Summer 2023

NATURE DETECTIVES

What's the Big Deal about Pollination?

It is summertime! Something natural and important is happening everywhere …and you may not even notice. We're talking about pollination and pollinators- big words and a big deal. Pollination affects everyone and everywhere- not just Boulder County, the entire planet!

Pollination is how flowering plants reproduce, spread, and make new seeds and fruit. Plants don't walk around, they're immobile, so many must rely on relationships with helpers in order to reproduce and spread. When pollen is transferred from the male part of a plant to the female part of another plant of the same species, pollination is happening.
Pollen is the fertilization agent.

Pull Out and Save

Pollinators: Our Hidden Heroes

Some options for pollination are wind, water, and animals, including insects.
We focus on insects and birds today.
It's estimated that more than 80% of flowering plants use animals (mostly insects!) for pollination.
That's a lot of busy bugs; you could think of them as **super heroes!**

So, How Does it Work?

Bright colored flowers from native plants, fruits, vegetables, or trees- with sweet smelling, high -energy nectar attract pollinators . A bee, for example, approaches a flower to eat, look for shelter, nest-building materials, or a mate…whatever they're doing, they may leave with a load of protein-rich pollen- the powdery stuff in the center of the flower.

Pollen is often yellow with sticky teeny barbs to enable it to stay on the pollinator until it goes to the next flower…and the next, and the next, pollinating away. Bees and other insect pollinators prefer yellow pollen as they can't see the color red; birds and butterflies can see the color red; maybe that is why they often prefer flowers with red pollen. There are many colors of pollen in nature. Remember, the plants have learned what colors, smells, and shapes attract just the right kind of pollinator for them.

Who are These Pollinators?

Bees- native, and honey bees are major players in pollination. Native bees pollinate wild plants while honey bees, the bees that live in hives (they are not native) pollinate agricultural crops.

Here's a fascinating fact you can share-
There are about 550 species of ***native*** bees just in Boulder County (over 900 species in Colorado).
Imagine how much pollinating that many bees can do!

Bees, beetles, and flies probably move the most pollen because there are so many of them. Other pollinators include butterflies, wasps, moths, hummingbirds, and bats. Each of them has a particular trait that pairs up with specific kinds of plants. Butterflies like big flat showy surfaces to land on- they like wide petal flowers. Hummingbirds like tubular shaped flowers that they can get deep into with their super long bills and tongues.
Bats and moths pollinate at night.

Why are Pollinators Important to Me?

Start to get the idea how important pollinators are? If you think insects are yucky and a nuisance, give this some thought. One out of every three bites of food you eat is part of the pollination cycle. WOW- 1 out of 3! Since it is recommended that we get around 5 servings of fruits and veggies a day, you can see we need these insects and other pollinators.

Here is a short list of foods that you might eat (at least a couple of which you probably REALLY like), that rely on pollination. Many of these are grown in Boulder county or nearby, some are grown far away. Many of the vegetables and fruit you might grow in your own family garden are pollinated by insects or birds and are a part of this vital process.

Apple, almond, apricot, avocado (do you like guacamole? It comes from pollinated avocado trees), banana (pollinated at night by bats), blueberries, broccoli, celery, carrot, cucumber, cinnamon, grapes, kiwi, lettuce, lime, onion, oranges, pineapple, potatoes, strawberries, tomatoes, even chocolate!
Plus, **SO** much more.

Would you miss any of these foods if we couldn't eat them? I think we all would!

If that isn't enough, we also know pollinators help create healthy ecosystems by supporting plants that stabilize our soils and help keep our air clean, support wildlife…
even our economy!

Bee a friend to pollinators

You might be inspired and excited about this pollination thing by now and wonder what you can do to help these hard-working helpers. Here are some suggestions:

Bee aware: Look around when you're in your garden, yard or in nature. Look for pollination in action. Observe these insects you might not have noticed before.

Bee kind: If you do nothing else, be gentle. All sorts of insects are doing beneficial work. Leave them alone or watch from a safe distance- for you and for them. Appreciate how amazing they really are.

Bee a friend to pollinators: You can plant flowers, herbs or vegetables (even just a pot or two- as big a pot as you can get) and tend to it throughout the summer.
Plant native milkweed and see if you get Monarch butterflies in your garden!
Let your garden be a little messy- it mimics nature, giving shelter to caterpillars, larvae, insects, and birds. These creatures are all happiest in wild places.
You can put out a small tray with pebbles and just enough water to cover them.
This provides water for bees and other insects- just remember to change it often.

See Pollinators in Action

Plants and pollinators work together to create pollination. If you read the last edition of Nature Detectives, you understand that native plants and animals that have evolved together for many generations know how to interact and support each other. . . they understand each other and are stronger together.

Here are suggestions for nearby places where you can really see pollination happening. Make it a family field trip and **bee prepped**-- sunscreen, hat, water, maybe a snack, your nature journal or notebook and a pen and/or markers for recording and drawing pollinators. If you have a camera, you can snap pics of your favorites; binoculars might be fun too.

- Any Boulder County Parks and Open Space Trails
- Longmont: native plant demonstration gardens at the Boulder County Fairgrounds
- Golden Ponds: the trails along the river and ponds are full of insects right now!
- Lyons: Rocky Mountain Botanic Gardens (rmbg.org)
- Boulder: Tierra Canta garden at 19th and Grove streets
- Westminster: Butterfly Pavilion- a great place to get buggy! (butterflies.org)
- Loveland: High Plains demonstration garden (suburbitat.org)

ACTIVITY: Pollinator Patrol

Choose any place on the previous page or wherever you find native plants or gardens-including yours. Let's get our science on!

Choose a small area to observe extensively.

What are the most prominent kinds of plants you see?

Create a hypothesis- decide if you think you will find more bees, Butterflies, or other insects or birds. Why?
Count the pollinators (as many as you can keep track!) and record your observations and findings in the chart below.

Date/time: _____ Location: _____ Weather: _____

Hypothesis:

ID	Count:	Total:	Notes:
Bees			
Beatles			
Butterflies			
Birds			
Unidentified species			

Observations/findings: Was your hypothesis correct? Did you learn something new?

Describe or draw the most prominent pollinator you've found today.
How do you feel about these super-hero pollinators now that you know them better?

How long did you spend outdoors at this activity? Circle your answer

Less than 30 minutes
30 minutes to 1 hour
1 hour plus
more than 2 hours

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