

Developing a Biological Control Program for Invasive Knotweeds



Fritzi Grevstad, Olympic Natural Resources Center, U. of W.

Richard Shaw, CABI-Biosciences-UK

Richard Reardon, U.S. Forest Service

Bernd Blossey, Cornell University

Eric Coombs, Oregon Department of Agriculture

Acknowledgements

Susan Turner, British Columbia Ministry of Forests

James McIver, Eastern Oregon Agriculture Research
Center

Marshall Udo, Washington Department of Agriculture

Alec McClay, McClay Ecosciences

Rob Bouchier, Agriculture and Agrifood Canada

Rosemarie DeClerck-Floate, Agriculture and Agrifood
Canada

Linda Wilson, University of Idaho

Vicki Nuzzo, Botanical Services

Jennifer Andreas, Washington State University Extension

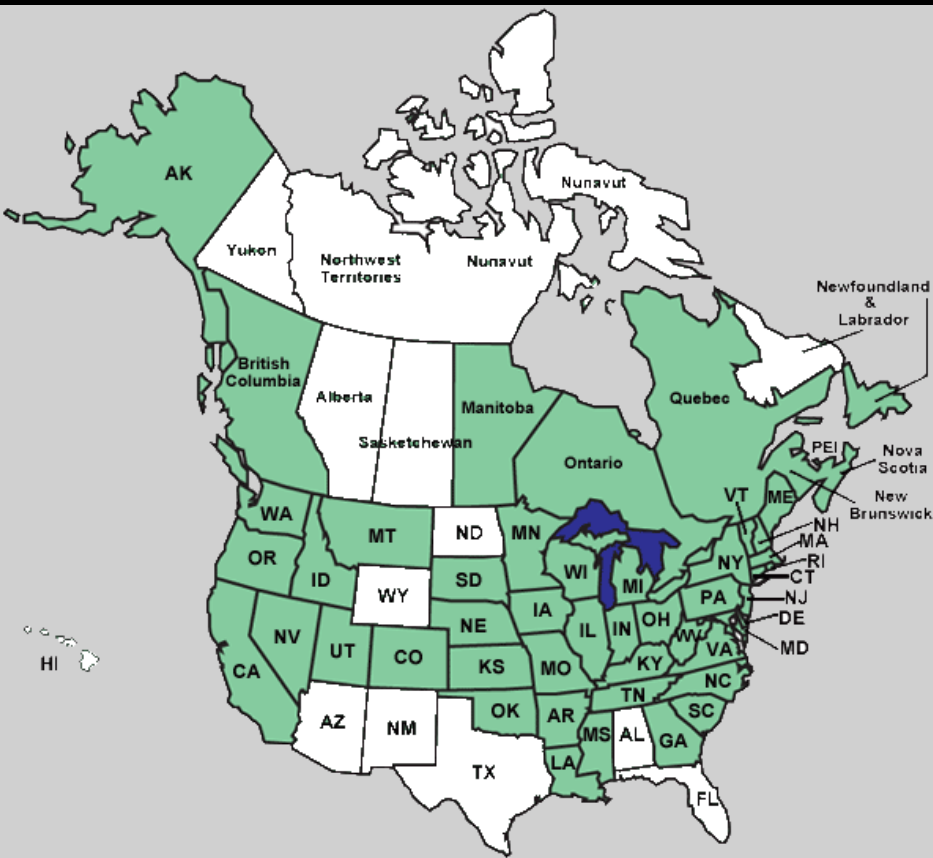
Letter writers



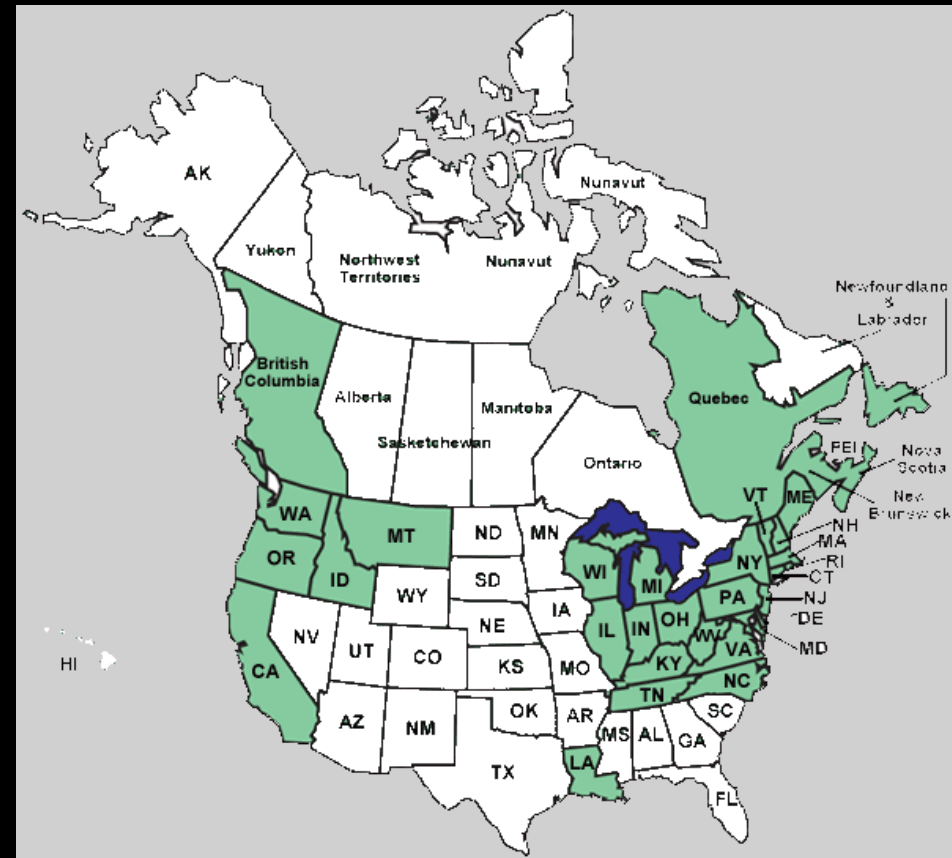
Knotweed Challenge

- Daunting quantities, widespread distribution
- Control not always effective
- Requires multiple application
- Costly
- Sites difficult to access
- Regional eradication unlikely
- Ongoing...

Japanese knotweed and hybrid



Giant knotweed





Knotweed in Japan



Photo: K. Yano

Why biocontrol?

- Economical over large scales
- Ecological
- No toxic side effects
- Specific to target weed
- Long term solution

Downside

- Slow action
