

# FIELD JOURNAL

Observations  
In The Regional Garden



UNITED STATES BOTANIC GARDEN

# Welcome to the Regional Garden!

Use this field journal and your observation skills to journey through the Regional Garden. Learn about plants native to D.C. and the surrounding states.

Discover what these plants look like at different times of the year and observe the habitats in which they grow. Please remember that the U.S. Botanic Garden (USBG) is a living museum and all of these activities are to be completed from the paths only. Do not pick any plants during your visit and never eat anything from the wild unless it has been identified by an expert.

## WHAT DOES IT MEAN TO BE NATIVE?

Every plant has a “right place” where it belongs and is at home. Species are considered native where their populations exist without human intervention. Native plants are essential to life and a healthy ecosystem. They provide food and shelter for people, native animals, fungi, and microorganisms.

**OBSERVE:** *Plants look different in every season. For example, some plants lose their leaves in the fall, others produce colorful berries, and others are in full bloom. Depending on the season you are visiting the Garden, some plants or parts of plants may not be visible. Note the time of year you are making your observation and come back in a different season to see how the plants have changed.*

Illustrations by Mara Menahan, used with permission.

As you explore the Regional Garden look for this symbol to help you locate these native plants.



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|------------------------|-------------------------|
| 1. American Witchhazel | 6. Swamp Rose           |
| 2. Butterfly Weed      | 7. Eastern Serviceberry |
| 3. Flowering Dogwood   | 8. Atlantic White Cedar |
| 4. Eastern Redbud      | 9. Longleaf Pine        |
| 5. Pickerelweed        | 10. Wet Pine Savanna    |

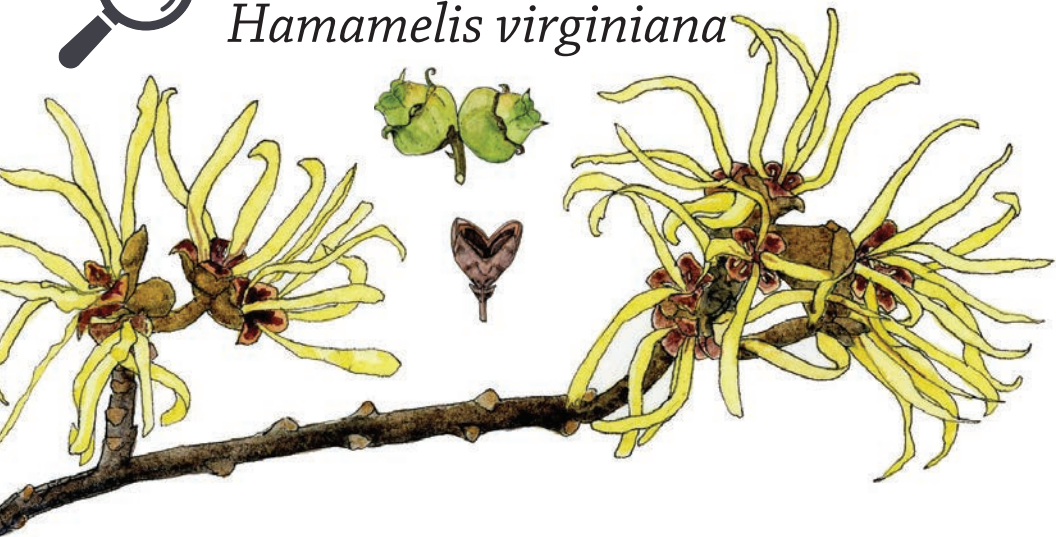
## U.S. Botanic Garden National Garden





# American Witchhazel

*Hamamelis virginiana*



American witchhazel is a favorite in gardens due to its shape and late season beauty. When most plants are dormant, the American witchhazel is showing off its beautiful flowers with yellow ribbon-like petals!

Plants can be used for many things, including food, housing, clothing, medicine, and so much more. The bark and stems of witchhazel have long been used in skin care products to relieve irritation and swelling.

**DRAW:** Observe the many different shapes of trees and shrubs around you. Illustrate one of these shapes below.



# Butterfly Weed

*Asclepias tuberosa*



Butterfly weed is in the milkweed family (Apocynaceae) and is a very important plant for monarch butterflies. Their caterpillars depend solely on milkweed species for food. As more and more land is converted to agricultural and other uses, milkweed and the monarch habitats are disappearing.



