



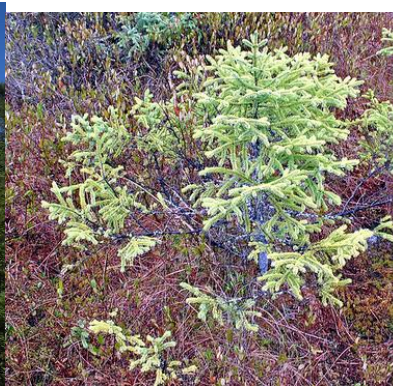
Common/ Important Wetland plants in The Land Between

Bog indicator Species

Black Spruce – Black Spruce – Tree, indicator species for a bog (is not common in fens - Tamarack usually dominates fens).



Stand of Black Spruce (photo Doug McGrady).



Black Spruce sapling.
(photo Aaron Carlson).



Characteristic form of Black Spruce - thick conical top and sparser towards the bottom.
(photo by Nicholas A. Tonelli).

- Needles are about ½ inch long, blue-green, stiff, four sided and have a blunt tip.
- Bark is thin and scaly and red brown turning darkish grey as a tree matures.
- The most distinguishing feature of this species is usually its form / silhouette – it will often have a cluster of dense branches at the top and be sparser towards the bottom, forming a club type silhouette.
- Lower branches often have ends that point upwards.
- Cones are egg shaped (spherical when open) and have a distinct purplish brown colour.

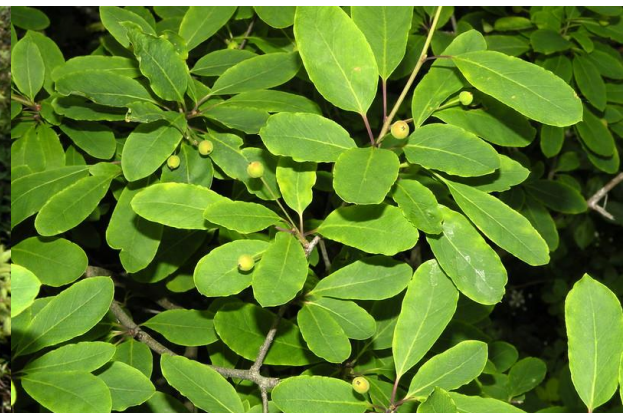
Mountain Holly – tall shrub, indicator species for a bog (doesn't grow in fens).



Mountain Holly flowers.



Mountain Holly with ripe fruit.



Mountain Holly with fruit not yet ripe (all photos by Doug McGrady).

- These shrubs grow in bogs along the edges.
- Leaves come off branch in alternate pattern are bright green on top, paler underneath and come to a sharp point.
- The stalks that attach the leaves to the branches (called the petiole) are purplish.
- Fruit are red/ purplish and berry like on long thin stalks.



Bog Laurel – low shrub, a bog indicator (doesn't grow in fens).



Bog Laurel flowers (photo by Forest Service Alaska Region, USDA).



Bog Laurel opposite leaf arrangement (photo by Dale Simonson).



Bog Laurel form, low growing shrub (photo by Cathie Bird).

- A low shrub with leathery dark green leaves that have a whitish underside and do not have stalks.
- Leaves come off branches in an opposite pattern, are oval/ elliptic in shape and their edges curl under a bit.
- Branches are flattened so that they only have with two edges.
- Flowers are pink in clusters at the ends of branches.

Sheep Laurel - low shrub, a bog indicator (doesn't grow in fens).



Sheep Laurel flower clusters are lower on the stem, branching off. In the same place leaves from the previous year veer off.



Sheep Laurel flower cluster (photo by Doug McGrady).



Sheep Laurel is a shrub that grows low to the ground (photo by peupleloup Flickr).

- Pink flowers closely resemble Bog Laurel flowers except they are usually darker pink and flower clusters are found lower down the plant – not at the end of branches like in Bog Laurel.
- Flower clusters are found in the axils of year old leaves, ie. the place where a branch veers off from the stem.
- Leaves also similar in shape and colour to Bog Laurel, but they have stalks and can sometimes appear whorled in groups of three (or opposite).



