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.
"Hope” is the Thing with Whiskers

Who, in their lives, has looked upon a lioness with her cub and not thought of their own mother or child? Who has worn leopard print and not felt the cat’s ferocity overtake their spirit? Who has gazed into the eyes of a snow leopard without being captivated by their inherent intelligence and mystery? My friends, 2020 imparted many lessons upon us, foremost of which is that man’s fate and soul remains inextricably tied to the preservation of wildlife. Those of us who have been confined to concrete jungles this past year can attest to the unique healing power of being in nature. Those of us who have choked on smoke pluming from distant wildfires can bear witness to the immeasurable destruction wrought when our relationship with nature is broken.

Throughout this storm, the words of my intellectual lodestar — Marcus Aurelius — continue to echo across the millennia in an attempt to shake us from our delusion that we humans might have dominion over this planet: “Everything is fruit to me which thy seasons bring, O Nature: from thee are all things, in thee are all things, to thee all things return.” As we sell wildlife, we breed violence. As we set fires for farmland, we scorch our own lungs. As we harm nature, we hurt ourselves.

And yet, as you’ll see in the pages that follow — with an assist from Emily Dickinson — “hope” is indeed the thing with whiskers. "When COVID-19 shuttered most of us in our homes, Panthera’s ranger teams were out in force protecting tigers in South and Southeast Asia while our scientists were distributing food to rural communities in Angola. As fires devastated the jaguar paradise of the Brazilian Pantanal, our staff put down their camera traps and picked up hoses and axes to douse burning wooden bridges and build firebreaks. Communities that had learned to mix sustainable cattle ranching with jaguar ecotourism immediately braved the flames to rescue the injured jaguars that they consider family. When two hurricanes battered Honduras last fall, we turned our attention from patrolling Jeannette Kawas National Park for illegal hunting and grazing to distributing food and basic supplies to nearby villages. Those cats that once represented threats to livestock and livelihoods turned, through Panthera and our partners, into suppliers of diapers and formula during that crisis. That was all of us: whether standing on the frontlines or donating what one could, we were all brought together by the love of cats. Speaking of the love of cats, 2020 officially brought one of the world’s most devoted advocates for cats into Panthera’s leadership. Jonathan Ayers, former CEO of IDEXX Laboratories, joined Panthera’s Board of Directors and, as announced in March 2021, became the newest member of The Global Alliance for Wild Cats with a $20 million commitment over 10 years to support wild cat conservation with an emphasis on small cats and lions. Jon’s passion for, and inextricable curiosity about, cats has impressed even me — a prime offender. You will learn more about Jon and why he has entrusted Panthera to execute on his vision of saving all 40 species of wild cats in his interview later in this report. Jon’s undeniable business acumen and vast leadership experience will also serve as invaluable assets as our organization grows further to meet those lofty expectations.

It would be inexcusable for me to take stock of the monumental challenges that 2020 presented without thanking all of our supporters — whether you gave Panthera one dollar or sit on our Board of Directors. In a year characterized by uncertainty, if not constant anxiety, and when so many worthy causes asked for help, you all stepped up and affirmed that cats are worth protecting, even under the most extraordinary of circumstances. You all recognized that there simply is no future — whether for us or our planet — if we drop our guard for even a moment and let wild cats vanish.

In the long, complex and yet passionate history of human and cat coexistence, the latter have always symbolized power, strength and courage. I humbly submit that hope can now be added to that list. For as long as a cat prows, an ecosystem is protected, a sustainable local economy is possible and faith in a re-born planet endures. As long as a cat prows, humanity may maintain that indispensable connection to the wild that will help us survive and thrive amidst an otherwise unpredictable future. As long as a cat prows, there is still — at last — beauty in this world.
Conservation During Crisis

A CONVERSATION WITH FRED LAUNAY

Panthera’s 2020 Annual Report is themed around Conservation During Crisis. The pandemic required staff around the globe to adapt conservation initiatives to a world where movement was severely restricted, tourists were cleared from protected areas and it was often too risky to interact with isolated communities that are particularly vulnerable to the ravages of COVID-19. On top of that, staff were dealing with hurricanes and wildfires in the Americas. Panthera President and CEO Fred Launay sat down with three staff members working in Colombia, Gabon and Malaysia to find out how our programs adjusted to the stresses of 2020.

WHAT IS YOUR ROLE AT PANTHERA?

I have been working as the Coordinator of the Lion Restoration Project in Plateaux Batéké National Park (PBNP), southeast Gabon, since July 2019. At this early stage, we are working on biomonitoring activities and logistics to prepare for the upcoming transfer of wild lions to the park.

I became Country Manager for Panthera Malaysia in November 2020. My responsibilities are to oversee and support all in-country projects and ensure that our activities align with our Regional Strategy for wild cat conservation in Malaysia. Prior, I worked closely with Panthera as a member of our Malaysian partner, Rimba.

As Regional Program Manager for South America, my role is mainly to keep an eye on everything that Panthera is doing in the area, from simple administrative tasks to overseeing our finances.

HOW DID THE COVID-19 PANDEMIC CHANGE THINGS IN 2020 AND HOW DID THAT IMPACT YOU PROFESSIONALLY AND PERSONALLY?

The pandemic pushed back a lot of our planned activities, including trainings and meetings. Personally, the lockdowns also limited my ability to travel to the field stations to provide direct support and rendered me feeling rather helpless at certain times. Surprisingly, however, poachers seemed to have stayed away from the forests in the Kenyir Core Area because of travel restrictions. We reported our first zero-snare year in 2020. Fewer incursions from Indonesian poachers were also observed in our Dupot Project site in Borneo for what we suspect were similar reasons.

Professionally, the two main issues we had to face were park protection against poachers with interrupted regular patrols and continuing to...
Saving Cats in a Pandemic

ECONOMIC IMPACTS

95% Jaguar-viewing tours cancelled in the Brazilian Pantanal

$14M Lost revenue for Zambia’s Department of National Parks and Wildlife

67% Lost revenue for homestay operators in Ladakh, northern India

ENVIRONMENTAL IMPACTS

3 Monitored pumas poached in Washington State, USA

2x Reported jaguar killings in Colombia

2x Snares recovered in Kafue National Park, Zambia

HOW WE ADAPTED

Conducted online law enforcement trainings

Increased humanitarian aid

Optimized law enforcement patrolling

Reached rural communities with radio ads and messaging apps

HOW WE HELPED

20k Kilometers patrolled in key tiger habitats

0 Tigers snared in Kenyir, Malaysia

400 People employed or fed in Luengue-Luiana and Mavinga National Parks, Angola

102 Lions monitored and protected in the Greater Kafue Ecosystem, Zambia

94 Families supported in the Brazilian Pantanal

40 Officials trained on identifying wildlife trafficking in Bolivia
In 2017, Jonathan Ayers made a $150 donation to Panthera and asked our staff what he could do to help the 33 species of small wild cats. At that point, Panthera was just beginning to explore establishing a dedicated program for studying and protecting small cats. Our Small Cat Action Fund was providing grants to projects dedicated to small cats around the world, but we knew we needed to do much more for these often ignored species. Impressed by Panthera’s global impact and our sound management, Jon gave $10,000 to the Small Cat Action Fund to really kick start his commitment to small cat conservation.

At the time, Jon was Chairman and CEO of IDEXX Laboratories, the veterinary diagnostics and software leader dedicated to advancing the health and well-being of domestic cats, other pets and livestock. Jon felt a connection to wild cats through his own cats. After establishing The Ayers Wild Cat Conservation Trust with his wife Helaine, Jon helped initiate Panthera’s Small Cats Program in 2018. He further stepped up his level of funding for small cat conservation in 2019 and then again in 2020 while joining Panthera’s Board of Directors. Shortly thereafter, in late 2020, Jon became chair of the Board’s Finance and Audit Committee.

The Panthera Board has gained a world-class leader deeply experienced in running a global organization. Jon grew IDEXX’s annual revenues from $380 million to $2.4 billion over his 17 years at the helm and drove the stock price from $6 to well over $500 in 2021. Jon’s vision, leadership experience and passion will be vital as Panthera continues to grow its impact on the conservation of all 40 species of wild cats.

In March 2021, Jon made an extraordinary commitment of at least $20 million over ten years towards wild cat conservation (focused on small cat conservation) and joined Panthera’s Global Alliance for Wild Cats. That commitment came almost two years after Jon was involved in a catastrophic bicycle accident that left him mostly paralyzed from the neck down and forced him to retire from his positions at IDEXX (he remains a Board member). We discussed with Jon the potent connections between our pet cats and wild cats and how he found new purpose in life protecting wild cats after his accident.

As his current role, Jon is providing financial support to key initiatives to advance small wild cat conservation. Yet, he’s still the same Jonathan Ayers who always wanted to be a veterinarian. There aren’t many jobs in wildlife health, so they are getting only a tiny fraction of species conservation funding. Some of my favorite species are the clouded leopard and the margay because they are tree loving and can climb down head first. We don’t see small cats too much because they make themselves scarce (they are both predator and prey) and they’re not in popular culture like the big cats.

To be clear, I like all cats, but I saw an opportunity to help round out Panthera’s programming and fund a group of species that are getting only a tiny fraction of species conservation funding. Plus, the 33 species of small cats are in all of the regions in which Panthera works, so we can help protect a wide variety of ecosystems and support a diverse set of human communities.

