

Beware the Invaders!

Roadside, Riparian and ROW Invasive Plants

Sue Gwise



Cornell Cooperative Extension
Jefferson County

Commonalities of Invasive Plants

- Site adaptable
- Like disturbance
- Create dense shade
- High reproductive capacity- sexually and asexually
- Some type of defense- thorns, toxic/bad taste, dermatitis

THEREFORE,
they out-compete native plants

Damage

- Form dense populations
- Interfere with forest regeneration
- Crowd out native plants
- Habitat destruction
- Reduction in wildlife populations/less diversity
- Interfere with recreation
- Non-natives- they contribute nothing to the ecosystem
- Leach toxic substances into the soil- recovery is difficult
- Control is problematic even with the use of herbicides
- Control and restoration measures are expensive and time consuming

Autumn Olive

Identification-

- Shrub, 20' tall
- Stems covered with silvery or rusty scales
- Thorny
- Leaves- silver or gray-green
- Fruit- red berry, with Metallic-looking scales



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Autumn Olive



Threats

- Invades disturbed areas, forest edges, abandoned pasture
- Birds disseminate berries
- Creates dense shade, thickets



Control

- Manual-
 - Pulling- must get entire root system
 - Cutting- only works in conjunction with herbicides
- Herbicide-
 - Cut stump
 - Basal bark spray
 - Foliar spray

Buckthorn

Identification-

- Small tree, multiple trunks, 25'
- Stems covered with silver lenticels
- Twigs end with thorns
- Orange or yellow under bark
- Fruit- clusters of black berries





Buckthorn



Threats

- Invader of maple forests, riparian woods, abandoned pasture
- Leaf out before natives; retain leaves longer
- Interferes with forest regeneration
- Seeds- laxative effect

Control

- Manual
 - Pulling, digging
 - Cutting- only works in conjunction with herbicides
- Herbicide
 - Cut stump
 - Basal bark spray
 - Foliar spray



Exotic Bush Honeysuckles

Identification-

- Shrub, 5 to 12'
- Older stems are hollow
- Leaves bluish green to downy
- Fruit- red, yellow or orange berry





Honeysuckles



Threats

- Invades disturbed woodlands, edges, roadsides, abandoned pasture
- Leafy out before natives
- Seeds disseminated by birds - low fat content



Control

- Manual
 - Pulling
 - Cutting (w/ herbicide)
 - Burning
- Herbicide
 - Cut stump
 - Basal Bark Spray
 - Foliar spray

Japanese Barberry

Identification-

- Common landscape plant
- Small shrub, 3 to 6'
- Spiny
- Fruit- egg-shaped berry



Japanese Barberry

Threats

- Invader of forest edges, pasture, roadsides
- Seeds dispersed by birds and rabbits
- Spines an issue on hiking trails



Control

- Manual
 - Burning is very effective
 - Mowing of young plants
- Herbicides
 - Cut stump
 - Basal bark spray

Wild Parsnip

Identification-

- Herbaceous perennial, up to 6' tall
- Compound leaves
- Yellow flower umbels



Wild Parsnip

Threats

- Invades roadsides, abandoned fields
- Prolific seed producer- seeds viable for up to 4 years
- Causes severe burns to skin; photodermatitis



Control

Use caution if working with or near this plant!

- Manual
 - Cut plants below root crown
 - Mowing- before seeds develop!
- Herbicides
 - Foliar



Giant Hogweed

Identification-

- Biennial/perennial; up to 16' tall
- Stem is purple-mottled and hollow
- Sharply lobed leaves up to 10' across
- Flower- white umbel, up to 5' across



Giant Hogweed

Threats

- Due to its size it suppresses native plants.
- Prolific seed producer
- Causes severe burns to skin; photodermatitis



Control

- *Use caution if working with or near this plant!*
- *Do not attempt control-
contact CCE, DEC or SLELO
PRISM for control programs!*



