

Nymphaea odorata - *Nuphar lutea* (ssp. *pumila*, *variegata*) Herbaceous Vegetation
(Northern Water Lily Aquatic Wetland)

COMMON NAME White Water Lily - Yellow Water Lily Herbaceous Vegetation
SYNONYM Northern Water Lily Aquatic Wetland
PHYSIOGNOMIC CLASS Herbaceous Vegetation (V)
PHYSIOGNOMIC SUBCLASS Hydromorphic rooted vegetation (V.C)
PHYSIOGNOMIC GROUP Temperate or subpolar hydromorphic rooted vegetation (V.C.2)
PHYSIOGNOMIC SUBGROUP Natural/Semi-natural (V.C.2.N)
FORMATION Permanently flooded temperate or subpolar hydromorphic rooted vegetation (V.C.2.N.a)
ALLIANCE NUPHAR LUTEA - NYMPHAEA ODORATA PERMANENTLY FLOODED HERBACEOUS ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 3

USFWS WETLAND SYSTEM PALUSTRINE

RANGE

Voyageurs National Park

This community type is found throughout the park area, typically in fairly sheltered bays of the large lakes, in interior lakes or, rarely, in recent beaver floodings.

Globally

This association is found in Michigan, Minnesota, New York, Manitoba, and Ontario.

ENVIRONMENTAL DESCRIPTION

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This type occurs in sheltered bays of lakes and beaver impoundments. In confined basins, this community may also occur as an open water lag around emergent marsh communities. Wave exposure is low. Water depth is 0.25 - 2 meters and substrate is typically muck, clay, or muck over clay. In stands that occur in beaver impoundments, standing dead trees and patches of emergent vegetation are common. The water regime is permanently flooded.

Globally

Stands occur in open, slow-moving water on lakes and streams, often less than 0.5 m deep. The substrate is variable, from muck to sedimentary peat (Harris *et al.* 1996).

MOST ABUNDANT SPECIES

Voyageurs National Park

Stratum

Floating-leaved

Species

Nymphaea odorata, *Nuphar lutea* ssp. *variegata*, *Brasenia schreberi*,
Potamogeton spp.

Globally

Stratum

Floating-leaved

Species

Nuphar lutea ssp. *variegata*, *Nuphar lutea* ssp. *pumila*, *Nymphaea odorata*,
Potamogeton spp.

CHARACTERISTIC SPECIES

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Nymphaea odorata, *Nuphar lutea* ssp. *variegata*, *Brasenia schreberi*, *Potamogeton* spp.

Globally

Nuphar lutea ssp. *variegata*, *Nuphar lutea* ssp. *pumila*, *Nymphaea odorata*, *Potamogeton* spp.

VEGETATION DESCRIPTION

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This community is dominated by floating aquatics, mainly *Nymphaea odorata*, *Nuphar lutea* ssp. *variegata*, and *Brasenia schreberi*. Cover of these floating aquatics is highly variable, ranging from 10-90%. *Nymphaea odorata*

USGS-NPS Vegetation Mapping Program
Voyageurs National Park

and *Nuphar lutea* ssp. *variegata* tend to dominate stands which occur in sheltered bays of lakes while *Brasenia schreberi* dominates beaver impoundments. A low amount of emergent vegetation may occur and is more common in beaver impoundments. Submerged aquatic plants often occur with the floating aquatics at 10-80% cover. The most abundant submerged aquatics in the lakes are *Potamogeton richardsonii*, *Potamogeton natans*, *Potamogeton epihydrus*, *Myriophyllum sibiricum*, *Vallisneria americana*, and *Najas flexilis*. In stands that occur in beaver impoundments, the most abundant submerged aquatic is *Utricularia vulgaris*.

Globally

Emergent vegetation cover is less than 25% and floating-leaved aquatics cover at least 25% of the surface. Typical dominants vary from stand to stand, but include *Nymphaea odorata*, *Nuphar lutea* ssp. *pumila*, and *Nuphar lutea* ssp. *variegata*. Other dominants may include *Brasenia schreberi* and *Potamogeton amplifolius*. A variety of emergent species can occur with this type (Harris *et al.* 1996).

CONSERVATION RANK G5.

DATABASE CODE CEG002562

COMMENTS

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Diagnostic features of the type include the greater than 10% cover of *Nymphaea odorata*, *Nuphar lutea* ssp. *variegata* and/or *Brasenia schreberi*. Stands that occur in sheltered bays of the large lakes closely related to the Midwest Pondweed Submerged Aquatic Wetland (CEGL002282) but that type has less than 10% cover of floating aquatics. Many stands that are intermediate between these two types exist. When found in beaver impoundments, the Northern Water Lily Aquatic Wetland many occur with patches of Northern Sedge Wet Meadow (CEGL002257) or Leatherleaf-Sweet Gale Shore Fen (CEGL005228), which together may be mapped as Deep Marsh Complex (DMX). This type is analogous to Ontario's W4 (Harris *et al.* 1996).

This community is subject to disturbance by beaver activity.

REFERENCES

Harris, A. G., S. C. McMurray, P. W. C. Uhlig, J. K. Jeglum, R. F. Foster, and G. D. Racey. 1996. Field guide to the wetland ecosystem classification for northwestern Ontario. Ont. Minist. Nat. Resour., Northwest Sci. Tech. Field Guide FG-01. Thunder Bay, Ont. 74 p.

Note:

This association is found in three different map classes:

- 1) Northern Water Lily Aquatic Wetland
- 2) Deep Marsh Mosaic / Complex
- 3) Beaver Basin Break-up Mosaic