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# *The* Delaware Wetland Plant *Field Guide*



Compiled by DNREC's  
Wetland Monitoring &  
Assessment Program

This Field Guide was prepared by the Delaware Department of Natural Resources and Environmental Control's (DNREC) Wetland Monitoring & Assessment Program (WMAP). WMAP provides state leadership to conserve wetlands for their water quality, wildlife habitat, and flood control benefits.

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# Welcome to this illustrated guide of the most common wetland plants found in Delaware.

All wetlands have 3 characteristics:

1. **Water** at or near the surface for some part of the year
2. **Hydrophytic plants**, which are specially adapted to living in wet conditions
3. **Hydric soils**, which are soils that are permanently or seasonally soaked in water, resulting in oxygen deprivation

If you have water on the area of interest for at least some part of the year, the next step in determining if you're in a wetland is to take a look at the plants. Learning to identify plants in your yard is the first step in fostering a long and healthy relationship with the wetlands in your life.

## Are you in...

### Freshwater Wetlands

Freshwater wetlands come in many different shapes, sizes, and types. Many are non-tidal, but some are actually influenced by ocean tides. Forested swamps, Coastal Plain ponds, interdunal swales, wet meadows, seeps, marshes, and floodplain wetlands are just some of the types of non-tidal freshwater wetlands. Freshwater tidal wetlands are marshes that are flooded daily with tidal inputs, but are so diluted by freshwater that their salinity levels are very low.

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### Saltwater Wetlands

Salt and brackish marshes cover Delaware's coast from upper Delaware Bay all the way down to the Inland Bays. Flooded by tidal waters carrying saltwater from the ocean and bay, these habitats are strongly influenced by salinity. They become less salty the further up the bay, river and streams you go.

#### *Saltwater Tidal Wetlands*

Herbaceous:	Broadleaf.....	110
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## Plant Identification Tips

There are many factors that feed into successfully identifying plants. One must have a keen eye and pay attention to how a plant is growing, its color, sun exposure, bloom time, and soil conditions. Included is an introductory overview to help you get started.

### Woody, Herbaceous, or Nonvascular?

Plants in this guidebook are organized by how they grow and are denoted by colored banners (shown below):

**Herbaceous:** plants that are not structured with wood and that maintain green stems throughout their life cycle

**Woody:** plants that produce wood as part of their structural tissue at some point in their growing process

**Nonvascular:** plants that do not have the specialized tissues that vascular plants (e.g. woody and herbaceous) do for circulating water and nutrients; they tend to be quite a bit smaller than vascular plants because of this limitation

### Deciduous or Evergreen?

When a plant is deciduous it sheds its leaves or needles every year. When a plant is evergreen, it keeps its leaves year-round.

### Smooth, Toothed, or Lobed?

Leaves come in many different sizes and shapes, and have different edges, also called margins.

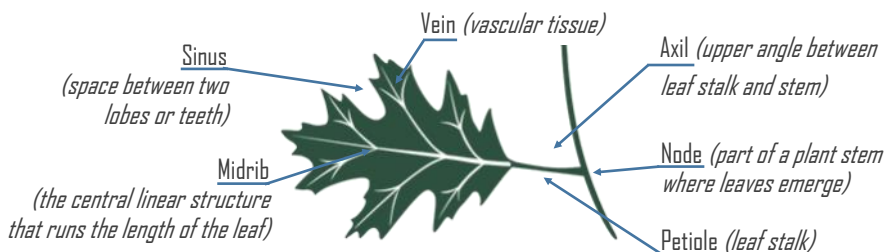


Smooth Leaf Edge

Toothed Leaf Edge

Lobed Leaf Edge

### Parts of a Leaf





## Alternate, Opposite or Whorled?

Leaves branch away from the main stem in different patterns.



Alternate Branching



Opposite Branching



Whorled Branching

## Simple, Pinnately Compound or Palmately Compound?

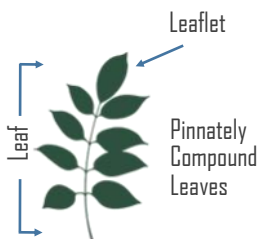
Leaves can be structured in different ways.



Simple Leaf



Palmately Compound Leaves



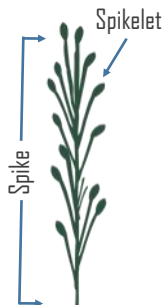
## Inflorescence

An inflorescence in a flowering plant is a cluster of flowers on a branch or system of branches. There are many different types of inflorescence. Below you will see two of the common ones mentioned in this guidebook.



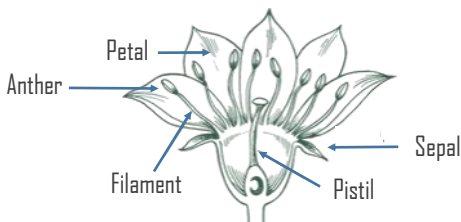
**Catkin** - A slim, cylindrical flower cluster that droops down from a branch. They are single-sex flowers (often male), and usually have no petals. They are most often found on trees, and sometimes on shrubs.

**Spike** - Flowers develop directly from the central stem. Spikelets can be at the end of each spike. Grasses and grass-like plants commonly have these.



## Parts of the Flower

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



## Plant Height

Plant heights are generally described as the following categories:

- ◇ *Small, short or low-growing*: less than 3 feet tall
- ◇ *Medium*: 3 to 6 feet tall
- ◇ *Large or tall*: greater than 6 feet tall

## Native, Non-Native, or Invasive?



*Native Species*: These plants are species that have, over time, evolved and adapted to the environmental conditions of the area, and are those that occurred in Delaware before European settlement.








*Non-Native Species*: These plants are species that have been either intentionally or accidentally introduced to Delaware and are not native to North America. Not all non-native plants are invasive, as not all cause severe environmental harm.



*Invasive Species*: These species cause harm to natural environments. They spread rapidly and take over areas, often displacing native plants and wildlife. Most invasive species are non-native, but they can also be aggressive native species.

## Wetland Indicator Status

Plants can be ranked on their likelihood of being present in a wetland. This ranking is used for many purposes, including wetland delineations, assessments, mitigation, and habitat restoration planning. Below are the five wetland indicator status ranking descriptions and their associated icons that are used in this field guide. Please note that this guide focuses mainly on the most common wetland plant species you will find in Delaware, and that indicator statuses are specific to the Mid-Atlantic region.

Icon	Indicator status (abbreviation)	% Occurrence in wetlands
	<i>Obligate (OBL)</i> : Occurs almost always in wetlands under natural conditions	99
	<i>Facultative Wetland (FACW)</i> : Usually occurs in wetlands but occasionally found in non-wetlands	67-98
	<i>Facultative (FAC)</i> : Equally likely to occur in wetlands and non-wetlands	34-66
	<i>Facultative Upland (FACU)</i> : Usually occurs in non-wetlands, but occasionally found in wetlands	1-33
	<i>Upland (UPL)</i> : Almost always occurs in non-wetlands under natural conditions in our region	< 1

# Freshwater

## Wetland Plants

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***Note:** Dividing plants into freshwater and brackish or saltwater wetland plants is not always simple. Some plants will grow in both freshwater and brackish water environments. So, pay close attention to the "You Are Likely to Find It" section on each page.*



Broadleaf

## Jack in the Pulpit

*[Arisaema triphyllum]*



**Key Characteristics:** Jack in the pulpit is a fairly short broadleaf herbaceous plant with fleshy stems. The plant has one or two palmately compound leaves, with each having three leaflets. The leaflets are oval or lance-shaped, pointed on the end, have smooth margins, and often grow taller than the flower.

**Bloom/Fruit Time:** April to August

**Flowers & Fruits:** The Jack in the pulpit flower is a cylindrical spike that has small green or purplish flowers. The flowers occur within a green and maroon striped sheath that partially covers the flower like a hood. The fruits are tightly clustered, bright red berries.

**You Are Likely To Find It:** Swamps, floodplains, and moist wooded areas are common locations to find Jack in the pulpit.

**Did You Know?** This plant gets its name from the structure of its flower, where “Jack” is the flower (called a spadix), and the “pulpit” is the sheath that covers the flower (called the spathe).



## Swamp Milkweed

*[Asclepias incarnata]*



**Key Characteristics:** Swamp milkweed is a medium-sized broadleaf herbaceous plant. The leaves are long, narrow, lanced shaped, oppositely arranged, and have smooth margins. Sap within the plant is whitish in color, hence the name "milkweed."

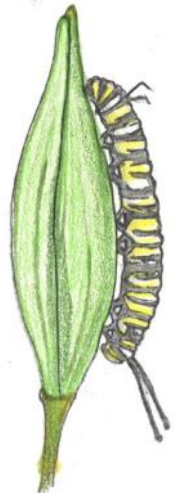
**Bloom/Fruit Time:** June to August

**Flowers & Fruits:** Flowers are pink, white, or purple, and occur in clusters at the tops of stems. Seed pods mature in the fall, are about 5 inches long, and are usually brownish in color. Seeds within the pod are attached to white fluffy hairs to allow them to be transported by wind.

**You Are Likely To Find It:** Swamp milkweed can be found in wet meadows, tidal freshwater marshes, inland shrub or forested swamps, and ditches.

**Did You Know?** While Monarch caterpillars love swamp milkweed, it is toxic to humans and livestock, especially sheep. But, Native Americans used it for medicinal purposes.

MONARCH CATERPILLAR  
ON MILKWEED  
SEED POD





Broadleaf

## Smooth Beggartick

*[Bidens laevis]*



**Key Characteristics:** Smooth beggartick is a small to medium-sized broadleaf herbaceous plant. The leaves are fairly narrow, lance-shaped, have finely toothed margins, and are oppositely placed along the branch.

**Bloom/Fruit Time:** June to October

**Flowers & Fruits:** Flowers are bright yellow, have 8 petals, and the plant bears one or more flowers on a single stalk. The fruit is a dry single seed that has sharp barbs that adhere to fur and clothing.

**You Are Likely To Find It:** Smooth beggartick can be found near ponds, streams, and wet open woods.

**Did You Know?** The smooth beggartick blooms until there is frost in mid to late fall, making the flowers great food resources for pollinators.







Broadleaf

## Devil's Beggartick

*[Bidens frondosa]*



**Key Characteristics:** Devil's beggartick is a small to medium-sized broadleaf herbaceous plant. Its leaves are pinnately compound in groups of 3 or 5 leaflets. Each leaflet is lanced shaped and has toothed margins. The bottom side of the leaf is hairy. Some of the stems may appear purplish in color.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** Flowers lack true petals but have yellow-orange disk structures that are surrounded by 5 to 12 leafy, petal-like structures. Each one of the petal-like structures are hairy around the edges. The seeds have 2 barbs on the end to attach to fur and clothes for dispersal.

**You Are Likely To Find It:** Devil's beggartick can be found near swamps, tidal freshwater marshes, and wet meadows.



FLOWER  
STRUCTURE





Broadleaf

## False Nettle

*[Boehmeria cylindrica]*



**Key Characteristics:** False nettle is a short to medium-sized broadleaf herbaceous plant. The leaves are oval or lance-shaped and have a pointed tip, toothed margins, and three major veins coming out of the leaf base. All leaves are oppositely arranged on the stems, and the stems may be smooth or hairy.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** Flowers on false nettle are small, green, or greenish-white. These flowers occur on upward-facing spikes that come out of the leaf axils on the stem.

**You Are Likely To Find It:** Tidal and non-tidal freshwater marshes, swamps, floodplains, and shady wet wooded areas are common locations to find false nettle.

**Did You Know?** False nettle does not have stinging hairs like the true stinging nettle (*Urtica dioica*) plant does, so it does not hurt to touch it.







## Stinging Nettle

[*Urtica dioica*]



**Key Characteristics:** Stinging nettle grows upright and is a medium-sized broadleaf herbaceous plant. The stems have tiny needle-like stinging hairs. The leaves are oppositely arranged, oval or heart-shaped, and have toothed margins.

**Bloom/Fruit Time:** May to September

**Flowers & Fruits:** The flowers of stinging nettle are tiny, greenish-white, and occur in branching clusters.

**You Are Likely To Find It:** Floodplains, moist woods, and ditches are common places to find stinging nettle. It is also found in disturbed areas and old fields.

**Did You Know? Warning:** This is not a fun plant to run into—when your skin brushes the fine hairs on the stems, it can leave you with a stinging sensation for minutes up to several hours!



LEAVES AND FLOWERS



## Fireweed

*[Erechtites  
hieraciifolius]*



**Key Characteristics:** Fireweed is a medium-sized herbaceous plant. The stems are tall stout and erect, usually unbranched, and sometimes have small white hairs. The leaves are alternately arranged and often have lower leaves oppositely arranged. They have toothed margins, are lanceolate in shape, deep green on top surface, and pale green on bottom surface. The veins connect near the leaf margins, and have a large white central vein.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** Flowers occur on a spike, and can be purple, pink or white in color. Each flower has 4 petals that alternate with 4 sepals. Seeds have tufts of silky hairs at the end that are used for wind dispersal.

**You Are Likely To Find It:** Clearings and disturbed wetlands are common locations to find fireweed.

**Did You Know?** Fireweed received its name from its ability to rapidly colonize areas that have been burned by fire.



# Spotted Water Hemlock

[*Cicuta maculata*]



**Key Characteristics:** Spotted water hemlock is a medium-sized broadleaf herbaceous plant. The leaves are alternately arranged and pinnately compound, with larger leaves at the bottom and smaller leaves at the top of the plant. Larger leaves may be double-compound, with 3 to 7 leaflets on each division. The leaflets are elliptical or lance-shaped, have toothed margins and pointed tips, and veins going from the center out to notches between leaflet teeth. The stems are green or greenish-purple and often have visible longitudinal veins.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** Flowers are small and white, have 5 petals, and occur in several clusters branching from upper stems. Each cluster is dome-shaped on top.

**You Are Likely To Find It:** Freshwater marshes, swamps, moist woods, seeps, and wet meadows are common locations to find spotted water hemlock.

**Can Be Easily Confused With:**  
Hemlock water parsnip [*Sium suave*]



DOME-SHAPED FLOWER  
WITH LEAF VEINS REACHING  
THE MARGINS



Broadleaf

## Hemlock Water Parsnip

[*Sium suave*]



**Key Characteristics:** Hemlock water parsnip is a medium to tall broadleaf herbaceous plant. The leaves are alternately arranged and pinnately compound. Each leaf is composed of 7 to 17 leaflets. The leaflets are lance-shaped and fairly narrow, have toothed margins, and have pointed tips. The stems are not round, having sharply-angled cross-sections.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** Flowers are small and white, have 5 petals, and occur in several clusters branching from upper stems. Each cluster is dome-shaped on top. Fruits are very small oval capsules.

**You Are Likely To Find It:** Slightly brackish marshes, freshwater marshes, and swamps are common places to find hemlock water parsnip.

**Can Be Easily Confused With:**  
Spotted water hemlock [*Cicuta maculata*]

**Did You Know?** Hemlock water parsnip has more leaflets on each leaf than spotted water hemlock, and its leaf veins do not extend all the way out to the notches between leaflets.







Broadleaf

## Swamp Loosestrife

*[Decodon verticillatus]*



**Key Characteristics:** Swamp loosestrife is a clump-forming broadleaf herbaceous plant with tall/long, arching, singular branches. The base of this plant tends to be somewhat woody. The leaves are lance-shaped with smooth margins, a pointed tip, and are arranged in either opposite pairs or whorled pattern. If whorled, there are usually 3 to 4 leaves per whorl.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** Flowers have pink to purple ruffled petals, a somewhat bell-shaped bottom, and occur at the leaf axils of the top leaves in a cluster. The fruits form in the fall, and are tiny, dark brown, round capsules that contain reddish seeds.

**You Are Likely To Find It:** Tidal and non-tidal freshwater marshes, stream, pond, lake and river banks, and open swamps are areas to look for swamp loosestrife.

**Also Called:**

Water willow





Broadleaf

## Perfoliate Thoroughwort

*[Eupatorium perfoliatum]*



**Key Characteristics:** Perfoliate thoroughwort is a small to medium-sized broadleaf herbaceous plant. The stems are mostly unbranched and hairy. The leaves grow in opposite pairs and are fused together. Leaves are lance-shaped, wrinkled, and have toothed margins.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The flowers are small, white, and clustered. There are usually 2 to 8 clusters per plant.

**You Are Likely To Find It:** Freshwater tidal and non-tidal marshes, wet meadows, and moist woods are common places to find perfoliate thoroughwort.

**Also Called:** Common boneset

**Did You Know?** Some people claim that the name boneset refers to the use of the plant to help heal bones, but others think that it's in reference to being used to treat dengue fever (also known as break bone fever) in the 18th century.



FLOWER CLUSTER

## Dotted St. John's-wort

*[Hypericum punctatum]*



Photo Credit: Peter Friedman

**Key Characteristics:** Dotted St. John's-wort is a small broadleaf herbaceous plant. The stems are hairless, usually red or green in color, and branch towards the upper half of the plant. The leaves are arranged oppositely and are oblong, oval, or lance-shaped. Leaves have a blunt tip, are hairless, and have smooth margins. The bottom of the leaf commonly has translucent dots.

