

Japanese Knotweed

Polygonum cuspidatum

&

Purple Loosestrife

Lythrum salicaria

Presented by:

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271-3488

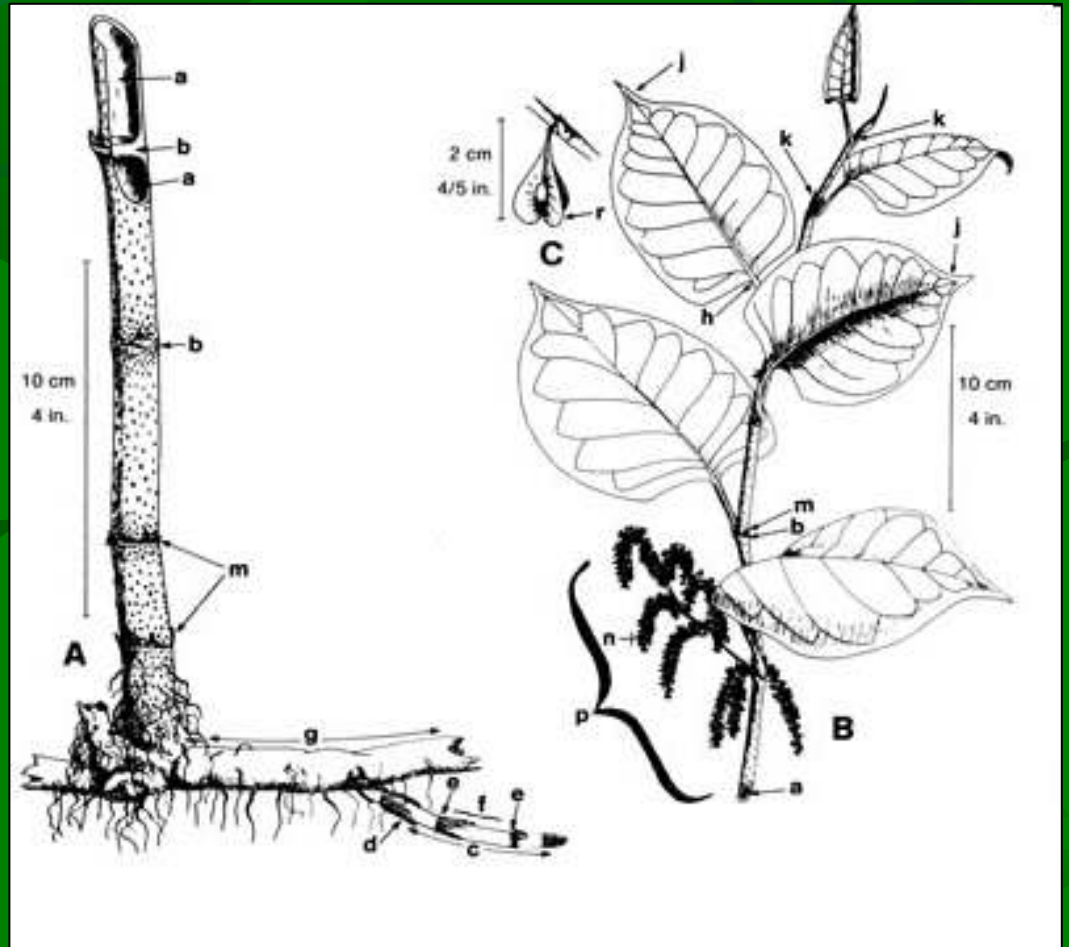
