

The  
Book

# global biodiversity festival

Life at the Frontline





“

If we are the most intellectual creature that ever walked on the planet, why are we destroying that planet?

”

Jane Goodall PhD, DBE  
Founder – The Jane Goodall Institute  
UN Messenger of Peace



**Dr. David  
Cooper**

**Acting Executive  
Secretary of  
the Secretariat  
of the Convention  
on Biological Diversity  
(CBD)**

## Foreword

“With the adoption of the Kunming-Montreal Global Biodiversity Framework, our focus must now move from agreement to action. It is imperative that the Framework be implemented with urgency to build back biodiversity and see tangible results by 2030. There are challenges ahead but I believe that we can achieve the goals and targets set out in the Framework, as well as the Sustainable Development Goals, if we continue to work together towards our shared vision of living in harmony with nature by 2050.”

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# Welcome to a crucial celebration of life at the frontline



The interior of a giant Rafflesia flower (*R. tuan-mudae*). With petals sometimes spanning over a meter in diameter, Rafflesia are the world's largest flowers. Flies, which act as pollinators, are attracted to the color and stench of the bloom, which mimics rotting meat. Sarawak, Malaysia (Borneo). ©Chien C. Lee

Year 4 of the Global Biodiversity Festival introduced a new format: We took a global snapshot of biodiversity over a whole day, with new speakers from countries around the world. As we prepared to celebrate the International Day for Biological Diversity on May 22 2023, we went on a live visit to a new country every 30 minutes.

Since its first edition in 2020, the Global Biodiversity Festival has broadcast 158 hours of live content, with 321 speakers, representing 81 countries. We have been live in the canopy of the Costa Rican rainforest, met the last northern white rhinos in Kenya, watched kiwis undergo health checks, explored Antarctica, and so much more.

As we are on a race to put a halt to the loss of biodiversity, it is more important than ever to celebrate and raise awareness about the vital work that is being done in every corner of the planet by individuals and teams whose passion, knowledge and utmost dedication force admiration and give hope for the future.

Festival talks are  
available online via  
[www.globalbiofest.com](http://www.globalbiofest.com)





## Sehen Andriantsaralaza

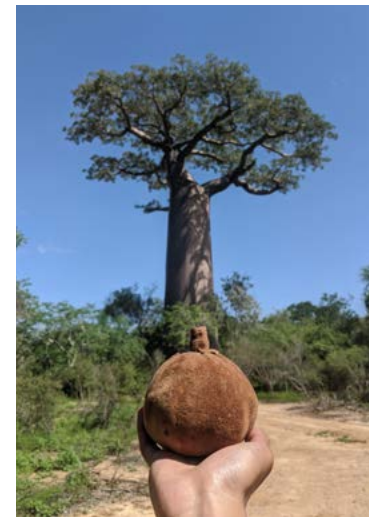
Madagascar

Conservation biologist.  
Researcher, University  
of Antananarivo,  
Madagascar

## The Mystery of Seed Dispersal of Madagascar's Baobabs

I am a conservation biologist from Madagascar. My expertise field is focusing on plant-animal interactions. My research aims to investigate what will happen to the baobab trees if there aren't any animals, such as giant lemurs and tortoises, to spread their seeds and constitute the next generation.

In Madagascar, the iconic baobabs are not only culturally valuable but also have an important economic value. Their seed dispersers mechanism remains a mystery that I wanted to resolve since my PhD. The large-bodied animals are the only potential animal seed dispersers that can handle baobab fruits. My research findings demonstrated that baobabs have lost their main primary animal seed dispersers and may rely on small native animals for their secondary seed dispersal. Our results also revealed that the natural regeneration is very low and we need to consider the restoration of ecological processes to restore baobab forests. There are many challenges related to threats on forests. The habitat loss is the most alarming crisis for baobabs. In this situation, local people are often blamed for being responsible for forest destruction rather than being invited to be part of the solution. Yet, increasing local community engagement is one of the keys to the success of conservation strategies because people protect what they value. In my project, restoring plant-animal interactions, such as seed dispersal, is at the heart of reforestation strategies. I also work closely with local communities during field expeditions and for conservation activities from building nurseries to transplanting baobab seedlings in degraded forests.



Baobab forest in the Complexe Mangoky Ihotry protected area, western Madagascar, picture taken from a drone. ©Stéphane Corduant

A baobab (*Adansonia grandidieri*) with its fruit. © Tanjoniaina Rabarijaonina

“The habitat loss  
is the most alarming  
crisis for baobabs.”



**Cristal Ange**

Colombia

**Executive Director,  
Heritage Foundation  
(Fundación Herencia  
Ambiental Caribe)**

## Following the Footsteps of the Jaguar

Colombia is not only one of the top ten biodiverse countries in the world, but also one of immense cultural diversity, with 65 indigenous languages still in use. Cristal’s work has focused on the conservation of both Colombia’s natural and cultural heritage, and that requires working and learning from local communities when working in sites of environmental importance. From that fusion of culture and nature, the figure of the jaguar becomes a very meaningful one.

As founder and executive director of the Heritage Foundation, Cristal has managed an interdisciplinary team which has followed the footprints of the jaguar in time and space. The journey starts in the sacred mountains of Chiribiquete in the Amazon, where the oldest paintings of jaguars in the world are protected amid the lush rainforest that holds, also, one of the highest densities of this large feline’s population.

In the Colombian Caribbean, Cristal and her team have found out that the routes followed by the jaguar play an important role in defining ecosystem connectivity for the region. A 5000-hectare jaguar corridor has been built in a formerly war-torn area, with over 200 families who are victims of internal social conflicts. In the Sierra Nevada of Santa Marta, ‘the most irreplaceable site on Earth’, her work with the local indigenous tribes has allowed the intertwining of biological techniques for studying jaguars, with the ancient rites honoring this powerful animal. And in the northernmost tip of South America, connectivity corridors for this animal are being established along with mining companies doing their part in biodiversity conservation. The jaguar connects ecosystems and communities, it is the foundation of our American cultural identity, and has opened immense opportunities for us to bring together various social stakeholders to conserve our planet Earth.



“The jaguar connects ecosystems and communities, it is the foundation of our American cultural identity.”



The four indigenous groups of the Sierra Nevada of Santa Marta are its guardians; they maintain a rich cultural tradition with various jaguar-related rituals that support the conservation of the large feline from an ancestral perspective. ©C. Ange / Fundación Herencia Ambiental Caribe

The Jaguar corridor in Montes de María connects ecosystems and social groups in a war-torn area where the jaguar figure is helping rebuild the local social fabric and connect the new generations to their local biodiversity. ©M. Velez / Panthera



www.herenciaambiental.org

SPEAKERS





In 2015, Fundación Herencia Ambiental Caribe led the scientific expeditions to Chiribiquete, known as 'the maloca of the jaguars', that supported its nomination as a Natural and Cultural World Heritage Site. © J. Alvarez/Fundación Herencia Ambiental Caribe





## Rodi Ansyah

Indonesia

Technical Division  
Manager, Yayasan  
Planet Indonesia

SPEAKERS

## Empowering Communities for Conservation: Planet Indonesia's Journey

Yayasan Planet Indonesia (YPI) is a non-governmental organisation based in West Kalimantan, Indonesia. Its main objective is to conserve and protect vulnerable species in the region, such as the helmeted hornbill, Borneo orangutan, proboscis monkey, and sea turtles, through community-led partnerships. We recruit expert locals as ranger patrols and biodiversity survey teams to contribute to research and protect these species from external threats. They actively contribute to our studies. We recognize the valuable knowledge held by local communities and integrate their insights into our understanding of the subjects being studied.

The inclusive approach of YPI, embodied through the Conservation Cooperative (CC), promotes holistic solutions and empowers communities. We are actively involved in projects that encompass microfinance, sustainable livelihoods, fire reduction, wildlife corridors, free healthcare support, and education services to enhance community resilience. With a commitment to consistency and community engagement, YPI aims to make a significant impact on the environment and local communities, towards a better future for humanity and the planet.

Our research demonstrates that these services have led to reduced deforestation, improved wildlife protection, and strengthened community governance. Our primary focus is on investing in community-driven solutions by listening to their ideas and addressing the challenges they face. As an NGO, our role is to provide technical support and funding to bring these solutions to fruition. We firmly believe that empowering communities and involving them in the decision-making process generates positive impacts for both people and the planet, as evidenced by the data.



