

# Panthera

## 2019 Annual Report





Panthera's mission is to ensure a future for wild cats and the vast landscapes on which they depend.

Our vision is a world where wild cats thrive in healthy, natural and developed landscapes that sustain people and biodiversity.

#### CLOUDIE ON CAMERA

"I am particularly fond of this photograph of a clouded leopard because of the high likelihood that I wouldn't capture it. After a leech and mosquito-filled five-day jungle trek, the biologists and I arrived at a ranger station at the top of the mountain in Malaysian Borneo, close to where this camera trap was located. I checked it but saw the battery was on its last leg. I decided to take the grueling full day's hike back and forth to pick up a fresh battery. When I checked it the following afternoon, this young adult had come through just hours before. The physical exhaustion was totally worth getting this amazing photograph."

- Sebastian Kennerknecht, Panthera Partner Photographer

# Panthera

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# Nature Bats Last

The power of nature is an awesome thing to contemplate. Nowhere is this more obvious and inspiring than when one is privileged to encounter in its own habitat a big cat, for many of us the most iconic and charismatic member of the animal kingdom. Such awe is well evinced by the grandeur of a pride of lions on the savannah and the majesty of a solitary tiger or jaguar patrolling the perimeters of its range. As that range has shrunk, depending on the species, by upwards of over 90 percent over the last century, and with multiple subspecies now extinct, sightings sadly have become more reserved to a fortunate few who can travel to the fewer and fewer patches of land in which many of these cats have effectively been herded. That does not mean all is lost – it is not. The pages of this Annual Report, along with Panthera’s numerous publications and media appearances, capture the truth not only of the daunting challenges we face, but also of our passionate – and often successful – fight to give nature some critical “wins” as well.

Events of the past months have shown that the conservation of wild cats, indeed of wildlife in general, is not a discrete series of isolated interventions. It is of a piece with the revelation of tears in the fabric of our co-existence with nature that are now understood to threaten the very foundations of modern human society. We have witnessed the phenomenon of billions of people under lockdown due to the blowback from an all-too-predictable pandemic that was triggered by man’s mismanagement of his dominion over the planet. It may perhaps – just perhaps – cause us to consider that with power... comes responsibility. As we at Panthera have said, written and deplored for years, some things are simply not meant for consumption. While we ourselves tend to focus on the tigers (and, increasingly, jaguars and lions) being poached or harvested for their body parts, closest as they are to our hearts, they nonetheless represent but a few examples. From elephants and rhinos through to pangolins, golden coin turtles and bats, Nature has been slaughtered – for far too long – without regards to its direct and rather dramatic consequences.

There is an expression – the tragic pun in which is genuinely not intended – that “Nature bats last.” At no time in multiple generations has this aphorism been more apt than it is now. Unlike most people, I had a fairly decent understanding of pandemics before our current crisis. I received my first real education about the risk of *zoonoses* – pathogens that can be transmitted from animals to people – from a conversation I had more than a decade ago with our partner in creating Panthera, the late Dr. Alan Rabinowitz, and one of our closest friends, Dr. Paul Klotman, now President and CEO of Baylor College of Medicine. Several of us had gathered in the Brazilian Pantanal, looking to buy up tracts of land to connect a few patches of

the Jaguar Corridor. Over dinner and *caipirinhas*, these two excellent minds began to discuss the interrelationship between the disappearance of the apex predator and the flourishing of diseases that could impact humans. Out of this particular discussion was born an innovative initiative that saw Paul send students from the Mount Sinai School of Medicine to work with the local population where we were active and perform research that might one day be of use in forestalling a pandemic the likes of which we are now experiencing.

This little vignette of Panthera in action is particularly moving at this time. It reminds us of Alan, of course, who we all wish were here to see Panthera’s growth. It also reminds us of the brilliant collaborators such as Conservation Council Member Paul Klotman, our Council co-Chairs Glenn Close and Jane Alexander and the many others who offer their service and counsel to our shared cause. And in light of current events, this anecdote is evidently just as gripping – and striking – for its premonitions. Candidly, we should do more such projects. But life is a trade-off, and we cannot be all things to all people. I would like to add “Yet” because we truly believe that, in the words of Marcus Aurelius – words that I used in my very first Chairman’s Letter – “a man’s worth is no greater than his ambitions;” our organization has ambitions that are indeed far greater than where we are today. I strongly suspect that we shall achieve many of them under the leadership of Dr. Fred Launay, whose organizational transformation of Panthera so that it is positioned for precisely that future has been nothing short of remarkable.

Fred fully understands, as Alan did, that there is both a powerful thrill and an enormous burden to one’s mission being nothing less than to save the world’s wild cats. The delight inherent in studying and being in the presence of these living paintings is only – and in fact, entirely – matched by the weighty responsibility of keeping beauty alive in a world determined to tame anything wild into production, conformity and consumption. As caretakers for the gods of old, the fates of myriad ecosystems, communities and cultures are shaped by Panthera as we speak. With this notion always nipping at our heels, there is simply no space for small thoughts, no oxygen left for “adequate.” To us, wild cats – and undoubtedly the future generations that should never have to ask us what happened to those cats – deserve no less than a worldwide concerted effort to ensure their safety and perpetuity.

It is not often that I meet others that both share, embody and empower such a creed *and* can have a transformational impact on our planet. To welcome two in the same year into the Panthera family is practically – and I know our scientists will bristle at this word – a miracle. I have no doubt whatsoever that

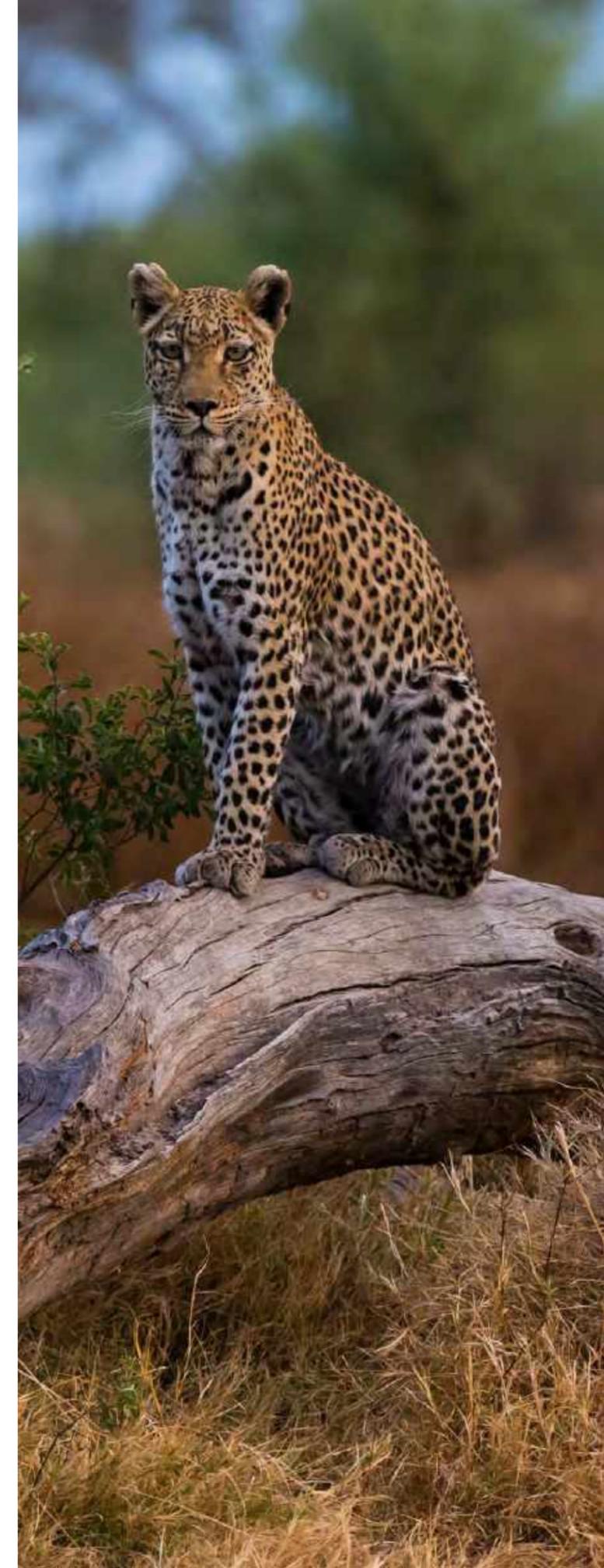
we will look back on 2019 as a watershed year for cats; the year when champions stepped forward for the leopard and for the 33 small cat species.

First, The Royal Commission for AlUla (RCU) of the Kingdom of Saudi Arabia approached Panthera with one of those big ideas that animates all of our work: together, we could save the Arabian leopard subspecies from inescapable extinction using a combination of traditional conservation methods and a new captive breeding and wild release program. Not satisfied to stop at resuscitating one of the most iconic animals of their region, RCU also wanted to conserve leopards – a species oft-ignored by the conservation establishment but near and dear to my heart – across their range, from Southern Africa to Southeast Asia. The resulting Arabian Leopard Initiatives (ALI) is supporting scientific research, the aforementioned captive breeding program, international collaborations, community-based conservation projects and a global fund dedicated to the protection and enhancement of remaining wild leopard populations. With a vision for the future that is so rare to observe nowadays, RCU committed \$20 million over 10 years to ALI and we happily anointed this outstanding organization as the newest member of the Global Alliance for Wild Cats.

Our other champions, Jonathan and Helaine Ayers, have been giving to Panthera since 2017 and helped us form the Small Cats Program in 2018. But in 2019, they created The Ayers Wild Cat Conservation Trust and effectively took their commitment to Panthera and the Small Cats Program to the stratosphere. While he may love small cats, Jon’s ideas and passion are anything but small. I am filled with immense excitement at the mere thought of all that we will learn about clouded leopards, fishing cats, flat-headed cats, Pallas’s cats, African golden cats, sand cats, Canada lynx, jaguarundis and the rest of the 33 small cat species. More importantly, we will be able to create and implement comprehensive conservation plans for the most threatened species and fight for their existence from a position of knowledge and strength.

RCU and the Ayers were drawn to Panthera because, put simply, we are the leading scientific authority on wild cats and their conservation. We are also now gaining a reputation worldwide for our expertise in – and willingness to deploy – emerging conservation techniques. This includes captive breeding and rewilding, as in the initiative taking place in the Kingdom of Saudi Arabia. We are also in the planning stages of translocating two genetically suitable lionesses to Gabon’s Batéké Plateau National Park and attempting to build a new pride with Gabon’s only lion.

A leopard in the Okavango Delta, Botswana



Most cutting-edge, however, are our ongoing discussions with the government of Taiwan and local Rukai people towards reintroducing clouded leopards to the Taiwanese mountains. Not only would such a program have a positive impact on the Yushan Range ecosystem in southern Taiwan, it would also bring back a cultural touchstone of the Rukai people. Lastly, we are looking into possibilities for reintroducing cheetahs in India and Pakistan. While there is no consensus in wildlife conservation about whether or not these techniques should be employed given their great cost, the stakes are just too high for these species to leave any option unexplored.

Finally, we will bring our expertise to scale through establishing a Global Policy Program under Chief Scientist Dr. John Goodrich and new Senior Director of Global Policy Karen Wood. This decision comes amidst a great clamoring for Panthera to weigh in on both the emerging conservation techniques discussed above and controversial policy issues around the illegal wildlife trade, hunting of cats and prey and others. While we certainly will never diminish our focus on *in-situ* conservation and research in favor of policy, meaningfully entering the policy arena provides a significant opportunity to broaden and sustain our impact for cats.

