PRE Score: 3 -- Accept (low risk of invasiveness)
Confidence: 60 / 100
Questions answered: 17 of 20 -- Valid (80% or more questions answered)

Privacy: Public
Status: Submitted

Evaluation Date: August 17, 2017
Plant Evaluated

*Acer pseudosieboldianum*

Image by James Steakley
Evaluation Overview

A PRE™ screener conducted a literature review for this plant (*Acer pseudosieboldianum*) 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

*Acer pseudosieboldianum* is among a group of perhaps underutilized landscape plants in the *Acer* genus. It has not demonstrated to be invasive in any location around the world. The PRE score of 3 is relatively low with the only points against it coming from three characteristics: 1) it has reportedly naturalized in one location in Maine; 2) it has one or more invasive relatives in the *Acer* genus; and 3) it does produce viable seed.

General Information

**Status:** Submitted  
**Screener:** Mike Monterusso  
**Evaluation Date:** August 17, 2017

Plant Information

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

   Answer / Justification:

   A. pseudosieboldianum has naturalized in Maine

   Reference(s):

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 screener has a Medium confidence in this answer based on the available literature.

   Answer / Justification:

   No evidence found.

   Reference(s):
   • [Anonymous].

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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 screener has a Medium confidence in this answer based on the available literature.

   **Answer / Justification:**

   No evidence found.

   **Reference(s):**

   - [Anonymous].

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 screener has a Medium confidence in this answer based on the available literature.

   **Answer / Justification:**

   No evidence found.

   **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 screener has a Very High confidence in this answer based on the available literature.
Answer / Justification:

Amur maple (Acer ginnala) is invasive in Minnesota and Wisconsin.

Reference(s):

- The University of Georgia - Center for Invasive Species and Ecosystem Health (2017). Amur maple (Acer ginnala) - EDDMapS Distribution.
- Wisconsin Department of Natural Resources (2015). Amur maple - Wisconsin DNR.

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 screener has a Very High confidence in this answer based on the available literature.

Answer / Justification:

GBIF shows very few occurrences, mostly in the native region of Eastern Asia.

Reference(s):

- GBIF (2017). 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 screener has a Medium confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.
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 screener has a Medium 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 screener has a Medium 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 screener 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 screener has a Medium confidence in this answer based on the available literature.

Answer / Justification:

No evidence found. It is likely that a cut stump would sprout from roots, but there is no reports of this occurring.

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 Medium 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:**

The straight species is not sterile. Seed propagation is discussed on various websites.

**Reference(s):**

- Kew Botanic Garden (0). Kew Seed Information Database.

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

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 screener has a Medium confidence in this answer based on the available literature.

Answer / Justification:

Maples will flower and set seed once/year.
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 screener has a Medium 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 screener has a Medium 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 screener has a Medium confidence in this answer based on the available literature.

Answer / Justification:

No evidence found.

Reference(s):

- [Anonymous].

Total PRE Score

PRE Score: 3 -- Accept (low risk of invasiveness)
Confidence: 60 / 100
Questions answered: 17 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.