Vast mangrove forests are an endemic home to the proboscis monkey (*Nasalis larvatus*). Planet Indonesia works to restore the important mangrove ecosystems. ©Planet Indonesia / Ripin

We collect scientific data, conduct monitoring and survey or studies on wildlife to protect vulnerable species such as the helmeted hornbill, Bornean orangutan, Bornean gibbon, proboscis monkey, sea turtles, songbirds, and other important species in West Kalimantan. As a step of safeguarding, it is important for us to get the community educated and participate in wildlife conservation. ©Planet Indonesia / Ripin



www.planetindonesia.org



## Alejandro Arteaga

Ecuador

Researcher,  
Khamai Foundation.  
Owner, Tropical Herping

## New Species of Reptiles and Amphibians in the Rainforest

My work deals with the discovery of new species and the rediscovery of extinct amphibians and reptiles in the world's tropics. In this work, adaptability is the name of the game, as field exploration is unpredictable, including the good, the bad, and the ugly.

Good, successful expeditions are not the norm. They occur about 30% of the time, but they are a blast! Imagine finding a lizard not seen in 100 years or finding a new species of snake under a graveyard. Both are true stories.

Bad field expeditions involve not finding the target species, a result that occurs up to 60% of the time, especially during the first attempt. Spending hundreds of person/hours in the field plus thousands of dollars in transportation, food, logistics, and hiring of personnel and missing the mark can feel disheartening.

The ugly stories usually deal with the unexpected, the accidents related to the fieldwork itself, which happen about 10% of the time and disrupt entire expeditions. Over the years, we have experienced three snakebites, falling from cliffs, blood poisoning, and landslides falling over the field vehicle.

In summary, field exploration in search for new/extinct species is a rewarding discipline, but one that is not devoid of obstacles. The main way to find success in this life path is to continue to persevere and surround yourself with like-minded individuals who enjoy life in the field.

“In this work, adaptability is the name of the game... Good, successful expeditions are not the norm. They occur about 30% of the time, but they are a blast!”



Alejandro Arteaga holding the holotype of *Atractus zgap*, a newly discovered species. ©David Jacome





Alejandro Arteaga and María Jose Quiroz on their way back from the campsite at Reventador Volcano. © David Jacome

Alejandro Arteaga photographing a monkey frog in the Ecuadorian Amazon. © David Jacome

Me exploring a cave in search for lizards in Ecuador. © Alejandro Arteaga



**Diego  
Cardeñosa**

Colombia

**Marine Scientist,  
Postdoctoral Associate,  
Florida International  
University**

SPEAKERS

## Tool Kits to Stop Illegal Wild Trafficking of Sharks

I was born in Colombia, a country with many challenges but blessed with coasts on both Atlantic and Pacific oceans, and home of the second largest biodiversity in the world. Early in life I knew that I wanted to become a scientist and protect the biodiversity that surrounded me as I grew up. Sharks have always been my life-long passion, but unfortunately, they are facing a global conservation crisis. Therefore, my research focuses on using field-based and genetic approaches to answer conservation-relevant questions. I majored in Biology as an undergraduate and MSc student and conducted a PhD in Marine Sciences at Stony Brook University. My current research, as a Distinguished Postdoctoral Research Fellow at Florida International University, focuses on determining the species composition of the international shark trade, the identification of supply chains at highest risk of illicit trade, and the development and implementation of rapid, portable, and inexpensive in-port DNA protocols to enhance the detection of illicit wildlife trade by law enforcement officers in major wildlife trade hubs in Asia, Europe and South America. My conservation work resulted in the DIJIN medal in 2022, the highest award given by Colombia's Directorate of Criminal Investigation and INTERPOL to civilians, and in the Samuel H. Gruber Award by the American Elasmobranch Society in 2019. In addition, I work closely with countries in South America to reduce shark bycatch and create programmes to protect the most threatened species in remote and previously unexplored places in the Eastern Pacific and Caribbean Sea.



Dr. Cardeñosa during a tagging expedition to the Bahia Malaga National Natural Park in Colombia where he and his team study the movement patterns and ecology of the most endangered hammerhead sharks in the world. ©Maria Alejandra Herrera

Dr. Cardeñosa working of molecular tools to detect illegal wildlife trade in Hong Kong. ©Alejandra Watanabe





Photo taken during an expedition to remote sites off the Colombian Pacific coast where critically endangered hammerhead sharks were found.  
© Maria Alejandra Herrera



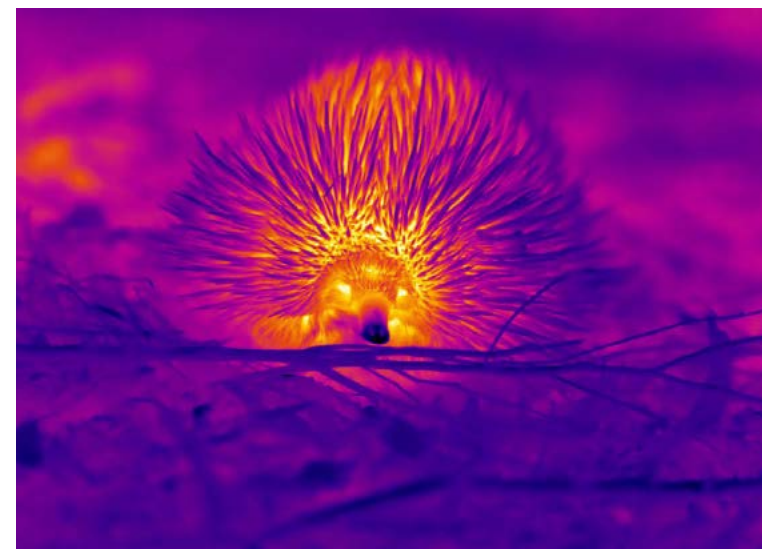
**Christine  
Cooper**

Australia

Senior Lecturer,  
School of Molecular  
and Life Sciences,  
Curtin University

## Echidna Physiology: Function in a Changing Environment

Short-beaked echidnas (*Tachyglossus aculeatus*) supposedly have low heat tolerance, but they can inhabit regions where ambient temperatures routinely exceed their purported thermal limits. Consequently, it is of interest to examine the thermal biology of echidnas to understand how they tolerate high temperatures and predict how climate change might impact them. Echidnas have been observed active at environmental temperatures that exceed supposedly lethal limits, indicating that they must physiologically regulate their body temperature. Despite a lack of sweating or panting, echidnas can enhance evaporative water loss at high temperatures, including via an evaporative window which functions when they blow bubbles of mucus that wet the tip of their beak and evaporate, cooling the underlying blood sinus and dissipating body heat. Thermal windows on the ventral surface and inside the legs promote heat dissipation by conduction and convection. Echidnas moderate their activity seasonally; they are nocturnal during hot weather and are more diurnal in winter. Southwest Australia echidnas use daily torpor regularly and sometimes hibernation, but this heterothermy does not have the strong seasonal pattern observed in colder climates. Heterothermy allows echidnas to avoid unfavourable conditions. For example, echidnas impacted by fire reduced their body temperature and activity compared with those in unburnt areas. Echidnas move over large distances daily and excavate considerable quantities of soil. Therefore, they are important ecosystem engineers, improving soil conditions for plant growth. The echidnas' physiological flexibility is a factor contributing to their current success and presumably will aid their continued survival in the face of human-induced habitat modification and climate change.



A wild short-beaked echidna (*Tachyglossus aculeatus*) with a moist beak tip that facilitates electroreception and acts as an evaporative window. ©Christine Cooper

Thermal imaging of a wild short-beaked echidna (*Tachyglossus aculeatus*) reveals the cooling effect of evaporation from the moist tip of the beak. ©Christine Cooper



## EDEN PROJECT

England



**Robbie Kirkman**

Education Team Lead

## Empowering Learners, Developing Leaders

The Eden Project is a global movement, working with nature, to respond to the planetary emergency. We are both an educational charity and a social enterprise. Our programmes for schools, colleges and universities engage with over 50,000 students and teachers each year. The vision of the education team is to foster the development of children and young people who are motivated and equipped to create and flourish in a future in which all living things thrive within planetary boundaries.

To that end we have designed a programme of unforgettable days out for schools, colleges and universities, a range of training opportunities to support teachers in introducing sustainability-focused learning, a set of virtual online workshops and scheduled livestreams so that we can engage with our learners on a global stage. This work draws on our experience of running education programmes and is informed by our understanding of the evidence-base on Nature Connection and Learning for Environment and Regenerative Sustainability.

This means that learning at Eden is in, about, for, from, through nature and we focus on connections between people, as well as people and the natural world and its systems. We use the power

of stories to motivate our learners on global challenges whilst supporting their emotional wellbeing. In a rapidly changing world, young people need to be adaptable, skilful and solution-focused. Therefore, we champion creativity, promote curiosity and empower our learners to work together, becoming agents of change who can shape the kind of future they want to live in.

“Learning at Eden is in, about, for, from, through nature.”

