

Field Guide to the Common Wetland Plants of West Virginia



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WVDEP presents

a guide to the 100 most common wetland plants found in West Virginia.

What is a wetland?

Wetlands are areas where the land is covered by shallow water or the soil is saturated to or near the surface for at least two weeks during the growing season. Wetlands are wet enough to affect the types of soils and plants that can occur, but they may also be dry at certain times of the year. Plants and many animals found in wetlands are specially adapted to live in these wet conditions. Wetlands can be found in every county in West Virginia. Some common names for different types of wetlands are swamp, marsh, and bog.

All wetlands have 3 characteristics:

1. **Water** at or near the soil surface for some part of the year,
2. **Hydrophytic (wetland) plants**, which are plant species adapted to living in wet soil conditions,
3. **Hydric soils**, which are soils that are permanently or seasonally flooded or saturated, resulting in oxygen loss from soil pores (anaerobic conditions).

This guide introduces the 100 most common wetland plants in the state and provides tips on how to distinguish them from similar species.

How this Guide is Organized:

The common plants in this guidebook are organized into 9 plant groups denoted by colored bars across the top of each plant page and growth habit icons in the top right-hand corner of each plant page.

Plant Groups in this Guide:



EVERGREEN TREE - Woody plant more than 6 meters tall when mature and typically with a single trunk. Leaves are needle-like and remain green through the winter.



BROADLEAF TREE – Woody plant more than 6 meters tall when mature and typically with a single trunk. Leaves are broad and shed in winter.



SHRUB – woody plant less than 6 meters tall when mature and typically with multiple woody stems.



VINE – woody plant with a climbing or trailing stem.



AQUATIC – flowering plant that is typically submerged in water or floating on water.



FORB – flowering plant with broad leaves and without woody tissue.



GRAMINOID – grass-like flowering plant including grasses, sedges and rushes.



FERN – non-flowering vascular plant that reproduces by spores.



MOSS – non-flowering non-vascular plant that lacks true roots, is low growing, and reproduces by spores.

Each of the common wetland plant species is presented on individual pages. Listed at the top of each plant page are both the **scientific and common names**, as well as the **plant family** to which that plant belongs. Nomenclature follows the USDA Plants list (<https://plants.usda.gov>).

Native – A plant that is a part of the balance of nature that has developed over hundreds or thousands of years in a particular region or ecosystem. Only plants found in West Virginia prior to European settlement are considered to be native.

Non-native – A plant introduced with human help (intentionally or accidentally) to a new place or new type of habitat where it was not previously found.

Invasive – A plant that is able to establish on many sites, grow quickly, and spread to the point of disrupting plant communities or ecosystems.

Wetland Indicator Status (WIS)

The following are standard ranking designations indicating a plant species' likelihood of occurring in a wetland.

WIS Code	Definition	% Occurrence
OBL	Obligate: Occurs almost always in wetlands under natural conditions	99
FACW	Facultative Wetland: Usually occurs in wetlands but occasionally found in non-wetlands	67-98
FAC	Facultative: Equally likely to occur in wetlands and non-wetlands	34-66
FACU	Facultative Upland: Usually occurs in non-wetlands, but occasionally found in wetlands	33-1
UPL	Upland: Almost always occurs in non-wetlands under natural conditions in our region	<1

Coefficient of Conservatism (CoC)

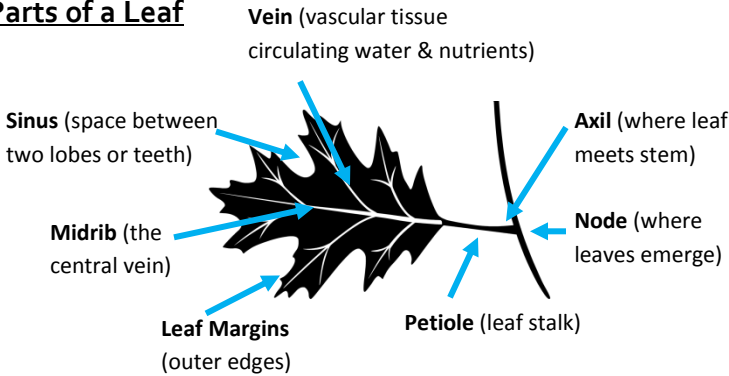
This is a numerical value assigned to plant species indicating their invasiveness, their likelihood of occurring in a particular habitat, and their tolerance and response to habitat disturbances. The Coefficient of Conservatism is the basic variable used in Floristic Quality Assessment (FQA). The principal concept of the FQA is that the quality of a natural plant community can be objectively evaluated by the degree of plant species' conservatism to the natural community. Values used for wetland assessment in West Virginia are:

CoC	Description
-5	Highly aggressive invasive plants
-3	Moderately invasive plants
-1	Occasionally invasive plants
0	Non-native non-invasive plants
1-2	Native plants with a wide range of ecological tolerances and adapted to severe habitat degradation. These weedy species thrive under conditions of anthropogenic disturbance.
3-4	Native plants associated with more stable though degraded habitat, but which may be found in a variety of habitats. They are generally widespread and not an indicator of a particular community type.
5-6	Native plants with an intermediate range of ecological tolerances and often associated with a specific natural vegetation community. They include many common dominant species that can persist under moderate degradation.
7-8	Native plants with a narrow range of ecological tolerances, often associated with advanced successional stage, and typically associated with stable natural vegetation communities and natural areas. They can persist where habitat has been slightly degraded.
9-10	Native plants with a very high degree of fidelity to a narrow range of pristine habitats, and highly sensitive to anthropogenic disturbance. They are generally restricted to high-quality natural areas.

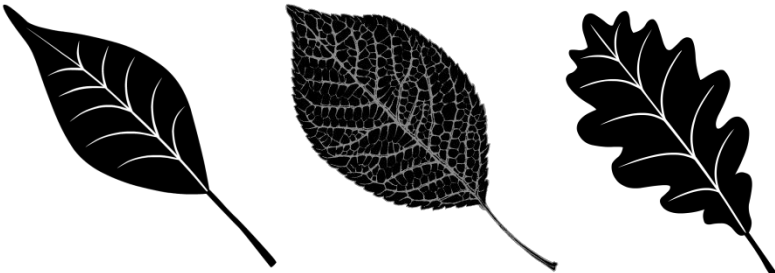
Plant Identification Tips

Plant identification involves carefully observing patterns in the many characteristics that define each plant species. This book is a beginning tool to help you identify the most common wetland plants in West Virginia, and so we have used non-technical descriptions as much as possible. The focal characteristics include size, habit or shape, stem and branch structure, leaf composition and arrangement, textures, colors, flowers and fruits. Also knowing the flowering and fruiting times and typical site or habitat are helpful. Often there are species that may be very similar at first glance and growing in the same habitat. Always double check all the characteristics. Included is a section on each plant page to help you avoid mistaking these similar species.

Parts of a Leaf



Smooth, Toothed, or Lobed Margins?



Leaf Structure

Simple



Palmately Compound



Pinnately Compound



Leaf Arrangement

Alternate



Opposite



Whorled



Identification Tip for Strap-leaved Graminoids



Typha



Acorus

Cut a cross-section of the leaf and compare to the diagram.



Iris

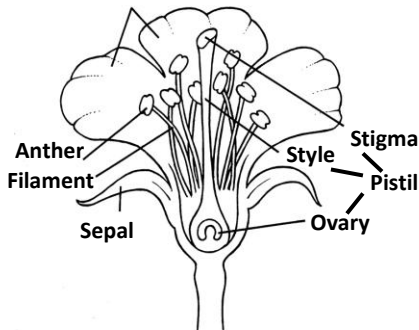


Sparganium

Parts of a Flower

Flowers have different parts that can be used to help identify a particular species.

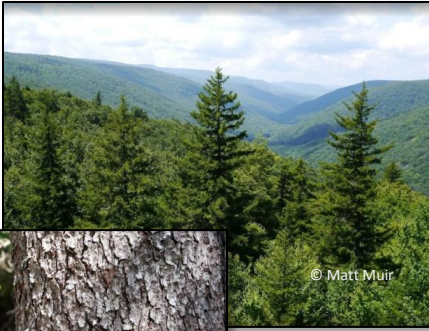
Petals





Picea rubens

(red spruce)



© Matt Muir



© Mike Mitchell

Pinaceae Family
Native FAC CoC=8

Description:

Evergreen tree (to 35 m tall) with a narrow cone-shaped crown, whorled branches, and reddish rough bark with irregular thin brown scales. Twigs and buds are orange-brown, with fine hairs along

twigs, and lower branches spreading downward.

Needles (leaves)

(12 to 15 mm) are yellow-green to dark-green, 4-sided so that they roll easily between the finger and thumb, sharply pointed, and arise from a peg-like base (sterigma). The sterigma persists after needles fall, giving the denuded branches a rough texture.



© Arthur Haines

Pollen and Seed Cones: May to June; October to November. Male cones are cylindrical, reddish turning yellow-brown when pollen is released. Young seed cones are purplish developing into woody cones (3 to 4.5 cm long) with smooth-edged, fan-shaped scales (widest near the tip), enclosing the developing seeds.



© Owen Clark
Picea rubens

Habitat: Seepage swamps, bogs, and forests at high elevations.

Similar species: *Picea abies*, Norway spruce, a non-native has larger cones 12 to 16 cm long (versus only 3 to 4.5 cm for *P. rubens*). Most branches are conspicuously drooping in mature trees. Young *Picea* trees are difficult to tell apart, but *Picea abies* twigs typically have few hairs, and the individual needles are flatter so they don't roll easily between the finger and thumb.



© Fred Lost

Picea abies



Pinus rigida

(pitch pine)



Pinaceae Family
Native FAC CoC =5

Description:

Evergreen tree (to 30 m tall) with dark to yellowish-brown platy rough bark. Needles (leaves) are 4 to 15 cm long, dark green to yellow-green, stiff, twisted and straight with 3

per fascicle (bundle of needles wrapped at base by papery sheath). Dense needle tufts often grow from the trunk and larger branches.

Pollen and Seed Cones:

May. Male and female reproductive structures form separate cones on the same tree with male

cones cylindrical, changing from red to yellow, and held in large clusters at twig tips. Seed cones are sessile (stalkless), 4.5 to 8 cm when mature, with a dark red-brown band on scale tips and curved sharp spines. Seeds are attached to a wing and are released in the fall of the second year after pollination.



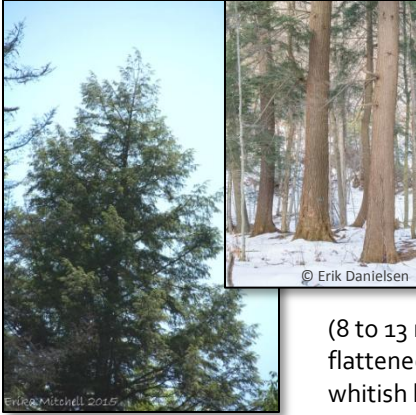
Habitat:

Sandy acid soils on moist to dry slopes and ridges and mountain swamps.

Similar species: *Pinus virginiana*, Virginia pine, is slightly smaller (to 20 m tall) with 4 to 8 cm long twisted needles (none straight) and 2 needles per fascicle. *Pinus pungens*, table-mountain pine, is also slightly smaller (to 21 m tall) with 3 to 7 cm long straight needles, 2 (sometimes 3) needles per fascicle and stout prickles on its cones.



Tsuga canadensis (eastern hemlock)



Pinaceae Family
Native FAC CoC =8

Description:

Evergreen tree (to 30 m tall) with a lax cone-shaped crown, spreading drooping lower branches and scaly deeply fissured dark brown bark. Leaves (8 to 13 mm long) are needle-like, soft, flattened, with shiny green upper surface and whitish lower surface with a green mid-rib.

The short-stalked leaves are arranged spirally around the twig, but petioles (stalks) of the upper and lower leaves twist so the branch has a flattened appearance.

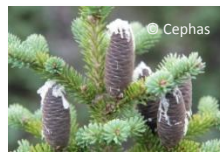
Pollen and Seed Cones: March to April. Male and female reproductive structures are separate on the same tree, with male cones in leaf axils and seed cones at the end of the previous year's twigs. Fruits are winged seeds forming in the mature leathery seed cone (1.5 to 2.5 cm).



Tsuga canadensis

Habitat: Moist to dry upland forests, seepage swamps, stream banks, and cool ravines.

Similar species: *Picea rubens*, red spruce, has 4-sided stiff needles (not soft, flattened leaves) pointing out in all directions from the branches. The cones are larger (3 to 4.5 cm) and are woody (not leathery). See *Picea rubens* page for more details. *Abies balsamea*, balsam fir, has a conical more compact shape, longer needles (10 to 32 mm) and larger resinous cones (3 to 10 cm).



Abies balsamea



Picea rubens



Acer negundo (box elder)



Aceraceae Family
Native FAC CoC =2

Description:

Usually a small tree (to 25 m tall), often with multiple trunks; light brown, medium to coarse bark with vertical furrows and ridges. Current year twigs are typically green and smooth, often sprouting from the trunk and older growth twigs are purple-brown. The crown is many branched, wide-spreading with low hanging branches. Leaves are compound,

opposite, with 3 to 5 leaflets. Leaflets are smooth, elliptic (4 to 15 cm long), tapering to a pointed tip with coarse-toothed to lobed margins. The light green

leaves turn yellow in the fall.

Flowers and Fruits: April; August to September. Flowers appear with or before the leaves, and clusters of male and female flowers are on separate plants. Flowers are



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Male flowers Female flowers

are drooping and hang at outer ends of the branches. Fruits are pairs of winged seeds (samaras), 2.5 to 4 cm long.

Habitat: Floodplain forests, stream banks and edges of marshes.

Similar species: *Toxicodendron radicans*, eastern poison-ivy, is a vine with compound alternate (not opposite) leaves with three leaflets (never more).

The vine stems wrap around tree trunks or low growing branches giving the false appearance that its leaves are growing from the tree or shrub it is using for support. See *T. radicans* page for more details.



© Peter M. Dziuk

A. negundo, opposite leaves



Acer rubrum (red maple)



© Donald Cameron



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Aceraceae Family
Native FAC CoC =3

Description:

Tree to 40 m tall. Young trunks and branches have smooth gray bark turning darker and furrowed with age, and twigs are smooth, brown to reddish with rounded winter buds. Leaves are simple, opposite (5 to 15 cm long) with 3 to 5 lobes and coarsely toothed margins, turning red in fall.



© C.E. Austin

Upper leaf surfaces are smooth, and the lower surface is often sparsely or velvety hairy on main veins that radiate from the long red leaf stalk.

Flowers and Fruits:

March through May. Flowers clustered at branch tips before leaves appear, with male and female flowers on separate trees or on separate branches of the same tree. Flowers are bright red, nearly sessile (attached to branches) with 2 to 6 flowers per rounded cluster. Fruits are red paired winged seeds (samaras), 1.5 to 2.5 cm long on elongated drooping red stalks.



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© Frank Bramley

Habitat: Moist woodlands, floodplain forests, swamps, depression wetlands, wooded slopes.

Similar species: *Acer saccharum*, sugar maple, has pointed tips on its winter buds (not round-tipped), the leaf margins lack the serrated teeth between lobes, and both flowers and samaras of sugar maple are green (not red).



© Arthur Haines

A. rubrum



© Quinten Wiegiersma

A. saccharum



Acer saccharinum (silver maple)



Aceraceae Family
Native FACW CoC =5

Description:

This large tree (to 40 m tall) has light gray flaky bark and green twigs. Leaves are simple, opposite (14 to 20 cm), and deeply 5-lobed with coarsely toothed margins. The upper leaf surface is dark green and smooth, the lower surface is silvery-white and softly hairy, and the leaves turn a dull yellow in the fall.



Flowers and Fruits:

March to
May. Flowers
in dense
round
clusters with



3 to 6 flowers, yellowish-red or greenish and forming before the leaves emerge at the tips of the branches. Male and female flowers are on separate trees or on separate branches on the same tree. Fruits are green to tan, paired winged seeds (samaras) 4 to 7.5 cm long.



Habitat: Floodplain forests, wet depressions, stream banks, swamps.

Similar species:

The leaves of *Acer saccharum*, sugar maple, are not as deeply lobed, lack the toothed leaf margins found in *A. saccharinum* and are often smooth or only hairy along the veins on the underside of the leaves (not velvety hairy).



