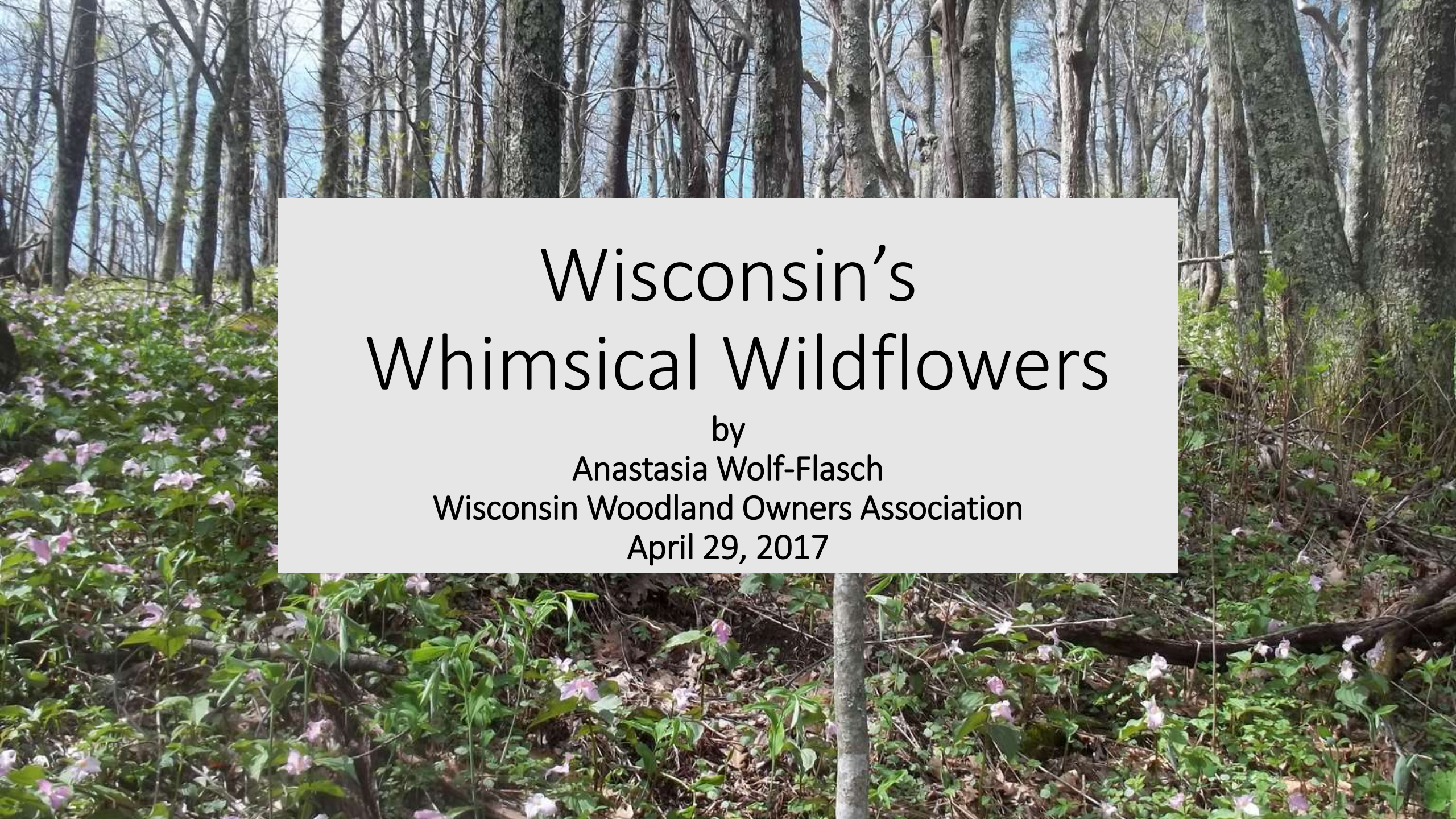

Wisconsin's Whimsical Wildflowers

by
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Are you ready?

- If you have a wildflower identification book, you may want be able to to refer to it.
- Grab a pen and paper! You might want to jot down some hints to help you identify these wildflowers when you are in your woods.

Okay, everyone ready? Click the mouse or hit the Enter key to dive in!

Wildflower Identification: Where to start?

