

Ohio's New Regulation of Invasive Plant Species: How It Happened And Was Implemented

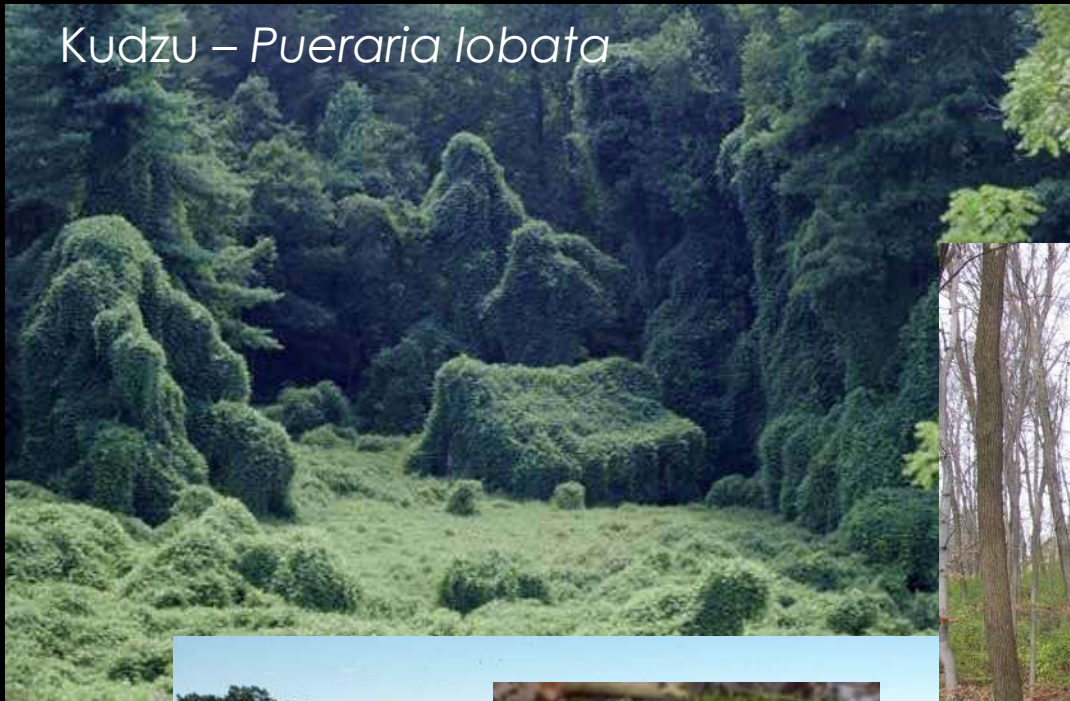
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Ohio Invasive Plants Council



Kudzu – *Pueraria lobata*



Amur Honeysuckle -*Lonicera maackii*



Purple Loosestrife – *Lythrum salicaria*

Before:



Amur Honeysuckle
(*Lonicera maackii*)

After:



UGA1330021



Invasive Species:

An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Clinton Executive Order 13112 (1999)

With regard to a particular ecosystem, a non-native organism whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal, or plant health.

Obama Executive Order 13751 (2016)