A. saccharum

Betula alleghaniensis (yellow birch)



© Joe Walewski



© S. Coombes

Betulaceae Family
Native FAC CoC =7

Description:

This tree (to 30 m tall), with irregular crown and drooping branches, has shiny yellowish-brown or silver bark peeling in thin strips on older stems and trunk. Broken twigs have a slight wintergreen fragrance. Leaves are simple,

alternate, elliptic to egg-shaped and pointed at the tip (3 to 10 cm long) with irregular double-toothed margins (fewer than 6 teeth per cm). Upper leaf surfaces are dark green and smooth, while lower surfaces are lighter green with tufted vein axils.

Betula alleghaniensis

Flowers and Fruits:

April to May; June to August. Male and female reddish-green flowers clustered in cone-like spikes (catkins) appear in the spring. Male catkins are slightly drooping and cylindrical, and female catkins are stout, erect and egg-shaped. Fruits are 2-winged seeds (samaras) protected by "bird-foot" like scales of the persistent fruiting cone.



© Eli Sagor

Habitat: Cove forests, spruce and fir forests, and stream banks at higher elevations.

Similar species:

Betula lenta, sweet birch, has dark brown bark (not peeling), twigs with strong wintergreen odor and leaf margins regularly, finely toothed (more than 6 teeth per cm). *Betula nigra*, river birch, is also similar but has tan to reddish-brown peeling bark, diamond-shaped leaves and no fragrance to broken twigs.



Betula lenta

© Marv Elliott



© Katja Schulz

Betula nigra



Betula nigra

(river birch)



Betulaceae Family
Native FACW CoC=5

Description:

Tree (to 30 m tall), often with multiple trunks, an irregular crown and arching branches. The bark is reddish to cinnamon brown, and peeling in tough strips giving a ragged appearance. Unlike other birch species, the broken twigs have no fragrance. Leaves (4 to 12 cm long) are simple, alternate, diamond or triangular-shaped with irregular double-toothed margins. Upper leaf surfaces are dark green, lower surfaces are pale, and leaf stalks (petioles) are hairy.

Flowers and Fruits:

April; May to June. Male and female reddish-green flowers appear in the spring and are clustered in cone-like spikes (catkins). Male catkins are slightly drooping and cylindrical, and female catkins are stout, erect and oblong-oval. Fruits are winged seeds (samaras) protected by "bird-foot" like scales of the persistent fruiting cone, until ripe when the cone disintegrates releasing the seeds.



Habitat: Floodplain forests, sand bars and rocky stream bars, stream banks, and swamps.

Similar species:

See the page for *Betula alleghaniensis* for differences between these species.

Carpinus caroliniana spp. *virginiana* (muscletree)



Betulaceae Family
Native FAC CoC =5

Description: Small tree (to 10 m tall) with light gray, smooth bark, and irregular fluted muscle-like trunks. Twigs are hairy and reddish brown. Leaves (5 to 12 cm long) are simple, alternate, elliptic tapering to a pointed tip with sharp double-toothed leaf margins.



Flowers and Fruits:

April-May; September to October. Separate male and female flower clusters are in drooping spikes (catkins) on the same tree, developing as the

leaves emerge. The fruits are nutlets, held in hanging elongated clusters (2 to 5 cm long), and each nutlet has a 3-lobed large leafy bract with smooth or toothed margins.



Carpinus caroliniana

Habitat: Mesic forests, floodplain forests, swamps, and stream banks.

Similar species: *Ostrya virginiana*, Eastern hop-hornbeam, has reddish-brown flaking bark and the fruits are held in a similar hanging cluster, however the nutlets are inside inflated sacs (not attached to flattened bracts). *Corylus americana*, American hazelnut, also has toothed leaf margins, but the leaf bases are distinctly heart-shaped. The large nuts also have bracts, but are in rounded clusters (not hanging elongated clusters).



Ostrya virginiana



Corylus americana

Fagus grandifolia

(American beech)



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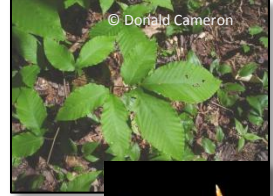


© Sarah Wolkenberg

Fagaceae Family
Native FACU CoC=5

Description:

Tree to 35 m tall, often with a large spreading crown. Bark and branches are smooth, light gray with brown smooth twigs and distinct cigar-shaped (19 mm long) narrow, pointed winter buds. Leaves (5 to 15 cm long) are alternate, oval-elliptic, with toothed margins. The leaves turn yellow to tan in the fall, and can be persistent, especially on younger trees and lower branches of large trees.

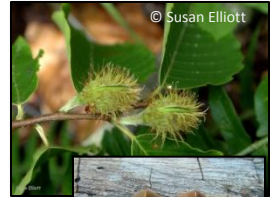


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Flowers and Fruits: April; September-October. Male and female flowers, on the same tree, develop as leaves emerge. Male flowers are in rounded drooping clusters, and female flowers are in pairs on a stout stalk with protective bracts. Fruits have husks with prickly burs, enclosing 2 triangular-shaped smooth brown nuts.



© Susan Elliott



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Habitat: Moist forests, well-drained floodplain terraces, ravines and lower slopes.

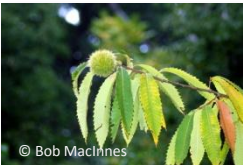
Similar species: *Ulmus americana*, American elm, has leaf bases and mid-rib that are offset (asymmetrical), the bark is rough (not smooth), winter buds are small,



© Carrie Seltzer

Ulmus americana

rounded (not long, pointed) and fruits are winged samaras (not nuts). *Castanea dentata*, American chestnut, has longer leaves (10 to 30 cm) with deeply toothed margins, male flowers are clustered in long spikes (not round clusters), and fruits, also in spiny husks, are much larger nuts.



© Bob MacInnes

Castanea dentata



Fraxinus americana (white ash)



Oleaceae Family
Native FACU CoC =5

Description:

Large straight tree (to 40 m tall) with a narrow crown, dark gray, diamond pattern ridged bark.

Leaves are opposite, compound with usually 7 leaflets (5 to

20 cm long). Leaflets are stalked (3 to 15 mm long petiolules), elliptic, with a pointed tip and finely toothed margins. Upper leaflet surfaces are



dark green, smooth, and the lower surfaces are pale green with some hairs along veins.

Flowers and Fruits: April to May; August to September. Flowers (male and female on separate trees) emerge before leaves in the spring. Fruits are spatula-shaped, narrow-winged seeds (samara) 6 to 11 mm long, held in drooping clusters.



Habitat: Calcareous soils of moist to dry woodlands, seepage swamps, fens, well-drained floodplain forests and old fields.



Similar species: Leaf scars (where leaves have detached from twigs) are strongly crescent shaped in *F. americana*,

F. americana, *F. nigra*, *F. pennsylvanica*

a wider crescent to semi-circle shape in *F. pennsylvanica*, green ash and rounded in *F. nigra*, black ash. Samaras also differ: *F. americana* – very narrow with wing above the seed to the tip (6 to 11 mm); *F. pennsylvanica* – wings begin on either side of seed before extending to the tip (4 to 7 mm); *F. nigra* – broader with short wings running most of the seed length before extending to the tip (5 to 10 mm).



Fraxinus pennsylvanica (green ash)



© Peter M. Dziuk



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Oleaceae Family
Native FACW CoC =6

Description:

Medium tree (to 25 m tall) with dark gray to brown diamond pattern, ridged bark, and smooth to hairy green-brown twigs. Leaves are opposite, compound with usually 7 to 9 leaflets (7 to 18

cm long). Leaflets are stalked (1 to 6 mm long, short velvety petiolules), elliptic, with a pointed tip and finely toothed margins. Upper leaflet surfaces are green, smooth, and the lower

surfaces slightly hairy.

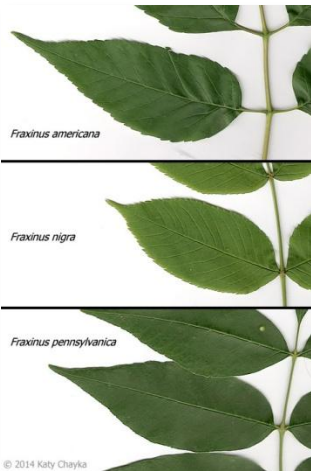


© Larry Allain

Flowers and Fruits: April to May; August to September. Flowers (male and female on separate trees) emerge after the leaves, and female flowers are on branched drooping flower head clusters in the previous year's leaf axils (where leaf meets stem). Fruits are spatula-shaped, narrow-winged seeds (samara), and wings begin on either side of seed before extending to the tip (4 to 7 mm long).

Habitat: Floodplain forests, stream banks, swamps, depression ponds, seepage swamps and wet fields.

Similar species: Green ash differs from other *Fraxinus* species in leaflet shape, leaflet margins and petiolules as shown in these images. See the *Fraxinus americana*, white ash, page for a comparison of other characteristics.



Fraxinus americana

Fraxinus nigra

Fraxinus pennsylvanica

© 2014 Katy Chayka



Liriodendron tulipifera (tuliptree)



© Sara Rall



© Christopher Martin



© Zihao Wang

Magnoliaceae Family
Native FACU CoC=5

Description:

Large tree (to 50 m tall) with clear straight trunk, light gray bark and shallow furrows and ridges. Twigs are purplish-brown and shiny, and the winter buds at the tips of branches are a distinct duck-bill shape.

Leaves are simple, alternate and smooth with distinctive flattened top and base and four pointed lobes. They turn a dull to bright yellow in the fall.

Flowers and Fruits:

May; September to October. The solitary tulip-like flowers (4 to 6 cm) appear after the leaves and are yellow-green with orange bands near the base of the petals. Fruits are cone-like clusters of rigid narrow-winged samaras (2 to 4.5 cm).



© Arthur Haines

Habitat: Moist to dry upland forests, floodplain forests, seepage swamps and old fields.

Similar species:

None.



© Steven Baskauf



© Sandy Walkenberg

Nyssa sylvatica (blackgum)



© Susan J. Hewitt



© Greeneshake



© Rodger Debenham

Cornaceae Family
Native FAC CoC =6

Description:

Tree (to 30 m tall) with light gray bark when young and thick blocky alligator-hide like brown or black bark when

mature. Branches and twigs are typically at right angles to the trunk with diaphragmed pith (inner tissue with horizontal layers). Leaves (3 to 15 cm long) are alternate, simple, oval to elliptic and margins are wavy but not toothed. Upper leaf

surface is dark green, shiny, smooth and lower surface is lighter green and slightly hairy. The leaves turn a bright red, orange, purple, or yellow in the autumn.



© Rodger Debenham

Nyssa sylvatica

Flowers and Fruits: April to May; August to October. Flowers appear with the leaves and are in small, green, loose drooping clusters on slender stalks with male and female flowers on separate trees. Fruits are fleshy blue-black berry-like drupes.

Habitat: Moist to dry upland forests, seepage swamps, floodplain forests, and depression ponds.

Similar species: *Oxydendrum arboreum*, sourwood, also has black thick blocky bark but the leaves are longer and lance-shaped with finely toothed margins (not oval with wavy margins and no teeth), the flowers are showy white, many-clustered in long drooping branched spikes and fruits are woody capsules (not drupes). *Diospyros virginiana*, persimmon, another small tree with similar bark has solitary urn-shaped female flowers and distinctive large and fleshy orange plum-like fruits.



© Joey Shaw

Oxydendrum arboreum



© Don Abrams

Diospyros virginiana

Platanus occidentalis

(American sycamore)



Platanaceae Family
Native FACW CoC=5

Description:

West Virginia's largest tree (to 50 m tall) with spreading open crown and thin, mottled (green, brown, tan and white) camouflage-like bark that often peels, especially on older mature trees. Twigs grow in a zig-zag pattern with leaf scars encircling the buds. Leaves are simple, alternate, palmately veined (veins

radiating from the base) with 3 to 5 main lobes, pointed tips and widely toothed margins. The bases of the leaf stalks (petioles) are enlarged and wrap or enclose the buds, and conspicuous leafy stipules also wrap the leaf bases on young shoots.

Flowers and Fruits:

April to May; September to October. Flowers are very small, appear with the leaves, and both male and female flowers are in dense round clusters hanging from a slender stalk. Fruits are balls of tightly clustered seeds (achenes), each attached to fine hair-like bristles for wind dispersal.



Platanus occidentalis

Habitat: Floodplain forests, swamps, stream banks, and rocky stream bars.

Similar species: *Liquidambar styraciflua*, American sweetgum, also has ball-like fruits but they are spikier, the leaves are star-shaped and it has dark furrowed bark.



Liquidambar styraciflua



Prunus serotina (black cherry)



Rosaceae Family
Native FAC CoC =3

Description:

Medium to large tree (20 to 35 m tall), with long clear trunk, and black, rough cornflake-like scaly bark on mature trees. Twigs and branches are reddish brown and smooth, with a bitter almond odor from the scratched bark. Leaves are simple, alternate (6 to 15 cm long), lance-shaped with finely toothed margins.



Upper leaf surfaces are shiny green and smooth, and lower surfaces are paler green with yellow-brown hairs along mid-vein.

Flowers and Fruits:

May; August to September. Flowers appear in spring, at the tips of branches, after the leaves are fairly developed.

The small white flowers of 5 petals each are in long drooping stalked clusters. Fruits are fleshy, berry-like, purple to black drupes in hanging stalked clusters.



Prunus serotina

Habitat: Wet to dry forests and woodlands, fencerows and old fields.

Similar species: *Prunus pensylvanica*, pin cherry, has similar leaves but the flowers and fruit are in rounded clusters (not hanging clusters).

Betula lenta, sweet birch, has similar leaves with finely toothed margins, but the broken twigs have a strong wintergreen odor (not bitter almond).



Prunus pensylvanica

Quercus bicolor (swamp white oak)



Fagaceae Family
Native FACW CoC=8

Description:

Large tree (15 to 35 m tall) with an irregular crown, and gray, rough, scaly bark with ridges and fissures. Mature twigs are light brown and smooth with short, blunt buds. Leaves (7 to 23 cm long) are simple, alternate, spatula-shaped, broadest in the middle with rounded lobed margins and tapering in a V-shape to the base. Upper leaf

surface is shiny dark green, and the lower surface is light grayish-green and densely hairy.

Flowers and Fruits:

April; September to October. Flowers appear before the leaves. Male flowers are clustered in long narrow drooping spikes (catkins). Female flowers are inconspicuous. Better identification aids are the acorn which are oval egg-shaped (1.5 to 3 cm), topped by thick bowl-shaped caps covering half of the nut and with overlapping pointed scales. Acorns are usually two together on woody stalks (pedicels) 4 to 7 cm long.

Habitat: Stream banks, swamp forests, depression swamps, poorly drained floodplains.

Similar species: *Quercus prinus*, chestnut oak, has leaves with similar lobed margins, but the leaves are longer (10 to 30 cm) and more elliptic (not spatulate), the buds are strongly conical (not blunt), and it is found in drier upland habitats.



Quercus bicolor



Quercus prinus



Quercus palustris (pin oak)



© Penny Logemann



© Gavin

Fagaceae Family
Native FACW CoC =5

Description:

Large tree (to 35 m tall) with pyramid-like crown, dead drooping lower branches, and gray-brown, smooth, thin bark becoming slightly furrowed and ridged in older trees. Twigs are slender, smooth with many sprouting from the branches giving a spiny look. Leaves (7 to 12 cm long) are simple, alternate with 5 to 7 lobes. The lobes are bristle-tipped with U-shaped deep sinuses (spaces between lobes) reaching almost

to the midrib. Upper leaf surfaces are bright green and smooth, and lower surfaces are pale with hairy tufts in vein axils.



© Glenn Dreyer

Flowers and Fruits:

April to May; September to October (2nd year).

Flowers appear with the leaves. Male flowers are clustered in drooping long spikes (catkins). Female flowers are inconspicuous. Acorns are small (0.8 to 1.5 cm), round, on very short stalks, with a flattened base on the bowl-shaped caps, that cover ¼ of the nut.

Habitat: Floodplain forests, swamps, depression ponds, and stream banks.

Similar species: *Quercus coccinea*, scarlet oak, has longer lobed leaves (10 to 20 cm), and has 5 to 11 leaf lobes with many smaller lobes near the tips (leaf tips with few lobes in *Q. palustris*).

Q. coccinea acorns are a bit larger (1.3 to 2.7 cm) with a more rounded base, and the cap covering ¼ to ½ of the acorn.



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Q. palustris



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Q. coccinea

Salix nigra (black willow)



Salicaceae Family
Native FACW CoC =2

Description:

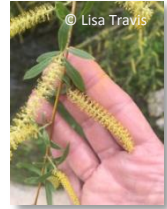
Small to medium-sized tree (to 25 m tall) with a spreading crown, often multiple large trunks, and dark gray to black, thick, rough, scaly ridged bark. Twigs are orange-brown,

smooth and slender. Leaves (3 to 16 cm long) are simple, alternate, lance and sickle-shaped with fine-toothed margins. Both upper and lower leaf surfaces are green shiny and smooth. Leafy



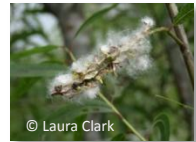
stipules are present on younger stems at the base of the leaf stalks (petioles).