1. Color
   - Note the flower color and if there's any variation or markings on the petals
   - Sometimes a species will vary in its color from white to pink or blue
2. Size
   - Knowing the size and shape of petals can help narrow down possibilities and distinguish between similar species.
   - Most guidebooks have a ruler printed in them to help you
3. Number
   - Note how many petals an individual flower has; it may vary or be in a range
   - Is there just 1 big flower or many tiny flowers that look like 1 large flower? For example, Queen Anne's Lace may look like 1 white flower, but it's really many tiny flowers arranged into an umbel shape (Example on next slide)

While Queen Anne's Lace looks like one big flower from afar, a closer look reveals it is actually comprised of lots of tiny flowers.

Wildflower Identification (Continued)

4. Leaves
   - Note the shape, arrangement, and edges
   - Sometimes leaves have unique features, like they’re hairy or they have prominent veins or coloration patterns. Watch for this
5. Leaf Arrangement
   - How are the leaves attached: at the base, whorled around, oppositely, or alternately
6. Look around!
   - The habitat type (wet, dry, soil, shade, etc.) can distinguish between similar species
   - Are there others? Some plants occur in colonies, others are solitary
   - Look at a few flowers if possible; irregularities (colors, number of petals, leaf arrangement, etc.) do happen so look at multiples to help you determine what is common to the species and what is an irregularity

Exercise 1: Understanding descriptions

For the next slide, a description identifying a wildflower will be given.
Read through each line carefully and
try to sketch/imagine what the flower might look like.
Do you know what it is based purely on the description?

When you feel like you know what the flower looks like,
click once more and the flower's image will appear.
Does your image match the one on the screen?

- A single white flower, 2-4” wide
- 3 white, triangular petals with wavy edges
- Grows from a single stalk
- 3 large (3-6”) oval leaves with pointed tips
- Leaf veins reach the edge
- Leaf edge is entire
- Found in rich, moist deciduous forests

Large-Flowered Trillium

- A single white flower, 2-4” wide
- 3 white, triangular petals with wavy edges
- Grows from a single stalk
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- Found in rich, moist deciduous forests

Notice the maple seedling next to the flower. This indicates the rich, moist deciduous forest habitat.

Exercise 2:
Some of Wisconsin's common wildflowers

Study the photo of each wildflower.

Read through the different identification characteristics of the plant.

Can you see the characteristics?

Yellow Trout Lily

- A single hanging or nodding yellow flower
- 6 backward curving petals toward the stem
- A pair of 3-8” long elliptical leaves with entire edges and a prominent central vein
- Leaves have mottled purple spots/streaks
- Leaves are attached at the base of the stem
- Found in dry, deciduous woodlands

Wild Geranium

- 5 round lavender/purple petals
- Flowers are 1-2” wide
- Flowers on separate stalks from the leaves
- Leaves are basally attached
- Leaves have toothed edges and are deeply lobed
- Leaves are strongly veined with a light colored center

Wild Strawberry

- White flower(s) with 5 petals surrounding a yellow center
- Flower is about ¾” wide and on its own stalk
- Basal 3 parted leaves with toothed edges
- Hairy stems and leaves
- Reddish stems
- Found on dry, sunny sites

Star Flower

- 1-2 star shaped, white flowers
- 7 pointed petals on each flower
- Flowers rise up on thin stalks above leaves
- 5-7 lance shaped leaves
- Leaves arranged in whorl
- Found in coniferous and deciduous forests

Wood Violet

- 1” violet colored flowers (they can sometimes range from violet to white)
- 5 distinct petals with a white (or sometimes violet) center
- Petal sizes differ with 2 larger at top and 3 smaller rounding the bottom
- Heart shaped leaves with toothed edge
- Hairy leaves and stems
- Leaves attached at base
- Found in moist woodlands

Canada Mayflower

- White round flowers arranged on a raceme
- Flowers are small (3/8”)
- Two-three alternate oval shaped leaves
- Leaves are glossy with parallel veins
- Numerous plants found together on a site
- Found in coniferous and deciduous forests

Dutchman’s Breeches

- White flowers unusually shaped, like pants or a tooth with a yellow tip
- Flower comprised of 4 petals and 2 large spurs
- Multiple flowers along the stem
- Pale grayish-green leaves
- Deeply divided leaves, appearing lacey/feathery
- Leaves are basal
- Found in deciduous forests

Dame’s Rocket

- Purple/lavender colored flower, ½” to 1” wide
- 4 rounded petals
- Flowers clustered at top of flower stalks
- Alternate leaves that are wide with toothed edges
- Leaves are 1 - 3” long
- Stalk and leaves covered in hairs

