Fundación
Charles Darwin
Foundation
GALAPAGOS

IMPACT REPORT 2023

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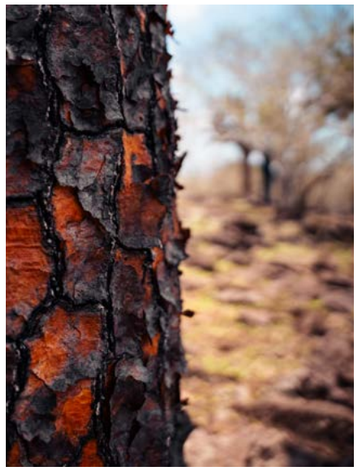

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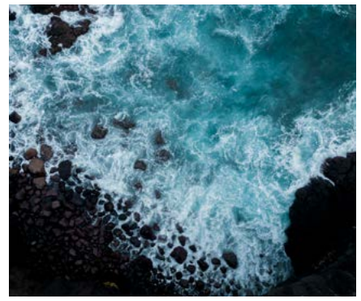

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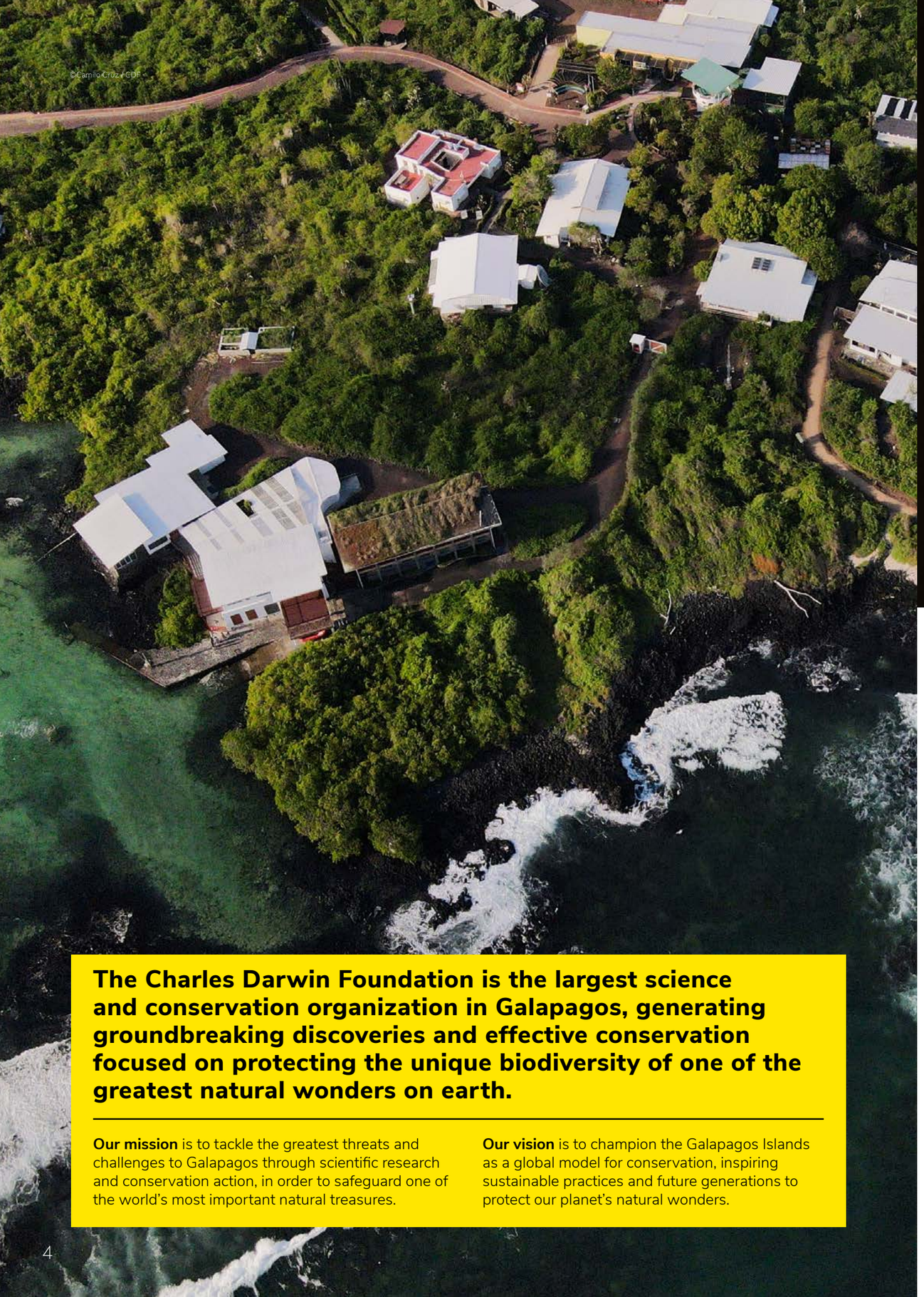

The Charles Darwin Foundation is the largest science and conservation organization in Galapagos, generating groundbreaking discoveries and effective conservation focused on protecting the unique biodiversity of one of the greatest natural wonders on earth.

Our mission is to tackle the greatest threats and challenges to Galapagos through scientific research and conservation action, in order to safeguard one of the world's most important natural treasures.

Our vision is to champion the Galapagos Islands as a global model for conservation, inspiring sustainable practices and future generations to protect our planet's natural wonders.

LETTER FROM OUR PRESIDENT

Dear Friends and Supporters,

In 2023, the Charles Darwin Foundation and its Research Station experienced remarkable growth, marking a pivotal year as we confront the critical conservation challenges ahead for Galapagos.

Our newly adopted mission, ratified into the Foundation's statutes in June 2023, underscores our strategic direction: safeguarding one of the world's most precious natural treasures. Complementing this, our fresh vision outlines Galapagos as a global model for conservation, inspiring sustainable practices and galvanizing the next generation to protect our planet's natural wonders. Both provide us with a clear guiding star, setting us up for the next 50 years.

Internally, governance enhancements have been a top priority. We're in the process of establishing Board committees to bolster strategy execution, and ensure accountability across everything that we do. We've further strengthened our Board with the addition of John Loudon, Executive Director of COmON Foundation, and Ecuadorian entrepreneur Carla Pinto, our new Board Treasurer; both bring unique skill-sets and networks to the table. Furthermore, the finalization of our Code of Ethics, set for implementation in 2024, marks a significant milestone as we align our organization with international standards.

All in all, I am hugely pleased with the progress made against our 5-year strategic plan, that is a testament to the dedication of CDF's management team. Their efforts in 2023 position us strongly to amplify our impact in 2024, alongside our key partner, the Galapagos National Park Directorate, and our collaborative network of institutions and donors.

Protecting Galapagos is paramount, as it holds the potential to influence global conservation efforts. It is my belief that if we protect Galapagos, we can impact the world.

Thank you for joining us on this important journey.

Sincerely,

Yolanda Kakabadse
President of the Board of Directors
Charles Darwin Foundation for the Galapagos Islands

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LETTER FROM OUR EXECUTIVE DIRECTOR

Dear Members, Friends, and Supporters of the Charles Darwin Foundation,

As I reflect on 2023 and all that transpired last year, it is my sincere hope that it will be remembered as a year that provided a glimmer of hope for nature and our oceans. Historic milestones were reached in global conservation, including Ecuador's landmark debt-for-nature swap, the signing of the High Seas Treaty, and the UN's 30x30 targets, underscoring a much-needed positive trajectory.

This positive momentum for our planet was also evidenced at CDF in 2023 and I am delighted to share with you our latest achievements in our 2023 Impact Report.

STRATEGIC HIGHLIGHTS

In June 2023, and after a lot of internal discussion and process, we unveiled our new mission statement to the world: *to tackle the greatest threats and challenges to Galapagos through scientific research and conservation action, in order to safeguard one of the world's most important natural treasures.* This new mission statement, while not a radical departure from our previous statement is a modern upgrade, and sets the tone for our collective purpose going forward, acting as our north star in everything that we do. Importantly, it adds an urgent action to our work, that of conservation action. As such we are now charged with not just scientific research, but also supporting its implementation.

Significant progress was made against the priorities set out in our 2022-2027 Strategic Plan. After almost two years of preparation, we published our much-anticipated Science Plan that will guide our science and conservation priorities for the coming 5-10 years. We further strengthened our leadership team, with the recruitment of new Human Resources and Finance Directors in 2023, as well as our new Chief Development Officer who started in March 2024. We strengthened our mid- to long-term financials, securing a total of $33 million in funding over the next five years, which will be essential as we continue to deliver sustainable *conservation impact in, with* and *for* Galapagos. Last but not least, major improvements to our campus infrastructure were made, with the installation of a stable internet connection through Starlink, the upgrade of our website and the finalization of plans for the overhaul of our scientific *Tomás Fischer* buildings, with construction set to begin in the second half of 2024.

RESEARCH HIGHLIGHTS

On the research front, and following more than a decade of planning, 2023 was marked by the implementation of Galapagos' most ambitious conservation effort to date: the Floreana Restoration Project, of which our scientific teams have been an integral part.

The year was also marked by exciting discoveries and projects in the ocean realm. A vast deep-sea coral reef was discovered inside the Galapagos Marine Reserve in April 2023 by one of our scientists aboard the *R/V Atlantis'* "Galapagos Deep" expedition – the first of its kind to be documented in the marine reserve. These pristine reefs provide a unique opportunity to further our understanding of deep-sea ecosystems and their role in ocean health.

In turn, our dedication to cutting-edge marine science and conservation leadership in the Eastern Tropical Pacific (ETP) region was evident in securing important new projects. Thanks to funding from USAID, we are leading an important shark and ray conservation initiative in Ecuadorian waters alongside WWF-Ecuador. We also launched a new initiative to support deep ocean exploration in Galapagos and the ETP, with the support of the Bezos Earth Fund and the Gordon and Betty Moore Foundation. The latter requires the coordination with partners in all ETP countries and represents the largest transnational research effort we have led in CDF's history.

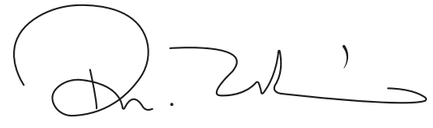
Finally, we expanded our science focus with new research lines in ocean governance and sustainable tourism - both exciting and highly relevant fields in our rapidly changing regional landscape.

LOOKING AHEAD

As we set our sights on 2024 and beyond, it is clear to me that CDF is poised for even greater conservation impact in Galapagos, the ETP and beyond, and these efforts are perfectly aligned with our new mission.

In closing, I would like to extend my deepest gratitude to our funders for their unwavering support throughout. Together, we are embarking on the next chapter of CDF's journey, united in our mission to safeguard the extraordinary biodiversity and future of the Galapagos Islands and the Eastern Tropical Pacific region as a whole.

Sincerely,



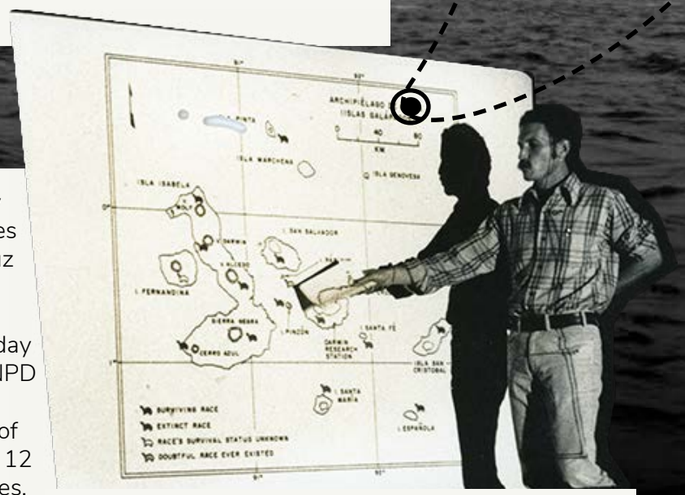
Rakan Zahawi
Executive Director
Charles Darwin Foundation for the Galapagos Islands

65 YEARS OF PARTNERSHIP: TOGETHER FOR THE CONSERVATION OF THE GALAPAGOS ISLANDS

Born just weeks apart from one another 65 years ago, the Charles Darwin Foundation (CDF) and the Galapagos National Park Directorate (GNPD) have shared the same unwavering mission of protecting the unique biodiversity of the Galapagos Islands through the sustainable development of the islands.

To be successful, scientific research needs to be reinforced with complementary policies and actions, and our long-standing mutualistic partnership has only strengthened this complementary dynamic through the years with each research and conservation milestone. In this special 65-year edition of CDF's impact report, we would like to remember and celebrate some of our major common achievements:

1959: The GNPD and CDF were founded on the 4th and 23rd of July, respectively, under the auspices of UNESCO and the IUCN in order to protect the wildlife and conserve the ecosystems of Galapagos.

