## Battling Invasive Plants...Nix the Knotweed





#### Suzanne Thompson

Old Lyme Town Hall Lyme Art Association Roger Tory Peterson Estuary Center Old Lyme, CT

## Panelists & Sites

**Diana Fiske** Whalebone Cove Lyme, CT **Courtney MacDonald** Ferry Landing South Glastonbury, CT

Fishers Island, NY



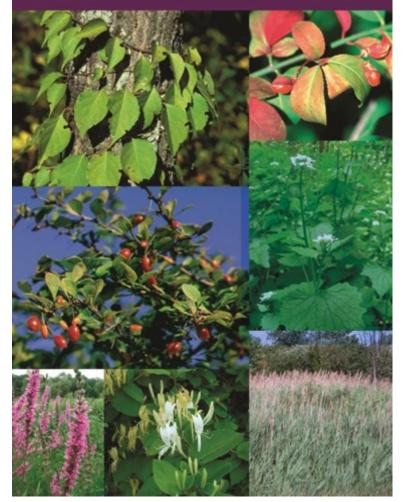


Michelle Royce Williams Veterans Memorial Park East Lyme, CT

## Plant Invaders in our Landscape Connecticut's Top Ten....

- Japanese Knotweed (Polygonum cuspidatum)
- Oriental Bittersweet (Celastrus orbiculatus)
- Japanese Barberry (Berberis thunbergii)
- Multiflora Rose (Rosa multiflora)
- Mugwort (Artemisia vulgaris)
- Garlic Mustard (Alliaria petiolata)
- Autumn Olive (Elaeagnus umbellata)
- Common Reed (Phragmites australis)
- Mile-a-Minute Vine (Persicaria perfoliata)
- Swallow-wort (Cynanchum Iouiseae)

Invasive Plants In Your Backyard! A Guide to Their Identification and Control NEW EXPANDED EDITION





## Japanese Knotweed

Reynoutria japonica Polygonum cuspidatum Falopia japonicum









## Why is Japanese Knotweed such a Problem?

What sounded too good to be true...

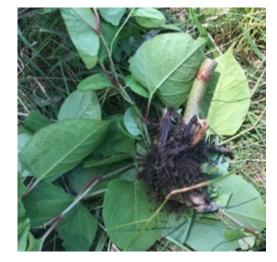
- Fast-growing
- Creates dense screen
- Deer won't eat it
- Insect and disease free





• Aggressive, early growth crowds out native plants





 Spreads by roots, rhizomes, cuttings & seeds



No native predators

## Knotweed after the first killing frost



## **Erosion Problems Exacerbated by Knotweed**





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Home News UK





### Japanese Knotweed UK map: What does Japanese Knotweed look like? Spread of KILLER plant

JAPANESE KNOTWEED is infesting Britain and wreaking havoc to residents, ruining homes and lives as it makes its destructive and determined way across the country. What does Japanese Knotweed look like? And where has it spread in the UK?

By KAISHA LANGTON

PUBLISHED: 09:26, Fri, May 17, 2019 | UPDATED: 13:16, Fri, May 17, 2019

SHARE f TWEET y in

#### Plant expert reveals UK weed that LOWERS property value





#### Japanese knotweed: The plant bringing misery to homeowners

By Conor Macauley BBC News NI Environment Correspondent

(0.19 June 2015





It was about eight years ago when the nightmare started at the north Belfast home of Liz and Adrian Atkinson.

They had lived there for 18 years but it was only recently that they noticed a rapid growth on a bank behind their property.

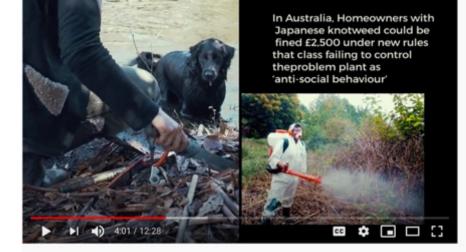
It turned out to be Japanese knotweed, an invasive species brought to these shores by 19th century botanists.

