



EARLY DETECTION, SPECIES RANKING AND PRIORITIZATION

wnyprism@buffalostate.edu

WNY Early Detection Species Priorities

Species represent the highest management priorities for WNY PRISM – when selecting projects, those involving these species will be prioritized above others. Projects may involve all aspects of management, from outreach to removal. Species are ranked Tier 2.

1) *Ampelopsis brevipedunculata*

Porcelain Berry – **new 2020**

2) *Aralia elata*

Japanese Angelica Tree – **new 2018**

3) *Brachypodium sylvaticum*

Slender False Brome

4) *Cytisus scoparius*

Scotch Broom – **new 2019**

5) *Eichhornia crassipes*

Water Hyacinth

6) *Microstegium vimineum*

Japanese Stiltgrass

7) *Nympoides peltata*

Yellow Floating Heart – **new 2019**

8) *Persicaria perfoliata*

Mile-a-Minute Vine

9) *Pistia stratiotes*

Water Lettuce



Porcelain Berry

(*Ampelopsis brevipedunculata*)

THREAT

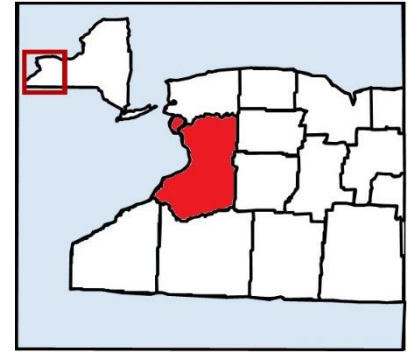
- Reduces native species, suppresses trees and shrubs.
- Loss of wildlife habitat.
- Thrives in partially shaded and open areas, and areas of disturbance.
- Spread by seed.

MANAGEMENT

- Individuals may be removed by hand.
- Cut-stump herbicide treatment.

STATUS

- First Observed in 2020.
- Delaware Park, Buffalo NY.
- Plant was manually removed.
- Surveys and follow-up expected in 2021



Japanese Angelica Tree

(*Aralia elata*)

THREAT

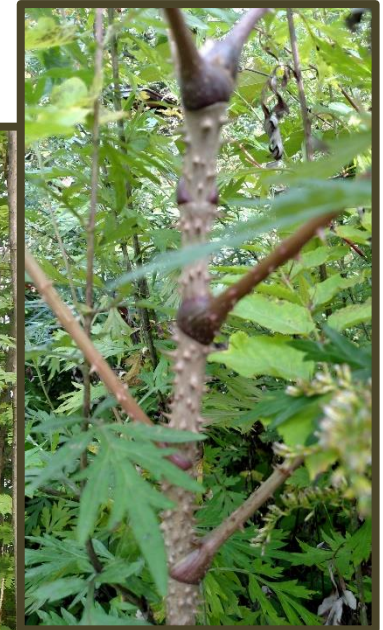
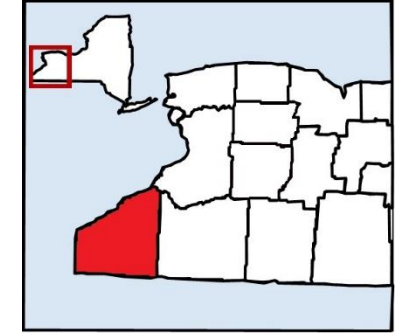
- Able to thrive in a wide-range of habitat and hydric conditions.
- Outcompetes native vegetation.

MANAGEMENT

- Herbicide - basal bark treatment with foliar follow-up.
- Physical injury results in a growth response.

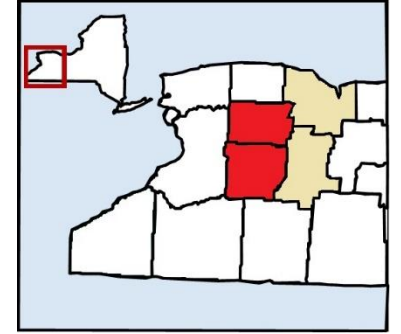
STATUS

- First Observed in 2018.
- Lake Erie State Park.
- Single Infestation – under management.
- Initial Treatment conducted in 2019, follow-up treatment completed in 2020.



Slender False Brome

(Brachypodium sylvaticum)



THREAT

- Dominates areas to the near complete exclusion of all other species.
- Spreads quickly – produces a lot of seed.