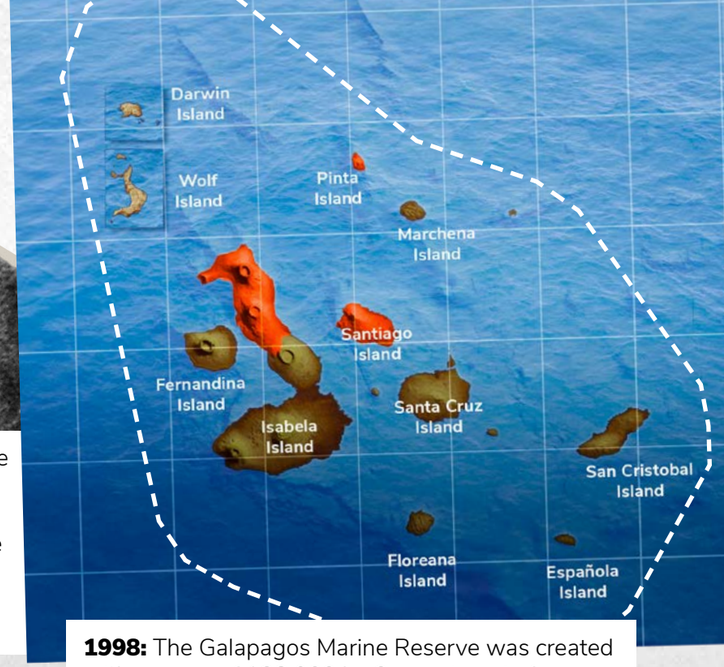


1965: The Breed in Captivity and Repatriate Giant Tortoises program began on Santa Cruz Island with eggs transferred from Pinzón Island. While started by CDF scientists, today the Program is run by the GNPD and since its inception it has facilitated the reintroduction of more than 6,730 tortoises to 12 different islands and volcanoes.

1973: The first Galapagos National Park Management Plan was launched.

1986: The Marine Resource Reserve for the Galapagos Islands was established with an area of 80,000 km2.

1997: Project Isabela was initiated alongside the GNPD to eradicate large introduced species responsible for the decline of numerous endemic and native species in the north of Isabela and on Santiago and Pinta Islands. This major successful undertaking took almost a decade to conclude.



1998: The Galapagos Marine Reserve was created with an area of 138,000 km2; a major win for ocean conservation.

2000: The pioneering Galapagos Quarantine and Inspection Program (SICGAL), today known as ABG, was started to prevent the introduction of invasive species into the archipelago.

2002: CDF researchers and GNPD staff deliberately released the Australian lady bug to control for the invasive cottony cushion scale insect – the archipelago's first successful biocontrol program.

2009: For its 50th anniversary, CDF initiated the Floreana Ecological Restoration Project, led by Island Conservation, Jocotoco Foundation, and the GNPD, with CDF support.

2014: The first Mangrove Finch is born at the Charles Darwin Research Station, as part of the 'Captive Rearing Program', in an effort to save this critically endangered species from extinction.

2015: CDF scientists, with GNPD and international experts, discovered 30 new deep-sea invertebrate species in fragile coral and sponge communities.

2023: After a decade of planning, the Floreana Ecological Restoration Project aimed to reintroduce twelve species once thought extinct on the island.

©Sam Rowley

Blue-footed Booby
Sula nebouxii

SCIENCE PLAN 2023 - 2028

Our Science Plan outlines how we will prioritize our research and conservation agenda for the next 5 years in our quest to tackle the greatest and most urgent threats and challenges to Galapagos and the Eastern Tropical Pacific region. While these priorities in all likelihood transcend that timeframe, after 5 years we will revisit this Science Plan and recalibrate our priorities to ensure they remain current and relevant to the needs of Galapagos.

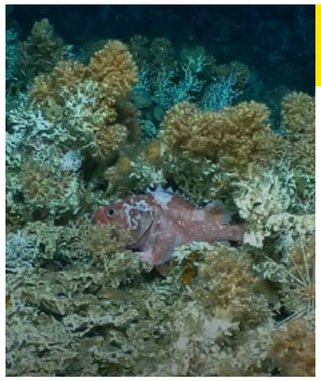
Our basic and applied research focus now is aligned to five priorities that will help us achieve more impact in and for Galapagos. These Priorities are:

1. BIODIVERSITY

Document nature, recognize threats, and leverage the unique reach of the biodiversity of Galapagos to conserve threatened regional ecosystems

2. BIOINVASIONS

Reduce the threat and impact of invasive species and pathogens in Galapagos and the Eastern Tropical Pacific



3. CLIMATE AND OCEAN CHANGE

Be the reference institution for climate and ocean research to further regional understanding and implications of climate change on communities and ecosystems in the Eastern Tropical Pacific

4. ECOSYSTEM RESILIENCE AND RESTORATION

Understand linked nature-human processes to ensure sustainable resource use and enhance ecosystem resilience and restoration

5. SCIENCE TO ACTION

Make scientific discovery relevant, accessible, and impactful through innovative engagement, illustration, and dissemination

VIEW OUR SCIENCE PLAN

2023 SCIENCE REVIEW

2023 was a productive year on the science front, with various exciting developments and advances made against our major scientific priorities. In 2023, our 63 scientists worked on more than 25 projects across land and ocean, as well as with the local community. We also published a total of 81 peer-reviewed publications, the most productive year in our history.

Our new Science Strategy, published in June 2023, underpins our research and conservation agenda for the next 5-10 years in our quest to tackle the greatest and most urgent threats and challenges to Galapagos. Our basic and applied research focus now align to five Scientific Priorities that will help us achieve more impact in and for Galapagos: Biodiversity; Bioinvasions; Climate and Ocean Change; Ecosystem Resilience and Restoration; and Science to Action. More than 40 individuals, including staff members, members of CDF's Board and General Assembly, and partner organizations, provided feedback and input on the plan over the course of a year and a half, culminating in this comprehensive interdisciplinary plan.

We are also pleased to have **launched two new research lines in 2023.** The first, born out of CDF's Sustainability Fellowship program, will look at the umbrella theme of Sustainability for Conservation. This research line is being led by our new Principal Investigator, Dr. Andrea Muñoz, and will investigate major socio-economic issues affecting the islands including sustainable tourism, agroforestry, e-waste and coffee genetics. The second, is our Ocean Governance research line which will be led by our new hire Dr. Sarah Enright, with a view to scale up our work across the Eastern Tropical Pacific in an effort to protect seascapes beyond national jurisdictions for the benefit of marine ecosystems.

2023 was also marked by significant developments in our marine science program, which benefited from **a total of 6 deep-sea expeditions, amounting to more than 100 days at sea.** Major expeditions of note included the historic "Galapagos Deep 2023" expedition in April 2023 on board the *R/V Atlantis* and its submarine *HOV Alvin*, operated by Woods Hole Oceanographic Institution, which resulted in the discovery of the first pristine deep-sea coral site to be registered inside the Galapagos Marine Reserve. A few months later, three expeditions on board the *R/V Falkor (too)*, operated by the Schmidt Ocean Institute, took place in fall 2023, that resulted in further deep-sea coral site registrations and new hydrothermal vent discoveries. These important expeditions allowed for the gathering of unique specimens, which will be studied over the course of the coming years, and will no doubt lead to the determination of species new to science while also advancing our understanding of the biodiversity of the deep-sea and its key role in maintaining ocean ecosystem health.

Our marine research gained further impetus this year with two major grant awards. The first funded by USAID, is to execute a 5-year research program jointly with WWF-Ecuador to strengthen fisheries governance and improve shark and ray conservation in Ecuadorian waters through sustainable fishing practices. The second 5-year grant was awarded to CDF by both the Bezos Earth Fund and the Gordon and Betty Moore Foundation to launch CDF's deep-ocean research and conservation work in the Eastern Tropical Pacific, alongside key implementation partners in Costa Rica, Panama and Colombia.

In 2023, **CDF continued to strengthen international collaborations.** In March, at the Our Ocean conference in Panama, CDF, the Smithsonian Tropical Research Institute (STRI) and the Smithsonian Environmental Research Center (SERC) signed a historic tripartite agreement to enhance collaboration in our respective coastal marine ecosystems, in view of the marine connectivity in the Eastern Tropical Pacific, while also strengthening research efforts to mitigate the introduction and impact of invasive marine species across the Americas. We formalized our long-standing collaboration with Costa Rica's Friends of Cocos Island (FAICO), the organization that partners with Cocos Island National Park to address marine and terrestrial invasive species and research marine connectivity between Cocos and Galapagos. We were also pleased to further our collaboration with the California Academy of Sciences on numerous fronts - from marine ecosystem research and conservation, to education and community outreach, to land bird genetics, to our work in the Floreana Ecological Restoration project, and even toward discussions on potential future research endeavors in Galapagos, among other initiatives. Finally, we supported the development of, and participated in the inauguration of Houston Zoo's Galapagos exhibit – a first of its kind in the world. Although many of the species are surrogate examples (i.e., are not endemic Galapagos species), the exhibit is an excellent way to expose and engage the public in conservation issues relating to the Galapagos Islands and insular systems in general.

Nationally, we renewed our long-standing collaboration with the National Hydrographical and Meteorological Institute (INAMHI) in order to maintain the Charles Darwin Research Station meteorological station, which has been functioning for more than six decades. We've also initiated operations for a new digital meteorological station integrated into the national network.

INVESTIGATION

50+ research permits

5 social science-based research permits

ACADEMIC PRODUCTION

5 theses completed in 2023 (3 Masters, 1 Doctorate, 1 Bachelor)

81 scientific publications including peer-reviewed, book chapters, and other formats

297 visiting scientists

563 collaborating scientists

IN THE FIELD

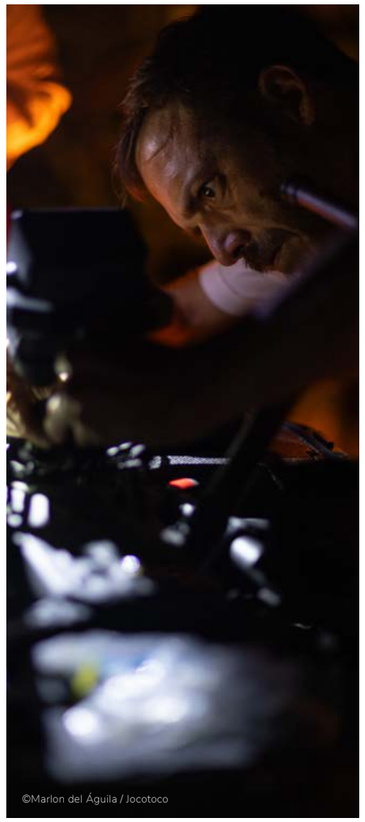
6 deep-sea research expeditions with partner institutions representing >100 days at sea

71 volunteers trained in the field

18,700+ samples exported for genetic and non-genetic analyses

Opuntia, Española Island

LAND



IN FOCUS: REWILDING FLOREANA ISLAND

October 2023 marked the beginning of the implementation phase of the Floreana Ecological Restoration Project, the largest and most ambitious multi-institutional restoration initiative in the Galapagos Islands. The project, led by the Galapagos National Park Directorate (GNPD) and the Galapagos Biosecurity Agency (ABG), co-executed by Jocotoco Conservation Foundation and Island Conservation, with the support of CDF and other partners, aims to reintroduce twelve species of fauna considered locally extinct on Floreana over the coming decade: the Floreana giant tortoise, Floreana racer snake, Floreana Mockingbird, Little Vermilion Flycatcher, Grey Warbler Finches, Large Ground Finches, Vegetarian Finches, Sharp-beaked Ground Finches, Barn Owls, Galapagos Rail, Lava Gulls and Galapagos Hawk.

HISTORY

Floreana is one of Galapagos' most altered island by human activity. Indeed, thanks to the presence of an easily accessible fresh water fountain – one of the only significant ones in the entire archipelago– Floreana became the preferred base for Galapagos' earliest settlers, including pirates and whalers. The early presence of humans, prior to the creation of the protected National Park area, led to the proliferation of invasive species, including feral cows, pigs, dogs, cats and rats, as well as invasive plant species, putting the native ecosystem, including its fragile endemic fauna and flora, under tremendous strain. According to the IUCN, Floreana Island today has the highest concentration of threatened species in the archipelago, at 55%.

2009: AN AMBITION WAS BORN

With the conclusion of the "Project Isabela" invasive species eradication initiative in 2006, and successful eradication of rats from Pinzón and Rábida Islands, CDF, together with the GNPD and other allies looked at the next big conservation challenge. This is how in 2009, on the eve of the GNPD's and CDF's 50th anniversary, the Floreana Project was born. The project's initial scope was

to better understand the island's biodiversity in order to prioritize sites for conservation, working hand in hand with the community to control invasive species to allow for the reintroduction of keystone species, most notably the Floreana Mockingbird. While smaller in scale at the time, it was the precursor to today's ambitious and groundbreaking initiative, which took another 12 years of operational planning before execution. The project today breaks down into three phases:

1) operational planning; **2)** eradication of invasive species; and **3)** reintroduction of locally extinct species.

2023: A COORDINATED AND MULTI-INSTITUTIONAL EFFORT IN ACTION

With the bulk of the planning phase behind us, CDF was actively engaged in various aspects of the project in 2023, before and during the eradication phase, contributing to ecological monitoring, restoration efforts, data analysis, mapping and tracking. Some highlights include:

Monitoring land bird and terrestrial invertebrate populations: Ahead of the controlled rodent and feral cats eradication in October, CDF's land bird team, together with the GNPD and Jocotoco Foundation, recorded 2,613 birds and 11 species at 223 points on Floreana Island, with the aim of establishing a baseline of bird populations. Similarly, and in preparation for the reintroduction of locally extinct species, especially Darwin's finches and the Little Vermilion Flycatcher, CDF entomologists actively monitored terrestrial invertebrate communities in both agricultural and National Park areas of Floreana Island. This research aimed to establish a baseline to evaluate both the impacts of invasive species' control, and assess habitat conditions for bird reintroductions in the coming years. A total of 17,837 terrestrial invertebrates were collected and identified by CDF's team, using entomological nets and pitfall traps.

