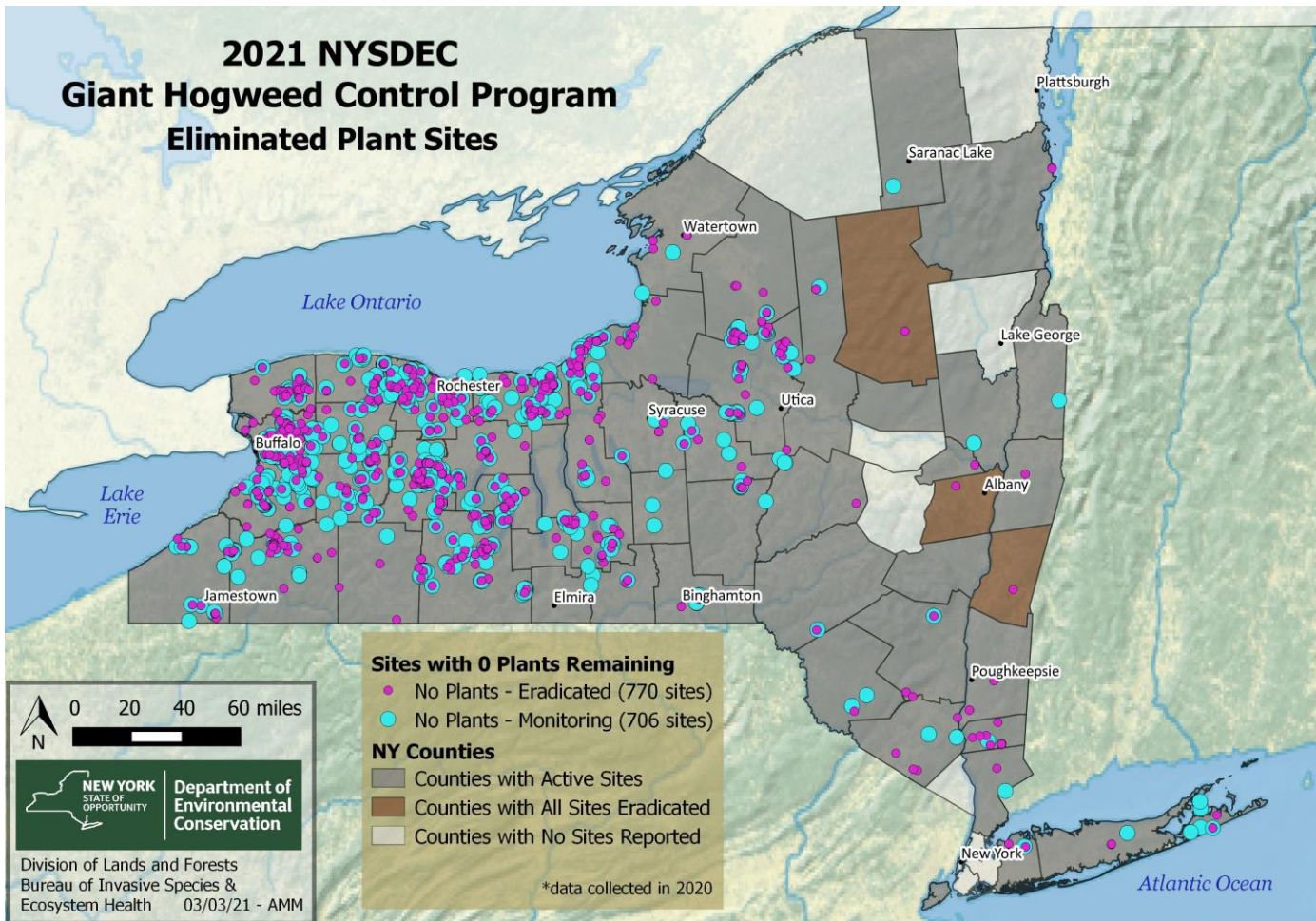


2,666 known sites
(1,476 no plants)



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2021 NYSDEC Giant Hogweed Control Program Eliminated Plant Sites



- 55% / 1,476 sites with no plants!
- 770 sites eradicated- no plants for 3 consecutive years
- 706 sites being monitored- no plants for 1 or 2 years

Yearly Revisits

- Monitor Sites
 - 75% no plants
- “Eradicated” Sites
 - 90% no plants



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Number of Sites per Size Class by County