MANAGEMENT

- Manual removal for small, isolated populations.
- Herbicide for large infestations.
- Mechanical (mowing) may facilitate herbicide treatment and may reduce spread with proper timing.

STATUS

- First Discovered in early 2000's.
- Working Group established in 2017 (Great Lakes Slender False Brome Working Group).
- Identified Best Management Practices
- Surveys, management, outreach – all ongoing.

Scotch Broom

(*Cytisus scoparius*)

THREAT

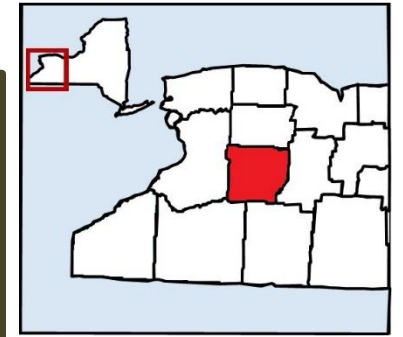
- Displaces native species, loss of habitat.
- Seeds are toxic to livestock and horses.
- Thrives in open areas and areas of disturbance
- Spread by seed.

MANAGEMENT

- Individuals may be removed by hand.
- Cut-stump herbicide treatment.

STATUS

- First Observed in 2019.
- Letchworth State Park.
- Discovered late in the season, making additional surveys difficult.
- Plants were manually removed.
- Surveys and follow-up expected in 2020



Water Hyacinth

(*Eichhornia crassipes*)

PREVENTION

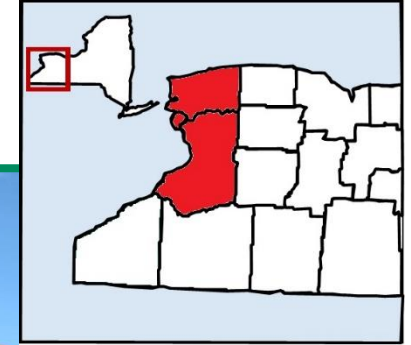
- Do not buy, trade or plant this species.
- Do not allow species to enter into natural waterways.
- Dispose of all plant material in landfill-bound trash.

MANAGEMENT

- Hand/Manual.
- Mechanical – Harvester.
 - Will need manual follow-up.

STATUS

- Isolated populations reported at Unity Island, Erie Canal, Ellicott Creek and Oppenheim Park, Buckhorn Island State Park.
- Populations have been small and removed upon discovery.
 - WNY PRISM, USACE, DEC, Parks
- Part of WNY PRISM annual site monitoring.



Japanese Stiltgrass

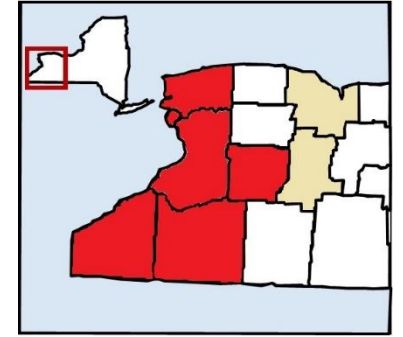
(*Microstegium vimineum*)

MANAGEMENT

- Hand/Manual Removal
 - Must be repeated annually to deplete seed bank.
- Mechanical
 - May (hypothetically) provide effective control, **only if** seed production is completely eliminated for 5+ years
 - Cut multiple times per year.
- Herbicide
 - Glyphosate or grass specific.

STATUS

- First Reported in 2017.
- WNY PRISM started systematic surveys – discovered additional infestations.
- Surveys, management, outreach – all ongoing.
- As surveys continue, additional infestations are likely to be discovered.

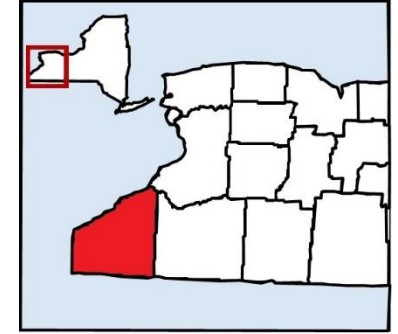


Distinctive silver mid-rib



Yellow Floating Heart

(*Nymphoides peltata*)



THREAT

- Forms dense mats.
 - Outcompetes native vegetation.
 - Creates low-oxygen conditions.
 - Reduces access/recreational opportunities.

MANAGEMENT

- Herbicide (ProcellaCor).

STATUS

- First Reported in 2019.
- Private Property – Chautauqua County.
- Long-existing infestation.
- Pond was treated by a contractor in 2019.
- WNY PRISM has reached out to private landowner for update.

