



**FIELD NOTES 2022**

WORDS FROM OUR CEO MARTIN SCHAEFER



Dear Jocotoco Supporters,

On a cold, windy morning, a group of majestic Andean Condors circled endlessly high in the sky. Magic happened as we slowly descended the steep road in our Chakana Reserve. The condors came close, some flew a few meters above our heads, and others dived at eye level into the deep shadows of the canyon below. Then a Black-Chested Buzzard Eagle, an impressive sight whenever seen but diminutive next to the huge condors, attacked. Swooping upon the condors, he forced them to turn upside down in flight to ward off the attack with their large talons right above our heads.

Interactions among large wildlife, such as this one, characterize wild places. Such places inspire our souls and nurture our bodies with clean water, air and soil for agriculture.

Each year, we see more floods, droughts, and wildfires across the globe. Despite many high-level talks, governments and decision makers are not doing nearly enough to reduce, let alone prevent, future disasters. To make change happen, we need Jocotoco and we need your continued support. Of course, Jocotoco will not save the world, but we are saving increasingly large portions of those critical areas that have disproportional impacts on combating the biodiversity and the climate crisis.

Given the urgency of preserving nature, we expanded our protection in 2022. This year, Jocotoco developed the legal documentation and operational plan for the 37,282 miles<sup>2</sup>/60,000 km<sup>2</sup> large,

new marine reserve, La Hermandad, that links the Galapagos Marine Reserve with protected areas in Costa Rica. We are now starting to expand our work beyond Ecuador, and have begun to work with the government and communities in Costa Rica to repeat our proven methods for successful conservation. There are good reasons for expanding marine conservation. New research shows how protected areas benefit both fish and fishermen. Spillover effects increase catches outside the reserve. Because La Hermandad connects protected areas in the Eastern Tropical Pacific, we now work internationally to protect highly threatened, migratory species, such as Whale Sharks, Hammerhead Sharks, marine turtles, and Manta Rays that all depend on (our) protection across national borders.

## **The Endangered Horned Marsupial Frog had not been seen in Ecuador for over a decade until a healthy population was found in our Canandé Reserve.**



*Gastrotheca cornuta* CANANDÉ RESERVE, ECUADOR  
**COVER PHOTOGRAPH PC: JAVIER AZNAR**

Given the urgency of preserving nature, we improved the actual protection of key areas. In the Galapagos, we work with the Galapagos National Park to improve protection on land

and sea. This year, we helped the park to acquire a speed boat and overhauled two further boats for patrolling. This is key to guarantee the effective protection not only of the Galapagos Marine Reserve but also of the high seas of La Hermandad. On land, we are fencing our reserve on San Cristobal Island and parts of the adjacent Galapagos National Park to restore the fragile ecosystem and protect vulnerable wildlife from predation by feral pigs and dogs. In the Andes, we work with communities and authorities to improve the protection of national parks and their buffer zone spanning >1,729,000 acres/700,000 ha.

Jocotoco, jointly with our partner Re:wild, currently develops the national strategy for protecting biodiversity in Ecuador. Analyses on the levels of biodiversity, the number of threatened species within regions, and the intensity of deforestation combine into a simple score, highlighting the most vital, yet most vulnerable regions. We are developing this strategy for the Ecuadorian Ministry of Environment to improve the basis for informed political decisions. At the same time, this document ensures that Jocotoco prioritizes the protection of the most critical regions. .







**Puma** (*Puma concolor*) CHAKANA RESERVE, ECUADOR **PC:** CAMERA TRAP



# AVOIDING EXTINCTION

Our protection of ecosystems avoids extinction. Due to widespread deforestation, our reserves become ever more important refuges for thousands of species. Each year, highly threatened Mountain Tapirs and Spectacled Bears rear their young in our reserves. Many species are only recorded within our reserves. This year, the discovery of two dozen previously unknown species in our reserves is a testament to the value of our model. Researchers found new species of plants, insects, amphibians, reptiles, and even mammals. These discoveries highlight the importance and success of our protection.

