

WINTER 2022

GALAPAGOS

POST

■ ON THE WINGS OF CONSERVATION



Galápagos
Conservancy
galapagos.org



- THE SCIENCE OF BREEDING TORTOISES
- CONFRONTING ILLEGAL WILDLIFE POACHING IN GALÁPAGOS
- TECHNOLOGY ADVANCES CONSERVATION IN GALÁPAGOS
- EXPERIENTIAL LEARNING DRIVES EDUCATION FOR SUSTAINABILITY
- Q&A WITH ECUADOR'S MINISTER OF THE ENVIRONMENT

GALÁPAGOS CONSERVANCY



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A Year of Profound Progress

Dear Friend of Galápagos Conservancy,

I am grateful to you for your profound support that helped make 2022 a landmark year for Galápagos conservation.

This year, we committed to support Conservando Galápagos — the first on-the-ground conservation organization run by local Galapagueño people who are uniquely positioned to make the greatest impact for conservation in the Islands. They are helping lead efforts to ramp up our breeding program for Giant Tortoises. Already 9,000 tortoises raised in the Breeding Centers have been released into the wild. With close to a 100% survival rate, this is the most successful breeding program for any Critically Endangered species on Earth! But the 9,000 tortoises released are just a tiny fraction of the historic population. So, we must forge ahead to amplify this magnificent feat and save Giant Tortoises from extinction.

Our experienced team alongside National Park rangers embarked upon eight major expeditions in 2022. We continue to search for a mate for Fernanda, the last remaining individual Fernandina Giant Tortoise. Hope abounds on Pinta — Lonesome George’s home island. An expedition located 39 hybrid Pinta Tortoises that were released in 2010 to rewild the Island. More to follow soon!

Saving species in Galápagos does not stop with Giant Tortoises. We will rescue the Critically Endangered Pink Iguana on Wolf Volcano. This incredible species is at risk of imminent extinction without immediate action to protect nesting areas from invasive predators. Furthermore, robust on-the-ground conservation action is well underway to save the Galápagos Penguin, Galápagos Sea Lion, Whale Shark, Mangrove Finch, and many more iconic species that depend on our assistance.

We are leading the way to restore the fragile ecosystems of Galápagos. A groundbreaking discovery by our team shows that the nearly 2,000 Española Giant Tortoises released into the wild are critical for restoring nesting areas for the endemic Waved Albatross. As tortoises consume vegetation and move about with their heavy bodies, they engineer the landscape to clear pathways or “runways” that albatrosses need to take flight from nesting areas on the

Island. This unique partnership between birds and tortoises is at risk as there are too few tortoises to keep vegetation at bay. Waved Albatrosses are perishing, but we have also discovered the solution to save them.

Our cutting-edge research doesn’t stop there. With partners, we are testing coral reef farming methods with the intent to repopulate Galápagos seas with these vital species. Coral reefs hold the most biodiversity of any marine ecosystem, and sadly, 95% of Galápagos reefs have been lost in recent decades due to climate change.

We are implementing the most sophisticated and sweeping anti-poaching measures ever seen in Galápagos to protect Giant Tortoises, Pink Iguanas, marine species, and all wildlife from trafficking and hunting using satellite technology and covert surveillance.

And we cannot forget that the people of Galápagos are essential to conservation success. We are investing deeply in the community through our Women in Sustainable Entrepreneurship and Education for Sustainability programs. Make no mistake, with your help, we will build a sustainable society in Galápagos that will serve as a model for the rest of the world.

Looking ahead to 2023 and beyond, we remain focused on saving species, rewilding Galápagos, and achieving sustainability across the Archipelago. To that end, all our work is strategically focused on these three pillars of conservation in Galápagos.

As you share this holiday season with those you hold dear, please know we remain grateful to you and dedicated to conserving Galápagos forever.

Together in conservation,

Dr. Paul Salaman



Dr. Paul Salaman
President



The imperiled Waved Albatross
on Española Island

PAGE
8



FOR THE FUTURE OF GALÁPAGOS, THERE ARE MANY WAYS TO GIVE

Photo by Joshua Vela/Galapagos Conservancy

Online Gifts Make a Difference!

Online donations have the lowest overhead cost. When you give online, your support makes the biggest impact on conservation action.



Become a Galápagos Guardian with Your Monthly Recurring Donation

When you become a monthly sustaining member at \$10+ per month you will receive this beautiful Pink Iguana iron-on patch and a new Galápagos wildlife patch each year! But the best part about becoming a Galápagos Guardian is that you will provide reliable support with the lowest overhead cost so we can plan for expeditions, scientific research, invasive species management, and so many other important conservation projects. Start your sustaining monthly gift at galapagos.org/winter2022.

Make a One-time Gift Online



galapagos.org/winter2022



For online gifts of \$50+, you will receive this beautiful 4x9" Galápagos wildlife magnet, made of 75% recycled material.



For online gifts of \$100+, you will receive this gorgeous, sustainably handmade metal mug.

More Ways to Give

IRAs - If you are over age 70½, 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 of course!)

Questions? Contact member@galapagos.org or 703-383-0077. Nonprofit Tax ID: 13-3281486

- 10 **The Science of Breeding Tortoises**
 - State-of-the-art incubators accelerate Giant Tortoise breeding
- 16 **Confronting Illegal Wildlife Poaching in Galápagos**
 - Wildlife cameras and PIT microchips fight poaching
- 20 **Technology Advances Conservation in Galápagos**
 - New technologies open doors to greater possibilities
- 23 **Experiential Learning Drives Education for Sustainability**
 - New local leaders enhance experiential learning for Galápagos students
- 24 **Q&A with Gustavo Manrique**
 - Ecuador’s Minister of the Environment’s thoughts on marine conservation



A Celebration of Galápagos Conservation and Ecotourism

At the Ecuadorian embassy in Washington, D.C., on October 14, distinguished guests, Galápagos Conservancy board members, supporters, and friends joined us as we expressed our gratitude and appreciation for all of those who support Galápagos Conservancy and the Galápagos National Park. During the course of the event, Dr. Paul Salaman, President of Galápagos Conservancy, stressed the importance of the organization's continued collaboration with the Galápagos National Park Directorate. Veronica Santamaria, Director of Public Use for the Park, announced that in the coming year, the Park plans to develop a state-of-the-art interpretive visitor center — the first of its kind — to properly welcome all visitors to the National Park and Breeding Center on Santa Cruz Island. She expressed her appreciation to Galápagos Conservancy for our dedicated partnership and support for the new Conservation Center in Santa Cruz. Our gratitude goes out to both the Galápagos National Park Directorate and the Ecuadorian government for their support of this event, and all of our collaborative conservation work.