WHAT ROLE CAN THE ANIMAL HEALTH BUSINESS PLAY IN WILDLIFE CONSERVATION?

Many veterinarians are lovers of wildlife. When they go to vet school, in many cases they dream to become a wildlife veterinarian. There aren’t many jobs in wildlife health, so they become a companion animal veterinarian. I’m hoping my involvement with Panthera can bring those two worlds together.

While most animal health professionals may not be able to directly care for wild cats, they can contribute financially to conservation and, more importantly, just make sure people are aware of the threats facing the cousins of their companion cats. Here’s my advice: find your purpose and figure out where and how you can help our world.

ARE YOU OPTIMISTIC ABOUT THE FUTURE OF OUR PLANET?

I think you have to be an optimist, but you also have to be a realist. It’s not just going to happen: our planet is not going to maintain its biodiversity unless we are purposeful in investing in it. The needs are pretty overwhelming. For example, we’ve lost half of the wild lion populations from one Lion King movie to the next. We have to stem that and reverse it. I think we’re getting better: we have better scientific approaches, we have better technology, we know how to work with local communities and we’re learning more about the ecological dynamism of cats. Now is a special time to be investing in cat conservation because we have the opportunity to preserve many of these key ecosystems – landscapes with multiple cat species present – while we keep growing our investment and perfecting our conservation strategies.

“Wild cat conservation is a very tangible cause on which I know I can have an impact. One of the things that drew me to Panthera is its exclusive focus on wild cats – and focus leads to impact.”
Africa

**BIG CATS**
- Lion
  - Panthera leo
- Leopard
  - Panthera pardus
- Cheetah
  - Acinonyx jubatus

**SMALL CATS**
- African Golden Cat
  - Caracal aurata
- African Wildcat
  - Felis lybica lybica
  - Felis lybica cafra
- Black-footed Cat
  - Felis nigripes
- Caracal
  - Caracal caracal
- Jungle Cat
  - Felis chaus
- Sand Cat
  - Felis margarita
- Serval
  - Leptailurus serval

**AFRICAN GOLDEN CAT RANGE, WEST AND CENTRAL AFRICA**
Panthera initiated a range-wide survey of the African golden cat, utilizing the 1,745 camera trap locations from which we receive data in the cat’s range and working with dozens of potential outside collaborators. The survey will also capture data on servals and African wild cats in this range.

**SAVING SPOTS, ZAMBIA**
While the pandemic slowed the effort to replace real leopard, lion and serval furs with synthetic furs in partnership with the Barotse Royal Establishment of the Lozi People, we still distributed 380 additional synthetic furs in 2020. In the absence of public gatherings, our videos educating communities about the plight of leopards and other wild cats have spread rapidly after being shared by key Lozi leaders and influencers.

**PLATEAU BATÉKÉ NATIONAL PARK, GABON**
Panthera has worked with Gabon’s National Park Agency since 2017 to reduce poaching in the home of Gabon’s only lions, an IUCN Save Our Species project co-funded by the European Union. Recent wildlife surveys have indicated that we are successfully reducing poaching as our camera traps have detected more leopards and key lion prey species. With this base established, we will begin efforts to translocate female lions to the park in 2021. Since 2017, we have detected:

- 33% Buffaloes
- 160% Red River Hogs
- 36% Leopards

**NIKOLO-KOBA NATIONAL PARK, SENEGAL**
Panthera has been working with the Senegalese Direction des Parcs Nationaux since 2016 to monitor wildlife, build law enforcement infrastructure and support anti-poaching patrols in the southeastern corner of Nkole-Koba National Park, home to one of the last remaining populations of lions in West Africa. We have effectively cleared the area of poachers and illegal miners, and elephants and lions have now returned to the area. Given this success, we are excited to announce that Panthera has signed a new five-year Memorandum of Understanding with the Senegalese Government to expand monitoring and law enforcement activities across the park.

**HWANGE NATIONAL PARK, ZIMBABWE**
Despite pandemic-related difficulties, the Scorpion Anti-Poaching Unit continued to provide protection to large carnivores in this former home of Cecil the lion. In 2020, the team accomplished the following:

- 5k+ Kilometers patrolled
- 162 Snares and traps removed
- 5 Poachers apprehended for killing a leopard
Africa

EMPTY WILDS

Across Africa’s national parks, the roars of jeeps had been silenced, the flashes of sunlight off of binoculars had been dimmed and the Instagram geotags had been reduced to Throwback Thursday posts. A continent that had given so much to the world by setting aside its most valuable landscapes lost the international tourists that helped pay for the management of these vast lands. Nearby communities lost income and wildlife lost the additional eyes that helped keep them safe. Panthera and our partners had to figure out how to protect wildlife and human communities as long as the pandemic lasted and build a conservation model not dependent on tourism for the future.

In Zambia, wildlife tourism contributes $1.8 billion in revenue every year and provides 341,000 jobs. Travel restrictions due to the COVID-19 pandemic have devastated the country’s tourism economy, significantly reducing revenue crucial for funding national park management and protection. This has forced reductions in resources for anti-poaching patrols. Combined with the lack of tourists, who provided additional “eyes on the wild,” and the loss of jobs amplifying poverty and fueling a rise in poaching, the situation could have been catastrophic in Kafue National Park, one of Panthera’s flagship landscapes for cheetahs, leopards and lions.

Indeed, the nightmare seemed to be coming true as two lions killed in early 2020 in areas that had formerly been secured from poaching. We also recovered almost double the number of snares in 2020 than in 2019. Thankfully, prior to the pandemic, Panthera, with our partners at the Zambian Department of National Parks and Wildlife (DNPW) and the Zambian Carnivore Programme (ZCP), had already begun the “Halo Approach,” a partnership approach to monitor the movement of key carnivore individuals and groups and direct intensive protection to those animals during critical biological events (like giving birth and denning). In response to the pandemic, we strengthened the Halo Approach with two dedicated Lion Monitoring and Protection Teams (comprising DNPW, ZCP and Panthera), which use GPS collars and old-fashioned tracking to monitor the composition and movement of 16 lion prides and, while tracking, document signs of poaching activity for patrol team rapid response. Anti-poaching effort is then directed to prides and areas most needing focal protection. Placing a “Halo” around these key individuals and groups has enabled us to maximize impact in the face of fewer resources and greater pressures, both of which the pandemic ratcheted up to the extreme.

We are thrilled to announce that, together with conventional protection patrols, the Halo Approach has lived up to its name, allowing wildlife protection teams to act as carnivores’ guardian angels despite facing steep challenges. Since the two lion losses early in the year, we monitored and protected 102 known lions (covering a collective distance of 8,137 km) with no further losses due to poaching in 2020.

2020 is just the latest in a tremendous run of wildlife protection work in Kafue National Park since Panthera began supporting DNPW law enforcement operations in 2017. Our preliminary wildlife monitoring results indicate that lion numbers resident on the Busanga Plains World Heritage Area increased by 63% from 2019 to 2020 and by more than 300% since 2016. We conservatively estimate that our law enforcement support prevents the poaching of at least 8,000 animals per year (including carnivores and their prey). We are eternally grateful to Fondation Segré, Green Safaris Conservation Foundation, The Lion Recovery Fund and the North Carolina Zoo for supporting these results.

These efforts will all be for naught, though, if the people living near and working in the Greater Kafue Ecosystem cannot recover. The incomes and livelihoods snatched away by the pandemic. In Kafue and other regions, we are developing new community conservancy models that reward communities for protecting wildlife from funds independent from tourism. We are also thinking broadly about how the conservation and global development fields can more actively collaborate so that development funds and activities also achieve conservation goals and vice-versa.

Kafue has been one of Panthera’s flagship programs since its inception because of the spectacular majesty of this enormous landscape, the potential for recovery of its varied and photogenic wildlife and the support we have received from our government and collaborative partners here. All three are still true today. While our committed staff in Kafue may have felt despondent in the pandemic’s early days after the two poached lions were discovered, hope is again on the horizon. This truly special landscape, one of the largest protected area wilderness complexes in the world, will recover. To do so, though, it needs much more than social media tags; it needs a world dedicated to preserving the world’s cats and iconic wild spaces, even if no one is around for a selfie.

Above: Lucky tourists photograph a cheetah walking in front of their jeep in Kafue National Park.

The Tourism of Tomorrow

Connect with this story...

Watch

Around 30,000 people live within Angola’s Luenge-Luiana and Mavinga National Parks after being displaced and resettled by a nearly three-decades-long civil war. Working with the Angolan National Institute for Biodiversity and Protected Areas (INBAC) through the Ministry of Culture, Tourism and Environment and with other organizations, Panthera is building law enforcement and community engagement programs to bring back the region’s once-thriving lion and other wildlife populations. These parks are not yet tourist destinations in the typical sense, so we did not see the bumps in poaching associated with COVID-19 travel restrictions comparable to what we have seen in Kafue National Park, Zambia. In fact, we are seeing evidence of the lion prey base recovering. We are hopeful that an increased lion population is not far behind, but we are exploring translocating some female lions to jumpstart this recovery.