Big cats have ruled and roamed entire continents. Some, like the jaguar, can still trace their reign unbroken – though fragile – through dozens of nations and cultures, uniting poor with rich and friend with enemy. Since our founding, Panthera has sought to mirror big cats’ global ambitions and imprint. With new partnerships, a new organizational model focused on local presence and, of course, our supporters behind us, we are closer than ever to fulfilling that vision. In 2019, we staked new claims in Asia with programs and offices opened (or prepared to open) in the Kingdom of Saudi Arabia, the United Arab Emirates, Malaysia and Thailand. I expect even greater things in 2020.

I am so sincerely grateful for everything you do for Panthera. Our supporters make possible our biggest swings and the precise execution of the smallest details. Even after decades immersed in this work, I still feel deeply the joy of every cat cub or kitten born, as well as the gloom of every cat killed. Seeing so clearly Panthera’s trajectory, I can genuinely say that it now feels more thrilling than daunting, more Herculean than Sisyphean, to protect these creatures through turning the next impossible idea into the headlines of tomorrow.

Talk of “headlines” brings me back to the project that Alan and Paul created in the Brazilian Pantanal to identify those intersections when man and nature meet, for good...or for ill. A [Time Magazine](#) piece of April 3, 2009, which was fittingly entitled “Getting People to Coexist with Cats,” put it very well. So well indeed in describing the many facets of our mission reflected in this initiative, including the emphasis on zoonotics that still resonates today, that I shall reproduce it here:

*As the human population has grown in the Pantanal, the vast wetland in central Brazil, people and big cats — namely the South American jaguar — are encroaching increasingly on each other’s territory. When conflict occurs, as it inevitably does, the cats are usually the ones who lose. (...)*

*This is the kind of situation to which conservationists might have responded by cordoning off protected habitats and reserves — building a fence, in effect, between the wild animals and the people. But in the Pantanal, and in much of the rest of our once wild, once underpopulated world, total separation is simply not a sustainable option. That’s especially true for jaguars and other big cats, which need a lot of room to roam, far more than could be fenced off. “The big cats’ territory is crossing over to the human landscape,” says Alan Rabinowitz, a renowned conservationist and the president of the new wildlife group Panthera. “At its root, we have to get people to be able to live with the big cats.”*

*That’s why Panthera, whose conservation efforts focus exclusively on endangered cats like jaguars and tigers, will be launching an innovative program in the Brazilian Pantanal this summer. The program will be carried out jointly with New York City’s Mt. Sinai Medical School and will involve a unique exchange of services that includes conservation, health care and disease research. Mt. Sinai’s medical students and researchers will come to Panthera’s 270-sq.-mi. (700-sq.-km) Pantanal ranch (which includes a jaguar habitat), where they will give free medical care to locals. That care, along with a free school that will be built for local children, will come under Panthera’s banner, and the hope is that Brazilians will learn to appreciate both the medical care and the conservation work for jaguars. “People are given better schools and better health care, and the connection between the two is made,” says Rabinowitz.*

*For Mt. Sinai, which has made global health a priority for its medical students, the Panthera project presents an opportunity to explore another consequence of the increasing proximity of animals and people: zoonotic diseases, which can pass back and forth between wildlife and human beings. Several major human diseases have originated in animals, including Ebola (which began among primates in Africa) and avian influenza (which started in wild and domestic birds in Southeast Asia, but has also infected big cats).*

*As human beings, wild animals and domestic animals begin to live in closer and closer [proximity] to one another, the chance of pathogens jumping — and amplifying — between species will only increase. Sinai’s researchers will be able to monitor the population in the Pantanal for zoonotic diseases, providing a needed early warning system for new and emerging pathogens. It will also be a valuable learning experience for Mt. Sinai’s students. “We see a really close interface between the health of human populations and conservation efforts,” says Paul Klotman, chairman of the department of medicine at Mt. Sinai.*

*“This will allow us to do surveillance to look for potential pathogens that could be important for both wildlife and people.”*

*The Panthera-Mt. Sinai collaboration is atypical, but not for long; it is the shape of things to come for conservation work around the world. Critics who accuse environmentalists like Rabinowitz of protecting animals at the expense of human well-being have got it wrong. Wildlife experts are aware that in a world of 6.7 billion people and counting, the only conservation efforts that have potential — and the only plans that will be truly sustainable — are those that benefit people as much as lions, tigers and bears. “Big cats won’t survive unless people want to live with them,” says Rabinowitz. “You have to show how they can benefit.” In the 58,000-sq.-mi. (150,000-sq.-km) Brazilian Pantanal, there should be room enough for both.”*

Amen to that.

With gratitude,



A handwritten signature in black ink, appearing to read 'DRK' followed by a long horizontal stroke.

**DR. THOMAS S. KAPLAN**  
Founder, Chairman of the Board



# Cores and Corridors

A CONVERSATION BETWEEN PANTHERA'S LEADERS

Panthera's leaders decided to theme our 2019 Annual Report around "Cores and Corridors." Wild cat cores, which are often in protected areas, have enough breeding cats so that the population can be sustained long term. Corridors are the areas between cores, which cats use to travel in their search for prey, mates and territory. You will see that for each continent we have chosen to highlight one story set in a wild cat population core and one set in a corridor. Panthera's leadership sat down for a virtual conversation about the Cores and Corridors approach.



## PANTHERA'S LEADERS



**FRED LAUNAY**  
President and CEO



**JOHN GOODRICH**  
Chief Scientist  
Director, Tiger Program



**HOWARD QUIGLEY**  
Executive Director,  
Conservation Science  
Director, Jaguar Program



**JOE SMITH**  
Executive Director,  
Conservation Action

## WHY IS PANTHERA FOCUSED ON CORES AND CORRIDORS?

**JS** To truly secure a future for wild cats, we have to meet their ecological needs. This requires that we protect core breeding populations in the short term and facilitate movement between populations in the longer term.

**HQ** And these cores also, in theory, allow wild cats and other wildlife to grow and evolve in more natural settings while human influences are especially strong in the corridors.

**JG** Connecting those cores with corridors creates metapopulations that secure species' futures both demographically and genetically for the long term.

## HOW IS OUR PAST WORK REFLECTIVE OF THIS FOCUS?

**JS** Since inception, Panthera has sought to identify the most important cores and corridors for each species of big cat, ensuring that our resources flow to the most critical populations and their specific conservation needs. The Counter Wildlife Crime (CWC) Program works at the interface between human and wild cat populations, and this is true at both the edges of cores and throughout key corridors.

**FL** It is important also that work on cores and corridors happens at the same time, not in a sequence. Connectivity is a key factor for core populations to recover faster.

**JG** Our [Tiger Program](#) began in 2006 with cores and corridors as the central theme of our strategy, with a focus on recovering rapidly disappearing core populations and ensuring connectivity of those source sites.

## HOW ARE WE MOVING MORE TOWARDS THIS FOCUS?

**JS** Panthera's global review of the conservation status of wild cats allows the organization and its partners to better prioritize populations and landscapes in need of conservation resources.

**JG** And with regular critical review of our programs, we refine our interventions for protecting and connecting core populations.

**HQ** Plus, our move to a 40-species focus means that we're assessing both cores and corridors for all of the cat species now. It's really very exciting.

## WHAT ARE THE BIGGEST CHALLENGES FACING WILD CAT CONSERVATION IN 2020?

**JG** Maintaining conservation momentum at a global scale during the current pandemic and its threats to human health and welfare.

**HQ** Yes, as we look back on 2019 and strategize about challenges for 2020, we're challenged now by the global coronavirus and the threats that it brings to human health and welfare. We have a very timely strategy where we are defining landscapes that have the greatest potentials for saving wild cats – including protected cores and human-dominated corridors – and really upping the ante on the resources we all bring to bear on those landscapes.

**FL** The world in 2020 is going through an unprecedented event that might change the way we live for a very long time. The challenge will be to keep the focus and be able to continue our mission while the [crisis is unfolding](#). When the crisis subsides, we need to make sure that the world has learnt its lesson: messing around with...

**FL** ...natural habitats and species has dire consequences for human health. There is a serious concern that after months of economic slowdown and confinements, human consumption of wildlife and development will rebound disastrously for wildlife and cats.

## WHAT HAVE BEEN THE MOST SIGNIFICANT PANTHERA VICTORIES FOR CORES AND CORRIDORS SO FAR?

**JS** The emphasis placed on cores within the Tigers Forever Program led to some of the most compelling tiger population recoveries ever documented.

**HQ** The [Jaguar Corridor](#), originally described by Alan twenty years ago now, is well known as a successful conservation example, and the Jaguar 2030 Roadmap – put together with our partners United Nations Development Programme, World Wildlife Fund and Wildlife Conservation Society – is getting government and NGO acceptance as a model for conservation in the Americas.

**FL** Yes, and even more than that, I would say that the greatest victory for Panthera is that conservation focused on cores and corridors has now been adopted, replicated and copied by many other organizations for a very wide range of terrestrial species.

Opposite: A tiger passes by a camera trap in Nepal

# Cores and Corridors

A young male jaguar named Juru leaps out of the river to chase capybara prey in the Brazilian Pantanal



## CORES

Areas with little human footprint and breeding populations of cats large enough to be sustained long-term, usually in designated protected areas.



## CORRIDORS

Areas that cats use to travel between cores. Often they are human-dominated landscapes, but ideal corridors are places where, though conditions may not be optimal, cats can survive and reproduce.



### TYPICAL THREATS



Hunting of cats for the illegal wildlife trade



Depleted prey populations



Snares set for illegal prey-hunting maim or kill cats



Habitat destruction

### PANTHERA'S ACTIONS

- Conduct law enforcement patrols against illegal hunting and habitat destruction
- Combat wildlife trafficking
- Support the creation of protected areas
- Rigorously monitor wildlife populations and threats

### TYPICAL THREATS



Infrastructure like highways that block wildlife movement



Unsustainable hunting of prey for sustenance and trade



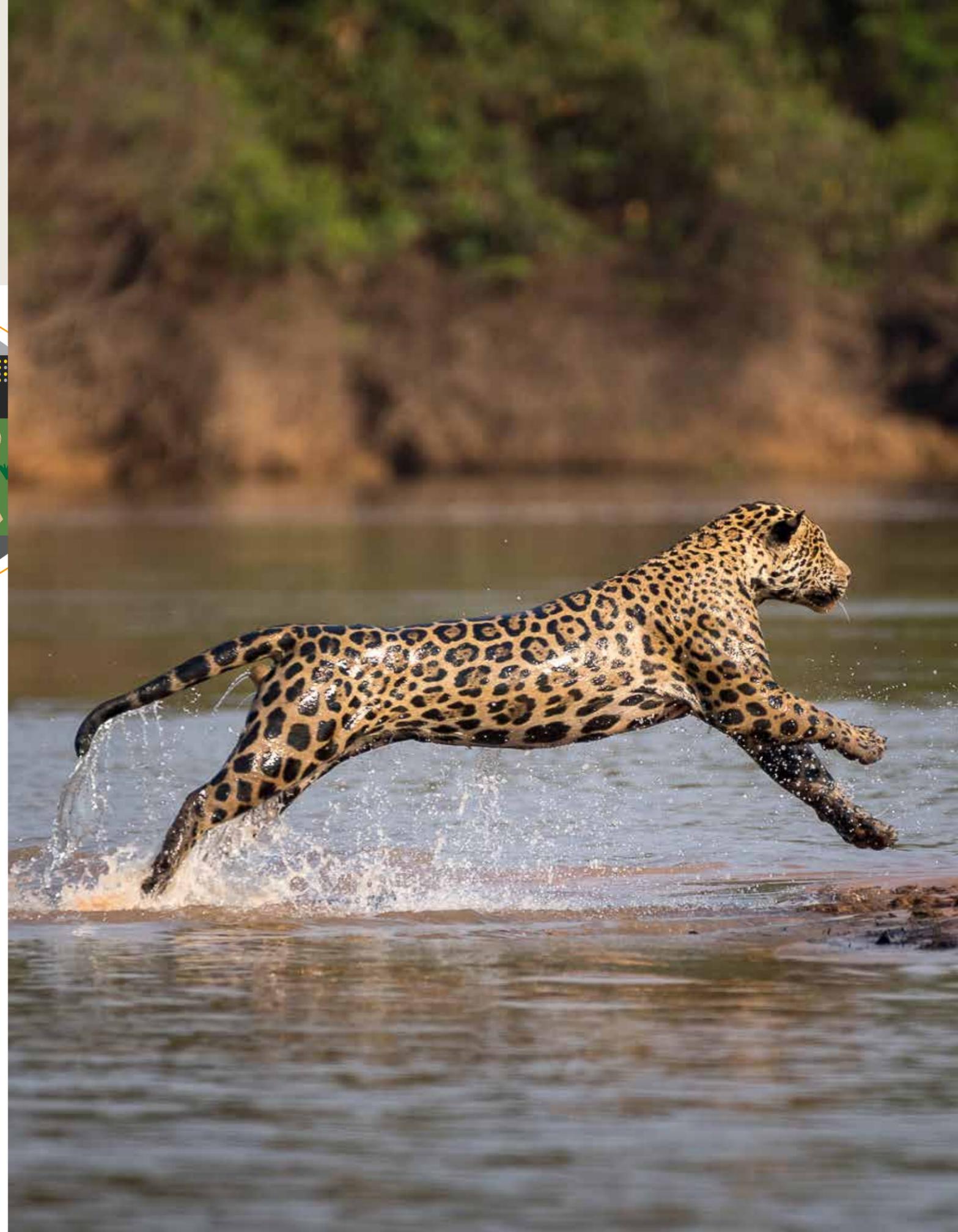
Livestock ranchers targeting cats after or to prevent livestock attacks