It had evolved to survive on the slopes of volcanoes in Japan.

But, over here, it's getting out of control.

It's fast-growing and difficult to kill. It can punch through concrete, doing damage to house foundations and drainage.

The species is so destructive that banks are refusing mortgages for those who have it on or near their property.



Japanese Knotweed, Invasive Plant or Wild Food and Medicine ..?

5,564 views · Apr 13, 2017

2K 41 28 A SHARE =+ SAVE ...



Herbal Jedi 133K subscribers

SUBSCRIBED

Join Herbalist Yarrow Willard in looking at one of the most notoriously invasive weeds on the planet!!

#### Japanese knotweed: How much can Japanese knotweed knock off price of YOUR home?

JAPANESE KNOTWEED is a deterrent for buyers and mortgage lenders alike, but how much can an infestation if Japanese knotweed knock off the price of your home?

By GEORGINA LAUD PUBLISHED: 19:29, Thu, Jan 23, 2020 ( UPDATED: 19:49, Thu, Jan 23, 2020









Polygonum cuspidatum Siebold & Zucc. Japanese knotweed

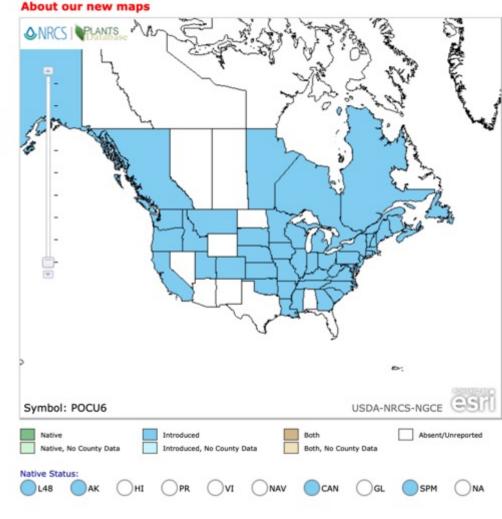


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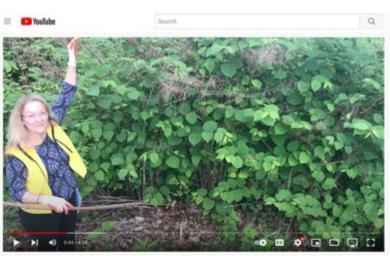
**General Information** Symbol: POCU6 Dicot Group: Family: Polygonaceae Duration: Perennial **Growth Habit:** Forb/herb Subshrub **Native Status:** AK I CAN I L48 I SPM I **Data Source and Documentation** 



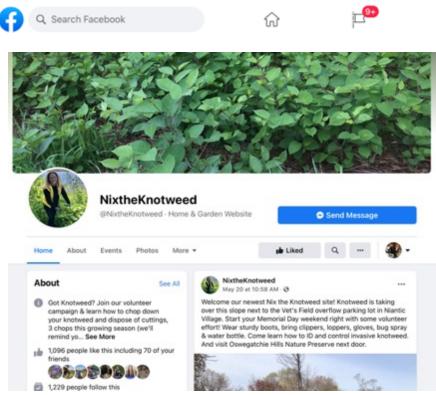


## Nix the Knotweed!

- Carbohydrate deprivation method
- Three cuttings each summer for 3 years
- Organic, no chemicals, uses hand tools
- Field tested over 10 years