Flowers and Fruits: April to May. Male and female flowers on separate plants are both tiny, green, in spike-like clusters (catkins), 2 to 9 cm long, arching or drooping and appearing with the leaves. The fruits are cone-shaped



capsules clustered on the mature catkin and containing many small silky-white hair covered seeds.

Habitat: Stream banks, sandy and rocky bars, floodplain forests, swamps, depression ponds, and beaver ponds.



Similar species: See the *Salix sericea* page for differences between these two species. *Salix alba*, white willow, is a tree with similar leaf shape but has waxy pale lower leaf surfaces.

Salix alba



Alnus incana ssp. rugosa (speckled alder)



Betulaceae Family
Native FACW CoC=7

Description:

This multi-stemmed shrub forms dense thickets. Stems (2 to 6 m tall; to 15 cm diameter), have reddish brown to gray bark with distinctive white horizontal lenticels (pores). Stem buds are erect, stalked, and elliptic. Leaves are leathery, alternate (to 15 cm long), elliptic with a pointed tip and with raised veins and irregular double-

toothed margins. The upper leaf is smooth, and lower leaf is dull green and hairy.

Flowers and Fruits: April to May, July to August. Flowers are clustered in spikes (catkins) that develop in summer, persist over winter, and bloom before spring leaves emerge. Male catkins are purplish-brown, slender, cylindrical, drooping (4 to 8 cm). Female catkins are also drooping, oval to egg-shaped (1 to 1.5 cm), becoming reddish-brown, stout and cone-like containing winged nutlets (samaras).

Habitat: Swamps, forested seeps, bogs, and stream banks.

Similar species: *Alnus serrulata*, smooth alder, has inconspicuous lenticels, erect fruiting (female) cone-like catkins (not drooping), and leaf margins that are evenly and finely toothed (not irregularly double-toothed). *Physocarpus opulifolius*, common ninebark, also growing along stream banks, differs in its peeling bark, 3-lobed leaves, white petal flower clusters and inflated fruit capsules.



A. incana var. rugosa



A. serrulata

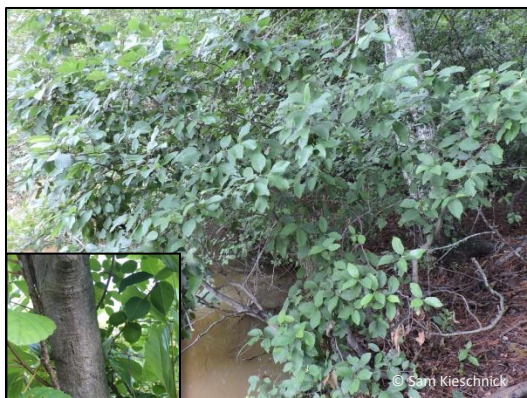
Alnus serrulata (smooth alder)



Betulaceae Family
Native OBL CoC=5

Description:

Shrub with gray to brown relatively smooth multiple trunks (2 to 7 m tall), with light brown inconspicuous lenticels (pores). The alternate leaves (2 to 14 cm) are egg-shaped or broadly elliptic, round tipped, and



with slightly wavy and evenly fine toothed margins. Leaf veins are distinct, and surfaces are smooth with the lower being only sparsely hairy along the central vein.



Flowers and Fruits:

March to April, July to October. Flowers are clustered in spikes (catkins) that develop in summer, persist over winter, and bloom before the leaves emerge in spring. Male catkins are long, slender, cylindrical, drooping (to 10 cm), and female catkins are erect, oval to egg-shaped (1.2 to 1.8 cm), becoming stout and cone-like and containing narrowly winged nutlets (samaras).

Habitat: Swamps, forested seeps, bogs, and stream banks.

Similar species:

See *Alnus incana* var. *rugosa*, speckled alder, page for differences between these two *Alnus* species.



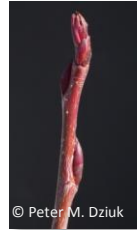


Aronia melanocarpa (black chokeberry)

Rosaceae Family
Native FAC CoC =7

Description:

Shrub with multiple smooth, erect stems (to 2 m tall) with gray bark, white lenticels (pores) and red buds and twigs. Leaves are simple, alternate (3 to 9 cm long), smooth, oval, wider near the



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pointed tip and with finely toothed margins. Using a hand lens, tiny elongate reddish glands can be observed along the upper leaf midvein and on the fine teeth along leaf margins.

Flowers and Fruits: May to June, August to September. Flowers are clustered at branch tips with 2 to 25 stalked flowers blooming after leaves appear. The white to purplish flowers have 5 round to oval petals (5 to 8 mm). Fruits



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are stalked and bluish-black fleshy, berry-like (pomes) (6 to 10 mm).



Aronia melanocarpa



© Glen Mittelhauser

Gaylussacia baccata

Habitat: Swamps, bogs, depression ponds, wet or dry woodlands.

Similar species: *Gaylussacia baccata*, black huckleberry, can be confused with *A. melanocarpa* because of look-alike black fruits. However, the flowers are distinctly different being red, tubular and hanging in nodding clusters. Also *G. baccata* has similar simple leaves but both upper and lower leaf surfaces are hairy and gland-dotted (not smooth with glands only on veins and margin tips as with *A. melanocarpa*).



Cephalanthus occidentalis (common buttonbush)



Rubiaceae Family
Native OBL CoC =7

Description:

Brushy shrub (3 m tall), with many arching branches, reddish brown shaggy bark becoming ridged and furrowed with age. Leaves (7 to 15 cm long) are opposite or in whorls of 3 or 4, elliptic, pointed at the tip and supported by a red stalk (petiole) with a pair of dark brown triangular appendages (stipules) at the base of the petiole.

Flowers and Fruits:

June through September. The white tubular flowers are found in stalked globe-like heads toward the branch tips. Flower heads are 2 to 3.5 cm in diameter, and resulting fruits are dense balls of nutlets, easily split apart when dried.



Habitat: Swamps, marshes, bogs, depression ponds, and lake edges.

Similar species:

Cornus amomum, silky dogwood, with similar leaf shape and venation, lacks the triangular stipules at the base of the petiole, has flattened, branched flower heads (not spherical), and green fruits turning dark blue. Like all dogwoods, *C. amomum* has leaf veins with distinctive elastic thread-like fibers, observed when the leaves are torn horizontally across the leaf veins and pulled slowly apart. See *C. amomum* page for image of this characteristic.



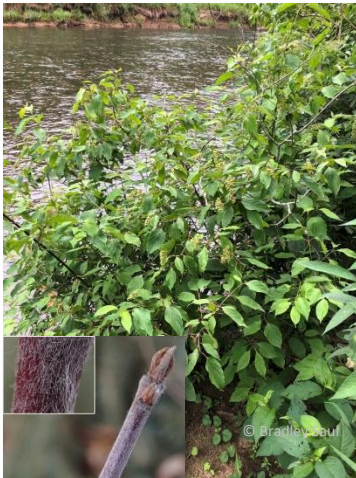


Cornus amomum (silky dogwood)

Cornaceae Family
Native FACW CoC =5

Description:

Large multi-stemmed shrub (to 5 m tall), branches both erect and bending with reddish-brown bark and silky hairs on young twigs. Pith (spongy tissue inside twigs and stems) of this species is dark brown (not white). Leaves (3 to 10 cm long) are opposite, oval with a pointed tip, smooth on



top with pale rusty hairs along veins on lower

surface. Each leaf has 4 to 6 paired veins extending towards the margins but then curving toward the tip and never reaching leaf edge. As with all *Cornus* species, this shrub has distinctive elastic thread-like fibers, observed when the leaves are torn horizontally across the leaf veins and pulled slowly apart.

Flowers and Fruits: May to June, August to September. Flowers are formed at the end of branches on spreading, branched flower heads (4 to 7 cm wide). Stalked flowers are creamy white with 4 lance to triangular-shaped petals. Fruits are drupes (fleshy solitary fruit with stony interior), green then ripening to dark blue.



Habitat: Swamps, stream banks, floodplain forests, and wet meadows.

Similar species: See *Cephalanthus occidentalis* page for differences between these two species.





Hypericum densiflorum (bushy St. Johnswort)



Clusiaceae Family
Native FACW CoC =6

Description:

Medium bushy shrub (to 2 m tall) with reddish-brown bark on many slender stiff branches, particularly in upper part of the plant. Leaves are narrow, linear (2 to 5 cm long; 3 to 7 mm wide) with smaller ones sometimes clustered in leaf axils (where leaf meets stem).



Flowers and Fruits:

July through September. The many yellow flowers (7 or more) are clustered in branched heads arising from upper

stem axils. Each flower has five petals (5 to 10 mm across) with 5 oblong to rounded firm sepals. Fruits are capsules (1.5 to 3 mm wide) containing many (1 to 1.3 mm) black seeds.



Hypericum densiflorum

Habitat: Acid soils in mid to high elevation swamps, seeps, bogs, stream banks and rocky stream bars.

Similar species:

Hypericum prolificum, shrubby St. Johnswort, with similar brushy branched habit, has fewer flowers (3 to 7), leaf blades that are wider, (mostly 7 to 15 mm wide) and wider capsules (3 to 5 mm wide).



Hypericum prolificum



Ilex verticillata (common winterberry)



Aquifoliaceae Family
Native FACW CoC =6

Description:

Multi-stemmed shrub (2 to 8 m tall) with smooth gray to brown bark with horizontal lenticels (pores). Leaves (3 to 7 cm long) are alternate, elliptic, tapering to a pointed tip with finely toothed

margins and distinct veins. The upper leaf surface is dark green, mostly hairless, and the lower surface is light green and hairy.

Flowers and

Fruits:

May to June, September to November. Male and female flowers are usually on separate plants (dioecious), with both flower types having 5 to 8 white petals. Fruit is a round, bright smooth, red berry (5 to 7 mm), enclosing 5 to 8 smooth nutlets and persisting on the branches through winter.



Ilex verticillata

Habitat: Swamps, bogs, wet woods, edges of ponds.

Similar species: *Ilex montana*, mountain holly, sometimes reaches tree size to 12 m tall; it grows in upland forest habitats although it may be on the edge of wetlands and has 4-5 petals on female flowers with faintly hairy margins and 4-5 many-ribbed nutlets per fruit (not 5-8 female petals without hairs and 5-8 smooth nutlets).

Ilex mucronata, catberry, a shorter shrub to 3 m tall, has smaller leaves (2 to 5 cm long) on purplish-green petioles, with few teeth on margins and a hard-pointed leaf tip (mucro); and long-stalked scarlet red berries.



Ilex mucronata



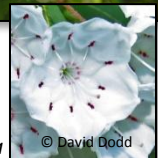
Kalmia latifolia (mountain laurel)



Ericaceae Family
Native FACU CoC =5

Description: Evergreen perennial shrub forming dense thickets (usually 2 to 3 m, but to 10 m tall) with ridged or furrowed stems, becoming gnarly with age. The bark often sloughs off in narrow strips. Leaves (5 to 12 cm long; 2 to 4 cm wide) are leathery, mostly alternate, oval to elliptic and smooth.

Flowers and Fruits: May to July, September to October. Flowers appear in large clusters at

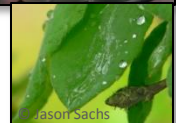
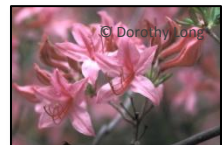


the branch tips. Each pink to white flower (15 to 30 mm across) is cup-shaped with five petals fused together, and has purple spots in small pockets that hold the male anthers (pollen structures) that arch backwards. When pressure is applied to the flower cup the anthers pop out of the pockets. Fruits are brown capsules 4 to 7 mm wide that persist through the winter.

Kalmia latifolia

Habitat: Mesic to dry acidic forests, less frequently in bogs and seeps.

Similar species: *Rhododendron prinophyllum*, early azalea, appears similar before flowering in growth habit and stems. However, *R. prinophyllum* leaves are hairy (not smooth) and not leathery; the flowers (also pink and in branch-tip clusters) are instead tubular with distinct separations from mid-point out to the "petal" tips, and gland-tipped hairs are present on flower parts and buds.



R. prinophyllum



Lindera benzoin (northern spicebush)



Lauraceae Family
Native FAC CoC=5

Description:

A woody, multi-stemmed shrub (1 to 5 m tall) with new twigs frequently green, and stems and older branches brown with white lenticels (pores). Leaves are light to medium green, simple, thin, alternate (5 to 12.5 cm long; 2.5 to 6 cm wide), oval, tapering at both ends and smooth on the margins and upper surfaces (underside sometimes slightly hairy). The

lemon-like spicy fragrance of bruised leaves gives this species its common name.

Flowers and Fruits:

March to May, August to September. Yellow flower clusters (4 to 6 flowers per cluster and each flower to 7 mm wide) occur in the previous year's leaf axils (where leaf meets stem), and appear early in the spring before the leaves. Fruits are fleshy oval short-stalked drupes with a single seed, and fruits turn bright red at maturity in late summer and fall.



Lindera benzoin

Habitat: Mesic to upland woodlands, floodplain forests, seepage swamps.

Similar species: *Nyssa sylvatica*, blackgum, is a small to medium tree with similar simple, alternate, oval leaves and fruits that are drupes. Differences include the lack of lemony smell in *N. sylvatica*, fall leaf color (yellow for *L. benzoin* and red to purplish and spotted for *N. sylvatica*), and fruit color (blue-black for *N. sylvatica*, not red).



Nyssa sylvatica



Rhododendron maximum (great laurel)



Ericaceae Family
Native FAC CoC=6

Description:

As the largest of West Virginia's *Rhododendron* species, this shrub grows up to the size of a small tree (to 10 m tall). It can form dense thickets in the mountains. The

leaves (8 to 25 cm) are evergreen, thick, leathery,

simple, smooth on both surfaces and elliptic with pointed (acute) tip and base.

Flowers and Fruits:

June to July, September to October. Flowers are clustered at branch tips and have bell-shaped corollas. Petals are united near the base, have 5 distinct

rounded lobes and are white to rose-pink (3.5 to 5 cm wide) with gland-tipped hairs on the flower stalks and sepals. Fruits are capsules, green maturing to dark brown and also with gland-tipped hairs. Winter buds are prominent on branch tips and are covered with overlapping scales.

Habitat: Acidic soils of mesic to dry forests, stream banks, and swamps.

Similar species:

Rhododendron catawbiense, Catawba rose bay, has pink to purple flowers (not white), rounded leaf tips and base and shorter leaves (5 to 15 cm). Sepals at the capsules base are smaller (0.5 to 1 mm) versus sepals of *R. maximum* (4 to 6 mm).



R. maximum



R. catawbiense

Rosa multiflora (multiflora rose)

NON-NATIVE
INVASIVE

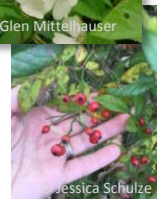


Rosaceae Family
Non-native FAC CoC =-5

Description:
Highly invasive multi-stemmed shrub forming expansive dense colonies. Branches are arching and sprawling (to 3 m long). Stems lack hairs, but are armed with stout cat's claw-like thorns. Leaves are compound

with mostly 5 to 9 leaflets, oval to elliptical (leaflets to 6 cm long), and usually finely

smooth above hairy below and have toothed margins. The base of each leaf stalk (petiole) has paired appendages (stipules) fringed with gland-covered bristles.



Flowers and Fruits:

May to June, September to October. Flowers are densely clustered at the branch tips or leaf axils (where leaf meets stem) in the upper and outer branches. White to light pink stalked flowers (1.5 to 2.5 cm) have 5 oval to heart-shaped petals. Fruits are red to purplish berry-like (hips), 6 to 12 mm in diameter.

Habitat:

Both wetland and upland forests, clearings and edge habitats.

Similar species:

Rosa palustris, swamp rose, has light to dark pink flowers (not white) that are sometimes held solitary or only a few per flower cluster (versus many-flowered clusters for *R. multiflora*). The leaf bases are distinctly different with *R. palustris* having very narrow, wing-like appendages (stipules), while *R. multiflora* has fringed bristles on the stipule margins.



