INTERNATIONAL IGUANA FOUNDATION

saving endangered iguanas

2022 IMPACT REPORT

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INTERNATIONAL IGUANA FOUNDATION

A LETTER FROM THE DIRECTOR

It was refreshing returning to *business as usual* and getting back to activities and grants. This year, the IIF Board of Directors awarded $91,105 in eight grants, two of which included large tier awards for up tp $25,000 each. This is the first year for large tier grants, and it reflects our increased focus on the core programs IIF plays a key role in sustaining. Awarding small grants to long-standing programs does not really "move the needle" in terms of growth; while they can help hold the line, they do not promote significant expansion. Look for the IIF to identify with more core programs as we continue to grow.

We ran another successful End-of-the-Year Campaign in 2022, and we raised $20,990 in support of the Motagua Spiny-tailed Iguana project in Guatemala. The funds will go to our partner there, ZooTropic, to purchase equipment to help manage the Heloderma Natural Reserve, including a Suzuki Carry one-ton lift-truck (see photo page 8). Most of these funds were donated by IIF Board members, and we are grateful for their generosity.

IIF welcomed three new Board members (see page 5): Russ Mittermeier (Re:wild), Kevin Torregrosa (WCS), and Brian Henley (Cameron Park Zoo). I am grateful for their participation and support. We also welcomed a new Communications Coordinator in February 2023, and I am pleased to introduce Karen Worley, who comes to us with a wealth of experience in PR and Marketing from her 30 years with the San Diego Zoo.

IIF was finally able to hold another live outreach event in May 2022, partnering with Martin House Brewery, a Fort Worth venue that sponsors events to benefit nonprofits. We showcased a new line of IIF merchandise, Dr. Resa Willis generously brought some of her handleable iguanas to the event, and we reached a lot of people with a nice turnout (see page 10). On the subject of live events, please mark your calendars for 14 October, 2023, for the 3rd IguanaFest at Iguanaland in Punta Gorda, Florida. Proceeds from this event will benefit iguana conservation.

As always, thanks to all our donors and supporters for their generosity, and for helping to sustain IIF in our efforts to protect endangered iguanas.

Rick Hudson, Executive Director

WHO WE ARE

"Our mission is to support conservation, awareness, and scientific programs that enhance the survival of wild iguanas and their habitats."

Black Spiny-tailed Iguana (*Ctenosaura similis*)

OUR TEAM

Rick Hudson
EXECUTIVE DIRECTOR
Fort Worth Zoo

Stesha Pasachnik, Ph.D.
GRANTS MANAGER
Fort Worth Zoo

Karen Worley
COMMUNICATIONS COORDINATOR

BOARD MEMBERS

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Re:wild

Tim Morrow
San Antonio Zoo

Cayle Pearson
Jacksonville Zoo

Kevin Torregrosa
Wildlife Conservation Society

Bruce Weissgold
Independent

Trevor Zachariah, DVM
Brevard Zoo

Photo by William Lamar

The International Iguana Foundation (IIF) works in partnership with individuals and organizations to provide critical support to iguana recovery programs and to generate public awareness of the threats facing iguanas today. As a nonprofit organization, we provide grants to support the restoration and conservation of threatened and endangered iguanas and their habitats worldwide.

WELCOME TO THE TEAM

Russell Mittermeier, Ph.D., Board Member

Russell A. Mittermeier is currently Chief Conservation Officer of Re:wild. Previously, he served for three years as Executive Vice Chair at Conservation International and as President from 1989 to 2014. Named a "Hero for the Planet" by *TIME* magazine, Mittermeier is regarded as a world leader in the field of biodiversity and tropical forest conservation. Trained as a primatologist and herpetologist, he has traveled widely in 169 countries on seven continents, and has conducted field work in more than 30 countries. He has a particular fondness for Galápagos Pink Land Iguanas.

Brian Henley, Board Member

Brian Henley is the Animal Care Supervisor of Amphibians and Reptiles at the Cameron Park Zoo. He has a lifelong interest in wildlife conservation and is dedicated to improving husbandry, reproduction, and well-being of captive herpetofauna. He began his career at the Gladys Porter Zoo in 2002, working his way to Supervisor of Herpetology. He has traveled widely in Central America and the Caribbean, seeing many species of iguanas in their natural habitats and the Jamaican Iguana headstart facility at the Hope Zoo in Kingston, Jamaica. He has been an IUCN SSC Crocodile Specialist Group Member since 2014.

Kevin Torregrosa, Board Member

Kevin Torregrosa has worked in the zoo field for 20 years. He is an instructor for the Association of Zoos and Aquarium's (AZA) Crocodilian Biology and Professional Management course, and he serves as the coordinator for both the Chinese Alligator and Komodo Dragon Species Survival Plans (SSP). Kevin is currently the Curator of Herpetology for the Wildlife Conservation Society's Bronx Zoo, where he directs both *in-situ* and *ex-situ* conservation projects.

Karen Worley, Communications Coordinator

Karen Worley has more than 30 years of experience working in communications, publications, and marketing. She previously worked as Managing Editor of Communications and Interpretation for San Diego Zoo Wildlife Alliance, where she was in charge of ZOONOOZ magazine, website content, newsletters, social media, advertising content, and on-grounds signs and interpretation for the San Diego Zoo and San Diego Zoo Safari Park.

OUR YEAR IN NUMBERS

$91,105

TOTAL GRANT MONEY AWARDED

$6,000

PROVIDED IN EMERGENCY GRANTS

9

PROJECTS FUNDED

$20,990

RAISED IN END-OF-YEAR CAMPAIGN DONATIONS

17K total followers

5.5K total followers

Photo by Amy MacLeod

54

RICORD'S ROCK IGUANA NESTS FOUND IN HAITI

An increase of more than 7 times those found in 2021

200

HECTARES OF IGUANA HABITAT RESTORED IN SOUTHERN DOMINICAN REPUBLIC

Local community planted over 300,000 cactus to provide a food source

63

JAMAICAN ROCK IGUANAS REINTRODUCED

A total of more than 600 have been released to the wild to date

4,370

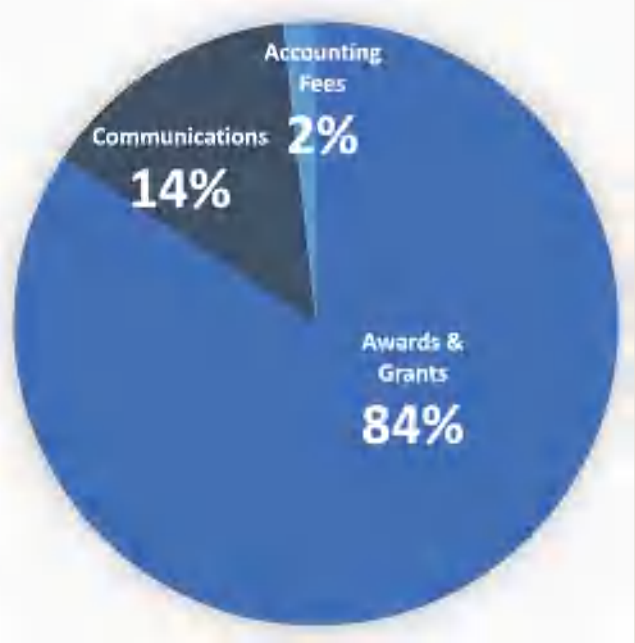
TREES AND CACTUS PROVIDED TO RESTORE MOTAGUA SPINY-TAILED IGUANA HABITAT

Trees and cactus grown at a nursery in Heloderma Natural Reserve will provide food and shelter for iguanas

