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The Buzzing Workers: Inside the World of Honeybees

Have you ever seen a bright yellow and black insect buzzing busily from flower to flower? Chances are, you were watching a honeybee! Honeybees are some of the most fascinating and hard-working creatures on Earth. They are famous for two things: making sweet honey and being incredible team players.

Honeybees are social insects, which means they don't live alone. Instead, they live together in a massive group called a colony. Their home is called a hive. A single healthy hive can be home to up to 60,000 bees! Inside the hive, it's like a bustling city, where every bee has a specific job to do.

The Hive Hierarchy

There are three main types of bees in a honeybee colony, and each one is essential.

- **The Queen Bee:** There is only one queen in each hive. She is the largest bee and is the mother to almost all the other bees. Her only job is to lay eggs—sometimes up to 2,000 in a single day! A queen can live for several years.
- **Worker Bees:** These are all female bees, and they do all the work! When they are young, they are "house bees," cleaning the hive, feeding the baby bees (called larvae), and protecting the entrance. When they get older, they become "foragers." These are the bees you see flying outside, searching for food.
- **Drones:** These are male bees. They have big eyes and don't have stingers. Their only job is to find and stay with the queen. They don't collect food or help around the hive, and if food gets scarce in the winter, the workers will kick them out.

The Quest for Food

Forager bees have a very important mission: to find food for the entire colony. They are looking for two things from flowers:

- **Nectar:** A sweet liquid that gives bees the energy to fly. This is what they turn into honey!
- **Pollen:** A dusty powder that provides protein, which is essential for the baby bees to grow strong.

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While collecting nectar and pollen, bees accidentally move pollen from one flower to another. This is called pollination, and it's what allows plants to grow fruits, vegetables, and seeds. Bees are critical pollinators for many of the foods we eat!

The Language of Dance

How does a bee tell its sisters where to find the best flowers? They can't speak, so they use a very special "language"—they dance! When a forager bee finds a fantastic source of food, she flies back to the hive and performs a specific dance on the vertical honeycomb.

There are two main types of dances:

- The Round Dance: This dance is used when food is very close to the hive (less than 100 meters). The bee runs around in small circles, first one way and then the other. This tells the other bees, "Food is nearby! Fly out and search!"
- The Waggle Dance: This dance is much more complex and is used when food is far away. It tells the other bees exactly how far and in which direction to fly!

During the Waggle Dance, the bee runs in a straight line while vigorously wagging her abdomen (tail end) from side to side. Then she circles back to the start. The angle of the straight line tells the other bees which direction to fly in relation to the sun. The speed or length of the waggle run tells them how far away the food is. A slower, longer waggle means the food is very far!

The other bees watch closely, feel the vibrations, and even smell the nectar on the dancer. Thanks to this incredible dance language, the hive can efficiently collect enough food to survive the winter and make the honey we all enjoy.



Bees may be small, but their complex society, hard work, and unique way of communicating make them one of nature's true wonders.



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1. Based on the passage, what is the most likely reason a honeybee would perform a "Round Dance" instead of a "Waggle Dance"?
 - a) The bee is trying to warn the colony about a nearby predator.
 - b) The queen has ordered the worker to find food in a different direction.
 - c) The source of nectar is located very close to the hive.
 - d) The bee is a young "house bee" that hasn't learned the Waggle Dance yet.

2. Which of the following best describes the role of the Queen Bee within the colony?
 - a) She protects the hive entrance and feeds the growing larvae.
 - b) She leads the foragers to new flower patches using the Waggle Dance.
 - c) She is the mother of the hive whose primary responsibility is laying eggs.
 - d) She collects nectar to turn into honey for the colony's winter food.

3. In the Waggle Dance, how does a forager bee communicate that a food source is very far away?
 - a) By running in small, quick circles first one way and then the other.
 - b) By increasing the speed and length of the straight "waggle" run.
 - c) By flapping her wings loudly to create specific vibrations.
 - d) By flying to the entrance and pointing her head toward the sun.

4. What can you infer about the importance of honeybees to humans based on the section about pollination?
 - a) Honeybees are the only insects capable of living in a social colony.
 - b) Without bee pollination, many of the fruits and vegetables we eat could not grow.
 - c) Honeybees prefer to visit flowers that have already been visited by other bees.
 - d) The honey produced by bees is the only source of energy for most other insects.

5. Which of the following best describes the main idea of the section "The Language of Dance"?
 - a) Honeybees use complex movements to share specific information about food locations.
 - b) Bees prefer to dance on the vertical honeycomb rather than outside the hive.
 - c) Dancing is a fun way for worker bees to relax after a long day of foraging.
 - d) Most bees in the colony are unable to find food without the queen's permission.