Mile-a-Minute

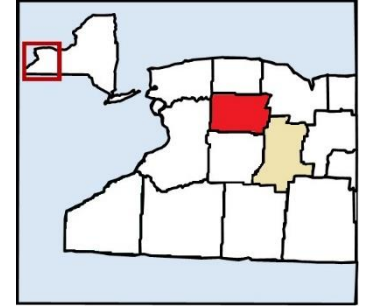
(*Persicaria perfoliata*)

MANAGEMENT

- Small Infestations.
 - Herbicide.
 - Hand/Manual Removal.
- Large Infestations.
 - Herbicide.
 - Biocontrol – variable effectiveness.
 - Mechanical.
 - Suppression Only – limits seed production but will not eliminate it.

STATUS

- First Reported in 2017.
- Oak Orchard WMA and adjacent properties.
- WNY Mile-a-Minute Working Group.
- Management began in 2018, continued in 2019 and 2020.
 - College at Brockport, DEC, WNY PRISM
- Appears isolated – surveys have not resulted in additional populations discoveries, yet.



THREAT

- Loss of native plant communities.
- Prevents tree seedling germination, can kill mature trees.
- Suppresses agricultural crops.

Water Lettuce

(*Pistia stratoites*)

PREVENTION

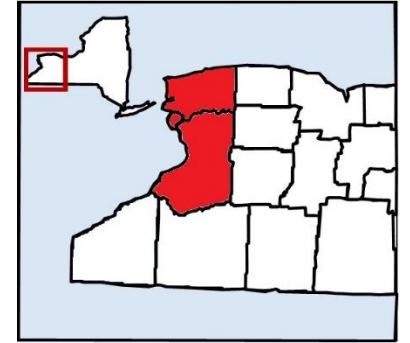
- Do not buy, trade, or plant this species.
- Do not allow species to enter into natural waterways.
- Dispose of all plant material in landfill-bound trash.

MANAGEMENT

- Similar to Water Hyacinth
 - Manual removal
 - Mechanical – harvesters
 - Herbicide

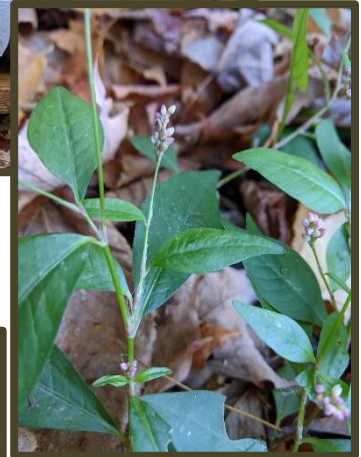
STATUS

- 3 known infestations – Ellicott Creek, Hyde Park Lake and one on private property in Erie County.
- Ellicott Creek infestation removed in 2018 – not observed 2019, 2020.
- Hyde Park Lake infestation was reported in 2020 – 730 plants removed.
- Part of WNY PRISM annual site monitoring.



New Species Reported in 2020 (so far)

- Brazilian Elodea
 - *Egeria densa*
- Porcelain Berry
 - *Ampelopsis brevipedunculata*
- Red Swamp Crayfish
 - *Procambarus clarkii*
- Smartweed
 - *Persicaria longiseta*



WNY Approaching Region (Watchlist) Species Priorities

Species represent those identified by WNY PRISM Staff, Working Groups and Steering Committee as posing the greatest threat and risk of establishment within the WNY PRISM region. WNY PRISM will prioritize efforts that support the prevention of species establishment. Projects may focus on addressing Pathways of Invasion, surveys and/or supporting research. Species are ranked Tier 1.

- | | |
|---------------------------------------|-------------------------|
| 1) <i>Aldrovanda vesiculosa</i> | Waterwheel |
| 2) <i>Anoplophora glabripennis</i> | Asian Longhorned Beetle |
| 3) <i>Channa argus</i> | Northern Snakehead |
| 4) <i>Hypophthalmichthys molitrix</i> | Silver Carp |
| 5) <i>Hypophthalmichthys nobilis</i> | Bighead Carp |
| 6) <i>Impatiens glandulifera</i> | Himalayan Balsam |
| 7) <i>Lycorma delicatula</i> | Spotted Lanternfly |
| 8) <i>Opismenus undulatifolius</i> | Wavyleaf Basket Grass |



