



Native Alternatives to Invasive Plants

[Presented By]

[Affiliation]



Southern Indiana Cooperative Invasives Management

- Non-profit coalition of organizations, agencies, governments, and citizen groups
- Work to coordinate invasive species mgmt. in Southern Indiana



First things first...

What is an invasive?

- ▶ An **invasive species** is a species that does not naturally occur in a specific area and whose introduction does or is likely to cause economic or environmental harm or harm to human health.

President's Executive Order 13112, 1999

- ▶ A **weed** is any plant that is growing where you don't want it to grow.
- ▶ Most non-native plants **ARE NOT INVASIVE**
- ▶ Likewise, some “**weeds**” may be **NATIVE**





How do they get here?

- By weather – wind
 - By natural disasters – floods
 - By animals – birds/others
 - By insects
 - By growth
 - By humans
- 

A close-up photograph of a dense patch of blue periwinkle flowers. The flowers are bright blue with five petals and a darker blue center. They are surrounded by lush green, oval-shaped leaves. The overall appearance is very attractive and healthy.

Invasives may look nice

Until they
take over...



Gardeners be on the lookout!

- ▶ Many invasive plants were (or still are) sold as ornamentals and garden plants
 - ▶ Invasives often spread from gardens to natural areas
 - ▶ Displace native vegetation
 - ▶ Can be hazardous to humans, livestock, or wildlife
- ▶ Even the most careful can be fooled
 - ▶ Mislabeled plants
 - ▶ Multiple plant names
 - ▶ Seed mixes with contaminants
 - ▶ Unregulated online sellers
- ▶ Gardening is a dirty business
 - ▶ Moving soil and plants something new can sneak into your garden



Get rid of them!

➤ Manual/Mechanical Options

- Hand pulling
- Digging, weed wrenching
- Cutting

➤ Sometimes, you need herbicide...

- Use on perennial invasives to kill the roots
- Apply concentrated herbicide to cut-stumps to keep woody plants from resprouting
- If you have a LOT of biennials or annuals, herbicide may be easiest

➤ REMEMBER:

- Don't compost invasives
- If moving off site, bag ANYTHING that could have seeds
- CLEAN up afterwards to keep from spreading invasives





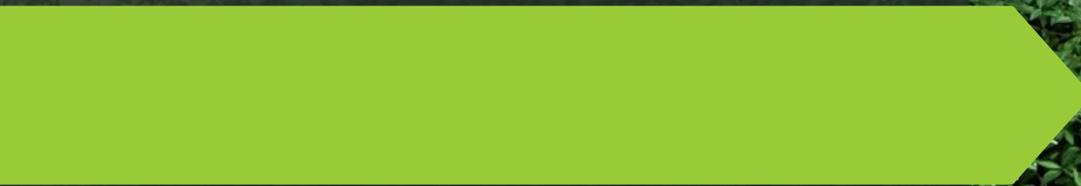
Alternatives

- ▶ Get the same desirable features of invasive plants with landscaping alternatives
 - ▶ Beautiful blooms
 - ▶ Groundcover
 - ▶ Fall/winter color
 - ▶ Privacy or structure
 - ▶ Fruit
- ▶ While alternatives include popular non-invasive non-native plants, consider NATIVE plants for the most benefits
 - ▶ Support local wildlife (pollinators, birds, and more)
 - ▶ Adapted to grow in our region
 - ▶ No worries if they “escape”



Watch Out For...

Groundcover and
Vines!



*Photos from SICIM, Bugwood.org, Prairie
Nursery, IN PAWS*



Periwinkle (*Vinca minor*)

- Vine-like, mostly evergreen
- Leaves: opposite, dark green, glossy, oval/lance-shaped, and thick
- Some varieties are variegated
- Forms dense mats on forest floor



Wintercreeper (*Euonymus fortunei*)

- ▶ Evergreen vine from Asia
- ▶ Leaves: opposite, glossy, dark green, oval, and slightly toothed, light veins
- ▶ Invades forest openings and margins
- ▶ Spreads across ground and climbs trees



English Ivy (*Hedera helix*)

- ▶ Evergreen climbing vine
- ▶ Leaves: alternative, waxy or leathery, usually green with whitish veins, extremely variable shape from unlobed to 3-5 lobed
- ▶ Aggressive invader of forest and open areas
- ▶ Can kill trees it covers



