

SUMMER 2023

GALAPAGOS

POST

CONSERVATION IN ACTION



- AN UPDATE ON DIEGO
- MEET OUR LOCAL CONSERVATION HEROES
- THE RACE TO SAVE GALÁPAGOS' ENDANGERED SPECIES
- COMMUNITY EFFORTS TO CONSERVE MARINE BIODIVERSITY
- UPDATE: ESPAÑOLA GIANT TORTOISE REPATRIATION



Celebrating Conservation

from the **PRESIDENT**



Dr. James Gibbs
President

Dear Friend of Galápagos,

At the heart of Galápagos Conservancy's mission is conserving the extraordinary, valuable, and beautiful biodiversity of the Galápagos Archipelago. Throughout my eight-year-long journey with this organization, now serving as its Acting President, I have had the privilege of witnessing Galápagos Conservancy's remarkable efforts to restore and protect the archipelago. These range from safeguarding endangered species and combating invasive species to revitalizing giant tortoise populations, all while involving local communities in conservation, thanks to your unwavering support.

In this issue of the Galápagos Post, I am eager to share with you some recent examples of our ongoing collective efforts to conserve these islands' natural heritage. You will have the opportunity to meet some local heroes of Galápagos conservation, including female leaders and their efforts to conserve marine biodiversity. You will see how our educational program is shaping the next generation of conservation leaders in Galápagos. And you will read about our ongoing efforts to protect endangered species, both marine and terrestrial. Among many examples, we feature the giant tortoises of Española Island, providing you with the very latest news about Diego — the famous old tortoise who saved his species.

None of this would be possible without your continued support. I am deeply grateful for your commitment to Galápagos Conservancy's mission and its work. Together, we can ensure that Galápagos remains one of the most singular and irreplaceable places in the world for generations to come.

Thank you for your continued support.

For Galápagos,

Dr. James Gibbs
President
Galápagos Conservancy



PAGE
12

AN UPDATE ON DIEGO!

contents

8	Saving Galápagos
➤	Meet our local conservation heroes.
10	The Race To Save Galápagos' Endangered Species
➤	Striving for the survival of some of the world's most unique creatures.
14	Conservando Galápagos
➤	One year of achievements, many more to come.
16	Jean Pierre Cadena
➤	A Passionate Park Ranger Dedicated to the Conservation of Galápagos.
22	Update: Española Giant Tortoise Repatriation
➤	The Española Giant Tortoise makes a comeback from the brink of extinction.

Leave your mark on Galápagos forever!

Join the Legacy Society with a planned gift

When you include Galápagos Conservancy in your will, you help ensure that the remarkable wildlife and ecosystems of Galápagos will be protected forever. Speak to your financial advisor or contact ambassador@galapagos.org.

HOW TO HELP GALÁPAGOS? MANY WAYS TO GIVE!

Donate Now Online

Online gifts are the most cost-effective way to support our work. These gifts have the lowest overhead, allowing you to have the greatest impact for conservation in Galápagos. For online gifts of \$50 or more, you have the option to receive a beautiful 4x9" Galápagos wildlife magnet, made of 75% recycled material. Gifts of \$100 and above qualify you to receive a gorgeous, sustainably handmade, metallic camp mug.

Become a Galápagos Guardian by Setting Up Monthly Giving



With a gift of \$10 or more per month, we'll thank you with our new, collectible Fantastic Fernanda iron-on patch — celebrating Fernanda, the last tortoise of her kind. And as long as you remain a sustaining supporter, we'll send you a new collectible wildlife patch every year! But the best reason to become a Galápagos Guardian is that your ongoing support provides a reliable, ongoing funding base — allowing us to carry out deep scientific research, invasive species interventions, crucial expeditions, and so many other vital conservation projects.

Adopt a Giant Tortoise and Help Save a Species!

When you adopt a giant tortoise, you sponsor their care at a breeding center until they are old enough to be released back into the wild. Your adoption also means you get to name your tortoise and receive a certificate, photograph, and yearly updates about your new family member in Galápagos! Turn to page 26 to learn more about this unique program.

MORE WAYS TO GIVE!

IRAs — If you are over age 70 1/2, you may make a qualified charitable contribution from an IRA as a tax-free distribution to Galápagos Conservancy.

Workplace Giving — Does your employer match your gifts to charity? If so, you can instantly double your donation.

Donor-Advised Funds — A donor-advised fund (DAF) is a philanthropic giving account that provides an immediate tax benefit to you and allows you to recommend gifts to your favorite charity.

Galápagos Conservancy will also graciously accept gifts in almost any form your financial advisor recommends: QCDs, stock, charitable trusts, insurance policies, mutual funds, savings bonds, and more.

If you have any questions, please email ambassador@galapagos.org.



**GALÁPAGOS CONSERVANCY
SUPPORTS THE STUDY OF FUNGI
IN THE ARCHIPELAGO**

Galápagos Conservancy is pleased to support a new scientific research project on fungi led by Galápagos student Luis Sanchez, who is pursuing a degree in biology at the Universidad Técnica Particular de Loja. Mentored by his professors Dario Cruz and Angel Benitez, Sanchez is heading up the research titled “Seasonal diversity of fungi along an altitudinal gradient in the area of the Galápagos National Park, Santa Cruz Island.”

Dr. Jorge Carrión, Director of Conservation at Galápagos Conservancy, explained that this research is significant for determining the diversity of fungi and understanding its function in Galápagos ecosystems. Like bacteria, fungi play an important role in ecosystem health and “are essential in recycling organic matter and producing nutrients in all terrestrial ecosystems,” Carrión said.

The results of this research, which has led to the discovery of at least two new species, will contribute to the scientific knowledge of fungal species and strengthen future conservation management of related ecosystems. Galápagos Conservancy congratulates Sanchez, student co-lead Camila Rohoden, and their host university for their research contributions to the critical knowledge of the archipelago’s biodiversity.

