



PLANT THIS

NOT THAT

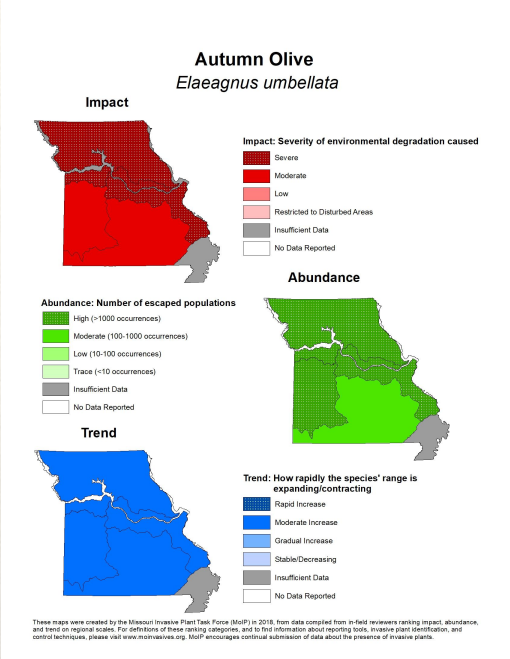
Serviceberry

Serviceberry (*Amelanchier arborea*) is a tall shrub or small tree bearing clusters of fragrant white flowers in April. Flowers give rise to very flavorful, red to purple-black, berrylike fruits relished by both songbirds and people. This lovely tree has colorful fall foliage in a blend of orange, gold, red and green.

Serviceberry photos by Flickr users Dan Mullin and RJ Bradford pose photos by Martin LaBar and Amanda Nichols.

The Missouri Invasive Plant Task Force is a resource at www.moinvasives.org

GR+W native
Missouri Invasive Plant Council
Keeping Nature Real!



Missouri Invasive Plant (MoIP) Council

Carol Davit, Chair,
Missouri Invasive Plant Council

Missouri Prairie Foundation

- The Missouri Prairie Foundation is a 57-year-old prairie conservation organization that became a nationally accredited land trust in 2021.
- MPF protects original, unplowed prairie remnants; create prairie plantings; runs the 23-year old Grow Native! native plant marketing and education program; and administers the Missouri Invasive Plant Council.





Clockwise from top left: original prairies, wetlands, woodlands, cliff/talus, forest, glade, and savanna habitats—incredible native biodiversity in Missouri that we want to protect. Credits: Bruce Schuette, MDC, Ken McCarty.



Woodlands, forests, grassland pastures—all working lands that provide forest products, cattle production, as well as the outdoor recreation industry—must be protected from invasive plants to protect local economies. Invasive plants, like this honeysuckle along a greenway in St. Louis, are costly for homeowners and municipalities to control.

Credits: Ken McCarty, MDC, Carol Davit.



MoIP Callery Pear Field Tour, 2018. MDC photo

Missouri Invasive Plant Council (MoIP)

Created in 2015

MoIP: Who We Are & What We Do

- MoIP is an interdisciplinary, multi-agency / multi-organization invasive plant group that many other states have.
- Representation from agriculture, weed science, academia, horticulture, planning groups, transportation sector, conservation groups.
- MoIP reviews, discusses and recommends action related to managing invasive plants that negatively impact working land-based economies, natural communities, and built landscapes in Missouri, and collaborates with invasive plant colleagues in the lower Midwest.



MoIP members. Tina Casagrand photo

MoIP: Who We Are

MoIP members include representatives from:

Andrew Turner, MoDOT

Angela Sokolowski, Missouri Department of Conservation

Bill Ruppert, National Nursery Products, Grow Native!

Brian Davidson, USDA Forest Service

Bruce Schuette, Missouri Prairie Foundation

Carol Davit, Missouri Prairie Foundation

Chad Follis, Hummert International

Christopher Pierce, USDA APHIS

Cody Hayo, Landscape and Nursery Association of Greater St. Louis

Hank Stelzer, University of Missouri School of Natural Resources

Isaiah Tanner, The Nature Conservancy

Jill Maes, Missouri Botanical Garden

Jim Ball, Missouri Walnut Council

Landry Jones, MFA Incorporated

Larry O'Donnell, Deep Roots KC

Malissa Briggler, Missouri Department of Conservation

Matt Arndt, Missouri Consulting Foresters Association

Matt Kemna, Columbia Utilities/Right of Way

**Reid Smeda, University of Missouri.
College of Agriculture, Food and Natural Resources**

**Roxie Campbell, Missouri Department of Natural Resources,
Rock Bridge State Park**

Valarie Repp, Scenic Rivers Invasive Species Partnership

Amy Hamilton, Hamilton Native Outpost

MoIP: Who We Are

MoIP associates include:

Allen Powell, FSA, USDA

Anastasia Becker, Private Citizen, MDA retired

Chris Edmondson, DNR – Rock Bridge State Park

Collin Wamsley, Missouri Department of Agriculture

Craig Young, National Park Service,
Heartlands Invasive Plant Management Team

Eric Bohle, Columbia Public School/
Friends of Rock Bridge State Park

Jay Doty, Magnificent Missouri

Jen Larson, US Forest Service

Joe Alley, NRCS

John Nekola, retired from New Urban Landscaping

Mike Rood, Pea Ridge Forest

Mike Doyen, Great Missouri Birding Trail

Sue Bartelette, Lincoln University

Susan Ehlenbeck, Missouri Department of Agriculture

Quinn Long, Missouri Botanical Garden

Ken McCarty, Missouri Department of Natural Resource
Missouri State Parks

Kyra N. Krakos, Maryville University

Lauren Jared, Landscape Designer

Lauren Pile, National Forest Service Northern Research Station

Lea Langdon, Missouri Master Naturalist

Lesli Moylan, Missouri Environmental Education Association

Margaret Chamas, Goats On The Go KCMO

Mark Renz, MIPN

Mike Hoffman, Forest & Woodland Association of Missouri

Miranda Brandt, Missouri National Guard,
Natural Resource Manager

Nadia Navarrete-Tindall, Lincoln University

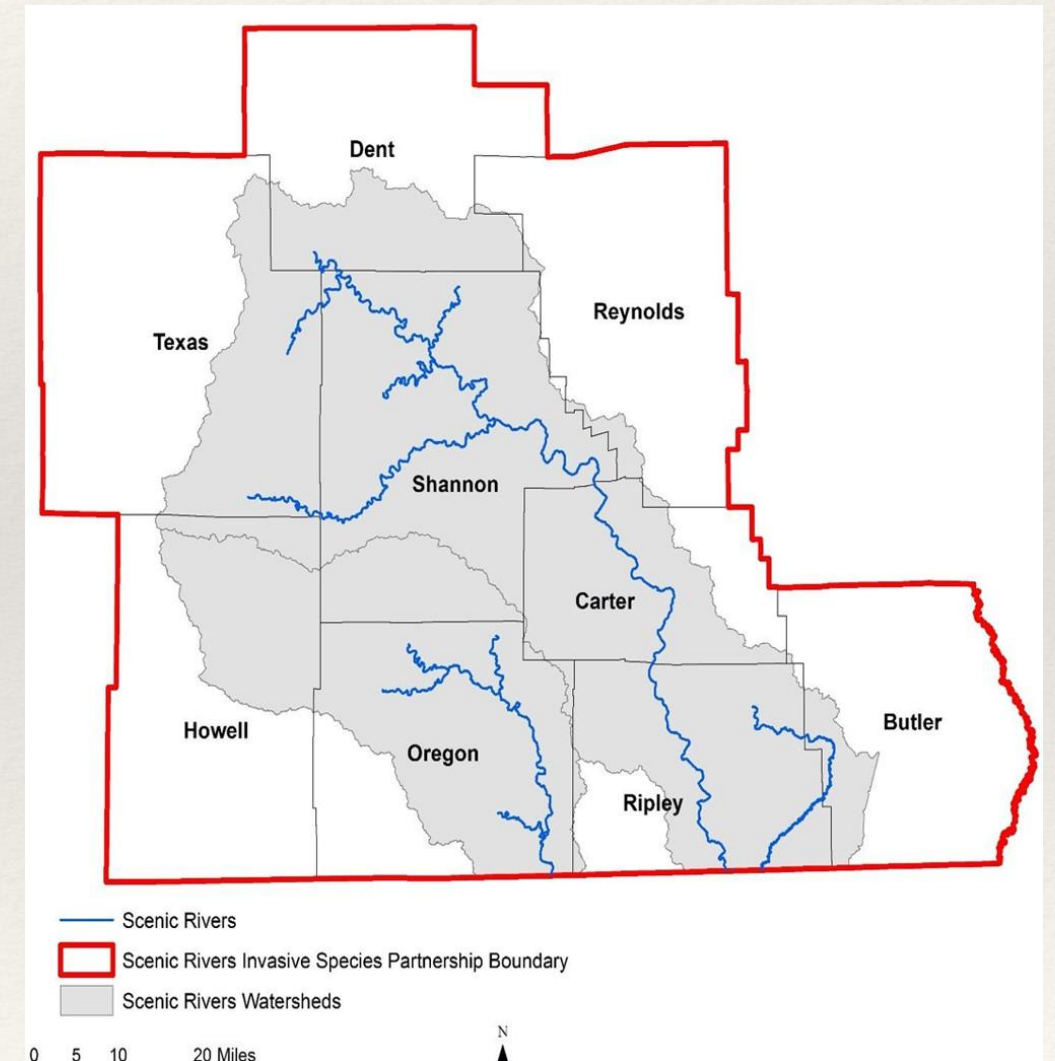
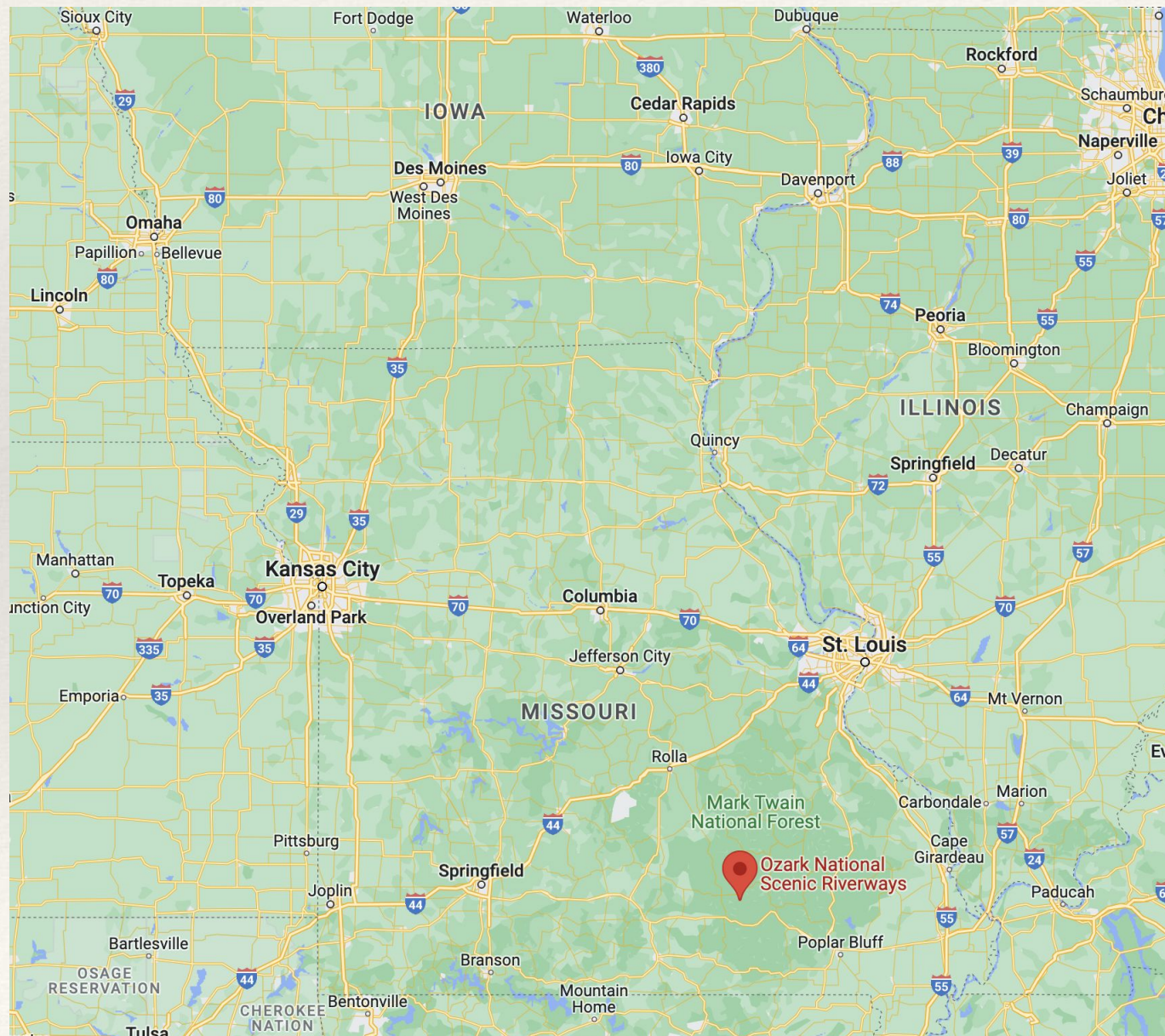
Nathan Kempker, Missouri National Guard,
Environmental Management Office

Robbie Doerhoff, Missouri Department of Conservation/
Forest Health

Steve Clubine, cattle producer

MoIP: Representation from SRISP

Scenic Rivers Invasive Species Partnership (SRISP), a Cooperative Invasive Species Management Area (CISMA) in southern Missouri



MoIP: What We Do

Vision: Missouri is committed to reducing the impact of invasive plants through early detection and control.

Mission: To benefit Missouri, MoIP advances efforts to reduce the impact of invasive plants.

2022–2026 Strategic Plan:

Goal 1: Increase public awareness of invasive plants to increase early detection and control efforts.

Goal 2: Advocate that the continued sale of specific known and future invasive plants be stopped.