**Bloom/Fruit Time:** Mid-Summer

**Flowers & Fruits:** Flowers are yellow and form tight clusters around the end of the stems. Each flower has five petals with dark dots and streaks appearing anywhere on the top surface. The center of the flower contains a flask-shaped pistil that is surrounded by yellow anthers.

**You Are Likely To Find It:** River or lake banks, marsh edges, and swamps are common places to find dotted St. John's-wort. It can also be found along woodland borders, roadsides, or slopes.

**Can Be Easily Confused With:** Alien St. Johnswort [*Hypericum perforatum*]



**Did You Know?** Dotted St. John's-wort flowers have dark dots and streaks all along the petals, while alien (and other *Hypericum* species) St. John's-wort flowers have no markings or only have them on petal margins.



Broadleaf

## Spotted Jewelweed

*[Impatiens capensis]*



**Key Characteristics:** Spotted jewelweed is a small to medium-sized broadleaf herbaceous plant. The leaves branch alternately from the stem, are oval shaped, have coarsely toothed margins, and are soft to the touch.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** The flowers are small and orange or yellow-orange in color with red or brown spots. They are on long droopy stalks, and the bottom petal of each flower is curved. The fruit is small and long, and a thin capsule contains the seeds. When the fruits are ripe, they will burst open when you touch them, just like the impatiens you plant at home.

**You Are Likely To Find It:** Freshwater swamps, seeps, tidal and non-tidal freshwater marshes (occasionally brackish marshes), wet meadows, and stream banks are common places to find spotted jewelweed.

SEED POD AND FLOWER





## Iris

[*Iris* spp.]

**Key Characteristics:** Irises are small to medium-sized broadleaf herbaceous plants that often forms dense colonies. The leaves are sword-shaped with parallel veins, and are blue-green or green in color. Leaves tend to grow upright but may be slightly arched when larger. Yellow iris (*Iris pseudacorus*) and blueflag iris (*Iris versicolor*) look similar except for the colors of their flowers. Blueflag iris is native to Delaware, while yellow iris is not.

**Bloom/Fruit Time:** May to July

**Flowers & Fruits:** Iris flowers are on the end of a roundish stalk. They have 3 sepals that are fused to 3 smaller petals. The 3 large sepals face downward, and the 3 petals face upward. Yellow iris flowers are pale yellow or light orange, while blueflag iris flowers are pale bluish-purple.

**You Are Likely To Find It:** Tidal and non-tidal freshwater marshes (occasionally brackish marshes), swamps, and the edges of lakes, ponds, and streams are common places to find iris species.





Broadleaf

## Cardinal Flower

*[Lobelia cardinalis]*



**Key Characteristics:** Cardinal flowers is a small to medium-sized broadleaf herbaceous plant. The leaves are oblong, tapered at both ends, have toothed margins, are alternately arranged, and have short stems.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The spike-like inflorescence has many small, vivid red flowers at the end of the stem. One lip of the flower has 3 lobes and droops downward.

### You Are Likely To Find It:

Swamps and freshwater marshes are common places to find the cardinal flower.



## Marsh Seedbox

*[Ludwigia palustris]*



**Key Characteristics:** Marsh seedbox is a broadleaf herbaceous plant that tends to sprawl low across the ground. The stems appear to be somewhat succulent, and are red or light green. Leaves are oval or lanced-shaped with a blunt end, are oppositely arranged, are green or reddish-green in color, and have smooth margins.

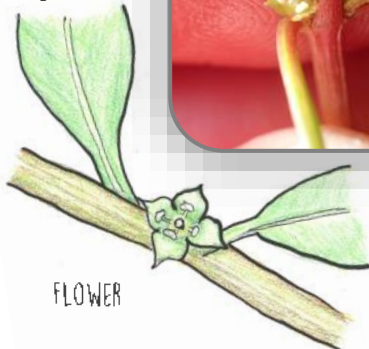
**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** The flowers of marsh seedbox are small, greenish in color, and occur on the leaf axils of the mid to upper leaves. There is one flower per axil. The fruits are small capsules with 4 chambers that contain seeds.

**You Are Likely To Find It:** Marshes and streambanks are common places to find marsh seedbox.

**Can Be Easily Confused With:** Creeping water primrose seedbox [*Ludwigia peploides*]

**Did You Know?** Though similar upon first glance, creeping water primrose seedbox has larger, showy, yellow flowers and alternate leaves, while marsh seedbox has small, non-showy flowers and opposite leaves.



FLOWER





Broadleaf

## Bugleweeds

[*Lycopus* spp.]



**Key Characteristics:** Bugleweeds are a group of small to medium-sized, broadleaf herbaceous plants in the genus *Lycopus*. There are 6 different species in Delaware—5 of which are native, and all of which occur in wetlands. They all look very similar, so they are grouped together in this guide. They have square, upright stems that are often slightly hairy and are reddish or green in color. The leaves are oppositely placed, are elliptical or lance-shaped, have toothed margins, and tend to taper at each end.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** The flowers are small and white and occur at the leaf axils in clusters. Clusters of flowers are whorled around the middle and top portions of stems. Fruits are very small nutlets.

**You Are Likely To Find It:** Floodplains, swamps, and wet meadows are common places to find bugleweed species.

**Also Called:** Horehounds

PICTURED ON THIS PAGE: AMERICAN BUGLEWEED  
(*LYCOPUS AMERICANUS*)





Photo Credit: Anthony Jackson

Broadleaf

## Purple Loosestrife

*[Lythrum salicaria]*



**Key Characteristics:** Purple loosestrife is a medium to tall broadleaf herbaceous plant. The stem of the plant is square and covered with hairs. The leaves are lance-shaped and occur in either pairs or whorls around the stem.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** The flowers occur in clusters along the end of the inflorescence spike. The flowers are small, have 5 to 7 petals, and are bright purple in color.

**You Are Likely To Find It:** Tidal and non-tidal freshwater marshes, wet meadows, and stream banks are common places to find purple loosestrife.

**Did You Know?** This plant spreads very rapidly with its underground root system; 30-50 stems can come from a single plant.





Broadleaf

## Indian Cucumber- Root

[*Medeola virginiana*]



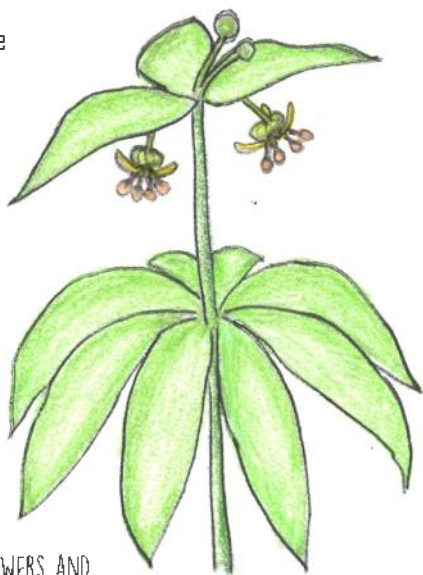
**Key Characteristics:** Indian cucumber-root is a fairly short broadleaf herbaceous plant. The stem of the plant is upright and unbranched with 1 or 2 leaf whorls around it. The lower whorl has 5 to 10 leaves that occur around the middle of the stem. The upper whorl is usually only present on flowering plants, and has 3 to 5 leaves. Each leaf is oval or lance-shaped with a pointed tip and has smooth margins. The bottom surface of the leaf is paler than the top.

**Bloom/Fruit Time:** May to July

**Flowers & Fruits:** Flowers are located at the end of the stem above the second leaf whorl. It has 3 to 9 small yellow-green flowers. The fruits are berries that are dark purple when ripe.

**You Are Likely To Find It:** Indian cucumber-root is commonly found in moist woods or on the outer edges of wetlands.

**Did You Know?** The root of the Indian cucumber-root is actually edible, and tastes a bit like a cucumber, thus giving the plant its name!



FLOWERS AND  
FRUIT BODIES





Broadleaf

## Spatterdock

*[Nuphar advena]*



**Key Characteristics:** Spatterdock is a small to medium broadleaf herbaceous plant. The stem of the plant is stout, spongy, upright and unbranched with leaves that grow from the top of the stalks. Leaves can be found submersed, floating or emersed. They are large, heart-shaped with wavy margins, and have a distinct midrib on the underside of the leaf.

**Bloom/Fruit Time:** April to October

**Flowers & Fruits:** Flowers are yellow, saucer or globe-shaped, and are singularly attached to thick round stems.

**You Are Likely To Find It:** Spatterdock is commonly found in tidal freshwater marshes, non-tidal marshes, swamps and ponds.

**Can Be Confused With:** Pickerelweed  
*[Pontederia cordata]*

**Did You Know?** The flowers close up in the evening, and have been known to trap insects overnight. The insects are then released when the flower opens up the next morning.





Broadleaf

## Arrow Arum

*[Peltandra virginica]*



**Key Characteristics:** Arrow arum is a small to medium-sized broadleaf herbaceous plant. The leaves are bright green, arrowhead shaped, have smooth margins, grow from the top of stalks, and emerge yearly from bulbs (perennial).

**Bloom/Fruit Time:** May to July

**Flowers & Fruits:** Flowers are hidden in spike-like structures below the leaves. The plant has greenish berries as its fruit. When the fruit falls from the plant into the water, the water causes the coating of the fruit to swell and burst. This process allows the seeds to sink to the bottom and grow from there.

**You Are Likely To Find It:** Tidal freshwater and brackish marshes, swamps, shallow lakes, and ponds are common places to find arrow arum.

**Also Called:** Tuckahoe or duck corn

**Did You Know?** Native Americans used arrow arum roots to make flour, and ate the fruits like peas.







Broadleaf

## Pickerelweed

*[Pontederia cordata]*



**Key Characteristics:** Pickerelweed is a short to medium-sized broadleaf herbaceous plant. It has large and long heart-shaped leaves that have smooth margins and are alternately arranged.

**Bloom/Fruit Time:** June to November

**Flowers & Fruits:** Flowers are purplish, and on a long, narrow, spike-like inflorescence. Fruits are small, light green or brown, and grow densely packed on the inflorescence.

**You Are Likely To Find It:** Tidal freshwater and brackish marshes and shallow waters along ponds or lakes are common places to find pickerelweed.

**Did You Know?** Fish and other small aquatic creatures use pickerelweed for protective cover from predators when it grows in dense clusters in shallow waters.





Broadleaf

## Swamp Dock

*[Rumex verticillatus]*



**Key Characteristics:** Swamp dock is a small to medium-sized broadleaf herbaceous plant. It is unbranching and upright, and it has light green to reddish green hairless stems. The stems have papery sheaths at each joint. The leaves are lance-shaped, alternate, and have wavy but smooth margins. They are larger at the bottom, and smaller towards the top.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** The flowers are tiny, green, and occur in whorls on drooping stalks. Fruits similarly occur on drooping stalks, and are small, brownish, and dry.

**You Are Likely To Find It:** Tidal freshwater and brackish marshes, stream edges, and swamps are common places to find swamp dock.





Broadleaf

## Broadleaf Arrowhead

*[Sagittaria latifolia]*



**Key Characteristics:** Broadleaf arrowhead is a small to medium-sized broadleaf herbaceous plant. The leaves are arrowhead-shaped with 1 point upward and 2 points downward. Veins appear to radiate outward from a single point.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** Flowers occur on upright stalks. The flowers are clustered in whorls and have 3 white petals. The fruits are small green nutlets that occur in whorled clusters like the flowers.

**You Are Likely To Find It:** Tidal and non-tidal freshwater marshes, swamps, and stream, pond and lake edges are common places to find broadleaf arrowhead.

**Also Called:** Duck potato





Broadleaf

## Lizard's Tail

*[Saururus cernuus]*



**Key Characteristics:** Lizard's tail is a small to medium-sized broadleaf herbaceous plant. It has fairly broad, alternate, heart-shaped leaves with smooth margins.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** Lizard's tail has tiny white flowers that occur on 2 long, narrow spikes and are fragrant. The fruits are small, round, wrinkled capsules.

**You Are Likely To Find It:** Tidal and non-tidal freshwater marshes, swamps, floodplains, and shallow waters are common places to find lizard's tail.

**Did You Know?** The fruits are strung together in a way that resembles a lizard's tail, which is where this plant gets its name.







Broadleaf

## Skunk Cabbage

*[Symlocarpus foetidus]*



**Key Characteristics:** Skunk cabbage is a short broadleaf herbaceous plant that grows low to ground, often in clusters. It emerges much earlier than most plants in the winter or early spring, and has very large, oval-shaped leaves once mature.

**Bloom/Fruit Time:** January to April

**Flowers & Fruits:** The flower is very distinct, and is encased in a maroon structure that partially covers it. The flower itself is yellowish-green and looks like a spiky ball with many small flowers that lack petals. It can smell very bad, particularly when damaged, thus how it got its name. The fruit is a brownish-green color, is circular or oval in shape, and has a bumpy surface.

**You Are Likely To Find It:** Irregularly flooded tidal and non-tidal freshwater marshes, stream banks, swamps, and forested wetlands are common places to find skunk cabbage.

**Did You Know?** This plant can produce its own heat! Because it often emerges in cold temperatures, flower buds can warm frozen ground to emerge.

SKUNK CABBAGE  
IN EARLY SPRING





Broadleaf

## Broadleaf Cattail

*[Typha latifolia]*



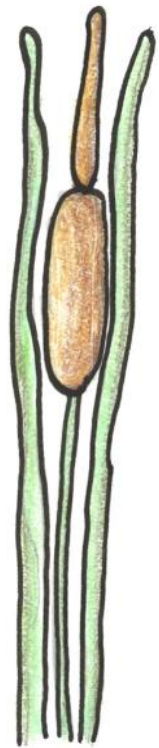
**Key Characteristics:** The broadleaf cattail is a tall broadleaf herbaceous plant. It has wider leaves than the narrowleaf cattail [*Typha angustifolia*]; leaves are between 0.5 to 1 inch (1.4-2.5cm) in width. The stem is an upright tall stalk, and the leaves are very long and flat.

**Bloom/Fruit Time:** May to July

**Flowers & Fruits:** The flowers are located at the top of the stalk, and are brown and cylindrical. The flower stalk is usually taller than the leaves. The male flower is located above the female flower on the same stalk, and there is no space between them. Often, the flowers look fluffy when dispersing seeds.

**You Are Likely To Find It:** Tidal and non-tidal marshes, ditches, and wet meadows are common places to find the broadleaf cattail.

**Did You Know?** The broadleaf cattail and the narrowleaf cattail may interbreed when they are growing in the same place, occasionally creating hybrid offspring.



BROADLEAF CATTAIL  
FLOWER SPIKE



Broadleaf

## Narrowleaf Cattail

*[Typha angustifolia]*

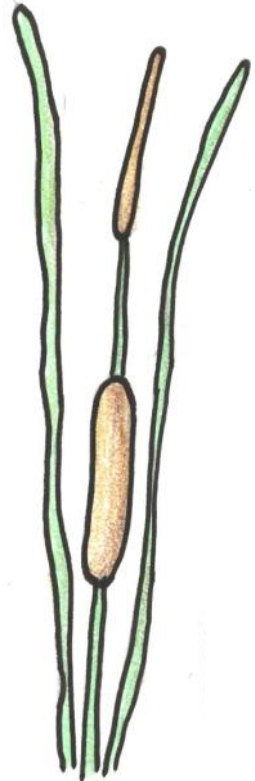


**Key Characteristics:** The narrowleaf cattail is a medium-sized broadleaf herbaceous plant. It has long, upright stalks, with very long, flat leaves that can be 0.16 to 0.40 inches (0.4–1.0cm) wide.

**Bloom/Fruit Time:** May to July

**Flowers & Fruits:** The flowers are brown and cylindrical, with the male flower above the female flower. The flower spike is generally shorter than the leaves. The male and female flowers are separated by a space on the same stalk. Often, the flowers will look fuzzy when dispersing seeds.

**You Are Likely To Find It:** Brackish and freshwater tidal marshes, non-tidal marshes, ditches, and wet meadows are common places to find narrowleaf cattail.



NARROWLEAF CATTAIL  
FLOWER SPIKE



Broadleaf

## Blue Marsh Violet

*[Viola cucullata]*



**Key Characteristics:** The blue marsh violet is a low-growing broadleaf herbaceous plant that often forms colonies. Its leaves are oval or roughly heart-shaped, have toothed margins, and appear clustered.

**Bloom/Fruit Time:** April to July

**Flowers & Fruits:** The flowers are light purple and have 5 petals. Each flower occurs on its own stalk and is often extended above the leaves. Some of the petals have tiny (about 1mm) hairs. The fruits are small green capsules that split into thirds when mature.

**You Are Likely To Find It:** Moist woods, meadows, floodplains, and swamps are common places to find the blue marsh violet.