Groundcover Alternatives



Wild Ginger



Lady Fern



Jacob's Ladder

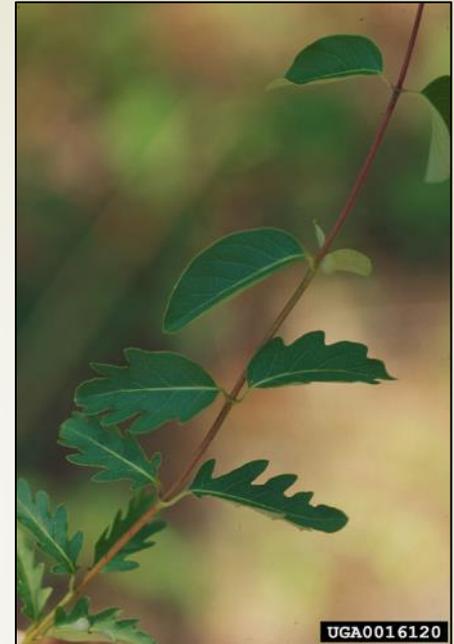
© Thomas G. Barnes



Maidenhair Fern

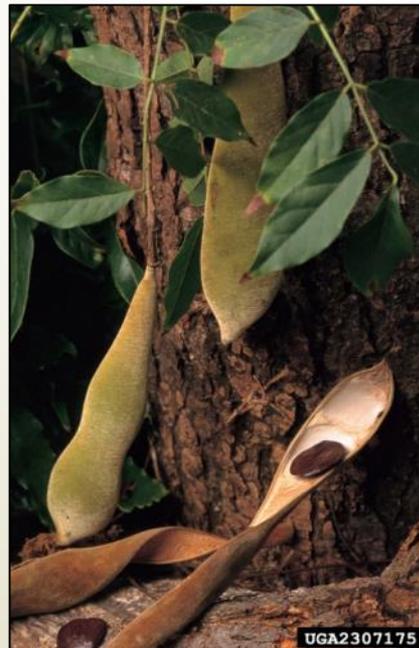
Japanese Honeysuckle (*Lonicera japonica*)

- ▶ Woody vine, trailing or climbing
- ▶ Can girdle small trees, form dense mats in canopies, and shade out natives
- ▶ Leaves: opposite, oval, usually smooth edges but young leaves can be lobed
- ▶ Tubular whitish/pinkish flowers, turn yellow with age
- ▶ Berries turn green to black as ripen



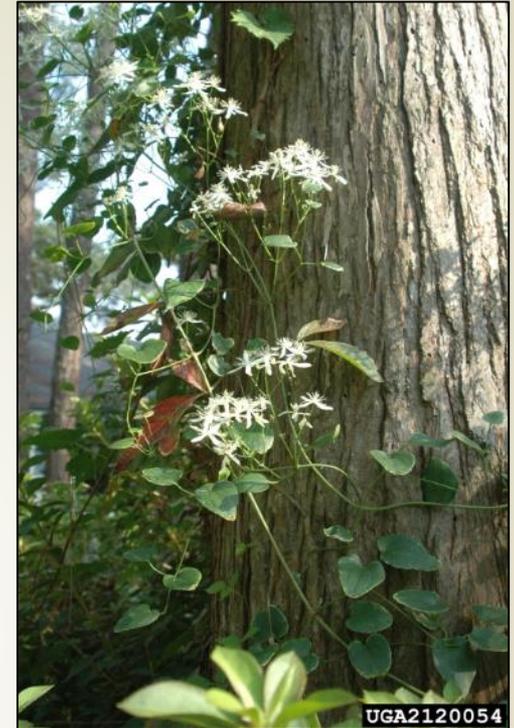
Chinese Wisteria (*Wisteria sinensis*)

- ▶ Tall, woody, climbing vine that can girdle trees
- ▶ Leaves: alternate compound leaves, 7-13 leaflets, wavy edges
- ▶ Showy purple/white flowers in long dangling clusters
- ▶ Seeds in long bean-like pods



Sweet Autumn Clematis (*Clematis terniflora*)

- ▶ Climbing vine from Asia
- ▶ Different from native *Clematis virginiana* (Virgins bower)
- ▶ Leaves: compound with 3-5 leaflets, **Leaves not toothed (unlike native)**
- ▶ White four-petaled flowers
- ▶ Prolific seeds; seed heads have long silvery-gray feather-like hairs



Oriental Bittersweet (*Celastrus orbiculatus*)