The pandemic did necessitate extensive adaptations to continue supporting the two dozen community members we employ in the parks as educators, ecological managers, drivers and Community Game Guards protecting big cats and their prey. Normally, the project’s education team would visit the 42 villages that fall within the main area of work and inform park residents about project progress, employment opportunities and the importance of protecting the area’s wildlife. Given the dangers of extensive movement and public gatherings during COVID-19, these meetings had to be severely curtailed. The team was, however, able to visit the major villages on a few occasions accompanying district administrators on their regular trips. The education team was able to incorporate updates about the spread of COVID-19 and movement restrictions into their presentations about the project.

Before the pandemic, project managers travelled between Angola and Namibia regularly to purchase supplies, rations and fuel. With international borders closed, the project had to adapt to new logistical challenges. After numerous discussions by Project Manager Donovan Jooste with border officials from both countries, we strategically placed Project Co-manager Geraldo Mayira in Namibia. Since then, Geraldo drives supplies to the border, where project drivers Norberto Mandjolo and Israel Kanepa wait on the other side with their own vehicle. With border officials’ approval, the exchange is made and about 400 people (project and park staff and their families) are provided with rations and necessary supplies.

But the pandemic has raised serious questions about the sustainability of building an ecotourism economy. While we are hopeful that the appetite for ecotourism will be even greater once international travel is safely permitted again, wildlife and rural communities in much of the continent are still suffering the worst-case scenario of a tourism-based economy. The project is still in its first phase, when we provide the enabling conditions for tourism, like healthy wildlife populations and park infrastructure. As we begin planning and building the businesses that will make up the tourist economy, though, we are taking the lessons of the pandemic to heart.

We are exploring building an alternative-livelihoods program to ensure – whether visitors come or not – local communities benefit from wildlife. With African Safari Foundation and Range Wide Conservation Program for Cheetah and African Wild Dogs, we began community-based asset mapping, which will assist the Angolan government in identifying opportunities for communities residing within the parks. Moreover, we are conducting a feasibility study to create a community conservancy in which community members work with the Angolan government to manage the parks. As we help the wildlife and rural communities survive the crisis of today, we are keeping our eyes on the future to prevent the crises of tomorrow.

This article was produced with the financial support of the European Union through IUCN Save Our Species (iucnsos.org). Its contents are the sole responsibility of Panthera and do not necessarily reflect the views of IUCN or the European Union (ec.europa.eu/international-partnerships). Save Our Species Initiative contributes to the long-term survival of threatened species, their habitats and the people who depend on them by supporting civil society organizations. We are also grateful for the support of Fondation Segré, the Wildlife Conservation Network’s Lion Recovery Fund and the World Wildlife Fund.
2. LADAKH, INDIA

Despite bad weather and pandemic restrictions, Panthera and Snow Leopard Conservancy-India Trust built 10 predator-proof corrals that helped protect approximately 25 snow leopards from being killed in retaliation for attacking livestock over the last two years. These corrals also improved the quality of life of the area’s rural herders as they no longer have to sleep outside in the cold to protect their livelihoods.

3. MANAS NATIONAL PARK, INDIA

Tiger growth and overall population health (see Page 38 for our new definition of tiger population health) in this long-time Panthera site continue to improve after conflict in the region almost wiped out the tiger population a decade ago. The stats below indicate a site well on its way to full recovery.

12% Tiger population annual growth since 2012

3.85 Tigers per 100 km²

72% Adult tiger survival

3.36 Years annual female tenure in the area

4. KAZAKHSTAN

In Kazakhstan, Panthera and our partners Kazakhstan Border Agency of the Committee of National Security (BACNS), Association for the Conservation of Biodiversity of Kazakhstan (ACBK) and Fauna & Flora International (FFI), supported by the United States Fish and Wildlife Service and Department of State, kicked off an ambitious project to stop the trafficking of snow leopards and their prey using scent-detecting dogs. In June, we trained and deployed these dogs to various border checkpoints in the country. These dogs have so far enabled two seizures by detecting red deer and moose antlers, species for which they had not even received training, showing the effectiveness of the dogs in detecting and stopping wildlife smuggling.

5. DERAMAKOT FOREST COMPLEX, BORNEO, MALAYSIA

In this key habitat for Sunda clouded leopards, flat-headed cats, bay cats and marbled cats, we signed a Memorandum of Understanding with the Sabah Forestry Department and established a fully operational anti-poaching team, the majority of whom are Dusun Indigenous people.

SHARAAN NATURE RESERVE, KINGDOM OF SAUDI ARABIA

In 2020, Panthera partnered with the Royal Commission for AlUla to launch an ambitious program of camera trap surveys in Saudi Arabia to try to find remnant populations of the elusive Arabian leopard, last recorded in Saudi Arabia in 2015. Panthera deployed approximately 500 camera traps across seven sites at which leopards were historically present in Saudi Arabia, covering a total area in excess of 2,200 km². Although no leopards have yet been detected, the surveys have detected 34 species, including other large mammal carnivores such as striped hyenas, caracals and the Arabian wolf. A further six sites are due to be surveyed in 2021, and the team is hopeful that at least one of these will uncover a local leopard population.
In Manas National Park, India, patrols encountered a momentary spike in low-level natural resource extractions (like illegal fishing and firewood collection) after the country locked-down in April. While individual violations may not hurt the forest much, the hundreds of cases we encountered in April can seriously degrade tiger habitat. Usually such violations occur most in the winter when employment opportunities and natural resources are most scarce. But the lockdown resulted in a sort of “panic shopping” with the forest acting as a stand-in for emptied grocery stores elsewhere in the world. Compounding this, across the country, a mass of people returned to their villages from cities during the lockdown, which we expected to tax forest resources even more. Luckily, excellent rainfall this year led to the community engaging more in traditional farming rather than extracting forest resources. The additional agriculture jobs were able to absorb a greater number of people. Our law enforcement patrols kept natural resource extraction and hunting levels even lower than in 2019 after the initial spike in violations.

In the Kenyir Core Area of Taman Negara National Park, Malaysia, much of the tiger snaring that had devastated the habitat’s wildlife was driven by foreign poachers. Travel restrictions in Malaysia appear to have given tigers and their prey a much-needed reprieve from the deep forest poachers and snares that have continually haunted this area. Our patrols did not find a single snaring incursion in the Kenyir Core Area in 2020, marking the first zero-snare year since we started working in this landscape in 2014. These results underline how dramatically local conditions can magnify or completely change the nature of the effects of crisis. While wildlife fared well in those areas where their hunters couldn’t cross borders, they suffered where those same restrictions kept out their funders and protectors. That’s why adaptability and locally-derived solutions will always be the difference-maker in successful wildlife protection, a mindset Panthera is formalizing through our innovations in Problem-Oriented Wildlife Protection.

As the world rushed indoors in March 2020 to slow the spread of COVID-19, brave rangers across Panthera’s sites embodied their roles as “essential workers.” They continued patrolling wildlife areas, albeit with fewer patrollers and at a reduced rate. Anti-poaching team members strictly monitored their health and contacts, sometimes going into quarantine and necessitating short-handed or rescheduled patrols. Panthera was equipped to handle the rapidly changing conditions on the ground in Asia thanks to new offices we opened in Thailand and Malaysia prior to the pandemic.

One photo showing the adaptations the teams were making entranced the world in April 2020: a Panthera-supported Thailand Department of National Parks, Wildlife and Plant Conservation anti-poaching team in Salakpra Wildlife Sanctuary sporting bright blue medical masks along with their camouflage uniforms. It was one of those moments that minutely captured the generational events we were facing as the world realized the pandemic had reached even the most remote wildernesses.

Despite these initial slowdowns, the anti-poaching teams we support in India, Thailand and Malaysia had regained their patrolling footprints by May and, by the end of the year, had patrolled the equivalent of half of the world’s circumference. The nature of the threat, though, had shifted in some of those protected areas.

These results underline how dramatically local conditions can magnify or completely change the nature of the effects of crisis. While wildlife fared well in those areas where their hunters couldn’t cross borders, they suffered where those same restrictions kept out their funders and protectors. That’s why adaptability and locally-derived solutions will always be the difference-maker in successful wildlife protection, a mindset Panthera is formalizing through our innovations in Problem-Oriented Wildlife Protection.

2020 was significant in wildlife law enforcement both for the short-term adjustments that had to be made in response to the COVID-19 pandemic and the long-term structural changes accelerated by spotlights on policing in general and wildlife law enforcement specifically. Adjustments to the pandemic were especially notable in our projects dedicated to protecting tigers from poachers. These sites served as laboratories for more holistic and effective law enforcement practices.
Negara National Park, Malaysia, rigorous analysis of the stages of tiger poaching by specialist Vietnamese teams identified dependencies on certain landscape features, enabling patrol teams to increase the likelihood of intercepting a poaching team before the tiger was killed. Some interventions avoid the justice system altogether, like our Furs for Life and Saving Spots projects in southern Africa to replace real leopard, lion and serval skins with high-quality synthetic skins for use in cultural and religious ceremonies.

Panthera worked with our partner the Netherlands Institute for the Study of Crime and Law Enforcement to publish a new guide on Problem-Oriented Wildlife Protection in 2020 with versions in English, French, Indonesian, Malay and Thai now available. Crime analysis techniques were adapted for the conservation context and tested in tiger range protected areas, under siege as they are by poachers with a diversity of motives, backgrounds and techniques. We also contributed to Volume I of Poaching Diaries: Crime Scripting for Wilderness Problems, a collection of crime scripts from around the world breaking down the stages of a particular wildlife crime and identifying intervention points.