Unsustainable hunting of cats and prey as trophies

### PANTHERA'S ACTIONS

- Ensure infrastructure is wildlife-friendly
- Teach ranchers and herders how to protect livestock
- Advise ranchers and agricultural companies on sustainable farming and land-use
- Provide sustainable livelihoods to local communities
- Advocate for reduced or banned cat and prey hunting
- Combat wildlife trafficking
- Support the creation of protected areas
- Rigorously monitor wildlife populations and threats





# Conservation in a Global Community

**A Q&A WITH THE HONORABLE CLAUDIA A. MCMURRAY PRESIDENT AND CEO MAINSTREAM GREEN SOLUTIONS, LLC PANTHERA BOARD DIRECTOR**

As one of Panthera’s longest-serving members of the Board of Directors, Claudia McMurray has provided indispensable guidance and support to Panthera in its growth from plucky startup to the globally impactful organization it is today. Claudia has spent a distinguished career as a lawyer, consultant, policymaker and senior diplomat with substantial time spent as a political appointee in the Executive and Legislative branches of the United States Government. In 2006, President George W. Bush appointed Claudia as Assistant Secretary of State for Oceans, Environment and Science (OES). After leaving that position, she served as Senior Counsel to President Obama’s Commission investigating the BP oil spill and later became a Senior Counsellor to the Prince of Wales and his International Sustainability Unit. Earlier in her career, Claudia served as Counsel to the Senate Committee on Environment and Public Works and Counsel to Senators John Warner and Fred Thompson.

Claudia has helped Panthera navigate the sometimes choppy waters of working with international governments and the diplomatic community in our mission to protect wild cats and their landscapes. We sat down with Claudia to talk about the role of diplomacy in conservation and her timely experience overseeing the State Department’s planning for and response to infectious diseases.

Above (left to right): Claudia A. McMurray in Antarctica; Claudia A. McMurray on horseback at Panthera’s Jofre Velho ranch in the Brazilian Pantanal

Next Page: Shannon Kachel, Conservation Scientist with Panthera’s Snow Leopard Program, tracks a collared snow leopard through the Tien Shan Mountains in Kyrgyzstan

**“Panthera’s staff is knowledgeable and rigorous in applying sound scientific analysis to their work in the field. They know what works and what doesn’t. And they are nimble — when a particular approach doesn’t work, they move quickly to adjust. Throughout my years as a Board member, I have regularly marveled at the results they are able to achieve on the ground, where it matters most.”**

**WHEN DID YOU FIRST ENCOUNTER PANTHERA?**

My first encounter with Panthera actually occurred before Panthera had even been founded. During my tenure as Assistant Secretary of State for OES, I was invited to meet with Panthera Founders Tom Kaplan and Alan Rabinowitz. During the meeting, we discussed ways for the U.S. Government and the private sector to collaborate in supporting big cat populations around the world, so many of which are critically endangered. I remember being extremely impressed with both Tom and Alan and their knowledge and passion for big cats. A couple of years after that meeting, Panthera was born and it was immediately clear to me that the organization would become a leader in science-based wildlife conservation. Once I left the government, I was honored to receive an invitation to join Panthera’s Board and I have continued supporting Panthera ever since.

**WHAT DID YOUR BUREAU OVERSEE AT THE STATE DEPARTMENT? WERE THERE CONNECTIONS TO WILD CAT CONSERVATION?**

The portfolio I oversaw was extremely broad, including protection of the environment, oceans, fisheries, forests and wildlife; climate change; health; protection of the Arctic and the Antarctic regions; and cooperation both in science and in outer space. If you think about it, pretty much all of these issues are interconnected. Climate change threatens the survival of humans and wildlife. Forests and fisheries support human health. And, of course, science underpins it all.

It is a tremendously challenging time for the United States and for so many other countries around the world due to the global coronavirus pandemic. During my time at the State Department, I contributed to the planning for, and U.S. support related to, outbreaks of Ebola, avian influenza and SARS. Thankfully, during that time, we did not see as serious a threat to human health and well-being as we are facing during this current pandemic. Many scientists believe that the coronavirus initially “jumped” from animals to humans in live wildlife markets in China and there is a substantial amount of evidence to support this theory. If the evidence is indeed correct, it is imperative that governments around the world work to close these markets — immediately and permanently. Doing so will have positive results for both

humans (protecting our health) and wildlife (saving the lives of endangered species).

**WHAT ROLE CAN A COUNTRY LIKE THE UNITED STATES PLAY IN CONSERVING THE WILDLIFE OF OTHER COUNTRIES?**

During my State Department tenure, the U.S. Government worked with individual countries, built public-private coalitions and provided support in multilateral fora to protect a wide range of threatened and endangered species. For example, in 2007, President Bush signed an agreement with India for law enforcement cooperation to stop trafficking in tigers and tiger parts. In 2005, the U.S. Government spearheaded the establishment of the Coalition Against Wildlife Trafficking (CAWT), a first of its kind partnership among governments, NGOs and businesses committed to stopping the illegal trade in wildlife. And, throughout President Bush’s term in office, we worked in multilateral fora such as the UN and the Convention on International Trade in Endangered Species (CITES) providing scientific support to boost populations of wildlife under threat. I can say without hesitation that many countries around the globe — both then and now — actively seek out this kind of U.S. support and expertise. It provides benefits both to the U.S. and to the countries asking for help.

**ARE YOU OPTIMISTIC ABOUT THE FUTURE OF OUR PLANET?**

I am an optimist by nature. There are times, however, when the challenges presented by the issues I work on are really overwhelming. I often think, “How can my generation hand the Earth off to the next in such a dismal state?” When I have these thoughts, I get back to my optimistic “center” by either venturing out into nature or looking at a beautiful photograph of a snow leopard, tiger or other animal. Seeing these amazing creatures — either in person or through photography — reminds me why I do this work. And, of course, my work with Panthera is also a continuing source of optimism for me. My involvement with Panthera constantly reminds me that I must remain optimistic and do my part to protect the Earth and those who rely on it.

# Program Highlights



# Africa

## BIG CATS



## SMALL CATS

**African Golden Cat**  
*Caracal aurata*

**Jungle Cat**  
*Felis chaus*

**African Wildcat**  
*Felis lybica*

**Sand Cat**  
*Felis margarita*

**Black-footed Cat**  
*Felis nigripes*

**Serval**  
*Leptailurus serval*

**Caracal**  
*Caracal caracal*

### 1 KAFUE NATIONAL PARK, ZAMBIA

After securing two poaching hotspots as Lockdown Zones, in December, we launched support for boundary control teams to major entry and exit points in the north to prevent illegal entry and wildlife trafficking.

Since April 2018, Panthera has supported:

**195** Arrests

**892** Snares disarmed

**57** Firearms confiscated

**221** Camps destroyed

### 2 SAVING SPOTS, ZAMBIA



In 2019, Panthera adapted our [Furs for Life model in Zambia](#) and distributed 200 synthetic furs to the [Barotse Royal Establishment](#) of the Lozi people to replace real leopard and serval furs.

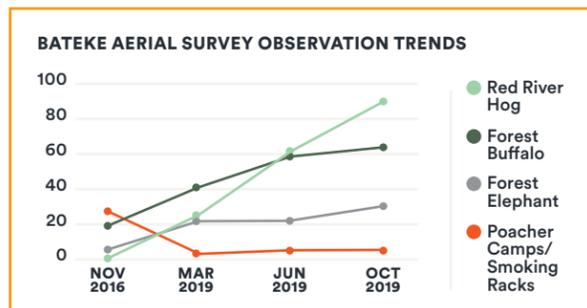
### 3 EAST ZAMBEZI REGION, NAMIBIA



With Kwando Carnivore Project, we ensured no lions were killed over a 3,000 km<sup>2</sup> area of key lion habitat, down from 20 lions killed in 2013 due to conflict with local herders. The project expanded in 2019 to another conflict hotspot adjacent to Chobe National Park.

### 4 BATÉKÉ PLATEAU NATIONAL PARK, GABON

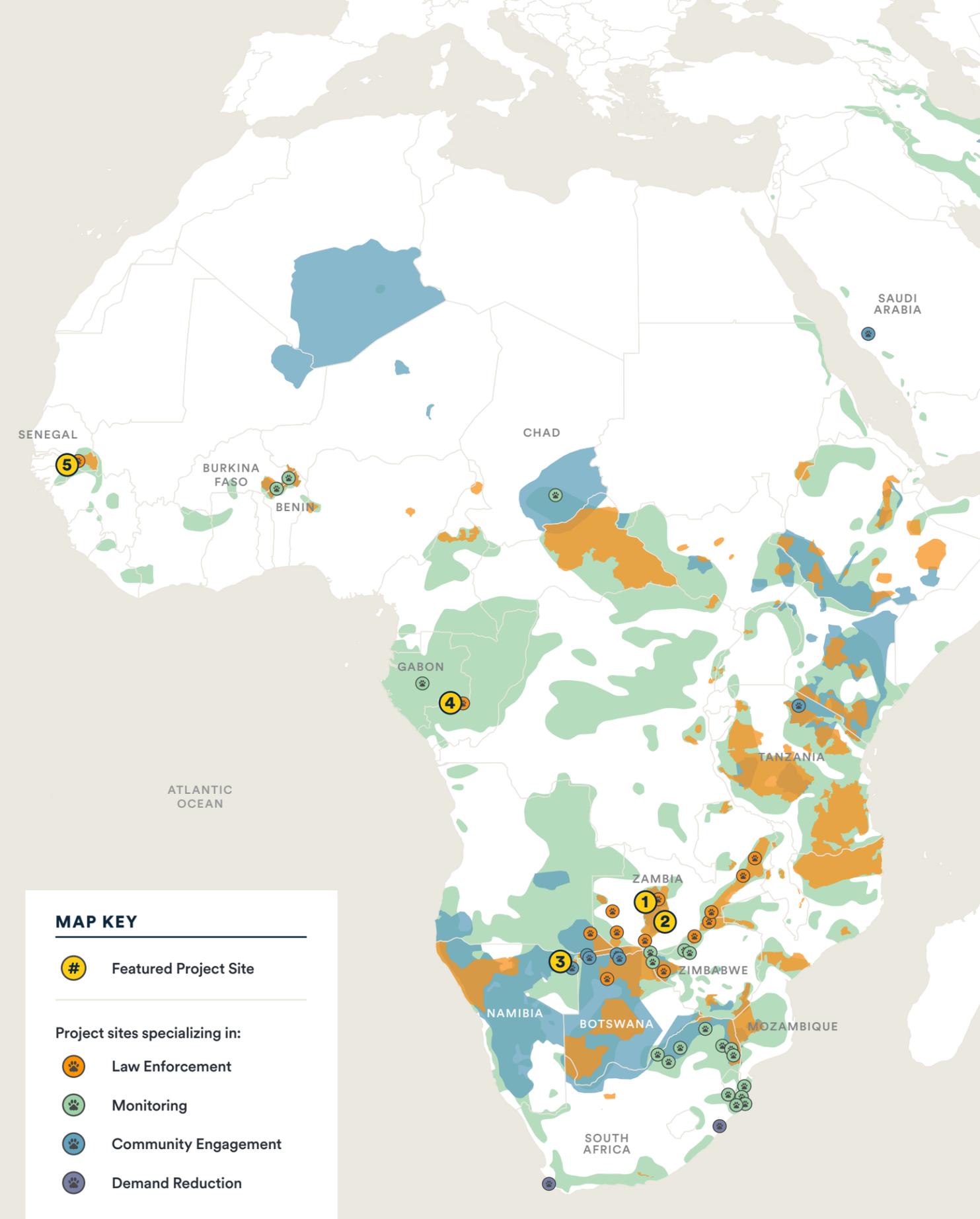
Panthera has improved the security infrastructure and deployed anti-poaching patrols in the home of Gabon's only lion (in addition to leopards, elephants, central chimpanzees and Critically Endangered western gorillas). This effort has significantly improved populations of key carnivore prey and reduced poacher presence.