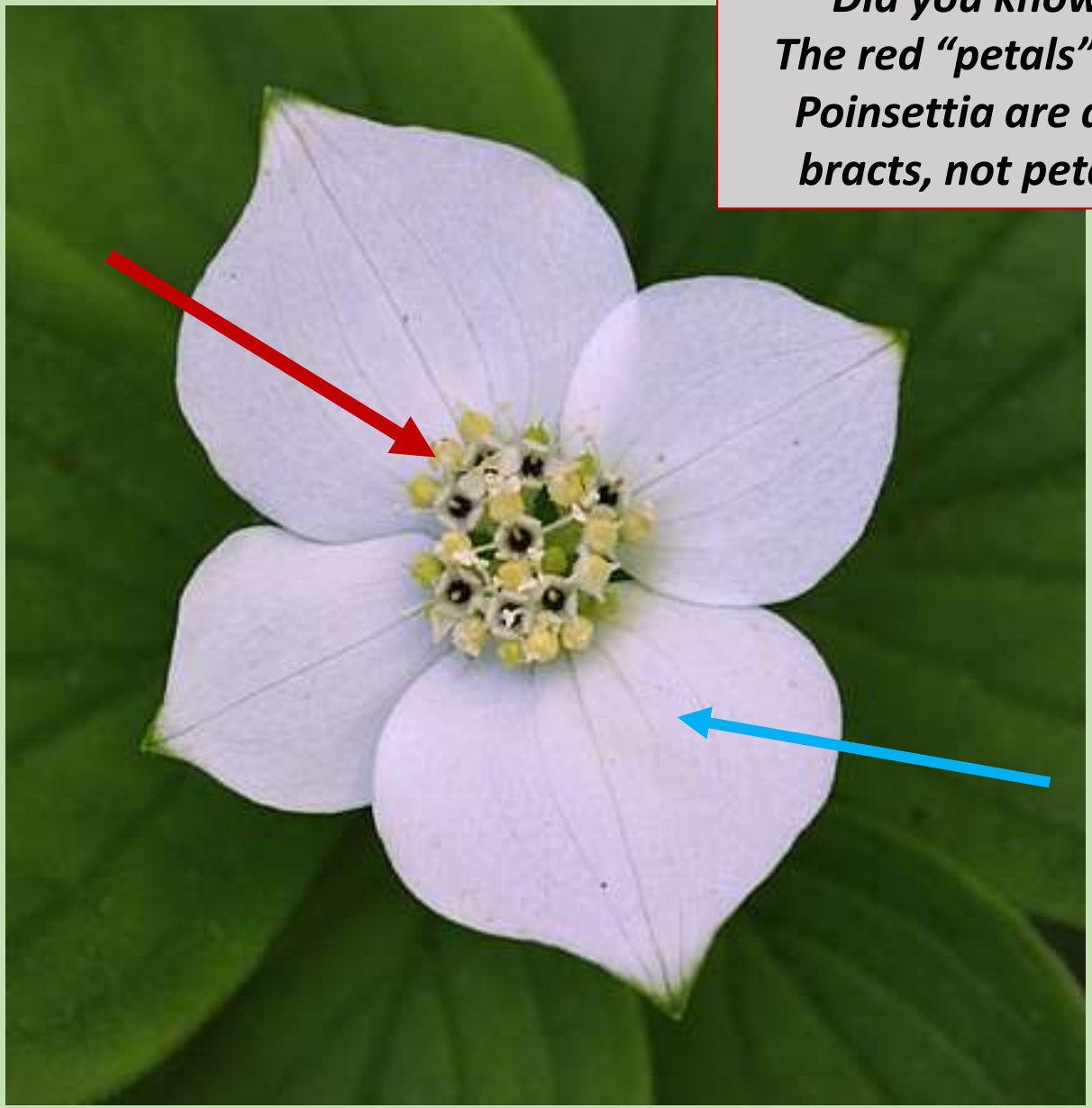
Pop Quiz!

What color are these bunchberry flowers?

Answer: Green

Did you answer white?
When you look closely where the red arrow is pointing, you will see the plant's true flowers, which are green.

The blue arrow points to the white "petals", which are not petals at all, but are actually called bracts (a modified or specialized leaf, especially one associated with a reproductive structure such as a flower).



Did you know?
The red "petals" of a Poinsettia are also bracts, not petals!

Flowers are Family, too!

