

LEVELED BOOK • Q

Goliath Bird-Eating Spiders: Giant Arachnids



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Focus Question

How do the unique features of a Goliath bird-eating spider help it to survive in the rainforest?



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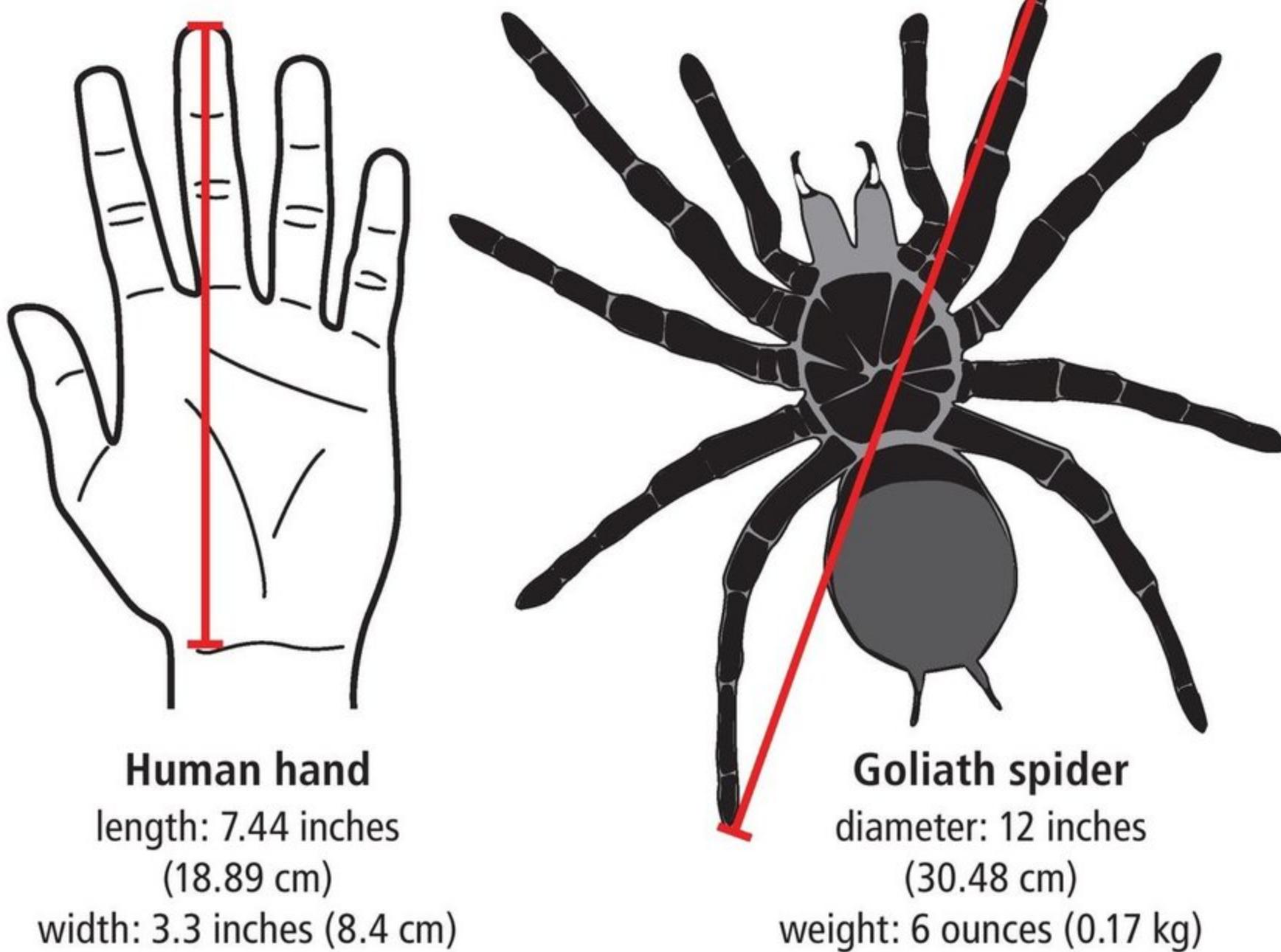
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Big, Hairy, and Heavy

It's nighttime in the rainforest. As you walk down the path, you see the biggest spider you've ever seen. This giant spider has eight long, hairy legs and fangs that measure 0.75 inches (2 cm)—about half the size of a person's thumb! Its **venom** can stop a mouse in its tracks with a single bite.

A giant of the spider world, the Goliath bird-eater is the heaviest spider in the world. They can weigh up to 6 ounces (170 g)—about the weight of a large apple.

How Big Is It?





The two limbs next to the head are called *pedipalps*. They help to hold prey.

Running into a spider the size of a dinner plate can be scary, but you don't need to worry. These spiders aren't dangerous to humans. They are an important part of the tropical habitats where they live.

Eyes, Legs, and Hair

Goliath bird-eating spiders are the largest of all *tarantulas*. Tarantulas are a type of big, hairy spider found in many parts of the world.

