

What's in Spirt Lake(s)?

Golden Sands Resource Conservation & Development Council, Inc.

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-Invasive plants and native plants presentation.

-Questions



What are Invasive Species?



- Non-native species that can “take over”
- Not all non-native species are invasive
- Successful because:
 - No natural predators, parasites, etc.
 - Aggressive, prolific, and mature early
 - Cause economical, ecological harm, health risks.

How do they get here?

- Shipping - ballast water
- Intentional introduction - stocking
- Canals - migration from the ocean
- Nursery industry
- Anglers/Bait industry
- Aquaculture
- Aquarium trade
- Food market





Once invasive species become established in a new area they are often transported to other places by being attached to trailers, footwear and other equipment or in water transported in boat bilges and livewells. WI laws require removing all aquatic plants and draining all water from equipment before leaving a boat landing.

Curly-Leaf Pondweed

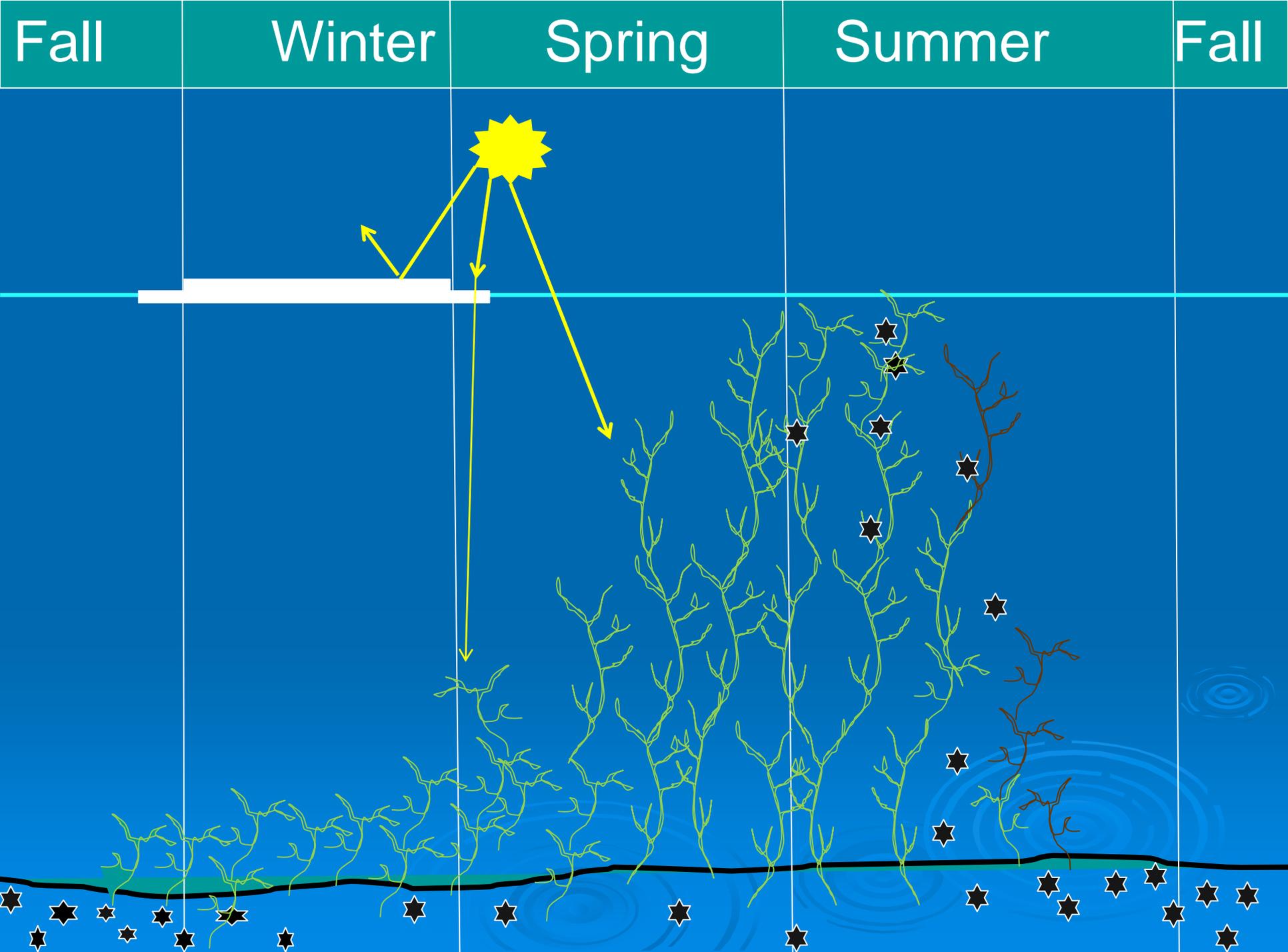


Michigan Sea Grant

- Accidentally introduced to US with common carp (late 1800s)
- Fairly widespread
- Can form dense mats, interfering with recreation and native plants
- Active very early in growing season – even under ice. Unique growth pattern.

Curly leaf pondweed (CLP) sprouts from a structure called a turion. Turions are produced in June and July. The plants then die and the turions sink to the lake bottom where they stay dormant until conditions are right for the turion to sprout a new plant. Typically this is in fall though research has shown CLP turions can stay dormant for over 5 years.

Turions that sprout in the fall grow until ice cover shades out sunlight. The plants stay dormant till ice off. At that point the CLP has a head start over native plants and quickly outcompetes them.



New growth of CLP prior to ice up.

Fall ice up through spring thaw.