Virginia Chain Fern – bog indicator (doesn't grow in fens).



Upper side of Virginia Chain Fern (photo by Homer Edward Price).



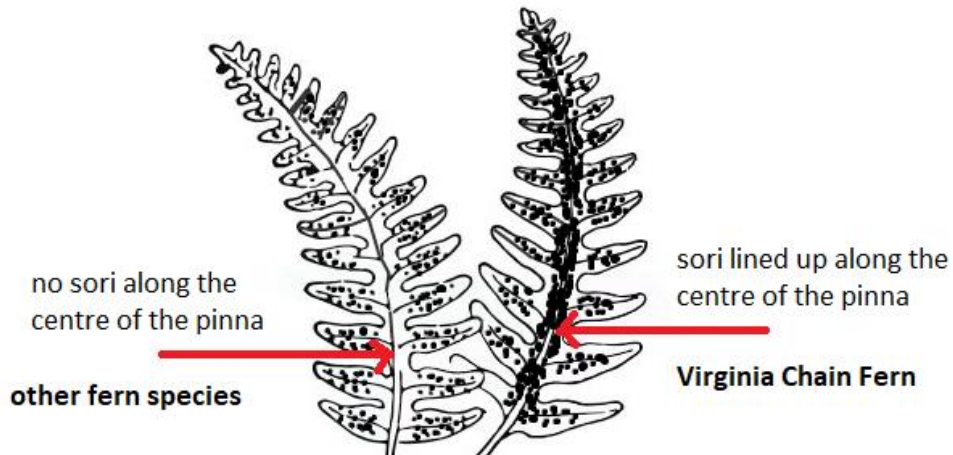
Underside of Virginia Chain form showing the distinct 2 lines of sori that form along the centre of each pinna (leaflet) (photo by Douglas McGrady).

NOT VIRGINIA CHAIN FERN



The underside of another fern species for comparison, see how there are no two chains of sori lined along the middle of each pinna.

- A typical fern with the fan-like leaves called fronds.
- The best way to distinguish this fern is to look for the sori (structures containing spores) on the underneath of the fern – shown in the middle photo.
- The sori form 2 distinct lines along the centre of each pinna – it is the only fern species in Canada to do this.





Fen Indicator Species

Bog Willow – low shrub, fen indicator (not found in bogs)



Pale underside of Bog Willow leaf
(photo by PA Natural Heritage Program).



Red showy female catkin
(photo by Peter Dziuk).



Male catkin (photo by Peter Dziuk).

- A low shrub with leathery leaves that come off branches in an alternate pattern and are pale and waxy underneath (thin pale waxy coating that can be irregular like you see on grapes).
- Leaves have obvious reticulate venation (web like veins, not parallel lines).
- They have catkins (cylindrical flower clusters without obvious petals).
- The female catkins are showy – each flower is reddish in colour and bulbous, the cluster (ie. the catkin) is found at the end of leaved branches.
- Male catkins have flowers that are less showy, not bulbous and pale yellow, and the clusters are found throughout branch, not only at end.

Bog Rosemary – low shrub, fen indicator (not found in bogs)



Long dark green linear leaves
(photo by Quinn Dombrowski)



Drooping pink flower cluster
(photo by Joshua Mayer)



Bog Rosemary without flowers (photo by
Nathan Dewar)

- Leaves are dark green above and white below, linear and come off the branch in an alternate pattern – they resemble rosemary leaves of the kind you would cook with (but leaves from this plant are toxic!!)
- White to pinkish flowers occur in small drooping clusters at the end of branches – flowers are shaped like urns, they are present in May and June.