Building ecological corridors in preparation for reintroductions: Meanwhile, ecologists from CDF's Galapagos Verde 2050 program worked with the GNPD to establish a large biological corridor to support the future reintroduction of locally extinct species such as the Floreana Mockingbird. This corridor consists of endemic shrub and tree species such as *Scalesia villosa* and Croton *scouleri* that will provide critical shelter and food for the mockingbirds upon their reintroduction to the island. In anticipation of this initiative, we are currently cultivating these endemic plant species in the island's forest nursery, established by CDF.

Mapping critical intervention areas: Our team further supported the implementation phase by collecting and analyzing geospatial data, while also providing strategic planning and on-the-ground assistance. Aerial operations involved UAV flights capturing nighttime videos with infrared sensors and multispectral images for mapping critical intervention areas. Ground operations included creating bait application maps and logistical planning with GPS coordinates.

Mapping and tracking controlled eradication: Invasive rodents and feral cats were targeted by Jocotoco and Island Conservation in a controlled eradication program that saw two helicopters disperse conservation bait in rural and protected areas at low altitude to ensure precise distribution. A total of three applications were dispersed between October and December 2023. CDF's technical teams assisted this action through geospatial analysis and by using drone technology and image analysis to map critical intervention areas for the controlled dispersal of bait. A total of 13 sites were mapped on Floreana over the course of 20 nights.

With the species reintroduction phase starting in 2024 and expected to last another 10 years in total, CDF will continue to support the project's implementation through its research and technical teams, to contribute to the successful rewilding of the island.

4 items of garbage per kg of feces were found in human-modified areas

182 kilograms (401 pounds) of tortoise feces examined – that's the mass of a large adult tortoise!

GALAPAGOS TORTOISE MOVEMENT ECOLOGY PROGRAM

Over its accomplished 15-year history, CDF's Galapagos Tortoise Movement Ecology Program (GTMEP) has worked with the Galapagos National Park Directorate and collaborating institutions to advance our understanding of six core themes: movement ecology, health, reproduction, ecosystem services, tortoise–human interactions, and education. In 2023, we made advances in education and all research themes with major highlights including:

EVALUATION OF THE THREAT OF PLASTIC POLLUTION TO TORTOISES

Giant tortoises frequently encounter and consume garbage, especially plastics, around human settlements of Santa Cruz Island. We assessed the scale of the problem and brought attention to the dire need to reduce plastic use through policy and improved waste management for the betterment of wildlife and human health.

86% of ingested trash found in feces was plastic

INFORM THE BIOLOGY OF TORTOISES IN A WARMING WORLD

For Galapagos tortoises, the sex of offspring is determined by incubation temperature. Recent research from our team found that slight increases in elevation (50-100m) lead to shifts in sex ratios, going from predominantly female to male, due to differences in nest temperatures. These findings provide important insight into how a changing climate may impact giant tortoises in the future, and inform appropriate conservation actions.

323 x-rays during the six-month nesting period (June–November)

Average of **11 eggs per nest**, **maximum of 21 eggs** in a single nest

61 nests of 628 eggs under active monitoring to evaluate nest success

ENGAGING NEW AUDIENCES

In 2023, we conducted 21 educational programs with over 1,000 participants, mostly in the outdoor classroom that is Galapagos. Local and visiting students engaged in experiential learning activities, including radio telemetry, tortoise seed dispersal studies, and discussions on tortoise ecology, threats, and conservation.

Looking ahead to 2024, we're intensifying our research on the critically endangered Eastern Santa Cruz Giant Tortoise (*Chelonoidis donfaustoi*). With a population decline of 97% due to human exploitation and invasive species, and an estimated population of just 400 individuals, we're focusing on nesting ecology, reproductive success, and migration patterns to aid in their recovery. Lab analyses of health samples are ongoing, and upcoming research will highlight the significant role tortoises play in creating and maintaining freshwater ponds, which are vital ecosystems for diverse flora and fauna. Stay tuned for more updates on our efforts!

RECORD BREEDING SEASON FOR THE LITTLE VERMILION FLYCATCHER

With less than 20 breeding pairs left in the highlands of Santa Cruz Island, CDF and the Galapagos National Park Directorate (GNPD), in collaboration with the University of Vienna, are spearheading a concerted effort to revive the dwindling population of the Little Vermilion Flycatcher, *Pyrocephalus nanus*, on the island.

Through a holistic approach encompassing habitat restoration, nest treatments targeting the invasive Avian Vampire Fly, and rat control, CDF researchers are making strides. **In 2023, 12 new fledglings were added to the small population, representing one of the most successful breeding seasons yet.** All fledglings came out of nests from the experimentally managed areas, demonstrating the positive response of breeding success to conservation intervention.

The results speak volumes: since the inception of the management program in 2019, 33 new birds have bolstered the local Santa Cruz population, with some already breeding in the area and contributing to the next generation. With continued dedication and collaboration, we are hopeful for the sustained recovery of the Little Vermilion Flycatcher on the island.


©Agustín Gutiérrez / CDF

14 hectares of habitat under experimental management


©Rashid Cruz / CDF

12 new fledglings of Little Vermilion Flycatchers

GENETIC INSIGHTS FOR EFFECTIVE REWILDING

Alongside ongoing conservation efforts, CDF scientist David Anchundia's PhD research on the Little Vermilion Flycatcher's phylogenetics, is shedding new light. By analyzing genome sequences from Little Vermilion Flycatchers across 11 islands, we can now discern distinct genetic lineages, crucial for pinpointing vulnerable populations and informing future rewilding efforts. This work was done in collaboration with the California Academy of Sciences.

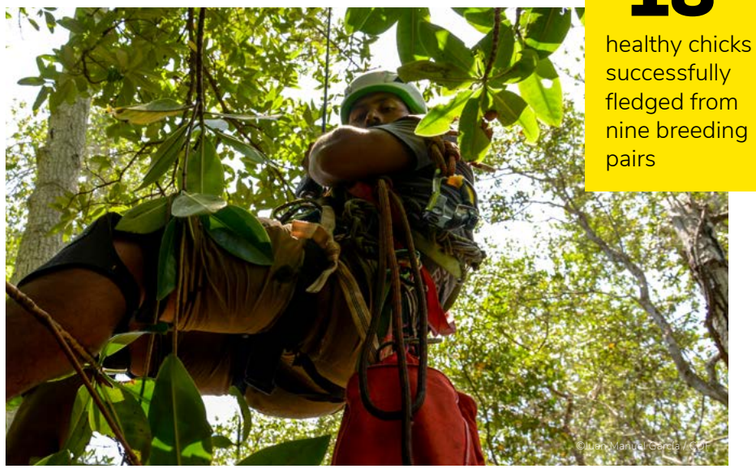
11 island populations of Little Vermilion Flycatcher sampled and analyzed to evaluate genetic lineages between islands

BIRD COUNTS AND HEALTH

Since 2013, CDF ornithologists, GNPD, and partners have been estimating bird populations and assessing their health to help inform management and reintroduction plans. In 2023, we surveyed 223 points on Floreana Island alone, recording 2,613 birds across 11 species. We also analyzed samples from 400+ birds across 5 islands to screen for diseases like toxoplasmosis and adenovirus.


©Francesca Cunninghame / CDF

71 different nest treatment events carried out throughout the season


©Juan Manuel García / CDF

18 healthy chicks successfully fledged from nine breeding pairs


©Juan Manuel García / CDF

5 new long-term plots set up to monitor vital habitats for Mangrove Finches' future evaluation


©Juan Manuel García / CDF

BREAKTHROUGH SEASON FOR THE MOST THREATENED BIRD IN GALAPAGOS

With an estimated 60-70 individuals left in the world, the critically endangered Mangrove Finch is a top priority for researchers at CDF and the GNPD.

Against all odds, 2023 proved to be a year of hope for this unique species. **A total of 16 breeding pairs were observed this season, resulting in the discovery and treatment of 21 nests.**

Intensive conservation measures, including rat control, careful pesticide applications and external sprays to combat Avian Vampire Fly larval parasitism, were employed to protect the nestlings. **Husbandry was provided to 23 chicks from 12 nests** – all of which were infested with parasites when first checked.

These efforts resulted in the most successful breeding season on record since 2016: **18 healthy chicks successfully fledged from nine pairs, representing a substantial increase in reproductive success (56%) compared to previous years.**

We also made progress on testing two techniques for reducing Avian Vampire Fly larvae in hard-to-reach nests; the Spritz technique using drones to spray the outside of nests with a low dose of insecticide to stop flies entering nests and the self-fumigation technique where bunches of lightly-treated sisal fiber are tied to trees for Mangrove finches to use in nest building. Both will be further tested in 2024.

ADVANCES MADE TO PROTECT GALAPAGOS LAND BIRDS FROM THE AVIAN VAMPIRE FLY

In 2023, significant progress was made in combating the threat posed by the invasive Avian Vampire Fly, *Philornis downsi*, to small Galapagos land birds. For more than a decade, CDF and the Galapagos National Park Directorate (GNPD), alongside a large group of international collaborators, have spearheaded efforts to develop effective control measures.

SHORT-TERM CONTROL METHODS DEPLOYED IN 2023

Short-term control methods have been vital for protecting at-risk birds, with two methods implemented: injecting insecticide into nests and self-fumigation with treated nest material. The latter technique, in particular, has shown promise as demonstrated by the Little Vermilion Flycatcher's willingness to utilize treated feathers to build its nests, resulting in reduced egg abandonment and increased chick survival rates. Additionally, **the self-fumigation technique benefited eight other bird species,** with kapok and sisal materials proving attractive and effective in preventing *Philornis* larvae survival in nests, **resulting in 93% fledging success compared to 57% in nests without material.** This technique will be deployed in 2024 in the Floreana Ecological Restoration Project to give a boost to bird populations following rodent and cat eradication.

Moreover, a new technique, the Spritz method, was introduced and tested in 2023 with the help of the University of Vienna, and is showing considerable potential. **By spraying the exterior of nests to deter flies from entering, reproductive success rates more than doubled compared to untreated nests.**

Third instar larvae

7,460+ *Philornis downsi* samples exported for analysis

©Rashid Cruz / CDF

14,000 avian vampire fly pupae reared in 2023 for various research purposes

Pupal stage

©Rashid Cruz / CDF

Adult female fly

©Juan Manuel García / CDF

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MAJOR ADVANCES MADE IN ASSESSING VIABLE LONG-TERM STRATEGIES

Looking toward long-term solutions, collaborative efforts with the University of Minnesota, Escuela Superior Politécnica del Litoral (ESPOL), and INABIO focused on evaluating parasitic wasps for biological control. **Preliminary studies with two parasitoid species, *Conura annulifera* and *Trichopria* sp. *novus*, are underway to assess their suitability**, considering factors such as habitat and host specialization.

In 2023, **a total of 20 species belonging to four insect orders (butterflies and moths, beetles, flies, and ants) were exposed to *Conura annulifera*** in an effort to assess the level of risk that this parasitic wasp could pose to non-target species. The results are promising, however, more testing on endemic flies, the most vulnerable to biological control due to their close relatedness to *Philornis*, needs to take place in 2024 - a challenge of its own as they are very hard to find!

Rearing large numbers of parasitic *Philornis* flies for evaluating control methods poses a significant challenge, as flies have proven reluctant to mate in laboratory conditions. Nonetheless, **more than 14,000 Avian Vampire Fly pupae were reared in 2023 for various research purposes.** Furthermore, a new collaboration with Columbia University aims to investigate the role of light and visual communication in fly mating behavior. These efforts underscore the ongoing commitment to safeguarding Galapagos land birds from the Avian Vampire Fly, and to pave the way for innovative and sustainable conservation strategies in the future.

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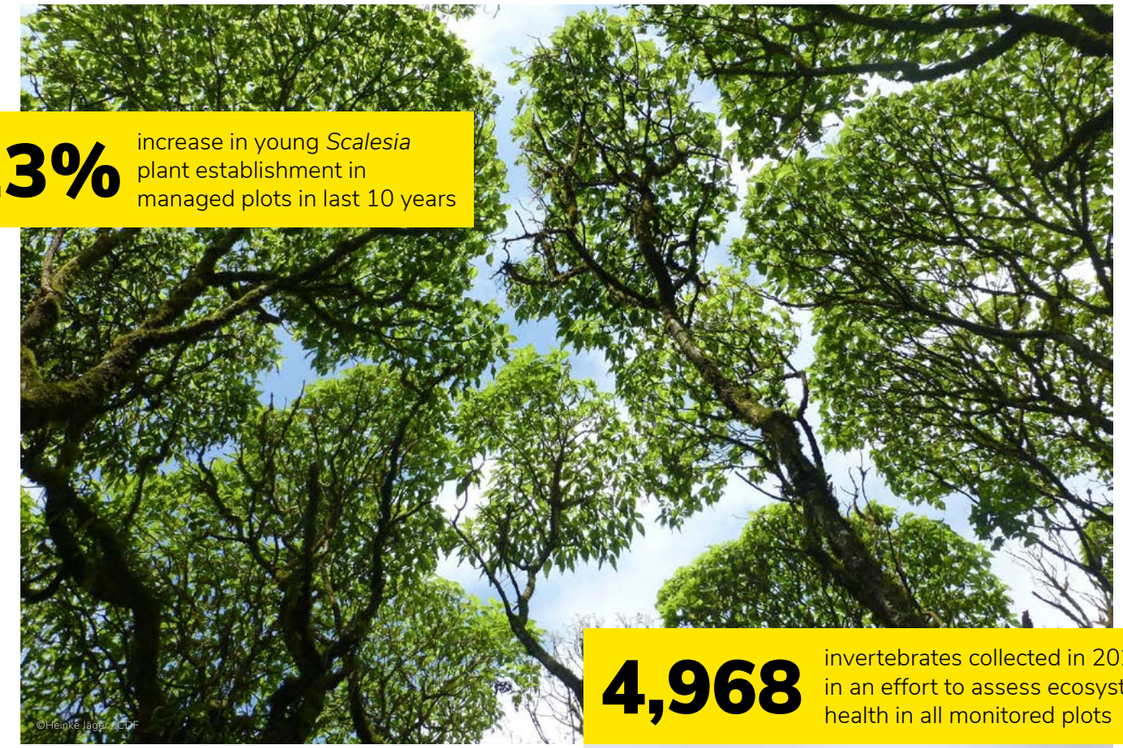
20 insect species from 4 insect orders exposed to the potential biological control agent, *Conura annulifera*

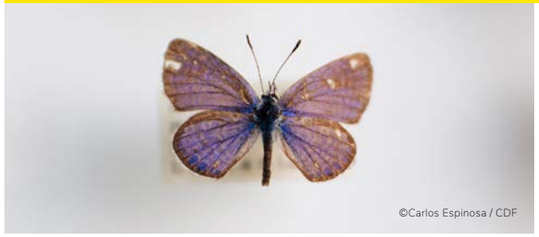
Conura annulifera

©Saúl Aguirre / CDF



23% increase in young *Scalesia* plant establishment in managed plots in last 10 years

4,968 invertebrates collected in 2023 in an effort to assess ecosystem health in all monitored plots



SCALESIA HABITAT ON SANTA CRUZ: A CONSERVATION PRIORITY

In the highlands of Santa Cruz, the *Scalesia pedunculata* forest once covered more than 10,000 hectares. Today, only about 300 hectares (3%) remain, facing an imminent threat from invasive plant species. Without large-scale removal efforts, our researchers estimate that the species will be extinct within the next 20 years, making the restoration of this unique habitat a conservation priority.