### 5 NIOKOLO-KOBA NATIONAL PARK, SENEGAL

*"The sighting of this elephant, which represents the first confirmed sighting of the species in Senegal in many years, and the placid behavior this big bull exhibited during the encounter, are both testimony that our joint conservation efforts with Senegal's Direction des Parcs Nationaux (DPN) in Niokolo-Koba National Park are finally paying off."*

-Dr. Phil Henschel, West and Central Africa Regional Director, after an elephant, first documented by a camera trap in 2019, was sighted in the park. Panthera and DPN have secured the southeast corner of the park from poachers and will expand to the rest of the park.





**“Signs of animals, such as elephant tracks leading to water or a quick glimpse of a duiker trotting off in the distance, remind us why we’re undertaking this mission. Luengue-Luiana is turning out to be that piece of Africa that everyone is longing for. With its seemingly untouched habitat, the park waits patiently. We dream that these signs in the sand will eventually lead to lions and the return of their resonating roar over Luengue-Luiana.”**

**DONOVAN JOOSTE**  
Project Manager, Angola

**CORES**

# Luengue-Luiana

**A PLACE FOR CATS AND PEOPLE**

Geraldo Mayira has a long to-do list for the day. As Co-Manager of Panthera’s project to restore lions and other cats in Angola’s Luengue-Luiana National Park, Geraldo’s duties are extensive: check in with the Ecological Management Team as they continue building needed roads for park staff and eventual eco-tourists, look over the results from the previous day’s patrols by the Community Game Guards, change the batteries of some camera traps monitoring carnivore and prey populations and, of course, visit the village of Kataha Thikuyu to update residents of the park on the progress of the project.

Geraldo’s job is a little different than that of other conservationists who work in national parks. Luengue-Luiana National Park is home to about 220 small communal settlements and approximately 5,500 people as the result of a three decades long civil war in Angola. Given this reality, Panthera, local organization ACADIR and Angola’s National Institute for Biodiversity and Protected Areas (INBAC) are creating a new model of national park management that recruits park residents as key employees and allies of the park.

The area, including the adjacent Mavinga National Park, houses only about 10 to 30 lions, far below historic numbers of perhaps 1,000 lions in the region. The area is afflicted by illegal snaring of carnivore prey, which inadvertently maims and

kills carnivores, and poaching of elephants by ivory trafficking syndicates. In Luengue-Luiana National Park, we work in a designated Important Habitat Zone (IHZ) of about 15,000 km<sup>2</sup> (or about the size of the state of Connecticut). Within the IHZ, we and park authorities have designated two Intensive Protection Zones (IPZs), human-free zones that will be intensely protected by law enforcement focused on reducing elephant poaching and carnivore prey hunting. By reducing illegal hunting, building up the park’s infrastructure and empowering park residents to take part in a new ecotourism economy, we will restore Luengue-Luiana’s wildlife population and create a world-class destination for wildlife viewing.

The residents employed by the project have made fantastic progress towards this goal. The Ecological Management Team has built or repaired over 100 km of roads and patrol routes. Since being deployed in August 2019, the Community Game Guards have arrested three poachers, investigated four other poachers, confiscated two weapons and removed 11 wildlife traps. The Education Unit has introduced the project to around 3,500 people across the 220 settlements and educated residents on the importance of conserving wildlife. We have identified a wildlife tourism route and are now in conversations with potential partners to develop an ecotourism plan for the IHZ.

Most wild cat core protection focuses on law enforcement to reduce cat poaching, unsustainable hunting of prey and habitat degradation. Restoring Luengue-Luiana’s lion, leopard and cheetah core populations, though, requires law enforcement plus the livelihood enhancement and community engagement more typical of Panthera’s wild cat corridor preservation programs. Geraldo and all of his team members have a big – and somewhat unprecedented – job in front of them to balance the needs of both wild cats and people living in the park. But now, after travelling multiple 400 km roundtrips guided by maps written in the sand, they have thousands of people behind them.

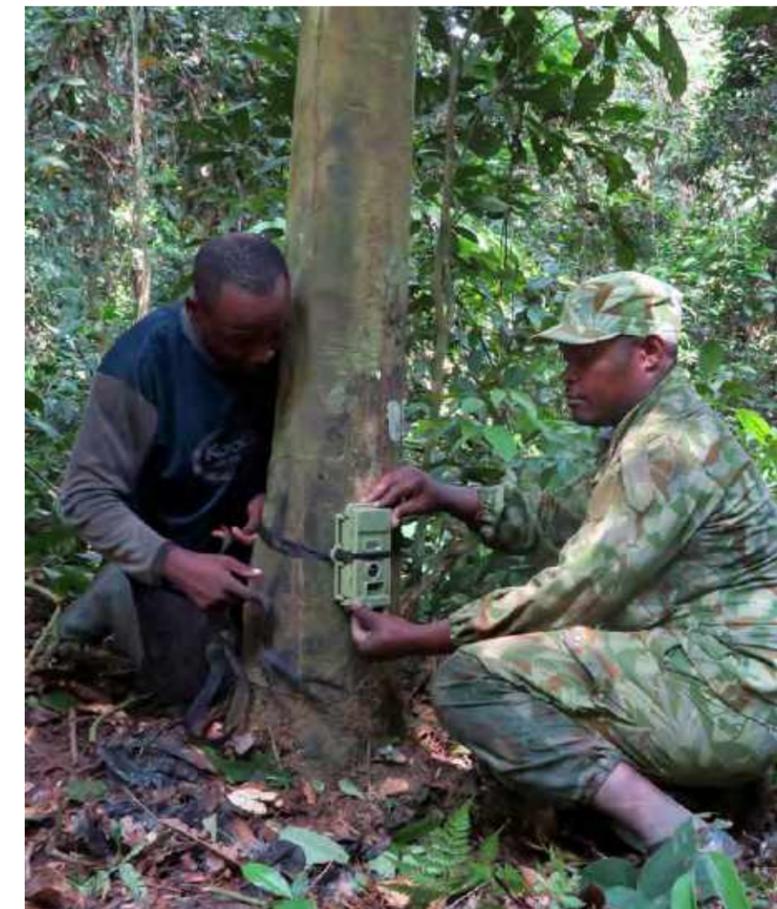
*This article was produced with the financial support of the European Union (<https://ec.europa.eu/europeaid>) through IUCN Save Our Species Initiative ([saveourspecies.org](https://saveourspecies.org)). Its contents are the sole responsibility of Panthera and do not necessarily reflect the views of IUCN or the European Union. Panthera is also grateful for the support of the Lion Recovery Fund, Fondation Segré and the World Wildlife Fund.*

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[SciPub](#) [Blog Post](#)

Above: Community game scouts on basic patrol training in Ndunjuru

Opposite: Male lion in Luengue-Luiana National Park



**CORRIDORS**

**Gabon Corridors**  
THE WILDLIFE SUPER HIGHWAY

Chris Orbell kneels in front of the camera, head just out of frame, while he holds a slate proclaiming the date, time and camera number. Far from any Hollywood lot, Chris and his companions from Wildlife Conservation Society (WCS) and Gabon's National Agency for National Parks (ANPN) will spend almost two weeks backpacking the forest between Gabon's Ivindo and Mwagna National Parks and placing 48 PantheraCams. These motion-activated cameras designed and manufactured by Panthera will capture the menagerie of wildlife that lives in and travels through this corridor: leopards, African golden cats, elephants, gorillas, chimpanzees, melanistic (black) honey badgers, aardvarks, giant pangolins and, though thought extinct in Gabon, spotted hyenas.

Chris, as Panthera's Leopard Corridors Project Manager, has spent much of his time in the last five years walking the forests between protected areas in Gabon. In partnership with ANPN, Panthera has been studying wildlife presence in the seven ecological corridors that connect nine protected areas. The project has revealed the great ecological diversity that depends on these unprotected lands and why just "holding the fort" of protected areas is not an option for effective conservation. Without studying the wildlife corridors, we probably wouldn't know that spotted hyenas do indeed call Gabon home. We wouldn't know about the illegal gold mines that dot these

corridors and threaten leopards and other wildlife. We wouldn't know where to actually define the corridor's boundaries. And we certainly wouldn't know about the elephant chat room of the Momba Baï.

The Momba Baï is a clearing in a former volcano a few kilometers south of the Mouniandjé River in the corridor between Ivindo and Mwagna National Parks. Our camera trap study of the corridor in 2019 focused on the area surrounding the Momba Baï, collecting 7,585 images. Almost 20% of the images captured are elephants, which seem to use the clearings as communication nodes. Elephants from as far as 100 km away come to the Momba Baï to dig for mineral salts and eat cyperaceae grass. These disparate elephants will then use this meetup for social interaction and communication.

We are working with the Gabonese government to give this area of the corridor some level of protection given that it connects Ivindo and Mwagna National Parks and its importance to cats, elephants and spotted hyenas on its own. And staff from Panthera's Applied Science and Data Management teams have visited the project to improve the analyses that are going to define and recommend the appropriate corridors for this and other connections in the country.

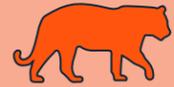
Chris's team placing camera traps in the Momba Baï enjoyed the temperate and dry weather of the long dry season. The teams picking up the camera traps later in the year weren't as lucky, mucking through extreme rains and flooding. Luckily, they were able to recover all 48 cameras despite the weather. The first shot they downloaded from each camera was Chris or one of his team members kneeling on dried leaves, holding that slate. Though not a big budget movie, the cameras captured a story more fascinating than any that could be produced by human hands.