Galápagos Marks 44 Years Since its Designation as a Natural World Heritage Site

Galápagos celebrated its 44th year since its designation as a Natural World Heritage Site in recognition of its unique biodiversity, a title awarded by the UNESCO Heritage Committee on September 8, 1978. On December 2, 2001, the Galápagos Marine Reserve was added to this declaration. The first Cultural Festival Celebrating Galápagos Natural Heritage and Humanity took place on Santa Cruz on September 8 to commemorate the milestone. Bertha Corella, a cultural activist from Galápagos and a recipient of one of our Women in Sustainable Entrepreneurship grants, organized the festival which she hopes will strengthen the Islands' cultural identity and celebrate the conservation of Galápagos ecosystems.



Galápagos Conservancy Condemns the Poaching of Giant Tortoises

An investigation has been launched to identify those responsible for killing four Giant Tortoises on Isabela, which the Provincial Attorney General of Ecuador believes may have been hunted for meat. This is not an isolated incident. In September 2021, the remains of 15 Critically Endangered Española Giant Tortoises were found on Isabela. Galápagos Conservancy strongly condemns the poaching and eating of Giant Tortoises as an environmental crime. We trust in the management of the Galápagos National Park Directorate (GNPD), an organization that works diligently to safeguard the biodiversity of the Islands. The GNPD is currently awaiting the findings of the investigation so that, if the perpetrators are identified, they will face the full force of the law.



99% of Whale Sharks that Transit the Galápagos Islands are Female

Galápagos Conservancy is supporting Whale Shark research, the results of which will provide baseline data on the reproductive status and movements of this Endangered species in the Archipelago. Researcher Sofía Green noted that a unique population of Whale Sharks transit the waters of Galápagos annually between June and December, of which 99% are female. "By having these adult females in Galápagos, we have the opportunity to protect a group of possible reproductive mothers of this species in danger of extinction," she said. This important research, coordinated with Jonathan Green, will help scientists discover if the female Whale Sharks that arrive in Galápagos are pregnant or in a critical part of their reproductive cycle. The researchers highlighted that thanks to Galápagos Conservancy's support, the local community is able to play a critical role in the educational and scientific process of the project by giving presentations on the threats sharks face and partnering with local fishermen to identify Whale Sharks.



Galápagos Conservancy Helps Boost Organic Food Production

In Galápagos, more farmers are striving to cultivate the land responsibly and produce quality food in ways that do not damage the environment. Cecilia Guerrero of Santa Cruz Island, one of the beneficiaries of Galápagos Conservancy's Women in Sustainable Entrepreneurship program, uses organic waste from her farm to develop different types of fertilizers. She educates her staff and other farmers on Santa Cruz Island in agro-ecological crop management methods. "We farmers want to have a lucrative production, but it must not only be profitable in economic terms," Cecilia emphasized. "We must also ensure that it is profitable and beneficial for human health and the environment." For Galápagos Conservancy, it is vital to promote and support organic production in the Archipelago because the remains of chemical products and pesticides are dispersed in the environment and become contaminants for animals, plants, soil, air, and water, threatening ecological stability and representing a danger to public health and the fragile ecosystems of the Islands.



Citizens Protect Sea Lion Beach

Playa de Los Marineros, a beach on San Cristóbal Island, is essential habitat for the largest colony of Sea Lions in the Galápagos Archipelago and a gathering point for Marine Iguanas, Blue-footed Boobies, Frigatebirds, Mojarra Fish, Galápagos Brown Pelicans, Eagle Rays, Sally Lightfoot Crabs, Lava Herons, and more. However, this special place has become contaminated by sewage, chemicals from boats, and litter. Pablo Escarabay is Galápagos Conservancy's new research associate working on the recovery of Playa de Los Marineros. The efforts aimed toward the recovery of the site are of extreme importance because of the wide array of biodiversity it holds. Escarabay led a survey to determine the exact number of species that frequent the beach and how they are threatened by the site's contamination. The team collected samples of water and soil to determine the level of contamination. The community, including tourists and fishing boat owners, worked together to collect garbage and have pledged to maintain the health of the beach on an ongoing basis.



After 187 Years, Yellow Iguanas Once Again Breeding on Santiago

Charles Darwin was the last person to record Yellow Iguanas on Santiago Island in 1835, when so many lively iguana nests caused him difficulty finding a place to pitch his tent. After that, Yellow Iguanas disappeared. Iguanas are ecosystem engineers – keystone species that dramatically shape and alter the landscape and habitat. In 2019, the Galápagos National Park Directorate released 3,143 Yellow Iguanas as part of the process to restore Santiago. Galápagos Conservancy and Conservando Galápagos support ongoing monitoring activities to evaluate the reintroduced Yellow Iguanas' adaptation to the ecosystem of Santiago.



Conservation Status of 86 Species in the Galápagos Marine Reserve Assessed

Scientists with expertise in marine species took part in an International Union for the Conservation of Nature (IUCN) workshop to assess and define the conservation status of 62 fish species and 24 sponge species endemic to the Galápagos Marine Reserve. Neil Cox, Director of the IUCN Global Species Program, stated that the IUCN Red List for Galápagos endemic marine fishes would be updated within the next year based on the assessments made during the workshop. “Now that the workshop is over, we have a long process to review all of the data that has been provided and ensure the evaluation protocol has been carefully followed to confirm the consensus decisions made in the workshop for each species,” Cox reported. During the workshop, several species, including Bacalao, a type of cod found in Galápagos, were identified as potentially Endangered due to overfishing if adequate management measures are not implemented.



Children Learn to Transform Plastic into Art

Galápagos Conservancy emphasizes the importance of community engagement in caring for the environment. One of our goals is to support initiatives by women entrepreneurs eager to contribute to the preservation and care of Galápagos. One of these initiatives is called “More Art, Less Trash,” founded by Mayra Hernández. Mayra is an active member of the Frente Insular (Island Front), a community movement working to solve social and environmental challenges. “We frequently organize beach cleanups, and it was precisely during one of these outings that I had the idea of recycling as an invitation to rethink our daily patterns of waste generation to motivate the community to have a cleaner environment,” Mayra said. She presented her initiative to Galápagos Conservancy through a grant application and received funds. With this support, she has developed 14 workshops benefiting 250 children from Santa Cruz who learned to transform plastic garbage into art and toys.