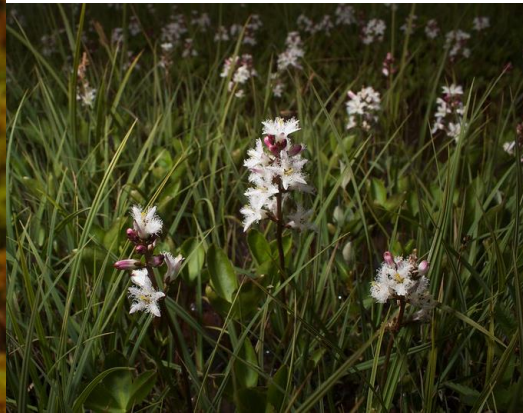
Buckbean – herb, fen indicator (not found in bogs)



Basal leaves with three leaflets
(photo by David Short).



Close up of Buckbean flower
(photo by Douglas McGrady).



Buckbean amongst other vegetation
(photo by Brian Gratwicke).

- Found in pools in fens.
- Leaves are compound each with 3 elliptic leaflets, and they are basal meaning they connect to the stem at the base (bottom) – leaf stalks are long.
- Flowers are unique with five white petals that have distinct white fringe, and they grow on taller stalks than leaves do.
- Flowers are present in spring and early summer.

Other Wetland Species

Tamarack – tree, found in fens and swamps, and sometimes in dwarf form in bogs or along the edges of bogs.



Distinct clumping of soft Tamarack needles that have turned yellow in the Fall.



Dwarfed Tamarack in a bog.



Tall growth form of Tamarack as you would see in fens or swamps (photo by Superior National Forest).

- Needles are about an inch long, soft and flexible. They are light green, but turn yellow and fall off in Autumn. They have 2 possible arrangements: they grow in clusters of 10 to 20 on short, slow growing twigs and on faster growing stems they occur as single needles spiraling the stem.
- The clusters of 10 -20 needles is a good way to identify this species.
- Bark is thin, smooth and grey when the tree is young but as it ages it becomes reddish brown and scaly.



Silver Maple – tree, found in swamps.



Mature Silver Maple bark,
photo by Plant Image Library.



Bright green top side of Silver
Maple leaf, photo by Kristian Peters.



Pale green/ white underside of
Silver Maple leaf, photo by Kristian
Peters.

- This Maple is easily distinguishable by its leaves' deeply cut lobes and pale whitish underside.
- Like all Maples, leaves come off from branches in an opposite pattern (ie. directly beside each other on either side of the branch).
- Mature bark is gray and develops furrows between long shaggy ridges.

Black Ash – tree, found in swamps.



Black Ash bark photo
by Eli Sagor.



Black Ash pinnate leaf
photo by Eli Sagor.



Black Ash swamp photo by Eli Sagor.

- Pinnate leaves (see middle photo) are made up of 7 to 11 leaflets, with each leaflet coming directly off the central stem without being attached to a leaf stalk.
- Leaflets have fine teeth along the edges.
- Mature bark is dark grey and flaky.



Red Maple – tree, found in swamps.



Red Maple leaves by Superior National Forest.



Red Maple Bark by Nicholas A. Tonelli.



Red Maple keys by Dan Keck.

- Leaf stalks are red, as well as the fruit (paired forking keys), flowers and autumn leaves (although leaves can sometimes be yellow or orange in autumn as well).
- Leaves resemble the classic Maple leaf on the Canadian flag, they have 5 main veins, and are more shallowly lobed (have less deeply cut lobes) than Silver Maple.
- Bark is grey and thin and becomes fissured forming long scaly ridges as it ages.

Northern White Cedar – tree, found in swamps.



White Cedar scale-like needles, by F. D. Richards.



White Cedar bark, by Aaron Carlson.



Cluster of White Cedars by F. D. Richards.

- Needles are flat and scale like and not sharp or pointed, they come off the branch fan-like in one horizontal plane.
- Cones are small and light brown and often clustered together.
- Bark is light brown/reddish and shreddy with shaggy long thin strips.



Sphagnum Moss – moss species found in bogs and fens.



Close up of Sphagnum moss,
photo by Rogene Schnell.



Sphagnum moss carpet, photo by
Adriana W. Van Leeuwen.



Red and yellow sphagnum,
Photo by Therese Hart.

