

Photographic Atlas of Wetland Plants of the Old  
Woman Creek State Nature Preserve and National  
Estuarine Research Reserve (Huron, Ohio)



by

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# Table of Contents

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Acknowledgements

Introduction

Plant Zonation & Plant Species

I. Submerged Macrophytes

- **Eurasian watermilfoil**  
(*Myriophyllum spicatum*)
- **Coontail** (*Ceratophyllum demersum*)
- **Minor Naiad** (*Najas minor*)
- **Longleaf pondweed**  
(*Potamogeton nodosus*)
- **Curlyleaf pondweed**  
(*Potamogeton crispus*)
- **Sago pondweed**  
(*Potamogeton pectinatus*)
- **Leafy pondweed**  
(*Potamogeton foliosus*)

II. Floating-leaved Macrophytes

- **American water lotus**  
(*Nelumbo lutea*)
- **White water-lily** (*Nymphaea odorata*)
- **Spatterdock** (*Nuphar lutea*)
- **Lesser duckweed** (*Lemna minor*)
- **Greater duckweed**  
(*Spirodella polyrhiza*)

III. Emergent Macrophytes

- **Pickerelweed** (*Pontederia cordata*)
- **Flowering rush** (*Butomus umbellatus*)
- **Beggar-ticks** (*Bidens* L.)
- **Broadleaf arrowhead**  
(*Sagittaria latifolia*)
- **Broad-leaved cattail** (*Typha latifolia*)
- **Narrow-leaved cattail**  
(*Typha angustifolia*)
- **Giant Bur-reed** (*Sparganium eurycarpum*)

III. Emergent Macrophytes

- **River bulrush**  
(*Schoenoplectus fluviatilis*)
- **Waterparsnip** (*Sium suave*)
- **Soft-stemmed bulrush**  
(*Schoenoplectus acutus*)
- **Arrowhead** (*Sagittaria latifolia*)
- **Smartweeds** (*Polygonum* L.)
- **Common reed** (*Phragmites australis*)
- **Purple loosestrife** (*Lythrum salicaria*)
- **Rice cutgrass** (*Leersia oryzoides*)
- **False pimpernel** (*Lindernia dubia*)
- **Cursed crowfoot**  
(*Ranunculus sceleratus*)

IV. Wet meadow & Floodplain

Macrophytes

- **Green bulrush** (*Scirpus atrovirens*)
  - **Cardinal flower** (*Lobelia cardinalis*)
  - **Blue flag** (*Iris versicolor*)
  - **Jewelweed** (*Impatiens capensis*)
  - **Swamp rose mallow**  
(*Hibiscus moscheutos*)
  - **Lake sedge** (*Carex lacustris*)
  - **Water plantain** (*Alisma subcordatum*)
  - **Marsh milkweed**  
(*Asclepias incarnata*)
  - **Buttonbush** (*Cephalanthus occidentalis*)
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## INTRODUCTION

This atlas is intended to be a general reference to the more common wetland plants of the Old Woman Creek wetland. Photographs and descriptions are provided for 37 species of wetland plants. Nomenclature for all plants follows the United States Department of Agriculture (USDA) Plants Database<sup>1</sup>. General background information for many of the plants comes from the many excellent identification guides available including the USDA Database and other guides and floras that are available; refer to the references provided below for a few of the more common sources used here<sup>2,3,4</sup>.

Specific background information on the ecology of Old Woman Creek may be found in the Old Woman Creek Site Profile<sup>5</sup>. The Site Profile describes the biology and ecology of the estuary vegetation. This atlas borrows from the Site Profile and follows the described zonation of estuary plant communities: submerged macrophytes, floating-leaved macrophytes, emergent macrophytes and wet meadow and floodplain macrophytes. Plants presented in this atlas are arranged based on this zonation. A general description for each zone is provided as an introduction to each sub-section of this atlas.

The occurrence and abundance of macrophytes varies from year to year in the wetland, largely a function of Lake Erie water level fluctuations. Wetland macrophytes are mapped annually to track changes to individual populations and their associated communities. The most current floristic survey documented more than 130 species of wetland plants that may be found in the wetland<sup>6</sup>. The Ohio Department of Natural Resources maintains a listing of all wetland

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<sup>1</sup>USDA, NRCS. 2008. The PLANTS Database (<http://plants.usda.gov>), 19 December 2008). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

<sup>2</sup>Crow, G.E. and C.B. Hellquist. 2000. Aquatic and Wetland Plants of Northeastern North America, A Revised and Enlarged Edition of Norman C. Fassett's A Manual of Aquatic Plants. Vol. 1, Pteridophytes, Gymnosperms, and Angiosperms: Dicotyledons. University of Wisconsin Press, Madison, WI.

<sup>3</sup>Crow, G.E. and C.B. Hellquist. 2000. Aquatic and Wetland Plants of Northeastern North America, A Revised and Enlarged Edition of Norman C. Fassett's A Manual of Aquatic Plants. Vol. 2, Angiosperms; Monocotyledons. University of Wisconsin Press, Madison, WI.

