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DODGING EXTINCTION

Snow leopards get a helping hand from Buddhist monks

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Catching a glimpse of one of the world's most elusive animals requires trekking to the top of the world: Tibet, a mountainous region in China. Surrounded by the Himalayas and other towering peaks, the Tibetan Plateau is one of the highest places on the planet. The area is rocky and dry with little vegetation. The elevation makes the air so cold and thin that it can be hard to breathe. This is where scientists come to seek out the reclusive snow leopard.

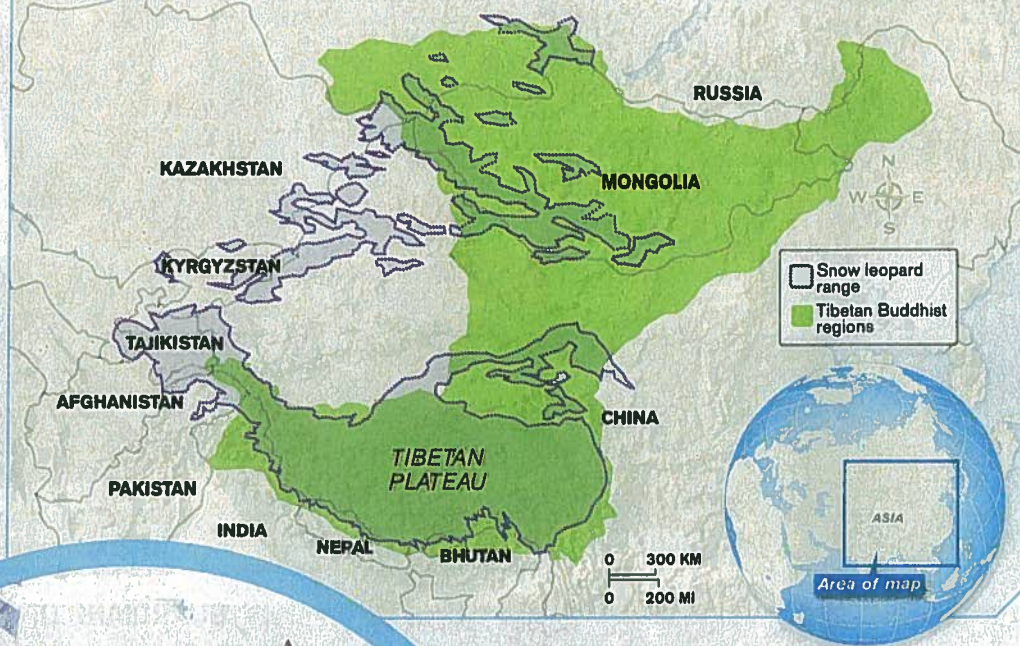
Few people, including locals, have ever actually spotted one of the big cats in the

wild. "They're so rarely seen that they're nicknamed 'mountain ghosts,'" says Tom McCarthy, director of the snow leopard program at Panthera, a wildcat-conservation group based in New York City. But despite their shy nature, snow leopards still run into trouble with humans. People have killed so many of the animals when they do encounter them that the cats are now considered *endangered*. Fewer than 7,000 snow leopards now remain in the wild.

Luckily, the cats have a surprising new ally in their struggle for survival: the monks at Buddhist monasteries across the Tibetan

SHARED SPACE

The snow leopards' range spans about 2 million square kilometers (770,000 square miles). Tibetan Buddhism is practiced across 80 percent of that range.



help local villagers live in harmony with snow leopards.

FIGHTING TO SURVIVE

The Tibetan Plateau is not an easy place for animals—or people—to live. Snow leopards are the top predators in this *ecosystem*. They're well-adapted to chase down wild sheep and goats across the rugged terrain (see *High-Altitude Adaptations*, p. 17). But sometimes there are too few of the prey around. That's because the people who share the snow leopards' habitat sometimes also hunt wild sheep and goats. In addition, they raise domesticated sheep, goats, and yaks, which compete with the wild animals for sparse grasses to eat.

If a leopard gets hungry enough, it may turn to killing livestock. That can be economically devastating for poor herding families. To make sure it doesn't happen again, they may poison or shoot the leopards.

"Even though the people are taught to have a reverence for life, they still have to eke out a living in a very harsh environment," says McCarthy.

Continued on the next page

Plateau. Tibetan Buddhism is practiced across 80 percent of the snow leopards' range (see *Shared Space*, above). An important part of the religion is compassion for all living things. Monks at the monasteries have been putting this belief into practice to

HELPING HANDOUT: A Tibetan Buddhist monk distributes posters about snow leopards.