FINANCIALS

2022 INCOME

2022 EXPENDITURES



2022 END-OF-YEAR CAMPAIGN

MOTAGUA SPINY-TAILED IGUANA

OUR GOAL: $20,000 WE RAISED: $20,990

Photo by Andres Novales

The International Iguana Foundation was very pleased to dedicate its 2022 End-of-Year Campaign to raising funds for the conservation of the Motagua Spiny-tailed Iguana (*Ctenosaura palearis*). The funds will aid two local conservation groups in Guatemala—ZooTropic and the Heloderma Natural Reserve—in efforts to save this endangered species.

One much-needed item the team has been able to purchase is a truck for their fieldwork (see below). It is sturdy for all the ground they cover, can carry equipment, plants for habitat restoration, and people, and the bed can be covered for shelter. The team says they love it, and they are calling it the "Shero Movil," after the local name for this iguana, "Shero."

A big thank you to everyone who contributed to the 2022 End-of-Year Campaign. It is donors that make this possible!

This project has had support from the International Iguana Foundation for the past 12 years, with efforts that include natural history studies, population surveys, and, importantly, education activities to raise local awareness and inspire school children to appreciate this unique species in their backyard, and the significance of protecting it and its habitat.

Among the spiny-tailed iguanas (*Ctenosaura*), the Motagua Spiny-tailed Iguana is one of the most threatened, largely as a result of habitat loss and poaching for human consumption. It is found only in the Valle de Motagua in Guatemala, a region of tropical dry forest that is rapidly disappearing. The iguana's distribution is severely fragmented, and the total population is estimated to be less than 2,500 mature individuals.

Photo by Daniel Ariano

This iguana plays a vital role in the dry forest ecosystem, specifically regarding the Pitayo Organ Pipe Cactus. Seeds eaten and distributed by the iguana have greater germination success, and the rehabilitation of the degraded areas of this region depend largely on the survival of this species.

Given its position in the food chain and its role in seed germination and dispersal, the Motagua Spiny-tailed Iguana is considered a keystone species of the Motagua Valley habitat, vital to the health of the ecosystem.

Photo by Johana Gil

Photo by Daniel Ariano

MARTIN HOUSE EVENT RAISES FUNDS FOR IGUANA CONSERVATION

On Saturday, 28 May 2022, with the pandemic finally in retreat, the International Iguana Foundation (IIF) held a fun public outreach event to promote iguana conservation. The venue was the popular Martin House Brewery, a Fort Worth establishment well known for hosting events to benefit nonprofit organizations. To commemorate the event, Martin House brewed a special beer—a hibiscus saison—featuring the Galápagos Pink Iguana. The beer was refreshing and popular on a hot day in Texas, and part of the proceeds went to IIF to help fund iguana conservation projects.

These three iguanas were very tractable and made great ambassadors for this event.

The IIF booth was staffed by Ashley Whittemore, Jordan Gray, and Rick Hudson (IIF Executive Director) and featured a new line of merchandise. But the stars of the show were the three iguanas belonging to Dr. Resa Willis, who generously helped us with presentations at the event. Resa brought two tame Green Iguanas—including one with beautiful red coloration—and a Black-chested Spiny-tailed Iguana that impressed many with his chill attitude, perfect for a brewery party. All three animals were excellent ambassadors for iguana conservation, provided exceptional photo opportunities, and

A handsome reddish Common Green Iguana strikes a pose on a four-pack of Galápagos Hibiscus Saison, which was specially brewed for the IIF and this event.

Dr. Resa Willis (right) generously gave of her time and iguanas to make this event special, especially for children.

Shugg Cole, event coordinator for Martin House Brewery, was a an amazing host for IIF's first local outreach event.

helped us demonstrate the distinction between the Common Green Iguana and its endangered relatives, which are the focus of IIF's conservation efforts.

It was a fantastic afternoon, and we can't thank Martin House Brewery enough for their hospitality and their enthusiasm and support—not to mention that great Galápagos Hibiscus Saison!

The International Iguana Foundation offers a range of branded merchandise for donors on the IIF website: iguanafoundation.org/contribute.

JAMAICAN ROCK IGUANA RECOVERY: A CONSERVATION SUCCESS STORY

By Stesha Pasachnik, Ph.D., International Iguana Foundation and Fort Worth Zoo

Photo by Ernst Rupp

The Critically Endangered endemic Jamaican Rock Iguana (*Cyclura collei*) is arguably one of the most threatened lizards in the world. By the 1940s, it was considered extinct, largely due to habitat conversion and Invasive Alien Species (IAS). However, Jamaican Rock Iguanas were rediscovered in 1990, in the Hellshire Hills tropical dry forest, a remote ecosystem along Jamaica's southeast coast. This galvanized an international recovery effort.

Protection and Capacity Lead to Reintroductions

Despite determination, IAS incursions into the iguana's core area were still common, and the natural recruitment rate for the iguanas remained low for the first 30 years of the program. Through intensive efforts since 2016, plans were developed for more effective protection, and the protected area for the iguanas was doubled by implementing a buffer zone surrounding the core iguana area.

Left to right: Jodi-Ann Blissett (Head Iguana Keeper, Hope Zoo), Dr. Stesha Pasachnik (Grants Manager, IIF), Shaneek Lewis (Senior Keeper, Hope Zoo), and Dr. Szarianne Khan (Veterinarian, Hope Zoo). The team was excited after completing the final iguana release of 2022.

Concurrently, the capacity at the headstart facility was quadrupled and captive management was improved to decrease the amount of time iguanas spend in captivity before reintroduction. Annual hatchling collection is now targeted at 150 individuals, and time in captivity has been reduced to three to four years.

In the first 20 years of reintroductions, about 300 individuals were released into the wild. Since 2016, the changes implemented have allowed an additional 300 iguanas to be reintroduced, including 63 in 2022. There are currently over 500 individuals in captivity, all of which are examined annually. With the improvements made, the program is on track to release the 1,000th Jamaican Rock Iguana by 2026.