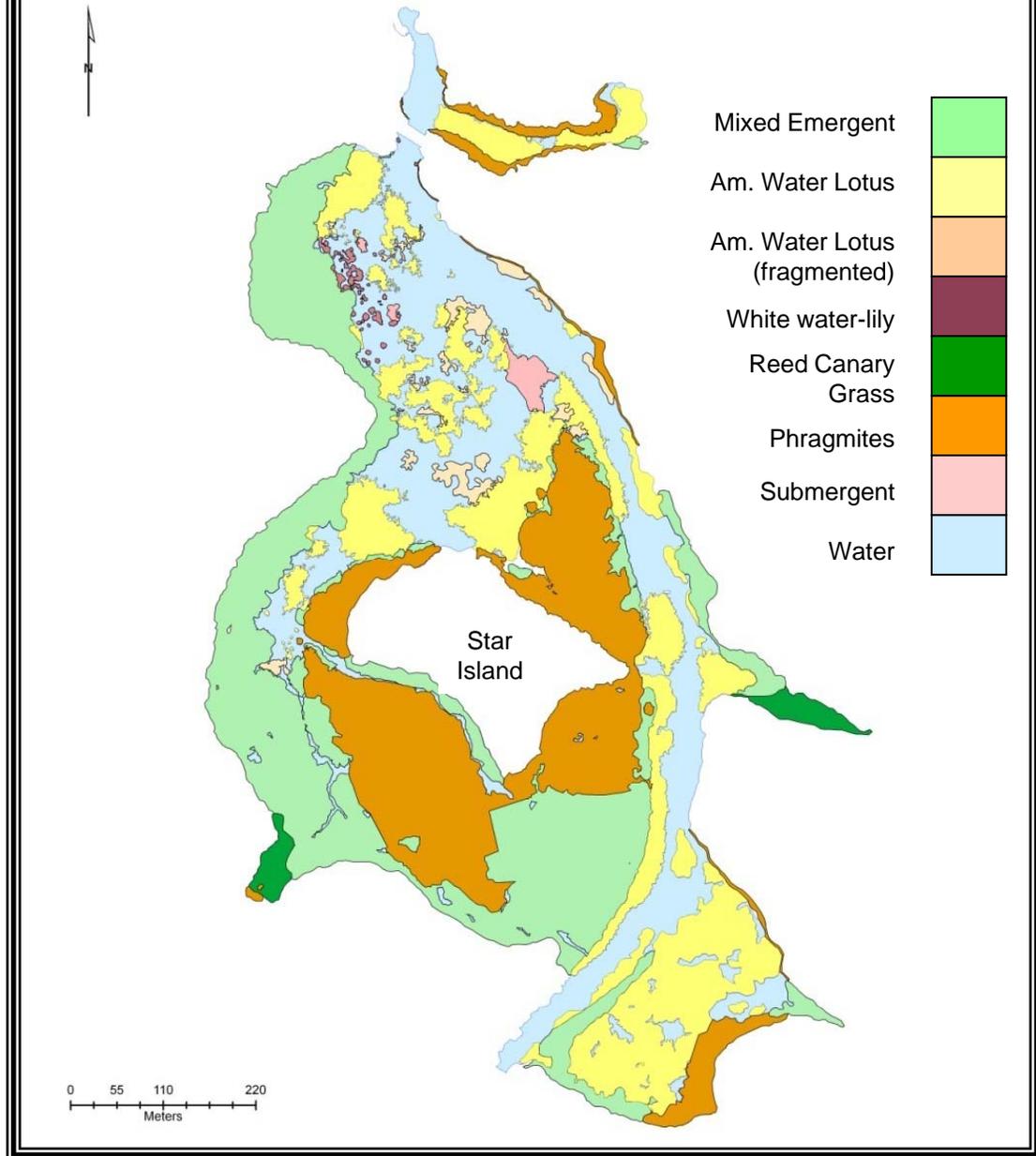
<sup>4</sup>Eggers, Steve D., and Donald M. Reed. 1997. Wetland plants and communities of Minnesota and Wisconsin. U.S. Army Corps of Engineers, St. Paul District. Jamestown, ND: Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/plants/mnplant/index.htm> (Version 03SEP1998).

<sup>5</sup>Herdendorf, C.E., D.M. Klarer, and R.C. Herdendorf. 2004. The Ecology of Old Woman Creek, Ohio: An Estuarine and Watershed Profile. Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Columbus, Ohio. 448 pp.

plants known to occur in OWC<sup>5</sup>. Currently the wetland is dominated by the invasive grass *Phragmites australis* (Common reed) and the floating-leaved plant *Nelumbo lutea* (American water lotus). *Phragmites* now occupies greater than 40 percent of the wetland surface area and the American water lotus approximately 25 percent.

<sup>5</sup>Whyte, R.S. 1996. The Vegetation Dynamics of a Freshwater Estuary on Lake Erie. The Old Woman Creek State Nature Preserve and National Estuarine Research Reserve, Huron, Ohio. Ph.D. Dissertation, Miami University, Oxford, OH, 372pp.

## Aquatic Vegetation of the Old Woman Creek Estuary



The above map shows the distribution of the major groups of wetland plants in the Old Woman Creek estuary. *Phragmites* and *Nelumbo* comprise almost two-thirds of the vegetative cover in the wetland. The area of mixed emergent macrophytes is dominated by *Phragmites*, *Typha*, *Sagittaria* and other herbaceous emergent plants.

