

WINTER 2021

# GALAPAGOS

POST

## ■ SAVING THE PINK LAND IGUANA



- A HISTORIC VICTORY: GALÁPAGOS MARINE RESERVE EXPANDED
- INICIATIVA GALÁPAGOS
- FERNANDINA EXPEDITION PREVIEW
- WOMEN IN SUSTAINABLE ENTREPRENEURSHIP
- GALÁPAGOS TEACHERS SHINE IN VIRTUAL EDUCATION



Galápagos  
Conservancy



# The Pillars of Galápagos Conservation

Reflecting on 2021, I feel grateful and proud for Galápagos Conservancy supporters, partners, and staff. We achieved so much. With your support, we confirmed the identity of Fernanda, the last-known surviving Fernandina Giant Tortoise. This discovery brings new hope to save the species. We led the world's first expedition to Wolf Volcano to census the Pink Land Iguana population and assess the conservation needs of this vibrant and critically endangered species. We strengthened our ties with the Galápagos National Park Directorate through a renewed and more robust agreement — *Iniciativa Galápagos* — to focus on key species, food sources, and habitats. We earned the top-tier, four-star rating from Charity Navigator which validates the confidence our donors place in Galápagos Conservancy due to our proven efficiency and effectiveness. In 2021, we lived up to our mission to protect the global treasure that is the Galápagos Islands.

I am looking forward to a new year and new focus on three pillars of sustainability that will drive our efforts going forward: **Rewilding Species**, **Restoring Ecosystems**, and **Realizing Sustainability**.

In 2022, we will focus on rewilding Giant Tortoises and their primary food source, the Opuntia Cactus. The Pink Land Iguana project, Galápagos Penguin protection, and a host of new marine conservation programs will also take center stage while we remain vigilant to protect all 59 critically endangered Galápagos species from imminent extinction. We cannot lose one more.

To restore Galápagos, we must combat invasive species. We are investing in biocontrol of the invasive Avian Vampire Fly (*Philornis downsi*) that preys on hatchling birds and threatens the survival of Galápagos species like Darwin's Finches. Other invasive species, such as the Asian blackberry, grow in dense

thickets, smother all native plants, and crash the ecosystem. We are working hard to control these invasives and more, to restore the fragile balance on the Archipelago.

Realizing a sustainable society in Galápagos is essential to achieving our conservation mission. We are incredibly proud of our Education for Sustainability program that trains teachers to impart conservation wisdom to all 7,000 Galápagos PreK-12 students. I am delighted to announce that this year we are awarding Women in Sustainable Entrepreneurship (WISE) grants to ten Galápagos eco-leaders who are bringing sustainability to their communities through enterprise.

Even with so much innovation and perseverance, I am alarmed by the continued threats of extinction, climate change, and invasive species. Galápagos wildlife is too precious to lose, so we must stop extinction now. Galápagos Conservancy is the most important global entity working to preserve, protect, and restore Galápagos ecosystems and biodiversity. I am proud of the phenomenal field team we have assembled in Galápagos. They endure harsh conditions and solve complex problems to pull species back from the brink. For that matter, our entire staff is dedicated to bringing people together to safeguard the Galápagos Islands.

But we could not do any of this without you. So, as we move through the joyous holiday season and onto a new year, I send you heartfelt gratitude. Your generosity and dedication are inspiring to me, and I am ever thankful.

Together for Galápagos,

Dr. Paul Salaman  
President



Dr. Paul Salaman  
President



## There is no second Galápagos.

From biodiversity loss and overfishing to climate change and the ongoing impacts of the pandemic, the challenges in Galápagos grow more profound each day. That's why we need you on our side.

Our critical conservation work in the Archipelago simply is not possible without the support of our community of more than 13,000 members. Your generosity is the difference between keeping the wildlife and ecosystems of Galápagos healthy and watching them succumb to the unprecedented threats they now face.

Our shared vision for a Galápagos that remains vibrant and wild in perpetuity is not an impossible dream, but it will require innovative, collaborative, and long-term solutions.

As we look toward 2022, we are counting on your support to help us invest in Galápagos conservation. We'll be expanding our species rewilding programs with Giant Tortoises and Pink Land Iguanas, funding the Galápagos National Park's fleet of patrol boats to detect and stop illegal fishing in the newly expanded Galápagos Marine Reserve, and continuing to empower tomorrow's conservation leaders. We do all of this, and so much more, because Galápagos is irreplaceable.

**Thank you for protecting Galápagos with us.**

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Pink Land Iguana © Joshua Veltz

☐ **YES!** I'd like to help make 2022 one of the greatest years for conservation in Galápagos history.

Member Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Email: \_\_\_\_\_

☐ My check is enclosed.

Or, please charge my:

☐ Visa ☐ AMEX ☐ Mastercard ☐ Discover

Name on Card: \_\_\_\_\_

Card Number: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

Signature: \_\_\_\_\_

One-time donation Amount: \$ \_\_\_\_\_ **or**

Monthly donation Amount: \$ \_\_\_\_\_

☐ I'd like to make this gift a monthly gift and become a member of the Galápagos Guardians. By checking this box, I agree to have my credit card charged once a month for the amount indicated above (\$10 minimum).

Questions? Email: [member@galapagos.org](mailto:member@galapagos.org)  
Cut out, use centerfold envelope, or mail this form to:

**Galápagos Conservancy**  
PO Box 1818  
Merrifield, VA 22116

**To make your gift online, visit**  
**[galapagos.org/donate](https://galapagos.org/donate)**

If your employer matches charitable contributions, you could double your impact on conservation in Galápagos.

**Galápagos Conservancy's EIN # is 13-3281486.**



(B21K)





A New Partnership with Hurtigruten Expeditions

We are thrilled to launch a new philanthropic partnership with one of the world’s leading adventure travel operators, Hurtigruten Expeditions. Hurtigruten will begin offering cruises to Galápagos in 2022, and to support conservation in the Islands, they will donate 1% of the purchase price of every cruise to Galápagos Conservancy. With a dual focus on sustainability and exploration, Hurtigruten’s mission aligns closely with our own, and we are grateful for their commitment to protecting the Archipelago’s wildlife and ecosystems. Their cruises will travel to 11 different areas around the Islands, giving guests the chance to fully experience the unique landscapes and wildlife this incredible place has to offer, while also learning about the importance of sustainability and conservation. Find out more at [hurtigruten.com/destinations/galapagos-islands](https://hurtigruten.com/destinations/galapagos-islands). Photo © Hurtigruten Expeditions



Española expedition confirms self-sustaining population

Galápagos Conservancy Vice President for Science and Conservation, Dr. James Gibbs, led an intensive, island-wide survey of Española Island in June and July of 2021 that engaged more than 40 Galápagos National Park rangers and Galápagos Conservancy staff — all expert observers and uniquely capable of navigating in the field. We were seeking urgently needed information to guide

the Park in its long-term conservation management of the island, specifically regarding the populations of Giant Tortoises and Waved Albatross that only occur on the island. During the expedition we found almost all of the 15 original survivors of the Española tortoise species, except the famous Diego, who was well-ensconced in dense vegetation. However, we know he and all the others remain very active and moving about the island based on the GPS tracking devices they carry. We now estimate these 15 tortoises have generated a population of almost 3,000 descendants on the island; about three-quarters of those are their own “kids” hatched in captivity and released to the island over the last 50 years, but now every fourth tortoise is native hatched, meaning they are “grandchildren” of the original 15 that hatched directly on the island. The tortoise population continues to grow, so we can now confirm the restoration program has been a tremendous success and the species status can be considered for downgrading from Critically Endangered to Endangered. Park rangers also explored the southern section of the island to perform the first ever island-wide survey of the nesting population of the Waved Albatross. Based on preliminary results, it is evident that the nesting population appears to be larger than we previously thought — 20,000 adults minimum. We look forward to reporting final outcomes from this massive survey in 2022 when the analyses are complete.