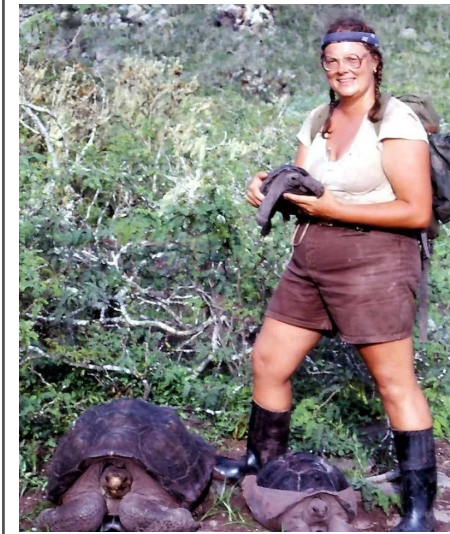
Ecological Monitoring in Baltra and North Seymour Islands

A team of 30, including park rangers and scientists from Galápagos Conservancy, the Charles Darwin Foundation, and the Galápagos National Park Directorate, surveyed 6,770 acres on Baltra and North Seymour Islands to assess the populations of several keystone species such as Land Iguanas, Opuntia Cacti, and various woody plants. This data will allow the Park to make management decisions with the aim to maintain the ecological integrity of North Seymour and restore the ecosystem of Baltra. Dr. James Gibbs, VP of Science and Conservation at Galápagos Conservancy, was pleased with the recovery of Yellow Iguanas on Baltra, with an estimated population of 2,467, up from 700 in 2014.

For more breaking news from the Galápagos Islands, visit galapagos.org/newsroom or scan the QR code below.



In Memorium

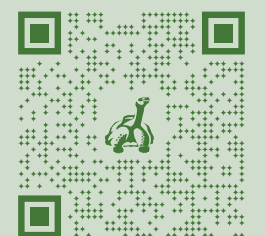


Giant Tortoise Crusader, Dr. Linda J. Cayot, Dies

Dr. Linda J. Cayot, best known as much beloved “Linda,” passed away on September 26, 2022. Shown in the photo above in 1982 on Pinzón, Linda dedicated most of her professional career to tortoise and iguana conservation in Galápagos. After completing a Ph.D. focused on the behavior and ecology of Galápagos tortoises, Linda took a position as a herpetologist at the Charles Darwin Research Station, where she supervised the Giant Tortoise and iguana breeding and repatriation programs. Recognizing that conservation takes a long time, and requires capable, dedicated people, Linda devoted much of her time to mentoring young conservationists, especially local Galapagueños, many of whom lead conservation efforts in Galápagos today. Before leaving Galápagos in 1998, Linda also helped initiate and manage Project Isabela – a complex initiative to eradicate feral goats, a nemesis for Giant Tortoises – that

was ultimately successful. From 2008, Linda worked for Galápagos Conservancy, where she became familiar to many of its members through her inspiring presentations on tortoise conservation and while serving as their guide on cruises. At Galápagos Conservancy, Linda launched Iniciativa Galápagos, a collaborative effort with the Galápagos National Park to restore all Giant Tortoise populations, which continues to this day. Linda retired in 2020 but continued to work and completed a textbook on Galápagos Giant Tortoises to capture all that was known about these animals she loved. The tortoises Linda worked so hard to restore are recovering well today due in no small part to her commitment to Galápagos, its people, and its wildlife. Undoubtedly, Linda’s contributions were enormous and to celebrate her life, we will continue working hard and tirelessly to perpetuate her legacy for Galápagos conservation. We shall all miss her deeply.

Visit galapagos.org/giftIG or scan the QR code below to make a gift to support Iniciativa Galápagos.





On the Wings of Conservation

by Dr. James Gibbs
Vice President of Science and Conservation

Midnight approaches, the heat of the day has dissipated, and a cool ocean breeze brings a chill to Española Island, where we are camped at the top of the bold cliffs of the Island’s southern coast.

As I lie inside my sleeping bag, a cacophony punctuates the silence. Episodes of hooting, honking, whistling, and clattering emanate from somewhere off in the dense, dark thicket that surrounds us. I realize the sounds are from pairs of Waved Albatross enthralled in their bonding ritual: clapping their bills together, bobbing, and calling out.

Then suddenly, a lumbering tortoise’s shell thumps hollowly as it rams past a lava rock, followed by the crack of a branch that gives way to the powerful passing tortoise. Española Giant Tortoises are making a comeback and appearing in parts on the Island where they have not been seen in over 200 years, such as our campsite near this albatross colony on the southern side of Española Island.

In 1960, the Española Giant Tortoise was on the brink of extinction as only 15 tortoises remained. Iniciativa Galápagos — a joint program of the Galápagos National

Park Directorate and Galápagos Conservancy — has helped rewild the population. Now over 3,000 tortoises live wild and free on the Island, but their numbers are still a tiny fraction of the estimated population of tortoises before they were hunted to near extinction by mariners in centuries past.

Remarkably, the entire global population of the Waved Albatross — the only species of tropical albatross on the planet — also uses Española as its sole nesting area. The species is considered Critically Endangered due to increasing by-catch in long-line fisheries on its foraging areas off the coast of Peru as well as an incursion of woody plants into its nesting areas caused by the collapse of tortoise populations.

But the Giant Tortoises are now returning to help. With their hulking bodies and boundless appetites, tortoises clear woody vegetation from areas that albatrosses use as pathways to take flight and land. Without these runways, nesting is not possible for many of these birds.

Indeed, our intrepid staff from Galápagos Conservancy are on Española Island to study “Albatross Airports,” and the tortoises that can engineer them.

MAGAZINE COVER PHOTO: Waved Albatrosses require clearings (or “runways”) in the vegetation of Española, as shown in this image, to be able to land. The return of Giant Tortoises’ ecosystem engineering activities to the Island has reopened these runways. © Christine Weisenstein

In the morning we begin the first island-wide survey of the Waved Albatross in over 50 years. For 10 days, we cut our way through endless thickets, our clothes shredded by their clawing branches. We find long openings in the thickets, where large clusters of albatross gather. The birds are mostly stationary and silent, but a brief gust of wind can trigger an albatross to suddenly snap into action, galloping down the narrow runway, webbed feet slapping against the ground and claws digging into the turf. Its eight-foot wingspan extends as the bird gradually takes flight.

We cringe as one doesn’t clear the top of the thicket at the runway’s end, wings smacking into branches, the massive bird crumpling up and falling through the trees into the understory, slowly regathering itself and then marching back to the top of the runway to try again. Some birds are not so lucky — over the next few days we find albatrosses dead in trees, like scarecrows hanging by their wings or necks.

In our wanderings, we start to see a pattern. About two-thirds of the population — many thousands of albatross — nest amongst the mostly impenetrable shrubs and trees in the Island’s interior near the few areas with openings in the vegetation. On the final day of the expedition, we visit 13 tortoise-proof fenced-in areas in the center of the Island. These are experiments to measure the effect of tortoises on the vegetation. We spend two days carefully measuring every plant inside and outside the tortoise exclosures. What we see first-hand confirms what we have already seen in high-definition NASA satellite imagery of the Island: wherever tortoises occur on Española, woody plants are declining. Where there are few or no tortoises (which coincidentally is where albatrosses prefer to nest) woody plants keep growing in vigorously.