- There are many species of moss, including many species of Sphagnum moss.
- Don't get bogged down with trying to identify specific species, in general look for moss that clumps together forming thick spongy mats. It can be green, brown, red or yellow.
- When looking close up, it will resemble little tiny trees, like seen in photo 1.

Pitcher Plants – carnivorous plant, found in fens and bogs.



Pitcher portion of the Purple
Pitcher plant, photo by
Bjorn S.



Purple Pitcher plants with flower and
pitchers in view, photo by Aaron Carlson.



Purple Pitcher Plant flower, photo
by bobistravelling (Flickr).

- These plants eat bugs!!
- Their red and green leaves form pitcher-like tubes that have downward pointing hairs and water inside and trap insects that fall or venture in.
- These insects help provide essential nutrients to these plants that live in nutrient depleted soils of bogs and fens.
- Flowers are dark red or maroon coloured with two sets of five large petals, with the inner set curving down and inwards.



Round-Leaved Sundew - carnivorous plant, found in fens and bogs.



White flower of a Round-Leaved Sundew, by Bjorn S.



Modified leaves of the Round-Leaved Sundew, by Bernard Dupont.



Round-Leaved Sundew, by Odd Wellies.

- This plant also eats bugs!!
- Its modified leaves have red hairs that have sticky glands at their tips, the leaf shape is round and the stalks of the leaves attach together at the base of the plant.
- Other Sundew species have different shaped leaves with the similar red hairs with sticky glands.
- This species' flowers are small with 5 white petals and are present in early to mid summer.

Cottongrass species – sedge species, found in bogs and fens.



Cottongrass species in a bog, by Matt Lavin.



Close up of Cottongrass species, by Randi Hausken.



Cottongrass species losing its Seeds, by Randi Hausken.

- There are 3 species of Cottongrass in Ontario that are often found in bogs and fens.
- They are all sedges, so they all have triangular stems which can be felt when you try to roll a stem between your fingers (you will feel edges – it will not feel round).
- Their fruit are covered in soft white hairs, so that the plants appear to have a wad of cotton at the top of them.
- At times they can cover wide expanses, as seen in the first photo.



Labrador Tea – herb found in bogs, and occasionally fens.



Multiple Labrador Tea plants showing leaf shape and young orange red stems. Photo by Leo-Seta Flickr.



Underside of Labrador Tea leaves, photo by Joshua Mayer.



Round flower clusters of white Labrador tea flowers, photo by Jason Hollinger.

- Grows to be between one and three feet tall.
- A woody plant, bark on its stem is reddish brown to orangey, and it stands uprights.
- Bark on stems of older plants is gray.
- Leaves are much longer than they are wide, dark green, and between 1 and 2 inches long with their edges curling under.
- The upper side of the leaves are glossy and dark green, and the undersides are hairy.
- This plant flowers in late spring with rounded clusters of 10 – 40 white flowers.

Royal Fern – found in bogs and fens.



Mature Royal Fern fronds (foliage), photo by Joshua Mayer.



Difference between central fertile frond (green because mature) and outer sterile fronds. Photo sourced from wildadirondacks.org.



Fertile frond that has turned brown because its spores have been released. Photo sourced from wildadirondacks.org.

- This fern does not look like a typical fern when it gets larger, instead it can appear more like a shrub once it matures.
- Its leaflets (called pinnules) are widely spaced from each other (compared to other ferns), and are very finely toothed, and come off the “branch” in an alternate pattern (not right opposite one another on either side).
- Its fertile fronds are different from its sterile fronds and are found in the centre of the plant.
- The fertile fronds stand more upright, have smaller leaflets that are covered in sporangia which house the spores (ferns’ versions of seeds).
- Fertile leaflets and their spore holding capsules are green when mature, but after the spores have dispersed they turn brown.



Sedges – narrow leaved family of plants with triangular stems, found in all wetlands.



Bottle Sedge, photo by Matt Lavin



Brownish Sedge, photo by Andrey Zharkikh.