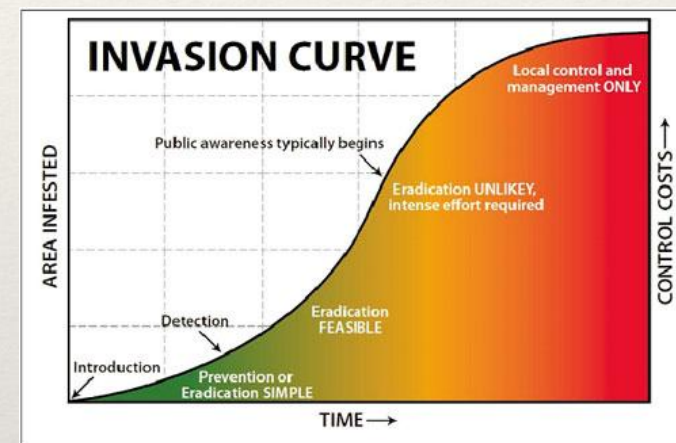
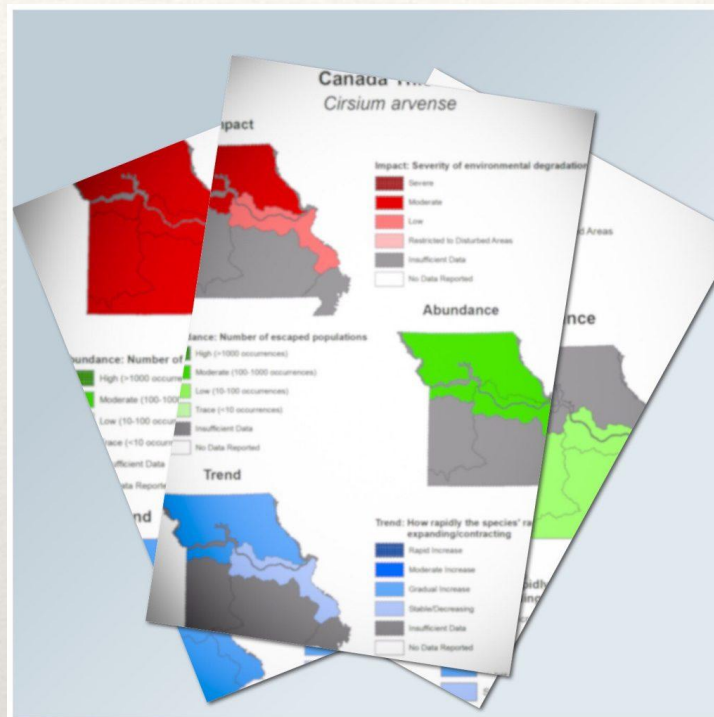
Goal 3: Review, promote, utilize, share, and refine existing strategies and techniques to support invasive plant management.

Goal 4: Ensure continued effective organization structure and operations of MoIP.

MoIP Activity Update & Future Projects

- **Update the MoIP assessment** of 142 plants known to be invasive in Missouri, ranked according to impact, abundance and spread, and by region, with maps. We have applied for grant funding to make increased fieldwork in the Ozark Highlands and Mississippi Lowlands possible, to increase information known from these regions.
- **Amplify public awareness** of invasive plants statewide.
- **Provide training and other tools** to natural resource professionals, land use planners, and vegetation managers.
- **Invite a second round of stakeholder input on MoIP's Cease-the-Sale idea.**
- **These four main activities aim to:**
 - Build on campaigns to raise awareness
 - stop production, sale, and intentional distribution of some invasive plants
 - encourage removal of known invasive plants in public and private sectors
 - provide resources on invasive plant identification and control in public and private sectors

Updating MoIP's Ranked Assessment



- Overview: Reviewing previous lists for Missouri and other states, the MoIP Assessment Working Group narrowed the list to 142 species with 26 reviewers (botanists, field biologists, and other professionals) ranking their impact, abundance, and trend—five years of work!

MoIP's Ranked Assessment

[Browse all 142 Maps:](#)

Select "Show X entries" to view more rows at once.

To view and download all map files, use the Dropbox link below the table.

Show entries

Search:

Scientific Name	Common Name - USDA PLANTS	Map
<i>Acer platanoides</i>	Norway maple	
<i>Acer tataricum</i> subsp. <i>ginnala</i>	Amur maple	
<i>Achyranthes japonica</i>	Japanese chaff flower	
<i>Acrotilon repens</i>	hardheads	

MoIP's Ranked Assessment

To view and download all map files, use the Dropbox link below the table.

Show entries

Search:

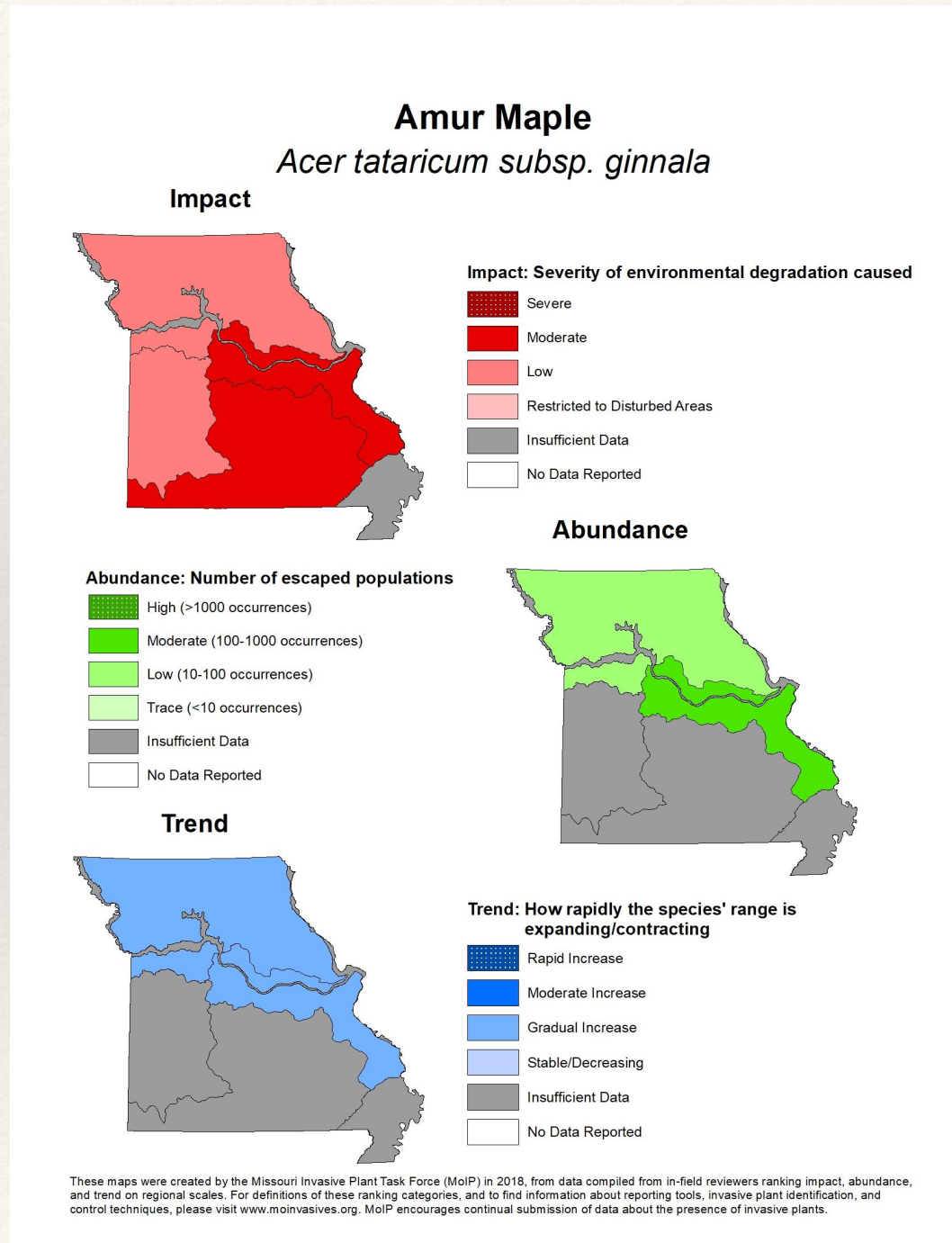
Scientific Name	Common Name - USDA PLANTS	Map
<i>Lonicera maackii</i>	Amur honeysuckle	
<i>Lonicera x bella</i>	Bell's honeysuckle	
<i>Lonicera xylosteum</i>	dwarf honeysuckle	
<i>Lonicera japonica</i>	Japanese honeysuckle	
<i>Lonicera morrowii</i>	Morrow's honeysuckle	
<i>Lonicera tatarica</i>	Tartarian bush honeysuckle	

Showing 1 to 6 of 6 entries (filtered from 139 total entries) [Previous](#) [Next](#)

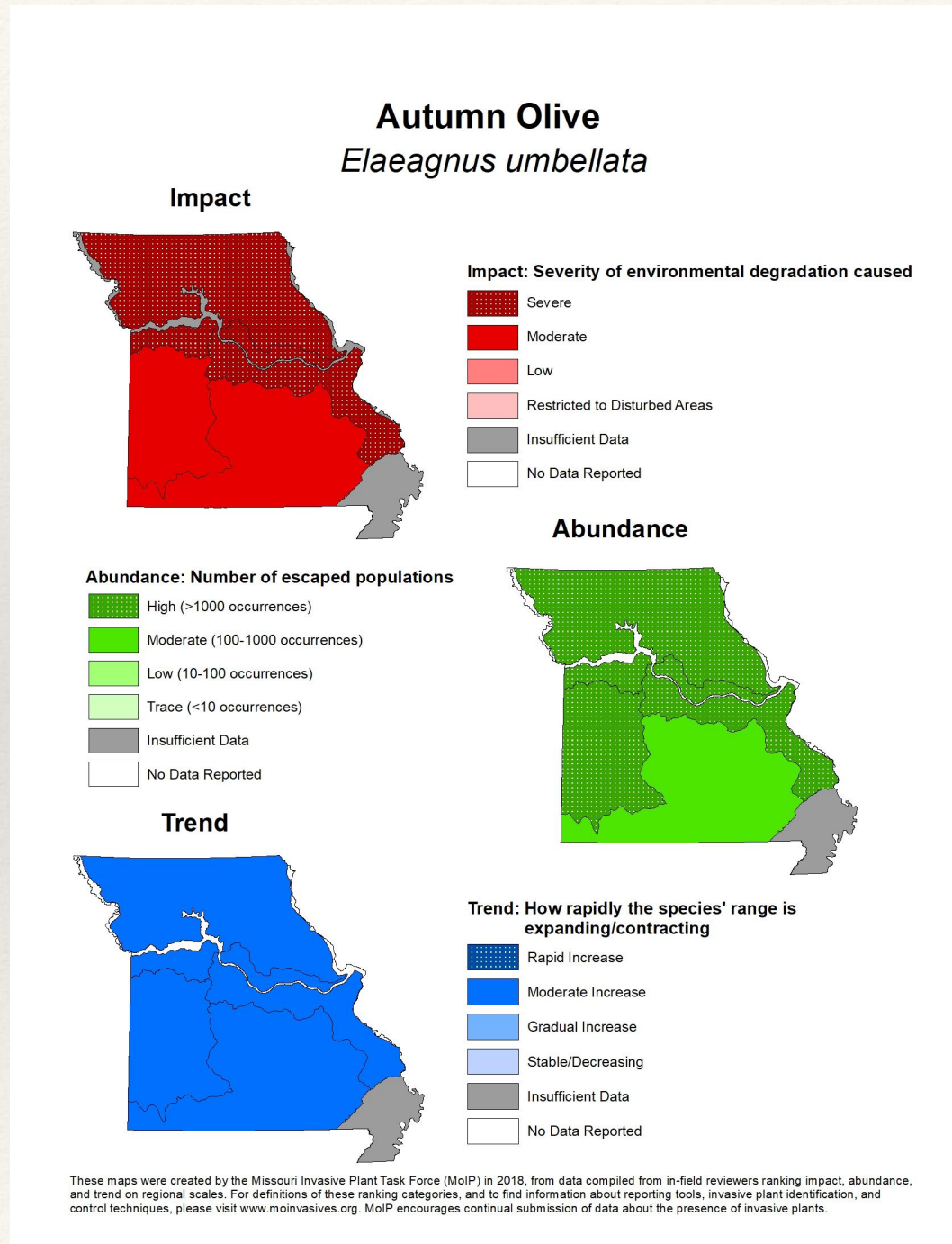
Note: some species display blank maps because of insufficient review data to populate the map.

[Click here to view and download all 142 maps on Dropbox.](#)

MoIP's Ranked Assessment



MoIP's Ranked Assessment

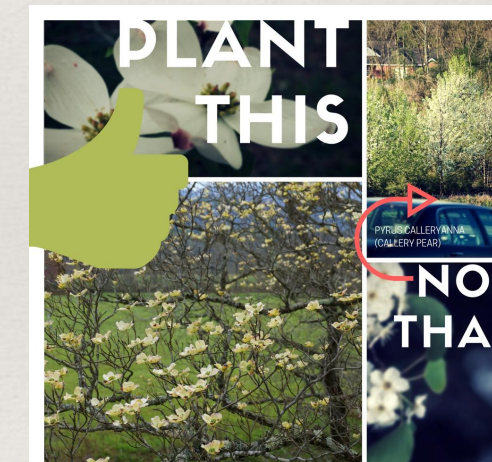
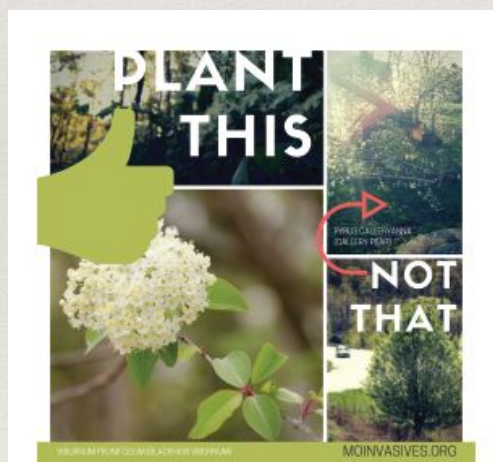


MoIP Projects to Raise Public Awareness



- MoIP Invasive Plant Action Award Program
- Outreach to suppliers/buyers of plants for the mainstream horticulture industry; MDA has offered to share information with plant growers/sellers
- Many invasive ID, control, and other resources available at moinvasives.org
- MoIP is launching a quarterly newsletter (State of Invasives) and inviting more than 1,000 public and private entities to subscribe to it. Will share ID and treatment information, interviews with professionals involved with current removal projects, and much more.