Note: Native species can also be invasive



UGA0002044

UGA1148104

UGA1162002



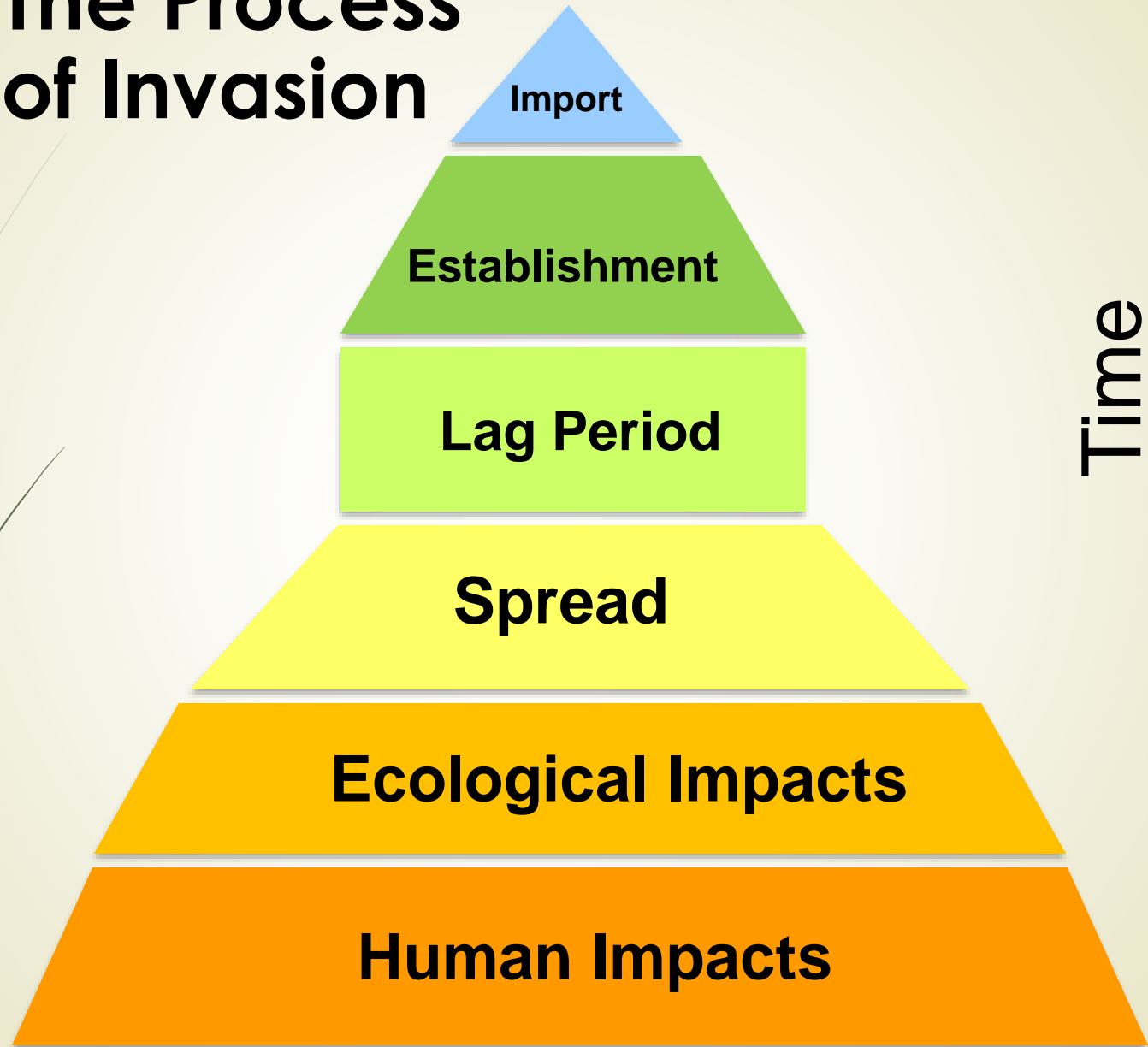
When Should A
Plant Be Described
As **Invasive**?

Lesser Celandine
(*Ranunculus ficaria*)



Miami Whitewater Forest,
Cincinnati, OH

The Process of Invasion



Not All Introductions Become Problems

"Tens Rule"

Of 1,000 introduced species



100 escape



10 establish



1 becomes invasive

25,000 introduced plant species in US

Non-native or Introduced \neq Invasive

But...many traits desired for horticulture are also associated with invasiveness

- Wide ecological tolerance / hardiness
- Rapid growth
- Prolific flowering
- High fruit/seed production (for wildlife)
- Multiple introductions



Distribution through
ornamental pathway



Horticulture can be a pathway of some invasive plant introductions

82% of 235 woody plant species escaping cultivation were used in landscaping (Reichard and White 2001)





History of Plant Regulation

Noxious Species

19 Aquatic
5 Parasitic
88 Terrestrial

Federal Noxious Weeds



Federal Noxious Weed Act - enacted 1975
Superseded by Plant Protection Act of 2000