Upcoming Return to Wolf Volcano

We will soon return to Wolf Volcano on Isabela Island for a follow-up trip during which we will begin the process of bringing materials to construct a permanent hut that will serve as the base of operations for Pink Land Iguana

research and restoration activities. We will also download footage from the trap cameras we set during the first expedition — nine on or near the summit of the volcano in the adult iguanas’ habitat, and three in the interior of the crater, where we believe breeding activity may occur.



First 5 WISE Grants Awarded

Our first five Women in Sustainable Entrepreneurship awardees, while diverse in scope and conservation goals, are each striving to encourage a cultural shift in their communities. From teaching regenerative farming and building a culture of learning through sustainability to promoting the use of native plants and creating awareness through repurposing pollution, these projects are representative of the diverse, interconnected, and important work of the WISE Grant Program. The first five grant recipients are Karina Bautista (Huerta Luna Farm and Regenerative Agriculture Book; photo above), Alice Bartlett (The Book Shop & Reading Center), Mirian Silva (Native Plant Gardens), Mireya Vasco (Cafe Embrujo), and Mayra Elizabeth Hernandez Nacato (Más Arte, Menos Basura).



Supporting Galápagos Artists

Galápagos Conservancy is pleased to announce *Handmade Galápagos*, a new partnership with Celebrity Cruises and Galápagos-based FUNCAVID, the “Un Cambio por la Vida (A Change for

Life)” Foundation. Our organizations are working together to develop and launch a first-of-its-kind online marketplace that will offer 100% locally made handicrafts for purchase. By featuring and benefiting Galápagos residents, the site will be both a means of economic revitalization and an archive of audio-visual storytelling about local artistry. We have partnered with Celebrity Cruises since 2004, and this is our first year working with the sustainable development organization FUNCAVID on Handmade Galápagos and the Women in Sustainable Entrepreneurship Grant Program.



Vampire fly mortality differs across Darwin’s finch host species

Hybrid offspring of small and medium tree finches could provide clues on how to stop the parasitic Avian Vampire Fly (*Philornis downsi*) that may cause up to 100% nestling mortality of the famous Darwin’s Finches. Fewer of these invasive flies were found in nests with hybrid chicks revealing that they may have more effective anti-parasite behavior (such as the parents picking the larvae off the nestlings), have a novel immune defense, or perhaps the adult flies are less attracted to the material used in the nests. The next step is to determine what possible defense mechanism is so effective against *Philornis downsi* as it may well be a solution to this great threat to Galápagos landbirds. Read the full study at [galapagos.org/a/finch](https://galapagos.org/a/finch). Photo © Kiyoko Gotanda



GC at the IUCN World Congress

This August, more than 4,000 conservationists from more than

120 countries came together at the International Union for Nature Conservation World Conservation Congress in Marseille, France. Our President Dr. Paul Salaman and Director of Conservation Washington Tapia were proud to represent Galápagos Conservancy at this important gathering. One of the many topics discussed was the urgent need to expand the protected marine area around Galápagos, which is now a reality. The conference also highlighted the importance of inclusivity in conservation. Collaboration with local people is essential to “Reverse the Redlist.” Stopping extinctions of species such as Pink Land Iguanas, Giant Tortoises, Scalloped Hammerhead Sharks, and Galápagos Penguins is up to all of us, working in concert together. Photo © IISD/ENB



An Icon Falls

Darwin’s Arch collapsed into the sea in May. The beauty of nature lies not in its permanence, but in its constant transformation. Galápagos, more than any place on Earth, is a symbol of that change and evolution, so though we are saddened to lose the structure due to natural erosion, it’s a reminder of the power of nature’s architecture and the need to preserve wild places while we still can.



Galápagos offers safe, secure travel

Galápagos continues to have very few cases months after the May 2021 campaigns vaccinated over 90% of the local community over the age of 16. Simple protocols such as the use of

masks and social distancing remain in place to protect residents and guarantee Galápagos as a secure travel destination while ensuring its ecological protection. As vaccinations globally become more available, the Islands are experiencing an upturn in the tourism-based economy that was crippled when the pandemic cut this vital economic lifeline. Vaccinated and tested researchers are now able to resume field work, which is great news for conservation. Photo © Dietmar Plath



Follow the Snail Trail

The endemic *Bulimulus* land snails have colonized most major islands and are found across five vegetation zones in Galápagos. The genetic diversification of the native land snails points to their incredible adaptive radiation as an example of how intense island conditions can drive physical changes. Many of the known 100+ species were only recently classified when in 2009, Jacqueline De Roy donated her husband André’s extensive collection, which was meticulously cataloged since they settled in the Archipelago in the 1950s. These exhilarating discoveries also produced sobering conclusions. The snails’ habitat has decreased due to development and expanding agriculture plus pressure from invasive predators such as rats and the Giant African Snail. Several species have become extinct and many are endangered. Their loss is a warning and a reminder that the conservation of the inconspicuous is essential for the survival of the amazing birds, lizards, and other animals that share their habitat. We will be launching a new project in 2022 to survey populations of endemic land snails across the Archipelago. Stay tuned over the coming year as we share stories from this program. Photo © Bryan Maitland



BY DR. JORGE CARRIÓN

PHOTOGRAPHS BY  
JOSHUA VELA & DR. JORGE CARRIÓN



# SAVING THE PINK LAND IGUANA

*In early August, a team of scientists and park rangers led by Galápagos Conservancy Conservation Manager Dr. Jorge Carrión traveled to Wolf Volcano on Isabela Island to conduct the first-ever comprehensive population census of the critically endangered Pink Land Iguana. Their findings? **211 remain on Earth.***

The remote slopes of Wolf Volcano on Isabela Island are home to an endemic species at risk of imminent extinction — the critically endangered Pink Land Iguana. First described as a new megafauna species in 2009 by a group of scientists including my colleague Washington Tapia, the Pink Land Iguana is the only living species with an ancient lineage that diverged from land iguanas approximately 3.7 million years ago, and one of the oldest known examples of genetic diversification in Galápagos. Because of this, the International Institute for Species Exploration at Arizona State University has designated the Pink Land Iguana as one of the most important new species in the development of evolutionary science this century.