Vital Support

A dedicated group of Jamaican and international organizations makes this project possible: National Environment and Planning Agency, Caribbean Coastal Area Management Foundation, Hope Zoo, Urban Development Corporation, Institute of Jamaica, Fort Worth Zoo, San Diego Zoo Wildlife Alliance, and IUCN SSC Iguana Specialist Group. The International Iguana Foundation (IIF) has played an integral role, supporting this project from the start. Generous support to the IIF from US Fish and Wildlife Service, Disney Conservation Fund, and Mohamed bin Zayed Conservation Fund has allowed the program to expand tremendously since 2016, when Dr. Stesha Pasachnik joined the team.

For 2023 and beyond, support from Disney Conservation Fund, US Embassy–Kingston, and Critical Ecosystem Partnership Fund will allow for continued research into the impacts of the buffer zone on the survival of the Jamaican Rock Iguana and other native species, improved IAS control, increased outreach and education efforts, headstart improvements, and support for the team on the ground.

Surveying populations of the ***Ricord's Iguana (Cyclura ricordii)*** in Dominican Republic and Haiti was a key goal in one of the projects IIF supported in 2022.

PROJECTS FUNDED

The International Iguana Foundation grants promote and enable iguana conservation through partnerships with scientists, educators, and organizations committed to preserving Earth's biodiversity.

Photo by John Binns

ÚTILA SPINY-TAILED IGUANA CONSERVATION: HABITAT PROTECTION AND COMMUNITY ENGAGEMENT

By Jimmy Andino, Fundación Islas de la Bahía | $7,500 AWARDED

OVERVIEW

The Útila Spiny-tailed Iguana (*Ctenosaura bakeri*) continues to be in serious danger of extinction. Since the mid-1990s, the Iguana Research and Breeding Station (IRBS) and Bay Islands Foundation (FIB) have conducted research and conservation efforts, leading to a better understanding of the ecology and reproduction. This 2022 project was to establish reference data and evaluate the current impacts of climate change on the mangroves (main habitat) and sandy beaches (nesting places) of *Ctenosaura bakeri*, and provide adaptive solutions to alleviate pressures on the primary habitats in Útila, Honduras.

ACCOMPLISHMENTS

Monitoring Protocol in Útila

In 2002, FIB established a standardized monitoring protocol, providing a tool to periodically evaluate the vulnerability of the habitat and its impacts on the wildlife. This year, findings were as follows.

Iguanas—In 100 m transects of mangrove, iguanas were spotted in the following locations: Oyster Bed Lagoon: two males, five females, and two unidentified; Western Path: two males, zero females, and one unidentified; Big Bight Pond: two males, zero females; and Turtle Harbor Wildlife Refuge: eight males, 26 females, and seven unidentified—for a total of 55 sightings.

Beach erosion—Monitoring was carried out on Chepas Beach (CB), Bando Beach (BaB), Pumpkin Hill Beach (PH), Turtle Harbor Beach (THB), and Neptune's Beach (N). Monitoring variables included temperature, increase in sea level, and measuring accretion/erosion. Neptunes and Chepas are the beaches with the greatest area loss, and their profiles decrease continuously due to the marine currents and coastal dynamics.

Mangroves and lagoons—In 2022, the parameters of salinity and pH were added to the monitoring data. Preliminary results of the average salinity in the mangroves are 14.6 ppm and an average temperature of 29.4°C. The Útila mangrove coverage map was updated using satellite images and ground validation, and coverage was estimated at 886 ha (21.4% of the surface of Útila). The total degraded area is

estimated at 231 ha, representing an increase of 16.1 ha/annually compared with historical data.

Regulations and Ordinances for the Protection of Critical Iguana Habitats

In 2022, training sessions about environment legislation were held with 25 participants from local authorities and municipal police. The sessions focused on the mangrove ecosystems and beaches as critical sites for iguanas and turtles, protection regulations for the areas, environmental crimes, and illegal hunting of iguanas in Útila. The training was conducted together with Kanahau and the Municipality of Útila. We worked with the municipal environmental office of Útila, and FIB has been able to include beach and mangrove protection regulations in the 2023 environmental chapter of the municipal development plan. The Turtle Harbor Wildlife Refuge Management Plan was also revised, adding specific guidelines and regulations for the protection of mangroves and *Ctenosaura bakeri*.

All photos this page by Rosalia Argueta

Community Participation

Útila stakeholder communities increased their conservation actions by participating in mangrove restoration and beach cleaning. More than 120 students and parents participated in five mangrove reforestation and iguana releasing field trips in Útila, and more than 100 people participated in six field trips to conduct beach clean-ups.

In August 2022, as part of the Útila Black Iguana Environment Pride campaign, a second annual festival of the Iguana #SavetheSwamper was held. More than 400 local people participated in its organization, and more than 80 local businesses (restaurants, hotels, hardware stores, and diving centers) contributed funds and in-kind donations as sponsors. Photographic exhibitions of critical ecosystems were presented, and "Swampy" was launched as flagship mascot for community outreach.

LOOKING AHEAD

As an organization now co-managing the Turtle Harbor Wildlife Refuge and the Islas de la Bahía National Marine Park, FIB will commit more to the protection of our endemic species and critical habitats.

During reforestation trips, we observed that there is a high mortality of planted seedlings. Conducting soil analysis and restoring water flow will be needed to achieve success in the damaged areas.

The presence of raccoons (*Procyon lotor*) as an invasive species is creating a problem, as they prey on iguana and turtle eggs on the beaches and on iguana juveniles in the mangroves. With municipal and government authorities, a protocol for eradication has been drawn up and is currently under review.

STRENGTHENING HELODERMA NATURAL RESERVE AS AN EDUCATION AND HABITAT RESTORATION CENTER FOR MOTAGUA SPINY-TAILED IGUANA

By Daniel Ariano and Johana Gil, Heloderma Natural Reserve | $11,920 AWARDED

OVERVIEW

Heloderma Natural Reserve (HNR) in Motagua Valley, Guatemala, is a 58-hectare reserve dedicated to conserving a unique tropical dry forest ecosystem that is inhabited by the Motagua Spiny-tailed Iguana (*Ctenosaura palearis*), as well as the endemic Guatemalan Beaded Lizard. Our goal is to ensure that these species are protected for future generations through community education and habitat protection/restoration programs. We built a tree nursery to expand the production of young trees and cactus to be planted, and the species produced are those that either provide food or shelter to sustain this highly threatened iguana.