- Tall climbing woody vine
- Can grow quickly, shade out natives, girdle even large trees
- Hybridizes with native bittersweet
- Leaves: alternate, mostly round, 2-5 in long
- Showy round capsules clustered in leaf axils; green in summer, yellow-orange in fall; split open when ripe to reveal red fruit
- Vs. native which has berries at end of branches



Climbing Vine Alternatives

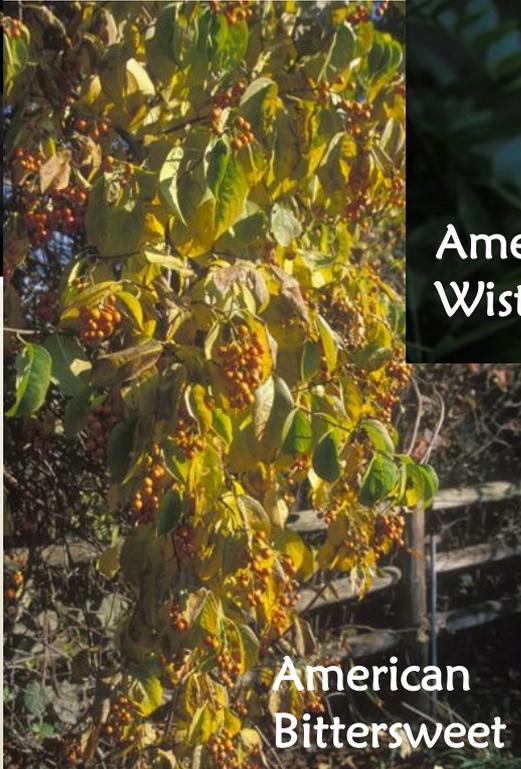


Crossvine

© Ted Bodner



American
Wisteria



American
Bittersweet



Virgins Bower



Watch Out For...

Hardy plants
with Showy
Blooms!



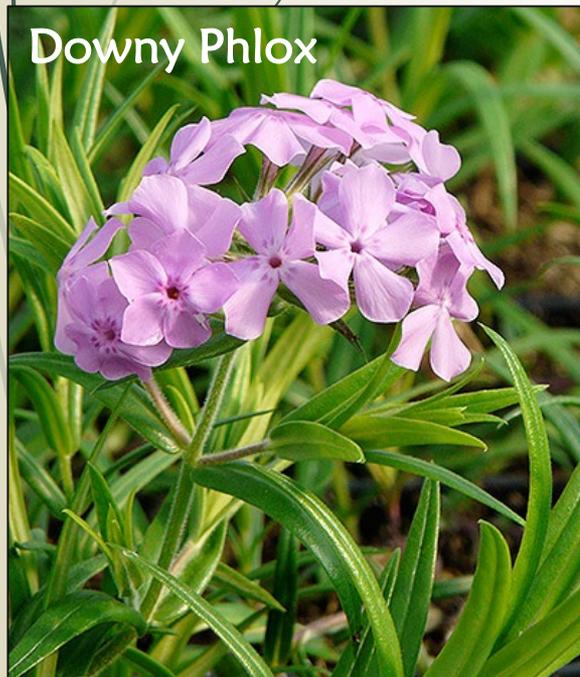
*Photos from WRISC, WDNR, Bugwood.org,
and online Nurseries*

Dame's Rocket (*Hesperis matronalis*)

- ▶ Invades woodlands, edges, and open areas
- ▶ Big seed producer
- ▶ Showy blooms similar to native Phlox
 - ▶ (D-A-M-E = 4 petals, P-H-L-O-X = 5 petals)
 - ▶ Alternative lance leaves with teeth vs. Phlox with opposite un-toothed leaves

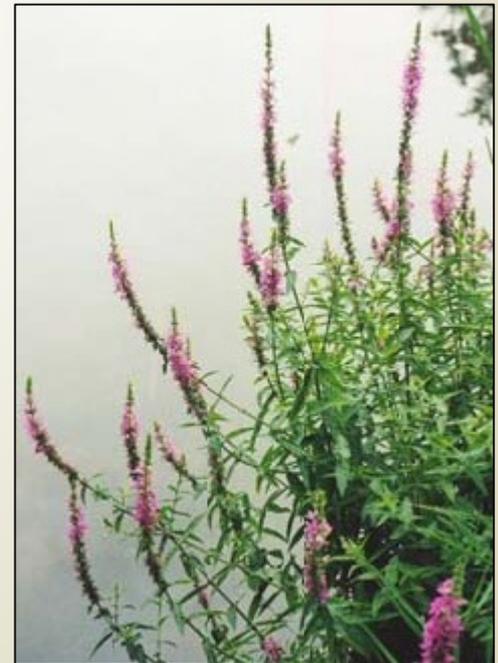


Dame's Rocket Alternatives



Purple Loosestrife (*Lythrum salicaria*)