Over the past 10 years, CDF researchers alongside the Galapagos National Park Directorate (GNPD) have diligently monitored vegetation in 34 permanent 10×10m plots in the *Scalesia* forest remnant at “Los Gemelos”, in an effort to measure the impact of invasive plants on endemic species. Half of the plots were established in an invaded area, while the others underwent continuous invasive plant removal.

The findings to date are unequivocal: over ten years, *Scalesia pedunculata* tree cover declined by 71% in invaded areas, with no seedlings emerging. **Conversely, in controlled plots, the cover of *Scalesia* seedlings increased from 0% to 23%.** Results underscore the urgent need for proactive and large-scale restoration measures to safeguard the future of Santa Cruz’s *Scalesia* forest.

INSECTS ARE HELPING US ASSESS THE HEALTH OF THE *SCALESIA* HABITATS

Invertebrates are important bioindicators of ecosystem health, because of their abundance, diversity and the large number of ecological roles they play. In 2023, **we collected 4,968 terrestrial invertebrates on Santa Cruz** that are currently being identified, with a view to analyze differences between invaded plots and plots with invasive plant removal by the end of 2024.

RAMPING UP RESTORATION EFFORTS ON ISABELA

Since 2021, we have been working to save *Scalesia cordata* from extinction, a tree-forming *Scalesia* species endemic to southern Isabela Island. In 2023, we ramped up our research and management actions for this threatened species, building on the progress made in 2022:

257 ha overflown with the drone at seven sites

1,000 adult trees found at 15 sites in the past 3 years, up from 620 in 2022

1 *Scalesia cordata* nursery established exclusively for farms

986 *Scalesia cordata* trees planted at 6 sites in the Galapagos National Park area

2,000 seedlings germinated at the GNPD nursery, up from 1,000 in 2022

20 *Scalesia cordata* trees planted at a highland school to encourage the community to take part in restoration efforts

GV2050: ECOLOGICAL RESTORATION AND CONSERVATION ACROSS THE ARCHIPELAGO

RESTORATION OF ARID ZONES

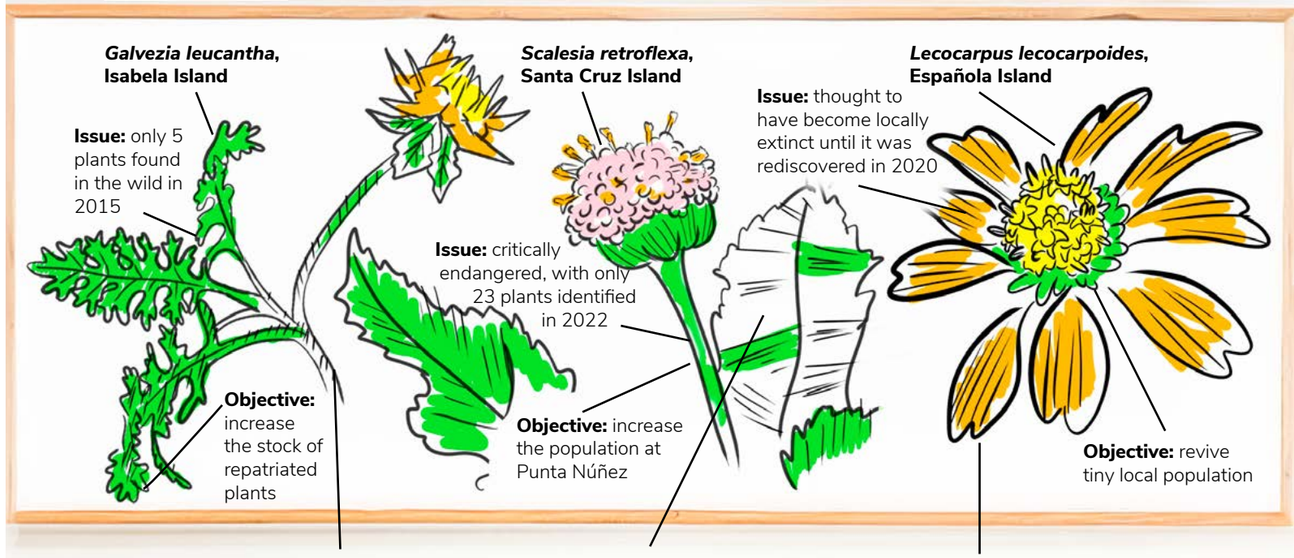
Baltra Island: In 2023, Galápagos Verde 2050 took significant steps to restore Baltra Island, one of the most degraded in the archipelago. Over 1,400 plants of 4 species were planted, totaling 8,128 individuals. With collaboration from the Galapagos National Park Directorate (GNPD) and others, 36 tree nuclei or islands were established, each containing 30 *Opuntia echios* that were grown for 4 years in the GNPD nursery. These tree nuclei or islands aim to create ecological connectivity to facilitate the movement of fauna across previously isolated areas. Furthermore, a restoration plan for Baltra Island until 2029 was developed.

Española Island: Here, conservation of the keystone cactus species *Opuntia megasperma* is a priority, given its important role as source of food to the Island's endemic tortoises and its land iguanas. In 2023, findings from our evaluation of the six permanent restoration plots, determined that *O. megasperma* seeds directly collected from fruits exhibited superior germination rates, yielding 195 individuals, compared to seeds sourced from tortoise feces, which produced 91 individuals. Additionally, our research revealed promising results regarding the utilization of cladodes in accelerating habitat recovery on the island.

Plaza Sur: Since 2015, we've planted over 1,200 *Opuntia echios* cacti, about three fourths of Plaza Sur's total population. In 2023, we installed a weather station and fortified fences. We are also pleased to report that the Cerro Colorado restoration site has been marked as complete with sufficient cacti survival and natural regeneration observed.

360+ native plants from 9 different species were planted in Puerto Ayora.

HOPE FOR CRITICALLY ENDANGERED PLANT SPECIES



2023 impact: 1,800 seeds used in germination experiments, and 69 new plants produced ex-situ that will be used to establish a new population on Isabela Island.

2023 impact: initiated germination trials with 150 seeds showing low (10%) viability; fencing off the site resulted in some natural regeneration with a population count of 27. We also installed a rainwater collector to allow regeneration trials in-situ.

2023 impact: 20 plants were repatriated to Punta Manzanillo; germination of 19 seedlings was observed at the site.

RESTORATION THROUGH COMMUNITY ENGAGEMENT

14 farms with whom we collaborate across two islands

In 2023, we actively engaged communities in Santa Cruz in plant restoration and conservation efforts. Our urban and rural restoration campaign gained momentum with several key initiatives. This included designating the critically endangered *Scalesia affinis* as a symbol of Puerto Ayora, establishing "Green Fridays in Puerto Ayora" and "Green Sundays in Bellavista," and inaugurating the "*Scalesia* Route" along the town's main cycling lane. These activities aimed to inspire the local community to restore native and endemic species in their gardens and community areas.

Additionally, in 2023, we inaugurated the renewed "Shade House" at the Charles Darwin Research Station - a visitor-friendly interpretation center dedicated to raising awareness of ecological restoration and conservation priorities in Galapagos.

In rural areas, we made visible the crucial role of women in agriculture. Additionally, we expanded our collaboration with farms across Santa Cruz and Floreana Islands from 11 in 2022 to 14 in 2023, facilitating the planting of over 220 new native and endemic plants linked with coffee cultivation.

STUDYING THE ECOLOGY AND DISTRIBUTION OF THE INVASIVE TREE FROG

82 nocturnal recordings at 24 locations on Santa Cruz and Isabela

The invasive tree frog *Scinax quinquefasciatus* was introduced accidentally in the late 90's and became invasive on the islands of Santa Cruz and Isabela shortly after. Despite its rapid spread, little is known about this species and its impact on native ecosystems. In 2023, our researchers made significant progress to understand its ecology and distribution. A total of 1,511 frogs were captured in ponds and marked for population size estimates and to study their reproductive cycle. The study will be repeated in 2024 to enable comparisons across years. To assess island distributions, we utilized visual and acoustic recordings of the frog and deployed automatic recorders in remote areas of the National Park. A staggering estimate of 6,500 frogs was recorded in a single pond.

300
eggs counted per clutch

6,500
frogs estimated for a single pond

1,511
frogs captured across 6 ponds

Our scientists capture frogs at each pond and mark them to distinguish new individuals from those captured during previous visits, this way estimating the population size.

OCEAN

MAKING NEW DISCOVERIES IN THE DEEP-OCEAN REALM OF GALAPAGOS AND THE ETP

Partnered with 30+ national and international research institutions

2023 was a highlight for deep-ocean research and exploration with five major expeditions in and around the Galapagos Marine Reserve (GMR) yielding incredible new discoveries about the hidden depths of Galapagos. Highlights included:

DISCOVERY OF ANCIENT DEEP CORAL REEF IN THE GMR

In April 2023, CDF and collaborators discovered extensive ancient deep-sea coral reefs thriving at depths of 400-600 meters within the GMR - a first since its establishment in 1998. This landmark discovery occurred during the "Galapagos Deep 2023" expedition aboard the US Navy-owned research vessel *R/V Atlantis* and its deep-sea research human operated vehicle *HOV Alvin*, operated by the Woods Hole Oceanographic Institution. These ancient reefs offer valuable insights into marine biodiversity heritage, connectivity with regional marine protected areas (MPAs), and ecosystem services such as carbon cycling and fisheries support. Additionally, their study will aid in understanding past ocean environments and modern climate change.

CHARACTERIZING HYDROTHERMAL VENT FIELDS AND THEIR UNIQUE COMMUNITIES

Three expeditions aboard the Schmidt Ocean Institute's *R/V Falkor (too)*, in collaboration with other institutions, led to the discovery of two new hydrothermal vent fields. The first, located west of the Galapagos Spreading Center, was named "Sendero de Cangrejo". Samples were collected to gain insights into the connectivity of marine life between these newly found vents and those to the east of the Galapagos Spreading Center. The second field, named "Tortugas", was discovered north of Pinta Island utilizing cutting-edge mapping technologies. The maps and samples collected will assist scientists in creating a more comprehensive understanding of the life cycle of hydrothermal vent ecosystems.

NEW SPECIES DOCUMENTED

At least 15 species previously unknown to the region were documented on the various expeditions, including a nursery with eggs of Pacific white rays - only the second documented in the world to date.

REVEALING HIDDEN COLD-WATER CORAL REEFS

Continuing the exploration during the second leg of the *R/V Falkor (too)* expeditions, in collaboration with Memorial University of Newfoundland, revealed larger cold-water coral reefs west of Fernandina Island. Additionally, researchers studied the impact of the oxygen minimum zone on the vertical distribution of biodiversity in the Eastern Tropical Pacific (ETP). These findings shed light on the importance of these ecosystems and their response to environmental factors.

2 hydrothermal vent sites discovered

430 Galapagos youth engaged with expedition scientists and crew from 9 different schools during virtual ship-to-shore events

STUDYING OPEN WATER MARINE HABITATS

CDF's investigations into mesophotic algae and Eisenia kelp communities in 2023 showed that the same kelp species discovered in the western archipelago is also present with adapted morphotypes across the central region of the GMR.

NEW COLLABORATION WITH THE MAX PLANK INSTITUTE

This collaboration has initiated regional oceanographic sampling from Panama to Galapagos during the onset and development of the strong 2023-2024 El Niño event. A suite of specialized equipment aboard the R/V Eugen Siebold has taken detailed open-ocean data for comparison over subsequent years.