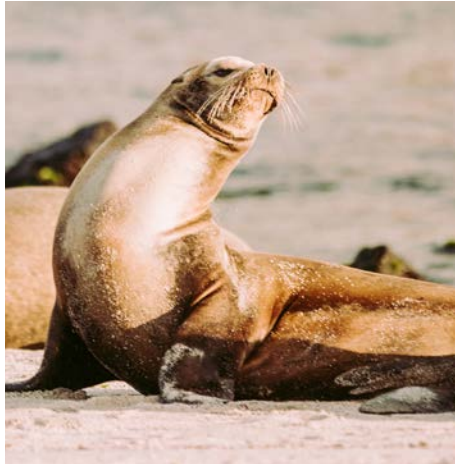


**GALÁPAGOS CONSERVANCY
PROVIDES CRITICAL FUNDS FOR
CORAL RECOVERY**

Galápagos corals include species that range from reef builders to those that form scattered colonies. Corals, which represent 25% of all marine species, are a significant attraction for visitors to Galápagos and are ecologically important, serving as home to diverse marine creatures, such as sponges, starfish, and sea urchins. A devastating amount of coral cover was lost due to El Niño events in 1982-83 and 1997-98, making these recovery efforts critical.

Galápagos Conservancy is supporting a pilot project by Galápagos National Park to restore corals in areas where they have declined. An underwater coral nursery recently established in Academy Bay on Santa Cruz Island grows corals for one year, during which time experts monitor coral growth and health. The nursery with four planting beds is currently growing 323 coral fragments of eight different species, including *Pavona clavus*, *Porites lobata*, and *Pocillopora capitata*. Pocillopora corals grow at a faster rate than other species, with an average growth of about an inch per month, providing shelter, protection, and feeding areas for many other marine species.

Galápagos Conservancy is now working alongside the Park to expand these efforts to restore corals on other affected islands, a timely intervention given the impending El Niño event predicted with high certainty for later in 2023.



**THE SAN CRISTÓBAL SEA LION
COLONY: A NATURAL TREASURE
WE MUST PROTECT**

San Cristóbal Island, the easternmost of the Galápagos Islands, is home to one of the largest colonies of Galápagos Sea Lions. Populations of these marine mammals have declined by 50% in the last 40 years to about 20,000 individuals due to overfishing of their prey, unregulated fishing practices that can kill sea lions, and human disturbance of their colonies' habitats. The species is classified as Endangered on the IUCN Red List.

To foster conservation of Galápagos Sea Lions, Galápagos Conservancy and the University of San Francisco Quito partnered to promote environmental education and sea lion conservation, raising awareness among local residents about the value these marine mammals bring to the ecosystem and why it is vital to protect them.

The project is also undertaking research to guide developing a management plan the Park will use to ensure the San Cristóbal sea lions are protected and conserved for future generations. This will involve restricting human activities that harm the sea lions’ environment, promoting sustainable tourism practices, and raising awareness about the importance of threatened and endangered species to ecosystems. Only collective conservation efforts will ensure that this beloved species thrives and continues to captivate future generations.



**GALÁPAGOS COMMEMORATES
488 YEARS SINCE DISCOVERY**

On March 10, 1535, a Dominican friar named Tomás de Berlanga was sailing from Panama to Peru when strong ocean currents swept his ship off course to a then-unknown archipelago. Berlanga was the first to give official descriptions of these “enchanted islands” and so now is recognized as their discoverer.

Berlanga declared the volcanic islands to be entirely uninhabited and inhospitable and later wrote to the king of Spain, “It looks as if God had rained stones down on Earth.” During their desperate search for fresh water, Berlanga and his crew encountered large numbers of giant tortoises. Many of the tortoises had shells resembling an old saddle known in Spain as a galápagos, giving the archipelago its now familiar name to mean “Islands of the Tortoises.”

Galápagos Conservancy recognized the 488th anniversary of Berlanga’s discovery, which introduced this enchanting natural wonder to the world, and remains deeply committed to the archipelago, protecting its wildlife, and contributing to the well-being of its inhabitants.



**100,000 MOSQUITOES
RELEASED IN GALÁPAGOS**

To protect the unique biodiversity of Galápagos and the health of its people, Galápagos Biosecurity Agency (ABG), along with Ecuador’s National Institute for Public Health Research (INSPI), recently released 100,000 mosquitoes of the *Aedes aegypti* species in the parish of Bellavista on Santa Cruz Island.

The *A. aegypti* mosquito is an introduced species, first reported in Galápagos in 2001, and a vector of diseases such as dengue, Zika, and chikungunya. Dr. Marilyn Cruz, Executive Director of the Galápagos Biosecurity Agency, explained that her agency has been seeking ways to control *A. aegypti* without resorting to insecticides.

After six years of research, Dr. Cruz’s team developed a highly specialized technique that involves rearing large numbers of sterile male mosquitoes in the lab and releasing them to the wild. The sterile males mate with wild females, producing no offspring and eventually leading to population collapse. This technique is completely environmentally friendly, as it does not require any chemicals and only affects the *A. aegypti* species. Field monitoring of mosquitoes is now ongoing in hopes of confirming that the release has reduced or perhaps even eradicated *A. aegypti* from the area.



**GALÁPAGOS EDUCATORS SHINE
DURING SUSTAINABILITY
TRAINING SESSION**

Galápagos Conservancy’s Education for Sustainability Program, in partnership with the U.S. Embassy, Ecuador’s Ministry of Education, and Galápagos education authorities, convened 26 English teachers from around the islands for a transformative professional development session January 22-23, 2023. Guided by experienced professionals, the teachers participated in a dynamic exchange of ideas and best practices for implementing a new “contextualized curriculum” for Galápagos, which seeks to insert a focus on environmental sustainability throughout classroom learning for all students in the islands.

The training was a resounding success, with the teachers demonstrating a strong eagerness to improve their teaching skills and learn from one another. Lenin Rogel, Coordinator of the Education for Sustainability Program, said he was very pleased with the teachers’ enthusiasm and expressed gratitude for the support of the U.S. government and the endorsement of Ecuador’s Ministry of Education in this important effort to strengthen education in Galápagos.