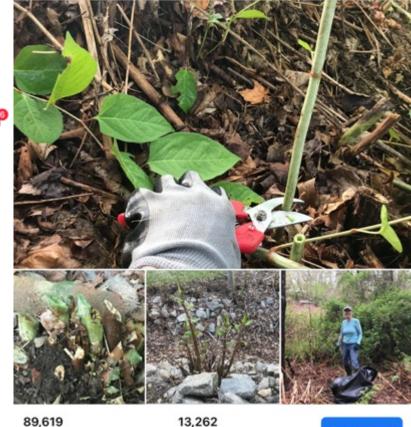






Published by Suzanne Thompson O · May 11 at 3:42 PM · O

We are here to help you Nix the Knotweed! This all-volunteer effort by organic gardeners and nature-lovers is sharing a method perfected over 10 years in coastal CT. Start cutting invasive Knotweed now. Cut stems close to the ground. Remove live stems so they do not resprout into new plants. If you live in CT, our municipal trash is incinerated. Bag your cuttings and put in the trash. In other states, please check where your trash goes. PLEASE DO NOT toss live cuttings into c... See More



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Engagements



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98 Comments 434 Shares

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## Nix the Knotweed!











## Pine Grove's Success Story







- Cut back 3 times
- Repeat for 3 years
- Dispose of/ destroy the live cuttings
- Replant native plants



## 3 Tools

## 3 Times

3 Years





(Don't forget the bug spray. And sturdy boots!)

## Best Times to Cut Back Knotweed



- Late May/Early June
- Mid-July
- Mid-August



## What You Don't Do



Weed whacking & mowing spread viable cuttings



### Don't pull - deep roots break off and sprout new plants



#### Pesticides can harm other species, including humans



## Pine Grove Year One





Pilot Program 100' x 40'

# Pine Grove Year 3

- Keep watching for sprouts
- Observe succession of plants
- Focus on other invasives and start adding desired plants

See more in the Photo Albums at NixtheKnotweed on Facebook





## Patience is a Virtue – Vigilance is Key

## Pine Grove, May 2020 – 8 Years Later



## Nix the Knotweed Started - 2020 Sites



Lyme Art Association Old Lyme





Old Lyme Land Trust John Lohmann CT River

Evening, morning & weekend cutting parties

Follow NixtheKnotweed on FB <u>nixtheknotweed@gmail.com</u> Text Suzanne – 860-662-1531



Old Lyme Town Hall



## Lyme Art Association





May 2020 – annual mowing wasn't working, so we started cutting & bagging



Sept. 2020 1<sup>st</sup> year

### **Lyme Art Association** Year 2, after repeated cuttings





Aug. 4, 2021



October 27, 2021



Native plants coming back – rushes, sedges, asters, ferns, Virginia creeper, and Poison Ivy

## Lyme Art Association

### October 27, 2021



## 2022 – Yes, it works...slowly...

Native plants continue to appear & grow





Lyme Art Assoc, end of 3<sup>rd</sup> year, 3 cuttings



### Whalebone Cove – Silvio O Conte Preserve





- Active Friends of Whalebone Cove group
- Mobilized first to pull aquatic species
  *Trapa* Water chestnut & *Hydrilla*
- US Fish & Wildlife Service permission required

## Volunteers Cutting Year 1 - 2021



First cutting, May 14, 2021

### Whalebone Cove after 2 Years



March 2023 – 3<sup>rd</sup> year of cutting will resume in May

## Veterans Memorial Park, Niantic





First cuttings 2021



### Project sign for curious onlookers



### Cutting parties continued in 2022



Pitch Pine saplings planted by Friends of Oswegatchie Hills in 2022

## Ferry Landing, South Glastonbury



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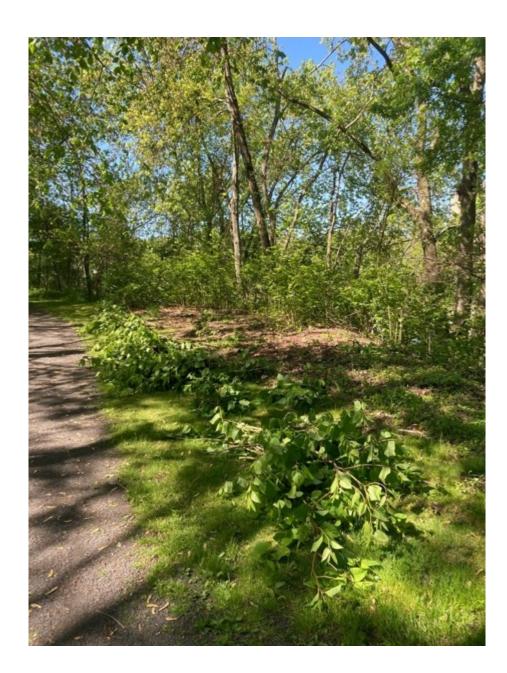
## Knotweed & Garlic Mustard



