LEVELED BOOK • Q

# Awesome Ants

Multi Level N·Q·T

Written by Rus Buyok

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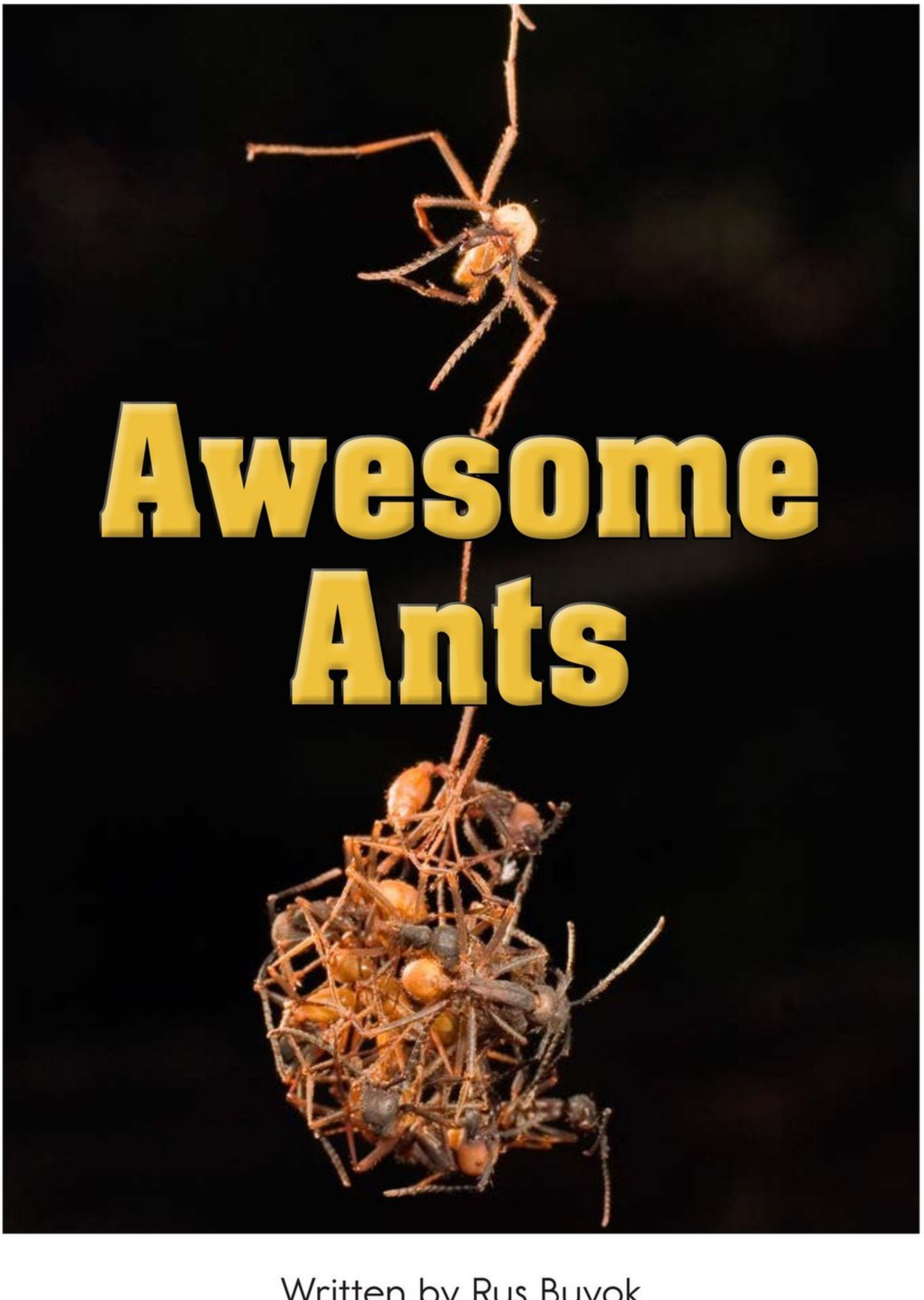


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## Focus Question

What makes ants awesome?

