

Tall Tales

Wildlife and Wild Places

STRUCTURE AND FUNCTION

As you read, think about the body parts that help a giraffe survive in its environment.

NATIONAL GEOGRAPHIC

Explorer

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What we thought we knew about giraffes doesn't measure up. There's more than one species!

By Lynn Brunelle

All About the Tall

Giraffe Basics

Giraffes are well-adapted to find the food they need to survive. Yet they have been studied less than any animal in the world. That's changing. Here's a look at these gentle giants:

Safety Goggles Long eyelashes and thick eyelids help protect a giraffe's eyes. There are many sharp thorns on the acacia trees, on which they browse.

Nose Plugs Nostrils close tightly so thorns and branches won't poke in.

High-End Dining A giraffe's long neck and narrow head help it reach high into trees to find leaves and buds to eat.

Super-size Neck Bones Like a human, a giraffe has seven neck bones. A giraffe's bones are a lot bigger, though. One neck bone can measure up to 25 centimeters (10 inches) long.

Spit Take A giraffe's mouth has to be tough to hold up to the thorns on the leaves they eat. Its tongue is coated with a thick saliva that protects against harmful bacteria.

Long Reach A giraffe's tongue is 50 centimeters (20 inches) long. It helps the giraffe reach the juiciest leaves at the tops of trees.

Spot On A giraffe's spots act as camouflage. They blend into the dappled sunlight and shadows of trees and plants. No two giraffes have the same pattern of spots.

Heavy Heart A giraffe's heart can weigh 11 kilograms (25 pounds). Each pulse pushes 75 liters (almost 20 gallons) of blood around its body.

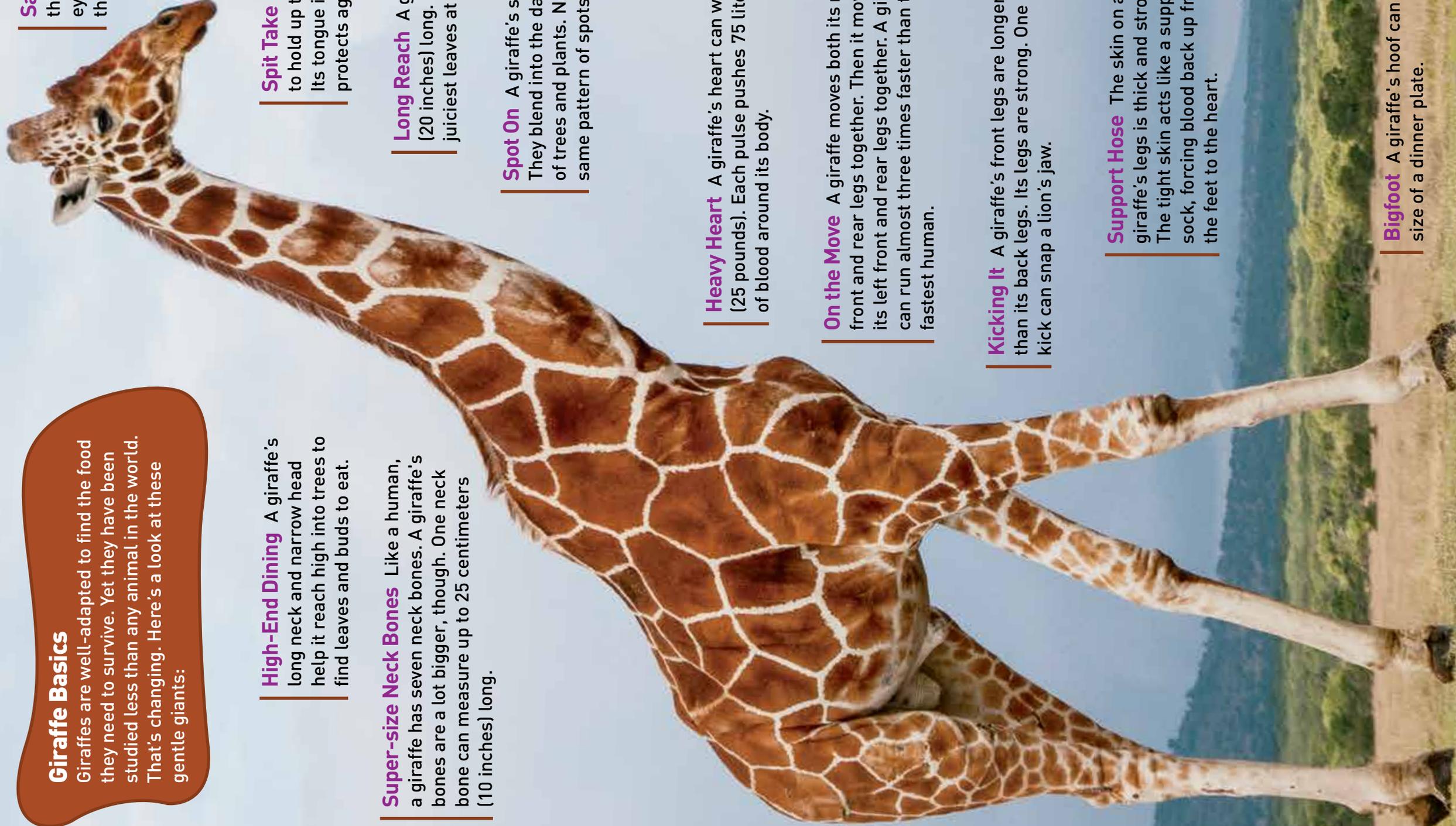
On the Move A giraffe moves both its right front and rear legs together. Then it moves its left front and rear legs together. A giraffe can run almost three times faster than the fastest human.