Monarch  
*Danaus plexippus*

**LOOK:** You can help by planting native milkweed species in your own garden! Look around for other plants you think could help butterflies and other pollinators. List some below.

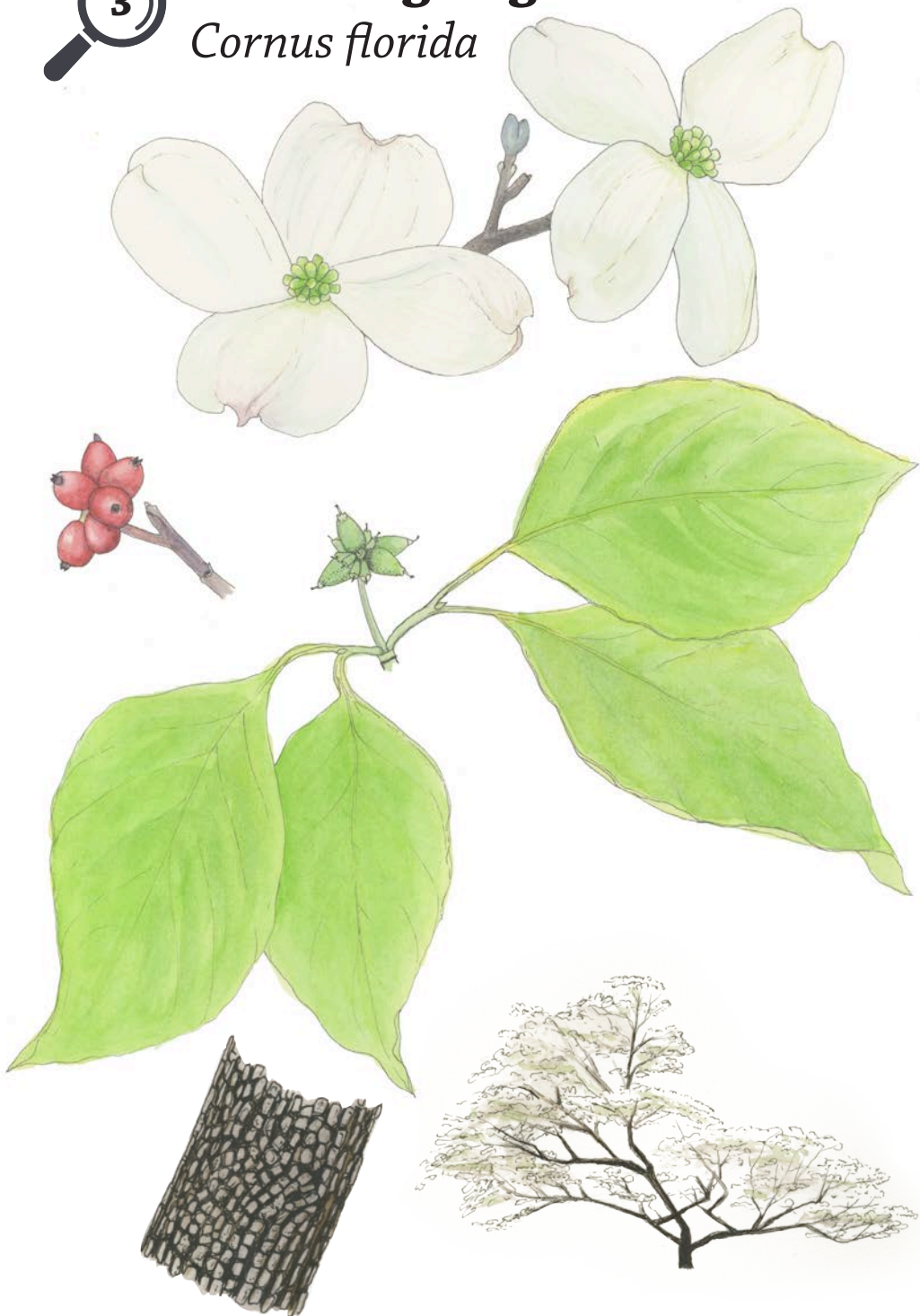
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## Flowering Dogwood

*Cornus florida*



You can identify a dogwood by several distinct features:

- checkered-patterned bark
- forked branches
- turban-shaped flower buds
- red fruits
- showy bloom

**OBSERVE:** Take a look at the illustrations here. Now look at the dogwood tree. Which parts are you able to observe?

Some plants, like the flowering dogwood, have a large native range in which they grow. Flowering dogwood grows in forests throughout most of the eastern United States. Although the dogwood is a forest tree, it has also become a popular ornamental tree for homeowners because of its compact size, beautiful bloom, and year-round interest.