- ▶ Aggressive wetland perennial
- ▶ Planted as ornamental, sterile varieties still sold but can produce seed with wild populations
- ▶ Can produce 1 million seeds!
- ▶ Look for opposite lance-shaped leaves, square stems, purple flowers in tight spike



Loosestrife Alternatives

Marsh
Blazing Star



Ironweed



Cardinal Flower



Blue Vervain



Swamp Milkweed



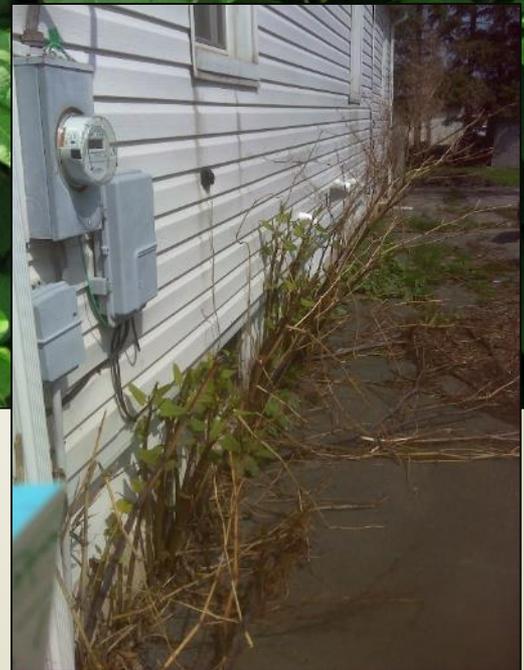
Japanese Knotweed (*Fallopia japonica*)

- VERY aggressive perennial
- Spreads by rhizomes and cut stems (can destroy pavement)
- Stems look like bamboo
- Large heart-shaped/spade-shaped leaves
- Planted for privacy fences and showy blooms





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Knotweed Alternatives

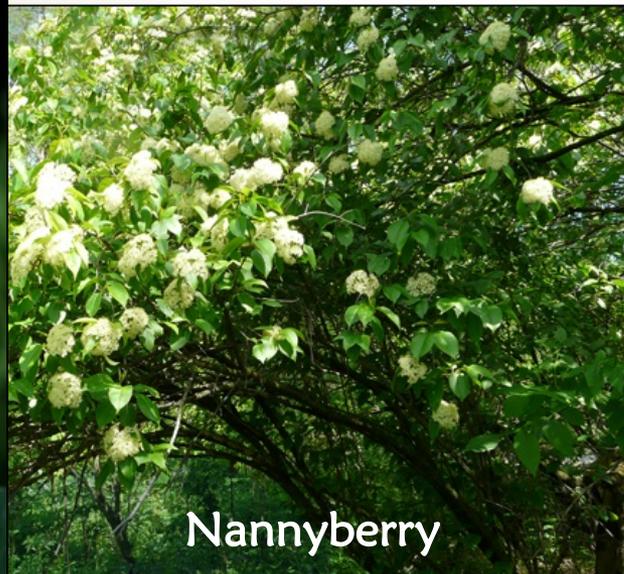


Dogwood (several species)



Solomon's Plume

Smooth Hydrangea



Nannyberry



Buttonbush

Star of Bethlehem

(*Ornithogalum umbellatum*)

- Bulb plant in the lily family, poisonous, can resemble wild garlic
- Problem in open fields and lawns
- Leaves: dark green, narrow, long leaves, with white midribs
- Flowers: white, 6 petals resembling a star, on stems up to 1 foot tall
- Resistant to many herbicides