## Words to Know

antennae
colony
communicate
environments
insects
mammals
pheromones
species
vibrations

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Level Q Leveled Book

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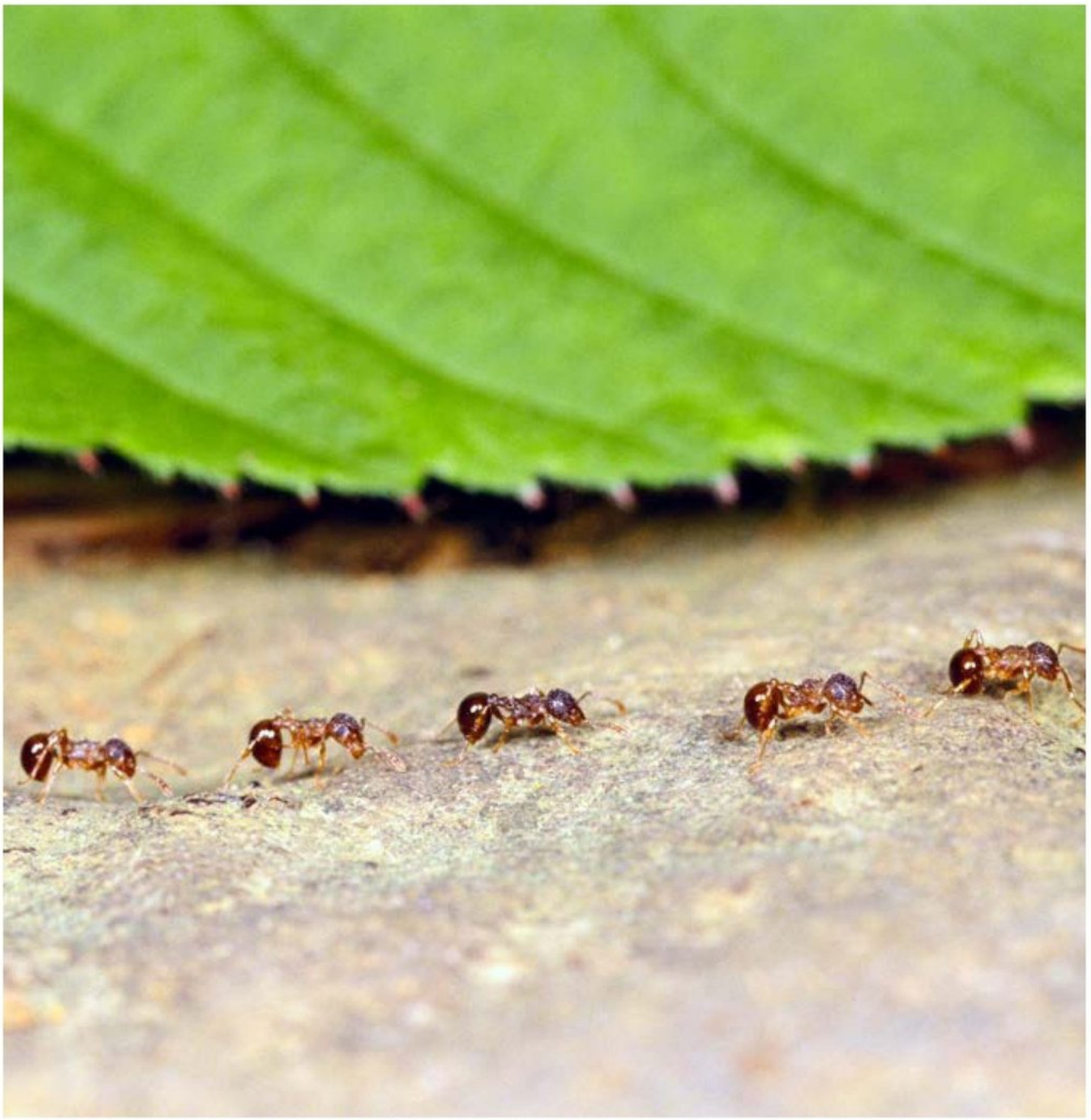
## Correlation

| LEVEL Q | |
|---|---|
| Fountas & Pinnell | N |
| Reading Recovery | 30 |
| DRA | 30 |