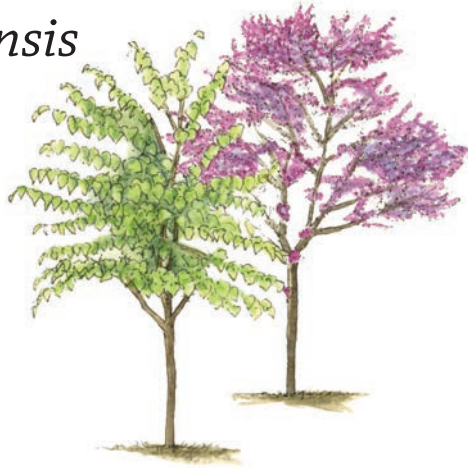


**DRAW:** Shade in the area on the map where you think dogwoods grow naturally.



# Eastern Redbud

*Cercis canadensis*



**OBSERVE:** Look at the flowers or fruits on the redbud. Notice that they grow along the stem. Botanists call this trait cauliflory.



**NOTE:** If you are here in the fall or winter, when the redbud is not in bloom, be sure to visit the Conservatory to see cauliflory on the cacao tree in the Garden Court.

Redbud flowers, and young fruits and leaves, were once an important food source for American Indians.

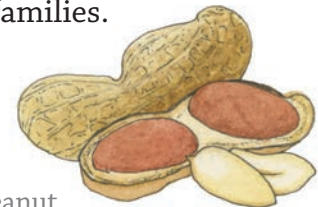


**THINK:** Does the fruit of the redbud, shown above, look like any vegetables you eat? Which ones?

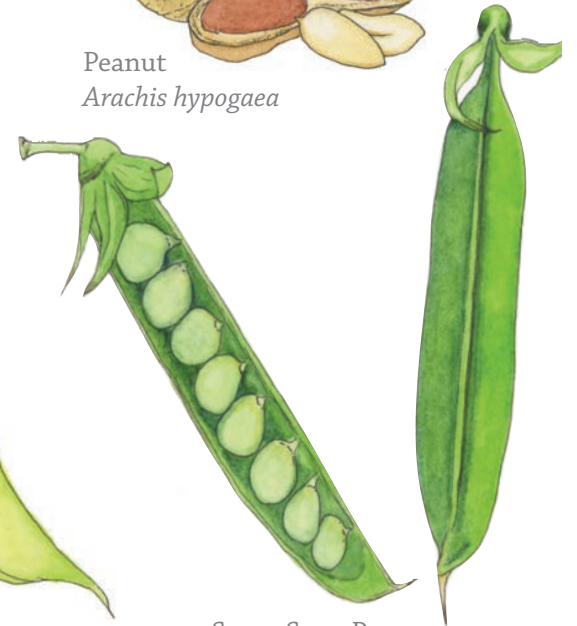
If you thought of legumes like peas, sugar snaps, green beans, or peanuts, you are correct. The eastern redbud is in the bean family (Fabaceae), one of the most economically important plant families.



Green Bean  
*Phaseolus vulgaris*



Peanut  
*Arachis hypogaea*



Sugar Snap Pea  
*Pisum sativum* var. *macrocarpon*



# Pickerelweed

*Pontederia cordata*



Long heart-shaped leaves and violet-blue flowers make pickerelweed easy to spot in shallow waters where it grows. Although you won't find it in your grocery store, all of the parts of this plant are edible!



**THINK:** Can you list any plants or plant parts that you eat?

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Many fish and birds eat pickerelweed and use it for shelter, making it important in the local ecosystem. One native bee, *Dufourea novaeangliae*, relies on this plant as its only source of pollen. Without pickerelweed, this bee would likely be extinct!



Bee  
*Dufourea novaeangliae*

**RECORD:** Spend some time observing wildlife in the National Garden. How do you think wildlife are using the plants in the garden? Record your observations below.