MoIP Projects to Raise Awareness



Black Haw Viburnum

Black haw viburnum (*Viburnum prunifolium*) have the heads of white flowers in the spring. Birds eat the purple-black fruit in the fall. The edible fruit tastes like raisins. Small tree or multi-stemmed shrub. Beautiful red color in fall.

Viburnum photos by Rita Fitch Reynolds and Suzanne Cahoon. Redford Pear photos by Susan Disney and MDC.



Eastern Redbud

Eastern redbud (*Cercis americana*) bears prolific, edible, pink flowers in early spring. Red-purple, pea-shaped seed pods follow the flowers. Heart-shaped leaves turn yellow in fall.

Eastern redbud photos from Chris Nicksel and Flickr user Matthew Shiner. Redford pear photos by Susan Disney and Amanda Nichols.



Serviceberry

Serviceberry (*Amelanchier arborea*) is a tall shrub or small tree bearing clusters of fragrant white flowers in April. Flowers give rise to very flavorful, red to purple-black, berrylike fruits relished by both songbirds and people. This lovely tree has colorful fall foliage in a blend of orange, gold, red and green.

Serviceberry photos by Flickr users Dan Muller and RJ. Redford pear photos by Martin LaBar and Amanda Nichols.



Black Gum

Black gum (*Nyssa sylvatica*) is a beautiful and underused native tree. Tidy shape. Glossy, dark green leaves turn yellow, orange, and scarlet red in fall. Bark is dark gray to almost black, alligator-like patterns when old. Fruit the size of navy beans ripen to a dark blue in fall and feed many birds. Host for the black and white Hebrew moth.

Serviceberry photos by Flickr users Dan Muller and RJ. Redford pear photos by Martin LaBar and Amanda Nichols.



“Plant This, Not That” Callery pear educational materials (free posters to download) developed in 2018.

MoIP Callery Pear BuyBack Campaign



Composite photo of photos from citizens who took part in the first buyback. Nine buyback events planted around Missouri on April 18, 2023. Tina Casagranda composite photo

Top Expanding Invasive Plant Lists

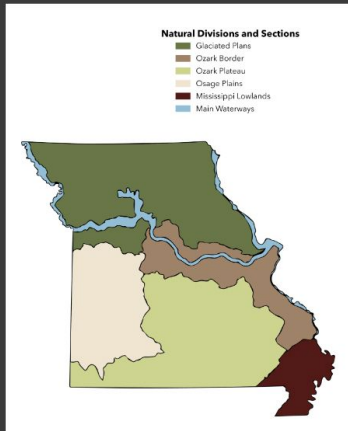
Top Invasive Plants in Missouri

The grid below displays top invasive plants in Missouri. Because of their vigorous expansion, these invasive plants are particularly important to identify and control.

You may sort by available regions. More regions coming soon.

Click the links on the right to download printable PDFs of ranked lists of the top 15 invasive plants by region or top 25 invasive plants in the state.

To see source data for these lists, please visit our page on the [Missouri Invasive Plant Assessment](#).



2021 Top Invasive Plants by Region (Ranked)

- State of Missouri
 - [Top Overall](#)
 - [Top Expanding](#)
- [Big Rivers](#)
- [Glaciated Plains](#)
- [Mississippi Lowlands](#)
- [Osage Plains](#)
- [Ozark Border](#)
- [Ozark](#)

All	2021	Big Rivers	Glaciated Plains	Mississippi Lowlands	MO Expanding	MO Overall	Ozark	Ozark Border
		Ozark Plains						



Callery pear

2021, Glaciated Plains, MO Expanding, MO Overall, Ozark, Ozark Border, Ozark Plains



Sericea lespedeza

2021, Glaciated Plains, MO Expanding, MO Overall, Ozark, Ozark Border, Ozark Plains



Invasive privets

2021, MO Expanding, MO Overall, Ozark Border, Ozark Plains



Reed canary grass

2021, Big Rivers, Glaciated Plains, MO Expanding, MO Overall, Ozark Plains

Top Expanding Invasive Plant Lists

Missouri Invasive Plant Task Force (MoIP)

TOP INVASIVE PLANTS EXPANDING IN MISSOURI

INVASIVE: AN AGGRESSIVE, NON-NATIVE SPECIES WHOSE PRESENCE CAUSES OR IS LIKELY TO CAUSE ECONOMIC HARM OR ENVIRONMENTAL HARM

MoIP's 2021 List of Expanding Invasive Plants draws data from MoIP's statewide assessment created by experienced field biologists in Missouri. Biologists estimated how rapidly the species' ranges will expand to form new occurrences throughout each of Missouri's primary ecological regions over the next 10 years. Plants below may be expanding rapidly in some Missouri regions, but not in others. Visit moivasives.org/moip-assessment/ for more information.

1. **Callery pear** (*Pyrus calleryana*)
2. **Garlic mustard** (*Alliaria petiolata*)
3. **Sericea lespedeza** (*Lespedeza cuneata*)
4. **Invasive privets** (*Ligustrum* spp.)
5. **Reed canary grass** (*Phalaris arundinacea*)
6. **Japanese stiltgrass** (*Microstegium vimineum*)
7. **Invasive bush-honeysuckles** (*Lonicera* spp.)
8. **Himalayan blackberry** (*Rubus armeniacus*)
9. **Autumn olive** (*Elaeagnus umbellata*)
10. **Japanese chaff flower** (*Achyranthes japonica*)
11. **Japanese honeysuckle** (*Lonicera japonica*)
12. **Japanese hops** (*Humulus japonicus*)
13. **Wintercreeper, climbing euonymus** (*Euonymus fortunei*)
14. **Teasels** (*Dipsacus* spp.)
15. **Sweet autumn virginsbower** (*Clematis terniflora*)
16. **Smooth brome** (*Bromus inermis*)
17. **Invasive wisterias** (*Wisteria* spp.)
18. **Oriental bittersweet** (*Celastrus orbiculatus*)
19. **Spotted knapweed** (*Centaurea stoebe* subsp. *micranthos*)
20. **Japanese knotweed** (*Fallopia japonica*)
21. **Burning bush** (*Euonymus alatus*)
22. **Birdsfoot trefoil** (*Lotus corniculatus*)
23. **Johnson grass** (*Sorghum halepense*)
24. **Old-world bluestems** (*Bothriochloa* spp.)
25. **Common reed** (*Phragmites australis*)



This educational campaign is ongoing. Follow MoIP for more on our assessment and find ID and control resources for each plant listed.


Top Expanding Invasive Plant Lists


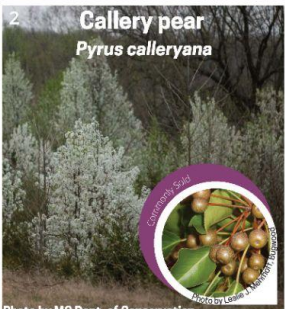
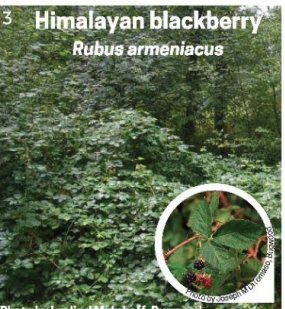
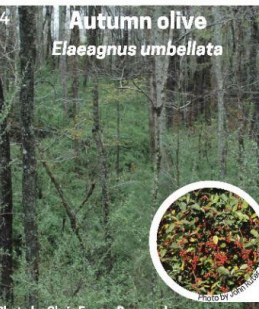
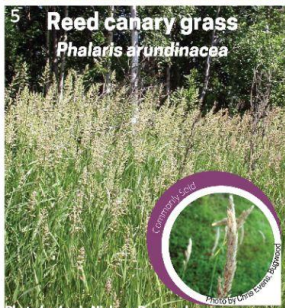
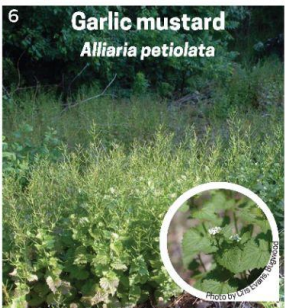
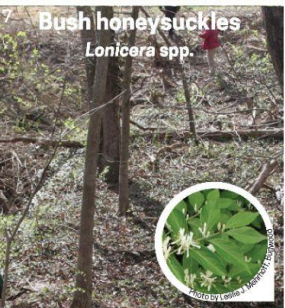

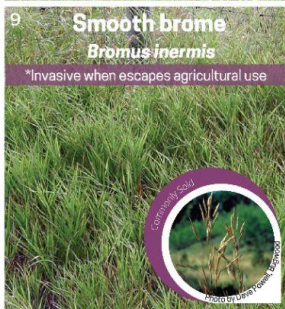
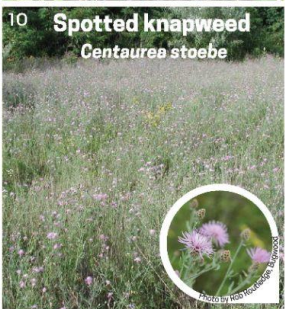
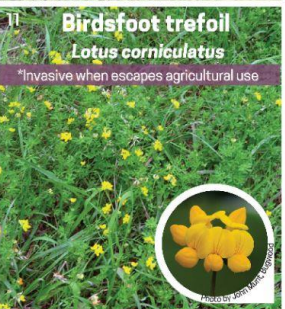
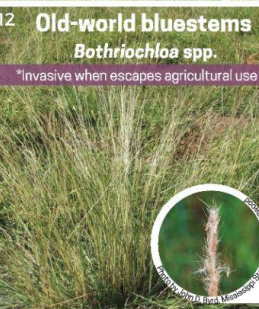

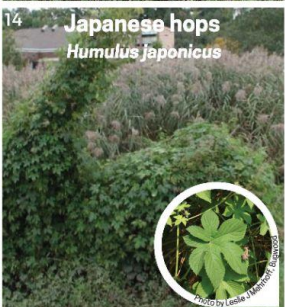
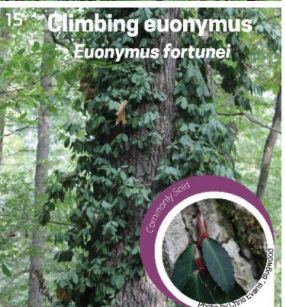
Did you know? **GLACIATED PLAINS EXPANDING INVASIVE PLANTS**

Invasive: An aggressive, non-native species whose presence causes or is likely to cause economic or environmental harm

Expanding: These plants are the biggest threat in relation to expansion, as they continue to spread at a higher rate

Northern Missouri's Glaciated Plains Region is threatened by many invasive plants. Because of their vigorous expansion, the plants pictured below are particularly important to identify and control. Learning how to identify and remove uncontrolled plants from your property is the first step in protecting the vitality of Missouri's natural and agricultural lands. For more information on identification and removal, visit the Missouri Invasive Plant Council (MoIP) website.

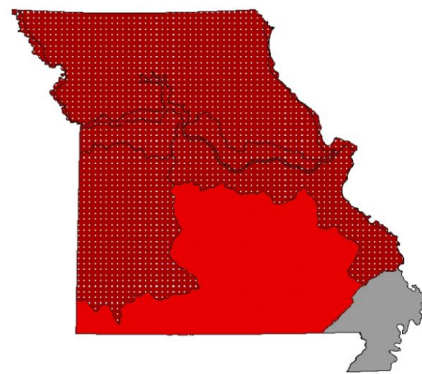


<p>1 Sericea lespedeza <i>Lespedeza cuneata</i></p>  <p>Photo by Chuck Bergeron, Bugwood</p>	<p>2 Callery pear <i>Pyrus calleryana</i></p>  <p>Photo by MO Dept. of Conservation</p>	<p>3 Himalayan blackberry <i>Rubus armeniacus</i></p>  <p>Photo by Leslie J Mehrhoff, Bugwood</p>	<p>4 Autumn olive <i>Elaeagnus umbellata</i></p>  <p>Photo by Chris Evans, Bugwood</p>
<p>5 Reed canary grass <i>Phalaris arundinacea</i></p>  <p>Photo by Jamie Nielsen, Bugwood</p>	<p>6 Garlic mustard <i>Alliaria petiolata</i></p>  <p>Photo by Chris Evans, Bugwood</p>	<p>7 Bush honeysuckles <i>Lonicera spp.</i></p>  <p>Photo by Richard Gardner, Bugwood</p>	<p>8 Teasels <i>Dipsacus spp.</i></p>  <p>Photo by Chris Evans, Bugwood</p>
<p>9 Smooth brome <i>Bromus inermis</i></p> <p>*Invasive when escapes agricultural use</p>  <p>Photo by Chris Evans, Bugwood</p>	<p>10 Spotted knapweed <i>Centaurea stoebe</i></p>  <p>Photo by Leslie J Mehrhoff, Bugwood</p>	<p>11 Birdsfoot trefoil <i>Lotus corniculatus</i></p> <p>*Invasive when escapes agricultural use</p>  <p>Photo by Chris Evans, Bugwood</p>	<p>12 Old-world bluestems <i>Bothriochloa spp.</i></p> <p>*Invasive when escapes agricultural use</p>  <p>Photo by Michelle Villafranca, Bugwood</p>
<p>13 Tall fescue <i>Festuca arundinacea</i></p> <p>*Invasive when escapes agricultural use</p>  <p>Photo by Howard F Schwartz, Bugwood</p>	<p>14 Japanese hops <i>Humulus japonicus</i></p>  <p>Photo by Leslie J Mehrhoff, Bugwood</p>	<p>15 Climbing euonymus <i>Euonymus fortunei</i></p>  <p>Photo by Chris Evans, Bugwood</p>	<p>The data collected on expanding invasive plants comes from the MoIP invasive plant assessment.</p> <p>WWW.MOINVASIVES.ORG/RESOURCES</p> <p>f t @MOINVASIVES</p>