## I. Submerged Macrophytes

Submerged macrophytes have often been hard to find in the wetland. The shallow turbid waters of the wetland limit their distribution. But since the 1990s the number of reported submerged macrophytes has slowly increased as has their abundance. In 2008, *Vallisneria americana* (not shown in the atlas) was reported for the first time. The submerged macrophytes which were once limited to almost exclusively north of Star Island, may now be found throughout the wetland. Submerged plants are scattered throughout the open water of the wetland, often in association with the American water lotus (*Nelumbo lutea*).



Plant families and associated species:

Family Haloragaceae: Eurasian watermilfoil (*Myriophyllum spicatum*)

Family Ceratophyllaceae: Coontail (*Ceratophyllum demersum*)

Family Najadaceae: Minor Naiad (*Najas minor*)

Family: Potamogetonaceae: Longleaf pondweed (*Potamogeton nodosus*), Curlyleaf pondweed (*Potamogeton crispus*), Sago pondweed (*Potamogeton pectinatus*), Leafy pondweed (*Potamogeton foliosus*)

**Eurasian watermilfoil** *Myriophyllum spicatum* L.; Family Haloragaceae  
**Coontail** *Ceratophyllum demersum* L.; Family Ceratophyllaceae  
**Minor Naiad** *Najas minor*, Family Najadaceae

**Habitat and Distribution:** Coontail, the most common of the submersed plants, is found throughout the wetland but is generally restricted to the quiet water areas. Milfoil has gradually spread south of Star Island although it occurs only in small isolated patches. Naiad is recent to the wetland being reported first in the mid-1990s and is confined to the wetland's northwest embayment.

**Field Characteristics:** The leaves of all three are thin and whorled. Coontail is unique of the three plants in lacking true roots.



*Najas minor*



*Ceratophyllum demersum*

*Myriophyllum spicatum*



Watermilfoil forms dense mats at the water surface and spreads by fragments forming new adventitious roots allowing it to easily spread and quickly root. *Najas minor* is also considered to be an invasive. Coontail, although native, will also tend to form dense mats.

## Longleaf pondweed

Scientific Name: *Potamogeton nodosus* Poir.

Family: Potamogetonaceae

**Habitat and Distribution:** Widely distributed from the south of the railroad overpass to the mouth of the wetland. Found in shallow and deep water (<1 to >2 feet) as well as quiet and flowing waters.

**Field Characteristics:** Has both floating leaves (somewhat elliptic) and submersed leaves (lanceolate and less conspicuous in the often muddy water of OWC). Flowers and fruit in dense spike appearing in mid-summer (July-August).



This large bed is located south of the railroad overpass along a quiet segment on the west shore.

## Curlyleaf pondweed

Scientific Name: *Potamogeton crispus* L.

Family: Potamogetonaceae

**Habitat and Distribution:** This is an introduced species that has become naturalized in the U.S. Its abundance in OWC has increased steadily since the early 1990s. More abundant in the shallow and quiet waters of the northwest embayment of OWC. Often growing in association with other submersed plants.

**Field Characteristics:** This species of *Potamogeton* has only submersed leaves. The leaves are distinctively wavy, lack a petiole (sessile), and have prominent reddish mid-veins. Although this plant will produce a terminal spike as other *Potamogetons*, it has never been observed to flower in OWC.



Curlyleaf pondweed as with many of the submersed plants in OWC is often found within or adjacent to the floating-leaf beds of American lotus which provide shelter from wave action.

**Sago pondweed** *Potamogeton pectinatus* L.  
**Leafy pondweed** *Potamogeton foliosus* Raf.  
Family: Potamogetonaceae (Pondweed Family)

**Habitat and Distribution:** Both species occur in the quiet shallow waters of the embayments with *Potamogeton pectinatus* also found in the more turbid open waters and adjacent to the main channel of OWC.

**Field Characteristics:** Although plants in this family may have both submersed and floating leaves, *Potamogeton pectinatus* and *P. foliosus* have only submersed leaves. Leaves of *P. pectinatus* tend to mass near the surface allowing for greater photosynthesis in the turbid waters of OWC; leaves of *P. pectinatus* are longer and narrower than leaves of *P. foliosus*. Flowers/fruits are produced in terminal (*P. pectinatus*) or axillary spikes (*P. foliosus*), although neither species has been observed to flower in OWC. Flowers from June to August.



*Potamogeton foliosus* (above) has submersed linear leaves with 3-5 prominent parallel veins and up to 2" long and 1/8" wide.



*Potamogeton pectinatus*, the most common of the submersed plants found in OWC, has submersed thread-like leaves up to 6" long but only 1/16" wide. Below-ground tubers provide an important food source for wildlife.

## II. Floating-leaved Macrophytes

Floating-leaved macrophytes are dominated by the American water lotus (*Nelumbo lutea*) and the White water-lily (*Nymphaea odorata*). Spatterdock (*Nuphar advena*) is much less common in the wetland. These plants may occur in waters up to a few meters deep. Another form of floating plants which do not root to the substrate are the duckweeds, Lesser duckweed (*Lemna minor*) and Greater duckweed (*Spirodella polyrhiza*). These are often found in association with the rooted floating-leaved plants as well as interspersed among the emergent plants.