County	0 plants "eradicated"	0 plants "monitor"	1-19	20-99	100-199	200-399	400-999	1000+	unknown	Grand Total
Genesee	14	21	17	7	1	2	3	3		68
Livingston	57	48	55	21	4	7	14	4	1	211
Monroe	68	61	49	17	5	8	3	5		216
Ontario	29	22	12	1				1		65
Orleans	24	24	13	4	6		5	2		78
Seneca			1							1
Wayne	53	57	46	38	9	13	13	13		242
Wyoming	30	24	25	11	1		4	2	1	98
Yates	28	14	9	4			1	2		58
Grand Total	303	271	227	103	26	30	43	32	2	1037
	574 sites without plants due to prior control									
	463 sites with giant hogweed plants									

County Township	0 plants "eradicated"	0 plants "monitor"	1-19	20-99	100-199	200-399	400-999	1000+	Grand Total
Genesee	7	6	10	3			1	1	28
Alabama	1								1
Bethany	4	2	5	3			1	1	16
Darien			1						1
Pembroke	2	4	3						9
Stafford			1						1
Livingston	14	6	14	2	1	2	4		43
Groveland	13	5	13	1	1	1	2		36
West Sparta	1	1	1	1		1	2		7
Monroe	20	27	12	8	1	3		2	67
Brighton	3	2	1						6
Brockport	4	1	1						6
Clarkson	2	13	8	5		1		1	30
Hamlin	3	4		3	1	1		1	13
Penfield	5	3	1						9
Rochester	3	4	1			1			9
Ontario	15	7	8	1					31
Canadice	2	4	6						12
Canandaigua	13	3	1	1					18
Farmington			1						1
Wayne	18	22	8	6	2	2	5	1	64
Arcadia		1				1	4		6
Galen	12	10	1	4	2	1			30
Lyons	6	9	4	2			1	1	23
Walworth		2	3						5
Grand Total	74	68	52	20	4	7	10	4	239

Number of Sites per Size Class by Township (only towns of people signed up for training)

- 142 Sites without giant hogweed plants due to prior control
- 97 Sites with giant hogweed plants



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NYSDEC Giant Hogweed Control Program

- Outreach <http://www.dec.ny.gov/animals/39809.html>
 - Website, social media, outreach materials, presentations & trainings
- Giant Hogweed Information Line 845-256-3111 ghogweed@dec.ny.us
 - Report new sites
 - Get help with identifying suspect plants
 - Ask questions about plant & how to control it
 - Connect with our statewide control project
- Control Crews & Partner Agencies
 - Manual & Chemical control
 - Monitor sites
 - Collaborate with local, county & state agencies

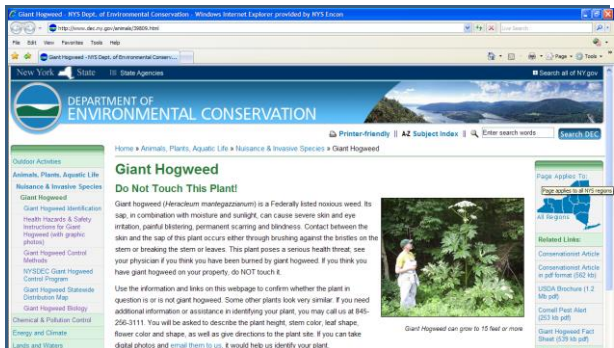


DEC Giant Hogweed Outreach



80,840 DEC brochures distributed since 2012.

200+ interviews



3,588,665 website visits since 2008



Giant Hogweed Control Methods



Are you worried about giant hogweed hurting you or someone else? Is giant hogweed causing ecological damage to your environment through replacement of native plants or erosion of soil? Are giant hogweed plants limiting your access to areas where you wish to recreate (e.g. back yard, stream bank) or work in (e.g. overrunning your garden, field or orchard)? If you answered yes to any of these questions, you may be interested in learning about methods for controlling this non-native invasive plant.

2,525 Control Guides distributed since 2010.