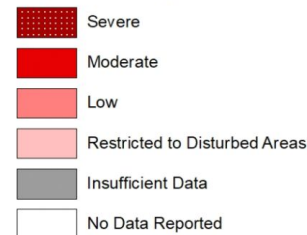
Top Expanding Invasives in Glaciated Plains

Sericea Lespedeza *Lespedeza cuneata*

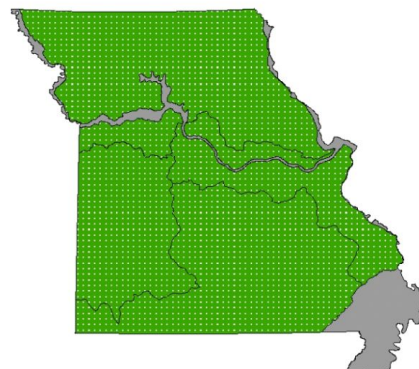
Impact



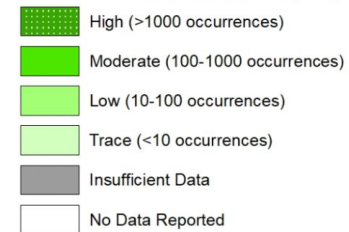
Impact: Severity of environmental degradation caused



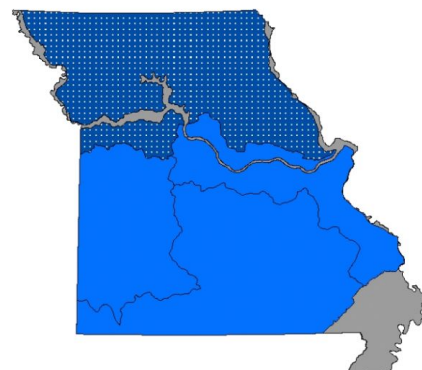
Abundance



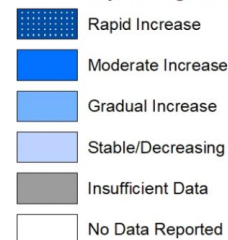
Abundance: Number of escaped populations



Trend



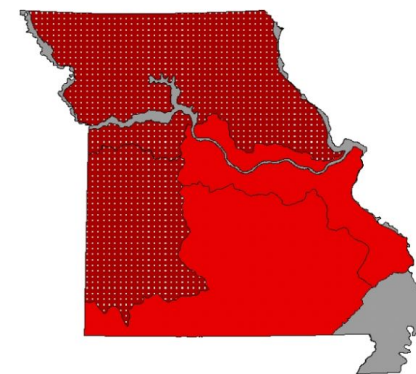
Trend: How rapidly the species' range is expanding/contracting



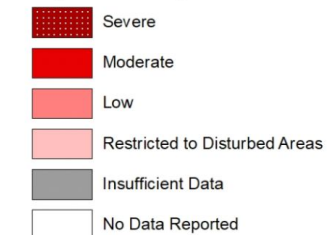
These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

Ornamental Pear, Callery Pear *Pyrus calleryana*

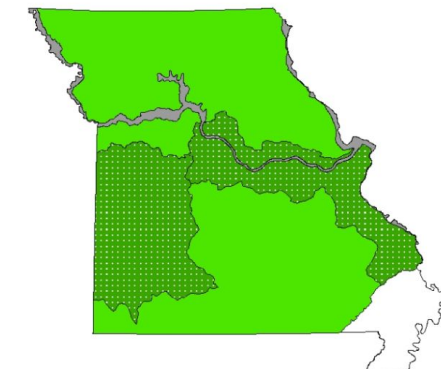
Impact



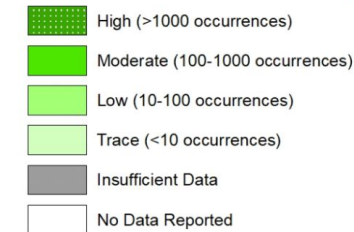
Impact: Severity of environmental degradation caused



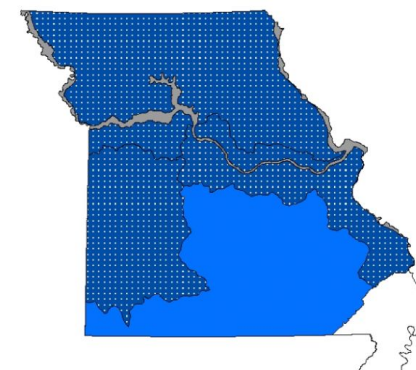
Abundance



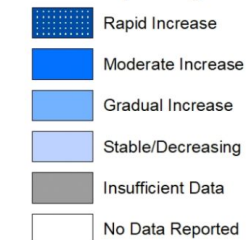
Abundance: Number of escaped populations



Trend



Trend: How rapidly the species' range is expanding/contracting

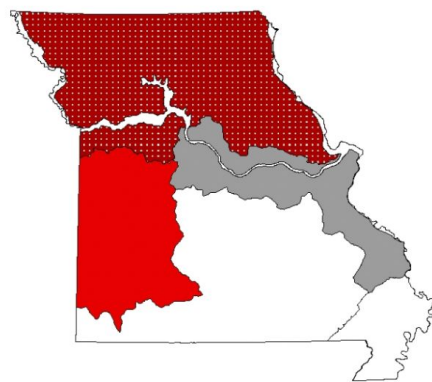


These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

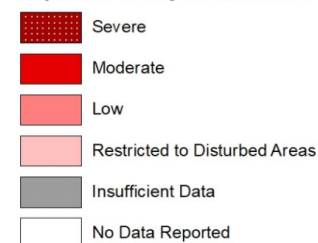
Top Expanding Invasives in Glaciated Plains

Himalayan Blackberry *Rubus armeniacus*

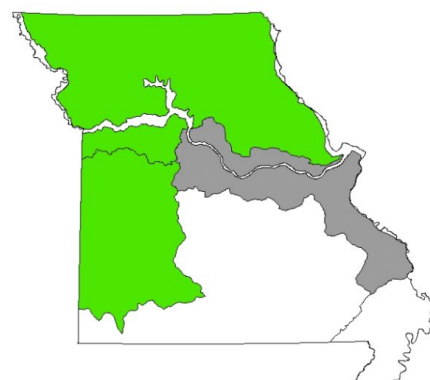
Impact



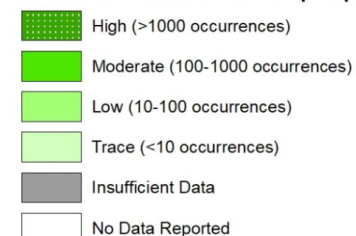
Impact: Severity of environmental degradation caused



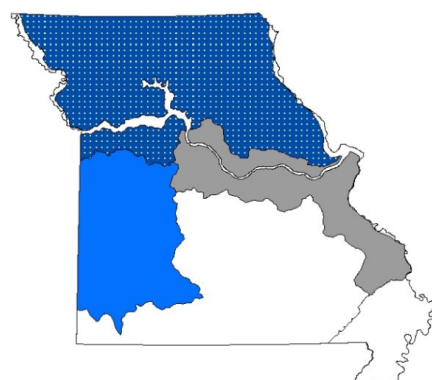
Abundance



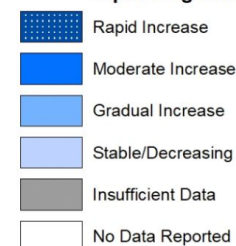
Abundance: Number of escaped populations



Trend



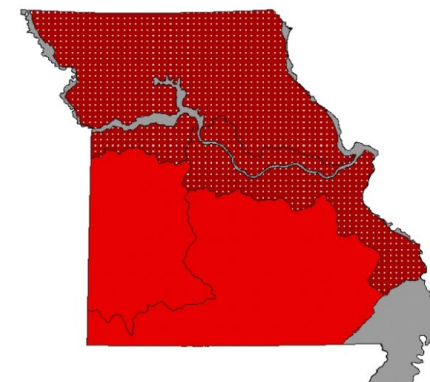
Trend: How rapidly the species' range is expanding/contracting



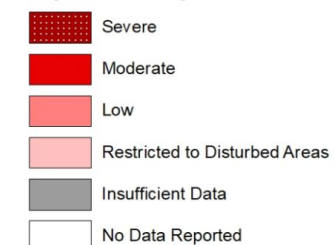
These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moipinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

Autumn Olive *Elaeagnus umbellata*

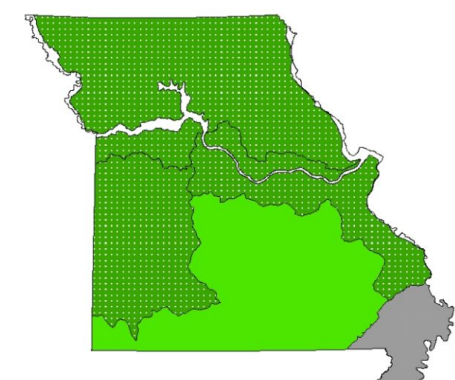
Impact



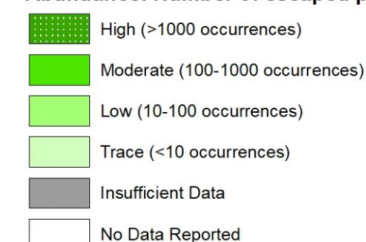
Impact: Severity of environmental degradation caused



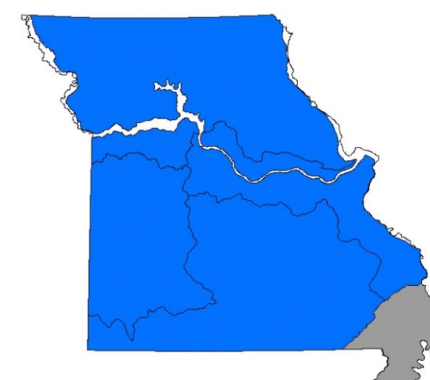
Abundance



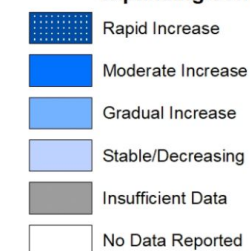
Abundance: Number of escaped populations



Trend



Trend: How rapidly the species' range is expanding/contracting

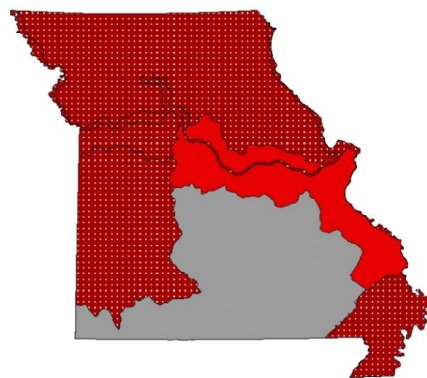


These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moipinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

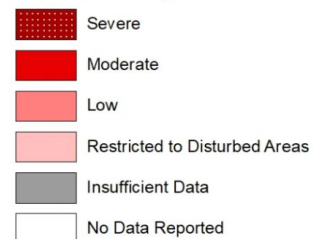
Top Expanding Invasives in Glaciated Plains

Reed Canary Grass *Phalaris arundinacea*

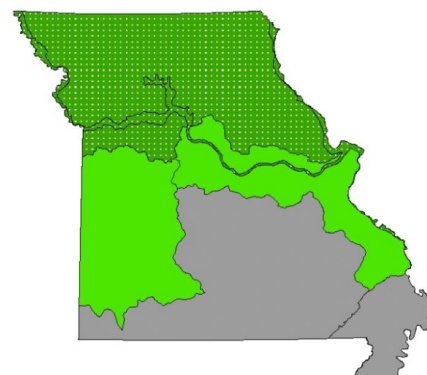
Impact



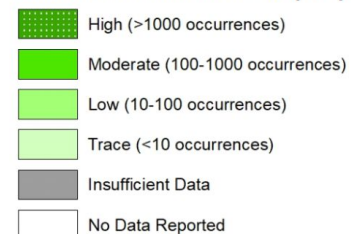
Impact: Severity of environmental degradation caused



Abundance



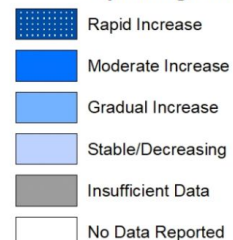
Abundance: Number of escaped populations



Trend



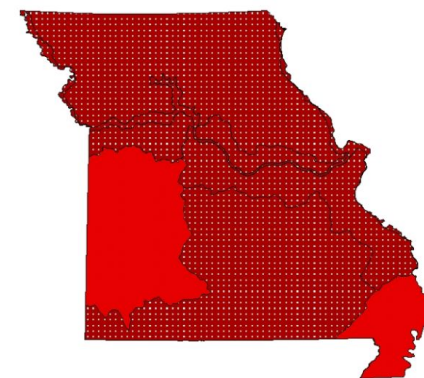
Trend: How rapidly the species' range is expanding/contracting



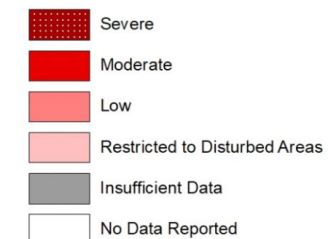
These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

Garlic Mustard *Alliaria petiolata*

Impact



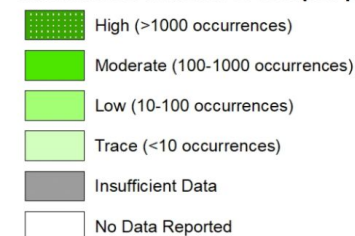
Impact: Severity of environmental degradation caused



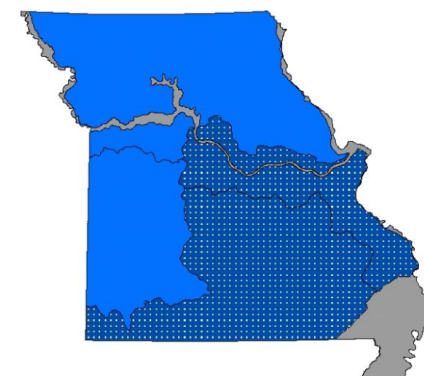
Abundance



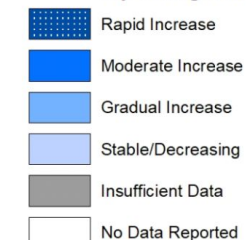
Abundance: Number of escaped populations