Rosa multiflora



Rosa palustris



Rosa palustris

(swamp rose)



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Rosaceae Family
Native OBL CoC=6

Description:

Multi-stemmed shrub (to 2.5 m tall) with distinct stout, usually downward curving, paired spines at most nodes along the stems. Leaves are compound with typically 7 leaflets, elliptic (leaflets 2 to 6 cm long), and finely toothed. The base of most leaf stalks (petioles) has paired, very narrow, wing-like appendages (stipules).

Flowers and Fruits:

June to July, September to October. The stalked flowers are solitary or in clusters of only a few near the branch tips or leaf axils (where leaf meets

stem) in the upper and outer branches. Flowers (4 to 5.5 cm wide) have 5 heart-shaped pink petals (2 to 3 cm). Fruits are red berry-like structures (hips), 8 to 15 mm in diameter.

Habitat: Swamps, marshes, pond edges, stream banks, seeps, and beaver wetlands.

Similar species:

See the page for *Rosa multiflora*, multiflora rose, for a comparison of these two species.



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Salix sericea (silky willow)



Salicaceae Family
Native OBL CoC =5

Description:

Shrub to 4 m tall with brittle branches and purplish velvety twigs. Leaves are alternate, narrowly lance-like (2 to 14 cm long; 1 to 3 cm wide), gradually tapering to a pointed tip, and with finely toothed margins. Leaf surfaces are dark green and slightly hairy to smooth above, and whitish (glaucous) with silky dense hairs below. Leaf stalks (petioles) are 2 to 13 mm long, and

bracts (stipules) at the base of petioles are very small or absent.

Flowers and Fruits:

March through April. Flower heads appear in the spring before the leaves, with male and female flowers clustered on spikes (catkins) on separate plants. Male catkins are 1 to 2 cm and female to 4 cm. Fruits are capsules 3 to 5 mm.

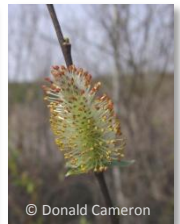
Habitat: Swamps, bogs, fens, seeps, and stream banks.

Similar species:

Salix nigra, black willow, a shrub or tree (5 to 25 m tall) has green to brown (not purple) twigs, the leaves are smooth on both sides and some have large stipules. *Salix caroliniana*, coastal plain willow, also has whitish (glaucous) lower leaf surfaces, but the leaves are hairy with conspicuous persistent stipules. The flowers appear along with the leaves (not before).



Female catkin



Male catkin



Sambucus nigra ssp. canadensis (black elderberry)



Caprifoliaceae Family
Native FAC CoC =4

Description:

Shrub with multiple thin arching stems (to 7.5 cm diameter), sometimes forming colonies via rhizomes (underground stems). Twigs are hairless,

yellow-green becoming brownish-gray with large lenticels (pores) and a white pith (porous tissue inside the twigs and stems). Leaves are compound, opposite with typically 7 leaflets. Leaflets are lance-shaped to elliptic (5 to 11 cm long), with a pointed tip, finely-toothed margins and mostly smooth with hairs along the veins.

Flowers and Fruits:

May to July, August to September. Flower heads, at the stem tips, are dome-shaped to flat branched clusters (5 to 20 cm across). Flower stalks are green and turn to purple when in fruit, and flowers are white with 5 rounded petals.

Fruits are berry-like (drupes), fleshy, purple to black and containing a single seed. The stems arch and bend over under the weight of the fruiting heads.



Habitat: Floodplain forests, swamps, wet meadows, stream banks, and roadside ditches.

Similar species:

Sambucus racemosa, red elderberry, is found primarily in moist woodlands, has red fruits (not black or purple) and the pith of stems and branches is light brown (not white).





Spiraea alba (white meadowsweet)



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Rosaceae Family
Native FACW CoC=5

Description:

Shrub (to 2 m tall) with smooth brown stems, yellow-brown twigs and lenticels (pores) on twigs. Leaves are simple, alternate, smooth, narrow, lance-shaped to elliptic (3 to 7 cm long) with sharply toothed

margins, a pointed tip and short stalk (petiole).

Flowers and

Fruits: June to September, August to October. Compact, branched flower clusters are on elongated inverted cone-like flower head. Corollas (4 to 8 mm wide) are white to pale pink with 5 petals joining below into a cup-shaped base. Fruits (2 to 3 mm) are follicles (tiny dry capsules containing seeds).



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Habitat: Seeps, seepage swamps, bogs, wet meadows, stream banks.

Similar species: *Spiraea tomentosa*, steeplebush, has woolly reddish branches and twigs and woolly white or reddish lower leaf surfaces (not mostly smooth as in *S. alba*). Also this species has pink flowers (rarely white). *Spiraea japonica*, Japanese meadowsweet, has pink to rose pink flowers held on flower heads wider than tall with a flattened appearance (not cone-like as in *S. alba*), and the leaves are 8–15 cm long (not 3 to 7 cm).



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Spiraea tomentosa



© Arthur Haines

Spiraea japonica



Vaccinium oxycoccos (small cranberry)



Ericaceae Family
Native OBL CoC =10

Description:

Evergreen creeping shrub with reclining stems that root at the nodes. Stems are smooth, wiry and often hidden under the leaf litter and moss. Leaves (3 to 8 mm long) are simple, alternate,

leathery, smooth, oblong-oval tapering to a point at the tip and are dark green above and whitish below.

Flowers and Fruits:

May to July, September to October. Flowers are stalked, nodding, pink, 5 to 6 mm long, with the 4 petals curving back toward the stalk causing the anthers (pollen-bearing structures) to protrude in beak-like appearance. Flower stalks have tiny (less than 2 mm long) red bracts below the mid-point of the stalk. Fruits are many-seeded red berries (5 to 12 mm in diameter).



Habitat: Sphagnum bogs and swamps in the mountains.



V. oxycoccos

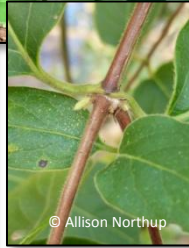
Similar species: *Vaccinium macrocarpon*, large cranberry, has larger elliptical leaves more rounded at the tips (6 to 17 mm long). The flowers and fruit are larger than *V. oxycoccos*, with flowers that are 6 to 10 mm long and berries 1 to 2 cm in diameter.



V. oxycoccos *V. macrocarpon*
V. macrocarpon flowers have bracts 2 mm long or longer, attached above the mid-point of the stalk.

Lonicera japonica (Japanese honeysuckle)

NON-NATIVE
INVASIVE



Caprifoliaceae Family
Non-native FAC CoC=-5

Description:

Woody perennial semi-evergreen vine (5 m or more long) with trailing or climbing habit. Stems are green to reddish, becoming tan to brown, rope-like with peeling bark. The dark green leaves (2.5 to 8 cm long) are simple, opposite, smooth or hairy and oval. They generally lack toothed margins, but younger leaves may be lobed or toothed.

Flowers and Fruits:

May to June, August to September. Paired flowers arise from the leaf axils (where leaf meets stem) at the ends of the branches. The fragrant tubular flowers (3 to 5 cm) are white or sometimes pale pink aging to a yellow-gold. The fruits are small (4 to 6 mm) shiny round berries, turning from green to black as they ripen.

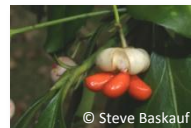


Lonicera japonica

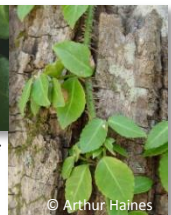


Habitat: Widespread from wet to dry forests, floodplains, stream banks, old fields and fencerows.

Similar species: *Euonymus fortunei*, winter creeper, differs in the dark green stems, numerous aerial roots along the stems, branched clusters of small 4-petaled flowers, red berries and toothed leaf margins.



Euonymus fortunei





Rubus hispidus (bristly dewberry)



Rosaceae Family
Native FACW CoC =6

Description:

Woody vine (to 2.5 m long) with branching, arching, trailing stems (canes) often rooting at the nodes (where leaf attaches to stem). The canes are angular, sparsely to densely armed with straight or

slightly curved narrow-based bristles.

Leaves are trifoliate (having 3 leaflets, rarely having 5) on armed stalks (petioles).

Leaflets (1.5 to 7 cm long) are green, egg-shaped with coarsely toothed margins.

Flowers and Fruits:

May to June, July to August. Flowers in clusters of 3 to 6 are found in leaf axils (where leaf meets stem). Each flower (10 to 12 mm) has 5 white oval-elliptic petals, 5 sepals and is supported on bristle covered stalks (peduncles). Fruits (0.6 to 1.2 cm) are green to red to dark purple or black when ripe.

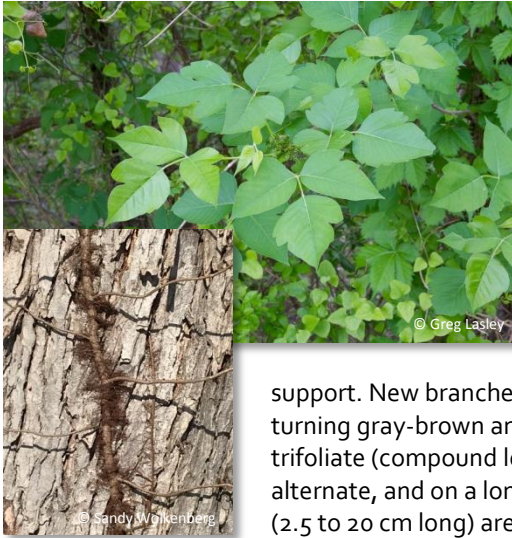
Habitat: Widespread in acidic soils of bogs, fens, seeps, swamps, floodplain forests, moist upland forests, and old fields.

Similar species: *Rubus pensilvanicus*, blackberry, with large shrubby habit (1 to 3 m tall), has 3 to 5 leaflets with hairy under surface and recurved prickles on the leaf stalks (petioles), and the canes are very stout and purple when mature. *Rubus flagellaris*, common dewberry, similar in creeping habit and rooting at the nodes, can have 3 to 5 leaflets, and the stems are armed with stout-based recurved bristles (not narrow-based bristles).



Rubus hispidus

Toxicodendron radicans (eastern poison-ivy)



Anacardiaceae
Family
Native FAC CoC =1

Description:

High climbing woody vine (also sometimes shrubby in habit) with dense growth of aerial roots that help it attach to tree trunks for

support. New branches are green and hairy, turning gray-brown and smooth. Leaves are trifoliate (compound leaf having 3 leaflets), alternate, and on a long stalk (petiole). Leaflets (2.5 to 20 cm long) are oval to egg-shaped with a pointed tip, and may lack teeth or may have

coarsely toothed or lobed margins. Upper leaf surfaces are sparsely hairy, while the lower surfaces are lighter in color and more densely hairy especially along the veins. Leaves are green, turning red in fall.

Flowers and Fruits:

May; August to October. Flowers are in branched loose clusters (2 to 10 cm), in the leaf axils (where leaf meet stem) near branch tips. Male and female flowers are on separate plants, with both being yellowish-green to greenish-white with 5 petals. Fruits (3 to 5 mm) are round fleshy berry-like drupes turning from green to dull yellowish white.

Habitat: Widespread in moist to dry forests, floodplain forests, swamps, and old fields.

Similar species: *Parthenocissus quinquefolia*, Virginia creeper, another high climbing vine with aerial roots, has compound leaves in sets of 5 leaflets (not trifoliate) with coarsely toothed leaf margins and blue-black berries (not white drupes).



Parthenocissus quinquefolia

Callitriche heterophylla (two-headed water-starwort)



Callitrichaceae Family
Native OBL CoC = 6

Description:

Very small, slender, branching annual aquatic herb found either typically submersed in water or sometimes lying flat on wet soils. Leaves are opposite with two leaf types: thin narrow submersed leaves and rounded to oval floating leaves.

Flowers and Fruits:

April through December. Flowers are tiny and found in leaf axils (where leaf meets

stem) with pollination occurring under water. Fruits (1 mm wide) are slightly wider above the middle with rounded sides, and are split into 4 nutlets containing 1 seed each at maturity.

Habitat: Springs and spring-fed streams, ponds, marshy or muddy shores, and slow-moving streams or shallows.

Similar species:

Two other very uncommon species of *Callitriche* occur in West Virginia. *Callitriche palustris*, vernal water-starwort, with floating leaves more oval at the tip and narrowing towards the base. *Callitriche terrestris*, terrestrial water-starwort, has leaves that are usually lance-shaped. It gets its name (terrestrial) because it is found on moist soil and water edges, usually not submersed in water.



Callitriche palustris



Callitriche terrestris

Ceratophyllum demersum

(coon's tail, hornwort)



© Donald Cameron

Ceratophyllaceae
Family
Native OBL CoC = 5

Description:

This submerged aquatic perennial lacks roots but is sometimes found buried in soft mucky water bottoms. Stiff branching stems (1 to 2 m long) with opposite leaves circle the stem. The

leaves project a feathery appearance under water. Teeth along the leaf margins are easily seen and evenly spaced.

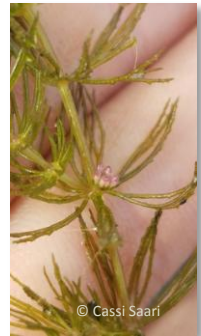
Flowers and Fruits:

July to September. Single flowers are found in the leaf axils (where leaf meets stem). Fruits are oval and 4-7 mm long with three spines. Vegetative reproduction is common with this species, as stem pieces break off from the main plant and float to new locations and to grow and spread.

Habitat: Slow moving streams and ponds. It can sometimes be a nuisance in farm ponds from overabundance.

Similar species:

The aquatic genus *Myriophyllum*, water milfoil, has 4 species (1 is non-native) found in West Virginia. The stems and leaves have the same feathery look underwater as *Ceratophyllum demersum*, but a close peek at the leaves shows a compound leaf pattern giving each leaf a comb-like look.



© Cassi Saari

Ceratophyllum demersum



© Larry Allain

Myriophyllum spp.

Lemna minor

(lesser duckweed)



Lemnaceae Family
Native OBL CoC = 4

Description:

Lemna minor is a diminutive floating aquatic perennial plant. Lacking stems, this plant is only a leaf-like thallus having 1 to 5 rounded segments (2 to 5 mm in diameter) with a single

root from each segment. Larger populations of *L. minor* appear to form a bright green mat across the water surface.

Flowers and Fruits:

Summer. Flowers and fruits are rarely produced. This plant reproduces vegetatively, and spreads quickly reproducing rapidly in eutrophic (high nutrient) waters such as farm ponds or drainages. Its winter buds detach and sink to remain dormant during cold temperatures.

Habitat: Still or stagnant waters of streams, marshes, ponds and ditches.

Similar species:

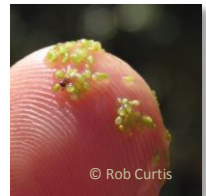
Spirodela polyrrhiza, greater duckweed, is larger than *L. minor*, and has a reddish underside and 7 to 20 hanging roots. There are 3 rare species of *Lemna* in West Virginia, plus 2 species of the much smaller *Wolffia*, watermeal. These are the tiniest of all flowering plants and they lack roots.



Lemna minor



Spirodela polyrrhiza



Wolffia spp.

Nuphar lutea ssp. advena (broadleaf pond-lily)



Nymphaeaceae
Family
Native OBL CoC = 4

Description:

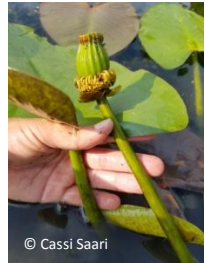
Large heart-shaped leaves of this perennial aquatic plant are about 30 cm wide and green on both sides. The lower leaf surface, leaf stalk and flower stalk are sometimes softly hairy.

Leaves float or emerge slightly above the water surface.

Flowers and Fruits:

May through October. Solitary flowers are spherical, 4 to 8 cm wide with 6 yellow petal-like sepals. Oval flat-topped fruits contain numerous seeds.

Habitat: Shallow, still or stagnant waters, marshes, and pond margins.



Nuphar lutea ssp. advena

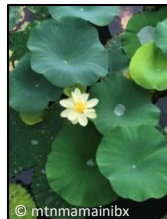
Similar species:

Nymphaea odorata, fragrant waterlily, also has heart-shaped leaves (10 to 30cm across), but they are reddish beneath. The showy flowers with 15 or more petals are white or rarely pink.

Nelumbo lutea, American lotus, has round leaves with the stem attached in the center of the leaf. The flowers are very pale yellow with many petals, or occasionally pink. The seedpod has an unusual showerhead-like shape.



Nymphaea odorata



Nelumbo lutea



© Theresa Bayoud

Potamogeton spp.

(pondweed)



Potamogeton epihydrus – floating leaves & flowers

and thread-like, while the floating leaves when present are wide and firm in comparison.