**eden project**

[www.edenproject.com](http://www.edenproject.com)



Primary school children working together to complete a problem-solving challenge. ©Eden Project



Secondary school students measuring banana leaves in order to calculate oxygen production as part of our photosynthesis workshop. ©Eden Project

**FABIEN  
COUSTEAU  
OCEAN LEARNING  
CENTER**

Nicaragua



**Pamela Fletcher**

**Program Director**



**Martin Molina**

**Project Manager**



www.fabiencousteauolc.org

## Sea Turtle Conservation and Women Empowerment Program

The Sea Turtle Conservation and Women Empowerment Program is located on the northwestern Pacific coast of Nicaragua at the Isla Juan Venado Nature Reserve. The programme is led and managed by women from the local indigenous community and town. During nesting season, the team members monitor 9 km of shoreline and maintain a sea turtle hatchery used to educate visitors, residents and tourists about sea turtles, and emphasise how everyone plays a role in the protection of the species and their habitats.

Since 2019, we initiated the programme alongside local partners and together identified both challenges and solutions related to funding and capacity building, and set two goals: 1) to increase the chances of survival for four species of endangered sea turtles which nest in the area; and, 2) to empower women and girls to manage the hatchery for entrepreneurial and educational opportunities.

Over 30 training and community workshops have been held to build skills and awareness for sea turtle monitoring, research, and outreach. Women and girls learn how to build and manage hatcheries, conduct research protocols for monitoring nesting turtles, and implement best management practices for flipper tagging, nest relocation, and hatchling releases. Over 103,000 sea turtle eggs have been relocated into the hatchery through collaboration with egg collectors. Tourism is growing as well as entrepreneurial opportunities. A partnership with a local university has strengthened science-based research and conservation activities with students and faculty while promoting science education involving approximately 4,500 individuals from the community.



“Over 103,000 sea turtle eggs have been relocated into the hatchery through collaboration with egg collectors.”



Team showing tagging. ©Martin Molina  
Baby sea turtle. ©Martin Molina





Volunteers begin constructing the hatchery where sea turtle nests are relocated for safety and monitoring. ©Julio César Banquedano Pérez



## Fer Gual-Suárez

Mexico

Student researcher

## The Carnivorous Bats of Calakmul

The Calakmul rainforest is home to two rare and endangered carnivorous bat species: the spectral bat and the woolly false-vampire bat. For several years, Luis Trujillo and I have been studying these bats in one of the few places in the world where the location of several roosts of the woolly false-vampire bat is known, all located inside ancient Mayan temples. Through examining the remains of prey brought back to their roosts, we have found more than a hundred species of animals in their diet, all native species and most found mainly within the rainforest. We used GPS devices to track the bats' movements, showing how they stay exclusively within well-preserved matrices and completely avoid open spaces such as agricultural fields or artificial grasslands. Through infrared video of what happens inside their roosts, we have documented the interactions within these tight-knit groups, with prey items of several species being brought back to supplement pregnant females and pups. We aim to provide a deeper understanding of the ecology of these rare bats that will eventually help for their conservation, especially in the face of threats to the forest matrix these bats depend on.



“Through examining the remains of prey brought back to their roosts, we have found more than a hundred species of animals in their diet, all native species and most found mainly within the rainforest.”



The spectral bat (*Vampyrus spectrum*) is the largest bat on the American continent.  
©Armando Vega





Luis Trujillo and I, holding a woolly false-vampire bat (*Chrotopterus auritus*) in front of the Mayan temple where it lives.  
© Armando Vega





## Maxwell Hall

Switzerland

Creative Editorial Lead,  
World Economic Forum

## Bringing Biodiversity into the Boardroom

When business and government leaders ask Jane Goodall and David Attenborough what they can do about biodiversity, you know the world is changing. These are the scenes at high-level summits like the World Economic Forum Annual Meeting in Davos. The reason is that our economic system is completely dependent on nature. Businesses are now realising just how much we – and they – rely on natural resources like water or soil. They used to assume that these assets would always exist and be free. Not any more. Now they are seeking the expertise and wisdom of conservationists, communities, indigenous leaders and scientists to take action and invest for the health of the planet. Shifting to a ‘nature-positive economy’ – one that allows biodiversity (and humans) to thrive – can create 400 million jobs and \$10 trillions in annual economic value, according to World Economic Forum research.

So what can businesses do? First, executives can advocate for the environment, work together with government leaders and take direct action themselves. Second, what you can measure you can manage. Calculating the value of nature, realising what we need to protect is important. The task now is to bring biodiversity into the boardrooms and nature onto corporate spreadsheets so conservation projects can get the investment they need. Behind much of this, is smart storytelling. The worlds of conservationists and corporates seem worlds apart. But they are connected and we can tackle the challenge of biodiversity loss if we all work together. Storytelling is the connective tissue that brings these worlds together. This is behind-the-scenes work that brilliant experts at the World Economic Forum who Max Hall has the pleasure to work with are trying to do.

Search for ‘biodiversity’ and ‘new nature economy’ at [www.weforum.org](http://www.weforum.org). If you are looking for planetary inspiration, look at this project we did with the European Space Agency: [www.weforum.org/events/the-davos-agenda-2022/sessions/live-from-space-the-next-frontier-for-knowledge-and-action](http://www.weforum.org/events/the-davos-agenda-2022/sessions/live-from-space-the-next-frontier-for-knowledge-and-action)



Samantha Cristoforetti, Astronaut, European Space Agency (ESA), France, speaking in the Live from Space: What Next for Global Cooperation? at the World Economic Forum Annual Meeting 2022. © World Economic Forum/Manuel Lopez

Greta Thunberg, Climate and Environmental Activist, Sweden speaking in the Averting a Climate Apocalypse at the World Economic Forum Annual Meeting 2020 in Davos-Klosters, Switzerland. © World Economic Forum/Manuel Lopez





## Jessica Hartel

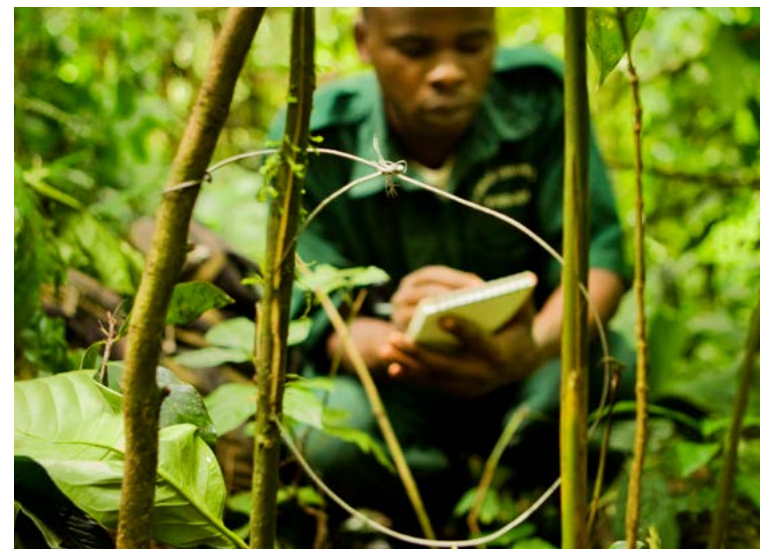
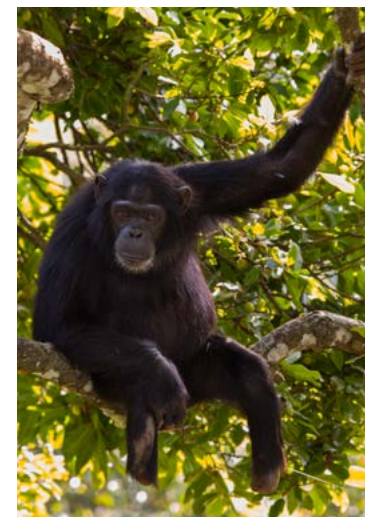
Uganda

Primatologist and conservation biologist.  
Director of Conservation, Kibale Chimpanzee Project

## ‘Landmines’ in the Forest: Mitigating the Threats of Snares to Wild Chimpanzee Conservation

The Kibale Chimpanzee Project is a NGO working in Kibale National Park, Uganda that has been dedicated to the research and conservation of the Kanyawara chimpanzee community since 1987. In Uganda, snares are one of the biggest threats to chimpanzees and wildlife more broadly. Our conservation work has focused on mitigating this illegal threat via snare removal patrols and veterinary interventions throughout Kibale and beyond. Since 1997, our Kibale Snare Removal Program in collaboration with the Uganda Wildlife Authority (UWA) has removed over 12,000 snares on more than 6,500 patrols, which has resulted in chimpanzees (and other wildlife) being snared less frequently. In 2020, we established the Chimpanzee Health, Intervention, and Monitoring Program (CHIMP), a One Health wildlife veterinary program, in collaboration with UWA and the Jane Goodall Institute to improve chimpanzee health monitoring and emergency response efforts to snaring events. Since CHIMP began, all snared chimpanzees in our community have received immediate emergency support with favorable outcomes. Our synergic conservation programs work together to mitigate the threat of permanent injury and even death from snares for not just chimpanzees but all wildlife living under their umbrella. Our most recent example involved a vet-accompanied snare removal patrol that quickly switched to an intervention team to rescue an endangered L’hoest’s monkey caught in a snare. We will continue to work with our key partners, stakeholders, and local people in the region to protect chimpanzees and other wildlife as human pressures on the park continue to increase.