It will take many decades for the Española Giant Tortoise to return to its historic numbers and start fully re-engineering the vegetation of Española Island. The Waved Albatross does not have the time to wait. **So we as conservationists must intervene.** There are two essential solutions. First, we need to immediately start selectively cutting back thorny scrub in and around the albatross airports to assist the birds as they take flight. Second, we need to attract tortoises back to the areas where albatrosses nest so they keep the albatross runways open. Planting cactus (the tortoises’ favorite food) and providing temporary water sources are effective ways to help rebuild the tortoise population within the albatross nesting areas and encourage their engineering activity.

We urgently need your generous support to undertake these ambitious solutions, to ensure that the spectacular island of Española returns to its former glory with an army of Giant Tortoises manicuring shrubs to provide safe runways for the endemic Waved Albatross to access their nesting areas. Their fates are up to us.

Visit galapagos.org/giftIG or scan the QR code to make a gift to support Iniciativa Galápagos.



Satellite view of Galápagos Islands © Alamy



A Waved Albatross in flight over the cliffs of Española © Jason Avery



Waved Albatrosses have one of the most elaborate courtship rituals in the animal kingdom, including bill-circling, displayed here. © Lawrence Blau



Tortoise movements and vegetation pruning create spaces for Waved Albatrosses to take off and land. © Galápagos Conservancy

THE SCIENCE OF BREEDING TORTOISES

Galápagos Conservancy and our local partner Conservando Galápagos have a unique and critical role to conserve the Archipelago. We have a joint agreement with the Galápagos National Park Directorate to rewild all 13 extant species of the iconic Galápagos Giant Tortoises. To accomplish this, we use every tool available to accelerate the process of breeding, incubating, hatching, and rearing tortoises.

To recover Critically Endangered Galápagos Giant Tortoise populations, an innovative captive breeding and rearing program was launched in 1965 on Santa Cruz Island. Later, Breeding Centers opened on Isabela and San Cristóbal Islands. Eggs are either brought from the wild into the Centers for hatching, or tortoises are encouraged to breed in captivity. The eggs are hatched and reared until the age of five when the tortoises are large enough to ward off predators. At that point, they are released into the wild.

Temperature within the incubators is critically important for both the survival of the growing embryos and to determine the sex of the hatchlings. In the wild, Galápagos Giant Tortoise eggs are incubated within the range of 72-93°F. Temperatures around 78°F produce mostly males, and 85°F produce mostly females. We aim to breed more females to rapidly increase the population of tortoises for wild release.

In the beginning of the breeding program, artisanal solar incubators built of wood and lined with cement were used to hatch baby tortoises. Later, electric hair dryers connected to timers were used to maintain a consistent ambient temperature for the eggs. Finally, in 2017, Iniciativa Galápagos supported the modernization of the Breeding Centers in Santa Cruz and Isabela — with a new sophisticated automated incubator system that uses microcomputers to control and regulate the temperature in the incubators.

The program's first major success was in 1970, when the first 20 baby tortoises born in captivity were released to Pinzón Island. Since then, almost 9,000 juvenile tortoises have been released to their islands of origin. **As many as a third of all Galápagos Giant Tortoises living in the wild today owe their existence to captive rearing operations.** Because many threats to Giant Tortoises persist and tortoises remain at only 10% of their original abundance, the Galápagos National Park, with the support of Galápagos Conservancy and Conservando Galápagos, will continue to maintain three Breeding Centers. We are delighted to announce the re-opening of the San Cristóbal Breeding center in 2023! Today, the Breeding Centers host an additional 2,200 juvenile tortoises who will be released into the wild one day soon, with thousands more to come after them.

THE ORIGIN OF LIFE: Brand new state-of-the-art incubators at the Giant Tortoise Breeding Center in Santa Cruz maintain a constant temperature for fragile eggs like the one below. © Galápagos Conservancy



ADOPT A GIANT TORTOISE!



Now, for the first time ever, you can create your conservation legacy in Galápagos by adopting a real, individual baby Giant Tortoise.

When you adopt a Giant Tortoise, you sponsor the care they will receive as they grow up at their Breeding Center on Santa Cruz, Isabela, or San Cristóbal Island. This includes the equipment to gently incubate your baby tortoise as an embryo inside its fragile eggshell for four months to hatching, all the delicious starchy Otoy and protein-rich Porotillo leaves they will need to eat for strong growth as a juvenile, regular monitoring of their health by on-site veterinarians, nutritional and other testing, and the security to keep your tortoise safe while they grow.

Tortoises remain in the Breeding Centers until they are five years old. While there, they live in best-in-class habitats that simulate their natural environments so they will be fully prepared for release to the wild. They learn to climb and descend rocks, right themselves when accidentally flipped over, get socialized with other tortoises, and develop the instincts for survival in the wild. At age five, tortoises are strong and unstoppable — their shells hard enough to protect them from all invasive predators like rats, cats, and pigs. They are then released into the wild to mature in 15-20 years, when a female will start producing about 15 eggs per year, for the next 100 years or so. By adopting a baby tortoise you are making a powerful investment. Your adoption will help to restore these iconic animals that once dominated the Archipelago.

Visit adopt.galapagos.org today to find your match.

SCAN THE QR CODE TO ADOPT YOUR TORTOISE TODAY!



MEET OOBUS!

On August 28, 2022, Oobus became the first tortoise adopted in our Adopt a Tortoise program.

Oobus was born on October 18, 2018, in the Breeding Center on Santa Cruz Island. At the hatchling tortoise's most recent checkup, Oobus was 10.2 inches long and 3.42 pounds. Oobus is a very friendly tortoise! Their best friend is a Lava Lizard.

Fun Fact: It's hard to tell the sex of a Giant Tortoise until age fifteen. At this time, the male tortoise's plastron (bottom shell) starts to become concave (rounded inward) and the tail starts to get longer than a female's. Until that time, we can only guess at their eventual sex.



A Galápagos Sea Lion chases King Angelfish © Joshua Vela/Galápagos Conservancy

Galápagos Sea Lions Impacted by Climate Change

You may be familiar with the cheeky Galápagos Sea Lions that fight for bench space on the waterfronts of towns across the Islands, or that wait in line to receive tid-bits from the fishmongers at the market in Puerto Ayora. But perhaps you are less familiar with their plight in the face of climate change.

While still widespread, Galápagos Sea Lions and Fur Seals — the endemic pinnipeds of Galápagos — have declined by 50% over the last 40 years. The reasons are not entirely clear, but declining food supplies, changing ocean conditions, and possibly environmental contaminants may be to blame. These threats, combined with the isolation of Galápagos populations, are why Sea Lions and Fur Seals are listed as Endangered on the International Union for Conservation of Nature Red List of Threatened Species. This year, Galápagos Conservancy is supporting research to evaluate the threats of climate change to Sea Lions and Fur Seals in Galápagos, led by our collaborator Dr. Diego Páez, a Galápagos native and marine biologist at the Universidad San Francisco de Quito.