11,731 info line calls since 2008

9,186 info line emails since 2010



6,226 posters distributed since 2015



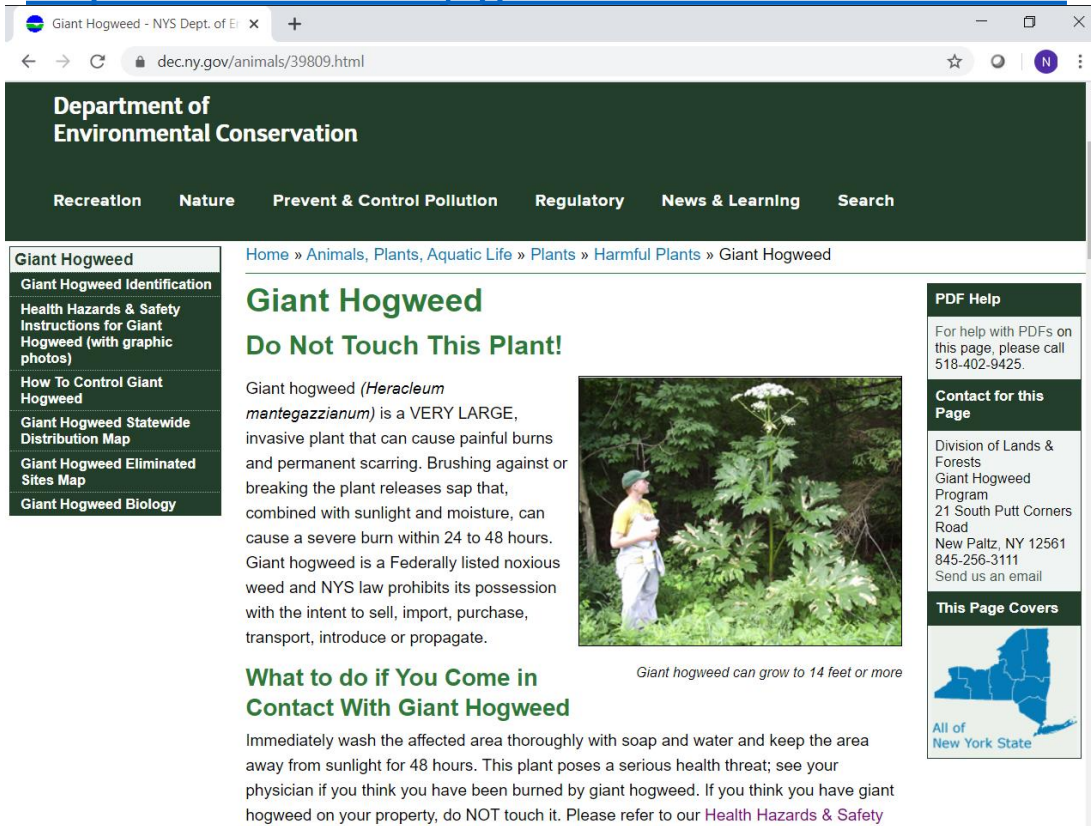
3,322,311 social media views since 2016



50+ trainings

DEC Giant Hogweed Website

<http://www.dec.ny.gov/animals/39809.html>



The screenshot shows a web browser displaying the DEC Giant Hogweed website. The browser's address bar shows the URL <http://www.dec.ny.gov/animals/39809.html>. The website has a dark green header with the text "Department of Environmental Conservation". Below the header is a navigation menu with links: Recreation, Nature, Prevent & Control Pollution, Regulatory, News & Learning, and Search. On the left side, there is a sidebar with a "Giant Hogweed" section containing links to "Giant Hogweed Identification", "Health Hazards & Safety Instructions for Giant Hogweed (with graphic photos)", "How To Control Giant Hogweed", "Giant Hogweed Statewide Distribution Map", "Giant Hogweed Eliminated Sites Map", and "Giant Hogweed Biology". The main content area has a breadcrumb trail: Home » Animals, Plants, Aquatic Life » Plants » Harmful Plants » Giant Hogweed. The title "Giant Hogweed" is followed by the heading "Do Not Touch This Plant!". A paragraph describes the plant as a "VERY LARGE, invasive plant that can cause painful burns and permanent scarring. Brushing against or breaking the plant releases sap that, combined with sunlight and moisture, can cause a severe burn within 24 to 48 hours. Giant hogweed is a Federally listed noxious weed and NYS law prohibits its possession with the intent to sell, import, purchase, transport, introduce or propagate." An image shows a person in a green shirt and hat standing next to a tall, leafy plant. Below the image, it says "Giant hogweed can grow to 14 feet or more". A section titled "What to do if You Come in Contact With Giant Hogweed" advises washing the affected area with soap and water, keeping the area away from sunlight for 48 hours, and seeing a physician if burned. It also mentions that if you have giant hogweed on your property, you should not touch it and refer to the "Health Hazards & Safety" page. On the right side, there is a "PDF Help" section with contact information for the Division of Lands & Forests, a "Contact for this Page" section with the same contact information, and a "This Page Covers" section with a map of New York State.

