



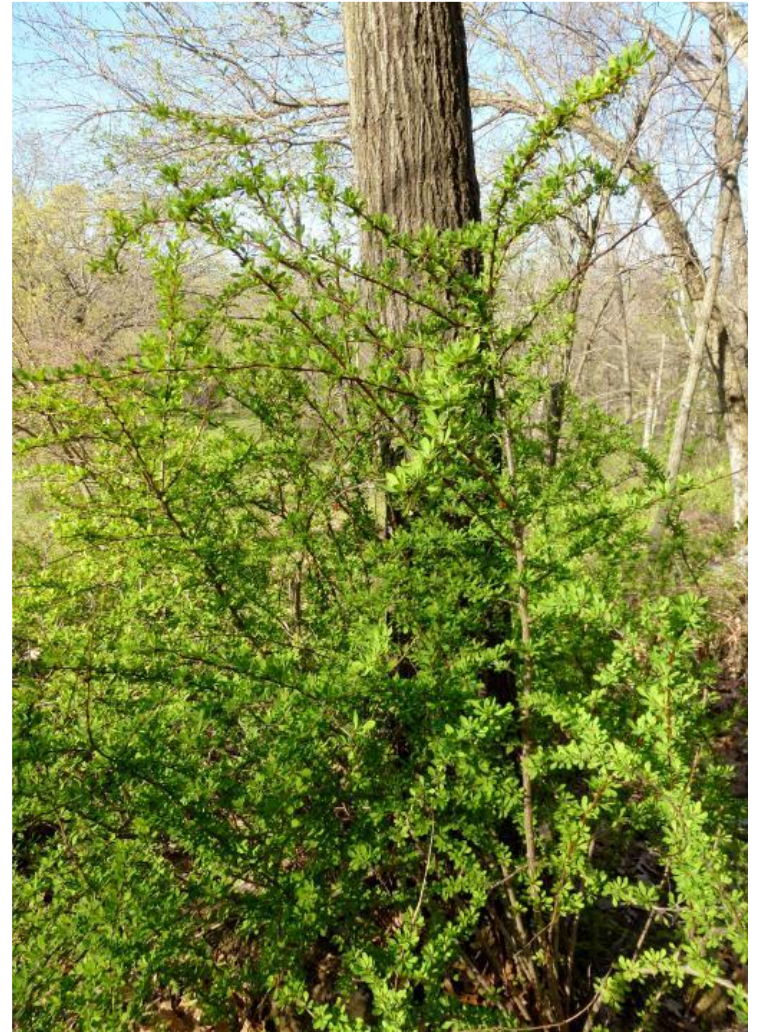
Japanese Barberry Regulation and Distribution in the Upper Midwest

Emilie Justen | Noxious Weed Law Coordinator

10/17/18

Japanese Barberry

- Crowds out native plant habitat
- Overtakes wooded pastures
- Painful spines
- Increased tick numbers in dense stands