OH Noxious Weeds: 901:5-37-01 (1987)

Species designated as “Noxious Weeds” can be dealt with on the local township level

List revisited every 5 years

Updates must be added to the Ohio Administrative Code



Current Noxious Species in OH

Shatter cane – *Sorghum bicolor*

Russian thistle – *Salsola kali*

Kochia – *Bassia scoparia*

Wild parsnip – *Pastinaca sativa*

~~**Queen Anne's Lace** – *Daucus carota*~~

Canada thistle – *Cirsium arvense*

Poison hemlock – *Conium maculatum*

Mile-A-Minute weed – *Polygonum perfoliatum*

Japanese knotweed – *Polygonum cuspidatum*

Giant hogweed – *Heracleum mantegazzianum*

~~**Oxeye daisy** – *Chrysanthemum leucanthemum*~~

~~**Wild mustard** – *Brassica kaber* var. *pinnatifidum*~~

Palmer amaranth – *Amaranthus palmeri*

Kudzu – *Pueraria montana* var. *lobata*

Apple of Peru – *Nicandra physalodes*

Cressleaf groundsel – *Senecia glabellus*

Johnsongrass – *Sorghum halepense*

Purple loosestrife – *Lythrum salicaria*

Grapevines – *Vitis* spp.

Marestall – *Conyza canadensis*

Musk thistle – *Carduus nutans*

Noxious Species in OH (Proposed)

Field bindweed – *Convolvulus arvensis*

Heart-podded hoary cress – *Lepidium draba* sub. *draba*

Hairy whitetop – *Lepidium appelianum*

Perennial sowthistle – *Sonchus arvensis*

Russian knapweed – *Acroptilon repens*

Leafy spurge – *Euphorbia esula*

Hedge bindweed – *Calystegia sepium*

Serrated tussock – *Nassella trichotoma*

Columbus grass – *Sorghum x alnum*

Forage kochia – *Bassia prostrata*

Water hemp – *Amaranthus tuberculatus*

Yellow groove bamboo – *Phyllostachys aureasculata*

(when plant has spread from its original premise of planting and is not being maintained)



Invasive Species Approach in OH

- **2000:** Original list created by land managers & those in natural areas, organized by OH Division of Natural Areas & Preserves
- But....buy-in was not universal
- **2005:** OIPC formed as a 501c(3) not-for-profit
 - Federal/state government
 - Local government (Metro Parks)
 - Academic & educational institution
 - Non-profit conservation organizations
 - Nursery industry
 - Interested public



www.oipc.info

Invasive Species Approach in OH

- **2008:** OIPC Invasive Plant Working Group was formed to create a transparent, objective, & scientifically-based assessment protocol
 - Involved ALL partners (including nursery)
 - Reviewed assessments from CN, MA, IN, FL, Australia
- **2013:** OIPC Invasive Plant Assessment Protocol & Policy approved by OIPC Board & ONLA
 - Establishment of Plant List Assessment Team