Photo Credit: William McAvoy





Broadleaf

## Triangle-leaf Tearthumb

*[Persicaria arifolia]*



**Key Characteristics:** Triangle-leaf tearthumb is a broadleaf herbaceous plant that is small to medium in height. The stems are either unbranched or branch occasionally, and are light green and prickly. Leaves are alternate, have smooth margins, are triangular-shaped with two lobes at the base, and the bottom surface is slightly covered with hairs.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** Flowers are located on the sides and at the end of a stem. Flowers can be tightly bunched or sparsely located on the stem, and can be white, pinkish white, greenish white, or white.

**You Are Likely To Find It:** Marshes, wet woods, wet meadows, swamps, seeps, ponds, and ditches are common places to find triangle-leaf tearthumb.

**Also Called:** Halberdleaf tearthumb





Broadleaf

## Arrowleaf Tearthumb

*[Persicaria sagittata]*



**Key Characteristics:** Arrowleaf tearthumb is a medium-sized broadleaf herbaceous plant. The stems are angular and have prickles that curve downward. The leaves are alternately spaced, are shaped like long and narrow arrowheads, and have smooth margins. The bottom leaf surface is slightly prickly along the midrib.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** Flowers are located on the sides and at the end of a stem. They are small and can range in color from white to pink. Flowers are grouped together to form clusters that are roughly circular in shape.

**You Are Likely To Find It:** Wet woods and meadows, marshes, swamps, seeps, depressions, ponds, and ditches are common places to find arrowleaf tearthumb.





Broadleaf

## Dotted Smartweed

*[Persicaria punctata]*



**Key Characteristics:** Dotted smartweed is a small to medium-sized broadleaf herbaceous plant. Each stem has joints with papery sheaths over the joints. The leaves are alternately arranged, lance-shaped, and are tapered to points at both ends. Leaves have smooth margins and are usually hairless except for the occasional hairs along the lower midrib.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** Dotted smartweed has small white flowers that grow in upright clusters at the ends of the stem. The sepals on these flowers have tiny glands on them, giving them a spotted appearance; but, because they are so tiny or pale in color, a magnifier may be needed to see them. The fruits are small, smooth, dark brown, three-sided nutlets.

**You Are Likely To Find It:** Stream banks, tidal and non-tidal freshwater marshes, swales, open swamps, and ditches are common places to find dotted smartweed.





Broadleaf

## Mile-a-Minute

*[Persicaria perfoliata]*



**Key Characteristics:** Mile-a-minute is a broadleaf herbaceous plant that forms dense tangles around other plants. The stems are thin but have curved barbs, and at each node there are cup shaped, leaf-like structures. The leaves are alternately arranged and shaped like arrowheads.

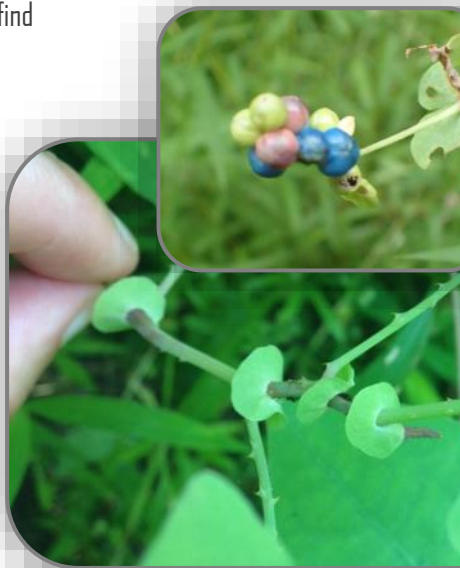
**Bloom/Fruit Time:** June to November

**Flowers & Fruits:** The flowers are tiny, white, and often unseen. The fruits occur in clusters and are round, berry-like, bluish when ripe, and contain a dark hard seed.

**You Are Likely To Find It:** Moist woods, floodplains, marshes, and swales are common places to find mile-a-minute.

**Also Called:** Asiatic tearthumb

**Did You Know?** When mile-a-minute tangles around native plants, it blocks sunlight from getting to them. This means native plants cannot get the sunlight they need to make food (photosynthesis).







Broadleaf

## Whorled Pennywort

*[Hydrocotyle prolifera]*



**Key Characteristics:** Whorled pennywort is a small, low-growing broadleaf herbaceous plant. The leaves are alternately arranged along the stem and have a roughly circular outline with small indents or lobes around the edges. Leaf stalks, which are on the centers of the undersides of leaves, hold the leaves fairly upright and flat.

**Bloom/Fruit Time:** April to September

**Flowers & Fruits:** The flowers are tiny, white or greenish-white, and occur on small, upright inflorescences. Flowers are usually in tight clusters arranged around the stalk of the inflorescence in a circular manner. Fruits are very small, dry, and very flat.

**You Are Likely To Find It:** Pond edges, depressions, or edges of salt marshes where freshwater seepage is strong are common places to find whorled pennywort.

**Did You Know?** Whorled pennywort is commonly used as groundcover in shallow aquariums.





Fern

## Sensitive Fern

*[Unaclea sensibilis]*



**Key Characteristics:** The sensitive fern is a short to medium-sized fern. The fronds, or leaves, are bright green, and there are both infertile and fertile leaves. The infertile leaves are somewhat triangular in overall outline, leathery, have leaflets with wavy margins, and die off in the winter. The fertile leaves are much smaller and more compact to form hardened structures that support the bead-like sporangia (spore-containing structures). The fertile leaves turn brown in the late summer.

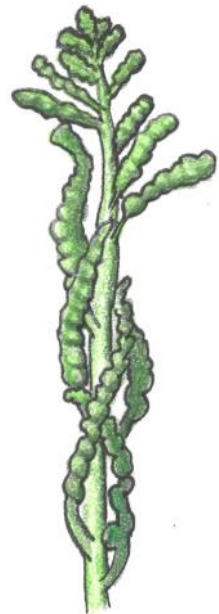
**Releases Spores:** June to August

**Flowers & Fruits:** The sensitive fern lacks true flowers, but spreads through spores and rhizomes (root-like structures underground).

**You Are Likely To Find It:** Moist woods, swamps, marshes, and streambanks are common places to find the sensitive fern.

**Did You Know?** This plant got its name because the leaflets are very sensitive to drought and frost, although the fertile fronds can persist through winter.

FERTILE FROND





Fern

## Cinnamon Fern

*[Osmundastrum  
cinnamomeum]*



**Key Characteristics:** The cinnamon fern is a small to medium-sized fern. Its infertile fronds, or leaves, are yellow-green and have cinnamon-colored fibers near the leaf bases. They are lance-shaped in outline and taper towards the end, often arching outward slightly from the center of the plant. The leaflets have deep lobes that are rounded or slightly pointed. The fertile leaves appear spike-like and support sporangia (spore-containing structures). They are green in color when immature, are cinnamon-colored when the spores are mature, and they stand upright in the center of the plant.

**Releases Spores:** Spring

**Flowers & Fruits:** The cinnamon fern lacks true flowers, but spreads through spores.

**You Are Likely To Find It:** Swamps, floodplains, wet woods, and wet meadows are common places to find the cinnamon fern.







Fern

## Royal Fern

*[Osmunda regalis]*



**Key Characteristics:** The royal fern is a small to medium-sized fern that often grows in clumps. The stalks are smooth and reddish in color near the base. The leaves are composed of leaflets that are fully separated (no lobes), and are fairly spaced out.

**Releases Spores:** March to June

**Flowers & Fruits:** Fertile leaves on the royal fern have an inflorescence on one end that is reddish-brown or light brown. It is spike-like and contains spores.

**You Are Likely To Find It:** Tidal and non-tidal freshwater marshes, moist woods, wet meadows, and swamps are common places to find the royal fern.







Fern

## Marsh Fern

*[Thelypteris palustris]*



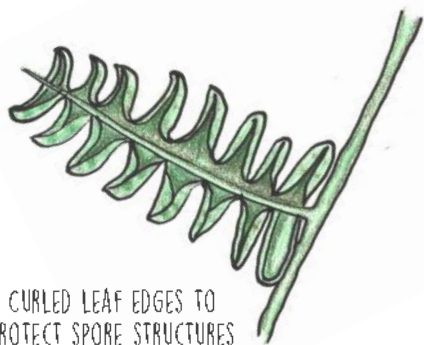
**Key Characteristics:** The marsh fern is a small fern. It has leaves that are composed of leaflets that are light green with a lance-shaped outline. Each leaflet has deep lobes. The stem base is brown or black, and the top of the stem is green or tan with some small hairs. There are a few tiny light brown scales scattered all over the stem.

**Releases Spores:** June to October

**Flowers & Fruits:** The marsh fern has spores on the lower surface of the leaves. The edges of the leaflets curl slightly under to help cover some of the spore-containing structures (sporangia).

**You Are Likely To Find It:** Tidal and non-tidal freshwater marshes, floodplains, and wet meadows are common places to find the marsh fern.

**Did You Know?** The clusters of circular structures on the backs of the leaflets of many fern species, including this one, are called *sori*; They contain the sporangia, which hold spores that allow ferns to reproduce.



CURLED LEAF EDGES TO  
PROTECT SPORE STRUCTURES



Fern

## Virginia Chain Fern

*[Woodwardia virginica]*

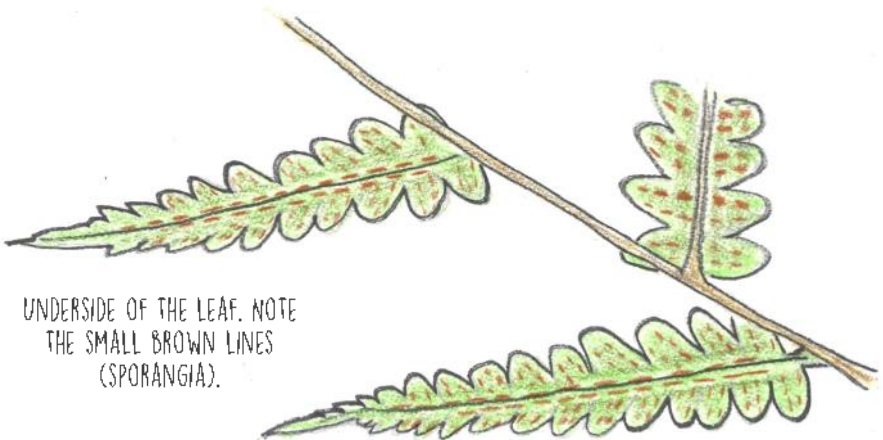


**Key Characteristics:** The Virginia chain fern is a small to medium-sized fern. The stems are often black, especially near the base. The compound leaves (fronds) have leaflets that feel leathery to touch and are deeply cut. The leaves are broadest in the middle, and get narrower at each end.

**Releases Spores:** June to September

**Flowers & Fruits:** When the Virginia chain fern becomes fertile, the fronds release reddish-brown spores from the lower leaflet surface.

**You Are Likely To Find It:** Swamps, swales, and Coastal Plain ponds are common places to find the Virginia chain fern.



UNDERSIDE OF THE LEAF. NOTE  
THE SMALL BROWN LINES  
(SPORANGIA).

# Carex Sedges

[*Carex* spp.]



SHALLOW SEDGE (*CAREX LURIDA*)

**Key Characteristics:** There are over 100 *Carex* species in Delaware, and they are notoriously difficult to identify, so they are grouped together in this guide. A good number of them are found in wetlands, and many are native to Delaware. *Carex* sedges are grass-like, are small to medium in size, and have narrow leaves. Most have triangular stems, and there are usually no nodes on the stems.

**Bloom/Fruit Time:** April-September

**Flowers & Fruits:** The flowers are small and inconspicuous, and the fruits are arranged in spikes that can be erect or drooping. Inflorescences often have a prickly appearance. They appear light green in the spring and early summer, and often appear light brown in late summer and fall as fruits mature.

**You Are Likely To Find It:** Wetland *Carex* sedges are often found in swamps, floodplains, freshwater marshes, and wet meadows.



NODDING SEDGE  
(*CAREX GYNANDRA*)

BLADDER SEDGE  
(*CAREX INTUMESCENS*)

BLUNT BROOM SEDGE  
(*CAREX TRIBULOIDES*)



## Flatsedges

[*Cyperus* spp.]



RUSTY FLATSEDGE (*CYPERUS ODORATUS*)

**Key Characteristics:** The *Cyperus* genus is a large group of sedges that are grass-like and are small to medium in size. Often known as flatsedges, there are many that are native to Delaware and that grow in wetlands. Flatsedges are only described at the genus level in this guide because there are so many species and they can be difficult to tell apart. Their stems tend to be upright and often have a somewhat triangular cross-section, and they have grass-like leaves that are located near the base of the plant.

**Bloom/Fruit Time:** June to January

**Flowers & Fruits:** Inflorescences on flatsedges may look similar to a bottle brush, or have a somewhat spiky appearance. They are made up of one or more clusters of spikelets that tend to radiate out from a central point. Inflorescences usually appear light brown or pale yellowish when mature. They have prominent leaf-like structures (bracts) that stick out just below the inflorescence.

**You Are Likely To Find It:** Freshwater or brackish marshes, wet meadows, swales, and ditches are common places to find many flatsedge species.



STRAW-COLORED FLATSEDGE  
(*CYPERUS STRIGOSUS*)



INFLORESCENCE  
WITH PROMINENT  
BRACTS





Sedge

## Softstem Bulrush

*[Schoenoplectus  
tabernaemontani]*



**Key Characteristics:** Softstem bulrush is a tall sedge with upright stems. The stems are grey-green in color, have a round cross-section, no visible leaves, and are pointed at the tip.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** The tiny flowers are located on an inflorescence that has many clustered branches located near the top of the plant, but just below the tip of the stem. Each spikelet is reddish-brown in color and is scaled.

**You Are Likely To Find It:** Brackish and freshwater tidal marshes, banks of streams, lakes and ponds, wet meadows, and non-tidal marshes are common places to find the softstem bulrush.

**Did You Know?** The stems of the softstem bulrush were used by Native Americans to make mats.



Sedge

## Woolgrass Bulrush

*[Scirpus cyperinus]*



**Key Characteristics:** Wool grass is a medium-sized sedge. Its leaves are long, flat, and fairly narrow with smooth margins. The stem can be round or slightly triangular.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** The flowers are dense clusters of greenish-brown spikelets that grow from the top of the stem and droop slightly. This inflorescence appears brown and “woolly” by late summer/early fall because of the bristles on the seeds.

**You Are Likely To Find It:** Irregularly flooded tidal and non-tidal freshwater marshes, wet meadows, swales, Coastal Plain ponds, and swamps are common places to find woolgrass bulrush.



Sedge

## River Bulrush

*[Balbaschoenus  
fluviatilis]*



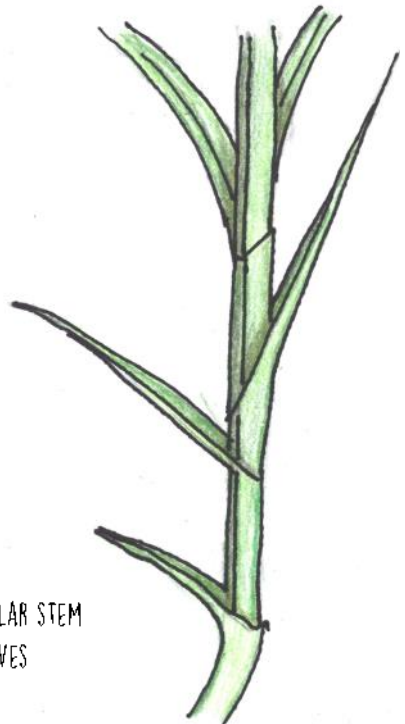
Photo Credit: William McAvoy

**Key Characteristics:** River bulrush is a medium-sized sedge with straight stems. Its stems are triangular with grass-like, narrow, pointed leaves. The leaves are alternately arranged, flat to v-shaped in cross-section, and may be rough along the margins or bottom surface of the leaf.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** The flowers and fruits are contained in an inflorescence at the top of the plant. It has many spikelets that tend to droop downward, except on the center spikelet. There are many leafy structures, called bracts, that also droop downwards.

**You Are Likely To Find It:** Freshwater tidal and non-tidal marshes, riverbanks, shallow ponds, and lake waters are common places to find river bulrush.



TRIANGULAR STEM  
AND LEAVES

Sedge

## Olney's Three-square Bulrush

[*Schoenoplectus  
americanus*]



Photo Credit: kgnaturephotography.com

**Key Characteristics:** Olney's three-square bulrush is a tall sedge that has straight stems. Its stems are triangular with deeply concave sides, and it has no leaves.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** The flowers and fruits are located on 5 to 12 spikelets near the top of the stem. Each spikelet is scaly and brown, and contains tiny flowers and fruit nutlets that are not easily visible.