## Table of Contents



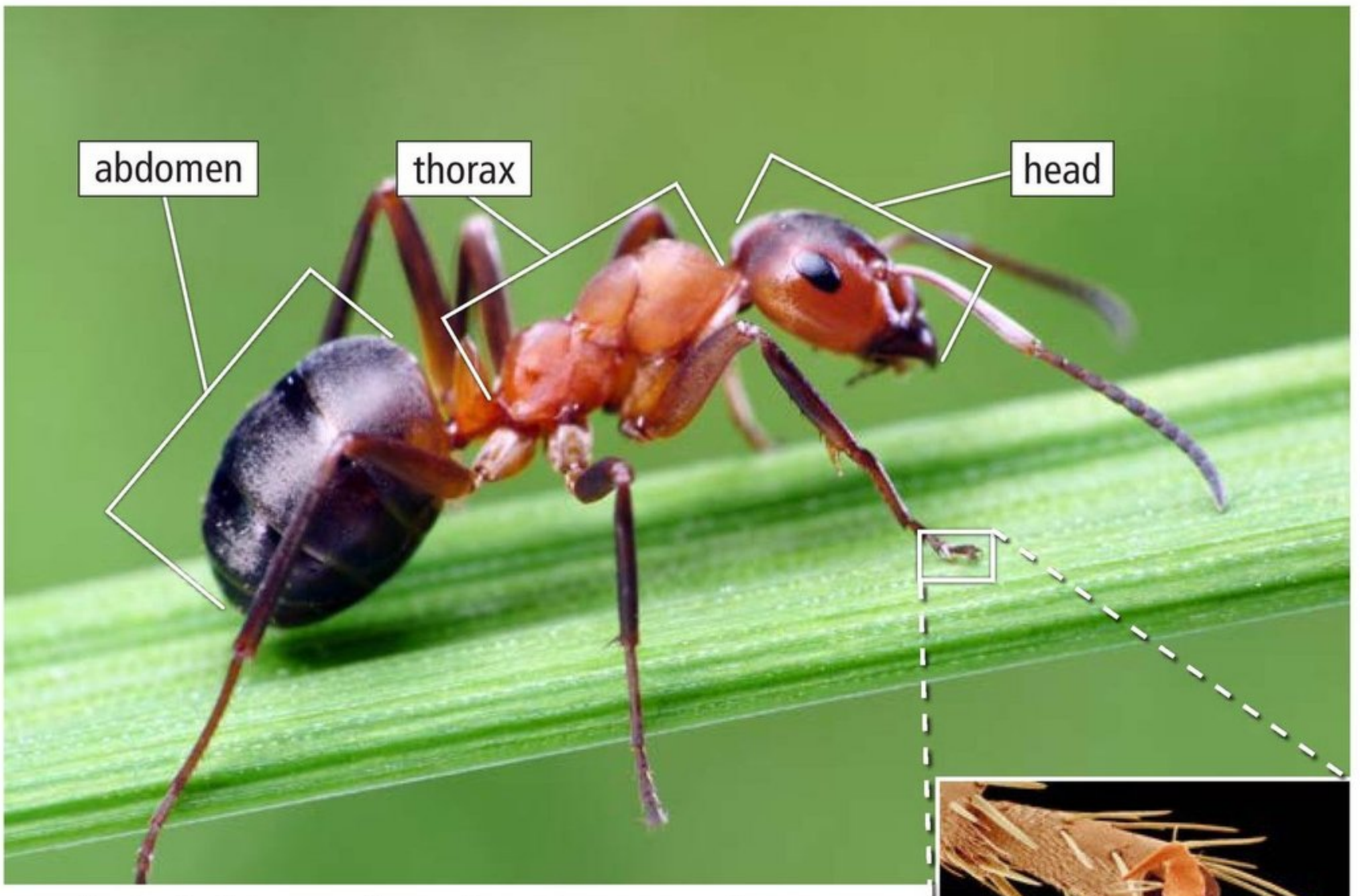
Ants are always on the move.

## A Little History

You've seen them marching through grass and across sidewalks. You may have even seen them crawling over your kitchen counter or inviting themselves to your picnic. They come in colors such as red, yellow, brown, and black. We're talking about ants—tiny, strong, awesome ants.

This fossil of a giant male ant is over 49 million years old.

Ants are about 100 million years old. They were crawling around under the dinosaurs, early **mammals**, and ancient birds! Between then and now, they've changed a lot. Ants used to look more like wasps with shorter jaws. Today, more than 10,000 **species** of ants live in deserts, rainforests, swamps, and cities on every continent except Antarctica. They have been able to survive so long because of their bodies and how they live. Through the years, they have been able to adapt to changes in their **environments**.