Theresa Culley
U Cincinnati



David Brandenburg
Dawes Arboretum



Steve Cortina
Cincinnati Zoo

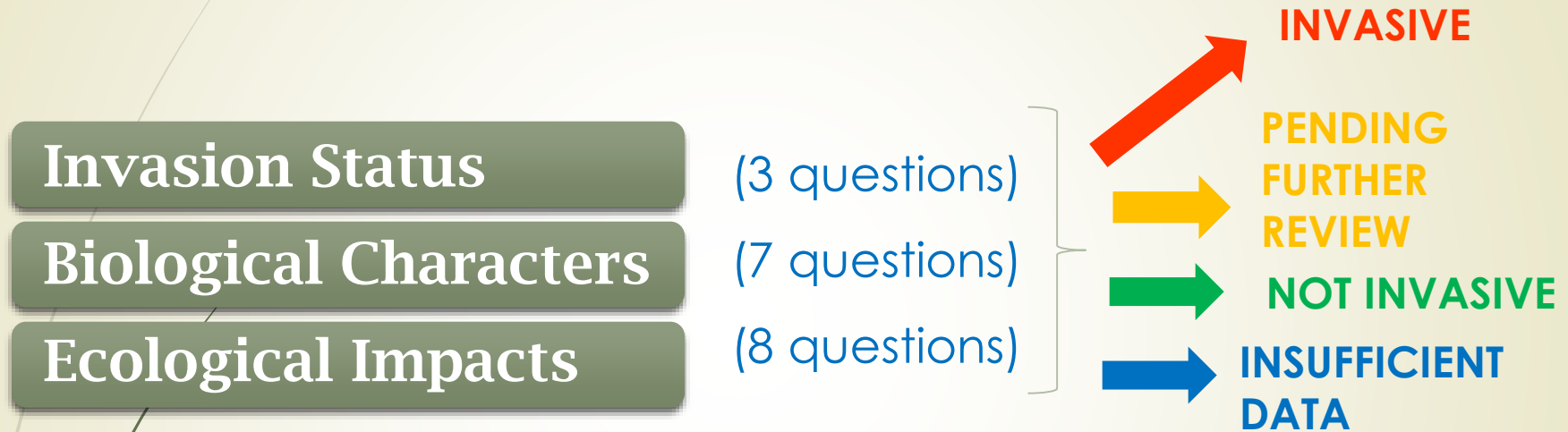


Rick Gardner
ODNR



Dick Munson
Miami U

OIPC Assessment Protocol



- Assessment was designed for informational purposes, not regulatory
- Focus is on existing invasive species, not preventative (not predictive)

Sample Questions

1. Current Invasion in OH

- Explores extent of invasive spread
- Recognizes that plant may be present if previously planted (ex. old home site)



2. State Distribution

- Is plant naturalized in 0-5 regions?

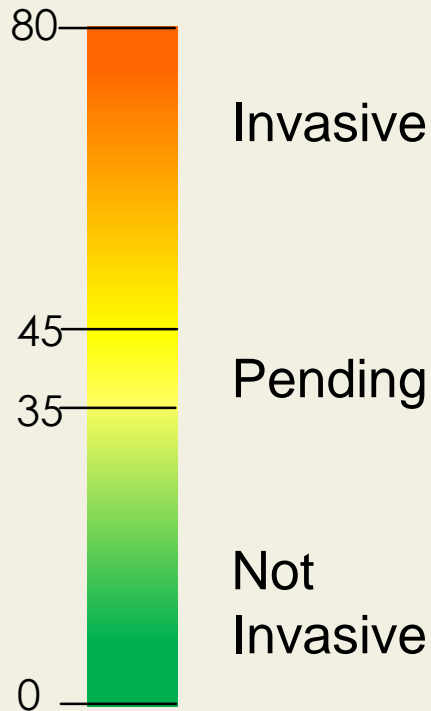
4. # Viable Seeds or Propagules per Plant

- few, moderate, prolific

11. Impacts on Ecosystem Processes

- None, moderate (nutrient cycling), major (fire cycles)

Invasive Plant Assessment



- 66 plant species already assessed
- 25 species currently being assessed
- 38 species next

Ohio Invasive Plants Council

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OHIO INVASIVE PLANTS COUNCIL

| NAME | SCORE | DATE | ASSESSMENT | |
|---------------------------------------------------------|-------|---------------|--------------|---------------------|
| | | | Excel Format | PDF Format |
| Invasive - score between 45 to 80: | | | | |
| Purple Loosestrife (<i>Lythrum salicaria</i>) | 77 | July 20, 2016 | | Scoring, References |
| Reed Canary Grass (<i>Phalaris arundinacea</i>) | 74 | July 1, 2015 | | Scoring, References |
| Narrow-leaved Cattail (<i>Typha angustifolia</i>) | 73 | July 20, 2016 | | Scoring, References |
| Hybrid Cattail (<i>Typha x galuca</i>) | 73 | July 20, 2016 | | Scoring, References |
| Common Reed (<i>Phragmites australis</i>) | 70 | July 1, 2015 | | Scoring, References |
| Eurasian Water-Milfoil (<i>Myriophyllum spicatum</i>) | 69 | July 1, 2015 | | Scoring, References |
| Amur Honeysuckle (<i>Lonicera maackii</i>) | 65 | May 1, 2014 | | Scoring, References |
| Garlic Mustard (<i>Alliaria petiolata</i>) | 63 | May 1, 2014 | | Scoring, References |
| Autumn Olive (<i>Elaeagnus umbellata</i>) | 63 | May 1, 2014 | | Scoring, References |
| Morrow Honeysuckle (<i>Lonicera morrowii</i>) | 63 | July 1, 2015 | | Scoring, References |