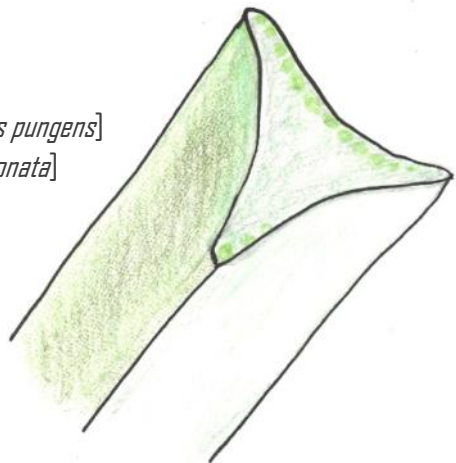
**You Are Likely To Find It:** Freshwater and brackish tidal marshes are common places to find Olney's three-square bulrush.

**Also Called:** Chairmaker's bulrush

### Can Be Easily Confused With:

Three-square bulrush [*Schoenoplectus pungens*]

Alien bulrush [*Schoenoplectiella mucronata*]



STEM  
CROSS-SECTION  
WITH DEEPLY  
CONCAVE SIDES





Sedge

## Three-square Bulrush

*[Schoenoplectus pungens]*



**Key Characteristics:** Three-square bulrush is a small to medium-sized sedge that has upright, straight stems. Its stems are triangular with either flat or slightly concave sides. It has 1 to 3 narrow, stem-like leaves.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** The flowers and fruits are located on 1 to 5 spikelets near the top of the stem. Each spikelet is scaly and brown, and contains tiny flowers and fruit nutlets that are not easily visible.

**You Are Likely To Find It:** Freshwater and brackish tidal marshes, non-tidal marshes, ditches, and interdunal swales are common places to find three-square bulrush.

**Also Called:** Common three-square

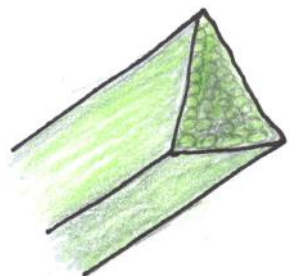
**Can Be Easily Confused With:**

Olney's three-square bulrush [*Schoenoplectus americanus*]

Alien bulrush [*Schoenoplectiella mucronata*]

**Did You Know?** Bog bulrush is not native to Delaware and looks very similar to Olney's three-square bulrush and three-square bulrush. The difference is that the top part of the stem kicks out to the side at the spikelets.

STEM CROSS-SECTION  
WITH STRAIGHT SIDES





Rush

## Smooth Rush

*[Juncus effusus]*



**Key Characteristics:** Smooth rush is a small to medium-sized rush. It is a grass-like plant that has unbranched stems. Stems have a round cross-section, and the bottom of the stems (basal sheath) tends to be brownish in color. Often, these plants grow in dense clusters.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** The inflorescence contains the flowers that grow in loose clusters from a single point mid-way up the stem.

**You Are Likely To Find It:** Tidal freshwater marshes, inland marshes, wet meadows, and pastures are common places to find smooth rush.

**Also Called:** Soft rush or common rush





Grass

## Deertongue Witch Grass

*[Dichanthelium  
clandestinum]*



**Key Characteristics:** Deertongue witch grass is a small to medium-sized grass. It has narrow, lance-shaped leaves with smooth margins (except those near the stem). The bases of the leaves wrap around the stem. The bottom surface of the leaf tends to be a paler green than the top surface. Nodes on stems occasionally have long, soft hairs.

**Bloom/Fruit Time:** Early summer and fall

**Flowers & Fruits:** The inflorescences has a roughly pyramidal shape with widely spread wavy branches. Each branch has one or multiple tiny spikelets.

**You Are Likely To Find It:** Deertongue witch grass can be found in moist open areas such as roadside ditches and moist clearings or open woods.

**Also Called:** Deertongue panic grass





Grass

## Barnyard Grass

*[Echinochloa crusgalli]*



**Key Characteristics:** Barnyard grass is a small to medium-sized grass. It has round, hollow, upright stems that often grow along the ground before turning upward. Its leaves are very long, taper into a point, and have a distinct light-colored mid-vein. The leaf sheath is smooth.

**Bloom/Fruit Time:** August to October

**Flowers & Fruits:** The inflorescence occurs at the top of the stem. It has many spikes with spikelets and some long bristles.

**You Are Likely To Find It:** Ditches, depressions, swales, and disturbed areas are common places to find barnyard grass.

**Can Be Easily Confused With:**

Walter's barnyard grass  
*[Echinochloa walteri]*







Grass

# Walter's Barnyard Grass

*[Echinochloa walteri]*



**Key Characteristics:** Walter's barnyard grass is a medium to tall grass. It has round, hollow, upright stems. The leaves are long, flat, alternately arranged, have smooth margins, and taper to a point. The leaf sheaths are hairy.

**Bloom/Fruit Time:** August to October

**Flowers & Fruits:** The inflorescence is in a branched cluster at the top of the stem. It has many spikes with spikelets and many long bristles on the seeds giving it a furry appearance.

**You Are Likely To Find It:** Fresh or brackish marshes, ditches, and disturbed areas, are common places to find Walter's barnyard grass.

**Also Called:** Walter millet or coast cockspur grass

**Can Be Easily Confused With:** Barnyard grass  
*[Echinochloa crusgalli]*





Grass

## Rice Cutgrass

*[Leersia oryzoides]*



**Key Characteristics:** Rice cutgrass is a small to medium-sized grass that often occurs in colonies. The stems are hollow, sparsely covered with hairs, and are usually unbranched. The leaf sheaths wrap around the stems. The leaves are yellow-green, long, narrow, and alternately arranged. Leaves have finely toothed margins and a very rough top surface.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The inflorescence at the top of the stem has widely spaced spikelets that either point upward or spread outwards. The seeds tend to look like rice.

**You Are Likely To Find It:** Tidal and non-tidal freshwater marshes, streambanks, ponds, wet meadows, and ditches are common places to find rice cutgrass.

**Did You Know?** Be careful when handling this grass. The surface of the leaves on this plant are very rough and can cut through skin and clothing.



## Japanese Stilt Grass

[*Microstegium vimineum*]



**Key Characteristics:** Japanese stilt grass tends to be short or medium in height and resembles a small delicate bamboo. The leaves are green, alternately arranged, and lance-shaped. Leaves have a distinctive off-center midrib with silvery reflective hairs running down the length of the upper leaf surface. The leaves are smooth when rubbed in both directions.

**Bloom/Fruit Time:** August to December

**Flowers & Fruits:** The inflorescence can be hidden in the leaf sheath or exposed on the end of the plant. The flowers are green, spike-like, and hairy. Once the seeds mature, the plant dies.

**You Are Likely To Find It:** Moist open woods, floodplains, fields, and roadside ditches are common places to find Japanese stilt grass.

**Can Be Easily Confused With:** Virginia cutgrass [*Leersia virginica*]

**Did You Know?** The leaves of Virginia cutgrass can look very similar to those of Japanese stilt grass, but they lack the silvery appearance along the midrib.







Grass

## Fall Panicgrass

*[Panicum  
dichotomiflorum]*



**Key Characteristics:** Fall panicgrass is a medium-sized grass. The stems bend at the nodes, often creating a zigzag appearance. The leaves are mostly smooth but are rough along the margins. Leaves are also flat and long.

**Bloom/Fruit Time:** August to September

**Flowers & Fruits:** The inflorescence is located at the top of the stem and has small, numerous brown or purple spikelets.

**You Are Likely To Find It:** Ditches, depressions, swales, streambanks, and floodplains are common places to find fall panicgrass.

**Did You Know?** Fall panicgrass is a valuable food source for many species of wildlife. However, it has been found to cause issues in grazing livestock, including nitrate poisoning.





# Wild Rice

*[Zizania aquatica]*



Photo credit: Partnership for the Delaware Estuary

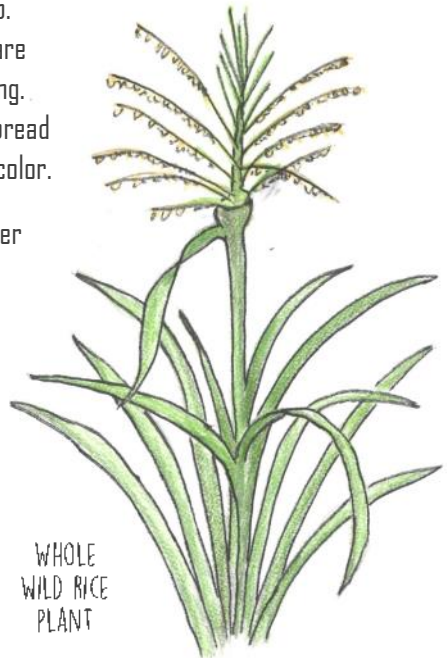
**Key Characteristics:** Wild rice is a very tall grass. It has long, smooth, flat leaves with sharply toothed margins.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** Wild rice has a two-part inflorescence, with the male part on the bottom and the female part on the top.

The male parts have brown flowers that are rice-like in shape, and are slightly drooping. The female parts have upright, slightly-spread flowers that are light greenish-yellow in color.

**You Are Likely To Find It:** Tidal freshwater and brackish marshes and non-tidal marshes are common places to find wild rice.



WHOLE  
WILD RICE  
PLANT

**Did You Know?** The grains from wild rice are edible! They are often boiled or made into flour.

## Dodder

[*Cuscuta spp.*]



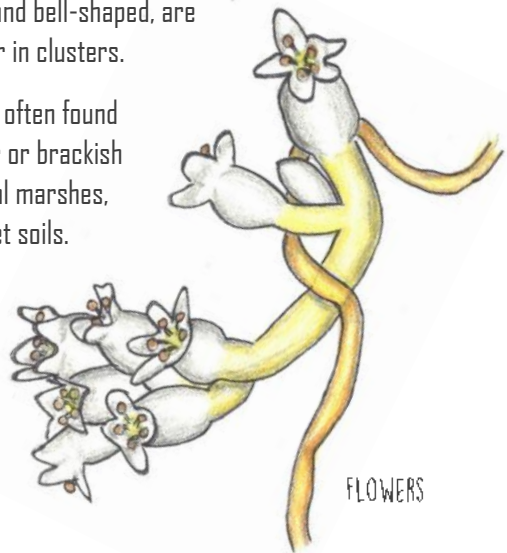
**Key Characteristics:** Dodder species are all herbaceous vines with no leaves. They have smooth, orange-yellow stems. They are never green because they do not have chlorophyll to make their own food through photosynthesis like most other plants do. So, they wrap around other plants to use them to survive, making them parasitic. It can be difficult to distinguish among different species, so they are grouped together here. These plants do not have a wetland indicator status, but may be found wrapped around wetland plants..

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** Flowers are tiny and bell-shaped, are white or yellowish in color, and occur in clusters.

**You Are Likely To Find It:** Dodder is often found growing on plants in tidal freshwater or brackish (occasionally salt) marshes, non-tidal marshes, stream banks, moist thickets, and wet soils.

**Also Called:** Scaldweed





Vine

## Yellow Yam

*[Dioscorea villosa]*



**Key Characteristics:** Yellow yam is an herbaceous vine. It has leaves that are heart-shaped and are alternately arranged, with occasional whorls at the base of the plant. Leaves have veins that radiate from the leaf base, have a hairy bottom surface, and have smooth margins. The stems are pale green, yellow, reddish-green, or dark red.

**Bloom/Fruit Time:** June to October

**Flowers & Fruits:** Flowers are very small, occur in dangling clusters, and are white or greenish-yellow. The fruit is a three-sectioned capsule that is brown when ripe.

**You Are Likely To Find It:** Moist woods, swamps, and shorelines are common places to find yellow yam.

**Also Called:** Wild yam

**Did You Know?** Yellow yam is dioecious, meaning that a vine either has all male or all female flowers, never both.





Vine

## Climbing Hempweed

*[Mikania scandens]*



**Key Characteristics:** Climbing hempweed is an herbaceous vine that can sprawl widely. The stems vary and can be very hairy or have few hairs. The leaves are triangular or heart-shaped with rounded bases and have slightly toothed margins. Leaves are pointed on the end, are oppositely arranged, and veins tend to have an oval outline in the middle of the leaf.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** Flowers are small, white or pink, arise from leaf axils, and appear in clusters. Fruits appear brown and have white or off-white hairs sticking out from seed tufts.

**You Are Likely To Find It:** Freshwater tidal and non-tidal marshes, swamps, moist woods, and stream banks are common places to find climbing hempweed.

**Did You Know?** Many insects, including butterflies and bees, frequently visit climbing hempweed flowers to feed on their nectar.







Vine

## Swamp Groundnut

*[Apios americana]*



**Key Characteristics:** Swamp groundnut is an herbaceous vine that twines around other plants. The leaves are alternate and pinnately compound with 3 to 7 leaflets. Each leaflet is oval or lance-shaped, has smooth margins, and has a fairly round base and a pointed end.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** Flowers are small, purple or purplish-brown, and usually occur in clusters on inflorescences. Fruits are long and narrow and look similar to pea pods.

**You Are Likely To Find It:** Swamps, floodplains, and tidal freshwater marshes are common places to find swamp groundnut.

**Did You Know?** Native Americans used to eat the thick, starchy parts of underground stems (tubers) of swamp groundnut.





Vine

## Roundleaf- Greenbrier

*[Smilax rotundifolia]*



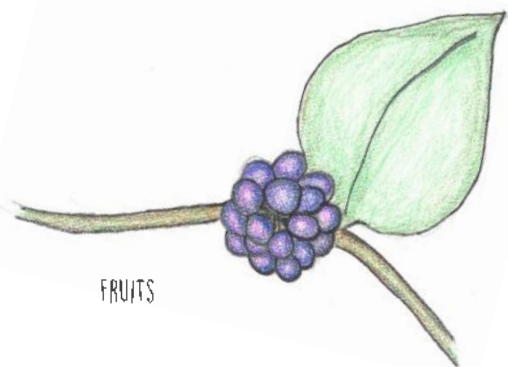
**Key Characteristics:** Roundleaf greenbrier is a deciduous woody vine that can climb high or sprawl low along the ground. The leaves are oval-shaped with a dark green top surface, pale green bottom surface, and sometimes they have tiny prickles at the base of the leaf veins. The stems are very thorny.

**Bloom/Fruit Time:** May to September

**Flowers & Fruits:** Flowers are small, greenish-white, and grow in clusters. The fruits are small, bluish-black berries that grow in tight clusters.

**You Are Likely To Find It:** Moist woods and swamps are places where roundleaf greenbrier is often found.

**Also Called:** Common greenbrier





Vine

## Japanese Honeysuckle

*[Lonicera japonica]*



**Key Characteristics:** Japanese honeysuckle is a woody vine that can form dense mats. Smaller vines often grow in a trailing fashion along the ground, and larger vines grow in trees. The leaves are oppositely arranged with smooth margins. Leaves are usually oval, but leaves near the ground may also be lobed.

**Bloom/Fruit Time:** April to September

**Flowers & Fruits:** Flowers are small, white or light yellow in color, and very fragrant. The fruits are small, black, shiny, round berries.

**You Are Likely To Find It:** Woodlands and areas disturbed by humans are common places to find Japanese honeysuckle.

**Did You Know?** Originally from Asia, it was introduced to New York in the early 1800's for erosion control on farms and for ornamental purposes. Now, it poses a threat to native plants throughout Delaware.





Vine

## Virginia Creeper

*[Parthenocissus quinquefolia]*

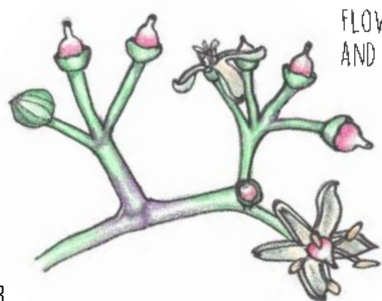


**Key Characteristics:** Virginia creeper is a woody vine that can grow along the ground or climb upward. The leaves are palmately compound with 5 leaflets. Each leaflet has toothed margins. Leaflets are spread around in a star-like pattern, and are red when they first emerge, but then turn green. Leaves turn bright red in the fall.

**Bloom/Fruit Time:** June to October

**Flowers & Fruits:** Flowers are greenish-white, small, and occur in clusters. The fruits are bluish purple berries when mature and occur in clusters.

**You Are Likely To Find It:** Borders of streams and clearings, and open or partially open woods are common places to find Virginia creeper.



FLOWER BUDS  
AND FLOWERS





## Poison Ivy

[*Toxicodendron radicans*]

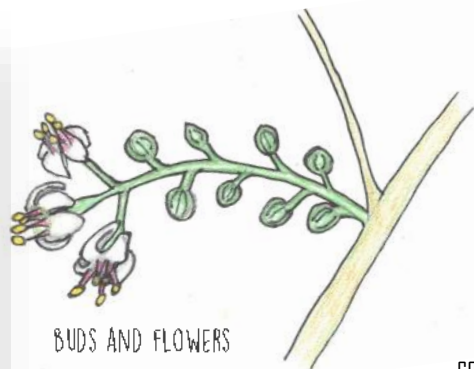


**Key Characteristics:** Poison ivy is a woody vine that can grow low on the ground in a shrub-like fashion, or climb high as a vine via aerial roots. The vine has hairy root-like structures when large. Each leaf is compound with 3 leaflets that vary in shape from oval to elliptical, and may (but not always) have 2 to 3 lobes. The leaves are alternately arranged, oval or elliptical in shape, and leaflets can have smooth or toothed margins. Leaves turn a vibrant red in the fall.