Plant families and associated species:

Family: Nelumbonaceae: American water lotus (*Nelumbo lutea*)

Family: Nymphaeaceae: White water-lily (*Nymphaea odorata*)

Family: Nymphaeaceae: Spatterdock (*Nuphar lutea*)

Family: Lemnaceae: Lesser duckweed (*Lemna minor*), Greater duckweed (*Spirodella polyrhiza*)

## American water lotus

Scientific Name: *Nelumbo lutea* (Willd.) Pers.

Family: Nelumbonaceae

**Habitat & Distribution:** Lotus is found as dense and expansive stands throughout the shallow open water areas of the wetland.

**Field Characteristics:** Young rolled leaves appear just below the water surface by early June. As the leaves unfurl they form large round floating leaves. Emergent leaves attached to a long petiole emerge by July extending well above the water surface. Leaves are entire (distinguished from the notched leaves of the lilies). Blooming in July and August the large showy pale yellow flowers extend above the water with numerous petals and sepals. A fruit develops from an enlarged receptacle containing numerous oval shaped seeds. Submersed plants may often be found interspersed within the beds of Lotus.



Large stand of American lotus growing in the northwest embayment. Note the large emergent leaves and flowers dispersed throughout the stand.

## White water-lily

Scientific Name: *Nymphaea odorata* Aiton

Family: Nymphaeaceae

**Habitat and Distribution:** Generally found in the shallow open and nearshore waters of the wetland growing in association with Lotus and submerged aquatic plants. More commonly found north of Star Island and in the northwest embayment.

**Field Characteristics:** Leaves are rounded to elliptical and notched. Leaves typically floating (may emerge slightly in very shallow water) are attached to long petiole. Flowers are white and generally flower through the summer (May-August).



White water-lily is scattered among a bed of Lotus plants in the northwest embayment of the wetland. Similar to other floating-leaved plants in the wetland, white water-lily has extensive and fleshy rhizomes.

## Spatterdock (yellow water-lily, cow-lily)

Scientific Name: *Nuphar lutea* (L.) Sibth. & Sm. [synonym: *N. advena* (Aiton)]  
*W.T.Aiton*

Family: Nymphaeaceae

**Habitat and Distribution:** Restricted to the backwater areas of OWC (south of the railroad overpass); usually found along the margins of open water areas or stream channel in shallow water quiet waters.

**Field Characteristics:** Possesses both floating and emergent leaves which emerge from thick spongy rhizomes. Leaves are elliptical and notched; typically longer than wide. Yellow solitary round flowers, producing many seeds, bloom in OWC typically between June and July.



Extensive stand of Spatterdock guards the entrance to the backwater channel and swamp forest in Old Woman Creek.

**Lesser duckweed**  
**Greater duckweed**  
Lemnaceae

Scientific Name: *Lemna minor* L.  
Scientific Name: *Spirodella polyrhiza* (L.) Schleiden Family:

**Habitat and Distribution:** Both species of duckweed are found in the quite water areas, generally hidden in amongst the lotus, water-lilies, and the emergent stands of reeds and cattails. Greater duckweed is much less common, scattered among the dense mats of Lesser duckweed.

**Field Characteristics:** These small floating plants have thread-like roots extending into the water and may be distinguished from Lesser duckweed by its larger size and red color on the underside of the leaf.



Duckweed is often the only plant found growing in amongst the dense stems of *Phragmites australis* where minimal light reaches the water surface.

### III. Emergent Macrophytes

### IV. Wet Meadow & Floodplain Macrophytes

The Old Woman Creek emergent plant community is a diverse mix of plant species growing in saturated to shallow water of a few inches and represents the largest group in the atlas.



Emergent: Plant families and associated species:

Family Pontederiaceae: Pickerelweed (*Pontederia cordata*)  
Family Butomaceae: Flowering rush (*Butomus umbellatus*)  
Family Asteraceae: Beggars tick (*Bidens*)  
Family Alismataceae: Broadleaf arrowhead (*Sagittaria latifolia*)  
Family Typhaceae: Narrow-leaved cattail (*Typha angustifolia*)  
Family Sparganiaceae: Giant bur-reed (*Sparganium eurycarpum*)  
Family Cyperaceae: River bulrush (*Schoenoplectus fluviatilis*); Soft-stemmed bulrush; (*Schoenoplectus acutus*)  
Family Apiaceae: Waterparsnip (*Sium suave*)  
Family Polygonaceae: Smartweeds (*Polygonum* spp.)  
Family Poaceae: Common reed (*Phragmites australis*); Rice cutgrass (*Leersia oryzoides*)

Family Lythraceae: Purple loosestrife (*Lythrum salicaria*)  
Family Scrophulariaceae: False pimpernel (*Lindernia dubia*)  
Family Ranunculaceae: Cursed crowfoot (*Ranunculus sceleratus*)

Wet Meadow & Floodplain: Plant families and associated species:  
Family Cyperaceae: Green bulrush (*Scirpus atrovirens*); Lake sedge (*Carex lacustris*)  
Family Campanulaceae: Cardinal flower (*Lobelia cardinalis*)  
Family Iridaceae: Blue flag (*Iris versicolor*)  
Family Balsaminaceae: Jewelweed (*Impatiens capensis*)  
Family Malvaceae: Swamp rose mallow (*Hibiscus moscheutos*)  
Family Alismataceae: Water plantain (*Alisma subcordatum*)  
Family Asclepiadaceae: Marsh milkweed (*Asclepias incarnata*)  
Family Rubiaceae: Buttonbush (*Cephalanthus occidentalis*)

## Pickerelweed

Scientific Name: *Pontederia cordata* L.