SAVING THE GIANTS: HOW TECHNOLOGY IS TRANSFORMING GIANT TORTOISE CONSERVATION

The giant tortoises of Galápagos are iconic, yet many basic aspects of many species’ lives remain unknown, including where they nest. Galápagos Conservancy scientists are currently using satellite tracking to understand where these giants roam and the locations of their critical habitats.

Small GPS devices weighing only 200 grams are glued to the tortoises’ shells to track their movements and habitat use. Over 250 tortoises across almost all species are currently being tracked in real time as they move around their islands and up and down volcanoes. Once the tag is attached, our scientists can study the animals remotely from the location data sent every six hours by satellite.

This cutting-edge technology has revealed many new nesting areas, greatly expanded our understanding of how these tortoises use their environment, and identified areas where invasive species are causing problems and tortoise poaching is still occurring. Galápagos Conservancy is grateful to everyone who supports our efforts to shed light on the comings and goings of these magnificent icons of Galápagos, which greatly aids us to protect them and their critical habitats.



“FLY SAFE”: GALÁPAGOS ISLANDERS UNITE TO PROTECT NATIVE BIRD SPECIES

Yolanda Heras, a Santa Cruz local, initiated a project to reduce bird mortality rates on the island’s main road that runs north-south between Itabaca Canal and Puerto Ayora. The roadway and its margins are heavily used by native birds, but the growing number of vehicles and their high speeds make collisions a daily threat for birds living near the road.

Heras and her team conducted daytime and nighttime surveys to measure the daily road mortality, installed road signs to encourage drivers to slow down, provided training sessions to commercial drivers and other community members, and met with key organizations to develop strategies to protect birds along the route.

Dr. Jorge Carrión, Director of Conservation at Galápagos Conservancy, considers this work critical to helping develop better protections for Galápagos birds and congratulated Heras and her team on their citizen initiative to conserve the bird life of Galápagos.



OVER 100 CONSERVATION INITIATIVES SUPPORTED BY GALÁPAGOS CONSERVANCY

Over just the last two years, Galápagos Conservancy has made strategic investments totaling \$4.15 million in grants that support 132 projects fostering conservation, restoration, and protection of the extraordinary biodiversity of the islands.

Most large investments come in the form of Major Grants directed toward saving endangered species and restoring ecosystems, averaging \$50,000 per project. Many of the supported smaller initiatives provide direct conservation benefits to local communities through environmental education, including teaching children about the islands' flora and fauna and encouraging the consumption of healthy food derived from sustainable, local sources. These include grants for Women in Sustainable Entrepreneurship (WISE), averaging \$5,000.

Together, these initiatives aim to balance economic growth, environmental protection, and social well-being. We will shortly launch a new round of grants for 2023 to advance conservation of key species and help the residents of Galápagos thrive.



EXPLORING THE DEPTHS: GALÁPAGOS TEENS LEARN TO BE MARINE CONSERVATIONISTS

Galápagos Conservancy sponsored an educational project by the Galápagos National Park that provides experiential learning opportunities in the Galápagos Marine Reserve for local high school students.

Park rangers and environmental educators collaborated with eight Galápagos school systems to provide 65 students with 100 hours of training and experiential learning about the marine environment. Over 600 members of the community were reached through various student-led activities, such as open houses and exhibitions. The program included visits to sea turtle foraging areas in La Calera, Isabela Island, and monitoring and tagging juvenile sharks in different nursery areas.

Galápagos Conservancy supports educational initiatives that promote conservation across the archipelago and commends the park rangers and educators who participated in this project. The program provided young Galápagueños with a unique and unforgettable opportunity to explore, learn, and enjoy the privilege of living near the Galápagos Marine Reserve.



INJURED GALÁPAGOS ANIMALS TREATED PROMPTLY AND RELEASED

The Galápagos National Park operates the Rapid Response Network (RRN) that provides 24/7 emergency assistance to sick and injured wildlife in the islands. Since March 2002, Galápagos Conservancy has supported this network, contributing funds for veterinary medicines and supplies, animal rescue equipment, and developing facilities for timely intervention to save affected animals.

In 2022, 163 animals were reported in adverse situations, with most associated with human interactions, including vehicle collisions, attacks by domestic dogs, and distress from artificial lighting. The RRN treated 48 animals, 22 of which were successfully released after recovering.

Dr. Jorge Carrión, Director of Conservation at Galápagos Conservancy, emphasizes the importance of working with the Park to rehabilitate injured animals and release them back to the wild as part of the larger effort to protect and recover species.



NEW HAMMERHEAD SHARK BREEDING AREA DISCOVERED IN GALÁPAGOS

Galápagos hosts one of the most abundant shark populations in the world, with nearly 30 different species. To safeguard these sharks, the Galápagos National Park, in partnership with Galápagos Conservancy, Save our Seas, and the University of San Francisco Quito, initiated a shark research and monitoring program in the Galápagos Marine Reserve. The project aims to identify key breeding and nursery areas of two iconic shark species: the Scalloped Hammerhead (*Sphyrna lewini*) and the Blacktip (*Carcharhinus limbatus*).

As a result of this work, a major new breeding site of Scalloped Hammerheads was discovered off the eastern coast of Isabela Island, alongside two other known Hammerhead shark nurseries, a significant milestone in the protection of this species. Park rangers are now carefully monitoring the physical condition of the sharks, measuring juvenile sharks, and deploying tracking devices to follow their migration patterns. This tracking has revealed some individual sharks, previously thought to live mostly in particular areas of the archipelago, actually swim throughout nearly the entire archipelago before returning to their breeding areas.

We are now working with the Park to apply what we are learning from this research to enhance protection for sharks in the Galápagos Marine Reserve, safeguarding these waters and the sharks that live within them from industrial fishing and other threats as they surface.