Department of Environmental Conservation

Recreation Nature Prevent & Control Pollution Regulatory News & Learning Search

Giant Hogweed


- Giant Hogweed Identification
- Health Hazards & Safety Instructions for Giant Hogweed (with graphic photos)
- How To Control Giant Hogweed
- Giant Hogweed Statewide Distribution Map
- Giant Hogweed Eliminated Sites Map
- Giant Hogweed Biology

Home » Animals, Plants, Aquatic Life » Plants » Harmful Plants » Giant Hogweed

Giant Hogweed

Do Not Touch This Plant!

Giant hogweed (*Heracleum mantegazzianum*) is a VERY LARGE, invasive plant that can cause painful burns and permanent scarring. Brushing against or breaking the plant releases sap that, combined with sunlight and moisture, can cause a severe burn within 24 to 48 hours. Giant hogweed is a Federally listed noxious weed and NYS law prohibits its possession with the intent to sell, import, purchase, transport, introduce or propagate.



Giant hogweed can grow to 14 feet or more

What to do if You Come in Contact With Giant Hogweed

Immediately wash the affected area thoroughly with soap and water and keep the area away from sunlight for 48 hours. This plant poses a serious health threat; see your physician if you think you have been burned by giant hogweed. If you think you have giant hogweed on your property, do NOT touch it. Please refer to our [Health Hazards & Safety](#)

PDF Help

For help with PDFs on this page, please call 518-402-9425.

Contact for this Page

Division of Lands & Forests
Giant Hogweed Program
21 South Putt Corners Road
New Paltz, NY 12561
845-256-3111
Send us an email

This Page Covers

All of New York State

3,387,192
website visits
since 2008



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Information Line

- 1,000-2,500 calls/emails per year
- 25% of reports are giant hogweed

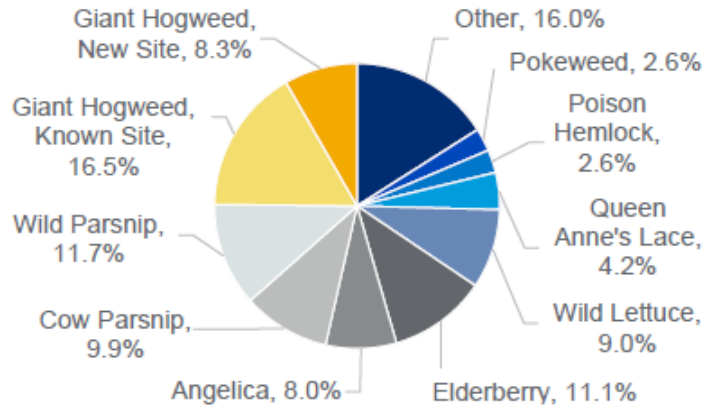


Figure 9. Most common plants reported to the information line.



Collaboration

Partners conducted outreach, survey and control for their GH sites:

- Adirondack Park Invasive Plant Program (APIPP) PRISM
- Capital/Mohawk PRISM
- Catskill Regional Invasive Species Partnership (CRISP) PRISM
- Lower Hudson PRISM
- Saint Lawrence Eastern Lake Ontario (SLELO) PRISM
- Oswego County Soil and Water Conservation District



Partners assisted with survey, outreach and program management:

- Finger Lakes PRISM hire three staff to work with GH control program and two staff to work on GH outreach. Funding received through USDA Natural Resources Conservation Service.
- NYS Parks host the Western NY DEC GH crews at their State Park Offices.
- New York City Department of Environmental Protection (DEP) staff survey properties in Putnam County. Plants controlled by Lower Hudson PRISM staff and Trillium Invasive Species Mgmt.
- Western NY PRISM assists with survey and outreach.
- Towns, Counties and landowners grant permission for crew visits. Some will do control



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2019 Season Highlights

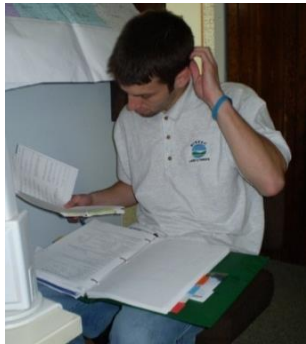
- 2,105 sites visited (96% of active sites)
- 129 sites newly designated eradicated.
- 115 new sites identified
- 1,189 sites and approximately 459,000 plants controlled
- 15.2 miles of stream frontage surveyed (200 properties).
- 1,598 Information Line calls/emails
- 239,773 visits to DEC GH webpages