The study involves the Galápagos National Park Directorate and Mexico's Interdisciplinary Center for Marine Sciences and is coordinated by Conservando Galápagos Director of Conservation Dr. Jorge Carrión.

The study focuses on Santa Fé, Floreana, Española, and San Cristóbal Islands on whose beaches over 60% of the pinnipeds of Galápagos reside. The study's goal is to examine how feeding habits of Sea Lions and Fur Seals change between seasons and years to determine how they may be affected by climate change. The researchers are taking small samples of Sea Lion droppings collected on beaches and, using DNA, identifying which species of fish they eat. One effect of climate change is more frequent and intense El Niño events, during which ocean temperatures increase. Warmer waters decrease ocean productivity and could make Fur Seal and Sea Lion food sources more scarce. But the researchers are discovering Sea Lions eat a wide variety of prey, including many deepwater fishes as well as some sharks and rays. The pinnipeds' diet flexibility may enable them to cope with changes in fish communities brought on by ocean warming.

Galápagos Conservancy hopes that Sea Lions and Fur Seals continue to be a familiar spectacle for all tourists. This November, we are launching an expedition to survey the species and learn more about the pinniped population. With your support, we will continue to work to understand and mitigate the potential long-term effects of climate change on these charismatic creatures.



Marine biologist Jack Grove, pictured here with a lifesize model of the Damsel, is the last person to see a living specimen in 1981. Since then, he has been leading searches for the Possibly Extinct fish © Galápagos Conservancy

Galápagos Damsel in Distress

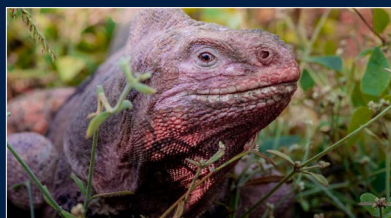
The Galápagos Damsel (*Azurina eupalama*), a silvery sardine-like fish found only in Galápagos, may have gone extinct. This fish was commonly seen by snorkelers in the shallow water just west of Pinnacle Rock at Bartolomé Island prior to the severe 1982-83 El Niño event. The increase in the temperature of Galápagos waters during that El Niño event caused a sharp decrease in plankton production that lasted over a year. Many plankton-eating fish species, such as the Galápagos Damsel, suffered as a result. Before this event, the Galápagos Damsel had previously been recorded in many regions of Galápagos, including around Floreana, Isabela, San Cristóbal, Santa Cruz, and Santa Fé Islands.

Despite intensive searches in the last three decades, no Galápagos Damsels have been found. It is a conspicuous fish that forms large schools in nearshore waters and is hard to miss if it is present. On March 27, 2008, the species was classified as "Critically Endangered (Possibly Extinct)" on the International Union for Conservation of Nature (IUCN)'s Red List of Threatened Species. In September 2022, an IUCN workshop on Santa Cruz Island reviewed the status of all endemic Galápagos fish species and concluded that the Galápagos Damsel's status could be Extinct. But in order to officially recognize

this tragic status, the IUCN is awaiting a final search.

The Galápagos Damsel reaches a length of 15 centimeters. It is olive-gray with a blue tinge, silver accents, and a black spot at the base of each pectoral fin. It has a prominent lateral line. It is our great hope that this lovely Damselfish will once again be found in the Archipelago.

Galápagos Conservancy is supporting efforts for one last major search of the Galápagos Marine Reserve in the hope of finding the Galápagos Damsel. Saving species is one of the three pillars of Galápagos Conservancy's mission, and stories like that of the Galápagos Damsel are why we work every day to prevent the extinction of endemic species in Galápagos.

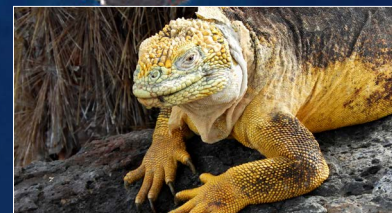


We constructed a research station on the rim of Wolf Volcano, which will soon be complete with satellite Internet. We have undertaken constant protection and monitoring of the Critically Endangered Pink Iguana throughout 2022 to gather information on its ecology and assess threats.

Pinta



The home of Lonesome George finally has a thriving, if small, population of Giant Tortoises. We are monitoring hybrid Pinta tortoises, released in 2010 to assess the recovery of plant communities after the eradication of invasive goats in 2003.



Since Darwin set foot on this island, the once abundant Yellow Iguanas disappeared. This year, our expedition finally confirmed that after 187 years, the Yellow Iguana, translocated from North Seymour Island, has once again started to breed and naturally repopulate Santiago.

OUR IMPACT 2022



An intense ecological monitoring program is measuring the conservation status of the fragile ecosystems on Baltra and North Seymour and estimating the population size of Land Iguanas, which are increasing rapidly following successful conservation measures.



In a desperate bid to seek a mate for Fernanda — the last known Fernandina Giant Tortoise — we have undertaken two expeditions across this vast Island to search for individuals of her species. Sadly, no individuals have yet been found. A final search in 2022 or 2023 is planned.

Wolf Volcano

Fernandina

Santiago

Baltra and North Seymour



We launched an innovative adoption program that will support the Giant Tortoise Breeding Centers on Santa Cruz, Isabela, and San Cristóbal Islands, to help rewild all Giant Tortoises species. Visit adopt.galapagos.org.

Isabela

Santa Cruz

Puerto Ayora

Santa Fé

San Cristóbal

Sierra Negra and Cerro Azul Volcanoes



We led the first major expedition in decades to explore the little known biodiversity of two immense volcanoes on southern Isabela. Using a helicopter, we accessed impenetrable areas and were able to survey the populations of two Endangered Giant Tortoise species.



We supported the renovation of the Lonesome George exhibit, with a new display case complete with professional-level climate-controlled conditions used by the best museums around the world to improve longevity of the specimen and the visitor experience.



Over 3,200 people have visited the Galápagos Conservation Center in Puerto Ayora since its launch in June, a huge success in educating not only international visitors, but also local people about the plight of Giant Tortoises and conservation successes.



Our team undertook a detailed ecological monitoring expedition to estimate the conservation status of habitats and the role of tortoises as ecosystem engineers on Santa Fé. In addition, satellite tracking devices were placed on tortoises to monitor their movements and impacts on the Island.



Confronting Illegal Wildlife Poaching in Galápagos

by *Xavier Castro*
Conservation Journalist, Conservando Galápagos

After the discovery of the Galápagos Archipelago in 1535, sailors and pirates began visiting the Islands, ushering in an era of pillaging and plundering of Galápagos wildlife.

Today, iconic species such as Giant Tortoises and Land Iguanas attract the attention of wildlife traffickers. Under Ecuadorian law, poaching wildlife carries a prison sentence of one to three years for anyone who hunts, fishes, captures, collects, extracts, or commercializes specimens or parts of wild flora and fauna, especially if the activity involves endangered species.