“Since CHIMP began, all snared chimpanzees in our community have received immediate emergency support with favorable outcomes.”



Max lost both his feet in two separate snare injuries when he was a juvenile. Max, now an adult, survived those injuries and acclimated to a life without feet but will forever experience mobility and social challenges. ©Ronan Donovan

Kibale Snare Removal Program Team Captain, Godi Nyesiga, collecting data and removing a wire neck snare during patrol in Kibale National Park. ©Sebastian Kennerknecht



kibalechimpanzees.wordpress.com





Twig lost his hand due to a snare injury. While this presented new mobility challenges, Twig was resilient and acclimated to a life with only one hand. ©Ronan Donovan





**Emily Hazelwood**

The United States

Marine conservation biologist. Co-founder, Blue Latitudes

## Rigs as Reefs: Turning Offshore Oil Platforms into Bountiful Reefs

In our daily lives, we use plastics, we drive our cars to work, and turn lights on and off in our homes. We contribute to the global demand for offshore oil and gas. This demand has led to the development of hundreds of offshore oil and gas platforms in almost every ocean around the world. At some point, these platforms will reach the end of their economically productive lives, and this is when we dive in. We are marine scientists on a mission to re-purpose offshore oil and gas platforms as artificial reefs. This concept is known as 'Rigs to Reefs'. However, re-using existing materials and re-purposing them for environmental benefit is not just relegated to offshore platforms, we can apply this concept to a variety of industries from offshore wind to aquaculture.

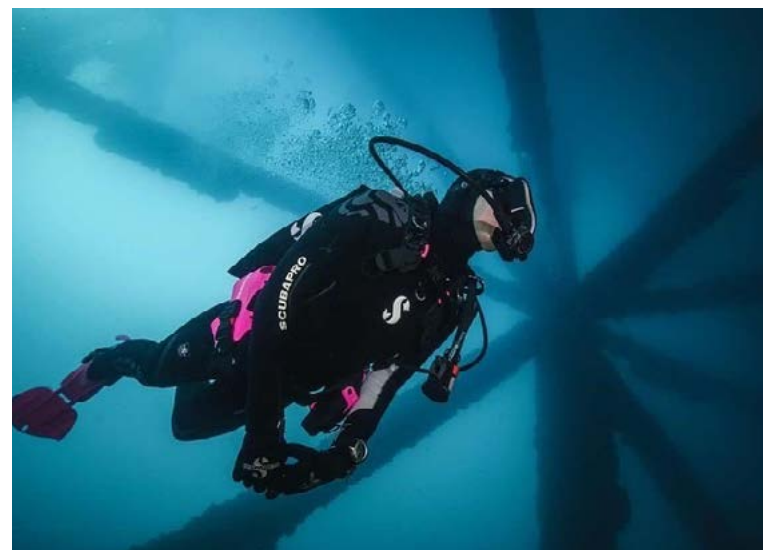
Our vision at Blue Latitudes is to find silver linings in our oceans at the intersection of industry and the environment and we are deeply invested in the concept of re-purposing offshore energy infrastructure for the benefit of the environment. Our organisation is intrinsically unique in that we are women-owned in the male-dominated industry of offshore energy. As scientists, we have integrated ourselves into the oil and gas industry and disrupted their perception of decommissioning. We offer solutions that they previously

didn't think were possible and in 2018, co-founders Emily and Amber were recognised on the Forbes 30 Under 30 list in the energy sector for their efforts with Blue Latitudes to create innovative solutions for the complex ecological challenges associated with the offshore industry.

“Our vision is to find silver linings in our oceans at the intersection of industry and the environment.”



www.bluelatitudesfoundation.org



Emily Hazelwood and Amber Sparks, co-founders of Blue Latitudes after a dive on Platform Elly, off the coast of Long Beach, California. ©Scott Sporleder

Emily Hazelwood diving on Platform Elly, off the coast of Long Beach, California. ©Joe Platko

SPEAKERS





Marine life below Platform Eureka  
off the coast of California. © Joe Platko





**Sam Inglis**

Hong Kong

**Wildlife Programme  
Manager, ADM Capital  
Foundation**

## Why Hong Kong Matters to Global Biodiversity

At the ADM Capital Foundation, we are working on many facets of the wildlife trade, striving to understand the impacts of this market on global biodiversity. Hong Kong plays an outsized role in the international trade of wildlife and we work to understand the dynamics and redress criminality within this vast market. Hong Kong has led global imports of innumerable species and wildlife products and criminal syndicates have exploited our city's financial and logistical infrastructure. As a bottleneck, interventions made in Hong Kong have the potential to benefit neighbouring and far-flung trade partners alike.

We monitor and shed light on emerging trends in legal and illicit markets alike, working to check the impact our small city's trade is having on ecosystems around the world. To combat the most egregious issues, we have supported legislative reforms including Hong Kong's ivory ban and the drive to designate wildlife offences as organized and serious crimes.

“Interventions made in Hong Kong have the potential to benefit neighbouring and far-flung trade partners alike.”



A Common green iguana (*Iguana iguana*), native to Central and South America, suns itself in a Hong Kong country park. Hong Kong imported 5.2 million reptiles for the exotic pet trade from 2015 to 2022. © Paul Hilton/Earth Tree Images

An ivory shop on Wellington Street, in the central business district of Hong Kong. The trade in ivory was phased out from 2018 to 2021, as authorities realised it could not be satisfactorily controlled. © Paul Hilton/Earth Tree Images

SPEAKERS





## Chien Lee

Malaysia

**Conservation  
photographer. Honorary  
Research Fellow,  
Institute of Biodiversity  
and Environmental  
Conservation,  
University Malaysia  
Sarawak**

SPEAKERS

## Documenting Biodiversity and Traditional Land Usage in the Heart of Borneo

Few places on Earth conjure up as much mystique as the rainforests of Borneo. Although seemingly vast and teeming with a nearly unparalleled wealth of biodiversity, these tropical forests have come under severe threat in recent decades due to drastic changes in land use. The loss of natural forest cover caused by large scale logging, monoculture plantations, and megadams not only results in the extirpation of native species, but also displaces indigenous communities and jeopardizes their traditional lifestyles.

The proposed Baram Peace Park is a community-driven initiative aimed at preventing logging and other destructive land conversion activities from intruding on over 2800 km<sup>2</sup> in the remote interior of northeastern Sarawak. This region contains a high proportion of primary rainforest as well as comprising the ancestral lands of several indigenous groups, most of whom still depend on the forests for their livelihood. Although not yet officially recognized by the state government, negotiations are underway to lobby for the land stewardship of this area to be fully retained by the local communities so that they can continue to protect the forest as they always have.

The aim of our present project has been to document the natural landscapes, biodiversity, and traditional land usages of this proposed park, with the goal of garnering local and international attention and increasing support for its conservation. In 2022, our team spent a total of two months on photographic expeditions into the region's remote interior, often camping for weeks at a time while traversing extremely rugged terrain. Our surveys revealed forests of exceptional beauty and also recorded an abundance of rare native flora and fauna, including a number of undescribed species. With these findings, and our continued work over the next year, we hope to bolster the recognition of this region and its native people's traditional rights so that it may ultimately serve as an exemplary model of community-led conservation.

[www.chienlee.com](http://www.chienlee.com)

“The proposed Baram Peace Park is a community-driven initiative aimed at preventing logging and other destructive land conversion activities from intruding on over 2800 km<sup>2</sup> in the remote interior of northeastern Sarawak.”