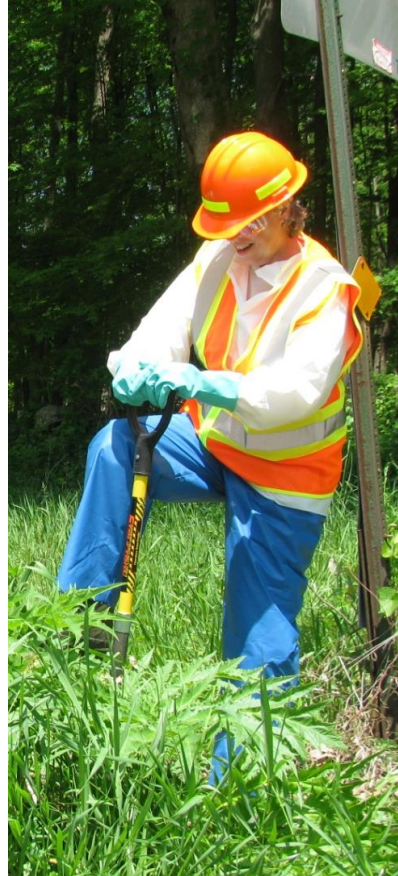
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Crew Tasks

- 23 Staff Members (13 crews) in 2019
 - Buffalo (4), Avon (8), Montemzuma (1), Syracuse (7), and New Paltz (3)
- Crews are responsible for 150-200 sites
- Contact each property owner
- Obtain permission to visit the property
- Visit each property once per season
 - Update site information
 - Update photos
 - Survey & perform control
 - Record GPS points/Tracks
 - Leave control summary for owner



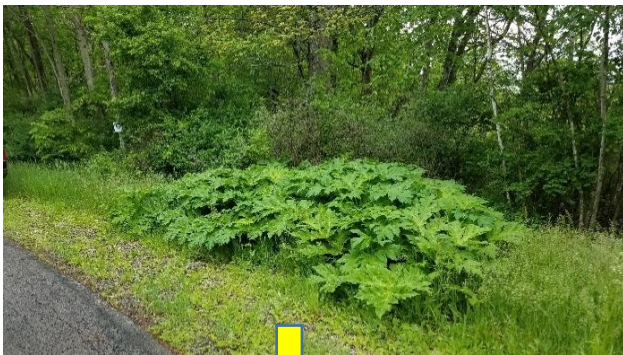
Safety Gear (PPE): Tyvek coveralls or pants, waterproof gloves, rubber boots, safety glasses, safety vest (roadside), respirator (optional)



