# Polipadou by Mart Sek

3mercania

#### Abb-choo!

The dusty yellow stuff that makes people sneeze is called pollen. Plants produce it so they can grow fruits and seeds. The pollen must move from one part of the plant, called the anther (*an-thur*), to a different part, called the stigma. Some plants use wind to move pollen. But many plants rely on bees, butterflies, and other animals to act as delivery pilots and transport pollen from flower to flower.

So what do the delivery pilots get for their services? Flowers offer them two kinds of food: nectar for a quick sugar rush and pollen for protein.

#### TO KEEP THE WORLD GREEN, PLANTS AND ANIMALS MAKE A GOOD TEAM.

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#### FUZZY and BUZZY

With most plants, the only thing an insect has to do is bump into a flower to get dusted with pollen. But some plants hide their pollen deep inside long, skinny anthers.

Luckily, bumblebees have the key to unlock this secret stash.

When a bumblebee lands on one of these stingy flowers, the bee uses its jaws to clamp down on an anther. (Biologists call the bite marks left behind "bee kisses.") Then the bee does something amazing. It flexes its flight muscles violently fast, which causes a loud, whining buzz. The buzz travels through the bee's body and shakes pollen out of the anther like salt from a shaker.

Tomatoes, peppers, and potatoes are just a few of the plants that require buzz pollination to form their fruits. So the next time you dunk a french fry in some ketchup, be sure to thank the humble bumble.

#### **FLYING Gemstones**

Not all bees are yellow and black. This sweat bee gleams like an emerald in the sunlight. And even though it's tiny — about the length of the word "tiny," in fact — it's a pollination pro. Just look at all of the pollen stuck to its fuzzy belly! Plants must love pollinators who are messy eaters.

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### Good Bees

Bryan Reynolds / Alamy Stock Photo

If you like apples, peaches, or blueberries, you should thank a blue orchard bee. In early spring, these beautiful, busy bees bustle about, searching for food and empty holes in which to build nests. Their favorite find is pollen from fruit trees and berry bushes. They mix it with spit and nectar to form a pollen loaf. Then they tuck the loaf into a hole, lay an egg on top, and seal the chamber with a wall of mud. When the egg hatches, the baby bee will have plenty to eat until it emerges as an adult the next spring.

#### FUNKY Flowers



Many flowers give off odors to attract pollinators. But not all flowers smell sweet. Some smell downright stinky.

Pawpaw flowers, for example, smell like rotten meat. This odor, along with the plant's livercolored blossoms, attracts flies and beetles that mistake the flower for a dead animal.

After pollination, pawpaw flowers produce large potatoshaped fruits that ripen in late summer. Many animals love to eat pawpaws, including people. The fruits taste like a cross between a banana and a mango.



Housefly: © Ecophoto | Dreamstime.com

Shearthadi

Paupaw flower

#### Yellow and Black – STAY BACK!

Most people know that a bee's behind can pack a painful punch. The ability to sting protects the buzzy insects from birds and other predators. The yellow and black bands on bees act like warning signs to tell predators, "Back off!"

But here's a little secret: Only female bees can sting. Male bees don't have stingers and are completely harmless. Yet because of their yellow-and-black coloration, most predators leave them alone, too.

Boy bees aren't the only insects that use this trick. If you saw this insect buzzing around, would you give it lots of room? Of course you would. But there's no need. Even though it looks, sounds, and acts like a bee, it can't sting. It's a harmless fly.

#### Invisible REASURE Maps

Bilobed looper moll of it is

Some flowers have patterns on their petals to help guide hungry insects to their nectar. If you look closely at this iris, you can see how the dark "veins" and "ribs" on the light-

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colored petals point to the center of the flower where the nectar is pooled.

On other flowers, these petal patterns, which biologists call "nectar guides," are invisible — at least to people. But bees and other insects can see colors that humans can't see. To a buzzing bee, the nectar guides aren't invisible at all. Like a map painted on the petals, they guide the bee right to the flower's sugar-filled treasure chest.

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# TOTALLY **Tubular**

A ruby-throated hummingbird's long beak is perfect for sipping nectar from deep, tubular flowers. And when the bird buries its beak in a blossom, its forehead gets dusted with pollen to drop off at the next flower it visits.

Ruby-throated

Hummingbirds flap their wings at blinding speeds — on average, about 50 times each second. This helps hummers hover precisely in place while they get a drink. But all that flapping comes at a cost.

The tiny birds burn energy faster than any warm-blooded animal. To keep their wings revved up, they must eat half their weight in sugar every day. (You'd have to drink more than 450 cans of soda to keep up.) In fact, from sunrise to sunset, a hummingbird may visit nearly 1,000 flowers. Now that's a lot of pollination!

## **A Moth in** DISCUISE

It's easy to mistake this hummingbird moth for a bee or a hummingbird. After all, it has yellow and black bands on

its abdomen like a bee. And, when it hovers in place, its wings buzz like a hummingbird's. Males even have flared hairs on their behinds that look like a bird's tail feathers.

To reach the flower's nectar, these day-flying moths are equipped with freakishly long tongues. In fact, some kinds of hummingbird moths have tongues that reach twice the length of the moth's body!





In September, monarch butterflies migrate all the way to Mexico to escape winter weather. To make the 1,500-mile trip, the plucky orange butterflies need lots of energy. And to get it, they sip nectar from late-blooming flowers like asters, goldenrods, and thistles. Nectar is the perfect energy drink to fuel a butterfly's flutter. In fact, most monarchs actually gain weight during their exhausting journey. The flower fat they pack on is key to their survival. Once they reach their wintering grounds, they won't eat again for nearly five months.

> Throughout the world, pollinators are disappearing in alarming numbers. But you can do something right in your own backyard to bring back the buzz.

• Plant a variety of flowers so something is blooming from early spring through late fall.

Plan

- Many native wildflowers make attractive additions to your flower beds. Plus, they're better for pollinators. For ideas about which ones to plant, flutter over to grownative.org.
- Ask your parents to avoid using pesticides. Not only do these chemicals kill pests, but they also kill helpful bees and butterflies.
- Mow your lawn less often. A few flowering weeds in a desert of grass offer an oasis for thirsty pollinators.
- Leave small patches of bare dirt for ground-nesting bees. Or search the internet for plans and build a bee house.

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