- Hard to predict level of impact
- Risk to non-target plants
- Extensive pre-release research required

Worldwide:

~1000 introductions against weeds

PNW:

73 introductions against 30 weeds



St. Johnswort
Hypericum perforatum



Tansy Ragwort
Senecio jacobaea



Purple loosestrife
Lythrum salicaria

Targets...

Japanese knotweed

Fallopia japonica var. *japonica*
(*Polygonum cuspidatum*)



Giant knotweed

Fallopia sachalinensis
(*Polygonum sachalinense*)



Bohemian knotweed - hybrid

Fallopia x bohémica
(*Polygonum x bohemicum*)



Not a target...



Himalayan knotweed
Persicaria wallichii
(Polygonum polystachyum)

Steps

- Identifying the problem
- Natural Enemy Surveys
 - Introduced range
 - Native range
- Test Plant List
- Host specificity and life history studies
- Review and permitting
- Release and monitoring of impacts

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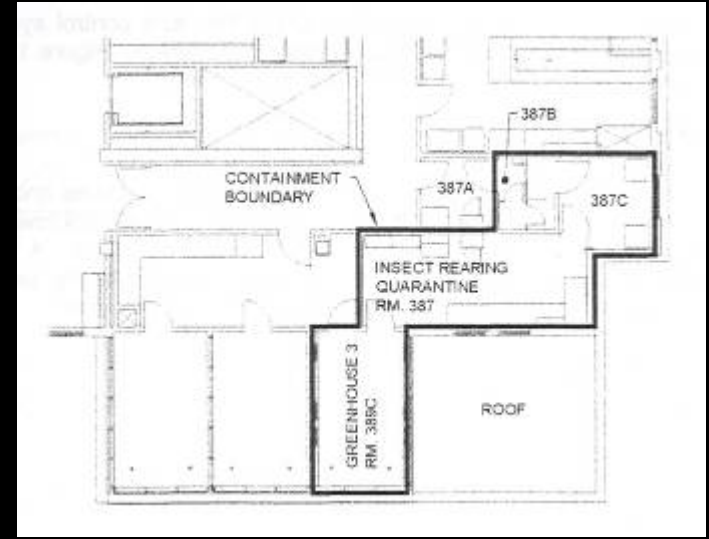
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OSU Quarantine Facility



Gallerucida bifasciata
Leaf beetle





What's next?

- More surveys in northern Japan
- Host specificity testing of *Gallerucida bifasciata*
- Additional candidates to be imported next summer
- Funding needed -- Knotweed Biocontrol Consortium

grevstad@u.washington.edu