**Bloom/Fruit Time:** March to January

**Flowers & Fruits:** Flowers are small, white, and occur on an inflorescence. Each inflorescence has 25 or more flowers. The fruits are fleshy, round, and berry-like, and occur in dense clusters. Fruits are whitish, cream-colored, or light brown.

**You Are Likely To Find It:** Wet woods, marshes, swamps, or forest edges are common places to find poison ivy.





Vine

## Muscadine Grape

*[Muscadinia rotundifolia]*



**Key Characteristics:** Muscadine grape is a deciduous, woody, climbing vine. The plant has woody twigs, tendrils, and larger climbing branches with bark. The bark is greenish brown and develops grooves when mature. The leaves are roughly heart-shaped, shiny, have toothed margins, and are alternately arranged.

**Bloom/Fruit Time:** May to October

**Flowers & Fruits:** Flowers are greenish-white, small, and occur in clusters on spikes. The fruits are purplish-black round berries when ripe.

**You Are Likely To Find It:** Moist open woods are the most common place to find muscadine grape.

FRUITS OF THE  
MUSCADINE GRAPE



**Did You Know?** These berries are delicious in jellies.

# Bristly Dewberry

[*Rubus hispidus*]



Photo Credit: kgNaturePhotography.com

**Key Characteristics:** Although there are many *Rubus* species in Delaware, bristly dewberry is the only one that usually grows in wetlands. Bristly dewberry is a semi-evergreen woody vine that often has long, ground-trailing, bristly stems that are reddish or light green in color. Leaves are alternately arranged and are compound with 3 leaflets. Leaflets have toothed margins, blunt tips, and the upper surface is darker than the lower surface.

**Bloom/Fruit Time:** June to August

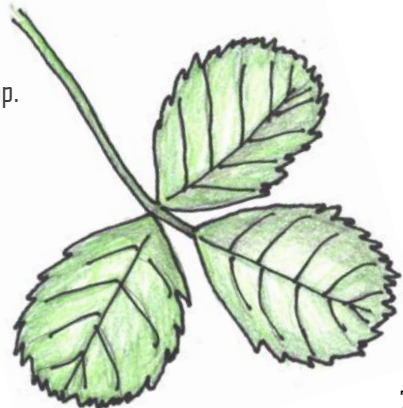
**Flowers & Fruits:** The flowers are white and small with 5 petals. The fruits are berries that change from light green or whitish, to red, and then to dark blackish purple as they mature .

**You Are Likely To Find It:** Bristly dewberry is commonly found in swamps and floodplains.

**Also Called:** Swamp dewberry

**Can Be Easily Confused With:** Other *Rubus* spp.

**Did You Know?** There are many different species in the *Rubus* genus. It can be difficult to tell them apart, especially because many of them hybridize with each other.







Moss

## Sphagnum Moss

*[Sphagnum spp.]*



**Key Characteristics:** Sphagnum mosses are nonvascular plants that are very spongy and absorbent and grow low to the ground. There are many species of sphagnum mosses that are very difficult to tell apart, so they are grouped together here. They have many small, upright stems. Small buds are often visible from the top of the stem, this is where the stem will continue to grow from. Small, soft, leaf-like branches grow outward off of each stem. Branches are often tightly clustered on shorter stems, and are more spread out on longer stems.

**Releases Spores:** July to October

**Flowers & Fruits:** Sphagnum mosses have no true flowers or fruits. Instead, many species release spores from small capsules on upright, elongated, thin stalks. Some species also reproduce by dividing one stem into two or more stems.

**You Are Likely To Find It:** Wet woods, marshes, and swamps are common places to find sphagnum moss.

**Also Called:** Peat moss

**Did You Know?** These species are incredibly absorbent. Some can hold as much as twenty times their weight in water!







Shrub

## Common Alder

*[Alnus serrulata]*



**Key Characteristics:** Common alder is a tall deciduous shrub. It has multiple trunks, and the bark is dark brown with lighter dots. The leaves are oval-shaped with a pointed tip, have finely toothed margins, and are alternately arranged. The bottom surface of the leaf tends to be hairy along the veins.

**Bloom/Fruit Time:** March to May

**Flowers & Fruits:** The flowers include 2 different types of catkins. The female catkins are oval-shaped and look like miniature cones when the seeds have been released. They start out light green in color and then turn dark brown. The male catkins are long, narrow, cylindrical-shaped features that hang down from the branches. They are light green or light greenish-pink in color.

**You Are Likely To Find It:** Floodplains, stream and river banks, irregularly flooded tidal and non-tidal freshwater marshes, swamps, and open wet meadows are all common locations where you will find common alder.

**Also Called:** Hazel alder or smooth alder



FEMALE  
CATKIN



## Shadbush

[*Amelanchier canadensis*]



Photo Credit: William McAvoy

**Key Characteristics:** Shadbush is a tall deciduous shrub. It has multiple trunks that are ash-gray. Trunks tend to have a dark strip when young, but develop rough or deeply furrowed bark when older. The twigs tend to be hairy when they are young. The leaves are oblong in shape, are finely toothed, and are alternately arranged. The top of the leaf has fine hairs when it is young, but it smooths out as it gets older. The bottom leaf surface has fine white hairs. Leaves turn a bright orange-red in the fall.

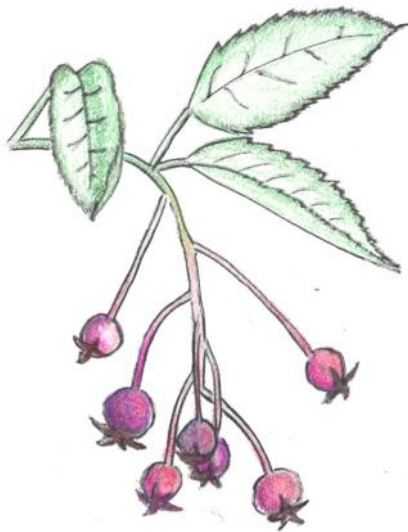
**Bloom/Fruit Time:** April to July

**Flowers & Fruits:** The flowers are white with 5 narrow petals, and there are gaps between each petal. The bloom starts when leaves are only half-grown. Fruits are purplish-black round berries when mature (light green or bright red when immature), and they are alternately arranged on the ends of stems.

**You Are Likely To Find It:** Shadbush is often found in the understory of moist woods or swamps.

**Also Called:** Canadian serviceberry

**Can Be Easily Confused With:** Red chokeberry [*Aronia arbutifolia*]



PURPLISH-BLACK FRUIT



Shrub

## Red Chokeberry

*[Aronia arbutifolia]*



**Key Characteristics:** Red chokeberry is a medium to tall deciduous shrub that is often fairly wide. This plant frequently forms colonies. The twigs are hairy. The bark is smooth and can be gray or reddish-brown. It often has diamond-shaped markings on it. The leaves are elliptical in shape, alternately arranged, have finely toothed margins, are a glossy dark green on the top surface, a fuzzy gray-green on the bottom surface, and turn bright red in the fall.

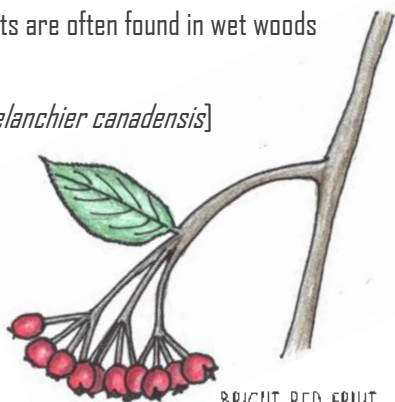
**Bloom/Fruit Time:** April to September

**Flowers & Fruits:** The flowers are white or light pink with 5 petals. Flowers occur in dense clusters along branches. The fruits are small, round berries that are bright red and glossy when mature. They also occur in clusters. The fruits often remain on the shrub throughout the fall and into the winter.

**You Are Likely To Find It:** Red chokeberry plants are often found in wet woods or swamps.

**Can Be Easily Confused With:** Shadbush [*Amelanchier canadensis*]

**Did You Know?** The red chokeberry has berries in tight clusters, and are bright red when mature. Their flower petals are wide and circular to oval shaped. Shadbush berries are purplish-black when mature, and its leaves are narrow and elliptical in shape.



BRIGHT RED FRUIT



Shrub

## Button Bush

*[Cephalanthus occidentalis]*



**Key Characteristics:** Button bush is a medium to large deciduous shrub. The leaves are oval, taper into a point, and have smooth margins. Leaves are oppositely arranged, but can grow in whorls of 3 or 4 leaves.

**Bloom/Fruit Time:** May to December

**Flowers & Fruits:** The flowers are tiny, white, and arranged on a sphere-shaped ball. The fruit is a sphere-shaped ball containing nutlets.

**You Are Likely To Find It:** Coastal plain ponds, freshwater marshes, and wet meadows are common places to find button bush.







Shrub

## Sweet Pepperbush

*[Clethra alnifolia]*



**Key Characteristics:** Sweet pepperbush is a large deciduous shrub. It has flaky, grayish-brown bark. The leaves are somewhat oval or elliptical, are narrow at the base, wide in the center, and pointed at the end. Leaves have toothed margins and are alternately arranged.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** The flowers occur on terminal spikes in tight clusters. They are small, white, fragrant, and have 5 petals. The fruits are small, roundish, hairy capsules.

### You Are Likely To Find It:

Swamps are common places to find sweet pepperbush.





Shrub

## Silky Dogwood

[*Cornus amomum*]



**Key Characteristics:** Silky dogwood is a medium to large deciduous shrub. The stems are reddish-brown or green when younger, then turn more gray as they age. The twigs have whitish vertical, elongated lenticels, and the pith (center) within the twigs is light brown or cream-colored. The leaves are oval-shaped with pointed tips, have smooth margins, and are oppositely arranged. The twigs and bottom leaf surface have soft silky hairs.

**Bloom/Fruit Time:** May to September

**Flowers & Fruits:** The flowers are small, occur in clusters, and are yellowish-white in color. The fruits are bluish-purple berries that are clustered together.

**You Are Likely To Find It:** Swamps, tidal and non-tidal freshwater marshes, wet meadows, and floodplains are common places to find silky dogwood.

**Can Be Confused With:** Redosier dogwood [*Cornus stolonifera*]

**Did You Know?** Dogwood species like this one are often used for streambank stabilization and for windbreaks.





Shrub

## Redosier Dogwood

*[Cornus stolonifera]*



**Key Characteristics:** Redosier dogwood is a medium to large-sized deciduous shrub. The bark and twigs are light green in spring and summer, and are red or purplish from fall to spring. The twigs have whitish circular or oval lenticels, and the pith (center) within the twigs is white. The leaves are oppositely arranged, smooth and dark green on the top surface, lighter green and hairy on the bottom surface, and have smooth margins.

**Bloom/Fruit Time:** May to October

**Flowers & Fruits:** The flowers are small, white, and grow in clusters. The fruits are white round berries that grow in clusters.

**You Are Likely To Find It:** Swamps, stream banks, wet meadows, and thickets are common places to find redosier dogwood.

**Can Be Confused With:** Silky dogwood [*Cornus amomum*]

**Did You Know?** Scientists are currently uncertain as to whether or not redosier dogwood is actually native to Delaware. Regardless, it is frequently planted in stormwater retention areas and in wetland creation areas.



Shrub

## Fetterbush

*[Eubotrys racemosa]*



**Key Characteristics:** Fetterbush is a medium to large deciduous shrub. The bark is grayish-brown and smooth. The leaves have finely toothed margins, are oval or lance-shaped, alternately arranged, and have a paler bottom surface than top. The leaves turn reddish-purple in the fall.

**Bloom/Fruit Time:** April to September

**Flowers & Fruits:** The flowers are small, white or light pinkish, and bell-shaped. They grow in small rows. The fruits are small and dry, brownish in color, and split open once ripe.

**You Are Likely To Find It:** Swamps, river banks, lake shores, and wet woods are common places to find fetterbush.

**Also Called:** Sweetbells or swamp doghobble



Photo Credit: William McAvoy



Shrub

## American Strawberry Bush

*[Euonymus americanus]*



Photo Credit: William McAvoy

**Key Characteristics:** American strawberry bush is a small to medium-sized deciduous shrub. The leaves are lance-shaped, pointed at the end, have toothed margins, and are paler on the bottom side than the top side.

**Bloom/Fruit Time:** March to October

**Flowers & Fruits:** The flowers are on the ends of long stalks and are greenish-purple or yellow-green, and have 5 petals. The fruits are reddish capsules with a bumpy, "warty" feel, which open when mature to reveal bright red seeds.

**You Are Likely To Find It:** Deciduous woods, swamps, stream banks, and shady edges are common places to find the American strawberry bush.

**Can Be Confused With:** Winged euonymus, also known as burning bush (*Euonymus alatus*), a highly invasive plant commonly used in landscaping.

**Also Called:** Bursting heart

**Did You Know?** Burning bush has corky "wings" on the sides of its stems, while American strawberry bush does not.

**Warning:** Unlike strawberries that we eat, the seeds of these fruits are strong laxatives and can be toxic!



LEAF ARRANGEMENT



Shrub

## Winterberry Holly

*[Ilex verticillata]*



**Key Characteristics:** Winterberry holly is a tall deciduous shrub. The bark is smooth and gray or blackish in color. The leaves are simple, have toothed margins, are alternately arranged, and have smooth surfaces. Leaves are dark green in the summer and yellowish in the fall.

**Bloom/Fruit Time:** April to August

**Flowers & Fruits:** The flowers are small and white, and occur at leaf axils. The fruits are small, round, and vibrant red when ripe, and often grow close together in clusters.

**You Are Likely To Find It:** Swamps and moist woods or thickets are common places to find winterberry holly.

**Also Called:** Common winterberry

**Did You Know?** Although the fruits may seem vibrant and inviting and are consumed by some animals, they are actually poisonous to humans.





Shrub

## Virginia Willow

*[Itea virginica]*



**Key Characteristics:** Virginia willow is a medium-sized deciduous shrub. The plant is roundish and is relatively wide-spread in diameter. The leaves are alternately arranged, lance-shaped, pointed at the tips, and have very finely toothed margins.

**Bloom/Fruit Time:** May to July

**Flowers & Fruits:** The flowers are small, white, occur in cylindrical drooping clusters, and are very fragrant. The fruits are very small, brown capsules.

**You Are Likely To Find It:** Swamps, sides of streams, or ponds are common places to find Virginia willow.

**Also Called:** Virginia sweetspire

**Did You Know?** This plant is very pretty in the fall—its leaves turn red, orange, and purple!



Photo Credit: Georgia Native Plant Society



Shrub

## Smooth Spicebush

*[Lindera benzoin]*



**Key Characteristics:** Smooth spicebush is a tall deciduous shrub. The leaves are oval or elliptical in shape, are pointed on both ends, have smooth margins, are alternately arranged, and are largest in size at the tips of branches.

**Bloom/Fruit Time:** March to October

**Flowers & Fruits:** The flowers are small and yellow-green. They occur on nodes and appear before the leaves in the spring. The fruits are small, oval berries that are light green at first and bright red when ripe.

**You Are Likely To Find It:** Moist woods, swamp edges, and streambanks are common places to find smooth spicebush.

**Did You Know?** When the leaves and fruits are crushed up, they smell really good and spicy, as the plant name suggests!







Photo Credit: William McAvoy

Shrub

## Swamp Azalea

*[Rhododendron viscosum]*



**Key Characteristics:** Swamp azalea is a medium-sized deciduous shrub. The leaves are somewhat oval, but are wedge-shaped at the base and have slightly pointed tips. Leaves have very finely toothed margins and are alternately arranged. Leaves are dark green on the top surface and pale green on the bottom surface, tend to be clustered at the ends of the branches, and turn purple and orange in the fall.

**Bloom/Fruit Time:** May to August

**Flowers & Fruits:** The flowers are white or pale pink, tubular, and fragrant. Flowers have 5 petals and occur in clusters of 4 to 9 flowers. The fruit is brown, dry, and narrow, and splits open when ripe.

### You Are Likely To Find It:

Swamps, low wet woods, and streambanks are common places to find swamp azalea.

**Did You Know?** All parts of this plant are highly toxic to humans if ingested.



Photo Credit: William McAvoy

## Multiflora Rose

*[Rosa multiflora]*

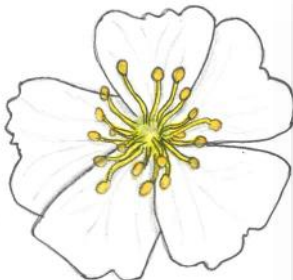


**Key Characteristics:** Multiflora rose is a medium to tall deciduous shrub that often forms dense clumps. The stems are thorny. The leaves are alternately arranged and are pinnately compound, usually with 5 to 9 leaflets per leaf. Leaflets are oval-shaped, come to a point at the end, and have toothed margins.