Trend



Trend: How rapidly the species' range is expanding/contracting



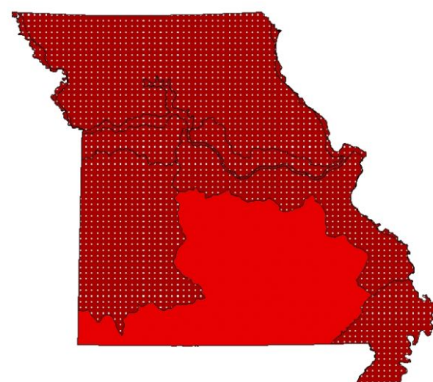
These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

Top Expanding Invasives in Glaciated Plains

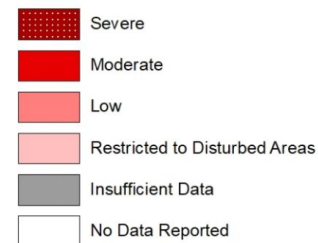
Amur Honeysuckle

Lonicera maackii

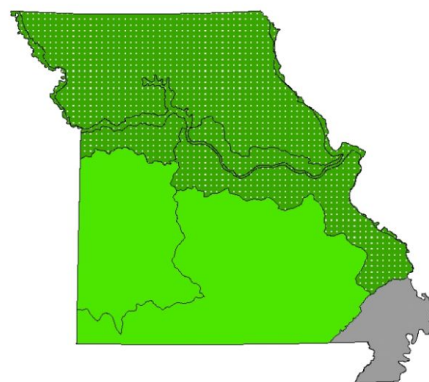
Impact



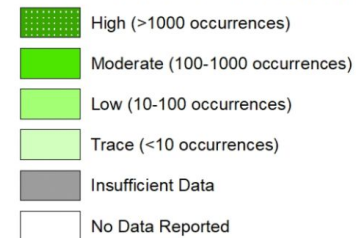
Impact: Severity of environmental degradation caused



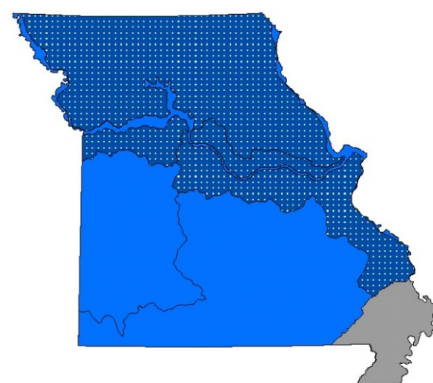
Abundance



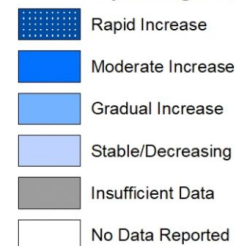
Abundance: Number of escaped populations



Trend



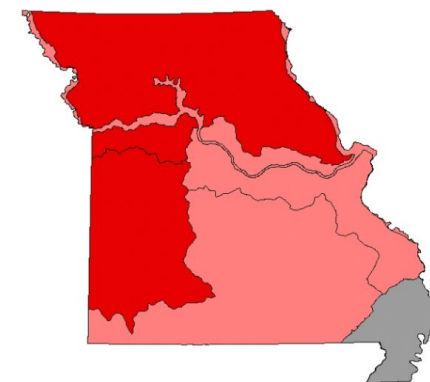
Trend: How rapidly the species' range is expanding/contracting



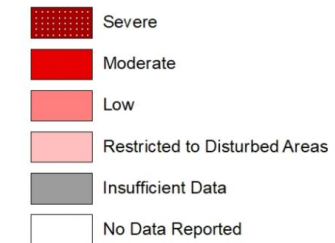
Cut-leaf Teasel

Dipsacus laciniatus

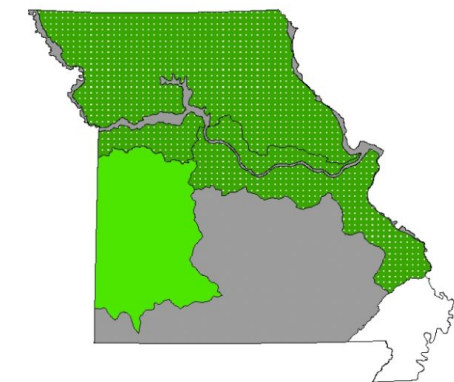
Impact



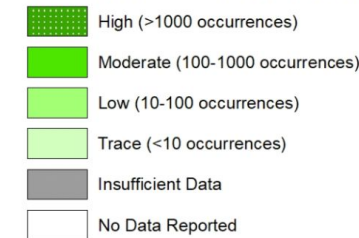
Impact: Severity of environmental degradation caused



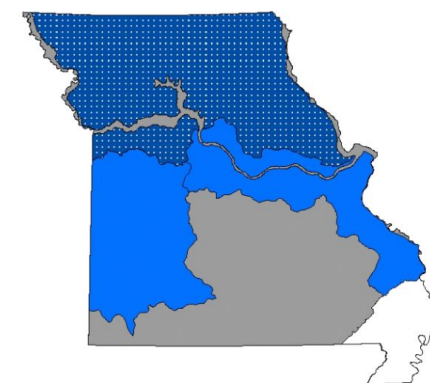
Abundance



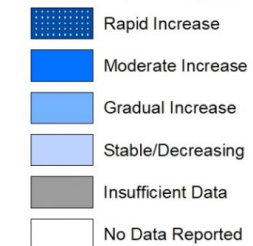
Abundance: Number of escaped populations



Trend



Trend: How rapidly the species' range is expanding/contracting



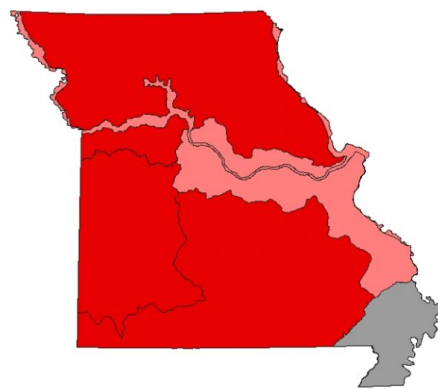
These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

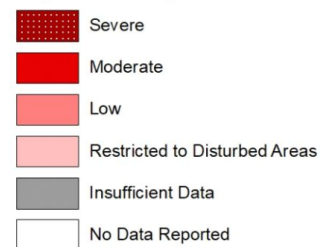
Top Expanding Invasives in Glaciated Plains

Smooth Brome *Bromus inermis*

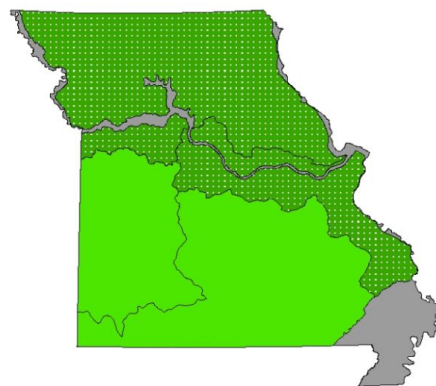
Impact



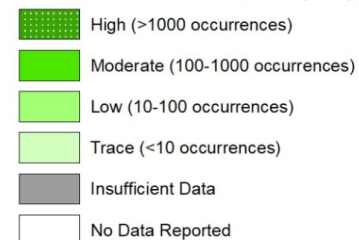
Impact: Severity of environmental degradation caused



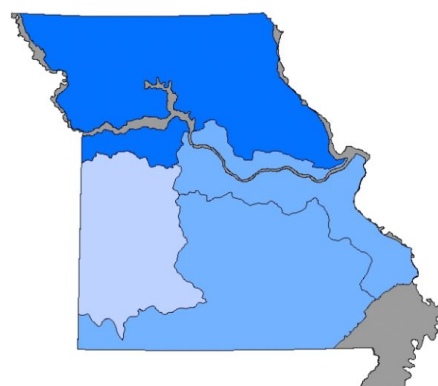
Abundance



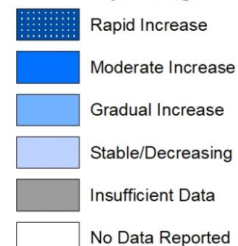
Abundance: Number of escaped populations



Trend



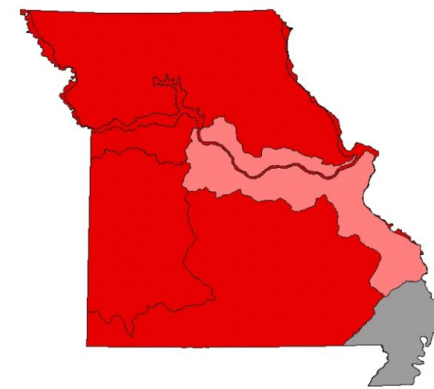
Trend: How rapidly the species' range is expanding/contracting



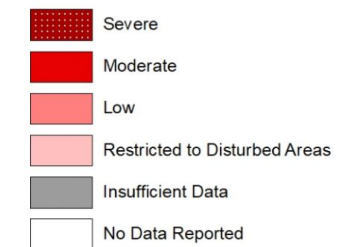
These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

Spotted Knapweed *Centaurea stoebe subsp. micranthos*

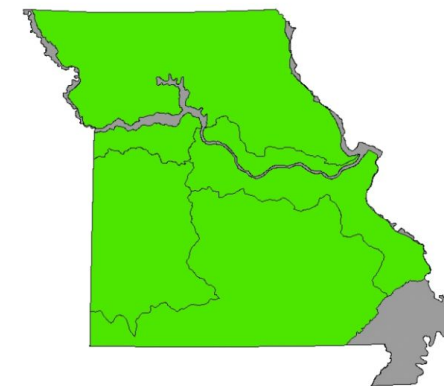
Impact



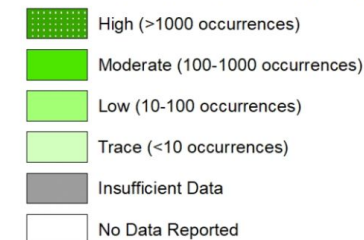
Impact: Severity of environmental degradation caused



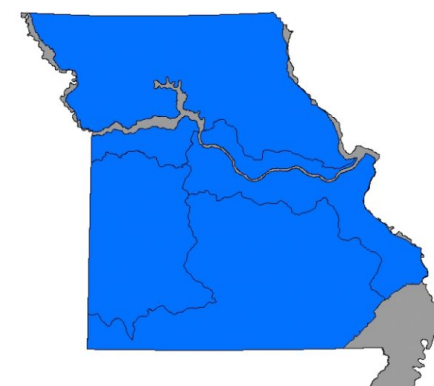
Abundance



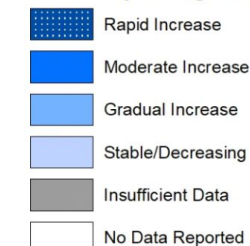
Abundance: Number of escaped populations



Trend



Trend: How rapidly the species' range is expanding/contracting

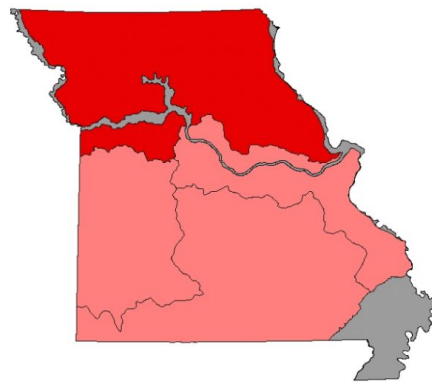


These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

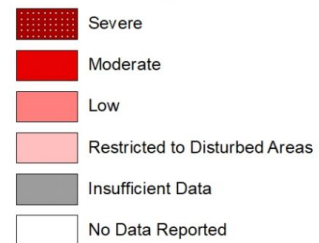
Top Expanding Invasives in Glaciated Plains

Birdsfoot Trefoil *Lotus corniculatus*

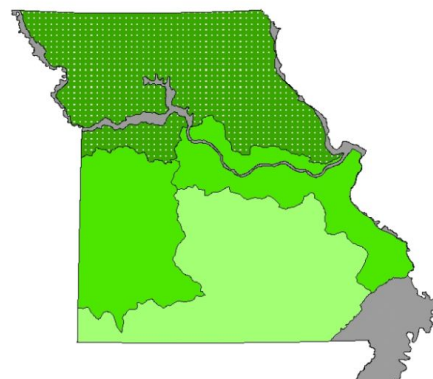
Impact



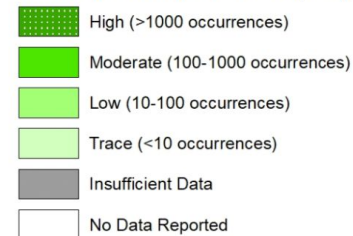
Impact: Severity of environmental degradation caused



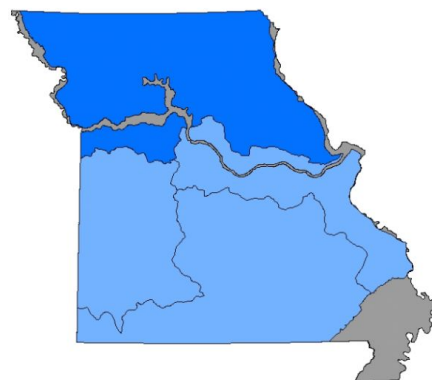
Abundance



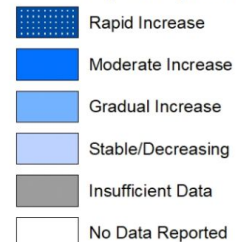
Abundance: Number of escaped populations



Trend



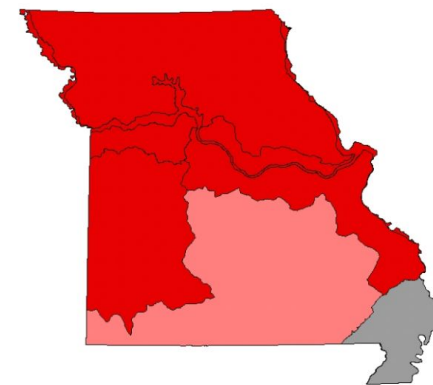
Trend: How rapidly the species' range is expanding/contracting