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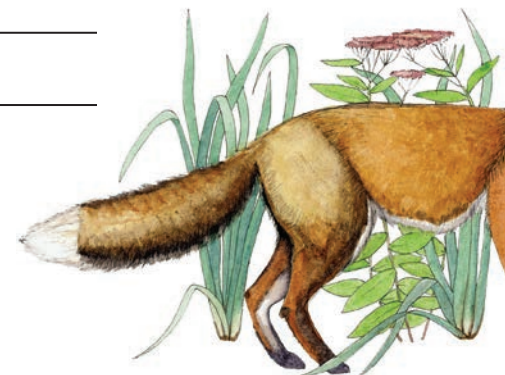
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# Swamp Rose

*Rosa palustris*



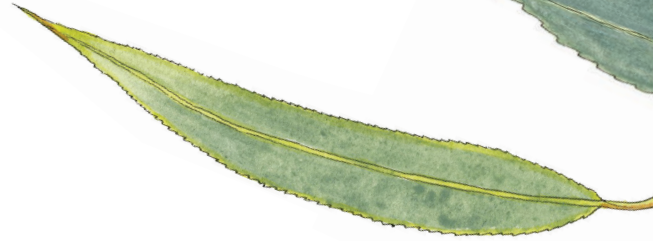
Be on the lookout for the swamp rose's beautiful, fragrant pink flowers and its fruit, called rose hips.

**LOOK:** Compare the leaves of the swamp rose to a nearby plant. How are the leaves similar? How are they different?

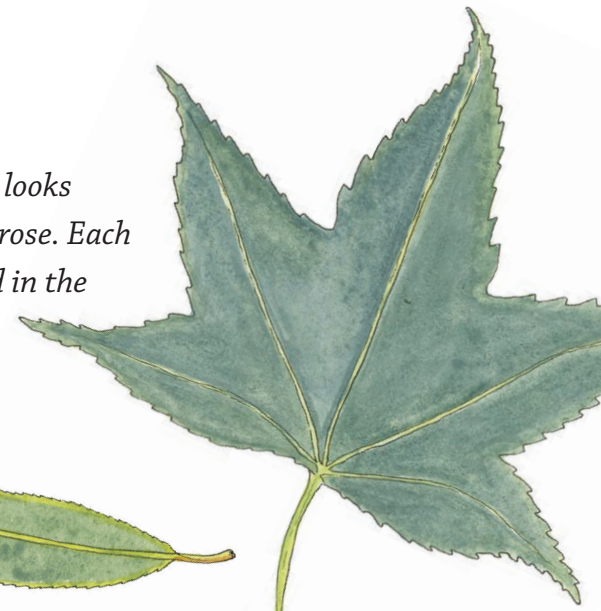
One of the ways scientists identify different plants is by the features of their leaves. One of the things that identifies swamp rose is that its compound leaves alternate and are made up of seven leaflets. If the swamp rose leaves are not visible you may see rose hips.

# Leaf Types

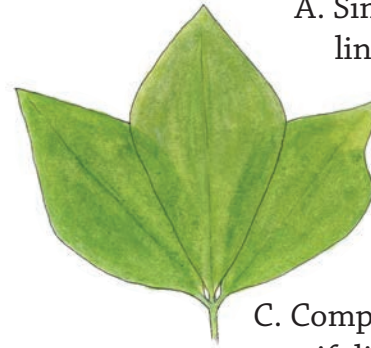
**NOTE:** Circle the leaf that looks most similar to the swamp rose. Each of these leaves can be found in the National Garden.