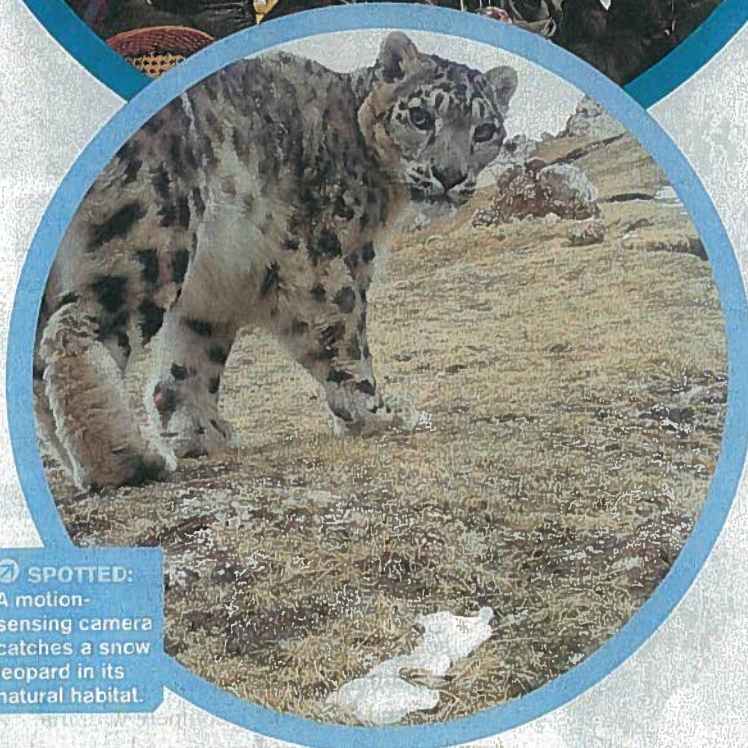
ALL IN: At a recent Buddhist festival in China, 50,000 people pledged to protect snow leopards.



CAT PROTECTORS: Buddhist monks with a picture of a snow leopard



SPOTTED: A motion-sensing camera catches a snow leopard in its natural habitat.



GUARDIANS OF WILDLIFE

The key to saving snow leopards might just come from the many Buddhist monasteries in or near the big cats' habitat. Monks look after sacred natural sites around their monasteries, including lakes and mountains—and the wildlife that lives there. McCarthy says the monasteries could potentially protect more snow leopard habitat than the nature reserves that have already been set aside for the animals.

In 2009, a group of scientists from Peking University in China began training monks at four monasteries to monitor snow leopards as they patrol their sacred areas. The team paid for binoculars, cameras, and tracking devices to help monks observe the cats.

The monks also help educate local people about saving the majestic animals. They're even providing "livestock insurance" to villagers: When a snow leopard kills animals, the owners are compensated. Hopefully, that deters them from attacking the leopard.

MONITORING A RECLUSIVE CAT

Poaching poses another threat to snow leopards. Some people illegally kill the cats for their thick, luxurious fur. One pelt can fetch \$600 on the black market—about three years' income for many people in the area. Snow leopards' bones are also highly prized. Although it's illegal, they're used in traditional Asian medicine. The bones are ground up into a powder, which some people believe can treat swelling and pain.

In addition to working with monasteries, scientists are trying to learn more about snow leopards so they know how best to protect them. But the animals are so elusive and populate such a vast range—an area

slightly larger than Mexico—that it's difficult to study them. To find the cats, scientists have to be clever.

Instead of looking for the snow leopards themselves, scientists look for clues they leave behind—like claw scrapes on the ground and scent marks on rocks. "A lot of times, that's the only way we'll know snow leopards are in a particular area," says McCarthy.

They also set up motion- and heat-sensing cameras to snap photos of the cats. Each snow leopard has a unique pattern of spots that scientists can use to identify it.

Most recently, researchers have been collecting snow leopard scat. The droppings contain *DNA*. This hereditary material acts like a genetic fingerprint, allowing scientists to identify individual cats.

When they have tracked down actual snow leopards, scientists have outfitted

some of them with tracking collars. The devices help the researchers locate snow-leopard dens and find out how many cubs the cats have.

All these strategies are giving scientists a better sense of how many snow leopards remain in the wild. That will help them know if the conservation efforts are working. The tracking collars can also tell scientists about the cats' interactions with each other, people, and livestock. If researchers better understand these relationships, they may be able to find new ways to help snow leopards and locals live together.

For now, the monasteries' efforts seem to be having an effect. McCarthy says that conservation groups in other countries now want monks' help in protecting snow leopards too—and that could go a long way toward saving a beautiful icon of Central Asia. ❀ —Cody Crane



CORE QUESTION

Cite two reasons from the text that explain why snow leopards are endangered.

HIGH-ALTITUDE ADAPTATIONS

Snow leopards have many characteristics that help them live in rugged mountain terrain and chase down agile prey.



NOSE: A wide nose warms the chilly air the cats breathe in. A large chest and powerful lungs help pull in more oxygen from the thin mountain air.

FUR: Long fur with a woolly undercoat keeps the cats warm. The fur pattern serves as camouflage.



PAWS: Extra-large paws act like snowshoes to help the cats walk on snow.

LEGS: Muscular hind legs allow the cats to leap as far as 9 meters (30 feet).

TAIL: A meter-long tail helps the cats balance while scaling steep rock faces. The cats also wrap their tails around their bodies to stay warm.