- Plants with similar genetics express similar characteristics and are grouped in the same family
- For example, wild parsnip and Queen Anne's Lace are both in the same family; the Parsley, Carrot family
- Look for similarities in the
  - Leaf arrangement, venation, shapes, and edges
  - Number of petals the flower has
  - Shape of the flower
  - Odd features, such as odor, hairs, or sap in the stem

Exercise 3: Finding Flower Families

Plants are like other living creatures and their relations can usually be identified by observing simple visual characteristics

The next slide has three images; one on the left and two on the right.

Based on the visual features you just learned about, select which of the two flowers on the right is related to the image on the left.

See how many you can answer correctly!

Jack in the Pulpit

Skunk Cabbage

Large Flowered Trillium

Jack in the Pulpit

Skunk Cabbage

Large Flowered Trillium

Jack in the Pulpit and Skunk Cabbage are both in the Arum, Calla family. This family is known for its spathe (red arrow) and spadix (blue arrow) flower arrangement.

Pink Lady’s Slipper

Bloodroot

Showy Orchis or
Showy Orchid

Pink Lady's Slipper and Showy Orchis are both members of the Orchid family. They have two basal leaves with smooth edges and parallel veins. Their flowers are known for their irregular shapes.

Bloodroot

Showy Orchis

Pink Lady's Slipper

Rue Anemone

Columbine

Wild Geranium

Rue Anemone

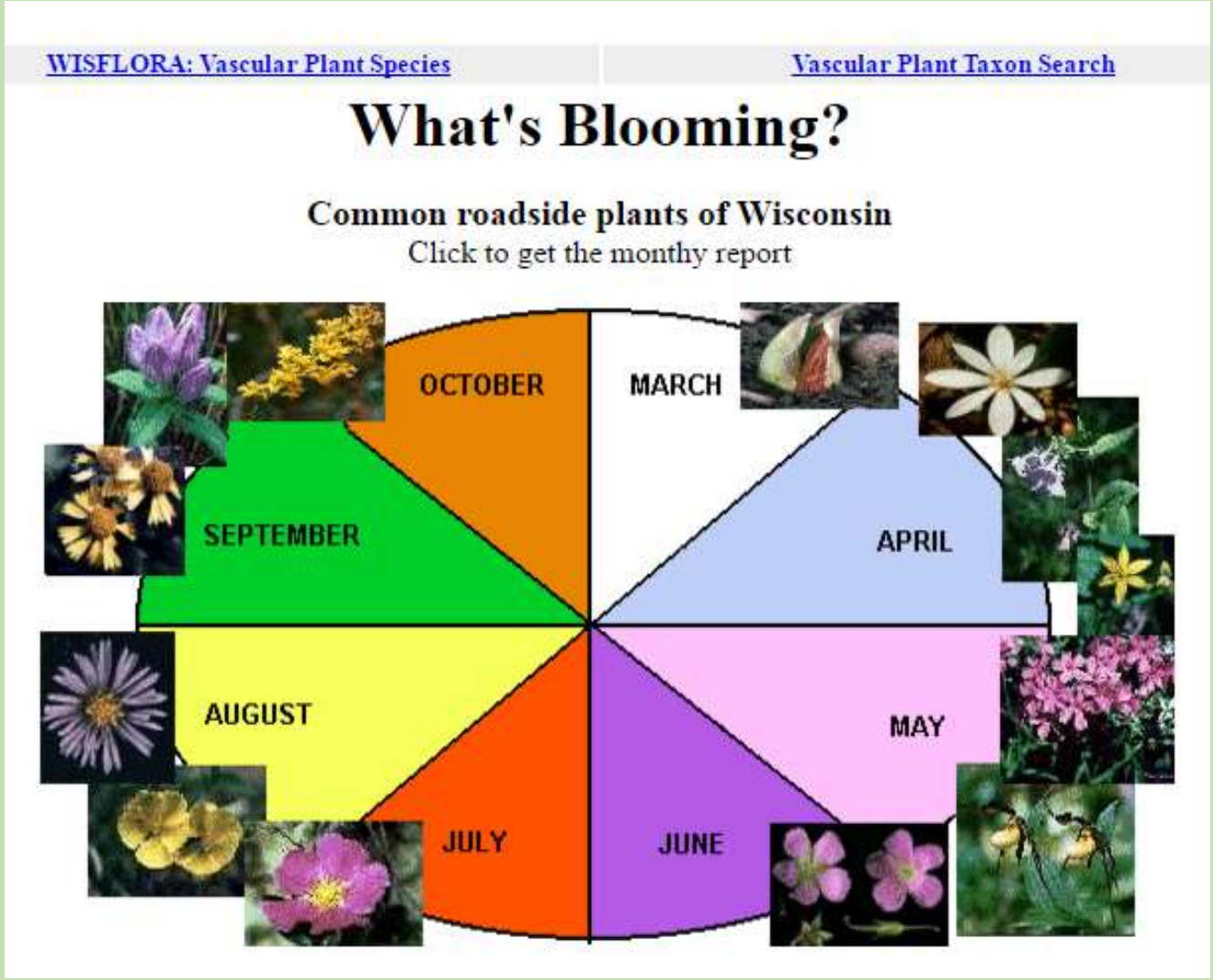
Columbine

Wild Geranium

Rue Anemone and Columbine are both part of the Buttercup Family. This family has alternate, lobed leaves. The flower petals are disconnected at the petal base and usually have showy stamens.

What blooms, when?

- Not all flowers bloom at the same time
- **Phenology** is *the study of seasonal changes related to climate, plant, and animal life*
- This includes the time of year that birds migrate, flowers bloom, trees lose their leaves, etc.