ACCOMPLISHMENTS

Reforestation

With IIF support, we built a new tree nursery that allowed us to expand production from 500 to 4,000 plants per year. Seed collection was carried out between January and March, and sowing in trays was done from March to May. Seeds that have a very hard seed coat require scarification before sowing. The tree species planted and delivered were 600 Upay (*Cordia alba)*, 600 Quebracho (*Lysiloma divaricatum)*, 600 Palo Obero (*Astronium graveolens)*, 600 Orotoguaje (*Acacia deamii)*, 600 Vanillo (*Leucaena shannonii)*, 480 Fruto de Cabro (*Karwinskia calderonii*), and 240 Nance of Iguana (*Ximenia americana*), as well as two

Photos by Daniel Ariano and Johana Gil

species of cacti: 100 Organ Pipe Cactus (*Stenocereus pruinosus*) and 50 Old Man or Wooly Torch Cactus (*Cephalocereus leucocephalus*).

The saplings produced were delivered to private owners and municipalities in areas with iguana distribution. In addition, we planted some trees and cacti in the Heloderma Natural Reserve in areas of secondary growth. In total, we made five deliveries

to the Niño Dormido Municipal Protected Area, the Xactun Private Nature Reserve, the El Momoto Dormido Private Nature Reserve, the San Luis School Garden, and the El Espino Private Nature Reserve. These areas are a priority because they are part of the iguana's habitat and have areas devoid of vegetation. We deliver all the trees with the commitment to take care of them for at least five years, and we have signed five contracts to do that.

Workshops

We carried out 10 workshops in the HNR with the residents, covering topics on iguana conservation and restoration of the iguanas' habitat, including activities such as an iguana drawing contest, and delivery and planting of trees through visits to other reserves that are part of the habitat. After each workshop we have a meal, hiring local cooks, to share and resolve issues, then we transport the residents back to town. The workshops are personalized, which allows us to get to know each other better, learn about our strengths, and share experiences around conservation and its role in society. We concluded our 10th and last workshop in December 2022 with a piñata, food, and prizes.

Education

We selected a group of local people from children to adults who are dedicated to promoting the conservation of iguanas and the dry forest in the Motagua Valley, and named our group "Los IGUANEROS," the iguana rescue and help team. There are 23 people who regularly attend the workshops, a diverse group of scientists, teachers, rangers, children, and parents. We meet every month and carry out activities to care for the iguanas, and we have planted trees to restore the dry forest. IGUANEROS has very good acceptance and results in the community, and visiting other areas of the iguana's habitat has aroused great interest among the children.

LOOKING AHEAD

We plan to strengthen our education program, as it is necessary to assess its impact and reach over the years on children and others who participated. We plan to conduct research that will focus on: (1) modeling the actual distribution of *Ctenosaura palearis* and assessing the potential impacts of global warming, and (2) analyzing the range, activity intensity, movement routes, habitat selection, and energy expenditure of the iguanas.

ADVANCING CONSERVATION OF RICORD'S ROCK IGUANA AND RHINOCEROS IGUANA

By Ernst Rupp, Grupo Jaragua | $12,000 AWARDED

Photo by Ernst Rupp

Photo by Cuevas

OVERVIEW

Our main goal is the long-term survival of the Ricord's Rock Iguana (*Cyclura ricordii*) and the Rhinoceros Iguana (*Cyclura cornuta*) throughout their natural range, with a focus on the La Selle-Jaragua-Bahoruco-Enriquillo Transboundary Biosphere Reserve. Actions are based on the *Cyclura ricordii* Species Recovery Plan to establish management for wild Ricord's Rock Iguanas, restore and maintain habitats, and institute education programs.

ACCOMPLISHMENTS

Patrols

In 2022, Grupo Jaragua (GJ) established three patrol teams led by community technicians José Luis Castillo in Pedernales (DR), Jerbin Volquez in South Shore Lago Enriquillo (SSLE), and Samuel Nossirel in Anse-à-Pitres (Haiti). No major disturbances like fires or active charcoal production were reported. We did find iguana roadkills and traps at SSLE, and three nests excavated by feral dogs at Fondo Malagueta. In Anse-à-Pitres, there were charcoal kilns at fondos (soil depressions used for nesting) in Anse-à-Cabrit, Nan Momben, and Saline. We're working with the Ministry of Environment on illegal land occupation in Pedernales.

Restoration

GJ coordinated the planting of 315,635 pads of Alpargata Prickly Pear Cactus (*Consolea moniliformis*) at SSLE and 4,856 pads in Anse-à-Pitres, impacting 1,000 hectares of habitat. This tree cactus is an important food plant for iguanas, especially when fruiting. A dry forest restoration guide was published on the GJ website and shared with five stakeholder groups.

Community integration

In the villages of Baitoa and Venganaver, 78 locals participated in iguana habitat restoration, and eight participated in Anse-à-Pitres. This program has both social and economic impacts on local communities, and has led to increased appreciation for iguanas that can lead to an important source of income.

Biological monitoring and research

Cyclura ricordii nest search and monitoring was successfully carried out in Pedernales and Anse-à-Pitres fondos during the nesting season and the final results are impressive: 260 and 54 successful nests, respectively. The number in Anse-à-Pitres was significantly higher than in previous years, likely due to greater search efforts and an extension of the area. The GJ team has been working on identification of suitable habitats for possible translocation sites for *Cyclura ricordii* on the southwestern part of the Barahona Peninsula. Three sites were identified, but legal aspects of human occupation and use may inhibit any translocation work. In contrast, the Southern Shore of Lake Enriquillo has suitable soils and does not have the negative legal aspects, so may prove favorable for restoring iguana populations.

Education

We carried out three education events at local schools in Las Salinas and Cabral to reach 182 children and 25 teachers. In Pedernales and Anse-à-Pitres, four activities were presented to a total of 149 marginalized youngsters. In addition, we reached over 2,000 people in Santo Domingo through interpretative booths during the celebration of Mangrove Week.

Gathering cactus pads for planting.

Photo by Ernst Rupp

LOOKING AHEAD

Habitat restoration work will continue, extended with better-fenced areas to diversify plant species available and protect them from goats and cattle. A translocation initiative for Ricord's Rock Iguanas should be developed in order to extend its range to suitable areas on the Southern Shore, where presently no iguanas can be found.

It remains to be seen if tourism development in Pedernales will impact the iguana habitat. Intensive patrolling and monitoring in cooperation with the Ministry of Environment continues to be necessary. Improving the situation of iguanas in Haiti will continue to be a big challenge, due to the difficult social and political situation. The small team in Anse-à-Pitres is doing a great job monitoring and conserving iguanas there.

CONSERVATION OF ÚTILA SPINY-TAILED IGUANA

By Ana Daniela Sansur, Kanahau Wildlife Conservation Organization | $10,060 AWARDED

OVERVIEW

The conservation of the Útila Spiny-tailed Iguana, aka the Swamper, has included scientific research, species management, community outreach, and environmental education. Since 2020, Kanahau has been actively working on implementing the *Ctenosaura bakeri* Conservation Action Plan. For 2022, the main objective was to advance execution of the plan, particularly to create awareness among the community about the Swamper's importance.