Family: Pontederiaceae (Water-hyacinth Family)

**Habitat and Distribution:** It is uncommon in OWC growing in small clumps at the edge of *Typha* or *Phragmites* stands in areas of quiet shallow water.

**Field Characteristics:** Pickerelweed has broad emergent heart-shaped leaves. An inflorescence of blue-violet (to purple) is borne on a terminal spike extending above the leaves. This plant may be confused with Arrow arum (*Peltandra virginica*), a once common emergent plant of OWC but which is now no longer occurs in the wetland. Arrow arum leaves are more arrow shaped and the inflorescence is a spathe enclosing the tiny whitish flowers of this plant.



Small patches as seen here are more common west of Star Island and in the northwest embayment.

## Flowering rush

Scientific Name: *Butomus umbellatus* L.

Family: Butomaceae (Flowering-rush Family)

**Habitat and Distribution:** Considered to be an invasive plant to the Great Lakes region, flowering rush is uncommon in OWC, occasionally observed in the northwest embayment, scattered along the water's edge, and adjacent to the barrier-beach.

**Field Characteristics:** Flowering rush has a tall (to about 3-1/2 feet) flowering stem with an umbel of pink flowers rising above the basal leaves which extend to a height of about 3 feet. Flowers June to August.



Although flowering rush may grow in quiet shallow waters of wetlands, it has only been observed in wet soil along the shoreline growing in association with other herbaceous emergent plants such as *Sagittaria latifolia* (broad-leaf arrowhead).

## Beggar-ticks or Bur marigold

Scientific Name: *Bidens* L.

Family: Asteraceae

**Habitat and Distribution:** *Bidens cernua* and *Bidens laevis* are two of the more common species of this genus present in OWC. This late season flowering plant (August-September) is commonly found along the shore in seasonally flooded to saturated soils.

**Field Characteristics:** *Bidens* may be identified by its bright yellow flowers, which typically have both ray (outer margin of inflorescence) and disk florets (central portion of the inflorescence). Leaves may be opposite or simple with somewhat serrate edges. These plants produce numerous barbed nutlets (one-seeded fruit) that attach to one's clothes.



Several species of *Bidens* may be found in OWC. With the decline in water levels in recent years, populations have become more numerous along the wet shore.

## Cattail (Broad- and Narrow-leaved)

Scientific Name: *Typha angustifolia* L. & *Typha latifolia* L.

Family: Typhaceae

**Habitat and Distribution:** Broad-leaved cattail (*Typha latifolia*) was once an abundant plant of OWC, forming extensive monocultures throughout the shallow embayments and nearshore areas. More recently, broad-leaved cattail has been displaced by the nonnative *Phragmites australis*

(a tall perennial grass) and narrow-leaved cattail (*Typha angustifolia*). Narrow-leaved cattail typically forms narrow bands at the water's edge of the extensive *Phragmites* stands and occasionally forms extensive stands in the nearshore areas of the wetland. Cattail provides good habitat for birds and muskrat and other wildlife.

**Field Characteristics:** Cattails are tall plants with long and narrow leaves that appear to be twisting (see photo below). Broad-leaved cattail can generally be distinguished from Narrow-leaved cattail by examining the distance between the staminate and pistillate flowers. On broad-leaved cattail the male and female flowers (spikes) form an almost continuous connection.



With the return of low lake levels in 2000, cattail gradually has become more abundant in OWC. However, broad-leaved cattail has been displaced by the non-native narrow-leaved cattail.

## Giant bur-reed

Scientific Name: *Sparganium eurycarpum* Englem.

Family: Sparganiaceae

**Habitat and Distribution:** A common perennial emergent plant of the shallow nearshore areas and wet soils along the shore. It is often found with cattail, arrowhead, and other emergent plants. Bur-reed is an important food source for muskrats and wetland birds.

**Field Characteristics:** Bur-reed is characterized by its distinctive unisexual flowers. The inflorescence has a distinct zig-zag appearance with the staminate heads above and the pistillate below. The leaves which are similar to cattail leaves may be distinguished from the latter by their strongly keeled appearance. The leaves are variable and may form submersed or floating leaves during periods of high water.



*Sparganium eurycarpum* is the only species of bur-reed found in OWC. Visitors to OWC often mistake this plant for cattail, although the flowers and fruit are distinctive and it does not form the extensive monocultures that characterize cattail.

## River bulrush

Scientific Name: *Schoenoplectus fluviatilis* (Torr.) Strong

Family: Cyperaceae

**Habitat and Distribution:** This perennial plant is common along the shoreline areas and along the main channel of OWC, more commonly occurring in wet soil (less common in prolonged standing water). River bulrush is another important food source for muskrat and provides habitat for wetland birds.