Saving habitats before they are lost is the most efficient way to protect nature. It produces many additional benefits. For example, our protection of the Chocó rainforest enables the quick regeneration of neighboring pastures and cacao plantations. In 2002, we added 5,000 acres/2,000 ha to our Canandé Reserve, now spanning 26,000 acres/10,500 ha. Within just one human generation, 25 years, insect communities have recovered on abandoned pastures and are as diverse as those of the adjacent old forest. Research currently underway in our Chocó Lab shows that the recovery rates are similar for other groups of animals. This recovery is another example of spillover effects from our reserve. It is deeply satisfying to know that even rainforests, arguably the most complex ecosystem on Earth, can heal, expand, and recover quickly. The only requirement is that we take good care of the land.



**Fewer than 2,500 adult Mountain Tapirs left in the wild.** **EN** ENDANGERED (IUCN 3.1)<sup>[1]</sup>



# HEALING

If ecosystems are too degraded to recover on their own, taking good care of the land requires active restoration. Perhaps surprisingly, a good example are the Enchanted Islands of the Galapagos. Here, the problem is not habitat loss, but invasive species that we humans brought to the islands intentionally or unintentionally. On the Galapagos, parasitic insects, blackberries, and rodents feed on the native flora and fauna or out compete them. Rodents can also consume up to 50% of agricultural products and thereby affect food security, particularly during droughts. Invasive species have extirpated endemic species, some of which only survive in captivity or on tiny, predator-free islets. Crucially, by eliminating pollinators and seed dispersers, invasive species also threaten the entire ecosystem. Our restoration allows us to heal past mistakes.



**Scalloped Hammerheads** (*Sphyrna lewini*)

GALAPAGOS ISLAND, ECUADOR **PC:** JONATHAN GREEN

**HELP  
STOP EXTINCTION  
DONATE NOW**





**HUMPBACK WHALE** (*Megaptera novaeangliae*) GALAPAGOS MARINE RESERVE, ECUADOR **PC:** LUCAS BUSTAMANTE





## VÍCTOR CARRIÓN ISLAND RESTORATION COORDINATOR - GALAPAGOS PROGRAM

Since September 2021, Víctor has led the Ecological Restoration project of Floreana Island in the Galapagos, which aims to eradicate alien invasive species, followed by the reintroduction of 13 native species. During his decades-long career, he has worked in the public and private sector managing similar projects in other areas of the Galapagos Islands. Víctor holds a degree in Educational Sciences with an emphasis in Ecology and Environment. He recently completed a master's degree in Agricultural Business Management, which will contribute with the development of the agricultural sector of Floreana, a key aspect for the success of the project.



# HOPE

Hope can return quickly. Almost four times as many critically endangered Galapagos Petrels fledged in our Los Petreles Reserve this year compared to two years ago when we started controlling invasive predators. Our work raised the reproductive success of pairs; it also attracted many more Galapagos Petrels to the reserve. We still do not understand how the birds identify a safe space, but apparently, they do. During most nights, you can now hear their eerie calls when they return to feed the chicks in the safety of darkness.

Floreana is the sixth largest island in the Galapagos. Our preparations are in full swing to start eradicating invasive mammals in 2023. Floreana harbors 54 globally threatened species, of which 13 are locally extinct, such as the Floreana Mockingbird which can only survive on two predator-free islets. Importantly, all 140 of the local community members that live on Floreana strongly back the project, as the rats consume their harvest and sometimes threaten food security on the remote island where boats only arrive every two weeks. Once Floreana is free of invasive predators, we can bring back the species that once roamed the island. To reduce the impact of livestock upon the ecosystem, we have built stables to house animals that facilitate better husbandry. Our operations will continue into 2024; once successful, this will be largest eradication of invasive mammals on a tropical island.



**GALAPAGOS PETREL** (*Pterodroma phaeopygia*)

GALAPAGOS ISLANDS, ECUADOR **PC:** DIEGO AÑAZCO





## **SAMANTA VILLEGAS** **DEVELOPMENT AND CARBON OFFICER**

At Fundación Jocotoco, we are convinced that climate change is a threat multiplier. For this reason, and with science as our guiding light, Samanta is seeking to ensure compensation projects that are a catalytic response to the challenges of climate change and biodiversity loss. As a result, individuals and companies have already set off their carbon emissions directly with Jocotoco. Additionally, and thanks to her work, Jocotoco is at the forefront with the Ecuadorian government to develop carbon credit policies for the entire country. Carbon compensation can significantly increase our reserves' sustainability and protection of standing forests throughout Ecuador.