LAUNCHING DEEP-OCEAN CONSERVATION IN THE ETP

2023 ended on a high note with the launch of a $7 million five-year grant to support deep-ocean conservation in the ETP. The project is based at the Charles Darwin Research Station, where a Deep Ocean Exploration Facility will be established. The grant, awarded by the Bezos Earth Fund and Gordon and Betty Moore Foundation, will bring together researchers from Ecuador, Costa Rica, Colombia, and Panama, as well as the global deep-water community to work together to improve critical knowledge of deep-ocean ecosystems in existing, newly established, and potential deep-water MPAs in the ETP.

78 deep-ocean dives conducted over 117 days at sea

6 deep-sea expeditions, of which 5 major ones exploring the depths of our ocean

1,092 dive hours (the equivalent of 50 days!)

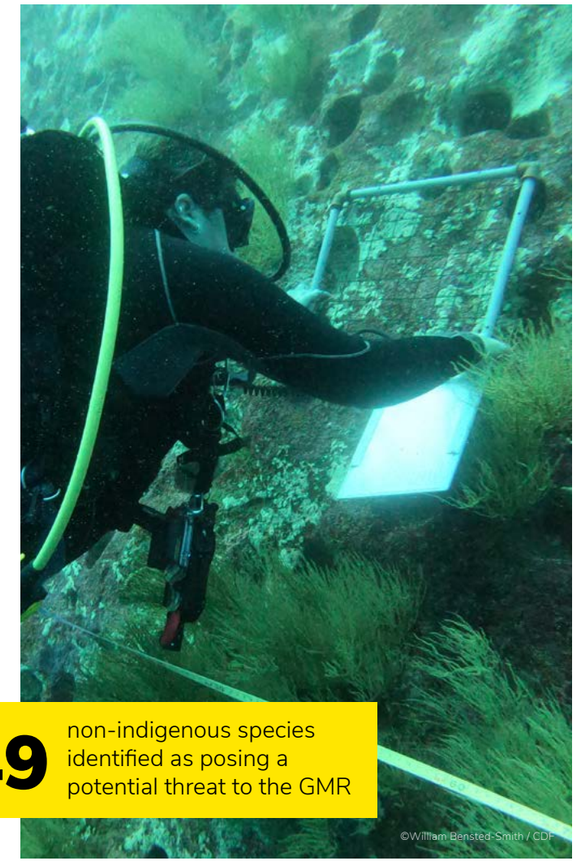
1,487 samples collected ranging from marine sediments, water quality to biological collections

15 species previously unknown to the region documented

148TB of high-resolution video surveys collected

400+ specimens collected for identification and curation across the full range of GMR depths

5,500+ samples exported for genetic and non-genetic analysis



49 non-indigenous species identified as posing a potential threat to the GMR

MONITORING THE HEALTH OF MARINE HABITATS

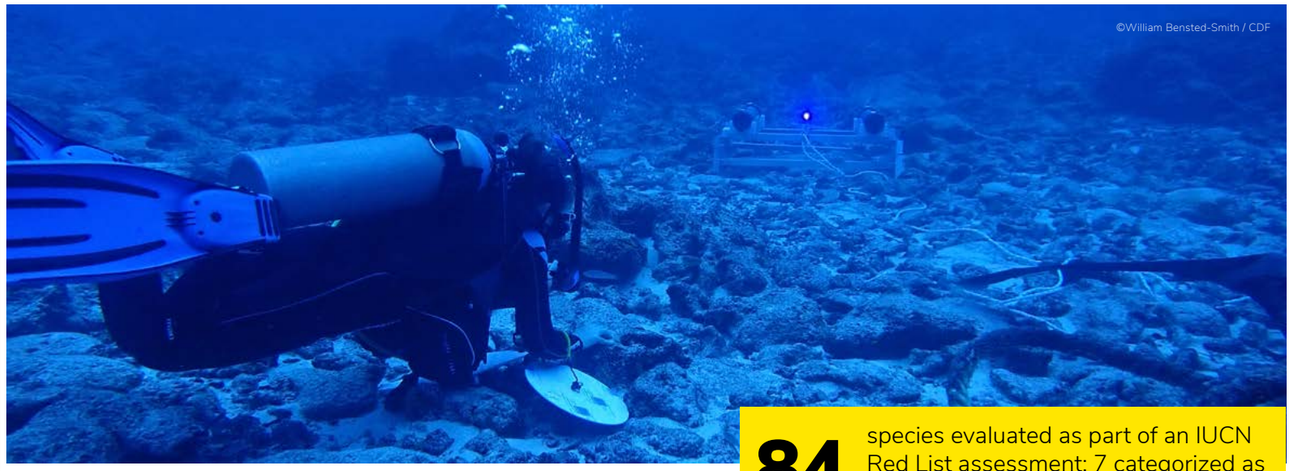
CDF's marine biodiversity research team continued progress in their long-term monitoring of underwater habitats, as well as tracking of marine invasive species. Major highlights for the year included:

ASSESSING THE RISK POSED BY NEW MARINE INVASIVE SPECIES

49 non-indigenous species were identified as posing potential threats to the Galapagos Marine Reserve (GMR) in 2023, in addition to the 58 already present. Of these, 35% are considered high risk, 47% medium risk, and 18% low risk. Notable high-risk species include *Magallana gigas* (Pacific Oyster), *Carcinus maenas* (European Green Crab), *Styela plicata* (a sea squirt), *Amphibalanus amphitrite* (a striped barnacle – named by Charles Darwin), and *Carijoa riisei* (an octocoral). We are also replicating this work to document and assess invasive species risk in Cocos Island National Park, with the aim of later expanding this effort throughout the ETP region, thanks to the ongoing support of the Eastern Tropical Marine Corridor initiative (CMAR). This proactive approach facilitates informed decision-making for regional biosecurity and conservation.

ADVANCING JOINT MARINE BIOSECURITY SOLUTIONS ACROSS THE AMERICAS

CDF, in collaboration with the Smithsonian, CMAR, and other partners, launched the Coastal Ocean Marine Biosecurity Integrated Network for the Americas (COMBINA). This initiative aims to accelerate knowledge exchange and capacity-building mechanisms, creating shared tools and resources necessary to prevent invasions, mitigate impacts, and inform policy and management across local, national, and continental scales.



STUDYING THE RESPONSE AND RESILIENCE OF MARINE ECOSYSTEMS

2023 saw significant ecological shifts in the GMR, moving from a three-year La Niña to an El Niño in just five months. This rapid change between extremes offered a unique chance to study the Galapagos marine ecosystems' response and resilience through CDF's subtidal ecological monitoring. Key findings showed that zooplanktivorous fish populations, such as the black-striped salema, experienced dramatic fluctuations, increasing by 300-600% post-La Niña, then rapidly declining, hinting at a potential boom-and-bust cycle. This raises concerns about their future population stability amid more frequent climate events.

Sea urchins, crucial for assessing the GMR's health due to their macroalgae diet, also showed significant changes. La Niña's onset boosted foliose algae growth, which led to increased sea urchin densities across western and central islands. However, following the 1982/83 El Niño, sea urchins contributed to the transformation of many areas into permanent urchin barrens, altering the marine landscape.

MONITORING CORAL HEALTH

Amid rising sea temperatures, we surveyed 79 coral colonies in Darwin and Wolf with advanced photogrammetry and constructed 3D models to track changes over time. 2023 findings showed a 2% mean bleaching rate in Wolf, 14.38% algae overgrowth, and 29.11% of colonies showing disease, in line with yearly averages. This will serve as an important refence point as we monitor the impact of the anticipated early 2024 El Niño event on these coral colonies.

84 species evaluated as part of an IUCN Red List assessment: 7 categorized as threatened and 18 as data deficient.

CDF joins the IOCC initiative to restore island-ocean ecosystems

45 soil samples collected for e-DNA extraction

1,000 mangrove trees measured across a total surveyed area of 1,200m²

LEARNING MORE ABOUT MANGROVES IN GALAPAGOS

Mangroves in Galapagos provide an important habitat for endemic and threatened species, offer essential ecosystem services like carbon sequestration, and support the well-being of local communities who depend upon them for their livelihoods, through tourism and fisheries. Despite this significance and their pristine state in the archipelago, mangroves in Galapagos remain largely understudied. In 2023, our scientists continued their efforts to learn about the ecology of mangroves in Galapagos and the ecosystem services they provide:

UNDERSTANDING THE ECOLOGY OF MANGROVES

Through meticulous fieldwork, our researchers established 19 permanent monitoring plots across the archipelago, systematically assessing mangrove forest structure, biomass and recruitment across a total surveyed area of 1,200m². These plots provide a baseline for calculating carbon sequestration by mangroves and evaluate changes over time, such as growth rates, the effects of climate variability, or catastrophic events such as tsunamis. We also collected samples of mangrove leaves at 11 sites to begin a genetic study, and collected 45 soil samples for e-DNA extraction in an effort to understand their unique microbial communities.

STUDYING CARBON SEQUESTRATION AND STORAGE

An extensive investigation into carbon storage was undertaken in 2023, involving the extraction of 50 soil cores from 16 sites to study the mangroves' blue carbon capacity, that is, their capacity to sequester and store carbon, crucial for climate change mitigation efforts. The cores will also be dated, so that we will know not only the amount of carbon per hectare, but also the rate of sequestration over time. Preliminary results indicate that mangroves in Galapagos may be able to store significantly higher levels of carbon than other mangrove forests around the world. Further determinations will be conducted in collaboration with Yale University.

TRACKING EL NIÑO IN MANGROVE ECOSYSTEMS

More than 30 temperature loggers have been strategically placed throughout the Galapagos Marine Reserve to track El Niño-induced temperature fluctuations and their impact on biodiversity and mangrove forest change. We also began monitoring mangrove growth to assess the impact of El Niño and La Niña on mangrove forests around the archipelago.

50 soil cores extracted from 16 sites to study blue carbon capacity of mangroves in Galapagos

MONITORING THE AVIAN FLU OUTBREAK AMONG MARINE BIRDS

615 individuals of 13 marine and lagoon bird species monitored

2023 was marked by the arrival of the Avian Flu H5N1 to the Galapagos Islands in September, impacting populations of marine birds - principally boobies and frigatebirds. As the main scientific advisor to the Galapagos National Park Directorate (GNPD) and the Galapagos Biosecurity Agency (ABG) and a member of the Galapagos Avian Flu Committee, CDF played a key role in the development of management recommendations and prevention actions, as well as the ongoing monitoring in the field of this crisis.

Of 429 individuals tested for Avian Flu, only 8% were found to be positive across six species: the Tropical Bird, Great Frigatebird, Magnificent Frigatebird, Nazca Booby, Red-footed Booby, and Blue-footed Booby. This infection rate is notably lower than that observed on the continent. CDF's Senior Researcher is currently trying to understand what factors contributed to this lower contagion rate, which may include the influence of a milder El Niño event than anticipated.

23 monitoring trips on 9 islands in collaboration with the GNPD and ABG

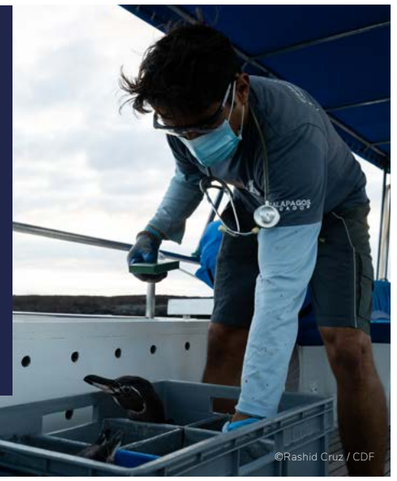
5 breeding areas temporarily closed to tourism as a measure to contain the outbreak

Of 429 individuals sampled, 34 individuals tested positive to Avian Flu

171 albatross individuals monitored using the capture-recapture method in Punta Suárez

HEALTHY PENGUIN AND FLIGHTLESS CORMORANT POPULATIONS

CDF's annual census identified a total of 3,833 marine and lagoon birds across 23 species. The census provided encouraging figures for emblematic species, estimating the penguin population at 2,209 individuals and flightless cormorant population at 1,271.



28 flightless cormorants monitored in Isabela and Fernandina

400 traps to control cats at 10 marine bird breeding areas were put on Isabela Island

STUDYING PRESENCE OF HEAVY METALS IN BIRDS

Our team collected over 400 feather samples from penguins, cormorants, and flamingos, which were sent for analysis to detect heavy metals and stable isotopes. This research aims to understand the environmental threats these pollutants pose to water bird populations.

UNDERSTANDING SHARK ECOLOGY IN AN EL NIÑO YEAR

212 dive hours completed to conduct shark surveys and tagging

In 2023, our team undertook three scientific expeditions to the northern islands of Darwin & Wolf during warm, cold, and transition seasons. These expeditions were integral to our long-term shark monitoring program, as well as for our new USAID funded shark and ray conservation initiative, called “Habla Tiburón”. Over the course of these trips, we compiled more than 86 hours of stereo video surveys and collected 131 shark tissue biopsies for stable isotope and genetic analysis. **We also tagged 92 scalloped hammerhead and silky sharks with satellite tags,** which will allow us to study their movements in response to the unusually warm waters due to the El Niño year, and compare these patterns with El Niño neutral years.