SAVING GALÁPAGOS:

MEET OUR LOCAL CONSERVATION HEROES

What makes someone a hero of conservation? Anyone who cares enough to take significant action to protect the natural world can be a conservation hero. For Galápagos, there have been many such heroes — people who work tirelessly, in very different ways, to safeguard the unique and fragile wildlife and ecosystems of this special place. Their work can be deeply challenging but also very rewarding. Galápagos is a better place because of the efforts of heroes like these. Please join us as we celebrate them and the important work they do to save Galápagos.



DR. JORGE CARRIÓN, a Galápagos native, has become a true hero in Galápagos. Since joining Galápagos Conservancy in May 2021, his trajectory in protecting and conserving the archipelago has been nothing short of phenomenal.

Prior to joining our team, Jorge worked for eight years in the Galápagos National Park Directorate (GNPD), performing various roles culminating in his tenure as Director. Concurrent with his work at the GNPD, he served as Secretary of the Eastern Tropical Pacific Marine Corridor (CMAR), leading crucial efforts to protect marine migratory species.

With his academic background as a Ph.D. in Conservation Biology from the University of Seville, Jorge is a respected figure in the scientific and conservation community. As Director of Conservation at Galápagos Conservancy and its sister organization, Conservando Galápagos, Jorge leads vital conservation initiatives and is an unwavering advocate for the protection of wildlife and ecosystems in Galápagos. Jorge’s dedication and hard work have established him as a true conservation hero.

GODFREY MERLEN (1944-2023) was a revered figure in Galápagos for half a century. His encyclopedic knowledge of the archipelago made him an important fount of information and guidance for scientists and conservationists. He was an expert on the marine life of Galápagos, expanding our understanding of this unique ecosystem.

In addition to his scientific work, Godfrey collaborated with nonprofit organizations such as WildAid and Sea Shepherd to promote marine life conservation in Galápagos and worldwide. During his time as an advisor to the Galápagos National Park, he played a crucial role in the approval of the Special Galápagos Law, which aimed to protect the biodiversity of the province and regulate human activities. He was also instrumental in the establishment of the Marine Reserve. Moreover, Godfrey spearheaded initiatives to protect Galápagos ecosystems, including the implementation of aircraft fumigation to prevent the spread of certain diseases.

Most recently, Godfrey was focused on penguin conservation and worked as an advisor for the Ecuadorian Fund for the Control of Invasive Species in Galápagos. He had also been advancing, with support from Galápagos Conservancy, in the search for any remaining members of the Galápagos Damsel — a beautiful, small near-shore fish once abundant and now vanished from Galápagos. Godfrey retained hope it might still exist and had been working with local fishermen to rediscover it.

Godfrey will be deeply missed, but his legacy advancing Galápagos conservation will endure.



NOVARINO CASTILLO

An Unsung Hero of Conservation in Galápagos

In the Galápagos Archipelago, we need to make expeditions to remote areas to discover and monitor the archipelago’s wildlife. These expeditions are difficult and challenging and rely on help from those whose efforts often go unnoticed. One man in particular is the linchpin for many expeditions. His name is Novarino Castillo, and he is a porter for Galápagos Conservancy and other organizations in all important conservation expeditions in Galápagos.

Novarino and his team are responsible for delivering vital supplies to scientists and park rangers during their extended stays on the islands. Their load includes food, water, medicine, scientific equipment, generators, and cookware. That may sound simple enough, but transporting these supplies on their backs across rocky terrain and up and down volcanoes is no easy task.

The daily work of Novarino and his team is arduous but critical to the success of our conservation field work. They begin their day before sunrise, rising at 4 a.m. to prepare and have a meal before heading out to meet the expedition groups. From that moment on, their mission is to provide the scientists and park rangers with everything they need to succeed in their work in the most remote areas of the islands.

The porters walk for many hours each day under an exhausting sun, carrying heavy loads on their shoulders, and traversing challenging and steep trails. This is Novarino's everyday reality. Sometimes, he treks for as many as 14 hours, making multiple trips back and forth to ensure every detail is addressed with care and precision. His dedication and resilience are crucial in ensuring the expedition camps are equipped with everything necessary.

Novarino takes pride in his role in species conservation, particularly when it comes to iconic Galápagos giant tortoises. His contribution, often overlooked, is crucial to the conservation of these animals and the resilience of the unique biodiversity of Galápagos.

Today, we recognize and applaud the tireless work of Novarino and Galápagos Conservancy's porters, which is indispensable for the success of these expeditions, as their efforts ensure that scientists and park rangers can carry out their work in optimal conditions. Without their logistical support, it would be impossible to conduct comprehensive research and maintain the integrity of these ecosystems.



Novarino Castillo in the field © Galápagos Conservancy

THE RACE TO SAVE GALÁPAGOS' ENDANGERED SPECIES

Galápagos is home to some of the world’s most unique and best-protected wildlife, but their survival is threatened by a range of human activities and environmental challenges. One of the main threats to Galápagos wildlife, currently, is invasive species. These are non-native animals and plants introduced intentionally or accidentally to the archipelago by humans. They can outcompete native and endemic species for resources, leading to population declines. Invasive species include rats, cats, goats, and blackberries. These have wreaked havoc on Galápagos ecosystems. Efforts to control these invasive species must be intensified to safeguard the archipelago’s exceptional biodiversity.

There is a lot at stake. Protecting Galápagos species is crucial for sustaining its biodiversity-based economy and the local communities who depend on it. Ecotourism is the major source of economic activity in Galápagos, generating about a billion dollars in revenue per year, and relies on maintaining healthy populations of the archipelago’s unique wildlife.

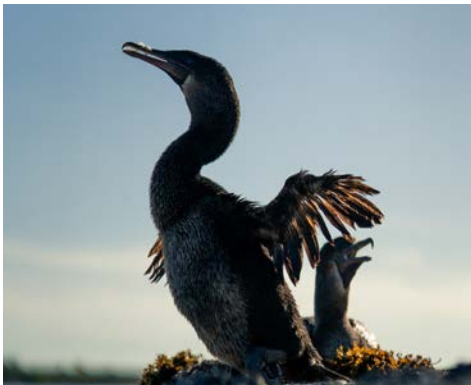
Through *Iniciativa Galápagos*, our focus is on restoring ecosystems for endangered giant tortoises and conserving other native and endemic species. With five tortoise species teetering on the brink of critical endangerment, three facing imminent peril, and five classified as Vulnerable, our efforts are urgent. By restoring their islands and ecosystems, we secure a better future for these creatures and protect Galápagos' unique biodiversity. Collaboration with governments, organizations, and communities is crucial for effective conservation. Immediate action is imperative.