Japanese Barberry



Spines



Showy fruit

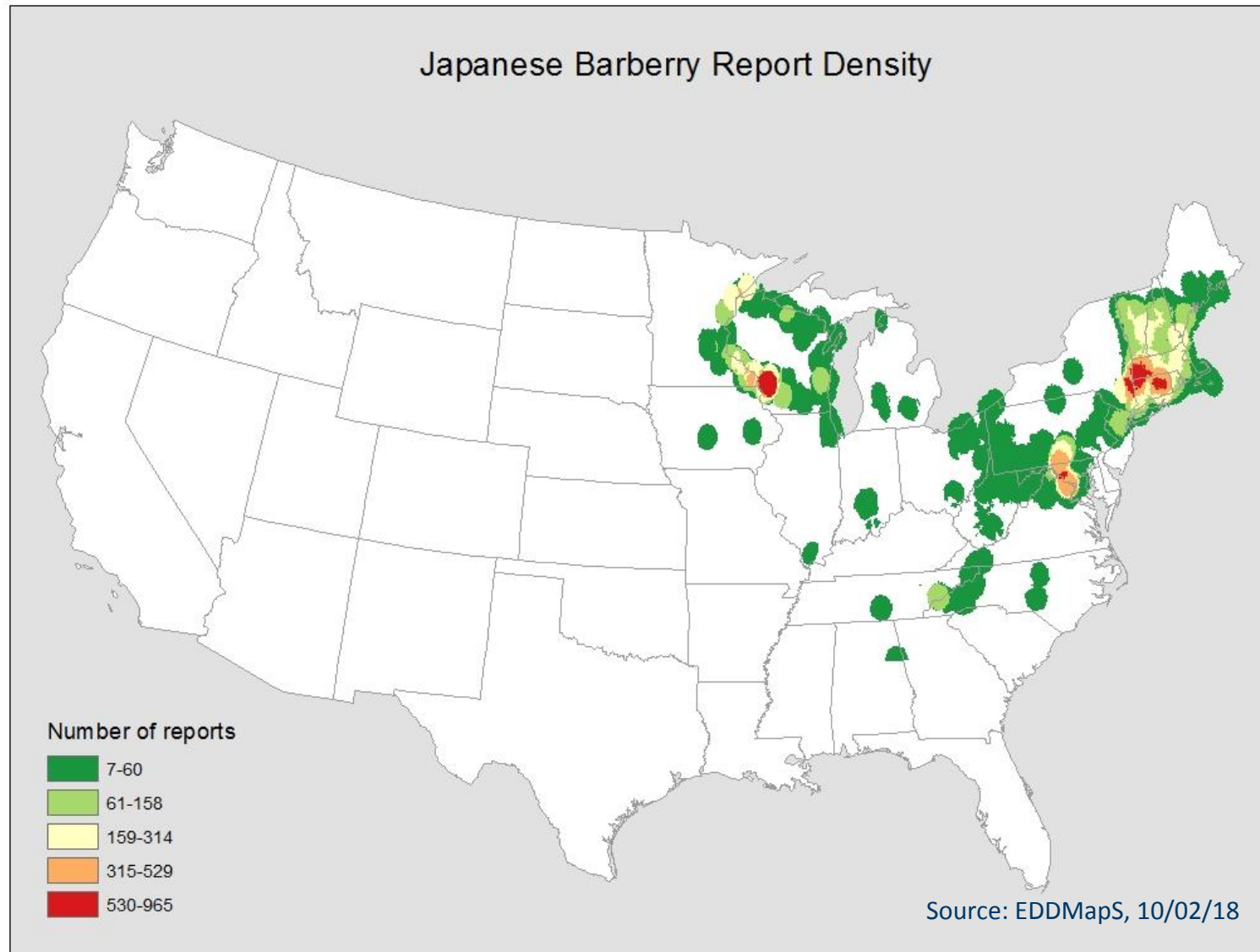
Naturalizing

- Herbarium records dating back to 1960s in Massachusetts
- Extensive work in Connecticut on naturalized Japanese barberry and black-legged tick populations