*** Cultivars are assessed individually**

Purple Loosestrife
(*Lythrum salicaria*)

Invasive Species

Narrow-leaved Cattail
(*Typha angustifolia*)



Reed Canarygrass
(*Phalaris arundinaceae*)

Amur honeysuckle
(*Lonicera maackii*)

Pending Further Review

Porcelainberry
(*Ampelopsis
brevipedunculata*)

Princess tree
(*Paulownia tomentosa*)



Japanese Chaff Flower
(*Achyranthes japonica*)



Beginning of Regulation

Several other states began to regulate invasive plant species:

Connecticut - 2003

New Hampshire – 2004 (ban started 2007)

Massachusetts - 2006

Wisconsin - 2009

New York - 2015

Path:

- 1) Creation of an Invasive Plants Council
- 2) State agencies prohibited from planting invasives & must control existing invasive populations
- 3) Invasive plants prohibited from commercial sale & distribution
- 4) Public cannot have invasive plants on their properties

Beginning of Regulation in OH

2012: ONLA expressed interest in invasive plant regulation, asked OIPC for input

2014: Gov. Kasich signs Ohio SB 192 on June 5



- grants Director of Agriculture exclusive authority to regulate invasive species (through rulemaking in the Ohio Administrative Code)
- ODA begins drafting rules (Dan Kenny – Asst. Chief, Division Plant Health)

Beginning of Regulation in OH

2018: ODA rules went into effect Jan. 7

- Created two rules:

901:5-30-01

Established initial list of 38 species

Cultivars are included unless shown NOT to be invasive

901:5-30-02

Created Invasive Plant Advisory Committee to propose new additions to ODA Dir.

- ODA designee (chair)
- ODNR designee
- EPA designee
- Member of academia
- Nursery representative

Regulated Species - Aquatic

Hydrilla

Elodea

European Frog-bit

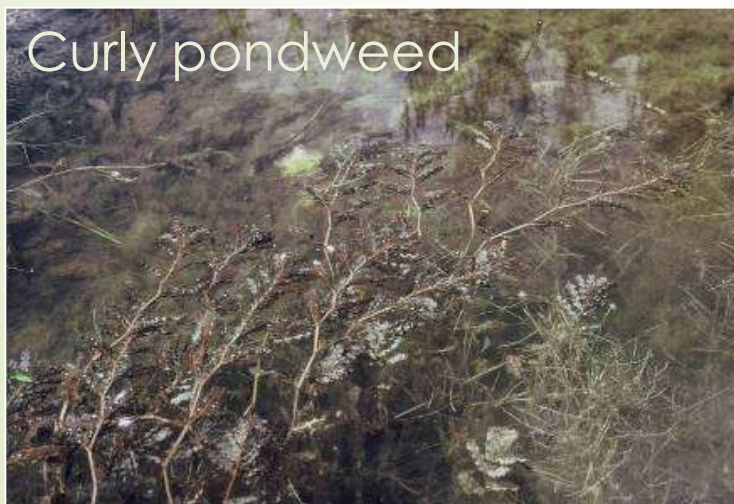
Parrotfeather

Eurasian Water-Milfoil

Yellow Floating Heart

Curly-Leaved Pondweed

Water Chestnut



Regulated Species - Terrestrial



Regulated Species - Terrestrial



Regulated Species - Terrestrial

Purple loosestrife



Glossy buckthorn
Frangula alnus



Narrow-leaved/Hybrid cattail



European buckthorn
Rhamnus cathartica



(C) 2002, Gary Fewless

Regulated Species - Terrestrial





Regulated Species - Terrestrial

Common Barberry – *B. vulgaris*

Flowering Rush

Japanese Stiltgrass

Spotted Knapweed

Kudzu

Lesser Celandine

Hairy willow herb

Dame's Rocket

Black Swallowtail

European Wand Loosestrife – *L. virgatum*

Callery Pear

Not Japanese barberry!
(*Berberis thunbergii*)