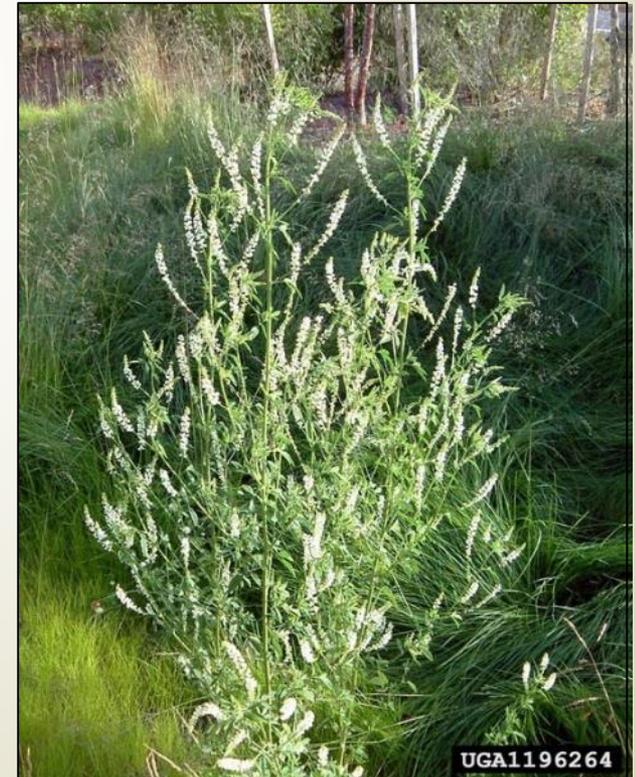
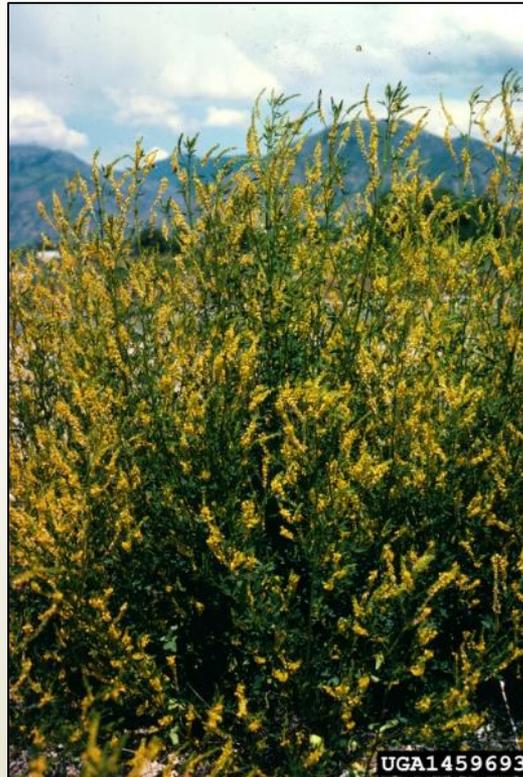
Crown Vetch (*Coronilla varia*)

- Creeping perennial in the pea family that forms dense thickets
- Once widely planted for erosion control
- Compound leaves with 9-25 small leaflets
- Pea-like white/pink/purple flowers in clusters that resemble large clover flowers

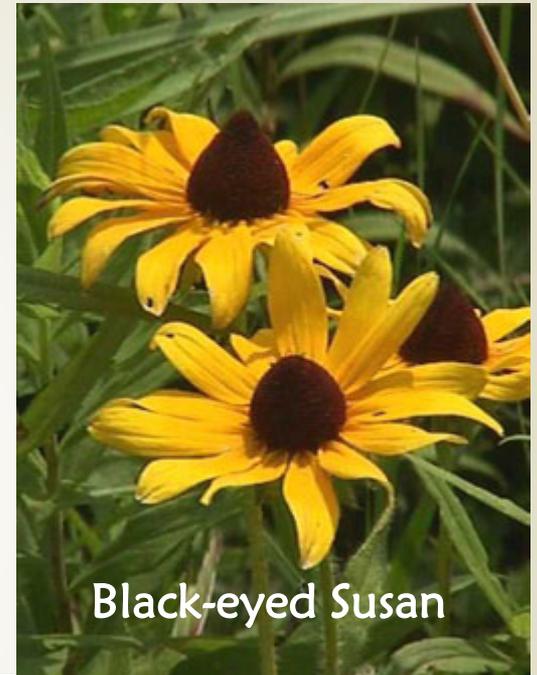


Sweet Clovers (*Melilotus* spp.)