Kicking It A giraffe's front legs are longer than its back legs. Its legs are strong. One kick can snap a lion's jaw.

Support Hose The skin on a giraffe's legs is thick and strong. The tight skin acts like a support sock, forcing blood back up from the feet to the heart.

Tummy Time Like cows, a giraffe has four stomachs. It can eat as much as 34 kilograms (75 pounds) of leafy greens every day.

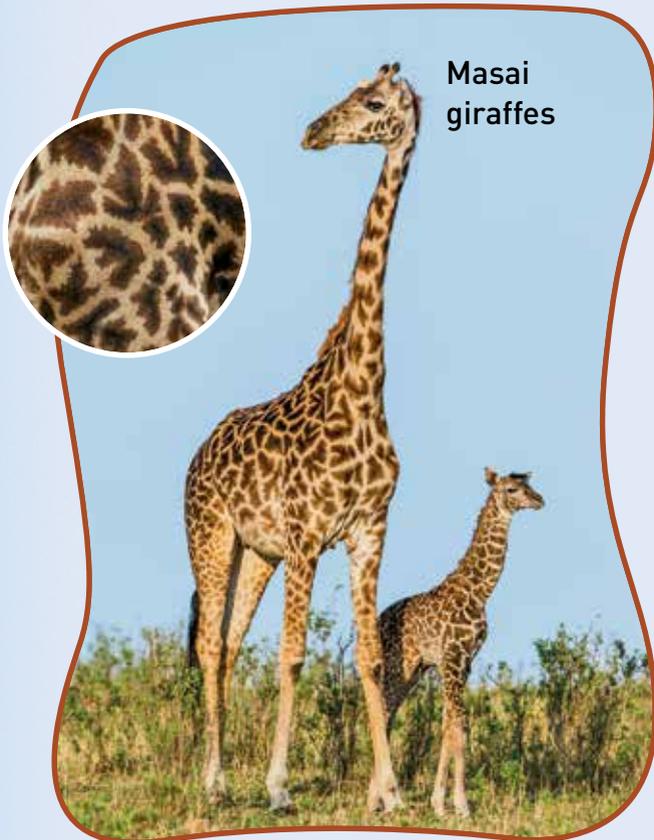
Bigfoot A giraffe's hoof can be the size of a dinner plate.



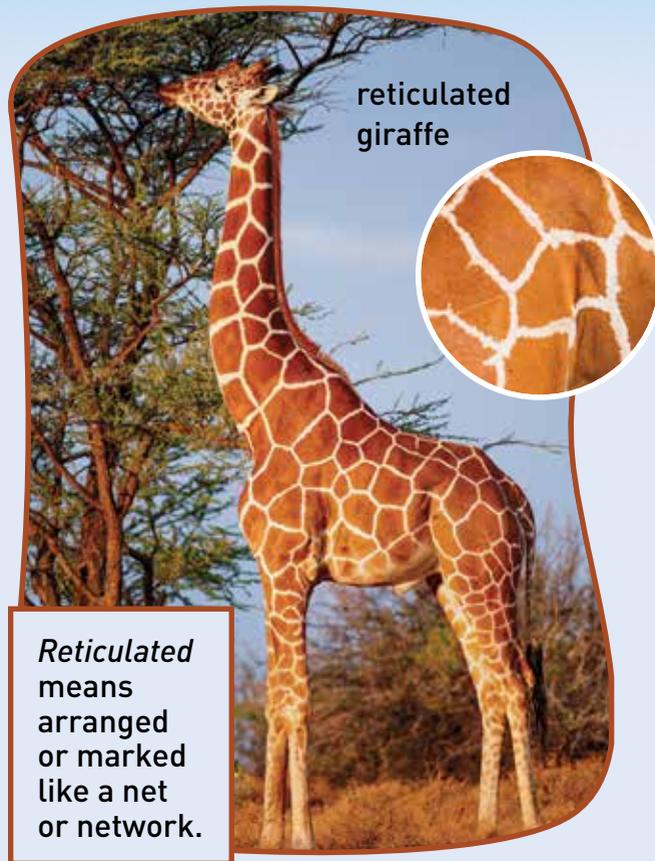
Under the Radar

They tower above the grasslands and woodlands of Africa. They stand out in zoos around the world. They appear in ancient rock carvings in Africa. They show up in toy stores and on clothing. Everyone knows a giraffe when they see one. But scientists weren't really taking a close look—until now.