The rainforests of the Ulu Baram region are some of the most magnificent and pristine in Borneo. ©Chien Lee





A Bornean Clouded Leopard (*Neofelis diardi borneensis*) on the prowl. Although the largest land predators on Borneo, these animals are so secretive that without the use of camera traps, their presence is often only detected by tracks, scat, and other sign they leave to mark their territories. © Chien Lee





## Jessica Lee

Singapore

**Head, Avian Species Programmes and Partnerships, Mandai Nature.**

**Coordinator, IUCN SSC Asian Songbird Trade Specialist Group.**

**Coordinator, IUCN SSC Helmeted Hornbill Working Group.**

**Steering Committee member, IUCN SSC Hornbill Specialist Group**

SPEAKERS

## Tackling the Asian Bird Crisis

As far back as when I was nine, I've always had a penchant for birds. That spurred my journey into conservation biology of the avian kind. I now oversee avian conservation programmes across Southeast Asia, with a specific focus on two groups of birds – songbirds and hornbills. A common thread that ties both together is the illegal bird trade. This conservation journey has brought me to pristine habitats, trailing after local conservation partners in the search for highly threatened and elusive birds such as the Helmeted Hornbill – wanted for its 'ivory' casque, to undercover operations in songbird markets where I witnessed the sheer extent and depth of the bird trade. However, my work is also about finding solutions, which comes in many forms: carrying out research to advise conservation or management decisions, providing support to conservation partners on the ground and to build their capacities in ways that maximise conservation impact, such as running training workshops in the rescue, rehabilitation and release of confiscated birds. Ensuring sustained funding, the filling of gaps and better coordination of region-wide conservation efforts are key to progress on the ground. Tackling these has given me a better understanding of the multi-faceted bird conservation landscape across Southeast Asia and its various sensitivities. Nevertheless, any progress is only achieved over time and I'm in it for the long haul.



www.mandainature.org



“Ensuring sustained funding, the filling of gaps and better coordination of region-wide conservation efforts are key to progress on the ground.”

In Brunei, in the treetops above 36 metres high, looking for hornbills as part of a wider study to identify important hornbill landscapes for preservation. © Jessica Lee

An unlikely path. Sometimes birds are easier seen over water than in the forest. Here in one of the important hornbill landscapes in Peninsular Malaysia. © Jessica Lee





## Laurie Marker

Somaliland

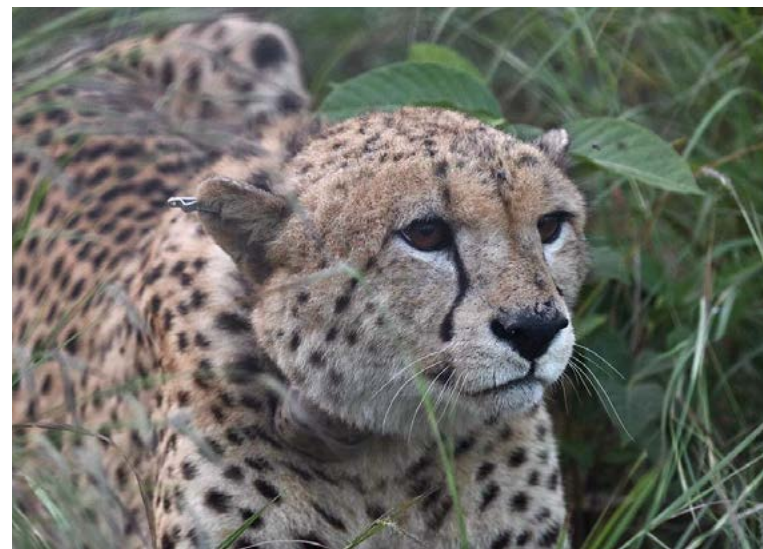
**Founder and Executive Director, Cheetah Conservation Fund**

## Keeping Cheetahs in the Wild

With fewer than 7500 cheetahs remaining in the wild, the world's fastest land mammal is at risk of becoming lost. Dr. Laurie Marker is a conservationist recognized as one of the leading experts on the cheetah. As Founder and Executive Director of Cheetah Conservation Fund (CCF), Dr. Marker has dedicated her life to saving cheetahs in the wild. She has pioneered research, established conservation models and created partnerships on behalf of the cheetah that had not before existed. Launched in 1990, CCF has become the longest running and most successful program for cheetahs in the world. From humble beginnings as a remote field base, Dr. Marker has grown CCF into a world-class cheetah research, education and conservation institution near Otjiwarongo, Namibia, set on a 57,000-hectare, private, integrated livestock and wildlife reserve.

Under the leadership of Dr. Marker, CCF scientists conduct intensive research on the species, then develop and deploy conservation action based on their findings. With a mission of keeping cheetahs in the wild, CCF's work extends through the Horn of Africa, where Dr. Marker has established a second field base in Somaliland for cheetahs caught up in the illegal wildlife pet trade. In 2022, CCF helped support the reintroduction of cheetahs in India by escorting eight cats from Namibia to Kuno National Park in Madhya Pradesh, India, to be re-released into the wild. The goal of translocating these animals is to establish a new population along with a dozen cheetahs contributed by South Africa. While India formerly was a cheetah range state, the species was declared locally extinct in 1952.

Using a holistic approach, Dr. Marker considers social, economic and environmental factors in determining how to create a permanent place for cheetahs on Earth.



Freddie, one of the eight Namibian cheetahs now living at Kuno National Park. Translocated on 17 September 2022, Freddie sired the first litter of cubs born on Indian soil since the 1950s. The four cubs were born to a female cheetah from Namibia named Siyaya, which means 'moving forward' in Zulu. ©Courtesy of Cheetah Conservation Fund

Dr. Marker and the Veterinary Team in Somaliland work on a cheetah named Janet. ©Courtesy of Cheetah Conservation Fund





To prepare young learners for a future coexisting with and possibly a career managing wildlife as adults, CCF educators may visit a dozen schools and interact with thousands of students in any given week. © Courtesy of Cheetah Conservation Fund





**Mireia Peris**

Spain

**Communications and Marketing Coordinator, MarAlliance**

## Using Communications as a Weapon of Mass Attraction

In the conservation sector, effective communication plays a vital role in raising awareness, mobilising support, and driving action toward environmental preservation. Conservation issues are complex and multifaceted, requiring a delicate balance between scientific accuracy, attractive visuals, and accessibility. The attitude people have towards biodiversity and the place they call ‘home’ is always shaped by their perception and understanding of nature, and that is why bridging the gap between science and audiences through effective communication and outreach campaigns is my passion.

The communications world is fast-paced and ever-changing, so the main challenge I face is to communicate complex environmental issues

through creative and innovative means that resonate with diverse audiences while maintaining scientific accuracy. Overcoming this challenge holds the power to educate, engage, and empower others to join the cause, ultimately contributing to the preservation of ecosystems and biodiversity for future generations.

Living in extraordinary places like the Galapagos Islands has provided me with a unique and privileged opportunity to experience nature in its true and untouched form. Consequently, I am acutely aware of the delicate balance

between nature and humans and, throughout my career, I have collaborated with international charities in creating compelling narratives and campaigns that inspire empathy, promote behaviour change, and foster a sense of urgency toward protecting nature and sustainable development.

“The attitude people have towards biodiversity and the place they call ‘home’ is always shaped by their perception and understanding of nature.”



Shark conservation campaign for Charles Darwin Foundation. Galapagos Islands, Ecuador. ©Mireia Peris

Recording the MarAlliance interviews at Lighthouse Atoll, Belize, for a CNN Call to Earth episode. ©MarAlliance



## Nikolai Petkov

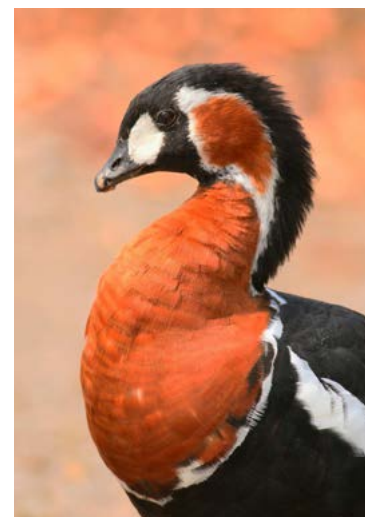
Bulgaria

**Project Manager and  
Coordinator of AEWA  
RbG International  
Working Group**

## Red-breasted Goose Conservation Story

The Red-breasted Goose is one of the most threatened goose species in the world, listed as IUCN Vulnerable and at the start of the new millennium its population crashed by over 50%. The species is impacted by climate change with predicted loss of 70% of its breeding grounds due to changes in the Arctic region where it breeds.