- Knowing the time of year you see the flower bloom can also help you identify what plant it is



https://botany.wisc.edu/herb/wisflora/blooming/

The magic of spring ephemerals

- The first flowers to bloom in spring are called “spring ephemerals”
- **Ephemeral** means *lasting for a very short time*
- These flowers bloom early; as soon as the weather starts to warm they put their leaves on to maximize the amount of sunlight they receive to fuel their quick life cycle
- Quickly, these plants grow, bloom, are pollinated, seed out, and then dieback to their underground parts between snowmelt and leaf out
- Spring ephemerals are key food sources for the first pollinators that come out after winter ends

Who's a spring ephemeral?

- Trillium
- Bloodroot
- Dutchmen's Breeches
- Wood Anemone
- Skunk Cabbage
- Virginia Bluebells
- Wild Geranium
- Trout Lily
- Bluebead Lily
- Wood Violet
- Blue cohosh

Large-flowered Bellwort

Wild Ginger

Rue Anemone

Round Lobed Hepatica

Summer Stars

- Bergamont
- Thistle
- Cardinal Flower
- Queen Anne’s Lace
- Goldenrod
- White Campion
- Chicory
- Orange Hawkweed
- Milkweed
- Heal All

Lupine

Jewelweed

Columbine

Purple Cone Flower

Fall Favorites

- Frost Aster
- Large Leafed Aster
- Yellow Gentian
- Sneezeweed
- Sunflower
- Butter and Eggs
- Tansy
- Yarrow
- Wild Cucumber
- Cardinal Flower

Canada Goldenrod

New England Aster

Boneset

Calico Aster

Exercise 4: Who blooms when?

Test your knowledge! An image of a common wildflower will come up on the next slide. Decide if it is a spring ephemeral, a summer star, or a fall favorite. Then, click again to see if you're correct!

Warm up with this **quick quiz question**:

What defines a spring ephemeral?

Answer: They are the first plants to emerge after snowmelt and they complete their reproductive cycle before the tree leaves come out.

White Trout Lily
Spring Ephemeral

Sunflower
Fall Favorite

Butter and Eggs
Fall Favorite

Did you know?
Monarch Butterflies lay their eggs on milkweed because it's the ONLY plant that monarch caterpillars eat?