Photo by Bryan Olivia

ACCOMPLISHMENTS

Produced novel educational materials
Kanahau developed "SWAMPA! The Útila Conservation Game," which portrays 30 species of animals of significant ecological importance to the Swamper or its habitat, the mangrove forest. SWAMPA! was developed to give a voice and a face to these animals in an effort to raise awareness about their status, teach both children and adults about them, and help Kanahau make the Swamper a flagship species for nature conservation.

Installation of six iguana signs depicting the "Swampy, the Iguana"
Kanahau created a cartoon iguana character named Swampy, to increase the Swamper's recognition in the local community as an ambassador for the environment. Kanahau designed five different signs with the iguana character, in which Swampy demonstrates and offers general environmental awareness lessons.

Monitor the Swamper population across Útila and the Turtle Harbour Wildlife Refuge
Monitoring was conducted using the capture-mark-recapture method, which Kanahau has used annually since 2016. The research seeks to continue building a comprehensive morphological and abundance database for *C. bakeri* on Útila, as well as to monitor population trends and evaluate the combined success of conservation initiatives. Kanahau completed three monitoring trips to Turtle Harbor, as well as three surveys at the nearby coastal site of Don Quickset. Iguana surveys at Don Quickset have proved remarkably successful in 2022, and a significant population exists at this site. Unfortunately, it is not part of the existing protected area, but it may be significant for conservation given that surveys there always reveal abundant populations and numerous recaptures.

Search for new populations and suitable habitats across west and central Útila
We made a trip to search for new iguana populations in the unexplored West End of Útila. Only two *C. bakeri* were encountered, providing novel distribution data for the region. We also made an expedition

Photo by Bryan Olivia

to central Útila, where we found three individuals, including one adult from Turtle Harbor Pond.

Purchase of UMIDIGI BISON smartphones
Two UMIDIGI BISON rugged waterproof smartphones were purchased for use in the field. Kanahau downloaded and trialed the SMART survey app during mark-recapture surveys for a period of five weeks. After consideration, we decided to opt for a Jotform online data system. The survey forms will prompt the user to enter all the data entry points needed for analysis.

Photo by Nicholle AMador

Monitored threats to the species' survival
Kanahau has focused on developing control protocols for invasive species. This included the design and presentation of the raccoon eradication plan to the new authorities, the official delivery to ICF, applications for funding, and the elaboration of Útila's first biosecurity plan. From March to August, Kanahau mentored a Honduran student, Nicholle Amador, for six months. Nicholle helped the Kanahau team finish the biosecurity plan, and assisted with the iguana surveys, environmental education, community outreach, and grant writing. Nicholle has since become part of the Kanahau staff.

Provided training sessions to educate law officials
Kanahau completed three training sessions for law officials in November and December, in collaboration with BIF and the Municipality of Útila. The workshops included an introductory presentation by Kanahau on aims of the IUCN Action Plan for *Ctenosaura bakeri*, as well as presentations by lawyers detailing the environmental laws protecting wildlife, the role of authorities in enforcement, and the role of NGOs in reporting environmental crimes.

Photo by Ana Daniela Sansur

LOOKING AHEAD

In 2023, Kanahau will continue the iguana awareness campaign by developing, distributing, and promoting new Swamper-themed education materials for school teachers, students, tourists, and the wider community. We will continue iguana-themed community events and pride campaigns, including the annual "Save the Swamper Festival," and International Iguana Awareness Day, as well as delivering monthly environmental education classes to the schools of Útila. Kanahau will integrate conservation action for iguanas with its new commitments in co-management of the Turtle Harbor Wildlife Refuge, including monitoring iguana populations and habitats, beach cleanup events, manual dispersal of mangrove seeds, and reforestation efforts, as well as systematic population assessments of *Ctenosaura bakeri* in the refuge and other sites on Útila.

Photo by Thomas Brown

PREVENTING LOSS OF THE ST. EUSTATIUS POPULATION OF LESSER ANTILLEAN IGUANA

By Matthijs van den Burg and Colleagues, in Collaboration with Tomas Cornwell and St. Eustatius National Parks Foundation | $10,960 AWARDED

OVERVIEW

We initiated our 2022 fieldwork by obtaining an overall assessment of nesting sites for the Lesser Antillean Iguana (*Iguana delicatissima*) across St. Eustatius. We used published data from 2013, 2016, and 2020, and performed field surveys to identify potential nesting locations.

Photo by Charles Knapp

ACCOMPLISHMENTS

Nest site monitoring

We identified 69 potential nesting locations, of which 20 were confirmed to have current digging activity, and 22 with activity within the last one to two years. We focused on monitoring 12 of these sites with in-person surveys and camera traps. We determined the exact locations of five possible nests. These were fenced off with goat wire and rebar to protect them from livestock, while still allowing iguanas to cross. During the last month of the incubation period, we added plastic wrap to confine emerging hatchlings. The plastic was buried in the ground to about 20 cm depth and attached to the fence with zip ties.

Enclosing nest sites and catching hatchlings

Of the five locations with potential nests, only a single nest was successful, with 16 hatchlings emerging. Two hatchlings had already been eaten and/or killed by racer snakes when we arrived at the site. A total of four racers were seen around the nesting site; two had found a way into the enclosure. The other 14 iguana hatchlings were caught upon emerging, measured, probed for sex determination, weighed, and fitted with Holohil radio-transmitters.

Radio-tracking hatchling iguanas

We tracked the 14 hatchlings from three to 16 days. Some hatchlings dispersed much farther from the nest, while others stayed close. Thereafter, the hatchings were either dead or had lost their trackers. One was found dead after three days, seemingly eaten by wild birds or chickens. Evidence showed that at least five of the 16 hatchlings were predated by racer snakes; the transmitters were found on the ground with signs of stomach acid damage.

After tracking, we excavated three nests, including the one that produced hatchlings. In that one, we found 16 empty eggs and one unhatched egg. The tunnel from entrance to chamber was 120 cm long. The nest chamber was at a depth of 60 cm and was oval-shaped, with a size of 40 x 18 x 28 cm (d-h-w). The other two nest excavations did not yield a chamber with eggs.

Collection of data on nest sites to identify conditions and threats

From the 69 likely nesting sites, we collected information on vegetation types, location, and substrates to glean information on nest site conditions. We have not yet analyzed these data, but we will in 2023. Threats to hatchlings come from predators at nesting sites: snakes and birds, including Cattle Egret, American Kestrel, and Yellow-crowned Night Heron.

Continue surveying native iguanas and monitoring for non-native (hybrid) iguanas

One juvenile non-native iguana was sighted near the harbor, presumably arriving on a cargo vessel from St. Maarten. It was euthanized, and a genetic

sample taken to assess its origin. Repeated night surveys found no other non-native individuals. We analyzed genetic data from six samples: two pure *Iguana delicatissima*, one suspected pure *Iguana iguana*, and three suspected hybrid animals. The

Photos this page by Matthijs van den Burg,

Iguana iguana appears to be an animal with Central American origin, and the hybrids have a similar partial origin from Colombia or Panama.