The Pink Land Iguana is easily identified by its vivid fuchsia coloration. This unique trait is caused by the iguana's lack of skin pigment, which allows the blood underneath to show through. They are not just a different color from other Galápagos land

iguanas; they are morphologically, behaviorally, and genetically different.

They are as iconic as they are enigmatic. Their intrigue comes from their unique appearance, recent discovery, and limited geographical range, as well as the challenges inherent in conserving a species that is so little understood. Our trip to Wolf Volcano revealed so much new information about this mysterious creature.

By using the mark-recapture method of population evaluation during our 10-day expedition to Wolf Volcano, we uncovered an alarming truth: 211 Pink Land Iguanas are all that stand between the survival and permanent extinction of this incredible species. Even worse, we did not find any juveniles. Despite this, the data we collected is a game-changer for defining the urgent action plan to rescuing this rare but beautiful reptile.

We documented never-before-seen behavior such as their symbiotic relationship with Darwin's Finches, which feed on parasites on the iguana's body. We witnessed the unexpected sight of an iguana seeking out the sun on a tree branch in an area where the sunlight couldn't penetrate the dense undergrowth (including the first-ever photo taken of this behavior; top left in gallery on the bottom of this page). Because we did not find any juveniles, the big remaining mystery is how, when, and where do Pink Land Iguanas nest. We installed 12 camera traps with motion sensors near their active burrows, allowing us to capture the behavior of these wild animals on film when we cannot be there to observe. **Scan the QR code** on the bottom right of this page with your phone's camera to watch some of the first footage from these cameras, in addition to a video recap of our expedition to Wolf Volcano.

We hope the cameras will shed light on the Pink Land Iguana's behavior, reproductive cycle, threats from invasive species, and relationship with the Yellow Land Iguana population that shares the same habitat. While protecting this rare animal is urgent, we also need to determine its role in the broader Wolf Volcano ecosystem.

In August 2021, we presented the findings from our Wolf Volcano expedition to local, national and international experts gathered at a workshop to define a step-by-step strategy that will result in the 2021-2030 Conservation and Management Plan for the Pink Land Iguana. We are currently working with our partners, including the Galápagos National Park Directorate, Island Conservation, Re:wild, Tor Vergata University of Rome, Houston Zoo, and San Diego Zoo to define and systematize this plan, which will be complete in the coming months.

We have already committed to follow-up expeditions to Wolf Volcano to collect additional information on breeding and nesting behavior, as well as to construct a permanent hut to serve as a base of operations for future fieldwork.

We hope that the trap cameras we have installed will help fill in many gaps in the baseline knowledge of this rare animal, such as identifying the time of year they breed and pinpointing the Pink Land Iguana nesting zone. The cameras will also document other important behavior, such as the role of the burrows in regulating body temperature, and protecting the iguanas from introduced feral cats and rats, which are known to prey on juvenile iguanas.

This is a new project for our Rewilding Program. We hope to be as successful saving these unique animals as we have in bringing the Giant Tortoise back from the brink of extinction. I look forward to having you with me every step of the way.



I come from a farming family in the Santa Cruz Island highlands. My generation was exposed to nature at home, and conservation consciousness was reinforced by environmental education programs in and out of school and the socio-economic influence on our community of a world fascinated with the wildlife living around us. I have a PhD in conservation biology from the Universidad de Sevilla in Seville, Spain, and was a professor at the Central University of Ecuador Campus in Galápagos before a career with the Galápagos National Park Directorate. As their Director, I was duly impressed by the positive impact of the decades of strategic contributions by Galápagos Conservancy to protecting the Archipelago. However, I am at heart a field researcher and therefore thrilled to now be part of the conservation team. Plus, it is personally gratifying to see the shift to increased local representation in decision-making as the new generations take up leadership, management and research roles. I am so grateful to be a part of this community alongside you and our tens of thousands of supporters across the globe.

For Galápagos,

*Jorge Carrión*

Dr. Jorge Carrión  
Conservation Manager





# Women In Sustainable Entrepreneurship

BY ALEX ANTRAM



**Karina Bautista**  
Huerta Luna Farm

*The WISE program provides support that empowers women eco-entrepreneurs in Galápagos like Karina Bautista, founder of Huerta Luna Farm, who works with local farmers, tour operators, restaurants, and others to expand sustainable agriculture.*

This summer, Galápagos Conservancy partnered with Goldman Sachs to launch the Women in Sustainable Entrepreneurship (WISE) Grant Program. The goal of the program is to invest in women-led, locally driven business projects with a conservation or sustainability focus. At the year’s end, we will have awarded over \$70,000 in WISE grants to ten women living in the Islands, supporting native plant propagation, sustainable artistry, youth education, and more.

Karina Bautista, one of our first WISE awardees, laughs as she describes herself as a “farming rebel.” Committed to conservation and the communal and celebratory nature of sharing wholesome food, Karina was dismayed at her difficulty finding organic, locally grown produce for her family in Galápagos. Farming in a way that benefits landscapes and wildlife is often seen as expensive and difficult, but for the human and environmental health of her home, Karina was compelled to prove

**HUERTA LUNA:** Founder Karina Bautista (center) with team members Maritza Castillo (left) and Susana Rodríguez (right). © Katie McElearney

otherwise. In 2016, she founded Huerta Luna, a research farm focused on discovering the agroecological practices best suited for farming in Galápagos.

Agroecology is the application of ecological principles to farming. Under that umbrella, Karina practices resilient permaculture, which is concerned with observing, imitating, and learning from nature, because “nature is resilient in its best form.” This approach is adaptive and works in tandem with native ecosystems instead of against natural processes. Foregoing unnatural fertilizers and pesticides and favoring diversity in plant species, this method can produce “a lot of food and health per acre — not only health for you as a human being, but health for the soil and health for the whole ecosystem.”

Karina was first introduced to these concepts while visiting collectively managed farms in the Amazon Basin. There, she saw successful community conservation in action. “They were creating change in a much more effective way” than she had previously seen in her sustainable development work. “Wherever these farms were, there was change. There was change at the community level. There was change with families. There was real change, not only in well-being, but in the community and how they helped each other and nurtured, fed, nourished [one another] physically and economically.” Karina knows this is possible for Galápagos, despite naysayers believing the terrain is too difficult

or there are too many invasive plants and pests. Farming can be regenerative and restore healthy ecosystem processes alongside improving social dynamics. But this knowledge is useless if not shared.

Karina is ready to publish on the Huerta Luna team’s six years of data collection, analysis, and adaptation of agroecological techniques. Her WISE grant is funding the publication and

But Karina has a message for you, too. This is an urgent call for people to invest in sustainable farming wherever they live. Individuals can make change and transform communities through working with, and not against, nature.