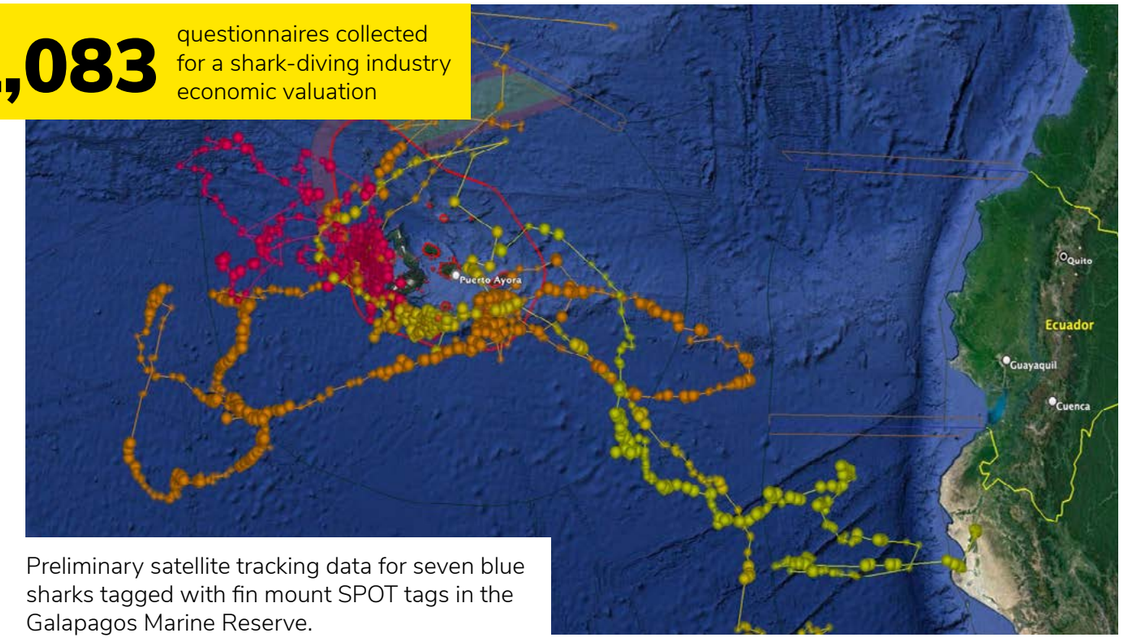
Additionally, **we launched our first oceanic shark tagging initiative** with local Galapagos fishers, **deploying seven SPOT satellite tags on blue sharks** - one of the most heavily-fished shark species globally. Early data show these sharks extensively use areas beyond the Galapagos Marine Reserve (GMR). Unfortunately, one of the seven tagged blue sharks was captured by a Peruvian fishing vessel in early 2024, underscoring the threats they face outside of protected zones such as the GMR.

We also conducted a comprehensive tourist survey to evaluate the economic impact of shark-diving on Galapagos tourism. Results will help to determine the value of living sharks as a key tourism asset for the region.

99 sharks tagged

©Dennise Arévalo / CDF

1,083 questionnaires collected for a shark-diving industry economic valuation



Preliminary satellite tracking data for seven blue sharks tagged with fin mount SPOT tags in the Galapagos Marine Reserve.

IN FOCUS: HABLA TIBURÓN, A NATIONAL SHARK AND RAY CONSERVATION INITIATIVE

In June 2023, we launched a new and ambitious development project, made possible by the United States government via the US Agency for International Development (USAID), that aims to strengthen fisheries governance, promote responsible fishing practices, and thus drive the conservation of sharks and rays in Ecuadorian waters.

Led by the Charles Darwin Foundation (CDF) in partnership with WWF-Ecuador, this five-year initiative broadens its reach from Galapagos to also include fishing communities on mainland Ecuador. Three key strategies drive our efforts: 1) exploring market opportunities to improve fishing practices; 2) enhancing governance of oceanic fisheries via participatory processes, and 3) strengthening compliance by improving monitoring and enforcement against illegal fishing practices. 2023 focused largely on building the project from the ground up with some key milestones:

SETTING UP THE PROJECT TEAM

CDF established a dedicated project management team to oversee the implementation of the project, as well as to coordinate scientific endeavors in shark ecology and conservation, and sustainable fisheries across mainland Ecuador and Galapagos. A total of 8 project team members were hired in 2023 in Galapagos and the port town of Manta on mainland Ecuador, with a further 6 to be hired in 2024.

UNDERSTANDING THE FISHERIES VALUE CHAIN

Analyzing the consumption of produce from specific fisheries within local markets provides insight into food systems and their interaction with the fishery value chain. By involving the Anderson Business School at UCLA in this assessment, we gained a deeper understanding of the current market state, thereby enabling us to strategize opportunities for the Habla Tiburón project to maximize its impact on both Galapagos and mainland Ecuador.

UNDERSTANDING THE ROLE SHARKS PLAY FOR DIVING TOURISM IN GALAPAGOS

Innovative approaches were also pursued this year, such as conducting economic assessments of shark-focused diving tourism. By surveying diving and snorkeling enthusiasts, a quantitative analysis was conducted to determine the economic contribution of this tourist activity to both the local and global economy. Surveys were administered at the airports of Baltra and San Cristobal, resulting in 1,082 completed questionnaires from 529 divers and 553 snorkelers.

STAKEHOLDER ENGAGEMENT

Given the project’s complex multi-stakeholder nature, stakeholder mapping and engagement is a top priority. In 2023, we briefed over 300 individuals on the project’s objectives in both Galapagos and the mainland. Additionally, we conducted a stakeholder mapping exercise focused on the fisheries relevant to the project.

ENHANCING COLLABORATION AND FOSTERING CO-LEARNING PROCESSES

The Fisheries Authority formally invited Habla Tiburón to participate in the actions outlined in the National Plan for Shark Conservation. As part of this collaboration, we have begun working closely with governmental representatives to improve technical expertise in data management and to strengthen stewardship frameworks for sharks, swordfish, and mahi-mahi action plans. These partnerships are essential for aligning with the recommendations of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) regarding the shark trade.

PEOPLE

“Playa de la Estación”, Santa Cruz Island

©Carlos Espinosa / CDF

SUSTAINABLE FISHERIES

Last year, CDF's Interdisciplinary Fisheries Project transitioned into a Think Tank, strengthening our interdisciplinary approach and expanding our geographical reach to produce scientific knowledge on fisheries as socio-ecological systems. Key highlights included:

CONTRIBUTION OF ARTISANAL FISHERIES TO GALAPAGOS' FOOD SECURITY

This year we advanced our research into the crucial role of artisanal fisheries for local food security, highlighting seafood as a primary protein source despite facing challenges such as limited access and unhealthy eating habits. In collaboration with Duke University, we identified key variables to monitor in order to better determine the Galapagos fisheries' contribution to food security.

ASSESSING MERCURY LEVELS IN LOCAL CATCH

We published important data indicating high levels of mercury concentration in local catch of wahoo (*Acanthocybium solandri*), mottled scorpionfish (*Pontinus clemensi*), and grouper (*Hyporthodus mystacinus*), with implications for human consumption. Based on these results, recommendations are to consume no more than 2g of wahoo or mottled scorpionfish per kilogram of body weight, and a maximum of 1g of grouper per kilogram of body weight.

17 recommendations submitted to the GNPD to enhance artisanal fisheries management in GMR, aligning with our role as scientific advisors to the National Park.

18 outreach and knowledge transfer events

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5 technical reports produced with the Galapagos National Park Directorate (GNPD)


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9 international collaboration networks in marine and coastal sciences

EXPANDING OUR NETWORK

In 2023, we established the Too Big To Ignore Chapter for Ecuador – a partnership for fisheries research – alongside the Socioeconomic Research Network for the conservation of the Eastern Tropical Pacific Marine Corridor. Finally, we became an observer member of the internationally recognized South Pacific Regional Fisheries Management Organization and co-chair of the Global Ocean Accounting Partnership (GOAP).

TECHNICAL ADVICE FOR DECISION-MAKING

The technical advice we provided last year informed the opening of sea cucumber and spiny lobster fisheries and influenced policy instruments for the Galapagos Marine Reserve (GMR) such as the fishing calendar and the inputs to the fishing regulation for Galapagos. Moreover, our involvement in the IUCN Red List assessment declared the Sailfin Grouper and White Spotted Sand Bass as endangered.

660 tourists and 433 residents surveyed


©Carlos Espinosa / CDF

417 beach visitor surveys conducted


©Carlos Espinosa / CDF

A JOURNEY TOWARDS SUSTAINABLE TOURISM IN GALAPAGOS

In 2023, our Sustainable Tourism research line launched as part of CDF's Sustainability for Conservation Research Program. With visitor numbers reaching 329,477 in 2023, up by over 25% from 2022 and 18% from pre-pandemic levels, it has become paramount that we understand how the ecological impacts of this volume of visitation can be mitigated. Key highlights for the year included:

"REGENERATIVE TOURISM" WORKSHOP

More than 60 stakeholders convened at the Charles Darwin Research Station for a two-day workshop to address sustainability, education, and the need for diversified economies. With the tourism industry representing at least 65% of the Galapagos economy, this workshop, organized by CDF in collaboration with the Galapagos National Park Directorate and other organizations, was an important first step to open up a dialogue about the major challenges the sector faces and enhance collaboration.

GAINING A BETTER UNDERSTANDING OF TOURISM IN GALAPAGOS

Surveys conducted this year highlighted tourist satisfaction with the quality and conservation efforts of visited sites but also concerns about urban fauna and waste. Residents acknowledged tourism's economic benefits but flagged resource scarcity and pollution. Such surveys provide crucial insights and establish a baseline to which we can compare future assessments.

Moving forward, our focus remains on sustainable tourism management, aiming to enhance the visitor experience while minimizing their ecological footprint. Additionally, we're initiating research on Agroforestry Systems in the humid highlands, where we will evaluate coffee cultivation's social, environmental, and economic impacts. Despite challenges, our dedication to preserving Galapagos biodiversity drives us forward, ensuring tourism benefits both the local community and the environment.

4,088 children, youth and adults engaged through our Science & Community Encounters

EDUCATION AND COMMUNITY OUTREACH

CDF's Environmental Education and Community Outreach Program seeks to foster environmental awareness and sensitivity by combining contact with nature, scientific knowledge, and experiential learning. It aims to cultivate attitudes, practices, and behaviors that respect and protect the environment, encouraging a sense of belonging and promoting the conservation and sustainable development of Galapagos' socio-ecosystems. Last year marked our education team's expansion beyond Santa Cruz Island, with educators now present on San Cristobal and Isabela Island.

CLUBS: FOR AN ENGAGED YOUTH

CDF actively engages Galapagos youth with its three flagship clubs including: Summer Club (for 13-15-year-olds), Science Club (for 14-18-year-olds), and Leaders Club (for those aged 18+). Each club is tailored to provide age-appropriate learning experiences, guiding young individuals through their developmental stages.

In 2023, we successfully conducted 75 activities across these clubs, achieving a total of 368 individual participations among a pool of approximately 66 participants. We also enhanced our engagement through "Learning Diaries", a creative outlet for members to document and share their experiences and learnings via stop motion videos, podcasts, and nature diaries.

120+ education and community activities organized throughout the year

SCIENCE & COMMUNITY ENCOUNTERS

2023 marked the re-launch of our flagship "Traveling Libraries" project. This initiative brings curated book collections to schools in remote areas lacking access to resources, internet, or specialized materials. A total of 10 workshops with teachers in 5 educational establishments were conducted on the islands of Santa Cruz, Isabela and Floreana, benefiting 190 youth and adults in all. This project will be ramping up further in 2024.

We also continued to invest time in sharing our scientific work with the community across Galapagos. We hosted 38 talks, 24 of which were open to the community, attracting 1,025 attendees. Eight workshops across the three islands resulted in 112 sessions with 406 participants.

We also engaged with the community through external activities, meetings, and events, reaching over 570 people, and led seven major events, such as the "CDF Open House" and the "Christmas Bird Count Album," which collectively drew more than 1,860 participants of various ages.

1,100 community members visited CDF's 2023 Open House, including 8 of the 12 educational establishments on Santa Cruz Island.

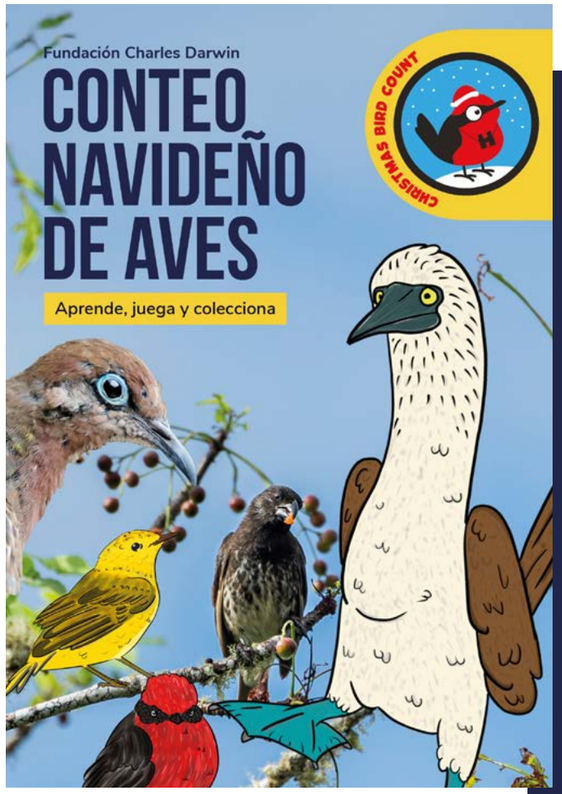
EXPERIENTIAL SCIENCE

In 2023, we engaged over 450 participants in 18 experiential science portfolio activities designed to connect the community with scientific knowledge. Additionally, our "Citizen Science" initiative involved more than 170 people across 12 bird count routes on Santa Cruz and Isabela Islands.