Milkweed
Summer Star

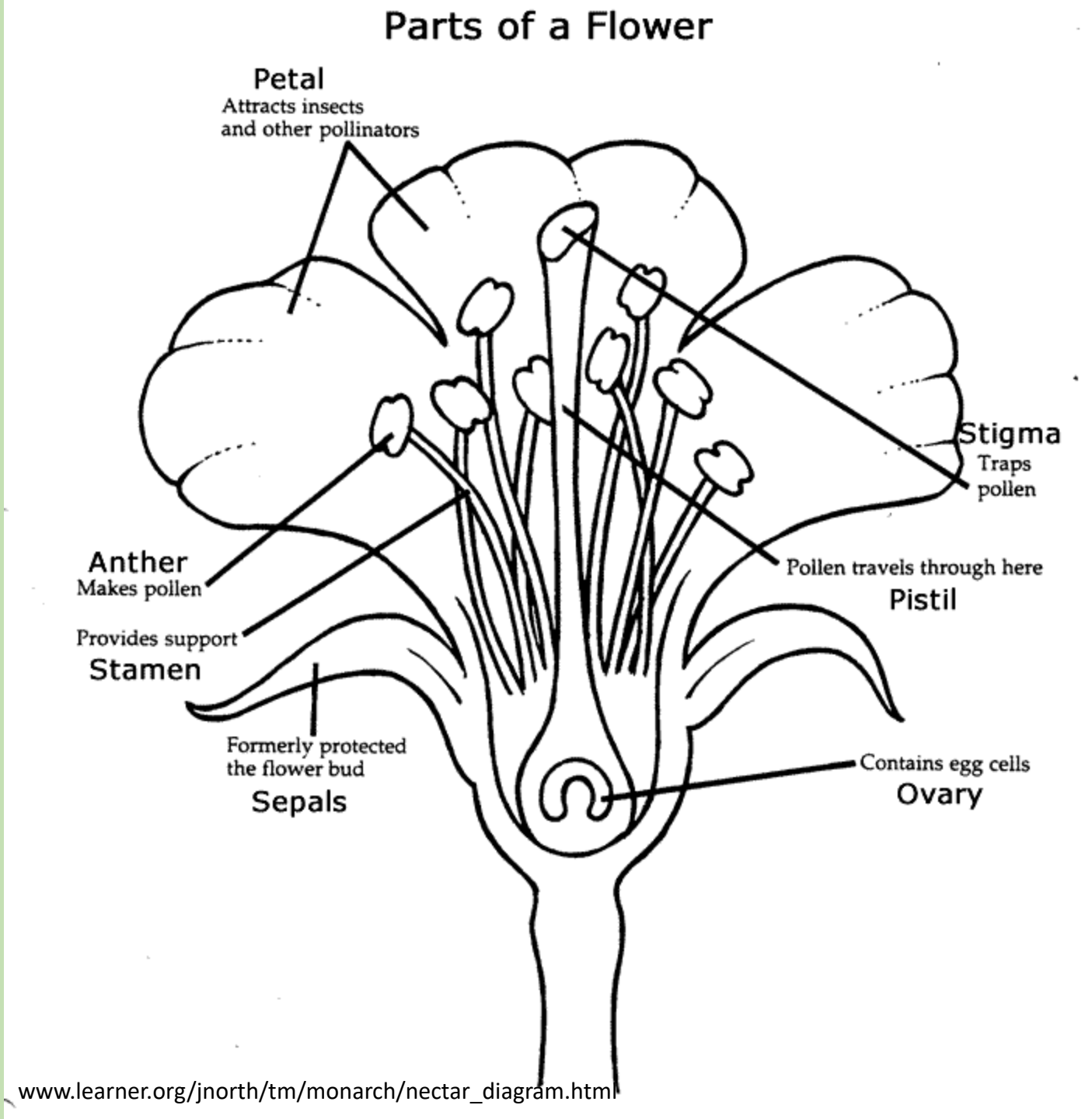
Lupine
Summer Star

Wood Violet
Spring Ephemeral

Flower Pollination

- Most flowers have male parts (stamen & anther) and female parts (pistil, stigma, & ovary)

- Pollinators are animals that move pollen from the male anther of a flower to the female stigma of a flower
- When a pollinator stops to collect nectar from a flower, the pollen clings to the pollinator, which is then transferred to other flowers as the pollinator travels to feed on other flowers.
- Different flowers have evolved their shapes to partner with different pollinators