Despite efforts by the Ecuadorian Government and environmental authorities in Galápagos to protect and conserve the Archipelago's biodiversity, there have been recent, isolated instances of poaching and wildlife

trafficking, due to ever-increasing demand for exotic species on the global market for illegally traded wildlife.

Galápagos Conservancy and our new affiliate Conservando Galápagos remain vigilant in providing all necessary support to the Galápagos National Park Directorate for anti-poaching measures.

While incidents of this nature are rare, we believe that more substantial control and surveillance measures are required in areas where the species most vulnerable to wildlife trafficking live.

Jorge Carrión, Conservation Director of Conservando Galápagos, stated that “more severe sanctions are needed. More robust judicial processes should be required to punish environmental crimes of this nature to the fullest extent

Washington Tapia straps a wildlife camera to a tree on Española
© Joshua Vela/Galápagos Conservancy



Left and Top Right: Scientists use weather-resistant epoxy to attach GeoForce satellite trackers to tortoises' carapaces © Galápagos Conservancy
Bottom Right: A tortoise is transported via boat to be repatriated on Española Island © Iván Vasquez

of the law, not only in Galápagos, but also at the national level.”

Galápagos Conservancy is making available the technology it uses for research to combat poaching and species trafficking. "We have dozens of motion-activated camera traps in strategic locations that allow us to access thousands of photographs of what happens at these sites. We also have satellite tracking devices that are placed on some species to keep track of their identity or investigate their movements. These tools can be very useful for control and surveillance purposes," Carrión explained.

Galápagos Conservancy supports efforts to protect endangered animals. We are staunchly against wildlife trafficking and work diligently to assist the Park and Ministry of the Environment to capture and prosecute perpetrators. Our team is also working to help the swift repatriation of smuggled wildlife back to their home habitats. We will keep fighting to eradicate poaching as a driver of biodiversity loss in Galápagos.

A member of the Ecuadorian Navy with the baby tortoises rescued from wildlife traffickers © Armada del Ecuador



Invasive Species: The Greatest Challenge to Galápagos

by Cecil Hynds-Riddle, Associate Director of Membership

Where I live in the northern U.S., I've seen Buckthorn, Bittersweet, Honeysuckle, and Garlic Mustard take over natural areas, leaving vast, biodiversity-poor wastelands behind. Insects like the Emerald Ash Borer and the Woolly Adelgid have wrought havoc on our woodlands, as has Chestnut Blight, an insidious, introduced fungus.

In Galápagos, invasive species pose an equal threat to wildlife and ecosystems. Invasive insects are tiny but powerful invaders. The avian Vampire Fly (*Philornis downsi*) was inadvertently introduced to Galápagos, brought in on poultry, in the 1960s. Today it has spread across the Islands. Its bloodsucking larvae are killing and maiming the offspring of most species of small landbirds. Meanwhile, introduced Fire Ants attack and can kill many ground-dwelling species, even tortoise hatchlings.

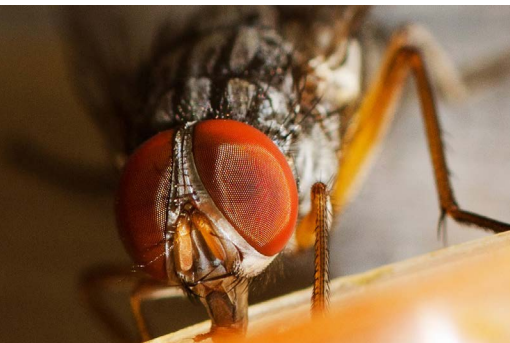
Invasive plants like Blackberry and Guava overtake ecosystems and smother native plants. Many other species are affected, including the insects that pollinate native plants, birds like the Vermillion Flycatcher that require open habitats free of invasive plants to forage, and the famous reptiles of Galápagos like tortoises and iguanas that depend on the leaves of native plants for food.

At home, I love my pet cats, but in Galápagos, introduced feral cats can be formidable predators, consuming small birds, young tortoises, Lava Lizards, and hatchling iguanas, generating rapid population declines. Free-roaming dogs have been the biggest threat to adult Land Iguanas on many islands. Dogs also carry canine distemper and can put beach-dwelling Sea Lions at risk for this serious infection. Galápagos Conservancy encourages responsible pet ownership in the Islands by partnering with WorldVet to sterilize and vaccinate cats and dogs, reducing the threat these companion animals place on native wildlife.

Black Rats, ecosystem-destroyers worldwide, have been the most destructive invasive mammal in Galápagos. These rodents consume tortoise hatchlings, bird eggs, native insects, and even the seeds of many plants. Invasive rats threaten native species with extinction: with just 20-30 Mangrove Finches alive today, this Critically Endangered species may soon be Extinct, partially due to rats and cats attacking their nests. As if that were not enough, the wonderfully rich diversity of native Rice Rats and endemic snails have mostly been driven to extinction by Black Rats.

For five consecutive years, Galápagos Conservancy has supported the Agency for the Regulation and Control of Biosecurity and Quarantine for Galápagos (ABG), which conserves biodiversity by detecting and responding to the arrival and spread of invasive species and diseases transmissible to wildlife and humans. This agency does amazing work tackling these complicated problems, and benefits from Galápagos Conservancy through critical funding to address emergency threats.

Just like the incredible people I know here in the U.S., clearing prairie of invasive Buckthorn and bringing the mighty American Chestnut back from near extinction, ABG and Galápagos Conservancy won't quit until Galápagos is free of invasive species and native flora and fauna can thrive again.



Avian Vampire Fly © Charles Darwin Foundation



Fire Ant © Galápagos National Park Directorate



Blackberry groundcover at Los Gemelos © Joshua Vela/Galápagos Conservancy



Feral cat caught on wildlife camera © Galápagos Conservancy

**OUR MISSION TO
STOP GIANT TORTOISE EXTINCTIONS**

When Lonesome George — the last individual Pinta Island Giant Tortoise — died in 2012, the species was declared Extinct. But soon after, expeditions to Wolf Volcano on Isabela Island stumbled upon a cohort of Giant Tortoises that looked like Pinta Island Giant Tortoises. DNA sequencing in 2015 revealed that, indeed, these individuals were descended in part from those historically found on Pinta Island.

This groundbreaking discovery means we may be able to bring an extinct species of Giant Tortoise back to life.

But why bring just one species back from extinction when you could revive two? Also on Wolf Volcano, a similar discovery was made with the Floreana Island Giant Tortoise — a large group of tortoises found there descended from Floreana. In a strange twist of fate, whalers likely translocated these tortoises long ago from their home islands to Isabela, inadvertently preserving the lineage. Many of these tortoises with genes of the Floreana and Pinta species have now been moved to the Santa Cruz Breeding Center where they are reproducing. One day soon, the offspring of these tortoises will be

released back into the wild on their home islands, and we can declare the resurrection of Pinta and Floreana Giant Tortoises.