Updating Priority Species Lists

- Species lists were last updated in 2019.
- In 2019, Yellow Floating Heart (YFH) was confirmed in Chautauqua County. YFH was on WNY PRISM's Approaching Region priority list and was automatically moved to the Early Detection list.
- Porcelain Berry followed suit in 2020.
- In 2020, *Galega officinalis* (common milkpea, goat's rue) was recommended for inclusion on the Approaching Region list based on proximity (PA – Allegheny National Forest), threat level and spread potential. *Has yet to be reviewed.*
- *What are the consequences of removing a species from the lists?*



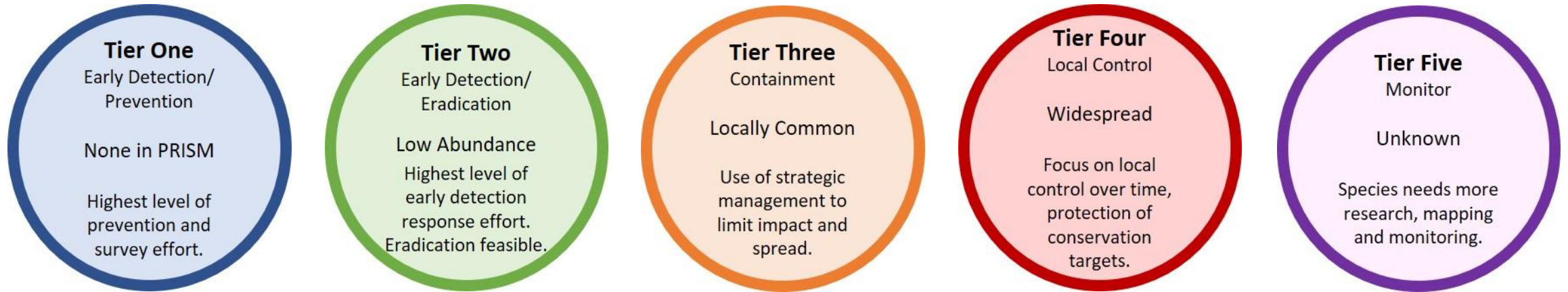
Updating Priority Species Lists

- Priority species represent moving targets – species can move quickly from Tier 1 to Tier 2, and then Tier 3.
- If an Approaching Region Species Priority is confirmed within the region, it moves to the Early Detection Species Priority list without further review.
- Adding & Removing Species
 - Lists are capped at 10 species...
 - Candidate species for addition may be generated by any partner, stakeholder or interested party.
 - Supporting documentation must be provided to WNY PRISM, which will be reviewed by WNY PRISM Staff and appropriate Working Group. A recommendation of addition will be presented to the Steering Committee for final decision.
 - Candidate species for removal...?
 - We don't currently have a protocol for this, other than a full reassessment of the list – does movement of a species from Tier 2 to Tier 3 automatically remove it?



NYS Tier Ranking System

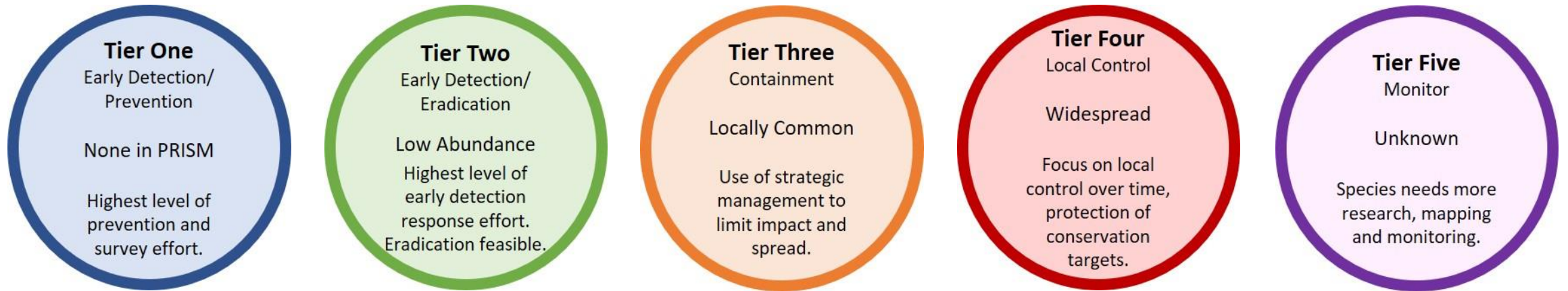
<https://www.wnyprism.org/priority-invasives>



- Tier One and Tier Two represent the highest priority species.
- Each PRISM reviews species, relative to their region, and assigns each a Tier.
- Tier names are based on management recommendations associated with the defined level of presence, distribution, threat and ability to manage.
- WNY PRISM maintains priority species lists in addition to Tier Rankings.