**Field Characteristics:** Has thick tuberous rhizomes and sharply angular (3) stems. The v-shaped elongated leaves are somewhat keeled. The inflorescence is a terminal spike with long leaf-like bracts that are similar to the leaves of the plant. The spike is characterized by noticeably pubescent scales. In OWC this plant tends to flower from July through September.



A large population of River bulrush may be found south of the railroad tracks adjacent to the river channel and swamp forest.

## Waterparsnip

Scientific Name: *Sium suave* Walter

Family: Apiaceae

**Habitat and Distribution:** Found along the shoreline in damp soil. It has increased its presence in OWC in response to the decline in wetland water levels. More common along the shore of the northwest embayment.

**Field Characteristics:** May grow up to 8 feet tall and is easily recognized in OWC by the umbrella shape of its flowers and the sharply serrate margins of its lance shaped leaflets; 15-17 leaflets are arranged on opposite sides of an elongate petiole. Flowers in July and August.



The white flowers or inflorescence of the Waterparsnip are arranged in umbels less than an inch in diameter.

## Soft-stemmed bulrush

Scientific Name: *Schoenoplectus tabernaemontani* (Gmel.) Palla  
synonym *Scirpus validus*

Family: Cyperaceae

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**Habitat and Distribution:** Widespread in OWC occurring frequently at the margin of emergent vegetation stands and the open water. Provides valuable cover and food for waterfowl and other wetland wildlife.

**Field Characteristics:** The tall round green stems easily stand out from other sedges and emergent plants of OWC. The stems when crushed between your fingers are characterized by a soft spongy feel. The inflorescence is comprised of terminal spikelets which may droop slightly. Begins to flower in June continuing through August.



Soft-stemmed bulrush is typically found in small scattered stands at the water's edge, particularly in the shallow quieter embayments of the wetland.

## Broadleaf arrowhead

Scientific Name: *Sagittaria latifolia* Willd

Family: Alismataceae

**Habitat and Distribution:** This plant is very common and widespread throughout OWC. Typically intermixed with other emergent plants but may form large monocultures. Prefers shallow quiet waters.

**Field Characteristics:** It is recognized by the arrow-shaped leaves and stalked flowers with 3 white petals. Leaves are typically broad, but may vary in width. In response to extended periods of high water narrow and thin submersible leaves may form. Leaves are often observed to be clipped from the plant, presumably by muskrat. Arrowhead seeds and tubers are an important food source for waterfowl and wildlife. Flowers in July.



Larger stands of Arrowhead, seen here, are today less common in the wetland due to the invasion of *Phragmites australis* (Giant reed grass), seen in the background,

## Smartweeds

Scientific Name: *Polygonum* L.

Family: Polygonaceae (Buckwheat Family)

**Habitat and Distribution:** Eleven species of *Polygonum* have been reported for OWC, several of which are wetland species (*P. amphibium*, *P. hydropiper*, *P. hydropiperoides*, *P. lapathifolium*, *P. pennsylvanicum*, *P. punctatum*, and *P. sagittatum*). They are widely distributed in OWC occupying varying habitats from the upland to standing water.

**Field Characteristics:** Generally referred to as “smartweeds” they are characterized by a sheath (or stipule) located at the base of each petiole. White to pink flowers lacking petals are clustered in terminal spikes. Leaves are generally lanceolate. It is often difficult to distinguish between species without examination of the mature fruit.



*Polygonum punctatum*, often found in shallow water along the shore in OWC, is pictured here widely scattered fronting a bed of American water lotus (*Nelumbo lutea*) adjacent to Star Island and the main channel of OWC.

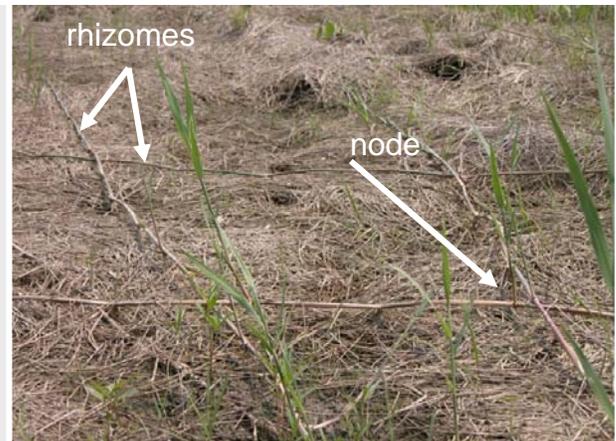
## Common reed

Scientific Name: *Phragmites australis* (Cav.) Trin. Ex. Steud.

Family: Poaceae (Grass Family)

**Habitat and Distribution:** This non-native invasive grass occupies almost all stretches of the OWC shoreline from the barrier-beach to south of the railroad overpass and the narrowing of the creek channel. It was first reported in OWC along the barrier-beach in the mid-1980s.

**Field Characteristics:** Grasses typically require the presence of flowers and often the fruit to make a correct identification. However, *Phragmites* is easily recognized by its height (9-12 feet), robust stems, and a large terminal inflorescence that has a feathery appearance. Flowers in OWC by late July through August.