Few-flowered sedge, photo by Len Worthington.

- “Sedges have edges” is a helpful rhyme that can help you determine if a “grass-like” plant in a wetland is a sedge or a rush.
- If you roll the stem of a sedge in your fingers, it will not roll easily and you will feel its distinct 3 edges because its stem is triangular.
- Sedges stems are solid (not hollow).
- Typically, sedges leaves come off the stem in 3 planes.
- Fruit are tiny, flat and nut like with only one seed.

Rushes - narrow leaved family of plants with round stems, found in all wetlands.



Soft rush, photo by Andreas Rockstein.



Path rush, photo by Andreas Rockstein.



Canada Rush, photo by Doug McGrady.

- Typically stems are round, so they can easily be rolled in between your fingers.
- Stems are solid at the nodes (places along stem where leaves, branches and flowers can grow out of).
- Leaves are usually found at the bottom of stems near the ground.
- Fruits is a capsule with many seeds.

Grasses – narrow leaved family of plants, with hollow and jointed stems, found in all wetlands.



Prairie Cord Grass, photo Aaron Carlson.



Reed Canary Grass, photo by Tom Brandt.



Canada Bluejoint, photo by USFWS Mountain-Prairie.

- Grasses have stems that are round, hollow and jointed (stem is wider throughout internodes, and thinner at nodes, see above for node definition)
- Leaves come off the stem in 2 planes.
- Fruit is a grain enclosed in 2 papery scales.



Steeplebush – A shrub, found in swamps and marshes.



Steeple-Bush flower cluster,
photo by Rebecca Krawczyk.



Steeple-Bush, photo by
Rebecca Krawczyk.



Steeple-Bush, photo by Doug
McGrady.

- A shrub with beautiful steeple-like flower clusters (long clusters that taper towards the top).
- Individual flowers are pinkish with five petals each.
- Leaves are dark green in top and underside is silvery and covered in small hairs.
- One plant tends to have multiple stems so it can look like multiple plants, and they often grow in colonies.

Jewelweed- herb, found in swamps and marshes.



Jewelweed flower, present in summer.
Photo by Liz West flickr.



Jewelweed flower and view of
Leaf characteristics, photo by
Carol Jacobs-Carre flickr.



Jewelweed cluster, by bobistravelling
flickr.

- Flowers are bright orange with red-brown spots and a distinct cone-like spur that extends behind the petals (see first and second photo).
- When fruit mature into thin, long green seed pods (resembling small pea pods) if you touch them they will explode sending their seeds flying! These fruit hang beside the flowers.
- Leaves are egg shaped and have jagged edges.



Yellow Pond Lily – aquatic emergent plant found in marshes.



Yellow Pond Lily, leaves (lily pad) and Flower, photo by Bryan Petrtyl.



Close up of Yellow Pond Lily flower, photo by Joshua Mayer.



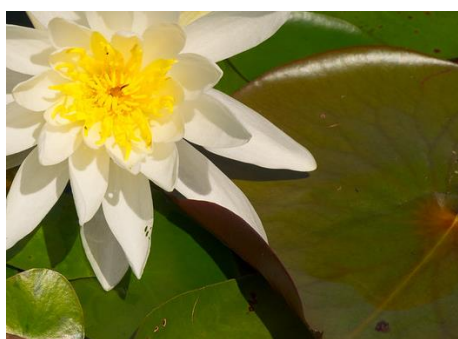
Far view of Yellow Pond Lilies, photo by Joshua Mayer.

- Leaves (lily pads) are heart-shaped with the edges before the cut into the middle being rounded (as opposed to White Water Lily leaves edges which are angular and v-cut and not rounded like a heart).
- The lily pads have parallel veins that for the most part do not branch.
- The flowers are bright yellow and can float on surface or be standing above surface on a stalk.
- 6 outer yellow petals cup the inner parts of the flower which are: small thin yellow petals and yellow male reproductive parts (see middle photo).
- Do not confuse this yellow flower with that of invasive floating heart which has 5 yellow fringed petals (with no inner petals like the pond lily) but also has lily pads for leaves and often stands above the water on a stalk.

