

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

PRISM: Adirondack Park Invasive Program

Scientific name: Hydrocharis morsus-ranae USDA Plants Code: HYMO6
 Common names: Frogbit
 Native Distribution: Eurasia
 Date Assessed: 27 January 2012; revised 25 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: 85.57 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: 6

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: Widespread

Describe distribution:

Known to be present in at least six water bodies in the Adirondack PRISM: Grasse River at Lampson Falls, Lake Champlain, Lake Eaton (Essex), Quebec Brook, Rogers Pond, and Webb Royce Swamp. All locations have more than 100 individuals except Grasse River which was down to one plant in 2015 due to hand harvesting effort. It is highly likely that this species is more widely distributed than reported here, since it has been showing up in some remote locations and is likely in more than 10 minimally managed areas.

Sources of information:

Adirondack Park Invasive Plant Program 2015

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

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*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/>).

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:

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

H. morsus-ranae has the ability to reproduce vegetatively; it sends out horizontal stems which produce daughter plants that can break free and float to new locations. Also produces turions that sink to the bottom in fall and float back up in spring to grow into new plants. A single plant can produce 100-150 turions. The turions can tolerate brief periods of freezing. H. morsus-ranae can spread to new locations from plant fragments and turions attached to recreational equipment and waterfowl.

Sources of information:

Nault & Mikulyuk 2009; Wisconsin Department of Natural Resources 2004

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.

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Nault, M.E. & Mikulyuk, A. 2009. European Frog-bit (*Hydrocharis morsus-ranae*): A Technical Review of Distribution, Ecology, Impacts, and Management. Wisconsin Department of Natural Resources Bureau of Science Services, PUB-SS-1048 2009. Madison, Wisconsin, USA.

Wisconsin Department of Natural Resources. 2004. European Frog-Bit (*Hydrocharis morsus-ranae*). Wisconsin Department of Natural Resources. <http://dnr.wi.gov/invasives/fact/frogbit.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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