

# For Creative Minds

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## Cheetahs and their Big Cat Cousins

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Cats come in all sizes, from the rusty-spotted cat (2-3.5 lb or 9-1.6 kg) to the Siberian tiger (up to 675 lb or 306 kg). Some cat species are grouped together and called the “big cats.” Lions, tigers, leopards, and jaguars are all big cats. Sometimes other cats, like cheetahs, pumas, and snow leopards, are called big cats too.

Cheetahs are smaller than their big cat cousins, but they are still pretty big! An adult cheetah is 3.5 to 4.5 feet (1.1-1.4 m) long from its head to the base of its tail. The tail adds another 2 to 2.5 feet (.6 to .76 m). Cheetahs are about 32 inches (.8 m) tall at their shoulders, and weigh 70-140 lb. (32-64 kg).



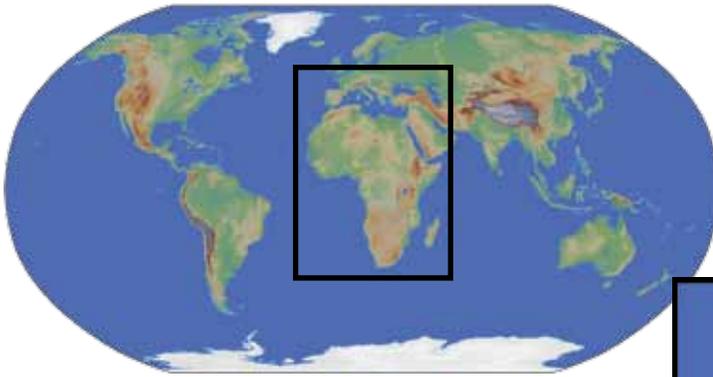
From left to right: human, lion, jaguar, cheetah, house cat, leopard, tiger.

*Which of these are not “Big Cats”?*

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## Cheetah Conservation

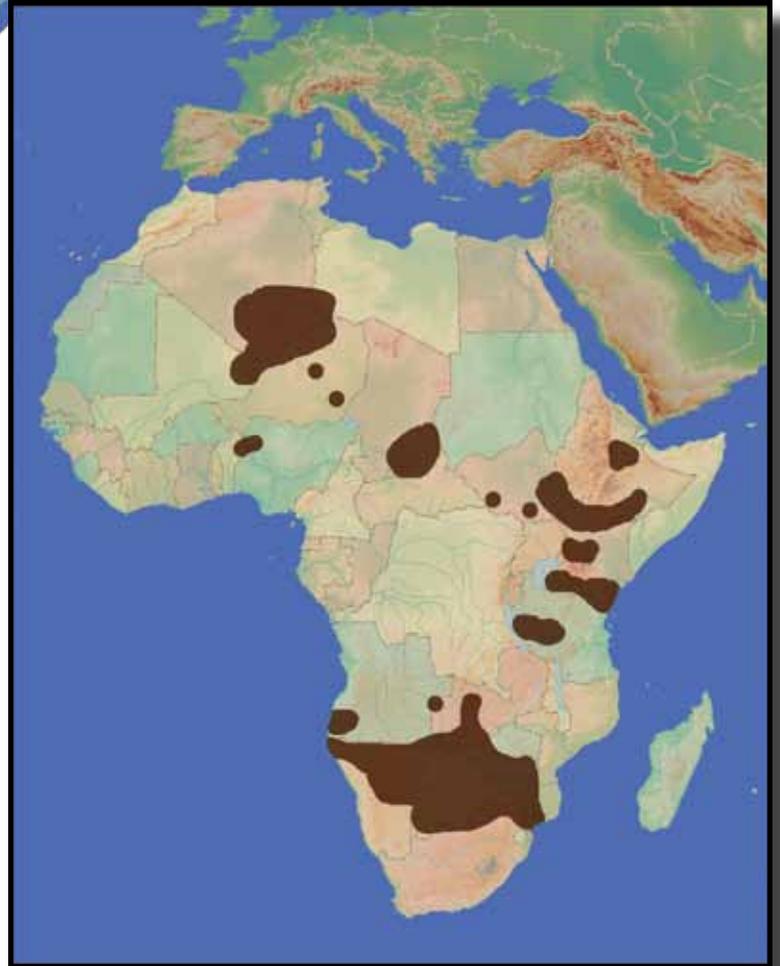
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There are 54 different countries on the continent of Africa . . . and cheetahs used to live in nearly all of them, and on other continents too! But not anymore—now cheetahs live only in the areas shown on this map.