The COVID-19 pandemic and reawakened movements for responsible policing showed conversely that while we face many of the same problems across the world, the roots and reactions to those problems are very specific to each person, community, culture and country. Panthera’s recent focus on geographically dispersing our expertise and workforce and our shift to Problem-Oriented Wildlife Protection were both movements that helped us adapt to and overcome the many challenges (and rise to the many opportunities) 2020 presented. While the need for law enforcement to protect wildlife has not changed, Problem-Oriented Wildlife Protection gives wildlife protectors a new suite of tools to help people and wildlife thrive together rather than be separated by prison bars.

As the field of protected area law enforcement has grown more sophisticated in predicting and responding to poaching threats, it has still not been enough to counter the rising tide of crime against wildlife as more wild areas are opened up by roads and infrastructure (and could be exasperated by increased poverty in the wake of the pandemic). Rather than focusing solely on responding to crime, Problem-Oriented Wildlife Protection attempts to prevent wildlife crime by analyzing a particular crime in-depth to find its weak points, then tailoring interventions with the right partners to exploit these weak points, prevent crime before it happens and reduce the problem in the long-term. For example, in the Kenyir Core Area of Taman Negara National Park, Malaysia, rigorous analysis of the stages of tiger poaching by specialist Vietnamese teams identified dependencies on certain landscape features, enabling patrol teams to increase the likelihood of intercepting a poaching team before the tiger was killed. Some interventions avoid the justice system altogether, like our Furs for Life and Saving Spots projects in southern Africa to replace real leopard, lion and serval skins with high-quality synthetic skins for use in cultural and religious ceremonies.

Panthera worked with our partner the Netherlands Institute for the Study of Crime and Law Enforcement to publish a new guide on Problem-Oriented Wildlife Protection in 2020 with versions in English, French, Indonesian, Malay and Thai now available. Crime analysis techniques were adapted for the conservation context and tested in tiger range protected areas, under siege as they are by poachers with a diversity of motives, backgrounds and techniques. We also contributed to Volume I of Poaching Diaries: Crime Scripting for Wilderness Problems, a collection of crime scripts from around the world breaking down the stages of a particular wildlife crime and identifying intervention points.

The COVID-19 pandemic and reawakened movements for responsible policing showed conversely that while we face many of the same problems across the world, the roots and
**Americas**

**BIG CATS**
- **Puma**
- **Jaguar**

**SMALL CATS**
- **Andean Mountain Cat**
- **Bobcat**
- **Canada Lynx**
- **Geoffroy’s Cat**
- **Jaguarundi**
- **Kodkod**

**THE LLANOS, COLOMBIA**
Panthera has worked with 10 ranches in and around La Aurora for six years to prevent jaguar attacks on cattle and monitor jaguars in addition to supporting local efforts to build their ecotourism economy. Prior to the pandemic, jaguar sightings by tourists had increased by 20 times since 2016 (compared to the flow of tourists only doubling). This success indicates Panthera’s model of preventing depredation and providing benefits to local communities works to increase jaguar populations.

**TORTUGUERO NATIONAL PARK, COSTA RICA**
Communities near this park, famous for its nesting turtles, were facing attacks by jaguars on their cattle (eight per year), resulting in the retaliatory killings of an average of two jaguars per year. Working with the community to protect their cattle, we accomplished the following:

<table>
<thead>
<tr>
<th>Metric</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in carnivore attacks</td>
<td>75%</td>
</tr>
<tr>
<td>Retaliatory killings of jaguars detected</td>
<td>0</td>
</tr>
<tr>
<td>Monthly community anti-poaching patrols</td>
<td>2</td>
</tr>
<tr>
<td>Jaguars hunted by poachers</td>
<td>0</td>
</tr>
</tbody>
</table>

**CHIQUIBUL NATIONAL PARK, BELIZE**
This park in the heart of the Maya Mountains is a key jaguar habitat and catscape with populations of puma, ocelot, margay and jaguarundi. Here, the park is threatened by illegal incursions from the border with Guatemala, a situation exacerbated by a border dispute. As a first step to implementing a security plan, Panthera, in close collaboration with Friends of Conservation and Development, the managers on the ground, conducted the park’s first major camera trap study since 2008.

**AWALTARA INDIGENOUS TERRITORY, NICARAGUA**
The Awaltara Territorial Government approved a plan to establish a 357,400 hectare protected area (larger than the state of Rhode Island) in their indigenous territory. While we await approval from the national government, Panthera and our partner Global Wildlife Conservation support indigenous Ulwa community guards to patrol and monitor wildlife in the proposed protected area.

**COUNTERING WILDLIFE TRAFFICKING IN BOLIVIA**
Panthera’s program to counter wildlife trafficking in Bolivia got creative to deliver trainings and education about preventing trafficking. We held an online training on identifying trafficked species and parts for 40 participants, most of them government and law enforcement officials in the German Busch province, a possible transboundary trafficking hotspot. In November, the Month of the Jaguar, we transmitted radio advertisements that educate on the laws protecting jaguars and advise ranchers on how to prevent jaguar attacks. The ads had physical reach across almost half of the country. Finally, we worked with firefighter brigades (who could travel) to distribute fliers that bust myths about jaguars and educate about their protected status.

**MAP KEY**
- Featured Project Site
- Law Enforcement
- Monitoring
- Community Engagement
- Demand Reduction
- Wildlife-Friendly Infrastructure
In the Americas, 2020 was a stark reminder that Panthera’s work reverberates widely beyond the wild cats to which we dedicate our mission. It was a year when our scientists, project managers and other experts had to take on new titles like firefighter and disaster relief worker.

Communities in the Porto-Jofre area in the northern Brazilian Pantanal, known by many as the jaguar viewing capital of the world, were already contending with COVID-19’s devastation of their ecotourism industry when another kind of disaster struck in the late dry season. Man-made fires to clear vegetation for farmland combined with a record-breaking dry season (likely exacerbated by climate change) to produce catastrophic wildfires that, in the end, burned over 4 million hectares of prime wildlife habitat, approximately 30% of this massive wetland. Panthera estimates that up to 600 jaguars had their habitats impacted by the fires.

In the northern Pantanal, Panthera owns and operates the Jofre Velho Conservation Ranch, where we study and monitor local jaguars and prey species, test methods to protect cattle from jaguars, advise local tour groups on safe jaguar viewing practices, run a free school for local children and adults and provide periodic medical services to the local community. The scientists, ranch-hands, teachers, cooks and other staff who live and work on the ranch sprang into action as fires threatened Jofre Velho and the ranches and homes of their neighbors. To fight the fires, these staff worked day-in and day-out to build firebreaks by clearing strips of vegetation with bulldozers, tractors with plows and back-breaking labor. With no large airstrips nearby to land and refuel large fire-controlling airplanes, firebreaks were the area’s best hopes for containing the fires. Through their hard work and sacrifice and with the help of around 20 state “Bombeiros” (firefighters from the Brazilian Ministry of Defense) that we organized, hosted and fed at the ranch, the ranch’s buildings, cattle paddocks, corrals and fences still stand and large tracts of forested savannahs and riverine forests were saved.

Panthera staff fought fires threatening neighboring ranches and the many wooden bridges on the Transpantaneira Road that connects Pantanal ranches and communities. In addition, Panthera has also collected and distributed food and necessary supplies every month since August 2020 to 94 “Ribeirinhos” families in Porto Jofre and Amolar. With almost no income due to the loss of tourism, these packages are lifesaving to many of these families. Finally, we supported the rescue of several animals, including jaguars.

Panthera is eternally grateful to the Jofre Velho staff, including Jaguar Conflict Program Director Dr. Rafael Hoogesteijn; Ranch Manager Elizeu Evangelista da Silva; Jofre Velho School Teacher Suelen Macedo Leite; Conservation Scientist Dr. Fernando Tortato; and Jofre Velho Conservation Ranch employees Yasmim de Arruda, Eledilson de Sousa, Clarindo Canavarros and Manoel Alves. We are also thankful to the Pantanal Relief Fund, created by Climb for Conservation and the Jaguar Identification Project, for their fundraising efforts to fight fires in the region and, as always, to all of our global supporters.

There is hope at the end of this story, though. A jaguar named Ousado was rescued from the fires with severely burnt paws. After barely being able to walk, he was successfully treated and released back into the wild. Ousado can now be frequently spotted in the riverine forest and forested savannah areas of the Jofre Velho Ranch that were saved from the fires. We also discovered that Pixana, a female jaguar whose territory covers a good part of the ranch’s river-coast and adjoining riverine forests, had survived the fires and given birth to a cub. We named the cub Fenix after the phoenix of Greek mythology who rose from ashes. We fervently believe that the Pantanal, its people and its wildlife will themselves in time rise from the ashes of these devastating fires. Panthera pledges to support them every step of the way.
Everything changed, though, when Hurricanes Eta and Iota devastated the region in November (two hurricanes likely strengthened by climate change). Those teams that were patrolling for poachers shifted into disaster-relief teams, collecting donations of food, water, clothes, diapers and other basic supplies and distributing them to villages throughout the area. We also distributed t-shirts with the message “I support jaguar conservation.” Thanks to our supporters, in those days and weeks after disaster struck, the jaguars next door weren’t just providing long-term ecologic and economic well-being, they were putting food and diapers into the hands of people who needed them. In the wake of these extreme climatic events, jaguars were protecting the communities that had done so much to protect them.