Like many other spiders, Goliaths have eight eyes and eight legs. They also have two main body parts. The front part contains the spider's eyes, mouth, stomach, and brain. The legs are also attached to this part. The part in the back contains the spider's silk-making glands.

Goliath tarantulas are covered in coffee-colored hairs. Their long, thick legs have dark brown hairs. The hairs are lighter in color at each "joint," or knee.



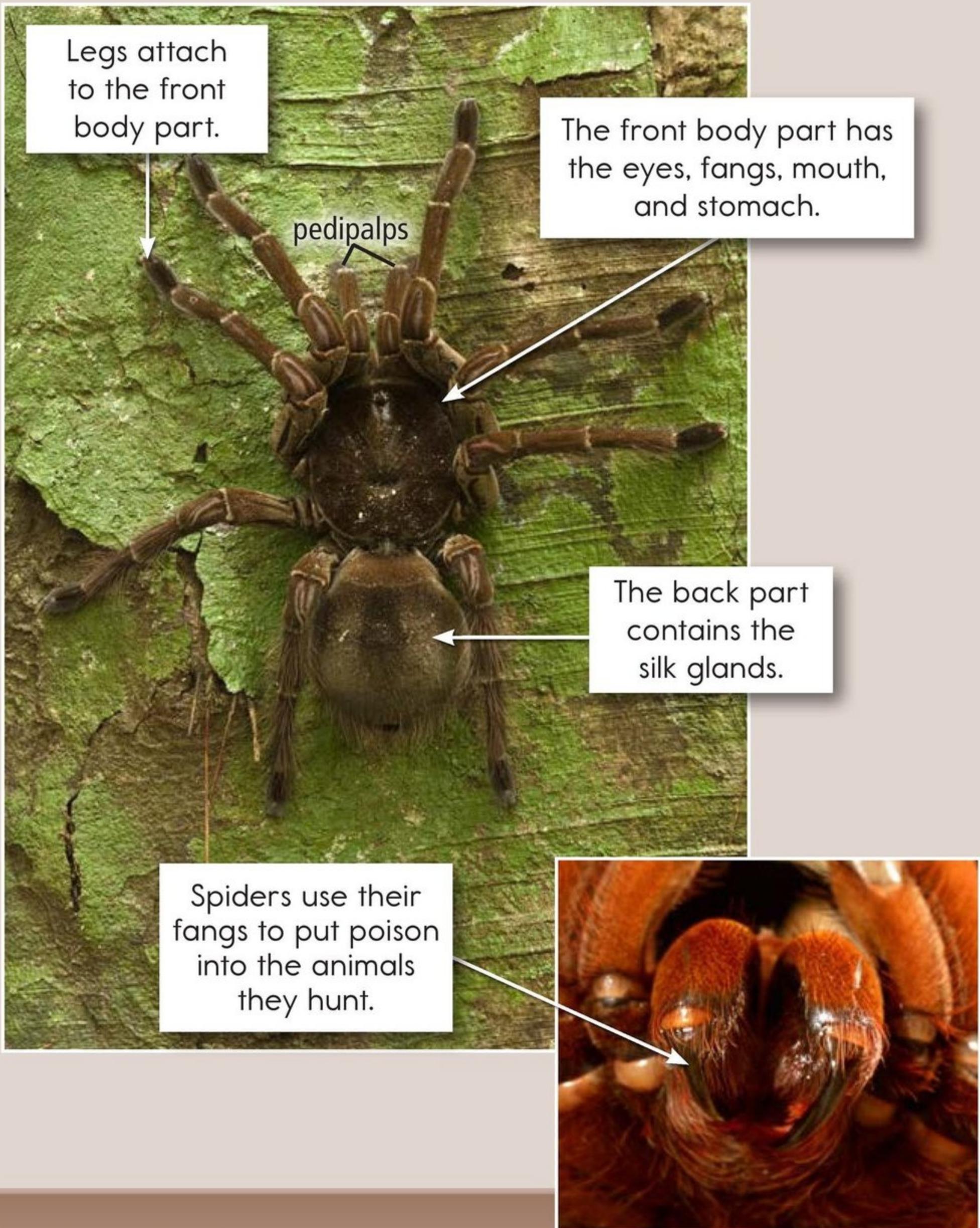


Female Goliaths have slightly shorter legs than males, but their bodies are bigger.

Even though they have eight eyes, these giant spiders have poor eyesight. They can tell light from dark, but they can't make out much detail. Instead, they depend on special hairs that cover their body to **sense** when prey is near. The hairs can feel the slightest vibrations on the ground and in the air. When a mouse or other small prey crawls by—*wham!* It triggers an attack.

The Goliath has an extra set of short limbs near the spider's head to hold a victim. These short **appendages** then help pull the prey toward the Goliath's mouth and fangs.

What Makes a Tarantula a Spider?



All spiders have

- eight legs
- jaws with fangs (most spiders make venom)
- glands that make silk
- a tough, protective outer skeleton
- eyes (most have eight eyes)
- sensory hairs on their bodies

Life in the Steamy Rainforest

Goliath spiders live in the hot, humid rainforests of South America. They live in **burrows** under the ground or in spaces under rocks. Unlike many spiders, they don't spin a web, but they make silk to use in their burrows.