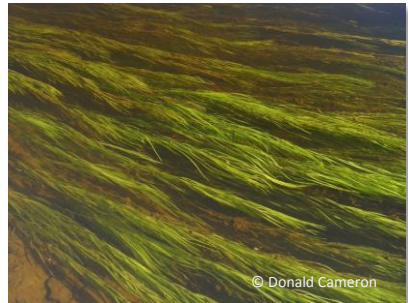
Flowers and Fruits:

July through September. Flowers form small spikes that can be observed submersed or just above the water surface. Pollination is both by water and wind. Fruits are an important food for waterfowl.

Habitat: Quiet waters of small streams and rivers, lake margins, ponds, and marshes.

Similar species:

Identifying pondweeds to the species level can be difficult, but it is easy to distinguish our native pondweeds from the invasive curly pondweed, *Potamogeton crispus*, with its wavy finely toothed leaf edges.



Potamogeton epihydrus - submersed leaves



Potamogeton crispus

Boehmeria cylindrica (small-spike false nettle)



Urticaceae Family
Native FACW CoC =5

Description:

Strongly toothed margins are evident on the 4 to 18 cm long, simple, opposite, rough, lance to oval shaped leaves of this tall perennial herb (to 1.5 m). It has a single stem with tiny hairs.

Flowers and Fruits:

July through September. Flowers formed on long spike-like stalks (1 to 10 cm) from the leaf axils (where leaves meet stem). Female spikes are interrupted and male

spikes are continuous. Fruits are achenes (dry one-seeded fruits that do not open to release the seed).

Habitat: Floodplain forests, swamps, seeps, marshes, and bogs.

Similar species: *Pilea pumila*, clearweed, has translucent “clear” stems, branched flower clusters, rather than the single spikes of *B. cylindrica*. Both lack the stinging hairs of *Laportea canadensis*, Canadian woodnettle, another similar species, has alternate leaves and branched flower panicles at both the stem terminal and leaf axils.



Boehmeria cylindrica



Pilea pumila



Laportea canadensis



Eupatorium perfoliatum (boneset)



© Larry Allain,

Asteraceae Family
Native FACW CoC=5

Description:

A tall herbaceous perennial (0.5 to 1.5 m) with a stout hairy branching stem. A key character is its opposite leaves that appear to “wrap” around the stem (perfoliate) so that the stem appears to pass through the leaf bases. The rough lance-shaped



© Larry Allain,

pointed leaves (5 to 20 cm long) have toothed margins and softly hairy undersides.

Flowers and Fruits:

July through September. Creamy white flat-topped flower heads are at the top of the stem and also smaller flower heads arise from the upper leaf axils (where leaf meets stem).

Habitat: Floodplain forests, stream banks, marshes, bogs, fens, wet meadows and disturbed sites.

Similar species:

Dipsacus fullonum, Fuller’s teasel, a non-native also has lance shaped toothed perfoliate leaves that can be confused with *E. perfoliatum* when in the vegetative stage. It differs in the very prickly hairs on stem and leaves, and distinct globose flower head.



© Sara Rall

Dipsacus fullonum



©Don Loarie



Euthamia graminifolia (flat-top goldentop)



Asteraceae Family
Native FACW CoC =3

Description:

This tall (0.5 to 1.2 m) herbaceous branched perennial has narrow grass-like simple leaves (4-13 cm long). The leaves are alternate along the stout smooth branching stem(s), with 3 to 5 parallel veins and small hairs along the mid-rib.

Flowers and Fruits:

July through September. Numerous yellow composite flower heads are at the tip of the stem and branches.

Habitat:

Floodplain forests, meadows, seeps, fens, and disturbed sites and roadsides.



Similar species:

Euthamia graminifolia can be distinguished from other goldenrods (*Solidago* spp.) by its narrow leaves, flat-topped flower clusters and generally smaller and more numerous flower clusters.

Galium tinctorium (stiff marsh bedstraw)



to 16 mm long) linear oblong are whorled in groups of 4 to 6, with blunt or rounded-tip leaflets.

Flowers and Fruits:

Clusters of tiny white three-petaled flowers (1.5 mm wide) are found in the leaf axils (where leaves meet the stem). Fruits occur in pairs and are smooth round tiny pods, each containing a seed. The fruits turn black as they ripen.

Habitat: Wet meadows, swamps, edges of lakes, ditches and other disturbed sites.

Similar species: *Galium obtusum*, bluntleaf bedstraw, is similar but flowers (1.5 to 3 mm wide) have 4 slightly longer petals, not 3 round short petals. *Galium aparine*, stickywilly, also with 4-petaled flowers, usually has whorls of 8 leaves (1 to 8 cm long) and will stick to clothing.

Rubiaceae Family
Native OBL CoC=4

Description:

As with most bedstraws, this species has both rough scratchy stems and leaves. The branching stems usually fall over, becoming tangled in each other and in the surrounding vegetation. The leaves (5



Galium tinctorium



Galium obtusum



Galium aparine



Hypericum mutilum (dwarf St. John's-wort)



Clusiaceae Family
Native FACW CoC =3

Description:

This slender herbaceous perennial (10 to 80 cm tall) has many 4-angled smooth branches. The light green, opposite leaves are oblong and ovate-shaped (0.3-1.5 cm), slightly clasp the stem or branches, and have 3

(sometimes 5) distinctive prominent veins.

Flowers and

Fruits:

July through
September. Small
clusters (cymes) of

5-petaled yellow flowers are found at upper stem and branch tips. Sepals are the same length as the petals (2-3 mm). The fruit is an ovoid capsule (8mm) containing numerous tiny seeds. The sepals remain after blooming and they grow larger as fruits mature.



Habitat:

Stream banks, wet fields, swamps, pond and lake edges, ditches and disturbed sites.

Similar species:

Hypericum mutilum is dwarfed in comparison to other *Hypericum* species. It has smaller scale-like floral bracts, and its seed capsules stay green longer than others of this genus.



Impatiens capensis (orange jewelweed)



Balsaminaceae Family
Native FACW CoC =3

Description:

This annual is most recognized by its bright orange spotted tubular flowers, borne on the smooth bright green to yellowish branching stems (0.5 to 1.5 m tall) in the

upper part of the plant. The leaves (4-9 cm long) are simple, alternate and egg-shaped with coarsely toothed margins.



Flowers and Fruits:

June through October. The tubular flowers (1.5-2 cm) have a long narrow spur that curls back under the tube and points forward. Flowers form on short stalks (pedicels) along shoots (racemes) in the upper part of the plant. Flower color is variable, but typically orange with a varying amount of darker spots (spots sometimes absent.) Fruit is a thin capsule about 2 cm long that pops open at the slightest touch, throwing dark brown oval seeds in all directions.



Habitat: Stream banks, floodplain forests, seeps, swamps, marshes, fens, beaver ponds, ditches and disturbed sites.

Similar species:

Impatiens pallida (pale jewelweed) flowers are pale yellow with few to no spots and a back spur curving downward (not forward).



Impatiens pallida

Ludwigia palustris

(marsh seedbox)



Onagraceae Family
Native OBL CoC=3

Description:

Box-like seed capsules are a key character of this perennial creeping plant. The succulent, often reddish, stems (10-60 cm long), are smooth and branching, sprawling along the ground, rooting frequently at the nodes and with branch tips pointing up (decumbent). Leaves (0.5-3cm long, to 2cm wide) are simple, opposite, smooth, egg-shaped and taper

at the base to a winged stalk. Leaf color ranges from green to reddish brown.

Flowers and Fruits: June through November. The stalkless bell-shaped tiny flowers, green to pinkish, are paired in opposite leaf axils (where leaf meets stem), and lacking petals, have 4 pointed, triangular lobes pointing outward. Fruits are 4-sided oblong capsules with numerous seeds.



Habitat: Pond edges, stream banks, seasonally exposed sand and gravel bars, swamps, marshes, ditches and other wet disturbed sites.



Lindernia dubia



Gratiola neglecta

Similar species: *Lindernia dubia*, yellowseed false pimpernel, and *Gratiola neglecta*, clammy hedgehyssop, also have opposite leaves and sprawling habit. *Lindernia dubia* has long-stalked pale violet flowers and a narrowly oval seed capsule. *Gratiola neglecta* has long-stalked yellow flowers, an oval seed capsule and sticky-fuzzy stems.



Lycopodium uniflorum (northern bugleweed)



Lamiaceae Family
Native OBL CoC=6

Description:

A squared-stemmed stiff mint (to 1 m tall) has both erect and horizontal stems (stolons) that root at the nodes in the wet soil and form tubers. The tubers produce a stem the next year. Leaves are opposite, lanceolate, 3-8 cm long, hairless or slightly hairy, have coarsely toothed margins, a pointed tip and a short stalk. The opposite leaf pairs are at right angles to the pairs above and below them.

Flowers and Fruits:

July through

September. Dense clusters of small tubular 5-

lobed white flowers surround the leaf axils (where leaf meets stem), and not all open at the same time. Fruits are sets of 4 nutlets each with a single seed.



Habitat: Floodplain forests, seeps, seepage swamps, bogs, fens, depression ponds, marshes, wet meadows and beaver ponds. Frequent in mid to high elevations.

Similar species: *Lycopodium virginicum*, Virginia water horehound, lacks tubers, has broader hairy leaves, and 4-lobed flowers. *Lycopodium americanus*, American water horehound, has deeply toothed or lobed lower leaves. *Mentha arvensis*, wild mint, has pink to lavender flowers, and a strong mint scent when crushed. *Lycopodium* species have no mint scent.



Lycopodium americanus



Mimulus ringens

(Allegheny monkeyflower)



© Patricia Faulkner

Scrophulariaceae Family
Native OBL CoC =5

Description:

Easily identified from its attractive almost orchid-like bluish-violet tubular flowers. The square stem (1 m tall) and finely toothed leaves are both hairless. Leaves (5-10 cm long) are opposite, lance-shaped with rounded bases clasping the stem.

Flowers and Fruits:

June through

September. The flowers found on long stalks (20-45 mm) at leaf axils (where leaf meets stem). The tubular blue-violet flowers (sometimes pink) are many lobed and have two yellow spots at the base of the middle lobe. Fruits are capsules (10-13 mm long) and strongly ribbed.



© JCW

Habitat: Marshes, calcareous fens, swamps, sand and gravel bars, wet meadows, and disturbed edges of streams and creeks.

Similar species:

Mimulus alatus, sharpwing monkeyflower, also a wetland obligate but much less common, differs in its stalked non-clasping leaves, and flowers on very short stalks (10-20 mm) in comparison.



© Rob Curtis

Mimulus alatus



© Dwayne Estes

Mimulus ringens



Packera aurea (golden ragwort)



Stem Leaves



Basal Leaves

Asteraceae Family
Native FAC CoC =4

Description:

This herbaceous perennial has smooth stems (30-80 cm tall) growing from creeping rhizomes (underground stems). Stem and basal leaves differ in appearance. Heart-shaped leaves with rounded toothed margins are mostly clustered at the stem base on slender stalks. The few stem leaves are stalkless, elongated with deep lobes and bluntly toothed margins.

Flowers and Fruits:

Early April through July. Bright yellow daisy-like flowers form in

flat-top clusters on

slender stalks at the upper stem tips. Fruit is a fuzzy puffball of small brown seeds.

Habitat: Floodplain forests, stream banks, swamps, seeps, fens, wet meadows, roadsides; abundant in the mountains.

Similar species: Marsh marigold and garlic mustard look similar when only basal leaves are present. Note the leaf veins for differences. *Packera aurea* veins start from the leaf midrib. *Caltha palustris*, marsh marigold, veins radiate from a single point at the leaf base. *Alliaria petiolata*, garlic mustard, leaves smell strongly of garlic.





Polygonum hydropiperoides (swamp smartweed)



© Marissa

Polygonaceae Family
Native OBL CoC =4

Description:

Spreading via rhizomes (underground stems) and rooting at leaf nodes (where leaves emerge from stems), this perennial often creates large colonies along muddy water edges. The sprawling branching stems have papery sheaths just above the swollen leaf nodes. Sheaths turn brown and have long bristle hairs along the upper edge. Leaves (5-15 cm long)



© Daniel Atha

are mostly smooth, lance-shaped, toothless and tapering to a pointed tip.

Flowers and Fruits:

May through September.

Flowers clustered along spike-like stalk at top of the plant stem and sometimes at leaf axils (where leaf meets stem) in the upper plant. The small flowers are greenish white to pink and flowers do not open all at the same time.



© Larry Allain

P. hydropiperoides

Habitat: Seepage swamps, depression ponds, beaver ponds, marshes, stream banks, sand and gravel bars.

Similar species:

Polygonum cespitosum var. *longisetum*, Oriental lady's thumb, is an invasive annual with fibrous roots (not long rhizomes) and has fine hairs sticking out from the flower clusters.



© Larry Allain

Polygonum cespitosum var. *longisetum*



Polygonum punctatum (dotted smartweed)



Polygonaceae Family
Native OBL CoC =4

Description:

Stem, leaves and flowers of this species are dotted with tiny pitted glands. The sprawling, smooth, branching stems (to 1m tall) have papery sheaths just above the swollen leaf nodes. Sheaths have long bristle hairs along the upper edge. Leaves 4-10 cm long, lance-shaped, toothless, and tapering to a pointed tip.



Flowers and Fruits:

May through September. Greenish-white flowers (never pink) are clustered along spike-like stalks on the upper stem and upper leaf axils (where leaf meets stem). The small flowers are covered with flat yellow glands and lower flowers are often separated along the stalk.



Habitat: Stream banks, sand and gravel bars, wet fields, swamps, pond and lake edges, ditches and disturbed sites.

Similar species:

Polygonum hydropiper, marshpepper knotweed, can have white or pink flowers, which are sometimes enclosed inside the sheath, and has seeds that are rough-textured and dull (*P. punctatum* has shiny smooth seeds).





Polygonum sagittatum (arrowleaf tearthumb)



© Sara Rall



© Paul Lewis

Polygonaceae Family
Native OBL CoC =3

Description:

This species is easy to identify by its sharp, claw-like bristles on both stems and underside of leaf veins and short fine hairs along the leaf margins. Stems (0.5 to 2

m long) are sprawling and vine-like, often becoming tangled with surrounding vegetation. Stems are branching mostly from

the base, often rooting at nodes on the lower plant and creating dense colonies. Leaves (4 to 12 cm long) are alternate, widely spaced, lance to arrow-shaped, deeply lobed and sometimes wrapping the stem.



© Erin Faulkner



© Ben Kellman

Polygonum sagittatum

Flowers and Fruits: May through September. Flowers are greenish to usually pink in tight, rounded, short clusters at the upper stem and from upper leaf axils (where leaf meets stem).

Habitat: Floodplain forests, wet meadows, bogs, fens, seeps and seepage swamps, marshes, ditches and disturbed wetlands.

Similar species:

Polygonum perfoliatum, Asiatic tearthumb or mile-a-minute, an exotic vine also armed with very sharp spines, has triangular leaves and distinctive blue-purple round fruits.



© Lena Struwe



© Laliga

Polygonum perfoliatum



Sagittaria latifolia (broadleaf arrowhead)



Alismataceae Family
Native OBL CoC =4

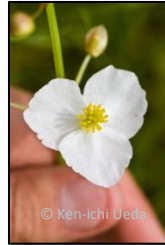
Description:

This spongy perennial plant has distinct arrow shaped leaves with 2 backward pointing basal lobes. Leaves vary in size and width from broad to very narrow. Flowering stems (to 0.6 m tall) grow from starchy edible corms (bulb-like root structures) and stems, and leaves and leaf stalks are smooth.

Flowers and Fruits:

July through

September. Flowers (both male and female) are whorled (3 per group) along a spike-like stem (2 to 8 groups per stem). Both genders (0.5 to 2 cm wide) have 3 broad white petals and 3 small pale green sepals. Female flowers have a ball-like green center, while male flowers have a center of bright yellow stamens. Fruit clusters are round, ball-like containing the beaked achenes (seeds).



Male



Female

Habitat: Shallow water edges in marshes, swamps, streams, ponds, floodplain forests, and disturbed wetlands.

Similar species: *Sagittaria australis*, longbeak arrowhead, differs in the achene beak; it is horizontal on *S. latifolia* and erect on *S. australis*. *S. latifolia* has stem bracts 4-12 mm long, *S. australis* has bracts 10-30 mm long. *S. australis* has sharply 5-angled leaf-stalks.