Above: Caught on camera trap along the wildlife highway (left to right, top to bottom): Chris Orbell holding slate, young leopard, spotted hyena and forest elephant

Opposite: (left, top and bottom) Giant pangolin, African golden cat and kitten; Right: Wilfried Mbombe (WCS Gabon) and Guy-Roger Koumbapaye (Ecoguard) installing a camera trap

# Asia

## BIG CATS



**Tiger**  
*Panthera tigris*



**Snow Leopard**  
*Panthera uncia*



**Leopard**  
*Panthera pardus*

## SMALL CATS

**African Wildcat**  
*Felis lybica*

**Leopard Cat**  
*Prionailurus bengalensis*

**Asian Golden Cat**  
*Catopuma temminckii*

**Pallas's Cat**  
*Otocolobus manul*

**Bornean Bay Cat**  
*Catopuma badia*

**Marbled Cat**  
*Pardofelis marmorata*

**Chinese Mountain Cat**  
*Felis bieti*

**Rusty-spotted Cat**  
*Prionailurus rubiginosus*

**Clouded Leopard**  
*Neofelis nebulosa*

**Sunda Clouded Leopard**  
*Neofelis diardi*

**Fishing Cat**  
*Prionailurus viverrinus*

**Sunda Leopard Cat**  
*Prionailurus javanensis*

**Flat-headed Cat**  
*Prionailurus planiceps*

**Jungle Cat**  
*Felis chaus*

### 1 TAJIKISTAN

Panthera supported 250 interview surveys with community members across 62 villages in Tajikistan to assess snow leopard and other carnivore presence and the level of conflict between humans and carnivores. These surveys will help us prioritize conservation actions in the region.

### 2 BARSKOON, KYRGYZSTAN

Panthera trained 28 rangers from the Kyrgyzstan State Agency on Environmental Protection and Forestry on effective checkpoint operations to detect illegal wildlife trafficking.

### 3 WESTERN FOREST COMPLEX, THAILAND



After training rangers from south-eastern WEFCOM in [effective boat patrolling](#) techniques in December 2018, the boat patrol arrested seven individuals for wildlife-related crimes in 2019.

### 4 MALAYSIA

Since 2017, Panthera's Justice for Silent Victims workshop series has promoted stronger judicial actions to effectively prosecute and sentence poachers and traffickers with officials from Malaysia and Thailand. In 2019, we accomplished the following:

**2** Workshops held

**28** Participants at each workshop

**5** Judges participated

**372k** Record fine (in US dollars) levied on wildlife criminals

### 5 DERAMAKOT FOREST COMPLEX, BORNEO, MALAYSIA

During a [large-scale camera trap survey](#), Panthera recorded images of the five Bornean cats: Sunda clouded leopard, marbled cat, bay cat, leopard cat and flat-headed cat. We also increased our anti-poaching patrol coverage of the Deramakot Forest Complex, identifying and responding to new threats together with the Sabah Forestry Department.



Bay Cat



Flat-headed Cat



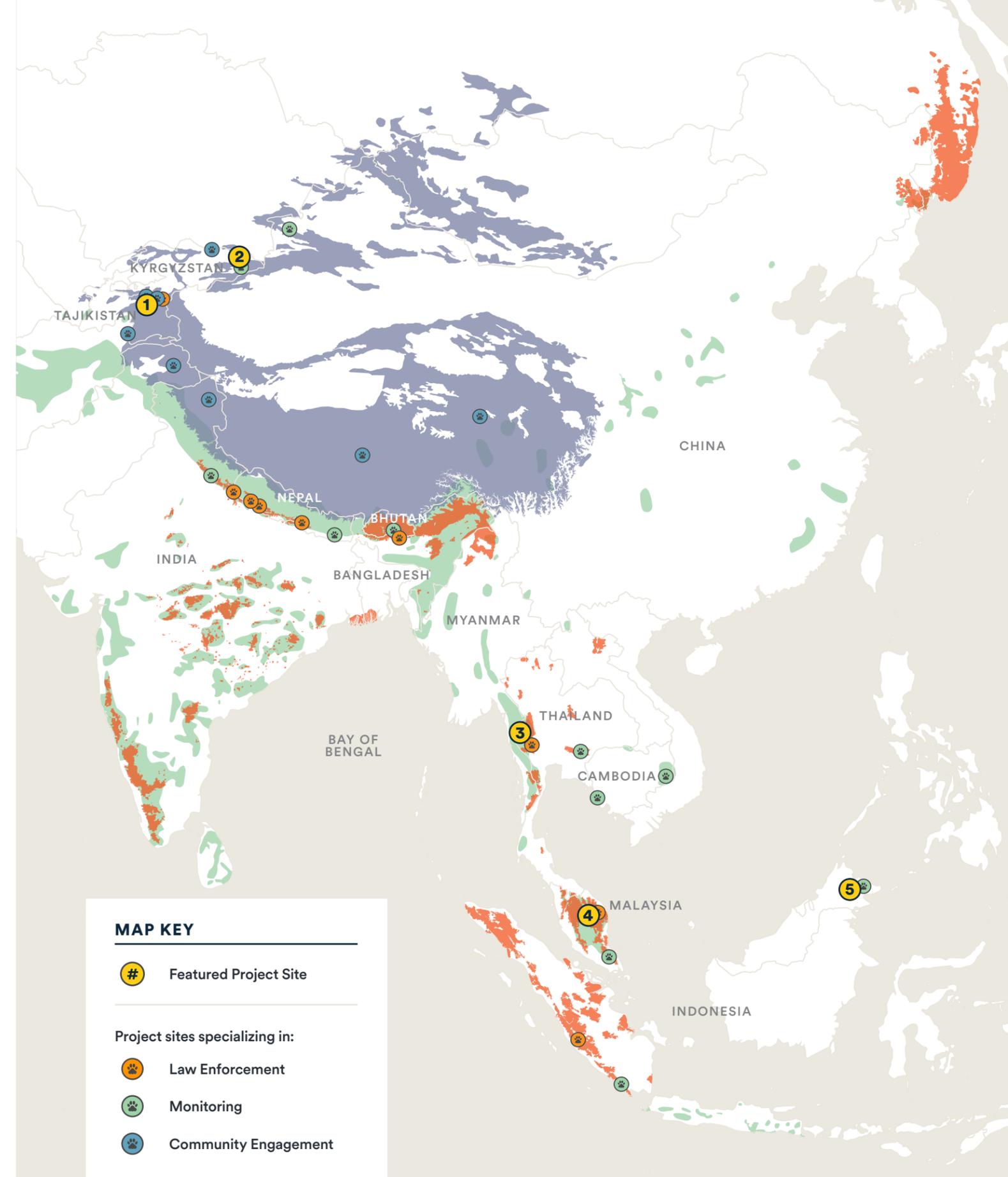
Sunda Clouded Leopard



Leopard Cat



Marbled Cat



#### MAP KEY

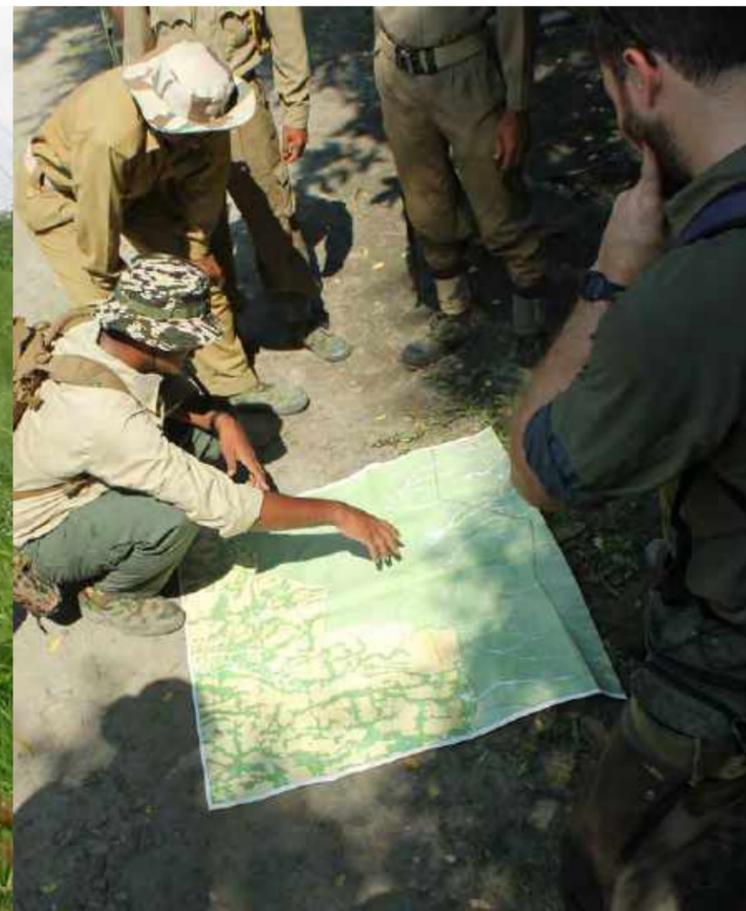
# Featured Project Site

Project sites specializing in:

Law Enforcement

Monitoring

Community Engagement



**Manas**  
WAR FOR THE CORE

Above: Manas Panthers from the Forest Department patrolling the Bansbari Range

Opposite (left to right): Patrols orienting themselves; Tiger caught on camera trap in Manas

The title of wild cat conservationist is not one you earn once you hang your PhD in wildlife biology on the wall. If only conservation was all spatially explicit capture-recapture analyses and understanding genetic heterozygosity, Panthera's staff would have much easier jobs. Instead, conservationists sometimes must commute through warzones, they have to learn the geography of land mines and diplomacy becomes an essential second language. The danger and sacrifice become worth it, though, when you help transform a battlefield into a home for tigers.

Panthera Chief Scientist John Goodrich first visited Manas in 2011 after the region had begun to stabilize in the wake of the Bodo indigenous community's violent separatist movement. Since the 1990s, separatist poaching for subsistence and perhaps to fund the movement had devastated the park's rhinos, tigers and tiger prey. Despite the danger, John and local partner NGO Aaranyak saw the potential the site had for tigers. The park once housed one of India's and the world's highest densities of tigers. With the Tigers Forever Protocol in place, built around rigorous tiger monitoring and effective law enforcement patrolling, they knew the park could be restored to its former glory. Panthera and Aaranyak, working with park management, began annually monitoring tigers in 2012 when just 13 of the cats roamed the park. After separatists left

the western area of the park in 2015, we formed, trained and deployed the Manas Tigers, an elite mobile anti-poaching team in the Bhuyanpara Range.

In 2017, Panthera and Aaranyak made a surprising announcement: our monitoring showed that the population in the former warzone had more than doubled from 13 to 30 tigers. That trend continued as we detected 43 tigers in 2019. Given our success, we doubled down on this law enforcement model and formed the Manas Panthers to patrol the Bansbari Range west of our original patrol area. Combined, these two forces patrol 300 km<sup>2</sup> of this core tiger habitat.

Recovering tiger populations is a conceptually simple, but tactically exhausting, process: stop poachers from killing tigers and their prey and they will rebound. Ensuring sustainability, though, requires that the local community buys in to the newly thriving population of carnivores living next door. To increase community tolerance and prevent unsustainable use of the park's resources, Panthera works closely with Aaranyak to provide alternative livelihoods to community members. If patrol teams catch someone collecting food or firewood (for example) in the park, their information is shared with the Community Livelihood Team, who can provide a gas stove or help develop timber plots for firewood harvest.

Devoid of people and infrastructure, wild cat core habitats will always be a natural staging ground for war and insurgency. Because wildlife cannot heed travel alerts, conservation can be a dangerous profession. From Colombia to India, Panthera's scientists and law enforcement professionals are showing that the risks are worth it to recover these key wild cat populations. In Manas at least, we have returned the park to its rightful owners: tigers, leopards, rhinos and all of the other wonderful species that roam its vast grasslands and lush tropical forests.