- ▶ Annual/Biennial bush-like plants
- ▶ Spike-like clusters of white or yellow flowers
- ▶ Invades prairies, roadsides, and other open areas



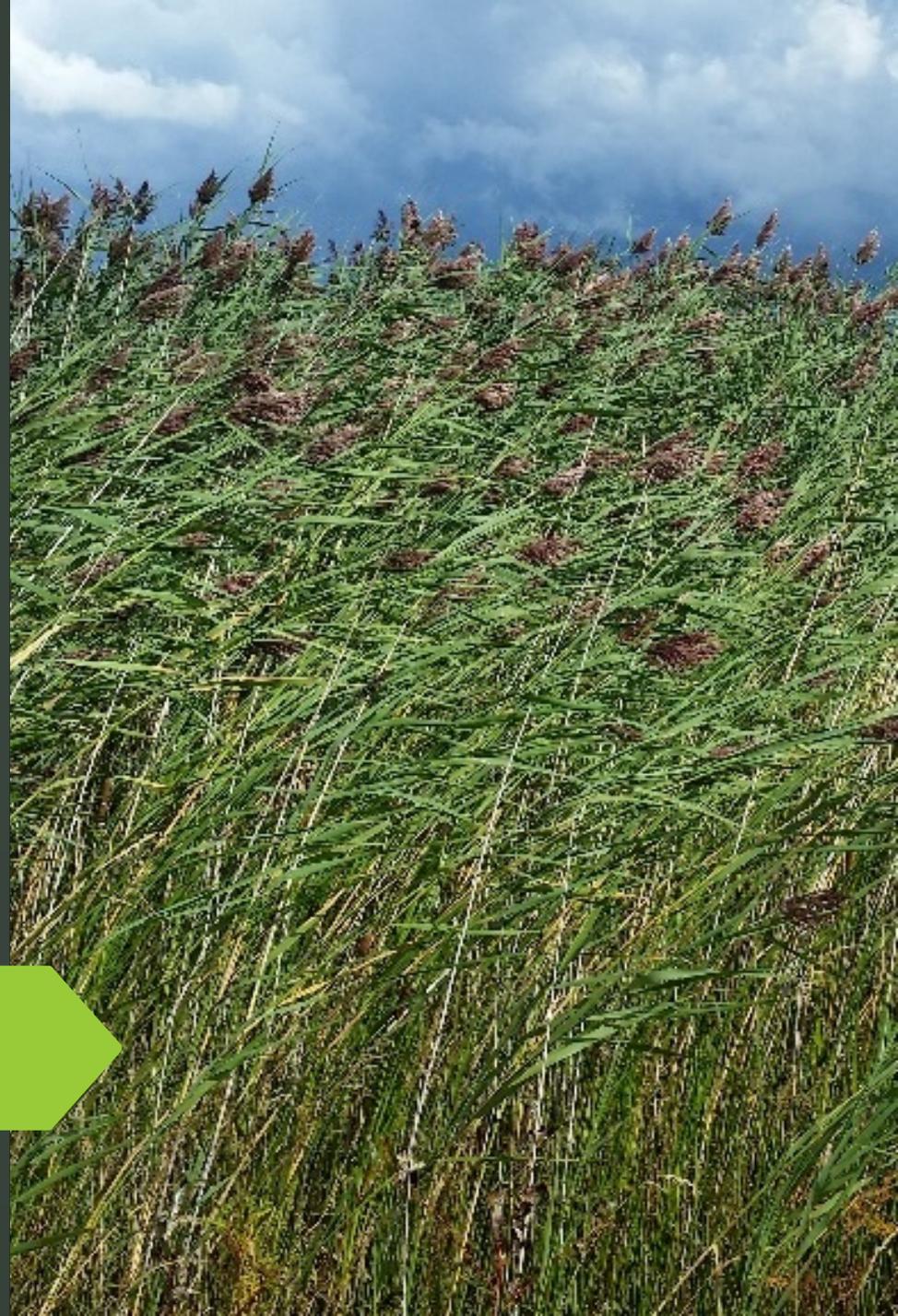
Other Native Flower Alternatives



Watch Out For...

Ornamental Grasses!