The flyway of the species covers five key range countries: Bulgaria, Romania, Ukraine, Russia and Kazakhstan. In the past five years, we have been working together with a network of 11 partners – including state agencies and NGOs – to conserve the species and reduce the impact of poaching and illegal hunting, a major threat to the species. We carried out extensive surveys to define staging and wintering grounds, including tracking 40 redbreasts with GPS tags. We managed to close spring hunting in Southern Russia and Kazakhstan – a benchmark achievement and breakthrough in the conservation of the species in major staging areas for many migratory waterbird species. We involved hunters and authorities in mixed patrols to reduce poaching incidents and raised awareness and delivered training to hunters' communities in the range countries. One of our partners in Kazakhstan, a hunting estate company, designated 35% of its hunting estate – a key staging area for the species – as a non-hunting zone for game rest and feeding to benefit redbreasts during peaks of migration. We have developed a network of volunteers and partner organisations and all cooperate within the framework of the AEWA RbG International Working Group.



**“We involved hunters and authorities in mixed patrols to reduce poaching incidents and raised awareness and delivered training to hunters’ communities in the range countries.”**

Red-breasted Geese on water.  
©Sonia Rozenfeld

Red-breasted Goose portrait.  
©Nicky Petkov/NaturePhotos.eu





**Morteza Pourmirzai**

Iran

**CEO, Iranian Cheetah Society**

SPEAKERS

## Asiatic Cheetahs in Iran: A Race Against Time

The Iranian Cheetah Society (ICS) was established in 2001 as a non-governmental organisation dedicated to the conservation of the Asiatic cheetahs in Iran. The ICS has been working with local communities and other stakeholders to develop conservation strategies that address the threats to the species. The ICS has also been involved in research and monitoring activities to better understand the ecology and behaviour of the Asiatic cheetahs.

I'm working with the Iranian Cheetah Society to save the critically endangered Asiatic cheetahs in Iran. My work is vital because less than 40 individuals remain in Iran. The threats to their survival include traditional livestock husbandry, roads, habitat fragmentation, and sanctions against Iran. Sanctions have caused economic issues and made it difficult for experts to visit Iran. They have also prevented Iranian conservationists from entering many countries and paying their memberships such as IUCN membership dues or using marketing tools such as Mailchimp and Paypal.

Despite these challenges, we won't stop trying to save the species. We believe that the conservation of the Asiatic cheetahs is not only important for Iran but also for the world. The Asiatic cheetahs are an important part of Iran's natural heritage and are also an important indicator of the health of the ecosystem.



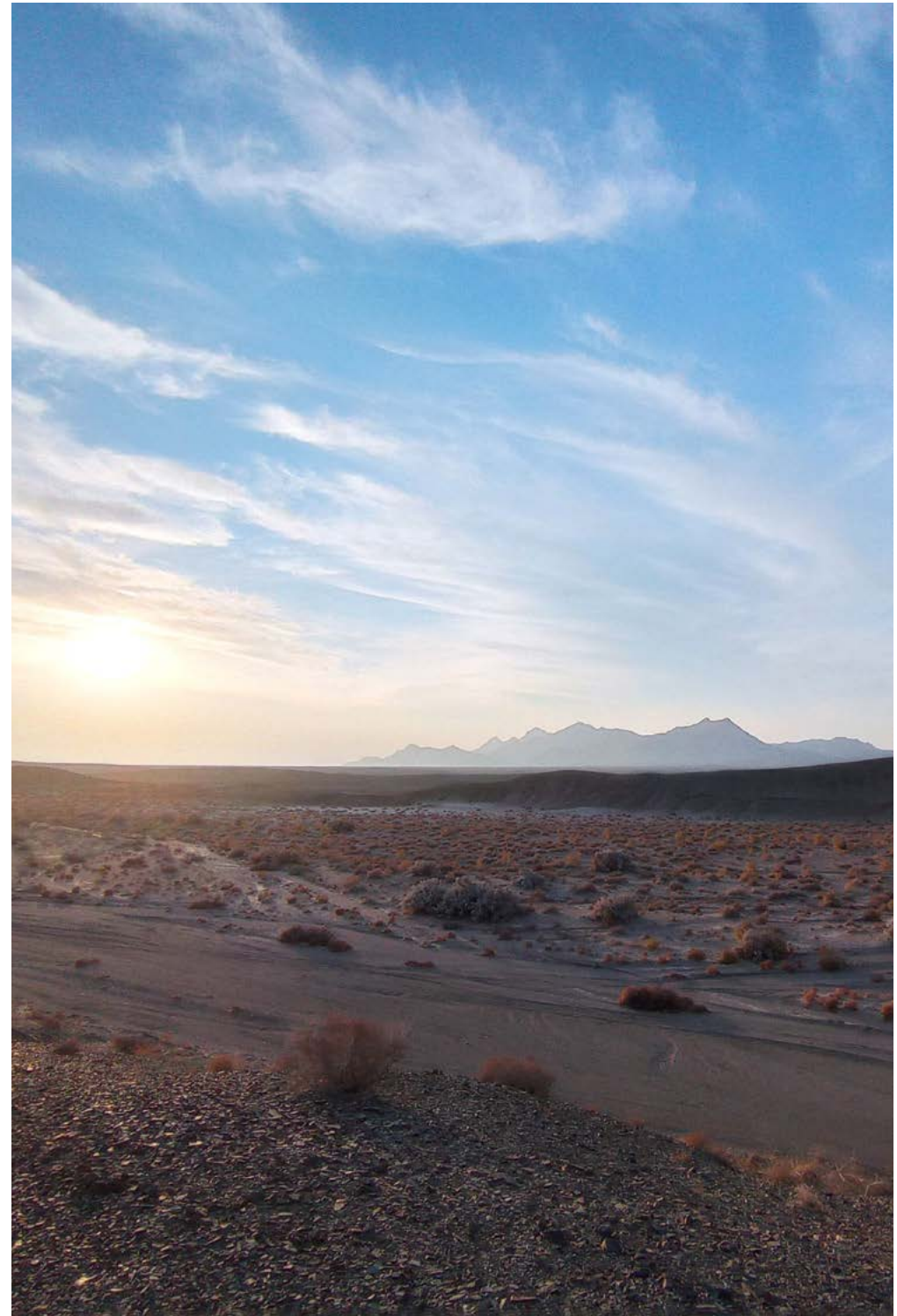
“The Asiatic cheetahs are an important part of Iran’s natural heritage.”



www.wildlife.ir

Camera trap picture. ©Iranian Cheetah Society  
Morteza Pourmirzai at a camera. ©A. Moradi





My team. ©Morteza Pourmirzai  
Morteza Pourmirzai at work. ©N. Samadzade  
Desert landscape. ©Morteza Pourmirzai





**Jorge Rojas-Jimenez**

Costa Rica

DVM, PhD Candidate,  
the University of Georgia (UGA)

## Conserving Baird’s Tapirs as Flagship Species – An Effective Way to Connect Protected Areas

Jorge’s work is comprehending wildlife movement ecology through tagging technologies and camera trapping; understanding human-wildlife conflicts, and implementing mitigation strategies to reduce conflicts; wildlife health and population genetics. In his PhD research, he is investigating the Baird’s tapir movements and habitat use in a fragmented landscape at the Tenorio-Miravalles Biological Corridor (TMBC), in Northwestern Costa Rica.

Tapirs wander in open areas in pastures and crops while feeding, they cross roads, increasing the risks of collision with vehicles, and get close to urban places, therefore interacting with people and domestic animals. This has caused human-tapir conflicts to increase in the last decade, as tapirs raid crops and farmers consequently suffer economic losses. Currently, Jorge and his team are implementing electric fencing and assessing this strategy to repel tapir from raiding crops.

Through all these approaches, he aims to integrate the Baird’s tapirs and achieve human-wildlife coexistence. Though budget limitations and political will are constant obstacles in wildlife conservation, Jorge aims to integrate his research into a policy brief, that may serve to establish technical recommendations for mitigation strategies (electric fencing, road signs) to reduce human-tapir conflicts at TMBC, and may be adapted to other regions from Costa Rica.



Dr. Jorge with community members capturing and outfitting a tapir with a radio collar GPS. ©Michiel van Noppen

Dr. Jorge deploying a camera trap with teammate Sofia with a farmer whose crop was suffering raiding from a tapir. ©Michiel van Noppen

SPEAKERS







Dr. Jorge tracking and assessing the health status of a tapir at Tapir Valley Nature Reserve. ©Alejandro Prieto Rojas





## Asiem Sanyal

São Tomé and Príncipe

Terrestrial Programme  
Manager, Fundação  
Príncipe. Project  
Manager, Fauna & Flora

SPEAKERS

## Working Towards a Prosperous, Safe and Healthy Príncipe for its Biodiversity and Communities

Despite its size (approximately 142 km<sup>2</sup>), the island of Príncipe, part of the island nation of São Tomé and Príncipe, has one of the highest rates of endemism in the world – it is home to at least 9 endemic bird species and 27 endemic tree species, with several species still undiscovered or undescribed.