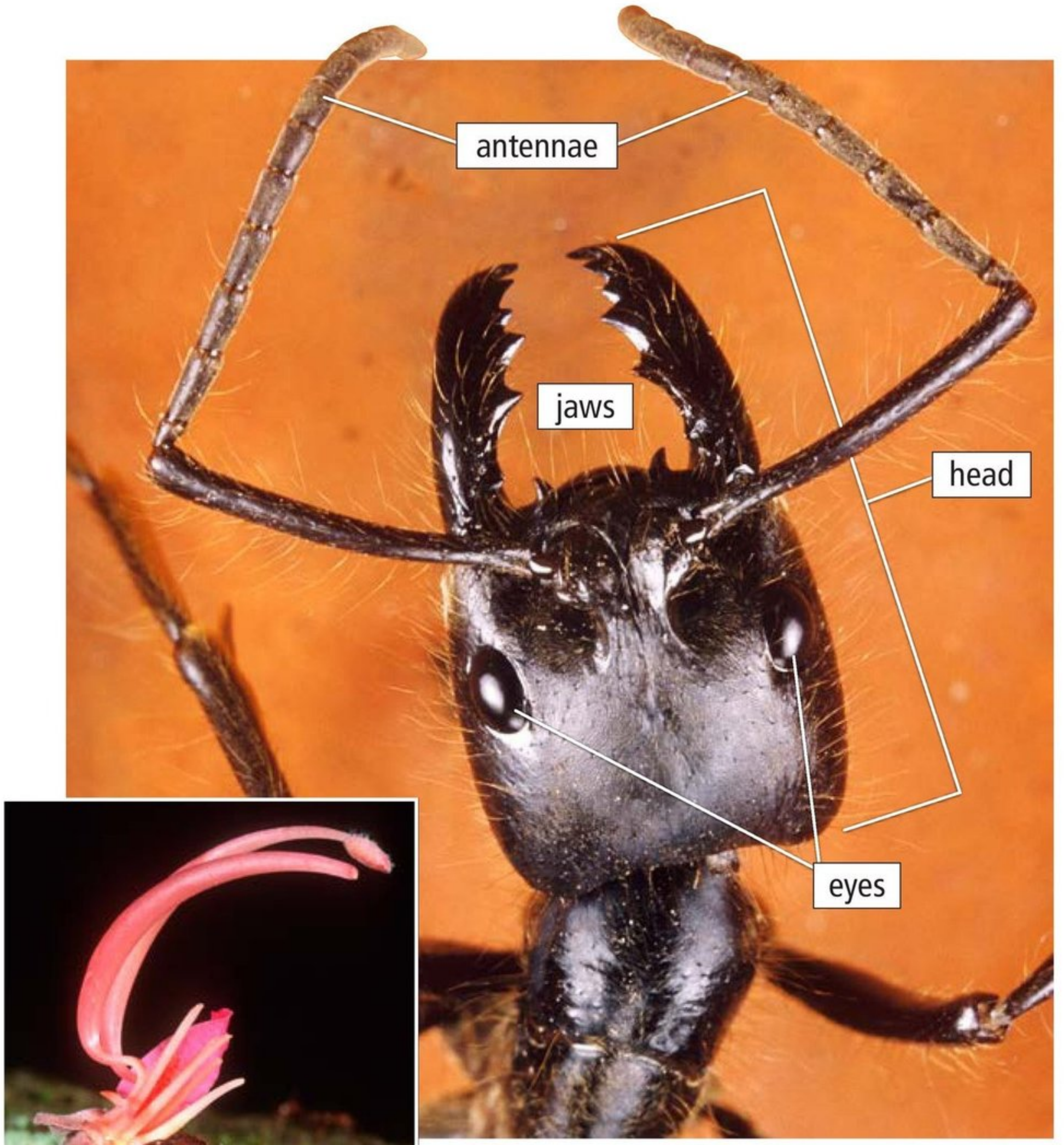



An ant's leg seen through a microscope shows the hooks it uses to climb.

## Body Parts

Like all **insects**, ants have six legs and three body parts. The back part of their body is the *abdomen*. This part holds the heart and stomachs. Some ants have stingers and poison sacs that they use to protect themselves from predators.

Their three pairs of legs attach to the middle part, called the *thorax*. Each leg has three joints and little hooks that allow ants to climb almost anything. Ants don't have ears, but they can hear by feeling **vibrations** through their legs and feet.






The head contains the brain, two eyes, **antennae**, and jaws. The jaws open and close like scissors. They are used for cutting and carrying things and also for digging and hunting. They are an ant's most important tool. Ants can lift more than twenty times their own weight. Ants also have other mouthparts for chewing food and drinking.

Ants use their antennae to taste a grape.

The two eyes, called *compound eyes*, are each made up of many smaller eyes. Even though ants have so many eyes, their eyesight is not very good. Instead, they use their antennae to get around. The antennae are like all-in-one sense machines. Ants use them to taste, smell, hear, and **communicate** with other ants through touch. The long, thin antennae bend in the middle, like a human's elbow, and are always moving around.