**Bloom/Fruit Time:** April to June

**Flowers & Fruits:** The flowers are small with 5 white petals and yellowish anthers. The fruits are small and red when ripe, and are spherical or oval in shape.

**You Are Likely To Find It:** Meadows, old fields, thickets, and edge habitats are common places to find multiflora rose.



FLOWER BLOSSOM





Shrub

## Swamp Rose

*[Rosa palustris]*



**Key Characteristics:** Swamp rose is a medium to large deciduous shrub. The stems are prickly. The leaves are alternately arranged and are pinnately compound with 7 leaflets. Leaflets have toothed margins and hairs on the surface. Each leaflet is elliptical and pointed on the ends.

**Bloom/Fruit Time:** June to July

**Flowers & Fruits:** The flowers are light pink with 5 petals, and can grow alone or in small clusters. The fruits are small, bright red berries when ripe with tiny prickles on the surface.

**You Are Likely To Find It:** Marshes, swamps, streambanks, and ditches are common places to find swamp rose.

**Did You Know?** Although the flowers are beautiful, be careful before getting too close—like many roses, the stems are very prickly!







Shrub

## Elderberry

*[Sambucus canadensis]*



**Key Characteristics:** Elderberry is a tall deciduous shrub. The bark is grayish or dark brown. Younger bark is mostly smooth with raised warts, while older bark has ridges and irregular furrows. The leaves are oppositely arranged and pinnately compound with 5 to 11 leaflets. Leaflets are elliptical with toothed margins, with the bottom surface much paler than the top surface.

**Bloom/Fruit Time:** May to October

**Flowers & Fruits:** The inflorescence is very wide and has a flat top. The flowers are small and white and occur in dense clusters. The fruits are round and berry-like, and are bluish, purplish, or blackish when mature.

**You Are Likely To Find It:** Open swamps and seeps, marshes, wet meadows, and stream or river banks are common places to find elderberry.

**Did You Know?** Blue or purple elderberries are edible and are often used to make wine, jams, syrups, and desserts.







Shrub

## Highbush Blueberry

[*Vaccinium corymbosum*]



**Key Characteristics:** Highbush blueberry is a large deciduous shrub that often forms dense colonies. The leaves are alternate and simple. Leaves are elliptical with a single point on the end, are slightly waxy to touch, and have smooth margins.

**Bloom/Fruit Time:** March to October

**Flowers & Fruits:** The flowers are small, white, somewhat bell-like, and clustered at the ends of branches. The fruits are small berries that are bluish-black when mature.

**You Are Likely To Find It:** Swamps and wet woods are common places to find highbush blueberry.

### Can Be Easily Confused With:

Black huckleberry

[*Gaylussacia baccata*]

**Did You Know?** Black huckleberries do not usually grow in wetlands. Also, their leaves have golden, translucent dots on the undersides, which highbush blueberries do not have.





Shrub

## Southern Arrowwood

*[Viburnum dentatum]*



**Key Characteristics:** Southern arrowwood is a large deciduous shrub. Older bark may appear gray and wrinkly, and younger bark often appears gray and smooth. Young twigs are often hairy. The leaves are simple and alternately arranged, and are round or somewhat oval-shaped. Leaves have toothed margins, appear glossy, and are sometimes hairy on the bottom leaf surface.

**Bloom/Fruit Time:** May to July

**Flowers & Fruits:** The flowers are small, white, and grow in flat-topped clusters. The fruits are small, dark bluish-black berries that grow in clusters.

**You Are Likely To Find It:** Moist woods and swamps are common places to find southern arrowwood.

**Did You Know?** The name arrowwood refers to the Native American Use of straight stems for arrow shafts.





Tree

# Red Maple

[*Acer rubrum*]



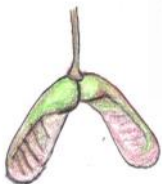
**Key Characteristics:** Red maple is a deciduous tree that grows up to 65 feet (20m) tall. Its bark is gray and develops long ridges as it ages. The leaves are simple, oppositely arranged, and have 3 lobes, sometimes with 2 small lobes at the leaf base. Leaves are generally dark green and smooth on top, and silver or light green on the bottom with some hairs.

**Bloom/Flower Time:** March to June

**Flowers & Fruits:** Flowers are pink or red and bloom close to the stem. The male flowers are relatively upright, while the female flowers are longer-stemmed and drooping. Fruits are small nutlets that are encased in wing-like structures (samaras) and are nicknamed "helicopters". Twigs often appear red on flowering plants.

**You Are Likely To Find It:** Stream banks, floodplains, and poorly drained soils are common places to find red maple trees.

SAMARAS  
(AKA, HELICOPTERS)



MALE  
FLOWER



FEMALE  
FLOWER





Tree

## Silver Maple

*[Acer saccharinum]*



**Key Characteristics:** The silver maple is a deciduous tree that grows approximately 89 -118 feet (27-36m) tall. The foliage and branches (collectively called the crown) are columnar and irregular, and have some openings. The tree bark is grayish-brown, thin when younger, and develops scaly ridges as it gets older. The leaves are simple, star-shaped, oppositely arranged on the stem, and have 5 deep lobes with v-shaped sinuses. Each leaf has coarsely toothed margins, a green top surface, and a silvery-green, lighter bottom surface.

**Bloom/Fruit Time:** March to June

**Flowers & Fruits:** The buds are reddish in color, and the flowers are small and turn greenish or yellowish color. Fruits are winged nutlets (samaras) that occur in pairs. The samaras are light brown or light green-brown and have pinkish veins.

**You Are Likely To Find It:** Silver maples like to reside in floodplains, along streambanks, and along the edges of lakes.



SILVER MAPLE'S LEAVES TURN YELLOW IN THE FALL, WHILE RED MAPLE'S LEAVES CAN BE ORANGE, RED, OR YELLOW IN THE FALL





Tree

## River Birch

*[Betula nigra]*



**Key Characteristics:** The river birch is a deciduous tree that can grow up to 50 feet (15.2m) tall. The leaves are simple, alternately arranged, oval-shaped with a pointed end, and have toothed margins. Leaves often feel fuzzy on the lower surface. The bark is light brown or gray and is often seen scaly and peeling. The inner bark often appears lighter, and can be creamy white, light orange, salmon, or reddish-brown.

**Bloom/Fruit Time:** April to May

**Flowers & Fruits:** The male flowers are long, cylindrical, drooping, light brown or reddish catkins, and the female catkins are slightly shorter, more upright, and light green. Fruits are reddish-brown cone-like structures.

**You Are Likely To Find It:** Swamps and floodplains are common places to find the river birch.

**Did You Know?** This tree is often used to reduce erosion along ditch, river, and stream banks.





Tree

## Bitternut Hickory

*[Carya cordiformis]*



**Key Characteristics:** Bitternut hickory is a deciduous tree that can grow up to 80 feet (24.4m) tall. The bark is light gray, and roughened by narrow ridges on old trunks. The bark on young trunks and branches is smooth and hard. The leaves are yellow-green in color and are pinnately compound with 5 to 9 leaflets. Leaflets are lance-shaped and have finely toothed margins.

**Bloom/Fruit Time:** April to September

**Flowers & Fruits:** The male flowers are long drooping catkins that occur in clusters, while the female flowers are on small, short spikes. Male and female flowers grow on the same plant (monoecious). The fruits are nuts in husks that start green and turn brown and open to release the nut when ripe.



**You Are Likely To Find It:** Moist woods, swamps, and stream banks are common places to find bitternut hickory.

**Also Called:** Swamp hickory, tight bark hickory, and bitter hickory

**Did You Know?** The nuts are not edible for humans. Also, buds turn very bright yellow in winter, helping in winter tree identification.

PINNATELY  
COMPOUND LEAF





Tree

# Atlantic White Cedar

[*Chamaecyparis thyoides*]



**Key Characteristics:** The Atlantic white cedar is an evergreen tree that can grow up to 70 feet (21.3m) tall. The bark is red to gray-brown or dark gray in color. The leaves are needle-like and scaly, and are fragrant if crushed.

**Bloom/Fruit Time:** March to April

**Flowers & Fruits:** The fruits are very small cones that are whitish-blue and often grow in clusters. The flowers are inconspicuous.

**You Are Likely To Find It:** The most common place to find the Atlantic white cedar is along floodplains of brown-water streams, often in dense, pure stands.

**Also Called:** Southern white cedar, swamp cedar, or green cypress

**Did You Know?** The wood of the Atlantic white cedar was once often used for constructing boats.







Tree

## Persimmon

*[Diospyros virginiana]*

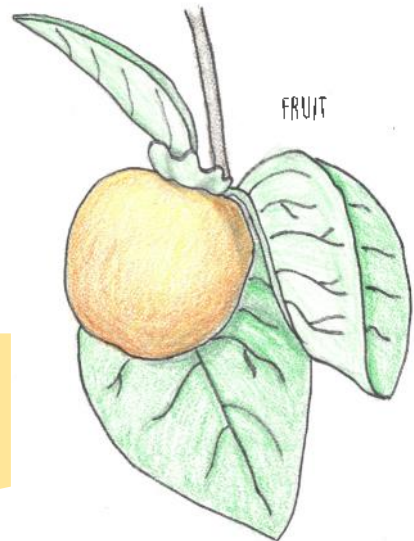


**Key Characteristics:** Persimmon is a deciduous tree that grows up to 70 feet (21.3m) tall. The bark is brown-gray and very blocky when mature. The leaves are simple, alternately arranged, oval-shaped with pointed end and a rounded base, and have smooth margins.

**Bloom/Fruit Time:** March to November

**Flowers & Fruits:** The female flowers are cream-colored or greenish-yellow, somewhat bell-shaped, have four thick lobes, and occur solitarily. The male flowers occur in clusters, are greenish-yellow, and are long and tubular in shape. The fruits are berries that are yellow-orange or red-orange when ripe.

**You Are Likely To Find It:** Moist and dry woods, wet flats, depressions, outer swamp areas, streambanks, and river bottoms are common places to find the persimmon tree.



**Did You Know?** The common name for this species comes from the Native American term for the fruit of the tree (persimmon).





Tree

## Green Ash

[*Fraxinus  
pennsylvanica*]



**Key Characteristics:** Green ash is a deciduous tree that grows up to 100 feet (30.5m) or taller. The bark is brownish-gray with ridges, and the twigs are usually light gray. The leaves are pinnately compound with 5 to 9 leaflets. The leaflets are oppositely arranged, bright green, oval-shaped with pointed ends, and have toothed margins.

**Bloom/Fruit Time:** April to May

**Flowers & Fruits:** The male flowers are light greenish-purple, occur in clusters, and turn gray-brown upon pollen release. The female flowers are on small branching structures (panicles). Both male and female flowers are small and lack petals. The fruit is a winged structure (samara) that contains one seed and is pale light yellowish or brownish.

**You Are Likely To Find It:** Moist woods, floodplains, and swamps are common places to find the green ash tree.

**Did You Know?** The emerald ash borer is a non-native, destructive insect that feeds on ash trees and can cause severe damage. While not yet widespread in Delaware, the insect is well-established in nearby states.





Tree

## American Holly

[*Ilex opaca*]



**Key Characteristics:** American holly is an evergreen tree that can grow up to 30 feet (9.1m) tall. The bark is smooth gray or gray-brown with branches growing horizontally outward almost parallel to the ground. The leaves are dark green on the top surface, yellow-green on the bottom surface, stiff and leathery to the touch, and have toothed spiny margins.

**Bloom/Fruit Time:** April to October

**Flowers & Fruits:** The flowers are small and greenish-white. Male flowers occur in a cluster, while female flowers are solitary. The berries are bright red and occur in clusters.

**You Are Likely To Find It:** Swamps and swamp edges are common places to find the American holly tree. These trees can also be found in slightly drier environments such as moist upland woods.

**Did You Know?** The American holly is the Delaware State tree.





Tree

## Sweet Gum

*[Liquidambar  
styraciflua]*



**Key Characteristics:** Sweet gum is a deciduous tree that grows up to 131 feet (40.0m) tall. The bark is gray-brown with deep ridges when mature. The leaves are simple, alternately arranged, and star-shaped (usually 5 lobes, sometimes 7). Leaves are glossy green on the top surface, pale green with tiny white hairs on the bottom surface, and have finely toothed margins.

**Bloom/Fruit Time:** March to November

**Flowers & Fruits:** The flowers are green or reddish-green, occur on cylindrical stalks, and lack true petals. The fruits are spiky balls that contain multiple small seeds.

**You Are Likely To Find It:** Swamps, moist woods, and thickets are common places to find sweet gum.



**Did You Know?** Sweet gum trees actually produce a “sweet gum”—their sap smells sweet, and when it hardens, it turns into a sweet-smelling gum!







Tree

## Northern Sweetbay Magnolia

*[Magnolia virginiana]*



**Key Characteristics:** Northern sweetbay magnolia is a deciduous tree that can grow up to 60 feet (18.3m) tall. When smaller, it may appear shrub-like. The bark is light gray-brown and has scales that appear pressed together. The twigs are hairy. The leaves are simple, smooth, a bit leathery, and are alternately arranged. Leaves also are dark green on the top surface, very pale on the bottom surface, are lance-shaped, and have smooth margins.

**Bloom/Fruit Time:** May to June

**Flowers & Fruits:** The flowers are fragrant, wide, white, and have 9 to 12 petals. The fruit is somewhat cylindrical, brown, and hairy, and the seeds that emerge are bright red.

**You Are Likely To Find It:** Tidal and non-tidal freshwater swamps, wet woods, streambanks, and floodplains are common places to find northern sweetbay magnolia.

**Also Called:** Swamp magnolia, laurel magnolia, and beaver tree

**Did You Know?** The blossoms have a very sweet fragrance, and the taste of the bark of the twigs is very spicy.







Tree

## Black Gum

*[Nyssa sylvatica]*



**Key Characteristics:** Black gum is a deciduous tree that can reach over 100 feet (30.5m) tall. The bark is light gray-brown with scaly ridges when mature. Branches often grow out perpendicular to the trunk. The leaves are simple, alternately arranged, oval-shaped, usually taper at both ends, and have smooth margins. Leaves are often crowded together at the ends of branches. The top leaf surface is dark green and shiny, while the bottom surface is paler green and often has some hairs.

**Bloom/Fruit Time:** April to October

**Flowers & Fruits:** The flowers are small, pale green, and occur in clusters. The fruits are small, round or oval, purplish-blue berries that occur in clusters.

**You Are Likely To Find It:** Swamps are common places to find the black gum tree.

**Also Called:** Black tupelo

**Can Be Easily Confused With:** Swamp black gum [*Nyssa biflora*]

**Did You Know?** There are some very subtle differences between swamp black gum and black gum. Swamp black gum prefers wetter organic or clay soils, while black gum prefers less wet, light-textured soils. Also, swamp black gum leaves are often smaller and narrower.





Tree

## Loblolly Pine

*[Pinus taeda]*



**Key Characteristics:** Loblolly pine trees are evergreen conifers that can grow up to 110 feet (33.5m) tall. The bark is red-brown in color, and looks like rectangular plates. The leaves are needles in clusters of 3. The needles are long, slender, stiff, and bright green.

**Bloom/Fruit Time:** May to September

**Flowers & Fruits:** The flowers are light greenish-yellow, cylindrical, and are clustered on tips of branches. The fruits are cones that are light red-brown, cylindrical or oval in shape, and house the long, thin, wide, black seeds. Cones have small, stout spines.

**You Are Likely To Find It:** Loblolly pines often grow in areas with poorly drained soils.



**Did You Know?** Like most pines, loblolly pines flower in the spring, but the cones don't ripen until the fall of the second season!



## Sycamore

*[Platanus occidentalis]*



**Key Characteristics:** Sycamore trees are deciduous and can grow up to 120 feet (36.6m) tall when mature. The bark at the trunk base has deep furrows, but most of it falls away in patches, exposing the whitish inner bark. The leaves are simple, alternately arranged, broad, and have 3 to 5 lobes. Leaves are bright green on the top surface, pale green and wooly on the bottom surface, and have broad teeth along the margins.

**Bloom/Fruit Time:** May to October

**Flowers & Fruits:** The flowers are small, red, and arranged on a ball-shaped structure that turns into the fruiting body. The fruit is round and appears slightly spiky.

**You Are Likely To Find It:** Floodplains and swampy woods are common places to find sycamore trees.

**Did You Know?** Many birds nest in cavities in sycamore trees, including wood ducks, barred owls, and eastern screech owls.







Photo Credit: William McAvoy

Tree

## Swamp White Oak

[*Quercus bicolor*]



**Key Characteristics:** Swamp white oak is a deciduous tree that can grow up to 98 feet (30.0m) tall. The bark is gray-brown, appears ridged or scaly, and may peel off in curls. The leaves are simple, alternately arranged, dark green and shiny on the top surface, and silvery-white with soft hairs on the bottom surface. Leaves have several moderate to deep lobes and coarsely toothed margins.

**Bloom/Fruit Time:** May to October

**Flowers & Fruits:** The flowers are drooping, yellow-green catkins, and the fruits are nuts (acorns).

**You Are Likely To Find It:** Swamps, stream banks, depressions, wet woods, and floodplains are common places to find swamp white oak trees.