*Phragmites*, a non-native grass, is often considered undesirable due to the formation of expansive stands. Expansion occurs through the growth of above- and below-ground rhizomes. New plants form at the nodes on each rhizome.

## Purple loosestrife

Scientific Name: *Lythrum salicaria* L.

Family: Lythraceae (Loosestrife Family)

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**Habitat and Distribution:** An aggressive control program has limited the spread and distribution of this non-native nuisance plant in OWC. It may occasionally be observed growing singly or in clusters of several plants along the shoreline in wet soil or shallow water. It is believed to have limited value to wildlife.

**Field Characteristics:** This perennial is easily recognized by its purple flowers, square stems, and lanceolate leaves; it may grow as tall as 6 feet. The leaves are opposite or whorled (3 leaves) and attached directly to the stem. The 6-petaled purple flowers grow both in long terminal spikes and the axils of the leaves. Flowers in July and August.



Purple loosestrife may initially be associated with other emergent vegetation such as Arrowhead (*Sagittaria latifolia*), but left unchecked it will often displace the native vegetation. Another aggressive invasive, *Phragmites australis*, may be seen in the background.

## Rice cutgrass

Scientific Name: *Leersia oryzoides* (L.) Swartz

Family: Poaceae (Grass Family)

**Habitat and Distribution:** Widely distributed in OWC: wetland shoreline, wet meadows, and margins of floodplain forests.

**Field Characteristics:** Two species of *Leersia* occur in OWC: *Leersia oryzoides* and *L. virginica* (whitegrass). *L. oryzoides*, the more common, may be recognized by its very sharp (razor-like) leaf margins; it grows up to 5 feet high with an open panicle and spikelets up to 1/4" long. *L. virginica* is not as tall (up to 3 feet) and produces smaller spikelets (1/6"-1/8" long). Flowers from July to September.



Rice cut-grass can grow in densely packed stands making it difficult to walk through and may result in numerous cuts on any exposed skin from the serrate leaves.

## False pimpinell

Scientific Name: *Lindernia dubia* (L.) Pennell

Family: Scrophulariaceae (Snapdragon Family)

**Habitat and Distribution:** Common on the exposed

**Field Characteristics:** Small plant grows to no more than 7-8" tall. Leaves are opposite and may have a few teeth. Flowers are white to pale violet tubular flowers on an extended stalk (pedicel) that are usually as long or slightly longer than the leaves. Flowers from late May through August.



This small plant may be easily missed if not looking for it. Tends to disappear from OWC during high water years.

## Cursed crowfoot

Scientific Name: *Ranunculus sceleratus* L.

Family: Ranunculaceae (Buttercup Family)

**Habitat and Distribution:** Eight species of *Ranunculus* have been reported in OWC occurring in varying aquatic habitats. In OWC, *R. sceleratus* is typically found in shallow water scattered among the dead stems of *Phragmites*.

**Field Characteristics:** Flowers and fruit are often helpful for correct identification. All *Ranunculus* species are distinguished by small 5-petaled yellow flowers. *R. sceleratus* flowers are approximately 1/4" across on extended stalks. Two leaf forms occur: basal leaves, typically 3 lobed, and linear stem leaves. Flowers in April and May.



The conspicuously deeply lobed basal leaves (not divided into multiple leaflets) helps to distinguish this *Ranunculus* from others. The basal leaves may be floating or erect.

## Green bulrush

Scientific Name: *Scirpus atrovirens* Willd.

Family: Cyperaceae

**Habitat and Distribution:** This perennial sedge is more common south of Star Island, scattered along the edges of the wetland. It tends to favor saturated but not flooded soils. The seeds of this plant are often eaten by waterfowl.

**Field Characteristics:** This tall sedge grows to about 4-1/2 feet, and in OWC may be confused with River bulrush and Woolgrass (not shown). It is distinguished from Woolgrass and River bulrush by the lack of sharply triangular stems (triangular to somewhat round) and the leaf-like bracts found at the base of each terminal cluster of flowers. It generally flowers from June through August.



As is characteristic of most sedges, Green bulrush leaves are "M" shaped (cross-section). Identification between the many species of sedges often requires a mature nutlet (seed).

## Cardinal flower

Scientific Name: *Lobelia cardinalis* L.

Family: Campanulaceae (Bellflower Family)

**Habitat and Distribution:** Although not common in OWC, it is generally observed at the transition zone from wet meadow to floodplain forest. It may also be found along stream margins of the floodplain forest.

**Field Characteristics:** Recognized by the brilliant red flowers; flowers are tubular shaped, often described as 2-lipped (bilaterally symmetrical – the upper lip 2-lobed and the lower 3-lobed), occurring in terminal racemes (pedicelled flowers arranged along the stem). Leaves are serrate, and arranged alternately along a generally hairy stem. Flowers from July to September. Great blue lobelia (*Lobelia siphilitica*) often occurs with Cardinal flower and may be distinguished by its blue flowers.



Close examination of the flowers reveals white-tipped stamens (pollen-bearing) extending from the flower.

## Blue flag

Scientific Name: *Iris versicolor* L.

Family: Iridaceae (Iris Family)

**Habitat and Distribution:** Scattered along the shore in OWC in wet soil this herbaceous plant is less common than once was. It is the only *Iris* with blue-violet flowers reported in OWC. *Iris pseudacorus* (yellow iris), escaped from cultivation, has yellow flowers and is occasionally seen.