Conservation is not a backburner issue to be ignored during crisis: both of these stories show that crisis can unite people and wildlife because we can only survive together. And conservation can only be sustained into the future when conservationists pick up multiple mantles and are heroes for wildlife and people.

Conservation During Crisis is not only the adjustments and sacrifices we make to be effective protectors of wildlife in extraordinary times, but also it means being there for every impacted person, plant and creature.

In many rural communities around the world, large carnivores like cats are too often associated with causing crisis: taking away a family’s livelihood by eating their livestock or wandering into a village and causing panic. But Panthera is positioning cats as a source of comfort and aid during crises like the COVID-19 pandemic or natural disasters. In Honduras, cats came to the rescue when the country was battered by back-to-back hurricanes.

Jeannette Kawas National Park on Honduras’s northern Caribbean coast holds a fantastic diversity of animals, plants and ecosystems. The park is managed by our partner Fundación PROLANSATE and was named after a Honduran environmental activist murdered for her work to declare and protect the park. This special place, in addition to being home to jaguars, provides jobs, food and clean water to nearby Ladino and Afro-descendent communities. In the park, poaching of iguanas, turtles, pacas, deer and other species supplies the black market of nearby cities and is devastating the jaguar prey base and the food supply for these communities. For instance, poaching wiped out collared peccaries from the park 15 years ago, a jaguar prey species Panthera is preparing to reintroduce to the park. In response, Panthera and PROLANSATE work with local communities to raise awareness of the illegality of poaching and support patrol teams in the park to detect and deter poachers.

Above: Panthera staff working with local communities to raise awareness about jaguar conservation
Opposite: Distributing food rations and “I support jaguar conservation” t-shirts to local communities

The Disaster Relief Workers
As new environmental crises rapidly upend our ecosystems and societies, we are increasingly discovering the crucial role Indigenous people play in protecting our planet. The knowledge Indigenous communities hold about how to best study and conserve local species and habitats is invaluable. Many Indigenous groups, given their close cultural connections to cats, have been longtime defenders of cats and their habitats but lack the institutional support necessary to turn back the tides of habitat degradation and illegal hunting. Panthera hopes to change that dynamic by partnering with and providing financial, material and scientific support to Indigenous groups across the world. In a year when travelling to remote areas was restricted (and dangerous to people in those areas), our collaborations with Indigenous communities were crucial to continuing our studies and protection of wild cats. These are just a few examples of these partnerships.

**Partnering with Indigenous Communities**

### Connecting Puma and Bobcat Populations in the Pacific Northwest

In partnership with the Lower Elwha Klallam Tribe, Panthera launched the Olympic Cougar Project to study wild cat movement in Washington State’s Olympic Peninsula. In this area, wild cat populations are becoming isolated by a nearby interstate and the rapid growth of local communities along the interstate. Now we work in collaboration with research teams from six First Nations (the Lower Elwha Klallam, Makah, Jamestown S’Klallam, Port Gamble S’Klallam, Skokomish and Quinault Tribes), using GPS collars, genetic sample collection and camera trap monitoring to detect obstacles to wildlife and recommend actions to restore wild cat immigration and emigration.

### Carbon Credits for Conservation in South America

**Conexión Jaguar** is a partnership between Latin American energy company ISA, sustainability consultancy South Pole and Panthera that uses carbon credits to fund the restoration and conservation of jaguar habitat in South America. The partnership has so far supported five projects in Peru, Brazil and Colombia. In northern Colombia’s Sierra Nevada de Santa Marta, Panthera works with the Kogi and Arhuaco Indigenous communities to monitor jaguars and other wildlife and the threats they face. Both groups are deeply connected to the jaguar: the Kogi call themselves people of the jaguar, while the Arhuacos believe the jaguar is responsible for holding the sun. Panthera and our allies monitor species according to the spiritual values and knowledge of the communities. Our team carries out extensive community consultations and knowledge exchanges to ensure acceptance by the communities and cultural sensitivity.

### Protecting Wild Heritage in Malaysia

The tigers and other wildlife of Malaysia’s Kenyir-Taman Negara Core Area are beset by poachers who camp deep in the forest for months at a time and set up devastating snare lines. Panthera and our partner Rimba have trained, equipped and supported Indigenous Orang Asli people to safely track these poachers in the deep forest since 2014. Today, our Orang Asli patrol teams are recognized in Malaysia for their stellar tracking and professionalism in assisting the country’s Department of Wildlife and National Parks to not only track wild cats in the forest, but also act as scouts to help locate poaching camps covertly and combat wildlife crime. Panthera will continue to empower the Orang Asli people as forest guardians and wildlife protectors through capacity building and working with government agencies.
“TIGER KING” CAPTIVATES THE WORLD

With its larger-than-life characters, Netflix’s docu-series “Tiger King” put a controversial spin on a real problem—breeding tigers for profit has created an animal welfare, public safety and law enforcement nightmare in the United States. As this series and a number of investigative reports that preceded it have shown, America has a big and growing captive tiger crisis right in its own backyards, but it pales in comparison to the one facing endangered wild populations. During this “Tiger King” frenzy, Panthera Chief Scientist and Tiger Program Director Dr. John Goodrich talked with multiple news outlets, including CNN, People Magazine, WIRED, The Huffington Post and BBC Wildlife Magazine, about the threats facing wild tigers and why we need to advocate for them now more than ever.

COVID-19 AND INCREASED POACHING

In the midst of the global pandemic, Panthera scientists around the globe witnessed wildlife creeping back into urban centers that had been emptied due to social distancing. Unfortunately, this meant that poachers had more access to these creatures, many of which are wild cats. Poachers also had more time on their hands with work stoppages, hitting the forests while guards attend to their families. Panthera’s leaders spoke frequently about this increase in poaching, especially in Latin America and Africa, to outlets such as CNN, The Guardian, The Telegraph, The Independent and Newsweek.

WILDFIRES DEVASTATE THE BRAZILIAN PANTANAL


INFORMING POLICY

Panthera uses its expertise to inform and influence public policy that contributes to maintaining healthy populations of wild cats and their wild landscapes. In 2020, we focused on a handful of hot-button issues including:

• Opposing the captive breeding of wild cats for commercial trade and exploitation. The commercial captive breeding industry, even where operating legally, has been affirmatively linked to the illegal wildlife trade and the trafficking of wild cats and their parts for luxury products, traditional medicine and other consumer uses. Panthera recommends that countries engaged in commercial captive breeding of wild cats initiate plans to rapidly and responsibly phase out captive breeding operations.

• Joining hundreds of international wildlife protection organizations in calling for the World Health Organization (WHO) to urge governments around the globe to permanently ban live wildlife markets, in recognition of their proven threats to human health. Panthera has also joined in calling for the WHO to unequivocally exclude the use of wildlife, including from captive-bred specimens, in the organization’s definition and endorsement of Traditional Medicine.

• Supporting the Big Cat Public Safety Act, a bipartisan bill to end commercial captive breeding and exploitation of tigers in the United States. If rigorously enforced, the Big Cat Public Safety Act will not only protect captive-bred cats and people, but it also will help to dismantle an industry with insidious implications for wild tigers by shrinking the availability of tiger parts for the global illegal wildlife trade.

Panthera’s expert guidance on the risks of South Africa’s lion breeding industry and legal bone trade to wild lions helped inform the government’s decision in May 2021 to end commercial captive breeding and use of lions.
Searching for New Frontiers

PANTHERA’S GRANT PROGRAMS

Recipients of Panthera’s grant programs have made exciting achievements across scientific disciplines, have studied cats in the most remote areas of the globe and have even become key members of Panthera’s staff and leadership. Please join us in congratulating Panthera’s 2020 grantees:

WINSTON COBB MEMORIAL FELLOWSHIP
Supports field-based internships for early-career conservationists on projects led by Panthera or partners
Rebecca Peterson
Olympic Cougar Project, Puma Program

SMALL CAT ACTION FUND (SCAF)
Supports conservation and research on many of the 33 small cat species
Reta Bahadur Powrel
Conservation of lesser-known wild small cats outside protected national parks in central Bhutan.
Yadav Ghimirey
Using scats to monitor clouded leopard in Annapurna Conservation Area, Central Nepal.
Murthy Kantimahanti
Threat assessment & mitigation of rusty-spotted cat (Prionailurus rubiginosus) in the Eastern Ghats of Andhra Pradesh
Magomedrasul Magomedov
Involving local people in research and conservation of Eurasian lynx (Lynx lynx) on the Eastern Caucasus.
Michelle Schroeder
Application of scat detection dogs and faecal DNA techniques for black-footed cat research
Swechhya Shrestha
Community for conservation of fishing cat in Jagdishpur, Kapilvastu Nepal
Juan I. Zanon-Martinez
Design of management guidelines to reduce the mortality of Geoffroy’s cat and pampas cats by human activities and infrastructures in central Argentina
Samantha Zwickler
Measuring the abundance and activity patterns of margay (Leopardus wiedii) and other mesopredators using arboreal camera traps in the lowland rainforests of Los Piedras, Madre de Dios