Create invasive species action plan for St. Eustatius as part of larger regional action plan. The Invasive Species Action Plan is currently stuck at the inter-institutional level. Since COVID-19, local stakeholders have not had the opportunity to assess it and provide comments. With the new Nature and Environmental Policy Plan in place, this topic will receive more attention, and we hope it can be included in tackling the problem of invasive species on St. Eustatius.

Create outreach and education materials Educational materials created in 2019 were shared with St. Eustatius National Parks (STENAPA) and regional stakeholders. On St. Eustatius, these have been used during the annual Summer Kids Club, and in The Netherlands, they have been used during the Iguana Day at the Rotterdam Zoo. During late 2022, partners in The Netherlands prepared an iguana conference (in Dutch) to present the current project.

Assess *Iguana delicatissima* population size Surveys during 2018 and 2019 assessed the population size and trend. Results show a decrease from 2017 to 2018 by about 25%, remaining equal during 2019. Although the interval of the latest 2019 estimate was wide—about 700 to 1,300, with a mean of 1,000 animals—we believe the actual size is in the lower range. These data were published in the journal *Biotropica*.

LOOKING AHEAD

In 2023, we intend to again track hatchlings, and hope to work toward having 30 trackers. We are currently analyzing data on hatchling dispersal patterns. A major problem has been the long-term attachment of transmitters, which fell off after two to 16 days. We had intended to recapture hatchlings every fifth day to collect growth data, but had to abandon this plan due to high predation.

Because of COVID and the high workload for the STENAPA staff, some projects must be postponed until 2023/2024. These include estimating the feral cat population in the national parks and performing a study to assess the relation between *Iguana delicatissima* and the Mexican Creeper Vine.

PROTECTION OF THE FIVE-KEELED SPINY-TAILED IGUANA IN NICARAGUA

By José David Quiroz Martinez, Universidad Nacional Autónoma de Nicaragua, Managua

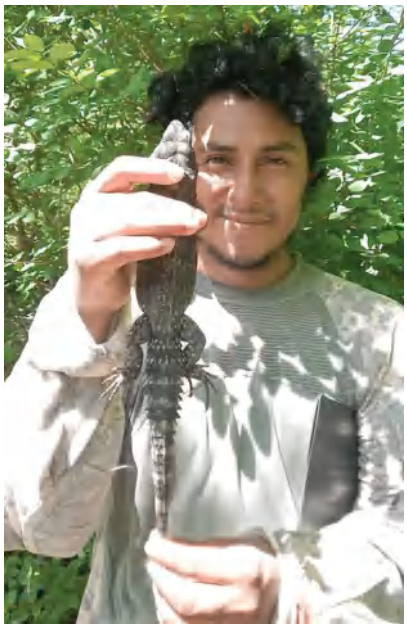
| $5,000 AWARDED

OVERVIEW

Our project focused on protection of the Five-keeled Spiny-tailed Iguana (*Ctenosaura quinquecarinata*), also called the Flat-tailed Iguana, through monitoring populations in identified areas. We also organized and supported a rural community center in order to strengthen participation in environmental education for children, young people, and adults. In addition, the Reptile Hatchery of the Universidad Nacional Autónoma de Nicaragua, Managua (UNAN-Managua) wanted to test the feasibility of a captive breeding program.

ACCOMPLISHMENTS

Selection of two study sites for the project
Exploratory visits were made to selected geographical areas to identify two target sites for the implementation of the project. One was in the municipality of Santa Rosa del Peñón, where we established monitoring of El Charco, El Coyol, El Ocotillo, and Nance Dulce. We also visited the Escalante Chacocente River Wildlife Refuge, where we monitored four of the refuge's areas: La Poma, La Chota, Escalante, and Papalon.



Collection of data
With the support of local resident volunteers, we sighted iguanas in both of our selected sites. In Santa Rosa del Peñón, we monitored 20 adults and 13 juveniles. In Chacocente Wildlife

All photos by José David Quiroz Martinez

Refuge, we monitored 20 adults and 20 juveniles. Georeferencing and habitat data were recorded. It was encouraging to see the community volunteers showing interest in participating, as well as getting involved in other monitoring activities in the future.

Update data from community monitoring
During the monitoring, we conducted a perception survey with 45 people, five per community, to see what they have observed. The responses showed 90% stated this species mostly lives in dry trees; 10% said in fence posts. Regarding the iguanas' diet, 80% of respondents said they did not know much; 20% said that they feed on insects. They were asked if they saw the iguanas daily; 70% said no, sightings used to be more frequent, but now it is difficult to find any.

Assessment and determination of conservation areas for nests and hatchlings
It was determined that other areas of the country still need to be studied and explored in order to map the distribution of *Ctenosaura quinquecarinata*. The 73 iguanas we monitored in this project were found in habitats of dry forest, secondary forest, pastureland, and dense thickets.

Environmental education in schools
We shared our information with 25 students from the university's biology department through their environmental volunteering program. These young people carried out awareness-raising activities in

six schools, where they interacted with more than 400 children. They presented information about the benefits of the conservation of the Flat-tailed Iguana through theatrical plays and puppet shows; visual materials such as posters, drawings, and comics; and conservation talks.

Starting a breeding program
On the campus of the Ruben Dario University of the UNAN-Managua, an enclosure was built at the reptile farm facility to house juvenile *Ctenosaura quinquecarinata*. This will be used to study the reproductive biology of the species and determine if captive-bred iguanas can be produced, in case wild areas require supplementation.

LOOKING AHEAD

In the near future, the UNAN-Managua will conduct a monitoring study to map nesting sites in the areas of Chinandega, Leon, Chontales, Carazo, and Rivas. This study aims to analyze the anthropogenic impact of habitat fragmentation on the species, and to establish areas of interest for further study.

ARMCHAIR CONSERVATION: MONITORING GALÁPAGOS MARINE IGUANAS USING DRONES AND CITIZEN SCIENCE

Photo by Kathleen Preissler

By Jen Jones, Ph.D., Galápagos Conservation Trust, and Amy MacLeod, Ph.D., Leipzig University

| $9,000 AWARDED

OVERVIEW

Our goal was to enable effective conservation of Galápagos Marine Iguanas (*Amblyrhynchus cristatus*) and to strengthen local capacity to deliver long-term monitoring. With the support of crowd-sourced data, we aimed to develop accurate Marine Iguana population estimates and quantify plastic pollution contamination at sites where no or little data has been collected.

ACCOMPLISHMENTS

Strengthening capacity
Six team members undertook drone training in mainland Ecuador. In March 2023, Chris Marshall from Airborne Platforms joined the Galápagos Conservation Trust (GCT) team to further develop plastic monitoring protocols to be used by park rangers in the coastal cleanup program.