Top endangered species in the Galápagos Islands:

- Galápagos Giant Tortoises (*Chelonoidis* spp.)
- Galápagos Penguin (*Spheniscus mendiculus*)
- Galápagos Sea Lion (*Zalophus wollebaeki*)
- Flightless Cormorant (*Phalacrocorax harrisi*)
- Waved Albatross (*Phoebastria irrorata*)
- Mangrove Finch (*Camarhynchus heliobates*)
- Pink Iguana (*Conolophus marthae*)



Pink Iguana (*Conolophus marthae*)
© Joshua Vela



Flightless Cormorant (*Phalacrocorax harrisi*)
© Joshua Vela



Galápagos giant tortoise (*Chelonoidis nigra*)
© Joshua Vela



Galápagos Penguin (*Spheniscus mendiculus*)
© Joshua Vela



Waved Albatross (*Phoebastria irrorata*)
© Joshua Vela



Galápagos Sea Lion (*Zalophus wollebaeki*)
© Joshua Vela



Support of waste management on Isabela Island, transforming recyclable waste into art © Galápagos Conservancy

Protecting a Fragile Treasure With the Help of Local Communities

The Galápagos Archipelago is a truly unique natural treasure, sought out by visitors from around the world. With 97% of its land mass protected by the Galápagos National Park, the Ecuadorian government provides key protections for the archipelago's biodiversity — but many of the greatest biodiversity hotspots are in the remaining 3%, where people live. In these areas, involving local communities in conservation efforts is paramount. These communities depend on nature-based tourism for their livelihood and well being. By engaging them in conservation efforts, we can ensure a more

sustainable future for both the environment and the people who call Galápagos home.

One initiative that Galápagos Conservancy takes great pride in is its work to reduce single-use plastics. A few years ago, the proliferation of these plastics posed a significant threat to the archipelago’s unique ecosystems, particularly the marine environment. After launching a program to reduce the use of single-use plastics in Galápagos, working closely with local communities to inform them about the harmful environmental impacts of plastic waste, and promoting

reusable bags, water bottles, and containers, the use of single-use plastics in Galápagos has been reduced significantly.

At Galápagos Conservancy, we are committed to supporting the involvement of local communities in the conservation and sustainability of Galápagos. By promoting sustainable and responsible practices and educating people on the importance of protecting the environment, we can safeguard the natural beauty of Galápagos for generations to come.

LIVING LIFE FULLY IN RETIREMENT — AN UPDATE ON DIEGO



Diego at the Fausto Llerena Breeding Center on Santa Cruz Island, with Washington Tapia before his release in 2020 © Andrés Cruz / Galápagos Conservancy



Among the longest-running and most important conservation efforts in Galápagos is *Iniciativa Galápagos* — a collaborative effort between Galápagos Conservancy and the Galápagos National Park — whose focus has been rewilding giant tortoises across the archipelago. One achievement in particular stands out: the restoration of the Española Giant Tortoise (*Chelonoidis hoodensis*). This Critically Endangered species went from just 15 individuals in the 1960s to the current number of several thousand. And we have one special individual to thank for his contribution to this amazing comeback — Diego, the father of hundreds of tortoises!

In late 2020, we announced that after more than 80 years away from his home, Diego was able to return to his birthplace to start his retirement. His homecoming to Española Island was well deserved, as his reproductive contributions played a key role in saving his entire species, serving as father and grandfather of perhaps one-third of the 3,000 or so Española tortoises now in existence.

WHAT IS DIEGO UP TO NOW?

Though he is getting up there in years, even for a tortoise, he is still quite an active traveler — moving vigorously around his small home range of cactus trees over the last several months. He has a small GPS tracker on his shell, enabling us to keep an eye on him from afar, following his movements five times per day. A regular stop on his meandering circuit is a solitary *Opuntia* cactus tree, beneath which Diego can wait for days during the dry season until gravity has its way and a cactus pad drops to the ground, where he can fetch it for a meal. When it rains, a rare event, he ventures out to search for new grass growth for a few weeks, then retreats back to the shade of his cactus trees for the rest of the year.

Diego’s active lifestyle and limited range seem to imply that he is pleased with his retirement and content to live out his days in his small part of his home island. We are all so happy that Diego is doing well and will forever be thankful for his contribution to the recovery of Española Giant Tortoises in Galápagos.



Top: Diego's last known location in Española Island; Bottom: Diego's movements are tracked by GPS



Conservando Galápagos: One Year of Achievements, Many More To Come

April 1, 2022, was a very special day in the history of our efforts for the archipelago, as it was the first day of Conservando Galápagos — the operational arm of Galápagos Conservancy in the islands. This is a Galapagueño-managed organization, composed of a seasoned technical team of dedicated conservationists and administrative professionals. Now, a year after its creation, I am proud to look back at the inaugural year of Conservando Galápagos and reflect on all our achievements.

When Conservando Galápagos was created, its mission was to conserve, protect, and restore wildlife and ecosystems while ensuring a sustainable future for the residents of Galápagos.

Throughout this first year, we have made many strides toward all these goals. One example of this is the strengthening of the Education for Sustainability Program under local leadership. The program is now operated by Galapagueños within Galápagos, who will contribute to improving the educational system so that these precious islands can have a more sustainable future.

Another example of our achievements throughout our first year has been the expansion of *Iniciativa Galápagos*. We completed the first-ever comprehensive census for each of the 10 giant tortoise populations in southern Isabela. This data will be invaluable as we determine the best next steps for restoring populations of two species of giant tortoise. The initiative has also allowed us to work not only with giant tortoises but also

other species, such as land iguanas and albatrosses, helping us to be more informed regarding all of these vital species so we can protect their future through conservation guided by science.