Source: Richard Gardner, UMES, Bugwood.org

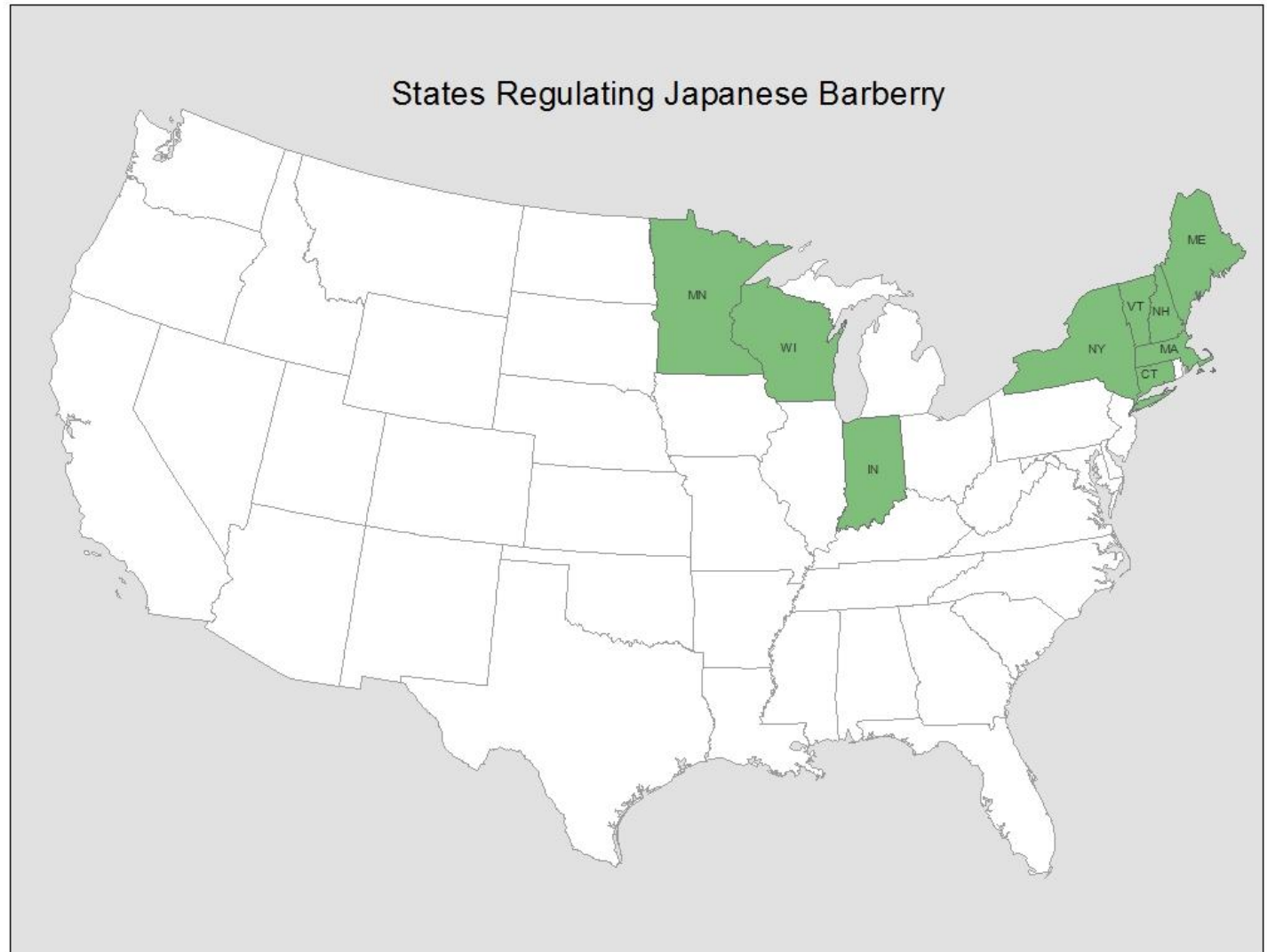
Distribution



- Eastern states began writing risk assessments in late 1990s and early 2000s
- Prohibited from importation and sale in Massachusetts
- Prohibited from importation, buy, sell, distribute, propagate, or transplant viable and living portion in New Hampshire
- Connecticut began phase-out of 25 seediest cultivars in 2010
- Illegal to import, export, buy, sell or intentionally propagate in Maine beginning January 1, 2018

