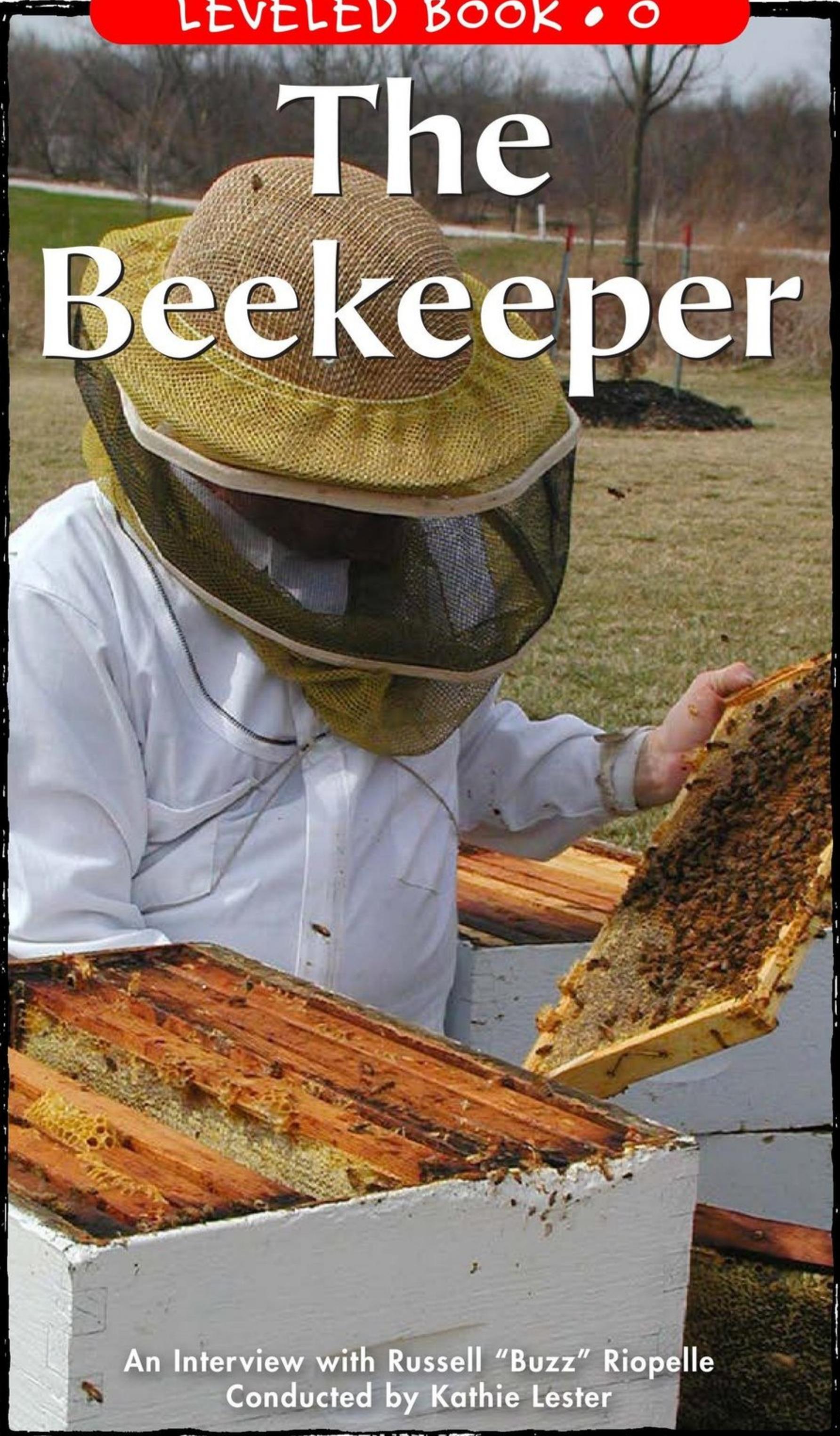


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The Beekeeper



An Interview with Russell "Buzz" Riopelle
Conducted by Kathie Lester

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Russell "Buzz" Riopelle is a beekeeper in the Cleveland, Ohio, area. He has been keeping bees for 30 years.