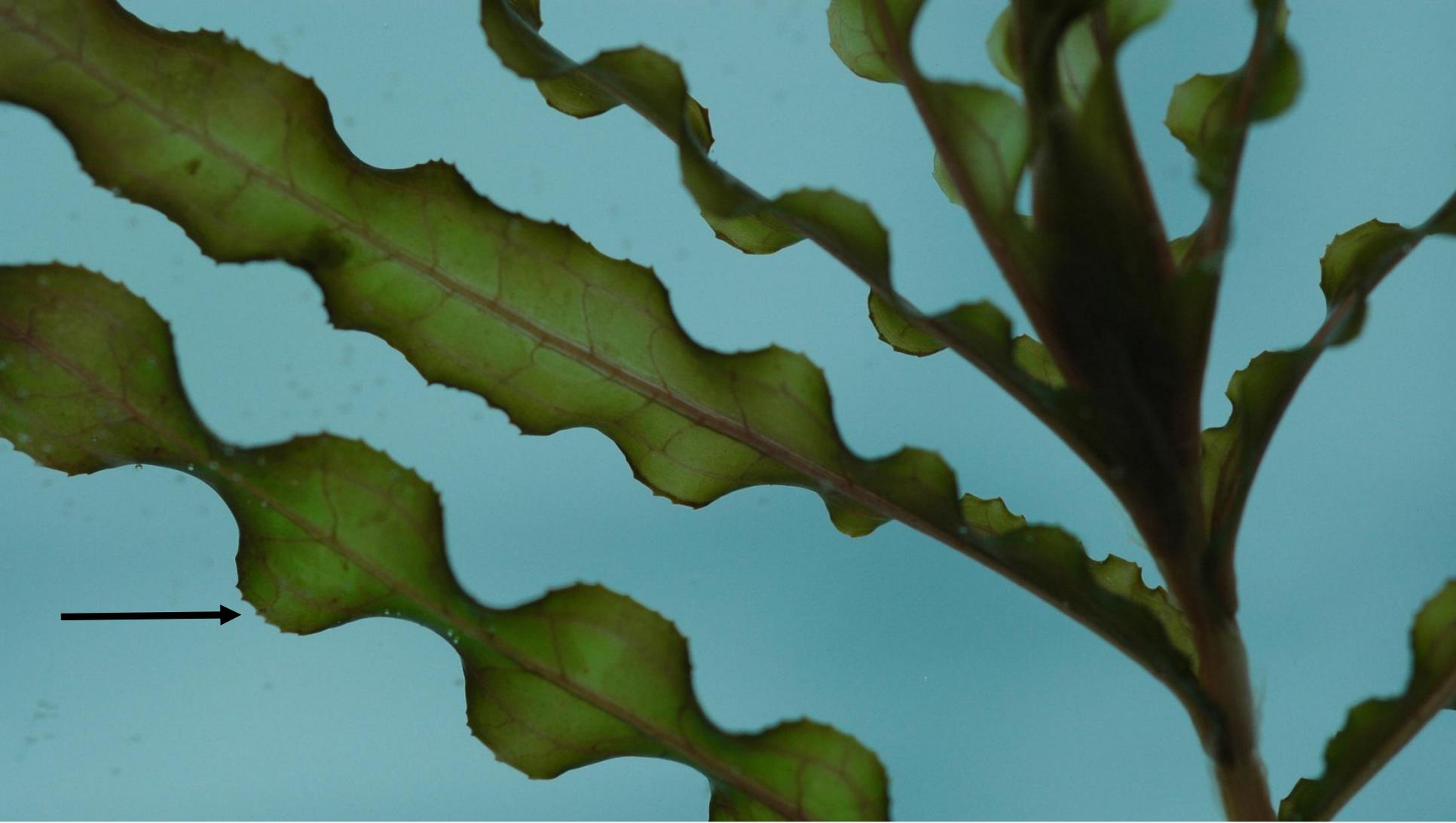
Photo courtesy of Chris Hamerla

www.smokeybear.com

16 USC 500 P4

CLP flower is formed once the plant reaches the water surface.





CLP leaves have a wavy appearance, like bacon or lasagna noodles. They are the only pondweed with a serrated leaf edge.



CLP turion. Turions are formed in June and July. The plant normally dies in mid to late July and the turions sink to the lake bottom to form new plants when conditions are right, typically in fall.



CLP turion that has fallen from the plant.