All these accomplishments, and more, would not be possible without our deep partnership with the Galápagos National Park Directorate and you. Thank you for making this vital work in the archipelago possible.



Washington Tapia

Sincerely,
Washington Tapia
General Director
Conservando Galápagos



Opposite: Conservando Galápagos team; Top right: Jorge Carrión and Jimmy Navas during the Isabela tortoise census; Bottom left: Inauguration of the 13th Teachers Training Institute on Santa Cruz Island © Galápagos Conservancy; Bottom right: Pink Iguana on Wolf Volcano, part of the *Iniciativa Galápagos* program © Joshua Vela.

JEAN PIERRE CADENA: A PASSIONATE PARK RANGER DEDICATED TO THE CONSERVATION OF GALÁPAGOS



Over the past decade, a young Galápagos National Park ranger has dedicated most of his waking hours to the protection of nature in the archipelago.

At 29 years of age, Jean Pierre Cadena is already a leader in the world of conservation in this precious place. He holds a Master's degree in Conservation Planning and Sustainability and puts his academic expertise into practice daily to the benefit of the flora and fauna of his incredible home. Currently, Jean Pierre leads aspects of native species conservation for the Park.

Among Jean Pierre's most notable efforts to date has been his co-leadership work on the ecology and conservation of the Critically Endangered Pink Iguana. With very few numbers left, the Pink Iguana is one of the world's most endangered species, but not much was known about their breeding behavior until this work carried out by Jean Pierre and Johanes Ramirez, the GNDP, and Galápagos Conservancy. With the support of Galápagos Conservancy, Jean Pierre and his colleagues have carried out vital work that has generated discoveries in only their first year of research on the status and behavior of this extremely rare iguana on the brink of extinction.

What does a typical day look like for Jean Pierre?



From the first light of dawn, Jean Pierre wakes up excited about what the day holds. Around 5:30 a.m., he rises and prepares the necessary materials for his fieldwork — work that can take him far into the wilderness of the archipelago. Due to the long days and the impossibility of returning to the camp during the day, Jean Pierre carries enough food and water to sustain himself for the day, with extra in case he gets stranded and is unable to return for days.

"The early morning hours are the most productive for data collection, as many species are more active during that time. Additionally, the weather conditions in the early morning are favorable for longer excursions," said Jean Pierre.

These field trips usually last between 10 and 15 days, and during this time Jean Pierre immerses himself entirely in his conservation work. Though his days are often very intense, Jean Pierre never complains. He is in love with his work and knows that every moment counts.

Jean Pierre is convinced that supporting the development of young professionals from Galápagos, who will be the next generation of conservation leaders, is one of the best ways to contribute long-term to the archipelago's conservation efforts. He says he greatly appreciates the support Galápagos Conservancy provides to young conservationists like him.

This young professional is an example of dedication and passion for the conservation of Galápagos. Jean Pierre's commitment and contributions to species protection are truly admirable, and his inspiring story reminds us of the importance of preserving the archipelago's unique biodiversity and working together to ensure a sustainable future for Galápagos and future generations.



Opposite: Jean Pierre on the field; Top left: Jean Pierre on top of Wolf Volcano during sunrise; Bottom left: Jean Pierre alongside park rangers; Bottom right: Jean Pierre examining an adult pink iguana © Joshua Vela



Women in the field on North Seymour Island © Galapagos Conservancy

WOMEN IN CONSERVATION: Highlighting the Achievements and Challenges of Local Female Leaders

Women have long been at the forefront of conservation efforts, and Galápagos is a prime example. Galápagos Conservancy's Women Investing in Sustainable Entrepreneurship (WISE) grant program has recently provided key support for many female conservationists in Galápagos.

One of the initiatives aiming to create a positive impact is called "More art, less garbage," led by passionate Galápagos native Mayra Hernández. Mayra's initiative aims to inspire the community to maintain a cleaner environment by encouraging people to reconsider their daily habits that generate waste. With the support of Galápagos Conservancy's WISE grant, she organized 14 workshops that benefited 250 children from Santa Cruz Island, teaching them how to turn plastic waste into art and toys. Mayra's goal is to expand "More art, less garbage" to schools and community colleges, reaching parents through their children. By doing so, she hopes to raise awareness about the harmful effects of plastic waste in Galápagos and demonstrate how it can be transformed into art.

Galápagos resident Mirian Silva is another WISE grant recipient for her "Native Gardens" project, which focuses on conserving native and endemic plant species on Santa Cruz Island. In addition to providing plants to local educational institutions, she aims to protect iconic flora by reforesting green areas in schools. Galápagos Conservancy supports projects like Mirian's to contribute to the sustainability of Galápagos.

Despite the critical contributions of these and other female conservationists in Galápagos, they still face various challenges. Women are often underrepresented in leadership roles within conservation organizations, limiting their ability to influence decision-making and shape policy. Additionally, gender-based violence and harassment can create unsafe working environments for women in conservation, hindering their ability to carry out their work effectively.

The achievements of local female leaders in Galápagos, supported by initiatives such as Galápagos Conservancy's WISE grant program, serve as a powerful reminder of women's important role in conservation efforts. By recognizing and supporting the contributions of women in this field, we can help to build a more equitable and sustainable future for our planet.



Mayra Hernández and her students © Galapagos Conservancy

EDUCATIONAL PROGRAMS FOR CONSERVATION IN GALÁPAGOS

Education is the key to conserving nature and protecting the planet's biodiversity. At Galápagos Conservancy, we share this vision and firmly believe that education plays a fundamental role in raising awareness among the local population about the importance of safeguarding the Galápagos Archipelago, a World Heritage Site that requires active and conscious protection.

