ADVERTISEMENT

Education



Earn 0.5 IEEE CEUs

COURSE: Quantum Mechanics and Information LEARN MORE November 2-6, 2015



SA Mind

Books



News & Features

Sian In I Register

Search ScientificAmerican.com

Videos & Podcasts

Q

Citizen Science

Subscription Center

Subscribe to All Access »

Subscribe to Print »

Give a Gift »

View the Latest Issue »

SA Magazine



SA en español

Subscribe **Blogs**

Q Search All Blogs

Topics

Blogs



Extinction Countdown

News and research about endangered species from around the world

About

Welcome to the Scientific American Blog Network, a forum for a diverse and independent set of voices to share news and opinions and discuss issues related to science. For more information see our About page and Guidelines....more

Can the Cheetah Outrun Extinction?

By John R. Platt | October 8, 2015 |

Habitat loss. Conflict with humans. Climate change. Limited genetic diversity. The illegal wildlife trade. The list of threats Africa's cheetahs (Acinonyx jubatus) face just seems to go on and on. The famously fleet-footed felines have gone extinct in more than 20 countries and seen their population decline from 100,000 in 1900 to about 10,000 today.



Although their numbers continue to shrink, the big cats are, in a few small ways, actually doing slightly better than they were a few decades ago. "At least we know what the problems are," says Laurie Marker, founder and executive director of the Cheetah Conservation Fund (CCF), who was in Portland, Oregon earlier this week as part of a fundraising tour for her organization's 25th anniversary.

ADVERTISEMENT



Earn 0.5 IEEE CEUs

course: Quantum Mechanics and Information

November 2-6, 2015

LEARN MORE

Our Blogs

SA BLOGS

- @ScientificAmerican (Inside SciAm)
- Anecdotes from the Archive (History)
- Dark Star Diaries (Blackholes)
- **Expeditions** (Field research)
- Guest Blog (Expert voices)
- MIND Guest Blog (Expert voices)
- Observations (News)
- SA Visual (Art)
- Talking back (Neuroscience)
- Voices (Diversity in science)

NETWORK BLOGS

- Anthropology in Practice (Anthropology)
- Beautiful Minds (Intelligence & creativity)
- **Budding Scientist (Kids in STEM)**
- Cocktail Party Physics (Physics)
- Compound Eye (Scientific photography)
- Cross-Check (Science in the news)
- Dog Spies (Companion animals)



Marker has lived in Namibia—the country with the healthiest cheetah population since 1990, but her work with the big cats actually began in the Pacific Northwest. Back in the 1970s, she established the first successful captive-breeding program at Wildlife Safari in Winston, Oregon. Later she brought a captive-bred cheetah to Namibia to see if it instinctually had the ability to hunt or if it needed to be taught. She was also one of the researchers who first uncovered the cats' lack of genetic diversity. In the field, the CCF has established numerous successful programs to help boost cheetah populations, restore habitat, and educate farmers to help reduce humanwildlife conflict.

"We've done a good job of stabilizing and growing the population in Namibia," she says. "From that we know where they are throughout the rest of their ranges. Now it's kind of in our hands as humans to figure out the next step, which is trying to grow the populations in other places."

It won't be easy. Marker explains that cheetahs require enormous amounts of territory. "They cover up to 800 miles in their movements," she says. "The reserves in Africa usually aren't that big." Cheetahs also don't do well on reserves, she says, since more aggressive lions and hyenas that are stuck within the same small territories tend to steal their food.

That leaves most cheetahs living on unprotected territory, where they still encounter

- Extinction Countdown (Endangered species)
- Food Matters (Food & nutrition)
- Frontiers for Young Minds (Science for kids)
- Illusion Chasers (Illusions & perception)
- Life, Unbounded (Astrobiology & cosmology)
- Not bad science (Animal behavior & cognition)
- Plugged In (Energy technology & policy)
- PsySociety (Psychology & pop culture)
- Roots of Unity (Math)
- Rosetta Stones (Geology)
- Running Ponies (Animals)
- Symbiartic (Science art)
- Tetrapod Zoology (Zoology) The Artful Amoeba (Natural history)
- The Urban Scientist (Culture & diversity)
- Unofficial Prognosis (Medical School Experience)

View Archived Blogs



Follow Us:









ADVERTISEMENT

View the Latest on SciLogs

ADVERTISEMENT







Earn 0.5 IEEE CEUs

course: Bioinformatics: How To Analyze the Human Genome

November 9-20, 2015 LEARN MORE

competition but also come into conflict with farmers and ranchers who see the cats as a threat and all too often kill them to protect their livestock.

That same livestock creates more problems. The animals overgraze the land, leaving little left for gazelles and other prey species the cheetahs eat. "Throughout many of these areas, the prey species are also very rare and endangered," Marker says. Poaching further depletes these species' populations, leaving the cheetahs with little to eat.