Start at home by using local vendors, growing food, or joining a co-op if you can. Karina feels growing our collective consciousness towards a conservation ethic is the best way



## INVESTING IN WOMEN THROUGH CONSERVATION TRANSFORMS COMMUNITIES

promotion of an accessible, engaging book on sustainable farming tailored to anyone living or working in the Islands. Karina is eager to host outreach events where people can learn, have fun, and “experience the flavors” created through resilient agriculture and collective action. She wants to connect with other farmers, gardeners, food distributors, chefs, mothers, cruise operators, political players — any and all people impacted by potential food insecurity in Galápagos.

to shift incorrect perceptions about agriculture. “You have to understand nature and you have to nurture it,” Karina shares.

*Galápagos Conservancy is thrilled to be supporting Karina in this endeavor. Thank you to Goldman Sachs and a generous donor for making this investment in creating a more equitable and sustainable future for Galápagos.*



**BEHIND-THE-SCENES:** Maritza Castillo oversees daily operations and conducts innovative experiments to identify plants that produce both high yield and nutrient regeneration.

**VISIT FROM THE PRESIDENT:** Karina Bautista explains the organic fungi-based compost accelerant to Galápagos Conservancy President Paul Salaman at Huerta Luna Farm.





An expanded agreement between Galápagos Conservancy and the Galápagos National Park Directorate launches a new phase of a historic conservation collaboration.



# A New Era of Conservation

A Giant Tortoise hatching emerges from its egg © ILCP/Pete Oxford

We are thrilled to announce the launch of *Iniciativa Galápagos*, a major expansion of our decades-long partnership with the Galápagos National Park Directorate to protect and restore the Galápagos Islands.

*Iniciativa Galápagos* replaces and expands upon the Giant Tortoise Restoration Initiative, a joint effort between Galápagos Conservancy and the Park that has become one of the most successful species and ecosystem restoration programs in the world. The new program will continue to focus on the restoration of Giant Tortoises across the Archipelago and will also develop innovative scientific solutions for the management of the critically endangered Pink Land Iguana, the Opuntia Cactus, and other native wildlife and plant species.



As part of the agreement, the Park will facilitate all Galápagos Conservancy research through the use of boats, remote field bases, labs, and other infrastructure, as well as assign Park Rangers to assist in the execution of research alongside Galápagos Conservancy scientists. Galápagos Conservancy will lead joint field research activities, invest in visiting researcher and volunteer programs, and provide training and technical guidance to the Park in the restoration and management techniques of the target species.

“This landmark agreement starts a new era of collaboration and cooperation,” said President Dr. Paul Salaman. “With Galápagos Conservancy’s major commitment to providing funding and

scientific expertise to the Park, we reaffirm and strengthen our leadership role in rewilding the endangered species of Galápagos, including the Pink Land Iguana and all 12 extant Giant Tortoise species.”

Thank you to our community for your unwavering support of our work with the Park. We owe our past success to you, and we look forward to continuing to work together to rewild Galápagos in the decades to come.



## PLANNING FOR THE FUTURE

In the wild, newly hatched tortoises face drought, food scarcity, and predators both native and introduced. Only 10% of eggs hatch and live to five years of age. In captivity, however, over 90% reach the five-year milestone, after which they can safely rejoin their native habitats. We recently helped redesign and expand the Santa Cruz and Isabela Island breeding centers to include new corrals like the one you see above to house the adults and juveniles. We also improved the specialized pens where hatchlings prepare for release into the wild. For decades, the breeding center depended on hairdryers connected to a timer to keep the temperature constant for tortoise egg incubation. But now, state-of-the-art incubators have been installed. Genetic analysis has opened a window of opportunity for cutting-edge conservation to restore partial-ancestry tortoises to Floreana Island, where they are extinct, in the near future. Floreana will be home to newly released young tortoises, where they will provide “ecosystem engineering” by trampling vegetation, opening areas, and dispersing seeds. This will help to recover ecosystem processes and provide improved habitat conditions for other native species.



The Galápagos Ambassador Society is the cornerstone of our work to ensure the long-term protection of the Islands' extraordinary species and fragile ecosystems. By becoming an Ambassador with (cumulative) annual giving of \$1,000 or more, you join an inner circle of supporters who are fueling our efforts to preserve this ecological wonder. Members receive exclusive benefits, including personal communication with our philanthropy staff, insider-only conservation updates, recognition in our annual report, and a unique welcome gift.



## Join the Galápagos Guardians by December 31

Members of our monthly giving program, the *Galápagos Guardians*, provide the consistent, dependable support that our scientists and partners rely on to operate critical conservation programs year-round. Start your recurring donation by December 31 and your first 12 monthly gifts will be **TRIPLED** by a generous donor! **You'll also receive our 2022 calendar as a complimentary gift.** Don't miss this opportunity to maximize your impact on the wildlife and ecosystems of Galápagos.

To join, select the monthly giving option on page 3, scan the QR code above, or visit [galapagos.org/guardians3X](https://galapagos.org/guardians3X).

# BE A CHANGEMAKER FOR GALÁPAGOS



Above the clouds on Wolf Volcano © Joshua Vela

- Española Society:** \$1,000 to \$2,499
- Pinta Society:** \$2,500 to \$4,999
- Santiago Society:** \$5,000 to \$9,999
- Fernandina Society:** \$10,000 to \$24,999
- Isabela Society:** \$25,000 and up

## MAKE GALÁPAGOS CONSERVATION PART OF YOUR LEGACY



## Support Galápagos Conservation with a Planned Gift

- You can join the *Galápagos Legacy Society* by:
- Making a bequest to Galápagos Conservancy through your will, living trust, or other charitable trusts
  - Naming Galápagos Conservancy as a beneficiary of a charitable remainder trust or charitable lead trust
  - Naming Galápagos Conservancy as owner and beneficiary of a life insurance policy
  - Naming Galápagos Conservancy as beneficiary of all or part of a retirement plan

To inform us of your planned gift or to learn more, contact Director of Philanthropy Alex Antram at [alex@galapagos.org](mailto:alex@galapagos.org).





Scan the QR code with your phone's camera to watch a video recap of our 2020-21 impact with President Dr. Paul Salaman.



Results from the first-ever comprehensive census of the Pink Land Iguana will guide decisions about their protection. Trap cameras and regular monitoring will give us important insights into their behavior and threats.

*Wolf Volcano*



Our census estimated a population of 12,000+ tortoises, the healthiest among all species in the Islands and trending up after the eradication of feral goats. The team also located tree ferns that were presumed extinct.



Galápagos  
Conservancy  
galapagos.org



We launched Galápagos Vital Signs, an online, interactive dashboard of current environmental conditions in the Islands, that allows scientists to analyze important data, plan expeditions, and make predictive models.

*Santiago*

*Alcedo Volcano*



The Darwin's Flycatcher is sadly close to extinction on Santa Cruz Island. Our investments help to restore their feeding and nesting grounds and eliminate the parasitic Avian Vampire Fly larvae that kill fledgling birds in the nest.