**“Manas captured my imagination. It truly is one of the world's greatest treasures, and this once broken ecosystem is rapidly returning to its former glory.”**

**DR. JOHN GOODRICH**  
Chief Scientist  
Director, Tiger Program



**“...there was discernable movement in the shadows and from beneath the right side of the huge boulder a spotted flank became visible; the snow leopard emerged, yawning and stretching. She...walked out to sit in front of the boulder. My heart raced as I composed the frame and fired the shutter in a first volley of shots.”**

**NICK GARBUTT**  
Wildlife Photographer and Tour Guide  
Panthera Partner Photographer

**CORRIDORS**

# Ladakh

**A SNOW LEOPARD'S ESCAPE FROM CLIMATE CHANGE**

If all you hear is your own huff and puff as you scale the scraggly mountainsides of Ladakh, northern India, the silence hides the buzz of conservation activity occurring across the region. In a remote paramilitary camp, a prototype bio-gas digester is being built to process and eliminate the food scraps that support the feral dogs that harass local wildlife. In the Sham Valley, a group of unemployed youth are being drilled on the diverse and fabulous wildlife of the region as they train to become nature guides. In the Rong Valley, staff and community members are hard at work building a livestock corral to keep snow leopards away from a family's livelihood.

In Saspotsey Village, premiums are being collected for a community-run livestock insurance program. In Chilling Village, artisans are passing on centuries-old knowledge of crafting metal pots. The monks of Likir Monastery are learning about the area's biodiversity and how to make their monastery more sustainable. And a tourist from the United States is settling in to bed after enjoying a meal of mok moks (Ladakhi dumplings) prepared by her Himalayan Homestay hosts.

In Ladakh, Panthera partners with Snow Leopard Conservancy-India Trust (SLC-IT) to monitor snow leopards and their prey, reduce conflict between predators and livestock herders and provide sustainable livelihoods to local communities.

**IN 2019**

-  **12** Predator-proof livestock corrals built
-  **3** New villages with Himalayan Homestays
-  **3** Trainings for artisans in local handicrafts

houses a unique mix of wildlife native to both the Himalaya and the TPHK regions that are threatened by feral dogs and conflicts with humans.

Ladakh is rapidly becoming a model for moving beyond just tolerating carnivores and integrating them into the cultural and economic life of the community. Ladakhis are coming to know intimately the biological gifts of their home, learning to live and earn money sustainably and rediscovering fading cultural practices like handicrafts. While this area may soon serve as an escape from climate change, for now, many snow leopards and the people who love them are happy to call it home.

Empowering the people of Ladakh to celebrate their local carnivores will be a key to the snow leopard's survival given the uncertain future dealt by climate change. As climate change reduces snow leopard range, Ladakh may become a major wildlife corridor between former snow leopard habitats in the Himalayas and the climate change resistant areas (what we call climate refugia) of the Pamir-Hindu Kush-Karakoram-Western Tianshan (TPHK) mountain ranges. In the present, the region

Connect with this story... 

Above (left to right): Ladakhi woman outside her home high in the mountains of the Himalayas in northern India; Predator-proof livestock corral

Opposite: Female snow leopard yawning and stretching

# Americas

## BIG CATS



**Puma**  
*Puma concolor*



**Jaguar**  
*Panthera onca*

## SMALL CATS

**Andean Mountain Cat**  
*Leopardus jacobita*

**Bobcat**  
*Lynx rufus*

**Geoffroy's Cat**  
*Leopardus geoffroyi*

**Jaguarundi**  
*Herpailurus yagouaroundi*

**Kodkod**  
*Leopardus guigna*

**Margay**  
*Leopardus wiedii*

**Ocelot**  
*Leopardus pardalis*

**Oncilla**  
*Leopardus tigrinus*

**Pampas Cat**  
*Leopardus colocola*

**Southern Tigrina**  
*Leopardus guttulus*

### 1 MAYA FOREST CORRIDOR, BELIZE

The Government of Belize declared support for plans to protect the [Maya Forest Corridor](#), a [key traveling path](#) for jaguars in Central America. Panthera has been working in and advocating for the Maya Forest Corridor for 12 years, and we are now fundraising with partners to purchase land blocks for conservation and to provide security and monitoring for the area.

### 2 LAGUNA DE TÉRMINOS-CALAKMUL CORRIDOR, MEXICO

The Calakmul Biosphere Reserve in the Yucatan holds one of Mexico's key jaguar populations. These jaguars travel through an 80 km<sup>2</sup> area to the [Laguna de Términos Flora and Fauna Protected Area](#). To reduce jaguar mortality and [maintain connectivity](#) between these areas, Panthera trained three community groups to monitor jaguars, patrol for illegal activities and help local ranchers prevent livestock predation by jaguars. One of these communities, San Pablo Pixtún, is designating 5,000 hectares of their communal land solely for conservation purposes.

### 3 COUNTERING WILDLIFE TRAFFICKING IN BOLIVIA, COLOMBIA, ECUADOR, PERU AND SURINAME

Panthera is partnering with these countries to investigate and counter the growing trafficking of jaguar parts. These efforts included:



Producing public service radio announcements in Spanish and Chinese in Bolivia and Suriname



Placing posters in Bolivia's largest airport to raise awareness of laws protecting jaguars



Training 50 Bolivian officials, including customs and airport employees, to detect wildlife parts using x-rays



Producing a wildlife identification guide for Bolivia, Suriname, Ecuador, Colombia and Peru



Hosting a workshop with Peruvian law enforcement and judiciary on wildlife trafficking

### 4 JAGUARS WITHOUT BORDERS, HONDURAS AND GUATEMALA

**2** Countries

**2** Protected Areas: Sierra Caral Water-Forest Reserve, Guatemala, and Cusuco National Park, Honduras

**2.5k** km patrolled in 2019

**12** acoustic monitors deployed to track gunshots

#### RESULTS

Poacher patterns detected

Signs of poaching decreasing

Two forest clear-cut attempts located and stopped



#### MAP KEY

# Featured Project Site

Project sites specializing in:

Law Enforcement

Monitoring

Community Engagement

Demand Reduction

Wildlife-Friendly Infrastructure



**“Together with Nicaragua’s indigenous groups, we are protecting the ecosystems so vital to the health and well-being of local communities and the region’s jaguars. The indigenous Rama people, the Afro-descendent Kriol people and the Awaltara Territorial Government, in their bravery and determination to protect their ancestral forests, deserve the thanks of the world for preserving these truly special areas.”**

**SANDRA H. POTOSME**  
Nicaragua Country Coordinator

**Nicaragua**  
DEFENDING  
INDIGENOUS LANDS

The patrol team returned to the scene of the crime. Days before, they discovered an area in the Indio Maíz Biological Reserve in southeastern Nicaragua that had been clear-cut by loggers. After the loggers left, a rancher had set up shop and had let loose his cattle to graze illegally in the former forest. The patrol, composed of indigenous Rama and Afro-descendent Kriol community guards, confronted the invading rancher, but he would not leave. This time, the patrol came back with the entire community literally behind them. If that show of people power didn’t work, the community was in the process of suing the illegal rancher to force him out of the protected area.

Indio Maíz is one of the largest intact lowland tropical rainforests remaining in Central America and is a key habitat for jaguars. With our partner Global Wildlife Conservation (GWC), Panthera is arming the Rama and Kriol peoples with the legal knowledge, site security practices and protected area management skills needed to repel from the Indio Maíz Biological Reserve a wave of illegal grazers, loggers and hunters. As part of this, Panthera and GWC trained community guards to effectively search for, collect data on and respond to illegal activities, including training patrol members in the use of SMART. SMART is the conservation community’s most trusted software for monitoring and evaluating law enforcement patrols. With SMART, patrollers can predict likely threats and

adapt their patrols to changing conditions. We also support the Rama and Kriol communities as they demarcate the boundaries of the biological reserve and place signs warning invaders of the consequences of illegal activities. In 2019, with a Rama lawyer, we produced and are distributing a legal manual for communities across the Caribbean Coast to battle the illegal ranching that causes the overwhelming majority of the deforestation in Nicaragua’s protected areas and indigenous territories. This manual was created in consultation with both the country’s indigenous peoples and the country’s largest cattle ranching associations. This ensures the buy-in needed to create mechanisms eliminating markets for beef raised illegally in indigenous lands.

While we continue to support the autonomous management of Indio Maíz by the Rama and Kriol peoples, we are replicating this program in another indigenous territory in Nicaragua. In the Awaltara Indigenous Territory on the central Caribbean coast of Nicaragua, we are working with the territorial government to establish a protected area in a key corridor (and perhaps core area) for jaguars connecting Bosawás Biosphere Reserve in the north with Indio Maíz and Costa Rica’s Tortuguero National Park in the south. Similar to Indio Maíz, this area is threatened by illegal logging and cattle grazing. With GWC, the Territorial Government and the Municipal Government, Panthera has

trained indigenous Ulwa community guards in collecting SMART compatible data. We are now supporting patrols in the proposed protected area.

One of Panthera’s core values is the importance of centering local people in any wild cat conservation program. While this often means educating people about the importance of wildlife, sometimes no hearts and minds need to be changed. Many indigenous and rural communities are already defending their wildlife against extreme odds, simply waiting for the rest of the world to notice. Panthera is proud to partner with the Rama and Kriol peoples and the Awaltara Territorial Government as they restore Nicaragua’s jaguars and other wildlife as the true owners of the forest.

Above: Community guards traveling by boat through the Indio Maíz Biological Reserve

Opposite: Sign marking the boundaries of a protected area of the Rama and Kriol peoples



**“As a member of the Lower Elwha Klallam Tribe, I’m part of an independent nation that treasures our natural resources. Together with Panthera, we established the Olympic Cougar Project to help preserve our native carnivores and the fragile wilderness we all rely upon. I’m proud to be part of the team that’s securing a future for cougars and bobcats in my backyard.”**

**CAMERON MACIAS**  
*Conservation Biologist*  
*Panthera Kaplan Award Grantee*

**CORRIDORS**

# Olympic Peninsula

**CONNECTING PUMA POPULATIONS IN THE PACIFIC NORTHWEST**

**Connect with this story...** [Watch](#)

Above: Female puma photographed through the trees in the Olympic Peninsula

Opposite: Puma Program Director Mark Elbroch conducting field training at a kill site with Cameron Macias and Kim Sager-Fradkin

The young puma stared bewildered at all that lay before him. The glistening trees of Olympic National Park, Washington, had suddenly transformed into cul-de-sacs. Puddle jumpers were making their approach into Olympia Regional Airport just to his southeast. His search for territory, prey and mates had led him straight into a six lane interstate. He had to turn around. He went south and then southeast. Unfortunately, that interstate had followed him south. Eventually, he veered southwest and quickly ran into the Columbia River where it was four miles wide. He paced its bank for a week before traveling west and slightly north, running into an impassible barrier—the Pacific Ocean. Travelling back northeast to an area not so far from the first place that Interstate-5 had stopped him near Olympia, the puma was killed by a hunter.

This is the story of the first dispersing puma we followed through the Olympic Cougar Project. Panthera and our partner the Lower Elwha Klallam Tribe together launched The Olympic Cougar Project to study and protect wildlife among the dense coniferous forests, glacier-clad mountains and rugged coastlines of Washington’s stunning Olympic Peninsula. Pumas, called cougars locally, have lower genetic diversity on the Peninsula than in the remainder of the state. Protecting a corridor for wildlife connectivity so that pumas can travel into and out of the region is essential to ensuring the long-term genetic viability of these big cats.

In addition to supporting and enhancing wildlife connectivity between the Olympic Mountain Range on the Peninsula and the southern Cascadia on the mainland corridor, we also aim to expand our understanding of puma behavior and juvenile dispersal patterns across the entire Olympic Peninsula. We accomplish both goals by placing GPS collars on pumas and tracking their dispersal; conducting genetic analysis on puma and bobcat scats (feces) collected by our scat sniffing dog partner Rogue Detection Teams; and using camera traps and novel mathematics to estimate the abundance of numerous species within the Tribe’s traditional use areas, including pumas, bobcats, deer, elk and black bears. In collaboration with the Washington Department of Fish and Wildlife; Olympic National Park; and the Skokomish, Makah, Jamestown S’Klallam and Port Gamble S’Klallam Tribes, the Olympic Cougar Project has quickly become a region-wide effort.