White Water Lily – aquatic emergent plant found in marshes.



White Water Lily flower, photo by Joshua Mayer.



White Water Lily palmate venation vein pattern in leaf (lily pad), photo by Joshua Mayer.



White Water Lily flower and leaves from further away, photo by Joshua Mayer.

- Leaves are lily pads that have a straight v cut in them, and are palmately veined, meaning that their veins branch (see middle photo).
- Flowers are white and showy with many petals surrounding yellow reproductive structures in the middle.
- Flowers float on the surface, they do not stand above on a stalk like the Yellow Pond Lily can.
- The flowers can open and close and often only are seen open during mid-morning and early afternoon during the summer.



Watershield – emergent aquatic plant, found in marshes.



Watershield leaves and flower, photo by Aaron Carlson.



Watershield flower close-up, photo by Aaron Carlson.



Watershield flower stalk high above water, photo by Rebecca Krawczyk.

- Another plant with “lily pads” for leaves.
- These lily pads are oval and not split (no cuts) and are attached to long slimy stalks attached to slimy stems.
- Flowers are present in early summer and are purple – red, with an outer row of 3 petals and in inner row of 3 petals.
- Flowers grow on thick stalks, standing above the water.

Common Cattail – aquatic emergent plant, found in marshes, and less frequently in fens and swamps.



Common Cattail brown spike, photo by Ryan flickr.



Common Cattails, photo by Andreas Rockstein.



Common Cattails without brown spikes visible, photo by Forest and Kim Starr.

- Stems can grow to be over a metre tall.
- The giveaway for this plant is its brown spikes found at the end of its stems.
- These Spikes contain the plant's small fruit which bear the seeds for the plant.
- The fruits become brown as they which give the spikes their colour, they are green in the early summer
- Leaves of this species are flat and between 10 and 25 mm wide.
- Leaves of another common Cattail species you may encounter (called the Narrow-leaved Cattail) are only 5 – 10 mm wide.



Milfoils – submerged plants found in marshes.



Native Northern Water Milfoil,
photo by Andrey Zharkikh.



Eurasian Water Milfoil – an
invasive species, photo by
Dave Britton.



Eurasian Water Milfoil – an invasive
water milfoil, photo by Chris Evans.

- Milfoils resemble underwater conifers, and have feather like leaves that spread out like fans and are soft and flexible.
- They can form thick mats.
- They are a hard group to identify at the species level, but their fruits and flowers can help with this.
- Eurasian Water Milfoil is an invasive species that can quickly spread and form thick mats.

Pondweeds – submerged plants found in marshes.



Floating-leaved Pondweed, photo by
Andreas Rockstein.



Variable-leaved Pondweed which has broader floating
leaves with stalks and narrower leaves without stalks
below the surface, photo by Jeremy Hall.

- These aquatic plants have long stems that are flexible and move easily under water.
- They float in the water or at the water's surface.
- Floating leaves are often broader while leaves under the surface tend to be thinner in shape (but not always).
- Usually they are anchored to the water bottom by roots or rhizomes.
- Leaf shape varies, and this group is definitely a hard one to identify at the species level – often seeds are and these are only collectable later in the season when fruit mature.



Duckweeds – small floating plants found in marshes and swamps.



Ducks eating a species of Duck weed, photo by Andy Rogers.



Duckweed species close-up, photo by Carolyn Jewel.



Frogs in duckweed, photo by normanack flickr.

- Any small, free floating plants – not differentiated into a leaf and stem.
- They often have small thread like “roots” that extend a few cm below them, but do not connect them to anything.
- They can be found in areas with standing water, or very slow moving water such as quiet ponds, marshes, swamps, and pools in road side ditches.
- They are considered true “floating” plants because they do not have roots or rhizomes that connect them to the water bottom, so they really are free floating.

Phragmites australis* subspecies *australis– an invasive tall grass found along the outskirts of many wetlands, especially when a road edge is present.