Photo © Rob Jansen

*Santa Cruz*

*Santa Fe*



The final group of juvenile Giant Tortoises joined a growing population on Santa Fe. Annual monitoring efforts have shown that the tortoises are effectively acting as "ecosystem engineers" to complete the successful restoration of the island.

*Floreana*



We expanded and renovated the Giant Tortoise breeding centers on several islands, including on Santa Cruz, where we are breeding tortoises with partial genetic ancestry to the extinct Floreana Giant Tortoise to bring back this invaluable ecological engineer and restore the island's habitats.

Photo © Louise Allinson

*Isabela*



Our grant recipient at the University of Washington reported that Galápagos Penguins are breeding in the artificial nests built in safe zones. Scientists observed a notable increase in the number of juveniles and well-nourished adults.

Photo © Cynthia Manning

*Fernandina*



The female tortoise we found with the Galápagos National Park Directorate in 2019 was confirmed as a Fernandina Tortoise, believed extinct for 112 years. We will soon begin to thoroughly search the island in the hopes of finding a mate and saving the species.

Photo © Lucas Bustamante

*Galápagos Marine Reserve*



We are working with partners to protect the rich waters of the newly expanded Galápagos Marine Reserve, including a host of migratory species that are increasingly vulnerable to large commercial fishing fleets operating near the Reserve's perimeter. Our partners are also researching the consequences of potentially invasive species that arrive on floating plastic debris.

Photo © Michael Haber

# OUR IMPACT



The COVID-19 pandemic cut a critical economic lifeline for the Islands and complicated vital field research. The generosity of our supporters in a time of unprecedented need enabled Galápagos Conservancy to continue to make strides in our conservation work and to provide strategic support for our partners across the Archipelago.



Across the populated islands, including San Cristóbal, our Education for Sustainability team moved teacher training workshops online to continue their essential work teaching students conservation awareness and sustainable social responsibility.

*San Cristóbal*



After 55 years, we and our partners closed one of the most successful captive breeding programs in the world. The original 15 adult tortoises that saved their species from extinction went home to Española Island to join the self-sustaining population that has begun breeding naturally.

*Española*





BY WASHINGTON TAPIA

## EXPEDITION: FERNANDINA



Fernanda at the Santa Cruz Breeding Center © Lucas Bustamante

### THE EVIDENCE IS CLEAR. THERE ARE STILL TORTOISES ON FERNANDINA ISLAND.

That's why, during the months that have passed since the last expedition in early 2021, we are planning a new series of expeditions to locate them amidst the inhospitable landscape of Fernandina.

Formed approximately 500,000 years ago by magma that escaped through a fissure in the Earth's submarine crust and lifted an existing seamount above the surface, Fernandina and its basaltic shield volcano, La Cumbre, sit at the epicenter of the volcanic hotspot that created the Galápagos Islands. During an eruption in 1968, its summit caldera collapsed, falling approximately 1,200 feet. As you can see in the photo above, the northern floor of the caldera intermittently holds a small lake, whose size, boundaries, and position morph with each eruption. Recent eruptions have occurred both in the caldera and on the outer slopes of the volcano, with some of them reaching the sea. Since the establishment of the Galápagos National Park in 1959, there have been 13 recorded eruptions on Fernandina, with some of them lasting for several days. The most recent eruptions were in May of 2005 and April 2009.

Thanks to the highest level of volcanism in the Archipelago, approximately 60% of Fernandina's total surface area is covered with lava. This includes *pahoehoe*, characterized by a smooth, billowy surface, and *a'a*, which is jagged and sharp. Its topography is in a constant state of change, making planning and mapping expeditions to the island highly challenging — even trekking routes planned with the utmost precision can be changed in an instant. And all members of our expedition teams must proceed cautiously, as a slip on the sharp *a'a* lava can leave deep wounds in the skin.

Since I started my work with Galápagos Conservancy in 2014, we had been planning to do a mega expedition to look for tortoises on Fernandina. But since the world was convinced that the Fernandina Giant Tortoise (*Chelonoidis phantasticus*) was extinct, few people wanted to invest in what appeared to be a lost cause. But thankfully, Animal Planet stepped up to fund the expedition. I am also grateful to our supporters and donors, including Ken and Diane Saladin, for helping to finance follow-up expeditions that have helped us gather critical information on the location of additional tortoises.



The moment of Fernanda's discovery.

Once we returned to Santa Cruz, the initial excitement eventually ceded to an inevitable question: Is Fernanda truly a specimen of *Chelonoidis phantasticus*? That question was resolved only a few months ago when our colleague, Dr. Gisella Caccone from Yale University, compared Fernanda's DNA to that of the remains of the individual located in 1906 and confirmed that she is indeed the only known living individual of the species.

If you've been following us on social media lately, you will have learned about ecosystem engineers and how Giant Tortoises fill that critical role in Galápagos. Basically, through their daily activities — eating, dispersing seeds in their feces, trampling down vegetation — Giant Tortoises are the architects of healthy terrestrial ecosystems in which all species can thrive. That's why we focus so many resources on their protection and restoration.

Thanks to the generosity of our community, Galápagos Conservancy, in partnership with the Galápagos National Park Directorate, has completed three follow-up expeditions to Fernandina since we located Fernanda in 2019. Though we did not locate additional tortoises during these expeditions, we were able to gather valuable clues. In three different areas, we have found tortoise walking paths, tracks, feces from a few months ago, and even beds, where it is clear that some animals recently rested. All these discoveries show me that there are at least two or three more tortoises wandering through the rugged landscapes of the island. They're searching for other tortoises, just like we are.

The next expedition is being planned to take place in the next few months. A team of at least 30 park rangers and scientists will head into the field for ten days with a detailed search plan and the will to do whatever it takes to locate the tortoises. Inch by inch, we will cover around 15 square miles between sea level and 2,300 feet above sea level on the west flank of the island, in the areas where we have previously found their footprints, feces, and beds.

I am convinced that this time we will be able to find one or more companions for Fernanda.

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*We need your urgent support to fund these expeditions to save the Fernandina Giant Tortoise, one of the most critically endangered species in the world. There are more tortoises on the Island, but finding a mate for Fernanda won't be possible without you. Become part of the team by donating at [galapagos.org/fernandinatortoise](https://galapagos.org/fernandinatortoise).*



**2009 ERUPTION:** The eruption (bottom left, opposite) began on April 11, 2009, and lasted for 17 days, ending on April 28. © Paula LeVay

**THE MAN WHO FOUND FERNANDA:** Galápagos National Park Ranger Jeffreys Málaga (bottom right, opposite) was the first to find Fernanda sheltering inside a small cave in a patch of vegetation (top left, opposite). © Washington Tapia







BY RICHARD KNAB

# Resilience, Collaboration, and Initiative: Galápagos Educators Shine in Response to COVID-19

**S**tories about the impact of COVID-19 on teachers and the teaching profession in the United States, where morale is often low and many educators are leaving the profession or are applying for early retirement.