The Work of a Beekeeper

Interviewer: Did you get the name "Buzz" because you keep bees?

Buzz: No, my parents started calling me Buzz before I was born.

Interviewer: How much work is involved in beekeeping?

Buzz: There's a lot of work, and it has to be done at the correct time. A one- or two-week delay can affect your honey crop drastically. You have to make sure the queen is laying eggs. You have to look at your bees every two to three weeks to make sure everything is all right. Removing the honey is a lot of heavy work. I have to lift the **honeycomb** out of the hives and put it on the truck. Then I carry it into the honey house, where I **extract** the honey.



Buzz's truck carries honey boxes and a bee blower. The blower blows the bees out of the boxes. Each box holds 35 to 45 pounds (16–20 kg) of honey.

Interviewer: What kind of equipment do you need?

Buzz: I wear a bee suit to keep my clothes clean. I also wear a veil over my head to protect my eyes and head from stings. I use a smoker to calm the bees. That's a small can with a **bellows** on it. I build a little fire in there and put the lid on. When you blow smoke on bees, they think it's a forest fire. They fill their

stomachs with honey in case they have to leave their tree. That's why smoke seems to calm them, because it keeps them busy.



Buzz pours smoke over an open hive.

Even after Buzz calms
the bees with smoke,
they may still sting his
bare hands as he moves
the boxes.



Interviewer:
**How often do
you get stung?**

Buzz: I get stung a couple thousand times a year because I don't wear gloves. Gloves are bulky and hard to keep clean, so they can spread disease. I don't swell up from stings anymore, but they still hurt. I work the bees on nice sunny days around two o'clock in the afternoon when all the flowers are producing nectar. When half the bees are out collecting nectar, I only have to deal with the other half.

Life in the Hive

Interviewer: Tell me about the kinds of bees.

Buzz: There are queens, drones, and workers. The queens and workers are female, and the drones are male.



All the bees in the hive come from eggs laid by the queen. In the springtime

she lays 1,500 to 2,000 eggs a day. Drones are only useful for mating. They don't work at all.

Every day they **congregate** outside the hive, waiting for a queen to fly by. Then they race after her and mate with her.



Top to bottom: A worker, a drone, and a Queen honeybee

Interviewer: I thought the queen never left the hive. She flies around?

Buzz: She makes short flights to mate. Other than that, she only leaves to swarm. If a second queen develops in the hive, the colony divides. The new queen stays in the old location. The old queen and half the bees find a new place to live. They fill their stomachs with two or three days' supply of honey. They find another place to build a honeycomb. Then they store the honey in this new comb and start laying eggs.



Honeycomb with eggs in the cells. The eggs look like tiny grains of rice standing on end.