Dense stand of Invasive *Phragmites* with full, dense flower tufts (inflorescences) that persist all year. Photo by Andrey Zharkikh.



Native Stems are red with leaf sheaths not overlapping generally, and invasive species leaves do overlap along the stems so stems appear more green. Photo by University of Minnesota.



Native flower clusters are sparser and less full compared to invasive flower clusters which are denser and also persist more through winter. Photo by University of Minnesota.



- Invasive *Phragmites* is causing big problems all over Ontario as it outcompetes native plants forming dense stands and is very hard to get rid of.
- It is a tall perennial grass (doesn't die in winter) with spikelets (modified flower clusters) at the top.
- We do have a native species that closely resembles this aggressive invasive.
- As the pictures show – the invasive species' flowers are bushier and fuller, and its leaves sheaths are bound tighter around the stem so stems of the invasive species are greener, while Native species with looser, non-overlapping leaf sheaths expose a red stem.
- **PLEASE BE VERY CAREFUL NOT TO INADVERTANTLY SPREAD SEEDS OF THIS INVASIVE PLANT.**



Links for photos

Stand of Black Spruce - https://www.flickr.com/photos/douglas_mcgrady/

Black Spruce sapling <https://www.flickr.com/photos/59003943@N00/>

Black spruce form - https://www.flickr.com/photos/nicholas_t/

Mountain Holly photos - https://www.flickr.com/photos/douglas_mcgrady/

Bog Laurel flowers – https://www.flickr.com/photos/alaska_region/

Bog Laurel alternate leaf pattern - https://www.flickr.com/photos/dale_simonson/

Bog Laurel form (low to ground) - <https://www.flickr.com/photos/seabird7/>

Sheep Laurel flower cluster- https://www.flickr.com/photos/douglas_mcgrady/

Sheep Laurel form (low to ground) - <https://www.flickr.com/photos/peupleloup/>

Upper side of Virginia Chain Fern - <https://www.flickr.com/photos/28340342@N08/>

Underside of Virginia Chain Fern with sori – https://www.flickr.com/photos/douglas_mcgrady/

Bog Willow pale underside of leaf - <https://www.flickr.com/photos/143646335@N04/>

Bog Willow female and male catkin - <https://www.minnesotawildflowers.info/shrub/bog-willow>

Bog Rosemary long green linear leaves - <https://www.flickr.com/photos/quinnanya/>

Bog Rosemary drooping pink flower - <https://www.flickr.com/photos/wackybadger/>

Bog Rosemary without flowers - <https://www.flickr.com/photos/157919384@N05/>

Buckbean basal leaves with 3 leaflets - <https://www.flickr.com/photos/14583963@N00/>

Close up of Buckbean - https://www.flickr.com/photos/douglas_mcgrady/

Buckbean amongst other vegetation - <https://www.flickr.com/photos/briangratwicke/>

Mature Silver Maple bark - <https://www.flickr.com/photos/138014579@N08/>

Silver Maple underside and topside of leaf - <https://www.flickr.com/photos/fabelfroh/>

Black Ash photos - <https://www.flickr.com/photos/esagor/>

Red Maple Leaves - <https://www.flickr.com/photos/superiornationalforest/>

Red Maple Bark - https://www.flickr.com/photos/nicholas_t/

Red Maple Keys - <https://www.flickr.com/photos/140641142@N05/>

Northern White Cedar scale like needles - <https://www.flickr.com/photos/50697352@N00/>

Northern White Cedar bark - <https://www.flickr.com/photos/59003943@N00/>

Northern White Cedar cluster - <https://www.flickr.com/photos/50697352@N00/>

Sphagnum Moss close up - <https://www.flickr.com/photos/33967938@N03/>

Sphagnum Moss carpet - <https://www.flickr.com/photos/chancelrie/>



Red and yellow Sphagnum Moss - <https://www.flickr.com/photos/teresehart/>

Pitcher portion of Purple Pitcher Plant - <https://www.flickr.com/photos/40948266@N04/>