Swallow-wort

Identification-

- Herbaceous perennial vine
- Leaves glossy, oval with pointed tips
- Flowers- small clusters, 5 petals, pink to maroon
- Fruit- pod; smooth, slender and pointed; in pairs. Contain downy seeds



Swallow-wort (Pale and Black)

Threats

- Aggressive in perennial crops, disturbed areas
- Will grow in any site conditions except standing water
- Wind dispersed seeds
- Crown of plant has buds
- Interferes with forest regeneration
- Changes the microbial composition of the soil
- Allelopathic properties
- Toxic cardiac glycosides
- Threat to monarch larvae



Control

Small populations

- Digging- must remove crown
- Mowing

Large populations

- Foliar herbicides in conjunction with mowing

Japanese Knotweed



Identification-

- Perennial, over 10 feet tall
- Large leaves with pointed tips
- Stems hollow and jointed; 'bamboo'
- Elongated clusters of white flowers in late summer
- Fruit- winged 'pods'



Japanese Knotweed

Threats

- Invades riparian, disturbed areas
- Forms dense thickets
- Reproduces via seeds and rhizomes



Control

- Cutting, mowing
- DO NOT dig or till!
- Cut stem application of herbicide
- Foliar herbicide
- Cut stems in spring, apply herbicide in late summer or fall

Himalayan Balsam

Identification-

- Succulent annual, 3 to 10 feet tall
- Stems- purplish and hollow
- Distinctive white, pink or purple flowers
- Fruit- chambered capsule that explodes



Native jewelweed
has orange flowers!

Himalayan Balsam

Threats

- Riparian/wet areas- re-seeds very quickly- seeds moved by water
- Out competes natives
- River banks- increased erosion



Control

- Pull in early summer before seeds develop
- Mowing/cutting
- Herbicides before flowering and repeat the following year- seeds remain viable for 2 years



Purple Loosestrife

Identification-

- Wetland habitats
- Perennial herb; under 4' tall
- Square stem, covered with downy hair
- Lance- to heart-shaped leaves
- Flowers- purple spikes



Purple Loosestrife

Threats

- Invades marshes, river/pond/stream banks, roadside ditches
- Moist soils; neutral pH
- Dense stands displace native plants



Control

- Pulling or cutting before flowering
- Late summer herbicide applications
- Bio-control *Galerucella* beetles very effective!



Garlic Mustard

Identification-

- Biennial herb; 1 to 3' tall
- First year leaves (rosette) kidney shaped
- Second year leaves triangular and toothed
- Flowers late spring- white clusters, $\frac{1}{4}$ "
- Fruit- black seeds in elongated capsule



Garlic Mustard

Threats

- Site adaptable
- Understory of forests- interferes with regeneration
- Allelopathic properties

Control

- Pull or cut before seed set
- Herbicides
- Pesto parties!



Leafy Spurge

Identification-

- Perennial, bluish-grey hue to leaves, 4' tall
- Cut leaves or stems exude a white, sticky sap
- Flowers in late spring- yellow flower bracts



Leafy Spurge

Threats

- Invades roadsides, pastures, disturbed areas
- Full sun; soil adaptable
- Extensive underground stems and roots
- Exploding seed pods- 20'!
- Problem in hayfields
 - Toxic to cattle and horses

Control

- Mowing before seed production
- Repeated mowing for re-sprouts
- Herbicides



Wild Chervil

Identification-

- Biennial/perennial; carrot family
- Prefers moist soil
- Fern-like leaves
- Small, white flowers in clusters



Wild Chervil

Threats

- Roots can extend 6' into soil
- Out-competes native species
- Problem in hay and forage crops
- Can irritate skin

Control

- Mow/till before seed production
- Digging- remove root stalk
- Broadleaf weed control products



Spotted Knapweed

Identification-

- Biennial, 4 to 5'
- Thistle-like flower; pink to purple



Spotted Knapweed

Threats

- Invades dry areas- dunes, barrens, disturbance
- Allelopathic properties- prevent growth of native species
- One plant can produce 140,000 seeds; 7 year viability
- Can cause skin irritation