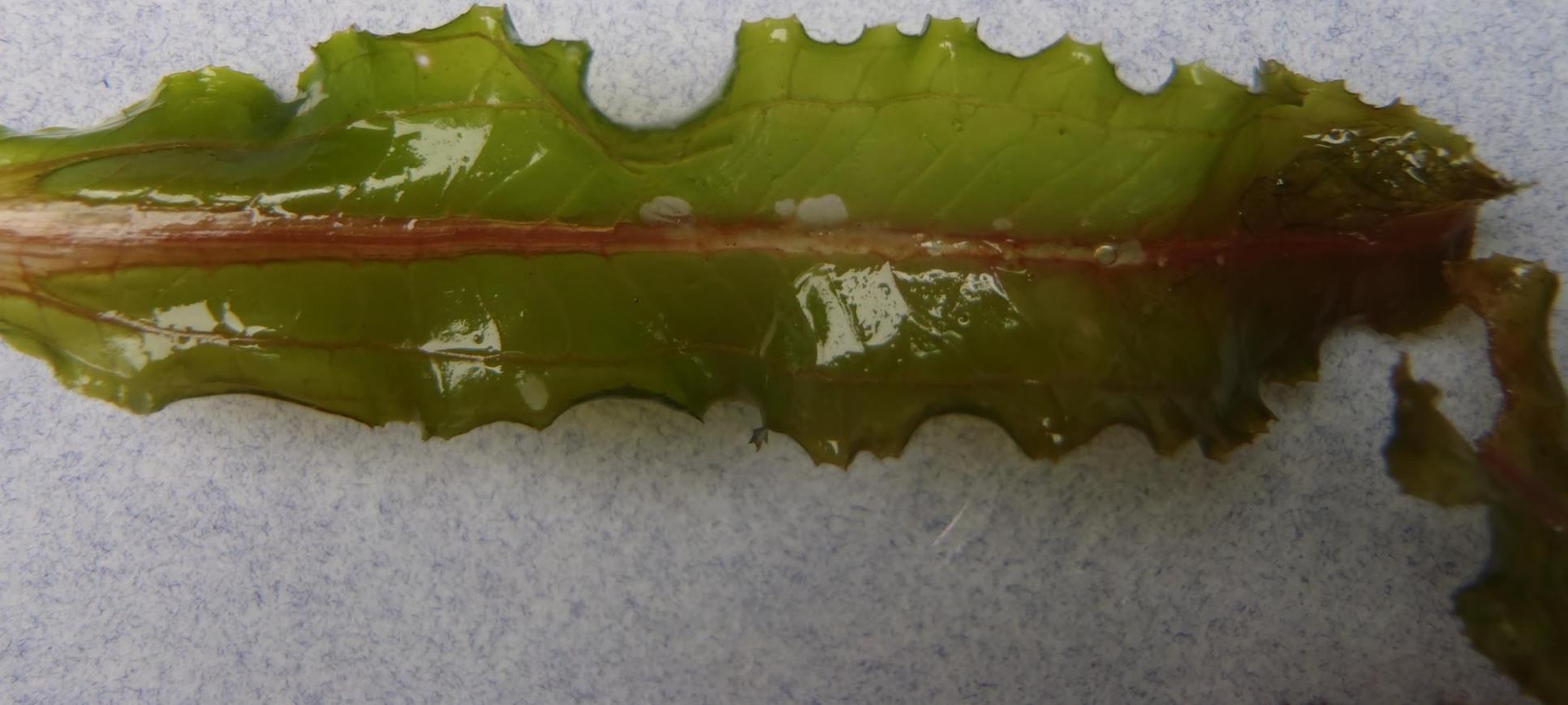


New growth CLP with turion still attached.

**CLP: wavy, serrated leaves,
round tips, and leaves do not
clasp the stem.**



CLP, serrated edges.



Curly leaf pondweed distribution in Spirit Lake as of 2015. Single green dots are individual plants. Green hash areas mean the plants are common but not dominant in the area. Since CLP dies back in July many people don't notice it.

When the plant dies it adds lots of nutrients to the lake which can increase algal blooms and decreased oxygen levels as bacteria decompose the CLP.



Eurasian watermilfoil: not in Spirit Lake!

This invasive plant is NOT in Spirit Lake. This is only for informational use.



4 or more leaves in a whorl,
12 or more leaflets per side of leaf.



Northern Milfoil/Eurasian Water Milfoil

Less than 12 leaflets



Typically 12 – 21 leaflets



There are 7 native milfoils in WI. They all typically have less than 12 leaflets per side of a leaf.

Rusty crayfish: have a reddish spot on each side of the shell/carapace.

There are 6 native crayfish in WI. None have the reddish spot like the rusty.



Brought to WI from Ohio to be used as fishing bait. In WI it is illegal to possess fishing equipment and live crayfish at the same time except on the Mississippi Rl.

Chinese mystery snail



Typically 1 – 2 inches in size. Originally introduced in San Francisco as a food source. They escaped rearing ponds and are now found in most waterbodies throughout WI.

Narrow leaf cattail: In the picture you see a cattail. This is actually the female flower. Note the green portion/gap of stem above the female flower, circled in red. This gap separates the female flower from the male flower. Invasive narrow leaf cattails have this gap.