Purple Pitcher Plant, flower and pitcher in view - <https://www.flickr.com/photos/59003943@N00/>

Purple Pitcher Plant, flower - <https://www.flickr.com/photos/bobistraveling/>

Round-Leaved Sundew flower - <https://www.flickr.com/photos/40948266@N04/>

Modified leaves of Round-Leaved Sundew - <https://www.flickr.com/photos/berniedup/>

Round-Leaved Sundew plant - <https://www.flickr.com/photos/rhubarbcrumbleandcustard/>

Cottongrass in a bog - https://www.flickr.com/photos/plant_diversity/

Close up of Cottongrass, and Cottongrass losing its seeds - <https://www.flickr.com/photos/randihausken/>

Multiple Labrador Tea plants - <https://www.flickr.com/photos/uncle-leo/>

Labrador Tea underside of leaves - <https://www.flickr.com/photos/wackybadger/>

Labrador Tea Flower Clusters - <https://www.flickr.com/photos/7147684@N03/>

Mature Royal Fern fronds - <https://www.flickr.com/photos/wackybadger/>

Royal Fern fertile and Sterile frond pictures - <https://wildadironacks.org/adirondack-ferns-royal-fern-osmunda-regalis.html>

Bottle Sedge - https://www.flickr.com/photos/plant_diversity/

Brownish Sedge - <https://www.flickr.com/photos/zharkikh/>

Few flowered Sedge - <https://www.flickr.com/photos/lennyworthington/>

Soft Rush and Path Rush - <https://www.flickr.com/photos/74738817@N07/>

Canada rush - https://www.flickr.com/photos/douglas_mcgrady/

Prairie Cord Grass - <https://www.flickr.com/photos/59003943@N00/>

Reed Canary Grass - <https://www.flickr.com/photos/12567713@N00/>

Canada Bluejoint - <https://www.flickr.com/photos/usfwsmtnpairie/>

Steeplebush photos (first 2) - <https://botanigal.com/blog/>

Steeplebush third photo - https://www.flickr.com/photos/douglas_mcgrady/

Jewelweed flower - <https://www.flickr.com/photos/calliope/>

Jewelweed flower and leaf - <https://www.flickr.com/photos/carolannie/>

Cluster of Jewelweed - <https://www.flickr.com/photos/bobistraveling/>

Yellow Pond Lily, leaves and flower - <https://www.flickr.com/photos/wrst/>

Close-up and far view of Yellow Pond Lily - <https://www.flickr.com/photos/wackybadger/>

White Water Lily photos - <https://www.flickr.com/photos/wackybadger/>

Watershield leaves and flower, and flower close-up - <https://www.flickr.com/photos/59003943@N00/>



Watershield high stalk of flower - <https://botanigal.com/blog/>

Common Cattail characteristic brown spike - <https://www.flickr.com/photos/ryanready/>

Common Cattails - <https://www.flickr.com/photos/74738817@N07/>

Common Cattails no brown spikes visible - <https://www.flickr.com/photos/starr-environmental/>

Invasive Eurasian Water Milfoil in a hand for scale - <http://www.invadingspecies.com/eurasian-water-milfoil/>

Invasive Eurasian Water Milfoil - <https://www.ontario.ca/page/eurasian-water-milfoil>

Native Northern Water Milfoil - <https://www.flickr.com/photos/zharkikh/>

Floating-leaved Pondweed - <https://www.flickr.com/photos/74738817@N07/>

Variable-leaved Pondweed - <https://www.flickr.com/photos/anax/>

Ducks eating Duckweed – <https://www.flickr.com/photos/cobaltfish/>

Duckweed Close-up - <https://www.flickr.com/photos/cjewel/>

Frogs in Duckweed - <https://www.flickr.com/photos/29278394@N00/>

Dense stand of Invasive Phragmites - <https://www.flickr.com/photos/zharkikh/>

Invasive and Native Phragmites comparison photos -

https://www.maisrc.umn.edu/sites/maisrc.umn.edu/files/mnphrag_identification_guide_v6-18.pdf