Only one in ten cheetah cubs survives to adulthood. Some die from health problems when they are young. Many cubs are killed by predators such as lions or hyenas. This can happen when the mother cheetah is out hunting, or even when she is with her cubs. She is not big and strong enough to fight off either of these predators.

Once a cheetah reaches adulthood, it faces new challenges. Fragmented territory makes it hard for cheetahs to move around in their habitat. Farms and human populations make the cheetahs' territories smaller and smaller. People hunt many of the same prey cheetahs do, so there are fewer prey animals left for the cheetahs. And some people hunt cheetahs too. In most countries, this is illegal and is called poaching.



### What are we doing?

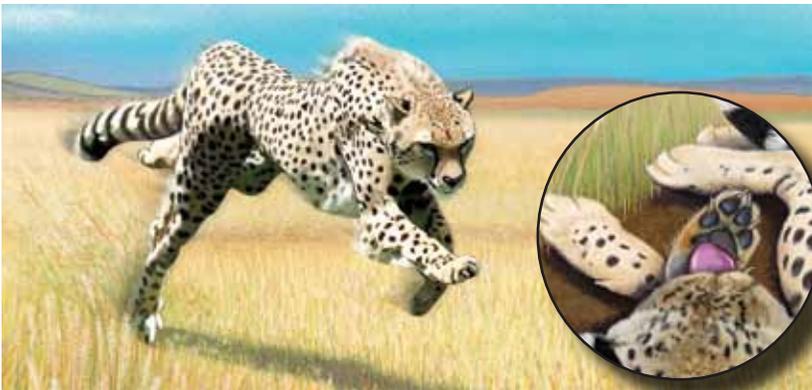
As with most endangered species, education is a big part of conservation. Zoos and conservation organizations teach people about the threats to cheetahs. They raise money to create wildlife refuges where cheetahs will be safe from poachers and away from farms. About 10% of wild cheetahs live in these protected areas. Some zoos are working on captive breeding programs, so that the cheetahs in their zoos can have babies and help the global population.

## Cheetah Adaptations

Cheetahs have larger than normal hearts and lungs for an animal of their size. Their extra-large lungs allow them to take in plenty of oxygen, and their big hearts pump the oxygen through their bodies, fueling them when they run at top speed.



Cheetahs' claws are adapted to help them run. While most cats' claws withdraw into their paws (retractable claws) cheetahs' claws are only partially retractable. They are always ready to grip the ground, much like the cleats on athletic shoes.



Cheetahs' large eyes are set high in their skulls and face forward. This, along with the shape of their retinas (a part of the eye), gives them binocular vision. Cheetahs can see details of things more than three miles away.



Young cheetahs grow a "mantle" of long hair on the tops of their heads, their necks, and their backs. Some believe this is to make them look like the honey badger, a fierce, small animal that most predators leave alone. Others believe the mantle is to help the cubs blend in with the grass.

## Purr or Roar

Some cats purr. Other cats roar. But they can't do both. Why? Two reasons.

Every cat has a bone in its throat called the hyoid bone. In purring cats, this bone is hard and connects to other bones. It transmits vibrations when the cat purrs. In roaring cats, this bone is more flexible and it "floats"—it attaches to muscle, but not to other bones, so it doesn't transmit vibrations well.

The vocal cords of purring and roaring cats are also different. Vocal cords in purring cats fold in a special way that allows them to vibrate when the cat breathes in and out. Because of this, these cats can purr without stopping to catch their breath. The vocal cords in roaring cats are shaped differently. Their vocal cords, along with their floating hyoid bones, keep them from purring, but allow big cats to make loud, deep sounds. Roar! Some roaring cats can make something like a purring sound when they breathe out, but they have to stop to breathe in, so it isn't a true purr.

Do you think these cats have floating hyoid bones or attached? Why?



Lions use their deep, rolling **roar** to tell other lions where they are. This warns strange lions to stay away from the lion group (pride) that lives in the area.

Jaguars are the largest cats in the Americas. Unlike many other cats, jaguars like the water. They swim, hunt fish, bathe, and even play in the water. They have a deep **roar**.



Most animals freeze when they hear a tiger's **roar**. If the prey are scared stiff, they are easier for the tiger to catch!



Cheetahs are awake and active during the day. Sometimes they find a cool spot to rest during the hot afternoon, and stretch out to **purr** in the shade.



Leopards don't roar as loud as lions, or as long. Leopard **roars** are short and raspy, like the sound of a saw moving back-and-forth through wood.



House cats might live with people, but they haven't lost their wild, hunter instinct. Cats will hunt birds and small mammals, and then return home to curl up and **purr** in their favorite person's lap.