Native, broadleaf cattails do not have a gap between the flowers. They touch.



Yellow Iris

Only the purple-ish/blue iris are native.



Now...

the good plants in Spirit Lakes!

Native plants create good diversity in a waterbody. They provide food and habitat for insects, fish, crustaceans, reptiles, birds and mammals.

Plants use nutrients in the water which prevents algae from becoming too abundant.

Plants slow wave action which reduces erosion due to waves.

Plants help water clarity by using nutrients and allowing sediments to settle out.

Blue flag iris



Photo courtesy of Chris Hamerla

Coontail



Elodea, Common waterweed



Ribbon leaf pondweed



Fern pondweed



Floating leaf pondweed





White stem pondweed

photo by Paul Skawinski

**Large leaf
pondweed**



Spiral fruited pondweed



Wild celery



Great food for waterfowl.



Clockwise:

Forked duckweed &
Filamentous Algae

Greater duckweed

Lesser duckweed





Spatterdock



White water lily



Left:
Arrowhead

Right:
Bur-reed

Both are good
food for
waterfowl and
muskrats.



A photograph of a marsh calla lily plant in a wetland. The plant features large, heart-shaped, bright green leaves with prominent veins. A single white flower is in bloom, showing a large, rounded spathe and a central, textured, greenish-yellow spadix. The plant is growing in a shallow, muddy, and wet environment with some water visible. The text "Marsh calla lily" is overlaid in the top right corner.

**Marsh
calla lily**

Good food for muskrats.

Pickerel weed



Pickereel weed fruits/seeds are good food for waterfowl and muskrats.



Questions?
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