A. Simple, linear



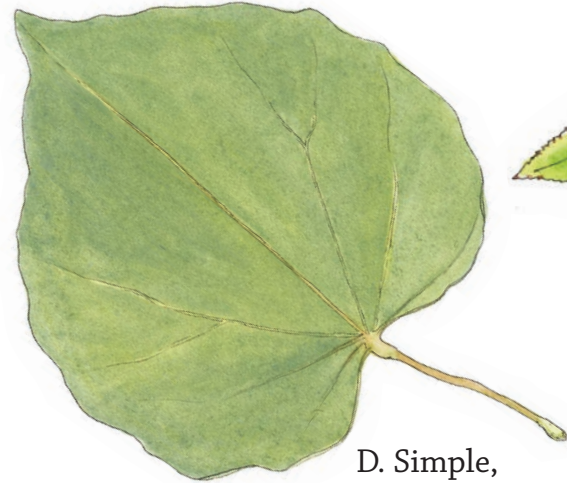
B. Simple, palmate



C. Compound, trifoliate



E. Compound, pinnate



D. Simple, heart shaped

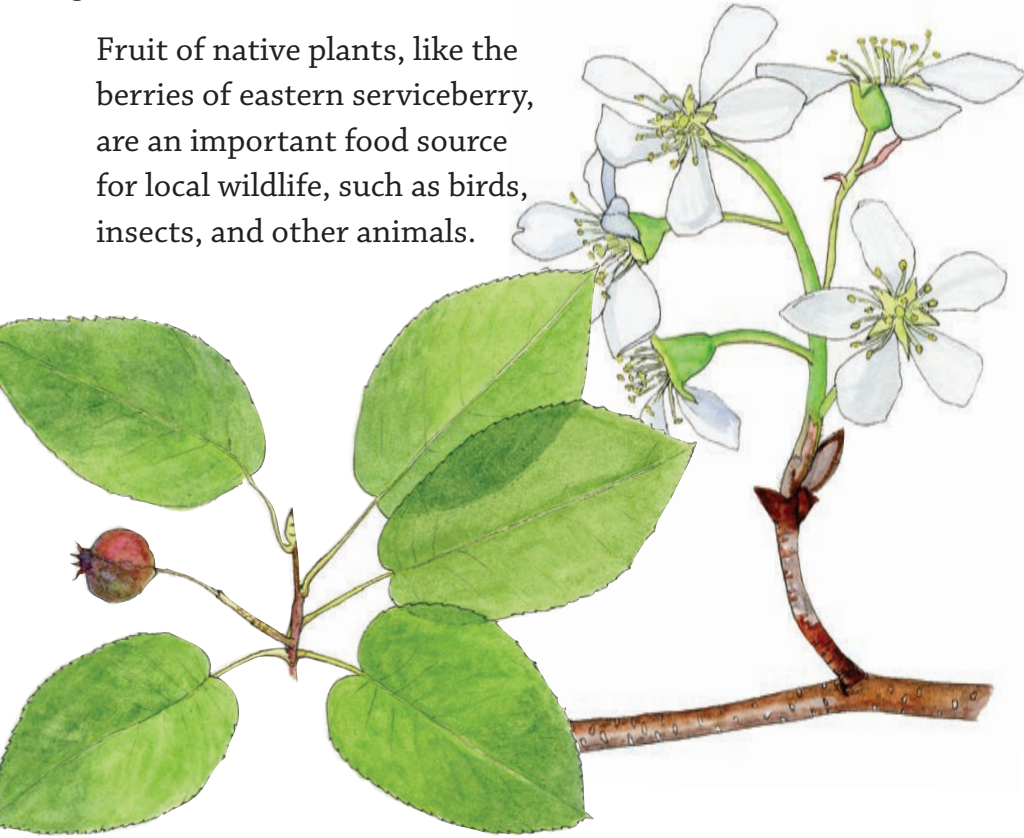
- A. willow
- B. sweet gum tree
- C. blue false indigo
- D. eastern redbud
- E. swamp rose



## Eastern Serviceberry

*Amelanchier canadensis*

Fruit of native plants, like the berries of eastern serviceberry, are an important food source for local wildlife, such as birds, insects, and other animals.



