



# Invasive Plant Atlas of New England

## Catalog of Species Search Results



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## *Potamogeton crispus* (Curly-leaved pondweed )

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### COMMON NAME

Curly-leaved pondweed

### FULL SCIENTIFIC NAME

*Potamogeton crispus* L.

### FAMILY NAME COMMON

Pondweed family

### FAMILY SCIENTIFIC NAME

Potamogetonaceae

### IMAGES



Habit



Turion

### NOMENCLATURE/SYNONYMS

**Synonyms:** None

### DESCRIPTION

### Botanical Glossary

*Potamogeton crispus* is a submersed aquatic perennial that can reach 30-80 cm (1-2.5 ft.) in length. The turions of this plant are spindle-shaped, measure 1.5-3 cm (0.5-1 in.) and can be located terminal or axillary. The stems of this plant are flattened. There are two ranks of sessile leaves that are arranged spirally. The leaves are linear-oblong in shape, measuring 3-8 cm (1-3 in.) long and 5-12 mm (0.2-0.5 in.) wide. The leaf margins are undulate and the apex of the leaf is obtuse. The stipules of the leaf are small, thin and paper-like, and disintegrate early.

The peduncles are 2-5 cm (0.75-2 in.) in length and can be recurved when the plant is in fruit. The spike is dense and measures 1-2 cm (0.4-0.75 in.) in length. The body of the red to reddish-brown achene is ovoid and measures 3 mm (0.1 in.). The achene has 3 keels, with the middle keel having a small tooth projecting out from the base. The beak of the achene is conic and erect, measuring 2-2.5 mm (0.1 in.). This plant has an unusual life history. It flowers and fruits in the late spring to early summer. The plant then dies, leaving only fruits and turions (vegetative reproductive structures) to survive the summer. The turions produce new plants in the late summer or fall, leaving small plants to overwinter, sometimes even under ice.

Page References Crow & Hellquist 43, Fernald 71, Flora of North America 48, Gleason & Cronquist 642, Holmgren 609, Magee & Ahles 118. See reference section below for full citations.

### **SIMILAR SPECIES**

*Potamogeton gramineus* L. (variable leaf pondweed)

### **REPRODUCTIVE/DISPERSAL MECHANISMS**

*Potamogeton crispus* spreads mostly by means of the vegetative turions that germinate in the fall. It produces flowers and fruits, but the seeds do not appear to be viable.

### **DISTRIBUTION**

*Potamogeton crispus* is native to north Africa, India, the Middle East, Australia and Europe, from Portugal to Turkey and France to Italy, and also in Ireland to the north. It has been reported from all of the states of the U.S. except Alaska, Hawaii, Maine and South Carolina. In New England, this plant occurs in Vermont, New Hampshire, Massachusetts, Connecticut and Rhode Island.

### **HISTORY OF INTRODUCTION IN NEW ENGLAND**

This plant was first collected in the U.S. in Wilmington, Delaware in 1860. The first New England record for this species was in 1880 near Arlington, Massachusetts. In 1900, it was collected from the

southeastern part of New York and Long Island. Vermont first reported the plant in 1911, and Connecticut in 1932. *Potamogeton crispus* was most likely introduced accidentally with fish hatchery stock. However, it may also have been introduced as a part of the aquarium trade. In all likelihood it was introduced in multiple places and spread from these different points of introduction.

## HABITATS IN NEW ENGLAND

Aquatic  
Lake or Pond  
River or Stream  
Salt Marsh

*Potamogeton crispus* is tolerant of slightly brackish as well as fresh water. It can survive in low light and low temperatures, and prefers high nutrient or alkaline water.

## THREATS

*Potamogeton crispus* can form dense mats of vegetation to the surface of the water. These mats inhibit the growth of native aquatics, and interfere with boating and other water recreation. Since these plants germinate in the fall, they overwinter under the ice and are therefore among the first plants to grow in the spring, giving it a competitive advantage. When the plants die off in the summer, the decaying plant matter can make the water extremely eutrophic.

## MANAGEMENT LINKS

[The Global Invasive Species Database](#)  
General information including management

## DOCUMENTATION NEEDS

Documentation required: A specific photograph or mounted snippet of the leaves showing undulate leaf margin.  
Best time for documentation: Spring, fall.

## ADDITIONAL INFORMATION

[Center for Aquatic and Invasive Plants](#)  
Images

[Integrated Taxonomic Information System](#)  
Taxonomic information about the species

[The PLANTS Database](#)  
General information and map

Flora of North America Online

Description, history of introduction and map

**REFERENCES**

Britton, N. L. and A. Brown. 1970. An Illustrated Flora of the Northeastern United States vol. 1. Dover Publications Inc., New York.

Crow, G.E. and C.B. Hellquist. 2000. Aquatic and Wetland Plants of Northeastern North America. Vol 2. University of Wisconsin Press, Madison.

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Gleason, H.A. and A.C. Cronquist. 1991. Manual of Vascular Plants of the Northeastern United States and Adjacent Canada. 2nd ed. New York Botanical Garden, Bronx, New York.

Holmgren, N.H. 1998. Illustrated Companion to Gleason and Cronquist's Manual. New York Botanical Garden, Bronx, New York.

Les, D.H. and L.J. Mehrhoff. 1999. Introduction of nonindigenous aquatic vascular plants in southern New England: a historical perspective. Biological Invasions 1:281-300.

Magee, D.W and H.E. Ahles. 1999. Flora of the Northeast. University of Massachusetts Press, Amherst.

USDA, NRCS. 2001. The PLANTS Database, Version 3.1. (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

## DATA RETRIEVAL

Select a task by clicking the radio button and then click "Submit Selection."

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## MAPS OF PLANT DISTRIBUTION IN NEW ENGLAND

Select a study area by clicking the radio button and then click 'Selection.'

- The whole New England area
- One or more states
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