SABIN SNOW LEOPARD GRANT
Supports conservation efforts on the snow leopard in Asia
Xiaoxing Bian
Human-wildlife conflict with snow leopards, Panthera uncia, in the Tibetan Plateau: Finding mechanisms for coexistence
Thomas W. Franklin
Developing eDNA tools for snow leopard conservation
Don Hunter
Drones for snow leopard conservation - Phase two
Fatima Mannapbekova
Integrating hunting knowledge with community-based conservation in the Pamir-Alai Range
Francesco Rovero
Occurrence and conservation status of snow leopard in Western Mongolia, with emphasis on patterns of co-occurrence with livestock and wild ungulates
Erdene-Ochir Tseren-Ochir
Next-generation sequencing and bioinformatics methodologies to assess disease research at wildlife - livestock interface: Molecular epidemiology and evolutionary dynamics investigation of canine distemper virus (CDV) and canine/feline parvovirus (CPV/FPLV) as deadly viral diseases in snow leopards and its conservation implication

KAPLAN GRADUATE AWARDS
Supports conservation efforts of outstanding, early career biology graduate students working on all wild felids in situ, with a particular focus on threatened species
Travis King
Jaguars and ocelots in Honduras
Anna Kusler
Connectivity, conservation and ecology of cheetahs in the KAZA TFCA
Gueye Malle
Lions and leopards in Senegal
William Connor O’Malley
Enumerating pumas in their North American range

A Eurasian lynx caught on camera trap near the Tien Shan Mountains in Kyrgyzstan.
In 2020, Panthera scientists authored over 30 different scientific publications. You can see a complete list of them at panthera.org/2020-scientific-publications.

13 YEARS OF MONITORING TIGERS IN INDIA

Challenging long-standing metrics used to monitor and conserve endangered tigers across Asia, a new 13-year study from the Wildlife Institute of India and Panthera has identified more reliable and robust metrics to qualify recovery of tiger populations and success of conservation initiatives. Conducted from 2004 to 2017 in northern India’s Rajaji National Park, the study, whose findings were published in the journal *Biological Conservation*, cautions against relying solely on tiger population increases and densities at local and national scales, metrics which have served as the traditional standard of success across tiger range for decades. Instead, the study finds that both the survival rate of tigers and how long female tigers remain in a habitat and have litters at individual sites are more reliable benchmarks for certifying long-term population recovery and success.

“Our findings highlight how critical site-based long-term monitoring is for evaluating the effectiveness of conservation actions for recovering tigers. Moving forward, Panthera will more rigorously measure tiger survival and female land tenure and include these metrics in assessments and conservation plans of core tiger areas,” says Panthera Assistant Tiger Program Director and lead author Dr. Abhishek Harihar.

SWIMMING JAGUARUNDIS IN GUATEMALA

Published in *Therya Notes* in May 2020, a study led by Panthera’s Guatemala Program Coordinator Barbara Escobar-Aleu marks the first record of swimming behavior of the jaguarundi in Guatemala. The event was captured on film in Bahía la Graciosa in the Punta de Manabique Wildlife Refuge. This paper is an important contribution to the knowledge of this little-studied small cat and its behavior.

TECHNOLOGY HIGHLIGHTS

• Panthera’s PoacherCam, the world’s first camera to distinguish between people and animals and alert law enforcement of poacher presence in real-time, was selected by *Fast Company*’s 2020 World-Changing Ideas Awards as an honorable mention in the AI and Data category. With the release of SMART Mobile, a new technology that anti-poaching rangers can use on the ground to collect and record accurate anti-poaching information, national parks across the globe are better equipped to gain a more informed understanding of areas that are at higher risk of illegal activities like poaching. In turn, this new technology will help give our cats the best fighting chance to survive using real-time ground-up information.”

“With the release of SMART Mobile, a new technology that anti-poaching rangers can use on the ground to collect and record accurate anti-poaching information, national parks across the globe are better equipped to gain a more informed understanding of areas that are at higher risk of illegal activities like poaching. In turn, this new technology will help give our cats the best fighting chance to survive using real-time ground-up information.”

PantheraIDS allows users to access data sets from anywhere in the world. In 2020, PantheraIDS was adopted by over 140 staff and partners across the world, with many Panthera camera trapping projects now using the software. In addition, we developed a new telemetry tool and a new smartphone app for iOS and Android called PantheraIDS Mobile to be used in the field.

With the release of SMART Mobile, a new technology that anti-poaching rangers can use on the ground to collect and record accurate anti-poaching information, national parks across the globe are better equipped to gain a more informed understanding of areas that are at higher risk of illegal activities like poaching. In turn, this new technology will help give our cats the best fighting chance to survive using real-time ground-up information.”
Pumas, also called cougars and mountain lions, sometimes dominate the American news cycle when an individual shows unusually aggressive behavior. 2020 was no exception as a video of a puma charging (but not attacking) a hiker in Utah went viral in the fall. Puma Program Director Mark Elbroch explained that the puma was likely not an active threat to the hiker: the mother puma was just warning him to stay away from her kittens. The quick and broad spread of the video shows just how high the mountain is that Mark and Panthera are climbing to dispel myths about pumas and advocate for scientifically-based solutions for peaceful coexistence. These myths have deadly consequences for pumas in the United States: nearly every western state increased puma hunting in 2020 to address growing fears about living with this animal.

A few months before the viral encounter, Mark had published The Cougar Conundrum: Sharing the World with a Successful Predator, a book that aims to tell the stories of pumas that cannot be captured in viral videos and give advice for how humans (and their pets and livestock) can live with them peacefully. Mark and other scientists in the Puma Program also published two studies showing just how vulnerable pumas are in the United States, despite the inaccurate picture painted of them as an aggressive species. We’re hopeful these efforts balance the misinformation and outlier anecdotes being spread about pumas and that, despite the viral video, 2020 was the year Americans learned a little more about the lions next door.

**THE COUGAR CONUNDRUM**

Published in August, Puma Program Director Mark Elbroch’s new book The Cougar Conundrum: Sharing the World with a Successful Predator discusses the very real possibility of co-existing with this beautiful big cat. This book offers advice and insight for wildlife managers, conservationists, hunters and those in the wildland-urban interface who share their habitat with large predators.

**PUMAS, PLAGUE AND PEOPLE**

A nine-year study led by Panthera examined the prevalence of sylvatic plague in pumas and found the disease was responsible for a significant number of puma deaths in the Greater Yellowstone Ecosystem, representing yet another threat to the species’ survival. The findings, published in Environmental Conservation, also suggest plague may be more prevalent in the region than previously believed.

**GRAY WOLVES AND PUMA DECLINE IN WYOMING**

A study published in Proceedings of the Royal Society B unveiled the first evidence that gray wolves have a greater negative impact on puma numbers and distribution than human hunters in northwest Wyoming, providing scientists with a vital roadmap for managing both species. The 17-year study could impact how we manage pumas in areas where the two carnivores coexist, including whether or not we allow pumas to be hunted.

“We must choose how we live with mountain lions – essentially, how we might share natural resources like habitat, deer and elk with them. Myself, I hope we choose peaceful coexistence over any other alternative.”

MARK ELBROCH, PHD
Puma Program Director

*The Cougar Conundrum: Sharing the World with a Successful Predator*
Together, We Can Save Wild Cats

As we eagerly await a post-pandemic world, wild cats need your help to ensure that they not only survive the crises they face today, but also restore them to their rightful places as protectors of our planet. Your support puts boots on the ground to protect cats while tourists stay home; disrupts the illegal wildlife trade that threatens wildlife, ecosystems and communities; and innovates new conservation solutions to combat emerging threats like increased wildfires and extreme weather events. Please consider making a gift, setting up a recurring donation or including Panthera in your estate plan.

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 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.
- If you are in France, give to us at panthera.org/donate/france.
- For all other countries, please contact us at donate@panthera.org.

To give by check, please make it payable to ‘Panthera Corporation’ and mail to:

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

Please send any questions to 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 contact donate@panthera.org to alert us to your incoming gift and track its arrival.

Morgan Stanley Smith Barney
DTC# 0015
For the account of: Panthera Corporation
Account #: 398-203268014
MSBB Phone#: 212-692-2367
MSBB Fax#: 212-692-2373

GIVE FROM YOUR DONOR-ADVISED FUND

Please consider recommending Panthera using our information below. For more information on Donor-Advised Funds, please email us at donate@panthera.org.

Legal Name: Panthera Corporation
Address: 18 West 40th Street, 18th Floor, New York, NY 10011
Federal Tax ID Number: 20-4668756

MAKE A PLANNED GIFT

A planned gift to Panthera is an extremely meaningful way to ensure the future of wild cats. As with any such legacy arrangement, we encourage you to meet with your financial or legal advisor to understand all of the implications of including Panthera in your plans. Please visit us at panthera.org/ways-to-give or contact us at donate@panthera.org to find sample language.

2020 Financial Summary

Panthera’s efforts to streamline financial processes and control costs paid dividends in 2020 and helped us end the year in a position of financial strength while also maintaining our conservation impact from 2019. Despite restrictions that necessitated adaptations of much of our programming, Panthera’s ratio of program spending to support services spending was 80% to 20%, respectively. And in 2021, we’re on track to grow revenues by over 25%.