S. latifolia



S. australis

© Anna Anisko



Saururus cernuus (lizard's-tail)



Saururaceae Family
Native OBL CoC=8

Description:

Creeping perennial forming large colonies from rhizomes (root structures). Jointed stems are zigzag branched (0.5 to 1 m tall) with alternate, stalked, heart-shaped, dark green

leaves (to 20 cm long). Base of the leaf stalks appear to hug or wrap the stem.

Flowers and Fruits:

June through September. Small white perfect (male and female together) flowers are found on slender spikes



(6 to 15 cm long) with nodding curved tips. Flower spikes arise from the axils (where leaf meets stem) of upper leaves. Fruits, formed along the spikes, are fleshy capsules becoming strongly wrinkled when dry and each containing a single seed.



P. cuspidatum

Habitat: Pond edges, beaver ponds, mucky seepage swamps, floodplain forests, stream banks.

Similar species: Japanese knotweed, *Polygonum cuspidatum*, is a bamboo-like plant with hollow reddish stems (to 3m tall) growing in similar zig-zag habit and with similar leaf shape as *S. cernuus*. It differs in its many branching clustered flower spikes (*S. cernuus* are single spikes) and winged seed covering.



Solidago rugosa (winkleleaf goldenrod)



© Marilee Lovit

© Joe Bartok

Asteraceae Family
Native FAC CoC =2

Description:

This perennial has an erect unbranching stem (0.5 to 2 m tall), green to brownish red and usually hairy. The alternate leaves (2.5 to 12 cm long) are lance-shaped, dull green, and scratchy to the touch with roughly toothed margins. Upper surfaces of the leaves have deeply indented

veins giving a somewhat wrinkled appearance.

Flowers and Fruits:

July through November. Yellow flowerheads of varying shape and size are



© Joe Bartok

formed at the upper stem. Small plants often have narrow flowerheads that resemble spikes, while large plants often have broad flowerheads with spreading curved branches. Each fertile flower produces a small bullet-shaped seed with a short tuft of hairs to carry it via wind.

Habitat: Floodplain forests, seeps, fields, wet meadows, thickets, and roadsides primarily in mid to higher elevations.

Similar species:

Solidago rugosa differs from other goldenrods by its usually hairy stems, rough wrinkled leaf veins, and leaves lacking the 3 strongly parallel veins typical of *Solidago gigantea*, giant goldenrod, and *Solidago canadensis*, Canada goldenrod.



© Rob Routledge



Solidago uliginosa (bog goldenrod)



Asteraceae Family
Native OBL CoC=8

Description:

Stems of this perennial are erect, unbranching, often a deep red color, smooth and to 1.5 m tall. Leaves (10 to 20 cm long), smooth, narrow and lance-shaped are mostly stalkless to somewhat clasping the stem.



Flowers and Fruits:

August through September. Bright yellow flower clusters of this species are typically dense and compact with the flowering stalks angled close



to the main stem, and creating a plume or wand-like appearance.

Habitat:

Acidic soils in bogs, fens, swamps, and other wetlands of higher elevations.

Similar species:

Large basal leaves (to 25 cm long and 8 cm wide), and the acidic boggy habitat distinguish *S. uliginosa* from other goldenrods. Like most goldenrods, the leaves are fragrant when crushed.



Symplocarpus foetidus (skunk-cabbage)



Araceae Family
Native OBL CoC =7

Description:

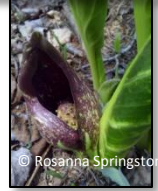
This perennial gives off a skunk-like odor to attract flies for pollination. Forming large colonies, it is one of the first plants to emerge in the spring,

generating its own heat that melts surrounding snow. A rosette

of bright green, net-veined, basal leaves emerges from the thick root stock after flowering. Leaves (to 60 cm long) on ridged leaf stems (to 30 cm long) are smooth, toothless, hairless and somewhat heart-shaped.



fruit



flower

Flowers and Fruits: February through April. Flowers are in a fleshy oval yellow-purplish cluster (spadix) (2 cm in flower; 5 to 10 cm in fruit). The spadix is enclosed in a leaf-like purplish brown bract (spathe), that is curved at the top and open to one side. The spathe withers, and the oval seed-containing compound fruit with a bumpy surface develops.

Habitat: Swamps, seepage swamps, bogs, and low floodplains.



Veratrum viride

Similar species: *S. foetidus* can be confused with *Veratrum viride*, green false hellebore, also a spring emergent, but the later has leaves with parallel veins (not netted veins) and spike-like flower heads, not concealed within a spathe.



Verbena hastata (blue vervain)



Verbenaceae Family
Native FACW CoC=4

Description:

Biennial with erect, square, somewhat hairy stems to 1.5 m tall. Leaves (4 to 20 cm long) are opposite, narrow, lance-shaped with coarsely toothed margins, a short stalk and frequently two basal lobes. The upper surface is rough and the lower finely hairy.



Flowers and Fruits:

June through September. Multiple slender spikes (5-15 cm long) arise from the upper leaf axils (where leaf meets stem). Flowers are blue to violet or rarely rose pink, with 5 petals fused at the base forming a short tube. Spikes elongate as the plants mature, with

flowers blooming near the tip and fruit forming below. Fruits are dark brown dry nutlets (1.5 to 2 mm).



Habitat: Wet fields and meadows, marshes, floodplains, stream banks, exposed sand and gravel bars, ditches and roadsides.

Similar species:

Vernonia noveboracensis, New York ironweed, has round (not square) stems, alternate (not opposite) leaves, and branched flower heads in flat or domed arrangement (not spike-like).



See the *V. noveboracensis* page for more details and images.

Verbesina alternifolia (wingstem)



Asteraceae Family
Native FAC CoC =2

Description:

Wings along the central stem (rarely unwinged) of this erect perennial (1 to 2 m tall) gives it its common name, and the stem branches only near the top where flower heads are formed. The olive green leaves (10 to 30



cm long) are alternate, lance-shaped, rough textured with smooth to slightly toothed

margins and white hairs on the under surface of major veins. Spreading via rhizomes (underground stems), this species forms vegetative colonies.



V. alternifolia

Flowers and Fruits:

August through September.

The upper stem holds the daisy-like flower heads (2.5 to 5 cm wide) with

yellow rays (petal-like structures). The globe-like fruits contain many oval-shaped capsules with two short slender awns (beaks) at the tip.



H. autumnale

Habitat: Moist woods, stream banks, and low floodplains.

Similar species: *Helianthus autumnale*, common sneezeweed, also has yellow flowers and winged stems, but tips of the ray flowers (petals) are lobed or toothed (*V. alternifolia* ray flowers are not lobed).



Vernonia noveboracensis (New York ironweed)



Asteraceae Family
Native FAC CoC =3

Description:

The common name has been attributed to its iron-like characteristics including the tough stems and rusty color of fading flowers and seeds. This erect perennial (to 2 m tall) has stems that are smooth or coarsely hairy and unbranched below the flower heads. The leaves are alternate,

rough, lance-shaped with toothed margins (7 to 25 cm long).

Flowers and Fruits: July through September. Flower heads, growing on stalks arising from the upper leaf axils (where leaf meets stem), have numerous tiny, fluffy, deep purple flowers. The flowers are in clusters wrapped at the base by rust colored bracts with long filament-like tips. Fruits are seed (achene) clusters with puff-ball appearance when mature.

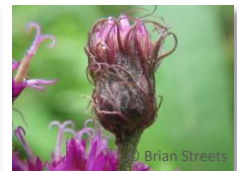
Habitat: Floodplain forests, stream banks, marshes, and wet meadows.

Similar species:

Vernonia gigantea, giant ironweed, is a bit taller (to 3m) than *V. noveboracensis*, and it lacks the filament-like tips on the flower head bracts.



V. gigantea



V. noveboracensis



Viola cucullata (marsh blue violet)



Violaceae Family
Native FACW CoC =5

Description:

This small colony-forming perennial lacks stems, having leaf stalks sprouting from branching rhizomes (underground stems). Leaves (4 to 12 cm long) are heart-shaped, basal and

smooth with small rounded teeth on the margins.

Flowers and Fruits:

April through June. Single flowers (1.5 to 4.5 cm) at the end of long smooth stalks extend above the leaves. Flowers have green sepals with pointed tips behind the 5 light blue to violet petals (rarely white). Petals are white at the base with darker purple veins and short club-shaped hairs (beard) with a swollen tip. The fruit is an olive green capsule (to 1.5 cm) with smooth brown to black seeds.

Habitat: Marshes, bogs, fens, seepage swamps, and stream banks.



Viola cucullata

Viola sororia

Similar species:

Viola sororia, common blue violet, found in many habitats from wetlands to mesic uplands, is also stemless but often has hairy leaves, round-tipped sepals and long thread-like petal beard hairs. In comparison, *V. cucullata* has smooth leaves, pointed-tip sepals and club-shaped beard hairs.

NON-NATIVE
INVASIVE



Agrostis gigantea (giant bentgrass)



Poaceae Family
Non-native FAC CoC = -1

Description:

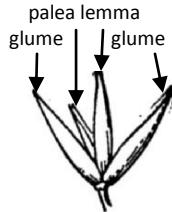
Perennial grass with smooth erect stems to 1.5 m tall, often reclining just at the base, and spreading via stiff creeping

rhizomes (underground stems). Leaves are alternate (20 cm long, 5 to 10 cm wide), flat, hairless, mostly smooth on both surfaces and have a smooth sheath with the edges sometimes overlapping to form a long "V". Nodes along the stem are smooth and typically reddish.

Flowers and Fruits:

June through October. Purplish red flower spikes are formed on branched stalks in overall pyramid-like shape to 20 cm long. Spikelets are somewhat flattened, lance-shaped tapering to a pointed tip and at the base are a pair of

lance-shaped bracts (glumes) with pointed tips.



Agrostis gigantea



Habitat: Pastures, fields, roadsides, and other disturbed sites.

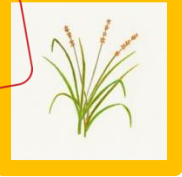
Similar species:

Agrostis perennans, upland bentgrass, is found in more natural sites. It has shorter weak stalks (0.5 to 1 m) and an airy delicate appearance. A technical difference is the palea which is absent or <0.5 mm long, whereas the palea of *A. gigantea* is 0.6-1.2 mm long.



Agrostis perennans

NON-NATIVE
INVASIVE



Arthraxon hispidus (small carpetgrass)



Poaceae Family

Non-native FAC CoC = -5

Description:

Arthraxon hispidus is a low, hairy, mat-forming grass. The branched stems are 0.5 m long and decumbent (lying along the ground and then curving upright). The leaves are 2.5 to 7.5 cm long with a

clasping heart-shaped base. The lower edge of the leaf and leaf-sheath are distinctly hairy.

Flowers and Fruits:

September through October. Flowers are found at the stem tips and leaf axils (where leaf meets the stem), and flower spikes are 1.2 to 7 cm long. Spikelets are pale green to purplish.

Habitat:

Poorly drained fields, disturbed floodplains, stream banks and ditches.

Similar species:

Sometimes confused with *Microstegium vimineum*, Japanese stiltgrass, especially before flowering. The leaves of Japanese stiltgrass have a shiny midrib and do not clasp the stem.



Arthraxon hispidus



Microstegium vimineum

Carex crinita (fringed sedge)



Cyperaceae Family
Native OBL CoC =5

Description:

The long nodding flower spikes are characteristic of this sedge, but see below as it is easily confused with *Carex gynandra*. It is a perennial sedge growing in grass-like clumps, with stiff triangular slightly rough-edged stems 0.3 to 1.5 m tall. Leaves are 4 to 10 mm wide, flat with a few hairs on leaf margins, but having smooth leaf sheaths reddish-brown near the base.



Flowers and Fruits: June through August. Long drooping flower spikes that can be 2.5 to 10 cm long. Usually 1 to 3 male spikes at the uppermost part of the stem and 2 to 6 female spikes below.



Carex gynandra



Carex crinita © Don Sutherland

Habitat: Floodplain forests, seepage swamps, bogs, marshes and pond margins.

Similar species: Easily mistaken for *Carex gynandra*, nodding sedge. Run your fingers upward at the base of the leaf sheath near the ground: *C. crinita* is smooth, but *C. gynandra* feels rough from minute stiff hairs. Then look at the long-awned scale below each individual fruit. *C. crinita*'s scales are square or notched with "sharp shoulders", whereas *C. gynandra*'s scales taper with "sloping shoulders".

Carex echinata

(star sedge)



Cyperaceae Family
Native OBL CoC =8

Description:

This small slender sedge gets its common name from the spiny look of the flower spikes. The “spines” are actually the long beaks of the female flower-cases (perigynia). Stems are 10 to 90 cm tall, and the leaves (only 1 to 2.5 mm wide) are smooth and dark green. The

leaves are generally shorter than or equaling the length of the fruiting stems.

Flowers and Fruits:

May to June. Flower spikes are short (1 to 7.5 cm), and can be widely separated or in groups along the stem. Female flower-cases (perigynia) are ovoid with a distinctive thickened spongy base, and the lower ones are much longer than wide.



Habitat: Bogs, seeps, seepage swamps, depression swamps and ponds at middle to higher elevations.

Similar species:

A very similar species, *Carex atlantica*, Atlantic sedge, has distinct perigynia with a wide fat base in comparison to the more slender base of *C. echinata* perigynia.



Carex atlantica



Carex echinata

Carex gynandra (nodding sedge)



Cyperaceae Family
Native OBL CoC =6

Description:

This species gets its common name from the characteristic drooping flower spikes that can be up to 10 cm long. It is a perennial sedge with grassy appearance. The leafy



© Patricia Faulkner

© WVDNR



triangular jointless stems are 0.5 to 1.5 m tall.

Leaves (4-13 mm wide) have sheaths that are very rough to the touch

from stiff hairs along the edges, and reddish-brown nearer to the base.

Flowers and Fruits:

May through July. This sedge usually has 1 to 3 male spikes at the uppermost part of the stem and 2 to 5 female spikes below. Flower-cases (perigynia) on the female spikes are smooth, flattened, oval and slightly tapering at the tip.

Habitat: Swamps, bogs, fens, seeps, wet meadows, and beaver ponds. Most common on the western slopes of the mountains.



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Similar species:

Commonly mistaken for *Carex crinita* - see the *Carex crinita* page for differences between these two species.

Carex lupulina

(hop sedge)



© Jim Vanderhorst

Cyperaceae Family
Native OBL CoC =6

Description:

This species gets its common name from the very large female flower spikes, longer than they are wide, with upward pointing beaks. You can tear open the fat flower-case (perigynium) to find

the diamond-shaped seed inside, with its long slightly curled tail-like style. This perennial sedge has stiff leafy triangular stems 0.3 to 1 m tall. Leaves are 6-10 mm wide, light green and smooth. Sheaths are reddish brown near the base.

Flowers and Fruits:

July through October. Male and female flower spikes are separate. Usually a single male spike at the tip of the flowering stem (rarely 2 or 3), and 2 to 5 female spikes just below.

Habitat: Open wet floodplain forests, swampy areas, wet meadows, ponds, beaver marshes.

Similar species:



© Rob Curtis

Carex grayi

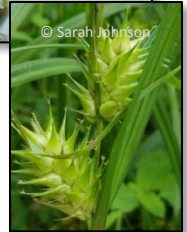
(perigynia) rather than longer than the body.

Carex grayi, Grey's sedge, also has large, fat flower spikes, but the spikes are spherical and the beaks point in all directions, not just upward.

Carex lurida, sallow sedge, flower spikes are much smaller, and the beaks are equal in length to the body of the female flower cases

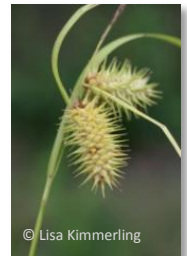


© Cathy Murray



© Sarah Johnson

Carex lupulina



© Lisa Kimmerling

Carex lurida

Carex lurida

(sallow sedge)



Cyperaceae Family
Native OBL CoC =5

Description:

Carex lurida has dense, almost prickly flower spikes. This perennial sedge (0.3 to 1 m tall) has smooth 3-angled stems and leaves (2 to 11 mm wide) flat to W-shaped, smooth and dark green. Leaf sheaths are tan to reddish at the base.

Flowers and Fruits:

June through October. Male and female flower spikes are separate in this species. A single male spike found at the top of the flowering stem, and 1 to 4 female spikes below with lower spikes often nodding.

Female flower spikes are longer than they are wide, and female flower-cases

(perigynia) are ovoid and equal in length to their thin beaks. The fruits are three-angled with a curled tail-like style.

Habitat: Floodplain forests, swamps, bogs and wet meadows.