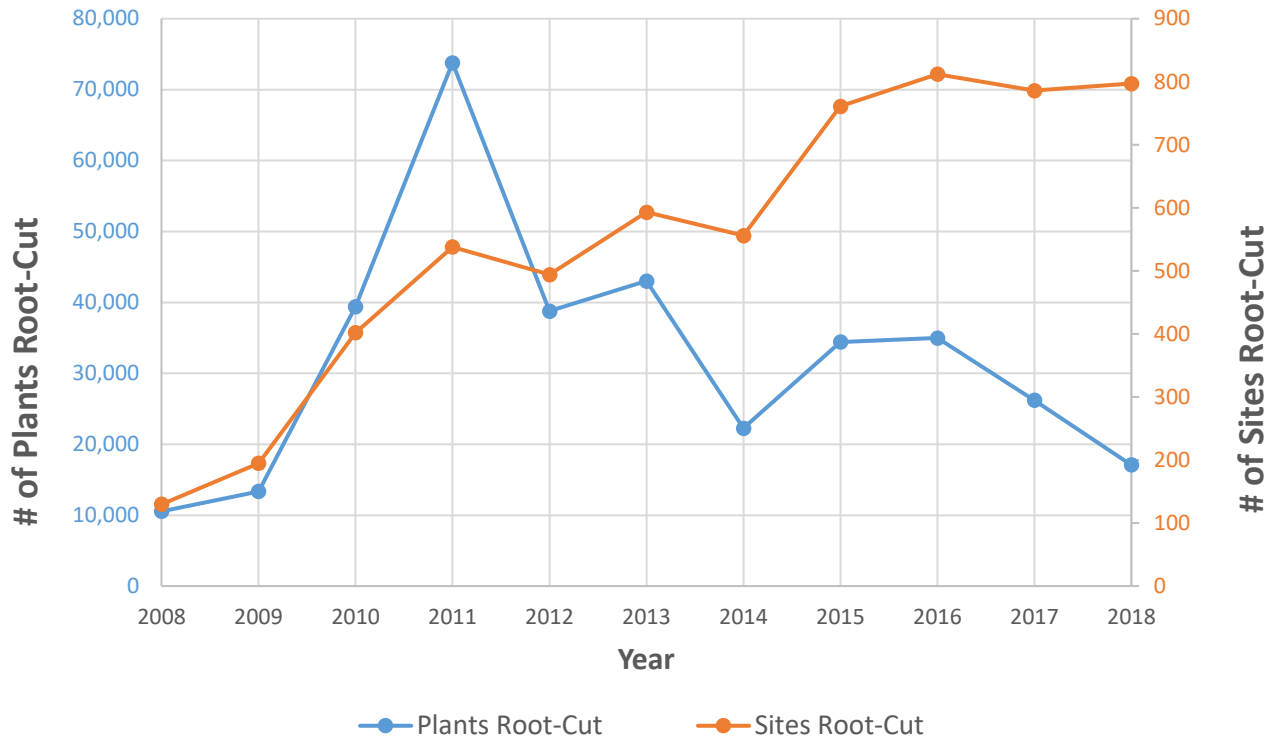
Control Methods



Before and After Control



Plants Root-Cut vs Sites Root-Cut by Year



The yearly root-cut count is dropping.



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2009



2016

Example of Control Success

Site #110 - Livingston County

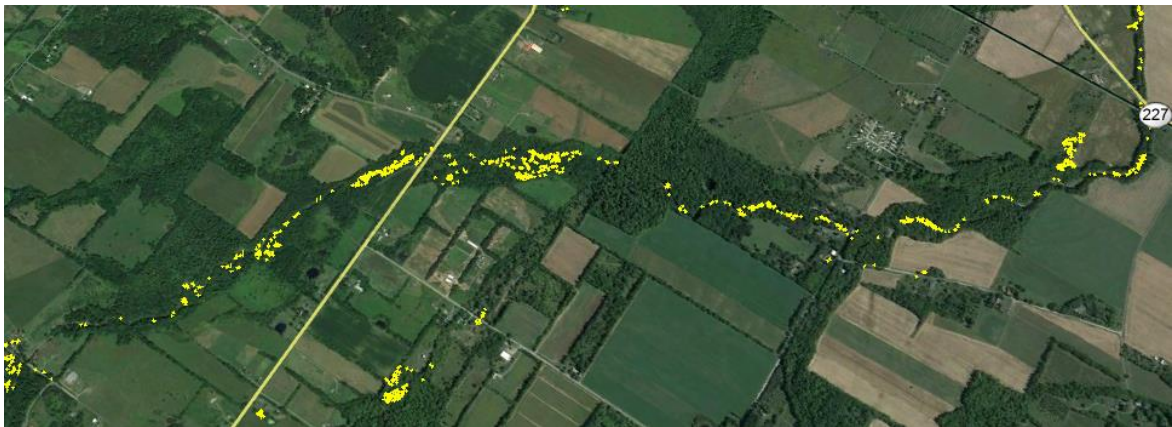
- This formerly large site has been controlled since 2009.
- In 2016, 97% less herbicide was needed to control the plants at the site than was used in 2009.
- The number of plants at this site has dropped dramatically.

Control Challenges



Sources of spread still exist

- Roadside mowing
- Riparian areas
- Access Denied!