Control

- Goats or sheep
- Pulling (small populations)
- Herbicide application during bud growth
- Several biological insect controls

Exotic Phragmites (Common Reed Grass)

Identification-

- Up to 15 feet tall
- Grows in dense stands
- Flowers- purple plumes; July
- Rigid, ribbed stems
- Dense mat of rhizomes



Exotic Phragmites

Threats

- Wetlands, disturbed soils, drainage ditches
- Forms monocultures
- Interferes with ground nesting birds
- Fire hazard

Control

- Cut in mid-summer to reduce vigor
- Burning
- Foliar or cut stem applications of herbicides



Japanese Stiltgrass

Identification-

- Annual; Looks like small bamboo; grows up to 3 1/2 '
- Blades are lance-shaped have an off-center midrib
- Stripe of silvery hairs on upper leaf surface
- Grows in damp locations with high nitrogen soil levels



Japanese Stiltgrass

Threats

- Invades fields, trails, ditches, forest edges, disturbed areas
- Out-competes native vegetation
- Decreased diversity
- Not a food of choice for deer
- One plant can produce up to 1,000 seeds w/ 3 year viability

Control

- Hand pull small populations before seed set
- Mowing, tilling
- 4-6' of mulch to prevent seed emergence
- Systemic herbicides for large infestations
 - Pre-emergent herbicide in spring and if soil is disturbed

Japanese Stiltgrass



In Your Community...

Keep an eye on:

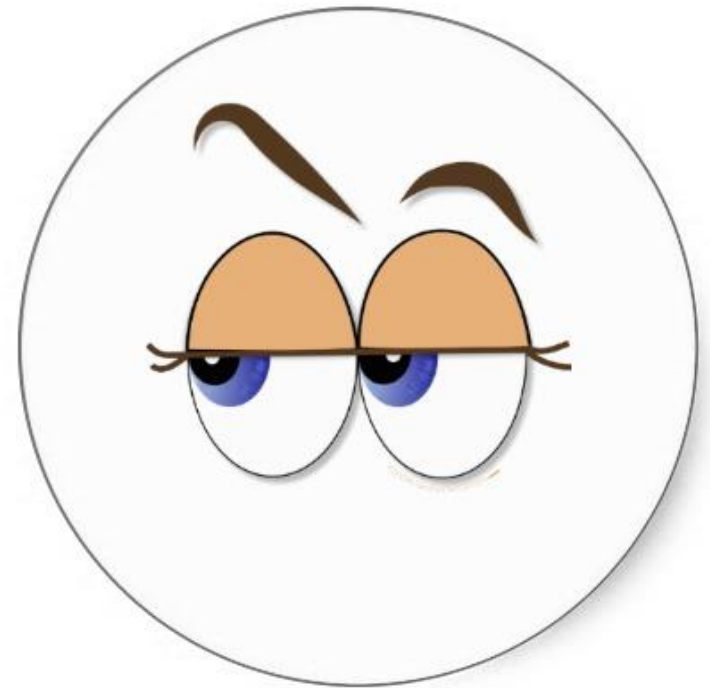
- Disturbed areas
 - If an area is disturbed → Have a plan!
- Abandoned pastures
- Natural areas frequented by people
- Stream/water banks
- 4-Wheeler trails
 - Associated with higher levels of invasives



In Your Community...

Be suspicious of:

- Large, dense, monoculture of plants
- Anything you've never seen before
- Deer
 - High deer pressure is associated with increased levels of invasives



In Your Community...

Once control or suppression is achieved:

- Have a plan for restoration
- Scout the area frequently!
 - Seeds can remain viable in the soil for many years

***Thoroughly clean equipment between sites!**



I think I found an invasive plant, now what?

- Get a positive identification- CCE, DEC, SLELO PRISM
 - Photograph
 - Sample is best (do not touch potentially toxic plants!)
- Control small populations ASAP
- Larger areas-
 - Continually mow if possible
 - Treat satellite populations first; move toward source population
 - Persistence will be required!
- Restore the area
- Continually scout

Questions?