**Field Characteristics:** Blue flag grows in clumps spreading through its rhizomes. The leaves are flat and pointed at the tip and non-flowering plants may initially be mistaken for *Typha* (cattail). The blue-violet flowers are irregular with 3 upper petals and 3 lower and larger sepals containing a yellow blotch at the base. The inflorescence is generally equal to or shorter than the height of the leaves. Flowers from late-May into July.



The encroachment of *Phragmites australis* (note the *Phragmites* to the left of the above photo) into the wetland has restricted the available habitat for *Iris versicolor*.

## Jewelweed (Touch-me-not)

Scientific Name: *Impatiens capensis* Meerb

Family: Balsaminaceae (Balsam Family)

**Habitat and Distribution:** This plant tends to the border of the wetland in wet meadows, the shoreline, or on the margins of the floodplain forest. A similar plant *Impatiens pallida* (Pale jewelweed) tends to the wet woods and stream banks and has yellow flowers.

**Field Characteristics:** Jewelweed is readily noticed by its orange flowers with reddish-brown spots. The flower is irregular (non-symmetrical) with an extended spur. As the fruit matures it will explode open when touched dispersing the seed. Flowers from June through September.



The sap from the stem of both *Impatiens capensis* and *I. pallida* is said to have medicinal properties acting as a fungicide effective in treating athlete's foot and alleviating the symptoms of poison ivy.

## Swamp rose mallow

Scientific Name: *Hibiscus moscheutos* L.

Family: Malvaceae (Mallow Family)

**Habitat and Distribution:** Scattered throughout OWC in wet soil to shallow water. Often more common along the shore, although it is less common today with the spread of *Phragmites australis*. The largest population is found south of the railroad in the large wet meadow adjacent to the swamp forest and creek channel.

**Field Characteristics:** A tall herbaceous plant, up to 6-7 feet tall that takes on a shrub-like appearance. The leaves are broad and may be shallowly lobed. The large showy flowers, about 5 inches wide, are pink tending to be darker toward the center. Flowers from July to August.



South of the railroad overpass and adjacent to the creek channel, large shrub-like plants grow interspersed with reed canary grass (*Phalaris arundinacea*).

## Lake sedge

Scientific Name: *Carex lacustris* Willd.

Family: Cyperaceae (Sedge Family)

**Habitat and Distribution:** More common in the nearshore areas in wet soil; often grows in dense stands. One of the few plants that has been able to withstand the invasion of *Phragmites australis* into OWC.

**Field Characteristics:** A tall sedge with somewhat spongy triangular stems and m-shaped leaves extending to 3 feet tall. The fertile shoots reach a similar height. Contains both staminate and pistillate spikes. Identification of the sedges often requires mature perigynia, a sac-like structure that encloses the fruit (achene). Flowers throughout the growing season.



Note the individual perigynium (right) contained within the pistillate spike.



## Water plantain

Scientific Name: *Alisma subcordatum* L.

Family: Alismataceae (Water-plantain Family)

**Habitat and Distribution:** Not common in OWC; plants often growing singly along the shore in wet soil with other emergent plants.

**Field Characteristics:** An erect plant growing from 1-3 feet tall. The leaves which are broad and ovate are basal only. The inflorescence is highly branched producing small white (to perhaps slightly pink) flowers with 3 petals. Flowers from July to August.



*Sagittaria latifolia* (broad-leaf arrowhead), seen in the background, is a member of the same family as Water-plantain and often grows in association with it in OWC.

## Marsh milkweed

Scientific Name: *Asclepias incarnata* L.

Family: Asclepiadaceae

**Habitat and Distribution:** Its distribution may vary annually, often determined by water levels. Commonly found in wet meadows or fringe areas of the wetland having saturated soils but typically not inundated. Over time milkweed will often be displaced by *Phragmites australis* (Common reed).

**Field Characteristics:** Its long lanceolate leaves are opposite or in whorls. If you break the stem, it will exude a white milky sap. Its bright pink flowers will bloom as early as June but more often may be seen in OWC by late July and into mid-August. The distinctive fruit (not shown here) is a long pod which upon splitting will release seeds attached to tufts of hairs.



This tall (>3 feet) herbaceous plant often extends above its neighbors. Milkweed may still be found scattered along the fringes of open areas of shore in OWC; often in areas lacking extensive growth of *Phragmites*.

## Buttonbush

Scientific Name: *Cephalanthus occidentalis* L.

Family: Rubiaceae

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**Habitat and Distribution:** These deciduous shrubs grow scattered along the shore of OWC and in the small embayments that fringe the wetland. It is more frequently found in the swamp forest bordering the wetland to the south.

**Field Characteristics:** Buttonbush is a small shrub (~10 feet in height) with numerous branches containing opposite (sometimes whorled) leaves that are oblong to somewhat lanceolate. It may be distinguished by its unique flowers and fruits which are packed into spherical heads. This shrub flowers in OWC from June through mid-August.



Growing amongst the ash (*Fraxinus pennsylvanica*), Buttonbush is the only understory woody plant found in the swamp forest of OWC.