Tropical rainforests are hot spots for living things. From bats, butterflies, and birds to big cats and lush plant life, these habitats are rich with life. Rainforests cover only about 6 or 7 percent of Earth's surface. However, they contain more than half of the plant and animal species in the world.

Where Do Goliath Bird-Eating Spiders Live?





Goliaths will often drag their prey back to their burrows to eat it.

Hunters on the Prowl

Tarantulas are **nocturnal**, which means they normally stay hidden in their burrows during the day. After the Sun goes down, they hunt. Goliath spiders are skilled predators. Crickets, beetles, frogs, bats, mice, and other small animals are all on their menu. They sometimes eat a small bird, but feathered creatures aren't a normal part of their diet.

These tarantulas have extra-large, hollow fangs that are filled with venom. When a mouse or other small animal gets close, Goliaths pounce and grab the prey with their legs. The spiders inject the prey with venom through their fangs.

The venom attacks the nervous system and **paralyzes** small prey. It isn't strong enough to cause serious problems in humans, but a bite can cause swelling and pain—like a sting from a bee or wasp.

The Goliath spider mouth is a straw-shaped opening that can only suck. All food must be in liquid form. Spiders spray strong juices on the paralyzed animal they've bitten. These juices turn the flesh into liquid.

A large tarantula can turn a mouse into a small pile of hair and bones in about thirty-six hours by breaking down the mouse tissue and sucking up the liquid remains.



Goliath spiders can shoot a cloud of stiff hairs at their attacker. These hairs have tiny hooks that cause tremendous irritation.



A paralyzed tarantula is being dragged to its own burrow by a spider wasp.

What Eats a Giant Spider?

Although Goliath bird-eating tarantulas are giants of the spider world, they do have enemies. To scare away predators, Goliaths rear up on their hind legs or make a loud hissing sound by rubbing the hairs on their legs together. Still, hawks, owls, skunks, and snakes sometimes eat these spiders. One of their deadliest predators is an insect known as a *spider wasp* or *tarantula hawk*. When a female wasp spies a tarantula, she stings it. The sting paralyzes the spider but doesn't kill it. The wasp digs a hole, places the paralyzed spider in it, and lays an egg on it. When the egg hatches, the wasp larva makes a tiny hole in the spider's body and crawls inside. Then the larva feeds on the spider.

Growing Up as a Tarantula

Goliath spiders are loners. They only get together with other spiders during the mating season or when they're guarding their young. Females are bigger than males and live much longer. Some females have survived more than twenty-five years in **captivity**.

Like all spiders, these tarantulas **molt** as they outgrow their hard outer covering, which is called an *exoskeleton*. They leave their old skin behind as a new outer skin hardens underneath. Adult Goliaths molt once or twice a year. Spiderlings, or young spiders, molt more often.





A Goliath spider is tending to her young. The young spiders will change color as they age.

After mating, a female Goliath lays about fifty eggs in a silk egg sac. She stores the sac in her burrow and guards the eggs until they hatch in about six to seven weeks. The little spiderlings stay under her watchful eye for a few weeks until after their first molt. Then they're on their own for the rest of their lives.

wowser!

- Like many spiders, Goliath bird-eating spiders have forty-eight "knees." Each leg has six joints!
- The Goliath bird-eating spider was named by early explorers in the 1800s who discovered one eating a hummingbird.





Their weight makes Goliath spiders slower climbers than most other spiders.

Why Spiders Matter

Goliaths have been around for millions of years—and they haven't changed much in all that time. Their sheer size has always fascinated people. We continue to learn more about these spiders, from how their venom works to why females live longer than males.

Like all living things, these spiders play an important role in the habitats where they live. They help keep rodents, insects, and other prey species under control. They also provide food for other animals.

The world just wouldn't be as interesting without these hairy giants crawling through the forest.

Glossary

appendages (<i>n.</i>)	external body parts that stick out from the body, such as arms or legs (p. 7)
burrows (<i>n.</i>)	holes dug in the ground by an animal for use as a home (p. 9)
captivity (<i>n.</i>)	the state of being confined or without freedom (p. 13)
glands (<i>n.</i>)	organs that make and give off substances that are necessary for a body process (p. 6)
molt (<i>v.</i>)	to shed an outer covering such as skin, hair, feathers, or a shell before replacing it with a new layer (p. 13)
nocturnal (<i>adj.</i>)	active at night rather than during the day (p. 10)
paralyzes (<i>v.</i>)	causes one or more parts of a body to become unable to move (p. 11)
sense (<i>v.</i>)	to receive information about the world through sight, touch, taste, smell, or hearing (p. 7)
venom (<i>n.</i>)	a poisonous fluid that some animals use to kill prey and defend themselves, usually delivered by biting or stinging (p. 4)

Words to Know

appendages
burrows
captivity
glands
molt

nocturnal
paralyzes
sense
venom

Front cover: A Goliath spider in the Amazon rainforest in South America

Title page: When a Goliath spider assumes this position, it is ready to defend itself.

Page 3: Goliath spiders look similar to the adults—only smaller.

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