## Ferry Landing



2<sup>nd</sup> year cutting in 2022



## Fishers Island, New York



June 2021 Before 1<sup>st</sup> cutting



June 2021 After 1st cutting

#### **Control along Fishers Island Bike Path**





## Town of Waterford Park

#### 47 Oswegatchie Road





Native Monotropa uniflora observed



Native wintergreen ground cover returning

2 cuttings each year, 2020, 2021, 2022





#### Permissions, Permits, Waivers







A map shows the regions in the four-state Silvio O. Conte Wildlife Refuge that U.S. Fish and Wildlife wants to add to the

refuge.

CREDIT U.S. FISH AND WILDUFE

# Finding and Organizing Volunteers











#### Motivating and Keeping Volunteers





#### What to Do with the Cuttings?





Invasive Plant Propagules can be bagged and tossed into CT's incinerated waste stream



## Solarizing Knotweed Cuttings – 2021 experiment

Lyme-Old Lyme Food Share Garden





Knotweed cuttings dried out over summer while smothering tarped invasive Mugwort

#### Once completely dried out and dead, Knotweed stems will not resprout







Dead stems are safe to compost and allow to decompose but live stems resprout and grow

# Other Alternatives?

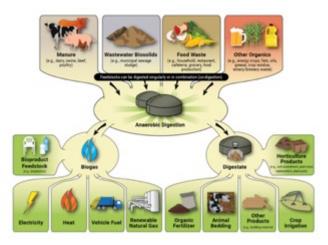
- Separate IPPs pile at Town Transfer Stations?
  - Solarize/Die Down
- Vermiculture worms?
- Goats eat it raw?
- Pigs eat it steam-treated w/food scraps?
- Anaerobic digesters?
- Biochar?







Honey Hill Farm, Lyme



US EPA – How Anaerobic Digesters Work

©Wiggle Room

#### Bio Char in CT!



www.zip06.com/features/20220706/after-the-flowers-are-planted/







NEWS ART & LIFE POLITICS OPINION LETTERS ABOUT CONTAC

Old Saybrook, Environment, News

#### **Old Saybrook Partners Launch Carbon Capture Startup**

- Brendan Crowley, 5.12.2022



https://ctexaminer.com/2022/05/12/old-saybrook-partners-launch-carbon-capture-startup/

## Could Bio Char be Part of the Solution?



https://blusky.io

# 2023 Challenge - CT's Waste Crisis Our Trash to Energy Incinerators are going away...



or food scraps on a pile of newly dumped garbage on the tipping floor at the MIRA facility in Hartford's South

verage of 2,500 tons of garbage are dumped and processed at the trash-to-energy plant daily.

• 22+% of our municipal waste is food scraps

- 11+% is other green waste Including Invasive Plant Propagules (IPPs)
- MIRA Incinerator Hartford shut down July 2022
- Towns paying more to ship waste to landfills in other states
- Major push by CT DEEP to compost food waste
- What to do with Invasive Plant Parts?

Does it make sense to use fossil fuels to bag and transport plant materials to land fills in other states?

# Nix the Knotweed 2023

- More locations
- More volunteers
- More solarizing & other approaches
- Good outdoor exercise
- No thorns, prickers or itchy sap





#### How you can help

- Find your patch of Knotweed
- Organize or join a Cutting Party
- Follow NixtheKnotweed FB page
- Help us make this a Citizen Science effort



#### Patience... Persistence



#### and Restore...



Suzanne Thompson

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### Panelists & Sites

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