Scientifically, giraffes didn't seem that interesting. They didn't seem to form close bonds, as elephants do. They didn't seem to be social, like gorillas. They didn't seem to do more than quietly browse. "Since they were a common sight in the wild, no one imagined there was an issue with population numbers," says Steph Fennessy. She's the co-founder of the Giraffe Conservation Foundation in Namibia, Africa. Steph and her husband, Julian, focus on the conservation of giraffes in the wild.

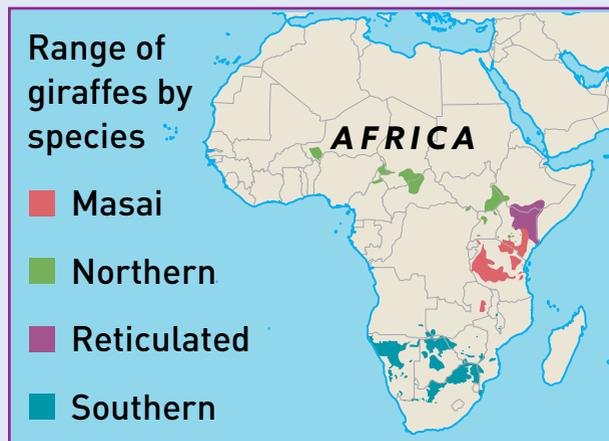


Masai giraffes



reticulated giraffe

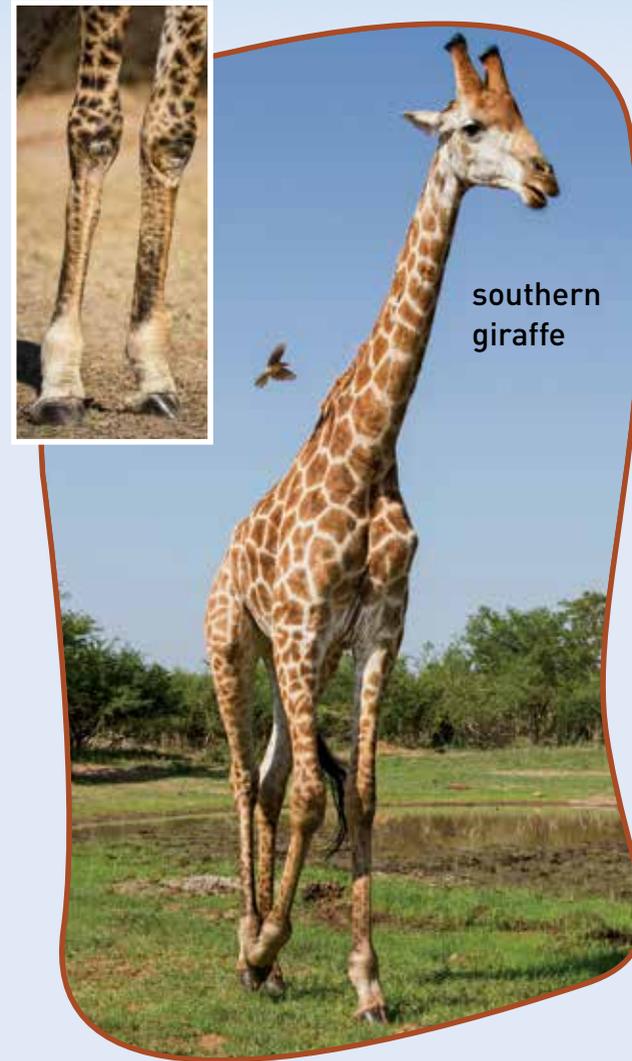
Reticulated means arranged or marked like a net or network.



Not All the Same

Scientists noticed there were different groups of giraffes living in different parts of Africa. They observed nine populations. Scientists thought they all belonged to the same **species**.

Then the Fennessys did more research. They gathered tissue samples from the major groups of giraffes. A scientist, Axel Janke, compared the samples under a microscope. He saw that there was not just one species of giraffe but four!



southern giraffe

Spot the Difference

How can you spot the difference between giraffe species? Look at their spots. The Masai giraffe has spots that are dark brown and leaf-shaped. The patches are jagged and surrounded by a creamy color. Their pattern does not cover all of their legs. They look like they're wearing socks.