NYS Tier Ranking System



- WNY PRISM currently has 78 species rankings approved.
- iMapInvasives has developed a tool to provide baseline Tier rankings for all species – based on current iMap data.



How Species are Ranked

- Initial ranking is done based on current iMap data.
 - Completed by WNY PRISM Staff and/or iMapInvasives Team.
- Proposed rankings are presented to WNY PRISM Aquatic and Terrestrial Working Groups for review.
- Final approval is made by the Steering Committee.
- If a species is ranked Tier 1 and is subsequently confirmed in the WNY PRISM region, the species ranking is changed to Tier 2 without need for additional review and/or approvals.
- At what point or threshold does a species move from Tier 2 to Tier 3?
 - What are the consequences of moving a species from Tier 2 to Tier 3?



WNY Species Priorities

Starry Stonewort - management

Watchlist – survey, outreach & prevention

- 1) Waterwheel
- 2) Asian Longhorned Beetle
- 3) Northern Snakehead
- 4) Silver Carp
- 5) Bighead Carp
- 6) Himalayan Balsam
- 7) Spotted Lanternfly
- 8) Wavyleaf Basket Grass

Early Detection - eradication

- 1) Porcelain Berry
- 2) Japanese Angelica Tree
- 3) Slender False Brome
- 4) Scotch Broom
- 5) Water Hyacinth
- 6) Japanese Stiltgrass
- 7) Yellow Floating Heart
- 8) Mile-a-Minute Vine
- 9) Water Lettuce



NOT TRUE

Tier 1 Ranked Species

Rusty Crayfish – West Canal Marina

Andrea Locke, wnyprism@buffalostate.edu

- | | |
|--------------------------------|------------------------------|
| 1. Northern Snakehead | 9. Spotted Lanternfly |
| 2. Carp, Silver | 10. Hardy Kiwi |
| 3. Carp, Bighead | 11. Himalyan Balsam |
| 4. Waterwheel | 12. Wavyleaf Basketgrass |
| 5. Carolina Fanwort | 13. Rusty Crayfish |
| 6. Variable-leaf Water milfoil | 14. Kudzu |
| 7. Parrot-feather | 15. Floating Primrose Willow |
| 8. Asian Long-horned Beetle | |

Tier One

Early Detection/
Prevention

None in PRISM

Highest level of
prevention and
survey effort.



Tier 2 Ranked Species

- | | |
|-----------------------------|----------------------------|
| 1. Brazilian Elodea | 12. Hemlock Woolly Adelgid |
| 2. Fishhook Water Flea | 13. Japanese Angelica Tree |
| 3. Water Hyacinth | 14. Red Swamp Crayfish |
| 4. <i>Hydrilla</i> | 15. Slender False Brome |
| 5. Yellow Floating Heart | 16. Scotch Broom |
| 6. Water Lettuce | 17. Japanese Stiltgrass |
| 7. Porcelain Berry | 18. Mile-a-Minute |
| 8. Balsam Woolly Adelgid | 19. Reed Manna Grass |
| 9. European Cherry Fruitfly | 20. Oriental Weatherfish |
| 10. Eurasian Boar | 21. Black Jetbead |
| 11. Narrowleaf Bittercress | |

Tier Two

Early Detection/
Eradication

Low Abundance
Highest level of
early detection
response effort.
Eradication feasible.



Next Steps – Species Prioritization

- WNY PRISM Staff
 - Review pending species tier rankings
 - Develop proposal for species removal from priority species lists.
- Working Group
 - review and reassessment of proposed new and/or rankings.
 - review of proposed changes/additions to priority species lists.
 - Develop recommendation for Steering Committee.
- Steering Committee
 - Review recommendations for priority lists and approve changes.



Swallow-wort biocontrol research site



Next Steps – 2020

- Continue taking a look at field season data
- New Best Management Practices and updated species profiles
- Water Chestnut Working Group Meeting
- Developing the 2021 annual work plan
- Program Reports
- Annual Report



Socially Distanced July Staff Meeting...



WNY PRISM

Partnership for Regional Invasive Species Management



QUESTIONS???

www.wnyprism.org

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