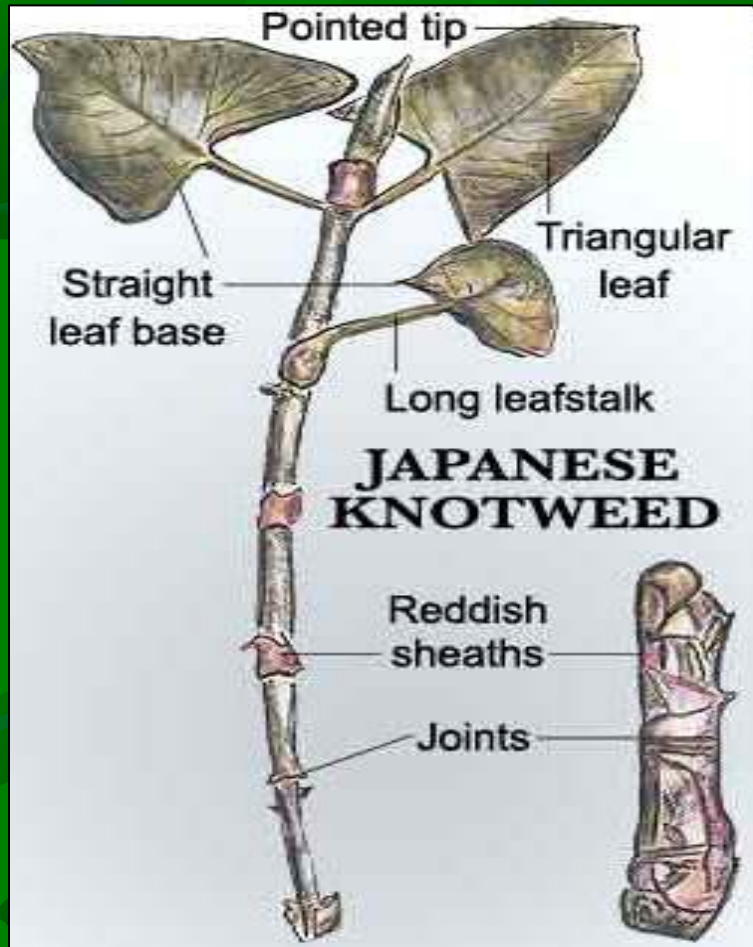
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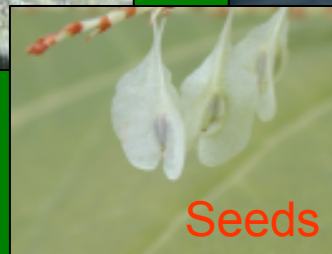
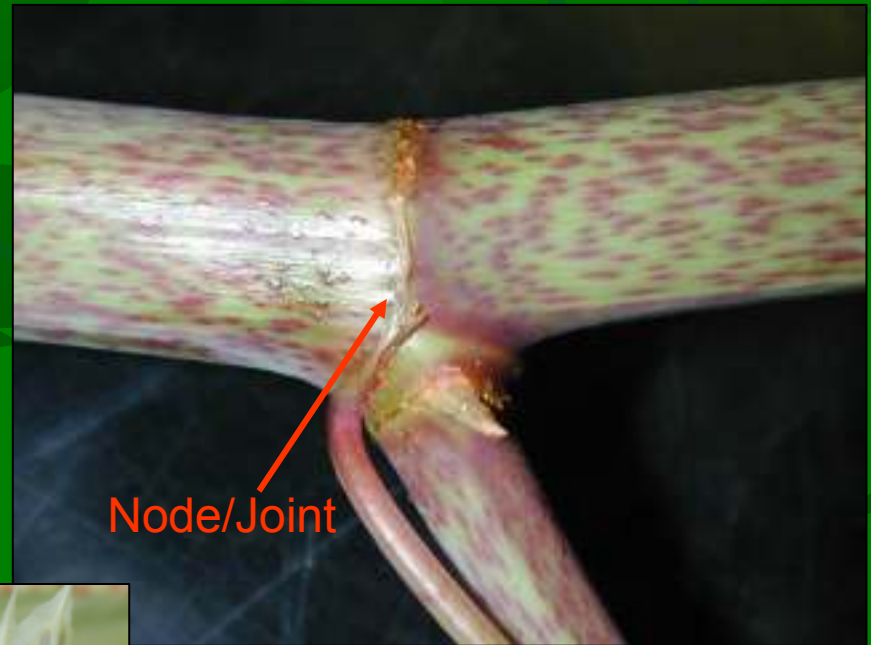
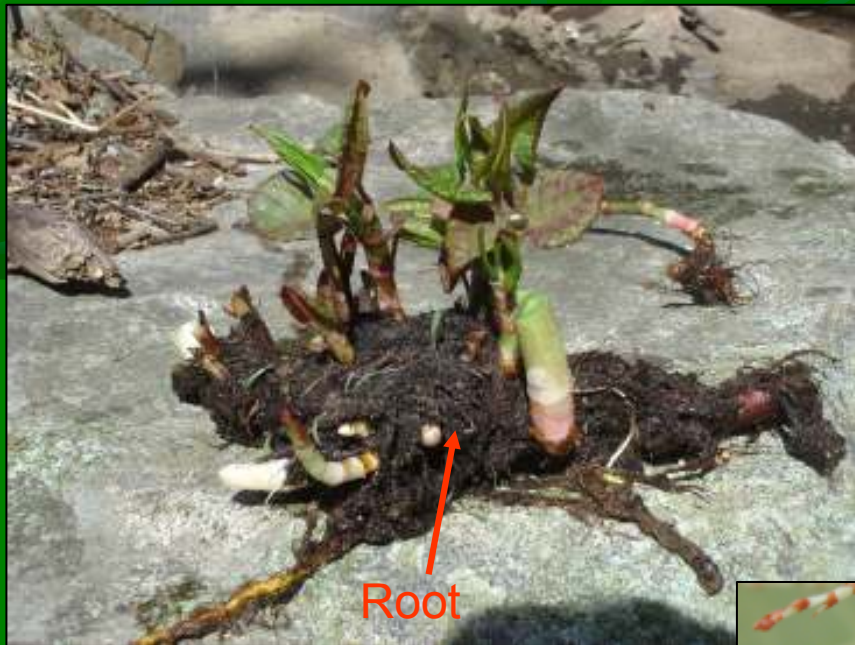