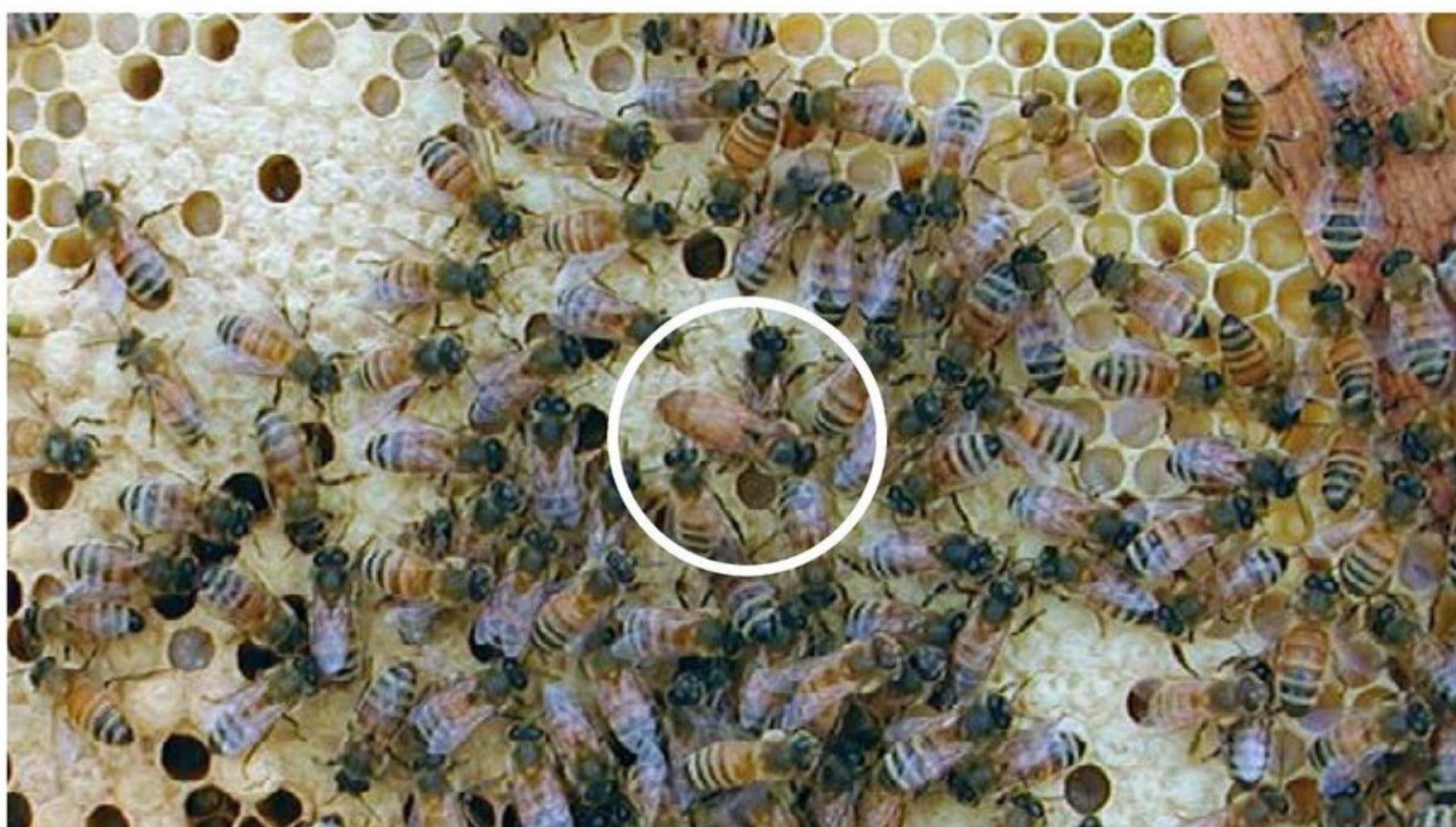


Do You Know?

Bees make beeswax from glands on their bellies. They scrape thin sheets of wax off their bellies with their legs. Then they form the wax into the six-sided cells of the honeycomb. People use beeswax to make candles, lip gloss, moisturizer, and decorations. Even the seals underneath your toilet that keep it from leaking are made of beeswax. For health reasons, people eat pollen and "royal jelly," a special food that bees make for the queen. Honey is also used in many health and beauty products.

Interviewer: How long do bees live?

Buzz: Queens can live two to three years. In the summertime, drones and workers live for only four to six weeks because their wings wear out. In the winter they live longer because they don't fly. In the wintertime, they eat honey and shiver to generate heat. When it's 5 degrees below zero (Fahrenheit; -20° C) outside, it's 95 degrees (Fahrenheit; 35° C) in the center of the beehive. This keeps the colony alive during the winter.



A honeybee queen (the larger bee in the center) is surrounded by workers that feed, clean, and take care of her.

Interviewer: How many bees live in a hive?

Buzz: In the summertime, there can be 60,000 to 80,000.

Interviewer: How do bees find their way back to the hive?

Buzz: When they leave the hive, they notice where the sun is in the sky. When they come back, they use the sun to find their way. On cloudy or rainy

days, bees don't fly because they can't see the sun.



This beehive is a large box with a row of frames inside. The bees build honeycombs on the frames. The honeycomb is where bees lay eggs, raise their young, and store pollen and honey.



Types of Bees

Interviewer: Are there different kinds of honeybees?