Pollinators

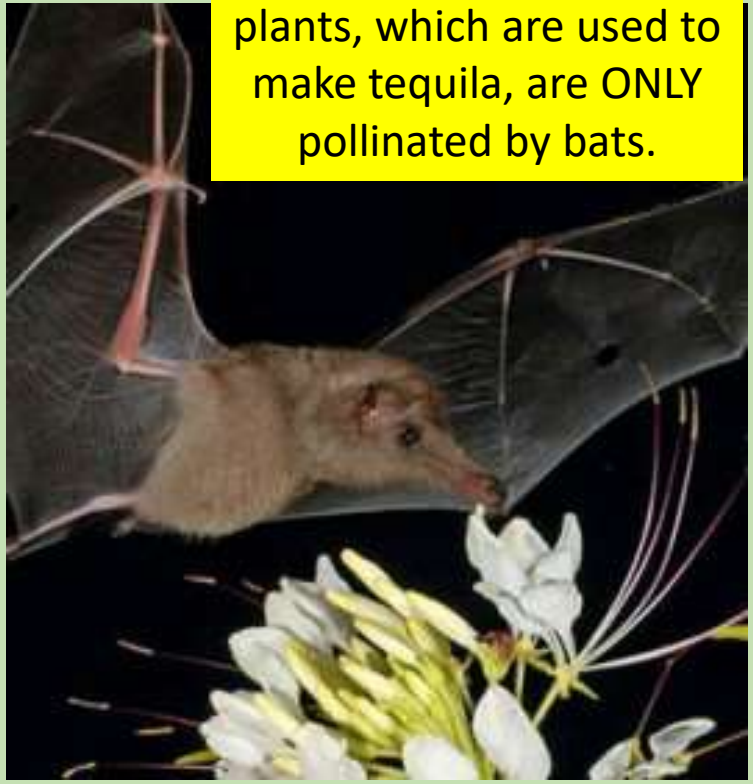
Monarchs and other butterflies are well known pollinators of a wide variety of plants, including New England Aster.

The open face of this Dame’s Rocket flower makes it easy for this bumble bee to feed on its nectar and pick up pollen to transfer to other flowers.

Pollinators

Hummingbird moths and other moths are also important pollinators for flowers. While we usually associate milkweed with monarchs, other pollinators enjoy this plant, too.

Did you know? Agave plants, which are used to make tequila, are ONLY pollinated by bats.



Bats are also pollinators for some tropical plants. Some bats species found in Wisconsin migrate to the tropics overwinter to pollinate plants like bananas, cashews, etc..

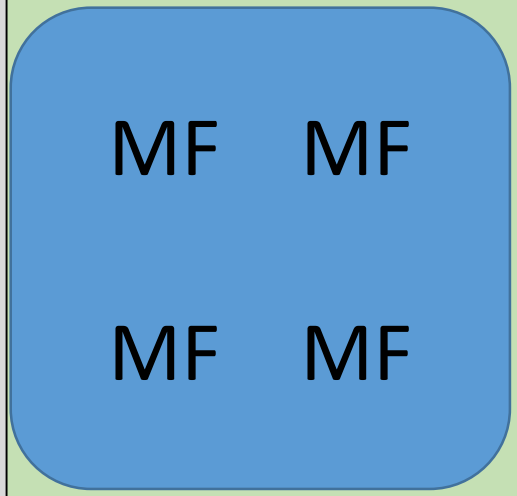
Hummingbirds are key pollinators, as well. Their long beaks allow them to reach down into tubular shaped flowers, like the cardinal flower, where other pollinators may not be able to.

Trees have flowers, too!

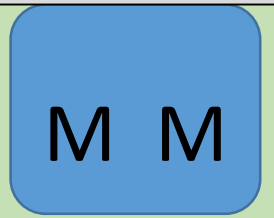
- Tree flowers aren’t always obvious and showy, but when you think about it, trees have to reproduce, too, so why wouldn’t they?

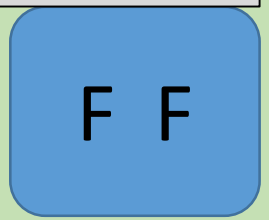
- Not all flowers have both **male (M)** and **female (F)** parts. Sometimes, the male and female parts are on separate flowers. Click to learn the three types of reproduction set-ups in trees.

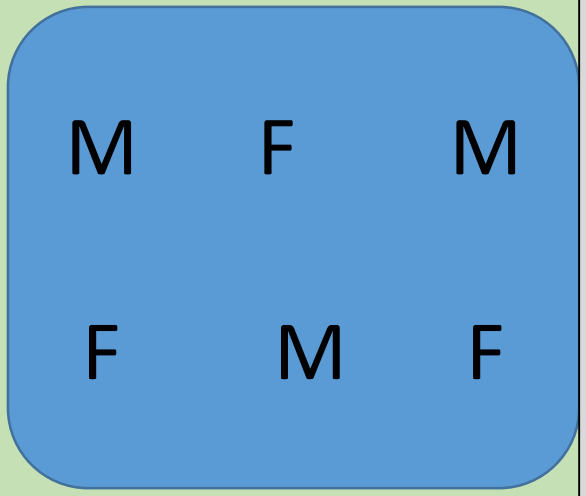
*The first type of reproduction style is **monoecious**, meaning both genders are found on the same plant. This is the style we've been discussing with most wildflowers. In this case, the tree's flowers contain both female and male parts (referred to as "perfect") and so, it does not need another tree nearby to reproduce and generate viable seeds.*