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Reproductive Propagules



$\frac{1}{2}$ " segment of root, a single node or seed can develop into a new plant.

Flowers, seeds & seedlings



Spread by vegetative fragments





Riparian invasion due to ice scouring
damage dislodging roots and stems



**Invasions along highways
and ROWs resulting from
mowing and maintenance**



Polygonum cuspidatum



Polygonum cuspidatum 'Variegata'



Polygonum sachalinense



Japanese & Giant knotweed

Japanese knotweed Variations

Controls – Cutting

Do Not Mow

Cutting is intended to starve the roots of energy by stopping photosynthesis. However, this method is very labor intensive requiring cutting at least four times a growing season for any long term positive results.



Cut knotweed at the base using brush saws, loppers, scythes, or sickle-Bar

Chemical Control

- Controls resprouting
- Useful when dangerous or impractical for mechanical methods
- Efficient and economical
- Immediate response
- **Pesticide Applicators License is required:**
call the Dept. of Agriculture's Division of Pesticides (271-3550) or a licensed pesticide applicator

Herbicides for Knotweed

■ Glyphosate

Broad spectrum, water soluble, inhibits amino acid synthesis.

■ Imazapyr

Broad spectrum, water soluble, inhibits amino acid synthesis.

■ Triclopyr

Woody and broadleaf herbaceous plants, disrupts tissue development and other physiological processes.

- Roundup (dry sites)

- Roundup-Pro (dry sites)

- Rodeo (wet sites)

- Aquamaster (wet sites)

- Gallup

- Arsenal (dry sites)

- Habitat (wet sites)

- Garlon 3A (wet sites)

- Renovate 3 (wet sites)

- Garlon 4 (dry sites)

- Pathfinder II (dry sites)

Application Methods

- *Spray* (foliar) – Cut plants in early June followed by a 5-7% solution of **glyphosate** herbicide foliar spray application in mid *August* with a potential control rate of 100% with no re-sprouts.
- *Cut & Fill* (cut stem) – *early August* (or when starting to flower) cut stems between the first and second node and pour in 3-5ml of 50% **Aquamaster** solution per stem.
- *Wicking* (cut stem) – *early August* (or when starting to flower).
- *Stem injection* –Used on stems $\frac{1}{2}$ " or greater in diameter with a potential control rate of 90% using (3-5ml) 50% **Aquamaster** solution per stem.

Controls for Knotweed

Treatment Method	Treatment Effectiveness
Cut and foliar spray	100% Damage
Stem injection	90% Second year
Cut and drop	50% Damage
Mechanical only	0% Second year

Smothering – 7mil Black Plastic

Meredith – Rte 3 Athletic field entrance



**Cut stems at base with Brush-saw
and remove stalks**



Cover sharp stems with a cushion



**Cover with heavy black plastic and
cover with wood chips or other material**



**Periodically check the site and make
repairs as necessary**

Foliar Spray Using - Aquamaster

Meredith – Lake Waukegan knotweed was cut in early June then allowed to regrow before applying herbicide in August-September



Controls – Herbicide – Roundup-Pro

Meredith – Mill St/Rte 3 Intersection



Herbicide foliar application using Roundup Pro on 09/07/2010



Guy Giunta from DOT applying herbicide with backpack sprayer



Paul Rushlow, DOT using sprayer with stream nozzle



Follow up visit on 10/06/2010

Mist Blowers Applying – Accord/Arsenal

By: Vegetation Control Services, Inc.



Purple loosestrife

Lythrum salicaria



Highly Adaptive



Biological Controls

Galerucella spp.



Nashua Wetland Mitigation Site

July, 1997 5,000 Galerucella Beetles Released



July, 1997

1,500 Galerucella Beetles Released



August, 1999

10,000 Galerucella Beetles Released



July, 2000

No Galerucella Beetles Released





The End