Regulation

1. Connecticut
2. Indiana
3. Maine
4. Massachusetts
5. Minnesota
6. New Hampshire
7. New York
8. Vermont
9. Wisconsin



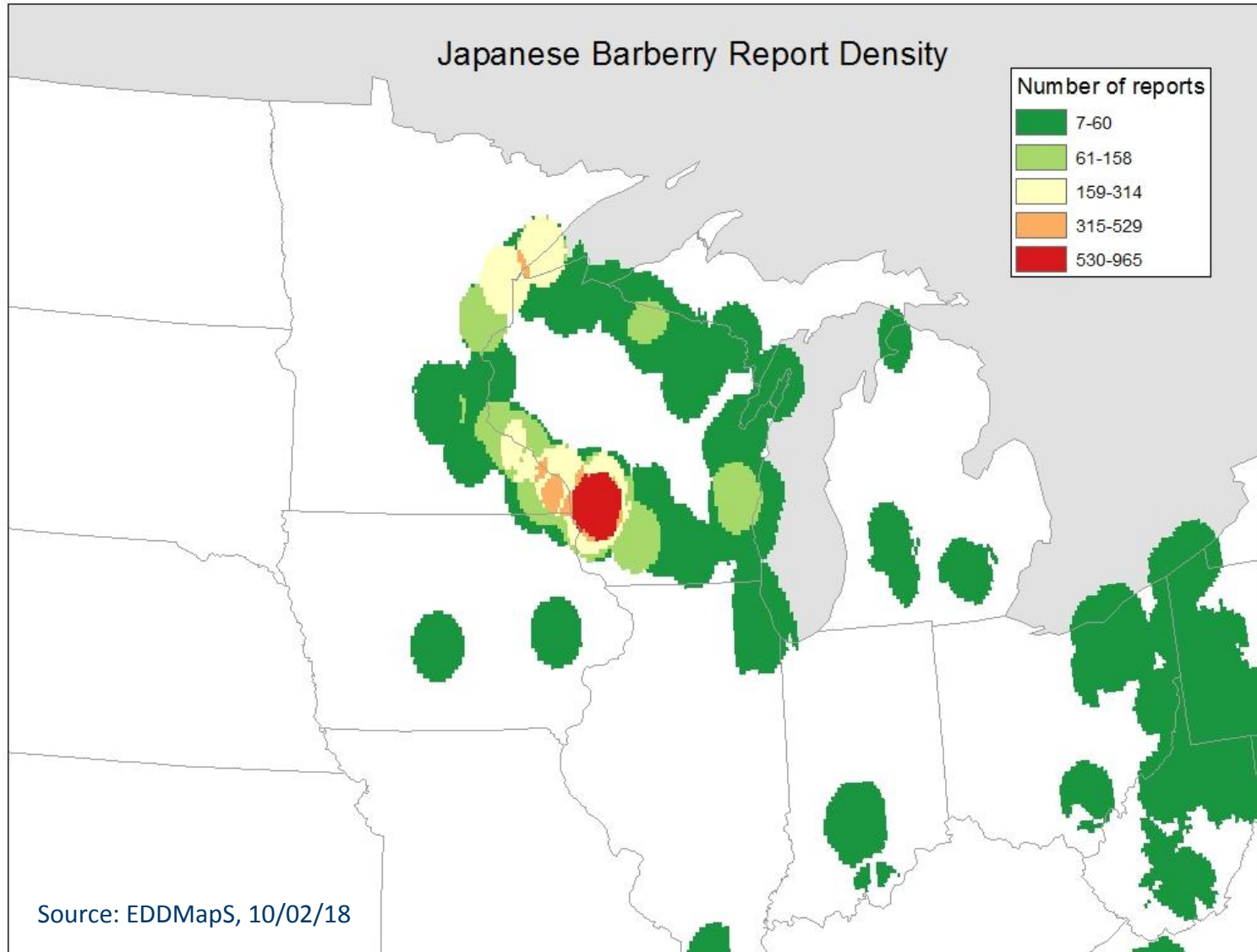
Upper Midwest Naturalizing

- In early 2000s, Midwestern states began recording Japanese barberry naturalizing





Upper Midwest Distribution



Upper Midwest Regulation

- Indiana completed risk assessment in 2007, recommended do not buy, sell, or plant
- WI's NR 40 created in 2009
 - Classified as Restricted and implemented in 2014
- MN risk assessment completed in 2013
 - 3 year phase-out of 25 seediest cultivars
 - Phase-out period: January 1, 2014 – December 30, 2017
 - Classified as Restricted January 1, 2018
 - Prohibited propagation and sale of 25 cultivars

Minnesota Regulation

Regulated Cultivars		
1. 'Anderson' (Green Lustre)	2. 'Angel Wings'	3. 'Antares'
4. 'Bailgreen' (Jade Carousel)	5. 'Bailone' (Ruby Carousel)	6. 'Bailsel' (Golden Carousel)
7. 'Bailtwo' (Burgundy Carousel)	8. <i>B. thunbergii</i> var. <i>atropurpurea</i>	9. 'Crimson Velvet'
10. 'Erecta'	11. 'Gold Ring'	12. 'Inermis'
13. 'JN Redleaf' (Ruby Jewel)	14. 'JN Variegated' (Stardust)	15. 'Kelleris'
16. 'Kobold'	17. 'Marshall Upright'	18. 'Monomb' (Cherry Bomb)
19. 'Painter's Palette'	20. 'Pow Wow'	21. 'Red Rocket'
22. 'Rose Glow'	23. 'Silver Mile'	24. 'Sparkle'
25. 'Tara' (Emerald Carousel)	26. Wild type (parent species – green barberry)	