ACTIVITIES WITH PARTNER ORGANIZATIONS

We continued to join efforts with other local institutions and organizations to expand our outreach to local communities. Collectively, these efforts reached more than 4,280 children, youth and adults in Santa Cruz, Isabela and San Cristobal through 46 individual activities.

4,500+ children, youth and adults reached through collaborative outreach campaigns with partner organizations



A CHRISTMAS BIRD COUNT TO REMEMBER

The CDF annually organizes a Christmas bird count, collaborating with the land bird conservation team and other institutions to raise awareness of declining bird populations in Galapagos. This year's event was particularly special as we introduced a limited-edition Christmas Bird Count Sticker Album, primarily aimed at children. Participants collected stickers for each bird sighting, some proving more challenging to obtain than others. **The activity was a resounding success, with over 300 kids and adults across Santa Cruz, San Cristobal, and Isabela Islands taking part, including more than 60 individuals in on-site bird counts.** Participants exchanged photographs for stickers, encouraging family involvement and exploration of nearby natural areas. Environmental educators witnessed successful species identification during bird count routes, underlining the project's impact and success!

A VITAL RESOURCE: CDF'S NATURAL HISTORY COLLECTIONS

The Charles Darwin Research Station is home to the largest Natural History Collections of endemic, native and introduced species of the Galapagos Islands in Ecuador. The collections were created as a repository of Galapagos biodiversity and to provide long-term resources for the study of biodiversity, taxonomy, and speciation of the organisms that make up the natural living laboratory that is the Galapagos Islands. **In 2023, 3,365 new specimens were added to our collections, with more than 65% of them being terrestrial invertebrates.** Other key developments included:

NEW DISCOVERIES IN GALAPAGOS

We reported on a **new mushroom-growing fungus**, and are describing a new species of velvet worm, a living fossil.

14 national and international volunteers trained in collection management.

555 visitors participated in our behind-the-scenes tours of the Collections.

SUPPORTING RESEARCHERS

31 projects from CDF and other institutions utilized our collections and facilities. Primarily, our collections serve as a reference for specimen identification, with increasing use of tissue samples for genetic and radioisotope analyses.

INSTITUTIONAL COLLABORATIONS

Together with the California Academy of Sciences, we conducted specimen salvage on Floreana Island during the eradication of introduced species in the second half of 2023. This work included the finding of fossils belonging to the extinct Floreana tortoise, *Chelonoidis niger*.

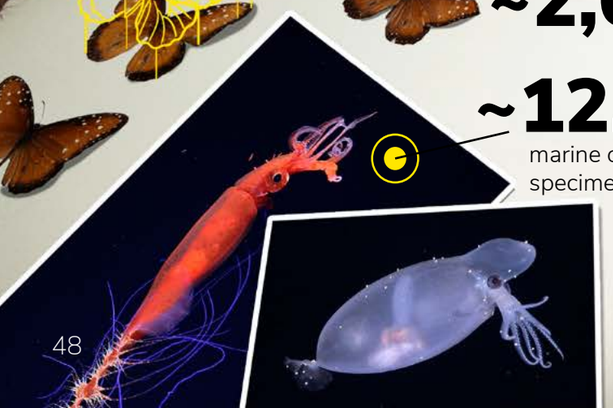
2023: CDF'S NATURAL HISTORY COLLECTIONS BY THE NUMBERS

~47,000 herbarium specimens

~76,000 terrestrial invertebrates specimens

~2,600 vertebrates specimens

~12,500 marine organisms specimens



USING TECHNOLOGY & INNOVATION TO ENABLE OUR RESEARCH

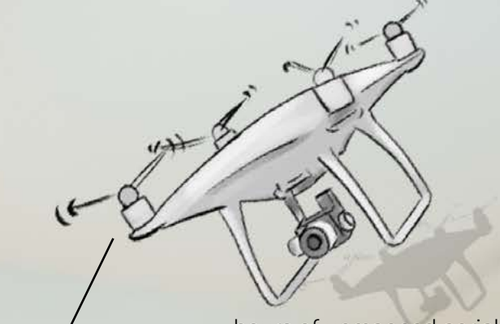
At CDF, we prioritize effective, science-based conservation through the optimal utilization of technology and data management. That's why we're dedicated to expanding the accessibility of Galapagos-related information and knowledge through web-based databases, visualization tools, and interactive digital platforms. Our dataZone platform hosts a comprehensive suite of applications, providing access to **more than 60 years of scientific research data collected** from various databases that center on the Galapagos Islands.

8 Story Maps and Geographic Visualization Applications published for use by the scientific community

New digital station installed at CDF with Ecuador's Meteorological Institute to boost climate data tracking amidst rising El Niño events.

517,000+ dataZone page views from 317,000+ users worldwide

7 data visualization dashboards under development for various CDF projects



72+ hours of unmanned aerial vehicle flights conducted for remote gathering of geographic features, capturing presence/absence of target species and their environmental interactions

14 digital models of specimens from our Natural History Collections generated using 3D equipment

Check out our Research Hub to access the latest Story Maps and Applications

1,000+ volumes added to the libraries' collection

OUR LIBRARY, ARCHIVE AND MUSEUM

In 2023, the Corley Smith Library experienced significant growth and development, enhancing its role as a vital repository of knowledge about the Galapagos Islands. With a commitment to serving the scientific community and the public alike, the library expanded its collection by **acquiring over 400 new volumes**, in addition to a generous donation of **625 books and materials from the private collection of Marita Valverde from Isabela Island**, enriching archives with valuable insights into Galapagos history and culture.

Emphasizing the importance of preservation and accessibility, the library prioritized the digitization and preservation of old books, unique copies, and original manuscripts. The digitization (including transcription, edition and publishing) of these unedited documents proved to be a cornerstone of the library's endeavors, as it enabled the preservation of valuable information about CDF and Galapagos' history in PDF format on the Galapagueana website, ensuring its longevity and accessibility for future generations.

Furthermore, the library **continued the maintenance of its facilities, including the rooms dedicated to the Archive and Museum**, housing a wealth of documents, plans, maps, recordings, tapes, reels, and archaeological material. While these materials await review and analysis by archival specialists, they represent an invaluable resource for researchers and enthusiasts alike, offering insights into the rich history and biodiversity of Galapagos.

Throughout the year, the Corley Smith library continued to serve as a hub for intellectual inquiry, **welcoming approximately 300 users who sought out its resources for consultations, studies, and research endeavors.** Looking ahead, the library remains committed to its mission of supporting Galapagos research projects, expanding its collections, and serving as an indispensable local resource for scientific inquiry and exploration.

Check out Galapagueana, CDF's digital and bilingual platform dedicated to the recovery, management, and dissemination of the cultural heritage, and the social and scientific memory of the Galapagos Islands.

134 full time employees, 62% from Galapagos

297 visiting scientists from 32 countries

OUR TEAM

CDF STAFF

At the Charles Darwin Foundation, our success hinges on the dedication and expertise of our remarkable team. Our people share a deep passion for conservation and a commitment to safeguarding the extraordinary biodiversity of the Galapagos Islands. In 2023 we had 134 full-time employees, of which 47% working in the scientific teams and the remainder in administrative support teams including operations, finance, HR, communications, fundraising and IT.

Championing gender equity and local talent are two critical priorities for CDF and we are happy to report that we continued to trend favorably in both areas in 2023. 51% of our science staff are women, against 48% at institutional level. Female representation within our management team in 2023 stood at 62%, largely above the national average. As a significant local employer, we prioritize hiring and training local talent. Currently, 61% of our CDF staff are permanent residents of Galapagos, 23% hail from mainland Ecuador, and 16% are international. Within our science teams, 45% are permanent residents of Galapagos, showing a slight increase from 2022.

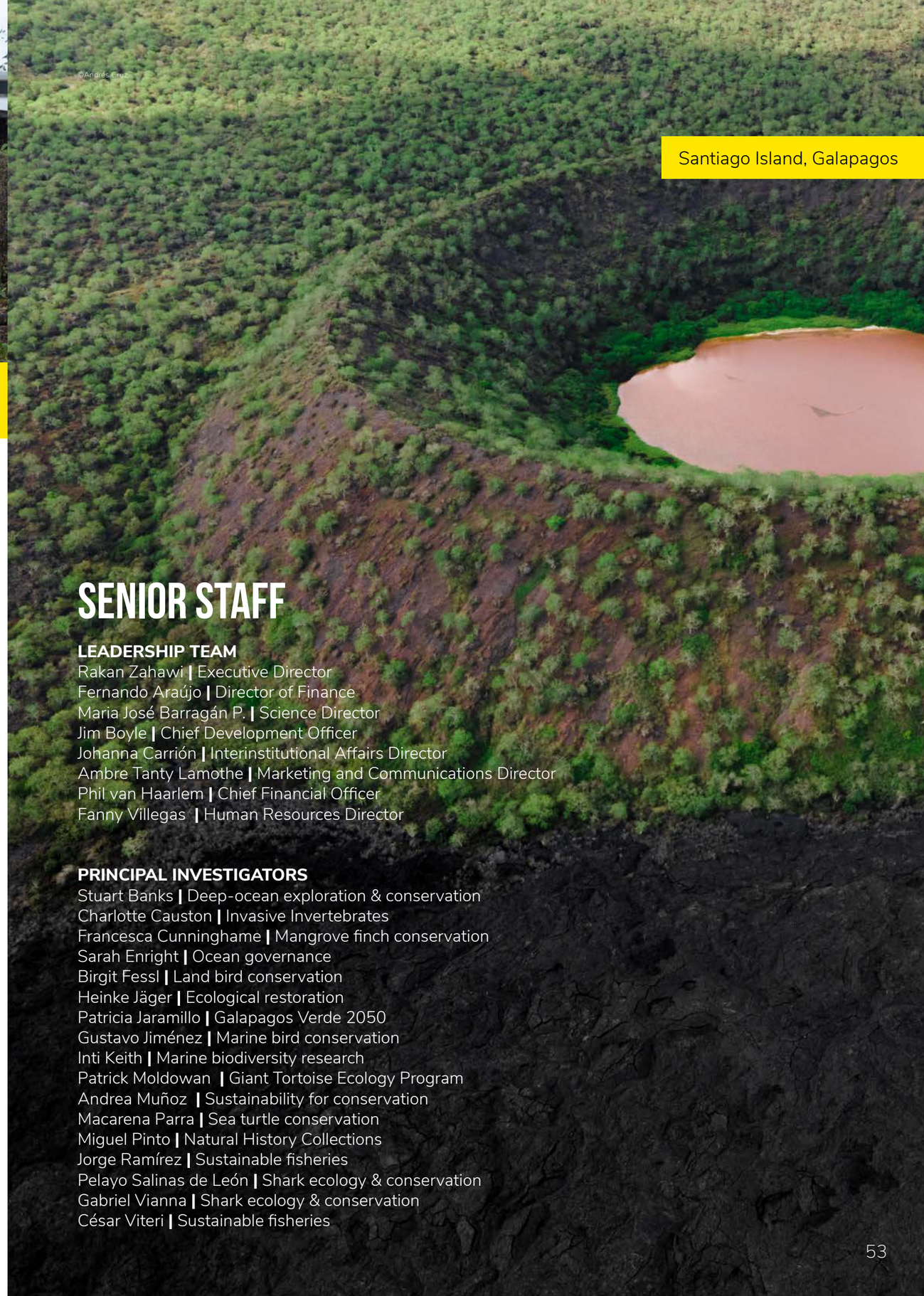
VISITING SCIENTISTS

2023 saw a significant uptick in the number of visiting scientists using the Charles Darwin Research Station as their base, and returning us back to pre-pandemic levels. CDF welcomed a total of 297 visiting scientists from 32 countries, up from 97 in 2022. More than 50% of these are recurring visitors who have been doing research on the islands for decades.

VOLUNTEERS

We welcomed 83 volunteers in 2023, of which 71 were trained by our scientists in the field. 25% of CDF's volunteers in 2023 are from Galapagos, 16% from mainland Ecuador and 59% from other countries.

83 volunteers in 2023



Santiago Island, Galapagos

SENIOR STAFF

LEADERSHIP TEAM
Rakan Zahawi | Executive Director
Fernando Araújo | Director of Finance
Maria José Barragán P. | Science Director
Jim Boyle | Chief Development Officer
Johanna Carrión | Interinstitutional Affairs Director
Ambre Tanty Lamothe | Marketing and Communications Director
Phil van Haarlem | Chief Financial Officer
Fanny Villegas | Human Resources Director

PRINCIPAL INVESTIGATORS
Stuart Banks | Deep-ocean exploration & conservation
Charlotte Causton | Invasive Invertebrates
Francesca Cunninghame | Mangrove finch conservation
Sarah Enright | Ocean governance
Birgit Fessl | Land bird conservation
Heinke Jäger | Ecological restoration
Patricia Jaramillo | Galapagos Verde 2050
Gustavo Jiménez | Marine bird conservation
Inti Keith | Marine biodiversity research
Patrick Moldowan | Giant Tortoise Ecology Program
Andrea Muñoz | Sustainability for conservation
Macarena Parra | Sea turtle conservation
Miguel Pinto | Natural History Collections
Jorge Ramírez | Sustainable fisheries
Pelayo Salinas de León | Shark ecology & conservation
Gabriel Vianna | Shark ecology & conservation
César Viteri | Sustainable fisheries

FUNDRAISING REVIEW

Thank you to everyone who helped make 2023 a year of incredible achievements and milestones for the Charles Darwin Foundation (CDF)! Over $33 million in funding for research and conservation programs was secured for the next five years and is a testament to the dedication and support of over 560 donors who believe in our mission. A special thank you to the 284 new donors who lent their support this year.