Not *Lythrum salicaria*

Pyrus calleryana (Callery Pear)



5 Year Phase Out



Bradford



Chanticleer



Butler County



Aristocrat

Lythrum virgatum (European Wand Loosestrife)

- Often sold as a “sterile” alternative to the highly invasive *Lythrum salicaria*



'Morden Pink'
L. virgatum x *L. salicaria*



'Morden's Gleam'
L. virgatum x *L. alatum*



'Dropmore Purple'
L. salicaria x *L. virgatum*

1 Year Phase Out


- MISSING -

Reed canarygrass
(*Phalaris arundinaceae*)



What's Next?

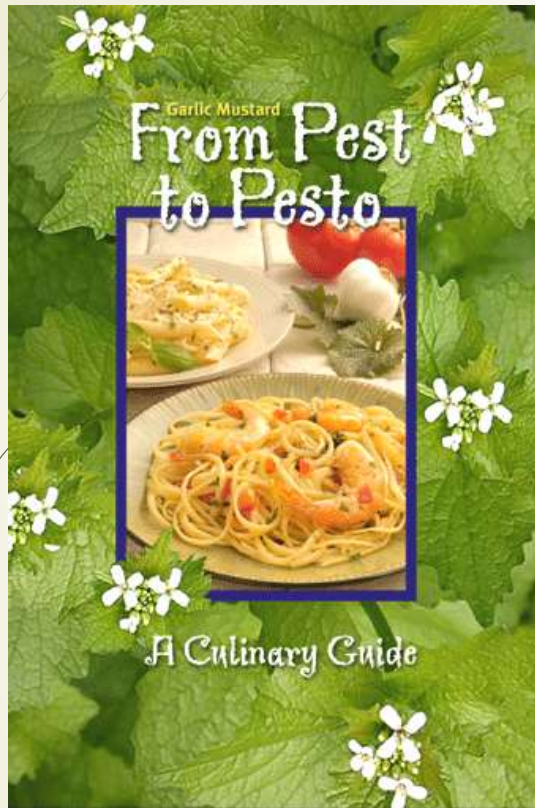
1. ODA Plant Advisory Committee meets to decide on next set of species to propose to ODA Director
2. ODA Director directs staff to modify rule 901:5-30-01
3. Public review & comment period
4. Revised rule must receive approval from:
 - **JCARR** – Joint Committee on Agency Rule Review
 - **CSI** – Common Sense Initiative



How can YOU make a difference?

1. Stay up to date on which species are being considered for placement on the ODA list
2. Attend the open meetings of the ODA Plant Advisory Committee (in Columbus)
3. Participate in the public comment period
4. Suggest species to be considered!

And finally, if you can't beat it....eat it!



For questions: Dr. Theresa Culley
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Regulated Species - Terrestrial

Tree of Heaven
Garlic Mustard
Common Barberry – *B. vulgaris*
Flowering Rush
Oriental Bittersweet
Spotted Knapweed
Common & Cutleaf Teasel
Russian & Autumn Olive
Hairy willow herb
Glossy Buckthorn – *F. alnus*
European Buckthorn
Giant Hogweed
Dame's Rocket
Black Swallowwort

Amur Honeysuckle
Japanese Honeysuckle
Tartarian Honeysuckle
Morrow's Honeysuckle
Japanese Stiltgrass
Common Reed/Phragmites
Kudzu
Lesser Celandine
Multiflora Rose
Narrow & Hybrid Cattails
Purple Loosestrife – *L. salicaria*
European Wand Loosestrife
– *L. virgatum*
Callery Pear