We are thankful to our supporters who rallied behind wild cats during the pandemic and allowed us to continue our crucial work even amidst so much uncertainty. We are also thankful to grantors who lifted restrictions on their grants or gave generous extensions while COVID-19 restrictions limited staff movement.

2020 EXPENSES

<table>
<thead>
<tr>
<th>Category</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programs</td>
<td>$10.8M</td>
<td>$11.0M</td>
</tr>
<tr>
<td>Supporting Functions</td>
<td>$3.9M</td>
<td>$3.9M</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$14.7M</td>
<td>$14.9M</td>
</tr>
</tbody>
</table>

KEY FIGURES

<table>
<thead>
<tr>
<th>Fig</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$16.1M</td>
<td>$14.3M</td>
</tr>
<tr>
<td>Net Assets</td>
<td>$14.4M</td>
<td>$13.9M</td>
</tr>
</tbody>
</table>

2020 Financial Summary — 43

Together, We Can Save Wild Cats
LEADERSHIP
Fred Launay, Ph.D.
President and CEO

John Goodrich, Ph.D.
Chief Scientist, Panthera

H.E. Razan Khalifa Al Mubarak
Co-chair, IUCN/SSC Cat Specialist Group

Rajesh Gopal, Ph.D.
Secretary General, Global Tiger Forum

K. Ullas Karanth, Ph.D.
Director, Centre for Wildlife Studies, India

SCIENCE COUNCIL CONT.
Tom Lovejoy, Ph.D.
Senior Fellow, United Nations Foundation

Tom Lovejoy, Ph.D.
Senior Fellow, United Nations Foundation

Joan Gelcich, Ph.D.
Director, Wildlife Conservation Research Unit at Oxford University, Fellow, Royal Society of Edinburgh, Founding Chairman, IUCN/SSC Canid Specialist Group

Laurie Marker, Ph.D.
Founder and Executive Director, Cheetah Conservation Fund

Rick Mills, Ph.D.
Endangered Wildlife Trust's Canivore Conservation Group, Extraordinary Professor, University of Pretoria

Dalia Miquele, Ph.D.
Director, Wildlife Conservation Society's Biafra Program

Craig Packer, Ph.D.
Distinguished McKnight Professor, University of Minnesota and Director, Lion Research Center

Mike Phillips, Ph.D.
Director, Turner Endangered Species Fund Coordinator, Turner Biodiversity Divisions

John Sadovy, Ph.D.
Former Director, Conservation Ecology Center at the Smithsonian's National Zoological Park

Linda Swanson, Ph.D.
Co-founder and former President, Wild Field Research and Management Association

PROGRAM DIRECTORS
Guy Balme, Ph.D.
Deputy Executive Director, Conservation Science Director, Leopard Program

Mark Ebsch, Ph.D.
Director, Puma Program

Paul Funston, Ph.D.
Senior Director, Lion Program

Ross Pitman, Ph.D.
Director, Data Science

Hugh Robinson, Ph.D.
Director, Applied Science

Byron Wakefield, Ph.D.
Director, Snow Leopard Program Director, Conservation Genetics

Wei-Ming Wong, Ph.D.
Director, Small Cate Program

Karen Wood
Senior Director, Global Policy

Kim Young-Chaeb, Ph.D.
Director, Cheetah Program

BOARD, STAFF AND SCIENCE COUNCIL— 45

BOARD OF DIRECTORS
Thomas S. Kaplan, Ph.D.
Founder and Chairman of the Board

Fred Launay, Ph.D.
President and CEO

Jonathan Ayers
Chair, Finance and Audit Committee

Gary Baldaeus
Corporate Treasurer

Carolyn Gibson
Manager, Human Resources

John Goodrich, Ph.D.
Chief Scientist, Panthera

Howard Quigley, Ph.D.
Executive Director, Conservation Science Director, Jaguar Program

Duncan McFarland
The Honorable Claudia A. McMurry

REGIONAL DIRECTORS
Philipp Henschel, Ph.D.
Regional Director, West and Central Africa

Kristine Maciejewski, Ph.D.
Regional Director, Southern and East Africa

Esteban Payán, Ph.D.
Regional Director, South America

Roberto Salom-Pérez, Ph.D.
Regional Director, Mesoamerica

REGIONAL DIRECTORS CONT.
Guy Balme, Ph.D.
Deputy Executive Director, Conservation Science Director, Leopard Program

Mark Ebsch, Ph.D.
Director, Puma Program

Paul Funston, Ph.D.
Senior Director, Lion Program

Ross Pitman, Ph.D.
Director, Data Science

Hugh Robinson, Ph.D.
Director, Applied Science

Byron Wakefield, Ph.D.
Director, Snow Leopard Program Director, Conservation Genetics

Wei-Ming Wong, Ph.D.
Director, Small Cate Program

Karen Wood
Senior Director, Global Policy

Kim Young-Chaeb, Ph.D.
Director, Cheetah Program

SCIENCE COUNCIL
John Goodrich, Ph.D.
Chair and Chief Scientist, Panthera

Jonathan Baillie, Ph.D.
CEO of Natural State

Christine Breitenmoser, Ph.D.
Co-chair, IUCN/SSC Cat Specialist Group

Urs Breitenmoser, Ph.D.
Co-chair, IUCN/SSC Cat Specialist Group

William Conway, Ph.D.
Director Emeritus, President Emeritus, Former President and Director General, Wildlife Conservation Society

Sarah Durant, Ph.D.
Senior Research Fellow, Institute of Zoology, Zoological Society of London and Wildlife Conservation Society

Laurence Frank, Ph.D.
Director, Living with Lions Research Associate, University of California, Berkeley

Claude Gascon
Global Environment Facility Secretariat Former Chief Scientist, National Fish and Wildlife Foundation

Rajesh Gopal, Ph.D.
Secretary General, Global Tiger Forum

K. Ullas Karanth, Ph.D.
Director, Centre for Wildlife Studies, India

A jaguar hunting in the reeds of the Brazilian Pantanal
Conservation Council

Jane Alexander
Chair
Dedicated Conservationist
Award-winning Actress of Screen and Stage

H.E. Yousef Al-Otaiba
Ambassador of the United Arab Emirates to the United States

Abeer Al-Otaiba
Businesswoman and Philanthropist
Founder and Creative Director of the designer line SemSem

Tom Anderson
Producer, formerly of CBS’s 60 Minutes

Ambassador Antonin Baudry
Author and Entrepreneur
Former Ambassador for Culture and President of the Institut Français

Ruth Brenner
Philanthropist and Conservationist

Jean-François Camilleri
Author and Entrepreneur
Ambassador of the United Arab Emirates to the U.S.

Celia Chien
Photographer and Conservationist

Ally Coulter
Designer, Ally Coulter Design

Ian Craig
Wildlife Conservationist
Co-founder Learn Wildlife Conservancy and the Northern Rangelands Trust

Frédéric Dallet
Collector, Custodian of the estate of the artist Robert Dallet

Ithak Dar
Social Analysis and Intelligence
Shafman Consulting and Management

Ambassador Francois Delattre
Secretary-General of France’s Ministry for Europe and Foreign Affairs
Former French Ambassador to the United States and to the United Nations

Jean-Dominique Damian
Staged, Film and Television Producer
Jean-Dominique Damian Productions

Pierre-Alexis Dumas
Artistic Director, Hermès

Susan Engel
Director and Executive Producer, 92Y Talks

Ali Erfan
Businessperson and Philanthropist
Founder and Chairman, The Cogito Scholarship Foundation

Stephanie Lott Ferrer
Intelligence College in Europe

Sally Fischer
Brand Strategist and Cause Activist
Sally Fischer Public Relations

Jane Fraser
Philanthropist
President of the Stuttering Foundation of America

Yamina Fuentes
Entrepreneur and Conservationist
CEO, Corso Conos, Inc.

Rick Garason
Hedge Fund Manager
Chairman, Falcon Edge Capital

Luiz Gauer
Conservation Activist
Former Deputy Chairman, Past-War and Contemporary Art, Christie’s

Ben Hall
Chairman, Americas at Christie’s

Jennifer Hall
Vice-President of Client Development, Christie’s

Charles Hansard
Investor
Board Member, Moore Global Investments Ltd.