In line with CDF's strategic plan, our fundraising efforts in 2023 continued to focus on two key priorities that will allow us to secure CDF's continued long-term impact in and for Galapagos:

SIGNIFICANT STRIDES MADE TO DIVERSIFY OUR DONOR BASE

We are pleased to have increased our donor base from 420 donors in 2022 to 560 donors in 2023 - a great indication that more people, foundations and partners are aligning with our mission to safeguard Galapagos for future generations. This growth was driven mostly by an increase in major gifts from 26 in 2022 to 30 in 2023 and an increase in the number of grants from 18 in 2022 to more than 30 in 2023.

As a result, we are pleased to report a 24% growth in restricted income compared to 2022, largely driven by large grants in ocean conservation. We also saw a healthy 9% growth in unrestricted income from $3,820,090 in 2022 to $4,150,889 in 2023. Unrestricted funds are important to CDF as they support our mission, operations, campus and part of our staff salaries, and importantly, give us the needed flexibility to allocate funds to where they are most needed. In 2019, our unrestricted income represented only 39% of our total income, which we identified as a weakness in our ability to deliver the needed impact where it is most needed. Today, we are pleased to report that unrestricted funds represent 55% of our total income, which is a much healthier balance that will enable us to deliver on our mission more effectively.

STRENGTHENING EXISTING PARTNERSHIPS AND BUILDING NEW LONG-TERM ALLIANCES

The year 2023 was also marked by a number of major strategic grants and partnerships with key donors, both new and old. It is particularly exciting to see the renewed commitment of our long-standing donors, who after years of partnership continue to align with our mission and strategy of the future of the archipelago.

With a generous pledge of EUR 7 million from our long-time partner, **the COmON Foundation**, CDF is embarking on a much-anticipated renovation of the Fischer building complex, which houses our terrestrial research offices, laboratories, and Natural History Collections. Once complete, this overhaul will provide for an immersive experience to visitors and showcase our spectacular collections of Galapagos specimens. The project also contemplates a comprehensive upgrade of our Exhibition Hall, which is being planned in collaboration with experts from the California Academy of Sciences and the Naturalis Biodiversity Center based in the Netherlands.

A new initiative supported by **USAID**, which we are executing in collaboration with **WWF Ecuador** for marine conservation is particularly promising, with an investment of $11.9 million over five years. This initiative not only highlights the importance of sustainable fishing practices but also underscores the significance of international partnerships in achieving conservation goals.

In October, CDF announced two significant grants of $5 million and $2 million from the **Bezos Earth Fund** and the **Gordon and Betty Moore Foundation**, respectively. This funding will allow CDF to greatly expand the deep-sea research and exploration program in collaboration with key partners in the Eastern Tropical Pacific region.

The historic debt-for-nature swap secured by Ecuador will generate significant funding for Galapagos conservation initiatives and is a landmark achievement with long-term implications for environmental sustainability in the region. CDF (and other organizations working in Galapagos) will eventually be able to apply for these funds once the call is announced.

Lastly, the generous commitment from the **TB-ARR Fund** provides essential unrestricted funding, ensuring the foundation's financial stability and enabling continued growth and success.

FUNDRAISING OUTLOOK

As we look to the coming years, our focus will remain on building a broad base of community supporters at all levels of giving in order to mitigate the impacts of climate change, safeguard species diversity, and control the onslaught of invasive species. Thank you.

Waved Albatross
Phoebastria irrorata

PROTECT GALAPAGOS, IMPACT THE WORLD

Become a donor today

OUR DONORS

FOUNDATIONS / NON-GOVERNMENTAL ORGANIZATIONS

Above $1,000,000
Bezos Earth Fund
COmON Foundation
Fondo para el control de las Especies Invasoras de Galápagos (FEIG)
Gordon and Betty Moore Foundation
Re:wild
USAID

$100,000 - $499,999
Blue Action Fund
Fondation Franklinia
Galapagos Conservation Trust
Lindblad Expeditions-National Geographic Fund
Paul M. Angell Family Foundation

$50,000 - $99,999
Fundación de Conservación Jocotoco
Houston Zoo

$10,000 - $49,999
The Blue Feet Foundation
Friends of the Galapagos Islands Netherlands
Friends of the Galapagos Islands Switzerland
Focused on Nature
Hurtigruten Foundation
Keidanren Nature Conservation Fund (KNCF)
National Geographic Society
Rapid Response Facility
Stanford University Alumni
Wilhelma

$1,000 - $9,999
Cameron Foundation
Island Conservation
Island Foundation
Japanese Association for Galapagos (JAGA)
NTNU University Museum
Penguin Fund of Japan
Schmidt Ocean Institute

CORPORATIONS

Above $100,000
Ecoventura

$10,000 - $99,999
CASIO
Galapagos PRO
IGTOA
Johnsonwax del Ecuador S.A.
Maeda Corporation
Metaverse Consulting S.A.S.
Stefano Ricci

$1,000 - $9,999
BESS Forest Club
The BlueFoot Seafood Company
BV Nieuw Vredebest (in honor of Wijnand Pon)
Horizon Group Properties (in memory of Elizabeth Skoien)
Kneissl Touristik G.m.b.H.

INDIVIDUALS

Above $500,000
Anonymous donor
TB-ARR Fund

$100,000 - $499,999
Anonymous donor
George & Susan Krouse
Peter & Kris Norvig

$50,000 - $99,999
Anonymous donor (in honor of Wijnand Pon)

$10,000 - $49,999
Anonymous donor (2)
Anonymous donor (in memory of Jacqueline De Roy)
Dennis Geist & Karen Harpp
Gustav Bergaman (bequest)
Ken Collins & Jenny Mallinson
Marisa Ignacio Hormel Trust
Mariana Marques & Terry Rockstad
Ronnie Stewart
Sylvia & Matt Kerrigan
Tracy & Chris Bridge

$1,000 - $9,999
Anonymous donor (4)
Anonymous donor (3) (in honor of Wijnand Pon)
Amy Blackwell
Anna & John Reger
Anton Broenink (in honor of Wijnand Pon)
Barbara West
Barry Lawrence
Besson Magaly & Friends (in memory of Jean François Apffel)
Brian Kurzel
Brit & Sharon McLin (in honor of Prof. William Durham)
Carol Baird & Alan Harper
Clara Jeffery Charitable Trust
Clay McLin
Connie Kwan-Wong
Cornelis Hartmans (in honor of Wijnand Pon)
Darlene Chirman
Darrel Schoeling & Jeff Corbin
Deborah Kainer & Ken Ripper
Doug & Emilie Ogden
Dyann & Peter Wirth
Eduardo Diez & Dolores Gangotena de Diez
Edward D Bullard
EPB Burbach-Vos (in honor of Wijnand Pon)
Ernie & Norma Mendoza
Frits & Ellen van Bruggen (in honor of Wijnand Pon)
Hendrik Schuurmans (in honor of Wijnand Pon)
Jan Anker (in honor of Wijnand Pon)
Janice Swab
Jennifer Brown (in honor of Fabian)
Jennifer Rowe (in honor of Andrew and Kate Davis)
Jim Boyle
John Duboise
John Ruedinger (in honor of Wijnand Pon)
Jozef Petrus Bernardus De Vries (in honor of Wijnand Pon)
Jurgen Van Breukelen (in honor of Wijnand Pon)
Karen Slagt (in honor of Wijnand Pon)
Linda Tuinier Hofman (in honor of Wijnand Pon)
Madeline Lee
Marchello Family Fund
Mari Watanabe (in honor of Rakan Zahawi and Tamara Cole)
Mariette Pon (in honor of Wijnand Pon)
Marja Boelkes & Jan Vos (in honor of Wijnand Pon)
Mark & Alejandra Veltmann
Mark Bauman
Melissa Kantesaria
Monica Donath
Patricio Marquez (in memory of Dr. Miguel Angel Marquez)
Paul Anderson
Peter & Theresa Chang
Peter Kramer & Diane Wood Kramer
Phil van Haarlem
Pien Pon (in honor of Wijnand Pon)
Ritz Family Foundation
Robert Gondo
Roelie De Vries (in honor of Wijnand Pon)
Steven & Karen Sperber
The Barry and Mimi Sternlicht Foundation
William & Jean Wilcox
William & Kathleen Durham
William Chadwick
William King & Joann Yates

$500 - $999
Anonymous donor (2)
Anonymous donor (in honor of Wijnand Pon)
Anara Zhakuova (in memory of Elizabeth Skoien)
Andrew Garcia
Angelika Domig
Ann Margerison
Bettina Krüger
Catherine Sheridan
Charles & Colleen Mills
Charles Kircher
David Moreno
Donald Clark
Garrett & Lane Adams
Gisela Gerstberger
Gordon Cooper
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Jennifer Racine
John Bullard
John Crabbe & Jeri Janowsky
John Loudon & Yolanda Leyen Loudon (in honor of Wijnand Pon)
Jozsef Jankovich (in honor of Wijnand Pon)
Juan Pablo Moncayo (in honor of Alma Moncayo-Haitsma)
Kelvin Yen
Matthew McDonough
Patricia Armstrong (in honor of Prof. William Durham)
Patricia Seyb
Rafik Ward
Ray & Lisa Bukaty
Richard Coulter
Robert Clack
Robert Ruck (on behalf of the Mittlemans & the Ruck/Perrotti family)
Ryan Kupres
Sara Neff
Sascha Hoffmann
Sharon Kewley

IN-KIND DONATIONS

$10,000 - $99,999
California Academy of Sciences
David Foster & Wilka Toppins
Ecoventura
Fotógrafo de Galápagos
Lindblad Expeditions
Marita Velarde
Quasar Expeditions
Ronnie Stewart

$1,000 - $9,999
The Blue Feet Foundation
Cole Chemical
Connie & Donald Rankin
Deborah Kainer & Ken Ripper
Kathleen & Glen Gondo
Lowell Instruments LLC
Metropolitan Touring
Picturatus
Roberto Ochoa
Samsung

AUDITED FINANCIALS

	2023	2022
INCOME		
Applied restricted income	**3,452,353**	2,785,633
Unrestricted pledged income	**2,891,246**	2,570,417
Unrestricted other income	**434,222**	621,532
Institutional promotions	**594,876**	424,150
Other income	**230,545**	203,991
TOTAL	**7,603,242**	6,605,723
EXPENDITURE		
Science, conservation and education*	**4,694,793**	3,944,673
Fundraising	**491,329**	443,961
Other expenditure	**2,514,975**	2,419,555
Extraordinary	**-**	-59,562
TOTAL	**7,701,097**	6,748,627
***Science, conservation and education**		
Cost of scientific projects	**2,967,254**	2,395,507
Cost of other projects	**485,100**	337,975
Services to scientists	**288,171**	276,160
Laboratory and collections	**954,268**	935,031
TOTAL	**4,694,793**	3,944,673

STATEMENT OF FINANCIAL POSITION

ASSETS		
Cash/cash equivalents	**5,277,833**	4,463,898
Other current assets	**778,759**	779,127
Non-current assets	**3,526,229**	3,501,318
TOTAL	**9,582,821**	8,744,343
LIABILITIES AND EQUITY		
Deferred income	**5,289,515**	4,497,656
Other current liabilities	**1,814,335**	1,760,129
Employee benefits	**764,768**	674,500
Equity	**1,714,203**	1,812,058
TOTAL	**9,582,821**	8,744,343

Galapagos Penguin
Spheniscus mendiculus

BOARD OF DIRECTORS AND GOVERNING MEMBERS OF THE GENERAL ASSEMBLY

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Ministerio de Relaciones Exteriores y Movilidad Humana Ecuador: Embajador Juan Daniel Stacey
Ronnie Stewart

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Alan Tye
Hans van Poelvoerde
Alan Tye
Hans van Poelvoerde

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Ministerio del Ambiente | Sade Fritschi
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UNESCO | Julio Carranza
Galapagos Conservation Trust | Jen Jones

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Oswaldo Hurtado Larrea
Henri The Grand Duke of Luxembourg
Peter Kramer
Craig MacFarland
Dennis Geist
Ole Hamman
Peter Grant
Rosemary Grant
Ken Collins
Lynn Fowler
Cleveland Hickman Jr.
Katherine Coolidge Lastavica
Sven-Olof Lindblad
Tjitte de Vries

See our full list of General Assembly members here

Trail to “Post Office Bay”, Floreana Island

©Carlos Espinosa / CDF

“Quinta Playa” Isabela Island

PROTECT GALAPAGOS, IMPACT THE WORLD

Help us safeguard Galapagos, one of the world’s greatest natural treasures, by making a tax-deductible donation today via our website www.darwinfoundation.org.

Your gift directly supports our scientists’ work at the Charles Darwin Research Station.

And why not become a monthly donor? Join our Wild Club today!

We also accept donations via check, bank, and stock transfer. For more information contact our fundraising team at fundraising@fcdarwin.org.ec

Thank you for making an impact with us!

ANNUAL REPORT GENERAL LAYOUT
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Ambre Tanty Lamothe

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Ambre Tanty Lamothe

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Boris Herrera

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Schmidt Ocean Institute

BACK COVER IMAGE
Schmidt Ocean Institute

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Rashid Cruz / CDF
Schmidt Ocean Institute
Saúl Aguirre / CDF
William Bensted-Smith / CDF

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The ‘Charles Darwin Foundation for the Galapagos Islands’, in French ‘Fondation Charles Darwin pour les Iles Galapagos’, Association internationale sans but lucratif (AISBL), has its registered office at 54 Avenue Louise, 1050 Brussels, Belgium. Trade Registry # 0409.359.103

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