Similar species: *Carex lurida* is very similar to *Carex baileyi*, Bailey's sedge, but has slightly wider leaves and flower-spikes. *Carex lurida* has fruiting spikes mostly 15-22 mm wide and widest leaf blades mostly 4.5-13 mm wide whereas *Carex baileyi* has fruiting spikes mostly 9-14 mm thick and widest leaf blades mostly 2.4-4 mm wide. *Carex lurida* is smaller than *Carex lupulina* (see the *Carex lupulina* page for differences between these two species).

Carex scoparia

(broom sedge)



© Glen Mittelhauser



© tsc_wis

Cyperaceae Family
Native OBL CoC =4

Description:

Clump-forming sedge with tall, thin, upright stems about 1 m tall. The dense tight broom-shaped flower spikes that age to a tan to dark brown are a key character. The leaves are 1-3 mm wide and shorter than the stems. Stems have fibrous, brown sheaths at the base.

Flowers and Fruits:

May to August. The numerous flower spikes are closely clustered near the stem tip. Female flower-cases (perigynia) are very long, lance-shaped and narrow in width.

Habitat:

Swamps, wet meadows, floodplain forests and stream banks.

Similar species:

Carex tribuloides, blunt broom sedge, has very similar flower spikes in habit and appearance, but this species is much leafier with 6 to 10 leaves per stem and with wider leaves (3-7 mm).



© Andy Newman

Carex scoparia



Carex stipata

(stalk-grain sedge)



Cyperaceae Family
Native OBL CoC =4

Description:

Perennial sedge with distinctive stiff, hollow, triangular winged stems. The hollow stems are easily crushed between finger and thumb. The leaves are m-shaped in cross-section and 7-10 mm wide. Stems have wrinkled, thin, whitish sheaths at the base.



Flowers and Fruits:

May to August. The numerous flower spikes are closely clustered along the stem near the tip, creating a prickly look. Female flower-cases (perigynia) (4-5 mm long) are lance-shaped with swollen bases and short beaks.

Habitat: Floodplain forests, seeps, swamps and wet meadows.

Similar species:

Carex vulpinoidea, fox sedge, is distinguished by its stiff stems and perigynia (2-3 mm long) that are shorter than those of *C. stipata*. See the *C. vulpinoidea* page for more details on this species.



Carex stipata



Carex vulpinoidea

Carex stricta (tussock sedge)



Cyperaceae Family
Native OBL CoC =6

Description:

This perennial sedge grows in dense clumps. The vegetative stems (30 to 80 cm long) are thin and narrow, with strongly angled rough edges, and often drooping over. The stem bases are wrapped in a ladder-like



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Arthur Haines

© Glen Mittelhauser

fibrous sheath. The light to dark green leaves are 2 to 6 mm wide.

Flowers and Fruits:

May to August. Flower stems (0.5 to 1.5 m) are longer than the vegetative stems. The flower

spikes are upright and 1.5 to 11 cm long. Female flower-cases (perigynia) are oval and yellow-brown with red-brown spots. Female scales are also red-brown, beakless and shorter than the perigynia.



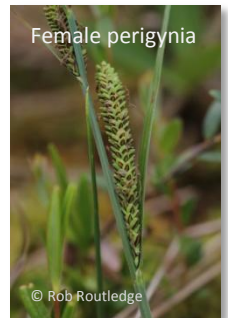
© Samuel Brinker

Habitat: Swamps, wet meadows, and low stream banks.

Similar species: *Carex torta*, twisted sedge, shares the habit of growing in large clumps, but lacks the ladder-like sheaths and is primarily found on stream banks and rocky beds. *Carex pellita*, woolly



© Rob Routledge



Female perigynia

© Rob Routledge

sedge, has dense hairs on its perigynia, and is generally found in calcareous or marl fens.

Carex vulpinoidea

(fox sedge)



© Don Sutherland

Cyperaceae Family
Native OBL CoC =3

Description:

Clump-forming sedge with rough, stiff stems (30 to 90 cm tall), and thin, whitish sheaths. The leaves are 2-4 mm wide and longer than the stems. The numerous flower spikes are in dense

clusters near the stem tip, and turn a brownish-yellow when mature. Hair-like bracts stick out from the crowded flower spikes.

Flowers and Fruits:

June to August. Female flower-cases (perigynia) are very small (2-3 mm long), oval to lance-shaped, and beaks tapered to a point.

Habitat: Disturbed swampy areas, wet meadows, beaver ponds, and ditches.

Similar species:

Carex stipata, stalk-grain sedge, differs in its hollow triangular stems that are easily crushed, and the larger perigynia (4-5 mm long). See the *C. stipata* page for more details. *Carex annectans*, yellow-fruited sedge, is the one most easy to confuse, but it is not as common. Differences include flowering stems that are longer than the leaves, and perigynia with round bodies and very short pointed beaks.



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© Cathy Murray

Carex vulpinoidea



© John Baur

Carex annectans

Dichanthelium clandestinum

(deer-tongue witchgrass)



© Rick Newberry

Poaceae Family
Native FAC CoC =3

Description:

Spring stems are erect, stiff, light green (70 cm to 1.5 m tall), hairy and unbranched. Leaves (10 to 20 cm long, 1.3 to 3 cm wide) are lance-shaped, flat and smooth except near the stem where they are hairy and clasp the stem. The leaf sheaths are light green, veined and upper sheaths are likely to be hairy. Fall stems are branching, and overwinter as rosettes of basal leaves.

Flowers and Fruits:

Spring stems— June to September; Fall stems — July to November. At the tip of each spring stem extends a pyramid-like branching head (8 to 15 cm long) of flower spikelets (2.4 to 3.6 mm). Much smaller flower heads produced in the fall remain hidden within their sheaths near the stem tips.

Both spring and fall spikelets produce seeds to 2.5 mm long that are oval and slightly flattened.

Habitat: Floodplain forests, swamps, seeps, sand and gravel bars, wet fields, and roadsides.

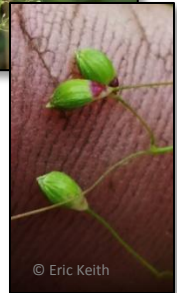
Similar species: *Dichanthelium dichotomum*, cypress panicgrass, while similar is overall a diminutive plant, having slightly shorter stems (to 70 cm tall), smaller leaves (1 to 3.5 cm long, 3 to 8 mm wide), smaller flower heads (4 to 9 cm long), and smaller spikelets (1.7 to 2.3 mm).



© Peter M. Martin



© Ashley M. Bradford



© Eric Keith

Dulichium arundinaceum (three-way sedge)



© Patricia Faulkner

flower spikelets arranged alternately in two opposite rows is unique to this species.

Flowers and Fruits:

July to October. Flowers are flattened spikelets having a gold hue contrasted against the bright green stem. They are found in the leaf axils (where leaf meets stem) of the upper stem.

Cyperaceae Family
Native OBL CoC =5

Description:

Three-way sedge is a rooted emergent perennial aquatic species. Stems are unbranched, erect, round and hollow to 1 m (3ft). Leaves are narrow, flat and arranged in three vertical rows which are obvious when viewed from above. This perennial often forms extensive colonies from spreading rhizomes (underground stems). The combination of numerous 3-ranked stem leaves, rounded stems, and



© Evan Raskin

The fruit is flattened with a long beak and narrow base.

Habitat: Acidic, sandy, or peaty soil of peatlands, swamps, or in standing water along the edges of ponds, particularly in the mountain counties.

Similar species: None.



© Evan Raskin

Eleocharis obtusa (blunt spikerush)



Cyperaceae Family
Native OBL CoC =2

Description:
Densely clumping plants that lack rhizomes (underground stems). Stems are bright green, smooth

and generally erect and in various lengths to 80 cm. Leaves appear absent, but actually lack blades and are reduced to sheaths at the stem base. The brown sheaths often have a single tooth along the upper rim.

Flowers and Fruits:

July through September. Each stem bears a small, egg-shaped, blunt-tip spikehead (4-10 mm long; 3-5 mm wide) covered by overlapping whitish green to brown oval scales. Hidden by these scales is one tiny flower each. Fruits are capsules (achenes) with a single seed and they are widest near the tip with a swollen cap-like appendage (tubercle) as wide as the top of the achene. Surrounding the achene are 5 to 7 barbed bristles.

Habitat: Depression wetlands and mucky pond edges, swamps, marshes, beaver meadows, low exposed muddy stream banks.

Similar species: *Eleocharis palustris*, common spikerush, has a longer narrow spikehead (5 to 30 mm long; 2 to 7 mm wide), the lowest scale on its spikehead is leathery, wrapping 75% of the stem. Its achene is turret-like with a narrow neck and usually 4 bristles. See the plant page for *Eleocharis tenuis*, slender spikerush, for a comparison with *E. obtusa*.



Eleocharis obtusa



Eleocharis palustris

Eleocharis tenuis

(slender spikerush)



Cyperaceae Family
Native FACW CoC =3

Description:

Clump-forming spikerush species with very slender bright green stems, 4 to 5-angled, erect and unbranching. Stems are rarely greater than 30 cm tall. Leaves appear absent, but

actually lack blades and are reduced to brown membrane-like sheaths at the stem base.

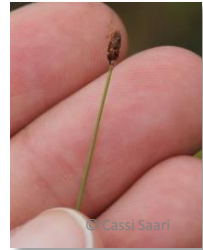
Flowers and Fruits:

May through July. Each stem bears a small, oblong spikehead (3-10 mm long) covered by many overlapping brown edged oval scales. Hidden by these scales is one tiny flower per scale. Fruits are capsules (achenes) containing a single seed and in this species they are rough, angled and with a pyramid-like appendage (tubercle) or cap at the tip of the capsule. The achene lacks the barbed bristles found in some *Eleocharis* species.

Habitat: Depression ponds, swamps, bogs, fens, low stream banks, wet fields and pastures and low disturbed sites.

Similar species:

Eleocharis obtusa, blunt spikerush, is stouter with taller stems, flowers and fruits later in the growing season (July to September), has fruits with a swollen cap as wide as the fruit (not pyramid-like cap), and its fruit is surrounded by barbed bristles that are absent in *E. tenuis*. See *E. obtusa* page for more details on this species.



Eleocharis tenuis



Eleocharis obtusa

Eriophorum virginicum (tawny cottongrass)



© Randy Bodkins

© Peter M. Ozick

© Katy Cheyka

Cyperaceae Family
Native OBL CoC =9

Description:

Perennial sedge in colonies with solitary erect stems or a few clumping (40 cm to 1.2 m tall), light to medium green, unbranched, smooth

and weakly 3-angled to round. The few leaves per stem (to 70 cm long, 4 mm wide) are alternate, often flopping or bending, flat near the base and triangular toward the tip, and rough margined with fine teeth. Sheaths are green, firm, often concave along upper

edge and are slightly loose around the stem.

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Eriophorum virginicum

Flowers and Fruits:

June through September. Compact flower heads, containing 2 to 10 flower spike clusters, at the tip of flowering stems. Each flower is surrounded by white thread-like bristles, creating a cotton-like tuft. Just below the lower flower spikes are leafy bracts, erect to downward pointing. Each flower has a single, egg-shaped, 3-veined scale. The fruit (2.5 to 4 mm long) is a capsule (achene) brown to black, elliptic, widest at the middle, and with a short beak at the tip.

Habitat: Bogs, fens and peaty meadows.

Similar species: *Rhynchospora alba*, white beaksedge, looks similar in flower, but lacks the long leaf-like bracts and is not as "fluffy" in appearance of the flower head.



© Arthur Haines

Rhynchospora alba

Glyceria melicaria (melic mannagrass)



Poaceae Family
Native OBL CoC =7

Description:

This wetland grass has slender, erect stems (50 cm to 1.2 m tall). The leaves are thin, drooping, flat, 7 to 9 per stem (to 50 cm long) and slightly rough. Sheaths are smooth.

Flowers and Fruits:

July through August. This species is characterized by its very narrow linear arrangement of the flowering head arising

from the top of the flowering stems (15-36 cm long) and nodding at the tip. Spikelets, containing 2 to 4 flowers each, are held on erect branches close to and along the upper flower stalk. Fruits are seed grains (1.2 to 1.5 mm) shiny and black.

Habitat:

Wet woods, swamps, seeps, and stream banks mainly in the mountains.

Similar species:

Glyceria striata, fowl mannagrass, has an open pyramid flower head rather than the very narrow linear arrangement of *G. melicaria*. *G. striata* also has fused sheaths and purple spikelets that are lacking in *G. melicaria*, and slightly smaller red (not black) seed grains (0.8 mm). See the *G. striata* page for more details on this species.



© Charlie Hohn



© Donald Cameron

Glyceria striata (fowl mannagrass)



Poaceae Family
Native OBL CoC=5

Description:

Wetland grass with slender, erect, stiff stems (30 cm to 1.5 m tall) with about 6 alternate leaves per stem. Leaf blades (to 35 cm long) are flat or folded, underside is

smooth and upper surface is rough. Sheaths are green to purplish, hairless and smooth to slightly rough and tube-like with the edges closed.

Flowers and Fruits:

June through August. Flower heads (10 to 20 cm long) are branching and open, usually pyramid-shape, typically nodding to one side and with branches drooping out towards the tips. Spikelets, each containing 3 to 7 flowers, are purplish, stalked, slightly flattened with raised veins. Fruits are seed grains (0.8 mm) shiny red.



Habitat: Floodplain forests, swamps, bogs, wet meadows, and ditches.

Similar species: *Glyceria laxa*, limp mannagrass, is common in high elevation wetlands, and is more robust, having leaves up to 60 cm long, drooping flower heads to 40 cm long, and visible (not raised) veins on the florets. *Glyceria canadensis*, rattlesnake mannagrass, (5-10 florets per spikelet) is similar to *G. laxa* (2-5 florets per spikelet).

Juncus brevicaudatus (narrowpanicle rush)



Juncaceae Family
Native OBL CoC=6

Description:

This member of the rush family, often growing in dense clusters, has erect, unbranched, smooth, round stems (10 to 60 cm tall), with brownish basal

sheaths. One to three basal leaves are present, with 1 or 2 alternate narrow leaves along the stem.

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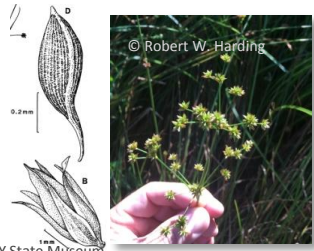
Flowers and Fruits: June through September. Flower heads somewhat tightly clustered and compact on slightly ranching stalks from upper part of the stem (4 to 15 cm long). Flower heads with 2 to 7 florets per head and sharply pointed sepals and petals. Capsule (3 to 4.3 mm) is dark brown, 3-angled, narrow, much longer than the perianth (set of petals and sepals wrapping the flower), and containing oblong ribbed seeds with "tails" at both ends of each seed.



Juncus brevicaudatus

Habitat: More common at higher elevations in bogs, seeps, pond edges, and beaver meadows.

Similar species: *Juncus subcaudatus*, woodland rush, also common in mountain wetlands, has compact flowerheads but they occur on widely spreading many branched stalks (not slightly branched) with more florets (8 to 20) per flowerhead than *J. brevicaudatus*. Other differences include capsules about equal in length to the perianth and seeds with a very prominent rib in *J. subcaudatus*.



Juncus subcaudatus

Juncus effusus

(soft rush)



© Marilee Lovit



© Colin Meurk

Juncaceae Family
Native FACW CoC =3

Description:

This grass-like plant forms dense clumps from rhizomes (underground stems). The round stems, with soft white pith inside, are erect (to 1 m tall), smooth, and unbranched. This species lacks leaves but does have bladeless sheaths at the base.

Flowers and Fruits:

June through September. Flower heads are in a branching cluster,

with the branches generally fanning or spreading. Flower clusters appear to sprout from the side of the stem with an erect bract (not an extension of the stem) extending above the flower cluster. The bract is very long, up to $\frac{1}{3}$ as long as the stem. Flowers are numerous, sepals are sharply pointed at the tip, and perianth (set of petals and sepals wrapping the flower) is equal in length to slightly longer than the capsule. Capsules are egg-shaped and seeds lack tails that are found in some *Juncus* species.



© Steve Waller

Habitat: Floodplain forests, open wet meadows, ditches and disturbed sites.



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Similar species: No common wetland species are similar.

Juncus subcaudatus (woodland rush)



Juncaceae Family
Native OBL CoC =7

Description:

Woodland rush grows in clumps, and has round, smooth stems (30 to 90 cm tall). The 1 to 3 leaves per stem (4 to 15 cm long), are hollow, round and overall similar to the stems.