Fieldwork & citizen science

The preliminary counts for the two islands covered in phase two of our project on Zooniverse are: 9,308 iguanas counted for Española and 7,105 for Floreana. Counts from several sites are missing because the photographs collected earlier were unsuitable for processing (low quality), but these sites were revisited in January 2023 so counts can be added to the final estimates. We have not yet applied a correction factor to these estimates, because we need to make further comparisons between capture-mark-resight results and drone-survey estimates before we can reliably correct the figures.

The third phase on Zooniverse to count iguanas on Genovesa, Pinta, and Marchena is nearing completion—currently receiving about 2,000 daily classifications, with 9,505 registered volunteers, and >445,592 inputs received. In addition, Jen Guy, a Masters student from the University of Exeter, counted and categorized plastics from a 200 photo sub-sample, confirming that, as with iguana counts, citizen scientists are highly accurate (98%) at identifying plastics.

Communications

We have promoted the project via GCT's January eNews and Instagram page to engage citizen scientists. We continue to maintain the project website and add updates to the Iguanas from Above social media. Two to three emails go out to the project's mailing list annually, and updates are sent to registered volunteers on the Zooniverse platform.

Our scientific manuscript to validate the use of drones for surveys of marine iguanas was published in *Frontiers in Zoology* in January 2023. German press interest remains high, with coverage and interest from several newspapers and broadcasters. The project was featured in the USA in *Smithsonian Magazine*, March 2023.

We gave a presentation for the local community on San Cristóbal at the Galápagos Science Center, and we are also supporting the time of a local project assistant, who has been preparing an outreach activity calendar. We are targeting a range of audiences and identifying what communication methods and resources could be useful.

LOOKING AHEAD

We will focus on finishing the counting and developing new tools, because the overarching goal is to ensure this method will continue to be used long after the *Iguanas from Above* project is complete. We are working with local conservation managers who have been increasingly using drones in their monitoring work. However, they face a bottleneck when it comes to analyzing the images, due to a lack of computational facilities and internet on the islands. Currently, their only option is manual counting, for which they lack both the manpower and the equipment. It seems that the only option is Artificial Intelligence (AI). We have therefore forged a partnership with AI experts from the University of Bielefeld in Germany, with a shared goal to develop an automated counting platform that can analyze drone images for wildlife counting.

Photo by Andres Marmol

Photo by Andrea Varela

EMERGENCY GRANT | $4,000 AWARDED

IMPROVING RAPID RESPONSE ERADICATION OF INVASIVE SPECIES ON ST. EUSTATIUS

By Tomas Cornwell, St. Eustatius National Parks Foundation

OVERVIEW

The IIF Emergency Grant enabled us to respond to a possible urgent conservation threat to the native Lesser Antillean Iguana (*Iguana delicatissima*), while also providing the opportunity for a postgraduate student to contribute to our efforts and to help develop a new monitoring plan for invasive iguanas on St. Eustatius. If Common Green Iguanas (*Iguana iguana*) or hybrid iguanas were present on the island, we would need to work quickly to validate these claims and ensure these individuals were caught and removed from the population.

ACCOMPLISHMENTS

Survey for non-native iguanas
We purchased 10 Havahart small mammal traps to survey key areas around the island following reports of a Common Green Iguana or hybrid sighting. Traps were set in different locations over a five-month period to sample iguana populations. No Common Green Iguana or hybrid iguanas were captured during this period. In addition to trapping, with the support of our student, Jordan Vermeulen (seen at right), we began conducting night surveys to assess population density of *Iguana delicatissima* across the island.

Capture and remove introduced/hybrid iguanas
During the project, only one invasive Common Green Iguana was reported, captured, euthanized, and a DNA sample was taken for later analysis. This individual was thought to be a hatchling, an unintentional introduction resulting from transport of building materials in the harbor. Night patrols in the area revealed no additional animals. This finding initiated plans to include four sites of new development and building supply/import businesses as part of our monitoring procedures.

Establish an ongoing monitoring program
This project facilitated the development of a new monitoring procedure, incorporating new survey sites and the use of traps to sample the island for the presence of non-native iguanas. Since the departure of our project student, we have continued to carry out native iguana population sampling, along with night patrols and occasional trap setting across the island.

Further strengthening of public awareness concerning threats to endemic, threatened species
During her time with us, our research student Jordan spent time raising awareness during fieldwork and helped develop materials for social media, pointing to existing information on invasive species, how to identify them, and who to reach out to in the event of a sighting. Jordan produced a presentation as part of her thesis project, which can be used to help raise awareness.

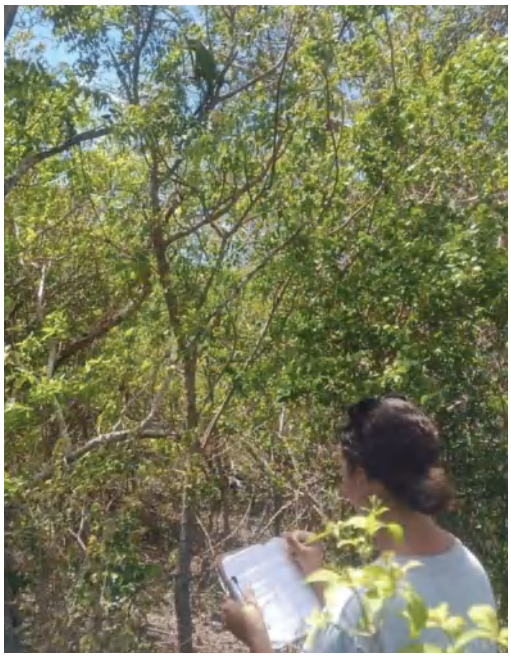


Photo by Tomas Cornwell

LOOKING AHEAD

The project allowed us to temporarily increase capacity to respond to reports of invasive iguana sightings and conduct much-needed rapid assessments of whether these animals exist on the island. Having the traps will also support long-term monitoring, and we plan to sample other potential invasive species on St. Eustatius, such as predators of hatchlings, including cats and rats. Ultimately, we need to explore further opportunities to increase staffing to continue long-term monitoring.

Photo by Tomas Cornwell

Lesser Antillean Iguana
***(Iguana delicatissima*)**

EMERGENCY GRANT | $2,000 AWARDED

RAPID RESPONSE TO ADDRESS DISCOVERY OF NON-NATIVE IGUANAS ON SABA ISLAND

By Matthijs P. van den Burg

OVERVIEW

Until 2021, there were only two Lesser Antillean islands from which invasive non-native iguanas had not been described: Saba and Montserrat. On Saba, increased awareness of the threat of invasive species led to a 2021 iguana population assessment. It was only during that assessment that non-native iguanas were identified as present on the island, which likely had been present at least for a few years. Their presence is highly problematic, given that non-native iguanas become larger and are reproductively more successful than the native species, Saba Green Iguana (*Iguana melanoderma*), meaning that population could be overtaken by non-native and hybrid iguanas if those are not removed.