The dilemma facing pumas on the Olympic Peninsula perfectly encapsulates why we must protect corridors for wild cats. Like the puma frustrated by Interstate-5 in his travel, pumas on the Peninsula are becoming more and more isolated from their mainland counterparts. Using the data gathered on wildlife presence and puma movement, we can eventually make recommendations that restore and protect puma immigration and emigration to the area, which will in turn benefit the other

wildlife in the region. Our experience helping jaguars and other wildlife safely cross highways and infrastructure in Costa Rica can be utilized here. With this project, Panthera and all of our partners are safeguarding the long-term future of this unique region’s wildlife and supporting the puma’s sacred freedom to roam.

**IN 2019**

- 12** Scat samples collected
- 74** Cameras deployed
- 12** Pumas collared



# The Arabian Leopard Initiatives

Above: Dr. Thomas S. Kaplan and H.H. Prince Badr bin Abdullah Al-Saud shake hands after signing the agreement

Opposite: Female Arabian leopard with her two cubs in the captive breeding program

**“The Arabian Leopard Initiatives... are a testament to the power of individuals to alter the trajectory of a species – away from extinction and towards rebirth.”**

**DR. THOMAS S. KAPLAN**  
*Founder and Chairman of the Board of Directors, Panthera*

Panthera and The Royal Commission for AlUla (RCU) of the Kingdom of Saudi Arabia cemented an historic conservation partnership in June 2019 with the goal of changing the course for leopards, the world’s most persecuted big cat. The RCU’s extraordinary commitment of \$20 million over the next 10 years will be devoted to bringing leopards back from the brink, with a focus on recovering the critically endangered Arabian leopard, which is native to AlUla.

The Arabian Leopard Initiatives (ALI) will be an integral part of RCU’s aim to deliver a sensitive and responsible transformation of the AlUla region.



The partnership’s goals will be achieved through a suite of conservation initiatives, including:

- scientific research
- captive breeding programs
- international collaborations
- community-based conservation projects
- a global fund for the protection and enhancement of remaining wild populations

The captive breeding program reached an important milestone with the birth of [two Arabian leopard cubs](#), one male and one female, and gave a beacon of hope for this beleaguered subspecies. Dr. Guy Balme, Panthera’s Deputy Executive Director of Conservation Science and Leopard Program Director, is leading the project for Panthera and presented a two-year conservation plan for the Arabian leopard at a workshop hosted by the Saudi Wildlife Authority in December.

## WHAT IS THE ARABIAN LEOPARD?



The Arabian leopard is the smallest subspecies of leopard. It is about half the weight of African leopards.



The subspecies lives in arid mountain regions of the Middle East.



The Arabian leopard typically hunts small to medium sized prey, like the Arabian gazelle, at night.

## ARABIAN LEOPARD’S STATUS



The Arabian leopard is listed as Critically Endangered by the IUCN with an estimated population of fewer than 200 individuals left in their range.



Greatest threats include loss of habitat, overhunting of prey and persecution due to conflict with people over livestock.

**“The signing of the agreement is a major milestone in our shared ambitions to reintroduce the Arabian leopard population in the region and join global partners to support the preservation of these wild cat populations worldwide. It is our duty to protect, conserve and build the population numbers to preserve the species from becoming a footnote of history.”**

**H.H. PRINCE BADR BIN ABDULLAH AL-SAUD**  
*Governor of The Royal Commission for AlUla and Minister of Culture*



## A Corridor to the World

### CAMPAIGN FOR WHO TO CONDEMN TRADITIONAL CHINESE MEDICINE UTILIZING WILD ANIMAL PARTS

In a controversial decision questioned by scientists, the World Health Organization (WHO) formally recognized Traditional Chinese Medicine (TCM) for the first time at the 72nd World Health Assembly in Geneva in May. CNN, The Telegraph and The Times of India covered Panthera, the Environmental Investigation Agency and Wildlife Conservation Trust's [urging of WHO to condemn the use](#) of TCM utilizing wild animal parts, including from captive-bred specimens, sending an unequivocal message to the world that it will not legitimize this practice in TCM and condone the decline of global wild animal populations.

**“Taken with China’s recent proliferation of Traditional Chinese Medicine around the globe, WHO’s decision could contribute to the end of many species on the brink of extinction, like the tiger.”**

**DR. JOHN GOODRICH**  
Chief Scientist  
Director, Tiger Program



### PREMIERING THE #LEOPARDSPOTTED MOVEMENT

The ultimate icon, leopard spots dominate popular culture while the magnificent cats that inspired the print are in a life and death struggle for survival. We asked people to channel their love for leopard print into environmental action. As the only organization in the world dedicated exclusively to the conservation of all species of wild cats, Panthera has a proven track record — and a plan — to save leopards globally. #LeopardSpotted launched in 2019 with a \$20 million goal, which will have a transformative impact on the future of leopards by allowing us to expand our flagship, life-saving programs. At a time when we are losing one of the world’s most charismatic species, we are enlisting consumers, businesses and brands to help us stop the leopard’s roar from being silenced forever. Learn more at [leopardspotted.org](https://leopardspotted.org).



### PANTHERA COVERS THE AMAZON FIRES’ IMPACT ON WILD CATS

In August, we began [reporting on the consequences](#) of the wildfires in South America for wild cats and other wildlife. By September, we [reported](#) to news outlets, including The Associated Press, National Geographic and USA Today, that over 500 jaguars were left homeless or deceased from fires in Brazil and Bolivia. After visiting the greater Santa Cruz area of Bolivia, Panthera scientists overlaid maps of burnt habitat with wild cat range and determined that fires in the country destroyed over 2 million hectares of forest in one of South America’s few and critical “catscapes,” a region with the highest predicted density of cat species on the continent (eight species).



### DISNEY’S THE LION KING HELPS PANTHERA SAVE REAL LIONS

In conjunction with the release of the new live-action film *The Lion King* in August, The Walt Disney Company and the Lion Recovery Fund launched #ProtectThePride, a global campaign to help recover Africa’s embattled lion populations. Panthera is a [proud partner of the Lion Recovery Fund](#); our research and conservation actions have proven that by providing strong protection and increasing tolerance for lions among the people who live with them, we can successfully recover lion populations. Chairman and Founder Dr. Thomas S. Kaplan chatted with Richard Quest on CNN International’s ‘Quest Means Business.’ In addition, The Walt Disney Company France selected Panthera as a conservation partner for the movie’s release in France. Together with Gifts for Change and cinema chain Pathé Gaumont, The Walt Disney Company France offered for sale a custom bracelet with a portion of proceeds going towards our lion programs.

A battle-scarred snow leopard captured at night on DSLR camera trap in Kyrgyzstan

# Searching for New Frontiers

## PANTHERA'S GRANT PROGRAMS

Recipients of Panthera's grant programs have made exciting advancements in wild cat genetic analysis, studied cats in the most remote areas of the globe and even become key members of Panthera's staff and leadership. Please join us in congratulating Panthera's 2019 grantees:

### WINSTON COBB MEMORIAL FELLOWSHIP

*Supports field-based internships for early career conservationists on projects led by Panthera or partners*

**Anda Ciurezu**

*Jaguar Program, Belize and Brazil*

### SMALL CAT ACTION FUND (SCAF)

*Supports conservation and research on many of the 33 small cat species*

**Divyashree Rana**

*Investigating genetic landscape of the fishing cat (*Prionailurus viverrinus*) in India*

**Phub Dorji**

*Conservation of clouded leopard through assessment of its spatial distribution and activity pattern inside biological corridor 4 in Bhutan*

**Giridhar Malla**

*How safe is the fishing cat? Addressing the challenges in conservation of fishing cats on the southern east coast of India*

**Hasan Rahman**

*Conservation of clouded leopards and other sympatric carnivores in the Chittagong Hills Tracts, Bangladesh*

**Jennifer McCarthy**

*Secret victims: Quantifying and mitigating human-small cat conflict in the Mamoni Valley of Panama*

**Juan Carlos Huaranca**

*Conservation of Andean Cat: evaluating the effects of grazing by llamas on modification of behavior and spatial use of the Andean cat (*Leopardus jacobita*) in the Central Andes of Bolivia*

**Liesbeth Frias**

*Health at the edge: an evaluation of health risks for wild cats at the human-wildlife interface*

**Vanessa Herranz Munoz**

*Fishing cat conservation in the Cambodian mangroves and initial fishing cat survey at the Tonle Sap Biosphere Reserve*

### SABIN SNOW LEOPARD GRANT

*Supports conservation efforts on the snow leopard in Asia*

**Charlotte Hacker**

*Snow leopard (*Panthera uncia*) prey use and dependence on livestock in Qinghai, China, and implications for conservation*

**Gaetan Dupont**

*Designing scalable study design protocols to estimate snow leopard (*Panthera uncia*) density and population size using non-invasive sampling*

**Juan Jose Diaz Sacco**

*Assessment of snow leopard ecology and niche partitioning with other large carnivores*

**Bruce Elfstrom**

*Mongolian snow leopard-human conflict reduction program*

**Don Hunter**

*Drones for snow leopard conservation*





## INTEGRATED DATA SYSTEMS

Panthera Integrated Data Systems, or PantheraIDS, was developed from a need to process, manage and interrogate the myriad of data collected by scientists. Our technology specializes in analyzing camera trapping data by automatically identifying species, number of animals and behavior.

Panthera IDS allows users to access data sets from anywhere in the world:



Operates both offline and online with a cloud-based database infrastructure



Advanced Encryption Standard (AES) for data security



Capable of displaying in any language

In 2020 and beyond, PantheraIDS will be developed to process telemetry data, observation data, sign data and external data sources such as Cybertracker and [SMART](#).

# Conservation Science and Technology Highlights

## SCIENTIFIC PUBLICATIONS

The foundation of Panthera is scientific excellence: our hard work protecting cats in the field would not be possible without rigorous science to guide and evaluate it. The knowledge produced in 2019, represented by an impressive 30+ publications in scientific journals covering cat populations across the globe, will have far-reaching implications for the work of Panthera and all wildlife conservation groups. Some highlights include:

Panthera Lion Program Manager Dr. Kristoffer Everatt's study in [Biodiversity and Conservation](#) emphasized the rising threat of targeted poaching for body parts to lions in the Mozambican portion of the Greater Limpopo Transfrontier Conservation Area. While more lions were killed because of human conflict with cats over livestock attacks, the demand for body parts like teeth and claws seems to be escalating these conflict killings. This could have devastating impacts on lions that mirror similar impacts on wild tigers.

A study published in [Conservation Science and Practice](#) by Puma Program Director Dr. Mark Elbroch and Executive Director of Conservation Science Dr. Howard Quigley provides evidence that puma hunting could [negatively impact prey populations](#) like mule deer. These findings question certain wildlife management techniques currently in play in the western United States.

Panthera South American Regional Director Dr. Esteban Payán and Colombia Project Coordinator Valeria Boron co-authored a paper in [Frontiers in Forests and Global Change](#) studying the [impacts of palm oil plantations on mammals](#) in tropical regions. Since the goal of the Jaguar Corridor is to provide connecting habitat for these big cats, we must understand this dynamic and mitigate its impacts.