Minnesota Regulation

- Noxious Weed Advisory Committee
 - Created by legislature in 2009
 - Advises the commissioner of agriculture
 - Members represent a variety of ecological, conservation, business, land ownership and government interests throughout the state
- Minnesota Nursery and Landscape Association cooperation



Minnesota Regulation

- More populations of naturalized Japanese barberry have been reported
- Agencies have been managing infestations
 - USFS in northern MN
 - DNR
- Management strategies
 - Controlled burns
 - Mowing
 - Herbicide treatments

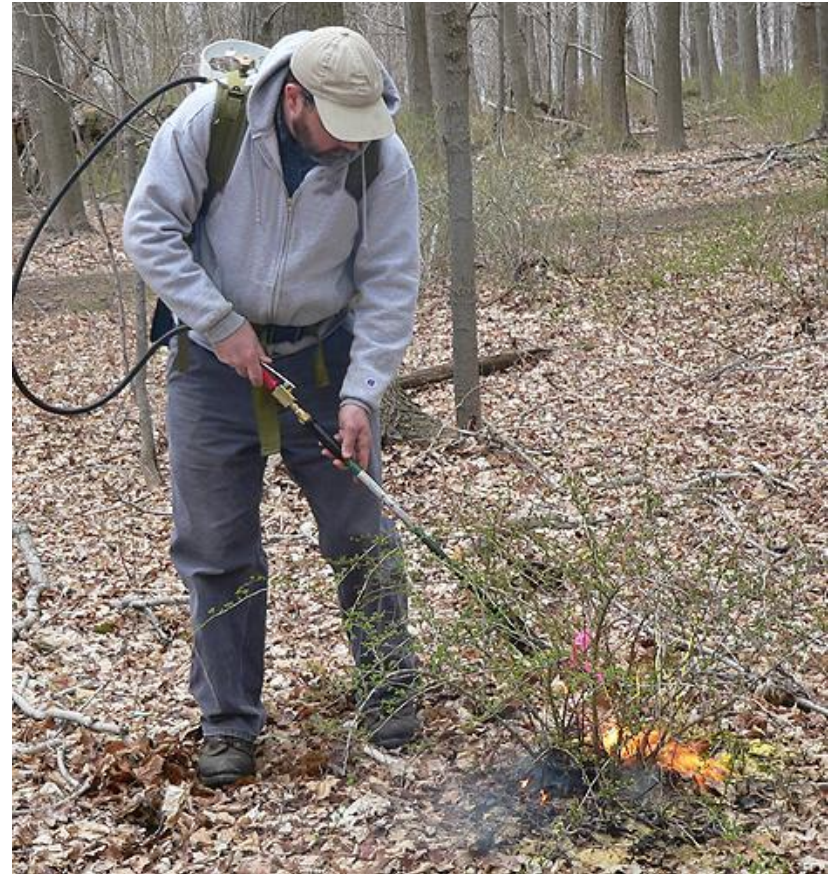


Photo: Connecticut Agriculture and Experiment Station

Minnesota Regulation

- Implications of phase-out program
 - Helped to get nursery cooperation and compliance
 - Phase-outs may be recommended for other woody plants currently being evaluated
 - Management plans in place before regulation begins



Barberry and Tick Research

- Barberry infestations create favorable habitat for black legged ticks and small mammals
 - Protective, monoculture shrub layer
 - Decreased species diversity
 - Increased survival of both species leads to interaction between black legged ticks and mice
- Control of barberry infestations reduced black legged tick density and infection prevalence in Connecticut



Tim Leonard and Russell Johnson
University of Minnesota



Barberry and Tick Research

- MN Dept of Health studies
 - Tick drags through infestations
 - Tested tick samples for disease pathogens
 - 2015 results: 53% of ticks collected tested positive for Lyme disease



Thank you!

Emilie Justen

Emilie.Justen@state.mn.us

651-201-6360