**THINK:** Can you name two other fruits animals might eat?

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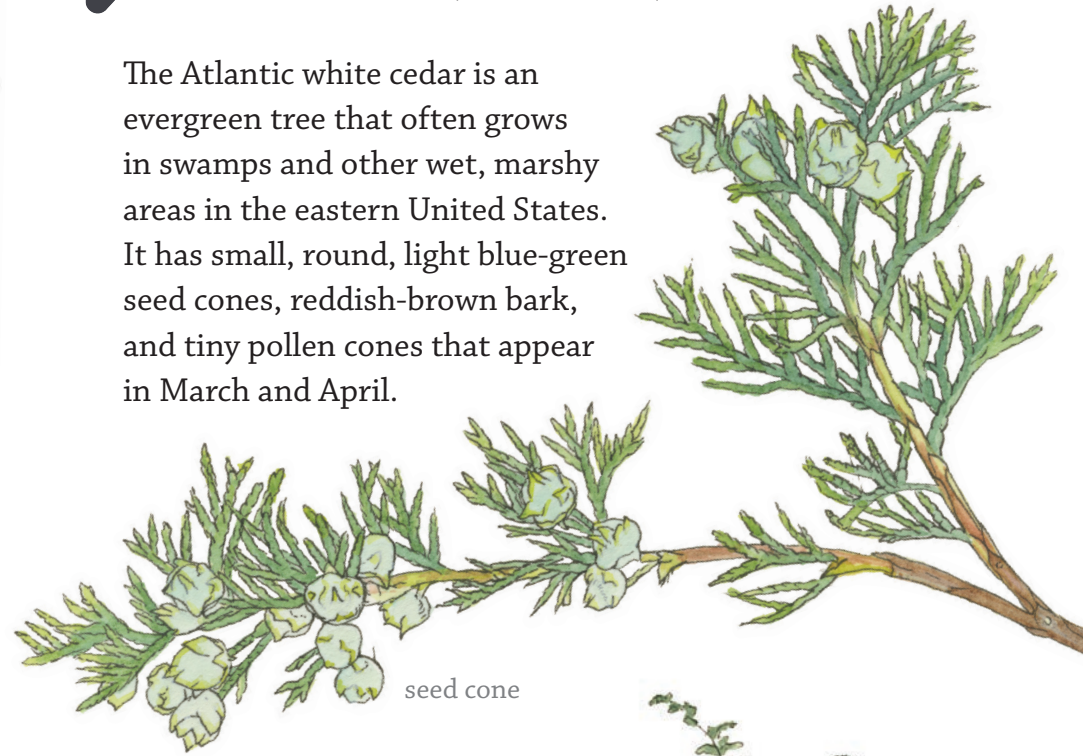
Plants get a benefit from this too! When animals eat the fruits, the seeds pass through their bodies and are often dropped far away where they may have more light and space to grow!



## Atlantic White Cedar

*Chamaecyparis thyoides*

The Atlantic white cedar is an evergreen tree that often grows in swamps and other wet, marshy areas in the eastern United States. It has small, round, light blue-green seed cones, reddish-brown bark, and tiny pollen cones that appear in March and April.



### GYMNOSPERMS

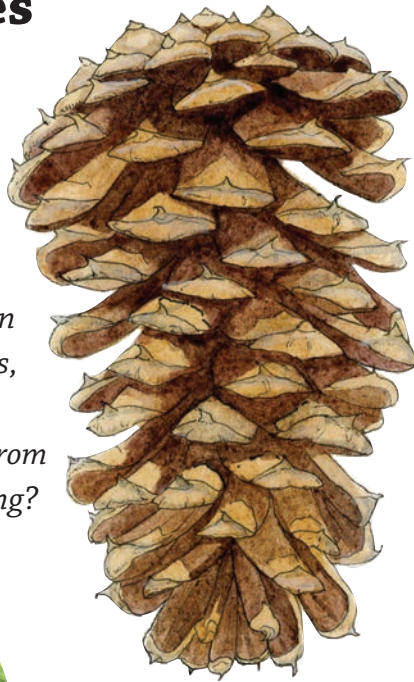
The Atlantic white cedar is different from the other plants you have been exploring. This tree's seeds come from cones, not from flowers. Plants that have cones are called gymnosperms, and plants that have flowers are called angiosperms.





# Cone Types

**LOOK:** Cones come in many different shapes, sizes, and colors! Can you see any of these from where you are standing?



loblolly pine  
*Pinus taeda*



loblolly pine seed



Virginia pine (immature cone)  
*Pinus virginiana*



Eastern redcedar  
*Juniperus virginiana* 'Burkii'