In Galápagos, things are different. During the tenth Teacher Institute of our Education for Sustainability Program this October, we asked the 400 participants the following question: Reflecting on the teaching profession and your role as an educator, how would you compare your current level of motivation with your motivation just prior to the COVID-19 pandemic?" The response? More than 83% of teachers replied that they were more motivated or much more motivated. Only 3% replied that their motivation had diminished.

While a part of this encouraging feedback is undoubtedly due to the flexibility and adaptability of those living in the Islands, a main factor is the combination of growing skills, teamwork, and sense of purpose among Galápagos teachers, as described in an article recently published in the prestigious *Journal of Environmental Education*.

In "Resilience, collaboration and agency: Galápagos teachers confronting the disruptions of COVID-19," the authors document how the skills, resourcefulness, and professional networks developed through the Education for Sustainability Program, have helped Galápagos educators to teach about local environmental topics and tap local expertise, despite unequal access to technology and the internet.

Galápagos educators face another opportunity to test their mettle as they implement the new Contextualized Curriculum for

Galápagos (CCG) launched by the Ministry of Education at the beginning of the current school year.

The CCG centers around three globally recognized pillars of sustainability (economy, society, and nature) and 14 themes, such as food security, transportation, energy, biodiversity, and social inclusion. The curriculum also mandates the use of Project-Based Learning (PBL) — a type of experiential learning that engages students in learning cycles in which they explore real-world problems—with teachers serving as expert coaches and guides in the learning process. Ecuador's Ministry of Education views Galápagos as a pilot for expanding this kind of education to every region in the country.

An important part of implementing the new curriculum involves integrating local experts to help teachers learn more about local and global conservation and sustainability themes and to validate their ideas — especially related to the design and implementation of meaningful hands-on learning opportunities. For the recent Institute, Ecology Project International (EPI-Ecuador) coordinated the design and implementation of 23 field trips on four islands through which environmental educators from EPI-Ecuador, the Galápagos National Park Directorate, the Universidad San Francisco de Quito, the Galápagos Biosecurity Agency, the Municipality of Santa Cruz, the Charles Darwin Foundation, the Jototoco Foundation, and the Galápagos Education and Research Alliance (GERA) modeled best practices in experiential learning.

Implementing the new curriculum represents a big challenge for Galápagos educators. Fortunately, it demands the very same skills and high-level of collaboration we have been helping to build

**TEACHER INSTITUTE:** Galápagos teachers explore the nature, origin, and ways to mitigate the plastic waste that washes up on Playa Ratón, Santa Cruz, during one of 23 field trips designed by local environmental educators as part of our tenth teacher Institute in October. © Xavier Castro

over the past five years. It also requires ongoing teacher coaching from program staff and the 60 teacher-leaders we are training through the program. Over the past five months, a team of 18 of these leaders collaborated in the design and implementation of the 2021 October Institute. This was the first time local educators led the activities, and they did so with impressive capacity.

While COVID-19 continues to challenge all residents in Galapagos, the Islands' educators continue to shine and impress as schools in the Islands slowly begin to open once again.

Their progress was noted by Ana María Loose, Director of EPI-Ecuador and leader in the design of the contextualized curriculum, during the Institute: "I was so excited to attend a group planning session, where 20 teachers of all subjects worked collaboratively and energetically to connect the new curriculum for Galápagos with meaningful activities related to invasive species. Teachers have learned so much through the ESG Program. As a member of the community, it fills me with pride to know we can count on such dedicated and talented teachers, who will have a great impact on future generations."

*The Education for Sustainability Program, now in its sixth year of implementation, is conducted in partnership with the Galápagos-based Scalesia Foundation, Ecuador's Ministry of Education, and a growing number of local collaborators.*



## Introducing Dr. Dan Sherman, Galápagos Conservancy Board Chairman

Dr. Dan Sherman first set foot in Galápagos in 2002 as a young scientist while on a tourist trip with family and friends. What he experienced over the next ten days was transformative. A trip to see a place that he initially thought may be on the verge of ecological collapse due to human-caused degradation, instead ended up imbuing a sense of hope for conservation and restoration. Shortly after returning home to California, Dr. Sherman made his first-ever donation to a conservation-focused nonprofit organization — Galápagos Conservancy.

Dr. Sherman's initial visit to Galápagos triggered a dream of making a contribution to conservation in Galápagos that was bigger than what he could afford to make in dollars. After gaining experience in bioinformatics and knowledge management in the biopharmaceutical industry, he became involved in GC's Knowledge Management program, returning to Galápagos in 2011 and 2012 for GC-sponsored workshops in knowledge management and citizen science.

His participation in these workshops expanded Dr. Sherman's understanding of GC's catalytic role in Galápagos: identifying conservation priorities and connecting the people and organizations equipped to tackle them. When he was later invited to serve on the Board of Directors, Dr. Sherman jumped at the opportunity to contribute to conservation work in Galápagos by helping GC, and he is thrilled to continue his service as Board Chair.

Not content with board service alone, Dr. Sherman also initiated a project that uses gigapixel repeat photography to monitor changes in landscapes over time. He has returned to Galápagos several times to work on this project and has provided images to a number of Galápagos conservation efforts, especially for our work with Giant Tortoises.

Ironically, while Dr. Sherman first traveled to Galápagos because of his assumption of unstoppable environmental



Dr. Dan Sherman in Galápagos © Dan Sherman

degradation, it turns out the opposite is true. Since his first steps in Galápagos in 2002, GC-funded and GC-led efforts have led to significant recovery of Galápagos ecosystems via the control of invasive species and restoration of endemic species. Dr. Sherman points out that significant challenges remain, but if the last two decades of GC's work are a guide, the future holds significant promise.

Dr. Sherman extends his heartfelt thanks to Galápagos Conservancy President Dr. Paul Salaman, President Emeritus Johannah Barry, and the entire GC team who work tirelessly to help GC fulfill its mission; members of the GC Board of Directors who volunteer their time to help guide GC; and to the many donors who place their trust in GC to protect and restore one of the world's most magnificent places.

Dr. Sherman began his first term on the Galápagos Conservancy Board of Directors in 2013 and was elected to his third term in 2020. He has a Ph.D. in Biology from the University of California San Diego.

Lastly, we are profoundly grateful to our previous esteemed Chair, Bradley T. Johnson, who has completed his term limits on the Board but continues to be a stalwart supporter of Galápagos Conservancy. We are thankful to Brad, Dan, and our entire Board of Directors who are so engaged and committed to supporting the organization.





Photo © Lucas Bustamante



Photo © Luis Ortiz Catedral



Photo © Mike Spalding



Photo © Karen Chiasson



Photo © Matthew Meier



Photo © Maidi Candler

## EXPERIENCE THE GALÁPAGOS ISLANDS YEAR-ROUND

Our 2022 calendar, *The Endangered Species of Galápagos* (cover page shown here), was created exclusively for Galápagos Conservancy supporters to celebrate the incredible but fragile array of life in the Islands. The brand new collage format includes more than 50 beautiful photographs of 12 of the most endangered species in the Galápagos Islands. Plus, for the first time ever, the calendar photos come to life through Augmented Reality video. To order your copy, scan the QR codes (opposite) with your phone's camera.