*Photos from WRISC, WDNR, Bugwood.org,
Prairie Moon, and Prairie Nursery*



Common Reed (*Phragmites australis*)

- ▶ Phragmites is a very tall invasive grass
- ▶ Can spread from stem fragments, root fragments, and/or seed
- ▶ Severely degrades wetlands, can spread on roadsides
- ▶ Herbicide needed to control



Miscanthus species

- ▶ Tall grass that grows in clumps
- ▶ White, grey hairs part of plummy inflorescence
- ▶ Can easily spread by seed or rhizomes to disturbed areas and form large clumps
- ▶ Herbicide use is recommended for control



Tall fescue (*Schedonorus arundinaceus*)

- ▶ Tallest of the fescue species
- ▶ Spreads mostly by rhizomes but can also spread by seed
- ▶ Often infected by fungus that can harm grazers and foragers



Native Grass Alternatives



Indian Grass



Prairie Dropseed



Big Bluestem



Prairie Cordgrass



Sideoats Grama

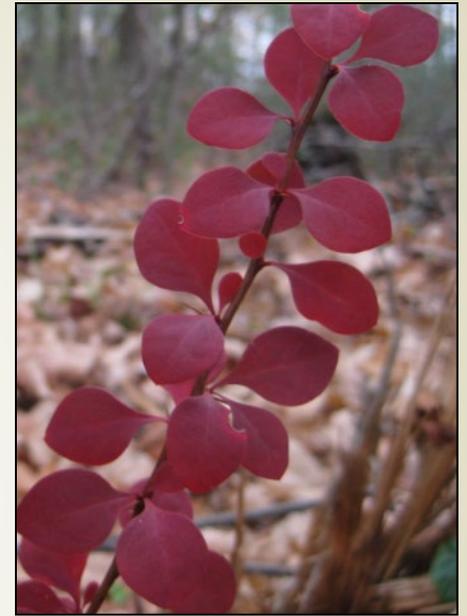
Watch Out For... Landscape Shrubs!



*Photos from SICIM, WRISC, WDNR,
Bugwood.org, Prairie Moon, and Prairie
Nursery*

Japanese Barberry (*Berberis thunbergii*)

- ▶ Leaves: small, alternate, oval to spoon-shaped, smooth margins, clustered in tight bunches above spines
- ▶ Numerous spiny stems, slightly curving, inner bark is yellow
- ▶ Clusters of small yellow flowers, fruit is small red, egg-shaped berries



Burning Bush (*Euonymus altus*)

- ▶ Leaves: small, opposite, elliptical with pointed tips, small toothed margins, turn bright red in Fall
- ▶ Distinct winged stems
- ▶ Small yellow to green flowers, fruit is small red berries



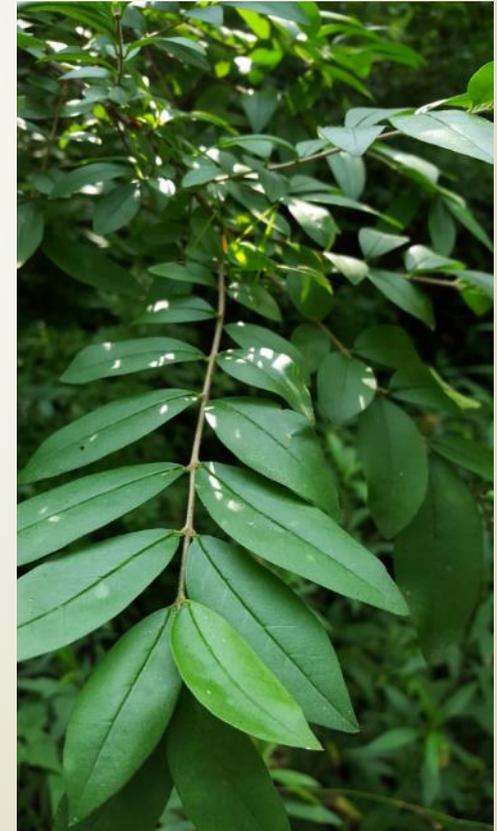
Autumn Olive, *Elaeagnus umbellate*

- ▶ Once planted for landscaping & wildlife
- ▶ Entire, leaves with silver undersides
- ▶ Clusters of red berries with shiny dots
- ▶ Bark is smooth and grey, and the branches have thorns



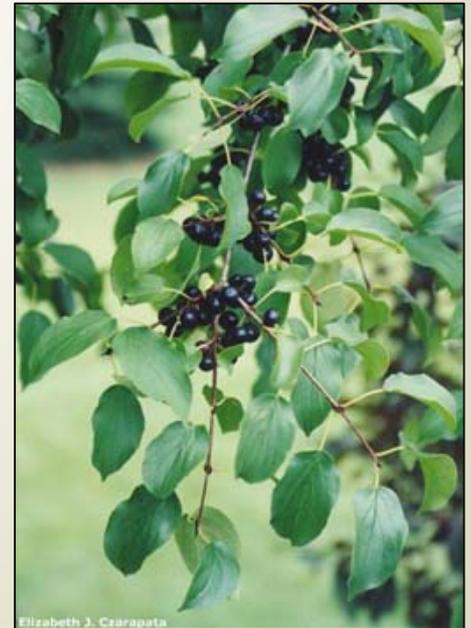
Privet (*Ligustrum spp.*)