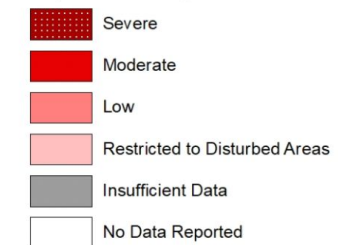
These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

Tall Fescue *Festuca arundinacea*

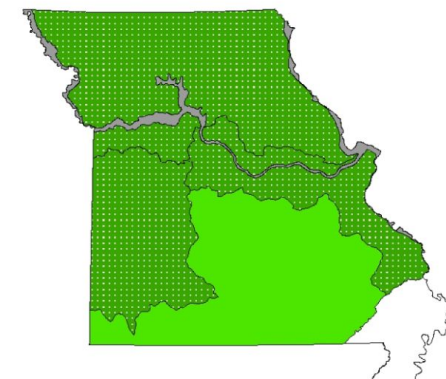
Impact



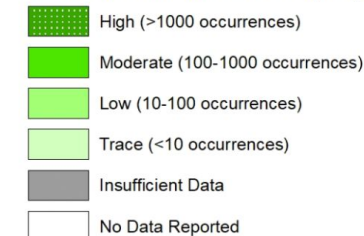
Impact: Severity of environmental degradation caused



Abundance



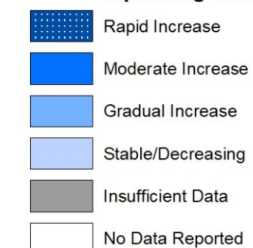
Abundance: Number of escaped populations



Trend



Trend: How rapidly the species' range is expanding/contracting

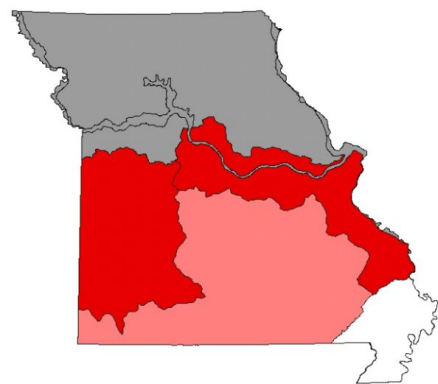


These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

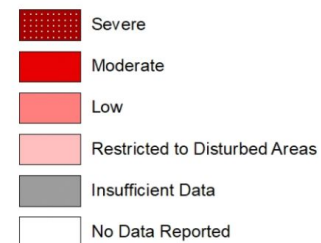
Top Expanding Invasives in Glaciated Plains

Caucasian Bluestem *Bothriochloa bladhii*

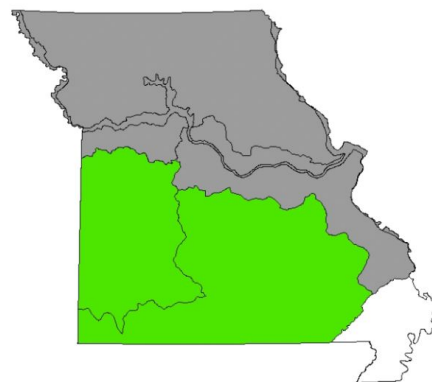
Impact



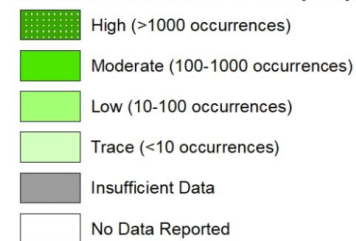
Impact: Severity of environmental degradation caused



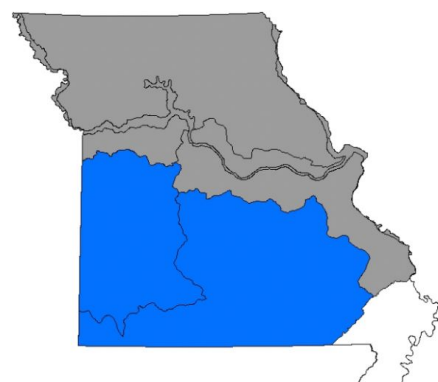
Abundance



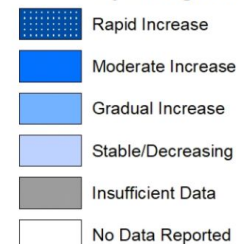
Abundance: Number of escaped populations



Trend



Trend: How rapidly the species' range is expanding/contracting



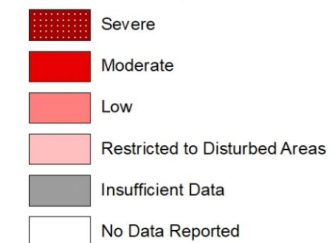
These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

Japanese Hops *Humulus japonicus*

Impact



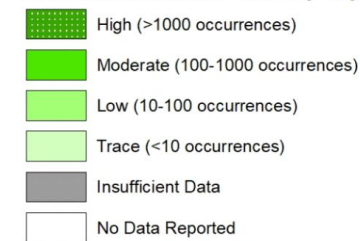
Impact: Severity of environmental degradation caused



Abundance



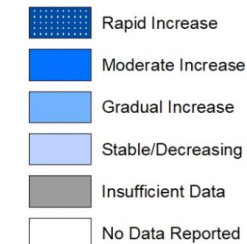
Abundance: Number of escaped populations



Trend



Trend: How rapidly the species' range is expanding/contracting

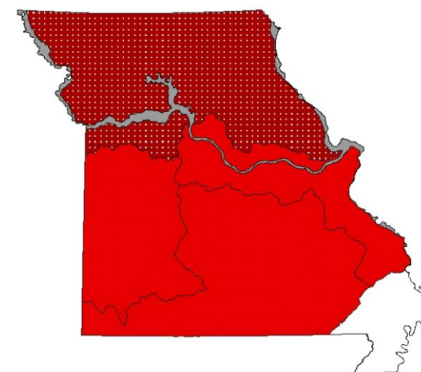


These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

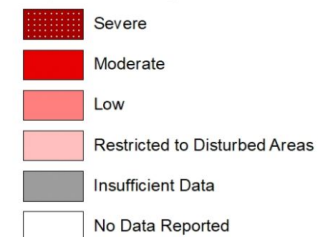
Top Expanding Invasives in Glaciated Plains

Climbing Euonymus *Euonymus fortunei*

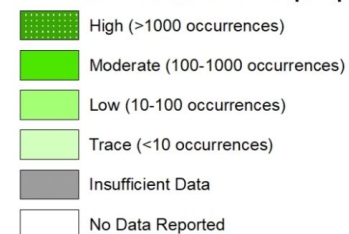
Impact



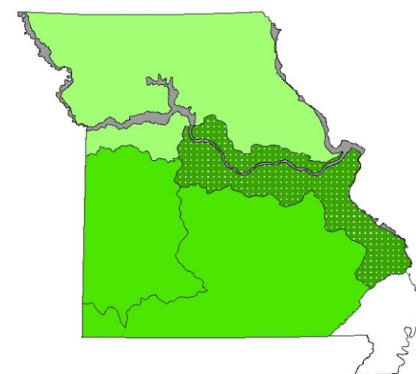
Impact: Severity of environmental degradation caused



Abundance



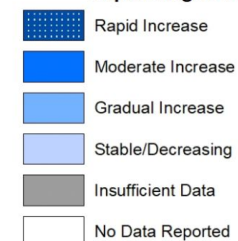
Abundance



Trend



Trend: How rapidly the species' range is expanding/contracting



These maps were created by the Missouri Invasive Plant Task Force (MoIP) in 2018, from data compiled from in-field reviewers ranking impact, abundance, and trend on regional scales. For definitions of these ranking categories, and to find information about reporting tools, invasive plant identification, and control techniques, please visit www.moinvasives.org. MoIP encourages continual submission of data about the presence of invasive plants.

Example: Sericea Lespedeza Treatment

Sericea Lespedeza Treatment Information:

From Missouri Prairie Foundation:

Triclopyr or triclopyr + fluroxpyer, foliar spray, June 15th - August 15th (prior to flowering)

From Mo. Department of Conservation:

Mechanical treatment:

Root reserves of sericea lespedeza increase during flowering with a low point in the cycle at the flower bud stage. This low point provides a vulnerable stage at which to use mechanical control. Mowing in the flower bud stage for two to three consecutive years should reduce the vigor of sericea lespedeza.

Fire & Grazing – for rangeland



Example: Callery Pear Treatment

Callery Pear Treatment Information from moinvasives.org:

Remove Small Trees

In areas with light infestation, remove small trees by hand when the soil is moist, with care taken to remove the entire root. When too numerous, foliar spraying with a 2 to 5 percent systemic herbicide solution of glyphosate or triclopyr can be utilized in mid to late summer.

Cut Medium to Large Trees

Medium to large trees should be cut down and stumps treated immediately with herbicide to prevent re-sprouting. Effective herbicides include glyphosate and triclopyr at a 25 to 50 percent solution.

Less labor intensive control options include basal bark treatment and girdling.

- Use basal bark treatment for trees up to 6 inches in diameter by applying a 1:5 ratio of the ester formulation of triclopyr and basal oil in a 12-inch wide band around the entire circumference of the tree base.
- Herbicide uptake is most successful in late winter/early spring or during the summer.
- Mature trees can be girdled during the spring and summer, by cutting through the bark around the entire trunk, 6 inches above the ground.



Plant Alternative Native Trees

Instead of landscaping with Callery pear, we recommend planting a variety of other small trees, especially natives, such as:

- American plum (*Prunus americana*)
- Flowering dogwood (*Cornus florida*)
- Eastern redbud (*Cercis canadensis*)
- Hawthorn (*Crataegus spp.*)
- Serviceberry (*Amelanchier arborea*)

Example: Himalayan blackberry Treatment

Himalayan blackberry treatment Information from invasives.org:

Mechanical removal or burning may be the most effective ways of removing the mature plants. Subsequent treatment with herbicides should be conducted cautiously for two reasons: (1) often grows in riparian areas and the herbicide may be distributed to unforeseen locations by running water, and (2) some herbicides promote vegetative growth from lateral roots.

Re-establishment may be prevented by planting fast-growing shrubs or trees, since the species is usually intolerant of shade. Regrowth has also been controlled by grazing sheep and goats in areas where the mature plants have been removed.




Top Expanding Invasive Plant Lists


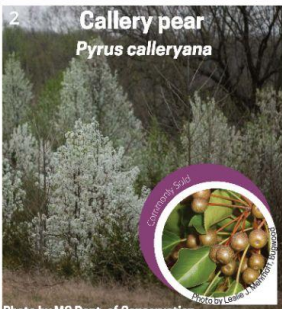
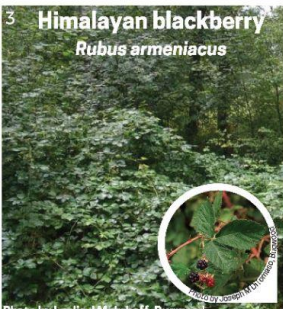
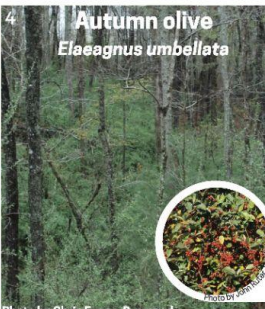
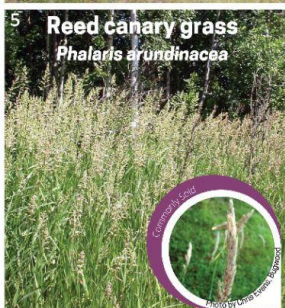


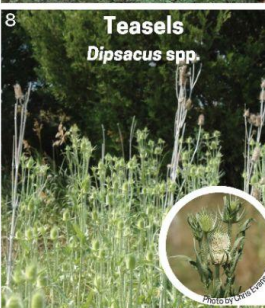
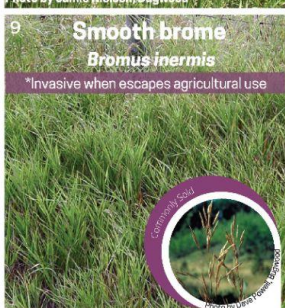

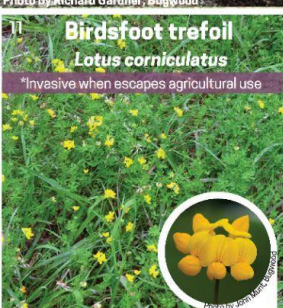


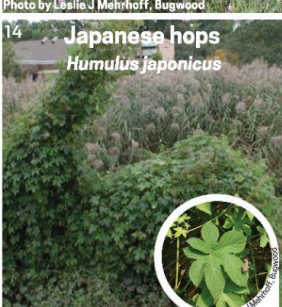
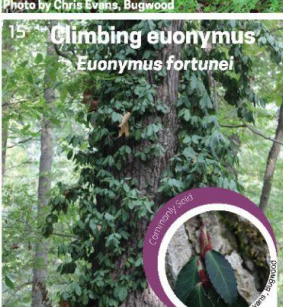
Did you know? **GLACIATED PLAINS EXPANDING INVASIVE PLANTS**

Invasive: An aggressive, non-native species whose presence causes or is likely to cause economic or environmental harm

Expanding: These plants are the biggest threat in relation to expansion, as they continue to spread at a higher rate

Northern Missouri's Glaciated Plains Region is threatened by many invasive plants. Because of their vigorous expansion, the plants pictured below are particularly important to identify and control. Learning how to identify and remove uncontrolled plants from your property is the first step in protecting the vitality of Missouri's natural and agricultural lands. For more information on identification and removal, visit the Missouri Invasive Plant Council (MoIP) website.