Stan Herman
Fashion Designer
Former President of the Council of Fashion Designers of America (CFDA)
Co-creator of New York Fashion Week

Sharon Hurwitz
Curator and Art Advisor
Coplan Hurwitz Art Advisory

Richard Hurwitz
Curator, The Octavian Report

Jeremy Irons
Award-winning Actor of Screen and Stage

Geoffrey Kent
Travel Entrepreneur
Chairman and CEO, Abercrombie and Kent

Mohamed Khachoghi
Writer, Conservationist
Chairman, M.K. Associates

Dr. Paul Klatman
President and CEO, Baylor College of Medicine

Stephen S. Lash
President Emeritus, Christie’s Americas
Chairman Emeritus, Institute of Fine Arts, New York University

H.E. Aurélien Lechevallier
Ambassador of France to the Republic of South Africa

H.E. Ambassador Jean-David LeVitte
Former Ambassador of France to the United States, Former Head of France’s National Security Council

Michael Leroy
Founder and CEO, The Levy Production Group

James Lieber
Strategic Consulting
Founder, Lieber Strategies

Maya Lin
Artist, Designer and Conservationist
Maya Lin Studio

Fern Mallis
Founder of New York Fashion Week and the Fashion Icon series

Dr. Bassem Masri
Chairman of the Board of Trustees for Bat Conservation International

Jaqui Safra
Investor, Collector, Entrepreneur and Philanthropist

Luana Sagieh
Co-Founder, LCL

Andy Sabin
Entrepreneur and Conservationist
Chairman, Sabin Metal Corporation

Dr. Paul Klotman
Chairman of the Board of Trustees for Bat Conservation International

Edith McBean
Dedicated Conservationist

Dr. John Mitchell
Chair of the Board of Trustees for Bat Conservation International

Katherine Mitchell
Artist, Nature Enthusiast

Wendi Deng Murdoch
Businessperson, Investor and Film Producer

Otto Neumann
Artist

Amer Sarraf
CEO, Draper Oakwood

H.R.H. Princess Reema bint Adil Al Saud
Ambassador of the Kingdom of Saudi Arabia to the United States

Dr. Claudio Segré
Economist and Banker

Diana Walters
Artist Educator and Collector

Frédéric Thélabaud
Business Executive
CEO, The Shanti Kids Can Foundation

Baron Lorne Thyssen-Bornemisza
Collector and Conservation Activist

Harry Timms
CEO and President, Lincoln Center for the Performing Arts

Kris Tompkins
Philanthropist
Founder and Conservationist

Shania Twain
Award-winning Singer and Songwriter

Johnny Van Haeften
Fine Art Dealer

Nina Siemiatkowski
Wildlife Photographer and Marketing Advisor to Conservation Organizations

Eric Vincent
President, Sarasin Capital Management

Ambassador Mark Wallace
Former United States Ambassador to the United Nations, Representative for United Nations Management and Reform

Nicolle Wallace
Political Analyst and Television News Anchor, MSNBC

Johnny Van Haeften
Fine Art Dealer

Nina Siemiatkowski
Wildlife Photographer and Marketing Advisor to Conservation Organizations

Kate Silverton
Journalist
Anchor for BBC News

Wilbur Smith
Author and Philanthropist
Founder, Wilbur Smith Foundation

Daisy Soros
Philanthropist
Chairman of the Paul and Daisy Soros Fellowships for New Americans

Lieutenant-Colonel Timothy Spicer, OBE
Strategist
Founder of Aegis Defense Services

Steven Stone
Attorney and Conservation Activist

Andy Sabin
President of the Shania Kids Can Foundation

Baron Lorne Thyssen-Bornemisza
Collector, Investor and Entrepreneur

Amer Sarraf
Philanthropist and Financier

Chairman, The Wisdom Tree

Aamer Sarfraz
Professional, United States Government
Cat Conservationist, Foreign Affairs and Policy Strategist

Fellowships for New Americans
Chairman, M.K. Associates

Daisy Soros
Philanthropist

Shania Twain
Philanthropist and Advocate for Children’s Education and Empowerment

Johnny Van Haeften
Fine Art Dealer

Nina Siemiatkowski
Wildlife Photographer and Marketing Advisor to Conservation Organizations

Kate Silverton
Journalist
Anchor for BBC News

Wilbur Smith
Author and Philanthropist
Founder, Wilbur Smith Foundation

Daisy Soros
Philanthropist
Chairman of the Paul and Daisy Soros Fellowships for New Americans

Lieutenant-Colonel Timothy Spicer, OBE
Strategist
Founder of Aegis Defense Services

Steven Stone
Attorney and Conservation Activist

Andy Sabin
Philanthropist and Financier

Chairman, The Wisdom Tree

Aamer Sarfraz
Professional, United States Government
Cat Conservationist, Foreign Affairs and Policy Strategist

Fellowships for New Americans
Chairman, M.K. Associates

Daisy Soros
Philanthropist

Shania Twain
Philanthropist and Advocate for Children’s Education and Empowerment

Johnny Van Haeften
Fine Art Dealer

Nina Siemiatkowski
Wildlife Photographer and Marketing Advisor to Conservation Organizations

Kate Silverton
Journalist
Anchor for BBC News

Wilbur Smith
Author and Philanthropist
Founder, Wilbur Smith Foundation

Daisy Soros
Philanthropist
Chairman of the Paul and Daisy Soros Fellowships for New Americans

Lieutenant-Colonel Timothy Spicer, OBE
Strategist
Founder of Aegis Defense Services

Steven Stone
Attorney and Conservation Activist

Andy Sabin
Philanthropist and Financier

Chairman, The Wisdom Tree

Aamer Sarfraz
Professional, United States Government
Cat Conservationist, Foreign Affairs and Policy Strategist

Fellowships for New Americans
Chairman, M.K. Associates

Daisy Soros
Philanthropist

Shania Twain
Philanthropist and Advocate for Children’s Education and Empowerment

Johnny Van Haeften
Fine Art Dealer

Nina Siemiatkowski
Wildlife Photographer and Marketing Advisor to Conservation Organizations

Kate Silverton
Journalist
Anchor for BBC News

Wilbur Smith
Author and Philanthropist
Founder, Wilbur Smith Foundation

Daisy Soros
Philanthropist
Chairman of the Paul and Daisy Soros Fellowships for New Americans

Lieutenant-Colonel Timothy Spicer, OBE
Strategist
Founder of Aegis Defense Services

Steven Stone
Attorney and Conservation Activist

Andy Sabin
Philanthropist and Financier

Chairman, The Wisdom Tree

Aamer Sarfraz
Professional, United States Government
Cat Conservationist, Foreign Affairs and Policy Strategist

Fellowships for New Americans
Chairman, M.K. Associates

Daisy Soros
Philanthropist

Shania Twain
Philanthropist and Advocate for Children’s Education and Empowerment

Johnny Van Haeften
Fine Art Dealer

Nina Siemiatkowski
Wildlife Photographer and Marketing Advisor to Conservation Organizations

Kate Silverton
Journalist
Anchor for BBC News

Wilbur Smith
Author and Philanthropist
Founder, Wilbur Smith Foundation

Daisy Soros
Philanthropist
Chairman of the Paul and Daisy Soros Fellowships for New Americans

Lieutenant-Colonel Timothy Spicer, OBE
Strategist
Founder of Aegis Defense Services

Steven Stone
Attorney and Conservation Activist

Andy Sabin
Philanthropist and Financier

Chairman, The Wisdom Tree

Aamer Sarfraz
Professional, United States Government
Cat Conservationist, Foreign Affairs and Policy Strategist

Fellowships for New Americans
Chairman, M.K. Associates

Daisy Soros
Philanthropist

Shania Twain
Philanthropist and Advocate for Children’s Education and Empowerment

Johnny Van Haeften
Fine Art Dealer

Nina Siemiatkowski
Wildlife Photographer and Marketing Advisor to Conservation Organizations

Kate Silverton
Journalist
Anchor for BBC News

Wilbur Smith
Author and Philanthropist
Founder, Wilbur Smith Foundation

Daisy Soros
Philanthropist
Chairman of the Paul and Daisy Soros Fellowships for New Americans

Lieutenant-Colonel Timothy Spicer, OBE
Strategist
Founder of Aegis Defense Services

Steven Stone
Attorney and Conservation Activist

Andy Sabin
Philanthropist and Financier

Chairman, The Wisdom Tree
In December 2019, I proudly accepted the mantle of Director of Panthera Thailand. It was supposed to be the start of a new era in Panthera as we pivoted to directing on-the-ground operations from previously providing training and technical support in this critical tiger-range country—and my home. With this new establishment, we hired local staff and took on a more active role monitoring and protecting the majestic cats of Thailand alongside Thailand's Department of National Parks, Wildlife and Plant Conservation (DNP) and the Zoological Society of London (ZSL). This includes the well-known tigers and leopards and the less famous (but no less captivating) small cats like clouded leopards, marbled cats, Asian golden cats, leopard cats and jungle cats.

I was just getting used to my new job and organization when COVID-19 upended everything. Due to the pandemic, national parks and other protected areas closed, we were prevented from organizing most meetings and we had to postpone ranger and law enforcement training. While still patrolling, park officers have reported an increased number of people entering these protected areas. Although most of those people were not there to hunt, we still saw too many casualties, including wild cats and their prey. Luckily, even as international travel shut down, we had built the local infrastructure to keep supporting protected area rangers. We could even keep monitoring wildlife as we had trained those rangers prior to the pandemic to collect camera traps and bring back to us the critical data they contained.

We had hoped (like the rest of the world) 2021 would bring us a fresh start with a renewed opportunity to complete critical field work and organize upcoming meetings and trainings. In the years ahead, we will continue our long-term monitoring and work with ZSL to support protected areas with the local communities located in tiger corridors. We have, despite difficulties with movement and gatherings, also begun partnering with local organizations to start conservation work on fishing cats.

Unfortunately, recent outbreaks have us preparing for more lockdowns with restrictions determined on a province-by-province basis, including tourism activities. Almost 1.5 years after joining Panthera, I have still met so many of my colleagues only through computer screens. Joining just prior to the pandemic certainly qualifies as a “trial by fire,” but, even amidst all of this sadness and confusion, we must still be grateful that we were able to establish this local presence just in time. The work continues on just as the rangers we support keep walking their patrol routes and tigers continue looking to us for protection. While it certainly hasn’t been a normal onboarding process, I am so proud today to say that I am a member of the Panthera family.