Fundação Príncipe (FP), an NGO established on the island in 2015, is working towards the conservation of this incredible biodiversity, alongside the communities that call Príncipe home, as well as with the support of organisations such as Fauna & Flora. Through its work on the island, FP focuses on three broad areas of work – terrestrial conservation, marine conservation, and community engagement, which overlaps the former two. Through a range of projects under these programmes, FP works towards mitigating the threats to different endemic species on the island [for e.g. the Obô giant snail (*Archachatina bicarinata*), Príncipe thrush (*Turdus xanthorhynchus*), and the Gogô (*Carapa gogo*) by collecting and analysing valuable scientific information which help inform conservation efforts, as well as by engaging communities in awareness campaigns to ensure their stewardship of the valuable natural resources on their island.



[fundacaoprincipe.org](http://fundacaoprincipe.org)  
[www.fauna-flora.org](http://www.fauna-flora.org)

“Fundação Príncipe works towards mitigating the threats to different endemic species on the island.”



The critically endangered Príncipe Thrush (*Turdus xanthorhynchus*).  
© Yodiney dos Santos/Fundação Príncipe

The Fundação Príncipe terrestrial flora team collecting data on a threatened tree species in Príncipe. © Teresa Holstein/Fundação Príncipe





## Cárol Sierra-Durán

Mexico

Master's student in Biological Sciences. National Autonomous University of Mexico. Global South Bats Ambassador. National Geographic Young Explorer

SPEAKERS

## Bats and Rice: the Value of Bats as Rice Pest Controllers

Bats are one of the most amazing but unfairly treated creatures in the world. Flying high above at night, they are mysterious creatures that have always aroused human curiosity. For me, that curiosity was awakened one day during my first year of college in 2015, and since then I have dedicated my life to studying and protecting them. In my journey with bats, I have learned that one of the cornerstones of their conservation is to have powerful science-based arguments that allow us to easily convey their importance to the general public and decision-makers. This is why I decided to undertake a project, under the guidance of my supervisor Dr. Medellín, in which we could evaluate the pest-controlling role of bats in a globally important crop such as rice. In this project, we proved for the first time in the American continent that bats not only make a real difference in rice crop damage, but that the damage is more than double when bats are excluded. We also estimate that this difference translates into US\$3.52 to \$8.33 per hectare per year.

These findings have allowed us to communicate more broadly and powerfully the importance of bats landscapes, and represent the first steps to include bat conservation in integrated pest management plans in Mexico and the world.



“One of the cornerstones of their conservation is to have powerful science-based arguments.”

Exclusion experiment used to test the role of insectivorous bats as rice pest suppressors in Mexico. © Cárol Sierra-Durán

Gray sac-winged bat, one of the most abundant insectivorous species in the rice fields of central Mexico. © Ángel Torres-Alcántara





**Rebecca Smith**

Paraguay

**Executive Director,  
Fundación Para  
La Tierra. National  
Geographic Explorer**

## Conservation in Paraguay's Last Wild Places

Fundación Para La Tierra (PLT) is a Paraguayan conservation NGO dedicated to the conservation of Paraguay's fragile habitats through scientific research, environmental education and community engagement. Using a multifaceted approach with the three key tenants of research, communities, and education, we tackle conservation issues in the Wetlands of Ñeembucú, and the Atlantic Forest of San Rafael. San Rafael (Tekoha Guasu) is the largest area of Upper Paraná Atlantic Forest left in Paraguay (73,000 ha). The Atlantic Forest is a biodiversity hotspot and one of the world's most threatened terrestrial habitats. San Rafael is the most urgent conservation priority in Paraguay, with the highest biodiversity of anywhere in the country. It is under extreme pressure from illegal settlements and logging, fires, continuing soy expansion and hunting.

Since 2013 we have studied the ecological requirements of the hooded capuchin monkey, the flagship species of our project. Promoting the hooded capuchin as the flagship species will further highlight the plight of this charismatic species that almost silently slipped into the Threatened categories. Using the species requirements and the needs of local communities, we have developed a conservation action plan with our Mbya Guaraní community partners and are implementing economically-beneficial reforestation projects using the native cash crop yerba mate and 13 native tree species. This project began in April 2023 with the reforestation of 7 ha (17,500 saplings) benefitting 18 Mbya Guaraní families. We run a programme of participatory environment education in 20 rural and Mbya Guaraní schools surrounding San Rafael benefitting more than 1000 children every month.



**“San Rafael is the most urgent conservation priority in Paraguay, with the highest biodiversity of anywhere in the country.”**

**Dr Rebecca Smith with children in Mberu Pirapo'i during a participatory lesson. ©Olivia Zickgraf 2022**

**Community members in Mberu Pirapo'i planting saplings. ©Olivia Zickgraf 2022**







tefanie Heitmueller @ Photographers without Borders 2017

A subadult hooded capuchin foraging in the Atlantic Forest fragment of Laguna Blanca.  
©Rebecca Smith 2016

The Upper Paraná Atlantic Forest in San Rafael (Tekoha Guasu). ©Stephanie Heitmuller/Photographers Without Borders 2017

Dr. Rebecca Smith and School Director Reina Rodriguez with children in Mberu Pirapo'i on the first day of reforestation planting. ©Olivia Zickgraf 2023







## Barghavi Srinivasulu

India

Post-doctoral researcher at the Centre for Biodiversity and Conservation Studies, Osmania University, India

## The Kolar Leaf-nosed Bat – Conserving an Indian Endemic

The Kolar leaf-nosed bat, *Hipposideros hypophyllus*, is distinct from other leaf-nosed bats in that it has a single pair of supplementary leaflets under its nose leaf. Of the two known locations in Kolar district, Karnataka, India, we discovered that it is no more found at Therahalli, and is threatened due to stone quarrying at Hanumanahalli where it roosts in a subterranean cave on a granitic hillock. This is the only known roost of this species which it shares with three other species of leaf-nosed bats, including the endangered Durgadas' Leaf-nosed Bat *Hipposideros durgadasi* which is known from a few scattered disjunct locations in central and peninsular India.

The local communities of Hanumanahalli and the nearby villages strongly supported us in convincing the local administration to ban mining on the hill and in the surrounding areas. Dissemination of information on the threats and conservation importance through news media, conservation education camps, sensitisation of policymakers, and top administration at local, state and national levels helped in creating the required support to protect this critically endangered bat species, its roost, and its habitat.

Since its rediscovery in 2013, a ban on mining and stone-quarrying in a 3-kilometer radius of the roost to the declaration of the Kolar leaf-nosed bat Conservation Reserve in 2019, and inclusion in Schedule I of the Indian Wildlife Protection Act rendering highest protection status to the species in 2021, we hope that the Kolar leaf-nosed bat will survive and flourish in future.



The Kolar leaf-nosed bat (*Hipposideros hypophyllus*). ©C. Srinivasulu and Aditya Srinivasulu

Habitat near the cave site on the Hanumanahalli hillock. ©C. Srinivasulu



## THE SLOTH INSTITUTE

Costa Rica



**Ana María Villada**

**Associate Veterinarian**

## Save a Sloth, Save a Tree, Save a Forest

As the associate veterinarian at The Sloth Institute, I am in charge of all the medical programmes, including clinical cases, rehabilitation, and clinical research. It is a challenging job because this means I am not only responsible for the animals that arrive in our care, I am responsible for the health checks after release. We track the individuals we are most concerned about or the individuals we want to obtain data from for a period of time. Tracking sloths in a rainforest is by itself a tricky job since the canopy makes tracking difficult with telemetry, nevertheless after studying wild sloths we learned about the patterns, and the activities our sloths must be performing allowing us to find them successfully. Sometimes it may take a few minutes, while sometimes it can take a whole day – but we always ensure the sloths are thriving in the wild.



Releasing a sloth. ©Sam Trull/The Sloth Institute

Ana cleaning equipment in preparation for a campaign with a local animal shelter for neutering. ©Sam Trull/The Sloth Institute



[theslothinstitute.org](http://theslothinstitute.org)



## THE TOUCAN RESCUE RANCH

Costa Rica



**Zara Palmer**

**Marketing and Fundraising Manager**



**Andrea Quirós Vargas**

**Tour Coordinator**



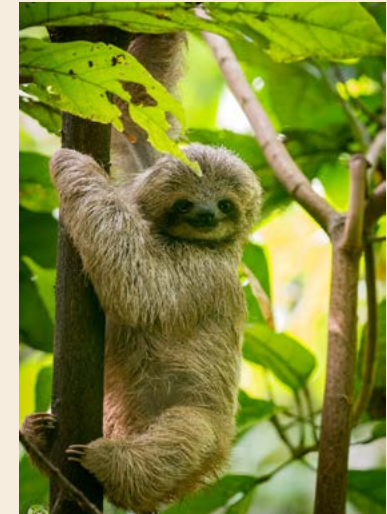
[www.toucanrescueranch.org](http://www.toucanrescueranch.org)

## Live from the Toucan Rescue Ranch

The Toucan Rescue Ranch's (TRR) mission is to rescue, rehabilitate, and release Costa Rican wildlife. TRR works with a model focusing on conservation, education, and research to ensure a brighter tomorrow for native wildlife. TRR works closely with the Ministry of Environment and Energy of Costa Rica, rescues wildlife, and brings them to our facility.