<p>1 Sericea lespedeza <i>Lespedeza cuneata</i></p>  <p>Photo by Chuck Bergeron, Bugwood</p>	<p>2 Callery pear <i>Pyrus calleryana</i></p>  <p>Photo by MO Dept. of Conservation</p>	<p>3 Himalayan blackberry <i>Rubus armeniacus</i></p>  <p>Photo by Leslie J Mehrhoff, Bugwood</p>	<p>4 Autumn olive <i>Elaeagnus umbellata</i></p>  <p>Photo by Chris Evans, Bugwood</p>
<p>5 Reed canary grass <i>Phalaris arundinacea</i></p>  <p>Photo by Jamie Nielsen, Bugwood</p>	<p>6 Garlic mustard <i>Alliaria petiolata</i></p>  <p>Photo by Chris Evans, Bugwood</p>	<p>7 Bush honeysuckles <i>Lonicera spp.</i></p>  <p>Photo by Richard Gardner, Bugwood</p>	<p>8 Teasels <i>Dipsacus spp.</i></p>  <p>Photo by Chris Evans, Bugwood</p>
<p>9 Smooth brome <i>Bromus inermis</i></p> <p>*Invasive when escapes agricultural use</p>  <p>Photo by Chris Evans, Bugwood</p>	<p>10 Spotted knapweed <i>Centaurea stoebe</i></p>  <p>Photo by Leslie J Mehrhoff, Bugwood</p>	<p>11 Birdsfoot trefoil <i>Lotus corniculatus</i></p> <p>*Invasive when escapes agricultural use</p>  <p>Photo by Chris Evans, Bugwood</p>	<p>12 Old-world bluestems <i>Bothriochloa spp.</i></p> <p>*Invasive when escapes agricultural use</p>  <p>Photo by Michelle Villafranca, Bugwood</p>
<p>13 Tall fescue <i>Festuca arundinacea</i></p> <p>*Invasive when escapes agricultural use</p>  <p>Photo by Howard F Schwartz, Bugwood</p>	<p>14 Japanese hops <i>Humulus japonicus</i></p>  <p>Photo by Leslie J Mehrhoff, Bugwood</p>	<p>15 Climbing euonymus <i>Euonymus fortunei</i></p>  <p>Photo by Chris Evans, Bugwood</p>	<p>The data collected on expanding invasive plants comes from the MoIP invasive plant assessment.</p> <p>WWW.MOINVASIVES.ORG/RESOURCES</p> <p>f t @MOINVASIVES</p>

Missouri's Noxious Weed Law

From the Missouri Department of Agriculture website: *The term noxious refers to the weed's ability to cause economic harm to the state's agriculture industry and to the high level of difficulty associated with controlling or eradicating the species.*

The State of Missouri designates 12 species of weeds as noxious. This law:

- requires property owners to control noxious weeds on their property and
- prohibits noxious weeds from being sold

Violation of either of these provisions is subject to penalty by county prosecutors.

Adding a plant to the Missouri Noxious Weed Law list requires review and approval by the Missouri Department of Agriculture.

The Missouri Department of Agriculture has no authority to deal with noxious weed violations, but can provide technical assistance to any landowner dealing with a noxious weed problem.

Missouri's Noxious Weed Law

Forum

National average is 75 species on state noxious weed laws. Some state examples:

- Oklahoma = 321
- Washington = 220
- California = 184
- Massachusetts = 155
- Ohio = 140
- New Hampshire = 137
- Wisconsin = 134
- Iowa = 132
- Illinois = 56
- Iowa = 27
- Arkansas = 2

An Analysis of US State Regulated Weed Lists: A Discordance between Biology and Policy

VASILIIY T. LAKOBA, RACHEL K. BROOKS, DAVID C. HAAK, AND JACOB N. BARNEY

Weedy and invasive plants threaten our food supply, native biodiversity, and the structure and function of ecosystems. The number and impact of these damaging plants are expected to continue to grow with ongoing global change. Some of the most common policy tools to help mitigate this threat are regulatory weed lists, which limit the importation and movement of listed plant species, but there has never been a comprehensive analysis of plants regulated in the United States. We analyzed US state regulatory lists (e.g., noxious, invasive, prohibited) to evaluate their composition, patterns of listing, congruities with weed distributions, and limitations. In total, 46 states maintain regulatory weed lists that include 3210 total listings of 1249 unique species; 48% of them are introduced, 40% are native, and 12% are not yet found in the United States. Overall, the listed species are not a good reflection of the weeds in each state, and listing appears largely reactive, regulating species after they become widespread. We highlight patterns and incongruities among lists and discuss their implications, especially the large number of regulated species native to the United States.

Keywords: agricultural weeds; invasive plants; noxious weeds; policy; risk assessment; weed prevention

Weeds have been a feature of the human condition since the dawn of agriculture and continue to play a consequential role in shaping global ecosystems and economies. The impacts of weeds are broad, dramatic, and, in some cases, irreversible (Horvath et al. 2018). The future holds little hope for relief, because the introduction of new species continues seemingly unabated (Seebens et al. 2017), and climate change is expected to worsen their impacts (Hellmann et al. 2008). We find ourselves at a watershed moment of rising globalization, emerging economies, an exploding global population, and worsening climate change with the need to mitigate the growing weed threat across ecosystems.

Our best protection against weeds, both economically and ecologically, is to prevent their introduction and to subsequently minimize their spread once they are introduced (Keller et al. 2007). These are the circumstances under which noxious weed laws were conceived, becoming one policy lever that jurisdictions have to limit the introduction and spread of pest plants. Many countries, states, and localities maintain noxious weed policies that vary broadly in their details (McCubbins et al. 2013) but share their motivation in protecting agricultural and natural resources from weeds.

Although pest plants were elements of previous regulations, it was the US Federal Noxious Weed Act (FNWA) of

1974 that formalized and expanded the regulation of weeds (McCubbins et al. 2013). The FNWA established a federal noxious weed list, defining *noxious weeds* as plants that can directly or indirectly injure agriculture, navigation, fish and wildlife resources, or public health. In 2000, under the Plant Protection Act (PPA) Congress repealed the FNWA and related legislation, consolidating US Department of Agriculture (USDA) authority over noxious weeds and plant pests into a single statute. The PPA revised the original definition of noxious weeds to include injury to the environment: defining a *noxious weed* as “any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests relating to agriculture, irrigation, navigation, natural resources, public health, or the environment.” The PPA focuses on preventative measures to prohibit further spread of noxious weeds, but does not require eradication of established weeds.

Currently, the US Federal Noxious Weed List includes 107 individual species plus all species within five genera, which cannot be moved into or within the United States. Although the federal listing process was previously fairly opaque, listing was recently improved by requiring a weed risk assessment, ensuring a science-based approach that increased transparency (Koop et al. 2012). Despite this, the

Missouri's Noxious Weed Law

Missouri Noxious Weed Law regulates these 12 species:

Thistles and thistle-like plants:



Canada thistle
(*Cirsium arvense* L. Scop.)



Common teasel
(*Dipsacus fullonum* L.)



Scotch thistle
(*Onopordum acanthium* L.)



Musk thistle
(*Carduus nutans* L.)



Cutleaf teasel
(*Dipsacus laciniatus* L.)

Other species:



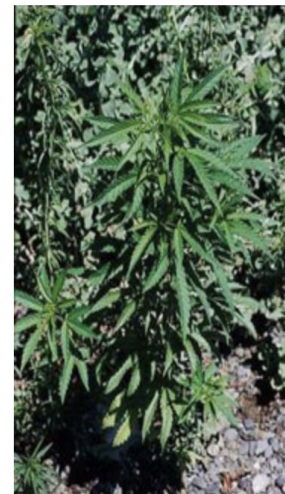
Spotted knapweed
(*Centaurea stoebe* L., including all
subspecies)



Multiflora rose
(*Rosa multiflora* Thunb. ex Murr.)



Purple loosestrife
(*Lythrum salicaria* L. and any
hybrids thereof)



Marijuana
(*Cannabis sativa* L.)

Cease-the-Sale Idea

- MoIP is working on an idea to cease the sale of some invasive plants in Missouri.
- In fall 2020, MoIP invited more than 90 stakeholder groups to review the MoIP list of 142 invasive plants and submit feedback about species they would be in support of having on a “Cease-the-Sale” list and which ones they would be opposed to having on such a list.
- We received feedback from 23 groups, which resulted in a preliminary list of 46 species that had sound support (in addition to the 12 already on the Missouri Noxious Weed list).

Cease-the-Sale Idea

Preliminary list of 46 Invasive Plant Species for Cessation of Sale, Propagation, Intentional Distribution in Missouri. Additional species may be added to this list following a second round of invited feedback.

- Japanese chaff flower (*Achyranthes japonica*)
- Hardheads (*Rhaponticum repens*)
- Tree-of-heaven (*Ailanthus altissima*)
- Garlic mustard (*Alliaria petiolata*)
- Sessile joyweed (*Alternanthera sessilis*)
- Burdock (*Arctium minus*)
- Oriental bittersweet (*Celastrus orbiculatus*)
- Bull thistle (*Cirsium vulgare*)
- Poison hemlock (*Conium maculatum*)
- Air potato (*Dioscorea polystachya*)
- Common viper's bugloss (*Echium vulgare*)
- Russian olive (*Elaeagnus angustifolia*)
- Autumn olive (*Elaeagnus umbellata*)
- Leafy spurge (*Euphorbia esula*)
- Japanese knotweed (*Fallopia japonica*)
- Goatsrue (*Galega officinalis*)
- Ground ivy (*Glechoma hederacea*)
- Giant hogweed (*Heracleum mantegazzianum*)
- Dame's rocket (*Hesperis matronalis*)
- Japanese hops (*Humulus japonicus*)
- Hydrilla (*Hydrilla verticillata*)
- John's wort (*Hypericum perforatum*)
- Sericea lespedeza (*Lespedeza cuneata*)
- Sweet breath of spring (*Lonicera fragrantissima*)
- Japanese honeysuckle (*Lonicera japonica*)
- Amur honeysuckle (*Lonicera maackii*)
- Morrow's honeysuckle (*Lonicera morrowii*)
- Tartarian bush honeysuckle (*Lonicera tatarica*)
- Bell's honeysuckle (*Lonicera x bella*)
- Japanese stiltgrass (*Microstegium vimineum*)
- Star of Bethlehem (*Ornithogalum umbellatum*)
- Wild parsnip (*Pastinaca sativa*)
- Beefsteak plant (*Perilla frutescens*)
- Common reed (*Phragmites australis*)
- Curly leaf pondweed (*Potamogeton crispus*)
- Callery pear (*Pyrus calleryana*)
- Common buckthorn (*Rhamnus cathartica*)
- Dahurian buckthorn (*Rhamnus davurica*)
- Itchgrass (*Rottboellia cochinchinensis*)
- Himalayan blackberry (*Rubus armeniacus*)
- Hemp sesbania (*Sesbania herbacea*)
- Tropical soda apple (*Solanum viarum*)
- Field sowthistle (*Sonchus arvensis*)
- Simplestem bur-reed (*Sparganium erectum*)
- Saltcedar (*Tamarix chinensis*)
- Siberian elm (*Ulmus pumila*)

Cease-the-Sale Idea

The various reasons for exclusion at this stage include: significant importance in agriculture / horticulture industries; insufficient data in the [MoIP assessment](#); species not included on national or adjacent-state noxious weed lists; and lack of overwhelming support for inclusion in the Cease-the-Sale effort in the Round 1 survey.

- *Acer platanoides* - Norway maple (aka: harlequin maple)
- *Akebia quinata* - chocolate vine (aka: five-leaf akebia)
- *Aralia elata* - Japanese angelica tree
- *Arundo donax* - giant reed (aka: carrizo, cana-brava)
- *Belamcanda chinensis* - blackberry lily (aka: leopard flower)
- *Bromus inermis* - smooth brome (aka: awnless brome grass, Hungarian brome)
- *Butomus umbellatus* - flowering rush (aka: grassy-rush)
- *Cardamine impatiens* - narrowleaf bittercress
- *Castanea mollissima* - Chinese chestnut
- *Cenchrus purpurascens* - Chinese fountaingrass (aka: fountaingrass, purple fountain grass, crimson fountain grass)
- *Cynanchum louiseae* - black swallow-wort (aka: climbing milkweed)
- *Cynanchum rossicum* - European swallow-wort
- *Egeria densa* - Brazilian waterweed (aka: egeria, Brazilian elodea)
- *Eragrostis curvula* - weeping lovegrass (aka: Boer's love grass)
- *Festuca arundinacea* - tall fescue (aka: alta fescue , Reed fescue)
- *Hemerocallis fulva* - orange daylily (aka: tawny daylily, fulvous daylily)
- *Iris pseudacorus* - yellow flag iris
- *Landoltia punctata* - dotted duckweed
- *Lepidium latifolium* - pepperweed
- *Lespedeza bicolor* - bicolor lespedeza (aka: shrub lespedeza , shrub bush-clover)
- *Lespedeza thunbergii* - Thunberg's bushclover (aka: Thunberg's lespedeza)
- *Lotus corniculatus* - birdsfoot trefoil
- *Miscanthus sinensis* - Japanese plume grass (aka: eulalia, eulalia grass)
- *Myriophyllum aquaticum* - parrotfeather (aka: water-feather)
- *Najas minor* - brittle naiad (aka: brittle-leaf naiad, eutrophic water-nymph)
- *Quercus acutissima* - sawtooth oak
- *Ranunculus ficaria* - lesser celandine (aka: pilewort)
- *Rhodotypos scandens* - jetbead (aka: Makino-black jetbead)
- *Rubus phoenicolasius* - wine raspberry (aka: Japanese Wineberry)
- *Saccharum ravennae* - ravennagrass (aka: Ravenna's grass)
- *Scabiosa atropurpurea* - pincushion flower (aka: sweet scabious, mourning-bride)
- *Sesbania vesicaria* - bagpod
- *Tanacetum vulgare* - common tansy (aka: golden-buttons)
- *Viburnum opulus* - European cranberry bush
- *Vicia villosa* - winter vetch (aka: hairy vetch)
- *Vinca minor* - common periwinkle (aka: vinca)
- *Zelkova serrata* - Japanese zelkova