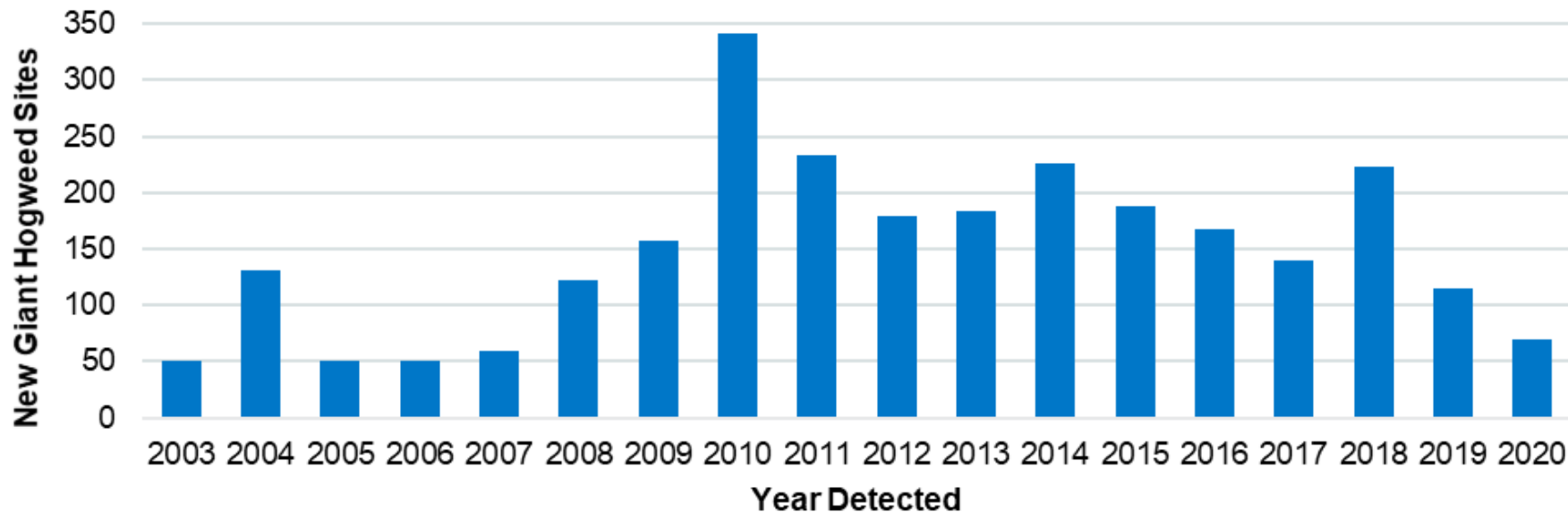


Sites where owners refuse to allow DEC access for giant hogweed control

County Township	0 plants "eradicated"	0 plants "monitor"	1-19	20-99	200-399	1000+	unknown	Grand Total
Genesee			1					1
Darien			1					1
Livingston	1			1			1	3
Geneseo							1	1
Livonia	1							1
Springwater				1				1
Monroe	2		1		1			4
Parma	1							1
Rochester			1		1			2
Webster	1							1
Orleans	1	1						2
Clarendon	1							1
Murray		1						1
Wyoming				1		1		2
Java				1				1
Sheldon						1		1
Grand Total	4	1	2	2	1	1	1	12



New Giant Hogweed Sites Detected Per Year



Stream Survey

2018-2020: crews visited 584 properties and surveyed 66.4 miles of stream frontage.

New GH infestations found on 106 properties, 65 of which were new properties.

Stream surveyed	# of Tax Parcels Surveyed	Miles Surveyed	# of Sites (Tax parcels) with GH Plants Found
Buffalo Creek	118 Parcels	17.3 Miles	41 Sites
Cazenovia Creek	110 Parcels	7.2 Miles	3 Sites
Conesus Lake Tributaries	48 Parcels	7.6 Miles	11 Sites
Eighteen Mile Creek	87 Parcels	7.9 Miles	25 Sites
Monroe County Streams	95 Parcels	4.5 Miles	5 Sites
Oatka Creek	102 Parcels	15.9 Miles	12 Sites
Salt Creek	16 Parcels	4.5 Miles	4 Sites
Springwater Creek	8 Parcels	1.5 Miles	5 Sites
Total	584 Parcels	66.4 Miles	106 Sites

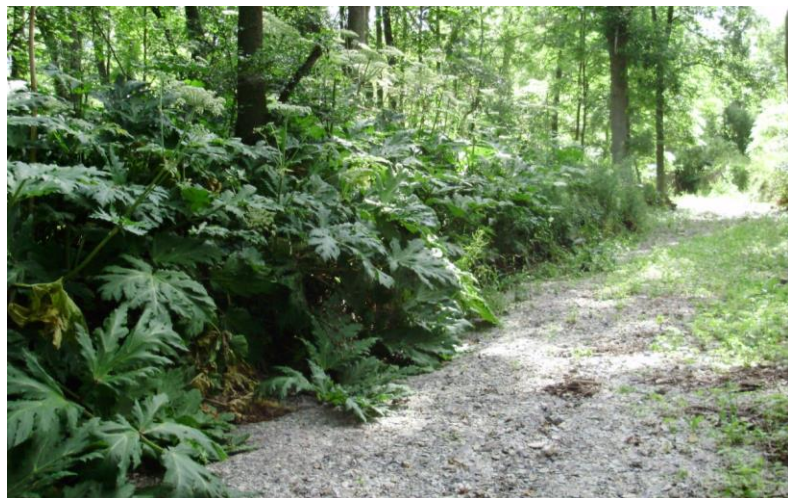


Eradication- Is that really possible?