Buzz: There are different kinds of bees from different places. Caucasian bees come from the Caucasus Mountains in Europe. Italian bees come from Italy, and there are bees from Africa. These are all honeybees. America actually has no **native** honeybees. The Pilgrims and settlers brought bees from Europe on their ships. Then those bees flew all over the United States and built hives.

Interviewer: What's the difference between honeybees and "killer bees"?

Buzz: There is no difference, other than where they come from. They produce honey just like regular bees. A scientist from South America bred bees from Africa with South American bees. But the Africanized bees he created are easily riled up. Hundreds or thousands of bees will attack one animal or person.

The Africanized bees, which some people call "killer bees," come into a beehive, kick out the bees that live there, and take over. You can come back next week, open your beehive, and suddenly get lots of stings. The bees move in that quickly. People have been trying to get rid of them for thirty years. But Africanized bees and honeybees do the same job.

Do You Know?

Both queen and worker bees have stingers. A worker bee's stinger has a hook on the end. When a worker bee stings, the stinger pulls out some of its insides. This kills the bee, so a bee will only sting when its life, or the hive, is at risk. The queen bee has a smooth stinger, so she can sting over and over.

Some people are allergic to bee stings. Their throats can swell up and cause breathing problems. People who are allergic to stings must carry a special medicine with them to stop a reaction before it gets too bad.



A bee can push its hooked stinger into skin.



When the stinger sticks, it pulls out part of the bee's insides.



The bee leaves a venom sac that causes the sting to hurt.



A bee collects pollen and nectar from flowers.