**Can Be Easily Confused With:**  
White oak [*Quercus alba*]

**Did You Know?** The leaves of the swamp white oak have more shallow lobes and a white underside verses the white oak which has leaves with deeper lobes and a dull green underside. White oaks can also have a knotty overall appearance.







Tree

## Swamp Chestnut Oak

*[Quercus michauxii]*



**Key Characteristics:** Swamp chestnut oak is a deciduous tree that can grow up to 70 feet (21.3m) tall. The bark is light gray or whitish-gray and somewhat scaly. The leaves are simple, alternate, somewhat oval in outline, and tapered at both ends. Leaves are dark green, smooth on top surface, and pale green or silvery with soft hairs on the bottom surface. Leaves have many shallow lobes that look like rounded teeth along leaf margins. Leaves turn reddish-orange in the fall.

**Bloom/Fruit Time:** May to October

**Flowers & Fruits:** The male flowers are small, drooping, light yellowish-green catkins. The female flowers are yellowish-green, and occur in very small clusters on short hairy stems. The fruits are acorns that are chestnut-brown in color.

**You Are Likely To Find It:** Swamps, stream banks, and low wet woods are common places to find swamp chestnut oak trees.





Tree

## Pin Oak

*[Quercus palustris]*



**Key Characteristics:** Pin oak is a deciduous tree that can grow up to 120 feet (36.6m) tall. The bark is smooth and gray-brown or gray-red when young, and rougher with shallow ridges and darker gray-brown when older. The leaves are simple, alternately arranged, have 5 to 7 lobes, pointed tips, and very large C-shaped sinuses. Leaves turn bright red in the fall.

**Bloom/Fruit Time:** April to November

**Flowers & Fruits:** The flowers are small, yellow-green catkins that occur in drooping clusters. The fruits are round acorns.

**You Are Likely To Find It:** Swamps and wet woods are common places to find pin oak trees.



**Did You Know?** The lower branches of the pin oak often point towards the ground to feel around for water!



Tree

## Willow Oak

*[Quercus phellos]*



**Key Characteristics:** Willow oak is a deciduous tree that can grow up to 100 feet (30.5m) tall. The bark is reddish-brown or reddish-gray, smooth when young, and ridged when older. The leaves are simple, alternately arranged, and are narrow and lance-shaped. Leaves are light green and shiny on the top surface, pale gray-green and dull on the bottom surface, and have smooth margins and a pointed tip.

**Bloom/Fruit Time:** February to October

**Flowers & Fruits:** The flowers are yellow-green catkins that occur in drooping clusters. The fruits are acorns, and the caps of the acorns are hairy with reddish-brown scales.

**You Are Likely To Find It:** Swamps and wet woods are common places to find the willow oak tree.

**Did You Know?** This oak gets its name from its narrow leaves that look much like willow tree leaves.







Tree

## Black Willow

*[Salix nigra]*



**Key Characteristics:** Black willow is a deciduous tree that can grow up to 60 feet (18.3m) tall. The bark is grayish-brown or blackish and has deep ridges. The leaves are alternately arranged, narrow and lance-shaped, and are pointed at the end. Leaves are yellow-green in color, have small hairs on the bottom surface, and have finely toothed margins.

**Bloom/Fruit Time:** March to July

**Flowers & Fruits:** The flowers are tiny and occur on drooping, yellow-green catkins that are located at the ends of leaf shoots. The fruits are reddish-brown capsules located on catkins, and contain tufted seeds when mature.

**You Are Likely To Find It:** Swamps, marshes, riverbanks, wet meadows or woods, depressions, and ditches are common places to find black willow trees.



**Did You Know?** Willow tree species help reduce streambank erosion because their roots hold sediments in place.







Tree

## Bald Cypress

[*Taxodium distichum*]



**Key Characteristics:** Bald cypress is a deciduous tree that can grow up to 120 feet (36.6m) tall. It is a southern species and grows at its natural northern limit in Delaware. The bark is light cinnamon-brown and slightly flaky. The base of the trunk has buttresses. The leaves are small, flat, needlelike, and turn red-brown in the fall. They have special roots that look like “knees” near and away from the base of the trunk called pneumatophores, which are important for gas exchange.

**Bloom/Fruit Time:** March to December

**Flowers & Fruits:** The male flowers are long, greenish-brown, and tassel-like. The female flowers are small, green, and roundish with scale-like features. The fruit is a knobby ball about one inch (2.5cm) in diameter.

**You Are Likely To Find It:**

Floodplains along brown-water streams are common places to find the bald cypress tree.



**Did You Know?** The bald cypress is one of only 3 deciduous conifer species in North America (most conifers are evergreen)!

# Saltwater

## Wetland Plants

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***Note:** Dividing plants into freshwater and brackish or saltwater wetland plants is not always simple. Some plants will grow in both freshwater and brackish water environments. So, pay close attention to the "You Are Likely to Find It" section on each page.*



Broadleaf

## Waterhemp Amaranth

*[Amaranthus cannabinus]*



**Key Characteristics:** Waterhemp amaranth is a medium to tall broadleaf herbaceous plant. The stems are smooth. The leaves are alternately arranged, long and lanceolate shape, and have smooth margins.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The flowers are small, green or greenish-yellow, and occur on spikes both at the end of the plant (terminal) and at the leaf axils.

**You Are Likely To Find It:** Tidal brackish and freshwater marshes are common places to find waterhemp amaranth.

**Also Called:** Saltmarsh water hemp or tidal marsh amaranth





Broadleaf

## Water Pimpernel

*[Samolus parviflorus]*



**Key Characteristics:** Water pimpernel is a small broadleaf herbaceous plant. The leaves are oval-shaped with smooth margins. Leaves tend to be tightly clustered at the base of the plant, and are more widely spread and alternately arranged higher up the stem.

**Bloom/Fruit Time:** May to September

**Flowers & Fruits:** The flowers are very small and white with 5 petals. They look like little green circles before they emerge. Flowers occur on inflorescences at the tops of plants and are on long, thin stalks. Fruits are small, round capsules.

**You Are Likely To Find It:** Tidal brackish and freshwater marshes are common places to find water pimpernel.

**Also Called:** Brookweed





## Spearscale

*[Atriplex prostrata]*



**Key Characteristics:** Spearscale is a broadleaf herbaceous plant that is not native to Delaware and originally comes from Eurasia. It is short in height but tends to trail along the ground. The leaves are usually alternately arranged, but sometimes oppositely arranged. Leaves are fleshy and are shaped like arrowheads or are narrow and lance-shaped.

**Bloom/Fruit Time:** July to November

**Flowers & Fruits:** The flowers are small, greenish or reddish-pink in color, and occur in small ball-like clusters at the top of the plant or at the upper nodes of the leaves. The fruits are small and greenish-purple. Fruits appear somewhat spiky.

**You Are Likely To Find It:** Irregularly flooded salt and brackish marshes are common places to find spearscale.

**Also Called:** Triangle orache



FLOWER ARRANGEMENT



Broadleaf

## Rose Mallow

*[Hibiscus moscheutos]*



**Key Characteristics:** Rose mallow is a tall broadleaf herbaceous plant. The stems are round and hairy. The leaves often have 3 lobes, are alternately arranged, and have a round or heart-shaped base. Leaves have hairs on the bottom surface, are smooth on the top surface, and come to a point at the end.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** The flowers are very large with 5 pink or white petals with purple or red centers. The fruit is a roundish capsule with 5 cells that split open when releasing seeds.

**You Are Likely To Find It:** Irregularly flooded tidal salt, brackish, and freshwater marshes are common places to find rose mallow.

**Can Be Easily Confused With:**

Seashore mallow [*Kosteletzkya pentacarpos*] or marsh mallow [*Althaea officinalis*]

**Did You Know?** Rose mallow has much larger flowers than marsh mallow (see following page for seashore mallow).



## Seashore Mallow

[*Kosteletzkya pentacarpus*]



**Key Characteristics:** Seashore mallow is a small to medium-sized broadleaf herbaceous plant. The stems are rough and hairy. The leaves are triangular with 3 lobes, have rough hairs on both the top and bottom surfaces, and have toothed margins.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** The flowers are pink with 5 petals, and occur at leaf axils and at the top of the plant. The fruit is small, brown, roundish capsule with 5 cells that splits open when releasing seeds.

**You Are Likely To Find It:** Salt and brackish marshes are common places to find seashore mallow.

**Also Called:** Virginia saltmarsh mallow

**Can Be Easily Confused With:**

Rose mallow [*Hibiscus moscheutos*] or marsh mallow [*Althaea officinalis*]

**Did You Know?** Seashore mallow has rough hairs on leaves and stems, while marsh mallow has more soft and velvety hairs on stems and leaves (see previous page for rose mallow).





*Photo credit: Partnership for the Delaware Estuary*



Broadleaf

# Sea Lavender

*[Limonium carolinianum]*



**Key Characteristics:** Sea lavender is a small broadleaf herbaceous plant. It has evergreen, elliptical leaves that grow out of the base of the plant and tend to be much shorter than the inflorescence.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** The inflorescence grows above the leaves and branches out widely. The flowers are tiny, lavender-colored, smooth, and have five petals. The fruits are tiny, seed-like, and are green to brownish-green in color.

**You Are Likely To Find It:** Saltmarshes are common places to find sea lavender.

**Also Called:** Carolina sea lavender or lavender thrift







Broadleaf

## Saltmarsh Fleabane

*[Pluchea odorata]*



**Key Characteristics:** Saltmarsh fleabane is a small to medium-sized broadleaf herbaceous plant. The stems and leaves are covered with tiny hairs and feel slightly fuzzy or velvety. The leaves are simple, lance-shaped, pointed at the end, and oppositely arranged.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The flowers are small, light pinkish-purple, and occur in clusters at the top of the stems. Fruits are tiny and have wispy bristles to be carried by the wind.

**You Are Likely To Find It:** Saltwater and brackish marshes are common places to find saltmarsh fleabane.

**Also Called:** Sweetscent

**Did You Know?** Just like you would expect from one of its common names, this plant has a sweet smell.





Broadleaf

## Seaside Goldenrod

[*Solidago sempervirens*]



**Key Characteristics:** Seaside goldenrod is a short to medium-sized broadleaf herbaceous plant. The leaves are long, fleshy, thick, and somewhat leathery. Leaves are also lance-shaped, pointed at the end, and have alternate branching. The leaves also tend to be smaller towards the top of the plant, and larger towards the bottom of the plant.

**Bloom/Fruit Time:** August to October

**Flowers & Fruits:** The flowers grow in dense clusters at the top of the stem and are golden-yellow in color. The fruits are very small and often appear white and fuzzy because of soft bristle-like structures.

### You Are Likely To Find It:

Irregularly flooded salt marshes are common places to find seaside goldenrod. It can also be found in slightly drier environments along coastal dunes.

**Did You Know?** Monarch butterflies are dependent on seaside goldenrod during their fall migration.





Broadleaf

## Perennial Saltmarsh Aster

*[Symphyotrichum  
tenuifolium]*



**Key Characteristics:** Perennial saltmarsh aster is a small broadleaf herbaceous plant. The stems are fleshy and smooth. The leaves are fleshy, narrow and linear, and alternately arranged. The upper leaves are shorter in length than the lower leaves.

**Bloom/Fruit Time:** August to October

**Flowers & Fruits:** The flowers are white or pale blue or purple, have 15 to 25 narrow petals, and are 0.5 to 1.0 inches wide. Fruits are small with soft, whitish bristles that give them a fuzzy appearance.

**You Are Likely To Find It:** Perennial saltmarsh aster is commonly found in irregularly flooded salt and brackish marshes.

**Can Be Easily Confused With:** Annual saltmarsh aster *[Symphyotrichum subulatum]*

**Did You Know?** Flowers of annual saltmarsh aster are smaller (less than 0.5 inches wide) than perennial saltmarsh aster flowers.







Sedge

## Saltmarsh Bulrush

*[Balbaschoenus  
robustus]*



**Key Characteristics:** Saltmarsh bulrush is a small to medium-sized grass-like sedge. The stout, triangular stems have long, narrow, grass-like leaves that taper to a point.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The inflorescence has multiple reddish-brown spikelets that are scaly, and are surrounded by 2 to 4 leaf-like structures (bracts). A few spikelets may have short stalks, but most spikelets lack stalks. The fruits are very small, dark brown nutlets.

**You Are Likely To Find It:** Irregularly flooded salt and brackish marshes are common places to find saltmarsh bulrush.

**Also Called:** Sturdy bulrush







Sedge

## Small Saltmarsh Spikerush

*[Eleocharis parvula]*



**Key Characteristics:** Small saltmarsh spikerush is a very short grass-like sedge. It grows in mats low to the ground in or near water. It can appear like mosses in surface mats. There are no visible leaves on the plant.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The flowers occur on a small spikelet at the end of the stem. The tiny flowers are covered by green or brownish scales. The fruits are tiny nutlets with three angles.

**You Are Likely To Find It:** Salt and brackish marshes, as well as mudflats, are common places to find small saltmarsh spikerush.

**Also Called:** Dwarf spikerush





Rush

## Blackgrass Rush

*[Juncus gerardii]*



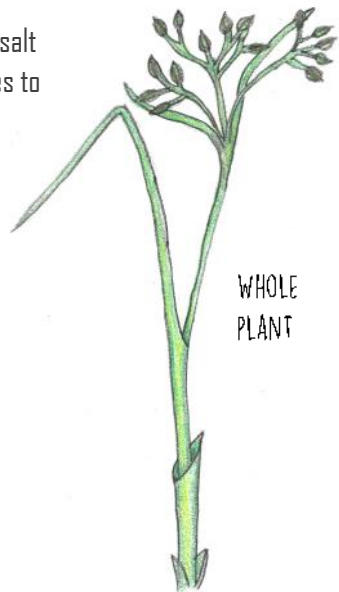
**Key Characteristics:** Blackgrass rush is a small grass-like rush. The stem has a round cross-section. The leaves are long and linear, and there are usually only one or two leaves per plant.

**Bloom/Fruit Time:** June to September

**Flowers & Fruits:** The flowers occur on a small inflorescence in a branching pattern on the upper half of the stem. Flowers appear light brownish in color. Fruits are tiny capsules.

**You Are Likely To Find It:** Irregularly flooded tidal salt (occasionally brackish) marshes are common places to find blackgrass rush.

**Also Called:** Black grass or saltmeadow rush



WHOLE  
PLANT

**Did You Know?** The popular saying, “sedges have edges and rushes are round,” refers to the shapes of stems, and it is true for most (but not all) sedges and rushes. The blackgrass rush follows this description, as it is a rush with a round stem.



Grass

## Spike Saltgrass

*[Distichlis spicata]*



**Key Characteristics:** Spike saltgrass is a relatively short grass. The stems are round, stiff, and hollow. The leaves are linear in shape, alternately arranged, often “roll” slightly inward, and have overlapping sheaths. Leaves tend to form a “V” with the stem. It is commonly found mixed with *Spartina alterniflora* or *Spartina patens*.

**Bloom/Fruit Time:** August to October

**Flowers & Fruits:** The flowers are tiny and occur on spikelets at the top of the plant. The spikelets appear light green at first, and then are light-brownish in color when flowering.

**You Are Likely To Find It:** Irregularly flooded salt and brackish marshes are common places to find spike saltgrass.

**Also Called:** Spike grass







Photo Credit: botphoto.com

Grass

## Tall Switchgrass

*[Panicum virgatum]*



**Key Characteristics:** Tall switchgrass is a medium to tall grass that grows in dense clumps. The stems are round and stout. The leaves are long, tapered to a point, often drooping a bit towards the end, and may have a few hairs at the base of each leaf.

**Bloom/Fruit Time:** July to September

**Flowers & Fruits:** The inflorescence occurs at the end of the stem, is pyramid-like in general outline, and has many branches and spikelets that are spaced out.

**You Are Likely To Find It:** Irregularly flooded salt, brackish, and tidal fresh marshes, swales, and wetland edges are common places to find tall switchgrass. It can also be found in drier or more sandy environments such as dunes, beaches, open woods or fields, or landscaping projects.

**Also Called:** Switch panicgrass



Photo Credit: botphoto.com





Grass

# Reed Canary Grass

*[Phalaris arundinacea]*



**Key Characteristics:** Reed canary grass is a tall grass. The stems are erect, hollow, and hairless. The leaves have a rough texture, are broad and flat, taper to a point, and droop at the ends towards the ground. Reed canary grass often outcompetes other plants to form a monoculture (a single plant in a given area).

**Bloom/Fruit Time:** June to August

**Flowers & Fruits:** The flowers are small, and are green or purple early in the season and beige later in the season. Flowers occur on spikelets that are part of a long, narrow inflorescence. Fruits are small, narrow, and grain-like.

**You Are Likely To Find It:** Streams and tidal and nontidal fresh and brackish marshes are common places to find reed canary grass.

**Did You Know?** There is both a native and a non-native, invasive type of reed canary grass, but it is not possible to tell the difference using physical characteristics. You are most likely to see the invasive type since it is so aggressive.