Founded in 2004, the center provides sanctuary while giving premier medical treatment, rehabilitation, and eventual reintroduction of rehabilitated wildlife.

An integral part of our work at the Toucan Rescue Ranch is to educate people on methods for protecting wildlife in Costa Rica and beyond. Through storytelling, education, and, most of all, passion, we genuinely save lives. Wildlife rescue and rehabilitation go beyond saving animals – it drives us to save each other and protect our home. Today and every day, we stand for wildlife.



“Through storytelling, education, and, most of all, passion, we genuinely save lives.”

A sloth receives arm surgery after arriving with injuries due to a dog attack.  
©Zara Palmer/Toucan Rescue Ranch

A successfully rehabilitated three-fingered sloth is reintroduced back into the wild thanks to Toucan Rescue Ranch's Saving Sloths Together Program.  
©Zara Palmer/Toucan Rescue Ranch





Baby Keel-Billed toucan rescued and hand-reared at Toucan Rescue Ranch, where they will grow big and strong for a life #backinthetrees.  
© Zara Palmer/Toucan Rescue Ranch





**Dan Tompkins**

New Zealand

Science Director,  
Predator Free 2050  
Limited

## Advancing Predator Management for Biodiversity Benefit in Aotearoa New Zealand

I work for a crown-owned company in New Zealand, Predator Free 2050 Limited, that was set up to help drive the nation's 'Predator Free 2050' mission to eradicate invasive mammalian pests critically impacting our biodiversity. For me personally, this really is the latest step in a pathway that started in academia but has been consistently diverted by the realisation that making an impact for conservation in the real world is by far the harder job but is where we most need to be doing better.

My role, as Science Director, is to build and support a portfolio of research and development that provides those working on the ground with the widest range of options for achieving their conservation goals. Pest control can be contentious due to varying stances on topics such as 'killing for conservation', toxins use, and new technologies such as genetic modification. In addition, the most effective approaches vary across both target species and context (e.g. urban versus rural). Hence, what might be the best solution for one community or area is seldom the same for another.

Some of the notable advances supported to date include the scaling of pest elimination on the mainland up to tens of thousands of hectares in single operations, increasing our capability

to detect reinvading pests through the use of remote-reporting thermal cameras with onboard image recognition, and the building of world-first high quality genomes for some of our target species, that will underpin and enable several lines of new control approach development.

“Making an impact for conservation in the real world is by far the harder job.”



SPEAKERS





## Julie Van den Broeck

Peru

Head of Research and Conservation area, Kawsay Biological Station

## Behind the Scenes of a Biological Station: Amazon Conservation in Peru

For many biologists, working at a biological station in the heart of the jungle is a lifelong dream. And I consider myself fortunate to be one of them. As the head of the research and conservation area, I have the privilege of training teams of students and volunteers, teaching them diverse methodologies for studying the intricate web of life in the Amazon. They become fully immersed in this extraordinary world—swimming in swamps to observe reintroduced black spider monkeys (*Ateles chamek*), conducting phenology transects amidst swarms of mosquitoes, venturing deep into the forest to set up camera traps, and staying up late to study the rich diversity of bats.

Each project is equally vital in unraveling the complexity and diversity of this understudied and threatened rainforest. Both frugivorous bats and spider monkeys play critical roles as seed dispersers, with bats serving as important pollinators as well. By investigating the structure, composition, phenology, and dynamics of the forest, we gain valuable insights into the impact of climate change and selective logging. Additionally, camera traps enable us to collect essential information about mammals.

Through education, conservation efforts, and unwavering dedication, we strive to bring clarity to the complexity of the Amazon rainforest and protect what is left of it.



Reintroduced black spider monkey (*Ateles chamek*). ©Michael Tweddle  
Julie measuring tree heights with her students. ©Thomas Nicolon





Drone view of the Amazon and Madre de  
Dios river near Kawsay Biological Station.  
© Raul Bello





**Sreedhar  
Vijayakrishnan**

India

Wildlife biologist

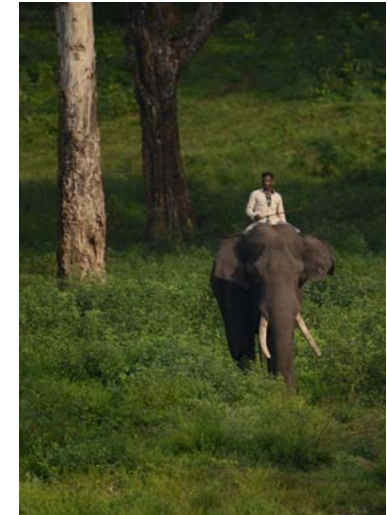
## Living with Elephants

Following elephants in tropical forests of Asia, particularly across the deciduous and evergreen forests of India poses its own challenges. With increasing anthropogenic pressures, it is vital to understand how elephants respond to these, and to landscape-level changes, behaviourally and physiologically.

The Anamalais landscape, in southern India, is the second largest contiguous elephant habitat across the species' range, and supports a population of about 2000 elephants. Nestled amidst a network of protected areas in the Anamalais is the Valparai plateau, a tea plantation-dominated region, and home to about 70,000 people and over 100 elephants. This spatial overlap between the two species results in negative interactions, which, to a large extent, have been resolved through participatory early warning systems by the Nature Conservation Foundation. We followed individual elephants and herds through plantations, human habitations and forests, to record behavioural observations and collect physiological data. Our work found that elephants, in the absence of any negative interactions, had hormone concentrations close to baseline values, indicating how well they are adapted to anthropogenic settings. The elephants, however, also had elevated levels of stress hormones when chased using intense drive methods.

The second aspect of my work encompasses documenting the traditional elephant-keeping practices of the Malasar community in the Anamalais – a community known for their ways of living with the species – to ensure the welfare of orphaned animals ending up in rescue and rehabilitation establishments, in a semi-wild, near-to-natural setting. The skills of these communities are also helpful in managing the larger-than-life problem of human-elephant conflict, and require urgent efforts towards their preservation.

“With increasing anthropogenic pressures, it is vital to understand how elephants respond to these, behaviourally and physiologically.”



An elephant maintained by the Forest Department in semi-wild conditions being brought back from grazing in the wild for supplementary feeding by its Malasar mahout. ©Aneesh Sankarankutty

An elephant being chased away from human habitations using vehicles and sirens by the Rapid Response Team of the Forest Department. ©Sreedhar Vijayakrishnan





Elephant being tracked on foot  
inside an evergreen habitat in the  
Anamalai landscape, southern India.  
© Aneesh Sankarankutty



“  
The task now  
is to bring  
biodiversity into  
the boardrooms,  
and nature  
onto corporate  
spreadsheets.  
”

**Maxwell Hall**  
Creative Editorial Lead,  
World Economic Forum

A lone emergent Tapang (*Koompassia excelsa*) tree towers above the mist-shrouded canopy of the Borneo rainforest to catch the morning sun. This is one of the tallest tropical tree species with recorded heights of over 85 meters. Sabah, Malaysia. © Chien Lee



## Global Biodiversity Festival – The Book

globalbiofest.com

### Design

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science to understand the world's  
environmental challenges and devise  
solutions that will restore balance to our  
ecosystems.

### Book development

Joëlle Bouchardy and Paul Rose

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Cover photo ©Suzi Estzerhas  
Jessica Hartel following pant hooting chimpanzees  
Lanjo and Tuke. Lanjo was later snared but due to  
a successful intervention he made a full recovery  
without permanent injury. Without intervention he  
would have lost his foot.







On May 21 2023, we took a global audience on a virtual journey to the frontlines of the race to save our planet's biodiversity. Through the stories and media of scientists, explorers, conservationists, filmmakers, photographers, and policymakers, we shone a spotlight on the challenges life faces, and the good news conservation stories that inspire and give us hope for a future bursting with wild places and teeming with wildlife. This was the fourth edition of the Global Biodiversity Festival.

# global biodiversity festival

Life at the Frontline

Luminous Porecap (*Favolaschia manipularis*), releasing spores.  
Sarawak, Malaysia (Borneo).  
© Chien Lee