

PRISM
(New York Partnerships for Regional Invasive Species Management)
NON-NATIVE PLANT INVASIVENESS RANKING FORM

PRISM: Adirondack Park Invasive Program

Scientific name: Trapa natans L. USDA Plants Code: TRNA
 Common names: Water chestnut, water caltrop
 Native Distribution: Central and eastern Europe, central Asia, tropical Africa and Asia
 Date Assessed: 27 January 2012; revised 30 November 2015
 PRISM Assessors: Meghan Johnstone and Erin Vennie-Vollrath
 PRISM Reviewers: Leigh Walrath, Meg Modley, Cathy McGlynn, Steve Young
 Date Approved: 20 April 2016 Form version date: 13 April 2009
 New York Relative Maximum score: 82.00 Date NY assessment approved: 16 June 2008
 New York State Invasive Rank: Very High

SUMMARY OF PRISM RANKING RESULTS:

Distribution: Common

Estimated number of infested sites: 2

PRISM Invasiveness Rank[§]: Very High



A. DISTRIBUTION AND ABUNDANCE (KNOWN/POTENTIAL):

1. What is the species distribution and abundance in the PRISM?

- | | |
|--|-------------|
| A. Not present | Not Present |
| B. Occurs in three or fewer natural areas (locations that are at least ¼ mile apart) with no infested area* >1 acre or containing >100 individuals | Restricted |
| C. Present in 4–10 natural areas, or with one occupied location >1 acre or containing >100 individuals | Common |
| D. Present in >10 minimally managed areas | Widespread |
| U. Unknown | Unknown |

Answer: Common

Describe distribution:

Known to be established in at least two water bodies in the Adirondack PRISM: Hadlock Pond and Lake Champlain. Several hundred acres are estimated to be infested in southern Lake Champlain. In 2015, a small number of plants were also found in Lake George (one plant) and Loon Lake (10 plants), Warren Co. Hand harvesting of these pioneer populations occurred within a week of discovery.

Sources of information:

Adirondack Park Invasive Plant Program 2015; Lake Champlain Basin Program

[§]Not Assessable: not persistent in the PRISM, or not found outside of cultivation.

*Definition of “infested area” is the “...actual or percentage of land occupied by [canopy cover of] weed plants” NAWMA (North American Weed Management Association) 2002. North American Invasive Plant Mapping Standards (see <http://www.nawma.org/>).

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2. What is the likelihood the species will occur (if not yet present) or expand its distribution and abundance (if already present) in the PRISM?

Answer: Moderately likely

Documentation (e.g.: history of establishment in PRISM, suitability of habitats and climate, distribution models, literature, expert opinions):

One acre can produce enough seeds to cover 100 acres the following year. Each seed can produce 10-15 rosettes, each rosette may produce as many as 20 seeds. Seeds have been known to remain viable for up to 12 years, but this is usually less than 1% of the seeds. Has become an aquatic nuisance species in North America because of its ability to reproduce rapidly and form extensive floating mats.

Sources of information:

Rhoads & Block 2003; Adirondack Park Invasive Plant Program 2015

B. INVASIVENESS RANK IN THE PRISM:

Is the species distribution Widespread or Common?

Yes: Go to column A in table below.

No: What is the likelihood of species occurrence or expansion? Answer:

- Very Likely: Use column A below
- Moderately likely: Use column B below
- Unlikely: Use column C below
- Zero likelihood Invasive potential Insignificant
- Unknown Invasive potential Unknown
- Not assessed Invasive potential not assessed

Assign a PRISM invasiveness rank to the species based on its New York Relative Maximum Score, using the designated column in the table below.

New York Relative Maximum Score	New York Invasiveness Rank	A	B	C
> 80.00	Very High	VH	H	M
70.00–80.00	High	H	M	L
50.00–69.99	Moderate	M	L	Ins
40.00–49.99	Low	L	Ins	Ins
<40.00	Insignificant	Ins	Ins	Ins

Column used: A (Insert PRISM Invasiveness Rank on page 1)

References for species assessment:

Adirondack Park Invasive Plant Program. 2015. Distribution of Lakes Monitored and Aquatic Invasive Species in the Adirondack PRISM, 2015. Adirondack Park Invasive Plant Program. Keene Valley, NY.

Lake Champlain Basin Program. Aquatic Nuisance Species in Lake Champlain & the Basin. Lake Champlain Basin Program. <http://www.lcbp.org/nuisum.htm#watchest>. [Accessed 27 Jan 2012].

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Rhoades, A. and Block, T. 2003. European water-chestnut: *Trapa natans* L. DCNR Invasive Exotic Plant Tutorial for Natural Land Managers. http://www.dcnr.state.pa.us/forestry/invasivetutorial/water_chestnut.htm. [Accessed 27 Jan 2012].

Citation: This ranking form for regions within NYS may be cited as: Jordan, M.J., G. Moore and T.W. Weldy. 2008. Invasiveness ranking system for non-native plants of New York. Unpublished. The Nature Conservancy, Cold Spring Harbor, NY; Brooklyn Botanic Garden, Brooklyn, NY; The Nature Conservancy, Albany, NY. Note that the order of authorship is alphabetical; all three authors contributed substantially to the development of this protocol.

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