Scan this QR code to join the Galápagos Guardians, our community of monthly donors, by December 31 and we'll send you the 2022 calendar at no extra cost!

or



Scan this QR code to purchase the calendar directly.



Photo © Marian Todd



Photo © Richard Whitcombe



Photo © Joshua Vela



Photo © Pete Oxford



Photo © Max Weinmann



## Donor Profile Judie and Al Muggia

When she met her future husband at a Vermont horseback riding camp in 1953, Judie Muggia knew her life would change. But she never imagined this connection would take her to Ecuador and Galápagos, inspire her to build a successful travel agency, and lead her to becoming one of the Archipelago's fiercest supporters of conservation-centered education for students in Galápagos.

Vermont is also where Judie met her first love: the wonder of the natural world. As a child at Quaker summer camp, she romped, explored, and uncovered the delights and mysteries of nature. Her most eye-opening moment was finding a broken beaver skull bearing its ever-growing, scythe-like teeth — evolutionary tools to etch and engineer wilderness. Discovering nature fascinates Judie because, "there's always something to find out."

Judie's husband, Al, was an Italian WWII refugee who fled to Ecuador with his family in 1939. Harvard brought him stateside, and the need for work brought him to the fated Vermont horse camp. This world-wise stable boy would later whisk Judie, as if in a fairytale, to paradise. Successive visits to Galápagos gave Judie the same adoration for the unique wildlife and harshly glorious landscapes shared by us all. However, Judie's connection with Galápagos is firstly a connection to people. And it was her own sense of justice and generosity that led her to champion access to education for young Ecuadorians and Galápagos residents.

In 1990, she started a travel agency to acquaint Americans like herself with the transformative wilderness and heart-wrenching beauty of the Islands. It was also this independent business that allowed her, and compelled her, to give back. Judie becomes misty-eyed when she remembers the first scholarship that she and Al awarded to a young Ecuadorian who wanted to become a ship captain — a



bright and eager man, whose successes fill her with pride as much as those of her own sons.

Over the years, Judie observed that many children growing up in Galápagos did not have access to environmental education about their sensational home. She vividly envisioned the essential need to connect Galápagos residents, especially children, with nature. The young people of Galápagos needed their own beaver-skull moment, and she was going to be the one to make that happen.

That is how the Galápagos Conservancy's Education for Sustainability program was born. Judie was among a small group who supported the initiative in the years before it formally launched in 2016. A mere five years later, and with the support of many other dedicated donors —perhaps yourself included — Galápagos Conservancy now facilitates biannual institutes that train more than 400 teachers to educate over 7,000 students about ecology, conservation, zoology, botany, habitat restoration, and more. As Judie puts it, this program allows "the teachers and parents to understand sustainability and impart to the kids that their choices, their personal choices, will make a difference to the sustainability of the Islands."

Judie continues, "People are part of nature. You cannot protect, maintain, and guard Galápagos if nobody's there caretaking. If you want to save what's left and improve what's left, like the iguana project, and the tortoise project, it takes people. And it takes investment...You lose the Islands if you don't train these kids, the families, and the teachers. It's that simple. Education is the basis of anything that goes well, anywhere in the world. That's why the Conservancy is such a gimme. I went from helping one person at a time to helping everyone on the Islands. It's really wonderful and it has got to keep going."



Judie and Al Muggia. Photo courtesy of Judie Muggia.

## Giant Tortoises: The Ecosystem Engineers of the Galápagos Islands

by Aaron Provencio

To the untrained eye, Española Island, a small, arid spit of land in the extreme southeast of the Galápagos Archipelago, may seem unremarkable. However, to the Galápagos conservation community, Española represents the perfect coalescence of successful wildlife repopulation efforts, endangered species protection, and ecosystem engineering.

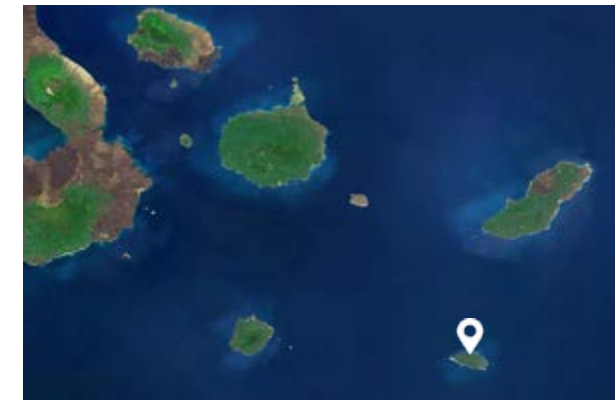
Ecosystem engineers are species that disproportionately modify their environment in a significant way by creating, maintaining or modifying habitat conditions in a manner that benefits other members of that biological community. In Galápagos, Giant Tortoises fill that role.

This June, an expedition led by Galápagos Conservancy and the Galápagos National Park Directorate returned to Española Island to monitor the ongoing habitat modifications being made by the 2,300+ captive-bred tortoises that have been released on Española over the past 45 years. When invasive feral goats were eliminated from Española in the late 1970s, the woody vegetation that their grazing had suppressed took over the island. This thick foliage made it difficult for Waved Albatrosses to access their traditional nesting grounds on Española, as they require bare rock openings to take off, land, and nest.

The restored tortoises, thanks to their movements across the landscape, have been clearing space for albatross nesting sites and "airstrips" for landing. They have also been dispersing the seeds of native plants including the Opuntia Cactus, a favorite food for many of the island's inhabitants. Thanks to these modifications, Waved Albatrosses have found more openings on which to raise their young and have slowly made their way inland.

By continuing to prioritize the preservation and recovery of Giant Tortoise populations throughout the Archipelago, we not only secure a future for this species, but we can use them as an ally in our fight to restore ecosystems across Galápagos.

**ESPAÑOLA ISLAND:** At the far southeast corner of the Archipelago, Española Island is the site of one of the most successful wildlife and ecosystem restoration projects in the history of the world.



**REPATRIATION CONCLUDES:** In the 1960s, 14 Española Giant Tortoises remained in the world. Now, there are more than 2,500, a thriving community that now sustains its population naturally. As of 2020, the program is closed. © Galápagos National Park Directorate



**HABITAT RESTORATION:** Through their movements and other behaviors, Giant Tortoises help create nesting, take-off, and landing areas for the critically endangered Waved Albatross. © Joshua Vela/Galapagos Conservancy



**A HEALTHY COLONY:** Blue-footed Boobies and Nazca Boobies that make their nests along the visitor trail near the western cliffs of the island are thriving.



Scan the QR code with your phone's camera to watch our livestream on Ecosystem Engineering with Dr. James Gibbs.





