

Forgotten Flowers: Spring Ephemerals

Each week, we will highlight a spring ephemeral by posting an information sheet, photos, guiding questions and enrichment activities designed for formal and informal educators, as well as life-long learners.

Week 1: Skunk Cabbage

Early spring is a magical time in our Eastern woodlands. Wildflowers that are known as **spring ephemerals** emerge and bloom. These flowers need to make the most of sunlight before the leaves appear on the trees making the forest floor too shaded. They are fascinating and fleeting, hence the name **ephemeral**.

Maybe the earliest of all is the **skunk cabbage** (*Symplocarpus foetidus*). It's sometimes called the first flower of winter because it often emerges while there is snow on the ground. As the name suggests, it grows best in soggy places with wet soils and it smells bad. It literally *stinks*!

The skunk cabbage has a cool flower called a **spathe** and **spadix**. The spathe is a large purple, mottled hood-like sheath. If you look inside that little hood you will see the spadix which consists of a stalk covered with tiny yellowish flowers.

Skunk Cabbage Flower: Spathe and Spadix



These little flowers give off a strong scent of rotting meat (think roadkill...gross!). Believe it or not the smell is critically important for attracting pollinators. The pollinators in this case are flies and beetles which can sense rotting meat from far away. Sometimes hundreds of flies can be seen swarming around skunk cabbage on a sunny day in March.

Here's another bizarre fact: these smelly plants are what is known as **thermogenic**. They can generate their own heat! They melt snow around them because they can raise their own internal temperature to 70°F, even when it's freezing around it! Because of the thermogenic properties, bumblebees that emerge in late March and April often seek out the skunk cabbage spathe as a warming hut. When they fly inside, they find a plentiful source of pollen and can warm their little fuzzy bodies from the heat the plant produces. It's like a little roadside diner for bees!

In late spring, the flowers are followed by the growth of huge leaves, sometimes several feet across. Their large size helps them capture as much sunlight as possible in the shaded wetlands where they thrive. The same large leaves act like natural umbrellas and provide shelter for a lot of creatures like snakes, frogs, lizards and even birds. The yellowthroat warbler sometimes builds its nest in the hood of the spathe, using the stinky smell to mask its own odor and protect it from raccoons and other predators.

Skunk Cabbage Leaves



Skunk Cabbage Leaves and Soggy Habitat



So, if you take a walk near a stream or river during the spring, keep your eye open for the purple hoods and dark green leaves poking up out of the mud. They might not smell so nice, but they are a mighty help to lot of wild creatures.

Guiding Questions and Enrichment

1. Ephemerals can be described as “fleeting” because they only have a short time to display their beauty before the trees develop their leaves. Explain how tree leaves negatively impact ephemerals.

Answer: Leaves will shade the ground. Ephemerals will get less sunlight.

2. Can you list five or more synonyms for the term, “fleeting”?

Answer: fading, momentary, short-lived, temporary, brief

3. Think of other elements found in nature that are not long-standing. How do these compare and contrast to spring ephemerals? You can show your ideas on a Venn Diagram. [Download and print a Venn diagram here.](#)

Answers will vary. Learners may think of other flowers, stages of metamorphosis, phases of the moon, changing weather, etc. There are many creative answers. As an extension, they may have to write an explanation.

4. Cite ways that a habitat may be enriched by the presence of skunk cabbage. Consider how other organisms use it for survival.

Answers: Smaller animals including birds may use the leaves as shelter from rain or even spring snow.

Bonus and Enrichment

1. Can you find the skunk cabbage's spathe and spadix pictured above? Illustrate the skunk cabbage's spathe and spadix and label each part. Using simple household materials, can you construct a model? Draw your design and include the materials you used.

Additional Resources

- [Native Plant Society of New Jersey: images of Skunk Cabbage flowers and leaves](#)
- [Lady Bird Johnson Wildflower Center: skunk cabbage](#)
- [USDA Plants Database](#)
- [National Wildlife Federation](#)

Sample Next Generation Science Standards:

**Please note that the following Standards serve only as examples. Depending on your curriculum, multi-disciplinary standards may also apply.*

- 3-LS4-3: Biological Evolution: Unity and Diversity Construct and argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- 3-5 ETS1-1: Engineering Design Define a simple design problem reflecting a need or a want that include specific criteria for success and constraints on materials, time, or cost.

If you would like more information about how you might modify this lesson for your learners, contact Kate Reilly, Manager of Education at kreilly@dukefarms.org. Special thanks Environmental Educator, Mrs. Bird, for creating the Forgotten Flowers series.