Cease-the-Sale Idea

Additional information requested - species included in the Round 2 survey

- *Acer tataricum* subsp. *ginnala* - Amur maple
- *Albizia julibrissin* - mimosa (aka: silktree, silk-tree albizia, mimosa)
- *Ampelopsis brevipedunculata* - porcelain berry
- *Berberis thunbergii* - Japanese barberry
- *Bothriochloa bladhii* - Caucasian bluestem
- *Bothriochloa ischaemum* - yellow bluestem (aka: King Ranch blue-stem, plains blue-stem)
- *Bromus sterilis* - bromegrass (aka: poverty brome, barren brome)
- *Bromus tectorum* - cheat grass (aka: downy brome)
- *Broussonetia papyrifera* - paper mulberry (aka: tapa-cloth-tree)
- *Centaurea solstitialis* - yellow star thistle
- *Clematis terniflora* - sweet autumn virginsbower
- *Eichhornia crassipes* - water hyacinth
- *Euonymus alatus* - burningbush (aka: winged euonymus, winged spindle-tree)
- *Euonymus fortunei* - wintercreeper (aka: climbing euonymus)
- *Frangula alnus* - glossy buckthorn (aka: European alder buckthorn)
- *Hedera helix* - English ivy
- *Imperata cylindrica* - cogongrass (aka: Kasongole)
- *Koelreuteria paniculata* - golden rain tree (aka: China-tree, pride-of-India)
- *Kummerowia stipulacea* - Korean clover (aka: Korean bush-clover, Korean lespedeza)
- *Kummerowia striata* - Japanese clover (aka: annual lespedeza, Japanese lespedeza, Japanese bush-clover)
- *Ligustrum amurense* - privet (aka: Amur privet)
- *Ligustrum japonicum* - privet (aka: Japanese privet, wax-leaf privet)
- *Ligustrum lucidum* - privet (aka: glossy privet, Nepal privet, wax-leaf privet, Chinese privet)
- *Ligustrum obtusifolium* - privet (aka: border privet)
- *Ligustrum ovalifolium* - privet (aka: California privet)
- *Ligustrum quihoui* - privet (aka: waxyleaf privet)
- *Ligustrum sinense* - privet (aka: Chinese privet)
- *Ligustrum vulgare* - privet (aka: European privet)
- *Lonicera xylosteum* - bush honeysuckle (aka: dwarf honeysuckle, fly honeysuckle, European fly honeysuckle)
- *Lysimachia nummularia* - creeping jenny (aka: creeping-Charlie, moneywort, yellow-myrtle, creeping loosestrife)
- *Lythrum virgatum* - purple loosestrife (aka: European wand loosestrife)
- *Melilotus albus* - white sweetclover
- *Melilotus officinalis* - yellow sweetclover
- *Miscanthus x giganteus* - giant miscanthus
- *Morus alba* - white mulberry
- *Myriophyllum spicatum* - Eurasian watermilfoil
- *Nandina domestica* - Heavenly bamboo (aka: sacred-bamboo)
- *Paulownia tomentosa* - princess tree (aka: empress tree, royal paulownia)
- *Persicaria perfoliata* - mile-a-minute weed
- *Phalaris arundinacea* - reed canary grass
- *Phellodendron amurense* - amur corktree
- *Phyllostachys aurea* - golden bamboo
- *Populus alba* - silver poplar (aka: silver-leaf poplar, white poplar)
- *Prunus mahaleb* - Mahaleb cherry (aka: St. Lucie cherry, perfumed cherry)
- *Securigera varia* - crown vetch (aka: Axseed, trailing crown-vetch, purple crownvetch)
- *Ulmus parvifolia* - Chinese elm (aka: Lacebark elm)
- *Wisteria floribunda* - Japanese wisteria
- *Wisteria sinensis* - Chinese wisteria

Cease-the-Sale Idea

Preparing to invite second round of stakeholder input:

- All 90 groups will be contacted and invited to invite their members to provide input
- Invitation made available through MoIP Council member communications (horticulture businesses, conservation groups, etc.)
- If an invasive plant is no longer sold (or stays on the market), this can affect stakeholders in different ways, so MoIP assigned weights for each plant species/each of 29 stakeholder groups (e.g., “Landscape/Horticulture: Wholesale Grower” and Farmer/Agricultural Professional: Livestock)
- For example, smooth brome “weights”: 1 for a wholesale grower; 3 for a livestock producer
- Another example, Japanese barberry “weights”: 2 for a Landscape/Horticulture: planning/design professional; 3 for an Outdoorsperson: hunter
- In second round, stakeholders will also be invited to suggest a “phase out” period for some species.

Cease-the-Sale Idea

- Missouri State Representative Bruce Sassmann (District 61) is interested in sponsoring potential, eventual Cease-the-Sale legislation.
- In December 2022, MoIP submitted a description of its Cease-the-Sale idea to the Missouri House Research Committee, which had questions for Representative Sassmann and MoIP:
 - Which state agency would enforce the legislation?
 - Would MoIP want the plants specifically listed on a statute or give the authority to the agency given the authority to enforce the legislation to set a list by rulemaking? (In 2011, the General Assembly remove the list of noxious weeds and gave the authority to the Missouri Department of Agriculture, stating that it is easier to modify a rule than a statute allowing for additions and subtractions quicker.)
 - What penalty would we want if someone is found selling these plants? Would we want a criminal penalty or a fine that would go to the county school fund (per the Constitution)?

Cease-the-Sale Idea

Proposed Cease-the-Sale statute would be completely separate from Missouri's Noxious Weed Law.

Cease-the-Sale statute would prohibit *only* the sale, propagation, and intentional distribution of a select list of known invasive plants. And:

- property owners would not be penalized for presence of invasive plants on their property
- property owners would not be required to treat or remove those invasive plants

This MoIP proposed statute would be complementary to—not a replacement or alteration of—the Missouri Noxious Weed Law.

Proposed Cease-the-Sale statute would also authorize funding and regulatory authority to the appropriate state agency or other entity to manage the statute.

Project Overview

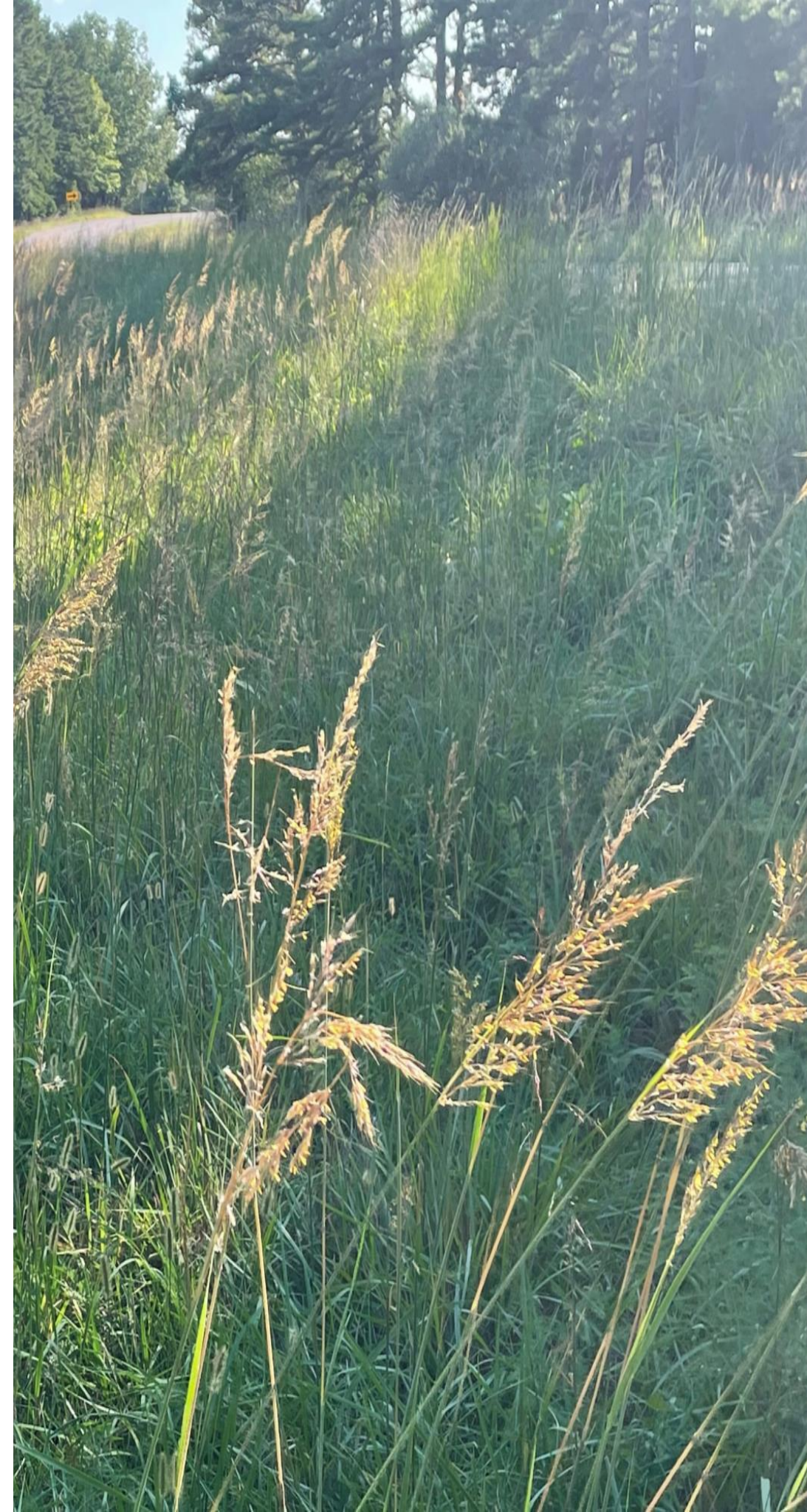
Background and
Introduction

Slides from Andrew
Turner, MoDOT



Spraying Strategy

- Spray and scout simultaneously.
- Prioritizing to maximize efficiency.
- Paying special attention to priority overlapping areas of concern. (Assisting MoDOT maintenance, MDC priority habitat, Scenic Rivers Invasive Species Partnership area).
- Sensitive habitat areas and transport corridors.
- Utilize off-season spraying



Tools and Equipment

- 4- Can Am Defender HD10 6x6 Outfitted with custom sprayer capable of spraying 3 different herbicides.
- GeoTab added to track sprayed area. Phase 1 of 3 currently being tested.
- GeoTab tracks machine and spray data.
 - 4 spray methods available.



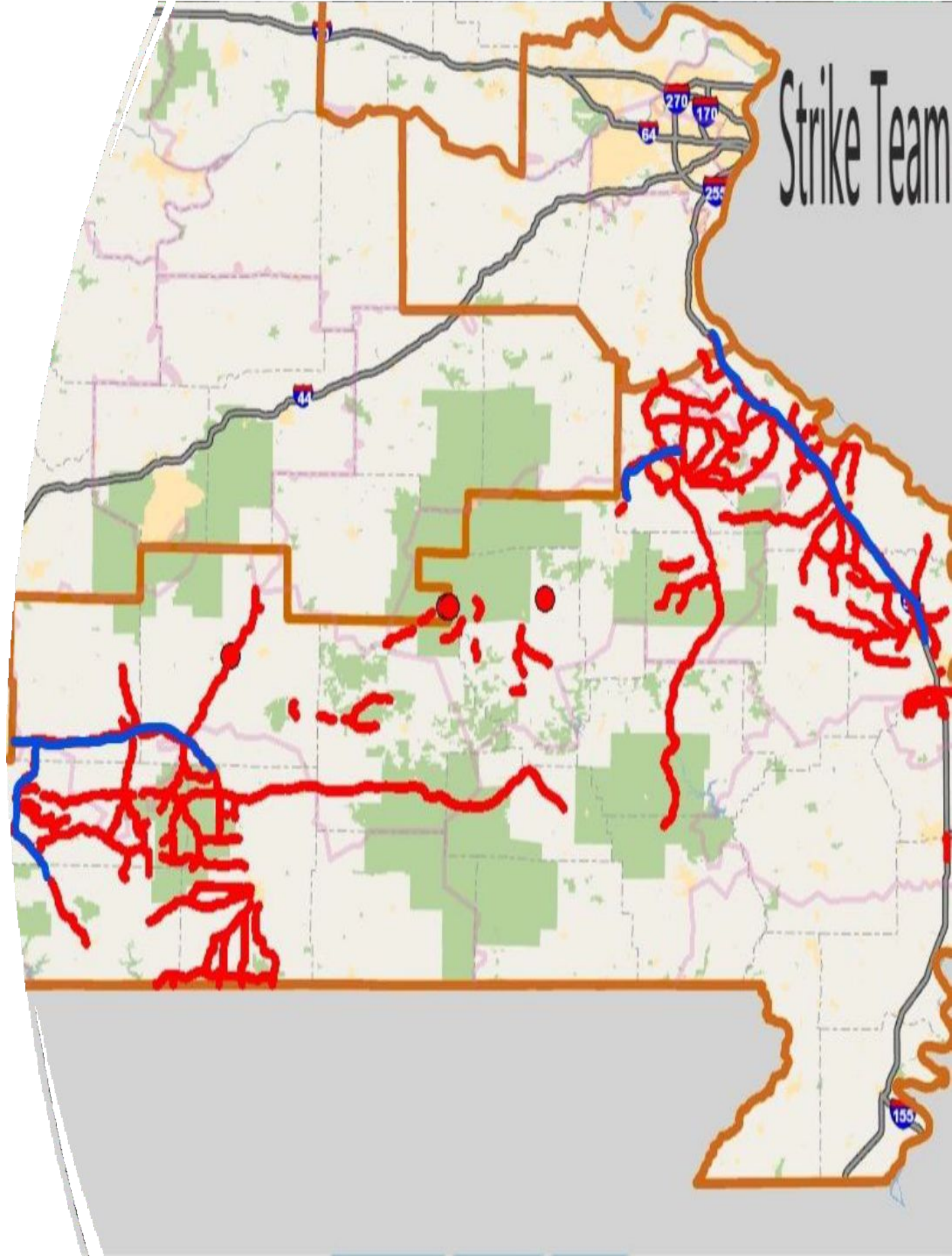


Accomplishments

- 7,561 Acres Sprayed to date
- Over 3,000 Miles Covered
- Over 30,000 Acres Covered
- Over 50% of SE District Spraying
- 12% statewide invasive plant spraying

Future Plans:

- Continue developing and testing accuracy of herbicide mapping and tracking.
- Apply equipment improvements to additional equipment statewide
- Expand use of crews and equipment across Missouri.



Questions?



Carol Davit
573-356-7828
carol@moprairie.org
moprairie.org
grownative.org
moinvasives.org