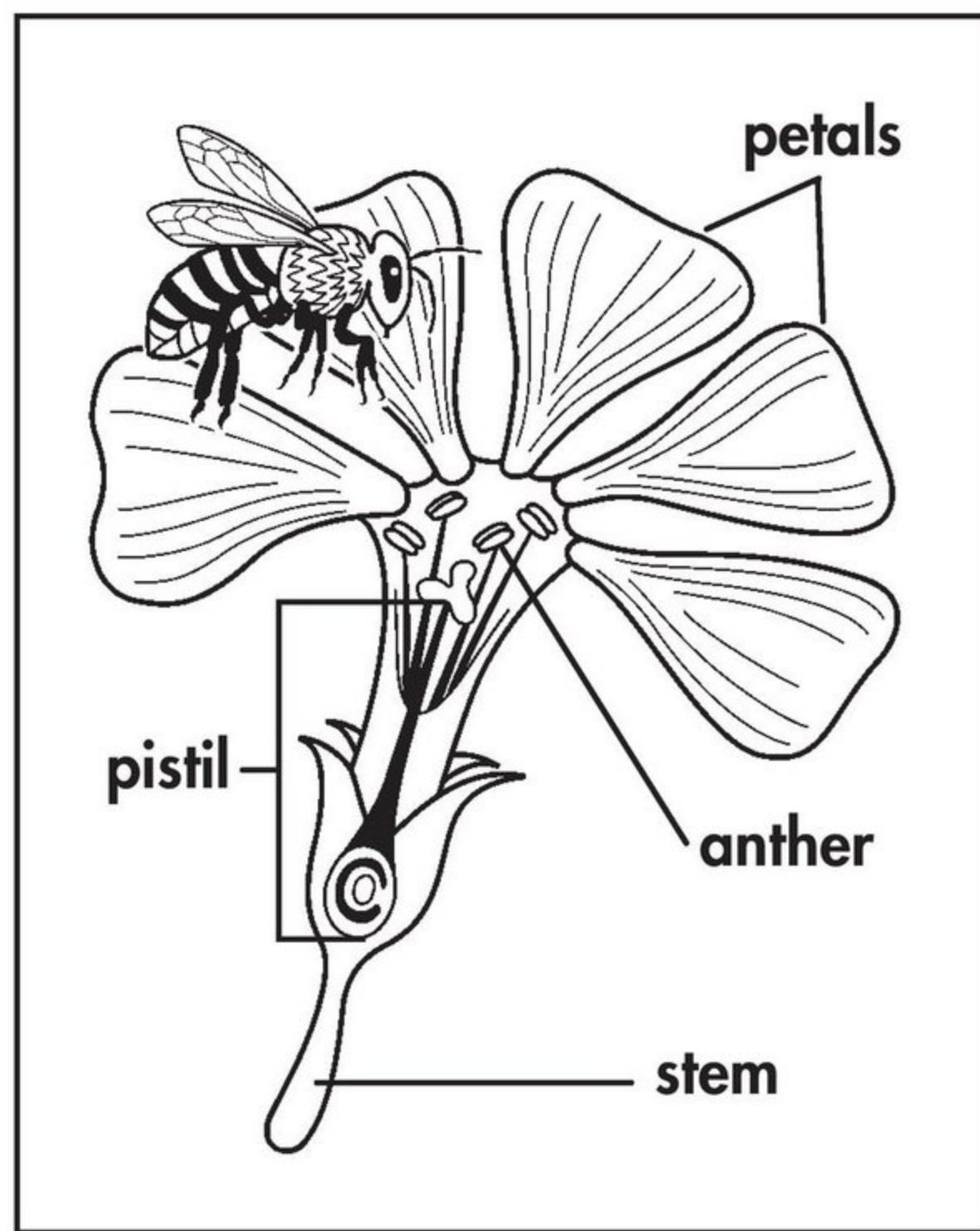
Making Honey

Interviewer: Do bees use pollen to make honey?

Buzz: No, they make honey from nectar, the liquid they collect from flowers. The bee goes to the flower and eats the nectar, putting it into her honey stomach. She flies back to the beehive, spits the nectar out, and other bees store it in the comb. Then bees fan their wings to evaporate water from the nectar and make it thicker.

But the biggest purpose of bees in this country is not to make honey. Their purpose is to pollinate crops like alfalfa, an important animal feed, and melons and almonds. Inside every flower, an **anther** produces **pollen**. This is a powder that contains the male **cells** of the plant. There is also a **pistil**, which produces seeds when pollen from another flower brushes on it. When a bee goes into a flower to get nectar, pollen from the anther rubs onto the bee. When she goes to the next flower, the pollen rubs onto the pistil.

The parts
of a flower





Honey comes in many delicious flavors, depending on which flower the nectar came from.

Different flowers have different flavors of nectar. Orange-blossom honey tastes different from apple-blossom honey. People

with orchards don't have time to keep bees, so they rent bees from me. I take my bees into their orchard at night and leave them for a week or two. After the flowers have fallen off the trees, I take the bees home. When I take my bees to an apple orchard, I get apple-blossom honey. If I took them to an orange orchard, I'd get orange-blossom honey.

Interviewer: How much honey do you get from one beehive?

Buzz: Between 60 and 350 pounds (27–159 kg.) of honey a year, depending on the location and how hardworking the bees are. Bees are like people. Some people get up early and work.