Ants don't have lungs. Instead they breathe through small holes all over their bodies.

Four ants use their antennae to communicate.

## Let's Talk

Ants communicate with each other in three ways: touch, sound, and smell. Ants touch each other with their antennae in different ways to send different messages. They can also make noises to communicate by rubbing their legs together or on their bodies. Scientists have learned that these special noises are a call for help.

Leaf-cutter ants carry leaves that weigh far more than the ants back to their colony.

The main way ants communicate is by smell. They release special chemicals, called ***pheromones*** (FAIR-oh-mohnz), which other ants can smell long after the first ant is gone. Different smells send different messages. For example, a crushed ant releases chemicals that attract other ants. Some chemicals work as an alarm to warn other ants that danger is nearby. The chemicals also make the other ants attack anything near them that is not an ant from the same **colony**. An ant that has found food will lay down a trail of chemicals for other ants to follow. The trail allows them to find the food and return to the colony. The more ants that follow the trail, the stronger it gets.

## One Big, Happy Family

Ant colonies, which can have millions of members, are filled with activity. Some ants build their colonies in wood, but usually colonies are built underground. They have many different rooms, which all have different uses. Some rooms store food or eggs, while others are used to care for the young. Colonies even have rooms for ants to relax in.

This cast shows the upper part of a large ant colony. Scientists think this colony went over 12 meters (39 ft) into the ground.


Soldier ants are usually much larger than worker ants.

Within the colony, every ant has a job and special skills to do that job. Worker ants and soldier ants find food and protect the nest. They are social insects and work together as a group. Worker ants are usually the ones you see above the ground. They are the older ants. Other ants build the nest, take care of the young, and do other jobs. The ants that work inside the nest tend to be younger ants. All these ants are female, but only one is allowed to lay eggs: the queen. In other words, all the ants in a colony are related.


## What About the Boys?

Male ants have only one purpose in most colonies: to mate with the queen. Once they've done their duty, most male ants simply die.

Many smaller ants spend their lives caring for the queen.

## The Queen

The queen is the leader of the colony, but she doesn't tell the other ants what to do. The largest of all the ants in the colony, the queen is an egg-laying machine. Some queens can lay thousands of eggs every day. Most colonies have only one queen. When other queen ants hatch, they must fly away and start other colonies. When they start laying eggs, they lose their wings. Queens can also live very long for insects—more than twenty-five years—but when they die, so does the colony.

### I Can Fly!

Like queens, some males can also fly. When they land near a colony, worker ants rip the wings off. Then they rush the male to the queen so the two can mate before the male dies.

## Let's Go Floating

Not even water can stop some ants. They climb on top of each other and link their legs until they form a raft or bridge made of their own bodies.

## Yep, Ants Are Awesome

Ants may be small, but they can do awesome things. Thousands or millions of ants working together can build bridges to cross a gap in their path. They can also shape themselves into boats to float across rivers safely. As a group, they can overpower animals hundreds of times their own size for food.

A trail usually means the ants are moving to a new home—or they've found something very tasty.

So the next time you come across a trail of ants, stop and watch. Better yet, follow them—just don't step on their trail. When you see what these little gals are capable of, you'll understand just how awesome they are.

# Glossary

**antennae** *(n.)* the thin feelers found on the heads of some animals that help them touch and smell (p. 7)

**colony** *(n.)* a group of animals that live together; a place where a group of ants or certain other social insects live (p. 10)

**communicate** *(v.)* to share information using pictures, language, or other means (p. 8)

**environments** *(n.)* the conditions affecting an organism in a specific area, including plants, animals, water, soil, weather, landforms, and air (p. 5)

**insects** *(n.)* small animals with six legs, three body parts, and usually two sets of wings (p. 6)

**mammals** *(n.)* warm-blooded animals with a backbone and hair or fur that nurse their young and have babies that are born live (p. 5)

**pheromones** *(n.)* chemicals released by animals to stimulate or communicate with other members of their species (p. 10)

**species** *(n.)* groups of living things that are physically similar and can reproduce (p. 5)

**vibrations** *(n.)* trembling movements; small, rapid shaking motions (p. 6)

# Awesome Ants

*A Reading A–Z Level Q Leveled Book*
*Word Count: 883*

## Connections

### Writing and Art

Write an acrostic poem with words or phrases about ants, using the letters in the words *awesome ants.* Illustrate your poem and share it with your class.

### Science

Research one species of ant, such as carpenter ants or leaf-cutter ants. Write a paragraph about what makes the species unique. Include a diagram of your ant.