For a complete list of our 2019 scientific publications, please visit [panthera.org/2019-scientific-publications](https://panthera.org/2019-scientific-publications)

## SNOW LEOPARD GENETICS ADVANCES

In 2019, Sabin Snow Leopard Grant recipient Safia Janjua published a paper in [Conservation Genetics Resources](#) on the establishment of the first ever single-nucleotide polymorphism panel for uniquely identifying individual snow leopards. Safia and other Panthera researchers are currently undergoing a series of experiments to try and optimize the methods from the paper to work on scat (feces) samples. This new method of next generation sequencing will help us study the elusive feline known as the "Mountain Ghost" in Pakistan and throughout its entire range in central Asia.

Above (left to right): A ranger in Zambia with confiscated lion pelts and snares; Mule deer

Opposite: Veterinarian John Oschsenreiter examining snow leopard blood samples



# Support Panthera and Save Wild Cats

Panthera's scientists, law enforcement experts and wild cat advocates on the frontlines need your help to stop poachers, protect key habitats and corridors and support the rural communities that hold the key to wild cats' futures. Please consider making a gift, setting up a recurring donation or including Panthera in your estate plan. You can also help Panthera by sharing our news and stories from the field with your online networks.

## MAKE A GIFT

Panthera is a 501(c)(3) non-profit organization, meaning your donation is tax-deductible in the United States to the fullest extent of the law.

- Visit [panthera.org/donate](https://panthera.org/donate) to make a secure online gift, set up a recurring donation or check if your employer will match your gift.
- In the United Kingdom, give to us at [justgiving.com/panthera/donate](https://justgiving.com/panthera/donate).
- If you are in France, give to us at [panthera.org/donate/france](https://panthera.org/donate/france).
- For all other countries, please contact us at [donate@panthera.org](mailto:donate@panthera.org).

To give by check, please make it payable to 'Panthera' and mail to:

Panthera  
8 West 40th Street, 18th Floor  
New York, NY 10018

Please send any questions to [donate@panthera.org](mailto:donate@panthera.org) or call us at 646-786-0400.

## DONATE STOCK

To make a gift of stock, please use the information below. We ask that you copy Panthera on transfer instructions or otherwise alert us to your incoming gift so that we can track its arrival.

Morgan Stanley Smith Barney  
DTC# 0015  
For the account of: Panthera Corporation  
Account # 398-203268014  
MSSB Phone# 212-692-2367  
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## GIVE FROM YOUR DONOR-ADVISED FUND

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Federal Tax ID Number: 20-4668756

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Blog  
[panthera.org/blog](https://panthera.org/blog)

# 2019 Financial Summary

In 2019, Panthera began a long process to improve our financial management across the organization so that it is more transparent, efficient and sustainable. Part of this change includes streamlining financial accounting processes across our 13 global entities, inefficiencies that in the past have delayed revenue collection. While our 2019 Statement of Revenues and Expenses shows a deficit, 80% of that deficit was reimbursed by revenue collected in 2020 specifically for 2019 expenses. In addition, nearly \$2 million of 2018 revenue was carried over into 2019. The results of our process improvements will be clear in our 2020 financial reports and we will keep our donors apprised of improvements as we make them.

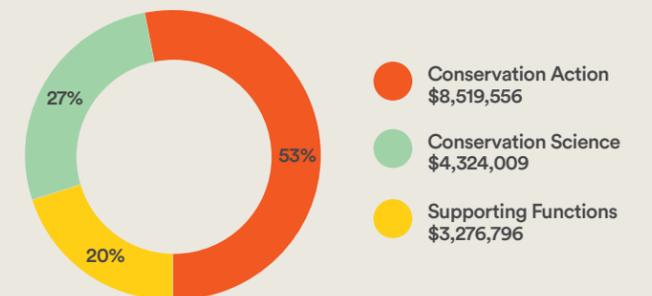
Another change we made was to the internal structure of the organization, evolving from species-based programs to programs based in geographical hubs. These programs are divided into two pillars, Conservation Action and Conservation Science. With this reorganization, we were able to shift more resources into programs, reducing our Supporting Functions category from 23% of the budget in 2018 to 20% in 2019. More granular detail about expenses within these categories will be found in our complete audited financials.

Due to the COVID-19 pandemic, the figures below are unaudited financials. When available, you can download Panthera's complete audited financial statements at [panthera.org/Annual-Report-and-Financials](https://panthera.org/Annual-Report-and-Financials).

## TOTAL EXPENSES

2019 Total Expenses	\$16,120,361
2018 Total Expenses	\$14,002,629

## 2019 EXPENSES



## REVENUE

	2019	2018
Unrestricted Contributions & Grants	\$4,939,285	\$2,230,249
Net Assets Released from Restriction	\$10,399,787	\$10,854,396
<b>Total Revenue</b>	<b>\$15,339,072</b>	<b>\$13,084,645</b>
2019 Net Assets End of Year	\$18,586,893	

Above (left to right): Lion Program Director Paul Funston collaring a large male lion in Angola; Field staff in Tajikistan

# Board, Staff and Science Council

AS OF JUNE 1, 2020

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Sub-adult tiger cub in Ranthambore  
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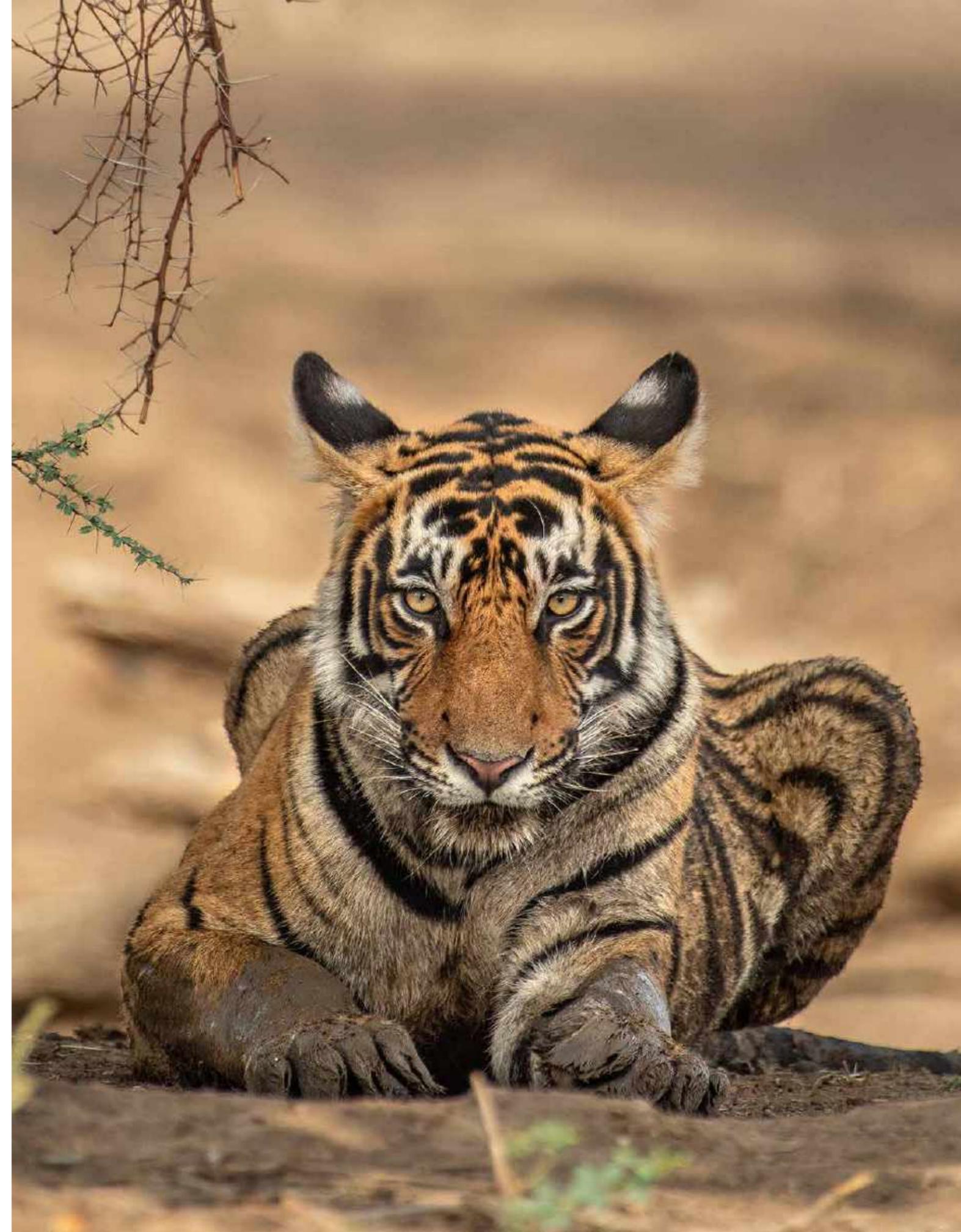
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# After the Fires

HELPING WILD CATS FLOURISH IN A HUMAN-DOMINATED WORLD



**DR. ESTEBAN PAYÁN**  
*South America Regional Director*

The Amazon has long been known as the biggest core jaguar population on the planet. Until now. This year's massive fires have proven that even this behemoth of biodiversity is at the mercy of humans. The Amazon, like all jaguar habitat across the continent, is vulnerable to both climate change and rampant colonization.

Successful wildlife conservation comes down to human actions, especially when protecting apex predators like wild cats. These iconic species are some of the most sensitive on the planet due to needing abundant prey and large, well-conserved areas combined with their vulnerability to human activity. We compete with big cats for wild prey and space to grow crops and we decide whether to hunt and poach them. It's up to us to act to save wild cats and that's exactly what Panthera is doing.

For more than a century, humans have worked to conserve biodiversity, including wild cat populations, inside national parks and other protected areas. However, we now know that this is not enough to save them. Lions, tigers and jaguars are landscape species, which means their territories are huge and they generally live at low densities, making parks insufficient for their long-term survival. This is why we must protect the corridors that connect core populations and ensure genetic exchange.

Cores and corridors are thus at the heart of Panthera's conservation strategy, which combines cutting-edge science with dedicated professionals on the ground. Our work on cores aims to maintain them as the strongholds of the species, many of which are centered on protected areas. We also depend on corridors to connect these core populations of big cats. This concept is the basic premise of the Jaguar Corridor Initiative (JCI); the largest and boldest attempt at providing a genetic corridor for a species in the world. Since its inception, the JCI has made tremendous strides in protecting jaguar habitat and has become an example for conserving species worldwide.

But our work continues to face more difficulties. As the planet faces sweeping problems, including pandemics born out of the illegal wildlife trade, changing climate patterns and socioeconomic turmoil, we will see more and more land cleared and more and more big cat habitat destroyed by humans.

In these increasingly dangerous times, conservation must become more strategic. Following our cores and corridors model, we must focus on strengthening relations with communities living within wild cat habitat corridors. We must recognize successful land tenure practices that have shown for hundreds of years how coexistence is possible and work together to conserve existing protected areas. We must join with and amplify the voices of those communities who call the Amazon and other wild areas home and often risk their lives and livelihoods to save these treasured ecosystems from disappearing.

Either we act now to save wild cats or we watch their demise. We have come far, but threats continue to grow, aggravated by climate change, man-made fires and extensive clearing of forests for agriculture. We must face them together, united by a common goal of conservation. Big cats have been considered gods in the past, have been labelled pests for several centuries and are now being recognized as conservation icons. They represent the last of our wildness and wilderness and it is our duty to preserve them for generations to come. We hope you'll join us on this adventure. From everyone at Panthera, thank you for your support and encouragement in our mission to save the world's wild cats.

**“Manmade fire is a new and absolutely devastating threat to wildlife due to its exorbitant intensity, scale and speed. When combined, these three factors mean that enormous swaths of forest and the life within them can be lost in a matter of days.”**

A grumpy-looking marbled cat caught on DSLR camera trap in Sabah, Malaysian Borneo

## CREDITS

**Writers:** Jared Watkins, Jamie Zaccaria

**Designer:** Danielle Garbouchian

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