But we cannot and will not allow any more Giant Tortoise species to go extinct. This is why Galápagos Conservancy is ramping up our Giant Tortoise conservation program in 2023 and beyond with a critical focus on the Breeding Centers to help restore wild populations.

But before the wild release of Giant Tortoises, suitable habitat must be available to receive them. In some places, invasive species, mainly Black Rats, still pose a problem. As the Galápagos National Park Directorate and its partners move ahead with rat eradication efforts and habitat restoration on the tortoises' home islands, Galápagos Conservancy supports building up tortoise numbers through captive rearing at the Park's facilities and field expeditions to plan tortoise reintroductions. Soon, as a result of these combined efforts, we hope tortoises will reign again, and even become “de-extinct” on Pinta and Floreana Islands, which would be a major accomplishment for Galápagos and endangered species rewilding programs globally.



Photo: Joshua Vela/Galápagos Conservancy



Technology Advances Conservation in Galápagos

A scientist attaches a tracking device to the dorsal fin of a Whale Shark in Galápagos © Jonathan Green

by Dr. Jorge Carrión

Director of Conservation, Conservando Galápagos

Technological advances in recent decades have been essential for saving endangered species across the globe. Galápagos Conservancy embraces technological innovation to facilitate biodiversity conservation and guard against species trafficking.

One example of the technological innovations that we use are PIT tags (Passive Integrated Transponders), placed subcutaneously in wildlife. PIT tags provide a unique and durable identifier that tracks individual animals through their lifespans, allowing us to measure growth rates, movements and habitat use, and to estimate survival and population size — all critical information for managing endangered species.



Understanding activity patterns and movements of species is particularly useful, and for this purpose we use GPS tracking devices that transmit animal locations via satellite to us in real time. Similarly, Galápagos Conservancy supports the Galápagos Whale Shark Project, which aims to better understand the movements and breeding habits of one of the most magnificent sea animals by tagging individuals with satellite tracking devices to monitor their movements

SNAPSHOTS: Infrared motion sensors in wildlife cameras snap an array of photos each time movement is detected. © Joshua Vela/Galápagos Conservancy

both within and outside the Galápagos Marine Reserve.

Camera traps placed in strategic locations teach us about wildlife behavior patterns and help us estimate population sizes. When an infrared motion sensor detects the presence of an animal, a photo or video is taken automatically. We have hidden over 100 camera traps across Wolf Volcano on Isabela Island that provide priceless knowledge about the interactions of Pink and Yellow Iguanas, the predatory activity of invasive cats and rats, and the nesting habits of the imperiled Pink Iguana.

In a first for Galápagos, we are about to place a Starlink satellite dish atop Wolf Volcano that will transmit live feed to see wildlife activity in real time and link our hidden camera trap network to send us real-time images.

Importantly, these camera traps have another vital role in detecting and reporting in real time the presence of poachers and hunters so we can immediately deploy park rangers and the police to apprehend them. Without this technology, we would know much less about how to save the remarkable Pink Iguana from extinction.

We have used drones to secure high-resolution imagery and measure habitat quality for tortoises, iguanas, and Waved Albatrosses. And we are currently using remotely sensed data from satellites with support from NASA to measure

how the Archipelago is changing and how best to plan out tortoise rewilding programs for the future.

We also frequently employ molecular genetic techniques to determine each individual's exact species and origin, genetic variability in populations of rare species, and even levels of kinship between individuals. When a group of 185 juvenile Giant Tortoises were intercepted from animal traffickers late last year, genetic analysis was used to determine their island of origin. Now in the Santa Cruz breeding center and with their home origins determined, these young tortoises will have a second chance at life once again in the wild when they are released.

Finally, tiny microgram amounts of scales, teeth, and bone from fishes, sea lions, and tortoises have been sampled to measure their stable isotope composition with an atomic mass spectrometer, thereby enabling us to learn where they were born, what these animals eat, and how their diets have changed over their lifetimes.

All these technological tools are essential for the management and conservation of Galápagos wildlife. We are so fortunate to have these incredible tools at our disposal and share these resources with the Galápagos National Park Directorate and Conservando Galápagos to advance conservation in Galápagos.

SATELLITE TRACKING: As seen here, GPS tracking devices are attached to the carapaces of Giant Tortoises to help scientists understand their movements, behaviors, and to combat poaching. © Joshua Vela/Galápagos Conservancy



HOME SWEET Isabela



by Cristian Gil Jaramillo
Technical Assistant
Conservando Galápagos

Being born and raised in Puerto Villamil on Isabela Island has been a privilege. It also comes with an enormous responsibility – to care for and conserve everything that surrounds me.

I had a very happy childhood with my family and many friends. I was surrounded by mangroves, Scalesia, Ceiba, and coffee trees, as well as Marine Iguanas, Lava Gulls, Flamingos, and a range of other sea life and land animals, including Giant Tortoises in the Galápagos National Park's Breeding Center. This diversity of plants and animals gave me a lot of peace. As I grew up and learned more, I began categorizing everything around me, starting to understand the role of each as an element in our ecosystem. From a young age, I learned the difference between endemic and introduced species and why I could pet my dog but not a Marine Iguana. Knowing what to touch, what not to touch, what to care for, and what to keep under control has always inspired me. I realized the importance of biodiversity here, and I wanted to play my part in its preservation. This was a fundamental starting point, which shaped my decision to pursue a degree in Environmental Science from the University of Buenos Aires, Argentina. I wanted to learn the necessary tools to contribute to the conservation and sustainable use of our Islands' natural resources.

Conflict between the institutions in charge of conserving nature in the Islands and the local people who seek to satisfy their basic needs has long been a challenge in Galápagos. Sadly, two essential animals in the

Galápagos ecosystem, Giant Tortoises and sharks, have been caught up in this conflict. Local people have long relied on tortoises for food, and catching sharks has been a source of income. To protect these amazing animals, conservation action for Giant Tortoises started in 1965 with the creation of the captive breeding and rearing program. In 1998, the Galápagos Marine Reserve was created to conserve sharks and other important sea life.

But the transition to a culture of conservation and a sustainable society has not been easy. In my childhood, it was common to see shark fins drying on the roofs of houses. And the poaching of Giant Tortoises on Isabela has gone on since the beginning of human colonization of the Island. But conservation action by the Galápagos National Park Directorate and allied organizations has been effective, and Isabeleños — people who live on Isabela Island — now enjoy and welcome shark sightings. We love to show our visitors how majestic Galápagos species are, especially Giant Tortoises.