The reticulated giraffe has large, orangey-brown spots. Thin streaks of creamy white surround the spots. The pattern goes all the way down the legs.

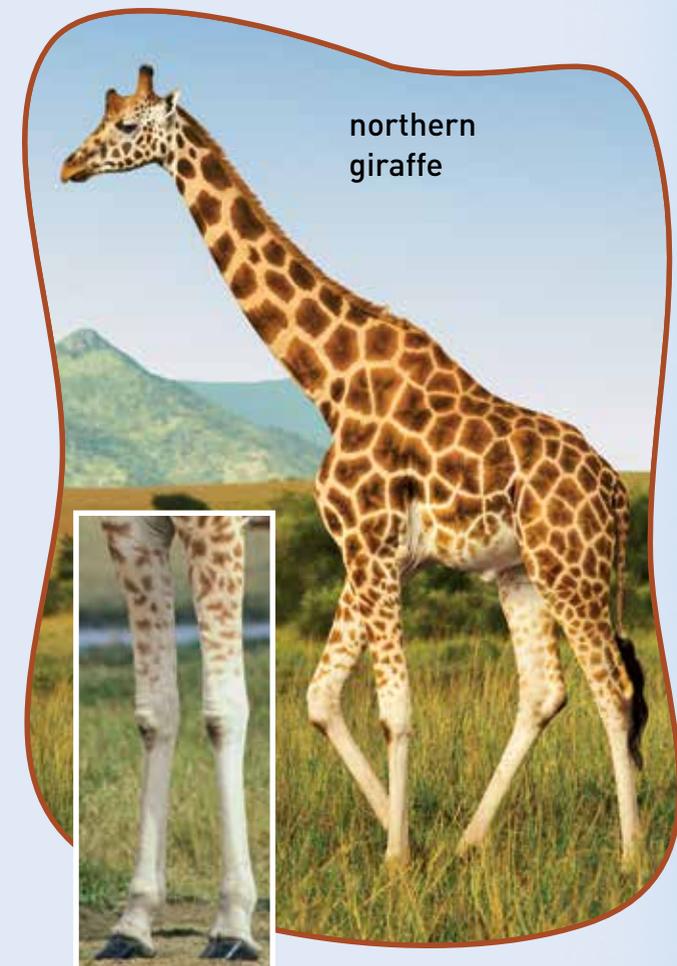
The spots of the southern and northern giraffes look similar. They are a chestnut brown surrounded by paler tan. The southern giraffe's patches are a little more jagged. The northern giraffe has no spots on its legs.

Branching Out

Long ago, giraffes may have belonged to one species. Over time, groups of giraffes spread out over Africa and lost contact with each other.

Each group adapted to their new environments. They slowly changed. They became four distinct species. Today they are as different from each other as a polar bear is from a brown bear.

The northern giraffe species lives in East and central Africa. The southern giraffe lives in southern Africa. The reticulated giraffe lives in East Africa. The Masai giraffe is found in southern Kenya, Tanzania, and Zambia.



northern giraffe

High Pressure

Giraffes need a lot of room to roam and browse. As human populations expand, giraffes' **habitats** start to shrink. People cut down trees. Then there is less food for giraffes.

Giraffes are also a target. Poachers kill them for their spotted coats and for meat. They are also killed for their tails, which are valued in some African cultures.

Giraffes are already extinct in at least seven countries in Africa. Across Africa, there are fewer than 100,000 giraffes left. That's not a lot for four species. So, there's much concern among animal **conservationists**.



A giraffe's long, purple tongue helps it snag leaves in hard-to-reach places.



Giraffes must stoop to drink.

Numbers Game

Axel Janke believes we must take a closer look at giraffes. "We need to understand giraffes better to conserve them," he says.

Time is running out to do so, though. The northern and reticulated giraffe species are the hardest hit. Poaching, habitat loss, and disease have reduced their numbers. There are fewer than 5,200 northern giraffes left in the wild. And fewer than 8,700 reticulated giraffes.

Bad News, Good News

The bad news is that each of these species is in trouble. According to Julian Fennessy, giraffes are among the most endangered large mammals in the world. But until scientists knew there were four species instead of one, they didn't realize the threat.

The good news is that the world is now aware of the urgent need to protect giraffes. How they are counted will change their conservation status.

Small Science, Big Difference

Giraffes look so similar. It took looking through a microscope to really understand their differences.

This highlights the importance of technology in understanding nature. As Janke says, "Only with scientific knowledge can we protect animals."

Giraffes have fur-covered horns called ossicones.



A group of giraffes is called a tower.

WORDWISE

conservationist: a person who works to protect animals and plants and promotes the careful use of natural resources

habitat: the place where a plant or an animal lives

species: a group of animals or plants that is similar and can produce young animals or plants