That's why in May 2021, we signed a tripartite agreement among the Ecuadorian Ministry of Education, Galápagos Conservancy, and Fundación Scalesia. Under this agreement, we have supported the most ambitious educational project ever undertaken in the archipelago, which focuses on contextualizing the educational curriculum to the needs and particularities of the island region, providing knowledge to all Galápagos teachers on essential academic topics with a central focus on protecting the archipelago's ecosystems. With our support, educational experts act as Pedagogical Leaders and Guide Teachers on all the inhabited islands of Galápagos to ensure the proper implementation of the new sustainability curriculum.

In addition to formal education, Galápagos Conservancy leads a program to cultivate non-formal education. Through conservation grants, we support local initiatives led by citizens

committed to the environment, who provide environmental and experiential education to children and young people in the community. In this way, we promote care and love for the place where they live, complementing formal education and fostering environmental awareness from an early age.

Sustainable education teaches how to responsibly protect and use natural resources, ensuring their availability for future generations. In Galápagos, the population must understand the importance of protecting their environment and the challenges involved in maintaining the ecological integrity of the archipelago. Galápagos Conservancy's innovative Education for Sustainability Program is an example of how education can be an effective tool in achieving these objectives.



Left and right: Teachers participating in the 13th Teachers Training Institute on Santa Cruz Island © Galapagos Conservancy

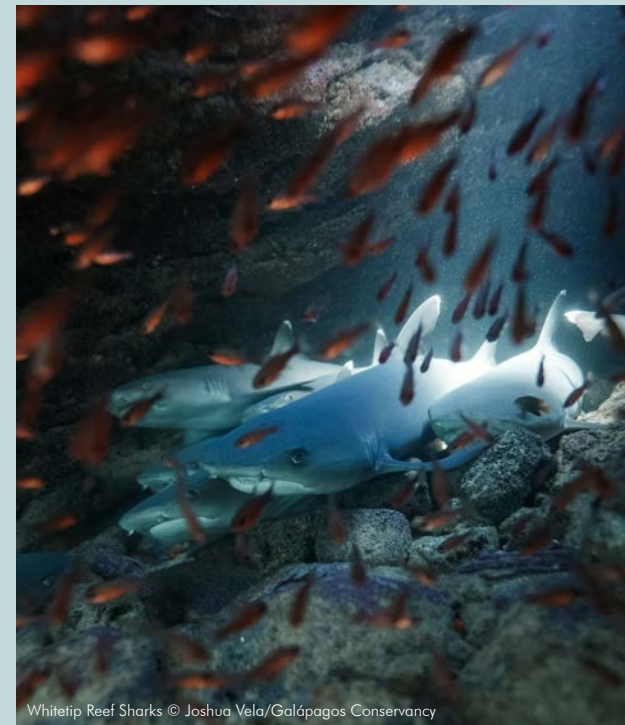
SAVING THE SEAS:

A COMMUNITY EFFORT TO CONSERVE MARINE BIODIVERSITY

Green sea turtles swimming in the Galápagos Marine Reserve along sharks and other sea creatures © Joshua Vela/Galápagos Conservancy



Top left and right: Students participating in beach clean-ups on Santa Cruz Island © GNPD



Whitetip Reef Sharks © Joshua Vela/Galápagos Conservancy



Sea lion swimming in the GMR © Joshua Vela/Galápagos Conservancy

Conservation in Galápagos requires not only scientists and professionals to solve conservation problems but the entire community. Thankfully, Galapagueño students and children are up to the challenge. In the last year, multiple projects have engaged and educated the next generation of conservationists in Galápagos.

One of the major issues that can affect both the local economy and wildlife as a whole on all the islands is beach pollution. Recently, 65 students took matters, and plastic, into their own hands as they collected 575 pounds of garbage from four beaches in the archipelago. Their success in cleaning up the beaches was not only a great feat for conservation, but it was also an inspiration to us all.

Additionally, the youth of Galápagos are helping their home by engaging in practices that promote marine conservation. The Galápagos National Park has given 65 students the opportunity to train and learn about the marine environment. The students are participating in many activities vital to marine conservation, including monitoring and tagging juvenile sharks and restoring corals.

These projects, and many more, show that the next generation of Galápagos conservationists is already well on their way to making a difference. None of these projects would have happened without Galápagos Conservancy's key partner in conservation, the Galápagos National Park, which leads these remarkable opportunities for youth in Galápagos. We are proud to support the Park's work to inspire this next generation of young conservationists.

YELLOW LAND IGUANAS:

THREE ISLAND POPULATIONS WHOSE FUTURES DEPEND ON ONE ANOTHER

Yellow iguanas are much-loved denizens of the dry lowlands of Galápagos. Once widespread across much of the archipelago, they are now limited to just a few areas and among them are three islands — Baltra, North Seymour, and Santiago — whose past and future fates are intimately intertwined in ways few people know.

Here's the story: In 2022, Galápagos Conservancy staff, along with Galápagos National Park guards, undertook an island-wide survey of iguanas on Baltra, where land iguanas went extinct but have since been reintroduced, and on North Seymour, where the species has been introduced but was never native. These iguanas were introduced to North Seymour on a lark from Baltra by U.S. military personnel around the time of World War II. The population now consists of nearly 4,000 individuals — a huge population for such a tiny island. The iguanas are now so abundant they are damaging the island's ecosystem, which is not adapted to their presence.

Remarkably, not long after the war, the Baltra population that was the source of the North Seymour iguanas went extinct, largely due to predation by introduced cats. Some 50 years later, cats were removed from Baltra, and iguanas were reintroduced to this island back from North Seymour.

A recent island-wide survey shows that Baltra's iguana population has quickly rebounded, with nearly 2,500 of these fascinating reptiles now on the prowl. While this recovery is great news for yellow iguanas, it also portends increasing conflicts with human activities on Baltra — particularly at the airport, where the iguanas have taken to basking on the runways.

So where does the third island, Santiago, fit into this story? This island once had a huge population of yellow iguanas. In fact, Darwin, on his visit to Santiago, commented that there were so many burrows of these iguanas it was difficult to find a place to pitch a tent. Here, too, the species was entirely eliminated after the arrival of invasive species that depredated iguanas, their young, and their eggs. Today, after concerted efforts, those threats have been removed from the island, and Santiago now offers an ideal iguana habitat. Soon, it could become the focus for translocation of all land iguanas from North Seymour.