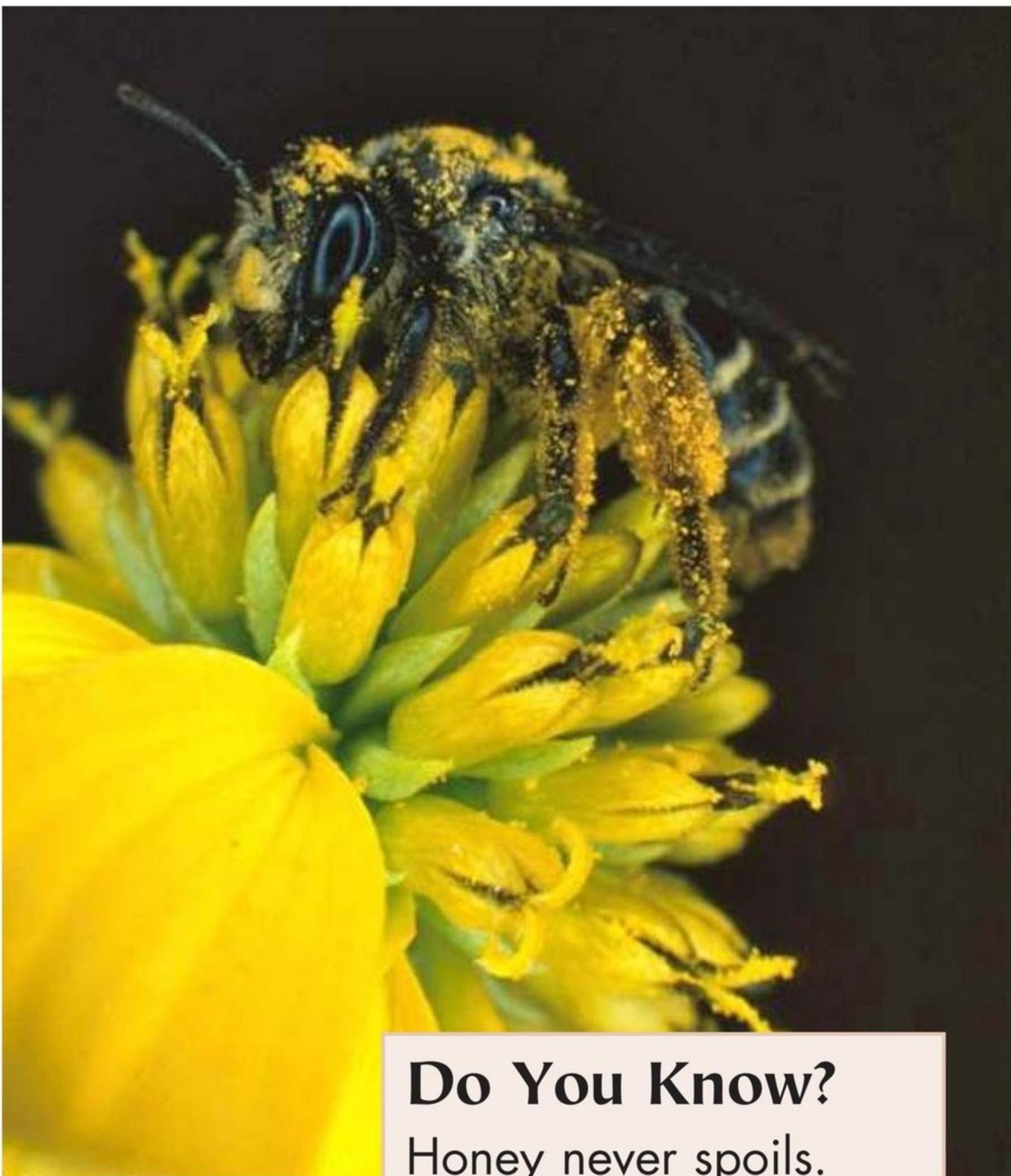
A frame of honeycomb. The honey is on the outside. The light circle contains eggs whose cells are capped to protect them until they hatch. The very center contains pollen.

Interviewer: How do you get the honey out of the comb?

Buzz: A wax cap seals the honeycomb. I have to cut off the capping and then put the frame into a machine that spins around. This makes the honey fly out of the cells. I give the comb back to the bees, and they fill it up again. After the honey comes out, I heat it to thin it. Then I filter out the wax and put the honey in jars.



Buzz's honey house has a heating tank (lower right-hand corner) and a tube that pumps the honey through a filter bag (center) and into a bucket.



This bee is covered in pollen. She will spread the pollen to other flowers, producing seeds.

Do You Know?

Honey never spoils. Bacteria don't grow in it because it has too much acid. The acid is antibacterial. Putting honey on a burn or a wound will help prevent infection and help the wound heal faster.

Glossary

anther (<i>n.</i>)	the male part of a flower that produces pollen (p. 17)
bellows (<i>n.</i>)	a pump that blows air (p. 6)
cells (<i>n.</i>)	the six-sided cups that form a honeycomb (p. 9)
congregate (<i>v.</i>)	to gather together (p. 8)
extract (<i>v.</i>)	to take out (p. 5)
honeycomb (<i>n.</i>)	layers of cells that form a beehive (p. 5)
native (<i>adj.</i>)	belonging to a specific place or country by birth (p. 13)
pistil (<i>n.</i>)	the female part of the flower that produces seeds (p. 17)
pollen (<i>n.</i>)	male flower cells that often look like yellow dust (p. 12)

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