A congregation of Scalloped Hammerhead Sharks at Darwin Island © Jonathan Green

# A HISTORIC VICTORY FOR MARINE CONSERVATION

ON NOVEMBER 1, THE U.N. CLIMATE CONFERENCE (COP26) IN GLASGOW, SCOTLAND, WAS THE SITE OF A HISTORIC ACHIEVEMENT FOR GALÁPAGOS AND GLOBAL MARINE CONSERVATIONISTS WHEN ECUADORIAN PRESIDENT GUILLERMO LASSO ANNOUNCED THE EXPANSION OF THE GALÁPAGOS MARINE RESERVE, INCLUDING A CRUCIAL NO-TAKE MIGRATORY CORRIDOR THAT CONNECTS THE MARINE RESERVE WITH PROTECTED COSTA RICAN WATERS.

President Lasso's declaration expands the Galápagos Marine Reserve by 14.8 million acres (23,166 square miles), a 45% increase from its previous size of 32.6 million acres (51,000 square miles). The new protected area is 2.5 times the size of Maryland and covers more water surface area than Lake Michigan. The total size of the marine protected area (MPA) now extends 47.4 million acres (74,000 square miles).

This decision also creates a no-take migratory corridor that connects the protected waters of the Galápagos Marine Reserve and Costa Rica's Cocos Island National Park. This previously unprotected band of water in the Eastern Pacific, known as the *Galápagos-Cocos Swimway*, has been at the center of intense conservation advocacy in the last few years.

The swimway is one of the most important migratory routes in the world — an underwater superhighway for an array of threatened and endangered migratory species like Whale Sharks, Scalloped Hammerhead Sharks, Manta Rays, Sea Turtles, Tuna, and many more. Ecuador's decision now allows them to travel from Darwin Island on the northern border of the Galápagos Marine Reserve to the limits of Ecuador's territorial waters without encountering fishing gear, a move achieved after reaching a consensus with Ecuadorian artisanal and industrial fishermen potentially affected by the change. By eliminating this haven for industrial fishing, the biodiversity-rich space between the two marine UNESCO World Heritage Sites is secured, reducing the impact on vulnerable marine wildlife. We expect that populations of these threatened and endangered species will soon begin to rebound.

The agreement between Ecuador and Costa Rica will serve as a model for multinational collaboration in marine conservation going forward. The creation of this new sanctuary is just the beginning. The day after the exciting news that Ecuador had taken the lead on creating the swimway, the presidents of Ecuador, Costa Rica, Panama, and Colombia announced that the four countries would create a vast MPA, the Eastern Tropical Pacific Marine Corridor, by extending and joining their current MPAs, thus setting the stage for a united regional ocean governance framework for migratory species. This connectivity between reserves is vital — the same Scalloped



Whale Shark © Steven M. Jenkins

Giant Manta Ray © Rich Carey

Green Sea Turtle © Michael J. Haber

Hammerhead Sharks that divers encounter in the Galápagos may be the same sharks that divers later see in Costa Rica, Panama, and Colombia.

This is a historic moment for Galápagos and a major victory for global marine conservation. Many organizations, including Galápagos Conservancy, were active in pushing for this important step, so we would like to congratulate President Lasso and the people of Ecuador for this incredible success. We also owe a special note of gratitude to our close collaborator Dr. Alex Hearn, creator of our Shark Count app, whose research on the importance of this swimway elevated the issue to global prominence.

Galápagos Conservancy is committed to stepping up to ensure the protection of these newly established sanctuaries. We will continue to provide financial support for the Galápagos National Park's patrol boats that monitor and prevent illegal fishing in the Marine Reserve's boundaries. We also have groundbreaking new marine projects planned for 2022, including more grants focused on marine conservation than ever before. We look forward to sharing these stories very soon.

Although conservation work is never done, we can celebrate a major victory for Galápagos and for our planet.



## VISION: 2022

In 2022, thanks to the incredible generosity of our community, we will expand our direct conservation programs while also funding a record-setting 34 grants to scientists and conservationists. Below, we are proud to introduce you to a sampling of these projects. Thank you for making our work possible, and we look forward to sharing these stories with you over the coming year.

- REWILDING **GIANT TORTOISES** ACROSS THE ARCHIPELAGO
- SAVING THE CRITICALLY ENDANGERED **PINK LAND IGUANA**
- PROTECTING THE **GALÁPAGOS MARINE RESERVE**
- INCREASING THE **GALÁPAGOS PENGUIN** POPULATION
- IDENTIFYING BREEDING ZONES FOR **HAMMERHEAD AND BLACKTIP SHARKS**
- RESEARCHING **WHALE SHARK** REPRODUCTION AND MOVEMENTS
- ASSESSING THREATS TO **GALÁPAGOS SEA LIONS AND FUR SEALS**
- RESTORING THE **PUNTA ESTRADA CORAL REEF**
- MONITORING **BLUE-FOOTED BOOBY** POPULATIONS
- RESTORING THE CRITICALLY ENDANGERED **MANGROVE FINCH**
- MONITORING NEST PREDATION AND POPULATION TRENDS IN THE **MEDIUM TREE FINCH**
- SURVEYING POPULATIONS OF THE ENDEMIC **GALÁPAGOS LAND SNAILS**
- STUDYING THE THREAT OF INTRODUCED SPECIES ON THE ENDEMIC **GALÁPAGOS GECKO**
- DEVELOPING A BIOCONTROL AGENT FOR THE **INVASIVE ASIAN BLACKBERRY AND LANTANA CAMARA**
- PROTECTING BIODIVERSITY THROUGH **EARLY DETECTION OF NON-NATIVE INVASIVE SPECIES**
- EMPOWERING **WOMEN ECO-ENTREPRENEURS**
- EDUCATING **GALÁPAGOS STUDENTS** IN SUSTAINABILITY AND CONSERVATION





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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.**

## MAKE 3X THE IMPACT AS A GALÁPAGOS GUARDIAN

ALL NEW MONTHLY RECURRING GIFTS MADE BY DECEMBER 31 ARE TRIPLED FOR A YEAR!

### ■ WHY DOES YOUR MONTHLY RECURRING GIFT MATTER?

- ✓ It provides sustaining support that we can count on to protect and restore Galápagos.
- ✓ It's an efficient and eco-friendly way to give that reduces paper and mail processing.
- ✓ It's the easiest and most convenient way to give. Make one monthly gift today, and know your charitable giving is set for this year and beyond!
- ✓ Plus, you can change or cancel your monthly gift at any time.



**Join the Galápagos Guardians by Dec. 31 and receive a complimentary 2022 calendar! Scan the QR code above or visit [galapagos.org/guardians3x](https://galapagos.org/guardians3x) to sign up.**

Not ready to become a Guardian? Your one-time gift will still be doubled if made before the end of 2021.



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Cover Photo: Pink Land Iguana on Wolf Volcano © Joshua Vela/Galápagos Conservancy

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