



***Plant Risk Evaluator -- PRE™
Evaluation Report***

***Acer pseudosieboldianum x palmatum 'IsIAJ'
Arctic Jade -- Minnesota***

2017 Farm Bill PRE Project

PRE Score: 2 -- Accept (low risk of invasiveness)

Confidence: 72 / 100

Questions answered: 18 of 20 -- Valid (80% or more questions answered)

Privacy: Public

Status: Submitted

Evaluation Date: September 11, 2017

This PDF was created on June 15, 2018



Plant Evaluated

Acer pseudosieboldianum x *palmatum* 'IsIAJ' Arctic Jade



Image by UBC Botanical Garden



Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Acer pseudosieboldianum x palmatum 'IslAJ' Arctic Jade*) in an effort to understand the invasive history, reproductive strategies, and the impact, if any, on the region's native plants and animals. This research reflects the data available at the time this evaluation was conducted.

Summary

The low PRE score of 2 is perhaps a function of the short period of time this maple hybrid has been available on the market. It should be noted that one parent species, *Acer palmatum*, has naturalized in multiple locations around the world is considered invasive in New York and New Jersey. The cold climate of Minnesota has kept *palmatum* at bay in the state. However, with the hybridization of *palmatum* and *A. pseudosieboldianum*, the invasive quality of *palmatum* might be extended into colder regions such as Minnesota. This is one hybrid to revisit in the years to come as more clones are sold and installed in landscapes.

General Information

Status: Submitted

Screener: Mike Monterusso

Evaluation Date: September 11, 2017

Plant Information

Plant: *Acer pseudosieboldianum x palmatum 'IslAJ' Arctic Jade*

If the plant is a cultivar, how does its behavior differ from its parent's?

Acer Arctic Jade is a cross between *Acer pseudosieboldianum* and *Acer palmatum*. It's intended to provide the look of Japanese Maple (*Acer palmatum*) with the cold tolerance of Korean Maple (*Acer pseudosieboldianum*).

Regional Information

Region Name: Minnesota



Climate Matching Map

To answer four of the PRE questions for a regional evaluation, a climate map with three climate data layers (Precipitation, UN EcoZones, and Plant Hardiness) is needed. These maps were built using a toolkit created in collaboration with GreenInfo Network, USDA, PlantRight, California-Invasive Plant Council, and The Information Center for the Environment at UC Davis.

Click [here](#) to see the generated climate matching map for this region. This climate match database is hosted by GreenInfo Network and publicly accessible.



Evaluation Questions

These questions are based in an original article published at the University of California, Davis, and can be found on the PLOS One website, here: <https://doi.org/10.1371/journal.pone.0121053>

Invasive History and Climate Matching (Questions 1 - 6)

1. Has the species (or cultivar or variety, if applicable; applies to subsequent "species" questions) become naturalized where it is not native?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found. However, one parent - *A. palmatum* - has naturalized in some Eastern US states.

Reference(s):

- United States Department of Agriculture (2017). Plants Profile for *Acer palmatum* (Japanese maple).
-

2. Is the species (or cultivar or variety) noted as being naturalized in the US or world in a similar climate?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found for this cultivar or its parent species.

Reference(s):

- [Anonymous] .



3. Is the species (or cultivar or variety) noted as being invasive in the U.S. or world?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found. However one parent, *A. palmatum*, is noted as moderately invasive in New York state.

Reference(s):

- Glenn, S., & Moore G. (2009). NEW YORK NON-NATIVE PLANT INVASIVENESS RANKING FORM - 564dd_Acer.palmatum.NYS.pdf.
-

4. Is the species (or cultivar or variety) noted as being invasive in the US or world in a similar climate?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found for this cultivar or its parent species.

Reference(s):

- [Anonymous] .
-



5. Are other species of the same genus (or closely related genera) invasive in a similar climate?

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

A. platanoides and *A. tataricum* subsp. *ginnala* are invasive in Wisconsin.

Reference(s):

- Wisconsin Department of Natural Resources (2015). Invasive species - Wisconsin DNR.
 - United States Department of Agriculture (2017). Plants Profile for *Acer platanoides* (Norway maple).
-

6. Is the species (or cultivar or variety) found predominately in a climate matching the region of concern?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **Very High** confidence in this answer based on the available literature.

Answer / Justification:

No information on the cultivar is available. The parent species are not predominately found in a matching climate.

Reference(s):

- GBIF Secretariat (2016). GBIF Backbone Taxonomy: *Acer palmatum* C.P. Thunberg ex A. Murray.
 - GBIF (2016). *Acer pseudosieboldianum* (Pax) Kom..
-



Impact on Native Plants and Animals (Questions 7 - 10)

7. Does this plant displace native plants and dominate (overtop or smother) the plant community in areas where it has established?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

No evidence on the cultivar was found. However, the parent species, *A. palmatum*, has demonstrated an ability to compete with native vegetation: "Capable of creating dense populations beneath the forest canopy, Japanese maple outcompetes native forest vegetation, disrupting natural communities. The species is now on the 'do not plant' lists for several states, including New Jersey and New York."