*The third type of reproduction is **dioecious**, meaning the male and female parts are on separate trees. Therefore, a tree is either entirely male or entirely female. Because of this, it needs another tree of the opposite gender nearby to pollinate with and generate viable seeds.*







*The second type of reproduction style is also **monoecious**, but it's a little different. In this case, the tree still contains both genders, but each flower is its own gender. Because both genders still reside on the same tree, these trees also do not need another tree present to reproduce and generate viable seeds, even though the individual flowers do not contain both gender parts.*

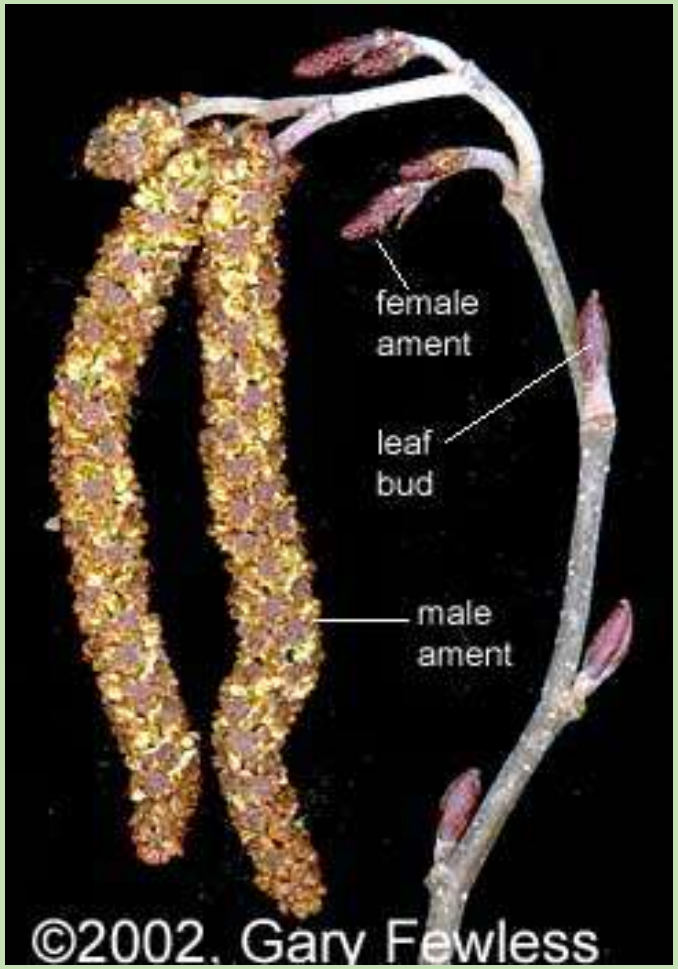
Style 1: Perfect tree flowers

Red Maple flowers look like red pom-poms decorating the trees in spring.

Basswood flowers are accented by a distinctive boat or tongue shaped bract.

Some tree flowers, like those of the redbud and cherry trees are very showy.

Style 2: Almost perfect



Tag Alder has male flowers that look like catkins, and female flowers that turn into small cones when fertilized.

Male flowers of Red Pine are on the left. Female flowers are on the right. When the female flowers are fertilized, they develop into the cones we know and recognize.

Style 3: Separate Trees

Some species that are *dioecious*, meaning each tree is one specific gender, include:

- Ash
- Gingko
- Holly
- Willow
- Yew
- Cottonwood

Did you know?

Indian Pipes are a wildflower found in Wisconsin that are entirely white!

They contain no chlorophyll, the green colored pigments that help a plant photosynthesize.

Instead, they get their food energy from their root systems, which work with fungi underground to collect the food they need.

A Few Recommended Identification Guides

Check out these resources to help you identify wildflowers!

- Books
  - Wildflowers of Wisconsin Field Guide by Stan Tekiela (WWOA Gift Shop)
  - Peterson Field Guide to Wildflowers (Northeastern/North-central North America)
  - Newcomb's Wildflower Guide
- Online Resources
  - USDA Plants Database @ https://plants.sc.egov.usda.gov/java/
  - Discover Life @ https://www.discoverlife.org/
  - Wisflora @ http://wisflora.herbarium.wisc.edu/
  - Wildflower Search @https://wildflowersearch.org/