Overgrazing of grassland also allows an invasive plant called the acacia thorn bush to take over much of the habitat. Much like mesquite, the thorn bushes have deep roots that further deplete the arid region's already tenuous water tables. The bushes themselves, meanwhile, pose a direct threat to cheetahs as racing cats run into the thorns and blind themselves, a death sentence for the animals.

For many of these problems, though, there are solutions. "We've developed programs that we call Future Farmers of Africa," Marker says. "It revolves around growing grass, not overgrazing the land, having healthy livestock, and having wildlife so you've got an integrated system that allows for biodiversity." The CCF also breeds and places large guard dogs to help protect livestock from predators to reduce human retaliation and has programs to pay farmers for any livestock losses.

As for the thorn bush, Marker has started a program to harvest the invasive plants and convert them into fuel logs. "We're trying to scale that up into biomass energy," she says. Not only will the plan help the local environment, it could also put people to work in harvesting and production.

New threats could loom in the future, however. "Climate change is going to be a really big problem," Marker says. "We're in one of the driest areas in the world. We're getting drier and hotter. We're getting more erratic in our temperature. We've got predictions which show our deserts growing."

She's also worried about Africa's growing human population, which is projected to double by the year 2050. "We're going to see huge development pressure in the next 25 to 30 years," Marker says, pointing out that this will affect wildlife species throughout the continent by eliminating more habitat, enabling more hunting and creating more opportunities for human-wildlife conflict.

Will the programs and science the CCF has developed over the past 25 years allow the cheetah to thrive over the next 25? "Well, we know the problems," Marker says. "I'm realistic over what the challenges are. The research has shown us what to do." Her goals include restoring grassland, building prey species populations, and finding more ways that sustainable ways to economically benefit impoverished farmers.

Still, hard decisions may be necessary. Marker says some cheetah sub-populations are so small or face so many threats that it may not be possible to save them. Meanwhile, scaling up the CCF's programs to cover more populations and creating more public awareness about the cheetah's plight is going to take a lot of money. Many people, she says, don't even realize that these iconic animals are even endangered.

Marker says that's why she's on tour this month. "Hopefully if nothing else people will see this beautiful animal and say, wow, we could lose it. The answer to that is yes, we

could. And if we do let that happen, shame on us."

Main photo by Eric Kilby, used under Creative Commons License. Laurie Marker photo courtesy of the Cheetah Conservation Fund

Previously in Extinction Countdown:

- Rarely Seen Saharan Cheetah Revealed in Incredible Photos
- The 6 Most Endangered Feline Species
- Should Cheetahs be Reintroduced in India?
- Asian Cheetahs Racing Toward Extinction

Related:

Cheetahs Are Being Wiped Out, and Selfies Are to Blame



Twice a week, John Platt shines a light on endangered species from all over the globe, exploring not just why they are dying out but also what's being done to rescue them from oblivion. Follow on Twitter @johnrplatt

The views expressed are those of the author and are not necessarily those of Scientific American.











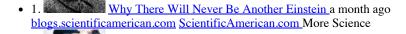








Recommended For You



- 2. Men Are Attracted to Nonconformist Women 2 days ago scientificamerican.com ScientificAmerican.com Head Lines
- 3. The Problem with Female Superheroes 3 months ago scientificamerican.com ScientificAmerican.com Mind & Brain



Comments

Oldest - Newest ‡

PaquitaSmith

October 11, 2015, 10:33 AM

When it comes to Cheetahs and the possibility of them becoming extinct it feels like a horrible nightmare. The fact that they are in a world of eat or be eaten is brutal, but when you add other factors to this equation it can put a dent in the population of Cheetahs. In one article, it mentions that cheetahs are already extinct in 20 countries. I also believe in this situation it is ideal to focus

on the problem to create some resolution. The Cheetah Conservation Fund states:

As with all other species fighting extinction, the problem facing the cheetah is complex and multifaceted. However, most of the reasons for the cheetah's endangerment can be grouped into three overreaching categories:

- 1. Habitat loss, fragmentation and degradation
- 2. Human-wildlife conflict
- 3. Illegal wildlife trade (Cheetah Conservation Fund, 2015)

These are the three issues that need to be broken down separately to gain more understanding on this issue.

Resources:

Cheetah Conservation Fund.(2015).http://cheetah.org/about-the-cheetah/race-for-survival/

Report as Abuse | Link to This

You must sign in or register as a ScientificAmerican.com member to submit a comment.



© 2015 Scientific American, a Division of Nature America, Inc.

All Rights Reserved.

Advertise About Scientific American Subscribe

Special Ad Sections Press Room Renew Your Print Subscription

SA Custom Media and Site Map Print Subscriber Customer Partnerships Service

Buy Back Issues

Terms of Use Science Jobs

Privacy Policy
Partner Network FAQs

Use of Cookies

International Editions Contact Us

Travel