Reference(s):

- Marquand, M. (2017). 5 Invasive Trees You Should Never, Ever Plant.
-

8. Is the plant noted as promoting fire and/or changing fire regimes?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .
-



9. Is the plant a health risk to humans or animals/fish? Has the species been noted as impacting grazing systems?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .
-

10. Does the plant produce impenetrable thickets, blocking or slowing movement of animals, livestock, or humans?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .
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Reproductive Strategies (Questions 11 - 17)

11. Does this species (or cultivar or variety) reproduce and spread vegetatively?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.



Answer / Justification:

No evidence found. In this screener's experience, no species in the *Acer* genus is known to reproduce vegetatively in nature.

Reference(s):

- [Anonymous] .
-

12. If naturally detached fragments from this plant are capable of producing new plants, is this a common method of reproduction for the plant?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .
-

13. Does the species (or cultivar or variety) commonly produce viable seed?

- Answer: **Yes**, which contributes **1** points to the total PRE score.
- The *screener* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

Since both parent species are known to produce viable seed, it can safely be assumed that this hybrid species does as well.



Reference(s):

- [Anonymous] .
-

14. Does this plant produce copious viable seeds each year (> 1000)?

Reference(s):

- [Anonymous] .
-

15. Is there significant germination (>25%) of seeds the next growing season, with no requirement of an infrequent environmental condition for seeds to germinate (i.e. fire) or long dormancy period?

Reference(s):

- [Anonymous] .
-

16. Does this plant produce viable seed within the first three years (for an herbaceous species) to five years (for a woody species) after germination?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **Medium** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.



Reference(s):

- [Anonymous] .
-

17. Does this plant continuously produce seed for >3 months each year or does seed production occur more than once a year?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

Acer spp. flower and set seed once/year.

Reference(s):

- [Anonymous] .
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Dispersal (Questions 18 - 20)

18. Are the plant's propagules frequently dispersed long distance (>100 m) by mammals or birds or via domestic animals?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeners* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .



19. Are the plant's propagules frequently dispersed long distance (>100 m) by wind or water?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .
-

20. Are the plant's propagules frequently dispersed via contaminated seed (agriculture or wildflower packets), equipment, vehicles, boats or clothing/shoes?

- Answer: **No**, which contributes **0** points to the total PRE score.
- The *screeener* has a **High** confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous] .
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Total PRE Score

PRE Score: 2 -- Accept (low risk of invasiveness)

Confidence: 72 / 100

Questions answered: 18 of 20 -- Valid (80% or more questions answered)



PRE Score Legend

The PRE Score is calculated by adding the point totals for each (answered) question.

< 13 : accept (low risk of invasiveness)

13 - 15 : evaluate further

> 15 : reject (high risk of invasiveness)

Questions Answered Legend

It is important to answer at least 16 questions to consider a PRE Score as "valid".

>= 16 : valid (80% or more questions answered)

<= 15 : invalid (not enough questions answered)

Organization Ownership and Content Privacy

Organization: 2017 Farm Bill PRE Project

Content Privacy: Public



Evaluation Reviewers

The PRE approach is to base decisions on science and make decisions by consensus of diverse horticultural stakeholders. The literature review and process of answering PRE's questions are based on science; the decisions of which plants to prioritize are based on consensus. To ensure this process is in place and that PRE is collaborative, volunteer stakeholders are recruited from each region to review evaluations. The following experts in their profession (plant science, conservation, or horticultural trade) have participated as volunteer PRE reviewers for this evaluation:

- Laura Van Riper November 30, 2017
- Tom Buechel November 9, 2017

This evaluation has a total of 2 reviewer(s).



Evaluation Issues

The following section lists all public issues for this evaluation. Issues provide a way for stakeholder reviewers to communicate any concerns or suggestions they might have with the plant or evaluation. Please email PlantRight@suscon.org if additional action is required to resolve open issues.

There are currently no issues associated with this evaluation.



About PRE and this Plant Evaluation Report

The PlantRight Plant Risk Evaluator -- PRE is an online database and platform enabling those involved in non-native, terrestrial plant production to know before they grow if a plant poses a regional invasive risk. This tool offers many benefits, and we encourage you to visit the PRE website (<https://pre.ice.ucdavis.edu>) for more information.

If you are a nursery trade association, or involved in the research, development or distribution of horticultural plants we invite you to join the PRE community. If you are a plant scientist, affiliated with a horticultural college or botanic garden, and would like to learn more about becoming a PRE Screener, please drop us an email, PlantRight@suscon.org, requesting a PRE Account.

PRE beta funding is provided by Sustainable Conservation (<http://www.suscon.org/>) and a USDA Farm Bill grant.