The impact of conservation efforts in Galápagos is visible, but threats remain and the path ahead is complicated. There is still demand for shark fins and tortoises. Nevertheless, the current public understanding of the importance of conservation here is much stronger than ever before. Our past successes provide hope and motivation for Isabeleños to get involved in these noble activities and, in this way, to vindicate ourselves as human beings who are aware of the privilege to call Galápagos home.

Local Solutions for Local Challenges

by Richard Knab,
Director of Strategic Partnerships

As a leading conservation organization, Galápagos Conservancy believes that it is our responsibility to invest in the long-term protection of the Galápagos Islands by educating Galápagos youth in the principles of conservation and sustainability.

Our Education for Sustainability Program operates under the guiding principle that effective conservation requires those living and working in the Islands to understand and appreciate their unique home. That's why over the past six years, all 7,300 PreK through 12th grade students have learned core subjects through month-long deep dives into essential topics in Galápagos, ranging from sustainable food systems and food security to invasive species, marine and terrestrial biodiversity, and sustainable energy.

Sindi Vélez, mother of two elementary students, remembers that not long ago, learning only took place in classrooms, and children didn't learn much about Galápagos at school. "I am thrilled to see my children learning outside, where teachers help them link theory and practice and push them to work together and exchange ideas as they experience their natural and man-made surroundings."

Juan Carlos Valladares, a junior in high school, appreciates the opportunity to learn about the intersection of economic, environmental, and social realities in the Islands. "We just finished an excellent month of learning about the Galápagos Marine Reserve — its most important species, the dangers of overfishing and bycatch, and traditional fishing methods that can help sustain fisheries. Much of this happened in the community, where we experienced firsthand what we need to do to protect and conserve all that surrounds us."

At the core of this major shift in education are 430 Galápagos teachers who have worked tirelessly to develop novel teaching strategies and a team of 40 teacher-leaders who are actively involved in the professional development of their peers. One of these leaders, Patricia Padilla,



Mayra Flores with Sindi Vélez and Juan Carlos Valladares
© Unidad Educativa Inmaculada Stella Maris

believes cooperation is key. "Six or seven years ago, teachers of different subjects never collaborated. Now there is intentionality associated with the way we work with one another. The teaching approaches we implement are exciting, but teacher collaboration and teamwork are just as important."

Galápagos Conservancy is pleased to announce that this year, it has restructured the Education for Sustainability Program, transitioning it entirely to Galápagos to be operated by Galapapagueños, led by the recently hired Mr. Lenin Rogel, who along with his team will ensure all students in the Islands graduate from high school as conservation-minded architects of a more sustainable Galápagos.

GUSTAVO MANRIQUE

Q: What is the Hermandad Marine Reserve?

A: The Hermandad Marine Reserve, established by Executive Decree 319, is located on the northeastern side of the Galápagos Marine Reserve (GMR) and extends 37,282 miles. The new Hermandad Marine Reserve serves as a biological corridor for more than 20 migratory species with varying degrees of threat, including sharks, sea turtles, and manta rays. These species migrate between the two protected areas: Galápagos and Cocos Island, Costa Rica, following the underwater mountain range that provides them with food. Some species from Galápagos such as Sea Lions, Waved Albatrosses and Galápagos Sharks have been found in this area, leaving the Archipelago to feed.

Because this area is located in a biological corridor through which several vulnerable species pass during their migratory routes, protection for this area can be expanded to ensure that these species are not harmed by human activities.

Q: What is the new marine reserve's purpose?

A: The Ecuadorian government announced the creation of this new reserve at COP 26 in Glasgow, Scotland as a way to bring the world's attention to the need to protect our oceans. The scientific proposal has undergone technical review and confirms the existence of the underwater mountain range used by endangered migratory species on their routes between Galápagos and Cocos Island, also known as a migratory highway.

Q: What other efforts are being made to conserve marine species?

Learn more about the amazing conservation efforts underway to protect marine species by scanning the QR code below with your phone.



Saving Species from Shore to Sea

In 2022, Galápagos Conservancy invested in more marine conservation initiatives than ever before, including projects focusing on Whale Sharks, Hammerhead Sharks, Blacktip Reef Sharks, Sea Lions, Fur Seals, Sea Turtles, Galápagos Penguins, Blue-footed Boobies, Waved Albatrosses, coral farming, and plastic pollution. In 2023, we'll build on this momentum by expanding these ambitious projects even further.

Photos: Sea Lions, Sea Turtles, Waved Albatrosses, Blue-footed Boobies, Galápagos Penguins © Joshua Vela/Galápagos Conservancy; Whale Shark © Jonathan Green; Fur Seals © Lisa Hayward-England; Hammerhead and Blacktip Reef Sharks © Greg Asner; Coral farming © GNPD; Más Arte jewelry © Mayra Hernandez



LONESOME GEORGE GETS A MAKEOVER

Thanks to Galápagos Conservancy supporters, Lonesome George has a new, improved display case, and visitors have a better viewing experience.

Visitors to the Galápagos National Park Directorate headquarters on Santa Cruz Island first walk along La Ruta de la Tortuga (Tortoise Path) to view Giant Tortoises of all ages in the Breeding Center. At the end, they enter “The Symbol of Hope” exhibit where the taxidermy of Lonesome George rests.

Since 2017, The Symbol of Hope exhibit has been a dimly lit room containing a simple glass case for Lonesome George against a rear wall. Since the display was not climate controlled, visitors were required to wait in a cold anteroom before entering so their body temperatures did not heat up the viewing room and degrade the specimen.

Lonesome George’s new display case is made of a special acrylic that blocks ultraviolet rays and has the same professional-level climate control conditions used by the best museums around the world. Visitors no longer need to cool their bodies down before entering, and the specimen will be better protected from deterioration over time. The display case is now placed at the center of the room so visitors can walk around George’s entire body for a 360°view. These changes will also allow for additional museum-quality interpretive signage about Lonesome George and Giant Tortoise conservation, coming soon.

Even ten years after his death, Lonesome George is one of the most famous reptiles in the world and an icon for conservation. He was the last surviving individual of his Giant Tortoise species, *Chelonoidis abingdoni*, from Pinta Island. In 1971, József Vágvölgyi, a Hungarian scientist studying Galápagos’ unique Land Snails, visited Pinta Island and, coincidentally, he and his assistant found the only remaining Giant Tortoise inhabiting the Island. Lonesome George was transferred to the Galápagos National Park Directorate Breeding Center. In his new home, the chelonian lived the rest of his life until he died of natural causes on June 24, 2012, leaving no descendants.

PRESIDENTIAL VISIT: President of Ecuador Guillermo Lasso (center, in blue) visited Galápagos for the reopening of the Lonesome George exhibit
© Galápagos Conservancy

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 donation support.

Plus, Galápagos Guardian recurring monthly donors receive this exclusive iron-on Pink Iguana patch!



Scan the QR code or visit galapagos.org/winter2022 to become a Galápagos Guardian monthly donor today.

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