# EASTERN SLOPES

Back on the continent near Quito, the capital, and in the north of Ecuador, we started a new program to save the Amazonian foothills on 1,358,500 acres/550,000 ha. Here, we engage in protecting the buffer zones of Sumaco-Galeras and Antisana National Parks. Both are only connected through a narrow strip at an elevation of 6,562 ft/2,000 m. (higher than Denver, Colorado). Our Narupa Reserve provides broader connectivity between both areas from 1000-1700 m. Jointly with the Danish Zoo Randers Regnskov and Kichwa communities, we are now securing forests across a much larger buffer area, ranging from ~1,000-5900 ft/300-1800 m on the eastern side, and from nearly 11,000-15,000 ft/3300-4600 m on the western side in our Chakana Reserve. Almost 10% of all birds of the world occur in this region, illustrating its tremendous potential for halting the loss of biodiversity.



**Coppery-chested Jacamar** (*Galbula pastaza*)  
NARUPA RESERVE, ECUADOR

**HELP PROTECT  
THE TROPICAL ANDES  
DONATE NOW**





Planting Critically Endangered *Magnolia canandean* CANANDE RESERVE, ECUADOR PC: JAMES MUCHMORE

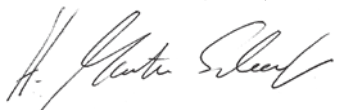


# HOPE-SPOTS

To curb the climate crisis, carbon offsetting has become a mainstay these days in the transition towards a net-zero economy. Yet, the carbon market remains unregulated, lacks transparency, and sets the wrong incentives with large part of its funding going to intermediaries and crediting companies. In 2022, a few individuals and companies cut through the red tape and set off their carbon emissions directly with us. It is simple: we acquire land, protect it, the trees growing upon it store carbon, while external scientists quantify carbon storage and uptake. We thereby circumvent the fallacies of the carbon market and ensure that the funding actually removes carbon from the atmosphere. Crucially, however, this direct carbon offsetting produces key benefits for biodiversity, as the trees are growing where they matter most for biodiversity. We thereby combat the twin crises of the climate and the biodiversity loss directly, rather than spending time on conferences to talk about it. Ultimately, Jocotoco works to convert biodiversity hotspots, which are defined in part by their threats, into Biodiversity “Hope” Spots. Those “Hope” Spots illustrate what we can collectively achieve and preserve for future generations to enjoy.

Thank you again for your partnership and preserving the extraordinary biodiversity of Ecuador. **If you are so inspired from our update, the Rainforest Trust is offering a 2.67 match to all donations which will go to the 3,000 are expansion of our Tapichalaca Reserve. (E.g. Your \$100 donation will be matched with \$267 dollars resulting in a total contribution of \$367.)**

With best wishes,





**DONATE HERE!**  
[WWW.JOCOTOCOCONSERVATION.ORG](http://WWW.JOCOTOCOCONSERVATION.ORG)

### **THE FUTURE DEPENDS ON YOUR GENEROSITY.**

We need your continued support to protect some of the last remaining truly wild places on Earth. We also need your support to make a few other places wild once again! Your support will help ensure that future generations have the same opportunities as we have today to discover new species and to marvel at the beauty of the world surrounding us. Please donate!

### **HERE'S HOW YOU CAN HELP**

**Be a Legacy for Biodiversity! It does not cost anything to add Jocotoco into your estate plan today. Doing so ensures the permanent protection of the biodiversity of reserves for generations to come.**

**Share your Stock! We accept donor advised funds, Qualified Charitably Distributions (QCDs), and stock gifts!**

**Allow us to offset your crypto currency gains by donating crypto currencies today!**

Mail a check payable to:  
Jocotoco Conservation Foundation  
PO BOX 38274  
Baltimore, MD 21231

Jocotoco Conservation Foundation is a US tax-exempt non-profit organization, under the section 501(c)(3) of the Internal Revenue Code. All charitable donations are deductible to the full extent allowed by law. **EIN: 83-2027203**

**FOR MORE INFORMATION CONTACT: [Donations@JocotocoConservationFoundation.org](mailto:Donations@JocotocoConservationFoundation.org)**