Flowers and Fruits:

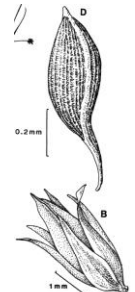
July through September. The flower clusters, found at the upper

stem on widely-spreading branches, have compact globe-like heads, each with 8 to 20 florets. Sepals are pointed with the perianth (set of petals and sepals wrapping the flower) that are about equal in length to the capsule. The capsules (3 to 4 mm long) are straw colored and taper to a short beak. Capsules contain seeds with prominent rib and lesser ridges and with short "tails" at both ends.

Habitat: Most frequent at higher elevations in marshes, swamps, bogs, wet fields and disturbed wetlands.

Similar species:

May be confused with two species with similar flower head branching patterns. The first, *Juncus canadensis*, Canadian rush, has capsules longer than perianth and seeds with very conspicuous tails at both ends, and the second, *Juncus acuminatus*, tapertip rush, has seeds with netted veins and no tails. Also see the *Juncus brevicaudatus*, narrowpanicle rush, page for comparison with this species.



© NY State Museum
Juncus subcaudatus



© NY State Museum
J. acuminatus



J. canadensis

Leersia oryzoides

(rice cutgrass)



Poaceae Family
Native OBL CoC =4



Description:
Wetland grass (1 to 1.5 m tall) with hairless to slightly hairy stems, unbranched, either

erect or decumbant (falling over and then curving up). Leaves (7 to 30 cm long) are flat with very sharp, stiff cutting hairs along the leaf margins. Nodes are densely hairy with downward pointing hairs.



Flowers and Fruits:

August through September. Flower stalks are at the top of stems, pyramid-shaped (10 to 20 cm long) and branching with 1 branch per node

near the top and 2 or more branches per node near the base. Spikelets (4 to 7.5 mm long) are elliptic, flattened, overlapping and with a single floret.

Spikelets are strongly hairy along the keel (ridged edges) and also hairy on the side bracts (lemma and palea), and they lack outer bracts (glumes) that are common in most grasses.



Leersia oryzoides

Habitat: Floodplain forests, swamps, depression ponds, bogs, fens, wet meadows, and low stream banks.

Similar species:

Leersia virginica, whitegrass, the only other *Leersia* species in West Virginia does not have sharp-cutting leaf edges, and the spikelets are less than 4 mm long.



Leersia virginica

Microstegium vimineum (Japanese stiltgrass)



**NON-NATIVE
INVASIVE**



© Meg Wilkinson

Poaceae Family

Non-native FAC CoC = -5

Description:

This non-native is a wiry, branching, annual grass (60 cm to 1 m tall) with stems sprawling along the soil and rooting at the nodes (stolons). Roots are very shallow and plants easily pulled. Leaves are pale green with off-center white mid-vein that shines like plastic wrap, alternate, narrow, lance-shaped (3 to 8 cm long).

Flowers and

Fruits:

August through October. Flower heads are spike-like and spikelets occur in pairs close to the flowering stem.



© Lonnie Murray

Habitat: Floodplain forests, shaded forest clearings, swamp hummocks, edges of ponds and lakes, stream banks, sand and gravel bars, moist to dry disturbed sites.

Similar species: *Arthraxon hispidus*, small carpgrass, also a non-native with similar sprawling form has heart-shaped leaves (not lance-shaped) that clasp the stem (*M. vimineum* leaves non-clasping) and lacks the white mid-vein. *Leersia virginica*, whitegrass, also often sprawling has longer leaves with rings of downward-pointing hairs at the stem nodes and pyramid flower stalks (not spike-like flower stalks). See the plant pages for *Arthraxon hispidus* and *Leersia oryzoides* for more details.



© Sara Rall

Phalaris arundinacea (reed canarygrass)

INVASIVE



Poaceae Family
Native FACW CoC =-5

Description:

This invasive native grass often forms expansive, dense colonies from long rhizomes (underground stems). Stems (1 to 1.5 m tall) are bright green, smooth, unbranched, erect to sprawling, and the entire

plant is a bleached tan in late season. Sheaths are thin, hairless and have translucent edges with a prominent yellow collar. Nodes are smooth. Leaves (10 to 30 cm long) are alternate, bending, flat and hairless with rough margins.

Flowers and Fruits:

June through July. Flower heads (7 to 25 cm long) are at the stem tips, branching and pyramid-shaped at flowering then becoming closer (appressed) to the stalk at maturity. Spikelets are purple tinged, flattened, egg-shaped with pointed tips but lacking bristles (awns). Fruits are brown grains, flattened and broadest near the tip with a short beak.



Habitat: Stream banks, pond edges, floodplain forests, swamps, marshes, wet meadows and ditches.

Similar species:

Sorghum halepense, Johnson grass, is taller (stems to 3 m, leaves to 90 cm), leaves have distinctive white mid-rib and are often purple spotted, and spikelets, in pairs with a few bristles (awns), are on larger branched pyramid-like flower heads (10 to 50 cm).



Sorghum halepense

Rhynchospora alba (white beaksedge)



Cyperaceae Family
Native OBL CoC =8

Description:

Dense clumping sedge with slender, erect, unbranched stems (10 to 80 cm tall). Leaves are as long or shorter than the flowering stem, and they are narrow, alternate, erect to bending, hairless and flat at the base to 3-sided toward the tip. Sheaths are closed.

Flowers and Fruits:

June through August. At the tip of the flowering stem, spikelets are in 1 to 3 tuft-like clusters (1 to 2.5 cm across) with 1 or 2 smaller clusters also on the upper stem. Clusters are



stalked and have leaf-like bracts, as long or slightly longer than the cluster. Spikelets (3.5 to 5.5 mm long) are narrow, elliptic, with pointed tip and 2 or 3 flowers. Scales at the base of the flowers are lance-shaped, pointed, overlapping and white then turning brown with age. Fruits are seed containing achenes (1.5 to 2 mm long), with a flat oval body, widest in the middle, and narrow triangular base. Surrounding the achene are 9 to 12 barbed bristles as long as or slightly longer than the achene.

Habitat: Prefers acid soils in mountain bogs, fens, swamps, and beaver ponds.

Similar species:

Eriophorum virginicum, tawny cottongrass, looks similar in flower, but has much longer leaf-like bracts, and very long thread-like bristles giving the flower heads a cotton-ball, fluffy appearance. See *Eriophorum virginicum* page for more details.



Eriophorum virginicum

Scirpus atrovirens (green bulrush)



Cyperaceae Family
Native OBL CoC =3

Description:

Perennial rush with solitary or only a few stems forming a loose clump. The stems (80 to 1.5 m tall) are erect, smooth and 3-sided with rounded angles. Leaves are alternate, green to yellowish green, arching to floppy, with mid-vein furrow and with sheaths that sometimes have polka-dot marks.

dot marks.

Flowers and Fruits:

June through

August. Flower heads (umbels) at the top of stems are spherical clusters of spikelets with a few small branches having smaller clusters. Leafy short bracts (3 or more) are at the base of the flower heads. Spikelets (8 mm long) are oval to egg-shaped, blunt at the tip and gray-green turning dark rusty. The fruits are achenes (1 mm long), elliptical, with 3-angles and surrounded by bristles the same length as the achene.

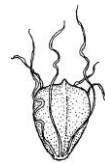


Scirpus atrovirens

Habitat: Floodplain forests, swamps, seeps, depression ponds, and wet meadows.

Similar species:

Scirpus polyphyllus, leafy bulrush, is distinguished from other *Scirpus* species by its very leafy stem (10 to 20 leaves versus 8 or less for *S. atrovirens*), and contorted bristles much longer than its achene.



© Anna Anisko



Scirpus polyphyllus

Scirpus cyperinus (woolgrass bulrush)



Cyperaceae Family
Native FACW CoC =4

Description:

Known for its large woolly flowering heads, this species forms dense clumps and tussocks. Stems (to 1.5 m tall) are stout, robust, erect and smooth. Leaves are alternate, curving downward with green to brownish sheaths.

Flowers and Fruits:

August through September. Flower heads, at the top of fertile stems, are wide and spreading, with many clusters of spikelets on each nodding branched stalk.



Wrapping the base of the flower head are downward curving leafy bracts with reddish-brown sheaths. Spikelets (3 to 8 mm long) crowd 2-3 per tiny stalk, are oval to egg-shaped, blunt at the tip with reddish-brown scales, and woolly look at maturity. This woolly appearance is from the 6 long, curly, reddish-brown bristles that surround each egg-shaped fruit (achene).



Habitat: Acid soils of marshes, bogs, seeps, wet meadows, and ditches.



S. cyperinus

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Similar species: *Scirpus atrocinctus*, blackgirdle bulrush, is similar but rare and restricted to higher elevations. It is a less robust plant with only one spikelet on each tiny stalk in a cluster.

S. atrocinctus



Sparganium americanum (American bur-reed)



Sparganiaceae Family
Native OBL CoC =6

Description:

Recognized by its stalk of large spherical bur-like flower clusters, this perennial has an erect stem with long linear,

slightly keeled (ribbed) flat leaves (to 1 m tall).

Flowers and Fruits:

June through September. Flowers stalks are thick and with



slightly zig-zag branching. Flowers are clustered in round heads near the top of the stalk, heads are green becoming brown and bur-like as seeds ripen. Female flower heads (1.5 to 2.5 cm) arise from axils of leaf-like bracts on the stem. The flowers have only 1 stigma, and fruit is an achene (4-5 mm) that tapers both to the base and tip.



S. americanum

Habitat: Muddy shores of ponds, swamps, floodplain depressions and low river and stream banks.

Similar species: *Sparganium eurycarpum*, giant bur-reed, differs in its thick stout stems (to 2.5 m tall), strongly keeled leaves, larger flowering heads (3 to 4 cm), and 2 stigmas per female flower. Also its achenes are larger (6 to 10 mm) and wedge-shaped, being broader near the tip than those of *S. americanum*. See the *S. eurycarpum* page for more details.



S. eurycarpum



Sparganium eurycarpum (giant bur-reed)



Sparganiaceae Family
Native OBL CoC=6

Description:

Perennial with stout erect flowering stems, and long linear, strongly keeled (ribbed) flat leaves (to 2.5 m tall).

Flowers and Fruits:

June through September. Large spherical bur-like flower heads (3 to 4 cm) sit atop thick, slightly zig-zag branching stems. Flower heads are green, becoming dark brown as seeds ripen. The female flowers have 2 stigmas, and fruits are achenes (6

to 10 mm) with distinct wedge shape being broader at the tip than the base.

Habitat: Swamps, floodplain depressions and low river and stream banks.

Similar species:

Sparganium americanum, American bur-reed, is similar in form and habit, however *S. eurycarpum* flower heads and seeds are distinctly larger. *S. eurycarpum* is the only



Two stigmas

bur-reed in West Virginia with two stigmas. See *S. americanum* page for more details on this species.



Typha latifolia (broadleaf cattail)

INVASIVE



Typhaceae Family
Native OBL CoC =-3

Description:

Perennial, often becoming invasive, forms dense stands via rhizomes (underground stems). It has stout, smooth, round stems (1

to 3 m tall). Leaves (8 to 24 mm wide) grow from the base in fan-like linear arrangement, and are green to bluish grey, smooth and flattened with many bending downward.

Flowers and

Fruits: July through September. Fertile stems have both a spike of male flowers and another spike of female flowers. The spikes are usually contiguous or separated only by 4 mm, with the male spike above the female spike. Male portion is 2 to 15 cm long, female portion is 2.5 to 20 cm long and 1.5 to 3.5 cm wide. Fruits are achenes (to 1 cm) with long white basal hairs for wind dispersal.



Typha latifolia

Habitat: Swamps, marshes, ponds, beaver wetlands, ditches, disturbed areas with high nutrient inputs.

Similar species: *Typha angustifolia*, narrow-leaved cattail, has green (not bluish-grey) leaves only 4 to 11 mm wide. The flowering spikes are more widely separated along the flowering stem (1 to 12 cm apart). The two species can hybridize, and identification of the hybrid is difficult.



Typha angustifolia



Dennstaedtia punctilobula (eastern hayscented fern)

Dennstaedtiaceae Family
Native FACU CoC = 2



Description:

The soft lacy fronds (leaves) are slightly sticky to the touch, grow from long rhizomes (underground stems), are twice or three-times compound, and form dense colony patches. Fronds are 10 to

90 cm long, with dense reddish-brown hairs along the rachis (main axis of a compound leaf).



Spores: The tiny rounded sori (clusters of spore-bearing cases or sporangia) are found on the underside of fertile fronds along the margins.

Habitat: Forests, open areas, and drier wetland types.

Similar species: *Athyrium filix-femina*, common ladyfern, has a similar lacy-look, but has larger comma-shaped sori, no hairs on the rachis, grows in circular clumps like ladies talking to one another, and lowermost "leaflets" point slightly downward like ladies pointing their toes. *Dryopteris intermedia*, intermediate woodfern, does not have the slightly sticky feel and has evergreen fronds, whereas hay-scented fronds die in winter.



Dennstaedtia punctilobula



Athyrium filix-femina



Onoclea sensibilis (sensitive fern)



Dryopteridaceae Family
Native FACW CoC = 4

Description:

The vegetative fronds (leaves) of sensitive fern wither with frost, giving this species its name. The sterile compound fronds have an overall triangular look, with wavy smooth margins on the lobes.

Spores:

Fertile fronds appear in mid-summer, persist until the next spring. Green at first, they quickly turn dark brown to black, with



rows of bead-like, tightly wrapped pinnae (leaf or frond sections) with spore containing sori (clusters of spore-bearing cases or sporangia) tight within.

Onoclea sensibilis

Habitat: Floodplain forests, moist meadows, and swamps.

Similar species: *Woodwardia areolata*, netted chainfern, rare in West Virginia, has finely toothed margins and lacks the unique bead-like fertile frond structure.



Woodwardia areolata

fertile frond

Osmunda cinnamomea (cinnamon fern)



Osmundaceae Family
Native FACW CoC = 6

Description:

A large tall clump-forming fern with sterile fronds (leaves) to 1.5 m long, and cinnamon-red compact, upward pointing, fertile fronds. Puffs of hairs where the pinnae (leaflets) attach to



the rachis (main axis of a compound leaf) are characteristic.

Spores:

Fertile fronds, 0.5 m long like a giant cinnamon stick,

began green in early spring before turning cinnamon color and withering soon after.



Habitat: Acidic soils of seepage swamps, fens, bogs and floodplain forests.

Similar species:

Osmunda claytoniana, interrupted fern, is also a large clumping fern, but lacks the puffed rachis hairs, and has its fertile brown "mini-fronds" interrupting larger green fronds midway up the rachis.



Osmunda claytoniana



Thelypteris *noveboracensis* (New York fern)



Thelypteridaceae
Family
Native FAC CoC = 5

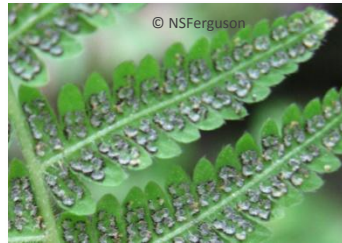
Description:

The compound fronds (leaves) (to 60 cm long) are widest in the middle, tapering equally to both the tip and base with a very small pair of pinnae (leaflets) at the base.

Surfaces of the fronds are covered with fine white hairs, and the fronds die back in winter.

Spores:

Fertile fronds look the same as sterile fronds. Sori (clusters of spore-bearing cases or sporangia) are round or kidney-shaped.



Habitat: Acid soils of damp woodlands, floodplain forests, seeps and swamp hummocks.

Similar species:

Thelypteris palustris, marsh fern, does not taper at the base, has forked veins, and does not have glands (*T. noveboracensis* has simple veins and often has tiny glands).

Sphagnum species (peatmoss)



Sphagnaceae Family
Native OBL CoC=7

Description:

Mat forming moss growing in cushion-like clumps or extensive patches. Stems (to 10 cm long) are topped with clusters of branchlets creating a small tree-like appearance (about 3 cm

wide). Lower branchlets are drooping, while upper ones are more erect. Leaves are tiny, slightly toothed and usually light green, but some species have yellow, red, purple, or brown leaves. The cellular structure allows the moss to absorb water like a sponge.



Spores:

Sporophytes, only occasionally seen, have deep dark red globe-like capsules on short stalks.

Habitat: Acidic soils of bogs, fens, seeps, seepage swamps and stream banks.

Similar species:

Twenty or more species of *Sphagnum* are found in West Virginia. A few examples are shown here. *Polytrichum*, haircap moss, is the second most common wetland moss genus.



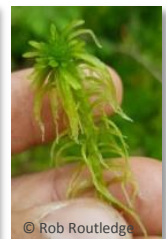
S. palustre



S. magellanicum



Polytrichum commune



S. girgensohnii

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