Virginia pine (mature cone)  
*Pinus virginiana*



# Longleaf Pine

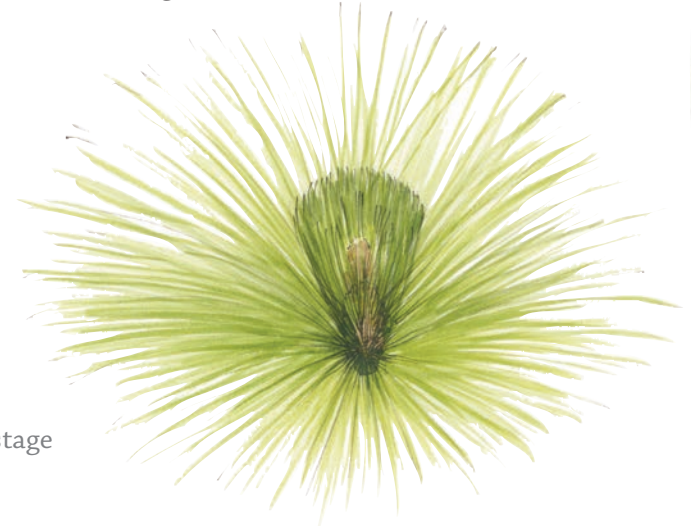
*Pinus palustris*

Fire is an essential part of the natural cycle of life in many ecosystems. It helps keep habitats, like pine savannas, from being crowded with trees and shrubs, allowing seeds the space, light, and nutrients they need to grow. Longleaf pine is a fire-adapted tree. When it is young, its short stem is capped with a bunch of needles at the soil surface and resembles a clump of grass. These needles protect the growing stem from being damaged by fire, as does the thick bark on mature trees. Due to the prevention of wildfires and the historic use of longleaf pine to build ships and railroads, longleaf pines are no longer abundant.

**OBSERVE:** Can you identify longleaf pine in its different stages in the Garden?



adult stage



grass stage



## Wet Pine Savanna



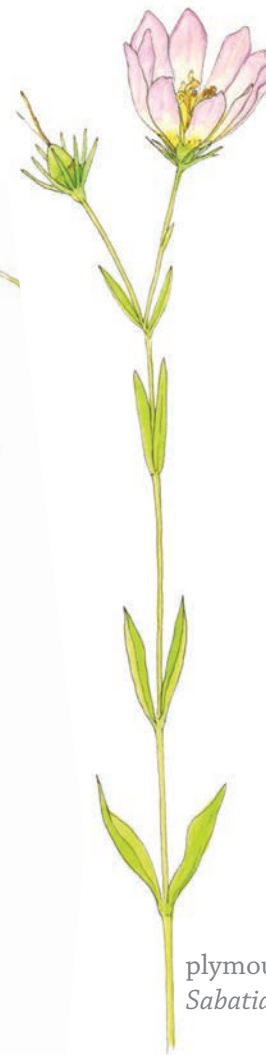
marsh ladies' tresses  
*Spiranthes odorata*



tuberous grass pink  
*Calopogon tuberosus*



white-topped sedge  
*Rhynchospora colorata*



plymouth rose gentian  
*Sabatia kennedyana*



pitcher plant  
*Sarracenia x catesbaei*

Wet pine savannas are one of the most species-rich habitats in North America. Unfortunately, they occupy areas of the eastern coastal plain of North America that are in high demand for agriculture and development.

**THINK:** Take a minute to look carefully at the wet pine savanna and the diversity of plants growing within it. Can you think of some other types of diverse habitats?

Carnivorous plants, such as the pitcher plant pictured here, grow in the wet, boggy, acidic soils of wet pine savannas. These sandy, peaty soils are low in nutrients needed by plants. Carnivorous plants have evolved to capture and digest insects, which allows them to obtain some of the nutrients lacking in the soil. Many carnivorous plants are dormant in winter. What can you observe about this habitat?

# Continue Your Exploration In the Conservatory

- Pick up the Field Journal for the Conservatory and have fun inside learning about plants!
- Remember the eastern redbud tree and its cauliflorous flowers? Explore the Garden Court and find another tree with cauliflorous flowers, the source of chocolate.
- Interested in carnivorous plants? Explore Plant Adaptations and look for the tropical pitcher plant.
- Remember the native bee whose only pollen source is pickerelweed? Look in Rare & Endangered or Hawaii to find a plant called cabbage on a stick, whose only pollinator is now extinct.

## Continue Your Observations

### Project BudBurst

Timing is everything!

You can contribute many of the observations you made today to Project Budburst. Flowering, fruiting, and leaf drop timing information is helping people understand more about how plants respond to changes in climate locally, regionally, and nationwide. Learn more at [www.budburst.org](http://www.budburst.org).



Make a difference at home! Landscape For Life is a program that demonstrates how to work with nature in your garden. Gardening sustainably can help clean air and water, reduce stormwater runoff, and provide other benefits that support the natural world. Learn more at [www.landscapeforlife.org](http://www.landscapeforlife.org).

## ADDITIONAL OBSERVATIONS IN THE NATIONAL GARDEN:

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U.S. Botanic Garden  
100 Maryland Avenue SW  
Washington, DC 20001  
[www.usbg.gov](http://www.usbg.gov)