- ▶ Shrub or small tree, creates dense thickets in open areas or understories
- ▶ Leaves: glossy, simple, opposite, lanceolate, entire
- ▶ Small white flowers
- ▶ Small berries start green and turn dark purple/black when ripe
- ▶ Branches can have spurs



Common Buckthorn (*Rhamnus cathartica*)

- ▶ Shrub or small tree, Creates dense thickets in open areas or understories
- ▶ Leaves: simple, mostly opposite, dark green, ovate to elliptic, slight teeth on margins, veins curve toward leaf tip
- ▶ Clusters of black berries – cathartic for birds that eat them



Eurasian Honeysuckles (*Lonicera spp.*)

- Upright shrubs, several varieties (Bells, Morrows, Tartarian, and Amur)
- Much more robust than native honeysuckles
- Leaves: simple, oval/oblong, and opposite
- Tubular flowers; pink/purplish, white, or yellow
- Abundant pairs of red or orange berries
- Many arching branches, bark is shaggy gray/tan, twigs are hollow



Elizabeth J. Czarapata



Elizabeth J. C.



Elizabeth J. Czarapata



Invasive Shrub Alternatives



Red Osier Dogwood



Photo by Matt Levin - Licensed under CC BY-SA 2.0 via Wikimedia Commons



Native Bush Honeysuckle



American Hazelnut



Witch Hazel



Ninebark

Shrub Alternatives – Showy Fruit



Watch Out For...

Invasive Trees!

Photos from SICIM, INPAWS, Missouri Botanical Garden and Bugwood.org



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Callery Pear (*Pyrus calleryana*)

- ▶ Leaves: alternate, simple, ovate, shiny with wavy slightly toothed margins
- ▶ White flowers with an unpleasant odor in the spring
- ▶ Green/Brown round fruits, 0.5" diameter
- ▶ Deep v shaped branching pattern



Norway Maple (*Acer plantanoides*)

- ▶ Can shade our understory and out-compete native canopy trees changing forest structure
- ▶ Leaves: opposite, 5-7 pointed lobes; usually green, but some with dark red leaves
- ▶ Fruit: paired samaras spread widely apart
- ▶ Bark: grayish with lots of ridges



Tree of Heaven (*Ailanthus altissima*)

- ▶ Leaves: compound, 11 to 41 leaflets per leaf, alternate, leaflets are lanced shaped with pinked bases, have a very unpleasant odor when crushed
- ▶ Produce large clusters of samara like fruit that are easily wind dispersed
- ▶ Bark is mostly smooth with occasional fissures



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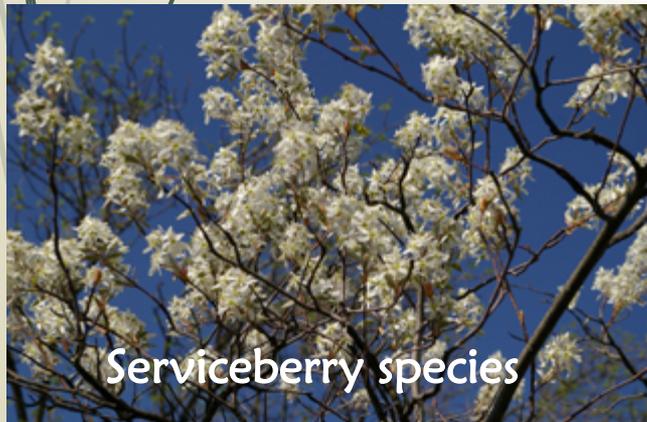
Native Tree Alternatives



Eastern Red Cedar



Black Gum



Serviceberry species



Eastern Redbud



Hawthorn species

Native Plant Programs

- INPAWS Grow Native
- Started by SICIM
- Works to promote native plants and encourage not selling invasive plants
- For landscaping companies and plant nurseries





Other Resources

- SICIM website: www.sicim.info
- Indiana Native Plant & Wildflower Society: www.inpaws.org
- Report Invasives: www.eddmaps.org/indiana/
- Midwest Invasive Plant Network (species and control information): www.mipn.org

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