- Matures in 3+ years- allowing for control before seed set
- Control methods are effective
- Struggles to hide plain sight. Public helps with reporting
- Not spread by wildlife
- We have had consistent funding
- Most landowners are cooperative



Perseverance



2009 (5,500 plants)



2012 (382 plants)

Site #373 - This site is located directly behind a school in Wyoming County. The photos show progress at a large site after three years of herbicide control. There were 10,000 plants in 2008; in 2018 there were 14 plants root-cut.

How to report a site

Contact the giant hogweed information line

- Email ghogweed@dec.ny.gov
- Call 845-256-3111
- Text 518-320-0309

Information needed:

- Directions to the site (GPS coordinates a plus)
- Estimate number of plants
- Photos (high resolution preferred)
 - Whole plant, leaves, stem, flower head, seed



What can you do to help?

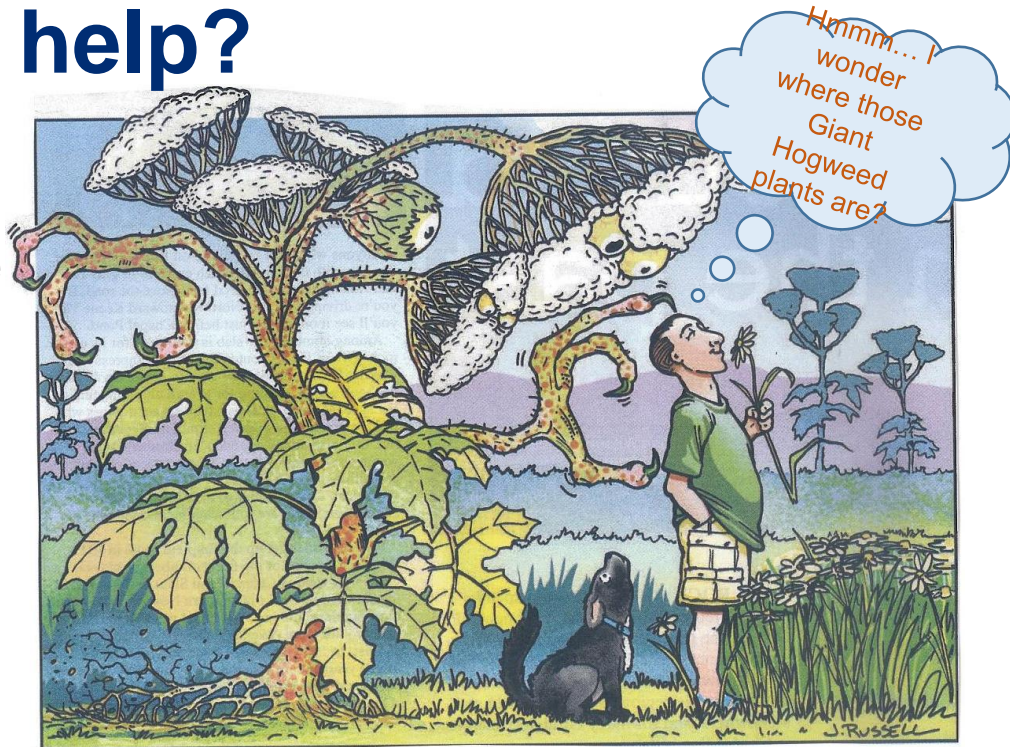
Be aware/observant

Report sightings to the information line

- ghogweed@dec.ny.gov , 845-256-3111
- Identify, Photograph, Report

If you have GH on your property:

- Report. We can help (for free)
- Survey for plants
- Control plants (especially seedheads)



Help STOP THE SPREAD. Encourage others to report and allow control of GH plants.

How can local government help?

- **Educate:** Provide outreach materials and information to the public & staff
- **Report:** Train employees to report hogweed sites to DEC information line
- **Stop the Spread:** Train highway department staff to NOT mow plants after they set flower
- **Control:** Let us know if they want to learn how to control hogweed- we will help train them.
- **Enforce:** Pass local noxious weed laws



Thank You



Department of
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What can be done about wild parsnip?

- Obtain information from DEC and PRISMs
 - www.dec.ny.gov/animals/105364.html (info & fact sheet)
 - Email: ghogweed@dec.ny.gov or Call: 845-256-3111
 - Info Line will ID plants from photos
- Outreach to educate about the dangers of wild parsnip and how to control it.
- No statewide control program
 - Too prevalent, sets seed every other yr.
- Recommend local focus on areas of concern and prevent spread of seed.
- Do not MOW once plant is in seed