In 2023, Galápagos Conservancy will be mounting an important expedition to Santiago to assess how to fully repopulate the island once again with yellow iguanas. This would allow for the rapid rebuilding of the population on Santiago while also removing all land iguanas from North Seymour, where they do not belong. Baltra, meanwhile, would continue to recover on its own.

This tale of three islands and their iguanas shows just how necessarily intertwined efforts are to restore endangered species across Galápagos, as scientists integrate the historical quirks of each island while adapting to new opportunities as they arise to rebuild populations.



Yellow land iguana © Sue Cullumber



Washington Tapia and GNPD park ranger releasing giant tortoises on Española Island. © GNPD

UPDATE: ESPAÑOLA GIANT TORTOISE REPATRIATION

Galápagos is famous for its special flora and fauna, including giant tortoises that have become emblematic of the islands. One of the most endangered species of giant tortoise in Galápagos is the Española Giant Tortoise (*Chelonoidis hoodensis*), which was almost extinct due to overhunting by whalers and other humans in the 18th and 19th centuries. However, thanks to the efforts of the Galápagos National Park and the support of Galápagos Conservancy in the last decade, the Española Giant Tortoise is making a comeback in its natural habitat.

This species was once widespread on the island of Española, but by the 1960s, only about 15 individuals remained, all living in captivity. The captive breeding program is a complex operation involving the repatriation of tortoises from breeding centers where they were hatched and raised to Española Island. The tortoises are carefully selected based on age, size, and health and undergo a rigorous quarantine period before being transported to the island. Once on Española, the tortoises are released into carefully selected areas that provide suitable habitat conditions. The tortoises are fitted with microchips and regularly checked to ensure their health and survival rate.

Washington Tapia, our tortoise expert and General Director of Conservando Galápagos, says the tortoise repopulation of Española has been — and will continue to be — a key element in the ecological restoration of the island, as their presence helps reestablish ecological processes, including the nesting of one of the archipelago's endemic birds, the Waved Albatross. With their massive bodies and prodigious appetites, giant tortoises clear the woody vegetation from areas that albatrosses use as runways to take off and land. Without these runways, their nesting would not be possible.

Galápagos Conservancy has played a crucial role in supporting this restoration program, providing funding and expertise during the last 10 years to help ensure its success. This is one of the world's great conservation success stories, soon to come to a fruitful conclusion as the final tortoise repatriations are made to the island, with 86 of the last captive-reared tortoises recently released there. The repatriation of the Española Giant Tortoise to its natural habitat is a testament to the power of conservation efforts to protect the unique biodiversity of Galápagos for future generations.



GNPD Park Rangers collecting tortoises at the breeding center before departure. © GNPD



Park Rangers loading tortoises onto the helicopter which transported them to Española Island. © GNPD



Juvenile Española Island tortoises awaiting take-off
© GNPD



Juvenile Española Island tortoises released on Española Island. © GNPD

YOU, TOO, CAN HELP RESTORE GIANT TORTOISE POPULATIONS IN GALÁPAGOS!



Giant tortoises on Alcedo Volcano. © Joshua Vela

A one-of-a-kind program is contributing significantly to our efforts to save Critically Endangered giant tortoises. It’s called “Adopt a Giant Tortoise,” and unlike other symbolic adoption programs, this one lets individuals, families, and even classrooms adopt a **real tortoise**, for life!

When you visit adopt.galapagos.org, you can pick out an **actual tortoise**, name it, and receive a certificate of adoption. You also have the option of gifting your adoption to a friend or loved one. Going forward, you, or your gift recipient, will receive updates on your tortoise for many years to come (these gentle giants have been known to live for more than 150 years!).

How does your adoption help restore giant tortoises?

The adoption fee covers the true cost of your tortoise’s incubation, its diet of Otoy and Portillo leaves in captivity, regular health monitoring by Park veterinarians, and its eventual release to the wild.

Once released, these iconic animals have multiplying beneficial impacts on their environment. That’s because giant tortoises are ecosystem engineers whose presence will help restore their native terrain.

Thank you to the scores of adopters who have already made a difference!

Join the effort at adopt.galapagos.org

SCAN THE QR CODE
TO ADOPT YOUR
TORTOISE TODAY!



A marine iguana in its natural habitat, the winning shot of our social media photography contest. © Alex Gutiérrez

ALEX GUTIÉRREZ:
A Galápagos Guide With
a Passion for Photography

Born under the radiant skies of El Oro province in Ecuador and raised amidst the untamed beauty of Galápagos, Alex Gutiérrez developed a passion for and commitment to nature. Relocating to Galápagos at the age of nine, he found a haven on Santa Cruz Island, its vibrant life etching an indelible mark on his formative years. The mainland called him back for education, graduating with a degree in tourism in 2015. Yet, the allure of Galápagos was irresistible. Always imagining himself as a guide in the heart of this wild paradise, Alex brought this dream to fruition in 2017. Ever since, he's been unveiling the extraordinary wonders of the Galápagos Islands from the deck of cruising vessels, sharing their enchanting magic with the world.



© Alex Gutiérrez

Our members are the driving force behind our efforts to preserve, protect, and restore the Galápagos Islands. As we work with our partners to tackle some of the biggest challenges Galápagos has ever faced, **we need your support now more than ever.**

AMPLIFY YOUR IMPACT AS A GALÁPAGOS GUARDIAN

Your generous online recurring monthly gift is the most efficient and reliable source of funding that we can count on for expeditions, scientific research, saving endangered species, and so many other direct conservation actions! Online gifts have the lowest overhead cost, so they are the most cost-effective way for Galápagos Conservancy to receive your support.

Plus, Galápagos Guardian recurring monthly donors receive this exclusive iron-on Fantastic Fernanda patch!



Scan the QR code or visit galapagos.org/summer2023 to become a Galápagos Guardian monthly donor today.



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