ACCOMPLISHMENTS

Identification of range and abundance of non-native iguanas on Saba

We directed our efforts around two areas that were identified during our 2021 fieldwork; these were the only areas where non-native iguanas were sighted: the harbor area (H), and the area known as English Quarter (EQ). We observed these areas using binoculars and a digital camera, identifying how many iguanas were present and where. We photographed those iguanas to assess their species based on scale morphology and coloration patterns. Data confirmed the number of non-native iguanas present is low, but higher than initially thought in 2021, especially in the EQ area.

Remove all observed non-native iguanas on Saba

We caught 14 iguanas using pole-lasso techniques; three were non-native. We collected a blood sample as well as over 15 different morphological characters and different detailed photographs from those three. We also shot one additional non-native iguana that was residing high on the cliffs directly next to the harbor, which was inaccessible for capture, first obtaining written permission from the Island Governor. There are three other non-native iguanas there, which we will need to return to eliminate.

Park ranger James Johnson setting traps

Photo by Matthijs van den Burg

Traps baited with fruit will also be used to try and catch those remaining iguanas on the plateau level above the cliffs.

Confirm species status and origin through genetic analyses

The process of acquiring CITES permits for the export/import of collected blood samples has been slow, so genetic analyses of collected blood samples still needs to be performed. Currently, we await approval of the CITES export permit, and our collected samples remain on Saba for now. We believe that all permits will be available during our next fieldwork in 2023.

Knowledge tranfser to Saba Conservation Foundation to continue identification and removal

Park ranger James Johnson accompanied us on six field days, allowing for knowledge transfer

Photo by Genn Gerber

Saba Green Iguana (***Iguana melanoderma***)

Photo by Matthijs van den Burg

Captured non-native iguana

about iguana ecology, capture techniques, and, most importantly, identifying non-native iguanas. James will continue monitoring for non-natives. Although we have several ways of identifying pure non-native iguanas, identifying hybrids remains difficult, especially given the presence of some Saba iguanas on St. Maarten. Finding potential hybrids could mean animals arrived from St. Maarten, instead of having been born on Saba. Hence, we are still learning how to identify hybrids with 100% certainty in the field, and the collected blood samples will provide more insight once analyzed.

Strengthening public awareness

Each year, the Sea and Learn NGO organizes a monthly event during which local, regional, and other international scientists are invited for a visit to Saba to give talks and excursions. The timing of our project changed, and we were unable to attend; however, we plan to attend the 2023 Sea and Learn event. We did have individual conversations with local residents while performing fieldwork, explaining the situation and giving people the experience of holding/touching iguanas and admiring them up close.

LOOKING AHEAD

Additional fieldwork to tackle the invasion of non-native iguanas remains highly necessary. Funding for such efforts have been obtained through the Dutch Ministry of Agriculture, Nature and Food Quality, allowing for another three-week intense fieldwork period in 2023. Then, we will again travel to Saba and work closely with the Saba Conservation Foundation, especially James Johnson. After that 2023 fieldwork effort, all collected blood samples will be transported to The Netherlands and analyzed at the University of Amsterdam, as well as the French GenIndexe laboratory, to understand the genetic origin of sampled iguanas. We further hope to inform students about this situation, in collaboration with Wageningen University Research. More work also needs to be done to identify non-native iguana nest sites around the two areas.

PROJECTS FUNDED FOR 2023

The Board of Directors of the International Iguana Foundation met in Miami on 5 November, 2022, and awarded funding for eight grants for 2023, a total of $91,105. This is the first year that both large tier (up to $25,000 max) and small tier (up to $10,000) grants were awarded. Congratulations to all our 2023 grant recipients!

Large Tier (up to $25,000)

Saving the Swamper (*Ctenosaura bakeri*): Conservation, Monitoring, and Education

- Ana Daniela Sansur, Kanahau Wildlife Conservation Organization
- Grant amount: $24,920

Consolidation of Community-based Conservation and Research for the Motagua Spiny-tailed Iguana (*Ctenosaura palearis*) in Guatemala

- Johana Gil and Daniel Ariano, Heloderma Natural Reserve/Zootropic
- Grant amount: $24,808

Small Tier (up to $10,000)

Armchair Conservation: Monitoring Galápagos Marine Iguana (*Amblyrhynchus cristatus*) and Plastic Pollution Using Drones and Citizen Science

- Jen Jones, Galápagos Conservation Trust
- Grant amount: $10,000

Advancing Conservation of Ricord's Iguana (*Cyclura ricordii*) and Rhinoceros Iguana (*Cyclura cornuta*) in Dominican Republic and Haiti

- Ernst Rupp, Grupo Jaragua
- Grant amount: $9,500

Movement Ecology and Reproductive Migration of a Critically Endangered Iguana, Útila Spiny-tailed Iguana (*Ctenosaura bakeri*)

- Josiah Townsend, Indiana University of Pennsylvania Research Institute
- Grant amount: $8,341

Caribbean Iguana eDNA (CIE): Conserving Iguana Diversity and Safeguarding Against Invasions through Terrestrial eDNA Innovations

- Kathryn Stewart, Institute of Environmental Sciences (CML), Leiden University
- Grant amount: $3,936

Mitigating Threats to the Lesser Antillean Iguana (*Iguana delicatissima*) in Its Last Stronghold: Dominca

- Jeanelle Brisbane, WildDominique
- Grant amount: $6,300

Securing the Future of the Saint Lucia Green Iguana (*Iguana iguana sanctaluciae*): A Newly Described Subspecies on the Brink of Extinction

- Luke Jones, Durrell Wildlife Conservation Trust
- Grant amount: $3,300

Photo credits
Left page, clockwise from top left: Tom Brown; Jen Jones; John Binns; Johana Gil
This page, clockwise from top left: Ana Daniela Sansur; Matthijs van den Burg; E. Corry; Bob Powell


Photo by Rosalia Argueta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THANK YOU TO OUR DONORS

Because of your generosity, we can provide vital support for iguana conservation by awarding grant funds to researchers who are working to protect endangered iguanas and their habitats. Your donations make it possible to safeguard the survival of these extraordinary animals for future generations. We couldn't do it without you!

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Jill Jollay


Photo by Matthijs van den Burg

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ON THE COVERS

Front cover: The critically endangered Ricord's Rock Iguana (*Cyclura ricordii*) is found in a restricted area of the southwestern Dominican Republic and adjacent Haiti. Photo © John Binns

Back cover: The Jamaican Rock Iguana (*Cyclura collei*), once thought to be extinct, has made a remarkable comeback as a result of dedicated conservation efforts. Photo © Joey Markx

INTERNATIONAL IGUANA FOUNDATION