Grass

## North American Reed

*[Phragmites australis  
subsp. americanus]*



**Key Characteristics:** This native subspecies of *Phragmites* is a very tall grass. The stems are smooth, upright, chestnut-colored, and have distinctive black spots. The leaves are long, light green, and tapered at the end. It often grows interspersed with other plant species, as well as with the non-native variety, and dies off mid to late September.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The flowers occur on an inflorescence at the end of the stem. The inflorescence appears feathery and is purplish when young and tannish-brown when mature. Fruits are very small and seed-like.

**You Are Likely To Find It:** Freshwater and brackish marshes that are undisturbed by human activity are common places to find the North American reed.

**Can Be Easily Confused With:**

European reed [*Phragmites australis* subsp. *australis*]

**Did You Know?** The North American reed has leaves that are smooth, and dies back in September. The European reed has leaves that are coarse with a prominent midrib, and dies back in October or November.

Grass

## European Reed

*[Phragmites australis*  
subsp. *australis]*



**Key Characteristics:** This non-native, invasive subspecies of *Phragmites* is a very tall grass. The rough stems are tan and rigid with no spots. The leaves are long, bluish-green, and tapered at the end. It forms dense monocultures (a single plant in a given area), where no other native plants will grow, and dies off late October to November. It is widespread throughout Delaware and has severely degraded many tidal wetlands by crowding out native species.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The flowers occur on an inflorescence at the end of the stem. The inflorescence appears feathery and is purplish when young and tannish-brown when mature. Fruits are very small and seed-like.

**You Are Likely To Find It:**

Freshwater and brackish wetlands are common places to find the European reed.

**Can Be Easily Confused With:**

North American reed  
*[Phragmites australis* subsp.  
*americanus]*

INVASIVE PHRAGMITES  
(BLUISH-GREEN)

NATIVE PHRAGMITES  
(LIGHT GREEN)



# Saltmarsh Cordgrass

*[Spartina alterniflora]*



**Key Characteristics:** Saltmarsh cordgrass is a grass that has two forms (tall and short), and the stems are soft and spongy. The leaves are flat, taper to a point, and have smooth to rough margins. The plant usually forms in dense colonies via rhizomes (root-like structures).

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The flowers are very small and greenish-white, and occur along a long, narrow inflorescence at the top of the stem. The inflorescence turns tannish-brown when in seed in the late fall.

**You Are Likely To Find It:** Saltmarsh cordgrass is commonly found in low elevation areas that are intertidal in salt and brackish marshes.

**Also Called:** Smooth cordgrass

**Did You Know?** The tall-form grows in areas that are frequently flooded by tides. The short-form of this plant grows in a slightly higher marsh elevation that is flooded less frequently, or in areas with poor drainage.







Grass

## Big Saltmarsh Cordgrass

[*Spartina cynosuroides*]



**Key Characteristics:** Big saltmarsh cordgrass is a very tall grass with thin and hollow stems. The leaves are flat with pointed ends, and have very small toothed margins, its distinguishing feature, making them sharp on the edges. It is often found growing alongside *Spartina alterniflora*.

**Bloom/Fruit Time:** August to November

**Flowers & Fruits:** The inflorescence is at the top end of the plant and usually has 20 to 50 spikes. Each spike is composed of many small, tightly-packed spikelets. It is green, but turns tannish-brown when in seed in the late fall.

**You Are Likely To Find It:** Big saltmarsh cordgrass is commonly found in salt, brackish, and tidal freshwater marshes.

**Also Called:** Big cordgrass

**Can Be Easily Confused With:**  
Saltmarsh cordgrass [*Spartina alterniflora*]

**Did You Know?** Muskrats often use the leaves and stems of this plant to make their lodges in salt marshes!





Grass

## Saltmeadow Cordgrass

*[Spartina patens]*



**Key Characteristics:** Saltmeadow cordgrass is a short to medium-sized grass. The stems are slender, stiff, and hollow. The leaves are very narrow, linear, and long, and the blades roll inward. The dense rhizomes (root-like structures) allow this grass to often form dense, cowlicked mats.

**Bloom/Fruit Time:** June to October

**Flowers & Fruits:** The inflorescence is at the top end of the plant with 3 to 6 alternately arranged spikes. Each spike has many small, densely-packed spikelets. Spikes are light greenish or whitish when they first emerge, and then turn tannish or light brown when seeding in the fall.

**You Are Likely To Find It:** Saltmeadow cordgrass is commonly found in irregularly flooded salt and brackish marshes.

**Also Called:** Saltmarsh hay

**Did You Know?** This species is often used by secretive marsh birds, such as saltmarsh sparrows and seaside sparrows, for nesting and cover!





Succulent

## Glasswort

*[Salicornia virginica]*



**Key Characteristics:** Glasswort is a low-growing, succulent (fleshy), herbaceous plant. The stems are green and often very branched. Stems look segmented such that it appears as though there are many little sections fused together. The leaves are green, small, and scale-like. The plant often turns red in the fall.

**Bloom/Fruit Time:** August to November

**Flowers & Fruits:** The flowers are tiny, green, and located at the tops of the stems, but are usually very difficult to find. Fruits are tiny, dry, and fairly inconspicuous.

**You Are Likely To Find It:** Glasswort is commonly found in pannes (shallow depressions that dry out) of salt marshes.

**Also Called:** Common branched saltwort, pickleweed, or Virginia glasswort

**Did You Know?** The young stems and leaves of this plant can be eaten raw, cooked, or pickled, and the ash can be used for glassmaking.





Photo Credit: Mike Crew

Succulent

## Perennial Glasswort

*[Sarcocornia pacifica]*



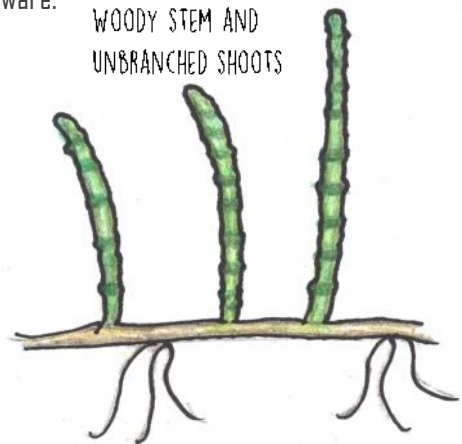
**Key Characteristics:** Perennial glasswort is a low-growing sub-shrub plant that grows horizontally across the ground. The horizontal stems are woody and brown, and the vertical shoots are succulent (fleshy), unbranched, and green. The shoots look segmented such that it appears as though there are many little sections fused together on one shoot.

**Bloom/Fruit Time:** July to October

**Flowers & Fruits:** The flowers are tiny, green, and located at the tops of the stems, but are usually very difficult to find. Fruits are tiny, dry, and fairly inconspicuous.

**You Are Likely To Find It:** Perennial glasswort can be found in saltwater and brackish water marshes in southern Delaware.

WOODY STEM AND  
UNBRANCHED SHOOTS



**Did You Know?** This is the only perennial (lives for multiple years) glasswort species in Delaware! The others are annual species (only live for a single year).





Shrub

## Groundsel Bush

*[Baccharis halimifolia]*



**Key Characteristics:** Groundsel bush is a tall semi-evergreen shrub. The leaves have an elliptical shape, have toothed margins from the middle of the leaf to the tip, and have smooth margins from the middle of the leaf to the base. Leaves are alternately arranged, and are waxy and shiny.

**Bloom/Fruit Time:** August to November

**Flowers & Fruits:** The flowers are very small, white or yellow-white, and grow in clusters. Fruits have silvery bristles that look cotton-like.

**You Are Likely To Find It:** Groundsel bush is commonly found in irregularly flooded areas of salt and brackish marshes.

**Also Called:** Sea myrtle or Eastern baccharis

**Can Be Confused With:** Marsh elder  
*[Iva frutescens]*

**Did You Know?** Groundsel bush is also often planted along roadsides because of the presence of road salt that is used to de-ice roads in the winter.



Shrub

## Marsh Elder

*[Iva frutescens]*



**Key Characteristics:** Marsh elder is a medium to large semi-evergreen shrub. The lower leaves are lance-shaped, oppositely arranged, somewhat fleshy to the touch, and have coarsely toothed margins. The leaves at the top of the plant tend to be smaller than those at the bottom, and may not always be oppositely arranged.

**Bloom/Fruit Time:** August to October

**Flowers & Fruits:** The flowers are small, greenish white, and arranged close together on spikes that also contain reduced leaves. Fruits are small, dry, and roundish or oval in shape.

**You Are Likely To Find It:** Marsh elder is commonly found in irregularly flooded areas of salt and brackish marshes.

**Also Called:** High-tide bush

**Can Be Confused With:** Eastern baccharis [*Baccharis halimifolia*]





Shrub

## Southern Bayberry

*[Morella cerifera]*



**Key Characteristics:** Southern bayberry is a large and highly branched evergreen shrub. The leaves are lance-shaped, light or olive green in color, waxy, and alternately arranged. Leaves may either have smooth margins or toothed margins on the upper half of the leaf. The bark is smooth and is gray, gray-brown, or gray-green in color.

**Bloom/Fruit Time:** February to October

**Flowers & Fruits:** The flowers are yellow-green catkins that occur in leaf axils. The fruits are berries that are small, light blue-gray when ripe (green when not), and grow in clusters along twigs.

**You Are Likely To Find It:** Wet open woods, swamps, interdunal swales, and edges of brackish marshes are common places to find southern bayberry.

**Also Called:** Wax myrtle

**Did You Know?** The leaves are very aromatic and have a spicy fragrance when they are crushed!



## Glossary

<b>Acorn</b>	the fruit structure of oak trees that appears nut-like
<b>Alternate</b>	leaf arrangement where leaves do not grow directly across from each other out of the stem
<b>Annual</b>	a plant that lives only for one year
<b>Anther</b>	the male flower structure that contains pollen
<b>Axil</b>	the upper angle formed between a leaf and the stem
<b>Bog</b>	a wetland type with peat and mosses that is acidic and low in nutrients
<b>Brackish</b>	water that is saltier than freshwater but less salty than ocean water
<b>Bract</b>	a leaf-like structure that is often flowers or inflorescences, often appearing different than the true leaves of the plant
<b>Broadleaf</b>	plants with relatively flat and broad leaves
<b>Capsule</b>	a type of fruit that is dry and contains multiple chambers
<b>Catkin</b>	a slim, cylindrical, drooping flower cluster that bears single-sex (often male), small flowers that lack petals
<b>Chlorophyll</b>	a green pigment present in most plants that absorbs light as part of the process through which plants make energy
<b>Coastal Plain Pond</b>	a unique wetland type that is small, isolated, and pond-like, and tends to be only seasonally wet in winter and spring
<b>Compound</b>	leaf arrangement where single leaves are divided into multiple, separate parts
<b>Conifer</b>	a plant that produces cones for reproduction, and has needles for leaves
<b>Crown</b>	the entire top section of the tree, including the branches and leaves
<b>Deciduous</b>	plants that shed their leaves in the fall
<b>Depression</b>	a wetland type that occurs in areas of low elevation, tends to be in a bowl-shaped indentation in the ground, and pools water (sometimes only seasonally) from groundwater, precipitation, and overland flow
<b>Dioecious</b>	plants that are unisexual and have male and female flowers on different plants
<b>Evergreen</b>	plants that maintain green leaves year-round
<b>Fern</b>	a type of plant with feather-like leaves that does not produce flowers and reproduces through spores
<b>Fertile</b>	capable of reproducing
<b>Filament</b>	a male flower structure that supports a pollen-bearing structure (anther)



<b>Floodplain</b>	an area alongside a stream or river that floods periodically when water levels rise
<b>Fron</b>	the leaf of a fern
<b>Herbaceous</b>	Plants that are not structured with wood and maintain green stems throughout their life cycle
<b>Infertile</b>	incapable of reproducing
<b>Inflorescence</b>	the flowering portion of the plant
<b>Intertidal</b>	an area along a marsh or shoreline that is flooded by water at high tide but uncovered by water at low tide
<b>Leaflet</b>	a single part of a compound leaf
<b>Lenticel</b>	a small circular or linear growth on the bark of some trees or shrubs that appears corky
<b>Lobed</b>	leaves that have indentations but are not divided into separate parts
<b>Margin</b>	the edge of a leaf
<b>Marsh</b>	a wetland dominated by herbaceous plants
<b>Midrib</b>	the central vein or rib of a leaf that is often prominent
<b>Midvein</b>	the central vein of a leaf
<b>Monoculture</b>	a population of a single plant species within a given area
<b>Monoecious</b>	plants that have male and female flowers on the same plant
<b>Moss</b>	a type of plant that often grows low in carpets, lacks flowers, and lacks specialized tissues for transporting water and nutrients
<b>Node</b>	the place on a stem where leaves and branches emerge
<b>Nonvascular</b>	plants without specialized tissues for circulating water and nutrients
<b>Nutlet</b>	a small fruit that is hard and dry
<b>Opposite</b>	leaf arrangement where leaves grow directly across from each other out of the stem
<b>Palmate</b>	a compound leaf that has multiple separate parts that are arranged in a similar fashion to a human hand
<b>Panicle</b>	a flowering plant structure that has many branches, where each branch has multiple flowers
<b>Panne</b>	a shallow depression in a salt marsh that can dry out and become highly saline (salty)
<b>Parasitic</b>	plants that exploit other plants for survival
<b>Perennial</b>	a plant that lives for multiple years
<b>Petal</b>	the part of a flower that surrounds reproductive structures and is often vibrantly colored to attract pollinators
<b>Petiole</b>	the stalk of a leaf, which connects the leaf to the stem
<b>Photosynthesis</b>	the process by which plants make their own food from sunlight, water, and carbon dioxide

<b>Pinnae</b>	multiple, separate parts of a fern leaf
<b>Pinnate</b>	a compound leaf that has multiple separate parts that occur opposite from one another
<b>Pistil</b>	the female reproductive structure of a flower
<b>Pith</b>	the central area within a stem that is soft or spongy
<b>Pneumatophore</b>	specialized, "knee-like" root structures that stick out above the ground for gas exchange
<b>Pollen</b>	a powdery material that is produced and released by male flowers and contains male gametes for reproduction
<b>Pollination</b>	the process in which male flower gametes are deposited into the female structure of the flower for egg fertilization
<b>Rhizome</b>	a root-like stem that grows horizontally underground and sprouts more vertical stems and roots
<b>Rush</b>	a group of grass-like plants that usually have round stems and lack visible nodes
<b>Samara</b>	a dry fruiting body that is winged for wind dispersal and contains one seed
<b>Sedge</b>	a group of grass-like plants that usually have triangular, edged stems and lack visible nodes
<b>Seep</b>	an area where groundwater flows out from underground onto the surface
<b>Sepal</b>	the petal-like outermost part of a flower that surrounds the flower when it is closed and is present at the flower base once it is open
<b>Sheath</b>	a tubular casing that surrounds a plant stem or leaf base
<b>Shrub</b>	a type of plant that is tree-like, but is usually shorter than most trees at maturity and produces multiple stems rather than one trunk
<b>Simple</b>	leaves that are singular and are not split into multiple separate sections
<b>Sinus</b>	the space between two leaf lobes or teeth
<b>Smooth</b>	leaf edges that are not jagged or sharp and have no indentations
<b>Sori</b>	clusters of circular fruit dots on the undersides of fern leaves that contain masses of reproductive cells
<b>Spadix</b>	a fleshy, upright flowering structure
<b>Spathe</b>	a leaf-like structure that surrounds a flowering structure
<b>Spike</b>	an unbranched flowering structure with a centralized stem that usually bears stalkless flowers
<b>Spikelet</b>	a small, secondary unit of some spikes, upon which grow one or more very small flowers
<b>Sporangia</b>	a circular casing that produces and contains fern reproductive cells
<b>Spore</b>	a reproductive cell that can grow into a new plant on its own without sexual reproduction
<b>Stamen</b>	the male reproductive structure of a flower, including the anther and the filament
<b>Subspecies</b>	a population within a single species that is genetically distinct from other populations within that species
<b>Succulent</b>	a type of plant that is thick and fleshy in texture

<b>Swale</b>	a low-lying wetland that is located between two higher ridges, such as two sand dunes
<b>Swamp</b>	a wetland dominated by trees
<b>Toothed</b>	leaf edges that are jagged
<b>Tuber</b>	a thickened section of an underground stem that can store water and nutrients
<b>Vascular</b>	plants with specialized tissues for circulating water and nutrients throughout the plant
<b>Vein</b>	a branching or thread-like part of a leaf that provides structural support and transports water and nutrients
<b>Vine</b>	a type of plant that trails along the ground or climbs with its stems
<b>Whorled</b>	leaf arrangement where 3 or more leaves grow in a circular fashion surrounding the stem
<b>Woody</b>	plants that are structured with wood

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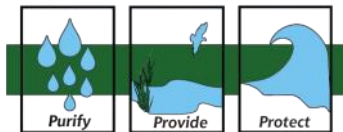
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